

NORTHERN RIVERS

**Local Emergency
Management Plan**

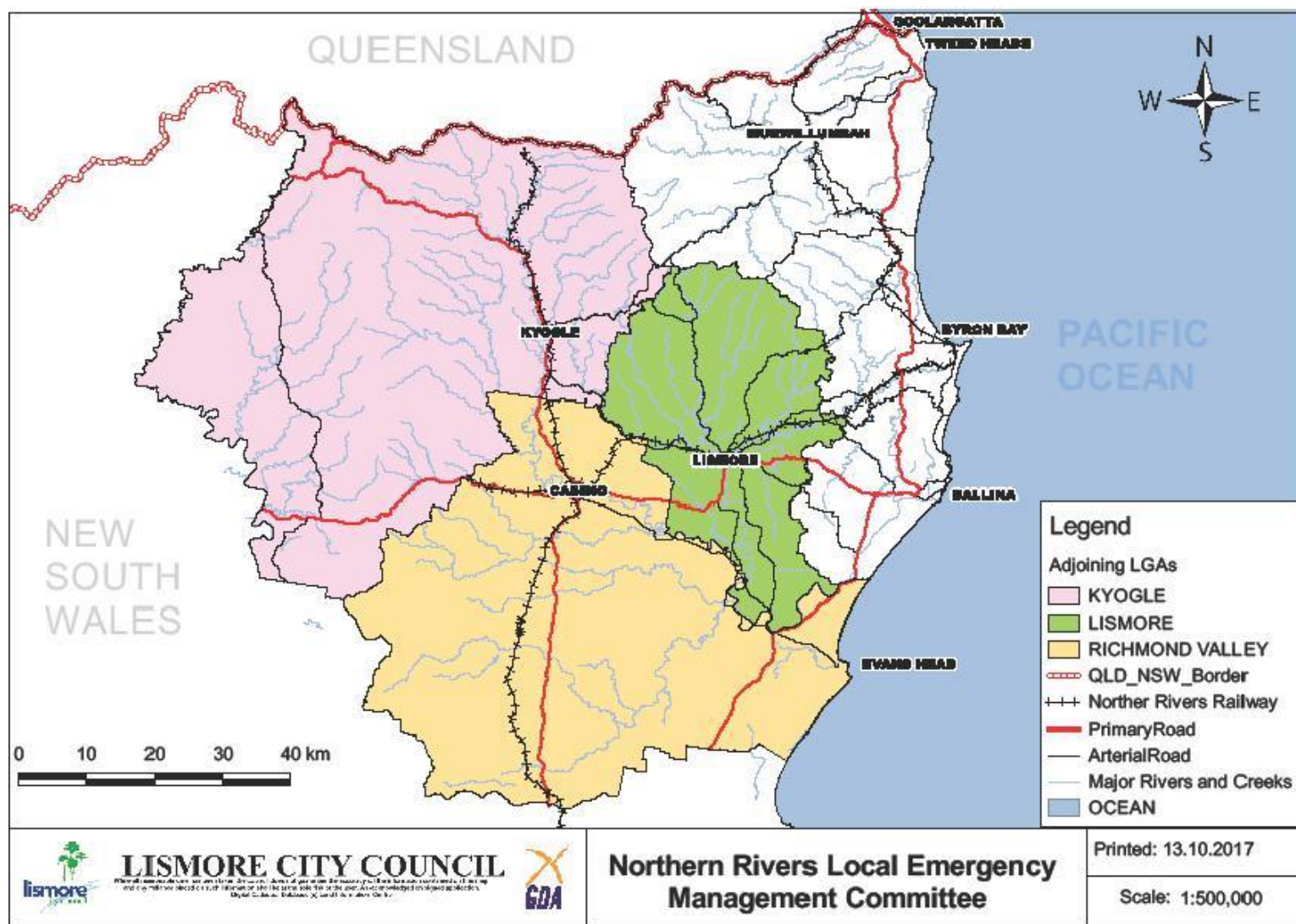
12 February 2021





Richmond
Valley
Council






Part 1 – Administration

Authority

The NORTHERN RIVERS Local Emergency Management Plan (EMPLAN) has been prepared by the Northern Rivers Local Emergency Management Committee in compliance with the State Emergency & Rescue Management Act 1989.

APPROVED



.....

Chair Northern Rivers Local Emergency Management Committee

Dated: 12 February 2021

ENDORSED



Chair Northern Rivers Local Emergency Management Committee

A/Assistant Commissioner Chad Gillies
A/REOCON

Dated: 17/05/2021

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Purpose

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

It encompasses arrangements for:

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

Objectives

The objectives of this plan are to:

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

Scope

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

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

Principles

The following principles are applied in this plan:

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

Test and Review Process

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

- Activation of the Plan in response to an emergency;
- Legislative changes affecting the Plan; and
- Exercises conducted to test all or part of the Plan

Part 2 – Community Context

Annexure A – Community Profile

Overview

The area covered by this plan is the combined local government areas of **Lismore City Council, Richmond Valley Council and Kyogle Council** which comprises the Northern Rivers Local Emergency Management area.

Refer Appendix No. 1: Map – Combined LGA areas for Northern Rivers LEMC area.

Refer Appendix No. 2: Map – Lismore City LGA area

Refer Appendix No. 3: Map – Richmond Valley LGA area

Refer Appendix No. 4: Map – Kyogle LGA area

Note:

For Emergency Management and Emergency Services operational purposes the Urbenville Township (town is located within the boundary area of Tenterfield Local Government Area) and surrounding area are included in the Kyogle LGA area and covered in this EMPLAN.

The Northern Rivers Local Emergency Management area is part of the North Coast Emergency Management Region.

The Community Profile for the three (3) subject Local Government Areas are profiled in separate sections of the Plan;

- Part A: Lismore City Council
- Part B: Richmond Valley Council
- Part C: Kyogle Council
- Part D: “Population and People” Census data for the three (3) subject Local Government Areas.

Population			
Lismore City LGA	Richmond Valley LGA	Kyogle LGA	Total
43,692	22,807	8,940	75,439
Aboriginal people - Percentage of population: Kyogle (4.3%), Richmond Valley (7.2%), and Lismore (5.0%). All three (3) LGAs are position in the Bundjalung Nation.			

Emergency Management Command / Management structures for the Northern Rivers Local Emergency Management area:

Emergency Services		
Agency	Command Name	Headquarters Location
NSW Police Force	Richmond Police District	Lismore
Fire & Rescue NSW	Regional North Zone 2	Ballina
NSW Rural Fire Service	Region North – Northern Rivers Zone	Casino
NSW State Emergency Service	Northern Rivers Command – Northern Zone	Lismore
NSW Ambulance	North Coast Sector	Coffs Harbour
NSW Volunteer Rescue Assoc.	Far North Coast Region (Region 1)	Brunswick Heads

Functional Areas (Local / Region Based)		
Name	Agency Name	Headquarters Location
Agriculture & Animal Services	Department of Primary Industries	Wollongbar
Engineering Services	Public Works Advisory	Lismore
Energy and Utility Services	Essential Energy	Lismore
	Essential Energy Head Office is at Port Macquarie	
Environmental Services	NSW Environment Protection Authority	Grafton
Health Services	Northern NSW Local Health District	Lismore
Public Information Services	NSW Police Force	Lismore
Transport Services	Transport for NSW	Coffs Harbour
	Transport for NSW	Grafton
Telecommunications Services	Telstra	Lismore
Welfare Services	Department of Communities & Justice, Community Services	Lismore

Queensland and New South Wales – Statement of Principles and Priorities for Cross-border Collaboration 2016-2019.

Note: This document is currently under the final stage of review as of February 2021.

The Queensland and New South Wales Governments have committed to close collaboration between the two jurisdictions.

The agreement applies to state agency activities on the Queensland and New South Wales border region, as well as respective Local Government areas.

This agreement has resulted in close working relationships between Queensland and NSW South Wales emergency service agencies, resulting in the availability of operational resource assistance.

For large scale emergency operations within the Northern Rivers Local Emergency Management area there is high likelihood that Queensland emergency service resources may be involved. These inter-state resources will be under the control of the relevant NSW based Combat Agency and / or LEOCON.

The Flood Plain Management Authority for the Lismore City and Richmond River LGAs is Rous County Council, which is based in Lismore.

Main Centres / Towns / Villages Within the Area

Lismore City	Map - Refer Appendix No.5
Bexhill Village	Map - Refer Appendix No.5-A
Caniaba Village	Map - Refer Appendix No.5-B
Clunes Village	Map - Refer Appendix No.5-C
Dunoon Village	Map - Refer Appendix No.5-D
Modanville Village	Map - Refer Appendix No.5-E
Nimbin Village	Map - Refer Appendix No.5-F
North Woodburn Village	Map - Refer Appendix No.5-G
The Channon Village	Map - Refer Appendix No.5-H
Wyrallah Village	Map - Refer Appendix No.5-I
Casino	Map - Refer Appendix No.6
Coraki	Map - Refer Appendix No. 6-A
Broadwater	Map - Refer Appendix No. 6-B
Evans Head	Map - Refer Appendix No. 6-C
Woodburn	Map - Refer Appendix No. 6-D
Rileys Hill	Map - Refer Appendix No. 6-E
Kyogle	Map - Refer Appendix No. 7

Major Road Network Within the Area

- Pacific Highway (National Highway No.1)
- Bruxner Highway
- Summerland Way

Rail Network Within the Area

- Northern Line (Sydney – Brisbane)
- Non-Operation line – Casino to Murwillumbah. (Closed in 2004)

Refer Appendix No.8: Map – Rail Network NSW

The main North Coast railway line (Sydney – Brisbane) line services both freight and XPT passenger trains. Casino and Kyogle townships are located on the rail line.

This rail line is the only line that operates between Queensland and New South Wales.

There is a higher level risk of serious rail accidents due to a large number of road / rail level crossings in the area.

Aviation - Major Airport Within the Area

- Lismore Regional Airport

Note: Major air traffic transverse across the area on key flight paths associated with Brisbane Airport, Gold Coast Airport and Ballina-Byron Gateway Regional Airport, and air traffic travelling in the Eastern Australia air route corridors.

Electricity Network Grid

Electricity Network Supplier – Essential Energy

330Kv Line

Coffs Harbour to McKees Hill

132Kv Line(s)

Tenterfield to McKees Hill, with a Tee off into Casino zone on route.

Koolkhan - McKees Hill

McKees Hill to Lismore

Lismore - Dunoon – Mullumbimby

66kv Line(s)

Koolkhan - Rappville – Casino

Casino – Lismore

Lismore – Woodburn-Broadwater Mill

Lismore – Alstonville - Lismore South - Lismore Uni - East Lismore

Lismore – Kyogle

33kv Line

Casino - Mallanganee - Bonalbo - Urbenville.

Refer Appendix No.9: Map – Electricity Network in area.

Major Geographic Areas Within the Area

- Great Diving Range [Border Ranges Rainforest Region and Richmond Ranges] (Border Ranges and Richmond Ranges contain World Heritage Listed areas)
- Pacific Ocean
- Richmond River Flood Plain

Key River Catchments / Systems Within the Area

- Richmond River
- Wilsons River
- Clarence River (Part of catchment lies within the Kyogle LGA)

Refer Appendix No.10: Map – Richmond River Basin.

Land Tenure

Land Manager	% of Land
Private	66.60
Forestry Corporation NSW	16.84
National Parks & Wildlife Service	14.15
Department of Industry – Lands & Forestry	1.70
Local Government	0.38
Other	0.33

Climate

The typical / average climate in the area is warm subtropical with a well-defined summer/autumn rainfall peak (January to March) and a dry winter and spring.

The climate in forested areas at higher altitudes tends towards warm temperate. The temperature and rainfall conditions vary across the district. The rainfall can be unreliable during the late winter / spring period, particularly on the lower altitude landforms.

The bush fire season generally coincides with strong south-west to north-west winds, which tend to prevail during late winter / spring (Aug / Sep) and often result in extreme fire danger days, particularly where the drought indices are low.

The majority of serious bush fires occur from this period until the onset of summer rains, which normally start from December and continue through to autumn. Longer fire seasons are experienced when summer rainfall is lower than normal, with the bush fire season extending through summer to early autumn.

The region experiences most of its rainfall between December and May, but heavy rain can fall at any time of the year.

Community Assets

Human settlement

- Residential areas.
- Schools, hospitals, nursing homes, and tourist facilities.
- Other human settlement areas including commercial and industrial areas where distinct from major towns.

Economic

- Commercial/industrial e.g. major industries, waste treatment plants, sawmills.
- Infrastructure e.g. large power lines, gas and oil pipelines, railway lines, electricity substations, communication facilities.
- Tourist and recreational e.g. tourist sites and facilities, resorts, retreats.
- Mines.
- Commercial forests e.g. pine plantations, eucalypt plantations and commercial native forests.
- Drinking water catchments.

Environmental

- National Parks and Conservation Areas.
- World Heritage Listed areas.
- Threatened species, populations and ecological communities and Ramsar wetlands.
- Locally important species and ecological communities, such as species and ecological communities.

Cultural

- Aboriginal significance – Aboriginal places and items of significance.
- Non-indigenous heritage – places and items arising from the early occupation of NSW by European or other non-indigenous settlers.

Other cultural assets – community halls, clubs and recreational facilities

Community Profile – Part A:

LISMORE CITY COUNCIL AREA

General

Lismore City Population: 43,692 (ABS estimated 2016).

Area: 128,956 ha or 1,290 km².

Population trend: Increasing.

Lismore City Council is a rural and urban area.

Population density is 0.35 persons per hectare.

More than 60% of the population live in the urban areas, particular the city of Lismore and the villages of Bexhill, Clunes, Dunoon, Nimbin and Wyrallah, with numerous smaller villages and hamlets.

City / Town / Village	Population (Approximate)
Lismore District	18,000
Goonellabah District	13,000
Clunes Village	500
Dunoon Village	400
Elthan Village	600
Modanville Village	500
Nimbin Village	1,600
The Channon Village	300
Wyrallah Village	200
Rural Area: Clunes / Bexhill / Eltham	1,500
Rural Area: South West	1,200
Rural Area: South East	2,500
Rural Area: North East	1,800
Rural Area: North West	1,700
Rural Area: The Channon District	1,500
Rural Area: Richmond Hill / McLeans Ridges	1,200

Lismore City includes the localities of:

Bentley (part), Bexhill, Blakebrook, Blue Knob, Boat Harbour, Boorie Creek, Booyong (part), Broadwater (part), Buckendoon, Bungabbee, Caniaba, Chilcotts Grass, Clunes (part), Coffee Camp, Coraki (part), Corndale, Dorroughby, Dungarubba, Dunoon, East Coraki (part), East Lismore, Eltham, Fernside, Georgica, Girards Hill, Goolmangar, Goonellabah, Green Forest (part), Howards Grass, Jiggi, Keerrong, Kilgin, Koonorigan, Lagoon Grass, Larnook (part), Leicester, Lindendale, Lismore, Lismore Heights, Loftville, Marom Creek (part), McKees Hill (part), McLeans Ridges (part), Modanville, Monaltrie, Mountain Top, Nightcap (part), Nimbin, North Lismore, North Woodburn, Numulgi, Pearces Creek (part), Repentance Creek, Richmond Hill, Rock Valley, Rosebank, Ruthven, South Gundurimba, South Lismore, Spring Grove (part), Stony Chute (part), Tatham (part), Terania Creek, The Channon, Tregeagle, Tucki Tucki, Tuckurimba, Tullera, Tuncester, Tuntable Creek, Whian Whian (part), Woodlawn and Wyrallah.

A large proportion of the Lismore workforce commute from surrounding smaller towns and rural villages creating a significant and diverse community profile.

Local Government Authority (LGA) areas that adjoin Lismore City Council are:

Kyogle Council	Tweed Shire Council	Byron Shire Council
Richmond Valley Council	Lismore City Council	Ballina Shire Council
Richmond Valley Council	Richmond Valley Council	Richmond Valley Council

All adjoining LGAs are part of the North Coast Emergency Management Region.

Rous County Council has its Administration Centre in Lismore.

Rous County Council is the recently formed authority from the amalgamation of Rous Country Council (Rous Water), Richmond Valley Country Council (Flood Mitigation Management) and Far North Coast County Council (Weeds).

Rous County Council is the authority responsible for Flood Plain management for the Wilson and Richmond Rivers.

The city of Lismore is one of the largest cities in the Region. Lismore City accommodates a large number of State and Federal Government departments and agencies.

Lismore City Council Administrative Headquarters is based in Lismore.

Lismore CBD is protected by a levee with a 1:10 ARI (up to and including the 10 year Annual Recurrence Interval flood). Areas outside of the levee can be heavily impacted by flood.

Electricity infrastructure provider for the area is **Essential Energy**.

Water Supply provider for the area is **Rous County Council**. Rous County Council has its headquarters in Lismore.

Lismore City LGA is part of the Northern NSW Local Health District with headquarters based in Lismore. Lismore Base Hospital and Nimbin Multi-Purpose Centre are the two hospital facilities within the Lismore LGA area.

Lismore Base Hospital is a major emergency retrieval health facility. The nearest other major emergency retrieval health facilities are located at Gold Coast (Queensland), Newcastle and Sydney.

NSW Ambulance manage all aero-medical retrieval services, using both State owned and contracted Fixed Wing and Helicopter aircraft. Aero-medical retrievals occur regularly in the area.

Lismore Regional Airport is used for aero-medical operations and is a key community asset.

The Westpac Rescue Helicopter Base is located in Lismore at Lismore Regional Airport. This rescue service covers the wider regional area.

Helipads are located at:

- Lismore - Lismore Base Hospital.
- Nimbin - Nimbin Soccer Fields.

NSW SES identified Helicopter Landing Areas for Flood Re-supply operations (Lismore City Flood Plan) are located at:

- Nimbin - Playing Fields located adjacent to Bowling Club.
- Nimbin - Playing Fields at Nimbin Central School.
- The Channon: The Channon Public School
- Dunoon - Dunoon Public School
- Goolmangar - Area adjacent to Memorial Hall.
- Wyrallah - Area adjacent to Wyrallah Public School.

Hepburn Park – During major flood events, the NSW SES sets up a temporary airbase at Hepburn Park in Goonellabah for helicopter operations. Hepburn Park is chosen as it is out of flood and close to the Regional SES Headquarters.

Lismore Regional Airport has a regular passenger service provided by Regional Express Airlines (REX) with several daily services Lismore – Sydney - Lismore.

The closest other passenger servicing Airports are located at Ballina and Coolangatta (Gold Coast, Queensland).

The Aboriginal Health Service has a facility at Lismore that provides Doctor and general community health services.

There are numerous Aged Care Facilities located at Lismore and Goonellabah, whilst Nimbin Multi-Purpose Service has an aged care function.

