DIAMANTINA SHIRE COUNCIL

SUSTAINABLY DEVELOPING THE OUTBACK

Diamantina Shire

Flood and Evacuation Sub Plan

2015

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Aim

The aim of this sub plan is to detail the threat of flood in the Diamantina Shire. This plan aims to provide more detailed explanation of the types and severity of flooding then is contained in the Diamantina Local Disaster Management Plan.

Part two of this sub plan is a detailed evacuation plan for the Diamantina Shire.

Objective

The objective of this plan is to detail the risk of flooding in the Diamantina Shire as well as the actions and considerations for evacuation operations in the shire.

Scope

This plan details the actions required for four distinctly different scenarios:

- Complete evacuation of Bedourie due to levee failure
- Partial evacuation of Bedourie due to levee failure or significant water levels inside of levee.
- Complete evacuation of Birdsville due to severe flooding
- Partial evacuation of Birdsville due to severe flooding

Each of the above threats will have distinctly different impacts on the community, therefore a separate evacuation plan is required for each.

Whilst the specific threat plans are written to mitigate against the most likely threats to the community parts or all of these plans may be used to evacuate persons at risk from any other threat.

This plan forms part of and is supported by the Local Disaster Management Plan for the Diamantina Shire.

Geography

The Diamantina Shire is an inland Shire that is bordered by the Northern Territory boarder to the West, the South Australian border to the South, the Barcoo Shire to the East and the Winton Shire to the North East.

The Shire covers and area of 97 300 Km^2.

The Shire is generally flat, sandy and sparsely vegetated with numerous sand dunes and normally dry channels crossing the shire. The Shire becomes forms the eastern edge of the Simpson Desert

River Systems

The predominant river systems in the shire are:

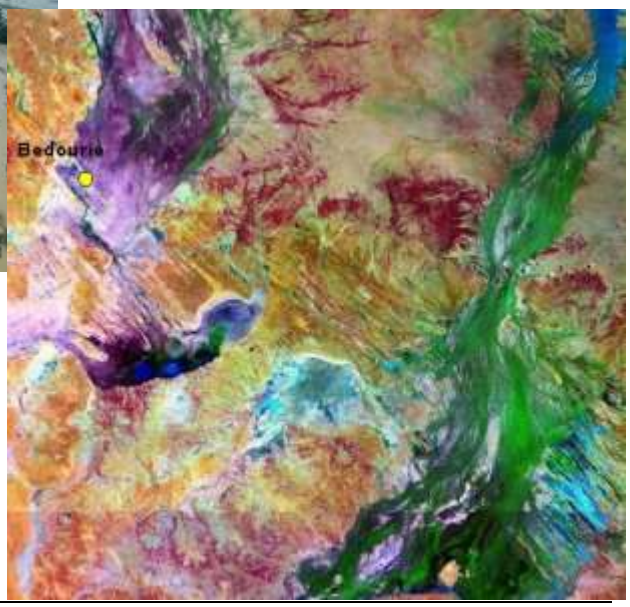
River	*River basin*
Diamantina	Diamantina
Eyre Creek	Georgina/Eyre Creek

Diamantina River

Flood Risk

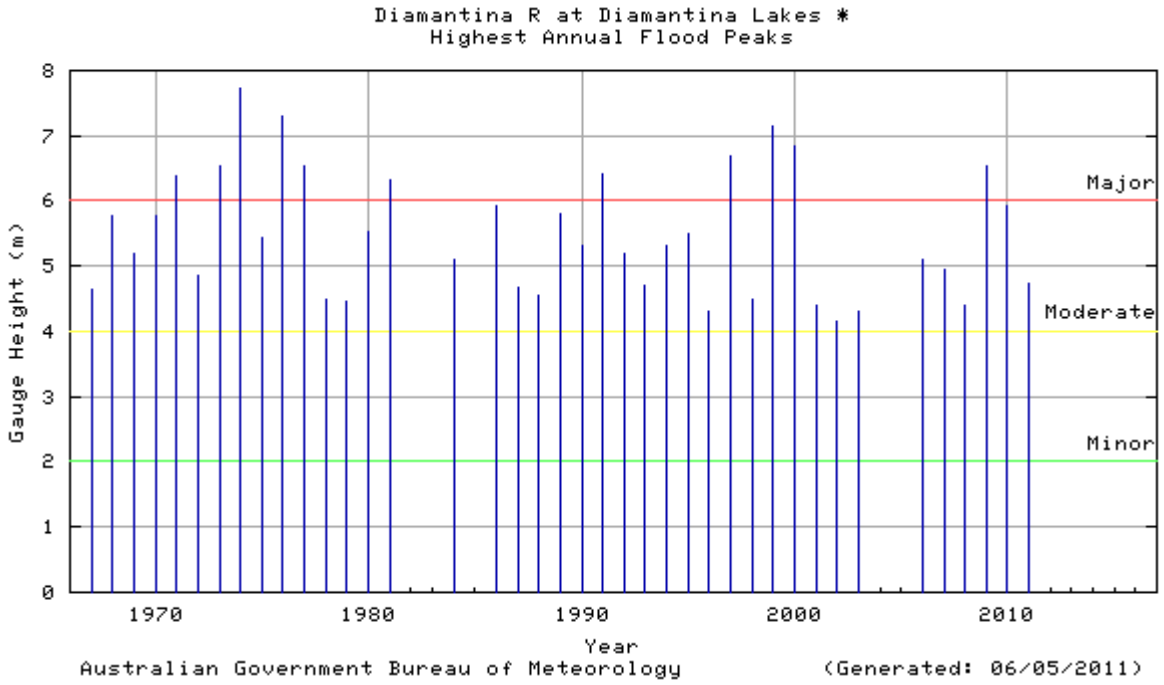
The vast Diamantina River catchment is located in south west Queensland and covers an area of approximately 119,000 square kilometres. The river rises in the Swords Range, 70 kilometres southwest of Kynuna and flows initially in a north and easterly direction before changing to a southwesterly direction 70 kilometres west of Winton. Major tributaries joining the river are the Western and Mayne Rivers above Diamantina Lakes and Farrars Creek below Monkira. The river does not have a well defined main channel but consists generally of a series of wide relatively shallow channels. The river passes through the town of Birdsville before crossing the Queensland-South Australia border 10 kilometres south of Birdsville. Floods normally develop in the headwaters of the Diamantina River and its major tributaries, however, flooding may result from heavy rainfall falling in the middle to lower reaches of the catchment around Diamantina Lakes. Local area rainfalls can be a significant factor throughout these areas.

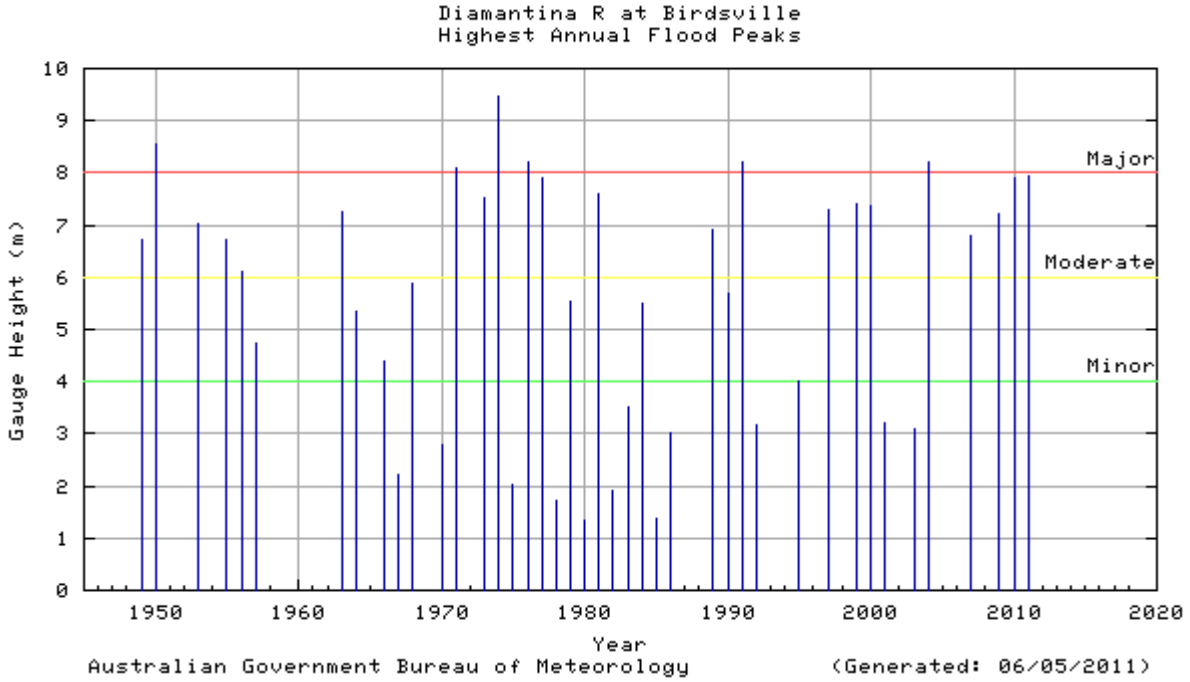
The main impact of the record major flooding in January 1974 at Birdsville, and more recently the floods of 1991 and 2000, is the isolation of towns and properties and the extensive inundation of grazing lands which can last several months in some areas, with road transport disrupted for considerable periods of time.



Previous Flooding

The Diamantina River catchment has well documented history of flooding dating back some 50 years, including Diamantina Lakes (commenced 1965) and Birdsville (commenced 1949).





