



ARTIST IMPRESSION: VINE FOREST HABITAT CENTRE.



4.2.5. Life at Night

EXHIBIT CONCEPTS

- » The Nocturnal House is an existing structure
- » This is a step-out experience, ie not directly related to the main themes of the park.
- » The exhibits within the building could be upgraded to provide higher quality display, including view-into burrow for Bilby.
- » It is suggested that Brush-Tailed Phascogales, an arboreal marsupial, could be displayed within the house. This would require a purpose-designed exhibit.

INTERPRETATION

- » "Conservation in Action" highlighting the skills and techniques used in conserving the Bilby, as an example of an endangered, nocturnal, Australian marsupial.
- » The roles of captive breeding, research and educational display for conservation will be illustrated.
- » A local nocturnal rare species could be identified, and perhaps even included in an exhibit, to focus the issues back on the local Ipswich area.

AMPHITHEATRE

- » This should be a story place with aboriginal cultural theming. Local people should be consulted about specific issues and stories and illustrative material. Such materials should be interwoven with the interpretive material throughout the park.





1 NOCTURNAL HOUSE

Existing nocturnal house to be upgraded and fitted with improved light adjustment vestibule at the entrance and exit to the exhibit. Interpretation signage to be established to distinguish conservation intent of the centre.

2 AMPHITHEATRE STEPS

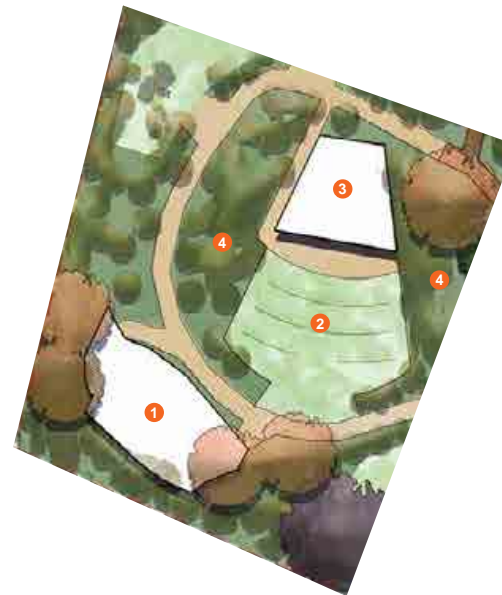
Terrace steps for stage viewing to be built into existing graded lawn. Existing lawn to be reduced in size to funnel view and screened with planting.

3 AMPHITHEATRE STAGE

Existing amphitheatre stage to be retained and screened with surrounding planting. Hard stand to remain for all access ramps only.

4 PLANTING

Extent of planting to be increased around existing amphitheatre for screening and noise deterrence to surrounding displays



LIFE AT NIGHT & AMPHITHEATRE LAYOUT

SCALE 1:500

4.2.6. Back Yard

INTENT

- » Further investigation is required for potential improvements to this area and to enhance user experience
- » A more contemporary and relevant display could be added about your 'backyard'. this could demonstrate to new and old residents:
 - » Water-wise techniques for household backyards should be displayed and developed. Adoption of sustainable methods.
 - » Wildlife attracting planting options should be on display with interpretive labels. The plants can in turn be purchased from the nursery
 - » Use of native planting at home should be on display with interpretive labels Which can in turn be purchased from the nursery
- » Shade in the form of trees and structure is encouraged for both the fauna and the users of the area who may longer to pet any exhibits available.

EXHIBIT CONCEPTS

- » The farm / backyard precinct should allow for greatest interaction with visitors establishing physical interaction with animals and plants.
- » Movement of visitors through the exhibition should be encouraged.
- » In keeping with the architectural language developed within the nature centre, the farm backyard areas should be improved with this in mind and establish a direct link to the nursery facility

NATURALLY OCCURRING WILDLIFE

- » With the establishment of a range of vegetation native to the Ipswich region it can be expected that a range of wild animals will use the nature centre. These animals will include species visible by day such as insects and spiders, butterflies and birds (Jippi).
- » Providing some feeding stations for birds (Jippi) and butterflies could eventually attract larger numbers of some species, such as lorikeets and honey eaters
- » Wild animals visible within the nature centre are a most valuable resource and there should be a dedicated effort to regularly locate and identify such species and to provide where practical, simple information about them to visitors. Simple tied tags and labels can be used, hanging within reach of visitors. Any system of volunteer guides can be trained to find insects and birds (Jippi) and to point them out to visitors, expelling their ecological relationships to the vegetation within the nature centre.





- 1 ARBOUR**
Arbour shelter with climbing plants as introductory gate-way to
- 2 WATER DISPLAY**
Water sustainability display for domestic use
- 3 WILDLIFE PLANTING**
Wildlife attracting planting ideas for domestic gardens
- 4 COMPOSTING**
Composting interpretation and principles for domestic use
- 5 WEEDS**
Recognition and removal of weed interpretation and principles for domestic use
- 6 PETS**
Caring for pets and influence within natural habitat interpretation
- 7 IPSWICH NATURAL ESTATE**
Ipswich Natural Estate interpretation and position within Ipswich ecosystems
- 8 FARMYARD**
Existing farmyard exhibit facilities to be upgraded and to include interpretation signage elaborating the progression of farmlands within the history of Ipswich and the role farmlands play within the natural environment.



BACKYARD (TAKE HOME) MASTERPLAN LAYOUT

SCALE 1:500

4.2.7. Back of House

INTENT

- » Upgrade of facilities encouraged to facilitate requirements of proposed new exhibits and to improve working and quarantine conditions.
- » The implementation of the facility can be staged if required based on an audit of services with the required stake holders.
- » Establish a plan for behind the scenes tours and engagement with behind the scenes process possibly incorporated within a 'friends of INC' programme for wildlife encounters
- » Establish programme to allow visitors to view feeding and preparation areas for interest in the workings of conservation and nature centres.
- » Allow for the establishment of integrated staff:
 - » 3 animal/keeper
 - » 1 gardener/maintenance manager
 - » 1 visitor guide





- 1 STAFF AREA**
 - Office Area - 5 Workstations (25m²)
 - Toilet, shower & lockers (30m²)
 - Lunch Room & Kitchenette (15m²)
 - Reception / Arrival (10m²)
- 2 FOOD STORAGE & PREPARATION (DISPLAY)**
 - Food stores, cool room (10m²)
 - Food preparation area (15m²)
- 3 ANIMAL HOLDING AREA**
 - Open Yard Holding (100m²)
 - Climate Control Building (30m²)
 - Aviary Holding (30m²)
- 4 ANIMAL HEALTH & QUARANTINE**
 - Treatment / Examination Room (25m²)
 - Office (10m²)
 - Open Yard Quarantine (50m²)
 - Building Quarantine (30m²)
- 5 STORAGE**

Equipment and maintenance store
- 6 PLANT HOLDING AREA**

Plant Holding and Growing area for the provision of animal feed and centre maintenance
- 7 PARKING**

Disabled and delivery parking
- 8 STAFF TERRACE**
- 9 FOOD PREPARATION VIEWING PLAZA**
- 10 PUBLIC TOILET**



MAINTENANCE YARD MASTERPLAN LAYOUT

SCALE 1:500



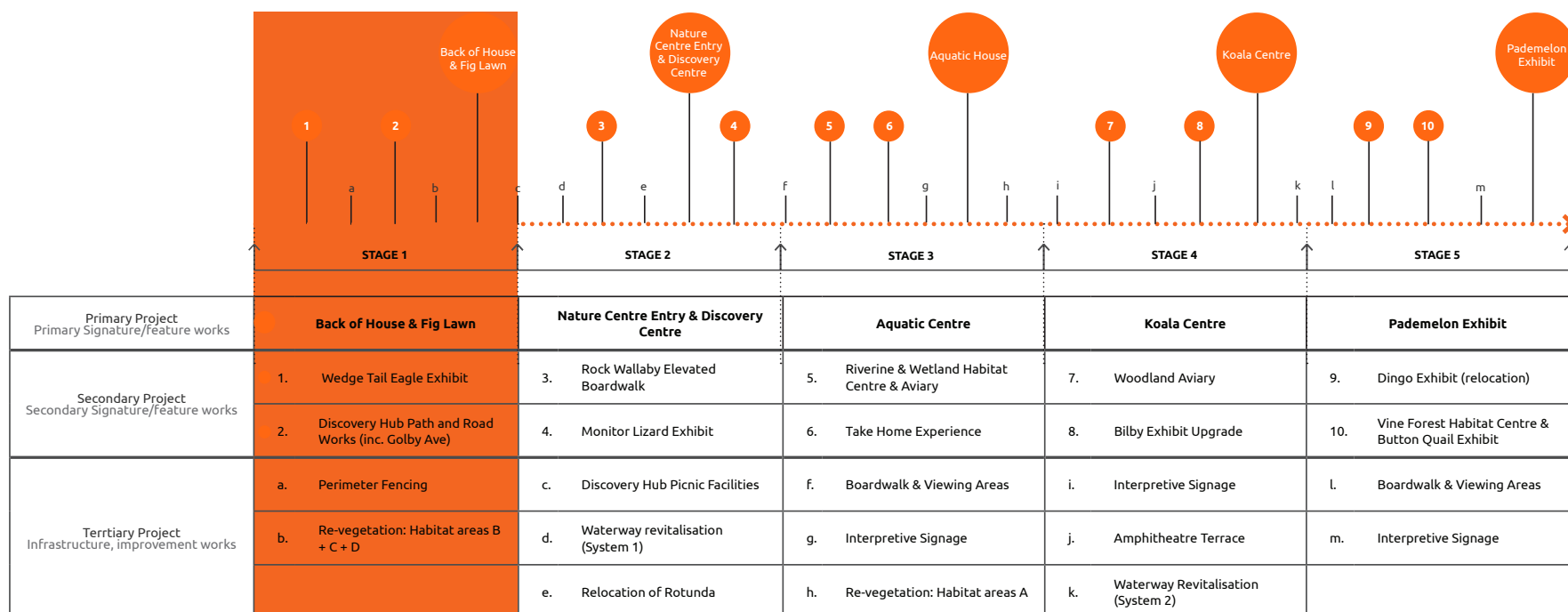
5.0 Master Plan Implementation

5.1. Implementation Stage 1

IMPLEMENTATION STRATEGY INTENT

- » This section outlines the proposed strategy for staged implementation of the Masterplan proposal. Works are outlined in stages per proposed feature habitat area of the Nature Centre Masterplan and Discovery Hub. The intention of the implementation strategy is to be utilised as a guide only. A degree of flexibility in the staging and roll out of works will need to be adopted based on funding and sponsorship requirements for specific exhibits. It is encouraged to review the program on a regular basis and update as necessary.
- » Service Infrastructure improvements, such as water, electricity, communications, civils, associated with each stage of works are not specifically identified and will need to be reviewed within the detail design phase. There are a number of works which are encouraged to proceed independent of Primary feature works projects, including planting consistent with future landscape character for each habitat area, circulation and interpretive signage and artworks.
- » In general, the implementation strategy aims to improve the 'Back of House'
- first as a Primary project as a means to allow for the adequate temporary relocation accommodation of species during the further construction roll out of the Masterplan proposal.
- » The associated Opinion of Probable costs associated with each implementation stage are outlined within the following indicative estimates.

STAGE 1: PROPOSED IMPLEMENTATION ROLL OUT





- NATURE CENTRE FENCE LINE**
 - » Existing perimeter fence to be upgraded with the inclusion of proposed maintenance access points
- CONSTRUCTION HOARDING**
 - » Area of upgrade to be temporarily fenced off from public access
- CONSTRUCTION ACCESS**
 - » Service access during construction period
- EXISTING CIRCULATION**
 - » Existing visitor circulation to be retained
- PROPOSED CIRCULATION**
 - » Proposed new visitor circulation
- PROPOSED PATH DEMOLITION**
 - » Existing path networks to be demolished
- EXISTING NATURE CENTRE ENTRY**
 - » Existing entry to be retained during construction
- GATE ACCESS**
 - » Proposed maintenance access points
- EXHIBIT BOUNDARY**
 - » Proposed exhibit to be opened during stage
- RE-VEGETATION**
 - » B. Woodland & Open Forest extent
 - » Discovery Hub extent
 - » C. Vine Forest extent
 - » D. Arid / Conservation extent



STAGE 1: OPINION OF PROBABLE COST

Item	Description of works	Unit	Rate	Stage 1	
				Qty	Amount
1.00	PRELIMINARIES				
1.01	General - Site mobilisation, Tree/ Environmental protection measures, Protective fencing allowance, Traffic management allowance, Site amenities, Site demobilisation, Insurances.	item	20.00%	1	\$ 434,217
1.02	Design Consultancy Fee - Landscape Architect/ Project Manager, Engineering, Geotech, Irrigation, Certification, Arboricultural advice, etc.	allow	8.00%	1	\$ 173,687
	Sub Total				\$ 607,904
2.00	EARTHWORKS AND DEMOLITION				
2.01	Demolition - Demolition and removal of existing concrete / removal and stock pile of existing trees, dumping off site of all unsuitable and/or spoil material	item	\$ 85,000.00	1	\$ 85,000
2.02	Bulk Earthworks - Perform all bulk earthworks, cut to fill and compaction to engineers approval; inclusive of rehaping of bulk earthworks to achieve finished landscape levels. Strip topsoil and stockpile	m3	\$ 30.00	1000	\$ 30,000
2.03	Detail Earthworks - Perform all detail earthworks, i.e. feature mounding and shaping where required	m3	\$ 50.00	100	\$ 5,000
	Sub Total				\$ 120,000
3.00	DRAINAGE				
	Sub Total				\$ -
4.00	PATHS & PAVEMENTS				
	Circulation Pathways and Hard Surfacing				
4.01	P1 - Feature Plaza Pavement - 100mm thk Colour: basic colour Finish: exposed - coloured aggregate	m2	\$ 160.00	150	\$ 24,000
4.02	P2 - Concrete Pathway - 3.0m wide - 100mm thk Colour: basic colour Finish: broomed	m2	\$ 130.00	404	\$ 52,520
4.03	P3 - Concrete Pathway - 1.8m wide - 100mm thk Colour: basic colour Finish: broomed	m2	\$ 130.00	0	\$ -
4.04	P4 - Concrete Pathway - 1.5m wide - 100mm thk Colour: plain grey Finish: broomed	m2	\$ 90.00	756	\$ 68,040
4.05	P5 - Gravel Pathway - 3.0m wide - 100mm thk Colour: plain grey Finish: broomed	m2	\$ 60.00	115	\$ 6,900
4.06	P6 - Hardwood Timber Boardwalk / Bridge - 1.8m wide - Including all structural members, fixings and finishes	m2	\$ 550.00	20	\$ 11,000
4.07	R1 - New Vehicle Set-down - Demolition and removal; Green Bulldozers; Earthworks; Subsoil drainage; Pavement; Surfacing; Concrete kerbs, crossovers and Kerb alterations; Signage; linemarking; etc.	m2	\$ 300.00	320	\$ 96,000
	Sub Total				\$ 258,460
5.00	WATER FEATURE				
	Sub Total				\$ -
6.00	WALLS & EDGES				
6.01	Planter Bed Edge - Concrete extruded edge	lin m.	\$ 35.00	500	\$ 17,500

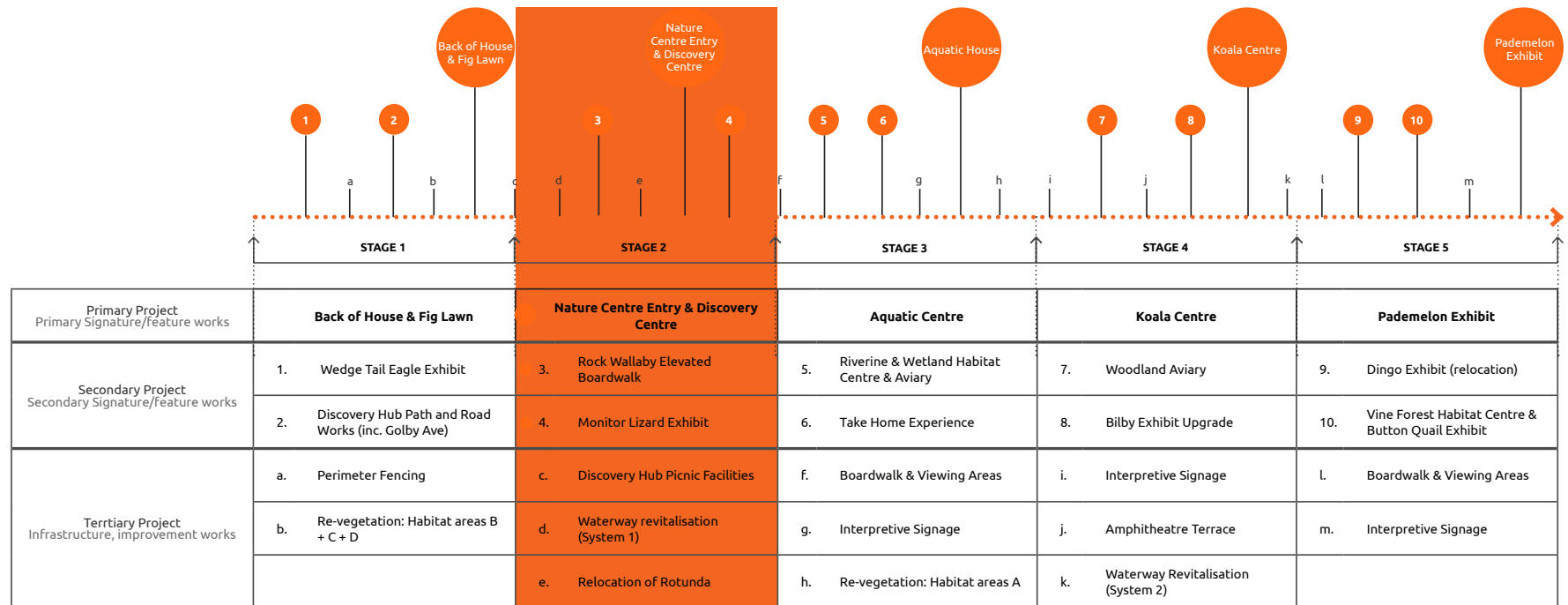
Item	Description of works	Unit	Rate	Stage 1	
				Qty	Amount
6.02	Terraces - Concrete seating terraces	lin m.	\$ 650.00	0	\$ -
6.03	General Landscape Walls -general allowance for low height landscape stone walls	lin m.	\$ 750.00	20	\$ 15,000
	Sub Total				\$ 32,500
7.00	STRUCTURES				
	General				
7.01	Arbor - Hardwood timber Arbor with horizontal wires for vegetation to grow up, Solid Hood attached to underside for Shade and Weather Protection	lin m.	\$ 2,500.00	40	\$ 100,000
7.02	Nature Play / Discovery Play Element - Artistic themed nature play/discovery play equipment, exc. Playground certification	item	\$ 80,000.00	1	\$ 80,000
	Buildings				
7.03	Back of House - Keeper facilities; refer masterplan document	m2	\$ 2,300.00	250	\$ 575,000
	Sub Total				\$ 755,000
8.00	SOFTWORKS				
8.01	PA1 - General Planting Area preparation: - ameliorated Subsoil & adding of necessary fertilizer - preparation of ground 150mm cultivated subgrade - spreading 300mm ameliorated topsoil - 75mm organic mulch - 3 x 140mm + 1 x 200mm pot/m2.	m2	\$ 55.00	10900	\$ 599,500
8.02	T1 - TURF preparation and TURF supply/ installation: - ameliorated Subsoil & adding of necessary fertilizer - Preparation of turf areas including excavation, cultivation and supply and spreading 100mm deep ameliorated topsoil - supply and install "Winter Green" turf species	m2	\$ 15.50	1000	\$ 15,500
8.03	Trees - 100Ltr	no.	\$ 255.00	115	\$ 29,325
8.04	Trees - 200Ltr	no.	\$ 450.00	15	\$ 6,750
8.05	Trees - 400Ltr	no.	\$ 1,000.00	2	\$ 2,000
8.06	Trees - 1000Ltr	no.	\$ 1,800.00	1	\$ 1,800
	Sub Total				\$ 654,875
9.00	FENCING & HANDRAILS				
9.01	F1 - Nature Centre Fence Line - Supply and install aluminium fence boundary fence to match existing , incl. all footings, posts and fixings	lin m	\$ 350	460	\$ 161,000
9.02	F2 - Exhibit Fence - Supply and install exhibit appropriate transparent fencing , incl. all footings, posts and fixings	lin m	\$ 225	450	\$ 101,250
9.03	F3 - Aviary Fence - Supply and install exhibit appropriate transparent fencing , incl. all footings, posts and fixings	m2	\$ 1,000	30	\$ 30,000
	Sub Total				\$ 292,250
10.00	FURNITURE				
10.01	F1 - Bench Seat - signature designed and fabricated seat	no.	\$ 2,500.00	0	\$ -
10.02	F2 - Plinth Seat - In situ concrete plinth seat	no.	\$ 3,000.00	1	\$ 3,000.00