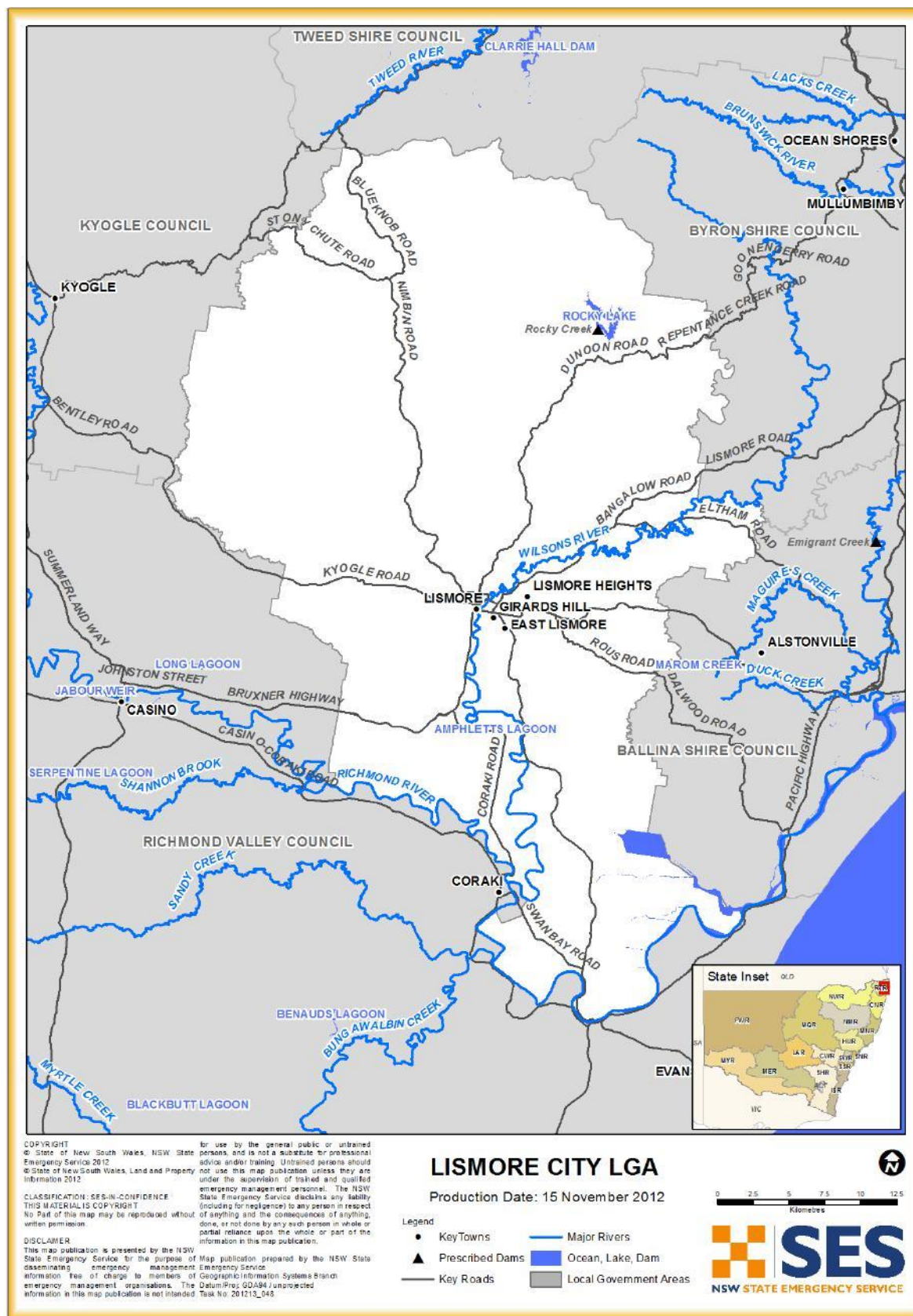
The Lismore City LGA area forms part of the North Coast Region of NSW Department of Primary Industries. The NSW Department of Primary Industries – Wollongbar Primary Industries Institute, a large scale facility, is located in the adjoining LGA area of Ballina Shire Council near the Lismore City LGA / Ballina Shire LGA boundary.

Lismore City LGA is part of the North Coast Local Land Services which has its headquarters in Lismore.

Emergency Service agencies for the Lismore City LGA are profiled in below Table.

Lismore - Emergency Service Agency Profile		
NSW Police Force	Police District: Name / HQ	Richmond Police District - Lismore
	Police Stations	Lismore and Nimbin
	Note: The Lismore Police Station is subject to inundation in major flood events and is likely to become non-operational. Plans for relocating to other facilities /locations for continuation of operations if required are in place with each agency.	
	Primary Rescue: GLR & VR	Lismore - Police Bomb Disposal & Rescue Unit
	Secondary Rescue: GLR	NIL
Fire & Rescue NSW	Zone: Name / HQ	Regional North 2 Zone - Northern Rivers: Ballina
	Fire Stations	Lismore (Station 362) Goonellabah (Station 316)
	Note: The Lismore Fire Station is subject to inundation in major flood events and is likely to become non-operational. Plans for relocating to other facilities /locations for continuation of operations if required are in place with each agency.	
	Primary Rescue: GLR	NIL
	Secondary Rescue: GLR	Lismore (Station 362)
NSW Rural Fire Service	Zone: Name / HQ	Northern Rivers Zone - Casino
	Village / Town Brigades	Clunes; Boat Harbour; Dunoon; Nimbin; The Channon; Tullera; Wyrallah
	Rural Brigades	Alphadale; Bentley; Blue Knob; Caniaba; Goolmangar; Juggi Valley; Larnook; Rosebank; Stoney Chute; Tuncester
NSW State Emergency Service	Region: Name / HQ	Northern Rivers Command - Northern Zone
	Local Units	Lismore City
	Primary Rescue: GLR	NIL
	Secondary Rescue: GLR	Lismore City
NSW Ambulance	Sector: Name / HQ	Regional Division – North Coast Sector Coffs Harbour
	Stations	Lismore
	Note: The Lismore Ambulance Station is subject to inundation in major flood events and is likely to become non-operational. Plans for relocating to other facilities /locations for continuation of operations if required are in place with each agency.	
NSW Volunteer Rescue Association	Region: Name / HQ	Far North Coast Region (Region 1) – Brunswick Heads
	Primary Rescue: GLR	NIL
Notes: <ol style="list-style-type: none"> 1. NSW Police Force – Lismore Station is open 24/7. 2. FR NSW - Lismore (Station 362) is operational 24/7 – 365, staffed by both Permanent and Retained Fire Fighters. 3. FR NSW - Goonellabah (Station 316) is staffed by on-call Retained Fire Fighters. 4. FR NSW - Goonellabah (Station 316) is an “Intermediate HAZMAT” capability Brigade. 		

MAP – LISMORE CITY COUNCIL LGA (Showing River Systems):



Landform and Topography

Rivers and Waterways

The Lismore LGA is in the Richmond River basin.

The Richmond River basin consists of two distinct river catchments; the Wilson River Catchment on the north east of the basin (North of Lismore), and the larger Richmond River catchment on the western and southern sections of the River.

Lismore City is located at the confluence of the Wilsons River (a tributary of the Richmond River) and Leycester Creek.

Lismore City and surrounding areas are affected by recurring major flood events. The majority of Central Lismore is protected by a levee to a level below the 10% AEP flood.

A small section of Central Lismore is located outside of the levee.

The 10% AEP Flood level equates to 10.8M on the Lismore – Rowing Club Gauge.

This height was exceeded in the March-April 2017 Flood event which resulted in extensive flooding of the CBD area of Lismore City.

A large amount of rural land is susceptible to inundation from flood events. This requires the movement of livestock and equipment to higher grounds. Both rural properties and communities can be isolated by flooding, requiring resupply. These rural communities include;

- Nimbin
- The Channon
- Dunoon
- Goolmangar
- Wyrallah
- Gundurimba
- Caniaba
- Bexhill
- Clunes

The Wilsons River catchment water combines with the Richmond River at Coraki to create a large and valuable floodplain.

Other significant waterways in the area are Boomerang Creek, Coopers Creek, Marom Creek, Pearce's Creek, Rocky Creek, Tuntable Creek and Terania Creek.

Rocky Creek Dam (Dam and Gates Lake) are significant water bodies of water in the Lismore LGA.

Rocky Creek Dam and associated Nightcap Water Treatment Plant are owned and managed by Rous County Council, based in Lismore.

Rocky Creek Dam Overview	
Owner / Operator	Rous County Council
Description of Dam	Rock fill, clay core Constructed in 1953 Height: 28 metres Length: 220 metres
Location	168 Rocky Creek Dam Road, Dorrroughby In Whian Whian State Forest, approximately 20 kilometres north of Lismore, on Rocky Creek and Gibbergunyah Creek.
Capacity	14,000 megalitres
Catchment Area	31 km ²
Hazard Rating: Dam Safety Act	High Category C
Communities downstream	Dunoon, The Channon, Lismore City. In a Dam Break scenario water would flow into Rocky Creek, into Terania Creek, into Leicester Creek, which connects with the Wilson River at Lismore City.
Monitoring System	The monitoring system consists of the following elements <ul style="list-style-type: none"> • Storage Level Indicators and Rainfall • Piezometers and survey inspections • Seepage • Seismic Monitoring
Warning System	The Rocky Creek Dam spillway level is monitored by a SCADA system that continuously records water level figures. Council's SCADA system will trigger alarms at pre-set spillway water levels: These levels correspond to previously defined alert categories. A real-time seepage monitoring weir is located at the toe of the dam to record total seepage from the tail water pond and the right abutment. The Council SCADA system monitors the seepage and is configured to send alarms to on-call operators when seepage flows exceed a preconfigured set-point. If any alarm is unanswered by the Council's on-call operators within a prescribe timeframe, Council's afterhours monitoring service is notified about the alarm.
Other / Notes: <ol style="list-style-type: none"> 1. The Dam is a Water Supply Dam for Lismore, Ballina, Byron and Richmond Valley Councils. 2. The dam is not considered deficient (NSW SES – Lismore City Local Flood Plan: October 2006) 3. The Dam is located 187m above sea level. This high elevation allows high pressure gravity supply to most areas within the water supply distribution system. 4. Water is released via Spillway which is designed to discharge more than 1,000 cubic metres of water per second under PMF conditions. 5. In 2009 the dam wall was upgraded by ensuring the safety of the dam wall during a maximum probable flood. The upgrade involved the removal of the top of the wall, the installation of a concrete cut-off wall keyed into the impermeable clay core, followed by replacement of the gravel and road over the dam wall. 6. The dam is considered small compared to the size of the population it services. However, the secure yield is high because of the catchment's climate with its consistent high annual rainfall. 7. Nightcap Water Treatment Plant is located adjacent to the Dam. The Plant starts and stops based on demand from the reservoirs in the supply network. When required, water is pumped directly from the Dam into the Plant for treatment. 	

The vegetation is generally reflects the geology and soils in the area which are derived from the Lamington Volcanics which in this area consists of basalt and thick rhyolite rocks erupted from or associated with the Tweed Volcano. The subtropical rainforest is generally regarded as one of the biggest remnants of the Big Scrub rainforest that once existed over a large part of the surrounding region.

National Parks and Nature Reserves

Lismore City LGA includes part of the Border Ranges rainforest region, one of Australia's biodiversity hotspots, and supporting fertile, productive land and expansive floodplains. This rich environment underpins the area's important agriculture and tourism sectors.

National Parks, Nature Reserves and State Conservation Areas in the Lismore LGA:

National Park	Nightcap		
Nature Reserve	Boatharbour	Bungabbee	Muckleewee
	Tuckean	Tucki Tucki	Wilson
State Conservation Area	Whian Whian		

Nightcap National park is a World Heritage listed area due to its Rainforest areas. Toonumbar and Border Ranges National Parks, located in adjoining LGAs, are also World Heritage listed areas.

State Forest

- Bungabbee State ForestThe

Climate

The subtropical climate means Lismore enjoys warm and mild weather all year 'round. Expect hot, languid summers, mild winter days with cool evenings, and lots of sunshine. Rainfall in the region is high, and green, lush vegetation abounds. Summers are characterised by warm nights and warm to hot days, and late afternoon rain is common. Autumn is generally warm with some rain showers. Winter brings cool nights with warm sunny days, while spring has cool-warm nights with warm, occasionally hot days. Rainfall in the region is relatively high – higher than in Sydney and Brisbane.

The region experiences most of its rainfall between December and May, but heavy rain can fall at any time of the year.

Month /Temp	Jan	Feb	Mar	Apr	May	Jun	July	Aug	Sept	Oct	Nov	Dec	Total
Mean MAX Temp C	30.0	29.5	28.1	26.8	23.4	20.7	20.8	22.6	25.6	27.3	28.7	29.4	26.0
Mean MIN Temp C	18.8	18.6	17.1	14.0	9.9	8.2	6.1	6.7	9.7	12.5	15.5	17.3	12.9

The average yearly rainfall: 1180mm.

Month /mm	Jan	Feb	Mar	Apr	May	Jun	July	Aug	Sep	Oct	Nov	Dec	Total
Mean (mm)	157.9	127.8	176.1	111.7	70.6	115.3	34.3	64.8	37.9	73.7	108.7	118.0	1179.6

[Source: BOM - Weather Station located Lismore]

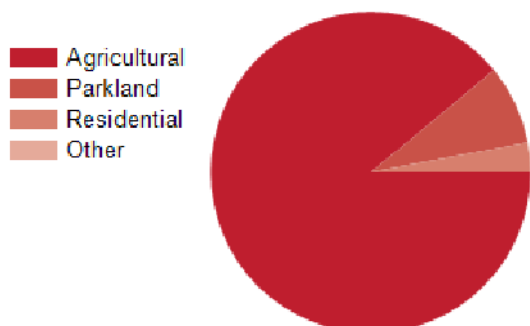
Land Use

Lismore City is a rural and urban area. More than 60% of the population live in the urban areas, particularly the township of Lismore and the villages of Bexhill, Clunes, Dunoon, Nimbin and Wyrallah, with numerous smaller villages and hamlets.

Rural land is used largely for dairy farming, macadamia nut, coffee, tea tree, tropical fruit and sugar growing, and pig farming. The City encompasses a total land area of nearly 1,300 square kilometres.

Rural land is used largely for dairy farming, macadamia nut, coffee, tea tree, tropical fruit, sugar growing and pig farming.

Land use



Land Use Zone / Type / Classification	Area (ha)	% of LGA
B1 Neighbourhood Centres	21.4445	
B2 Local Centres	18.3596	
B3 Commercial Core	79.5925	
B4 Mixed Use	67.4005	
B6 Enterprise Corridors	34.0257	
DM Deferred Matter	1,942.3664	1.5%
E1 National Parks and Nature Reserves	9,127.1270	8.2%
E2 Environmental Conservation	33.0915	
E3 Environmental Management	44.0725	
IN1 General Industrial	237.4226	0.2%
IN2 Light Industrial	54.6356	
R1 General Residential	1,683.7279	1.3%
R2 Low Density Residential	101.4141	
R3 Medium Density Residential	17.8037	
R5 Large Lot Residential	1,035.6859	0.8%
RE1 Public Recreation	377.5471	0.3%
RE2 Private Recreation	86.5451	
RU1 Primary Production	109,648.5070	84.9%
RU2 Rural Landscape	85.3534	
RU3 Forestry	1,099.4205	0.9%
RU5 Villages	379.6535	0.3%
SP2 Infrastructure	781.7694	0.6%
W1 Natural Waterways	2,070.9338	1.6%
W2 Recreational Waterways	54.9475	
TOTAL	128,956 ha	

Population and People

Community Snapshot

(ABS Census data: Using 2011 & 2016 Census data - Current at November 2016)

Subject	Number or % of population
Total Persons	44,054
Total Females	22,577
Total Males	21,477
Population Density (persons per / km2)	34.2
Aged 0-4 years	2,430
Aged 5-14 years	8,109
Aged 65 +years	5,116
Average Age	42.3
Of Aboriginal / Indigenous origin (2016 Census)	5.0
Overseas Born	9.5%
Speaks another language then English at home	4.6%
Post school qualifications	54.5%
Unemployment rate	8.2%
Main industry: Health Care & Social Assistance – people employed in industry	17.6%
Lone person households	4,754
Number of motor vehicles	35,587
Internet connection (2011 Census) [% of private dwellings have internet access at home]	73.6%
Average persons per occupied dwelling	2.4

Labour Force: [Source: ABS 2011 figures]

Employed: 18,495

Unemployed: 1,658

Unemployment Rate: 8.2%

Housing Average Household Monthly: [Source: ABS 2015 = 2011 figures]

Rent Payment: \$1,139

Mortgage Payment: \$1,547

Median Sale Price Residential Properties: [Source: ABS 2015 = 2011 figures]

\$345,000

Medium Employee Income: [Source: ABS 2015 figures]

\$39,484

Aboriginal People

The original inhabitants of the Lismore area were the Bundjalung Aboriginal people. Aboriginal and Torres Strait Islander people make up approximately 5.0 per cent of the population, which was significantly higher than the national and state averages of 2.5 per cent.

Religious Diversity

Christianity: 52.1% of Population.

Secular Beliefs, other Spiritual Beliefs and Non-Religious affiliation: 33.5% of population.

Note:

There are numerous “Environmental” based lobby and support groups located within the area. These groups have a strong community presence and political connections. The presence of these groups should be noted when undertaking and implementing emergency management strategies, especially in the Recovery area.

The area, and that of the surrounding areas, have a higher than average number of people that are not vaccinated. This is especially so for children.

Transport Routes and Facilities

Transport

Road

The main transport route through the Lismore City area is the Bruxner Highway. This state based road forms an important link between Ballina and Casino via Lismore. It transverses the area on an east – west axis and carries a vast amount of district and commuter traffic. Heavy transports and large passenger vehicles regularly use the route.

The Bruxner Highway is used as a “by-pass” when the Pacific Highway (National Highway No.1) is closed in the immediate area.

Bangalow Road, which connects Lismore to the Pacific Highway is also a highly used road and significant transport route through the area. A like the Bruxner Highway the road carries a large amount of district and commuter traffic that includes heavy transports and large passenger vehicles.

Rail

There are no operational railway lines in the Lismore City LGA area.

The rail line Casino – Lismore – Murwillumbah closed in 2004.

State contracted Coach services operate from Lismore – Casino - Lismore connecting with the Sydney – Brisbane XPT and Sydney – Casino passenger trains that operate daily through Casino.

Air

The area is served by Lismore Regional Airport, with daily passenger services operating from the Airport. Regional Express Airlines (REX) operate several daily services Lismore – Sydney – Lismore from the Airport.

Airspace above the LGA area is used extensively for inter-state aviation routes, especially traffic to and from Gold Coast City Airport and Brisbane Airport (Queensland) and Ballina Byron Gateway Airport to southern ports, especially Sydney.

Lismore Regional Airport

Has one (1) runway. Sealed Aprons and Taxiways.

Runway	Size	Type
15 / 33	1,647m x 30m	Sealed - Asphalt
Aerodrome is licensed with CASA. License number 4012		
Main runway 15 / 33 is fitted with PAL (Pilot Actuated lighting). Frequency 124.20		
Owner: Lismore City Council		
Notes: 1. Airport is a Security Controlled Airport. 2. On-Site Aviation Fuel Supplies 3. Runway is subject to Flood impact 4. The airport caters for approximately 50,000 passengers per year		

Infrastructure

Lismore Levee

Levee constructed to protect the Lismore CBD from floods up to and including the 10 year Annual Recurrence Interval flood. The levee is owned and maintained by Rous County Council and can be operated by Lismore City Council.

Lismore City Council maintains and operates a series of pumps throughout the Lismore City Floodplain to assist in the minimisation of flood inundation.

The Lismore levee consists of both earthen and concrete structures and includes pump stations and flood gates. The most critical of these are the flood gates and Brown's Creek Pump Station which removes water from the lowest areas of Lismore. The minor pump stations remove water from specific low lying areas to prevent minor local flooding.

There is NO back-up generator for Brown's Creek Pump Station.

The Flood event of March 2017 breached the Lismore Levee, causing wide spread flooding of the Lismore City / CBD area.

MAP - Refer Appendix No. 11 & 11A – Approximate Area of Inundation of 2017 March Flood event

Water Supply Services

Lismore

Water Supply across the LGA are supplied by both Lismore City Council and Rous County Council. Rous County Council own the infrastructure to get water to Reservoirs and Lismore City Council own the infrastructure from Reservoirs to premises.

The infrastructure consists of Rocky Creek Dam (Dam with a capacity of 14,000 ML) and Nightcap Water Treatment Plant (with a capacity of 70 ML / day) and Lismore Source Pump Station (capacity of 20 ML / day).

There is NO backup generator for the infrastructure at Rocky Creek Dam or Nightcap Water Treatment Plant.

The City View Drive reservoir supplies water to the lower river areas of Coraki and North Woodburn (located in Richmond River Council LGA area). Rous Water owns this reservoir.

There are nine (9) major water storage reservoirs in Lismore, including City View Drive reservoir which services the lower river areas of Coraki and Woodburn. There are a further six (6) reservoirs servicing the villages of Dunoon, Clunes, Modanville, The Channon, Caniaba and Nimbin.

Refer Appendix No.12: Map – Rous County Council Water Supply Network

Nimbin

Nimbin water supply is owned and managed by Lismore City Council.

Infrastructure consists of a chlorinated raw water supply extracted from Mulgum Weir (located approximately 7km north-east of the town centre on the Mulgum Creek); trunk main water pipes; a “turkey nest” type storage Dam; a pump building including main power supply and telemetry station that is surrounded by a chain wire fence.

The water is Chlorinated at a plant located at Mulgum Weir. A truck water main pipe takes the water to a “Turkey Nest” storage Dam at Nimbin. There are approximately Eighty (80) customers that draw water off the Truck Main between the Weir and Nimbin town.

The water supply is NOT fluoridated, in response to community demands.

Sewage Services

Lismore

Has two (2) Sewerage Treatment Plants. One (1) at East Lismore and one (1) at South Lismore.

Nimbin

As one (1) Sewerage Treatment Plant.

The Nimbin catchment comprises two (2) sewerage pump stations. Each pump has a short rising main connected to a common man hole in Thorburn Street.

Note:

In the Woodburn area (Woodburn located in Richmond Valley Council LGA), where LGA boundaries meet, there is a sharing of sewerage infrastructure between Lismore City and Richmond Valley Council. Sewerage from Western side of the Richmond River (in Lismore City Council LGA area) is pumped over the river via pipeline on the Bridge for processing at the Woodburn Treatment Plant.

Services Summary

City / Town / Village	Water [Reticulated]	Sewerage	Electricity [Grid Supply]	LPG Gas Pipeline
Lismore	Yes	Yes	Yes	Yes (Hospitals Only)
Goonellabah	Yes	Yes	Yes	No
Bexhill	No	No	Yes	No
Caniaba	Yes	Yes	Yes	No
Clunes	Yes	No	Yes	No
Dunoon	Yes	No	Yes	No
Goolmangar	No	No	Yes	No
Modanville	Yes	No	Yes	No
Nimbin	Yes	Yes	Yes	No
North Woodburn	Yes	Yes (via Richmond Valley)	Yes	No
Richmond Hill	Yes (Rous Water)	No	Yes	No
The Channon	Yes	No	Yes	No
Wyrallah	Yes (Rous Water)	No	Yes	No
Note:	Water Supply across the LGA are supplied by both Lismore City Council and Rous County Council.			

Telecommunications

The main telecommunication exchanges are located at:

- Telstra Building -176 Molesworth Street, Lismore
- 614 Ballina Road, Goonellabah
- Major Telecommunications facility - Mt Nardi within Nightcap Range National Park

A number of smaller rural exchanges are spread across the LGA area.

All facilities are monitored by the Telstra Goble Operations Centre (GOC) as are the mobile phone tower sites.

Major telecommunication towers are located at:

- Duke and Fisher Streets, Goonellabah
- Old Quarry Road, North Lismore
- Parrots Nest Road, South Gundurimba

Electricity

The electricity network supplier for the area is Essential Energy.

The critical component to the local grid is the McKees Hill (Richmond Valley LGA) Sub Station. Supply networks feed from this Sub Station, and there are two main feeder supply lines into the Sub Station. One from the South (Coffs Harbour) and one from the West (Tenterfield).

Electricity supply within the LGA distributes from the key facility at McKees Hill (Located in Richmond Valley Council LGA). Supply lines in the Lismore City LGA are:

330Kv Line

Coffs Harbour to McKees Hill

132Kv Line(s)

Tenterfield to McKees Hill, with a Tee off into Casino zone on route.

McKees Hill to Lismore

Lismore - Dunoon – Mullumbimby

66kv Line(s)

Casino – Lismore

Lismore – Woodburn-Broadwater Mill

Lismore – Alstonville - Lismore South - Lismore Uni - East Lismore

Lismore – Kyogle

Note:

- # There are significant Sub Stations located at Three Chain Road that provides power to flood pump Stations.
- # Nightcap Water Treatment Plant has only one (1) feeder line and NO backup generator.

Electricity Supply registered “At Risk or Vulnerable Customer”

Essential Energy does not “own” the registered Customer Contact details. These details belong to the supply Retailer, and is privileged information.

In emergency operations, the Essential Energy LEMC member can access the “Life Support Customer” data information from retailer providers and take necessary action as required.

All emergency related information regarding electricity can be channeled through the Essential Energy emergency response phone number: 132080.

Electricity Supply Zone Substations address / locations

McKees Hill (located in Richmond Valley LGA)	Cnr Rogersons Road and Cooper Road, Casino
Lismore	176 Three Chain Road, South Lismore
Dunoon	Cnr Dunoon Road and Duncan Rd, Dunoon
Alstonville	Cnr Wardell Road and Grays Lane, Alstonville
Lismore South	Cnr Three Chain Road and Union Street, Lismore
Lismore University	148 Military Road, Lismore
Lismore Switching Station	148 Military Road, Lismore
East Lismore	Warrawee Crescent, Goonellabah

Bridges

There are over 130 bridges within the Lismore LGA area. Bridges range from timber bridges in excess of 50 years old, to modern steel and concrete structures.

There are 3 key bridges in the LGA that are owned and maintained by Roads & Maritime Service (RMS).

RMS Owned and Maintained Bridges

- **Ballina Street Bridge**
Location: Elliott Road and Ballina Road
Crosses the Wilsons River
- **Hollingworth Bridge**
Location: Union Street, South Lismore
Crosses Hollingworth Creek
- **Fawcetts Bridge**
Location: Woodlark Street, Lismore & Bridge Street, North Lismore
Crosses Wilsons River

- **Coleman's Bridge**
Location: Bridge Street, South Lismore
Crosses Leycester Creek



Key Bridges owned and maintained by Lismore City Council are:

Bridge Name	Location	Crossing (River / Creek)
Boatharbour Bridge	Bangalow Road	Wilsons River
Simes Bridge	Molesworth Street	Wilsons River
Wyrallah Ferry	Wyrallah Ferry Road	Wilsons River
Etham Bridge	Eltham Road	Wilsons River
Wilson Bridge	Wilsons Street	Hollingworth Creek
Chelmsford Bridge	Chelmsford Road	Leycester Creek
Knight Bridge	Quilty Road	Leycester Creek
Thorn Bridge	Rock Valley Road	Leycester Creek
Coleman Bridge	Bridge Street	Leycester Creek
Walsh Bridge	Rosehill Road	Leycester Creek
Robert White Bridge	Wilson Street	Leycester Creek
Martin Bridge	Martin Road	Leycester Creek
E J Olley Bridge	E J Olley Road	Leycester Creek
McMullen Bridge	Moffit Road	Goolmangar Creek
Eaton Bridge	Crofton Road	Goolmangar Creek
Rann Bridge	Crofton Road	Goolmangar Creek
Southwell Bridge	Blue Knob Road	Goolmangar Creek
Green Bridge	Stony Chute Road	Goolmangar Creek
Summerville Bridge	Rosehill Road	Goolmangar Creek
Seccombe Bridge	Boyle Road	Goolmangar Creek
McNamara Bridge	Boyle Road	Goolmangar Creek
Hensen Bridge	Hensen Road	Goolmangar Creek
Goolmangar Bridge	Jiggi Road	Goolmangar Creek
Osborne Bridge	Patterson Road	Terania Creek
Blakebrook Bridge	Nimbin Road	Terania Creek
Town Bridge	Town Road	Terania Creek
Lawler Road Bridge	Lawler Road	Terania Creek
W J Green Bridge	Keerrong Bridge Road	Terania Creek
F C Ford Bridge	Standing Street	Terania Creek
Cullen Bridge	Blue Knob Road	Mulgum Creek

Bridge Name	Location	Crossing (River / Creek)
Sheather Bridge	Gungas Road	Mulgum Creek
Betteridge Bridge	Lillian Rock Road	Websters Creek
Clarke Bridge	Campbell Road	Websters Creek
Suffolk Bridge	Blue Knob Road	Calico Creek
Pratt Bridge	Blue Knob Road	Calico Creek
Ronan Bridge	Blue Knob Road	Calico Creek
Nardi Bridge	Blue Knob Road	Calico Creek
Cabbage Tree Bridge	Hutchison Road	Cabbage Tree Creek
Cullen Lane Bridge	Cullen Road	Cabbage Tree Creek
Tucki Creek Bridge	Mathieson Lane	Tucki Tucki Creek
Robsons Bridge	Tucki Road	Tucki Tucki Creek
Hoskins Hill Bridge	Tregeagle Road	Tucki Tucki Creek
Yeagers Bridge	Leycester Road	Back Creek
Bungabee Bridge	Bungabee Road	Back Creek
Fernside Bridge	Fernside Road	Back Creek
Hartley Bridge	Hartley Bridge Road	Marom Creek
Buckland Bridge	Bucklands Bridge Road	Marom Creek
Booerie Creek Bridge	Nimbin Road	Blakebrook Creek
Loadsman Bridge	Rous Road	Marom Creek
Meerschaum Bridge	Tucki Road	Marom Creek
Loftville Bridge	Bruxner Highway	Loftville Creek
Pelican Creek Bridge	Bruxner Highway	Pelican Creek
Ruthven Bridge	Coraki Road	Pelican Creek
Clovass Bridge	Caniaba Road	Pelican Creek
Spring Grove Bridge	Spring Grove Road	Pelican Creek
Hick Road Bridge	Hicks Road	Pelican Creek
Rocky Creek Bridge	The Channon Road	Rocky Creek
Simes Bridge	Whian Whian Road	Rocky Creek
He King Bridge	Koonorigan Road	Tuntable Creek
Buchanan Bridge	Cawongla Road	Jeffries creek
Myott Bridge	Dunoon Road	Coopers Creek
Ridgewood Bridge	Mackie Road	Coopers Creek
Ewing Bridge	Corndale Road	Coopers Creek
Lockton Bridge	Lockton Road	Coopers Creek
Bowen Gully Bridge	Keerrong Road	Bowen Gully
Boomerang Creek Bridge	Rosebank Road	Boomerang Creek
Booyong Bridge	Alma Street	Pearces Creek
Carrs Crossing Bridge	Tooheys Mill Road	Pearces Creek
Pearces Creek Bridge	Pearces Creek Hall Road	Pearces Creek
Jiggi Bridge	Jiggi Road	Jiggi Creek
Waddington Bridge	Jiggi Road	Jiggi Creek
Sims Bridge	Bertoli Road	Jiggi Creek
Davis Bridge	Davis Road	Jiggi Creek
Shepherd Bridge	Cave Road	Boundary Creek
Stibbards Bridge	Bagotville Road	Tuckean Broadwater
Branch Creek Bridge	Teraniacreek Road	Branch Creek
Dusputed Plains Bridge	Kyogle Road	Eleven Mile Creek
Numulgi Creek Bridge	Numulgi Road	Numulgi creek
Sommerville Bridge	Kyogle Road	Yak Yak Creek

Bridge Name	Location	Crossing (River / Creek)
Payne Bridge	Keerrong Road	Unknown Creek
McKinnon Road Bridge	Boatharbour Road	Unknown Creek
Rankin Bridge	Cawongla Road	Unknown Creek
Swain Bridge	Corndale Road	Unknown Creek
Plim Bridge	Cawongla Road	Unknown Creek

Colemans Bridge over Leycester Creek at Lismore

Colemans Bridge is of State significance. It is historically significant for its association with the expansion of the NSW road system and the renowned early twentieth century engineer, Harvey Dare. Completed in 1908 and survives in an excellent condition.

The Bridge demonstrates less common features of Dare truss bridges, including central iron piers, relatively long truss spans and the fact that it is the only two lane Dare truss in NSW and the only to have footways.

Colemans Bridge over Leycester Creek



Ballina Street Bridge, Lismore (Bruxner Highway)



Waste Disposal

Lismore City Council owns and operates Waste Disposal facilities in the area. The Waste Facility is located at East Lismore.

Wyrallah Waste Facility

313 Wyrallah Road
EAST LISMORE NSW 2480
Phone: 02 6623 2009

The facility is licensed for General Waste and Asbestos.

Asbestos product lodgement is subject to prior approval from facility owner Lismore City Council.

The lodgement of “Hazardous Materials” is subject to prior approval from waste facility owner Lismore City Council.

The facility has the following recycling facilities on-site:

- MRF: Material Recycling Facility (Bottles, paper products etc)
- RRF: Resources Recovery Facility (Copper wire from electrical appliances, steel products etc)
- Green Waste Processing

Nimbin has a “Waste Transfer Station”, where product is deposited and later transferred to the Wyrallah Waste Facility at Lismore.

Collection Serve across the LGA is by way of “Wheelie Bins” kerbside pickup. Lismore City Council owns and operates the Collection Vehicles.

“Richmond Waste” is a private waste collection operator that services the Lismore, Ballina, Byron Bay, Evans Head, Casino and Kyogle areas. The Richmond Waste Facility is located at Lismore.

Richmond Waste

15 Skyline Road
EAST LISMORE NSW 2480
Phone: 02 6621 7431
Fax: 02 6622 1389

Economy and Industry

Lismore Council Area is part of a region experiencing business growth in Health Care, Education and industry sectors contributing to Tourism and Hospitality

Dominance by the Retail sector as the region’s main employer for many decades, gave way in 2006 to service delivery in Health Care and Social Assistances. Since the 2006 census, the ‘Employees by Industry’ chart reflects strong expansion in both the Health and Education

sectors as they continue to provide the chief employment in the region. These two sectors firmly underpin Lismore as the medical and educational centre for the region.

The major tertiary industries in the Lismore LGA are tourism, education and health. Education is based on the Lismore Campus of Southern Cross University and TAFE NSW, with a range of public and religious based schools.

Health care is based on two major Hospitals, Lismore Base Hospital and St Vincent's Hospital, plus a number of Aged Care Facilities, Day Surgeries and medical specialists. Legal services, includes the NSW based Local and District Courts and the Federal based Family Court. There are a large number of legal firms based in Lismore.

The largest retail shopping precincts in the area are at Lismore. They are;

- Lismore Square
- Lismore Central
- Lismore CBD

There are smaller shopping precincts in Goonellabah and Nimbin. The villages of The Channon, Clunes, Goolmangar and Dunoon all have general stores and fuel suppliers. There are general stores in Modanville and Bexhill.

Agriculture has always been one of the economic backbones of the area. Main industries include; sugar cane, poultry, dairy, viticulture, macadamia nut, coffee, beef and timber. Norco has a large scale Milk Processing Plant at Lismore.

Industry

Top 6 Employment Sectors:

Sector	Percentage (%)
Source: ABS - Census 2011)	
Health Care & Social Assistance	17.6
Retail Trade	13.8
Education & Training	11.2
Manufacturing	7.1
Accommodation & Food Services	6.8
Construction	6.8

The large employers and major businesses located in the area are:

- Norco Dairy
- Southern Cross University
- Lismore City Council
- Rous County Council
- Health – Lismore Base Hospital & St Vincent Private Hospital
- NSW and Federal government agencies (Regional Offices: Northern NSW Local Health; NSW Public Works and Department of Education)

Key community based agencies

- Ngulingah Aboriginal Land Council - Phone: 02 6621 5541
- Gurgun Bulahnggelah Aboriginal Health – Phone: 02 6620 7585
- Jullums – Lismore Aboriginal Medical Service – Phone: 02 6621 4366
- Lismore City Visitors Information Centre - Phone: 02 6626 0100
- Department of Communities & Justice, Community Services - Phone: 02 6623 4900
- Environment Groups:
 - Lismore Environment Centre – Phone: 0438 415 715
 - Nimbin Environment Centre (Based in Lismore) – 02 6621 6977

Major Storage Facilities

Ammonia Storage

Norco Dairy

Union Street / Norco Lane
LISMORE NSW 2480
Phone: 02 6627 8000

Gas

ELGAS – Lismore Depot

165 Molesworth Street
LISMORE NSW 2480
Phone: 02 6621 2743

Fuel

There is a large scale wholesale / retail fuel distribution facility with substantial quantities of petroleum products stored on-site located at:

North Coast Petroleum

21 Elliott Road
SOUTH LISMORE NSW 2480
Phone: 02 6622 4442
Fax: 02 6622 8845

Shell Depot

116 Wilson Street
SOUTH LISMORE NSW 2480
Phone: 02 6621 4961

Grain/Stock feed:

There is a Stock Food manufacturing / processing plant with substantial on-site storage of grain is located adjacent to the Bruxner Highway, South Lismore.

Goldmix Stockfoods Mill (Business Enterprise of NORCO)

Krauss Avenue / Bruxner Highway

SOUTH LISMORE NSW 2480

Phone: 02 6621 3042

Fax: 02 6621 9170

Nut Processing

Several large-scale processing plants, and numerous smaller operations, processing Macedonia Nut with on-site storage are located within the area.

The main processors are:

Macadamia Processing Company

2 Cowlong Road

ALPHADALE VIA LISMORE NSW 2480

Phone: 02 6624 3900

Fax: 02 6624 2297

Macadamia Industries Australia Pty Ltd

1277 Dunoon Road

DUNOON VIA LISMORE NSW 2480

Phone: 02 6689 5292

Fax: 02 6689 5849

Quarry

Lismore City Council owns and operates a Quarry, with an associated Asphalt Plant at Blakebrook, near Lismore.

Name: Blakebrook Quarry

Address: 540 Nimbin Road, Blakebrook via Lismore

Phone: 02 6629 3236

Livestock Transport

There are large scale road transport movements of livestock (predominately Cattle) travelling on the road networks through the LGA area to the major livestock selling centre located at Casino and the smaller scale operation at Lismore Saleyard.

There are numerous Livestock Transport Operators based at Lismore and surrounding areas.

Livestock Saleyards

Lismore City Council owns a small scale Livestock Saleyard complex, located opposite the Lismore Showground at Tweed Street, North Lismore.

The Saleyard is used to sell Cattle. This complex is leased to a local private operator – Stock and Station Agent, Ian Weir & Son Pty Ltd.

Ian Weir & Son Pty Ltd

Phone: 02 6621 2768 / 02 6621 2769

Fax: 02 6621 2926

Caravan Parks

Lismore Lakes Caravan Park

Bruxner Highway (adjacent to Lismore Lake)

LISMORE NSW 2480

Phone: 02 6621 2585

Approximate Capacity Population: Peak Occupancy: 240 people

Note: Flood liable

Lismore Centra Caravan Park

60 Dawson Street

LISMORE NSW 2480

Phone: 02 6621 6581

Approximate Capacity Population: Peak Occupancy: 60-70 people

Note: Flood liable

Roadrunner Caravan Park

61 Caniaba Road

SOUTH LISMORE NSW 2480

Phone: 02 6621 6705

Approximate Capacity Population: Peak Occupancy: 150 people

Note: Flood liable

Nimbin Tourist Caravan Park

29 Sibley Street

NIMBIN NSW 2480

Phone: 02 6689 1402

Approximate Capacity: 13 Powered Sites / 70 Unpowered Sites / Tent sites

Teretre Cabins

5 High Street

NIMBIN NSW 2480

Phone: 02 6689 1908

Approximate Capacity: Facility has 4 One Bedroom Cabins

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Community Profile – Part B:

RICHMOND VALLEY COUNCIL AREA

General

Richmond Valley Council Population: 22,807 (ABS estimated 2016)

Area: 3047.4km² (305,100 Hectares)

Population trend: Increased by 0.69% from 2011 – 2016

Richmond Valley Council is a rural and urban area

Population density is 7.48 persons per km²

Richmond Valley LGA is located on the Far North Coast of NSW.

The area's urban population predominates in Casino township, in the coastal town of Evans Head, in Woodburn and Broadwater/Rileys Hill on the Pacific Highway and in Coraki on the Richmond River between Casino and Woodburn.

City / Town / Village	Population (Approximate)
Casino	10,900
Coraki	1,300
Evans Head	2,850
Woodburn	750
Broadwater	650
Rileys Hill	180
Rappville	170
Note: The population at Evans Head is estimated to increase by additional 50% during peak holiday periods	

Richmond Valley LGA includes the localities of:

Backmede, Banyabba, Bentley, Bora Ridge, Broadwater, Bungawalbin, Busbys Flat, Camira, Casino, Clearfield, Clovass, Codrington, Coombell, Coraki, Dobies Bight, Doonbah, East Coraki, Ellangowan, Esk, Evans Head, Fairy Hill, Gibberagee, Greenridge, Hogarth Range, Irvington, Kippenduff, Leeville, McKees Hill, Mongogarrie, Mount March, Myrtle Creek, Naughtons Gap, New Italy, North Casino, Piora, Rappville, Rileys Hill, Shannon Brook, Six Mile Swamp, Spring Grove, Stratheden, Swan Bay, Tabbimoble, Tatham, The Gap, Tomki, Upper Mongogarrie, West Bungawalbin, West Coraki, Whiporie, Woodburn, Woodview, Wyan, Yorklea.

Local Government Authority (LGA) areas that adjoin Richmond Valley Council are:

Kyogle Council	Lismore City Council	Ballina Shire Council
Clarence Valley Council	Richmond Valley Council	Tasman Sea
Clarence Valley Council	Clarence Valley Council	Tasman Sea

All adjoining LGAs are part of the North Coast Emergency Management Region.

Richmond Valley LGA is part of the Northern NSW Local Health District with headquarters based in Lismore. Hospital facilities within the LGA are located at Casino. Casino Hospital is the emergency retrieval health facility for the area. The nearest major emergency retrieval health facilities are located at Lismore and Grafton.

Coraki has a health facility. The *Coraki Campbell HealthOne* facility integrates community health, general practice services, and oral health in the one facility to meet the health needs of local residents, with a particular focus on older people, particularly those with chronic care needs, families with young children, and disadvantaged groups.

NSW Ambulance manage all aero-medical retrieval services, using both State owned and contracted Fixed Wing and Helicopter aircraft. Aero-medical retrievals occur regularly in the area.

Helipads are located at:

- Casino Hospital - Adjacent to Casino Hospital (Southern side) in Car Park.
- Casino Airfield - No designated landing area
- Evans Head Aerodrome - No designated landing area
- Woodburn – Opposite NSW SES – RFS Headquarters Uralba St Woodburn

The Westpac Rescue Helicopter Base is located in Lismore. This rescue service covers the wider regional area.

The nearest Airports that provides regular passenger services are Lismore Regional Airport and Ballina-Byron Airport. Regional Express Airlines (REX) operates from Lismore and Ballina-Byron Regional Airports with several daily services Lismore – Sydney - Lismore. Jetstar, Virgin, and Fly Pelican airlines operate services from Ballina – Byron Airport. The closest other passenger servicing Airports are located at Grafton and Coolangatta (Gold Coast, Queensland).

The Aboriginal Health Service (Bulgar Ngaru Medical Aboriginal Corporation) has a Richmond Valley Clinic facility (Djanangmum Clinic) at Casino that provides Doctor and general community health services to the aboriginal communities of Casino and surrounding areas.

Aged Care Facilities are located at Casino and Coraki.

The Richmond Valley LGA area forms part of the North Coast Region of NSW Department of Primary Industries. The NSW Department of Primary Industries – Wollongbar Primary Industries Institute, a large scale facility, is located in the adjoining LGA area of Ballina Shire Council.

The Richmond LGA is part of the North Coast Local Land Services which has its headquarters in Lismore. There is a Local Land Services office located at Casino.

Emergency Service agencies for the Richmond Valley LGA are profiled in below Table.

Richmond Valley LGA - Emergency Service Agency Profile		
NSW Police Force	Police District: Name / HQ	Richmond Police District - Lismore
	Police Stations	Casino, Coraki, Evans Head and Woodburn.
	Primary Rescue GLR	NIL
	Secondary Rescue GLR	NIL
Fire & Rescue NSW	Zone: Name / HQ	Regional North Zone 2 - Ballina
	Fire Stations	Casino (Station 253), Coraki (Station 267), and Evans Head (Station 288)
	Primary Rescue GLR	NIL
	Secondary Rescue GLR	Casino, Coraki and Evans Head
NSW Rural Fire Service	Zone: Name / HQ	Northern Rivers Zone - Casino
	Village / Town Brigades	Casino; Rappville; Whiporie, Woodburn
	Rural Brigades	Casino East; Ellangowan; Hogarth; Middle Creek; Myall Creek; North Casino; Shannon Brook; Support; Tomki; West Coraki; Woodview
NSW State Emergency Service	Region: Name / HQ	Northern Rivers Command - Northern Zone
	Local Units	Broadwater, Casino, Coraki and Woodburn
	Primary Rescue GLR	Woodburn
NSW Ambulance	Sector: Name / HQ	Regional Division – North Coast Sector Coffs Harbour
	Stations	Casino and Evans Head
Marine Rescue	Station Base	Evans Head
NSW Volunteer Rescue Association	Region: Name / HQ	Far North Coast Region (Region 1) –
	Primary Rescue GLR & VR	Casino & District Rescue Squad - Casino
Notes: <ol style="list-style-type: none"> 1. NSW Police Force Stations are NOT open 24 hours (except Casino). 2. All Fire & Rescue NSW Stations are staffed by on-call Retained Fire Fighters. 3. Marine Rescue NSW is the primary Marine Rescue Agency in NSW. 4. Marine rescues are co-ordinated by the NSW Police Marine Area Command. 		



Landform and Topography

The Richmond Valley area spreads from the coastline (Pacific Ocean) at Evans Head, along the Richmond River to the rural heartland of Casino and out to the Richmond Ranges (Great Dividing Range). The area is interspersed with State Forests, National Parks and Nature Reserves.

The area has a large number of natural assets including beaches, agricultural lands, significant rivers systems and hinterland areas.

The majority of the human settlement centres around the towns and villages of Casino, Evans Head, Woodburn, Broadwater and Coraki. All of these towns and villages with the exception of Evans Head are surrounded by populations of rural holdings and primary production. Evans Head is almost completely surrounded by the Broadwater and Bundjalung National Parks.

The area is well known for its high value environmental/ecological assets. The area is a component of the extremely diverse species North Coast Bioregion. The Richmond Valley sandstone substrates overlain with basalt derived soils support mainly eucalypt vegetation communities interspersed with significant wetlands towards coastal tea tree and wattle. In the upper catchment areas, rainforest and eucalypt forests support diverse and often threatened terrestrial species.

The river valleys and bushland ranges that form a significant component of the Richmond landscape to some extent pose a bush fire hazard to adjoining urban, rural residential and agricultural areas. Some National Park, Nature Reserve and State Forest areas are exposed to major bushfire risk.

Bush fires, depending on intensity, are likely to have impacts varying from short term degradation of scenic quality to longer term, and in some instances permanent soil stability and water quality problems, and flora and fauna population declines.

Waterways

The Richmond River winds through the catchment towards the coastal town of Evans Head from the Richmond Ranges to the West (elevation up to 900m).

This area covers most of the Richmond River flood plain. Whilst the main headwaters of the Richmond River rise in the adjoining Kyogle Shire, a large flat basin making up the remainder of the catchment, in the southern portion of the Richmond Valley Council contributes significantly to the severity and duration of flooding in the Mid Richmond area.

Casino sits on the Richmond River. The headwaters of the river are to the north of Casino into Kyogle Shire. The river flows in a generally southerly direction through to Casino and easterly to Coraki and Woodburn where the river turns north east to Broadwater then discharging at Ballina.

The Wilsons River flows south from Lismore and joins the Richmond River at Coraki. Other major water ways are the Evans River which has its mouth at Evans Head and Bungawalbin Creek that has its confluence with the Richmond River between Coraki and Woodburn.

National Parks and Nature Reserves

National Parks, Nature Reserves and State Conservation Areas in the Richmond Valley local government area:

National Parks - (total area 17,340 hectares):

Broadwater	Bundjalung	Mount Pikapene
Bungawalbin	Mallanganee (World Heritage Area)	

Nature Reserves - (total area 10,928 hectares):

Bungawalbin	Narringully	Mount Neville
Hogarth Range	Banyabba	Tabbimoble Swamp

State Conservation Areas - (total area 6,894 hectares):

Mount Pikapene	Yarringully	Jackywalbin
Bungawalbin	Bundjalung	Banyabba

Note: Mallanganee National Park is a World Heritage listed area.

State Forest Areas

State Forest areas in the Richmond Valley local government area:

Bungawalbin	Ellangowan	Camira
Gibberagee	Carwong	Fullers
Whiporie	Royal Camp	Myrtle
Cherry Tree	Mount Belmore	Braemar
Doubleduke	Mount Pikapene	Tibbimoble

Climate

Month /Temp	Jan	Feb	Mar	Apr	May	Jun	July	Aug	Sept	Oct	Nov	Dec	Total
Mean MAX Temp C	31.3	30.4	29.0	26.8	23.7	21.4	21.1	22.8	25.6	27.8	29.7	31.1	26.7
Mean MIN Temp C	18.9	18.8	17.3	14.1	10.6	8.0	6.7	7.3	10.2	13.2	15.9	17.8	13.2

The average yearly rainfall: 1100mm

Month/mm	Jan	Feb	Mar	Apr	May	Jun	July	Aug	Sept	Oct	Nov	Dec	Total
Mean (mm)	137.6	155.2	147.9	95.3	79.8	67.8	56.3	42.4	42.2	70.5	86.6	116.0	1097.4

[Source: BOM - Weather Station located Casino]

Land Use

The combined rural localities have an area of 3016km² and stretch from the foothills of the Great Dividing Range to the coastline.

The rural localities are divided into 3 areas being Rural (North), having an area of 325km², the Rural (East), having an area of 1005km², and the Rural (West), having an area of 1686km².

Rural (North): Situated predominately to the north, but wrapping around, the township of Casino it shares part of its boundary with both Kyogle and Lismore councils. The area is characterised by a mixture of rural residential subdivisions and large areas of grazing, cropping, and plantations.

Rural (East): Situated predominantly on the coastal fringe but extending inland as far as Whiporie it is bounded by the Pacific Ocean to the east, the Richmond River to the north, the Summerland Way to the west, and the Richmond Range to the south. It shares boundaries with Ballina, Lismore & Clarence Valley councils. The area consists of scattered rural and remote settlements and is characterised by extensive floodplains, and a mixture of grazing and cropping, particularly sugar cane and tea tree. There are also extensive areas of remnant native vegetation, wetlands, national parks and forests.

Rural (West): Situated predominantly in the south-western area. It is bounded by the Richmond Ranges to the south and west, Casino to the north, partly the Summerland Way to the south-east, but extending further east towards the village of Coraki and the Richmond River. It shares boundaries with Kyogle, Clarence Valley and Lismore councils. The locality has a diverse range of landscapes from undulating valleys steep escarpments, to floodplains, and from predominantly cleared lands to extensively forested areas.

Predominately rural in nature with vast areas of grazing interspersed with some cropping and plantation timber, national parks and forests.

Land Use Zone / Type / Classification	Area	% of LGA
RU1 Primary Production	209,812.1 ha	68.73
RU3 Forestry	49,412.7 ha	16.19
RU5 Villages	351.0 ha	0.115
R1 General Residential	786.3 ha	0.258
R5 Large Lot Residential	785.1 ha	0.257
B1 Neighbourhood Centres	0.87 ha	0.0003
B2 Local Centres	8.83 ha	0.003
B3 Commercial Core	34.00 ha	0.011
IN1 General Industrial	331.88 ha	0.109
SP1 Special Activities	1.1 ha	0.0004
SP2 Infrastructure	480.4 ha	0.157
RE1 Public Recreation	293.2 ha	0.096
RE2 Private Recreation	193.4 ha	0.063
E1 National Parks and Nature Reserves	36,091.2 ha	11.82
E2 Environmental Conservation	3,694.3 ha	1.210
E3 Environmental Management	668.7 ha	0.219
W1 Natural Waterways	2,292.6 ha	0.751
W2 Recreational Waterways	24.1 ha	0.0079
	305,261.77 ha	100

Population and People

The largest town is Casino and smaller communities include Broadwater, Coraki, Evans Head, New Italy, Woodburn and Rappville and numerous rural locations.

The 'natural beauty' of the Richmond Valley area, and relaxed and friendly atmosphere of the community has been a major draw card for sea changers and tree changers in recent years. The LGA also sits within a highly attractive region, the Far North Coast of NSW and is within close proximity to the major population of South East Queensland.

Community Snapshot

(ABS Census data: Using 2016 Census data - Current at November 2020)

Subject	Number or % of population
Total Persons	22,807
Total Females	11,489
Total Males	11,318
Population Density (persons per / km2)	7.6
Aged 0-4 years	1,371
Aged 5-14 years	2,996
Aged 65 +years	5,120
Average Age	44
Of Aboriginal / Indigenous origin	7.2%
Overseas Born	5.7%
Speaks another language then English at home	1.7%
Post school qualifications	37.6%
Unemployment rate	7.7%
Main industry: Manufacturing – people employed in industry	14.7%
Lone person households	2,507
Number of motor vehicles	17,379
Internet connection (2011 Census) [% of private dwellings have internet access at home]	69.6%
Average persons per occupied dwelling	2.4

Labour Force: [Source: ABS 2016 figures]

Employed: 8,266

Unemployed: 696

Unemployment Rate: 7.7%

Housing Average Household Monthly: [Source: ABS 2016 figures]

Rent Payment: \$1,000

Mortgage Payment: \$1,300

Median Sale Price Residential Properties: [Source: ABS 2015 figures]

\$265,000

Medium Employee Income: [Source: ABS 2013 figures]

\$39,982

Aboriginal People

Richmond Valley LGA is positioned in the Bundjalung Nation.

Religious Diversity

In excess of 23% of all residents in the Richmond Valley at the 2016 census nominated no religious affiliation, compared to the national average of 29.6%. Meanwhile, affiliation with Christianity exceeded 65%, which was significantly higher than the national average of 52.1%..

Note

There are numerous “Environmental” based lobby and support groups located within the area. These groups have a strong community presence and political connections. The presence of these groups should be noted when undertaking and implementing emergency management strategies, especially in the Recovery area.

Transport Routes and Facilities

Transport

Road

The main transport routes through the Richmond Valley Council are the Pacific Highway, the Bruxner Highway and the Summerland Way. The Pacific Highway passes through the coastal portion of the Richmond Valley Council and through the villages of Woodburn and Broadwater. The current Pacific Highway upgrade is due for completion by 2020.

The Bruxner Highway traverses the area on an east west axis from Ballina to Tenterfield and carries a significant amount of district and commuter traffic. Heavy transports and large passenger vehicles regularly use the route.

The Summerland Way traverses the area on a north south axis from Grafton to Queensland, via Casino and Kyogle. It also carries a significant amount of heavy transport as it is an alternate route to the Pacific Highway.

Rail

The main North Coast railway line (Sydney – Brisbane) transgresses the area in a North – South direction. This line services both freight and passenger trains. Casino Township is located on the rail line.

The passenger train operating through the area is the “XPT”. The XPT is a high speed train and is seen to present a higher level risk of serious accident at the numerous level crossings in the area. There is a daily overnight service Sydney – Brisbane and a daily.

Sydney – Casino service, with road Coach service from Casino to Ballina, Byron Bay and Gold Coast.

The Sydney – Brisbane - Sydney XPT trains have passenger seating and sleeper car configurations. The Sydney – Casino – Sydney XPT train only has passenger seating. The XPT train operating through the area is normally a five (5) carriage configuration, with increase to six (6) in peak periods.

The XPT fully loaded passenger capacity would be approximately 300 passengers.



Freight train movements include the transportation of dangerous goods and hazardous materials that includes Sodium Cyanide that is manufactured in Queensland.

The North Coast railway line (Sydney – Brisbane) is managed by Australian Rail & Track Corporation (ARTC). The ARTC Train Control Centre is based at Broadmeadow in Newcastle.

ARTC TRAIN CONTROL CENTRE Phone: 1800 029 741

Air

The area is served by Casino Airport and Evans Head Aerodrome. No regular passenger service airlines operate within the LGA. The closest passenger services operate from Lismore Regional Airport and Ballina Byron Gateway Airport.

Airspace above the LGA area is used extensively for inter-state aviation routes, especially traffic to and from Queensland Airports of Gold Coast City and Brisbane Airport; Lismore Regional Airport and Ballina Byron Gateway Airport to southern ports, especially Sydney.

Casino Airport

Is used extensively for light aircraft, non-commercial passenger movements. There are no regular passenger services operating from this Airport. Part of the former Casino Airport has been re-developed as a Campervan and Motor Home Park.

Construction of a regional Rural Fire Service Centre and air industry development adjacent to the strip has significantly increased usage, particularly during bush fire emergencies.

The NSW Rural Fire Service uses the airport as an Air Base. There is associated infrastructure located on the grounds.

The airport has two parallel runways. One (1) sealed and one (1) unsealed.

Runway	Size	Type
10 / 28	1030m x 30m	Sealed - Asphalt
10L x 28R	834m x 46m	Unsealed – Grass / Turf
The airport is a NON certified Aerodrome. Not licensed with CASA. Landing Zone status only.		
Both runways are not fitted with Runway Edge Lights.		
Owner: Richmond Valley Council		

Evans Head Aerodrome

The Evans Head Aerodrome is designated as an authorised “Landing Zone”.

The facility was used extensively for RAAF operations in the Second World War. As a result of that history and significance the facility is listed on the NSW State Heritage Register

Significant development is proposed for the facility, centred on establishment of an air park. The Aerodrome has one Sealed Asphalt runway.

Runway	Size	Type
18 / 36	1300m x 18m	Sealed – Asphalt
Aerodrome is a NON certified Aerodrome. Not licensed with CASA. Landing Zone status only.		
No runway lightning – Airport is suitable for daylight operations only.		
Owner: Richmond Valley Council		
Notes: 1. Aerodrome is State Heritage listed. 2. Airfield is a “Contaminated Site”. Safety measures apply.		

Infrastructure

Water Supply Services

Richmond Valley water supply is comprised of two separate water supply systems. Casino which is serviced from the Richmond River and the Mid and Lower Richmond River which is serviced by Rous Water.

Refer Appendix No.12A: Map – Rous County Council Water Supply Network.

Casino

The Casino system comprises one water filtration plant, one raw water pumping station, four reservoirs, one distribution pump station and approximately 115km pipes that distributes water to customers. Raw water from the Richmond River (Jabour Weir) is fully treated and reticulated to the town of Casino.

Mid and Lower Richmond River (MLRR)

The MLRR system distributes bulk water purchased from Rous Water. Water is supplied through four separate distribution systems as follows:

- Evans Head
- Woodburn
- Broadwater and Rileys Hill, and
- Coraki (including Box Ridge)

Council operates eight Reservoirs, four pump stations and a network of pipes (77km). Rous Water uses Council's Langs Hill Reservoir to provide bulk water to Broadwater and Rileys Hill.

Sewage Services

The sewerage system includes four Sewage Treatment Plants (STP) at Casino, Evans Head (which also receives raw sewage from North Woodburn which is located in the Lismore Local Government Area, Woodburn and Broadwater), Coraki and Rileys Hill. The village of Broadwater is serviced with a pressure sewer system with sewage transferred by pump and rising main to Evans Head STP for treatment.

Casino

Casino STP includes three trickling filters and an Extended Aeration Tank (EAT). Treated effluent is discharged into a tertiary pond and then into a constructed wetland area within the STP site. The transfer system includes sixteen pumping stations and a network of rising mains and gravity reticulation mains. The Casino system also comprises of a Comminutor to macerate raw effluent prior to transfer under the Richmond River via a dual pipe inverted siphon system.

Evans Head

Evans Head STP was augmented in 2007 with a new Intermittently Decanted Extended Aeration (IDEA) Treatment Plant replacing the old trickling filter plant. The augmentation also included new inlet works (fine step screen, grit arrestor, flume and flow division), two IDEA tanks, deodorization bed, balance/catch tank attached to aeration tanks, chemical dosing systems, two new sludge tanks, a sludge dewatering area and UV disinfection. The Evans Head transport sewage system includes nine pumping stations.

The Woodburn sewage transport system includes four pumping stations together with a network of rising mains and gravity reticulation mains. North Woodburn in the Lismore Local Government Area is a Pressure Sewer System with sewerage transferred to Woodburn then to Evans Head.

The Broadwater Sewerage Scheme consists of a Pressure Sewerage System with sewage transferred to Evans Head STP via one pump station. Treated effluent is discharged from the Evans Head STP via an open drain to natural wetlands that drain into Salty Lagoon.

Coraki

Coraki STP comprises a trickling filter and two tertiary maturation ponds. The transport system includes two pumping stations and a network of rising mains and gravity reticulation mains. Effluent from the final maturation pond is discharged via a concrete outfall pipe onto adjacent swampland and drains into the Richmond River.

Rileys Hill

Rileys Hill STP is an activated sludge plant incorporating UV disinfection and phosphorus removal. The transport system includes one pumping station and a network of rising mains and gravity reticulation mains. Effluent is discharged directly into the Richmond River.

Services Summary

City / Town / Village	Water [Reticulated]	Sewerage	Electricity [Grid Supply]	Natural Gas
Casino	Yes	Yes	Yes	No
Coraki	Yes	Yes	Yes	No
Evans Head	Yes	Yes	Yes	No
Woodburn	Yes	Yes	Yes	No

Electricity

The electricity network supplier for the area is Essential Energy.

The critical component to the local grid is the McKees Hill Sub Station (Located in Richmond Valley Council LGA). Supply networks feed from this Sub Station, and there are two main

feeder supply lines into the Sub Station. One from the South (Coffs Harbour) and one from the West (Tenterfield).

The electricity infrastructure covers over 80% of the settled areas with a significant portion of the Bungawalbyn area not supplied with mains electricity.

Electricity supply within the LGA distributes from the key facility at McKees Hill. Supply lines within the Richmond Valley LGA are:

330Kv Line

Coffs Harbour to McKees Hill

132Kv Line(s)

Tenterfield to McKees Hill, with a Tee off into Casino zone on route.

Koolkhan - McKees Hill

66kv Line(s)

Koolkhan - Rappville – Casino

Casino – Lismore

Lismore – Woodburn-Broadwater Mill

33kv Line

Casino - Mallanganee - Bonalbo - Urbenville.

Electricity Supply Zone Substations address

McKees Hill	Cnr Rogersons Road and Cooper Road, Casino
Rappville	Cnr Summerland Way and Main Camp Road, Myrtle Creek
Casino	20 Ellangowan Road, Casino
Woodburn	Pacific Hwy & Tuckombil Road, Woodburn (Sub Station also supplies Evans Head)
Broadwater Generation Site & Sub Station	Broadwater Sugar Mill; Pacific Highway, Broadwater

Electricity Supply registered “At Risk or Vulnerable Customer”

Essential Energy does not “own” the registered Customer Contact details. These details belong to the supply Retailer, and is privileged information.

In emergency operations, the Essential Energy LEMC member can access the “Life Support Customer” data information from retailer providers and take necessary action as required.

All emergency related information regarding electricity can be channeled through the Essential Energy emergency response phone number: 132 080.

Telecommunications

The main telecommunications exchange at Casino is located at the Telstra building: 61 Simpson Parade, Casino.

There are telecommunications towers used for emergency services at the Trans-Grid Tower at Mallanganee.

A number of smaller rural exchanges are spread across the council area and monitored by the Telstra Global Operation Centre (GOC) as is the major exchanges and mobile tower sites.

The major telecommunications towers are located at:

- Quarry Road, Broadwater
- Frost Road, Buckendoon
- Woodburn Street, Evan Head
- Reardon's Lane, New Italy
- Casino Exchange Tower

Bridges

There are over 140 bridges within the Richmond Valley LGA area.

Bridges range from timber bridges in excess of 50 years old, to modern steel and concrete structures.

There are 123 vehicular bridges, 112 concrete and 11 timber.

There are 14 vehicular bridges owned by Roads & Maritime Services in the LGA.

There are 3 Rail Line (North Coast Line) bridges, located with public road access, within the rail network across the LGA. These bridges are maintained by Australian Rail & Track Corporation (ARTC).

The main span bridges are those over the Richmond River.

The Key Bridges are:

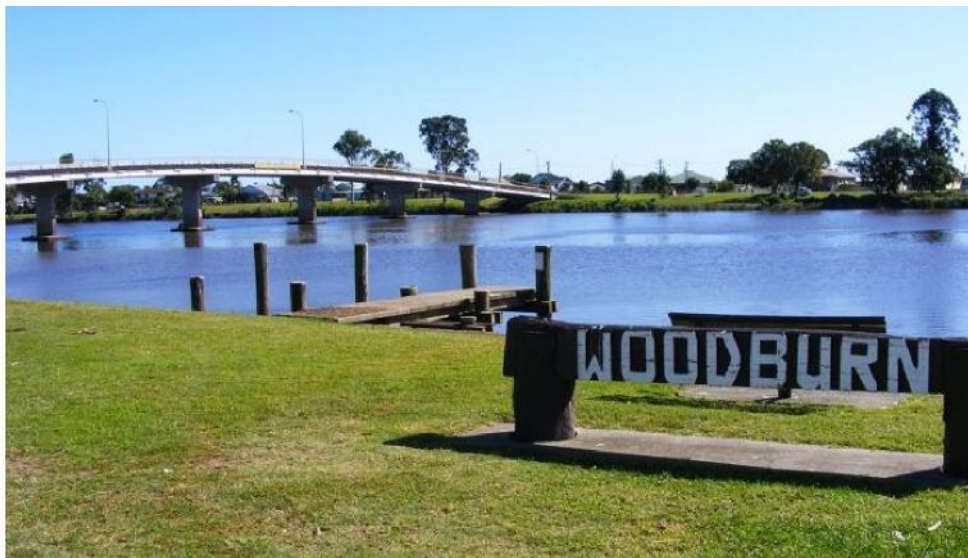
Bridge Name	Construction Type	Location
Irving Bridge	Concrete	Over Richmond River Centre Street, Casino
	Note: Bridge dissects the Casino Township	
Lagoon Bridge	Concrete	Summerland Way, Fairy Hill
McDonalds Bridge	Concrete	McDonalds Bridge Road, Fairy Hill
Bennetts Bridge	Concrete	Stratheden Road, Stratheden
Elford's Bridge	Concrete	Sextonville Road, Dobies Bight
Knights Bridge	Timber	Sextonville Road, Woodview
Black Gully East Bridge	Concrete	Bruxner Highway, Tomki
Tomki Creek Bridge	Concrete	Bruxner Highway, Tomki
Seeds Bridge	Concrete	Tomki Tatham Road, McKees Hill
Tatham Bridge	Concrete	Tomki Tatham Road, Tatham

Deep Creek Bridge	Concrete	Casino Coraki Road, Tatham
Oakey Creek Bridge	Concrete	Casino Coraki Road, Casino
Barling Creek Bridge	Concrete	Naughtons Gap Road, Casino
Bridge (not named)	Concrete	Near 260 - Naughtons Gap Road, Casino
Railway Bridge	Timber	Naughtons Gap Road, Casino
Armstrongs Bridge	Concrete	Naughtons Gap Road, Casino
Barling Creek Bridge	Concrete	Spring Grove Road, Casino
Common Lagoon Bridge	Concrete	Spring Grove Road, Casino
Petersons Bridge	Concrete	Spring Grove Road, Spring Grove
Meldrums Bridge	Concrete	Spring Grove Road, McKees Hill
Pelican Creek Bridge	Concrete	Spring Grove Road, McKees Hill
The WA Nicholas Bridge	Concrete	Bentley Road, Bentley
Thomas E Llewelyn Bridge	Concrete	Summerland Way, Leeville
Branches Bridge	Concrete	Summerland Way, Leeville
Sandy Creek Bridge	Concrete	Summerland Way, Coombell
Myrtle Creek Bridge	Concrete	Summerland Way, Myrtle Creek
Two Mile Creek Bridge	Concrete	Summerland Way, Myrtle Creek
Battons Bight Bridge	Concrete	Summerland Way, Camira
Myall Creek Bridge	Concrete	Summerland Way, Whiporie
Ben Dight Bridge	Concrete	Summerland Way, Whiporie
Railway Bridge	Concrete	Summerland Way, Whiporie
Black Gully West Bridge	Concrete	Bruxner Highway, Casino
Rileys Creek Bridge	Concrete	Bruxner Highway, Piora
East Coraki Bridge	Concrete	East Coraki Road, East Coraki
Spring Gilly Bridge	Concrete	Casino Coraki Road, Tatham
Willox Bridge	Concrete	Casino Coraki Road, Tatham
Woodburn Bridge	Concrete	Court Street, Woodburn
Bungawalbin Creek Bridge	Concrete	Woodburn Coraki Road, West Coraki
Rocky Mouth Creek Bridge	Concrete	Woodburn Coraki Road, Woodburn
Evans River Bridge	Concrete	Elm Street, Evans Head
Broadwater Bridge	Concrete	Broadwater Bridge Road, Broadwater

Old Irving Bridge washed away 1954 Floods



Woodburn Court Street Bridge - Woodburn



There are a number of rural based communities which have single road access. These communities can become isolated in the event of a bridge failure.

These include the communities at:

- Ainsworth Road
- Backmede Road
- Clarkes Road
- Coombell Road
- Elfords Road
- Ellems Bridge Road
- Gooleys Road
- Hancocks Road
- Junors Road
- Mount Marsh Road
- Neileys Lagoon Road
- Ranson Road
- Scheilers Road
- Shannonbrook Road
- Stronges Road
- The Gap Road
- Upper Cherry Tree Road
- Upper Mongogarrie Road

Ports and Harbours

Ports – NIL

There is a Boat Harbour at Evans Head. (Pacific Ocean)

Boat Ramps located at: Coraki, Casino, Broadwater, Woodburn, Evans Head x2, Swan Bay (Richmond River)

Waste Disposal

All Richmond Valley LGA waste and resource recovery sites are controlled and operated by Richmond Valley Council. There are no other licensed sites in the LGA for the management of general solid waste.

Domestic kerbside collection services for Casino and surrounds and Mid-Richmond and surrounds plus some commercial kerbside collections are operated by Richmond Valley Council.

Other private collection operators may operate in the LGA from time to time.

Waste Disposal Sites

Nammoona Waste Facility with weighbridge

Nammoona Landfill – 25 Dargaville Drive, Casino (Part Lot 2 DP 1106028)
Licensed for Waste Disposal (application to land)
Environment Protection Licence Number: 5872

Note: Limited space until new cell is developed and installed.

The total tonnage of waste disposed of at the premises must not exceed 28,000 tonnes per annum.

Unlicensed transfer station and resource recovery facility located on part of this site.

Waste Types:

- General solid waste (putrescible)
- General solid waste (non-putrescible)
- Asbestos waste
- And wastes assessed as General Solid Waste which are also subject to general or specific Immobilisation approvals which have a restriction that they may only be disposed of at waste disposal facilities which have currently operating leachate collection systems.

Coraki Closed Landfill and Transfer Station

Bora Ridge (Lot 354 DP 728161)
Myall Creek Road, Bora Ridge
Environment Protection Licence Number: 13104

No weighbridge

House hold volumes only general solid waste (putrescible and non-putrescible) includes some resource recovery.

Unlicensed Sites: (not be suitable for large quantities of waste)

Evans Head Transfer Station with weighbridge: 972 Broadwater Evans Head Road, Evans Head. General solid waste putrescible and non-putrescible) includes some resource recovery.

Rappville Transfer Station no weighbridge: Carwong Road, Rappville.

Household volumes only general solid waste (putrescible and non-putrescible) includes some resource recovery.

Hazardous materials, including Asbestos, may be deposited at the Nammoona Waste Facility (Casino) subject to prior approval from Richmond Valley Council.

Economy and Industry

The main industries that are in the district are the local fishing industry, the tourist industry, forest industry, sugar, dairy, soy bean industry, tea-tree industry, chicken industry and cattle industry.

There are approximately fifteen (15) large scale Commercial Chicken Farm operations and approximately eight (8) large scale piggery operations, and numerous small scale operators across the LGA are.

The largest retail shopping precincts in the area are at Casino, Woodburn and Evans Head. Coraki has a number of individual shops and a fuel station.

The Casino Town Centre is the dominate retail destination within the LGA. The town centre includes Woolworths and Coles and Aldi supermarkets, a range of retail speciality including cafes, restaurants, hotels, retail services, hardware, discount variety, independent fashion and sporting goods retail.

The villages of Broadwater and Whiporie contain general stores and fuel suppliers.

The North–West area of Casino, in the Reynolds Road and Summerland Way area, is a heavy Industrial area.

The “Reynolds Road Industrial Estate” is located approximately 2km North of Casino. Through Reynolds Road, the precinct has access to the Summerland Way (a key arterial road). Existing businesses include Boral Pole Plant, Riverina Stockfeed, Northern Rivers Livestock Exchange, and the Northern Co-Op Meat Company Abattoir.

Primary Industry

Agriculture has been one of the economic backbones of the area and still plays a major part, although the type of agriculture has changed over time. Present industries include beef, pigs, poultry, dairy, sugar, grains, tea tree, viticulture and timber. The value of agricultural production in the region has change in recent times with significant declines in milk, and sugar cane, with increases in beef production, dry land rice, beans, and corn. The Agriculture, Fishing and Forestry industries employ around 8% of the workforce contributing some 5.9% of Gross regional product from a large number of businesses.

Secondary Industry

Manufacturing is primarily located adjacent to the larger towns and principally comprises value adding manufacturing to primary products such as at The Northern Cooperative Meat Company which processes beef and pigs into a variety of retail products including leather; Richmond Dairies which supplies frozen milk products principally for export and Mariani Foods which manufactures dried beef jerky. In addition there is manufacturing connected with the construction industry and a number of engineering companies. The manufacturing sector employs some 19% in a relatively small number of companies contributing 21.6% of Gross Regional Product.

Tertiary Industry

Tertiary industry comprises education, health services, public administration, accommodation and food services, wholesale, retail and transport. The service sector is geared towards servicing the primary and secondary industries and comprises a range of financial, legal, repair and maintenance, supply and distribution services. These are principally located within the CBDs of Casino and Evans Head.

Timber Industry

A number of State Forests, along with a number of private forest holdings are scattered throughout the foothills and ranges in the western and southern areas of the district.

Timber production has been a major activity within the Richmond Valley LGA on both private and public land, but has declined with the resource and increasing recognition of other values of the remnants.

Forestry Corporation of NSW has a commitment to supply hardwood sawlogs from these areas to Sawmills in the Richmond Valley Shire at Casino and Rappville, and sawlogs, poles and veneer logs to sawmills and processing plants in adjoining areas. There are also some small sawmill operations in the area that obtain sawlogs from State forests and private lands. Softwood timber from pine plantations in the Richmond Valley area is supplied to the Rappville sawmill and veneer mills in Grafton and Kyogle.

Over recent years there has been a land acquisition program to establish suitable areas to softwood and hardwood joint venture plantations in the Richmond Valley area. Timber supplied from plantations will have an increasing importance in the area, with an increasing reliance on plantations to supply sawlogs and other timber to industry.

Tourism

The focal point for tourism in Richmond Valley district is the beach side town of Evans Head, with beach facilities and the ecotourism opportunities provided in the surrounding National Parks and State Forests.

The population of Evans Heads swells to approximately double its normal size during peak holiday seasons.

Major Events held in the LGA

- Evans Head: Great Eastern Fly In – January every year
- Casino: Beef Week – May every year
- Casino: Primex Field Days – June every year
- Casino: Truck show – August every year
- Casino: Casino Show – October every year
- Australia Day – Richmond Valley various locations

Six (6) major events – over sixty (60) smaller events that occur throughout the year that are reoccurring. These events are published/advertised on Councils website.

Major Industry Employers

Northern Co-Operative Meat Company

10615 Summerland Way
CASINO NSW 2470
Phone: 02 6662 2444

There is LPG storage and cleaning chemical storage on site. The facility holds an Environmental Protection Licence for its activities including rendering, slaughtering animals and tanning. The licence addresses the discharge of effluent from the facility.

The facility has the capability to process 12,500 bovines per week. The modern plant has two separate processing floors. The Beef Floor processes all animals over 150 kg and the Veal Floor all those under 150 kg.

The facility has a **Hide Tanning** capability. It processes to convert 90,000 cattle hides each year. Established in 1975, Casino Hide Tanners (CHT) was one of the first tanneries in Australia dedicated to the tanning of cattle hides for export.

Broadwater Sugar Mill (Sunshine Sugar)

113 - 117 Pacific Highway
BROADWATER NSW 2472
Phone: 02 6620 8200

The Broadwater Sugar Mill is owned by the NSW Sugar Milling Co-operative. The facility holds an Environmental Protection License which limits discharge to air and water.

Richmond Dairies and Fast Freeze Australia (formerly NORCO)

100 Dyraba Street
CASINO NSW 2470
Phone: 02 6660 1111

Richmond Dairies and Fast Freeze Australia operates a fast freeze facility. The facility holds an Environmental Protection License for dairy processing and limits discharge to air, water and land. The facility stores ammonia which is considered high risk.

Riverina Australia (Riverina Stock Feeds – Casino)

Reynolds Road

CASINO NSW 2470

Phone: 02 6662 7400

Riverina Australian Pty Ltd operates a manufacturing plant and storage facilities.

The facility was established in 1997 and manufactures stock feed for poultry, pigs, dairy and beef cattle. The facility holds an Environmental Protection License for its activities.

Main Camp Natural Extracts

840 Main Camp Road

RAPPVILLE NSW 2469

Phone: 02 6661 7966

Main Camp Natural Extracts is a tea tree processing facility that extracts tea tree oil.

The facility stores large quantities of LNG.

Mara Seeds

7696 Bruxner Highway

MALLANGANEE NSW 2469

Phone: 02 6664 5145

Provides organic products centred around grass seed, oilseed and cereal grain production; high quality organic yearling beef that are grass feed or grain finished; organic compost and compost tea production.

Mariani Foods - Casino

6 Foy Street

CASINO NSW 2470

Phone: 02 6662 2177

Facility is a processing plant producing nutritious and tasty premium Australian beef and game jerky.

Industry

Top 6 Employment Sectors:

Sector	Percentage (%)
Source: ABS – 2011 Census	
Manufacturing	14.7
Health Care & Social Assistance	13.6
Retail	10.2
Education & Training	8.2
Agriculture, Forestry & Fishing	8.2
Accommodation & Food Services	7.2

The largest individual business employers in the area are:

- Northern Cooperative Meat Company: Casino
- Sunshine Sugar: Broadwater
- Richmond Dairies: Casino
- Richmond Valley Council
- Mariani Foods: Casino
- Riverina Stock Feeds: Casino
- Mara Seeds: Shannonbrook
- RMS and associated Contractors involved with Pacific Highway Upgrade (Highway Upgrade work due for completion 2020)

Key community based agencies:

- Boolangle Local Aboriginal Land Council - Phone: 02 6662 6286
- Bundjalung Hacc Aboriginal Home Care Service - Phone: 02 6662 4544
- Djanangmum Health Clinic [Bulgar Ngaru Aboriginal Medical Corporation]
Phone: 02 6662 3514 / Fax: 02 6662 4849
- Visitors Information Centre - Phone: 02 6660 0325
- Department of Communities & Justice, Community Services [Ballina Office: Phone: 02 6686 1999
- Disability Services:
ACHIEVE - Phone: 1300 224 438
CASPA - Phone: 02 6662 6792
- Environment Groups: Northern Rivers Guardians - Phone: 02 6689 7466

Major Storage/Hazard Facilities

Large steam boilers as well as ammonia based refrigeration systems are located at:

Northern Co-Operative Meat Company

10615 Summerland Way
CASINO NSW 2470
Phone: 02 6662 2444

Broadwater Sugar Mill

113 - 117 Pacific Highway
Broadwater NSW 2472
Phone: 02 6620 8200

Richmond Dairies

100 Dyraaba Street
CASINO NSW 2470
Phone: 02 6660 1111

Main Camp Natural Extracts

Address: 840 Main Camp Road
RAPPVILLE NSW 2469
Phone: 02 6661 7966

The LPG storage area at the Main Camp Tea Tree plantation is one of the largest in the State of NSW.

Equipment infrastructure rupture at any of these facilities could result in a large scale impact type incident involving fire, rescue, medical and Police resources and/or a toxic plume which may necessitate evacuation of nearby areas.

There is a large scale wholesale / retail fuel distribution facility with substantial quantities of petroleum products stored on-site at Casino.

Major Fuel Depot

Caltex Fuel Depot

Address: 32 Dyraaba Street
CASINO NSW 2470
Phone: 02 6662 2155

Fuel Outlets

Caltex Energy

28 Dyraaba Street
CASINO NSW 2470
Phone: 02 6662 2155

Coles Express

Centre Street and Richmond Street
CASINO NSW 2470
Phone: 02 6662 1903

Caltex Star Mart

96 Centre Street
CASINO NSW 2470
Phone: 02 6662 5995

Puma Casino

37 Johnston Street
CASINO NSW 2470
Phone: 02 6662 6788

United Petroleum

136-144 Johnston Street
CASINO NSW 2470
Phone: 02 6619 2014

Liberty South Casino

84 Centre Street
CASINO NSW 2470
Phone: 02 6662 8255

Liberty Casino

Address: 80 Barker Street
CASINO NSW 2470

Casino Road House

86 Johnston Street
CASINO NSW 2470
Phone: 6662 1287

Caltex Woolworths

130 Canterbury Street
CASINO NSW 2470
Phone: 02 6662 6487

Shell Service Station

Centre Street
CASINO NSW 2470
Phone: 6662 1903

Caltex Woodburn

129 River Street
WOODBURN NSW 2472
Phone: 6682 2436

BP Coraki

104 Queen Elizabeth Drive
CORAKI NSW 2471
Phone: 6683 2074

Whiporie General Store

5351 Summerland Way
WHIPORIE NSW 2469
Phone: 6661 9100

Liberty Rileys Hill

7 Pacific Highway
RILEYS HILL NSW 2472

BP Broadwater

Address: 171 Pacific Highway
BROADWATER NSW 2472
Phone: 6682 8253

Evans Head Bombing Range

A Defence Force bombing range is located to the south of Evans Head on the coastal hinterland. The range is used for training which may consist of live bombing runs and strafing runs. The range may contain unexploded ordinance.

The Defence Force has safety and emergency procedures to be implemented in the event of an emergency.

Saleyards

Northern Rivers Livestock Exchange (NRLX)

Address: Dargaville Street, Casino
Phone: 02 6662 6403

The average number of head which go through NRLX from 2012/2013 to 2016/2017 financial year is: 103,488 head of cattle. The number of sales per year for 2016/2017 financial year was 82 sale days.

Caravan Parks

Reflections Holidays Park Evans Head

18 Park Street
Evans Head NSW 2473
Phone: 02 6682 4212 / Fax: 02 6682 4891
Approximate Capacity: Caravan Sites / Tent Sites / 23 Self Contained Cabins.

Broadwater Sunrise Caravan Park

74-92 Pacific Highway
BROADWATER NSW 2472
Phone: 02 6682 8388
Approximate Capacity Population:

Broadwater Stop Over Tourist Park

1-5 Pacific Highway
BROADWATER NSW 2472
Phone: 02 6682 8254

Coraki Caravan Park

81 Richmond Terrace
CORAKI NSW 2471
Phone: 02 6683 2704

Casino Showground

10095 Summerland Way
CASINO NSW 2470
Phone: Richmond Valley Council - 02 6662 0300

Casino Airport

Neville Bienke Memorial Drive
CASINO NSW 2470
Phone: Richmond Valley Council - 02 6662 0300

Discovery Parks Casino

115 Johnston Street
CASINO NSW 2470
Phone: 02 6662 1572

Casino Holiday Park

69 Light Street
CASINO NSW 2470
Phone: 02 6662 1069

Browns Caravan Park

58-60 Hare Street (Bruxner Highway)
CASINO NSW 2470
Phone: 02 6662 1840

Riverside Village

570 Woodburn – Evans Head Road
EVANS HEAD NSW 2472
Phone: 02 6682 4974
Approximate Capacity Population: 75 permanent Sites (approval to go to 166 sites)

Camp Koinonia

29-41 Terrance Street
EVANS HEAD NSW 2472
Phone: 02 6682 4329

Aryana Bison Farm

670 Elliotts Road
MYRTLE CREEK NSW 2469
Phone: 02 6661 7866
Approximate Capacity Population: 12 Sites

Freedom Camping in New Italy Museum Car Park

Pacific Highway
NEW ITALY NSW 2472
Phone: 02 6682 2622

Evans Head Memorial Aerodrome (Eastern Fly-in Event)

Memorial Airport Drive
EVANS HEAD NSW 2473
Phone: Contact Richmond Valley Council – Phone: 02 6660 0300
Phone: Heritage Museum – Mobile: 0411 378998
Approximate Capacity Population: (Camp next to plane)

Rabbits Eat Lettuce (Doof Party Festival Site)

1032 Seery Road
KIPPENDUFF NSW 2469

Note: Festival type location. People camp in area at festival time.
Phone: Contact Richmond Valley Council for Event Manager contact details
Approximate Capacity Population: Maximum capacity 3,000 people

Accommodation

Motels

Casino Motor Inn

91 Hare Street
CASINO NSW 2470
Phone: 02 6662 1777

River Park Motor Inn

121-125 Centre Street
CASINO NSW 2470
Phone: 02 6662 3888

Squatters Homestead Motel

161 Centre Street
CASINO NSW 2470
Phone: 02 6662 3888

Milgate Motel

118 Centre Street
CASINO NSW 2470
Phone: 02 6662 1022

The Clydesdale Motel

143 Johnston Street
CASINO NSW 2470
Phone: 02 6662 5982

Woodburn Motel

9610 Pacific Highway
WOODBURN NSW 2472
Phone: 02 6682 2486

Evans Head Pacific Motel

38 Woodburn Street
EVANS HEAD NSW 2473
Phone: 02 6682 4318

Hotels

Commercial Hotel

74 Walker Street
CASINO NSW 2470
Phone: 02 6662 1007

Tattersalls Hotel

136-138 Barker Street
CASINO NSW 2470
Phone: 02 6662 1449

Rod & Reel Hotel

99-103 Pacific Highway
WOODBURN NSW 2470
Phone: 02 6682 2406

Ilawong Hotel

15-19 Oak Street
EVANS HEAD NSW 2470
Phone: 02 6682 4222

Cabins

The Bowlo Holiday Cabins

Beech Street
EVANS HEAD NSW 2470
Phone: 02 6682 4343

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Community Profile – Part C:

KYOGLE COUNCIL AREA

General

Kyogle Council Population: 8940 (ABS: estimated 2015)

Area: 358401.9 ha or 3584 km²

Population trend: Steady

Kyogle Council is a rural and urban area

Population density is 2.5 person per km²

Note:

The Kyogle Council Local Government Area for Emergency Management and EMPLAN purposes includes those parts of the Tenterfield Shire Council Local Government Area in and around the village of Urbenville, which are within the boundaries of the NSW Police Force - Richmond Local Area Command (LAC).

The urban centre of Kyogle and other main villages (Bonalbo, Tabulam, Woodenbong, Urbenville, Mallanganee, Mummulgum, Old Bonalbo, Grevillia and Wiangaree) contain approximately 41% of the population. The majority of the population, approximately 59%, live rurally.

City / Town / Village	Population (Approximate)
Kyogle	2197
Bonalbo	371
Tabulam	470
Woodenbong	381
Urbenville	321
Mallanganee	148
Mummulgum	95
Old Bonalbo	77
Grevillia	77
Wiangaree	131
Cawongla	192
Ettrick	134

Kyogle Council LGA includes multiple localities deriving all of their services from the above listed centres.

Local Government Authority (LGA) areas that adjoin Kyogle Council are:

Queensland (Scenic Rim Regional Council)	Queensland (Scenic Rim Regional Council)	Tweed Shire Council
Tenterfield Shire Council	Kyogle Council	Lismore City Council
Tenterfield Shire Council	Clarence Valley Council	Richmond Valley Council

All adjoining LGAs are part of the North Coast Emergency Management Region, **except** Tenterfield Shire Council which is part of the New England Emergency Management Region (Western Region – NSW Police Force structure).

Due to large number of rural based bridges; terrain and topography; Flood Risk and Bushfire Risk many rural based localities / communities can become isolated due to Bridge loss.

The Bushfire Risk is of particular concern in some rural based localities / communities. Many subject areas have one access road and properties are located in areas with high levels of timber and vegetation.

Kyogle LGA is part of the Northern NSW Local Health District with headquarters based in Lismore. Hospital facilities within the LGA are located at Kyogle, Bonalbo and Urbenville. These facilities are all Level 2 Rural Hospital / Multi-Purpose Health Service Centres. The nearest major emergency retrieval health facility is located at Lismore.

NSW Ambulance manage all aero-medical retrieval services, using both State owned and contracted Fixed Wing and Helicopter aircraft. Aero-medical retrievals occur regularly in the area.

Helipads are located at:

- Kyogle Hospital (Dr David Reid Park – Southern side of Hospital)
- Kyogle Showground (Northern side of town)
- Bonalbo Cricket Oval / Sports Ground (located in centre of town)
- Bonalbo Water Storage Dam site north of town
- Mallanganee Sports Oval (located adjacent to Hotel)
- Tabulam Oval / Sports Ground (located in centre of town)
- Woodenbong Oval / Sports Ground
- Urbenville Showground (Primary Site)
- Urbenville School Grounds (Secondary Site)

The Westpac Rescue Helicopter Base is located in Lismore. This rescue service covers the wider regional area.

The nearest Airport that provides regular passenger services is Lismore Regional Airport. Regional Express Airlines (REX) operates from Lismore Regional Airport with several daily services Lismore – Sydney - Lismore.

The closest other passenger servicing Airports are located at Ballina, Grafton and Coolangatta (Gold Coast, Queensland).

The Aboriginal Health Service (Bulgarr Ngaru Medical Aboriginal Corporation) has a Richmond Valley Clinic facility (Djanangmum Clinic) at Casino that provides Doctor and general community health services to the aboriginal communities of Kyogle and Tabulam and surrounding areas.

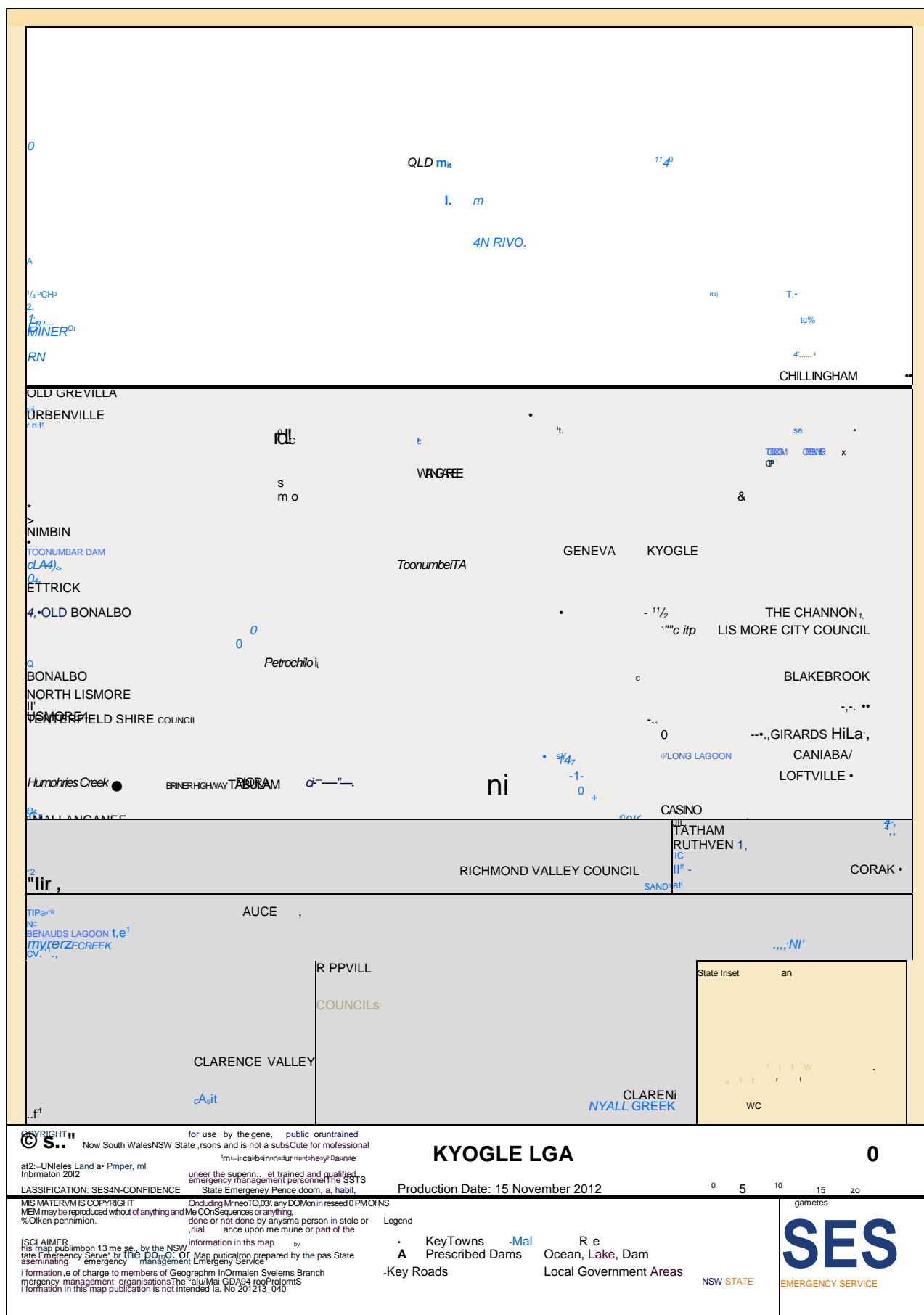
Aged Care Facilities are located at Kyogle, Bonalbo and Urbenville Multi-Purpose Service facilities have an aged care function.

The Kyogle LGA area forms part of the North Coast Region of NSW Department of Primary Industries. The NSW Department of Primary Industries – Wollongbar Primary Industries Institute, a large scale facility, is located in the nearby LGA area of Ballina Shire Council.

The Kyogle LGA is part of the North Coast Local Land Services which has its headquarters in Lismore. There is no Local Land Services office located in Kyogle LGA.

Emergency Service agencies for the Kyogle LGA are profiled in below Table.

Kyogle LGA - Emergency Service Agency Profile		
NSW Police Force	Police District: Name / HQ	Richmond Police District - Lismore
	Police Stations	Bonalbo, Kyogle, Tabulam and Woodenbong
	Primary Rescue: GLR & VR	NIL
	Secondary Rescue: GLR	NIL
Fire & Rescue NSW	Zone: Name / HQ	Regional North Zone 2 - Ballina
	Fire Stations	Kyogle
	Primary Rescue: GLR	NIL
	Secondary Rescue: GLR	Kyogle
NSW Rural Fire Service	Zone: Name / HQ	Northern Rivers Zone - Casino
	Village / Town Brigades	Bonalbo; Grevillia; Kyogle HQ; Mallanganee; Mummulgum; Old Bonalbo; Tabulam; Wiangaree; Woodenbong
	Rural Brigades	Green Pigeon; Hanging Rock; Sextonville; Toonumbar; Wyneden
NSW State Emergency Service	Region: Name / HQ	Northern Rivers Command - Northern Zone
	Local Units	Kyogle, Tabulam and Urbenville
	Primary Rescue: GLR & VR	Kyogle, Tabulam
	Primary Rescue: GLR	Urbenville
	Secondary Rescue: GLR	NIL
NSW Ambulance	Sector: Name / HQ	Regional Division – North Coast Sector Coffs Harbour
	Stations	Kyogle, Bonalbo and Urbenville
NSW Volunteer Rescue Association	Region: Name / HQ	Far North Coast Region (Region 1) – Brunswick Heads
	Primary Rescue: GLR	NIL
Notes: <ol style="list-style-type: none"> 1. NSW Police Force Stations are NOT open 24 hours. 2. Urbenville Police Station is no longer operational. The Bonalbo Police Station covers the Urbenville area. 3. Fire & Rescue NSW – Kyogle Station is staffed by on-call Retained Fire Fighters. 4. Urbenville Township is located within the boundaries of Tenterfield Shire Council. For Policing, Emergency Management and Emergency Services operational purposes it forms part of the Kyogle LGA and the Northern Rivers LEMC structure. 5. Kyogle Council boundary in the north connects to the Queensland border. An incident in this border area may result in Queensland based emergency service resources coming into NSW area to assist in emergency services response operations. This assistance is in-line with the “Queensland and New South Wales – Statement of Principles and Priorities for Cross-border Collaboration 2016-2019”. 		



Landform and Topography

Kyogle has an array of spectacular natural and cultural attributes, including the renowned Border Ranges, Toonumbar and Richmond Range National Parks. The striking landscape and local character are major drawcards for tourist, particularly those seeking eco-tourism and adventure tourism experiences.

Kyogle is the gateway to the rich agricultural areas in Queensland, including the Scenic Rim and Darling Downs.

Kyogle has a history of the timber and sawmilling industry.

Waterways

The main water ways through the area are the Richmond River and its tributaries in the east and the Clarence River in the west. The Clarence River forms the western boundary of the Council area.

Water storage infrastructure includes;

- Toonumbar Dam: on Ironpot Creek within the Richmond Catchment, which provides agricultural storage.
- Petrochilos Dam: off Peacock Creek at Bonalbo which provides bulk storage for the Bonalbo water supply.
- Kyogle Offline Bulk Storage: off the Richmond River and Fawcetts Creek at Kyogle which provides bulk storage for the Kyogle water supply.

Other water supply weirs are located on the Richmond River at Kyogle and Tooloom Creek at Urbenville.

Petrochilos Dam (Bonalbo) Overview	
Owner / Operator	Kyogle Council
Description of Dam	Off creek water storage – Earth fill embankment dam. 13.3m high with small run-off catchment.
Location	Bonalbo
Communities downstream	Bonalbo Village
Monitoring System	Manual reading – Seepage weir, Piezometers
Warning System	Dam has a White and Red Alert. White Alert: will trigger a SES issued Evacuation Warning. Red Alert: Will trigger an SES issued Evacuation Order.
Other	Dam Safety Emergency Plan in place.
Note:	Estimated dam failure/escalation timeframes between White and Red Alerts: Flood study indicates that the shortest possible time under the worst circumstances would be 10 minutes.

Kyogle Offline Bulk Storage Overview	
Owner / Operator	Kyogle Council
Description of Dam	Off creek water storage – Earth fill embankment dam. Turkey Nest Dam with no run-off catchment.
Location	Between the Richmond River and Fawcetts Creek at Kyogle
Communities downstream	Kyogle, Casino, Coraki, Woodburn, Broadwater, Wardell, Ballina
Monitoring System	Full PLC monitoring systems with SMS Alarms
Warning System	

Toonumbar Dam Overview	
Owner / Operator	Water NSW
Description of Dam	Rock fill embankment with clay core. Wall height 44metres. Length 229metres. Construction completed in 1971.
Location	Toonumbar Dam is situated among tall timbers in rugged mountain country in the foothills of the Great Diving Range above Casino and Lismore. Located on Iron Pot Creek about 30 kilometres west of Kyogle
Communities downstream	Etrick, Stratheden, Casino
Monitoring System	
Warning System	
Other: <ol style="list-style-type: none"> 1. Dam constructed to conserve water, control flows, reduce flood risk and provide a reliable water supply in the region. 2. The maximum water depth is 34 metres and at 100% capacity the dam wall holds back 11,100 megalitres. The surface area of Lake Toonumbar is 320 hectares (790 acres) and the catchment area is 9,800 square kilometres. The uncontrolled concrete chute spillway is capable of discharging 1,700 cubic metres per second. 3. The dam is also a popular fishing and water sport destination. 	

National Parks and Nature Reserves

Richmond Range National Park, 40 km west of Kyogle, contains a remnant of the vast Focal Peak volcano, active about 24 million years ago.

About 40 per cent of the park is covered by subtropical and dry rainforest, and more than 400 species of plants may be found. The park's mammal fauna are said to be the most diverse of any comparably sized area in Australia, and include spotted tailed quolls and squirrel gliders. Bird species number more than 100.

The World Heritage listed Border Ranges Park, shared by NSW and Queensland, has its southern entrance at Barkers Vale, some 25 km from Kyogle.

The park contains several picnic areas, lookouts and camping sites. The 60 km drive from entry to exit takes a leisurely 4-5 hours, allowing for a number of stops along the route. Visitors should not miss the opportunity to spend some time here.

National Parks and Nature Reserves in the Kyogle area

National Parks		
Border Ranges (WHA)	Mount Nothofagus (WHA)	Koreela
Mebbin	Mount Warning	Nightcap
Richmond Range (WHA)	Tooloom (WHA)	Toonumbar (WHA)
Mallanganee (WHA)		

Nature Reserve
Moore Park
Note: (WHA) = World Heritage Area

State Forest Areas

State Forest areas in the Kyogle Local Government Area

Eden Creek	Boorabee	Mount Lindesay
Unumgar	Yabbra	Donaldson
Mount Lindesay	Richmond	Richmond Range
Sugarloaf		

Climate

Month /Temp	Jan	Feb	Mar	Apr	May	Jun	July	Aug	Sept	Oct	Nov	Dec
Avg. Temp C	24.3	24.1	22.9	20.2	16.8	14.3	13.3	14.5	17	19.6	21.8	23.7
Min Temp C	18.7	18.9	17.5	14.3	11.0	8.1	6.5	7.3	9.8	12.9	15.3	17.5
Max Temp C	30.0	29.3	28.3	26.2	22.7	20.5	20.2	21.7	24.3	26.4	28.4	30

The average yearly rainfall: 1,159mm

Month /mm	Jan	Feb	Mar	Apr	May	Jun	July	Aug	Sep	Oct	Nov	Dec
Mean (mm)	148	74	158	102	97	61	50	34	32	76	93	134

[Source: Climate-Model By [Climate-Data.Org](https://climate-data.org/)]

Land Use

<i>Land Use Zone / Type / Classification</i>	<i>Area (Ha)</i>	<i>% of LGA</i>
RU1 Primary Production	181,400	50
RU2 Rural Landscape	45,480	13
RU3 Forestry	41,600	12
RU4 Primary Production Small Lots	434	<1
RU5 Villages	225	<1
R1 General Residential	339	<1
R3 Medium Density Residential	2	<1
R5 Large Lot Residential	659	<1
B2 Local Centres	11	<1
B4 Mixed Use	13	<1
IN1 General Industrial	70	<1
IN2 Light Industrial	85	<1
SP1 Special Activities	0	0
SP2 Infrastructure	44	<1
RE1 Public Recreation	577	<1
RE2 Private Recreation	26	<1
E1 National Parks and Nature Reserves	73,890	21
W1 Natural Waterways	2,741	<1
W2 Recreational Waterways	221	<1
<i>DM Deferred Matter (AKA E-ZONES)</i>	11,360	3

Population and People

The Kyogle LGA is well known for its heritage buildings and architecture that reflect the early timber milling and agricultural ventures.

Kyogle township is the focal centre of the area, providing local retail, commercial and community services and a high quality of life for residents and visitors.

Community Snapshot

(ABS 2016 Census data)

Subject	Number or % of population
Total Persons	8,940
Total Females	52.3%
Total Males	47.7%
Population Density (persons per / km2)	2.66
Aged 0-4 years	388
Aged 5-14 years	1072
Aged 65 +years	2,053
Average Age	50
Of Aboriginal / Indigenous origin	4.3%
Overseas Born	19.8%
Speaks another language then English at home	3.7%
Migrants not proficient in speaking English	1.4%
Post school qualifications	36.2%
Unemployment rate	8.7%
Main industry: Agriculture, Forestry and Fishing – people employed in industry (ABS estimated 2019)	18.7%
Lone person households	1142
Occupied private dwellings (Households)	3528
Number of motor vehicles (ABS estimated 2019)	7,704
Internet connection (2011 Census) [% of private dwellings have internet access at home]	70.9%
Average persons per occupied dwelling	2.2

Labour Force: [Source: ABS 2016]

Employed: 3,551

Unemployed: 310

Unemployment Rate: 8.7%

Housing Average Household Monthly: [Source: ABS 2016 Census]

Rent Payment: \$866

Mortgage Payment: \$1,110

Median Sale Price Residential Properties: [Source: ABS 2016 Census]

\$250,000

Medium Employee Income: [Source: ABS 2017 Figures]

\$32,358

Aboriginal People

Kyogle LGA is positioned in the Bundjalung Nation. There are four (4) Local Aboriginal Land Councils within the LGA:

Gugin Guddaba; Muli Muli; Jubullum, and Casino – Boolangle.

Religious Diversity

The shire has approximately 63% of the residents who identify as belonging to a Christian faith, with 24% having no religious affinity and the balance 13% members of various minor religious groups in the Australian context.

Other groups

There are numerous environmental based lobby and support groups located within the area. These groups have a strong community presence and political connections. The presence of these groups should be noted when undertaking and implementing emergency management strategies, especially in the Recovery Area.

The area, and that of the surrounding areas, have a higher than average number of people that are not vaccinated. This is especially so for children.

Transport Routes and Facilities

Transport

Road

The main transport routes through the area are the Bruxner Highway and Summerland Way. The Bruxner Highway traverses the area on an East/West axis and the Summerland Way traverses the area on a North/South axis.

These arterial routes carry the majority of the traffic including heavy transport vehicles. The main commuter traffic connecting roads are Kyogle Road (Kyogle – Murwillumbah), Bentley Road (Kyogle – Lismore), Clarence Way (Grafton – Woodenbong) and Mount Lindesay Road (Woodenbong – Legume).

Rail

The main North Coast railway line (Sydney – Brisbane) transgresses the area in a North – South direction, passing through the eastern section of the Council area including Kyogle and includes the Border Loop tunnels.

This line services both freight and passenger trains.

The passenger train operating through the area is the “XPT”.

The XPT is a high-speed train and is seen to present a higher-level risk of serious accident at the numerous level crossings in the area.

There is a daily overnight service Sydney – Brisbane – Sydney. The XPT train has passenger seating car and sleeper car configurations. The XPT train operating through the area is normally a five (5) carriage configuration, with increase to six (6) in peak periods. The XPT fully loaded passenger capacity is approximately 300 passengers.



Freight train movements include the transportation of dangerous goods and hazardous materials that includes Sodium Cyanide that is manufactured in Queensland.

The North Coast railway line (Sydney – Brisbane) is managed by Australian Rail & Track Corporation (ARTC). The ARTC Train Control Centre is based at Broadmeadow in Newcastle.

ARTC Train Control Centre Phone: 1800 029 741

Air

There are no Airports located, or regular passenger service airlines operating, within the LGA.

The closest passenger services operate from Lismore Regional Airport and Ballina Byron Gateway Airport.

Airspace above the LGA area is used extensively for inter-state aviation routes, especially traffic to and from Queensland Airports of Gold Coast City and Brisbane Airport; Lismore Regional Airport and Ballina Byron Gateway Airport to southern ports, especially Sydney.

Infrastructure

Water Supply Services

Kyogle

Kyogle Water Supply consists of a river extraction pump station behind an artificial weir and a separate off-stream storage dam located in McDougal Street. The pump station is accessed from Clarkes Lane off the Summerland Way north of Kyogle, and then via the football grounds and private property via a right of carriageway. Access is all weather, but the area surrounding the pump station building is flood prone. The Water Treatment Plant is located in Plant Street, and reservoirs are located on Hill Street, Mount Street, and James Street in Geneva.

Urbenville/Muli Muli/Woodenbong Water Supply (UMMWWS)

The UMMWWS is supplied from the Urbenville Water Treatment Plant located on Tooloom Falls Road south east of Urbenville. Access is via Legume Road which is a sealed road, and Tooloom Falls Road which is gravel but all weather. The service reservoirs are located in Urbenville and Woodenbong. There is also a booster pump station located on the Clarence Way north of Urbenville, and a rising main between Urbenville and Woodenbong connecting these reservoirs.

Bonalbo

The Bonalbo water supply consists of a river extraction pumping station and bore located on the banks of Peacock Creek on Woodworths Road off the Clarence Way to the east of the village. The site is accessed by an all-weather gravel road, and is flood prone.

The water supply has a prescribed dam (Petrochilos Dam) located on High Street to the north of the central school. A Dam Safety Emergency Plan is in place for this dam. There is a pump station and air compressor room located near the base of the dam, and the Water Treatment Plant is located to the east of the dam, within the dam catchment. The power supply for the site is located at the entry to the site on High Street, and has provision for a generator connection and change over switch. The access to all components within the dam site is via sealed road access from High Street.

Sewage Services

Kyogle

The Kyogle Sewerage system is a gravity system with five pumping stations. The Sewage Treatment Works (STW) is located at the end of Highfield Road and has all weather sealed road access. The main part of the STW is flood free, but the effluent ponds are in flood prone land. The Pumping Stations (PS) are located at:

- PS1: Chauvel Street (in flood prone area, and has constructed overflow to Fawcetts Creek)
- PS2: Anzac Drive/Harrison Street
- PS3: Boorabee Street (in flood prone area)
- PS4: Golf Course (in flood prone area)
- PS5: Highfield Road
- PS6: Saville Street

All pump station switchgear is located above the 1 in 100 flood level, but inundation of PS1 results in the pump station being flooded and non-functional. All pump stations are fitted with change-over switches to allow generator connection in the event of extended periods of power loss.

Woodenbong/Muli Muli

The Woodenbong/Muli Muli sewerage system is a gravity system with two pumping stations. The Sewerage Treatment Works is located on Roseberry Street to the south of Woodenbong village and is accessed via an all-weather gravel road. The Woodenbong Pump Station is located in Unumgar Street adjacent to the town pool and is in a flood prone area. The Muli Muli Pump Station is located on the Clarence Way opposite the Muli Muli access road. Both pump stations and the STW are fitted with change-over switches to allow generator connection in the event of extended periods of power loss.

Bonalbo

The Bonalbo sewerage system is a gravity system with a single pump station. All flows to the STW are via this pump station. The Sewerage Treatment Works is located to the south of the village on Farm Road, and is an all-weather gravel road, but there is a low level causeway that is subject to inundation between the village and the STW on Farm Road. The sewer pump station is located at the eastern end of Sandilands Street and is accessed via this street which is a sealed road, with gravel access track into the pump station site.

The pump station is flood prone but its switchgear is located above the 1 in 100 flood level, but inundation of the site results in the pump station being flooded and non-functional. The pump station is fitted with change-over switches to allow generator connection in the event of extended periods of power loss.

Electricity

The electricity network supplier for the area is Essential Energy.

The critical component to the local grid is the McKees Hill (Richmond Valley LGA) Sub Station. Supply networks feed from this Sub Station, and there are two main feeder supply lines into the Sub Station. One from the South (Coffs Harbour) and one from the West (Tenterfield).

Electricity supply within the LGA distributes from the key facility at McKees Hill.

Supply lines within the Kyogle LGA are:

66kv Line(s)

Lismore – Kyogle

33kv Line

Casino - Mallanganee - Bonalbo - Urbenville.

Note: The village of Woodenbong has only one power line feeder.

Electricity Supply Zone Substations address:

Kyogle	11 Craig Street, Kyogle
Mallanganee	6979 Bruxner Highway, Mallanganee
Bonalbo	CnrCapeen / Peacock Street, Bonalbo
	Note: This site is flood prone
Urbenville	Cnr Clarence Way and Boomi Creek Road, Urbenville

Electricity Supply registered “At Risk or Vulnerable Customer”:

Essential Energy does not “own” the registered Customer Contact details. These details belong to the supply Retailer, and is privileged information.

In emergency operations, the Essential Energy LEMC member can access the “Life Support Customer” data information from retailer providers and take necessary action as required.

All emergency related information regarding electricity can be channeled through the Essential Energy emergency response phone number 132080.

Telecommunications

There are emergency services use telecommunications towers located at the following locations:

- Homeleigh Tower: Whites Road, 4wd dry weather only access, also a separate Optus tower located at the same site
- Haystack Tower: Joes Box Road, 4wd dry weather access only
- Mt Donaldson Tower: Mount Lindesay Road, 4wd dry weather access only

There is also a major telecommunications tower located east of Mallanganee which is accessible from Bulmers Road via an all-weather gravel access road.

The main telecommunications exchange is located at the Telstra building at: 155 Summerland Way, Kyogle.

A number of smaller rural exchanges are spread across the council area and monitored by the Telstra Global Operation Centre (GOC) as is the major exchanges and mobile tower sites

Services Summary

City / Town / Village	Water [Reticulated]	Sewerage	Electricity [Grid Supply]	Natural Gas
Kyogle	Yes	Yes	Yes	No
Bonalbo	Yes	Yes	Yes	No
Tabulam	No	No	Yes	No
Woodenbong	Yes	Yes	Yes	No
Urbenville	Yes	Yes	Yes	No
Mallanganee	No	No	Yes	No
Mummulgum	No	No	Yes	No
Old Bonalbo	No	No	Yes	No
Grevillia	No	No	Yes	No
Wiangaree	No	No	Yes	No

Bridges

There are 321 bridges within the Kyogle LGA area. Bridges range from timber bridges in excess of 50 years old, to modern steel and concrete structures.

“Bridge Loss” is a relative risk within Kyogle Council LGA due to large number of rural based bridges; terrain and topography; Flood and Bushfire Risk. Some localities / communities will become isolated in the event of Bridge loss.

There are also numerous RAILWAY LINE Bridges on the North Coast Rail Line. These bridges are maintained by Australian Rail & Track Corporation (ARTC).

Key Bridges owned and managed by Kyogle Council are:

Asset Information					
Asset No	Structure Name	Structure On	Chainage	Date of Construction	Current Structure Class
544-B2607	Allcocks Bridge	Bentley Road	27986	1/07/1985	Timber
141-B2411	Back Creek Bridge	Kyogle Road	62442.6	1/07/1982	Timber
361-B2571	Bean Creek No.3	Clarence Way- 361	163845	1/12/2009	Precast concrete
361-B2565	Bean Creek No1 Bridge	Clarence Way- 361	154412	1/07/2007	Precast concrete
361-B2569	Bean Creek No2 Bridge	Clarence Way- 361	159920	1/07/2009	Precast concrete
361-B2572	Bean Creek No.4	Clarence Way- 361	164870	1/07/2010	Precast concrete
361-B2576	Becks Bridge	Clarence Way- 361	180846	1/07/2009	Precast concrete
361-B2573	Boomi Creek Bridge	Clarence Way- 361	174226	1/04/2012	Precast concrete
622-137967	Bridge Sized Culvert	Mount Lindsay Highway	137967	1/07/1960	Precast culvert
141-65865	Bridge Sized Culvert	Kyogle Road	65865	1/07/1960	Box Culvert
141-60535	Bridge Sized Culvert	Kyogle Road	60535	1/07/1960	Precast culvert
544-34833	Bridge Sized Culvert	Bentley Road	34833	1/07/1960	Precast culvert
544-30550	Bridge Sized Culvert	Bentley Road	30550	1/07/1960	Precast culvert
361-B2555	Cookes Bridge Bottle Creek	Clarence Way- 361	131045	1/07/1972	Precast concrete
361-B2562	Cooksons Bridge	Clarence Way- 361	151222	1/07/1980	Timber

361-B2551	Culmaran Creek No. 1	Clarence Way- 361	124414	20/01/2009	Concrete
361-B2552	Culmaran Creek No. 2	Clarence Way- 361	124480	20/01/2009	Concrete
361-B2564	Duck Creek No2 Bridge	Clarence Way- 361	153456	1/06/2004	Concrete
141-B2412	Edwin Roach Bridge	Kyogle Road	52995.4	1/07/1967	Precast concrete
361-B2550	Little Creek Bridge	Clarence Way- 361	119353	20/01/2009	Precast concrete
150-B2501	Minney Bridge	Clarence Way- 150	107386	1/12/2015	Steel truss
361-B2558	Peacock Creek Bdg	Clarence Way- 361	140139	1/07/1960	Concrete
361-B2560	Sandy Creek	Clarence Way- 361	145934	1/07/2009	Precast concrete
622-B2267	Sw Reid Bridge	Mount Lindsay Highway	137759	1/07/2009	Precast concrete
361-B2554	Tunglebung Creek	Clarence Way- 361	127747	20/01/2009	Concrete

The Tabulum Bridge is owned and managed by Roads & Maritime Service (RMS)

This Bridge is located at Tabulum on the Bruxner Highway, between Tenterfield and Casino. The bridge is a double lane, concrete constructed, with a length of over 300 metres over the Clarence River.

Newly constructed bridge at Tabulam on Bruxner Highway



Tabulum Bridge: New bridge and old bridge (to be removed) side-by-side



Tabulum Old Bridge during 2011 Flood Event



Waste Disposal

Kyogle Council operates one landfill and three waste transfer stations in the LGA. The landfill is located in Kyogle, with the transfer stations located in Woodenbong, Mallanganee and Bonalbo.

The Kyogle landfill operates under EPA Licence no. 12124, and is licensed to accept putrescible, non-putrescible and asbestos waste and tyres. Household quantities of chemicals (up to 20 L) may be delivered to Household Hazardous Wastes Stores at waste facilities in Casino and Lismore. Approximately 2,500 tonnes of waste is landfilled at the Kyogle facility each year.

Comingled recyclables (paper, cardboard, glass and hard plastic) are stored at the Kyogle landfill prior to being transported to a MRF at Chinderah. Scrap metal and waste oil are collected by recycling contractors. Green waste is pasteurised on-site prior to transport off-site for reuse.

Approximately 2000 split 240 L bins (waste and recycling) are collected each week as part of Council's kerbside waste service.

Appropriately wrapped and taped asbestos can be disposed of at the Kyogle landfill.

Council requests 24 hours notice prior to delivery.

Economy and Industry

The largest retail shopping centre in the area is at Kyogle but the villages of, Grevillia, Woodenbong, Urbenville, Old Bonalbo, Bonalbo, Tabulam, Mallanganee and Mummulgum all contain general stores and fuel suppliers.

There are general stores in the rural areas of Wiangaree, Cawongla and Wadeville.

The major rural industries in the area have traditionally been dairy and beef production, agriculture, sawmilling and forestry.

There has been a marked reduction in dairying in recent years and a large increase in plantation forestry.

There is an increasing tourism industry in the area. This is underpinned by National Parks and camping areas such as that at Toonumbar Dam.

Industry

Top 6 Employment Sectors are:

Sector	Percentage (%)
Source: ABS Region Summary Data estimated 2016	
Agriculture, Forestry & Fishing	18.7%
Health Care & Social Assistance	14.4%
Retail Trade	9.2%
Manufacturing	8.1%
Education and Training	9%
Construction	8.3%

The largest employers in the area are:

- NSW Department of Education
- NSW Health
- Kyogle Council
- Mountain Blue Farms (Seasonal Workers – Harvest period)

Major business and industry located in and around Kyogle include:

- Boral Timber
- Graham's Concrete
- Hurford Hardwood's
- MJ Smith Earthmoving
- NORCO Cooperative Limited
- Forestry Corporation NSW

Major business and industry located in and around Tabulam include:

- Mountain Blue Farms
- Mara Seeds Soft Agricultural
- Northern Bacon – Piggery

Mountain Blue Farms

1949C Hootens Road
TABULUM NSW 2469
Phone: 02 6624 8258

Mountain Blue Farms employs up to 800 seasonal pickers during the “Blue Berry” harvest period of September to November. These seasonal workers, which include large numbers of “Overseas Back-Packers” stay in and around Tabulam and Bonalbo areas. Accommodation sources include; Camping Vans / Caravans (includes Legal and Illegal sites), Bed & Breakfast facilities, Caravan Parks, and Hotels.

Northern Bacon

Jackson Flat Road
TABULUM NSW 2469
Phone: 02 6666 1288

Northern Bacon (Piggery) is a large scale business with a license for up to 8,000 pigs. The Agricultural Industry includes; cattle, pigs, goats, sheep (dorpers), horses (Arab horse and thoroughbred horse studs), llamas, and small scale free range chickens.

Key community based agencies:

- Gugin Gudduba Aboriginal Land Council (Phone: 02 6632 1056)
- Casino Boolangle Aboriginal Land Council (Phone: 02 6662 1308)
- Jubullum Aboriginal Land Council (Phone: 02 6666 1337)
- Muli Muli Aboriginal Land Council (Phone: 02 6635 1487)
- Home Care Service of NSW (Phone: 02 6632 2077)
- Kyogle Visitors Information Centre (Phone: 02 6632 2700)
- Department of Communities & Justice, Community Services (Phone: 02 66321044)
- Environment Groups - (No formal environmental group structures or agencies but action affiliated and interest groups embedded within the community)

Livestock Transport

There are large scale road transport movements of livestock travelling on the road networks through the LGA area to major livestock selling centre located at Casino.

Major Storage Facilities

There are no large scale wholesale / retail fuel distribution facility with substantial quantities of petroleum products stored on-site at Kyogle.

Fuel Outlets

Caltex

Address: 24-26 Summerland Way
KYOGLÉ NSW 2474
Phone: 02 6632 1042

BP

Address: 13 Summerland Way
KYOGLÉ NSW 2474
Phone: 02 6632 1706

Note: Flood free fuel storage at Kyogle Council Works Depot, Highfield Road, Kyogle

Saleyards / Livestock Exchanges:

There are no operating animal selling centres located in the LGA. The closest facilities are located at Casino and Lismore.

Caravan Parks

Kyogle Gardens Caravan Park (Kyogle Council)

Summerland Way
KYOGLÉ NSW 2474
Phone: 02 6632 1204
Approximate Capacity Population: 70 (33 Sites)

Kyogle Showground (Kyogle Showground Trust)

Summerland Way
KYOGLÉ NSW 2474
Phone: 0459 537 601
Approximate Capacity Population: 60 (30 Sites)

Woodenbong Camping Ground (Kyogle Council through Woodenbong Progress Association)

Unumgar Street
WOODENBONG NSW 2476
Phone: 02 6635 1300
Approximate Capacity Population: 40 (20 Sites)

Bonalbo Caravan Park (Kyogle Council through Bonalbo Common Trust)

Clarence Way
BONALBO NSW 2469
Phone: 0418 481 192
Approximate Capacity Population: 35 (16 Sites)

Urbenville Recreational Area

Clarence Way
URBENVILLE NSW 2475
Phone: 02 6634 1254
Approximate Capacity Population:

Urbenville - Brooklyn Camping Ground

Kangaroo Creed Road
URBENVILLE NSW 2475
Phone: 02 6634 6176
Approximate Capacity Population:

Mallanganee (Kyogle Council through Mallanganee Progress Association)

Sandilands Street
MALLANGANEE NSW 2469
Phone: 0427 285 144
Approximate Capacity Population: 16 (8 Sites)

Note: People “Self-Camp” in this area. Especially in the “Seasonal Work” periods with “Back-Packer” type workers

Tabulam Racecourse

Racecourse Road

TABULAM NSW 2469

Phone: 6666 1204

Approximate Capacity Population: 200+

Note: People “Self-Camp” in this area. Especially in the “Seasonal Work” periods with “Back-Packer” type workers

PART D: Census Information

Population and People

Population and Age Groups

LGA	Lismore City	Richmond Valley	Kyogle
Population by Age Group	Number		
Age 0 to 14	8,109	4,367	1,460
Age 15 to 24	5,501	2,621	831
Age 25 to 34	4,690	1,988	637
Age 35 to 44	5,259	2,465	854
Age 45 to 54	6,173	2,935	1,359
Age 55 to 64	6,638	3,304	1,746
Age 65 to 74	4,334	3,807	1,216
Age 75 to 84	2,252	1,679	598
Age 85+	1,098	634	239
Total	44,054	22,800	8,940
Average Age	42.3	44	50
(National Average 37.2)			
Source: ABS 2016 figures			

Families

LGA	Lismore City	Richmond Valley	Kyogle
Family Type	Number		
Couple Families with children under 15 / or Dependent students	3,216	1,683	560
Couple Families with non-	824	459	147
Couple Families without children	4,346	2,489	1,142
One parent families with children under 15 / or Dependent students	1,640	753	272
One parent families with non-	729	412	152
Other families	169	107	38
Total Families	10,918	5,912	2,321
Average Family	2.9	2.9	2.8
Source: ABS 2016 figures			

Households

LGA	Lismore City	Richmond Valley	Kyogle
Type	Number of Households		
Lone Person households	4,754	2,507	1,142
Group households	764	258	109
Family households	10,672	5,784	2,274
Total Households	16,195	8,549	3,525
Average Household Size	2.4	2.4	2.2
Source: ABS 2016 figures			

Registered Motor Vehicles

LGA	Lismore City	Richmond Valley	Kyogle
Type of Vehicle	Number of Vehicles		
Passenger Vehicle	25,769	11,745	3,829
Campervans	179	166	39
Light Commercials	6,863	3,988	1754
Light Rigid Truck	281	173	62
Heavy Rigid Truck	613	464	244
Articulated Truck	123	122	21
Non Freight carrying truck	24	7	12
Buses	212	94	39
Motorcycles	1,604	689	305
Total	35,668	17,448	6,304
Source: ABS 2016 figures			

Mode of Travel to Work

LGA	Lismore City	Richmond Valley	Kyogle
Type of Travel	Number of People		
Train	6	0	0
Bus	109	36	13
Car	13,356	6,071	2,117
Motor Bike / Scooter	157	56	25
Bicycle	119	57	11
Other (including Taxi)	153	44	28
Walked	709	339	231
Total One Method	14,929	6,735	2,503
Total Used More Than 1	179	55	26
Work from Home	1,096	464	494
Employed but do not go to work	2,033	871	338
Method of Travel not stated	258	133	65
Total Employed	18,495	8,265	3,426
Source: ABS 2016 figures			

Registered Motor Vehicle Type of Fuel

LGA	Lismore City	Richmond Valley	Kyogle
Fuel Type	Number of Vehicles		
Petrol	27,014	12,205	3,845
Diesel	8,136	4,997	2,382
LPG Gas / Dual / other	430	177	64
Electric	7	3	0
Source: ABS 2016 figures			

Employment Classifications

LGA	Lismore City	Richmond Valley	Kyogle
Classification	Employed Persons Percentage (%)		
Managers	12.4	11.5	8.7
Professionals	19.8	11.2	12.5
Technicians and Trade Workers	13.4	13.2	15.2
Community & Service Personal	11.3	12.1	11.9
Clerical & Administration	13.2	11.1	11.3
Sales Workers	11.2	9.4	10.2
Machinery Operators & Drivers	5.3	8.4	10.1
Labourers	12.1	20.2	17.1
Other not described	1.3	2	1.8
Total Employed	20,153	8,798	3,551
Total Unemployed	1,658	704	310
% Unemployed	8.2%	8.0%	8.7%
Source: ABS 2016 figures			

Employed by Industry

LGA	Lismore City	Richmond Valley	Kyogle
Industry	Percentage of Population (%)		
Agriculture, Forestry and Fishing	5.2	8.2	14.8
Mining	0.4	0.7	0.6
Manufacturing	7.1	15.2	9
Electricity, Gas, Water & Waste Services	0.7	1.0	0.9
Construction	6.8	6.5	8.3
Wholesale Trade	2.8	3.5	2.2
Retail Trade	13.8	11.8	10.3
Accommodation and Food Services	6.8	6.7	4.6
Transport, Postal and Warehousing	3.2	4.9	3.3
Information Media & Telecommunications	1.8	0.8	0.7
Financial & Insurance Services	2.0	1.5	1.1
Rental, Hiring & Real Estate Services	1.3	1.3	0.9
Professional Scientific & Technical Services	4.6	2.9	3.5
Administrative & Support Services	2.8	2.5	2.3

Public Administration & Safety	5.1	4.5	4.2
Education & Training	11.2	7.9	9.1
Health Care & Social Assistance	17.6	13.5	15.2
Arts & Recreation Services	1.3	1.2	1
Other Services	3.8	3.7	3.2
Total Employed	18,495	8,094	2,658
Source: ABS 2016 figures			

Dwelling Types / Structures

LGA	Lismore City	Richmond Valley	Kyogle
Type	Number (Dwellings)		
Separate House	13,407	7,179	3,351
Semi Detached, Terrace House, Town House etc	1,543	483	22
Flat or Apartment	754	631	62
Other Dwelling Total	383	215	67
Total	16,087	8,508	3,502
Source: ABS Census 2016			

Tenure By Dwelling Structure

LGA	Lismore City	Richmond Valley	Kyogle
Type	Number (Dwellings)		
Owned Outright	5,817	3,297	1,618
Owned with Mortgage	5,067	2,407	969
Rented	4,674	2,490	788
Other tenure type	149	70	39
Tenure not stated	484	279	121
Total	16,191	8,543	3,535
Source: ABS Census 2016			

Annexure B – Hazards and Risks Summary

The below Risk Matrix was utilised to assess the Hazard and Risk Summary table on page 103.

RISK MATRIX

Likelihood	Consequence				
	Insignificant	Minor	Moderate	Major	Catastrophic
Almost Certain	High	High	Extreme	Extreme	Extreme
Likely	Moderate	High	High	Extreme	Extreme
Possible	Low	Moderate	High	Extreme	Extreme
Unlikely	Low	Low	Moderate	High	Extreme
Rare	Low	Low	Moderate	High	High

LIKELIHOOD RATING TABLE

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

CONSEQUENCE RATING TABLE

Descriptor	Description	
	<i>Human Life and Health</i>	<i>Property, Financial, Environmental</i>
Insignificant	No injuries or fatalities. Small number or no people are displaced and only for short duration.	Inconsequential or no damage. Little or no disruption to community. No measurable impact on environment.
Minor	Little or no personal support required (support not monetary or material). Small number of injuries but no fatalities. First aid treatment required.	Little or no financial loss. Some damage.
	Some displacement of people (less than	Small impact on environment with no lasting effects.

	24 hours).	Some financial loss.
	Some personal support required. Some disruption (less than 24 hours).	
Moderate	Medical treatment required but no fatalities. Some hospitalisation. Localised displacement of people who return within 24 hours. Personal support satisfied through local arrangements.	Localised damage that is rectified by routine arrangements. Normal community functioning with some inconvenience. Some impact on environment with no long-term effect or small impact on environment with long-term effect.
Major	Fatalities. Extensive injuries, significant hospitalisation. Large number displaced (more than 24 hours duration). External resources required for personal support.	Significant financial loss. Significant damage that requires external resources. Community only partially functioning, some services unavailable. Some impact on environment with long-term effects. Significant financial loss – some financial assistance required.
Catastrophic	Significant fatalities. Large number of severe injuries. Extended and large numbers requiring hospitalisation. General and widespread displacement for extended duration.	Extensive damage. Extensive personal support. Community unable to function without significant support. Significant impact on environment and/or permanent damage.

Annexure B – Hazards and Risks Summary

A Local Emergency Risk Management (ERM) Study has been undertaken by the NORTHERN RIVERS Local Emergency Management Committee identifying the following hazards as having risk of causing loss of life, property, utilities, services and/or the community's ability to function within its normal capacity. These hazards have been identified as having the potential to create an emergency. The Name Emergency Risk Management Study should be referenced to identify the complete list of consequences and risk descriptions.

Hazard	Risk Description	Likelihood Rating	Consequence Rating	Risk Priority	Combat/Responsible Agency
Agricultural Disease (Animal)	An agriculture/horticulture incident that results, or has potential to result, in the spread of a communicable disease or infestation.	Likely	Moderate	High	Department of Primary Industries
Biosecurity - Plant	An agriculture/horticulture incident that results, or has potential to result, in the spread of a disease or infestation.	Likely	Moderate	High	Department of Primary Industries
Bridge Collapse	Failure of a local rural bridge structure with or without warning owing to structural failure or as a result of external/ internal events or other hazards/ incidents.	Likely	Moderate	High	LEOCON
	Particularly related to Kyogle Council LGA due to large number of rural based bridges; terrain and topography; Flood Risk and Bushfire Risk. Localities / communities can become isolated due to Bridge loss.				

Hazard	Risk Description	Likelihood Rating	Consequence Rating	Risk Priority	Combat/ Responsible Agency
Building Collapse	Collapse of building owing to structural failure or impact from external/internal event of other hazards /incidents.	Rare	Major	High	FRNSW (USAR) LEOCON
Communicable Disease (Human/Animal)	Pandemic illness that affects, or has potential to affect, large portions of the human or animal population	Possible	Major	Extreme	Department of Health DPI
Coastal Erosion	Severe storm with accompanying lightening, hail/wind, and or rain that causes severe damage, coastal erosion.	Possible	Minor	Medium	LEOCON
Dam Failure	A Prescribed Dam is compromised that results in localised or widespread flooding.	Unlikely	Major	High	Dam Owners NSW SES
	Three (3) Prescribed Dams: 1 owned by Rous Water / 1 owned by Water NSW / 1 owned by Kyogle Shire Council. Another Dam owned by Kyogle Council. 4 Dams profiled in this EMPLAN.				
Earthquake	Earthquake of significant strength that results in localised or widespread damage.	Unlikely	Moderate	Medium	LEOCON
Fire (Bush or Grass)	Major fires in areas of bush or grasslands.	Almost Certain	Major	Extreme	NSW RFS FRNSW

Hazard	Risk Description	Likelihood Rating	Consequence Rating	Risk Priority	Combat/ Responsible Agency
Fire (Industrial)	Serious industrial fire in office complexes and/or warehouses within industrial estates.	Almost Certain	Moderate	Extreme	FRNSW NSW RFS
Fire (Commercial)	Serious commercial fires in shopping centres, aged persons units, nursing homes and hospitals.	Likely	Moderate	High	FRNSW NSW RFS
Fire (Residential)	Serious residential fire in medium/high rise apartments.	Possible	Moderate	High	FRNSW NSW RFS
Flood (Flash)	Heavy rainfall causes excessive localised flooding with minimal warning time	Almost Certain	Moderate	Extreme	NSW SES
Flood (Riverine)	River flows exceed the capacity of normal river systems resulting in flood waters escaping and inundating river plains	Almost Certain	Major	Extreme	NSW SES
Hazardous Release	Hazardous material released as a result of an incident or accident.	Almost Certain	Moderate	Extreme	FRNSW
Heatwave	A sequence of abnormally hot conditions having the potential to affect a community adversely.	Almost Certain	Moderate	Extreme	SEOCON

Hazard	Risk Description	Likelihood Rating	Consequence Rating	Risk Priority	Combat/ Responsible Agency
Landslip	Landslip/landslide resulting in isolations or widespread damage.	Likely	Minor	High	LEOCON
Storm	Severe storm with accompanying lightning, hail, wind, and/or rain that causes severe damage and/or localised flooding (includes tornado).	Almost Certain	Moderate	Extreme	NSW SES
Transport Emergency (Air)	Aircraft crashes in LGA resulting in large number of fatalities, injuries and/or damage to property.	Unlikely	Major	High	LEOCON
Transport Emergency (Road)	A major vehicle accident that disrupts one or more major transport routes that can result in risk to supply routes and/or protracted loss of access to or from the area.	Unlikely	Moderate	Medium	LEOCON
	A major vehicle accident in the LGA resulting in large number of fatalities, injuries and/or damage to property.	Possible	Major	Extreme	LEOCON
Transport Emergency (Sea)	A major accident that results in environmental damage and major recovery operation	Rare	Moderate	Medium	Relevant Port/ Maritime/ [Regional/ State Event]

Hazard	Risk Description	Likelihood Rating	Consequence Rating	Risk Priority	Combat/ Responsible Agency
Transport Emergency (Inland Waterways)	A major accident that results in environmental damage and major recovery operation	Rare	Moderate	Medium	FR NSW EPA
Transport Emergency (Rail)	A major incident involving freight or passenger rail.	Unlikely	Major	High	LEOCON
Tsunami	A tsunami wave of magnitude that presents a risk to land and marine elements.	Unlikely	Catastrophic	Extreme	NSW SES [Regional/ State Event]
Terrorism	A major incident that results in injury, property damage and recovery operation.	Unlikely	Major	High	NSW POLICE LEOCON
Utilities Failure - Telecommunications	Major failure of essential utility for unreasonable periods (greater than 48 hours) of time as a result of a natural or man-made occurrence.	Possible	Minor	Medium	LEOCON
Utilities Failure - Electricity	Major failure of essential utility for unreasonable periods (greater than 48 hours) of time as a result of a natural or man-made occurrence.	Possible	Major	Extreme	LEOCON (Essential Energy / AusGrid)

Hazard	Risk Description	Likelihood Rating	Consequence Rating	Risk Priority	Combat/ Responsible Agency
Utilities Failure - Water	Major failure of essential utility for unreasonable periods (greater than 48 hours) than of time as a result of a natural or man-made occurrence.	Unlikely	Major	High	LEOCON (Council) (Rous County Council)
	There are numerous key water supply pipelines that run from Storage Dams to water distribution reservoirs.				
Utilities Failure - Sewerage	Major failure of essential utility for unreasonable periods (greater than 48 hours) of time as a result of a natural or man-made occurrence.	Unlikely	Major	High	LEOCON (Council)
Utilities Failure - LPG Pipeline	Failure of underground gas pipeline located in Lismore City as a result of a natural or man-made occurrence.	Unlikely	Minor	Low	LEOCON (Elgas)
	Gas Pipeline runs underground from Lismore Elgas Depot and services Lismore Base Hospital; St Vincent's Private Hospital and KFC Store.				

Risks and Ratings reviewed and determined by LEMC in November 2020.

Source of Risk	Risk Level	Combat Agency (Key Support Agency)
Communicable Disease (Human / Animal)	Extreme	NSW Health (DPI)
Bushfire / Grassfire	Extreme	NSW Rural Fire Service
Fire / Explosion – Industrial (Warehouses / Abattoir / Timber Mills / Milk Processing Plant / Petroleum Storage / Gas Storage / Industrial Estates)	Extreme	Fire & Rescue NSW NSW Rural Fire Service
Flood – Riverine (“Major”)	Extreme	NSW State Emergency Service
Flood - Flash	Extreme	NSW State Emergency Service
HAZMAT (Major Storage facilities and transport routes)	Extreme	Fire & Rescue NSW
Heatwave (Human)	Extreme	SEOCN (NSW Health)
Storm	Extreme	NSW State Emergency Service
Transport Emergency – Road (Mass Death / Injury)	Extreme	LEOCON
Tsunami	Extreme	NSW State Emergency Service
Utilities Failure - Telecommunications	Extreme	LEOCON
Utilities Failure - Electricity	Extreme	LEOCON
Agricultural Disease – Animal (Exotic Stock/Animal Disease: Abattoir / Saleyards / Rural)	High	DPI (Local Land Services)
Biosecurity – Plant (Sugar Cane / Myrtle Rust)	High	DPI (Local Land Services)
Bridge Collapse: Rural Local Bridge	High	LEOCON
Building Collapse (Multi Storey / Accommodation)	High	Fire & Rescue NSW / LEOCON

Source of Risk	Risk Level	Combat Agency (Key Support Agency)
Dam Failure (Prescribed Dams: 3 Dams / 1 Storage Dam)	High	NSW State Emergency Service
Fire - Commercial (Shopping Centres; Aged Care; Nursing Homes; Hospitals; Tafe; Boarding Schools)	High	Fire & Rescue NSW NSW Rural Fire Service
Fire Residential	High	Fire & Rescue NSW NSW Rural Fire Service
Landslip	High	LEOCON
Transport Emergency – Air	High	LEOCON (NSW Police)
Transport Emergency – Rail (Mass Death / Injury)	High	LEOCON
Terrorism	High	LEOCON (NSW Police)
Utilities Failure - Water	High	LEOCON
Utilities Failure - Sewerage	High	LEOCON
Bridge Collapse - Major Bridge	Medium	LEOCON
Earthquake	Medium	LEOCON
Coastal Erosion	Medium	LEOCON (NSW SES)
Transport – Road (Major Transport Route)	Medium	LEOCON
Transport Emergency – Sea	Medium	PORT AUTHORITY
Transport Emergency – Inland Waterways	Medium	Fire & Rescue NSW (EPA)
Utilities Failure - Telecommunications	Medium	LEOCON
Utilities Failure – Gas Pipeline (Lismore City)	Low	LEOCON (FR NSW)

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