River height station	Mar 1950	Mar 1971	Jan/Feb 1974	Feb 1976	Mar 1977	Feb 1991	Feb/Mar 2000	Jan 2004	Mar 2010	Mar 2011
Elderslie	-	-	-	-	-	-	2.94	3.65	-	3.15
Oondooroo	-	-	-	-	-	-	4.11	2.80	-	-
Oondooroo Auto	-	-	-	-	-	-	-	-	-	-
Aldingham	-	-	-	-	-	-	2.66	1.45	-	-
Apsley	-	-	-	-	-	-	-	0.80	-	-
Winton	4.47	-	4.53*	-	-	-	4.65*	2.90	-	-
Tulmur	-	-	9.75	-	-	-	7.65	6.25	-	4.30
Diamantina Lakes	-	6.38	7.71	7.29	6.52	6.40	6.85	-	3.81	4.73
Monkira	5.79	5.03	6.12	5.25	4.45	4.80	4.80	5.00	4.10	3.87
Durrie Station	-	-	5.30	3.90	3.40	4.30	3.10	-	3.25	2.90
Birdsville	8.54	8.08	9.45	8.20	7.90	8.20	7.35	8.20	7.90	7.95

DIAMANTINA RIVER CATCHMENT - ASSESSMENT OF THE FLOOD POTENTIAL

Major flooding requires a large scale rainfall situation over the Diamantina River catchment. The following can be used as a rough guide to the likelihood of flooding in the catchment :

75mm in 24 hours over isolated areas, with lesser rains of 50mm over more extensive areas will cause stream rises and the possibility of minor flooding. If lesser rainfalls have been recorded in the previous 24 to 72 hrs, then moderate to major flooding may develop.

100mm in 24 hours will cause isolated flooding in the immediate area of the heavy rain.

General 100mm or heavier falls in 24 hours over a wide area will most likely cause major flooding in the middle to lower reaches of the Diamantina River between Tulmur and Diamantina Lakes extending downstream to Monkira and Birdsville.

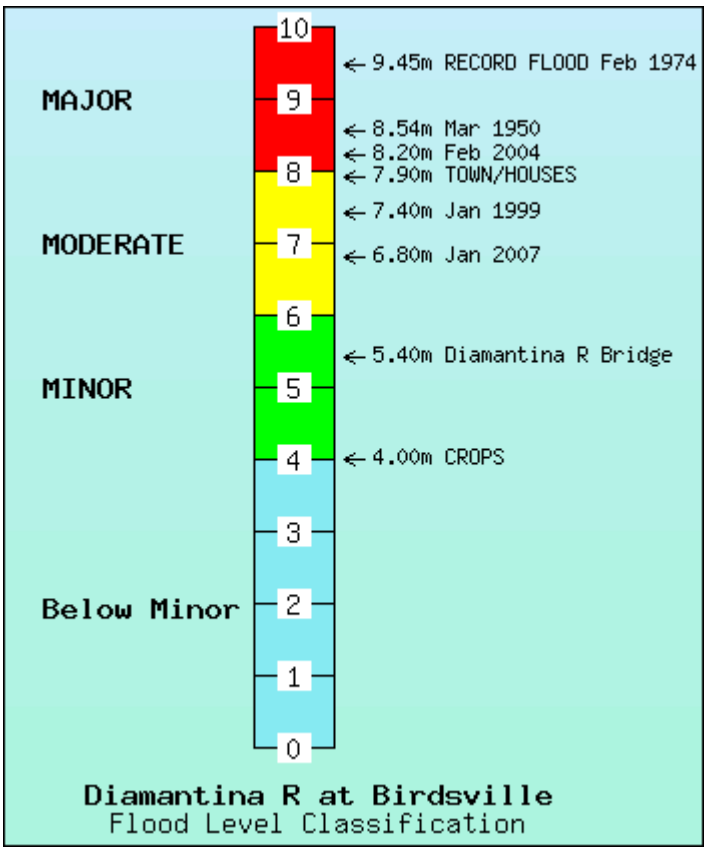
Flood Classifications

At each flood warning river height station, the severity of flooding is described as minor, moderate or major according to the effects caused in the local area or in nearby downstream areas. Terms used in Flood Warnings are based on the following definitions.

Major Flooding : This causes inundation of large areas, isolating towns and cities. Major disruptions occur to road and rail links. Evacuation of many houses and business premises may be required. In rural areas widespread flooding of farmland is likely.

Moderate Flooding : This causes the inundation of low lying areas requiring the removal of stock and/or the evacuation of some houses. Main traffic bridges may be closed by floodwaters.

Minor Flooding : This causes inconvenience such as closing of minor roads and the submergence of low level bridges and makes the removal of pumps located adjacent to the river necessary.



Each river height station has a pre-determined flood classification which details heights on gauges at which minor, moderate and major flooding commences. Other flood heights may also be defined which indicate at what height the local road crossing or town becomes affected by floodwaters.

The table below shows the flood classifications for selected river height stations in the Diamantina River catchment.

River Height Station	First Report Height	Crossing Height	Minor Flood Level	Crops & Grazing	Moderate Flood Level	Towns and Houses	Major Flood Level
Elderslie	1.5	1.60 (C)	1.5	2.5	2.5	-	3.0
Apsley	1.5	-	2.0	-	2.5	-	3.0
Aldingham	1.0	-	1.5	-	1.7	-	2.0
Oondooroo	1.0	0.60 (C)	2.0	-	3.0	-	4.0
Winton	1.3	1.30 (B)	1.5	-	2.0	-	3.5
Tulmur	4.0	-	5.0	7.0	7.0	9.0	8.0
Diamantina Lakes	0.3	0.00 (X)	1.0	1.0	3.0	7.0	5.0
Diamantina Lakes TM	-	-	2.0	-	4.0	-	6.0
Monkira	2.5	2.60 (A)	2.6	3.0	4.0		4.5
Durrie	1.4	-	1.5	1.5	2.0	-	2.4
Roseberth	4.0	-	4.5	4.0	4.7	-	5.2
Birdsville	2.0	5.40 (A)	4.0	4.0	6.0	7.9	8.0

Courtesy of the Bureau of Meteorology www.bom.gov.au

Georgina River/Eyre Creek

Flood Risk

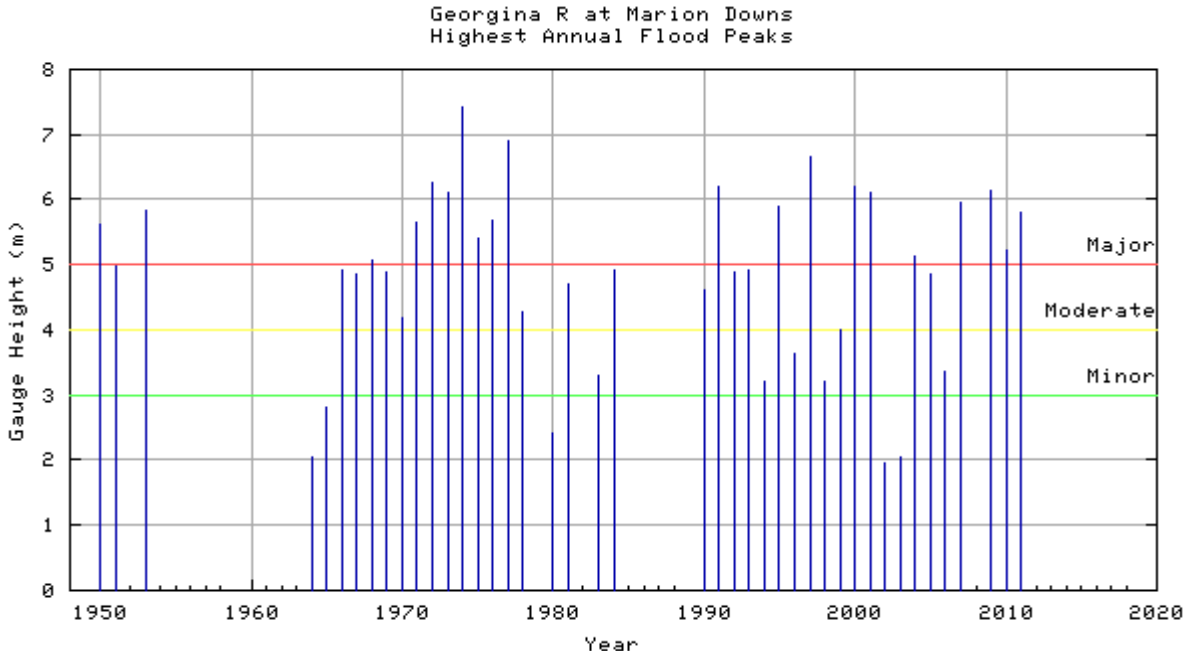
The Georgina River and Eyre Creek system drains an area of approximately 210,000 square kilometres. It rises to the north west of Mt Isa with three main tributaries, the Buckle, Sander and Ranken Rivers. The latter two have their headwaters in the Northern Territory. Further inflow enters the system from numerous creeks and rivers, the two main tributaries being the Burke and Hamilton Rivers. The Burke River drains the area to the north of Boulia and enters the Georgina River about 20 kilometres upstream of Marion Downs, whilst the Hamilton rises to the northeast of Boulia and enters the main Georgina below Marion Downs. Towns located within the catchment include Urandangie, Dajarra, Boulia and Bedourie.

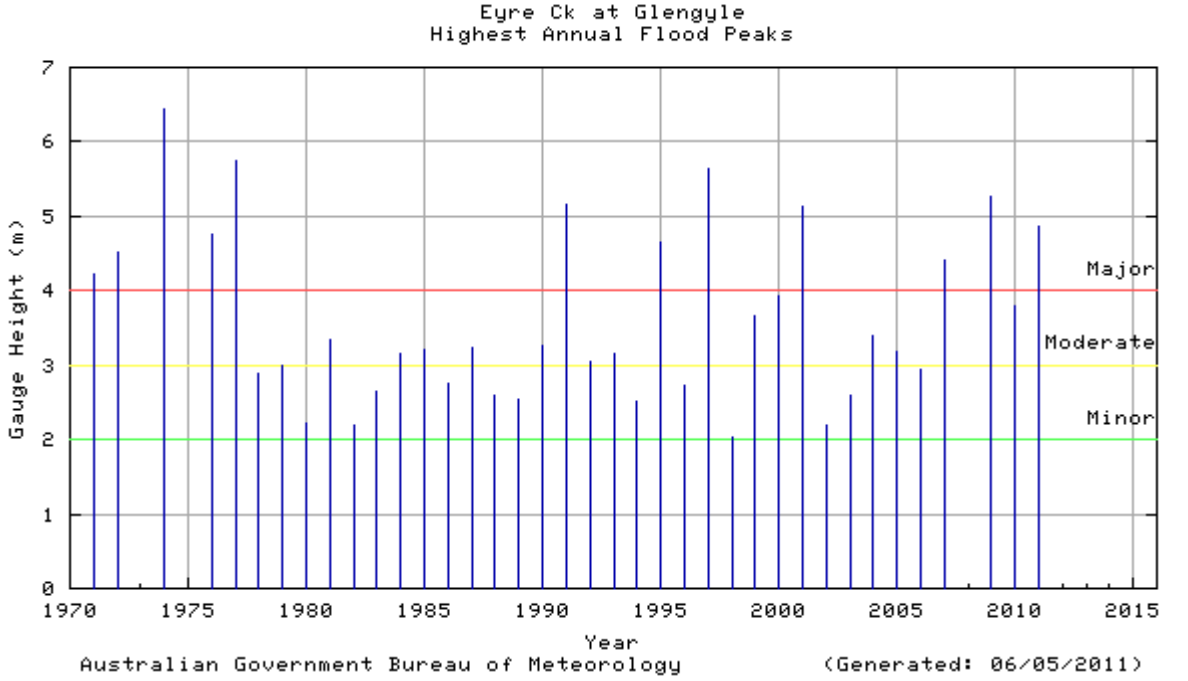
Very little rainfall is needed to bring the country to a standstill. Following flood rains, the main channel fills fairly quickly and then spreads out into the neighboring channels and watercourses for kilometres on either side. In the event of severe flooding, the Georgina can vary in width in the upper reaches from 15 to 20 kilometers, and in the lower reaches it is estimated in some sections to be 25 to 30 kilometers wide.

The main impact of flooding is the isolation of towns and properties and the extensive inundation of grazing lands which can last several months in some areas. Road transport is disrupted for long periods.

Previous Flooding

Flooding in the Georgina River is generally associated with widespread rainfall situations over northern and central Queensland and the Northern Territory. The two most recent major floods that were recorded in the system occurred in December 2000/January 2001 and January/February 2007. The highest recorded flood peaks occurred in late January and early February of 1974. The following figures show the significant flood peaks at Marion Downs and Glengyle since records began.





River height station	Jan/Feb 1974	Feb/Mar 1977	Feb/Mar 1991	Mar 1997	Dec 00/ Jan 01	Jan/Feb 2004	Jan 2007	Jan 2009	Mar 2011
Camooweal	-	-	-	-	-	-	2.40	6.50	-
Urandangi	7.45*	7.32	3.75	7.30	6.00	4.90	4.70	6.85	5.70
Roxborough Downs	9.80	9.93	-	-	-	-	8.72	9.22	8.63
Glenormiston	8.89	8.78	4.95	8.15	7.00	5.55	6.70	7.50	6.50
Boulia (Burke R.)	5.96	5.35	4.40	5.70	5.40	5.60	3.15	5.26	-
Marion Downs	7.42	6.91	6.20	6.65	6.21	5.14	5.95	6.15	5.80
Bedourie (Eyre Ck)	-	-	-	-	-	-	5.40	5.38	5.68
Cluny (King Ck)	6.40	5.70	5.50	5.90	5.40	3.75	4.60	5.50	5.25
Glengyle (Eyre Ck)	6.45	5.74	5.15	5.65	5.13	3.40	4.40	5.25	4.85

GEORGINA RIVER AND EYRE CREEK CATCHMENT - ASSESSMENT OF THE FLOOD POTENTIAL

Major flooding requires a large scale rainfall situation over the Georgina River and Eyre Creek catchment. The following can be used as a rough guide to the likelihood of flooding in the catchment :

75mm in 24 hours over isolated areas, with lesser rains of 50mm over more extensive areas will cause stream rises and the possibility of minor flooding. If lesser rainfalls have been recorded in the previous 24 to 72 hrs, then moderate to major flooding may develop.

100mm in 24 hours will cause isolated flooding in the immediate area of the heavy rain.

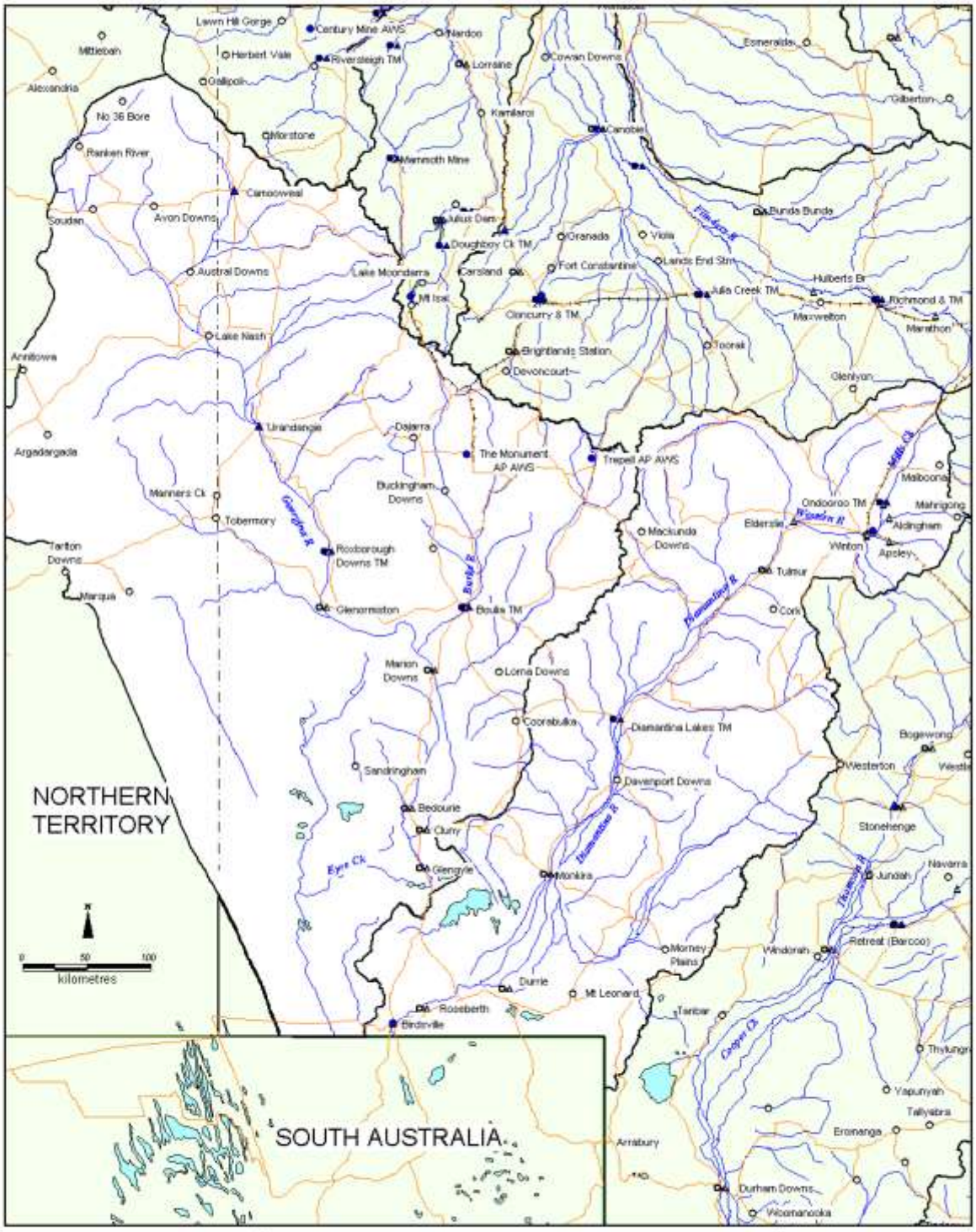
General 100mm or heavier falls in 24 hours over a wide area will most likely cause major flooding in the middle to lower reaches of the Georgina, Burke and Hamilton Rivers extending into Eyre Creek, downstream of Marion Downs.

River Height Station	First Report Height	Crossing Height	Minor Flood Level	Crops and Grazing	Moderate Flood Level	Towns and Houses	Major Flood Level
Camooweal	1.5	8.30 (B)	2.0	-	4.0	-	6.0
Urandangi	0.5	0.20 (X)	1.0	-	5.0	7.0	7.0
Glenormiston	3.0	2.60 (B)	3.0	3.0	4.0	-	6.0
Boulia	3.0	4.90 (B)	4.0	4.0	5.0	6.1	6.0
Marion Downs	1.0	3.50 (A)	3.0	3.0	4.0	-	5.0
Bedourie	3.0	4.40 (B)	3.5	-	4.0	-	5.0
Cluny	1.0	3.10 (A)	2.0	-	3.5	-	4.5
Glengyle	1.0	3.30 (B)	2.0	-	3.0	-	4.0

Courtesy of the Bureau of Meteorology www.bom.gov.au

MAP 002.1

Australian Government
Bureau of Meteorology



- Manual Heavy Rainfall Station
- Daily Reporting Rainfall Station
- Manual River Station
- Telemetry Rainfall Station
- Telemetry River Station

DIAMANTINA & GEORGINA RIVERS & EYRE CREEK
FLOOD WARNING NETWORK

- Major Roads
- Railway

Revised: Aug 2007

r:/psh/maps/map16/map002_1.wor

Population and Demographics

The Diamantina Shire has a population of 280 (*based on 2006 census data*) the population is distributed as follows:

Bedourie: 140

Birdsville: 115

Betoota: 0

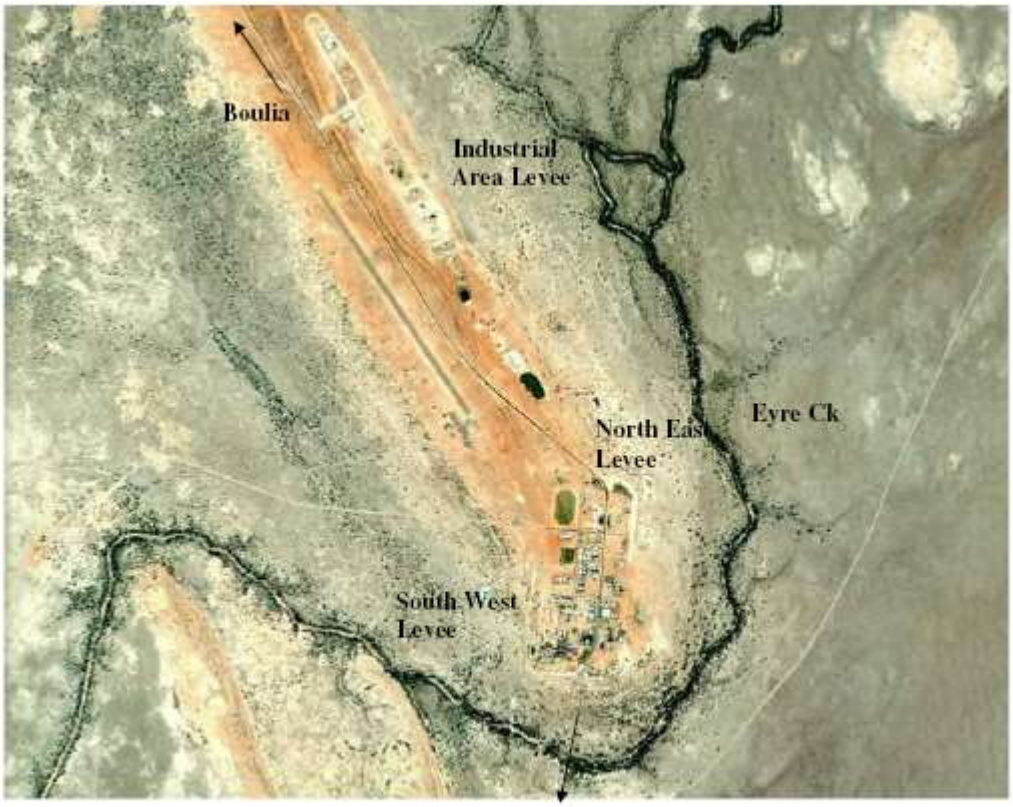
Other: 25

The shire is 97 300 Km^2 giving it a population density of .002 persons per Km^2.

The Shire sees and influx of tourists in September for the Birdsville races when the population swells to around 6000. Throughout the cooler months the shire plays host to numerous tourists. The Shire is a starting or end point for many travellers embarking on desert crossings or travelling the Birdsville track to South Australia.

Bedourie

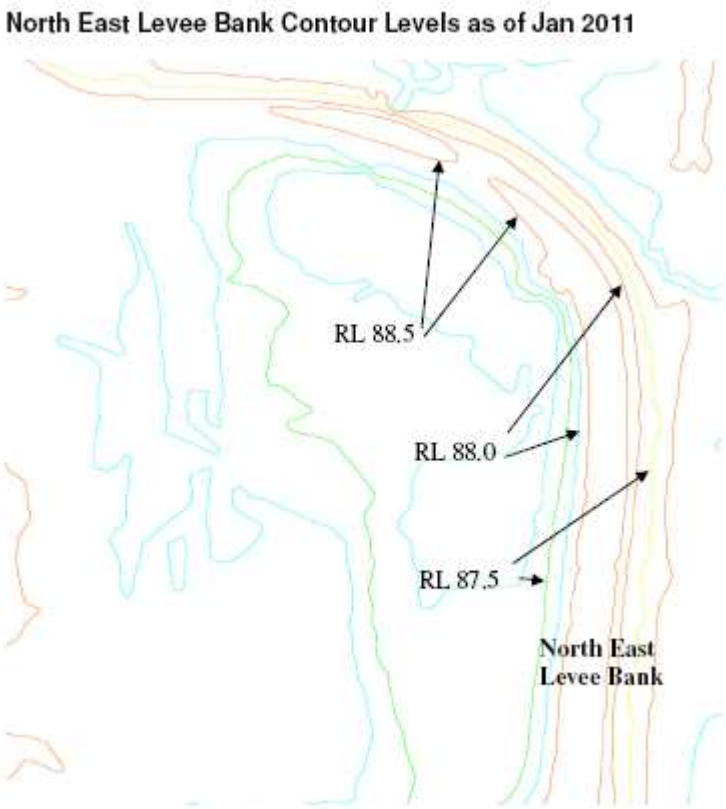
Bedourie is the administration centre for Diamantina Shire Council and experiences regular flooding from Eyre Creek. During flood times Eyre Creek expands dramatically to almost completely surround Bedourie. Three key levee banks have been used to prevent flood waters entering the town, the North East, South West and Industrial Levees. Heavy local rain directly over the town can cause local flooding as the water is prevented from running off by the Levee banks, and must be pumped out. Although a flood study has not been completed for the flood plain, the highest recorded flood level was RL88.8 during the 1974 floods. For planning and immunity purposes it has been assumed that this level is the 1 in 100 year event and that flood mitigation should be constructed to this level.



Data sourced Bedourie Levee Bank report- GBA Consulting Engineers 2011

North East Levee Bank

The North East Levee bank extends from Herbert Street on the Boulia road to Merri Street. This levee incorporates a pipe fitted with a 'one-way' flap valve. The levee is constructed of local silty sand obtained adjacent to the levee. The Levee prevents Eyre Creek from inundating the North East side of town.

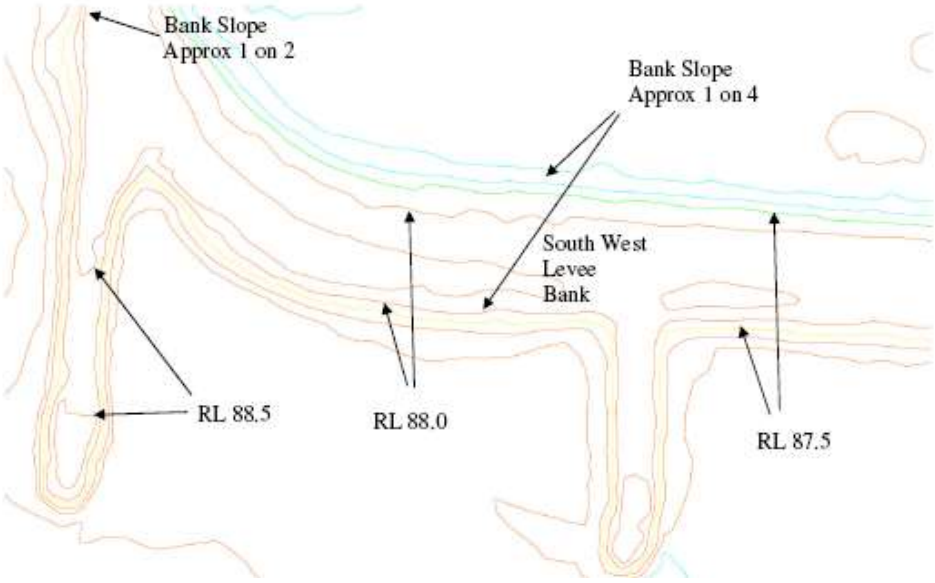


Data sourced Bedourie Levee Bank report- GBA Consulting Engineers 2011

South West Levee Bank

The South West Levee bank extends from Herbert St on the Birdsville road to Merri Street. The levee is constructed of local silty sand obtained adjacent to the levee. The Levee prevents Eyre Creek from inundating the South West side of town.

South West Levee Bank Contour Levels as of Jan 2011



Data sourced Bedourie Levee Bank report- GBA Consulting Engineers 2

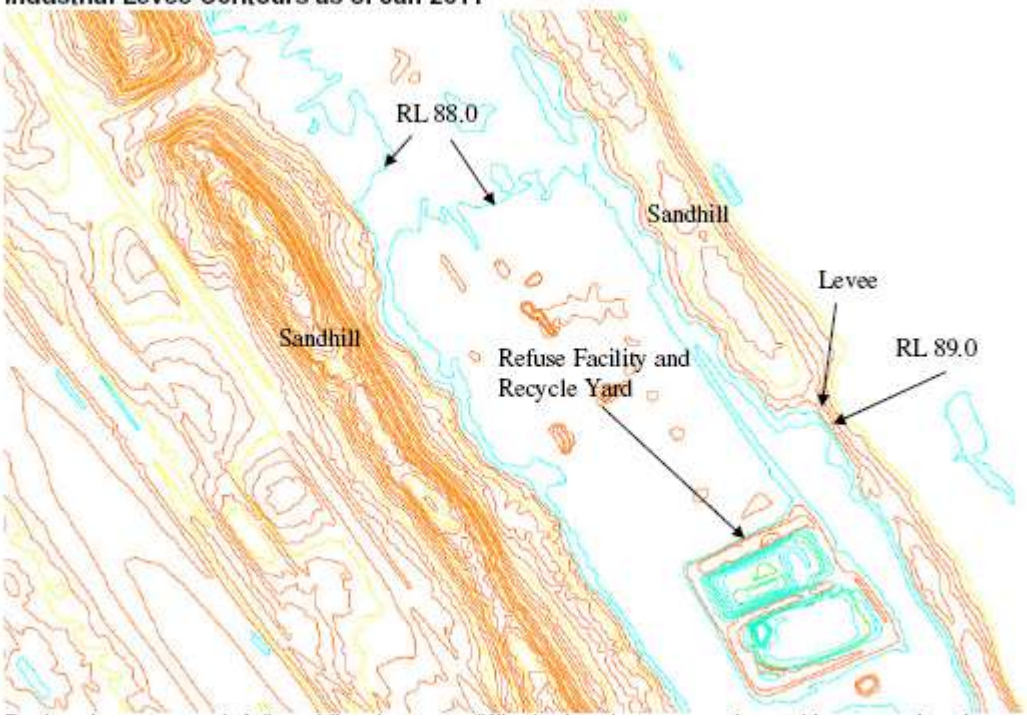
Industrial Area Levee Bank

The Industrial Area Levee bank extends for a short distance (90m) to fill in a low point along the sandhill on the eastern side of the Industrial Estate (adjacent to Clover Street). The levee is constructed of local silty sand obtained adjacent to the levee. The Levee prevents Eyre Creek from inundating the Industrial area. The industrial area contains the power station, council works depot/ materials storage, town refuse facility and recycle yard, and some privately owned industrial blocks. The levee is located at the lowest point and local rain will pond in between the sandhills. The levee must be manually breached to drain this water through the levee out into Eyre Creek (to the East). Previous events have resulted in approximately 1 metre of local rain water through the industrial area (as this area is RL 88.0).

An aerial LIDAR survey was completed on 27th January. The top bank level varies but is generally RL 89.0. This height will provide sufficient flood immunity.

Data sourced Bedourie Levee Bank report- GBA Consulting Engineers 2011

Industrial Levee Contours as of Jan 2011



Data sourced Bedourie Levee Bank report- GBA Consulting Engineers 2011

Birdsville

Birdsville is located on the banks of the Diamantina River. Due to its elevation major flooding of the Diamantina River has little impact on the populated areas of the town.

Risks of flooding

The risk of flooding above housing floor level for Bedourie can be attributed to three main causes:

- Flooding as a result of structural failure of the levee system,
- Flooding resulting from river heights exceeding the levee construction level,
- Flood water inside the town area being unable to drain.

The risk of flooding above housing floor level for Birdsville can only be attributed to one cause:

- Flooding of the Diamantina River exceeding the immunity level of the town.

Risk assessment

Risk Descriptors	Descriptor	Potential Scenarios
	Insignificant risk	No fatalities. Medical treatment required. Small number displaced for a short period. Some damage. Little disruption to the community. Some impact on environment, with no lasting effects. Some financial loss.
	Minor	Small number of fatalities. Hospitalisation required. Minor temporary displacement. Significant damage. Some community disruption. Serious impact on environment with no long-term effects. Significant financial loss.
	Moderate	Multiple fatalities. Numerous injuries requiring hospitalisation. Significant numbers displaced for short periods. Serious damage requiring some external assistance. Community functioning with difficulty. Severe impact on environment with long-term effects. Serious financial loss.
	Major	Numerous fatalities. Extensive injuries, with significant hospitalisation. Large number displaced for significant duration. Severe damage that requires external resources. Community only partially functioning. Severe permanent damage to the environment. Severe financial loss.
	Catastrophic	Mass fatalities. Large numbers requiring extended hospitalisation. General and widespread displacement for extended duration. Widespread extensive damage. Community unable to function. Widespread severe permanent damage to the environment. Widespread severe financial loss.

Likelihood		Consequence				
		Insignificant 1	Minor 2	Moderate 3	Major 4	Catastrophic 5
	A Almost Certain 1:1	H	H	E	E	E
	B Likely 1:10	M	H	H	E	E
	C Possible 1:50	L	M	H	E	E
	D Unlikely 1:100	L	L	M	H	E
	E Rare 1:500	L	L	M	H	H

	Event	Consequence	Likelihood	Risk
Bedourie	Flooding as a result of structural failure of the levee system,	Moderate	Unlikely	Medium
	Flooding resulting from river heights exceeding the levee construction level,	Moderate	Unlikely	Medium
	Flood water inside the town area being unable to drain.	Moderate	Possible	High
Birdsville	Flooding of the Diamantina River exceeding the immunity level of the town.	Minor	Rare	Low

Administration and Governance

Purpose

The purpose of this evacuation sub plan is to outline the arrangements for the implementation of an evacuation of at risk persons within the Diamantina Local Disaster Management Group (LDMG) area of responsibility.

The implementation of this plan will allow the LDMG to make informed, timely decisions regarding evacuation, ensure an orderly release of warnings to the community, the safe and managed movement of persons at risk to a safer location and a structured return.

Authority

This plan forms a sub plan to the Diamantina Local Disaster Management Plan and is developed under the authority of the *Disaster Management Act 2003*. This sub plan will be managed in accordance with the administrative and governance processes outlined within the Diamantina Local Disaster Management Plan including approval, document control, distribution and review and renew.

Activation

This evacuation sub plan will be activated by the Local Disaster Coordinator of the LDMG where the nature of a risk to the community will require the movement of at risk persons to a safer location.

Evacuation Committee

The Evacuation Committee shall convene upon the activation of this sub plan. The committee will also conduct business meetings as a minimum every six (6) months to perform planning, review and renew activities associated with the arrangements outlined within this sub plan.

The Evacuation Committee consists of the core group of the Diamantina Local Disaster Management Group or their nominated delegate:

How to use this Sub Plan during Operations

Upon activation this sub plan should be utilised to manage the conduct of the evacuation and in particular the actions outlined in the Evacuation: Operational Checklist at Annexure A are to be referenced and recorded. This plan has been developed as an operational guide with pre-determined strategies able to be adapted to the specific circumstances of the event.

Evacuation Strategy

The following table outlines a pre-determined evacuation strategy for a range of threats and associated risks.

The evacuation strategy provides a basis of reference data to enable prompt decision making and can be refined at the time of an event where the data is influenced by event specific factors.

In particular, the Evacuation Disaster Management Response Maps, developed and referenced by threat, at Annexure B, will be utilised to inform decision making and determine 'who' requires evacuation.

Diamantina LDMG Evacuation Strategy

Threat	Areas at Risk	Population[1]	Evacuation Method	Safer Location	Evacuation Route	Estimated Evacuation Timeframe[2]	Transport Issues
Major Flooding – Higher then 1974 levels)	*Bedourie* *Birdsville*	140	*Airlift*	*Boulia/Mount Isa*	Air	24hrs	Nil
Major flooding inside Bedourie Levee area	*Bedourie*	Percentage dependant on area affected	*Airlift*	*Boulia/Mount Isa*	Air	24hrs	Nil
Failure of Bedourie Levee	*Bedourie*	140	*Airlift*	*Boulia/Mount Isa*	Air	24hrs	Nil
Severe Weather (flash flooding, damaging winds.	*Town areas*	115	*Shelter in place*	*High ground in town area*	Normal	6hrs	Nil

(1) Population figures are based on 2006 census data.

(2) Estimated evacuation timeframe is derived from the Evacuation Timelines outlined under Decision to Evacuate.

(3) Minor flooding: Causes inconvenience. Low-lying areas next to watercourses are inundated which may require the removal of stock and equipment. Minor roads may be closed and low-level bridges submerged.

(4) Moderate flooding: In addition to the above, the evacuation of some houses may be required. Main traffic routes may be covered. The area of inundation is substantial in rural areas requiring the movement of stock.

(5) Major flooding: In addition to the above, extensive rural areas and/or urban areas are inundated. Properties and towns are likely to be isolated and major traffic routes likely to be closed. Evacuation of people from flood affected areas may be required.

(6) Severe Weather: Includes any non tropical cyclone conditions that may produce anomalously high tides and coastal inundation, for example East Coast Lows.

Decision to Evacuate

Considerations for decision to evacuate

Consider the specific circumstances of the event and the existing strategy outlined in the LDMG Evacuation Strategy. Given the specifics of the event consider if this strategy is directly applicable to this event or if it will need to be refined, in particular:

- Advice from relevant authorities on severity, arrival and impact area.
- The applicability of predetermined vulnerable zones and modification of existing or development of additional maps as required.
- The time required to complete the evacuation and the lead time available. Is evacuation achievable, safe and the most suitable option?
- What type of evacuation is necessary; voluntary, managed? Is shelter in place a safer alternative?
- The capacity of proposed evacuation routes to support rapid egress by pedestrian and / or vehicular traffic given the specific event related conditions.
- The suitability of proposed shelter and / or assembly points, including the ability to establish them quickly and sustain them for the duration of the event.
- Specific transportation requirements.
- If special needs populations and facilities have been planned for?
- If the appropriate resources are available to effectively manage the evacuation?

Where the event has not previously been detailed in the LDMG Evacuation Strategy, develop relevant data for the event, based on the criteria in the strategy.

As the process of evacuation carries a level of risk to evacuees and emergency response agencies, the final step in the decision making process, when all available data is known, is to undertake a risk assessment. The decision to evacuate needs to be based on a proper assessment of all the risks and the availability of alternative public protection measures.

In consideration of all issues, the risk assessment and available data, the Evacuation Committee will provide a recommendation regarding the evacuation of at risk persons.

Authority to evacuate

The process of evacuation requires the approval of an appropriate authority.

Evacuations undertaken during small scale incidents for the purposes of public safety would be undertaken by emergency service responders in the execution of their normal duties and authorised in accordance with their relevant legislation. This Evacuation Guideline is designed for the evacuation of persons at risk from disaster events in accordance with, and under the authority of, the *Disaster Management Act 2003*.

The voluntary evacuation of at risk persons may be authorised and implemented by the Local Disaster Coordinator of the LDMG. The Local Disaster Coordinator is to take reasonable steps to consult with and brief the District Disaster Coordinator (DDC) prior to the implementation of this decision.

A managed evacuation requires the approval of the DDC upon recommendation by the Local Disaster Coordinator. Upon receipt of a recommendation for managed evacuation from the Local Disaster Coordinator or following consultation between the DDC and the Local Disaster Coordinator, the DDC will seek the approval of the Minister for the Declaration of a Disaster Situation in accordance with the provisions of the *Disaster Management Act 2003*.

Upon approval of the declaration, a managed evacuation order may be issued by the DDC and persons may be authorised to exercise declared disaster powers to enable the effective conduct of the withdrawal process.

Evacuation Timelines

The following are the timeframes for the effective execution of an evacuation, relative to each threat.

These timelines have been developed based on the following assumptions and criteria

- *All roads out of Birdsville and Bedourie are likely to be closed.*
- *Both airports are likely to remain open*
- *Availability of aircraft.*
- *Warnings for river heights are accurate and early.*
- *Warnings for local rain causing flooding are short notice.*

Warnings

When at risk areas and the location of safer areas have been determined, the decision to evacuate at risk members of the community can be made. This information needs to be communicated to the community.

Warning dissemination and methods

The following table documents the agencies responsible for the dissemination of evacuation warnings to at risk populations. Detailed contact lists are available Diamantina Shire administrative centre. Given the low population of the area warning dissemination is not complex.

At Risk Population	Warning Method	Agency primarily responsible for dissemination of warning
General Population	*Media releases*	*LDCC via media contact lists.*
	Door knocking	*Queensland Police Service with assistance from State Emergency Service*
	Emergency Alert (land line Bedourie, Land and mobile Birdsville)	*SDCC* *LDCC to formally request through DDCC*
	Town sirens	*LDCC*
Rural Properties	*Phone, email, visit (helicopter)*	*LDCC*
Hospitals Nursing Homes, Aged Care		*LDCC*
School, Daycare, University		*LDCC*
Tourists	*Via Tourism Operators, Accommodation Providers etc*	*LDCC*
Caravan Parks, Camping Grounds		*LDCC*
Non English Speaking	*Nominated central point of contact within community for interpretation and distribution to relevant ethnic group.*	*LDCC*
People with a disability	*Methods appropriate to ensure audience understanding.*	*LDCC*

LDCC Local Disaster Coordination Centre

DDCC District Disaster Coordination Centre

SDCC State Disaster Coordination Centre

Standard messages to the community

Standard Evacuation Order message templates are attached at Annexure C.

The standard wording contained in these templates should be further populated with the details relevant to the event and then utilised across all warning methods to ensure consistent messages are provided to all elements of the community.

Withdrawal

Evacuation Routes & Traffic Management Strategy

Due to the size of Bedourie and Birdsville it is considered there is no need to pre establish evacuation routes or manage traffic in the area.

Transport

At Risk Area / Suburb/Location	Transport Mode	Transport Provider	Number of Services	Pick Up Point	Destination
Bedourie	*Aircraft*	*Sources from Mount Isa.*	*6 (Dash 8)*	*Airport*	*Boulia and Mount Isa*
Rural Properties	*Helicopter*	*Mount Isa*	*Varies*	*Homestead*	*Evacuation Centre*

Security Strategy

Not required.

Shelter

Safe Locations

The following table provides a Summary of Safe Locations available with specific information beneficial to support decision making in selecting locations most suitable to the nature of the event and the number of at risk persons and projected length of stay.

This summary table includes assembly points (AP) and evacuation centres (EC).
Detailed information on each nominated evacuation centre and cyclone shelter is available at Annexure D and can be sourced by the Reference Number indicated on the summary table.

Evacuation Centre Management

Where evacuation centres are being used as safe locations during an evacuation they are to be opened and operational prior to their details being released to the public in the Evacuation Order.
The specific management and ongoing operation of the evacuation centre will be undertaken in accordance with the Evacuation Centre Management Sub Plan.

Pets and Animal Welfare

Outline the LDMG strategy for the welfare of the pets and animals of evacuees. Consider where evacuation centres will have the capacity to provide separate shelter for pets and animals. Consideration should also be given to companion/assistance animals for people with disabilities and how these animals can be accommodated with their owners within separate quarters of the evacuation centre.

Summary of Safe Locations

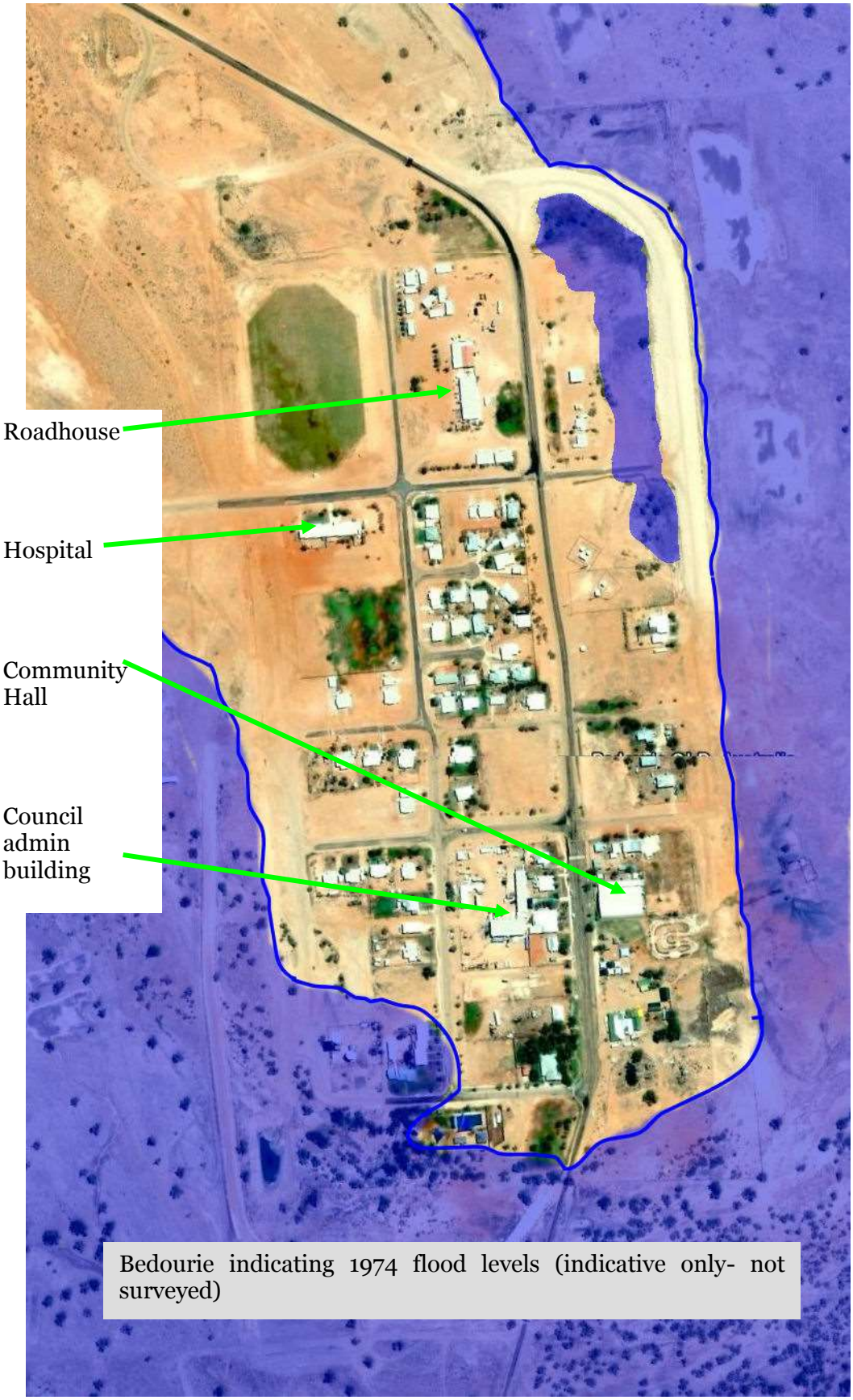
Bedourie									
Location Type[1] and Reference No.	**Name**	**Address**	**Map Ref**	**Event Suitability Considerations**				**Capacity**	
				Storm Tide[2]	**Flood[3]**	**Cyclone Shelter[4]**	**Tsunami[5]**	**Respite[6]**	**Accomm[7]**
Roadhouse (EC)	*Roadhouse*	*Herbert St*	*Indicated*		*RL 88.49*			*50*	*30*
Community Hall (EC)	*Hall*	*Herbert St*	*Indicated*		*RL 89*			*60*	*40*
Council admin building (EC)	*Shire building*	*Herbert St*	*Indicated*		*RL 89*			*40*	*20*
Airport (AP)	*Airport*	*Airport*	*Indicated*		*RL 90*			*40*	*Nil*
Birdsville									
Location Type[1] and Reference No.	**Name**	**Address**	**Map Ref**	**Event Suitability Considerations**				**Capacity**	
				Storm Tide[2]	**Flood[3]**	**Cyclone Shelter[4]**	**Tsunami[5]**	**Respite[6]**	**Accomm[7]**
Airport (AP)	Airport	Graham St	Indicated		6.5m				
Hotel (EC)	Birdsville Hotel	Adelaide Street	Indicated		6m			80	50
Hall (EC)	Birdsville Hall	Adelaide Street	Indicated		5.5-6m			60	30

(1) Location Types: Insert Assembly Point (AP), Evacuation Centre (EC) or Cyclone Shelter (CS).

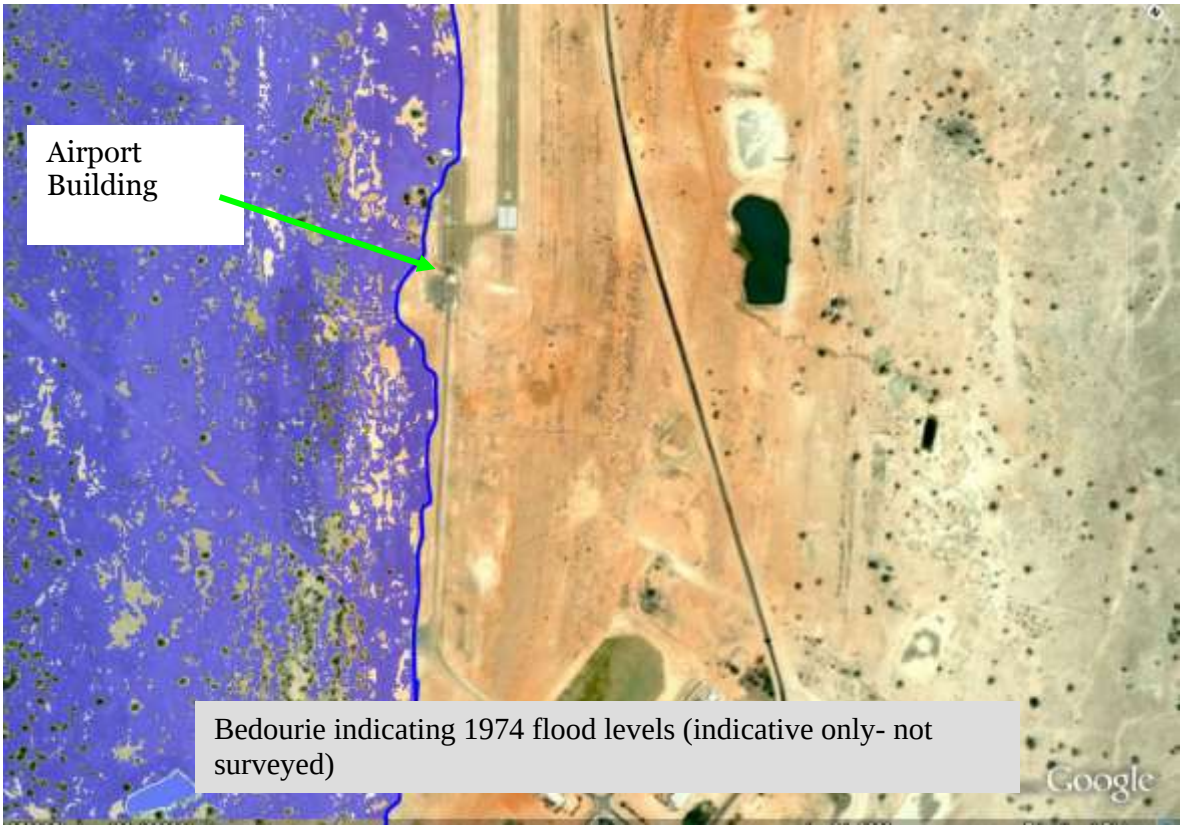
(2) Flood suitability: Insert the flood level(s) below the facility, i.e. if the facility is in the major flood area, insert moderate and minor to show that it may be suitable for an event requiring evacuation of the moderate and minor flood zones.

(3) 'Respite' or Temporary Short Term Respite is defined as a stay for a period of between approximately 1-18 hours where provision of bedding or substantial meals is **not** required. This could include hazards like cyclone where shelter is usually only required for a short time.

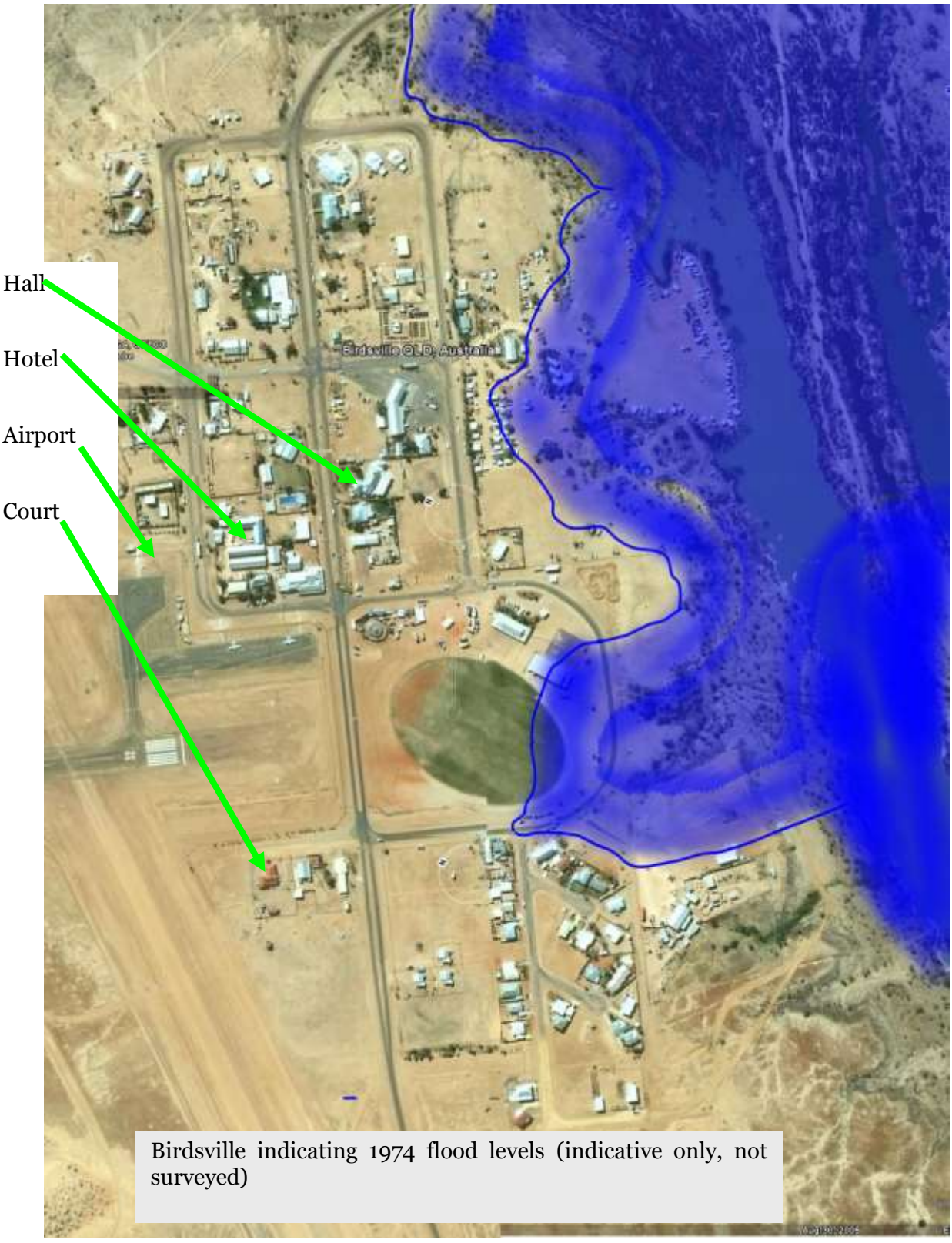
(4) 'Accomm' or Temporary Short Term Accommodation is defined as a stay for a period in excess of 18 hours and may extend into days where the provision of bedding and substantial meals **is** required. This would include those events where the impact of the hazard causes substantial damage to homes and interruption to critical infrastructure.



Bedourie indicating 1974 flood levels (indicative only- not surveyed)



Bedourie indicating 1974 flood levels (indicative only- not surveyed)



Birdsville indicating 1974 flood levels (indicative only, not surveyed)

Return

The decision for the return of evacuees and the development of a return strategy will be undertaken by the Evacuation Committee in consultation with:

- District Disaster Coordinator and relevant District Functional Committees
- Electricity Provider
- Telstra
- Local Government Divisions (as relevant, may include Environmental Health, Water and Sewerage, Roads and Drainage and Building Services).

Decision for Return

To determine if the disaster area is safe for return it will be necessary to assess the following issues:

- absence of the hazard and the possibility of its return;
- safety of buildings and structures;
- safety of transport infrastructure;
- availability of schools and work places;
- operation of utilities; power, water, sewerage, and communications;
- public health;
- security of remaining damaged or unsafe areas; and
- availability of support services and infrastructure.

Return Strategy

Once it is determined that areas are safe for return a Return Strategy is to be developed to outline the arrangements necessary to plan and execute an organised return and how that process will be coordinated and managed. The Return Strategy will address:

- specific areas deemed safe for return
- security of damaged, unsafe structures or infrastructure;
- detailed return advice to evacuees;
- traffic management plan; and
- transportation requirements.

Annexure A

Evacuation: Operational Checklist

Event: _____

It is recommended that this checklist be maintained by the Evacuation Committee. This checklist may be used electronically and displayed within the LDCC.

Action	**Responsible Agency / Officer**	**Specific Information**	**Status**
Decision to Evacuate			
Consider the specific circumstances of the event and review/refine the pre-determined Evacuation Strategy in light of: - advice from relevant authorities on severity, arrival and impact area; - the applicability of predetermined vulnerable zones and modification of existing or development of additional maps as required; - the nature of the at risk population; - the capacity of proposed evacuation routes to support rapid egress given the specific event related conditions; - the suitability of safe locations; - the needs of special needs populations and associated actions; - specific transport issues			Assigned Completed

Action	Responsible Agency / Officer	Specific Information	Status
- the availability of appropriate resources to effectively manage all aspects of the evacuation.			
Consider all aspects with particular emphasis on the time required to complete the evacuation and the lead time available. Conduct a risk assessment. Is evacuation achievable, safe and the most suitable option?			Assigned Completed
Make decision on the type of evacuation being contemplated.			Assigned Completed
Define the timeframe for conduct of evacuation if pre impact.			Assigned Completed
Determine the amount of external assistance that will be required to affect evacuation.			Assigned Completed
Advise DDC that evacuation decision has been made and made request for assistance, if required.			Assigned Completed
If managed, recommend to DDC that managed evacuation is required.			Assigned Completed
Pre-Implementation Preparation			
Ensure adequate copies of evacuation zone maps for operational teams.			Assigned Completed
Check current and predicted status of evacuation routes.			Assigned Completed

Action	Responsible Agency / Officer	Specific Information	Status
Populate Evacuation Order templates with relevant information including affected zones and sequence of evacuation. Hold pending approval for release.			Assigned Completed
Confirm and ready warning mechanisms.			Assigned Completed
Where transportation will be required, review Transport Strategy and activate Transport Sub Plan.			Assigned Completed
Refine traffic management strategy and stage traffic control devices at required locations.			Assigned Completed
Confirm evacuation centres, arrange opening, manning of centres and test of communication system back to LDCC.			Assigned Completed
Activate Evacuation Centre Management / Welfare Sub Plan.			Assigned Completed
Where warning mechanisms will include door knocking, mobile public address systems etc refine grid/locality system to ensure coverage.			Assigned Completed
Warning			
Upon ***authorisation*** for release, issue voluntary evacuation advice to at risk population.			Assigned Completed
Provide notice to at risk population establishments of requirement to evacuate.			Assigned Completed

Action	Responsible Agency / Officer	Specific Information	Status
Receive ***authorisation*** for managed evacuation from DDC.			Assigned Completed
Issue managed evacuation order to at risk population.			Assigned Completed
Provide evacuation teams with written order to be provided to members of public.			Assigned Completed
Withdrawal			
Activate traffic management strategy.			Assigned Completed
Activate door to door evacuation teams.			Assigned Completed
Activate transport strategy.			Assigned Completed
Ensure evacuation messages continue to be conveyed to public.			Assigned Completed
Provide regular situation reports on evacuation to DDMG.			Assigned Completed
Ensure regular reporting from field teams of completed tasks.			Assigned Completed
Implementation of security strategy for evacuated areas.			Assigned Completed
Shelter			
Ensure evacuation centre management being coordinated through Evacuation Centre			Assigned Completed

Action	Responsible Agency / Officer	Specific Information	Status
Management Sub Plan.			
Request and maintain a record of evacuees at evacuation centres.			Assigned Completed
If evacuees are being registered upon leaving at risk areas, ensure record is being maintained including details of destination.			Assigned Completed
Return			
Determine areas that are safe for return with consideration of the following issues: - content of impact assessment; - health and safety issues; - functioning of utilities; power, water, sewerage and communications; and - status of repair; clearing and re-opening of roads.			Assigned Completed
Review and modify the Return Strategy, addressing: - specific areas deemed safe for return; - security of damaged, unsafe structures or infrastructure; - detailed return advice to evacuees; - traffic management plan; and - transportation requirements.			Assigned Completed
Advise DDMG of Return Strategy.			Assigned

Action	Responsible Agency / Officer	Specific Information	Status
			Completed
Issue media release outlining return strategy for evacuees. Distribute return advice to Evacuation Centres and notify special facilities.			Assigned Completed
Release appropriate information to returning evacuees on reactivation of utilities, damage repairs, clean up and debris removal.			Assigned Completed
Implement traffic management plan.			Assigned Completed
Implement transportation requirements through Transport Sub Plan.			Assigned Completed
Maintain security controls for those areas that can not be safely reoccupied.			Assigned Completed
Ensure the coordination of temporary housing for evacuees unable to return to their residences.			Assigned Completed
Close evacuation centres.			Assigned Completed
Complete final situation report on evacuation and stand down Evacuation Committee.			Assigned Completed

Annexure B

Evacuation Disaster Management Response Maps

INDEX	
Reference No.	Map
A1	*Bedourie 1974 flood levels*
A2	*Birdsville 1974 flood levels*

Annexure C

Evacuation Order Media Release Templates

TOP PRIORITY FOR IMMEDIATE AND FREQUENT BROADCAST

Transmitters serving the area/s of [*insert locations*] are requested to use the **STANDARD EMERGENCY WARNING SIGNAL** before broadcasting this message.

EVACUATION ORDER

For FLOODING

Issued: [Time, Day, and Date]

As a result of the flood level predicted by the Bureau of Meteorology for [location*]* at [***date/time***] the Queensland Police Service is directing residents within the [***nominated areas/ evacuation zones***] to evacuate within the next [***number***] hours. *Where more than one evacuation zone is identified, the sequence for movement should be specified. For example: "Evacuation of the Red Zone is to commence immediately and to be completed by no later than XXX hours. Evacuation of the Orange Zone is to commence no earlier than XXXX hours and be completed by XXX hours.*

Do not delay your evacuation. Roads will be congested or closed. You could become trapped and need rescue. Remaining in those areas nominated for evacuation is dangerous and may place your life at risk.

Evacuation centres will be established at [***name and address***] where you can obtain temporary accommodation and other assistance. You may also choose to go to friends or relatives who reside outside the area nominated for evacuation.

The registration of evacuees will be undertaken at evacuation centres, if you do not go to an evacuation centre please telephone [***telephone number***] to report your safety.

[***include any transport arrangements including times and pick up points***]

As you evacuate you should:

- Take your evacuation kit with you.
- Ensure neighbours have received the evacuation order.
- Turn off the electricity and gas and lock your home.
- Do not walk or drive through floodwater.
- Continue listening to your local radio station for further information and instructions.

For assistance or further information telephone the Local Disaster Coordination Centre on < ***telephone number***> or view the website at: www.<***insert address***>

The <name> Local Disaster Management Group would appreciate this order being broadcast regularly.

Authorised By: [insert name & operational position title]

Message End

Annexure D

Evacuation Centre Details

The following pages contain detailed information on each nominated Evacuation Centre, Assembly Point and Cyclone Shelter as detailed in the Summary of Safe Locations on Page 35. Each facility has been provided with an appropriate reference number.

Note: This list is for LDMG planning purposes and not for public distribution. Evacuation Centres are not available until activated and staffed by the LDMG.

Assembly Point / Evacuation Centre / Cyclone Shelter[1] : *<insert shelter name>*

Address and Contact Details			
Reference Number			
Address			
Map Reference			
Contact Person for Access	Name: Position: Phone: Mobile:		
Alternative Contact Person for Access	Name: Position: Phone: Mobile:		
Event Suitability Considerations			
Storm Tide Immunity			
Flood Immunity			
Cyclone Shelter Rated			
Tsunami Immunity			
Communications			
Phone Number			
Facsimile Number			
Communication redundancy mechanism			
Resources			
Capacity : (Respite 1sqm per person : Accommodation 3-3.5sqm per person)	Temporary Short Term Respite:	Temporary Short Term Accommodation:	
Toilets	Female	Male	Unisex
Showers	Female	Male	Unisex
Disabled Access and Amenities			
Kitchen Facilities			
Ventilation			
Vehicular Access			
On-Site Parking			
Animal (Pet) Facilities			
Alternative Power Supply			
Alternative Water Supply			
Additional Information			

[1] Delete which ever does not apply