				Stage 1	
Item	Description of works	Unit	Rate	Qty	Amount
10.03	F3 - Picnic Table Setting - signature designed and fabricated seat and table	no.	\$ 8,500.00	1	\$ 8,500.00
10.04	F4 - Rubbish Bins - double bin for general waste and recycling, signature design	no.	\$ 9,000.00	1	\$ 9,000.00
10.05	F5 - General Signage and Wayfinding	no.	\$ 13,500.00	1	\$ 13,500.00
10.06	F6 - Drink Fountain - including water supply and connection to storm water	no.	\$ 8,000.00	1	\$ 8,000.00
10.07	F7 - Maintenance Taps - including water supply and connection to storm water	no.	\$ 3,000.00	2	\$ 6,000.00
10.08	F8 - Artwork - includes consultation, construction and install	no.	\$ 10,000.00	1	\$ 10,000.00
10.09	F9 - Bollards - timber bollards	no.	\$ 120.00	0	\$ -
Sub Total					\$ 58,000
11.00	IRRIGATION				
11.01	Water Tank & pump for irrigation water storage	Allow	\$ 35,000.00		\$ -
11.02	Turf Irrigation - Automatic Commerical Grade Irrigation to Turf area - design, supply and install	m2	\$ 20.00		\$ -
11.03	Planting Irrigation - Automatic Commerical Grade Irrigation to PA Planting Beds - design, supply and install	m2	\$ 28.00		\$ -
Sub Total					\$ -
12.00	ELECTRICAL & LIGHTING				
12.01	Feature Lighting -Supply electricity & supply & install Feature Lighting (excl. pools & water features)	Allow	\$ 100,000.00		\$ -
12.02	Code Lighting -Supply electricity & supply & install Code Lighting	Allow	\$ 120,000.00		\$ -
12.03	CCTV cameras & distress alarms - general allowance	Allow	\$ 80,000.00		\$ -
Sub Total					\$ -
13.00	ESTABLISHMENT & MAINTENANCE				
13.01	General Establishment period - 13 weeks	week	\$ 1,200.00	13	\$ 15,600
Sub Total					\$ 15,600
14.00	GENERAL				
14.01					\$ -
14.02					\$ -
Sub Total					\$ -

				Stage 1	
Item	Description of works	Unit	Rate	Qty	Amount
			SUB - TOTAL		\$ 2,794,589
	20% CONTINGENCY				\$ 558,918
					TOTAL
	TOTAL ESTIMATED COSTS				\$ 3,353,507

5.2. Implementation Stage 2

STAGE 2: PROPOSED IMPLEMENTATION ROLL OUT



PROPOSED IMPLEMENTATION STRATEGY ROLL OUT



- NATURE CENTRE BOUNDARY**
- CONSTRUCTION HOARDING**
 - » Area of upgrade to be temporarily fenced off from public access
- CONSTRUCTION ACCESS**
 - » Service access during construction period
- PRIMARY VISITOR CIRCULATION**
 - » Existing visitor circulation to be retained
- PROPOSED CIRCULATION**
 - » New visitor circulation
- PROPOSED PATH DEMOLITION**
 - » Existing path networks to be demolished
- GATE ACCESS**
 - » Proposed maintenance access points
- EXHIBIT BOUNDARY**
 - » Proposed exhibit to be opened during stage
- WATER REVITALISATION**
 - » Existing Water System 1
 - » Proposed Water Feature



STAGE 2: OPINION OF PROBABLE COST

Item	Description of works	Unit	Rate	Stage 2	
				Qty	Amount
1.00	PRELIMINARIES				
1.01	General - Site mobilisation, Tree/ Environmental protection measures, Protective fencing allowance, Traffic management allowance, Site amenities, Site demobilisation, Insurances.	item	20.00%	1	\$ 136,440
1.02	Design Consultancy Fee - Landscape Architect/ Project Manager, Engineering, Geotech, Irrigation, Certification, Arboricultural advice, etc.	allow	8.00%	1	\$ 54,576
Sub Total					\$ 191,016
2.00	EARTHWORKS AND DEMOLITION				
2.01	Demolition - Demolition and removal of existing concrete / removal and stock pile of existing trees, dumping off site of all unsuitable and/or spoil material	item	\$ 85,000.00	0.5	\$ 42,500
2.02	Bulk Earthworks - Perform all bulk earthworks, cut to fill and compaction to engineers approval; inclusive of reshaping of bulk earthworks to achieve finished landscape levels. Strip topsoil and stockpile	m3	\$ 30.00	0	\$ -
2.03	Detail Earthworks - Perform all detail earthworks, ie: feature mounding and shaping where required	m3	\$ 50.00	200	\$ 10,000
Sub Total					\$ 52,500
3.00	DRAINAGE				
Sub Total					\$ -
4.00	PATHS & PAVEMENTS				
Circulation Pathways and Hard Surfacing					
4.01	P1 - Feature Plaza Pavement - 175mm thk Colour: basic colour Finish: exposed - coloured aggregate	m2	\$ 160.00	60	\$ 9,600
4.02	P6 - Hardwood Timber Boardwalk / Bridge - 1.8m wide - including all structural members, fixings and finishes	m2	\$ 550.00	70	\$ 38,500
Sub Total					\$ 48,100
5.00	WATER FEATURE				
Creek Bed					
5.01	Creek Shell - concrete structure - incl. all prep, reinforcing and expansion joints	m2	\$ 450.00	185	\$ 83,250
5.02	Creek Edge - Feature Boulders	lin m	\$ 550.00	130	\$ 71,500
5.03	Creek Finish - Feature Rock base base	m2	\$ 180.00	65	\$ 11,700
5.04	Creek Plumbing costs - incl. all pipework and connections	allow	\$ 25,000.00	2	\$ 50,000
5.05	Waterway Edge Revitalisation	allow	\$ 25,000.00	1	\$ 25,000
Sub Total					\$ 241,450
6.00	WALLS & EDGES				
6.01	Planter Bed Edge - Concrete extruded edge	lin m.	\$ 35.00	20	\$ 700
Sub Total					\$ 700

Item	Description of works	Unit	Rate	Stage 2	
				Qty	Amount
7.00	STRUCTURES				
Buildings					
7.01	Nature Centre Entry and Discovery Centre	m2	\$ 2,100.00	115	\$ 241,500
Sub Total					\$ 241,500
8.00	SOFTWORKS				
8.01	PA1 - General Planting Area preparation: - ameliorated Subsoil & adding of necessary fertilizer - preparation of ground 150mm cultivated subgrade - spreading 300mm ameliorated topsoil - 75mm organic mulch - 3 x 140mm + 1 x 200mm pot/m2.	m2	\$ 55.00	30	\$ 1,650
8.02	T1 - TURF preparation and TURF supply/ installation: - ameliorated Subsoil & adding of necessary fertilizer - Preparation of turf areas including excavation, cultivation and supply and spreading 100mm deep ameliorated topsoil - supply and install "Winter Green" turf species	m2	\$ 15.50	0	\$ -
8.03	Trees - 100Ltr	no.	\$ 255.00	0	\$ -
8.04	Trees - 200Ltr	no.	\$ 450.00	4	\$ 1,800
8.05	Trees - 400Ltr	no.	\$ 1,000.00	0	\$ -
8.06	Trees - 1000Ltr	no.	\$ 1,800.00	0	\$ -
Sub Total					\$ 3,450
9.00	FENCING & HANDRAILS				
9.01	F1 - Nature Centre Fence Line - Supply and install aluminium fence boundary fence to match existing , incl. all footings, posts and fixings	lin m	\$ 350	10	\$ 3,500
9.02	F2 - Exhibit Fence - Supply and install exhibit appropriate transparent fencing , incl. all footings, posts and fixings	lin m	\$ 225	60	\$ 13,500
9.03	F3 - Aviary Fence - Supply and install exhibit appropriate transparent fencing , incl. all footings, posts and fixings	m2	\$ 1,000	0	\$ -
Sub Total					\$ 17,000
10.00	FURNITURE				
10.01	F1 - Bench Seat - signature designed and fabricated seat	no.	\$ 2,500.00	0	\$ -
10.02	F2 - Plinth Seat - In situ concrete plinth seat	no.	\$ 3,000.00	0	\$ -
10.03	F3 - Picnic Table Setting - signature designed and fabricated seat and table	no.	\$ 8,500.00	4	\$ 34,000.00
10.04	F4 - Rubbish Bins - double bin for general waste and recycling, signature design	no.	\$ 9,000.00	1	\$ 9,000.00
10.05	F5 - General Signage and Wayfinding	no.	\$ 13,500.00	1	\$ 13,500.00
10.06	F6 - Drink Fountain - including water supply and connection to storm water	no.	\$ 8,000.00	1	\$ 8,000.00
10.07	F7 - Maintenance Taps - including water supply and connection to storm water	no.	\$ 3,000.00	1	\$ 3,000.00

Item	Description of works	Unit	Rate	Stage 2	
				Qty	Amount
10.08	F8 - Artwork - includes consultation, construction and install	no.	\$ 10,000.00	1	\$ 10,000.00
10.09	F9 - Bollards - timber bollards	no.	\$ 120.00	0	\$ -
Sub Total					\$ 77,500
11.00	IRRIGATION				
11.01	Water Tank & pump for irrigation water storage	Allow	\$ 35,000.00		\$ -
11.02	Turf Irrigation - Automatic Commerical Grade Irrigation to Turf area - design, supply and install	m2	\$ 20.00		\$ -
11.03	Planting Irrigation - Automatic Commerical Grade Irrigation to PA Planting Beds - design, supply and install	m2	\$ 28.00		\$ -
Sub Total					\$ -
12.00	ELECTRICAL & LIGHTING				
12.01	Feature Lighting -Supply electricity & supply & install Feature Lighting (excl. pools & water features)	Allow	\$ 100,000.00		\$ -
12.02	Code Lighting -Supply electricity & supply & install Code Lighting	Allow	\$ 120,000.00		\$ -
12.03	CCTV cameras & distress alarms - general allowance	Allow	\$ 80,000.00		\$ -
Sub Total					\$ -
13.00	ESTABLISHMENT & MAINTENANCE				
13.01	General Establishment period -13 weeks	week	\$ 1,200.00	13	\$ 15,600
Sub Total					\$ 15,600
14.00	GENERAL				
14.01					\$ -
14.02					\$ -
Sub Total					\$ -
SUB - TOTAL					\$ 888,816
20% CONTINGENCY					\$ 177,763
				TOTAL	
TOTAL ESTIMATED COSTS					\$ 1,066,579

5.3. Implementation Stage 3

STAGE 3: PROPOSED IMPLEMENTATION ROLL OUT



PROPOSED IMPLEMENTATION STRATEGY ROLL OUT



- CONSTRUCTION HOARDING**
 - » Area of upgrade to be temporarily fenced off from public access
- ➔ CONSTRUCTION ACCESS**
 - » Service access during construction period
- ➔ PRIMARY VISITOR CIRCULATION**
 - » Existing visitor circulation to be retained
- ➔ PROPOSED CIRCULATION**
 - » New visitor circulation
- PROPOSED PATH DEMOLITION**
 - » Existing path networks to be demolished
- ⚡ GATE ACCESS**
 - » Proposed maintenance access points
- EXHIBIT BOUNDARY**
 - » Proposed exhibit to be opened during stage
- RE-VEGETATION**
 - » A. Riverine and Wetland extent



STAGE 3 IMPLEMENTATION STRATEGY

STAGE 3: OPINION OF PROBABLE COST

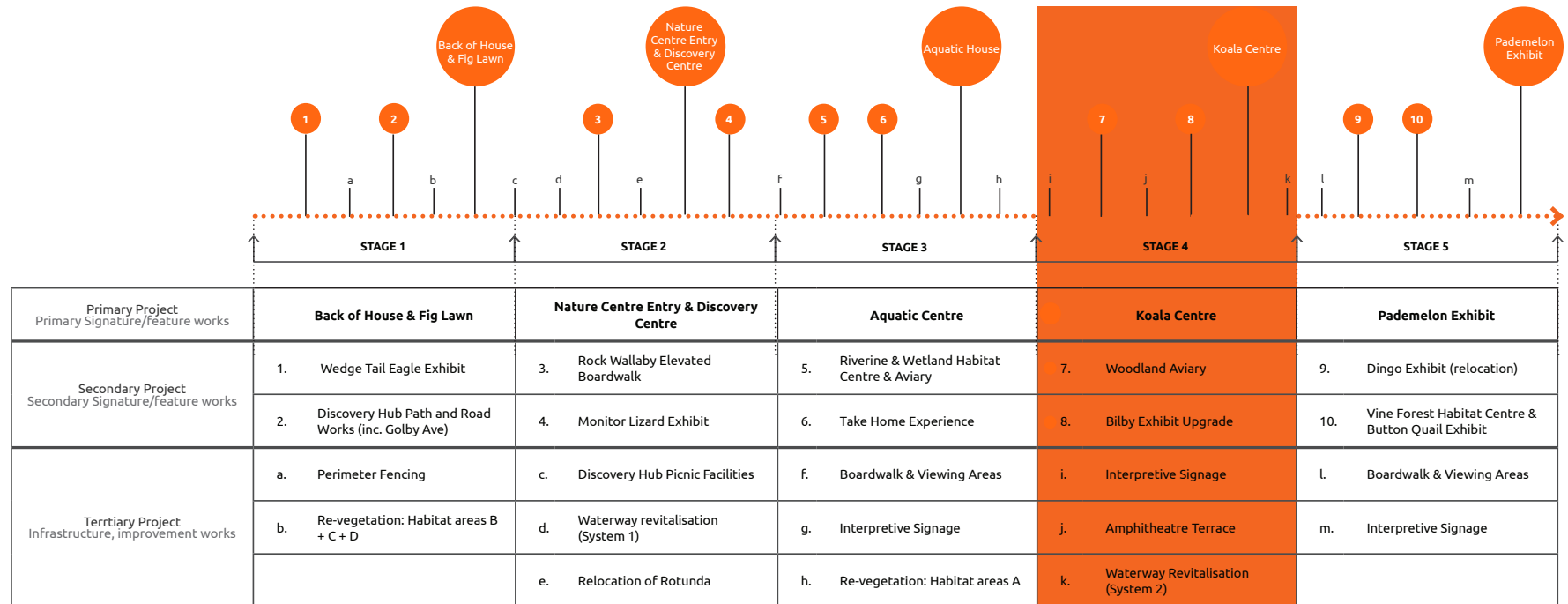
Item	Description of works	Unit	Rate	Stage 3	
				Qty	Amount
1.00	PRELIMINARIES				
1.01	General - Site mobilisation, Tree/ Environmental protection measures, Protective fencing allowance, Traffic management allowance, Site amenities, Site demobilisation, Insurances.	item	20.00%	1	\$ 502,880
1.02	Design Consultancy Fee - Landscape Architect/ Project Manager, Engineering, Geotech, Irrigation, Certification, Arboricultural advice, etc.	allow	8.00%	1	\$ 201,152
Sub Total					\$ 704,032
2.00	EARTHWORKS AND DEMOLITION				
2.01	Demolition - Demolition and removal of existing concrete / removal and stock pile of existing trees, dumping off site of all unsuitable and/or spoil material	item	\$ 85,000.00	0.75	\$ 63,750
2.02	Bulk Earthworks - Perform all bulk earthworks, cut to fill and compaction to engineers approval; inclusive of reshaping of bulk earthworks to achieve finished landscape levels. Strip topsoil and stockpile	m3	\$ 30.00	0	\$ -
2.03	Detail Earthworks - Perform all detail earthworks, i.e. feature mounding and shaping where required	m3	\$ 50.00	200	\$ 10,000
Sub Total					\$ 73,750
3.00	DRAINAGE				
Sub Total					\$ -
4.00	PATHS & PAVEMENTS				
Circulation Pathways and Hard Surfacing					
4.01	P1 - Feature Plaza Pavement - 175mm thk Colour: basic colour Finish: exposed - coloured aggregate	m2	\$ 160.00	50	\$ 8,000
4.02	P3 - Concrete Pathway - 1.8m wide - 125mm thk Colour: basic colour Finish: broomed	m2	\$ 130.00	175	\$ 22,750
4.03	P5 - Gravel Pathway - 3.0m wide - 100mm thk Colour: plain grey Finish: broomed	m2	\$ 60.00	80	\$ 4,800
4.04	P6 - Hardwood Timber Boardwalk / Bridge - 1.8m wide - including all structural members, fixings and finishes	m2	\$ 550.00	20	\$ 11,000
Sub Total					\$ 46,550
5.00	WATER FEATURE				
Sub Total					
6.00	WALLS & EDGES				
6.01	General Landscape Walls - general allowance for low height landscape stone walls	lin m.	\$ 750.00	3	\$ 2,250
Sub Total					\$ 2,250
7.00	STRUCTURES				
General					
7.01	Arbor - Hardwood timber Arbor with horizontal wires for vegetation to grow up, Solid Hood attached to underside for Shade and Weather Protection	lin m.	\$ 2,500.00	10	\$ 25,000

Item	Description of works	Unit	Rate	Stage 3	
				Qty	Amount
7.02	Nature Play / Discovery Play Element - Artistic themed nature play/discovery play equipment, exc. Playground certification	item	\$ 80,000.00	0	\$ -
Buildings					
7.03	Habitat Centre	m2	\$ 2,100.00	310	\$ 651,000
7.04	Aquatic House - Building, Internal Fit-out, Back of House	m2	\$ 4,500.00	310	\$ 1,395,000
Sub Total					\$ 2,071,000
8.00	SOFTWORKS				
8.01	PA1 - General Planting Area preparation: - ameliorated Subsoil & adding of necessary fertilizer - preparation of ground 150mm cultivated subgrade - spreading 300mm ameliorated topsoil - 75mm organic mulch - 3 x 140mm + 1 x 200mm pot/m2.	m2	\$ 55.00	2000	\$ 110,000
8.02	T1 - TURF preparation and TURF supply/ installation: - ameliorated Subsoil & adding of necessary fertilizer - Preparation of turf areas including excavation, cultivation and supply and spreading 100mm deep ameliorated topsoil - supply and install "Winter Green" turf species	m2	\$ 15.50	0	\$ -
8.03	Trees - 100Ltr	no.	\$ 255.00	10	\$ 2,550
8.04	Trees - 200Ltr	no.	\$ 450.00	4	\$ 1,800
8.05	Trees - 400Ltr	no.	\$ 1,000.00	0	\$ -
8.06	Trees - 1000Ltr	no.	\$ 1,800.00	0	\$ -
Sub Total					\$ 114,350
9.00	FENCING & HANDRAILS				
9.01	F1 - Nature Centre Fence Line - Supply and install aluminium fence boundary fence to match existing , incl. all footings, posts and fixings	lin m	\$ 350	0	\$ -
9.02	F2 - Exhibit Fence - Supply and install exhibit appropriate transparent fencing , incl. all footings, posts and fixings	lin m	\$ 225	100	\$ 22,500
9.03	F3 - Aviary Fence - Supply and install exhibit appropriate transparent fencing , incl. all footings, posts and fixings	m2	\$ 1,000	155	\$ 155,000
Sub Total					\$ 177,500
10.00	FURNITURE				
10.01	F1 - Bench Seat - signature designed and fabricated seat	no.	\$ 2,500.00	1	\$ 2,500.00
10.02	F2 - Plinth Seat - In situ concrete plinth seat	no.	\$ 3,000.00	0	\$ -
10.03	F3 - Picnic Table Setting - signature designed and fabricated seat and table	no.	\$ 8,500.00	0	\$ -
10.04	F4 - Rubbish Bins - double bin for general waste and recycling, signature design	no.	\$ 9,000.00	0	\$ -
10.05	F5 - General Signage and Wayfinding	no.	\$ 13,500.00	1	\$ 13,500.00
10.06	F6 - Drink Fountain - including water supply and connection to storm water	no.	\$ 8,000.00	0	\$ -

				Stage 3	
Item	Description of works	Unit	Rate	Qty	Amount
10.07	F7 - Maintenance Taps - including water supply and connection to storm water	no.	\$ 3,000.00	1	\$ 3,000.00
10.08	F8 - Artwork - includes consultation, construction and install	no.	\$ 10,000.00	1	\$ 10,000.00
10.09	F9 - Bollards - timber bollards	no.	\$ 120.00	0	\$ -
Sub Total					\$ 29,000
11.00	IRRIGATION				
11.01	Water Tank & pump for irrigation water storage	Allow	\$ 35,000.00		\$ -
11.02	Turf Irrigation - Automatic Commerical Grade Irrigation to Turf area - design, supply and install	m2	\$ 20.00		\$ -
11.03	Planting Irrigation - Automatic Commerical Grade Irrigation to PA Planting Beds - design, supply and install	m2	\$ 28.00		\$ -
Sub Total					\$ -
12.00	ELECTRICAL & LIGHTING				
12.01	Feature Lighting -Supply electricity & supply & install Feature Lighting (excl. pools & water features)	Allow	\$ 100,000.00		\$ -
12.02	Code Lighting -Supply electricity & supply & install Code Lighting	Allow	\$ 120,000.00		\$ -
12.03	CCTV cameras & distress alarms - general allowance	Allow	\$ 80,000.00		\$ -
Sub Total					\$ -
13.00	ESTABLISHMENT & MAINTENANCE				
13.01	General Establishment period - 13 weeks	week	\$ 1,200.00	13	\$ 15,600
Sub Total					\$ 15,600
14.00	GENERAL				
14.01					\$ -
14.02					\$ -
Sub Total					\$ -
SUB - TOTAL					\$ 3,234,032
20% CONTINGENCY					\$ 646,806
					TOTAL
TOTAL ESTIMATED COSTS					\$ 3,880,838

5.4. Implementation Stage 4

STAGE 4: PROPOSED IMPLEMENTATION ROLL OUT



PROPOSED IMPLEMENTATION STRATEGY ROLL OUT



- CONSTRUCTION HOARDING**
 - » Area of upgrade to be temporarily fenced off from public access
- CONSTRUCTION ACCESS**
 - » Service access during construction period
- PRIMARY VISITOR CIRCULATION**
 - » Existing visitor circulation to be retained
- PROPOSED CIRCULATION**
 - » Proposed visitor circulation
- PROPOSED PATH DEMOLITION**
 - » Existing path networks to be demolished
- GATE ACCESS**
 - » Proposed maintenance access points
- EXHIBIT BOUNDARY**
 - » Proposed exhibit to be opened during stage



STAGE 4: OPINION OF PROBABLE COST

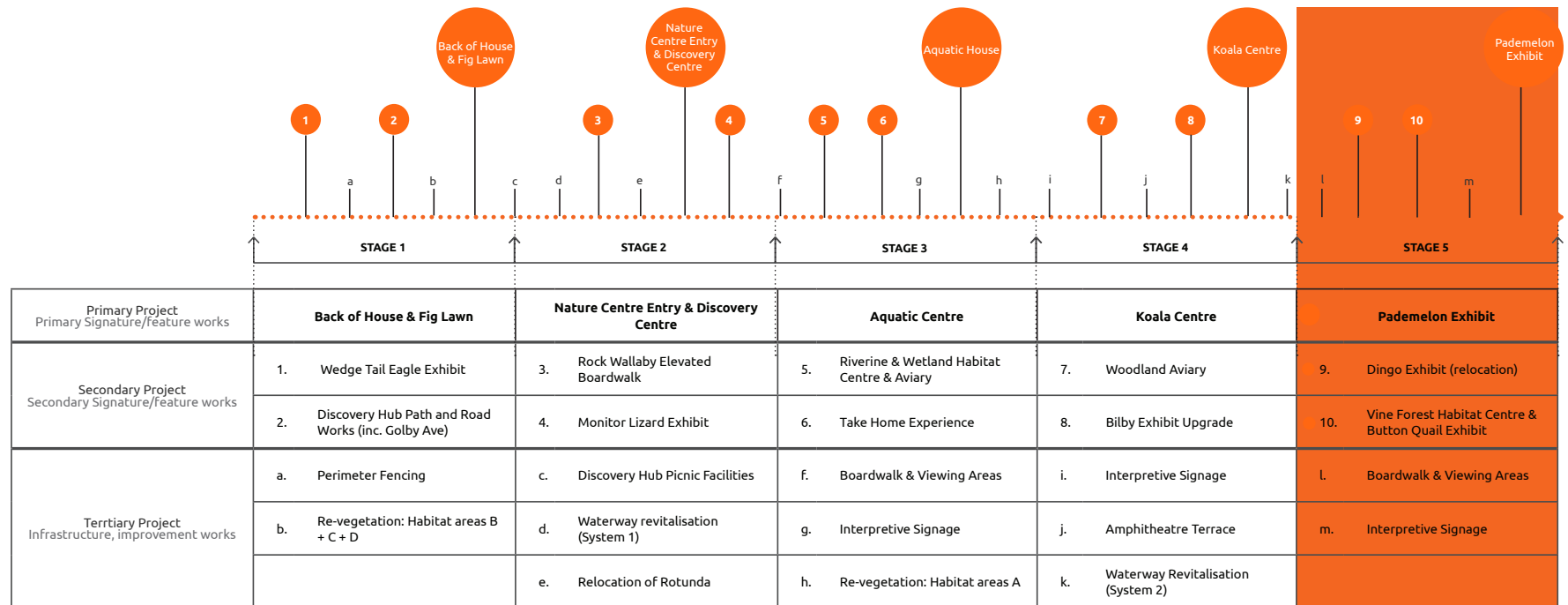
Item	Description of works	Unit	Rate	Stage 4	
				Qty	Amount
1.00	PRELIMINARIES				
1.01	General - Site mobilisation, Tree/ Environmental protection measures, Protective fencing allowance, Traffic management allowance, Site amenities, Site demobilisation, Insurances.	item	20.00%	1	\$ 166,720
1.02	Design Consultancy Fee - Landscape Architect/ Project Manager, Engineering, Geotech, Irrigation, Certification, Arboricultural advice, etc.	allow	8.00%	1	\$ 66,688
Sub Total					\$ 233,408
2.00	EARTHWORKS AND DEMOLITION				
2.01	Demolition - Demolition and removal of existing concrete / removal and stock pile of existing trees, dumping off site of all unsuitable and/or spoil material	item	\$ 85,000.00	0.2	\$ 17,000
2.02	Bulk Earthworks - Perform all bulk earthworks, cut to fill and compaction to engineers approval; inclusive of reshaping of bulk earthworks to achieve finished landscape levels. Strip topsoil and stockpile	m3	\$ 30.00	0	\$ -
2.03	Detail Earthworks - Perform all detail earthworks, ie: feature mounding and shaping where required	m3	\$ 50.00	200	\$ 10,000
Sub Total					\$ 27,000
3.00	DRAINAGE				
Sub Total					\$ -
4.00	PATHS & PAVEMENTS				
Circulation Pathways and Hard Surfacing					
4.01	P2 - Concrete Pathway - 3.0m wide - 125mm thk Colour: basic colour Finish: broomed	m2	\$ 130.00	25	\$ 3,250
4.02	P3 - Concrete Pathway - 1.8m wide - 125mm thk Colour: basic colour Finish: broomed	m2	\$ 130.00	175	\$ 22,750
4.03	P5 - Gravel Pathway - 3.0m wide - 100mm thk Colour: plain grey Finish: broomed	m2	\$ 60.00	45	\$ 2,700
4.04	P6 - Hardwood Timber Boardwalk / Bridge - 1.8m wide - including all structural members, fixings and finishes	m2	\$ 550.00	50	\$ 27,500
Sub Total					\$ 56,200
5.00	WATER FEATURE				
Creek Bed					
5.01	Waterway Edge Revitalisation	allow	\$ 25,000.00	1	\$ 25,000
Sub Total					\$ 25,000
6.00	WALLS & EDGES				
6.01	Terraces - Concrete seating terraces	lin m.	\$ 650.00	40	\$ 26,000
Sub Total					\$ 26,000
7.00	STRUCTURES				
Buildings					

Item	Description of works	Unit	Rate	Stage 4	
				Qty	Amount
7.01	Koala Centre - Retrofit and renovation, back of house	m2	\$ 2,300.00	145	\$ 333,500
7.02	Bilby Upgrade - general allowance to improve entry and exit to existing exhibit	Allow	\$ 80,000.00	1	\$ 80,000
Sub Total					\$ 413,500
8.00	SOFTWORKS				
Sub Total					
9.00	FENCING & HANDRAILS				
9.01	F1 - Nature Centre Fence Line - Supply and install aluminium fence boundary fence to match existing , incl. all footings, posts and fixings	lin m	\$ 350	0	\$ -
9.02	F2 - Exhibit Fence - Supply and install exhibit appropriate transparent fencing , incl. all footings, posts and fixings	lin m	\$ 225	44	\$ 9,900
9.03	F3 - Aviary Fence - Supply and install exhibit appropriate transparent fencing , incl. all footings, posts and fixings	m2	\$ 1,000	250	\$ 250,000
Sub Total					\$ 259,900
10.00	FURNITURE				
10.01	F1 - Bench Seat - signature designed and fabricated seat	no.	\$ 2,500.00	1	\$ 2,500.00
10.02	F2 - Plinth Seat - insitu concrete plinth seat	no.	\$ 3,000.00	0	\$ -
10.03	F3 - Picnic Table Setting - signature designed and fabricated seat and table	no.	\$ 8,500.00	0	\$ -
10.04	F4 - Rubbish Bins - double bin for general waste and recycling, signature design	no.	\$ 9,000.00	0	\$ -
10.05	F5 - General Signage and Wayfinding	no.	\$ 13,500.00	1	\$ 13,500.00
10.06	F6 - Drink Fountain - including water supply and connection to storm water	no.	\$ 8,000.00	0	\$ -
10.07	F7 - Maintenance Taps - including water supply and connection to storm water	no.	\$ 3,000.00	0	\$ -
10.08	F8 - Artwork - includes consultation, construction and install	no.	\$ 10,000.00	1	\$ 10,000.00
10.09	F9 - Bollards - timber bollards	no.	\$ 120.00	0	\$ -
Sub Total					\$ 26,000
11.00	IRRIGATION				
11.01	Water Tank & pump for irrigation water storage	Allow	\$ 35,000.00		\$ -
11.02	Turf Irrigation - Automatic Commerical Grade Irrigation to Turf area - design, supply and install	m2	\$ 20.00		\$ -
11.03	Planting Irrigation - Automatic Commerical Grade Irrigation to PA Planting Beds - design, supply and install	m2	\$ 28.00		\$ -
Sub Total					\$ -

				Stage 4	
Item	Description of works	Unit	Rate	Qty	Amount
12.00	ELECTRICAL & LIGHTING				
12.01	Feature Lighting				
	-Supply electricity & supply & install Feature Lighting (excl. pools &	Allow	\$ 100,000.00		\$ -
12.02	Code Lighting				
	-Supply electricity & supply & install Code Lighting	Allow	\$ 120,000.00		\$ -
12.03	CCTV cameras & distress alarms				
	- general allowance	Allow	\$ 80,000.00		\$ -
	Sub Total				\$ -
13.00	ESTABLISHMENT & MAINTENANCE				
13.01	General Establishment period				
	-13 weeks	week	\$ 1,200.00	13	\$ 15,600
	Sub Total				\$ 15,600
14.00	GENERAL				
14.01					\$ -
14.02					\$ -
	Sub Total				\$ -
			SUB - TOTAL		\$ 1,082,608
	20% CONTINGENCY				\$ 216,522
					TOTAL
TOTAL ESTIMATED COSTS					\$ 1,299,130

5.4. Implementation Stage 5

STAGE 5: PROPOSED IMPLEMENTATION ROLL OUT



PROPOSED IMPLEMENTATION STRATEGY ROLL OUT



- CONSTRUCTION HOARDING**
 - » Area of upgrade to be temporarily fenced off from public access
- CONSTRUCTION ACCESS**
 - » Service access during construction period
- PRIMARY VISITOR CIRCULATION**
 - » Existing visitor circulation to be retained
- PROPOSED CIRCULATION**
 - » New visitor circulation
- PROPOSED PATH DEMOLITION**
 - » Existing path networks to be demolished
- GATE ACCESS**
 - » Proposed maintenance access points
- EXHIBIT BOUNDARY**
 - » Proposed exhibit to be opened during stage



STAGE 5: OPINION OF PROBABLE COST

Item	Description of works	Unit	Rate	Stage 5	
				Qty	Amount
1.00	PRELIMINARIES				
1.01	General - Site mobilisation, Tree/ Environmental protection measures, Protective fencing allowance, Traffic management allowance, Site amenities, Site demobilisation, Insurances.	item	20.00%	1	\$ 37,150
1.02	Design Consultancy Fee - Landscape Architect/ Project Manager, Engineering, Geotech, Irrigation, Certification, Arboricultural advice, etc.	allow	8.00%	1	\$ 14,860
	Sub Total				\$ 52,010
2.00	EARTHWORKS AND DEMOLITION				
2.01	Demolition - Demolition and removal of existing concrete / removal and stock pile of existing trees, dumping off site of all unsuitable and/or spoil material	item	\$ 85,000.00	0.2	\$ 17,000
2.02	Detail Earthworks - Perform all detail earthworks, i.e. feature mounding and shaping where required	m3	\$ 50.00	200	\$ 10,000
	Sub Total				\$ 27,000
3.00	DRAINAGE				
	Sub Total				\$ -
4.00	PATHS & PAVEMENTS				
	Circulation Pathways and Hard Surfacing				
4.01	P3 - Concrete Pathway - 1.8m wide - 125mm thk Colour: basic colour Finish: broomed	m2	\$ 130.00	50	\$ 6,500
	Sub Total				\$ 6,500
5.00	WATER FEATURE				
	Sub Total				\$ -
6.00	WALLS & EDGES				
	Sub Total				\$ -
7.00	STRUCTURES				
	Buildings				
7.01	Habitat Centre	m2	\$ 2,100.00	50	\$ 105,000
	Sub Total				\$ 105,000
8.00	SOFTWORKS				
8.01	T1 - TURF preparation and TURF supply/ installation: - ameliorated Subsoil & adding of necessary fertilizer - Preparation of turf areas including excavation, cultivation and supply and spreading 100mm deep ameliorated topsoil - supply and install "Winter Green" turf species	m2	\$ 15.50	500	\$ 7,750
	Sub Total				\$ 7,750
9.00	FENCING & HANDRAILS				

Item	Description of works	Unit	Rate	Stage 5	
				Qty	Amount
9.01	F2 - Exhibit Fence - Supply and install exhibit appropriate transparent fencing , incl. all footings, posts and fixings	lin m	\$ 225	90	\$ 20,250
	Sub Total				\$ 20,250
10.00	FURNITURE				
10.01	F1 - Bench Seat - signature designed and fabricated seat	no.	\$ 2,500.00	1	\$ 2,500.00
10.02	F5 - General Signage and Wayfinding	no.	\$ 13,500.00	0.5	\$ 6,750.00
10.03	F8 - Artwork - includes consultation, construction and install	no.	\$ 10,000.00	1	\$ 10,000.00
	Sub Total				\$ 19,250
11.00	IRRIGATION				
11.01	Water Tank & pump for irrigation water storage	Allow	\$ 35,000.00		\$ -
11.02	Turf Irrigation - Automatic Commerical Grade Irrigation to Turf area - design, supply and install	m2	\$ 20.00		\$ -
11.03	Planting Irrigation - Automatic Commerical Grade Irrigation to PA Planting Beds - design, supply and install	m2	\$ 28.00		\$ -
	Sub Total				\$ -
12.00	ELECTRICAL & LIGHTING				
12.01	Feature Lighting -Supply electricity & supply & install Feature Lighting (excl. pools & water features)	Allow	\$ 100,000.00		\$ -
12.02	Code Lighting -Supply electricity & supply & install Code Lighting	Allow	\$ 120,000.00		\$ -
12.03	CCTV cameras & distress alarms - general allowance	Allow	\$ 80,000.00		\$ -
	Sub Total				\$ -
13.00	ESTABLISHMENT & MAINTENANCE				
13.01	General Establishment period -13 weeks	week	\$ 1,200.00	13	\$ 15,600
	Sub Total				\$ 15,600
14.00	GENERAL				
	Sub Total				\$ -
	SUB - TOTAL				\$ 253,360
	20% CONTINGENCY				\$ 50,672
	TOTAL				\$ 304,032
	TOTAL ESTIMATED COSTS				\$ 304,032



5.5. Summary

OPINION OF PROBALBE COST: ALL STAGES

Item	Description of works	Value of Works	Contingency		Total
		Amount	Qty	Amount	Amount
1.00	Stage 1	\$ 2,794,588.80	20%	\$ 558,918	\$3,353,506.56
2.00	Stage 2	\$ 888,816.00	20%	\$ 177,763	\$1,066,579.20
3.00	Stage 3	\$ 3,234,032.00	20%	\$ 646,806	\$3,880,838.40
4.00	Stage 4	\$ 1,082,608.00	20%	\$ 216,522	\$1,299,129.60
5.00	Stage 5	\$ 253,360.00	20%	\$ 50,672	\$304,032.00
Sub Total		\$ 8,253,405		\$ 1,650,681	
TOTAL ESTIMATED COSTS					\$9,904,085.76



6.0 Design Issues and Guidelines

6.1. Landscape and Plant Communities

6.1.1 Riverine and Wetland Habitat

Species listed below are a sample of the species observed in these vegetation communities and are by no means exhaustive. The species provided are however encouraged to be utilised as a base for planting within the habitat.

COMMONLY OBSERVED TREES and SHRUBS:

- » Queensland Blue Gum (*Eucalyptus. tereticornis*);
- » Morton Bay Ash (*Corymbia tessellaris*)*;
- » Broad-leaved Apple (*Angophora subvelutina*);
- » Broad-leaved and Rough-barked Apple (*Angophora floribunda*)*;
- » River Oak (*Casuarina cunninghamiana subsp. cunninghamiana*);
- » Weeping Bottle brush (*Melaleuca viminalis*);
- » Black Tea-tree (*Melaleuca bracteata*);
- » Creek Sandpaper Fig (*Ficus coronata*);
- » Black Bean (*Castanospermum australe*);
- » Brown Laurel (*Cryptocarya triplinervis*);
- » Red Kamala (*Mallotus philippensis*)
- » Silky Oak (*Grevillea robusta*)
- » Brush Cherry (*Syzygium australe*); and
- » Satinash (*Syzygium floribundum*)

GRASSES / GROUNDCOVERS:

The ground layer is fairly sparse especially where there is dense shade. Dominant species of the ground layer includes:

- » Mat rush (*Lomandra Hystrix*)

Other ground cover species that may be observed include:

- » Binung (*Christella dentata*);
- » Creeping Beard Grass (*Oplismenus aemulus*);
- » False Mallow (*Malvastrum coromandelianum*);
- » Maidenhair Fern (*Adiantum aethiopicum*);
- » Native Glycine (*Glycine clandestina*);
- » Pennywort (*Centella asiatica*);
- » Phyllanthus (*Phyllanthus virgatus*); and
- » Rough Maidenhair Fern (*Adiantum hispidulum*)



Native Glycine (*Glycine clandestina*)



Binung (*Christella dentata*)



Black Tea-tree (*Melaleuca bracteata*)



Silky Oak (*Grevillea robusta*)



Brush Cherry (*Syzygium australe*)



Weeping Bottle Brush (*Maleleuca viminalis*)



Broad-leaved Apple (*Angophora subvelutina*)



Moreton Bay Ash (*Corymbia tessellaris*)



Mat Rush (*Lomandra Hystrix*)



Phyllanthus (*Phyllanthus virgatus*)



Pennywort (*Centella asiatica*)

6.1.2 Woodland and Open Forest Habitat

Species listed below are a sample of the species observed in these vegetation communities and are by no means exhaustive. The species provided are however encouraged to be utilised as a base for planting within the habitat.

COMMONLY OBSERVED TREES and SHRUBS:

- » Broad-leaved Apple (*Angophora subvelutina*);
- » Rough-barked Apple (*Angophora floribunda*);
- » Swamp Box (*Lophostemon suaveolens*);
- » Moreton Bay Ash (*Corymbia tessellaris*);
- » Queensland Blue Gum (*Eucalyptus tereticornis*);
- » Queensland Grey Ironbark (*Eucalyptus siderophloia*);
- » Gum-Topped Box (*Eucalyptus moluccana*);
- » Narrow-leaved Ironbark (*Eucalyptus crebra*);
- » Silver-leaved Ironbark (*Eucalyptus melanophloia*);
- » Pink Bloodwood (*Corymbia intermedia*);
- » Spotted Gum (*Corymbia citriodora* subsp. *variegata*);
- » Swamp Tea-tree (*Melaleuca irbyana*);
- » Weeping Bottlebrush (*Melaleuca viminalis*);
- » Black Tea-tree (*Melaleuca bracteata*);
- » Moreton Bay Ash (*Corymbia tessellaris*);
- » Narrow-leaved Red Gum (*Eucalyptus seeana*) and
- » Swamp Mahogany (*Lophostemon suaveolens*)

GRASSES / GROUNDCOVERS:

Mature Eucalypts commonly have relatively open crowns allowing for sunlight to reach the ground where a mix of grasses and herbaceous plants flourish. Species that may be observed are;

- » Kangaroo Grass (*Themeda triandra*);
- » Queensland Blue Grass (*Dichanthium sericeum*);
- » Scented Top (*Capillipedium spicigerum*);
- » Native Millet (*Panicum decompositum*);
- » Blue-leaved Grass Trees (*Xanthorrhoea glauca*);
- » Blady Grass (*Imperata cylindrica*);
- » Cockatoo Grass (*Cymbopogon refractus*); and
- » Forest Blue Grass (*Bothriochloa bladhii*)



Scented Top (*Capillipedium spicigerum*)



Forest Blue Grass (*Bothriochloa bladhii*)



Queensland Grey Ironbark (*Eucalyptus siderophloia*)



Morton Bay Ash (*Corymbia tessellaris*)



Gum-Topped Box (*Eucalyptus moluccana*)



Swamp Tea-tree (*Maleleuca irbyana*)



Spotted Gum (*Corymbia citriodora subsp. variegata*)



Silver-leaf Ironbark (*Euc. melanophloia*)



Pink Bloodwood (*Corymbia intermedia*)



Native Millet (*Panicum decompositum*)



Blue-leaved Grass Trees (*Xanthorrhoea glauca*)

6.1.3 Vine Forest Habitat

Species listed below are a sample of the species observed in these vegetation communities and are by no means exhaustive. The species provided are however encouraged to be utilised as a base for planting within the habitat.

COMMONLY OBSERVED TREES :

- » Crows Ash (*Flindersia australis*);
- » Small leaved Fig (*Ficus obliqua*);
- » Hoop Pine (*Araucaria cunninghamii*);
- » Silky Oak (*Grevillea robusta*);
- » Native Holly (*Alchornea ilicifolia*);
- » Native Witch Hazel (*Turraea pubescens*);
- » Native Pomegranate (*Capparis arborea*);
- » Crow's Apple (*Owenia venosa*);
- » Deep Yellowwood (*Rhodospaera rhodanthema*);
- » Scrub Ironbark (*Bridelea exaltata*);
- » Giant Ironwood (*Choricarpia subargentea*);
- » Ivorywood (*Siphanodon australis*);
- » Moreton Bay Fig (*Ficus macrophylla*);
- » Pine Mountain Coral Tree (*Erythrina numerosa*);
- » Rosewood (*Acacia fasciculifera*);
- » Small-leaved Fig (*Ficus obliqua*); and
- » Yellowwood (*Flindersia xanthoxyla*)

PIONEER SPECIES:

- » Celerywood (*Polyscias elegans*);
- » Green Kamala (*Mallotus laeoxylodes*);
- » Lolly Bush (*Clerodendrum floribundum*); and
- » Maiden's Wattle (*Acacia maidenii*)

GRASSES, FERNS, FORBS AND EPIHYTES:

- » Bird's Nest Fern (*Asplenium australasicum*);
- » Dwarf Sickle Fern (*Pellaea nana*);
- » King Orchid (*Dendrobium speciosum*);
- » Large-leaved Sickle Fern (*Pellaea paradoxa*);
- » Maidenhair Fern (*Adiantum aethiopicum* and *A. atroviride*);
- » Stout Bamboo Grass (*Austrostipa ramosissima*); and
- » Resurrection Fern (*Doryopteris concolor*)

VINES:

- » Black Silkpod (*Parsonsia leichhardtii*);
- » Blood Vine (*Austrosteensia blackii*);
- » Bower Vine (*Pandorea pandorana*);
- » Burney Vine (*Trophis scandens*);

- » Corky Prickle Vine (*Caesalpinia subtropica*);
- » Hairy Silkpod (*Parsonsia velutina*);
- » Hairy Water Vine (*Cayratia acris*);
- » Kangaroo Vine (*Cissus antarctica*);
- » Native Jasmine (*Jasminum didymum* subsp. *racemosum*);
- » Wombat Berry (*Eustrephus latifolius*)



Burney Vine (*Trophis scandens*)



Black Silkpod (*Parsonsia leichhardtii*)



Kangaroo Vine (*Cissus antarctica*)



Native Jasmine (*Jasminum didymum*)



Deep Yellowwood (*Rhodospaera rhodanthema*)



Native Pomegranate (*Capparis arborea*)



Moreton Bay Fig (*Ficus Macrophylla*)



Crows Ash (*Flindersia australis*)



Birds (Jippi) Nest Fern (*Asplenium australasicum*)



King Orchid (*Dendrobium speciosum*)



Maidenhair Fern (*Adiantum aethiopicum*)

6.2. Materials and Built Elements

A cohesive suite of materials, forms and furniture is encouraged to be developed in detailed design and rolled out with the implementation of the Masterplan. The list of features below provides a guideline to begin to establish the developing principles for material selection and built element design.

PATHWAYS

Through the rationalisation of the path network during the implementation of the masterplan, paths should be rationalised to reduce the choices visitors are required to make to navigate the centre and be legible in their materiality to understand their hierarchy. Every effort should be made to make the centre accessible to everyone.

- » Service Roads / Maintenance Access Tracks should be approximately 3.5m wide gravel to allow for vehicle access where required.
- » Primary visitor paths within the nature centre cater for the highest level of traffic and should be either treated timber elevated decking or concrete at a minimum of 1.8m wide.
- » Primary visitor paths within the Discovery Hub cater for the highest level of traffic and should be concrete
- » Throughout the nature centre and discovery hub there is extensive use of pathways which can provide opportunity for the inclusion of feature patterning details and embellishment. These can be limited to directional 'pathfinders' inlaid and/or painted onto concrete works and decking or establish patterning related to specific habitats, nodes and animal exhibits. An example of this could be patterning associated with specific animal tracks and Aboriginal cultural story telling.
- » Any new concrete works should generally maintain a crossfall of 1-2%. Upright curves and constructed edges on paths should be avoided as they detract from the natural and historic character of Queens Park



STONE

In keeping with the heritage of Queens Park, the use of stone feature work is encouraged in the form of:

- » Feature paving
- » Low feature / seating walls
- » Proposed Built Forms
- » Swales / creek embellishment



FENCING AND EDGING

- » perimeter fencing is encouraged to be re-constructed in keeping with the recently upgraded fencing to the Nature Centre and to continue to ensure that it is:
- » Quarantine and Fox proof
- » Has the ability to contain animals
- » and any fencing along Goleby Avenue and the Southern car park is adequately screened with planting.
- » Where barriers are required along path edges a low bollard pole with stainless steel wire detail is encouraged to maintain visitor visibility





FURNITURE

The roll out of a furniture suite within the nature centre and discovery hub is encouraged to be developed within the detailed development of this masterplan and is to include:

- » Seating within viewing areas and pause areas
- » Drinking fountains and bins
- » Picnic tables and seats
- » Wayfinding and interpretive signage

The furniture developed should be in-keeping with the built form of the park and the natural setting of the nature centre. The opportunity exists for the inclusion of interpretive and discovery artworks within the design of the furniture suites which can be related to the distinct habitats where they may be situated.

ARTWORK

Within the context of the Nature Centre setting there is an opportunity for an ongoing art / interpretation program which can be implemented within the roll out of the master plan. Artwork can be undertaken by community professionals artists or run by community groups. The artwork should be considered to contribute on various levels, not only as a point of visual interest but contain educational value and fulfil practical functions.

- » There is a positive opportunity to use artwork to focus on the inter-relationships between humans - animals - environment - culture.
- » Artwork can serve functionally in elements such as furniture, paving, signage and discovery landmarks placed throughout the centre and discovery hub.
- » Works should be visually accessible to cater to a wide range of users.

ARCHITECTURE

Buildings and structures associated with individual exhibits should adopt an architectural theme or style that is consistent with the surrounding habitat themeing and ensure to be as unobtrusive within the centre as is feasible:

- » Timber screening elements are encouraged which can accommodate vines / creepers
- » Low stone feature walls in keeping with the heritage of Queens Park

Maintenance buildings / back of house should be more neutral in character.

Building design should be energy efficient and utilise water collection where possible.

Buildings / structures within the Discovery Hub should aim to be responsive of the historical character of Queens Park. These buildings should not aim to be pseudo-historical but rather adopt historic elements in the form of material, colour and form.



Appendices

Detail Items for Consideration

Additional consideration for the implementation of QPNC Masterplan:

1. When constructing the roundabout connecting Goleby Avenue and Merle Finimore Avenue, additional consideration will be required to be given to managing run off and overland flow coming down from the greenhouses. There are currently issues managing run off, particularly in the area where the new proposed nature centre entry is located.
2. New bus drop off zone will be practical however additional bus parking should also be a consideration be in the detailed design of the back car park.
3. The suggested new alignment of the footpath along Goleby Avenue will need to be investigated further to assess its practicality. With the number of trees adjacent to the existing footpath we will need to be careful of damaging or interfering with roots etc.
4. There have been several suggestions throughout the master planning process that the suggested location of the new major infrastructure such as the platypus enclosure could reduce amenity of Queens Park if there is a strong visual presence from the outside of the Nature Centre looking in. These potential impacts can be mitigated through other means such as the choice of materials used during construction and how much screening we can do via planting etc.
5. Will need to ensure that the design of the roundabout is bus friendly and that they can fully circulate it successfully.
6. Requires drinking water sources for people outside and inside the Nature Centre. Currently the only one available for people who go to the nursery, Nerima Gardens or the Nature Centre is inside there.

NOTICE:

PRELIMINARY HERITAGE ADVICE 02

QUEENS PARK NATURE CENTRE

Date:	23-08-2018
Issued to:	David Hatherly Vee Design
Project:	Queens Park Nature Centre
Project No:	17201
Subject:	Review of 85% complete Proposal and Design Development Queries –

The following queries have been forwarded:

1. The nett reduction in hard stand / pavement area – refer to the attached Demolition plan – orange highlighting new pavement and blue highlighting removal of hard pavement for soft landscape. You can see that we are removing a lot of road and bitumen from around the existing Nursery building. Would this be seen as a positive?
2. Relocation of the Nature Centre entry and removal of the existing Gazebo structure – refer attached Demolition plan. Would this be a concern? I know your previous report suggested the Gazebo had no significant relevance in its current location.
3. Introduction of a new "Discovery Hub Shelter" and "Nature Centre Entry" – refer items 1 & 2 on the attached master plan, also refer pages 42-45 of draft report. The intent of these buildings/ structures are to be very light and open and using similar materials to the Environmental Education Centre and Café. Would these new structures be seen as too much newly introduced built form?
4. Introduction of the "Spine Connector" – refer item 3 on the attached master plan, also refer page 46 of draft report. This is a new primary connector path to provide legibility, we are considering a simple Arbour structure along parts of this spine path to define it as the primary connects (materials and design in keeping with the existing Env. Ed Centre & Café). Would this new arbour be seen as too much newly introduced built form?
5. Significance of Nursery Building and potential impacts of proposed development of the car park.

1. DEMOLITION OF HARD LANDSCAPE REPLACING WITH SOFT LANDSCAPE



The blue areas nominated are not identified as being of specific significance. The reduction of the hard surfaces which are later adaptations and increase in soft landscaping would be considered to be a beneficial modification.

2. RELOCATION OF THE NATURE CENTRE ROTUNDAU ENTRY

The Nature Centre Rotunda may contain some early fabric from the collapsed Gazebo. The ventilator and other elements may be of some significance. It is essentially a reconstruction that was constructed and conveniently utilised as an entry to the Nature Centre.



Nature centre rotunda

Extracted from the CMP:

A timber-framed, open octagonal structure with an octastyle corrugated iron roof surmounted by a decorative roof vent. The guttering is currently a modern SQUARELINE - profile. Timber posts are embellished by timber capital moulds and cast iron brackets and frieze. Diagonal v-jointed timber balustrade panels form seat backs to alternating perimeter panels.

The structure was relocated from the "play flat" and now sits on a concrete floor slab and steel post stirrups providing an arrival point for the nature centre. The structure appears to be generally in good physical condition although it is currently slightly out of plumb.

The elements of the Rotunda are noted with the following relative levels of significance:

- c.1891 rotunda generally
- Original location (adjacent to Merle Finimore Drive)
- Current location (since 1938)
- Octastyle roof form
- Corr. iron roof
- Decorative ridge ventilator
- SQUARELINE gutters
- Cast iron frieze
- Timber seats & balustrades
- Concrete floor slab

B
B
C
A
C
B
E
B
B
D

Relocation to the known original location would be supportable as this is identified to be a significant aspect. The concrete slab could be demolished with little impact on significance. It would be important to relocate all the building fabric however its reconstruction in location close to the original would be considered beneficial.

The relocation should be addressed with a location proposed in the Master Plan and described in detail in the Heritage Impact Statement accompanying the Master Plan.

3. INTRODUCTION OF NEW ELEMENTS

The proposed light-weight small-scale built forms are sympathetic and identifiable as new additions. This legibility is supported in Burra Charter principles and is supported as an appropriate response. The design should be addressed in the Heritage Impact Statement accompanying the Master Plan.

4. INTRODUCTION OF SPINE CONNECTOR

The spine connecting path is an appropriate and sympathetic pathway making logical connections between key aspects. The new hardstand path is offset by replacement of hard with soft landscaping elsewhere. The proposed light-weight small-scale About providing shaded seating is sympathetic and identifiable as an appropriate new addition. The design should be addressed in the Heritage Impact Statement accompanying the Master Plan.

5. SIGNIFICANCE OF THE NURSERY BUILDING

The Plant Nursery is located in the eastern upper section. The following is extracted from the Conservation Management Plan:

The plant nursery area consists of a series of buildings including a recent toilet block, a c.1970s single-storey concrete block and metal deck roof office building and the earlier single-storey, timber-framed and weatherboard-clad Lloyd Bird Education Centre. The latter building has a corrugated iron gable roof and various additions over time including an unsympathetic northern bullnosed awning and a large, sympathetic eastern open plan addition with a concrete block base.

The toilet block and education centre appear to be generally in good physical condition while the office building has some masonry cracking and appears to be generally in fair physical condition.



6. SIGNIFICANCE OF ELEMENTS – PERTAINING TO THE NATURE CENTRE

The Plant Nursery

- The Lloyd Bird Education Centre component of the building is generally identified to be of level C significance. The eastern addition (Level D) and northern awnings (Level E) are not significant.
- The c1970s office building is not significant (Level D)
- The Plant Nursery use is identified to be of social significance for longstanding uses similar to several of the park functions and features such as the playground, the nature centre and free tree program conducted from the plant nursery.
- Maintaining dense vegetation creates an edge between the Nature Centre and the more open park grounds and the Plant Nursery and is consistent in maintaining the character of the Park.

Queensland Heritage Register –

The Nature Centre (zoo) is noted specifically in the Queensland Heritage Register Entry citation, and the Plant Nursery is mentioned for its use in supplying plants to homes in Ipswich.

Criterion G

The place has a strong or special association with a particular community or cultural group for social, cultural or spiritual reasons.

The park has a strong association with the people of Ipswich as a place of recreation, incorporating a parklands, zoo area, facilities for tennis, bowls and croquet, a band rotunda, a wedding chapel and is a source for plants for homes in Ipswich.

In addressing the query of the significance aspects related to the Plant Nursery and a review of the project proposal the following items are provided to assist with the design.

- The identified aspects of significance at the Plant Nursery should be conserved in accordance with the CMP.
- The proposal appropriately provides an improved public interface to the Plant Nursery.
- The proposed modification to the car park is to non-significant aspect and provides a 'softer' green space addressing the Plant Nursery, which is considered beneficial.
- recommend minor conservation works to the significant aspects of the Plant Nursery are proposed by the Master Plan.

7. RECOMMENDATIONS FROM REVIEW OF 85% COMPLETE PROPOSAL

Overall the proposal presents a well-crafted and elegant upgrade to the existing Nature Centre and surrounds. The adaptations and additions are considered to be minimal and appropriate and nothing appears to contradict the Conservation Management Plan policies. Only minimal impacts on significance aspects have been identified and a supporting Heritage Impact Statement will be provided to accompany the final issue of the Master Plan.

The Master Plan would be well supported if you were to add a 'Heritage' page identifying the heritage aspects. If you forward a page layout with the existing landscape features I would be happy to provide a mark-up or make notes of any 'fine-tuning' notes to be included on the plan.

The draft of the Heritage Impact Statement can be provided in approximately 2 weeks.

Yours faithfully



Jacqueline Pearce
Director Architect Reg 3553

ATTACHMENT B

IPSWICH NATURE CENTRE: 7 YEAR DELIVERY PROGRAM

SPORT, RECREATION & NATURAL RESOURCES BRANCH

PRELIMINARY OPINION OF PROBABLE COSTS (VEE DESIGN)				
STAGE	TIMING		DESCRIPTION	TOTALS
Stage 1	19/20 - 21/22	Primary Project	1. Back of House & Fig Lawn	\$ 3,353,506.56
		Secondary Projects	1. Wedge Tail Eagle Exhibit 2. Discovery Hub Path and Road Works (inc. Golby Ave)	
		Tertiary Project	1. Perimeter Fencing 2. Re-vegetation: Habitat areas	
Stage 2	22/23	Primary Project	Nature Centre Entry & Discovery Centre	\$ 1,066,579.20
		Secondary Projects	1. Rock Wallaby Elevated Boardwalk 2. Monitor Lizard Exhibit	
		Tertiary Project	1. Discovery Hub Picnic Facilities 2. Waterway revitalisation (System 1) 3. Relocation of Rotunda	
Stage 3	23/24	Primary Project	1. Aquatic Centre	\$ 3,880,838.40
		Secondary Projects	1. Riverine & Wetland Habitat Centre & Aviary 2. Take Home Experience	
		Tertiary Project	1. Boardwalk & Viewing Areas 2. Interpretive Signage 3. Re-vegetation: Habitat areas A	
Stage 4	24/25	Primary Project	1. Koala Centre	\$ 1,299,129.60
		Secondary Projects	1. Woodland Aviary 2. Bilby Exhibit Upgrade	
		Tertiary Project	1. Interpretive Signage 2. Amphitheatre Terrace 3. Waterway Revitalisation (System 2)	
Stage 5	25/26	Primary Project	1. Pademelon Exhibit	\$ 304,032.00
		Secondary Projects	1. Dingo Exhibit (relocation) 2. Vine Forest Habitat Centre & Button Quail Exhibit	
		Tertiary Project	1. Boardwalk & Viewing Areas 2. Interpretive Signage	
				\$ 9,904,085.76

CONCEPT DESIGN (CD), DETAIL DESIGN (DD) & CONSTRUCTION: INDICATIVE PHASING								
STAGE		19/20	20/21	21/22	22/23	23/24	24/25	25/26
Stage 1	Stage 1 CD							
	Stage 1 DD							
	Stage 1 Construction							
Stage 2	Stage 2 CD							
	Stage 2 DD							
	Stage 2 Construction							
Stage 3	Stage 3 CD							
	Stage 3 DD							
	Stage 3 Construction							
Stage 4	Stage 4 CD							
	Stage 4 DD							
	Stage 4 Construction							
Stage 5	Stage 5 CD							
	Stage 5 DD							
	Stage 5 Construction							

Environment Committee	
Mtg Date: 19.02.19	OAR:
Authorisation: Bryce Hines	

MP:MP

\\Council\Data\WPR\Departmental\Committee Reports\3101 MP Terms of Reference for the City of Ipswich
Local Disaster Management Group.docx

31 January 2019

MEMORANDUM

TO: ACTING SPORT RECREATION AND NATURAL RESOURCES MANAGER

FROM: PRINCIPAL OFFICER (EMERGENCY MANAGEMENT)

RE: TERMS OF REFERENCE FOR THE CITY OF IPSWICH LOCAL DISASTER
MANAGEMENT GROUP

INTRODUCTION:

This is a report by the Principal Officer (Emergency Management) dated 31 January 2019 concerning the review of the terms of Reference of the City of Ipswich Local Disaster Management Group.

ADVANCE IPSWICH THEME LINKAGE

The nature of this report is aligned to the following Advance Ipswich themes:

- Caring for the Community
- Caring for the Environment

BACKGROUND:

The current terms of reference for the City of Ipswich Local Disaster Management Group (LDMG) are contained within Part 2 of the Ipswich City Council Local Disaster Management Plan (LDMP) (Attachment A) which was adopted by Council resolution on the 22 August 2017.

Amendments to plans, which result in changes that are greater than those considered minor and inconsequential must be approved by Council pursuant to section 80(1)(b) of the Act. Further, post Council approval, these changes must then be formally endorsed by the Local Disaster Management Group (LDMG).

TERMS OF REFERENCE REVISION:

The review of the terms of reference commenced at the City of Ipswich LDMG meeting in November 2018, with a discussion and review facilitated by the Principal Officer (Emergency Management) and overseen by the Chair of the City of Ipswich LDMG, Mr Greg Chemello.

It is proposed that the terms of reference be removed from the Local Disaster Management Plan to a standalone document titled the Terms of Reference for the City of Ipswich Local Disaster Management Group.

The proposed Terms of Reference for the City of Ipswich Local Disaster Management Group (Attachment B) have been prepared from the planning session and the disaster management guideline issued by the State of Queensland pursuant to the *Disaster Management Act 2003*.



The changes to the terms of reference include:

- Articulation of relevant provisions of the *Disaster Management Regulation 2014*
- Introduction of scope and limitations
- Clarification of membership categories
- Clarification of membership responsibilities and obligations
- Introduction of an annual reporting element

CONCLUSION:

The amendments to the terms of reference will provide greater clarity around the activities and functions of the Local Disaster Management Group within the City of Ipswich and ensure alignment with the *Disaster Management Act 2003* and *Disaster Management Regulation 2014*.

ATTACHMENT:

Name of Attachment	Attachment
Local Disaster Management Plan (June 2017)	 Attachment A
Terms of Reference for the City of Ipswich Local Disaster Management Group	 Attachment B

RECOMMENDATION:

That the Interim Administrator of Ipswich City Council resolve:

- A. That the Terms of Reference for the City of Ipswich Local Disaster Management Group, as detailed in Attachment B of the report by the Principal Officer (Emergency Management) dated 31 January 2019, be adopted.
- B. That the Chief Operating Officer (Works, Parks and Recreation), in their role as the Local Disaster Coordinator and in consultation with the Interim Administrator, be authorised to make any amendments deemed necessary on the basis of comment received from the Local Disaster Management Group.

Matthew Pinder

PRINCIPAL OFFICER (EMERGENCY MANAGEMENT)

I concur with the recommendation contained in this report.

Kaye Cavanagh

ACTING SPORT RECREATION AND NATURAL RESOURCES MANAGER

I concur with the recommendation contained in this report.

Bryce Hines

CHIEF OPERATING OFFICER (WORKS, PARKS AND RECREATION)

Ipswich City Council Local Disaster Management Plan

June 2017





A Brilliant Morning by L Hepburn
Enviroplan Photographic Competition



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Direct Hit by S Boyle
Enviroplan Photographic Competition



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How prepared are you?



Visit [lpswich.qld.gov.au/emergency](https://www.lpswich.qld.gov.au/emergency) for more information on being prepared, including emergency contact numbers, fact sheets and check lists.

Emergency contact list

Light Show by B Duhig
Enviroplan Photographic Competition

In an emergency, always dial 000

TTY¹ Emergency call 106

Animal Emergencies

1300 ANIMAL 1300 130 372

Department of Agriculture
and Fisheries 13 25 23

Disaster and Emergency Information

Queensland Alert Qld.gov.au/alerts

Emergency Management
Dashboard Emd.ipswich.qld.gov.au

Donation of Goods to Affected Persons

GIVIT Givit.org.au

Electrical Providers

Energex Energex.com.au

Emergency 13 19 62

General enquiries 13 12 53

Loss of supply 13 62 62

Non-Life-Threatening Flood, Storm or Rescue Information

State Emergency Service
(SES) 132 500

General information Ses.qld.gov.au
132500.qld.gov.au
or download the QLD SES Assistance
App (ios or android)

Non-Life Threatening Fire, Emergency or Rescue Information

Qfes.qld.gov.au 13 74 68

Ruralfire.qld.gov.au 1800 020 440

Gas (Natural) Providers

Emergency Contacts

Networks 1800 427 532

Transmission 1800 017 000

LPG 1800 808 526

Health

13 HEALTH 13 432584

Ipswich City Council

Ipswich.qld.gov.au

General enquiries (including emergencies) (07) 3810 6666
(24 hour)

National Relay Service

Teletypewriter 133 677

Speak and listen 1300 555 727

SMS relay 0423 677 767

Internet relay users Internet-relay.nrscall.gov.au

Captioned relay users Captioned-relay.nrscall.gov.au

National Security Hotline

Hotline 1800 123 400

Police

Crime Stoppers 1800 333 000

PoliceLink 13 14 44

Prepare for an Emergency or disaster

Get Ready Qld.gov.au/getready

Ipswich City Council Ipswich.qld.gov.au

QLD Government Community Recovery

Hotline 1800 173 349

Radio

ABC 612 AM 1300 222 612
Abc.net.au/Brisbane

River 94.9 FM (07) 3813 1949
River949.com.au

Telecommunications

Telstra Telstra.com.au

Personal 13 22 03

Business 13 29 99

Optus Optus.com.au

Personal 131 344

Small and medium
business 133 343

Vodafone Vodafone.com.au

All enquiries 1300 650 410

NBN Co Nbnco.com.au

Traffic and Transport

Qldtraffic.qld.gov.au 13 19 40

Translating and Interpreting Service

Tisnational.gov.au 13 14 50

Seqwater Dam Information

Seqwater.com.au 1800 613 122

Water and Sewerage

Queensland Urban Utilities (QUU)

Faults and Emergencies 13 23 64

General Enquiries 13 26 57

Volunteer During an Emergency

Volunteering Queensland (07) 3002 7600
Emergencyvolunteering.com.au/qld

¹Text telephone, for the hearing or speech impaired.

Foreword

The City of Ipswich is a dynamic and growing area of South East Queensland. It covers more than 1000 square kilometres, including urban, rural and agricultural areas. It has a wide range of topography and industry, and is home to a constantly changing population. Occasionally, it is affected by disasters—some natural and some not.

This Local Disaster Management Plan guides Ipswich City Council in preparing for disasters and dealing with them and their aftermath. The plan has been developed in conjunction with partner agencies—government and non-government. Their contribution is acknowledged and appreciated.

While we may not be able to prevent disasters or serious events, we can prepare ourselves and improve how we respond to them. This plan is an important tool for helping us to do just that.

It integrates with Queensland's disaster management arrangements. If there were to be a major event, disaster management groups at the local, district and state level would become involved. If these groups were not able to deal effectively with an event, the Australian Government would provide assistance.

This plan is our commitment to ensuring the safety and wellbeing of the Ipswich community prior to, during and after a disaster. I am confident that it provides an appropriate disaster management and response framework for our community. The people that make up our local disaster management group are experienced, capable and dedicated professionals. Our residents, and visitors to our city, are in safe hands.



Mayor Andrew Antonioli
City of Ipswich
Chairperson, City of Ipswich Local Disaster Management Group



Approval of plan

Sunset at Bellbird Park by J Baessler
Enviroplan Photographic Competition

Ipswich City Council

This plan has been developed by, and with the authority of, the Ipswich City Council pursuant to sections 57 and 58 of the *Disaster Management Act 2003*. The plan conforms to the state planning guidelines.

Section 80(1)(b) requires Council to approve its Local Disaster Management Plan (LDMP).

This plan was approved by the Ipswich City Council on 22 August 2017.

City of Ipswich Local Disaster Management Group

The plan was endorsed by the City of Ipswich Local Disaster Management Group on 15 September 2017.



15 September 2017
Mayor Andrew Antonioli
City of Ipswich
Chairperson, City of Ipswich
Local Disaster Management Group



15 September 2017
Bryce Hines
Acting Chief Operating Officer
Works Parks and Recreation
Ipswich City Council Local Disaster Coordinator



Part 1: Administration and governance

Amendments and version control

This plan will be reviewed at least annually,² and relevant amendments will be made and distributed.

The Ipswich City Council maintains responsibility for the secretariat role of the City of Ipswich Local Disaster Management Group (LDMG). Proposals for amendments or inclusions (from residents, businesses, visitors and other stakeholders) can be addressed in writing to:

Post Chief Executive Officer
 Attention: Emergency Management Program
 Ipswich City Council
 PO Box 191 Ipswich, Qld 4305

Email council@ipswich.qld.gov.au

Minor amendments that do not materially affect the plan can be authorised by the Manager of Sport Recreation and Natural Resources, Ipswich City Council.

²Section 59, *Disaster Management Act 2003*, Reviewing and renewing (the) plan

Local disaster management planning cycle and indicative timeframes

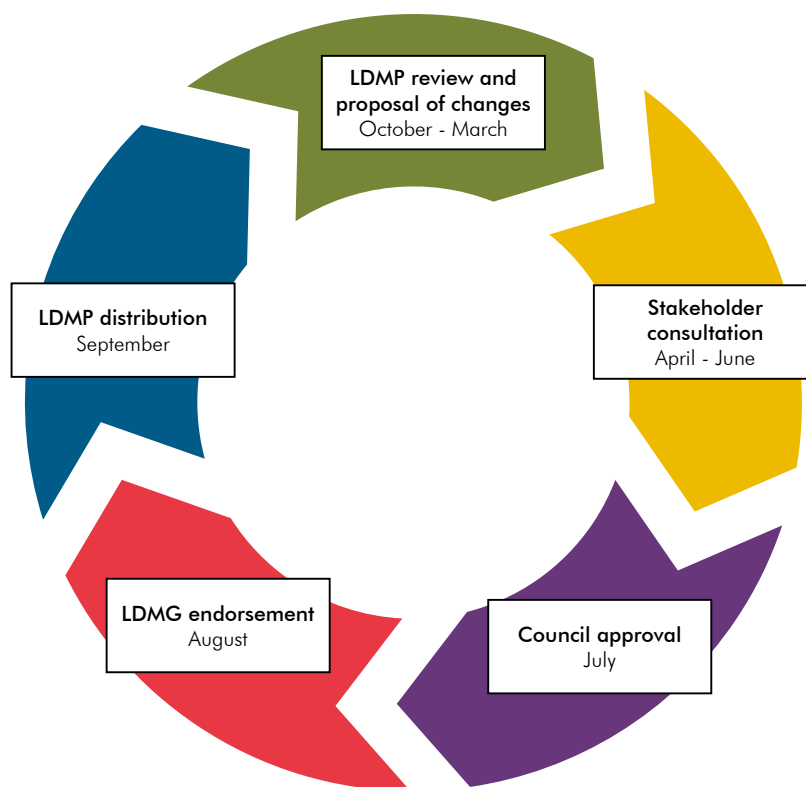


Figure 1 – LDMP review cycle

Amendment register

Version	Date	Comment
2.00	July 2012	Plan reviewed after 'Wild Fire Exercise' conducted
3.00	February 2016	Complete review and revision incorporating 2015 Queensland State Disaster Management Plan (SDMP). Complete change to formatting, style and layout.
4.00	June 2017	Annual review conducted. Plan updated for 2016 Strategic Policy Framework, 2016 Queensland State Disaster Management Plan and 2016 Interim Recovery Plan

Table 1 – Amendment register

Distribution

The master copy of this plan is held by the Principal Officer (Emergency Management), Ipswich City Council. The plan is available online at ipswich.qld.gov.au/emergency. Printed copies can be viewed at Council offices.³

Authority to plan

This plan has been prepared by Ipswich City Council for the City of Ipswich local government area under the provisions of section 57(1) of the *Disaster Management Act 2003* (the Act).

Responsibilities

In accordance with section 30(1)(f) of the Act, the LDMG is responsible for managing disaster operations in the area. It does so under policies and procedures defined by the Queensland Disaster Management Committee (QDMC).

In the event of a disaster, decision-making authority for disaster management in the local government area rests with the LDMG.⁴ The Chairperson is responsible for managing of the business of the group.⁵

The Chairperson is supported by the Local Disaster Coordinator (LDC), who is responsible for managing the coordination of disaster operations and activities performed by disaster response and recovery agencies.⁶

Queensland's Disaster Management Arrangements

The LDMG forms part of the Queensland Disaster Management Arrangements (QDMA). The arrangements include local, district and state tiers, as shown in Figure 2. They enable a progressive escalation of support and assistance through each tier as required, and they are geared towards providing support and coordination to the local level.

The Australian Government is also included in the arrangements as a fourth level, in recognition that Queensland may need to seek federal support in times of disaster.

³Available from Council Customer Service Centres, Divisional Offices and Libraries

⁴Section 30, *Disaster Management Act 2003*, Functions

⁵Section 34A, *Disaster Management Act 2003*, Functions of chairperson of a local group

⁶Section 35, *Disaster Management Act 2003*, Local disaster coordinator

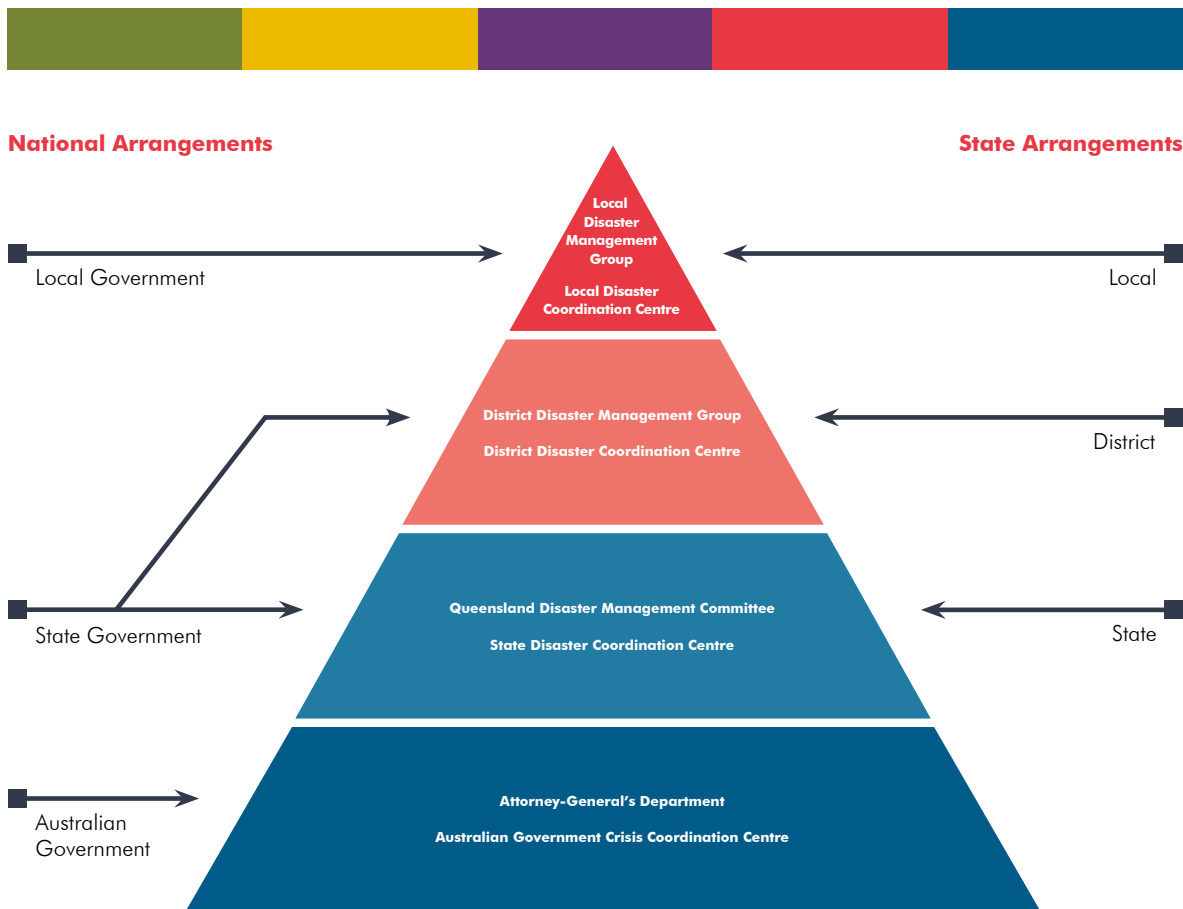


Figure 2 – Queensland Disaster Management Arrangements

For detailed information on the arrangements, please refer to the QDMA Participant Guide, available online at [Disaster.qld.gov.au/Disaster-Resources/documents/QDMA-PG.pdf](https://disaster.qld.gov.au/Disaster-Resources/documents/QDMA-PG.pdf)

Purpose of the plan

The purpose of the LDMP is to:

- detail the arrangements for the coordination and management of resources
- ensure the safety and wellbeing of the Ipswich community prior to, during and after a disaster

The plan provides a comprehensive, all-hazards, all-agencies approach to disaster management (An 'all-hazards' approach means that the plan addresses all threat types in a holistic manner).

Structure of the plan

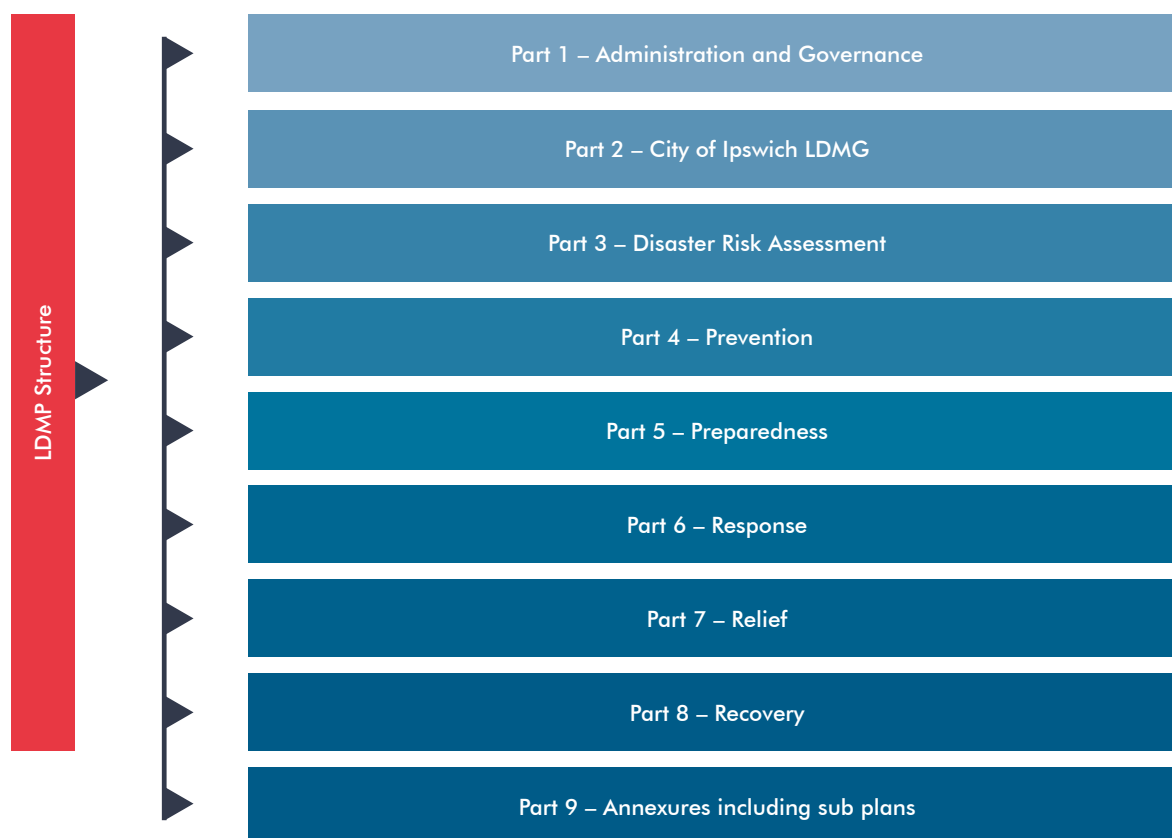


Figure 3 – LDMP structure

This plan and its annexures do not include:

- Documents which detail how member organisations (including Council) will manage their own resources and the way in which they will implement their agreed roles and functions.
- Member organisations' documented standard operating procedures (or similar).
- Business documents of the LDMG such as contact lists, agendas and minutes.



Objective of the plan

The objective of the plan is to protect people, property and the environment from the impacts of disaster. The intent is to achieve this through risk reduction measures and response and recovery strategies, and by working towards increased community resilience. To achieve this, the plan follows the four guiding principles outlined in the Act, which are:

- a) Disaster management should be planned across the following four phases – prevention, preparedness, response and recovery.
- b) All events, whether natural or caused by human acts or omissions, should be managed in accordance with the strategic policy statement⁷, the state disaster management plan and any disaster management guidelines.
- c) Local governments should primarily be responsible for managing events in their local government area.
- d) District groups and the state group should provide local governments with appropriate resources and support to help the local governments carry out disaster operations.⁸

The strategies for the four phases are as follows:

Prevention

- Investigate and coordinate risk management strategies to reduce the impact of disaster events on the community.

Preparedness

- Increase community resilience by increasing knowledge and education.
- Encourage shared responsibility and an all-hazards approach to disaster management—including the resources and arrangements used to support response and recovery.
- Enhance local capability by encouraging participation in training and exercises, contributing to equipment acquisition programs, and building relationships.

Response

- Provide effective and efficient coordination of disaster response and recovery in order to safeguard people, property and the environment.
- Provide support to communities outside of the city who may be affected by a disaster.

Recovery

- Ensure that the recovery priorities of the City of Ipswich community are identified and met across the functional areas.⁹
- Ensure that recovery operations help to build community resilience.

⁷The Queensland Disaster Management 2016 Strategic policy statement

⁸Section 4A, *Disaster Management Act 2003*, Guiding principles

⁹More information on functional areas can be found in Part 8 of this plan.

Statement of compliance

Ipswich City Council is committed to ensuring that the city's disaster management arrangements comply with the provisions of the Act.¹⁰ Section 58 of the Act obliges Council to ensure that the LDMP is consistent with approved disaster management guidelines.

Ipswich City Council also acknowledges the legislative role of the Inspector-General of Emergency Management in the setting and reviewing of disaster management standards.¹¹

In the preparation of this plan, the following guidelines were considered:

- the Act and associated regulation
- the *Local Government Act 2009*
- the Emergency Management Assurance Framework (2014)
- AS/NZS ISO 31000:2009 Risk Management—principles and guidelines
- the Queensland Disaster Management Strategic Policy Statement (2016)
- the Queensland Evacuation Guidelines for Disaster Management Groups¹² (2011)
- the Queensland Interim Recovery Plan (2016)
- the Queensland Local Disaster Management Guidelines¹² (2012)
- the Queensland Resupply Guidelines¹² (2010)
- the Queensland State Disaster Management Plan (2016)
- the Ipswich District Disaster Management Plan (2016).

Emergency Management Assurance Framework

The Inspector-General of Emergency Management has issued a standard pursuant to section 16N of the Act. This is referred to as the Emergency Management Assurance Framework (EMAF).

The EMAF represents a commitment by Queensland's disaster management stakeholders to position Queensland as the most disaster-resilient state in Australia. The framework supports accountability and builds consistency across all levels of the disaster management arrangements. It also reinforces a shared responsibility for delivering better disaster management outcomes for the community.

For more information on the EMAF visit igem.qld.gov.au.

¹⁰Section 58, *Disaster Management Act 2003*, Requirements of the plan

¹¹Sections 16C and 16H, *Disaster Management Act 2003*, Office's functions and Functions of inspector-general

¹²Section 63, *Disaster Management Act 2003*, Guidelines about disaster management plans

Ipswich City Council policy for disaster management

Ipswich City Council has a long-term community plan – *Advance Ipswich*, which informs and reflects Council’s vision, strategies and community programs. In *Advance Ipswich*, Council explains its commitment to managing disasters and enhancing community resilience. This LDMP is a vital component of this commitment.

Advance Ipswich and other Ipswich City Council corporate planning documents are available online at ipswich.qld.gov.au.

Scope of application

This plan applies to the local government area of the City of Ipswich, as shown in Figure 4. This area is bordered by the City of Brisbane to the north and north-east, the City of Logan to the south-east, the Scenic Rim Region to the south, the Lockyer Valley Region to the west and Somerset Region to the west and north-west.

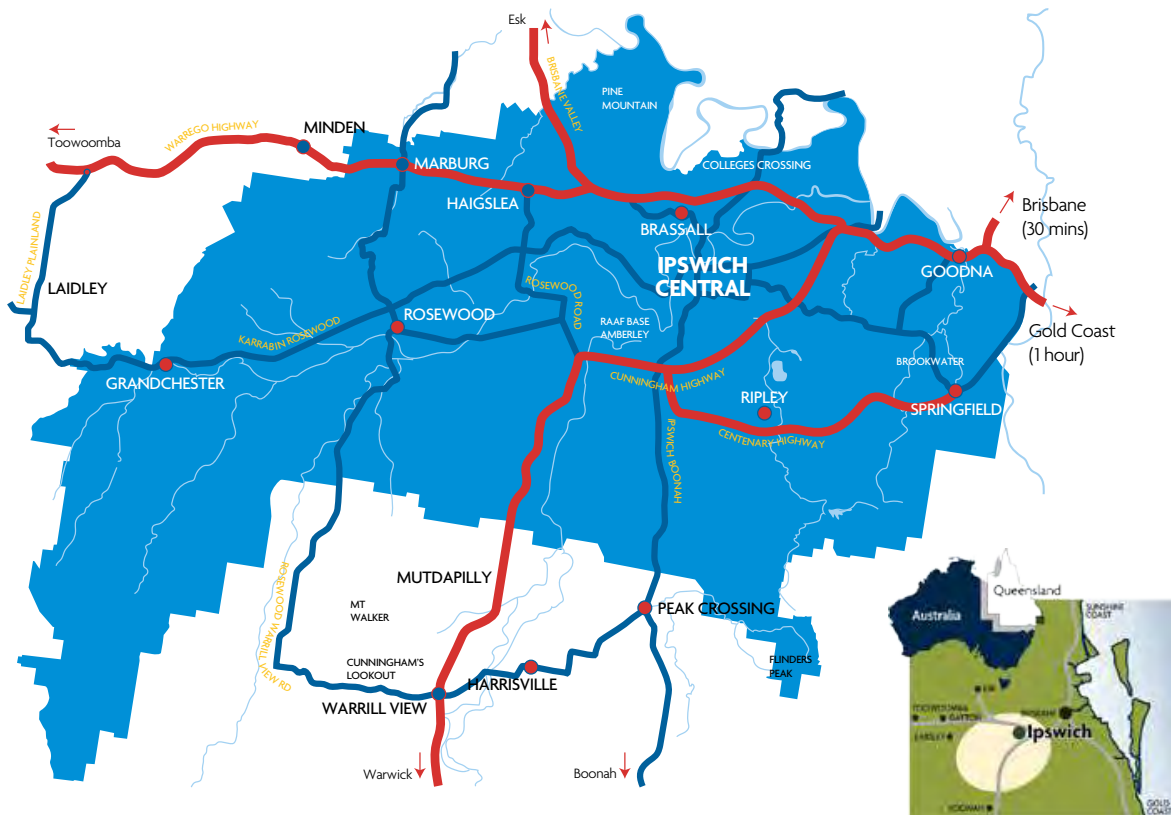


Figure 4 – City of Ipswich local government area

Abbreviations and acronyms

Annexure 3 lists abbreviations and acronyms used in this plan.

Glossary

Annexure 4 contains a glossary of terms.



Part 2: City of Ipswich LDMG

Establishment

Council has established the City of Ipswich Local Disaster Management Group,¹³ referred to as the LDMG.

The LDMG was formed to oversee the development and implementation of Council's LDMP.

Functions

The functions of the LDMG are¹⁴:

- a) to ensure that disaster management and disaster operations in the area are consistent with the state group's strategic policy framework for disaster management for the State.
- b) to develop effective disaster management, and regularly review and assess the disaster management.
- c) to help Council to prepare a LDMP.
- d) to identify, and provide advice to the relevant district group about, support services required by the local group to facilitate disaster management and disaster operations in the area.
- e) to ensure the community is aware of ways of mitigating the adverse effects of an event, and preparing for, responding to and recovering from a disaster.
- f) to manage disaster operations in the area under policies and procedures decided by the State Group.
- g) to provide reports and make recommendations to the relevant district group about matters relating to disaster operations.
- h) to identify, and coordinate the use of, resources that may be used for disaster operations in the area.
- i) to establish and review communications systems in the group, and with the relevant district group and other local groups in the disaster district of the relevant district group, for use when a disaster happens.
- j) to ensure information about a disaster in the area is promptly given to the relevant district group.
- k) to perform other functions given to the group under the *Act*.

¹³Section 29, the *Disaster Management Act 2003*, Establishment

¹⁴Section 30, *Disaster Management Act 2003*, Functions



LDMG membership

In accordance with Section 33 of the Act, Council appoints the membership of the LDMG.

Chairperson

Ipswich City Council appoints the Mayor of the City of Ipswich to the role of Chairperson of the LDMG.¹⁵

In line with the Act, the chairperson has the following functions:

- manage and coordinate the business of the group
- ensure, as far as practicable, that the group performs its functions;
- report regularly to the relevant district group, and the chief executive officer of the department¹⁶ about the performance by the local group of its functions¹⁷

Deputy Chairperson

Ipswich City Council appoints the Chairperson of the City Infrastructure and Emergency Management Committee as the Deputy Chairperson of the LDMG. The Deputy Chairperson assists the Chairperson as required.¹⁸

Local Disaster Coordinator

The Chairperson of the LDMG, in consultation with the Ipswich City Council Chief Executive Officer, appoints a LDC for the group.¹⁹

Council appoints the Chief Operating Officer of the Works Parks and Recreation Department to the role of the LDC.

Council appoints the Manager, Sport Recreation and Natural Resources Branch (within the Works Parks and Recreation Department) as the Deputy LDC.

The LDC has the following functions:

- to coordinate disaster operations for the local group;
- to report regularly to the local group about disaster operations;
- to ensure, as far as practicable, that any strategic decisions of the local group about disaster operations are implemented.²⁰

¹⁵Section 34, *Disaster Management Act 2003*, Chairperson and deputy chairperson; Disaster Management Regulation 2014, Chairperson and deputy chairperson of local groups

¹⁶The department means the administrator of the Act, Queensland Fire and Emergency Services

¹⁷Section 34A, *Disaster Management Act 2003*, Functions of chairperson of local groups

¹⁸Section 34, *Disaster Management Act 2003*, Chairperson and deputy chairperson, and Disaster Management Regulation 2014, Chairperson and deputy chairperson of local groups

¹⁹Section 35, *Disaster Management Act*, Local disaster coordinator

²⁰Section 36, *Disaster Management Act 2003*,

Core membership

The core membership of the LDMG is detailed below:

Organisation	LDMG Position	Organisational Role
Statutory appointments and those appointed because of the office they hold in Ipswich City Council.	Chairperson	Mayor, City of Ipswich
	Deputy Chairperson	Chairperson of the City Infrastructure and Emergency Management Committee, City of Ipswich
	Local Disaster Coordinator (LDC)	Chief Operating Officer of Works Parks and Recreation Department
	Deputy LDC	Manager, Sport, Recreation and Natural Resources Branch
APA Group	Member	Government Policy Manager
Department of Communities, Child Safety and Disability Services	Member	Principal Contract Officer
Department of Transport and Main Roads	Member	Senior Roadworks Inspector
Energy Queensland	Member	Distribution Design Manager South
Ipswich City Council	Member	Principal Officer (Emergency Management)
	Secretariat	Emergency Management Officer
	Member	Chief Operating Officer of Arts, Social Development and Community Engagement Department
Queensland Ambulance Service	Member	Officer in Charge
Queensland Fire and Emergency Services	Member	Area Commander
Queensland Fire and Emergency Services	Member	Emergency Management Coordinator
Queensland Police Service	Member	District Duty Officer
Queensland Reconstruction Authority	Member	Project Manager/Civil Engineer
Queensland Urban Utilities	Member	Business Resilience Manager
RAAF—Australian Defence Force	Member	Executive Officer
Australian Red Cross	Member	Emergency Services Regional Coordinator
Telstra	Member	Senior Account Executive
West Moreton Hospital and Health Service	Member	Director, Service Support
State Emergency Service	Member	Deputy Local Controller

Table 2 – City of Ipswich LDMG core members

Each member is able to nominate a deputy member, who may exercise the role of the core member in the absence of that member (if approved by the Chairperson).²¹ Dependent on the role of the member, a second deputy may be considered.

²¹Section 14, Disaster Management Regulation 2014, Meeting deputies for particular members



Advisors

The LDMG has standing advisors who are experts in their field. The permanently appointed advisors are listed below:

Organisation	Organisational Role
Department of Communities, Child Safety and Disability Services	Senior Advisor (Community Recovery)
Department of Education and Training	Assistant Manager
Ipswich City Council	Emergency Management Officer
	Engineer (Floodplain Management)
	Technical Officer (Maintenance Planning)
Queensland Rail	Day of Operations Coordinator
Seqwater	Incident and Security Management Coordinator
West Moreton Hospital and Health Service	Manager, Environmental Health

Table 3 – City of Ipswich LDMG permanent advisors

Invitees and observers

The LDMG also invites representatives from non-member organisations to contribute to the business of the group. These representatives will have the necessary expertise or experience, and delegated authority to assist the group in considering their approach to the ongoing planning, testing and reviewing of the city's disaster management arrangements.

Sub-groups and working groups

The LDMG may form sub-groups or working groups to assist as necessary. Membership of these groups will reflect the necessary expertise for the particular function or threat at the time.

Activation

The LDMG is activated by the Chairperson or Deputy Chairperson on receipt of specific warnings, requests or advice.

In the case of a fast breaking event or potential event with significant community consequences for the city, the LDC may activate the Local Disaster Coordination Centre (LDCC) to respond without activating the LDMG.

Business-as-usual arrangements

Council and other member organisations, as primary agencies and lead agencies, may also activate their own business-as-usual arrangements without the activation of the LDMG, the LDMP or the LDCC. For Council, this activation is done under the direction of Council's Emergency Management Operations Group (CEMOG).

General organisational roles and responsibilities

Effective coordination of disaster events relies on roles and responsibilities being clearly defined and communicated. Outlined below are the indicative roles and responsibilities LDMG member organisations and other stakeholders. State government departmental and organisational roles and responsibilities are adapted from the Queensland State Disaster Management Plan or legislation.

Organisation	Indicative roles and responsibilities
City of Ipswich LDMG	<p>Disaster coordination and support to agencies, including:</p> <p>Situation assessment</p> <ul style="list-style-type: none"> The collection, collation, evaluation and dissemination of information relating to the current and predicted status of the disaster. <p>Event priority determination</p> <ul style="list-style-type: none"> The establishment of priorities among the many distinct incidents that may make up a disaster event. <p>Essential resource acquisition and allocation</p> <ul style="list-style-type: none"> The acquisition of resources from the agencies involved or from external sources to support the disaster response. <p>Policy level support of interagency activities</p> <ul style="list-style-type: none"> The making of local policy level decisions, where required, if existing arrangements are not sufficient to support the disaster response. <p>Coordination with other groups</p> <ul style="list-style-type: none"> Coordination with other groups such as the District Disaster Management Group (DDMG) and cross-border coordination bodies. <p>Coordination with elected and appointed officials</p> <ul style="list-style-type: none"> The briefing of elected and appointed officials on disaster-related issues in the local area. <p>Coordination of summary information</p> <ul style="list-style-type: none"> Coordination of summary information such as impact assessments. <p>Coordination of public information</p> <ul style="list-style-type: none"> Coordination of information among agencies and other groups to ensure consistency in messages to the public.



Ipswich City Council
LDMG Member and
Secretariat

- Carry out primary (hazard) and/or lead (functional) agency roles as nominated in this plan.
- Ensure the business continuity of essential local government services including, but not limited to:
 - public health, including refuse disposal
 - maintenance (including debris clearance) of parks, city-controlled roads and bridges
 - animal management
 - environmental protection
- Provide a secretariat to the LDMG.
- Conduct and implement prevention and preparedness arrangements, including community education.
- Maintain flood telemetry (measurement) and warning systems within the Ipswich local government area.
- Collect, analyse and disseminate information from telemetry systems in conjunction with the Bureau of Meteorology.
- Support the Ipswich City State Emergency Service (SES) Unit in conjunction with Queensland Fire and Emergency Services.
- Coordinate immediate welfare and recovery needs in conjunction with partner organisations.
- Provide advice to the LDMG and action reasonable requests during disaster operations, as required.



Australian Defence Force
LDMG Member

- Consider Defence Aid to the Civil Community (DACC) when requested through the appropriate channels.
- Provide advice to the LDMG and action reasonable requests during disaster operations, as required.



Australian Red Cross
LDMG Member

- Upon request from Council, activate staff to operate, manage and subsequently close evacuation centres as agreed.
- Operate the Register. Find. Reunite. service.
- Provide advice to the LDMG and action reasonable requests during disaster operations, as required.



Australian Government Bureau of Meteorology
Access through local arrangements and DDMG

- Provide forecasts, warnings and long-term outlooks on environmental phenomena that affect the safety, prosperity and resilience of Australians.



**Department of
Agriculture and
Fisheries**

Access through
DDMG

- Carry out primary (hazard) and/or lead (functional) agency roles as nominated in this plan.
- Coordinate efforts to prevent, respond to and recover from pests and non-human disease, and to address livestock welfare.
- Provide advice related to stock.
- Coordinate destruction of stock or crops in an emergency pest/disease situation.



**Department of
Communities, Child
Safety and Disability
Services**

LDMG Member

- Carry out primary (hazard) and/or lead (functional) agency roles as nominated in this plan.
- Provide human and social relief and recovery information and advice across all stages of disaster management.
- Administer personal finance assistance under the State Disaster Relief Arrangements (SDRA) or the Natural Disaster Relief and Recovery Arrangements (NDRRA).
- Provide support and resources to the local affected area.
- Purchase the registration of volunteers through the Volunteering Queensland Community Response to Extreme Weather (CREW) and the referral of offers of assistance from spontaneous volunteers.
- Upon request, source additional relief and recovery volunteers.
- Provide advice to the LDMG and action reasonable requests during disaster operations, as required.



**Department of
Energy and Water**

Access through
DDMG

- Regulate the operation of energy and water supply industries.
- Maintain and develop a readiness for energy and water supply emergencies, regardless of the hazard type.
- These energy emergency supply responsibilities cover the electricity, liquid fuels and natural gas sectors, and involve:
 - o developing and implementing energy policies and plans to improve the protection and resilience of Queensland's energy systems.
 - o developing the capability to coordinate action to mitigate against energy supply deficiencies during any emergency event (including a terrorist incident).
 - o facilitating actions within and across the energy sectors in response to an emergency event.
- The water emergency responsibilities, include:
 - o ensuring emergency action plans are in place for referable dams (those that could put people at risk if they were to fail) to ensure appropriate action is taken in the event of incidents or failures of the dams
 - o exercising dam safety emergency powers if needed to minimise the risk of failure of a dam or to minimise the consequences of failure
 - o overseeing drinking water and recycled water incident management.



Queensland Government

**Department of
Environment and
Heritage Protection**

Access through
DDMG

- Carry out primary (hazard) and/or lead (functional) agency roles as nominated in this plan.
- Regulate the operation of mining, petroleum and gas, and other industrial sites in terms of their environmental impacts – including water and waste treatment operations.
- Provide situational monitoring of events and incidents across industrial sites, and authorise emergency waste water releases as necessary.
- Monitor and advise on the management of affected native wildlife outside national park estates, and reduce conflict and risks to the community due to the displacement of this wildlife.
- Establish mechanisms for industry, landowners and local governments to receive necessary environmental approvals for recovery (for example, temporary landfills, fill extraction for road repairs, dredge spoil disposal, retrieval of hazardous materials, repairs to heritage listed places and provision of dispensation to nature refuge holders).
- Conduct investigations pursuant to the *Environmental Protection Act 1994* and other environmental and conservation legislation.



Queensland Government

**Department of
Education and
Training**

LDMG Advisor

- Maintain the safety and wellbeing of students, staff and volunteers who work or participate in Department of Education and Training schools, institutes and workplaces.
- Ensure, as far as practicable, that all state instructional institutions and workplaces have a documented emergency management plan.
- Minimise interruption to essential services to allow teaching and learning to be maintained or resumed as a priority.
- Protect critical resources where possible.
- Facilitate the return of state instructional institutions to normal operations as soon as possible.



Queensland Government

**Department of
Housing and Public
Works**

Access through
DDMG

- Carry out primary (hazard) and/or lead (functional) agency roles as nominated in this plan.
- Maintain contact registers for:
 - professional service providers (for example, geotechnical, structural and civil engineers; heritage architects; and other professional officers and consultants)
 - specialist building contractors, service providers and suppliers
 - building services and trade personnel to support regional-based disaster response or recovery operations.
- Coordinate structural assistance grant assessments (excluding caravans and vessels) on behalf of the Department of Communities, Child Safety and Disability Services.
- Provide temporary accommodation solutions and services for affected members of a community (non-social housing clients and/or response/recovery teams).
- Coordinate temporary office type accommodation for use by state government agencies and departments as forward command posts, recovery centres, local disease control centres, storage facilities and ablution facilities—including connection of building services.
- Coordinate temporary leased accommodation for state government agencies and departments.
- Coordinate technical advice on the structural suitability of buildings for use as community evacuation centres, places of refuge or cyclone shelters.
- Carry out other building and engineering services tasks as requested by a District Disaster Coordinator or the State Disaster Coordination Centre within the scope of the building and engineering services function.
- Coordinate emergency fleet vehicles.



**Department of
Infrastructure, Local
Government and
Planning**

Access through local
arrangements and
DDMG

- Support disaster mitigation considerations in development planning and in built environment and infrastructure design.
- Through the State Planning Policy, ensure the state's interests in natural hazards, risk and resilience are properly considered in all levels of the planning system.
- Provide advice to assist delivery agencies to plan, sequence and prioritise work.
- Support the building of flood risk management and resilience in conjunction with the Queensland Reconstruction Authority.
- Manage the development and implementation of disaster mitigation and resilience funding programs such as the Community Resilience Fund and the Natural Disaster Resilience Program.



**Department of
National Parks,
Sport and Racing**

Access through
DDMG

- Carry out primary (hazard) and/or lead (functional) agency roles as nominated in this plan.
- Provide for the safety of national parks and agency-owned recreational centre users. This may include issuing warnings in extreme conditions, closing areas where necessary and coordinating evacuations with the Queensland Police Service.
- Provide advice on the management of national parks to responding agencies.
- Lead fire-fighting on the protected areas and state forests where there is no threat to life or property.



**Department of
Premier and Cabinet**

Access through
DDMG

- Support and provide advice to the Premier as Chairperson of the Queensland Disaster Management Committee and as leader of the government.
- Coordinate and liaise with the Australian Government's Crisis Coordination Centre in relation to Queensland Government policy positions (when required).
- Represent Queensland at meetings of the National Crisis Committee when initiated by the Australian Government.
- Coordinate and represent Queensland Government positions on national bodies such as the Australia-New Zealand National Emergency Management Committee, the Australia-New Zealand Counter-Terrorism Committee and the Council of Australian Governments.
- Maintain and coordinate any actions relating to the Memorandum of Understanding between the Queensland Government and Non-Government Organisations—Disaster Relief Appeal Management.



**Department of State
Development**

Access through
DDMG

- Carry out primary (hazard) and/or lead (functional) agency roles as nominated in this plan.
- Advise the LDMG, and request and provide assistance through the LDMG as required, during disaster operations.



 Department of Transport and Main Roads LDMG Member	<ul style="list-style-type: none"> • Carry out primary (hazard) and/or lead (functional) agency roles as nominated in this plan. • Provide information and advice on the impact of disruptive events on road, rail, aviation and maritime infrastructure. • Enable an accessible transport system through reinstating road, rail and maritime infrastructure. • Assist with the safe movement of people due to mass evacuation of a disaster-affected community. • Ensure the capability of logistics-related industries is appropriately applied to disaster response and recovery activities.
 Energy Queensland LDMG Member	<ul style="list-style-type: none"> • Maintain and/or restore electrical power supply. • Provide advice in relation to electrical power, including safety advice for consumers. • Provide advice to the LDMG and action reasonable requests during disaster operations, as required.
 Inspector-General Emergency Management Access through local arrangements	<ul style="list-style-type: none"> • Regularly review and assess the effectiveness of disaster management by district and local groups, including district and local disaster management plans. • Regularly review and assess cooperation between entities responsible for disaster management in the state, including whether systems and procedures employed by those entities are compatible and consistent. • Set disaster management standards. • Regularly review and assess disaster management standards. • Review, assess and report on performance (against disaster management standards) by entities responsible for disaster management in the state. • Work with entities performing emergency services, with departments, and with the community to identify and improve disaster management capabilities, including volunteer capabilities. • Identify opportunities for cooperative partnerships to improve disaster management outcomes.
 Queensland Ambulance Service LDMG Member	<ul style="list-style-type: none"> • Carry out primary (hazard) and/or lead (functional) agency roles as nominated in this plan. • Provide, operate and maintain ambulance services. • Access, assess, treat and transport sick and/or injured people. • Protect people from injury or death during rescue and other related activities. • Coordinate all volunteer first aid groups during major emergencies and disasters. • Provide and support temporary health infrastructure where required. • Collaborate with the Queensland Clinical Coordination Centre in the provision of paramedics for rotary wing (helicopter) operations. • Participate in search and rescue, evacuation and victim reception operations. • Participate in health facility evacuations. • Collaborate with Queensland Health in mass casualty management systems. • Provide disaster, urban search and rescue, chemical hazard (hazmat), biological and radiological operations support with specialist logistics and specialist paramedics.



Queensland Fire and Emergency Services (QFES)
LDMG Member

QFES Services



SES is a jointly-funded service of Ipswich City Council and Queensland Fire and Emergency Services

Queensland Fire and Emergency Services

- Carry out primary (hazard) and/or lead (functional) agency roles as nominated in this plan.
- Contribute to prevention and preparedness activities—including community education.
- Provide impact assessment and intelligence-gathering capabilities at the request of Council.
- Provide advice to the LDMG and action reasonable requests during disaster operations, as required.
- Prepare guidelines on behalf of the QDMC as per section 63 of the Act.
- Establish and maintain arrangements between the state and federal governments about matters relating to effective disaster management.
- Ensure that disaster management and disaster operations in the state are consistent with the state group's strategic policy framework, the Queensland State Disaster Management Plan, the disaster management standards, and the disaster management guidelines.
- Ensure that people performing functions under the Act in relation to disaster operations are appropriately trained.
- Provide advice and support to the state group and local and district groups in relation to disaster management and disaster operations.
- Carry out planning and logistics functions of the SDCC.
- Provide situational monitoring.
- Coordinate, support and manage the deployment of SES resources as required. In consultation with local government, appoint a suitably experienced and/or qualified officer as SES Coordinator to support the coordination of SES operations.
- Coordinate and manage resupply (of food and other essentials) and emergency supply operations.
- Coordinate and manage the deployment of air assets including fixed wing and rotary aircraft.
- Coordinate disaster management training in accordance with the Queensland Disaster Management Training Framework.

Fire and Rescue Service and Rural Fire Service

- Provide control, management and pre-incident planning of fires (structural, landscape and transportation).
- Support the Queensland Police Service when requested in the coordination of search and/or rescue events as defined in the inter-governmental agreement.
- Provide rescue capability for people trapped in any vehicle, vessel, by height or in confined space.
- Carry out rescues of people isolated or trapped in swift-water/floodwater events.
- Provide advice, chemical analysis and atmospheric monitoring at chemical/hazmat incidents.
- Provide mass and technical decontamination capabilities under the State Biological Disaster and State Radiological Disaster response.
- Provide urban search and rescue capability for building collapse events.
- Support the Queensland Hazardous Materials Incident Recovery Plan.
- Provide impact assessment and intelligence-gathering capabilities.



State Emergency Service

- Search and/or rescue missing, trapped or other people under the direction of the Queensland Police Service, in line with the inter-governmental agreement.
- Provide emergency repair and protection of damaged or vulnerable critical infrastructure.
- Provide emergency repair and protection of damaged essential living areas (for example, a room for sleeping, meal preparation and personal hygiene).



Telstra
LDMG Member

- Provide emergency communication facilities and specialist advice.
- Provide advice to the LDMG and action reasonable requests during disaster operations, as required.



Queensland Health
– West Moreton
Hospital and Health
Service

LDMG Member

- Carry out primary (hazard) and/or lead (functional) agency roles as nominated in this plan.
- Provide appropriate information on public and community health risk and preventative measures.
- Protect and promote health in accordance with the *Hospital and Health Boards Act 2011*, *Hospital and Health Boards Regulation 2012*, *Health and Public Health Act 2005*, and other relevant legislation and regulations.
- Provide a whole-of-health emergency incident management and counter-disaster response capability to prevent, respond to, and recover from a state-declared emergency or disaster event.
- Provide (through its hospital and health services) coordinated multidisciplinary support for disaster response and recovery, including specialist health services and specialist health knowledge representation.
- Provide state representation at the Australian Health Protection Principal Committee.
- Provide state-wide clinical and forensic services support for disaster and response recovery.
- Promote optimal patient outcomes.
- Provide appropriate on-site medical and health support.
- Clinically coordinate aeromedical transport throughout the state. In a disaster situation, provide staff to the Emergency Helicopter Tasking Cell.
- Provide health emergency incident information for media communication.



Queensland Police Service

LDMG Member

- Carry out primary (hazard) and/or lead (functional) agency roles as nominated in this plan.
- Preserve peace and good order.
- Prevent crime.
- Manage crime scenes and potential crime scenes.
- Conduct investigations pursuant to the *Coroners Act 2003*.
- Provide a disaster victim identification capability.
- Provide for the effective regulation of traffic.
- Coordinate evacuation operations.
- Control and coordinate search and rescue operations.
- Activate and manage the registration of evacuees and associated inquiries in conjunction with the Australian Red Cross.
- Provide security for damaged or evacuated premises.
- Respond to and investigate traffic, rail and air incidents.
- Coordinate the review and renewal of the Queensland State Disaster Management Plan.



Queensland Rail

Advisor

- Provide advice on the condition and operational status of rail corridors.
- Provide advice to the LDMG and action reasonable requests during disaster operations, as required.



Queensland Government

Queensland Reconstruction Authority

Access through DDMG

- Carry out primary (hazard) and/or lead (functional) agency roles as nominated in this plan.
- Develop and implement disaster recovery, resilience and mitigation policy.
- Develop and implement flood risk management and resilience, including the Brisbane River Catchment Flood Study and the Flood Warning Gauge Network Review.
- Coordinate and monitor recovery, including developing event-specific recovery plans and reporting to government and the community on recovery progress.
- Administer Natural Disaster Relief and Recovery Arrangements (NDRRA) and state disaster relief arrangements (SDRA) measures. Conduct negotiations with the federal government for natural disaster funding arrangements in consultation with the Department of Premier and Cabinet and Queensland Treasury.
- When requested, support Queensland Fire and Emergency Services (QFES) with rapid damage assessments of housing in disaster-impacted areas.
- Provide input as required by QFES to statewide risk-based planning.
- Support QFES in coordinating whole-of-government disaster management data and data management policy.
- Undertake damage assessments of public infrastructure in collaboration with local governments.
- Liaise with local governments and state agencies to gather information to ensure NDRRA disaster activations meet Australian Government criteria.
- Prepare briefs to request activation of the NDRRA and the SDRA.
- Share knowledge and innovative solutions to build resilience, sustainability and self-reliance across governments, industry and communities.
- Drive the enhancement of disaster resilience throughout Queensland, ensuring that the state's resilience goals and objectives are achieved, including implementation of the Queensland Strategy for Disaster Resilience.
- Facilitate activities that assist in the coordination of offers of goods and services through partnership with the not for profit organisation, GIVIT.









 Queensland Urban Utilities LDMG Member	<ul style="list-style-type: none"> • Deliver drinking water, recycled water and sewerage services within the city. • Provide advice to the LDMG and action reasonable requests during disaster operations, as required.
 APA LDMG Member	<ul style="list-style-type: none"> • Monitor the gas transmission and distribution networks. • Maintain and/or restore the gas supply. • Provide advice in relation to gas supply, including safety advice to customers. • Provide advice to the LDMG and action reasonable requests during disaster operations, as required.
 Seqwater LDMG Advisor	<ul style="list-style-type: none"> • Provide advice and information regarding the various dams that operate in the City of Ipswich or in catchments that affect the City of Ipswich. • Prepare and maintain the Seqwater Dam Safety Emergency Action Plans and the Bulk Authority Emergency Response Plan. • Coordinate the South East Queensland Bulk Water Supply. • Disseminate notifications and warnings to downstream stakeholders.
 St John Ambulance Access through local arrangements	<ul style="list-style-type: none"> • Assist with evacuation centres (and elsewhere as required) by providing first aid and personal care.
 The Salvation Army Access through local arrangements	<ul style="list-style-type: none"> • Support disaster-affected people and emergency services workers during times of crisis by providing emergency catering.
 GIVIT Access through local arrangements	<ul style="list-style-type: none"> • In partnership with the Queensland Government, manage offers of donated goods and services, including corporate offers of assistance, following Queensland disasters. Allocate them in response to urgent requests received from government agencies, local services and community groups. • Connect and inspire an online network of givers to support the community as it manages the immediate and long-term needs of affected residents.

Table 4 – Indicative organisational roles and responsibilities

Part 3: Disaster risk assessment

Community context

To tailor this LDMP to the needs of Ipswich, Council has to take into account the population, infrastructure, industry, climate, geography, assets, challenges and hazards of the area.

Geography and topography

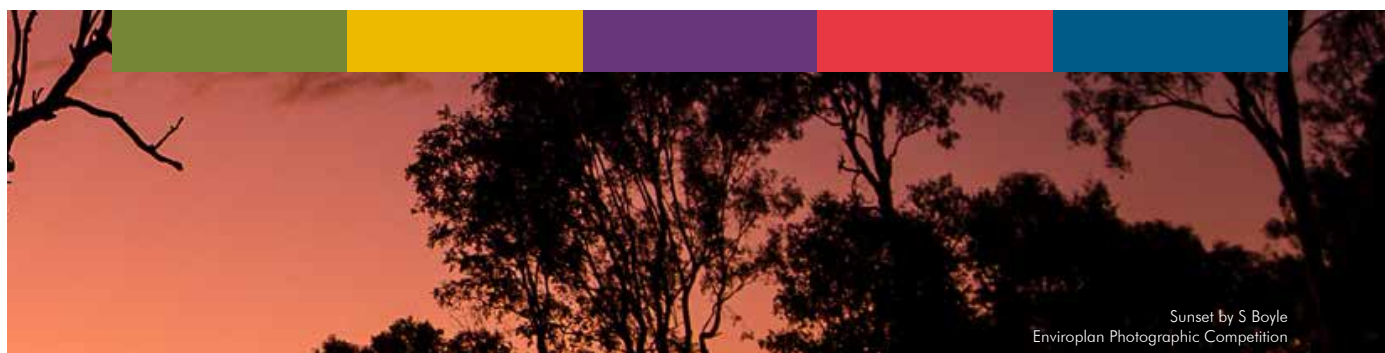
The local government area (LGA) of the City of Ipswich covers an area of 1,090 km².



The LGA is bordered by a series of vegetated hills and mountain ranges including the Little Liverpool Range and the Proctor Range to the west, Pine Mountain and the D'Aguilar Range to the north-east, the Bluff to the north-west, and Flinders Peak and the Grampian Hills to the south.

Many of the region's rivers and waterways converge in the Ipswich LGA, including the Brisbane and Bremer rivers and the Western, Warrill, Purga, Bundamba, Six Mile, Opossum, Goodna and Woogaroo creeks.

Natural vegetation types in the area are the most diverse in South East Queensland and include rainforest, dry vine forest, soft forest, open forest, heathland, wetlands and grasslands.



Climate and weather

The climate is described as moist sub-tropical with a seasonal rainfall pattern. The heaviest rainfall occurs in the summer months and is often associated with summer storms. The average rainfall is 877mm per annum,²² the yearly average maximum temperature is 27.3°C and the yearly average minimum temperature is 13.9°C.²³

Storm season and bushfire threats occur during the spring and summer months of September to April. The heaviest rainfall occurs during the summer months and is usually associated with cyclones or summer storms.

Population

The population of the area includes all people, residents, visitors and tourists within the City of Ipswich LGA at a given point in time. As at 9 August 2016 the total population was 193,733.²⁴ It is predicted to increase to 435,000 by 2031.²⁵

The majority of the population (81%) lives in the urban areas of the city.

Population category	Ipswich	%	Queensland	%	Australia	%
Total	193,733	-	4,703,193	-	23,401,892	-
Male	95,797	49.4	2,321,889	49.4	11,546,638	49.3
Female	97,937	50.6	2,381,308	50.6	11,855,248	50.7
Median age	32	-	37	-	38	-

Table 5 – Population breakdown²⁶

The most common countries of birth for people who live in Ipswich are Australia (72.9%), New Zealand (5.6%), England (3.1%), Samoa (1.8%) India (1.0%) and the Philippines (0.9%).

In addition to Indigenous Australian peoples, other ethnic groupings within the area include people from New Zealand, Samoa, England, Laos, Tonga, India, China, Vietnam, Sudan, Latin America, the Philippines, Malaysia, the Netherlands and Germany.

²²Bureau of Meteorology, Bom.gov.au/climate/averages/tables/cw_040101.shtml

²³Bureau of Meteorology, Bom.gov.au/climate/averages/tables/cw_040101.shtml

²⁴Australian Bureau of Statistics, 2016 – Quick Stats

²⁵SEQ Regional Plan

²⁶Australian Bureau of Statistics, 2016 – Quick Stats

Our age²⁷

% of population in age	
0 – 4 years	8.4%
5 – 9 years	8.2%
10 – 14 years	7.1%
15 – 19 years	6.9%
20 – 24 years	7.2%
25 – 29 years	7.6%
30 – 34 years	7.9%
35 – 39 years	6.8%
40 – 44 years	6.7%

Table 6 – Our age

% of population in age	
45 – 49 years	6.5%
50 – 54 years	6.0%
55 – 59 years	5.4%
60 – 64 years	4.5%
65 – 69 years	3.7%
70 – 74 years	2.7%
75 – 79 years	1.9%
80 – 84 years	1.2%
85 years and over	1.2%

Where we come from

Our ancestry ²⁸	
English	27.2%
Australian	26.2%
Irish	7.6%
Scottish	7.1%
German	5.8%

Table 7 – Where we come from

Our birthplace (Other than Australia) ²⁹	
New Zealand	5.6%
England	3.1%
Samoa	1.0%
India	1.0%
Philippines	0.9%

Our education

Highest level of schooling ³⁰	
Year 11 or 12	50.5%
Year 10	27.5%
Year 9 or below	13.3%
Did not go to school	0.6%

Table 8 – Our education

Tertiary and current study	
Currently (2011) hold tertiary qualifications ³¹	21,210
Currently (2011) enrolled in study ³²	23%

²⁷Australian Bureau of Statistics, 2016 – Quick Stats

²⁸Australian Bureau of Statistics, Census 2016 – Quick Stats

²⁹Australian Bureau of Statistics, Census 2016 – Quick Stats

³⁰Profile.ID—Community Profile (2011) Profile.id.com.au/ipswich/schooling

³¹Profile.ID—Community Profile (2011) Profile.id.com.au/ipswich/qualifications

³²Profile.ID – Community Profile (2011) Profile.id.com.au/ipswich/education



Disability

11,030 people or 5.72% of the population in the City of Ipswich have reported needing help in their day-to-day lives due to disability.³³

Linguistic diversity

The linguistic diversity of the area is shown below:

Top five languages other than English	Ipswich	%	Queensland	%	Australia	%
Samoa	4,089	2.1	14,969	0.3	44,869	0.2%
Vietnamese	1,820	0.9	25,914	0.6	277,400	1.2
Spanish	1,030	0.5	21,006	0.4	140,817	0.6
Hindi	921	0.5	18,163	0.4	159,652	0.7
Mandarin	864	0.4	69,474	1.5	596,711	2.5
Only English spoken at home	158,562	81.9	3,820,632	81.2	17,020,417	72.7
Households where a non-English language is spoken	8,996	13.3	242,052	13.5	1,971,011	22.2

Table 9 – Languages other than English³⁴

What we do

The population of Ipswich is a diverse mix of people who contribute through employment, volunteering, home duties and the provision of unpaid child care and/or unpaid care of another.

Employment by industry ³⁵		Other ³⁶	
Manufacturing	14.4%	Volunteering	17%
Health/social care	12.1%	More than 14 hours of domestic duties	23.4%
Retail	10.7%	Unpaid child care	11,965
Public admin and safety	9.7%	Unpaid provision of care	13,812
Education and training	6.9%		

Table 10 – What we do

³³Australian Bureau of Statistics - 2016 Census Table Builder

³⁴Australian Bureau of Statistics, Census, 2011

³⁵Profile.ID – Community Profile (2011) Profile.id.com.au/ipswich/industries

³⁶Profile.ID – Community Profile (2011) Profile.id.com.au/ipswich/



Ripples 2 by G Homann
Enviroplan Photographic Competition

Community capacity

The community is well supported by agencies, organisations, service and sporting clubs, and a myriad of special interest and hobby groups.

Vulnerable populations

The city has a number of vulnerable populations. These include, but are not limited to, those in aged care facilities, seniors residing in their homes, people with a disability, people with chronic medical conditions, and those who have difficulty with communicating in the English language.

Public buildings, spaces and events

The area is well serviced by public buildings including Council offices and facilities (such as the Civic Hall, Art Gallery and the Court House), Queensland Government department regional offices, swimming complexes, a racecourse, showgrounds, sporting facilities, a motor sport precinct, primary and secondary schools, vocational education facilities and universities, and places of worship.

Ipswich is well known for its cultural and social events, which include the Jacaranda Festival, Ipswich Festival, Ipswich Cup, Winternational drag races, V8 Supercar races and the Ipswich Show.

Critical infrastructure and service localities

Critical infrastructure is given a high priority in the recovery stages of an extreme event. The below tables shows the categories of critical infrastructure for the City of Ipswich. Some facilities located outside of the LGA have responsibility for response areas within the LGA.



Category	Name of facility or establishment
Health facilities	Ipswich General Hospital, St Andrews Private Hospital, Mater Private Hospital Springfield
Police establishments	Ipswich, Yamanto, Karana Downs, Rosewood, Marburg, Booval, Goodna, Springfield
Ambulance establishments	Ipswich, Rosewood, Redbank, Springfield
Fire and Rescue stations	Ripley, Brassall, Rosewood, Marburg, Booval, Camira, Karana Downs
SES depots	Ipswich, Goodna, Marburg, Rosewood
Major roads	Brisbane Valley Highway Centenary Highway Cunningham Highway Ipswich Motorway Logan Motorway Warrego Highway
Rail lines	Main Western Rail Line (Gailes to Grandchester) Springfield Rail Line (Springfield to Darra)
Rural Fire Brigades	Ripley, