NSW STATE EMERGENCY SERVICE

Lachlan Shire

Local Flood Emergency Sub Plan

FloodSafe

LACHLAN SHIRE FLOOD EMERGENCY SUB PLAN

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

Volume 1 of the Lachlan Shire Flood Emergency Sub Plan

Endorsed by the Lachlan Shire Local Emergency Management Committee

24 November 2023
Version 3.0

AUTHORISATION

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

Authorised

Signature: _____

NSW SES Local/Unit Commander

Print Name: Susan Bennett

Date: 24 November, 2023

Endorsed

Signature: _____

Chair, Local Emergency Management Committee

Print Name: Adrian Milne

Date: 24 November 2023

VERSION HISTORY

Version Number	Description	Date
1.0	Lachlan Shire Local Flood Plan	March 2011
2.0	Lachlan Shire Local Flood Plan	6 September 2017

AMENDMENT LIST

Suggestions for amendments to this plan should be forwarded to:

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

Amendment Number	Description	Updated by	Date

DISTRIBUTION LIST

Available for general use and distribution on the NSW State Emergency Service website www.ses.nsw.gov.au

CONTENTS

1 OUTLINE AND SCOPE

1.1 PURPOSE

1.1.1 The purpose of this plan is to set out the multi-agency arrangements for the emergency management of flooding in the Lachlan Shire Local Government Area (LGA).

1.2 AUTHORITY

1.2.1 This plan is written and issued under the authority of the *State Emergency and Rescue Management Act 1989* (NSW) ('SERM Act'), the *State Emergency Service Act 1989* (NSW) ('SES Act') and the NSW State Emergency Management Plan (EMPLAN).

1.2.2 This plan is a sub plan to the Lachlan Shire Local Emergency Management Plan (EMPLAN) and is endorsed by the Local Emergency Management Committee (LEMC).

1.3 ACTIVATION

1.3.1 This plan does not require activation. The arrangements set out in this plan are always active.

1.3.2 The Lachlan Shire Emergency Management Plan (EMPLAN) is active at all times in anticipation of the need to coordinate support and resources requested by combat agencies, including the NSW State Emergency Service (NSW SES).

1.4 SCOPE

1.4.1 The area covered by this plan is the Lachlan Shire LGA. The Lachlan Shire LGA and its principal towns, villages, rivers and creeks are shown in Appendix A.

1.4.2 The Council area is in the NSW SES Southern Zone and for emergency management purposes, is part of the Central West Emergency Management Region.

1.4.3 The plan sets out the Lachlan Shire level emergency management arrangements for prevention, preparation, response and initial recovery for flooding in the Lachlan Shire LGA. Hazard and Risk information can be found in Volume 2 of this document, and NSW SES Response Arrangements can be found in Volume 3.

1.4.4 In this plan a flood is defined as a 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 (including tsunami) overtopping coastline defences.

1.4.5 This plan outlines the local level arrangements for the management of downstream consequences of flooding due to dam failure, however it does not cover the management of flooding of an underground mine by inrush or other cause, which should be covered by the Mine Emergency Sub Plan for the respective mine.

1.5 GOALS

1.5.1 The primary goals for flood emergency management in NSW are:

a. Protection and preservation of life.

b. Establishment and operation of flood warning systems.

c. Issuing of community information and community warnings.

d. Coordination of evacuation and welfare of affected communities.

e. Protection of critical infrastructure and community assets essential to community survival during an emergency incident.

f. Protection of residential property.

g. Protection of assets and infrastructure that support individual and community financial sustainability and aid assisting a community to recover from an incident.

h. Protection of the environment and conservation values considering the cultural, biodiversity and social values of the environment.

1.6 KEY PRINCIPLES

1.6.1 The protection and preservation of human life (including the lives of responders and the community) is the highest priority.

1.6.2 Evacuation is the primary response strategy for people impacted by flooding.

1.7 ROLES AND RESPONSIBILITIES

1.7.1 General responsibilities of emergency service organisations and functional areas are set out in the NSW State EMPLAN and NSW State Flood Sub Plan.

1.7.2 Specific roles and responsibilities for agencies, functional areas and organisations in relation to flooding within Lachlan Shire are detailed within this plan, Appendix B and Appendix C.

1.7.3 Any agency with agreed responsibilities in this plan that are temporarily unable, or no longer able to fulfil their responsibilities in response operations must as soon as possible notify:

a. The NSW SES Incident Controller (for local or zone level responsibilities during response operations).

b. The NSW SES Zone Duty Commander (for regional level responsibilities outside of response operations).

1.8 PLAN MAINTENANCE AND REVIEW

1.8.1 NSW SES will maintain the currency of this plan by:

a. Ensuring that all supporting emergency services and functional areas, organisations and officers mentioned in it are aware of their roles and responsibilities.

b. Conduct a minimum of one exercise every five years or within two years of the plan being reviewed.

c. Reviewing the contents of the plan:

- When there are changes which alter agreed plan arrangements.
- When changes to land use strategic plans and policies increase the population at risk.
- After a flood including recommendations from after action reviews, reports, or inquiries.
- As determined by the NSW SES Commissioner.

d. The plan is to be reviewed no less frequently than every five years or after a significant flood event.

1.9 SUPPLEMENTARY DOCUMENTS

1.9.1 Supplementary and supporting material of the Local Flood Emergency Sub Plan is maintained on the NSW SES website Flood, Storm and Tsunami Plans including:

a. Flood Plan Glossary.

b. NSW SES Dam Failure Notification Flowchart.

c. NSW SES Resupply Flowchart.

2 OVERVIEW OF NSW FLOOD HAZARD AND RISK

2.1 THE FLOOD THREAT

2.1.1 NSW SES maintains information on the nature of flooding and effects of flooding on the community in the Lachlan Shire LGA. This is outlined in Volume 2 – Hazard and Risk in Lachlan Shire.

2.1.2 Declared dams in or upstream of the Lachlan Local Government Area.

Dam Name	Owner	High Risk Dam
Company Dam – Grenfell	Weddin Shire Council	NO
Lake Endeavour - Parkes	Parkes Shire Council	NO
Mineral Hill Tailings – Condobolin	Mineral Hill Limited	NO
Mineral Hill Southern Tailings Dam	Mineral Hill Limited	NO
Northparkes E27 – Estcourt Tailings Goonumbla	Northparkes Mines	NO
Northparkes Infill Tailings Storage Facility	Northparkes Mines	NO
Northparkes Rosedale Tailings Storage - Goonumbla	Northparkes Mines	NO
Northparkes Tailings – Parkes	Northparkes Mines	NO
Northparkes Tailings 2– Parkes	Northparkes Mines	NO
Wyangala – Darbys Falls	Water NSW	NO

3 PREVENTION/ MITIGATION

3.1 INTRODUCTION

3.1.1 The Floodplain Risk Management Manual outlines the NSW Government's Flood Prone Land Policy which details the framework for managing flood prone land in New South Wales. Incorporation of floodplain risk management into land use planning is one of the key means to limit the exposure to flood risks to our communities and help build long term resilience to future flood events.

3.2 LAND USE PLANNING

3.2.1 **Strategy:** Effective land use planning is a key focus for minimising the impacts of flooding. NSW SES will work with land use planning and consent authorities to inform and influence the consideration of the risks arising from flood, storm and tsunami, to prevent the creation of intolerable impacts of these hazards on the community.

Actions:

a. NSW SES will provide strategic input about land use planning matters which have or will create significant flood risk to life and/or property due to flooding.

b. NSW SES will provide responses to land use planning proposal referrals that have or will create significant flood risk to life and/or property due to flooding.

3.3 FLOODPLAIN RISK MANAGEMENT

3.3.1 **Strategy**: Advocate for consideration of emergency management in decision making to reduce risks to the existing community and minimise the growth in future, continuing and residual risk due to development through input to the floodplain management program.

Actions:

a. NSW SES will provide coordinated and consistent emergency management advice to councils and other agencies in relation to the management of land that is subject to flooding or coastal inundation.

b. NSW SES will provide advice, support, technical resources and training for NSW SES representatives to contribute effectively on local Floodplain Risk Management Committees.

4 PREPARATION

4.1 INTRODUCTION

4.1.1 Preparation includes arrangements or plans to deal with an emergency or the effects of an emergency.

4.2 FLOOD EMERGENCY PLANNING

4.2.1 **Strategy**: NSW SES develop, review and maintain Flood Emergency Sub Plans.

Actions:

a. Develop and review this NSW SES Local Flood Emergency Sub Plan as required. Local Flood Emergency Sub Plans outline the specific arrangements for management of flood events within an LGA and may include cross boundary arrangements.

b. Review plans as per Section 1.8.

4.2.2 Local EMPLAN Consequence Management Guides (CMG's) for flood are not required for communities covered by NSW SES Local Flood Emergency Sub Plans however may be utilised in place of Local Flood Emergency Sub Plan if agreed to by NSW SES.

4.3 FLOOD INTELLIGENCE SYSTEMS

4.3.1 **Strategy**: NSW SES develop and maintain a flood intelligence system to identify flood behaviour, its impact on the community and required response actions.

Actions:

a. Gather and assess flood information for the full range of flood types and severities.

b. Collect, collate, and assess information on the characteristics of communities at risk and the potential effects of flooding on communities at risk.

c. Share flood intelligence information with supporting agencies.

4.4 DEVELOPMENT OF WARNING SYSTEMS

4.4.1 **Strategy**: Develop, maintain and prepare systems for the provision of flood warnings and associated warning services.

Actions:

a. All levels of government work in partnership to develop and maintain flood warning infrastructure.

b. NSW SES maintains a list of the requirements for flood warnings for flood gauges in NSW (including flood classifications, warning times required and key statistics) and can be found in the supplementary document to the NSW State Flood Plan (see Section 1.9). Gauges of relevance within the Lachlan Shire LGA are also listed in Volume 3 of this plan.

c. NSW SES will recommend new warning services and changes to warning alert levels for gauges to the NSW and ACT Flood Warning Consultative Committee.

d. The State Government, in partnership with Local Government, is responsible for developing and maintaining flash flood warning systems for local catchments where required.

e. Dam Owners will provide Dam Emergency Plans (where required) and consult with NSW SES on alert levels and messaging. Alert level definitions are listed in Dam Emergency Plans.

f. NSW SES maintains a dedicated dam failure hotline and procedures to ensure priority dissemination of dam failure warnings.

g. NSW SES develops and maintains warning and flood information products by:

- Utilising flood intelligence data.
- Developing warning and flood information products.
- Continuously reviewing warning and flood information products.
- Consulting with affected communities, key stakeholders, Dam Safety NSW and the NSW and ACT Flood Warning Consultative Committee and maintains Operational Readiness.
- Participating in the development of public information and warning systems.

h. Gauge owners adequately maintain flood warning gauges and systems, including those identified in the 'Service Level Specification' maintained by the Bureau of Meteorology (Bureau) and those identified in the 'Provision and Requirements for Flood Warning in New South Wales' maintained by NSW SES.

4.5 BRIEFING, TRAINING AND EXERCISING

4.5.1 **Strategy**: Ensure NSW SES, supporting agencies, functional areas and the community are prepared and familiar with the strategies and arrangements within the Flood Emergency Sub Plan and supporting documents.

Actions:

a. NSW SES will consult stakeholders throughout the development of plans.

b. NSW SES will inform stakeholders of content changes after revisions.

c. NSW SES will ensure their facilities and resources are maintained and operationally ready.

d. NSW SES will train personnel for their expected flood operation roles.

e. NSW SES will regularly brief stakeholders on the exercise arrangements contained in the NSW Flood Emergency Sub Plan.

4.6 COMMUNITY RESILIENCE TO FLOODING

4.6.1 **Strategy**: NSW SES provides and maintains a flexible volunteer workforce to support community resilience.

Actions:

a. Ensure ongoing recruitment and training of a diverse range of volunteers.

b. Ensure pre-planning to facilitate the management of spontaneous volunteers and community members during a flood.

4.6.2 **Strategy**: NSW SES works with individuals, communities, businesses and government agencies to build flood resilience.

Actions:

a. Partner with and engage communities to understand and manage the risks associated with floods, including providing business continuity guidance (NSW

SES Business FloodSafe), family preparedness (NSW SES Home FloodSafe) and other engagement strategies.

b. Collate, assess and disseminate flood information to the community.

c. Collaborate with individuals, businesses, government agencies and communities when developing flood intelligence, preparedness and response information.

d. Plan for floods collaboratively with communities through community and stakeholder participation and engagement.

e. Collaborate with community sector and recognise the needs of individuals within communities who have an increased susceptibility during floods.

5 RESPONSE

5.1 INTRODUCTION

5.1.1 Flood response operations will begin:

a. On receipt of a Bureau Severe Weather Warning or Thunderstorm Warning that includes heavy rain or storm surge; or

b. On the receipt of a Bureau Flood Watch or Flood Warning; or

c. On receipt of warnings for flash flood; or

d. On receipt of a dam failure alert; or

e. When other evidence leads to an expectation of flooding.

5.2 INCIDENT MANAGEMENT ARRANGEMENTS

5.2.1 **Strategy**: Maintain effective control of flood operations across NSW.

Actions:

a. NSW SES uses the Australasian Inter-service Incident Management System (AIIMS) to manage the flood response.

b. Control of flood response will be at the lowest effective level and may be scaled to suit the incident.

c. The NSW SES State Controller (or delegate) will appoint Incident Controllers and establish Incident Control Centres (see NSW SES facilities on map in Appendix A).

d. The NSW SES Incident Controller, in consultation with participating supporting emergency services and functional areas will determine the appropriate breakdown of an Area of Operations into Divisions and/or Sectors in accordance with the principles of AIIMS.

5.2.2 **Strategy**: Maintain Incident Control Centre(s).

Actions:

a. NSW SES will operate Incident Control Centre(s) as required.

b. The NSW SES Incident Control Centre(s) will:

- Control resources from NSW SES and coordinate resources of supporting emergency services and functional areas.
- Manage Request for Assistance (RFA) tasking and ensure they are actioned in a timely manner.
- Undertake response planning and determine future resourcing requirements.
- Coordinate information flow, including warnings, public information and social media.

5.2.3 **Strategy**: Provide effective liaison between NSW SES and supporting agencies or functional areas in accordance with Local EMPLAN.

Actions:

a. Supporting emergency services and functional areas should provide Liaison Officers to NSW SES Incident Control Centre(s) and/or Emergency Operation Centres as required.

b. NSW SES will provide Liaison Officer(s) to Emergency Operations Centres as required.

c. Where possible Emergency Operation Centres to be co-located with NSW SES Incident Control Centres for Flood Emergency Response.

5.2.4 **Strategy**: Coordinate resources and logistics support to ensure operational effectiveness.

Actions:

a. The NSW SES Incident Controller will notify agencies of potential access issues between locations, for the consideration of pre-deploying of resources.

b. NSW SES may request resources and logistics support directly from a supporting emergency service or functional area.

c. Wherever possible, supporting organisations are to provide their own logistic support in consultation with NSW SES where appropriate.

d. The NSW SES Incident Controller will control air support operations and may utilise supporting agencies in the management of aircraft.

5.3 USE OF INFORMATION AND COLLECTION OF INTELLIGENCE

5.3.1 **Strategy**: Ensure flood information is effectively utilised, communicated and collected during and after a flood.

Actions:

a. Information relating to the consequences of flooding, response strategies, situational awareness and operational updates will be distributed by NSW SES to supporting emergency services and functional areas listed under this Plan.

b. All supporting emergency services, functional areas and Council will accurately record and report information relevant to their activities and any real time

flood information (including road closure information) to the NSW SES Incident Controller. This may be in the form of a combined Emergency Operations Centre (EOC) report, or direct from agencies where an EOC has not been established.

c. NSW SES may establish and operate a Joint Intelligence Unit to coordinate the collection, collation, interpretation, mapping, actioning and dissemination of information.

d. Reconnaissance, mapping, damage assessments, intelligence validation and post flood evaluation will be coordinated by NSW SES. This may occur post impact and continue into the recovery phase.

e. NSW SES may request Engineering to assist with the gathering of flood intelligence including (not limited to) maximum flood extents, peak flood heights, recording major flood damage at key high velocity locations and preparation of After-Flood Report.

5.3.2 **Strategy**: Ensure flood intelligence is incorporated into operational decision-making.

Action: NSW SES will use flood intelligence, official forecasts, warnings, and flood scenario products to undertake an assessment of the predicted impact of a flood and to inform operational decision-making.

5.4 PROVISION OF INFORMATION AND WARNINGS TO THE COMMUNITY

5.4.1 **Strategy**: Timely and effective warnings are distributed to the community.

Actions:

a. The Bureau issues public weather and flood warning products before and during a flood. These may include:

- Severe Thunderstorm Warnings – Detailed - issued for all capital cities and surrounding areas when individual severe thunderstorms are within range of the capital city radars.
- Severe Thunderstorm Warnings - Broad-based - issued for the entire Australian State or territories affected highlighting broad areas where severe storms may occur within the next 3 hours.
- Severe Weather Warnings with reference to heavy rainfall and/or storm surge.
- Flood Watches.
- Flood Warnings.

b. Dam Owners will utilise the Dam Emergency Plan to provide warnings and information to NSW SES and communities (where appropriate).

c. NSW SES Incident Controllers will issue the following NSW SES Flood Warnings aligning to the Australian Warning System:

- Advice.
- Watch And Act.

- Emergency Warning.

d. NSW SES liaises with the Bureau to discuss the development of flood warnings as required.

e. NSW SES provides alerts and deliver flood information to affected communities using a combination of public information.

f. NSW SES may request supporting agencies redistribute NSW SES alerts and information, including through the provision of doorknocking teams.

g. Road closure information will be provided to the community through the following agencies/methods:

- Local Government websites.
- Transport for NSW 'Live Traffic' website: https://www.livetraffic.com/ or 'Transport Info Line': 131 500. VMS messaging on roadways may also be used to advise motorists.

h. The Public Information and Inquiry Centre will be established by NSW Police Force where required to provide information regarding evacuees and emergency information. Contact details will be broadcast once the centre is established.

i. The Disaster Welfare Assistance Line will be established by Disaster Welfare Services where required to provide information on welfare services and assistance. Assistance line contact details will be broadcast once Disaster Welfare Services commence.

5.5 PROTECTION OF PROPERTY

5.5.1 **Strategy**: Coordinate the protection of property from destruction or damage arising from floods.

Action: NSW SES, supporting agencies, and community volunteers will assist the community (where resources are available, feasible and safe to do so) in:

a. The protection of properties including critical infrastructure through flood protection systems (e.g., sandbagging) to minimise entry of water into buildings.

b. The raising or moving of household furniture and commercial stock/equipment.

5.6 ROAD AND TRAFFIC CONTROL

5.6.1 **Strategy**: Coordinate the closing and re-opening of flood affected roads.

Actions:

a. Lachlan Shire Council will coordinate the closure and reopening of council managed roads once inspections have been carried out by the relevant authority.

b. Transport for NSW will coordinate the closure and reopening of the state road network.

c. NSW Police Force may close and re-open roads but will normally only do so (if the Lachlan Shire Council or Transport for NSW have not already acted and if public safety requires such action.

d. NSW SES will assist with erecting road closure signs and barriers when time and resources permit.

5.6.2 **Strategy**: Coordinate traffic control measures in flood affected areas.

a. The NSW SES Incident Controller may direct the imposition of traffic control measures into flood affected areas in accordance with the provisions of the *State Emergency Service Act, 1989* and the *State Emergency Rescue Management Act, 1989.*

b. The NSW SES Incident Controller may request the Local Emergency Operations Controller provide suitable personnel to assist with traffic coordination.

5.7 PROTECTION OF ESSENTIAL SERVICES

5.7.1 Arrangements for the protection of local assets are outlined in Volume 3 of this NSW SES local Flood Emergency Sub Plan. In addition, Local and Region EMPLAN's contain infrastructure inventories.

5.7.2 **Strategy**: Minimise disruption to the community by ensuring protection of infrastructure and supply of essential energy, utility services and lifelines.

Actions:

a. Transport Services Functional Area is to coordinate the provision of information about the assessment and restoration of transport network infrastructure.

b. Energy and Utility Services Functional Area is to coordinate the assessment and restoration of essential energy and utility services (not including telecommunications).

c. Telecommunications Services Functional Area is to coordinate the assessment and restoration of telecommunications and the Public Safety Network.

d. Engineering Services Functional Area is to:

- Coordinate the assessment and restoration of critical public buildings for example hospitals.
- Assessment and operation of flood protection levees.
- Protection of property.
- Construction and repair of levees.
- Dam safety assessment and dam stability.
- Water supply and sewerage operations.
- Other critical infrastructure.

e. Functional Areas and Council will keep NSW SES informed of the status of utilities and infrastructure.

5.8 EVACUATION

5.8.1 Evacuation is NSW SES's primary response strategy for managing the population at risk of flooding.

5.8.2 Community specific evacuation arrangements are located in Volume 3 of this Plan.

5.8.3 **Strategy**: Conduct planning to ensure all evacuation constraints are considered.

Actions:

a. Evacuations will take place when there is a risk to public safety. Circumstances may include:

- Evacuation of people when their homes or businesses are likely to flood.
- Evacuation of people who are unsuited to living in isolated circumstances, due to flood water closing access.
- Evacuation of people where essential energy and/or utility services are likely to fail or where buildings have been or may be made uninhabitable.

b. NSW SES will consider the following in evacuation decisions:

- Duration of evacuation.
- Characteristics of the community.
- Numbers requiring evacuation.
- Availability of evacuation routes and transport.
- The ability for existing levees or other flood protection works to fulfil their intended function.
- Time available for evacuation.
- Evacuee management requirements.
- Resources and delivery of evacuation information.
- Length of isolation.

c. NSW SES Incident Controllers, planning and intelligence officers will carefully consider the risks involved in conducting evacuations.

d. All evacuation decisions will be made as per the current NSW SES policies and procedures, and consistent with the NSW Evacuation Management Guidelines.

e. Potential Evacuation Centres are located in Volume 3/Local EMPLAN.

f. NSW Police Force will coordinate the provision of overall security for evacuated areas.

5.8.4 **Strategy**: Evacuate people pre-emptively from dangerous or potentially dangerous places and or locations created by the flood hazard to safe locations away from the hazard.

a. NSW SES will control and coordinate the evacuation of affected communities.

b. The NSW SES Commissioner (or delegate) will warn communities to prepare for a possible evacuation, where circumstances allow such lead time.

c. The NSW SES Commissioner (or delegate) will order any necessary evacuations and provide information to the community about when and how to evacuate.

d. Support to evacuation operations may be requested from other emergency services and supporting agencies using arrangements in the local EMPLAN and supporting plans.

e. Health Services Functional Area will coordinate the evacuation of hospitals, health centres and aged care facilities (including nursing homes) in consultation with NSW SES and Welfare Services.

f. School administration offices (Government and Private) will coordinate the evacuation of schools in consultation with NSW SES and Welfare Services, if not already closed.

g. Caravan Park proprietors will inform the NSW SES Incident Controller when caravan park evacuations have been completed.

h. People who are reluctant or refuse to comply with any Emergency Warning will be referred to NSW Police Force.

5.9 EVACUEE MANAGEMENT AND WELFARE

5.9.1 Research and experience in flood operations shows that most evacuees go to family, friends and commercial accommodation outside the impact area.

5.9.2 **Strategy**: Maintain the welfare of communities and individuals affected by the impact of a flood.

Actions:

a. NSW SES will provide initial welfare for evacuees where required but will hand the responsibility over to Welfare Services Functional Area as soon as possible. NSW SES will brief Welfare Services Functional Area at the earliest opportunity regarding the level of assistance required.

b. Welfare Services Functional Area will manage evacuation centres for affected residents and travellers in accordance with Welfare Services Functional Area Supporting Plan.

c. Schools Administration (Government and Private) will manage the safety of students directly affected by flooding and will work with NSW SES in the temporary closure of schools and will coordinate with NSW SES, Transport and Welfare Services in the management of school evacuees.

d. Disaster Victim Registration will be controlled and coordinated by NSW Police Force with the assistance of NSW SES and the Welfare Services Functional Area.

e. NSW SES will provide details of all residents assisted in evacuations to the Welfare Services Functional Area as early as possible.

f. Where the expected remaining number of evacuees and the duration of evacuation is assessed to be beyond the capability and capacity of the

established evacuation centre arrangements the SEOCON may establish Major Evacuation Centres or Mass Care facilities.

g. The decision to establish Major Evacuation Centres or Mass Care Facilities will be made by NSW SES and SEOCON in consultation with members of the State Emergency Management Committee.

5.9.3 **Strategy**: Coordinate available and accessible health services for flood affected communities.

Action: The provision of environmental health advice, assessment of public health risks and coordination of immediate mental health support will be provided by Health Services Functional Area.

5.9.4 **Strategy**: Maintain the welfare of animals impacted by a flood.

Actions:

a. Agriculture and Animal Services Functional Area will coordinate the welfare of livestock, pets, companion animals and wildlife including support to primary producers, animal holding establishments and community members.

b. Agriculture and Animal Services Functional Area role will coordinate the evacuation, emergency care of animals and assessment, humane destruction and disposal of affected animals, and supply of emergency fodder, water and aerial support where necessary.

5.10 FLOOD RESCUE

5.10.1 **Strategy**: Control and coordinate flood rescue of people and domestic animals.

Actions:

a. NSW SES will perform flood rescue, where training and equipment is suitable and where a risk assessment has indicated that the risk to rescuers is acceptable.

b. Flood rescue operations will be conducted in accordance with the State Rescue Board NSW State Rescue Policy which sets out the framework, governance, responsibilities and requirements for the management and conduct of flood rescue in NSW.

c. NSW SES may request other supporting emergency services to undertake flood rescues on behalf of NSW SES. Agencies must be authorised/accredited to undertake flood rescue operations in accordance with State Rescue Board requirements, as prescribed by NSW SES. Supporting emergency services must supply information regarding rescues performed to NSW SES. Notification arrangements with NSW Police Force are outlined in the State Rescue Board NSW State Rescue Policy.

d. Rescue agencies will conduct rescue of domestic small and large animals as per the State Rescue Board NSW State Rescue Policy (and may include Large Animal Rescue of family horses and cows at a residence or property). The rescue of livestock (which includes commercial animals found on farming and breeding enterprises) will be coordinated through Animal and Agriculture Services Functional Area.

5.11 RESUPPLY

5.11.1 **Strategy**: Coordinate resupply to towns and villages isolated by flooding to minimise disruption to the community.

Actions:

a. NSW SES will advise communities and businesses if flood predictions indicate that areas are likely to become isolated, and indicative timeframes where possible.

b. Retailers should be advised to ensure sufficient stock is available for the duration of the flood.

c. When isolation occurs, NSW SES will establish loading points where retailers can instruct suppliers to deliver goods.

d. NSW SES will endeavour to support the delivery of mail to isolated communities but may not be able to do so according to normal Australia Post timetables.

e. NSW SES will assist hospitals with resupply of linen and other consumables where able.

f. NSW SES may request resupply assistance from supporting agencies.

g. NSW SES may conduct resupply operations as per the designated resupply plan for the event.

h. Where additional supplies are required Engineering Services Functional Area be requested to coordinate the supply of goods and services in response to and recovery from the emergency.

5.11.2 **Strategy**: Coordinate resupply to rural properties isolated by flooding.

Actions:

a. When requested, NSW SES will establish a resupply schedule and coordinate the resupply for isolated rural properties.

b. NSW SES will provide local suppliers with designated loading points. Resupply items are to be packaged by the supplier.

c. Isolated households unable to afford resupply items will be referred to Welfare Services Functional Area for assistance.

5.12 RETURN

5.12.1 **Strategy**: Coordinate the safe return of communities to flood affected areas when the immediate danger to life and property has passed.

Actions:

a. The NSW SES Incident Controller will determine when it is safe to progressively return in consultation with the relevant Emergency Operations Controller and supporting agencies considering the ongoing risk to public safety.

b. The NSW SES Incident Controller will specify the level of access to affected communities as the following:

- Not suitable for access; or

- Limited access by emergency services and response agencies; or
- Limited access by residents and/or business operators; or
- Full access.

c. The NSW SES Incident Controller will issue an Advice Warning advising 'Reduced Threat: Return with Caution' when the immediate danger to life and property has passed for areas.

d. NSW SES will facilitate the return of evacuees to their homes.

5.13 END OF RESPONSE OPERATIONS

5.13.1 **Strategy**: Conclude response operations.

Actions:

a. Response operations will conclude when:

- There is a reduced likelihood of additional flooding within the Area of Operation and flood waters have receded.
- All requests for assistance related to the flood have been completed.
- The need for warning and evacuation no longer exists.
- There is no further likelihood of rescuing people.
- Resupply is no longer required (resupply operations may occur concurrently with the recovery phase).
- Response to fire and hazardous material incidents have concluded (not including subsequent clean-up of contaminated sites).
- All affected areas have had a 'Reduced Threat: Return with Caution' issued.

5.14 POST IMPACT ACTIONS

5.14.1 **Strategy**: Learnings from the event are used to inform recovery and future events.

Actions:

a. NSW SES will continue to engage with communities after significant floods through convening one or more community forums, workshops or other opportunities to provide communities a chance to provide feedback, address any concerns and provide input into the recovery process. These will typically include other agencies such as the Bureau, Welfare Services and Lachlan Shire Council representatives.

b. NSW SES will conduct After Action Reviews, at the conclusion of response operations, which will involve all stakeholders. Findings will be shared and incorporated into improved disaster resilience planning.

c. NSW SES will provide information and data throughout the emergency response to inform community recovery. A report will be developed at the

request of the SERCON at the conclusion of the response within an area. Should a response summary report be required it will include the following:

- The emergency action plan in place at conclusion of the response emphasising any continuing activities including community meetings/ engagement activities.
- Resources allocated to the emergency response and associated exit strategies.
- Details of any areas or situations with potential to re-escalate the emergency.
- A recommendation for the conclusion of NSW SES as lead agency to transition to NSW Reconstruction Authority as the lead agency for Recovery.
- Any actions that are incomplete or outstanding.
- Damage Assessment Data and Information obtained throughout the response phase which will further support the long-term recovery of communities.

d. NSW SES will undertake/coordinate a comprehensive review of intelligence and plans following significant flood events.

5.14.2 **Strategy:** Participate in post flood data collection analysis.

Actions: NSW SES works with relevant stakeholders and Lachlan Shire Council(s) on post flood data collection analysis including review of flood intelligence where necessary.

6 RECOVERY OPERATIONS

6.1 INTRODUCTION

6.1.1 Recovery is the process of returning an affected community to its proper level of functioning after an emergency. It will generally commence simultaneously with the Response phase.

6.1.2 Recovery operations will be initiated and conducted as outlined in the NSW State EMPLAN and as further detailed in the NSW Recovery Supporting Plan.

6.2 NSW SES RECOVERY ROLE

6.2.1 **Strategy**: NSW SES will support recovery operations and established Recovery Committees.

6.2.2 **Actions**:

a. NSW SES will provide representation to Recovery Committees as required and may have an ongoing role in the Recovery phase.

b. NSW SES roles on Recovery Committees may include providing information about any continuing response, guidance on mitigation strategies and general

advice and assistance to the committee as a subject matter specialist and/ or expert.

c. NSW SES will provide information to NSW Reconstruction Authority to support applications to Treasury for Natural Disaster Relief and Recovery Arrangements.

d. NSW SES, in conjunction with a Recovery Committee, will provide a service to support the information needs of a community immediately following a flood.

e. NSW SES and where required supporting agencies will assist with clean-up operations after floods, where possible when resources and personnel permit.

f. NSW SES may coordinate immediate relief in collaboration with SEOCON and SERCON.

7 ABBREVIATIONS

For a full list of abbreviations refer to the NSW State Flood Plan – Abbreviations.

8 GLOSSARY

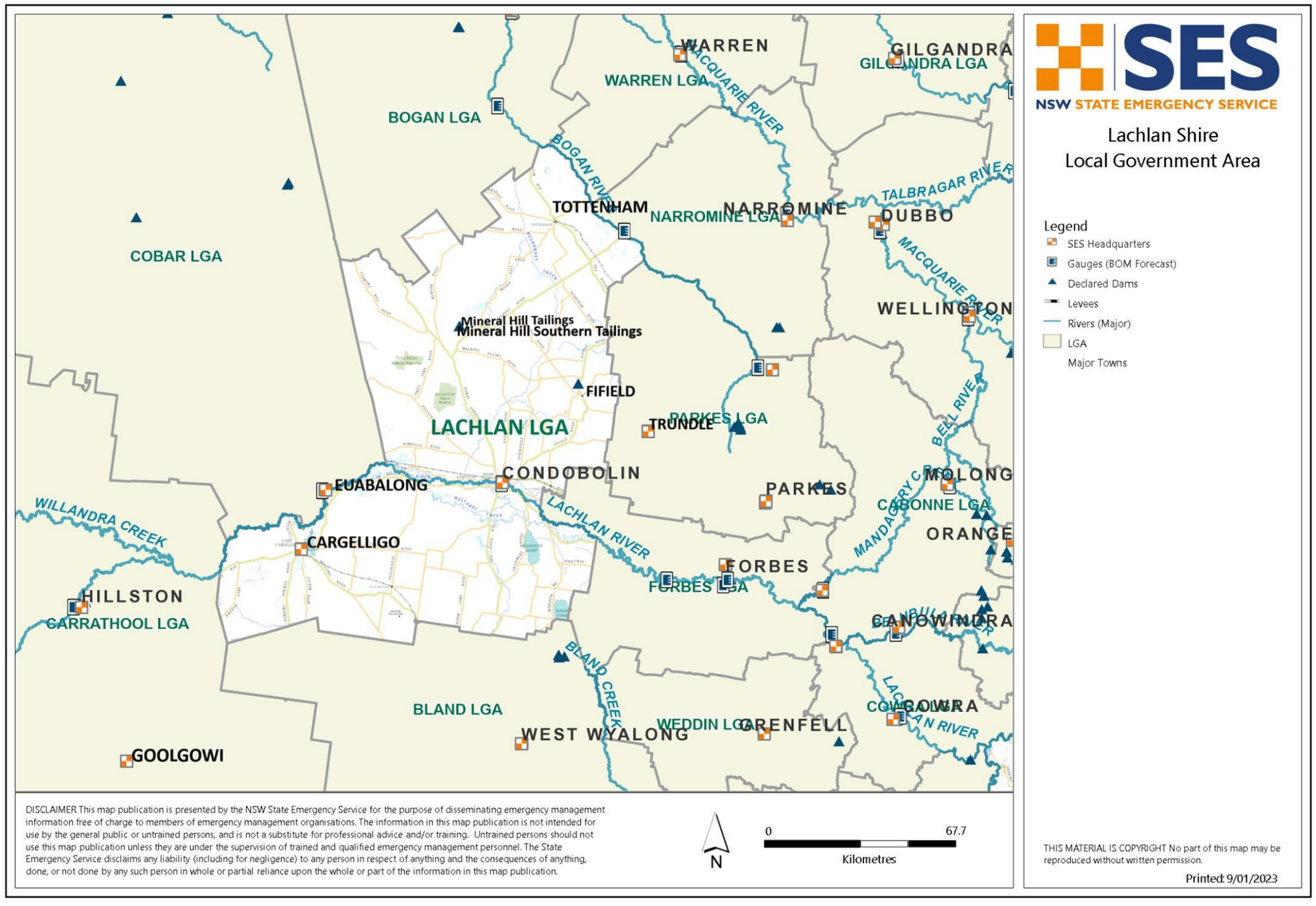
Common emergency service terminology can be found within the Australian Disaster Resilience Glossary.

Readers should refer to EMPLAN Annex 9 – Definitions.

Refer to the NSW State Flood Plan for a complete glossary of terminology used throughout this plan and within NSW SES Flood Plans.

For a full list of definitions refer to the Supporting Document - State Flood Plan Glossary https://www.ses.nsw.gov.au/media/2650/glossary.pdf

9 Appendix A – Map of Lachlan Shire Council Area



10 Appendix B – Roles and Responsibilities

AGENCY	RESPONSIBILITIES
NSW State Emergency Service	NSW SES is the designated Combat Agency for floods, storms and tsunami and controls response operations. NSW SES roles and responsibilities in relation to floods are outlined in the NSW State Flood Emergency Sub Plan.

AGENCY	RESPONSIBILITIES
Agriculture and Animal Services Functional Area	The roles and responsibilities for Agriculture and Animal Services are outlined in the Agriculture and Animal Services Supporting Plan and NSW State Flood Plan.
Australian Government Bureau of Meteorology	The roles and responsibilities for the Australian Government Bureau of Meteorology (Bureau) are outlined in the NSW State Flood Plan.
Caravan Park Proprietor(s)	• Prepare a flood emergency plan for the caravan park. • Ensure that owners and occupiers of movable dwellings are aware that the caravan park is flood liable by providing a written notice to occupiers taking up residence and displaying this notice and emergency management arrangement within the park. • Ensure that owners and occupiers of movable 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 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). • 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 movable dwelling (cabins) relocation. • Ensure that owners and occupiers of caravans are aware of what they must do to facilitate evacuation and movable dwelling relocation when flooding occurs. • Coordinate the evacuation of people and the relocation of movable dwellings when floods are rising and their return when flood waters have subsided. Movable dwellings will be relocated back to the caravan park(s) by owners or by vehicles and drivers arranged by the park managers.

AGENCY	RESPONSIBILITIES
	• Secure any movable dwellings that are not able to be relocated to prevent floatation. • Inform NSW SES of the progress of evacuation and/or movable dwellings relocation operations and of any need for assistance in the conduct of these tasks.
Childcare Centres and Preschools	• When notified of possible flooding or isolation, childcare centres and preschools should. – Liaise with 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 childcare centres.
Dams Safety NSW	The roles and responsibilities for Dams Safety NSW (formerly NSW Dam Safety Committee) are outlined in the NSW State Flood Plan.
Department of Defence	Arrangements for Defence Assistance to the Civil Community are detailed within the State EMPLAN (section 448).
Energy and Utilities Services Functional Area	The roles and responsibilities for Energy and Utilities Services are outlined in the Energy and Utility Services Supporting Plan (EUSPLAN). Roles and responsibilities in addition to the Supporting Plan are: • Assist NSW SES with identification of infrastructure at risk of flood damage where resources are available. • Facilitate local utility service distribution providers (electricity, gas, water, wastewater) to: – Provide advice to NSW SES of any need to disconnect power/gas/water/wastewater supplies or of any timetable for reconnection. – Advise NSW SES of any hazards from utility services during flooding and coastal erosion/inundation. – Advise the public regarding electrical hazards during flooding and coastal erosion/inundation, 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 / wastewater installations, when certified safe to do so and as conditions allow. – Assist NSW SES to identify infrastructure at risk of flooding for incorporation into planning and intelligence.
Engineering Services Functional Area	The roles and responsibilities for Engineering Services are outlined in the Engineering Services Supporting Plan and NSW State Flood Plan.

AGENCY	RESPONSIBILITIES
Environmental Services Functional Area	The roles and responsibilities for Environmental Services are outlined in the Environmental Services (ENVIROPLAN) Supporting Plan.
Floodplain Management Australia	The roles and responsibilities for Floodplain Management Australia are outlined in the NSW State Flood Plan**.**
Fire and Rescue NSW	The roles and responsibilities for Fire and Rescue NSW are outlined in the NSW State Flood Plan.
Forestry Corporation of NSW	The roles and responsibilities for Forestry Corporation of NSW are outlined in the NSW State Flood Plan.
Health Services Functional Area	The roles and responsibilities for Health Services are outlined in the Health Services (HEALTHPLAN) Supporting Plan and NSW State Flood Plan.
Lachlan Shire Council	**Preparedness** • Establish and maintain floodplain and coastal risk management committees and ensure that key agencies are represented. • Develop and implement floodplain risk management plans in accordance with the NSW Government's Flood Prone Land Policy and the Floodplain Risk Management Manual. • Provide levee studies, flood studies and floodplain management studies to NSW SES. • Maintain council-owned flood warning networks and flood mitigation works. • Participate in NSW SES-led flood emergency planning meetings, to assist in the preparation of Flood Sub Plans. • Maintain a plant and equipment resource list for the council area. • Contribute to community engagement activities. **Response** • Subject to the availability of council resources, assist NSW SES with flood operations including: – Traffic management on council managed roads. – Provision of assistance to NSW SES (plant, equipment and personnel where able and requested). – Property protection tasks including sandbagging. – Assist with the removal of caravans from caravan parks. – Warning and/or evacuation of residents and other people in flood liable areas. – Provision of back-up radio communications. – Resupply of isolated properties. – Technical advice on the impacts of flooding.

AGENCY	RESPONSIBILITIES
	– Close and reopen council roads (and other roads nominated by agreement with Transport for NSW) and advise NSW SES, NSW Police Force and people who contact the council for road information. – Assist NSW SES to provide filled sandbags and filling facilities to residents and business in areas which flooding is expected. • Assist with making facilities available for domestic pets and companion animals of evacuees during evacuations. • Operate flood mitigation works including critical structures such as detention basins and levees and advise NSW SES regarding their operation. • Manage and protect council-owned infrastructure facilities during floods. • Provide advice to NSW SES and the Health Services Functional Area during floods about key council managed infrastructure such as sewerage treatment and water supply. • Advise the Environmental Protection Authority of any sewerage overflow caused by flooding. • Work with NSW SES and NSW Department of Planning and Environment to collect flood related data during and after flood events. **Recovery** • Provide for the management of health hazards associated with flooding including removing debris and waste. • Ensure premises are fit and safe for reoccupation and assess any need for demolition. • Provide services, assistance and advice to State Government in accordance with the State Recovery Plan.
Local Emergency Operations Controller (LEOCON)	• Monitor flood operations. • If requested, coordinate support for the NSW SES Incident Controller.
Local Emergency Management Officer (LEMO)	• If requested by the NSW SES Incident Controller, advise appropriate agencies and officers of the start of response operations.
Manly Hydraulics Laboratory (MHL)	The roles and responsibilities for Manly Hydraulic Laboratory are outlined in the NSW State Flood Plan.
Marine Rescue NSW	The roles and responsibilities for Marine Rescue NSW are outlined in the NSW State Flood Plan.
NSW Ambulance	The roles and responsibilities for NSW Ambulance are outlined in the Health Services (HEALTHPLAN) Supporting Plan and NSW State Flood Plan.

AGENCY	RESPONSIBILITIES
NSW Department of Education, Association of Independent Schools of NSW, and National Catholic Education Commission	The roles and responsibilities for NSW Department of Education, Association of Independent Schools of NSW, and National Catholic Education Commission are outlined in the NSW State Flood Plan.
NSW Department of Planning and Environment (Environment and Heritage Group)	The roles and responsibilities for NSW Department of Planning and Environment (Environment and Heritage Group) are outlined in the NSW State Flood Plan (referred to as DPIE EES).
NSW Department of Planning and Environment (Water)	The roles and responsibilities for NSW Department of Planning and Environment (Water) are outlined in the NSW State Flood Plan.
NSW Food Authority	The roles and responsibilities for NSW Food Authority are outlined in the Food Safety Emergency Sub Plan.
NSW National Parks and Wildlife Services	The roles and responsibilities for NSW National Parks and Wildlife Services are outlined in the NSW State Flood Plan.
NSW Police Force	The roles and responsibilities for NSW Police Force are outlined in the NSW State Flood Plan.
NSW Reconstruction Authority	The roles and responsibilities for NSW Reconstruction Authority are outlined in the NSW State Flood Plan.
NSW Rural Fire Service	The roles and responsibilities for NSW Rural Fire Service are outlined in the NSW State Flood Plan.
Owners of Declared Dams within or upstream of the LGA	The roles and responsibilities for Owners of Declared Dams are outlined in the NSW State Flood Plan.
Public Information Services Functional Area	The roles and responsibilities for Public Information Services are outlined in the Public Information Services Supporting Plan and NSW State Flood. Plan**.**
SEOCON/SEOC	The roles and responsibilities for the SEOCON/SEOC are outlined in the NSW State Flood Plan**.**
Surf Life Saving NSW	The roles and responsibilities for Surf Life Saving NSW are outlined in the NSW State Flood Plan.
Telecommunications Services Functional Area	The roles and responsibilities for Telecommunications Services are outlined in the Telecommunications Services (TELCOPLAN) Supporting Plan.
Transport for NSW	• Transport for NSW coordinates information on road conditions for emergency services access.

AGENCY	RESPONSIBILITIES
	• Transport for NSW coordinates the management of the road network across all modes of transport. • Transport for NSW in conjunction will assist NSW SES with the evacuation of at-risk communities by maintaining access and egress routes. • Assist NSW SES with the communication of flood warnings and information provision to the public through Live Traffic and Social Media according to the VMS protocols and procedures. • Assist NSW SES with identification of road infrastructure at risk of flooding.
Transport Services Functional Area	The roles and responsibilities for Transport Services are outlined in the Transport Services Functional Area Supporting Plan and NSW State Flood Plan.
VRA Rescue NSW	The roles and responsibilities for VRA Rescue NSW are outlined in the NSW State Flood Plan.
Water NSW	The roles and responsibilities for Water NSW are outlined in the NSW State Flood Plan.
Welfare Services Functional Area	The roles and responsibilities for Welfare Services are outlined in the Welfare Services Functional Area Supporting Plan and NSW State Flood Plan.

11 Appendix C – Community Specific Roles and Responsibilities

Community Members	**Preparedness** • Understand the potential risk and impact of flooding. • Prepare homes and property to reduce the impact of flooding. • Understand warnings and other triggers for action and the safest actions to take in a flood. • Households, institutions and businesses develop plans to manage flood risks, sharing and practicing this with family, friends, employees and neighbours. • Have an emergency kit. • Be involved in local emergency planning processes. **Recovery** • Assist with community clean-up if required and able to do so. • Participate in After Action Reviews if required.
Private Companies or other Organisations	• Assist with the provision of; - Excavator for sand and rescues - Equipment and Service, 11 May Street Condobolin 2877 NSW. Ph: (02) 6895 4222. - Excavator for sand and rescues - Ross Brothers Excavations, 1 Goobang Street, Condobolin 2877 NSW. Ph: (02) 6895 2785. - Forklift supply, equipment repair, supply personnel for flood protection - Kiss J&E M General & Precision Engineering, 15 Bathurst Street, Condobolin 2877 NSW. - Food supplies - Chamen's SUPA IGA 56-62 Bathurst Street, Condobolin, 2877 NSW. Ph: (02) 6895 2055. - Pharmacy resupply - Shortis & Timmins, 75-81 Bathurst Street, Condobolin 2877 NSW. Ph: (02) 6895 2477. - Mail and parcel delivery - Australia Post, 33 Bathurst Street, Condobolin 2877 NSW. Ph: (02) 6895 2750. - Hi Lift Pump - Maspro Engineering, Lot 3/28 Burnett Street, Condobolin 2877 NSW. Ph: (02) 6895.
Aboriginal Organisations or Groups	• Act as the point of contact between NSW SES and the Willow Bend and Wiradjuri community. • Inform the NSW SES Incident Controller about flood conditions and response. • Disseminate flood information, including flood and evacuation warnings. - Condobolin Local Aboriginal Land Council, 137 Bathurst Street, Condobolin 2877 NSW. Ph: (02) 6895 4418. - Murrin Bridge, Level 165 Church Street Dubbo NSW 2830. Ph: (02) 5852 1000. - Willow Bend Community, Louise Davis. Ph: 0456 808 481.

Communication	• Condobolin NSW SES Facebook Page. • Condobolin Argus.
Community Assistance Groups	• Supply of food and filled sandbags. Rapid Relief Australia.

NSW STATE EMERGENCY SERVICE

HAZARD AND RISK IN LACHLAN SHIRE

Volume 2 of the Lachlan Shire Local Flood Plan

Last Update: September 2018

FloodSafe

AUTHORISATION

The Hazard and Risk in Lachlan 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

NSW SES Lachlan Region Controller

Date: 11 September 2018

Tabled at LEMC 6 November 2018

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VERSION LIST

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

Description	Date
Lachlan Shire Local Flood Plan – Annexes A and B	March 2011

AMENDMENT LIST

Suggestions for amendments to this Volume should be forwarded to:

The Lachlan Shire Local Controller

NSW State Emergency Service

55 Matthews Street, PARKES NSW 2870

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

a. The Lachlan valley covers an area of 84,700 km^2 and stretches westward from the Great Dividing Range for 560 km as a long narrow basin. The most usual set of meteorological conditions causing floods in the valley are a series of well-developed troughs (associated with southern depressions) crossing the region and causing high autumn and winter rainfalls (1).

b. The Lachlan Shire Council Local Government Area (LGA) is located within the Murray Darling Basin. The Shire covers two sub-catchments. The largest part of the Shire lies in the Lachlan River Catchment and the remainder lies within the Bogan Catchment. The Lachlan River is not a major tributary of the Murray Darling as the river terminates in the Great Gumbung Swamp and it is only in flood when the river flows into the Murrumbidgee River. The Lachlan River itself is only intermittently connected to the Murrumbidgee River when both rivers are in flood (2). The northern part of the LGA lies in the Bogan Catchment, which flows into the Macquarie River which then flows into the Darling.

1.2 LANDFORMS AND RIVER SYSTEMS

Lachlan River Valley upstream of Condobolin

a. The Lachlan River Valley is located in the central western region of New South Wales, lying between the Macquarie and Murrumbidgee River Valleys. The valley covers an area of 84,700 km^2 as a long and narrow basin. The Lachlan River rises on the Breadalbane Plain to the east of Gunning and flows initially westwards. Near Gunning, the river veers northwards for some 120 km until it is joined by a major tributary, the Crookwell River, which rises near Crookwell in the south-east of the valley. The river then flows northward for about 64 km before entering the storage of Wyangala Dam. Another major tributary, the Abercrombie River, enters the Wyangala storage after draining rugged sections of the Divide in the east of the valley (2).

b. Below Wyangala Dam, the Lachlan River veers north-west. It is joined from the south by Hovell's Creek and the Boorowa River before it reaches Cowra. Downstream of Cowra the river enters a broadening valley and is met by two major tributaries, the Belubula River and Mandagery Creek, both of which drain the high country along the northern boundary. All of the principal tributaries drain the undulating and mountainous section of the valley and join the main river before Forbes. Belubula River can add significant flows into the Lachlan River in the vicinity of Gooloogong (2).

c. The river then flows to Forbes and assumes a more westerly course to Condobolin. On this reach the course is characterised by extensive meanders, anabranches and swampy depressions. South of this section is Lake Cowal which is fed by a catchment of about 9,800 square kilometres which, during wet years, fills and overflows down its escape to the Lachlan and branch system (2).

d. Lake Cowal is a natural depression of around 145 square kilometres, situated approximately 60 kilometres west of Forbes and 32 kilometres south of the Lachlan River. It is comprised of a larger southern section and shallower northern section known as Nerang Cowal. Lake Cowal is fed from the south by Bland Creek and its' tributaries. During floods, floodwater escapes the Lachlan River immediately downstream of Jemalong Gap and flows west to enter Nerang Cowal (2).

e. Manna Creek drains Lake Cowal to the north into Bogandillon Swamp, then Bogandillon, Willamundry and Wallaroi Creeks before entering the Lachlan River near Kiacatoo (2).

f. The Jemalong and Corradgery Mountain Ranges, about 24 km west of Forbes, are a natural obstruction to flood flows. Flood waters from a wide area upstream are concentrated to pass through the Jemalong Gap which is only a kilometre wide. In very large floods some water also passes through Gunning Gap (a break in the Corradgery Range north of Jemalong Gap) and then flows through the Goobang Creek system (which rises near Parkes) and back into the Lachlan River at Condobolin (3).

Goobang Creek

g. Goobang Creek rises to the north east of Parkes then flows generally west and to the north of the Lachlan River. The area between Goobang Creek and the Lachlan River west of Bogan Gate consists of depressions, billabongs and anabranches which fill during floods and eventually channel water towards Goobang Creek and then back to the Lachlan River near Condobolin (1).

Condobolin and Downstream

h. In the Condobolin area and downstream to below Lake Cargelligo is a complex network of anabranches and floodways. To the south they include the Wallamundry, Nerathong and Wallaroi Creeks (from Lake Cowal) which flow generally west and to the south of the Lachlan River. All flood waters carried by these creeks eventually re-join the Lachlan River above Goobothery Ridge about 27 km west of Condobolin.

i. Flood waters west of the Jemalong Gap can cover an area up to 25 km wide from Condobolin as far south as Banar Swamp. The Banar Swamp is usually filled from the north and north-east by Yanal Creek, however water may also flow into it from the south through the Humbug Creek (1).

j. Out of the plains to the west of Condobolin most of the creeks leave the main river and never re-join. The most notable of these is Willandra Creek, which terminates in a series of lakes and swamps. In this stretch there are also a number of riverside lakes, including Lake Cargelligo and Lake Brewster. These are controlled storages through the use of weirs, cuttings and regulators (2).

k. Lake Cargelligo is comprised of Sheet Water, Curlew Water and Lake Cargelligo itself, interconnected by the construction of channels. These can be filled by the diversion of water from the Lachlan River 13 km north-east of the town Lake Cargelligo. Lake Creek drains this system joining with the Lachlan River 18 km downstream of the diversion weir (2).

l. About 60 km downstream from Condobolin the river turns south westerly and flows through flat country for about 800 km before joining the Murrumbidgee River approximately 35 km downstream of Maude (2).

1.3 STORAGE DAMS

a. Dam locations are shown on the Lachlan River Basin Map.

b. There are two prescribed dams located within the Lachlan Shire LGA:

   i. Triako Tailings owned by Kimberley Metals Limited - located on Yarra Yarra Creek near Mineral Hill, 65 km northwest of Condobolin. There are no known consequences of failure.

   ii. Flow in the Lachlan River is also heavily dependent on releases from Wyangala Dam, with a travel time of around 9-10 days from the dam to Condobolin.

1.4 WEATHER SYSTEMS AND FLOODING

a. High monthly rainfalls over the Lachlan catchment are usually generated from either of two meteorological conditions. In spring and summer, heavy falls occur over the upper catchment areas when a depression forms to the north of the valley. These depressions result in a moist northerly airstream west of the Divide, usually forming in a trough extending from the north of the continent southwards. In the vicinity of the depression intense short-period rainfalls may occur (1).

b. The most usual set of meteorological conditions causing floods in the valley are a series of well-developed troughs (associated with southern depressions) crossing the region and causing high autumn and winter rainfalls (1).

c. It is the latter of the above two meteorological conditions that usually has greater influence on flooding within the Lachlan Valley. By nature of its direction of movement, from west to east, the depression usually results in significant rainfall over the entire valley, saturating the downstream catchments and creating increased

river flows before the occurrence of the intense rainfall over the upper catchment areas. As a result the Lachlan River, and its tributaries, will be already experiencing substantially higher flows when the discharges from the upper catchments pass through Wyangala Dam (3).

d. The movement of the storm centre in relation to the stream network, together with the velocities of the peaks travelling down the streams, affect the arrival times of the peaks and their contributions to the flood peak in the Lachlan' River. For example, a storm moving northwards through the headwater region can result in flood peaks from the upper Lachlan and Boorowa Rivers arriving at Gooloogong simultaneously with the peak from the Belubula River. However, for more common storm tracks, moving from west to east, and also for general rainfall over the catchments, the Belubula and Mandagery flood peaks pass into the main river some time before those from the headwaters arrive. The time separation of peak flows is widest when catchments are dry and when there is storage space available in the dam. Separation tends to disappear when rainfall intensity increases slowly across the main catchment in a north westerly direction, when the catchments are very wet and when Wyangala Dam is near full (2).

1.5 CHARACTERISTICS OF FLOODING

Flood behaviour Jemalong Gap to Condobolin

a. Refer to Forbes Local Flood Plan for upstream of Jemalong Gap.

b. Flow patterns on the Lachlan River floodplain are complex, particularly during large flood events. Each flood is different in terms of rainfall pattern, volume and distribution and roughness of the floodplain etc.

c. Flood runoff from the Lachlan River flows through Jemalong Gap and continues west to Condobolin via a braided network of channels and floodways. Jemalong Gap is about 1 km in width. Most flood flows have to pass through this constriction. For the largest floods, a small proportion of the flow is diverted via Little Plain to Gunning Gap, about 9 km to the north. Flood flows “pond” upstream of these gaps, attenuating downstream flood peaks and prolonging the duration of inundation (4).

d. In the June 1952 flood the peak discharge at the Jemalong Weir gauging station was 2600 m^3/s. Due to downstream floodplain storage and the escape of flows from the Lachlan River channel to the anabranches to the south, the peak flow at the Condobolin gauge which also includes contributions from Goobang Creek was 550 m^3/s. This reduction in flood peaks is typical for major flood events in the Lachlan Valley downstream of Jemalong Gap (4).

e. Downstream of Jemalong Gap, floodwaters spread over a wide area again. Approximately 20 km downstream of Jemalong Gap, the Lachlan River divides into

two waterways: the Lachlan River channel and the Island Creek anabranch. Island Creek runs parallel with the Lachlan River for approximately 20 km, before re-joining the channel about 25 km upstream of Condobolin. It is actually larger than the main Lachlan River channel to its north (4).

f. Wallamundry Creek is fed by water from Lake Cowal via Bogandillon Swamp. In the vicinity of Condobolin, Wallamundry Creek runs parallel with the Lachlan River, but approximately 10 km to the south and joins the Lachlan River at Kiacatoo via Wallaroi Creek – which also collects inflows from Humbug Creek to the south toward Ungarie (5).

g. To the south, Bland Creek, which is a significant tributary of the Lachlan River, flows North West into Lake Cowal. As Lake Cowal fills, it spills north into Nerang Cowal, then Manna Creek and Bogandillon Creek to Bogandillon Swamp, and then into the braided creek system including Wallamundry Creek, Nerathong Creek, Wallaroi Creek and Duckholes Creek ('The Duckholes') (1). These creeks converge about 15 km southwest of Condobolin. When these creeks flood, water flows into Banar Swamp ('Banar Lake') and back into Wallaroi Creek. Eventually Wallaroi Creek flows into the Lachlan River, near Goobothery Ridge around 27 km west of Condobolin. In floods, this results in a large amount of water moving north and west over rural land toward Condobolin and downstream, impacting Euabalong and Lake Cargelligo and causes access issues in the area (4).

h. The Humbug Creek travels from the Ungarie area (in the Bland Shire LGA), northward paralleling The Gipps Way and flows in Banar Swamp, then Wallaroi Creek to the Lachlan River as above. This creek is ungauged and subject to different rainfall systems to the Lachlan River floods, but can exacerbate flooding in the Lake Cowal system, south of Condobolin. This particularly affects Lake Cargelligo Road (alternative routes available) (5).

i. To the east of Condobolin, Goobang Creek flows westwards, parallel with the Lachlan River and eventually joins the river at Condobolin, approximately 1 km east of the gauge (4). This creek system can be fed from water leaving the Lachlan River upstream near Jemalong, and can result in more extensive flooding of rural areas, particularly the North Forbes Road area, as occurred in 2016, with reduced flows in the Lachlan River itself (5). The Goobang Creek can also break south into the Lachlan River at several locations to the east of Condobolin (5).

j. Breakouts occur below Jemalong Gap and traverse a broad 11 km. These breakouts can carry more than 62 000 megalitres but are shallow, passing through the Jemalong Irrigation District merging at the Wilbertroy State Forest toward the south end of Lake Cowal.

i. "17 Mile breakout" towards Lake Cowal, to the south-west of the Lachlan River. At this location a spillway exists within a rural levee (height of 0.15 m), and can result in the closure of Carrawandool Road (in Forbes Shire LGA).

ii. The "21 Mile breakout" (aka "Kennedy's Breakout") at Cadow Channel east of Warroo, which commences flow at around 7.31 m at Jemalong Weir (6). This flow travels westward towards Bogandillon Swamp and Manna Creek, paralleling Lachlan Valley Way impacting rural areas in the Driftway Road and Diggers Road area (5).

iii. Other breakouts include the Cadow Escape near Jemalong Farm and overflow to the Island Creek Offtake between Warroo and Fairholme where it crosses Lachlan Valley Way (South Condobolin Road) and eventually re-joins the Lachlan River 16 km east of Condobolin (6) (2).

iv. Floodwater from the Lachlan River can travel northward across the Lachlan Valley Way between Forbes and Jemalong as well as between Jemalong and Bedgerabong and feed into the Goobang Creek System, which eventually re-joins the Lachlan River again to the east of Condobolin and can be a significant cause of flooding in the area. This system is also fed from the north and north east, including Yarrabandai, Gunningbland, Crooked, Hartleys and Billabong Creek systems (7).

k. The waterway area of the Lachlan River channel tends to decrease in size progressively downstream. In the lower Lachlan, gradients are small, approximately 1 in 4,000, and the resulting flow velocities are low. In this area, the capacity of the main channel is small and the adjacent floodplain tends to carry an increasingly large proportion of flows, as floods move downstream toward Condobolin (4).

Flood behaviour in the Condobolin area

l. The town of Condobolin is situated on high ground on the northern bank of the Lachlan River and is mostly flood free. The main impacts of flooding are inundation of agricultural land on the floodplain and dwellings on the outskirts of town and frequent closure of local and main roads (1).

m. In major floods, floodwaters are reported to spread out about 20 km across the floodplain to the south, with all roads being cut for approximately several weeks to several months (in 1952, 1990 and 2016 up to 6 months). Adequate warning of major floods is available, as flood peaks take approximately 8 days to travel from Forbes. Floods remain at around peak level for about several days and then take several weeks to recede (1).

n. The Goobang Creek can cause severe flooding from inflows north of the Ootha-Bogan Gate section of the Condobolin-Parkes road. This water comes from the Trundle, Peak Hill and Fifield areas. There are no facilities to gauge and predict the

extent of flooding from this source. These flood waters may be carried by the Goobang Creek. The peak from this flooding can be expected to arrive at Condobolin before the Lachlan River peak reaches Condobolin (1).

o. As mentioned, the rural floodways were designed to contain a flood with peak levels equal to the August 1990 event (7.36 m), however the heights and alignment of these are variable and impacted by rural levees. At Condobolin the August 1990 flood was only marginally below the June 1952 event in terms of peak flood level. Consequently, it appears likely that the floodway system will protect the leveed areas of the floodplain and influence over flow paths for major floods (1).

p. The Willow Bend Aboriginal Settlement (population approximately 50) is located on the south bank of the Lachlan River opposite the Goobang Creek junction at Condobolin. In 1952 (7.37 m) 0.45 m of floodwater covered the area and in 1974 it was inundated to a depth of 0.2 m over the land but not in the houses. Evacuations occurred on both occasions. The settlement is now protected by a levee, however deficiencies have been identified (refer to Part 2 - specific risk areas). In 2016 (7.1 m), the levee did not overtop or breach. The Willow Bend Settlement may be isolated from Condobolin by major levels of flooding (1).

Flood behaviour downstream of Condobolin (including Euabalong in Cobar Shire, Far West NSW SES Region)

q. In the Condobolin area and downstream to below Lake Cargelligo is another complex network of anabranches and floodways. The wide floodplain to the south of Condobolin is channelled into a narrow section of the Lachlan River near Kiacatoo. Downstream of Kiacatoo it then branches out once again. To the south the anabranches include the Wallamundry, Nerathong and Wallaroi Creeks. All flood waters carried by these systems eventually re-join the Lachlan River above Kiacatoo bridge (5).

r. West of Kiacatoo, the Lachlan River breaks north towards Bimbella Road, across Kiacatoo Road (closing the secondary access between Condobolin and Euabalong/Lake Cargelligo), backflowing up Kalingalungagy Creek (5).

s. The Booberoi Creek system flows from the Lachlan River at Booberoi Weir (controlled flow). This system re-joins the Lachlan River about 15 kilometres northwest of Lake Cargelligo, downstream of Euabalong (1).

t. Water from the inlet to the outlet channel at Lake Cargelligo Weir can become uncontrolled in a flood, moving overland south into Lake Cargelligo as a large sheet of water (8).

u. Much of the rural land downstream of Condobolin is located on the floodplain. Roads are affected and the approaches to the bridge over the Lachlan River at Kiacatoo and Euabalong as well as bridges over the Wallaroi Creek and Nerathong

Creek may become inundated from flood waters (2). Flooding can affect the access of some landholders to properties adjacent to the river at minor flood level (1).

v. The Murrin Bridge Aboriginal Settlement may become affected by floodwater and may become isolated during severe flood events. Upgrade of culverts, road and the bridge have occurred and should be monitored in future events to ascertain the extent of flooding on the Murrin Bridge Settlement (1). In 2016, the water level had several metres until it the bridge and culverts were to be overtopped. The road in and out of Murrin Bridge is still liable to flooding. Historically the local traffic may bypass the main roads along higher ground to avoid floodwater (8).

w. Euabalong can become isolated in moderate to major flooding. In 1974 the village of Euabalong became isolated for a number of days. During the 1990 (7.43 metres) flood the village of Euabalong became isolated by road for a number of weeks (1). In 2016 (7.1 m), there was shallow water over the majority of the roads. In a severe flood, some low-lying buildings are threatened. One property (with a temporary dwelling) was inundated in 2016, located outside the levee on Murrin Street, adjacent to the Lachlan River (5).

x. Flooding generally dissipates as it travels downstream, however the townships such as Euabalong can become isolated for a few weeks in severe floods (2). Floodwater can travel south from Euabalong across Eribendery Plains (the swampy area) to the west, and flood Lachlan Valley Way between Euabalong and Murrin Bridge and flows back into the Lachlan River near Murrin Bridge. It takes approximately two weeks for this area to fill and cross the Lachlan Valley Way (8). The Lachlan Valley Way can also be flooded east of Euabalong.

y. Approximate travel time between locations on the Lachlan River are summarised in table 1.

Table 1: Approximate travel times along the Lachlan River, highly variable depending on overbank flow conditions and magnitudes of flooding (2)

Section of river	Travel time
Wyangala - Cowra	6 hours
Cowra - Gooloogong	0.5-1 day
Gooloogong - Forbes	1-2 days
Forbes – Jemalong Gap	2 days
Jemalong Gap – Condobolin	6 days
Condobolin - Euabalong	8 days

1.6 FLOOD HISTORY

a. Flooding from the Lachlan River is fairly predictable as to height and timing of the peak. A typical flood will remain at around the peak level for about two days and then take 7 to 10 days to subside (1).

b. Flood level records commenced at the Condobolin gauge in 1894 (4). Major floods at Condobolin and Euabalong are summarised in Figure 1 and 2.

c. Major flooding generally occurs between April and November, however floods were recorded in December 2010 and March 2012, peaking at Condobolin at 6.675 m in 2012. These floods also reached 1.65 and 2.52 m respectively on the Goobang Creek gauge in Condobolin, and resulted in only rural isolations (9). These floods were a result of recurrent storms in 2010 and widespread, heavy and persistent rainfall in 2012 (9).

d. The 1952 flood reached a peak of 7.37 m on the town gauge. Floodwaters are reported to have entered about nine buildings including several residences, the shire depot and the exhibition hall at the showground. The August 1990 flood reached a similar height of 7.36 m (10).

e. Flooding in the Lachlan Valley between 1974 and 1976 resulted in major production losses and disruption within the valley (2).

f. In 2016, the Lachlan River at Condobolin reached 7.1 m (7.15 m on the manual gauge and approximately 2.25 m at Lake Cargelligo Weir and 176.8% storage level at Lake Cargelligo). Goobang Creek carried a significant portion of the Lachlan River downstream from Jemalong. This brought high flows southward from Goobang Creek across the North Forbes Road upstream of the normal confluence. This caused water from the Lachlan River to move across Lachlan Valley Way, to The Gipps Way, Murie Creek and eventually Nerathong Creek and then flowing back into the Lachlan River, bypassed the Condobolin gauge. Floodwater bypassing the gauge via the showground and Diggers Avenue, with reports from local residents stating that flooding occurred in different locations both above and below the 1990 flood level.

g. A temporary levee was built along Lachlan Street in town during this event but required ongoing maintenance due to seepage. An emergency diversion was made down Denison Street to divert storm water around the levee. A levee was erected along the footpath in 2012 due to historical inundation but there was still some minor inundations so the levee was placed along the road minimised these impacts.

h. Six residential properties were flooded, seven commercial premises, 11 rural buildings and a substantial amount of farmland to the east and west of the town was damaged. These were in: Bathurst Street, North Forbes Road, Lachlan Valley Way, Selems Road, Turners Road and Diggers Avenue Condobolin.

i. Approximately 80 dwellings were isolated for several weeks. 142 flood related requests for assistance were received for Condobolin, mostly sandbag requests. More than 55 local roads and several regional roads were flooded across the LGA with flood depths exceeding 30 centimetres in most locations these roads were cut. Regional roads cut were The Gipps Way, Diggers Avenue, Dandaloo Road, Lachlan Valley Way (South Forbes Road), Kiacatoo Road and Lake Cargelligo Road. The

Willow Bend community on Willow Bend (Mission) Road was evacuated due to the levee condition. Other areas issued with evacuated orders were (specific details outlined in flood intelligence card):

i. Riverside Caravan Park

ii. Lachlan Valley Way, east of Condobolin

iii. Officers Parade, north and west of Graf Street

iv. Lachlan Street between William Street and Denison Street

v. Southern side of Bathurst Street between Denison Street and Gordon Street

vi. Lachlan Valley Way and Kiacatoo Road to the west of Condobolin

vii. Molong Street between Mooney Street and Goobang Bridge

viii. North Forbes Road and Waitohi Lane (around 20 properties)

j. Additional rural properties were impacted south of Condobolin by ungauged flood waters from Lake Cowal. These properties were not issued with an evacuation order but advice was provided. Some residents self-evacuated from properties on Hopes Road near Bogandillon Creek, Selems Road and Turners road along Nerathong Creek. These residents were unable to return to their properties until January 2017, access to larger flood areas restricted for months (5).

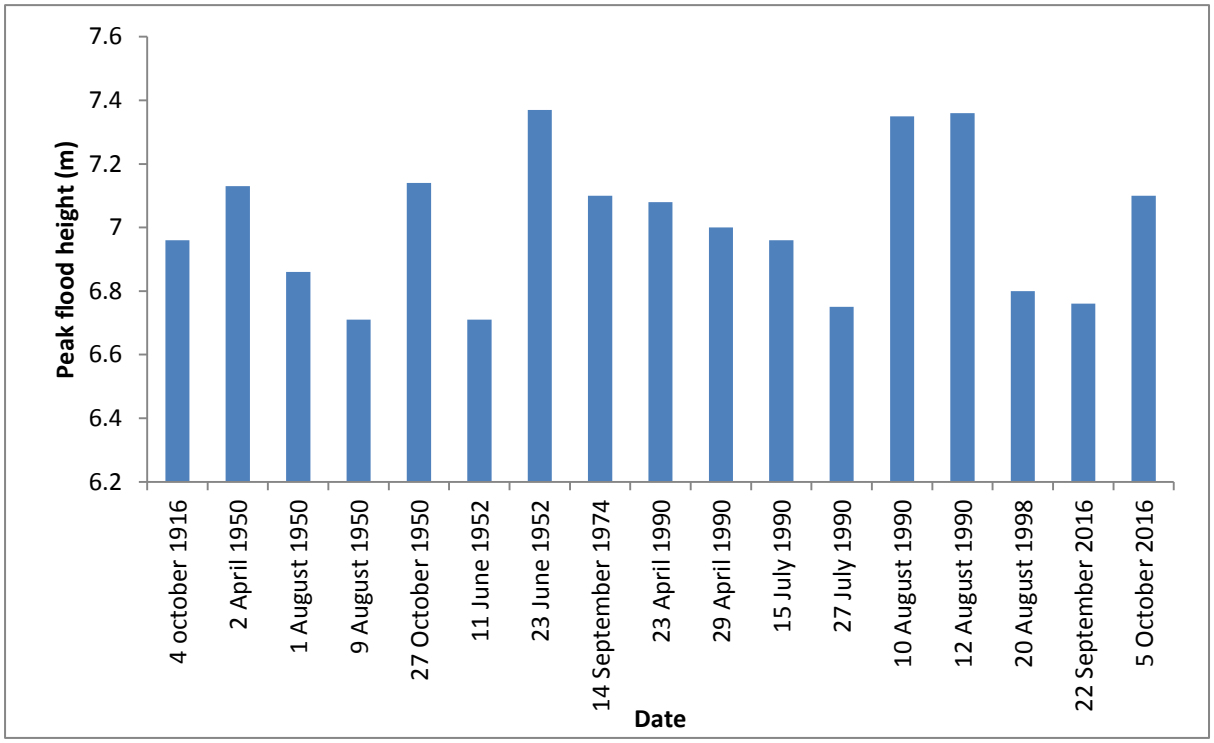


Figure 1: Flood History from Condobolin Gauge (412006) – Floods above Major (6.7 m)

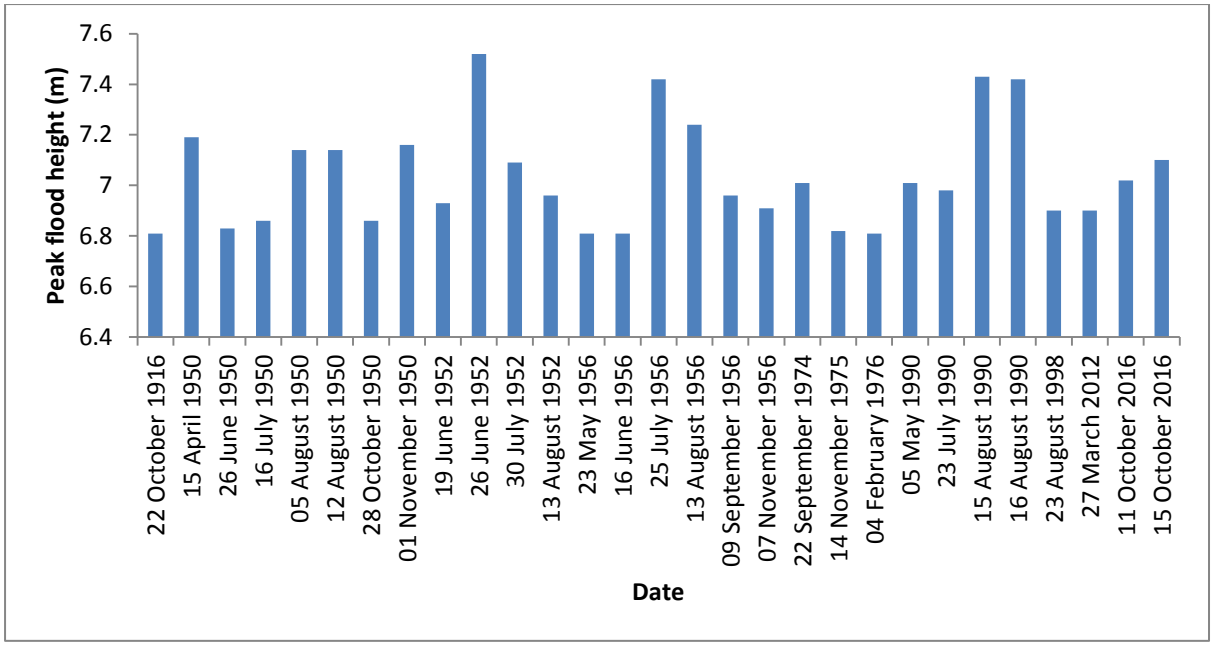


Figure 2: Flood History from Euabalong Gauge (412903) – Floods above Major (6.8 m)

1.7 FLOOD MITIGATION SYSTEMS

a. There is a series of rural levees, particularly to the south-east of Condobolin, protecting the areas to around a 1990 flood level (7.36 m at Condobolin) and creates defined floodways. This includes a significant rural levee to the north of Lake Cargelligo and south of Euabalong, on the western bank of the Lachlan River – which pushes water to the eastern side of the river and down towards the lake system of Lake Cargelligo (8).

b. There is one *urban* levee within the Lachlan Shire LGA (further described within Part 2 - Specific Risk Areas):

   i. Willow Bend (Mission) Road Levee located at Willow Bend Aboriginal Settlement on the eastern outskirts of Condobolin.

c. A levee also exists at Murrin Bridge, just on the outside border of the Lachlan Shire, in the Cobar Shire.

d. A large number of rural levees occur to the west of Lake Cargelligo protecting homesteads along Lachlan River, built in 2012 (8).

1.8 EXTREME FLOODING

a. It is important to note that the largest floods observed in recorded history are not the largest floods feasible at this location. Even during major floods observed, flood extents are extraordinarily wide.

b. An indication of design flood levels at Condobolin are listed below.

Table 2: Design flood heights at Condobolin (4)

Design flood	Gauge height at Condobolin (m)
20% AEP	6.3
5% AEP	7.0
2% AEP	7.25
1% AEP	7.4
0.5% AEP	7.6
Extreme (3 x 1% AEP)	8.1

2 EFFECTS ON THE COMMUNITY

2.1 COMMUNITY PROFILE

Table 3: Census of Housing and Population data (2011)

Census Description	Lachlan LGA	Condobolin	Lake Cargelligo	Tottenham
Total Persons	**6,476**	**3,746**	**1,378**	**635**
Aged 0-4 yrs	484	277	109	28
Aged 5-14 yrs	897	532	176	81
Aged 65 + yrs	1,213	643	264	156
Of Indigenous Origin	1,061	753	235	30
Who do not speak English well	3	3	0	0
Have a need for assistance (profound/severe disability)	343	195	78	31
Living alone (Total)	694	380	161	91
Living alone (Aged 65+)	304	168	68	44
Residing in caravans, cabins or houseboats or improvised dwellings	35	29	3	3
Occupied Private Dwellings (Households)	**2,476**	**1,394**	**536**	**278**
No Motor Vehicle	191	117	51	14
Caravan, cabin, houseboat or improvised dwell	16	9	4	3
Rented via State or Housing Authority	115	85	20	0
Rented via Housing Co-Op or Community Church Group	58	33	21	5
No Internet Connection	932	539	210	117
Unoccupied Private Dwellings	**601**	**320**	**133**	**89**
Average persons per occup dwelling	**2.4**	**2.7**	**2.0**	**2.2**
Average vehicles per occup dwelling	**1.9**	**1.8**	**1.8**	**2.0**

a. The Lachlan Shire is the home to approximately 6,500 people across around 14,970 km^2. Many of these people are located within the townships of the Shire. The townships include Condobolin and Lake Cargelligo as well as the villages of Tottenham, Tullibigeal, Burcher, Albert and Fifield (11).

b. Lachlan Shire has a road network of almost 4,500 km. This network consists of 999 km of sealed roads and 3,600 km of gravel, formed and unformed roads (1).

c. The population is predominantly anglo-celtic, with a high proportion of over 45 age groups. The Lachlan Shire also has a significant indigenous population with some 16% of the population being Wiradjuri people (11).

d. The Shire is one of the largest producers of grain in Australia and also has diversified into many others areas of agriculture including: beef, wool, cotton and horticulture (1).

e. Flooding can result in disruption to services such as transport, telecommunications, power, sewerage, water, drainage and public health across the LGA. It also generally results in large crop losses and economic impact (2).

SPECIFIC RISK AREAS - FLOOD

Lachlan River Valley

2.2 CONDOBOLIN

2.2.1 Community Overview

a. Condobolin is located at the confluence of Goobang Creek and the Lachlan River. It has a population of 3746, with a high proportion of people aged over 65 years (11)

b. Willow Bend is on the eastern outskirts of Condobolin. It is comprised of 16 houses and has an average population of about 50. The community is managed by the Condobolin Local Aboriginal Land Council (1).

c. Derriwong is a small locality to the east of Condobolin.

d. Kiacatoo is a small locality on the Lachlan River, with a hall and only rural dwellings.

2.2.2 Characteristics of flooding

a. Condobolin is affected by riverine flooding from Goobang Creek and Lachlan River (as described further in section 1.5 above) .

b. Some of the roads can be flooded by overland and flash flooding.

2.2.3 Flood Behaviour

a. The majority of the town remains flood free to an extreme flood (3 x 1% AEP flood). However the outskirts and southern part of the town, including major roads can become flooded in a major flood (4). The floodwater extends wide (18 km or more) and is relatively slow moving. It can remain flooded for several weeks (7).

b. Flood travel time is approximately 8 days from Forbes to Condobolin (4). It generally remains around peak level for 2 days and then take 7 - 10 days to subside, provided another peak does not follow. The peak from Goobang Creek generally arrives

before the Lachlan River peak, however their coincidence can exacerbate flooding (9).

c. Flooding is influenced by the ungauged waters of the Goobang Creek, which has its confluence with the Lachlan River at Condobolin. A number of break outs also occur from the southern bank of the Lachlan River, which either re-join the Lachlan River to the west of Condobolin flow into Nerathong Creek which then joins the Lachlan River to the east of Condobolin (7). The majority of this area is floodway, with the exception of three relatively small flood storage to the south and east of Condobolin. Two high hazard floodways cross The Gipps Way and Lachlan Valley Way to the east of Condobolin (4).

d. A large number of rural levees exist in the area to the east of Condobolin, with a protection of level of around 7.36 m on the Condobolin gauge (4).

e. Refer to Section 1.5 for further detail.

2.2.4 Classification of Floodplain

a. Condobolin CBD has rising road access. It can become a high flood island if surrounding roads become cut.

b. North Forbes Road and Waitohi Lane become low flood islands from a moderate flood (7).

2.2.5 Inundation

a. The Condobolin community uses the Condobolin gauge for flood warning.

b. During the 1952 flood (7.37 m on the Condobolin gauge), flood waters entered about 9 buildings in Condobolin, including several residences, a shire depot and the exhibition hall at the showground (1).

c. The Condobolin Racetrack becomes flooded by around 5.6 m (12).

d. The Caravan Park and eight low lying properties along Lachlan Street between McDonnell Street and Denison Street are threatened at around 6.35 m (12).

e. Dwellings at risk in a major flood include:

   i. Lachlan Valley Way, east of Condobolin

   ii. Officers Parade, north and west of Graf Street

   iii. Lachlan Street between William Street and Denison Street

   iv. Southern side of Bathurst Street between Denison Street and Gordon Street

   v. Lachlan Valley Way and Kiacatoo Road to the west of Condobolin

   vi. Molong Street between Mooney Street and Goobang Bridge

   vii. North Forbes Road and Waitohi Lane (around 20 properties)

f. A great deal of rural land downstream of Condobolin is flood liable, roads are affected and the approaches to the bridge over the Lachlan River at Kiacatoo may become inundated by floodwaters (1).

g. Flooding from the Goobang Creek system may threaten residents in the village of Derriwong on the Condobolin to Bogan Gate Road. Goobang Creek flooding may also inundate two houses and a number of rural properties (1).

h. If overtopping or failure of the Willow Bend levee occurs, the Willow Bend Community will become inundated (16 houses). During the 1952 flood, the area was covered by a depth of 0.45 m and in 1974 to a depth of 0.2 m (13).

i. One dwelling in Officers Parade is at risk of inundation from around 7.6 m (12).

Table 4: *Estimated* number of properties inundated above floor level and over ground in Condobolin related to the Condobolin gauge

Condobolin Gauge Height (m)	Range of Over Floor Depths (m)	No. Properties with Over floor Flooding	No. Properties with Over-ground Flooding
7.1	0.01-0.3	6 residential, 11 rural, 7 commercial	Rural inundation significant
Extreme	>0.3	Approximately 9 additional commercial (total 16) and >16 residential buildings	Rural inundation significant

2.2.6 Isolation

a. Flooding to the west of the Jemalong Gap can cause the isolation of many rural properties and disrupt the road system. Water may spread from Condobolin south to Banar Swamp, covering most properties in between (1).

b. Derriwong can become isolated in some events (population about 25) and enter from the north requiring repairs to the rural levee bank and or placement of sandbags (1).

c. The Willow Bend Community (16 houses) is protected by a levee, but may still become isolated from Condobolin in a major flood event (1).

d. Access by road to Forbes along the north and south Forbes-Condobolin Roads is prevented by even minor overbank flows. The Condobolin-West Wyalong Road is affected by the Manna Creek system. Access northwards towards Bogan Gate generally remains unaffected (2).

e. South Forbes Road floods 11.25 km to the east of Condobolin by approximately 5.6m and Lachlan Valley Way floods by 6.3 metres, restricting access to the east to Forbes (12).

f. Kiacatoo Road floods in several locations, including around 40 and 4 km to the west of Condobolin, isolating a number of rural properties along this road around 5.8 m.

g. Diggers Avenue floods by 6.4 metres, and The Gipps Way floods by 6.5 m, (moderate flood) restricting access between Condobolin and West Wyalong to the south.

h. Gum Bend Road floods in moderate floods, with isolation of one house on this road occurring around 6.3 m.

i. Isolation of dwellings along North Forbes Road, Waitohi Lane and Grassmere Road occurs from around 6.3 m and generally lasts for several weeks.

j. The Orange- Broken Hill Railway can be cut near Kiacatoo, at Kalingalungaguy Creek (8).

2.2.7 Flood Mitigation Systems

Table 5: Levees in Condobolin; summary of information

Willow Bend Levee	
Location	Willow Bend Aboriginal Settlement is 2.8 km south east of Condobolin. The eastern perimeter of the community is bounded by Willow Bend (Mission) Road which also provides protection from floodwaters (1).
Type of Levee (ring etc.)	Partial levee along the Lachlan River
Owner	The community is managed by the Condobolin Local Aboriginal Land Council who is also the owner and manager of the levee that is between the Lachlan River and three sides of the community.
Design Height and freeboard	The levee was built in the 1990's to a design level but there are currently no design or construction drawings available to the NSW SES. Accordingly there are no design survey details available.
Overtopping Height	Council has gathered some basic survey details and has reported the level of the crest as approximately 7.27 m at its lowest point to the Condobolin Gauge *(5)*, which is below at least three historical flood peaks. As there are issues with the levee's flood gates, if works are not completed to improve the levee, contingency plans should be implemented for a predicted river height of above 5.0 m (1). Lachlan Shire identified during the December 2010 Flood event should the river level reach 5.0 m is to line the upstream pits with plastic sheet and fill the pits with sand to plug the upstream ends of these lines under the levee. In 2016 (at 6.76 m) the water was approximately 300-400 mm below the crest. This was followed by a layer of loose gravel (variable thickness, up to a nominal 7.6 m to provide additional freeboard).
No. of properties protected	16 houses and has an average population of about 50.
Known low points	Refer to deficiencies.

Location and sequence of inundation	Refer to deficiencies.
Consequences of levee overtopping or failure	If the levee were to overtop or fail, the Willow Bend Community would be inundated-. If the blockages in the pipes fail, there could be inundation of properties inside the levee. Residents advised that the floor level of the houses in this community are above the 1990 flood level (7.36 m) *(5)*.
Deficiencies	The levee is currently in poor condition (December 2016). Of particular concern is the fact that erosion has occurred at the location of Flood Gate No.1 which has disappeared. This has resulted in a pipeline that is now permanently open to the river. If the river rises above 5.2 m, water may start to flow through this pipe into the community. It should be noted that there is also undercutting of the levee at this location. There is a chance that the joints in the remaining pipeline could be separated. Flood Gate No. 2 had been jammed open but can be closed off temporarily with plastic and sandbags. Stormwater within the levee is channelled to collection pits that are connected by pipes that drain out to the Lachlan River in non-flood situations via two outlet pipes (1). At least one major ants' nest has been identified. Ants nests can be a potential weak point in a levee as the ant tunnels can promote "piping" failures in embankments. Rainfall can result in ponding of water behind the levee, which requires pumping (generally by Council, RFS and NSW SES in consultation with the residents). It was recommended by Engineering Services on the 9th December, 2010 that in the longer term the eroded section of river bank/levee near Flood Gate No. 1 needs to be stabilised and the head wall and flood gate re-instated and restored to a functional state. The large ants' nest should be excavated and replaced with well compacted clay. The issue of ultimate crest height is a long term consideration. A proper assessment would need to be done incorporating detailed survey, geotechnical and hydraulic investigations (5).

2.2.8 Dams

a. Flow in the Lachlan River is heavily dependent on releases from Wyangala Dam. Travel time to Condobolin from the dam is approximately 9-10 days.

2.2.9 At Risk Facilities

a. The facilities that are at risk of flooding and/or isolation within the Lachlan Shire LGA including schools, child care centres, hospitals, aged and infirm, infrastructure and caravan parks are shown in Annex 2.

2.2.10 Other Considerations

a. The following events can see a 10% increase in population:

i. Condobolin Show – August

b. The Lachlan Valley Way, The Gipps Way and Henry Parkes Way serve as a thoroughfare for road freight and travellers.

2.3 TOTTENHAM

2.3.1 Community Overview

a. Tottenham is a small town in the Lachlan Shire, it has a population of 635 people, with a high proportion of people over 65 years of age (refer to table 4).

2.3.2 Characteristics of Flooding

a. Although the town itself remains flood-free, flooding around Tottenham including the major transport routes can result from overland flooding, and flooding of the Bogan River and Bulbodney Creek.

2.3.3 Flood Behaviour

a. There is little documented information available for the flood behaviour at Tottenham, however it appears the floodplain in the 1955 flood on the Bogan River near Tottenham was approximately three kilometres wide (14).

2.3.4 Classification of Floodplain

a. Tottenham can become a high flood island.

2.3.5 Inundation

a. Extensive rural inundation occurs within this region as result of the overland waters.

b. Tottenham itself is approximately 10 km from the Bogan River to the east and Bulbodey Creek to the west, and has limited known inundation in the township itself.

2.3.6 Isolation

a. The village of Tottenham can become isolated for short periods of time from overland flooding from the North East and North West of the Bogan River. The Bogan River and its tributaries can cut Tabratong Crossing Road, Dandaloo Road, Alagala Road, and The Bogan Way near Tullamore. Bulbodney Creek can cut Tottenham Road, Glengarriff Road, Bobadah Road, Moira Vale Road, Melrose Road and Jumble Plains Road (14).

2.3.7 Flood Mitigation Systems

a. No known flood mitigation systems have been identified.

2.3.8 Dams

a. No known consequences of dam failure have been identified.

2.3.9 At Risk Facilities

a. The facilities that are at risk of flooding and/or isolation within the Lachlan Shire LGA including schools, child care centres, hospitals, aged and infirm, infrastructure and caravan parks are shown in Annex 2.

2.3.10 Other Considerations

a. No additional considerations have been identified.

2.4 EUABALONG

2.4.1 Community Overview

a. Euabalong is located on the Lachlan River on the Cobar Shire Council boundary. It is assisted by the Lachlan Region NSW SES during flood operations. It has a population of 378, with 240 dwellings. It has a large proportions of people aged over 65 and indigenous (11).

b. Murrin Bridge is an aboriginal community 12 km north of Lake Cargelligo situated on the Lachlan River, historical data has shown that this community has become isolated during a major flood event. An upgrade of culverts, roads and the bridge have occurred therefore the extent of flooding on the Murrin Bridge Settlement is still to be determined (15).

2.4.2 Characteristics of Flooding

a. Flooding at Euabalong occurs from the Lachlan River and Booberoi Creek to the north.

2.4.3 Flood Behaviour

a. Flooding occurs relatively slowly and can last several weeks. It is generally shallow, widespread floodwater.

b. The bulk of the flood water bypassing Euabalong and Lake Cargelligo is concentrated in the Booberoi Creek system to the north.

2.4.4 Classification of Floodplain

a. Euabalong is a high flood island.

b. Murrin Bridge can become a low flood island when the levee overtops (refer to section 2.5.7).

2.4.5 Inundation

a. Euabalong community uses the Euabalong gauge for flood warnings.

b. During major floods, low-lying buildings are susceptible to flooding, including one in Womboin Street (which was sandbagged in 2016) (8).

c. Flooding in Murrin Bridge used to occur from 6.8 m, however a series of levees now protect the Murrin Bridge community. In 2016, there was approximately one metre of clearance to any properties being affected.

2.4.6 Isolation

a. Euabalong can become isolated for several weeks by moderate to major floods. In 1974 the village of Euabalong became isolated for a number of days. During the 1990

event the village of Euabalong became isolated by road for two weeks (16), this also occurred in 2016.

a. The Murrin Bridge Aboriginal Settlement may also be affected by flooding and becomes isolated (comprises of 31 houses and has an average population of about 100) (1).

2.4.7 Flood Mitigation Systems

Table 6: Levees in Murrin Bridge; summary of information (17)

Murrin Bridge Levee	
Location	Located to the north east of Murrin Bridge along the main road into town and the first street to the right (unnamed) between the Lachlan River and the community
Type of Levee (ring etc)	Earth mound single levee, tying into high ground
Owner	Not known
Design Height and freeboard	Not known – although council have indicated that it has been designed to the 1993 flood event
Overtopping Height	Not known
No. of properties protected	Protects the sewer pump station and water pump station.
Known low points	The “access point” has been identified that requires filling during a flood.
Location and sequence of inundation	Not known
Consequences of levee overtopping or failure	Murrin Bridge has higher ground to retreat to if the levee overtops
Deficiencies	No known structural deficiencies.

a. A low level levee also exists in Euabalong, which runs along Murrin Street and parts of Lachlan Street. Temporary levee works were added along Lachlan Street in 2016 as a precautionary measure, and did not overtop (5). No further details on the design height are currently available.

2.4.8 Dams

a. Cargelligo Weir is not a prescribed dam, but can result in minor inflows being contributed to the rural areas on the Lachlan River to its west including Murrin Bridge. A white, amber and red alert exist for this weir (18).

2.4.9 At Risk Facilities

a. The facilities that are at risk of flooding and/or isolation within the Lachlan Shire LGA including schools, child care centres, hospitals, aged and infirm, infrastructure and caravan parks are shown in Annex 2.

2.4.10 Other Considerations

a. This community is outside of the Lachlan Shire LGA (in the Cobar LGA), however operations are managed by Condobolin, Lachlan Region NSW SES.

2.5 LAKE CARGELLIGO

2.5.1 Community Overview

a. Lake Cargelligo is a large rural community with many of the properties along the Lachlan River requiring assistance during flood events. It is located on a lake that is fed by the Lachlan River through Lake Curlew with a population of 1,380 people (table 4). Curlew Waters is located to the east of Lake Cargelligo, comprising of approximately twelve dwellings.

2.5.2 Characteristics of Flooding

a. Flooding at Lake Cargelligo occurs from Marias and Manies Lake to the south, Lake Cargelligo and Curlew Water to the north east, and Lachlan River to the north.

2.5.3 Flood Behaviour

a. Flooding is generally shallow, widespread and slow moving.

2.5.4 Classification of Floodplain

a. Rising road access (access and egress to the south).

b. Curlew Waters becomes a low flood island by a 1% AEP flood, when Stuart Drive is cut.

2.5.5 Inundation

a. The majority of Lake Cargelligo village is not affected by flooding up to the extreme flood, however, rural properties along the river to the east and north are subject to flooding in smaller events (height unknown). This includes approximately 35 dwellings off Lake Cargelligo Road, McInnes Road, Nillsons Lane, McInnes Street, Dents Lane, Brooks Lane to the east of Lake Cargelligo, including Curlew Waters subject to flooding below a 1% AEP flood (1).

b. In 2016, two properties in Lake Street and Bridge Street, Lake Cargelligo were flooded. The impacts were reduced by sandbags, as the dwellings flooded in 1990. This is a consequence of backflow from the channel from Lake Cargelligo and under Lake Street to the west (8). One house on Nillsons Lane was also flooded in 2016 and previous flood, requiring sandbagging. Four properties in Curlew Waters also flooded, along Stuart Drive and Wells Street, with the potential for the dwellings also to become flooded (8).

2.5.6 Isolation

a. In relatively small floods, travel north of Lake Cargelligo is not possible as Lachlan Valley Way and Curlew Road are prone to flooding (7). Lake Cargelligo Road (to

Condobolin) is also prone to flooding from overland flooding and local rainfall. Alternative routes are available.

b. Curlew Waters can become isolated if Stuart Road is cut (8).

c. Access into and out of Curlew Waters is prone to flooding, becoming boggy and can isolate these residents. In 2016, the Council placed pipes in the area to alleviate the issue toward the end of the flood (8).

2.5.7 Flood Mitigation Systems

a. No known flood mitigation systems have been identified.

b. There are three levees in Lake Cargelligo (on the southern side of the lake). These were built in 1902 and built up further in 1922 to hold water. The walls were planted with Willow trees, with the roots remaining reducing the structural integrity of the walls. The eastern levee, 'C', has an adjacent road, with 15 properties south of the lake which would be at risk of flooding if the wall was to break (which is owned by Water NSW). In 2016, this wall had 350 millimetres clearance. The other two walls 'A' had one metre clearance and 'B' had 750 millimetres clearance in 2016 (8).

c. Rural levees are common in the area along Lachlan River, protecting rural homesteads.

2.5.8 Dams

a. Cargelligo Weir is not a prescribed dam, but can result in minor inflows being contributed to the rural areas on the Lachlan River to its west (18).

2.5.9 At Risk Facilities

a. The facilities that are at risk of flooding and/or isolation within the Lachlan Shire LGA including schools, child care centres, hospitals, aged and infirm, infrastructure and caravan parks are shown in Annex 2.

2.5.10 Other Considerations

a. The following events occur in Lake Cargelligo:

   i. Lake Cargelligo Show – September (no significant increase in population)

   ii. Lake Cargelligo Fisherama – October (approximately 10% increase in population).

ROAD CLOSURES AND ISOLATED COMMUNITIES

2.6 ROAD CLOSURES

a. Table 7 lists roads liable to flooding in the Lachlan Shire LGA.

b. Lachlan Shire has a road network of almost 4,500 km. This network consists of 999 km of sealed roads and 3,600 km of gravel, formed and unformed roads therefore the list of roads liable to flooding may not be exhaustive (1).

c. Lachlan Shire during a flood event will provide on their website information of road closures and alternate routes (1).

d. Alternate routes will be determined by the Lachlan Shire and/or RTA and will be dependent on road conditions and flood impacts across the Shire. Alternate routes will be advised to the SES including any limitations on these routes such as vehicle type limits (1).

Table 7: Roads liable to flooding in Lachlan Shire LGA (1).

Road	Closure location	Consequence of closure	Alternate Route	Indicative gauge height
Kiacatoo Road	Several locations to the west of Condobolin	Restricts access between Kiacatoo and Condobolin	No	5.79 m (Condobolin)
Booberoi Road	Gunnebang	Restricts access between Euabalong and Condobolin. Access to Booberoi still available	Lachlan Valley Way (until its closure)	6.4 m (Euabalong)
Lachlan Valley Way	South River Road	Prevents access between Euabalong and Condobolin.	No	6.41-6.8 m (Euabalong)
Lachlan Valley Way	Murrin Bridge and other locations	Restricts access between Euabalong and Lake Cargelligo. Isolates Euabalong. Isolates Murrin Bridge.	No	6.8 m (Euabalong)
Condobolin - Parkes Road (Condobolin Road)	2 km east of Condobolin	If this road closes whilst other roads are closed it can isolated		Overland flooding
Condobolin - Parkes Road (Condobolin Road)	Near Derriwong (closed by Goobang Creek water).	As above		Overland flooding
North Forbes Road	At a number of places from a point about 15 km from	Can isolate North Forbes Road residents	No	From approximately 4.2 m

Road	Closure location	Consequence of closure	Alternate Route	Indicative gauge height
	Condobolin to the Shire boundary (Mitchell's Creek, Lachlan and/or Goobang Creek water).			(Condobolin)
Lachlan Valley Way	At a number of places in the first 10 km east of Condobolin.	Restricts access between Condobolin and Forbes	Via Parkes	5.66 m (Condobolin)
Condobolin - West Wyalong Road (The Gipps Way)	At a number of points in the first 10 km south of Condobolin (including Nerathong, Wallamundry and Wallaroi Creek water).	Restricts access between Condobolin and West Wyalong	No	From 6.4 m (Condobolin), however the creek inundation is not gauged
Lake Cargelligo Road	At Banar Swamp.	Restricts access between Condobolin and Lake Cargelligo	Wyalong Road	n/a
Lachlan Valley Way	At Murda Creek and a number of other causeways.	Restricts access between Condobolin and Lake Cargelligo	No	n/a
Booberoi Road	At Kiacatoo and other locations.	Restricts access between Kiacatoo and Euabalong West	No	n/a
Tipping Way	By Lachlan River flood waters bypassing Euabalong to the north and at Booleroi Creek.	Restricts access between Euabalong and Euabalong West.	No	6.81 m (Euabalong)
Lachlan Valley Way	Euabalong Bridge, Euabalong (over Lachlan River) at the approaches.	Restricts access from Euabalong to the east	No	This road has been raised to an unknown height
Lachlan Valley Way	At a point near Erabendrie.	Restricts access between Euabalong and Murrin Bridge	Potentially via Wallanthery Road	
Lachlan Valley Way	At Murrin Bridge.	Restricts access between Euabalong and Lake Cargelligo	No	A new culvert has been installed, reducing its exposure to flooding
Lachlan Valley Way	At the western Shire boundary.	Restricts access between Lake Cargelligo and Hillston	Potentially via Rankin Springs Road	

2.7 SUMMARY OF ISOLATED COMMUNITIES AND PROPERTIES

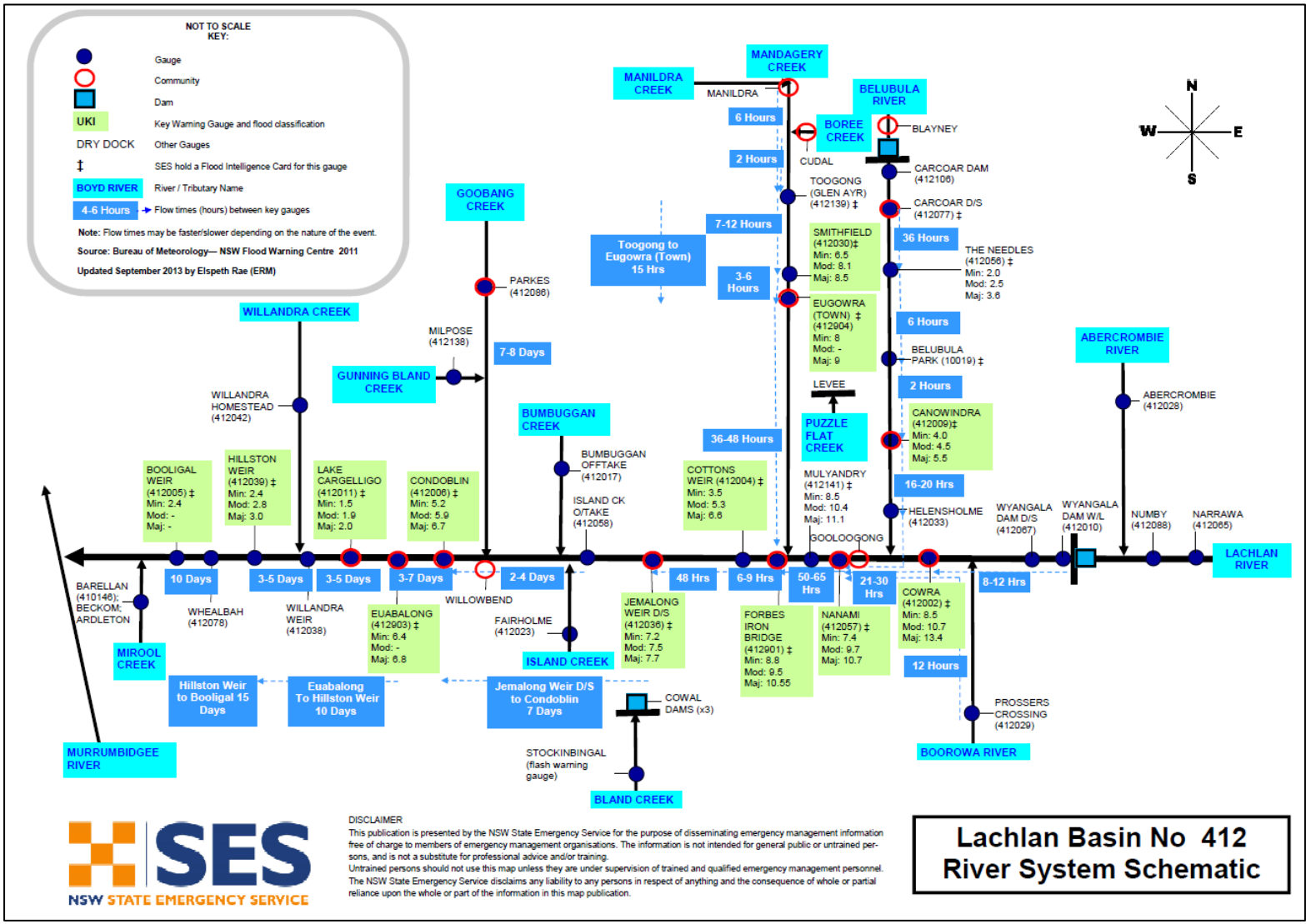
a. Table 8 lists communities liable to isolation and potential periods of isolation. Information presented here is based on historical and design event information and does not reflect the duration of isolation expected in larger and extreme events.

Table 8: Potential Periods of Isolation for communities in the Lachlan Shire LGA during a Major flood.

Town / Area (River Basin)	Population/ Dwellings	Flood Affect Classification	Approximate period isolation	Weeks								NOTES
				1	2	3	4	5	6	7	8	
Rural areas around Condobolin (e.g. North Forbes Road, Kiacatoo)	80pp, 32 dwellings	Low Flood Island	1 – 8 weeks or more									Resupply likely to be required after 5 days
Euabalong	378pp, 240 dwellings	High Flood Island	2-3 weeks									
Tottenham	635pp, 275 dwellings	High Flood Island	Less than a week									

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: LACHLAN RIVER BASIN SCHEMATIC



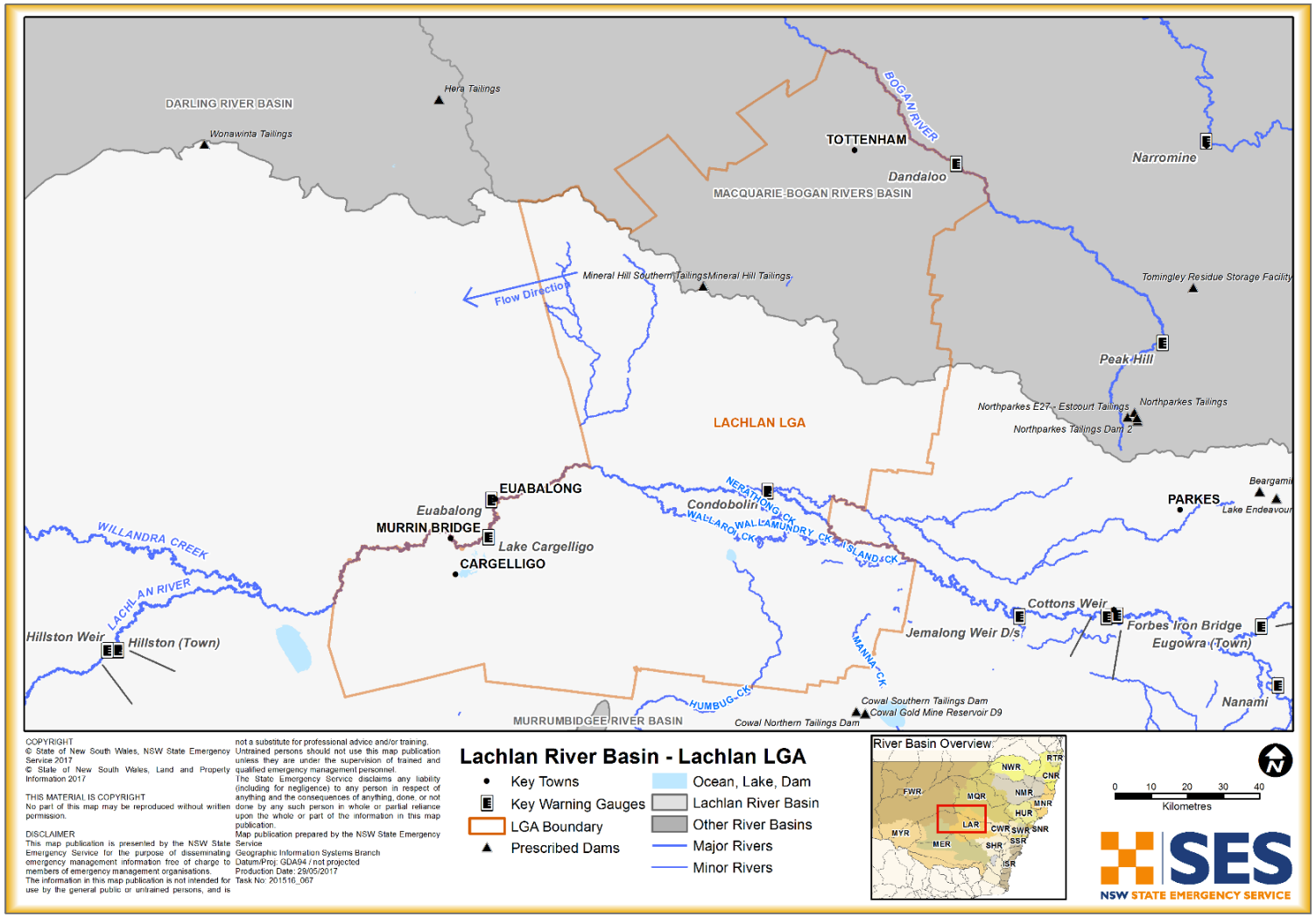
ANNEX 2: FACILITIES AT RISK OF FLOODING AND/OR ISOLATION

Lachlan River Valley

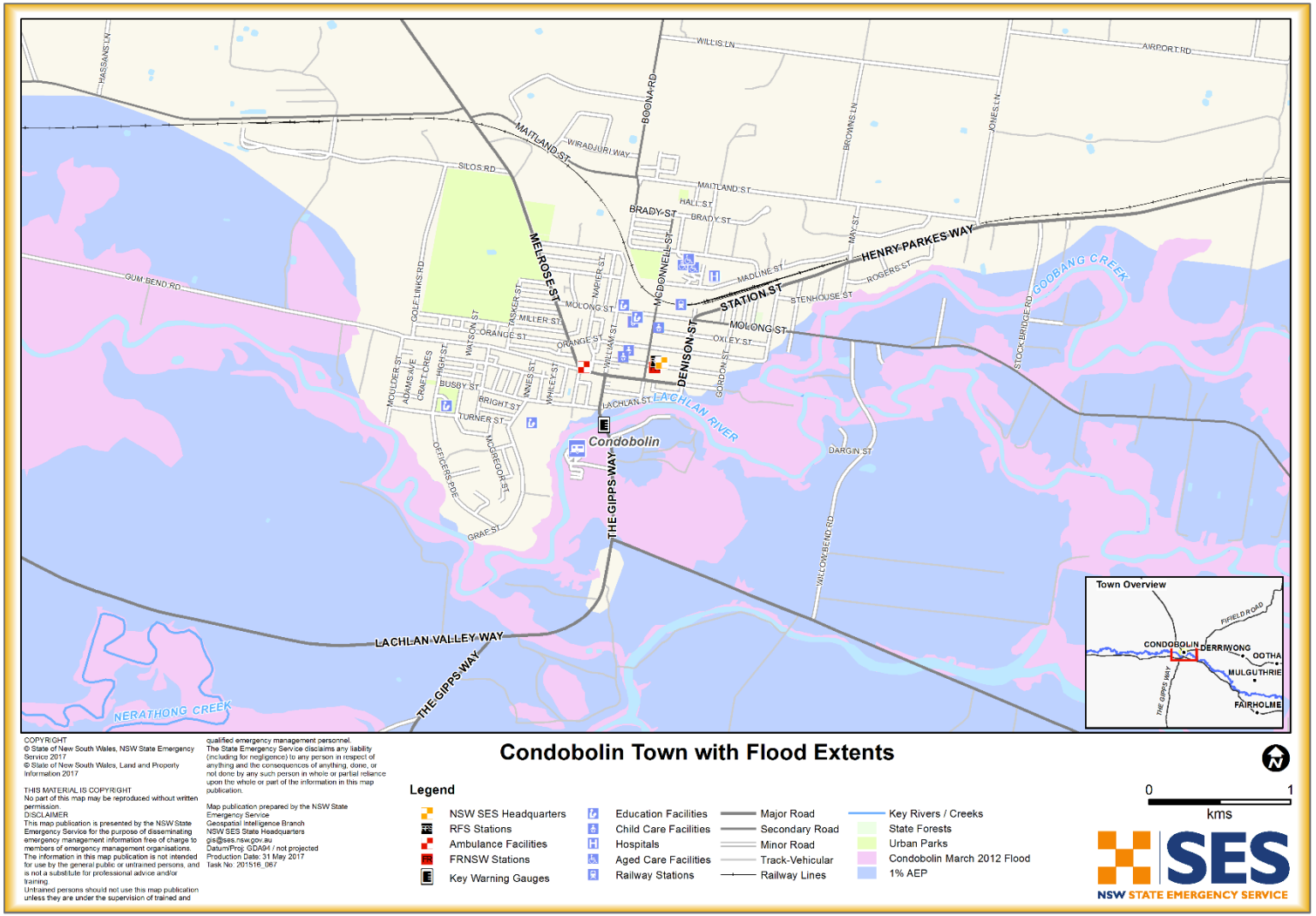
Facility Name	Street	Suburb	Comment
Schools	n/a		
Child Care Centres	n/a		
Facilities for the aged and/or infirm	n/a		
Utilities and infrastructure	n/a		
Telecommunication towers	Across the Shire		In the December, 2007 rainfall event the communication infrastructure failed due to the network of telecommunication towers experiencing power failures across the Lachlan Shire, resulting in the loss of both landline and mobile communications within the Condobolin township. During this event generators were flown into the telecommunication towers by helicopter to restore some services
Camping Ground / Caravan Parks			
Riverview Caravan Park	Diggers Avenue	Condobolin	64 caravan sites and camping ground. Lower levels of caravan park (campers and temporary caravan sites) inundated at 6.35 m. Carport and house have a floor height of 6.37 m. Sewerage pump station is just above 6.8 m. Easter - Condobolin 750 August - Condobolin Show and Dog Show (100 + sites require evacuation during these times). All heights relate to the Condobolin gauge.
Riverview Caravan Park	Diggers Avenue	Condobolin	64 caravan sites and camping ground. Upper levels of caravan park permanent vans (with wheels) and cabins (floor height 7.37 m) inundated at 6.78 m. Power fails at 6.78 m. Amenities block floor height 7.32 m. Easter - Condobolin 750 August - Condobolin

Facility Name	Street	Suburb	Comment
			Show and Dog Show (100 + sites require evacuation during these times). Adequate notice required to evacuate prior to 6.78 m being reached. All heights relate to the Condobolin gauge.

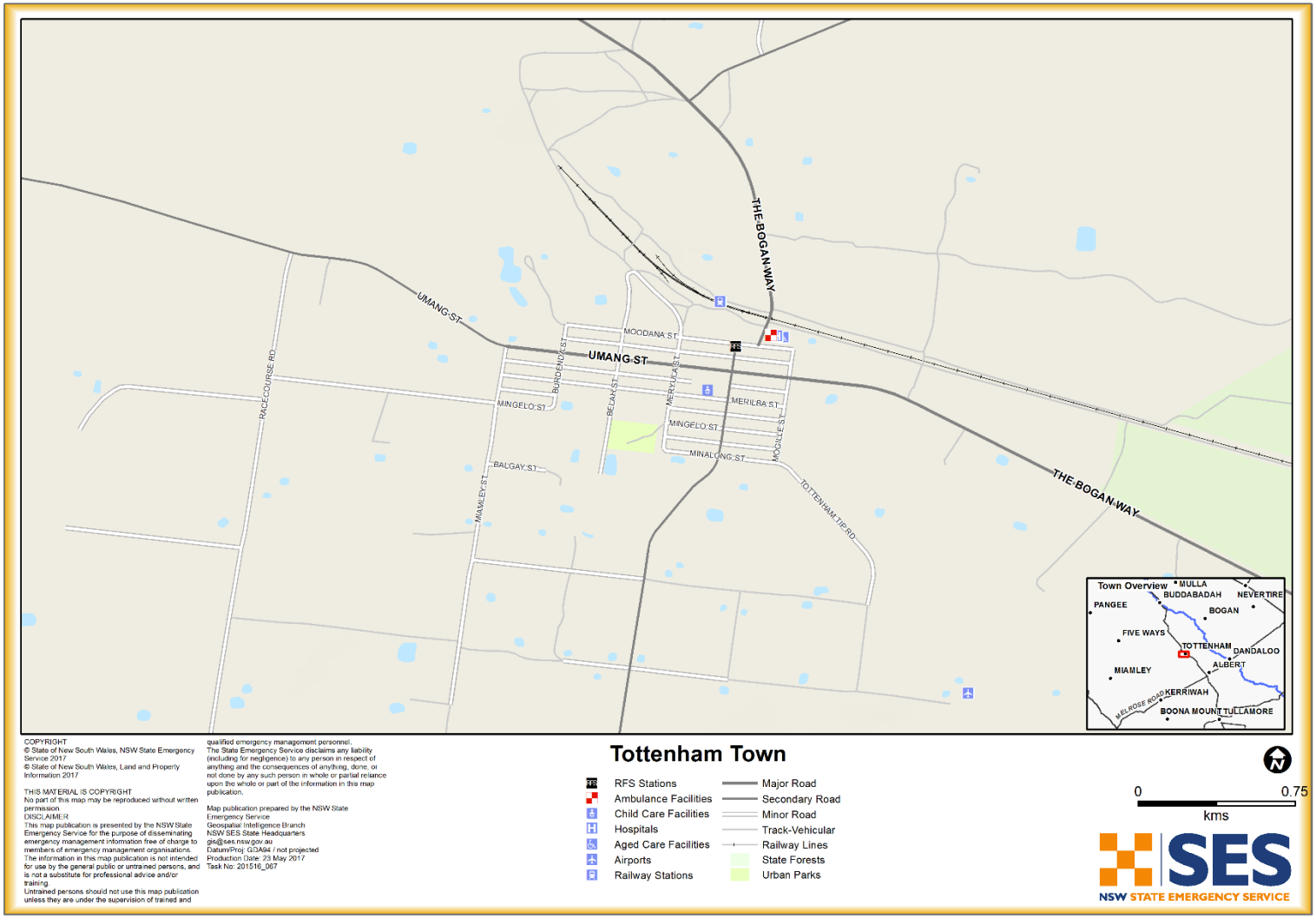
MAP 1: LACHLAN RIVERBASIN



MAP 2: CONDOBOLIN TOWN MAP

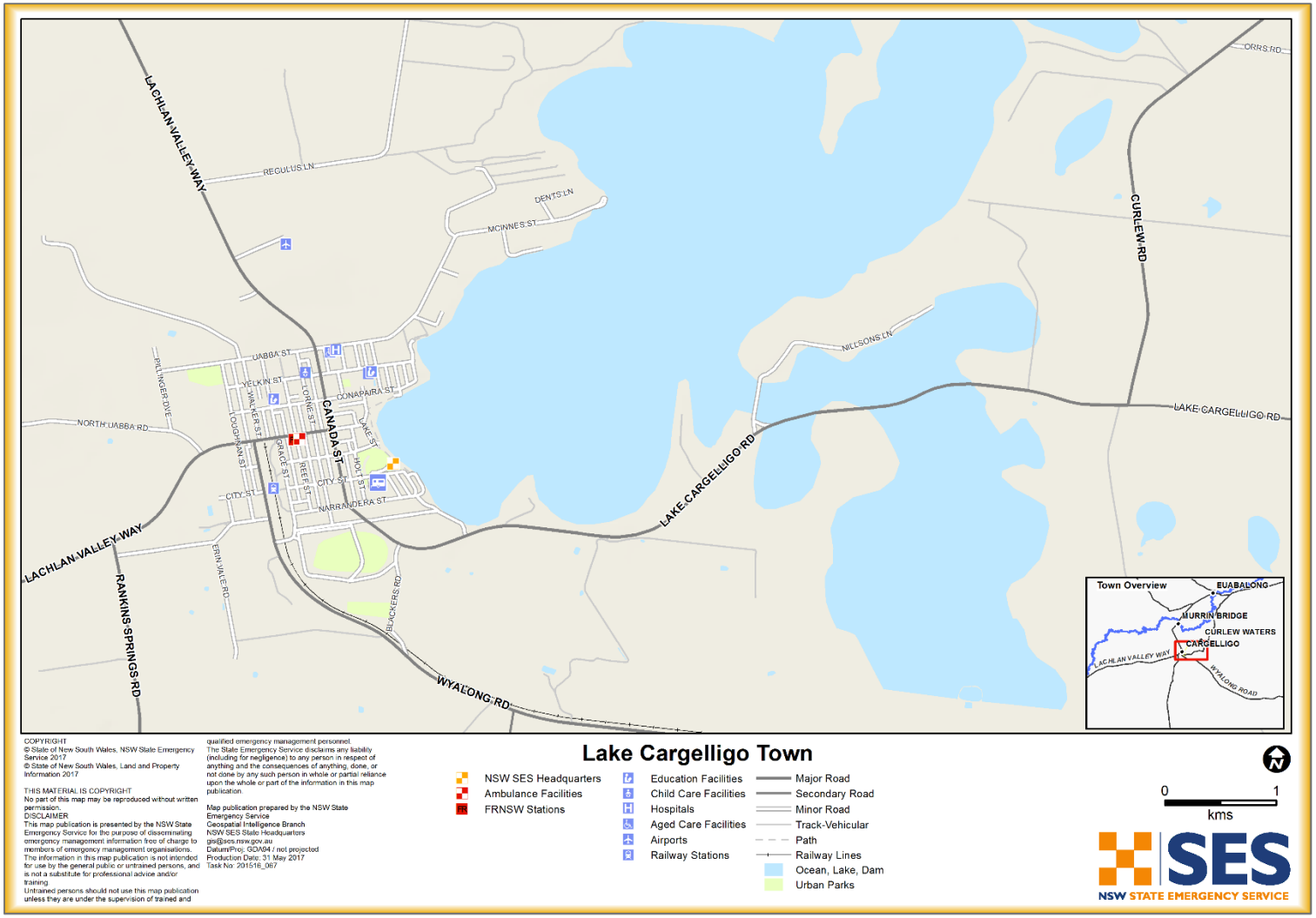


MAP 3: TOTTENHAM TOWN MAP



Map publication prepared by the NSW State Emergency Service
Geospatial Intelligence Branch
NSW SES State Headquarters
gis@ses.nsw.gov.au
Datum/Proj: GDA94 / not projected
Production Date: 23 May 2017
Task No: 201516_067

MAP 4: LAKE CARGELLIGO TOWN MAP



Map publication prepared by the NSW State Emergency Service
Geospatial Intelligence Branch
NSW SES State Headquarters
gis@ses.nsw.gov.au
Datum/Proj: GDA94 / not projected
Production Date: 31 May 2017
Task No: 2015/16_067

MAP 5: EUABALONG TOWN MAP

LIST OF REFERENCES

1. **NSW State Emergency Service.** *Lachlan Shire Local Flood Plan.* March 2011.

2. **Rankine and Hill Pty Ltd Consulting Engineers.** *Lachlan Valley flood mitigation study.* s.l. : Water Resources Commission, 1979.

3. **NSW SES.** *Lachlan Region Catchment Descriptions.*

4. **Lyall & Associates Consulting Engineers.** *Condobolin Flood Study.* June 2008.

5. **NSW SES Lachlan Shire Local Controller.** *Historical observations.* 2017.

6. **Parsons Brinckerhoff.** *Lachlan River (Jemalong Gap to Condobolin) Rural Flood Study.* s.l. : Department of Infrastructure, Planning and Natural Resources, 2004.

7. **NSW SES.** *Lachlan River flood observations 2016.* 2016.

8. **NSW SES Lake Cargelligo Unit.** *Historical observations.* 2017.

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13. **Rankine and Hill Pty Ltd Consulting Engineers.** *New South Wales Inland Rivers Flood Plain Management Studies: Lachlan Valley.* 1983.

14. **Sinclair Knight and Partners.** *Macquarie Valley Floodplain Atlas.* 1984.

15. **NSW SES.** *Flood Intelligence.* 2016.

17. **Cobar Shire Council.** *Murrin Bridge levee questionnaire.* 2012.

18. **Water NSW.** *Lake Cargelligo DSEP.* 2016.

19. **Molino Stewart Pty. Ltd.** *Regional State of the Environment Report for the Councils of the Greater West Region of NSW: Bathurst, Blayney, Bogan, Bourke, Cabonne, Coonamble, Cowra, Dubbo, Gilgandra,.* 2008-2009 Comprehensive Report.

20. **Glenn Vardy, Engineering Services Functional Area Co-ordinator, Emergency Management, NSW Public Works.** *Willow Bend, Condobolin - Levee.* December 2010.

SES RESPONSE ARRANGEMENTS FOR LACHLAN SHIRE

Volume 3 of the Lachlan Shire Local Flood Plan

CONTENTS

VERSION LIST

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

Description	Date
Lachlan Shire Local Flood Plan	March 2011

AMENDMENT LIST

Suggestions for amendments to this Volume should be forwarded to:

The Lachlan Shire Local Controller

NSW State Emergency Service

55 Matthews Street, PARKES NSW 2870

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

Amendment Number	Description	Updated by	Date

LACHLAN SHIRE: FLOOD WARNING SYSTEMS AND ARRANGEMENTS

Chapter 1 of Volume 3 (NSW SES Response Arrangements for Lachlan Shire) of the Lachlan Shire Local Flood Plan

Last Update: September 2018

AUTHORISATION

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

Approved

NSW SES Lachlan Region Controller

Date: 11 September 2018

Tabled at LEMC 6 November 2018

Document Issue: 3.1-07042014

CONTENTS

LIST OF TABLES

1. GAUGES MONITORED BY THE NSW SES LACHLAN SHIRE LOCAL HEADQUARTERS

Table 1: Gauges monitored by the NSW SES Lachlan Shire Local Headquarters

Gauge Name	Type	AWRC No.	Bureau Gauge No.	Stream	Flood level classification in metres			Special Reading Arrangements	Owner
					MIN	MOD	MAJ		
Condobolin * † ‡	Automatic	412006	550000	Lachlan River	5.2	5.9	6.7		NSW Office of Water
Euabalong * † ‡	Manual	412903	49125	Lachlan River	6.4		6.8	Euabalong SES reads flood gauge and provide data to Lachlan Region for the BOM.	Bureau
Lake Cargelligo Weir	Automatic	412011	575006	Lachlan River	1.5	1.9	2.0		NSW Office of Water
Lake Cargelligo Storage	Automatic	412107	-	Lake Cargelligo	-	-	-	-	NSW Office of Water
Condobolin (Goobang Ck)	Telemeter	412014	-	Lachlan River	-	-	-	-	DLWC
Fairholme	Telemeter	412023	-	Island Creek	-	-	-	-	DLWC
Condobolin Weir	Manual	412034	-	Lachlan River	-	-	-	-	DLWC
Kiacatoo Weir	Manual	412013	-	Lachlan River	-	-	-	-	SES

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 (‡).

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

The NSW SES Lachlan 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
WIN Television	Orange
Prime Television	Orange
Southern Cross Ten	Orange
WIN Television	Griffith

Radio Stations:

Station	Location	Frequency
ABC 2CR	Orange	549 AM
2GZ	Orange	105.1 FM
2PK	Parkes	1404 AM
Rock FM	Parkes	90.5 FM
2RG	Griffith (Lake Cargelligo)	963 AM

Newspapers:

Name	Location
The Lachlander	Condobolin
Lake News	Lake Cargelligo
Condobolin Argus	Condobolin
Southern Weekly	(inserted into the Lachlander on Tue and Friday)
Champion Post	Parkes – services Tottenham

Other Agencies:

As listed in Volume 1 of this Local Flood Plan (including Cobar and Lachlan Shire).

LACHLAN SHIRE: NSW SES LOCALITY RESPONSE ARRANGEMENTS

Chapter 2 of Volume 3 (NSW SES Response Arrangements for Lachlan Shire) of the Lachlan Shire Local Flood Plan

Last Update: September 2018

AUTHORISATION

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

Approved

NSW SES Lachlan Region Controller

Date: 11 September 2018

Tabled at LEMC 6 November 2018

Document Issue: V3.2-07042014

CONTENTS

LIST OF TABLES

SECTOR OVERVIEW

Table 1: Overview of Sectors in the Lachlan Shire LGA.

Sector Name	Community	Sector Basis	Total properties	Properties potentially at risk
Sector 1	Condobolin	Geographical community	1394	Approximately 16 commercial and >16 residential buildings
Sector 2	Euabalong	Geographical community	240	n/a
Sector 3	Lake Cargelligo	Geographical community	536	35

1. CONDOBOLIN COMMUNITY

1.1. CONDOBOLIN RESPONSE ARRANGEMENTS

Refer to Volume 2: Hazard and Risk in Lachlan Shire for more information about this Sector.

<table>
<tr><td>Sector Description</td><td colspan="5">Condobolin is located at the confluence of Goobang Creek and the Lachlan River. It has a population of 3,746, with a high proportion of people aged over 65 years.
Willow Bend is on the eastern outskirts of Condobolin. It is comprised of 16 houses and has an average population of about 50. The community is managed by the Condobolin Local Aboriginal Land Council.
Derriwong is a small locality to the east of Condobolin.</td></tr>
<tr><td>Hazard</td><td colspan="5">Riverine flooding from the Lachlan River and Goobang Creek.</td></tr>
<tr><td>Flood Affect Classification</td><td colspan="5">Condobolin CBD - rising road access. It can become a high flood island if surrounding roads become cut.
North Forbes Road and Waitohi Lane - low flood islands from a moderate flood.</td></tr>
<tr><td>At risk properties</td><td colspan="2">Approximately 16 commercial and >16 residential buildings</td><td colspan="2">Total number of properties within Sector</td><td>1,394</td></tr>
<tr><td>Sector Control</td><td colspan="5">Small-scale evacuations will be controlled by the NSW SES Lachlan Shire Local Controller. Should the evacuation operations escalate beyond the capabilities of local resources, control may be handed over to the NSW SES Lachlan Region Controller or appointed Incident Controller.</td></tr>
<tr><td>Key Warning Gauge Name</td><td>Name</td><td>AWRC No.</td><td>Min (m)</td><td>Mod (m)</td><td>Maj (m)</td></tr>
<tr><td></td><td>Condobolin</td><td>412006</td><td>5.2</td><td>5.9</td><td>6.7</td></tr>
<tr><td>General Strategy</td><td colspan="5">• 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.
• Pre-deployment of sandbags to assist with property protection.
• Evacuation of at risk population:
  ○ 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.
  ○ Medical evacuation considerations.
• Establish resupply operations where isolation has continued for several days.
• Flood rescue where evacuation has failed, or where people have driven into floodwater.</td></tr>
<tr><td>Key Risks / Consequences</td><td colspan="5">Significant rural inundation and isolation, as well as some properties located within Condobolin and the potential for levee failure or overtopping at Willow Bend to the town's east.</td></tr>
<tr><td>Information and Warnings</td><td colspan="5">NSW SES Flood Bulletins will localise the consequences of the Bureau products on the sector. NSW SES Lachlan Region will issue timely, relevant and tailored information to the public in the following formats:
• NSW SES Bulletins
• Flood Watch
• Flood Warning</td></tr>
</table>

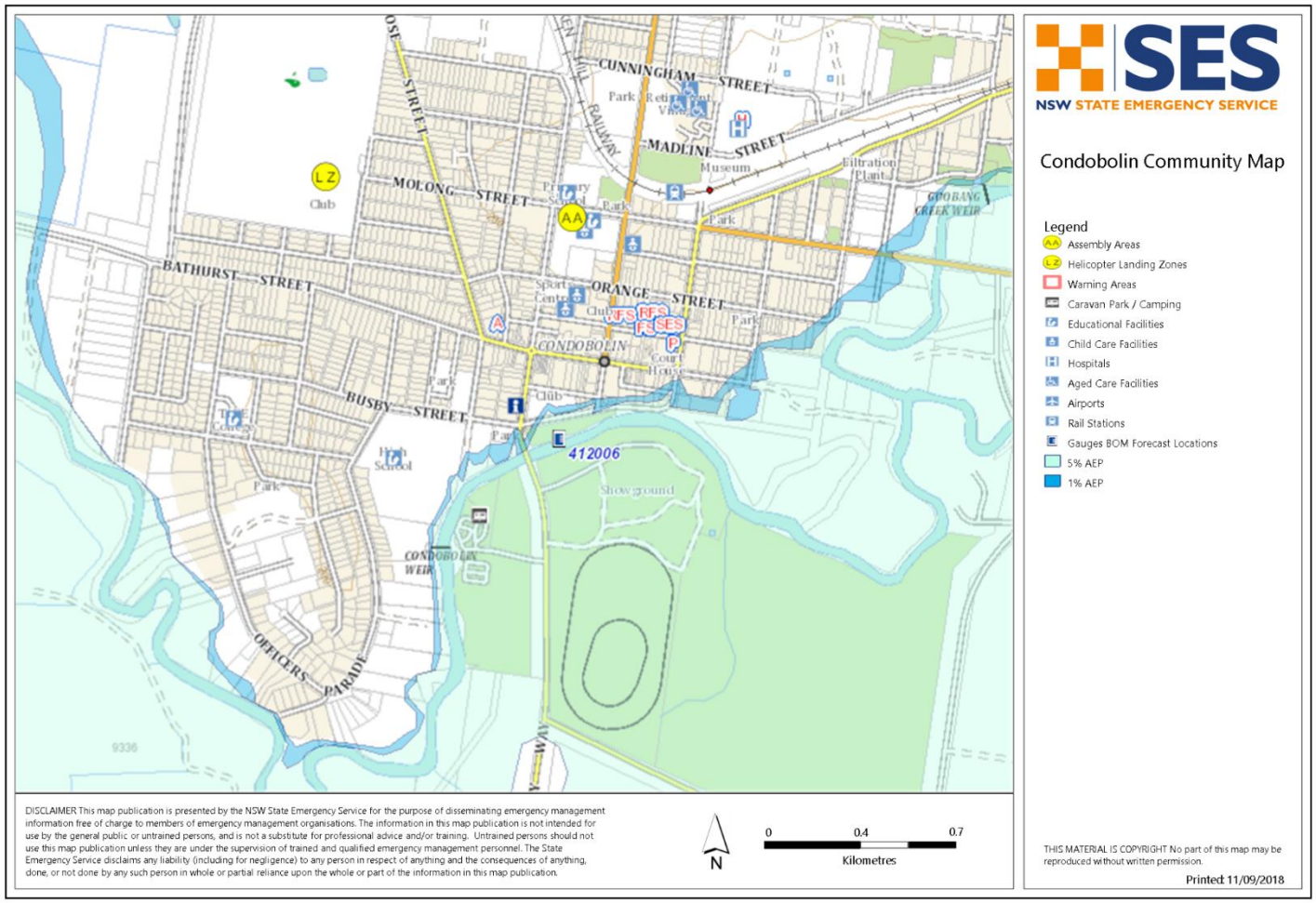
	• Equipment, Livestock and Aquaculture Warnings • Media Release such as– Isolation Warnings • Evacuation Warning • Evacuation Order • All Clear • Sequenced door knocking (the primary means of warning) • Media briefing • Interagency Local Emergency Management Committee (LEMC) briefings • Bureau products, such as Flood Watches and Flood Warnings, will include NSW SES safety advice.
Property Protection	***Specific property protection measures:*** NSW SES Condobolin Unit assists elderly and infirm residents in need of assistance. A sandbagging facility is also established at the Unit Headquarters in Marsden Street, Condobolin for the Condobolin community to pick up sandbagging resources.
	Protection of essential infrastructure: Council arranges for protection of essential infrastructure in the Condobolin community.

Evacuation and/or Isolation Triggers	• The Condobolin Racetrack becomes flooded by around 5.6 m.
	• The Caravan Park and eight low lying properties along Lachlan Street between McDonnell Street and Denison Street are threatened at around 6.35 m.
	• Dwellings at risk in a major flood include:
	  ○ Lachlan Valley Way, east of Condobolin
	  ○ Officers Parade, north and west of Graf Street
	  ○ Lachlan Street between William Street and Denison Street
	  ○ Southern side of Bathurst Street between Denison Street and Gordon Street
	  ○ Lachlan Valley Way and Kiacatoo Road to the west of Condobolin
	  ○ Molong Street between Mooney Street and Goobang Bridge
	  ○ North Forbes Road and Waitohi Lane (around 20 properties)
	• A great deal of rural land downstream of Condobolin is flood liable, roads are affected and the approaches to the bridge over the Lachlan River at Kiacatoo may become inundated by floodwaters.
	• Flooding from the Goobang Creek system may threaten residents in the village of Derriwong on the Condobolin to Bogan Gate Road. Goobang Creek flooding may also inundate two houses and a number of rural properties.
	• If overtopping or failure of the Willow Bend levee occurs, the Willow Bend Community will become inundated (16 houses). During the 1952 flood, the area was covered by a depth of 0.45 m and in 1974 to a depth of 0.2 m.
	• One dwelling in Officers Parade is at risk of inundation from around 7.6 m.

Evacuation Routes	Henry Parkes Way Parkes Road Kiacatoo Road Lachlan Valley Way

Evacuation Route Closure	Lachlan Valley Way becomes closed due to water over road between Condobolin and Forbes during flood events. The roads surrounding Condobolin become restricted to local traffic during flood events to minimise damage to local roads (outlined in volume 2 Road Closures).
Method of Evacuation	Self-evacuation, with residents using their own transport is the primary means of evacuation in the Condobolin community. Assistance for elderly and infirm is arranged through the EOC.
Evacuation Centre/Assembly Point	Any or all of the following sites may be used as evacuation centres: • Condobolin Public School, Molong Street, Condobolin.
Large scale evacuations	Large scale evacuations are unlikely in Condobolin.
Rescue	Hot spots for rescue are surrounding major roads, with vehicles stuck in floodwater.
Resupply	Table 2, in Volume 2 provides information about isolated communities in the Lachlan Shire area and potential periods of isolation.
Aircraft Management	***Helicopter Landing Points:*** Suitable landing points are located at: ▪ Condobolin Airport ▪ Condobolin Golf Club
	Airports: ▪ Condobolin has a small airport to the east of the town (-33.065827; 147.212983).
Other	Condobolin Show – August The Lachlan Valley Way, The Gipps Way and Henry Parkes Way serve as a thoroughfare for road freight and travellers.

1.2. CONDOBOLIN SECTOR MAP



2. EUABALONG SECTOR

2.1. EUABALONG RESPONSE ARRANGEMENTS

Refer to Volume 2: Hazard and Risk in Lachlan Shire for more information about this Sector.

Sector Description	Euabalong is located on the Lachlan River on the Cobar Shire Council boundary. It is assisted by the Lachlan Region NSW SES during flood operations. It has a population of 378, with 240 dwellings. It has a large proportions of people aged over 65 and indigenous. Murrin Bridge is an aboriginal community 12 kilometres North of Lake Cargelligo situated on the Lachlan River.		
Hazard	Riverine flooding from the Lachlan River.		
Flood Affect Classification	High flood island		
At risk properties	n/a	**Total number of properties within Sector**	240
Sector Control	Small-scale evacuations will be controlled by the NSW SES Lachlan Shire Local Controller. Should the evacuation operations escalate beyond the capabilities of local resources, control may be handed over to the NSW SES Lachlan Region Controller or appointed Incident Controller.		

Key Warning Gauge Name

Name	AWRC No.	Min (m)	Mod (m)	Maj (m)
Euabalong	412903	6.4	-	6.8

General Strategy

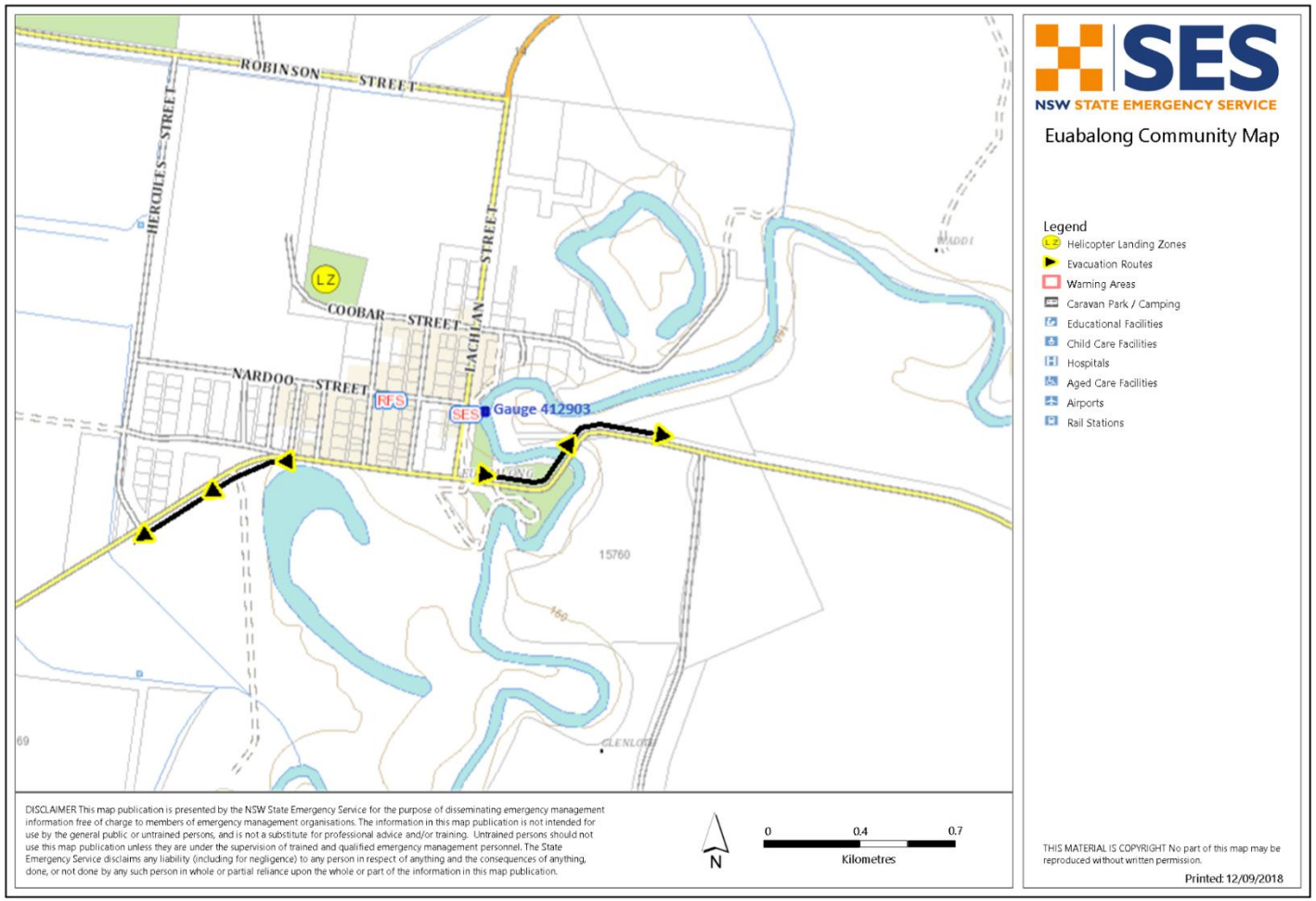
- Manage operations in response to predicted heights indicating likely consequences that pre-empt appropriate actions.
- Issue of early warning of flood level impacts and potential isolation.
- Pre-deployment of sandbags to assist with property protection.
- Evacuation of at risk population:
  - Self-Evacuation to friends/family outside the impact area.
  - Establishment of an Assembly Area/Evacuations Centre in consultation with the Welfare Services Functional Area Coordinator.
  - Medical evacuation considerations.
- Establish resupply operations where isolation has continued for several days.
- Flood rescue where evacuation has failed, or where people have driven into floodwater.

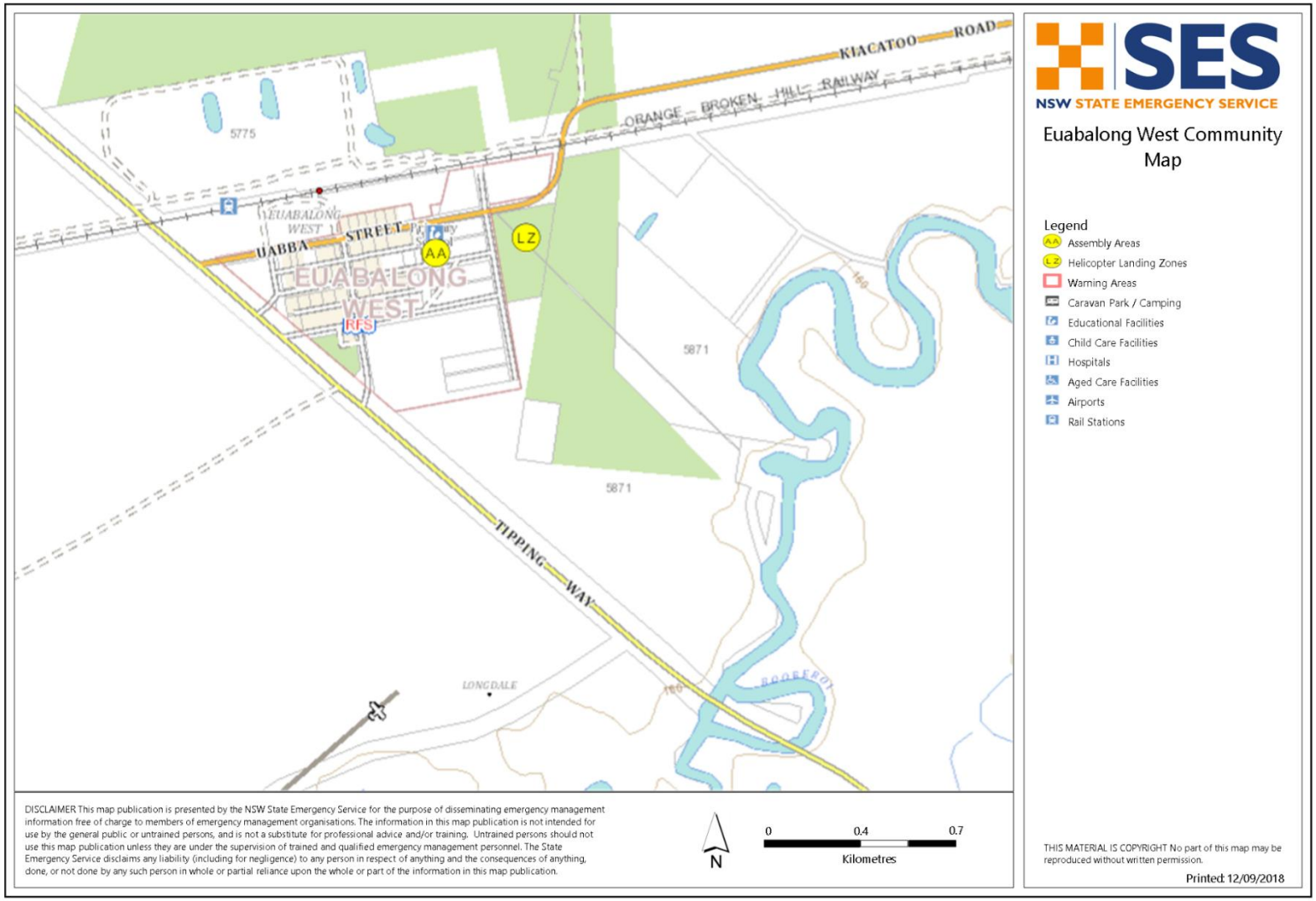
Key Risks / Consequences	The key risk in these communities is isolation for several weeks; with the potential of inundation in Murrin Bridge if the levee fails or overtops.
Information and Warnings	NSW SES Flood Bulletins will localise the consequences of the Bureau products on the sector. NSW SES Lachlan Region will issue timely, relevant and tailored information to the public in the following formats: • NSW SES Bulletins • Flood Watch • Flood Warning • Equipment, Livestock and Aquaculture Warnings • Media Release such as– Isolation Warnings

	• Evacuation Warning • Evacuation Order • All Clear • Sequenced door knocking (the primary means of warning) • Media briefing • Interagency Local Emergency Management Committee (LEMC) briefings • Bureau products, such as Flood Watches and Flood Warnings, will include NSW SES safety advice.
Property Protection	***Specific property protection measures:*** NSW SES Condobolin Unit assists elderly and infirm residents in need of assistance. A sandbagging facility is also established at the Unit Headquarters in Marsden Street, Condobolin for the Condobolin community to pick up sandbagging resources.
	Protection of essential infrastructure: Council arranges for protection of essential infrastructure in the Condobolin community
Evacuation and/or Isolation Triggers	• During major floods, low-lying buildings are susceptible to flooding, including one in Womboin Street (which was sandbagged in 2016). • Euabalong can become isolated for several weeks by moderate to major floods. In 1974 the village of Euabalong became isolated for a number of days. During the 1990 event the village of Euabalong became isolated by road for two weeks (16), this also occurred in 2016. • Flooding in Murrin Bridge used to occur from 6.8 m, however a series of levees now protect the Murrin Bridge community. In 2016, there was approximately one metre of clearance to any properties being affected. • The Murrin Bridge Aboriginal Settlement may be affected by flooding and becomes isolated (comprises of 31 houses and has an average population of about 100). *Further information is outlined in the Lachlan Shire Local Flood Plan Volume 2.*
Evacuation Routes	Lachlan Valley Way to Condobolin or Lachlan Valley Way to Lake Cargelligo.
Evacuation Route Closure	Lachlan Valley Way becomes closed due to water over road between Euabalong, Lake Cargelligo and Condobolin during flood events. The roads surrounding Euabalong become restricted to local traffic during flood events to minimise damage to local roads (outlined in volume 2 Road Closures).
Method of Evacuation	Self-evacuation, with residents using their own transport is the primary means of evacuation in the Euabalong community. Assistance for elderly and infirm is arranged through the EOC.
Evacuation Centre/Assembly Point	• An assembly area would be set at the Euabalong West Public School, Euabba Street, Euabalong West. • Evacuation of Murrin Bridge will be coordinated by the EOC and the Local Aboriginal Lands Council (LALL), accommodation will be in Lake Cargelligo as required.
Large scale evacuations	Large scale evacuations are unlikely in Euabalong.
Rescue	Hot spots for rescue are surrounding major roads, with vehicles stuck in floodwater.
Resupply	Table 2, in Volume 2 provides information about isolated communities in the Lachlan Shire area and potential periods of isolation.

Aircraft Management	***Helicopter Landing Points:*** Suitable landing points are located at: ▪ Cnr Coobar & Blaxland Streets, Euabalong (-33.106623; 146.468094) ▪ Cnr Marobee Street & Uabba Street, Euabalong West (-33.055715; 146.399944).
	Airports: ▪ Lake Cargelligo Airport is a small airport located to the north of Lake Cargelligo (-33.282287; 146.374833) ▪ Condobolin has a small airport to the east of the town (-33.065827; 147.212983).
Other	This community is outside of the Lachlan Shire LGA, however operations are managed by Condobolin, Lachlan Region NSW SES.

2.2. EUABALONG SECTOR/COMMUNITY MAPS




KIACATOO ROAD
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TIPPING WAY
LONGDALE
BOOREBOY
160
SES
NSW STATE EMERGENCY SERVICE
Euabalong West Community Map
Legend
Assembly Areas
Helicopter Landing Zones
Warning Areas
Caravan Park / Camping
Educational Facilities
Child Care Facilities
Hospitals
Aged Care Facilities
Airports
Rail Stations
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Printed: 12/09/2018

3. LAKE CARGELLIGO SECTOR

3.1. LAKE CARGELLIGO RESPONSE ARRANGEMENTS

Refer to Volume 2: Hazard and Risk in Lachlan Shire for more information about this Sector.

Sector Description	Lake Cargelligo is a large rural community with many of the properties along the Lachlan River requiring assistance during flood events. It is located on a lake that is fed by the Lachlan River through Lake Curlew with a population of 1,380 people. Curlew Waters is located to the east of Lake Cargelligo, comprising of approximately five dwellings.				
Hazard	Riverine flooding from Lachlan River/Lake Cargelligo				
Flood Affect Classification	Lake Cargelligo - Rising road access Curlew Waters - Low flood island				
At risk properties	35	**Total number of properties within Sector**	536		
Sector Control	Small-scale evacuations will be controlled by the NSW SES Lake Cargelligo Unit Controller. Should the evacuation operations escalate beyond the capabilities of local resources, control may be handed over to the NSW SES Lachlan Region Controller or appointed Incident Controller.				
Key Gauge Name (note this is not a Bureau warning gauge)	**Name**	**AWRC No.**	**Min (m)**	**Mod (m)**	**Maj (m)**
	Lake Cargelligo	421011	1.5	1.9	2.0

General Strategy	• 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.
	• Pre-deployment of sandbags to assist with property protection.
	• Evacuation of at risk population:
	  ○ 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.
	  ○ Medical evacuation considerations.
	• Establish resupply operations where isolation has continued for several days in Curlew Waters.
	• Flood rescue where evacuation has failed, or where people have driven into floodwater.				

Key Risks / Consequences	35 dwellings at risk of inundation off Lake Cargelligo Road, McInnes Road, Nillsons Lane, McInnes Street, Dents Lane, Brooks Lane to the east of Lake Cargelligo, including Curlew Waters subject to flooding below a 1% AEP flood and Lake Street and Bridge Street.				
Information and Warnings	Lake Cargelligo undergo doorknocking local residents at risk. As it is a small community, communication networks are strong. This includes information (such as alert levels) on the Lake Cargelligo wall owned by Water NSW. NSW SES Flood Bulletins will localise the consequences of the Bureau products on the sector. NSW SES Lachlan Region will issue timely, relevant and tailored information to the public in the following formats: • NSW SES Bulletins				

	• Flood Watch • Flood Warning • Equipment, Livestock and Aquaculture Warnings • Media Release such as– Isolation Warnings • Evacuation Warning • Evacuation Order • All Clear • Sequenced door knocking (the primary means of warning) • Media briefing • Interagency Local Emergency Management Committee (LEMC) briefings • Bureau products, such as Flood Watches and Flood Warnings, will include NSW SES safety advice.
Property Protection	***Specific property protection measures:*** NSW SES Lake Cargelligo Unit provide sandbags to community members at risk.
	Assistance with property protection: Generally there is little requirement for sandbagging assistance. The Boat Shed off Johnston Street, is generally sandbagged during floods.
	Protection of essential infrastructure: No protection of essential infrastructure is performed by NSW SES.
Evacuation and/or Isolation Triggers	Evacuation will be considered with an Amber alert on the Lake Cargelligo wall/levee (owned by Water NSW), or when floodwaters approach dwellings (in a very severe flood).
Sequencing of evacuation	Curlew Waters would be the first area to require evacuation, which would be required prior to Stuart Drive being cut. The remaining areas would be evacuated as required, having rising road access.
Evacuation Routes	Curlew Waters: Stuart Drive, Curlew Road and Lake Cargelligo Road to Lake Cargelligo to friends or family; or established evacuation centre.
Evacuation Route Closure	Stuart Drive may become cut in major floods, preventing evacuation of Curlew Waters.
Method of Evacuation	Primary means of evacuation is private transport.
Evacuation Centre/Assembly Point	Lake Cargelligo Central School.
Large scale evacuations	Large scale evacuations are unlikely.
Rescue	No flood rescue hot spots in this sector.
Resupply	Resupply is generally not required; however if Curlew Waters becomes isolated, this community may require resupply (2-3 days).
	Table 2, in Volume 2 provides information about isolated communities in the Lachlan Shire area and potential periods of isolation. A flowchart illustrating the Resupply process is shown in Volume 1 of the Local Flood Plan, Attachment 1.

Aircraft Management	***Helicopter Landing Points:*** Suitable landing points are located at: ▪ Lake Cargelligo Airport to the north of Lake Cargelligo (-33.282287; 146.374833)
	Airports: ▪ Lake Cargelligo Airport is a small airport located to the north of Lake Cargelligo (-33.282287; 146.374833)
Other	Lake Cargelligo Show – September Lake Cargelligo Fisherama - October

3.2. LAKE CARGELLIGO SECTOR MAP

NSW STATE EMERGENCY SERVICE

LACHLAN SHIRE NSW SES
CARAVAN PARK ARRANGEMENTS

Chapter 4 of Volume 3 (NSW SES Response Arrangements for Lachlan Shire) of the Lachlan Shire Local Flood Plan

Last Update: September 2018

FloodSafe

AUTHORISATION

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

Approved

NSW SES Lachlan Region Controller

Date: 11 September 2018

Tabled at LEMC 6 November 2018

Document Issue: V3.3-21102014

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LIST OF TABLES

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. Riverview Caravan Park, Condobolin

1.1.2 For more information on individual caravan parks see Table 1 and **Error! Reference source not found.** 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 Lachlan Shire Local Controller will ensure that the managers of caravan parks are advised of Flood Information (described in Volume 1 of the Lachlan Shire 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 Table 1 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 Lachlan Shire 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 Lachlan Shire Local Controller when the evacuation of the caravan park has been completed.

f. Provide the NSW SES Lachlan Shire 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 Lachlan Shire 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
Riverview Caravan Park	Diggers Avenue, Condobolin	Condobolin	64 caravan sites and camping ground	Riverine flooding		Lower levels of caravan park (campers and temporary caravan sites) inundated at 6.35 m. Carport and house have a floor height of 6.37 m. Sewerage pump station is just above 6.8 m. Upper levels of caravan park permanent vans (with wheels) and cabins (floor height 7.37 m) inundated at 6.78 m. Power fails at 6.78 m. Amenities block floor height 7.32 m.	Melrose Street, Cricket Ground		Easter - Condobolin 750 August - Condobolin Show and Dog Show (100 + sites require evacuation during these times).

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.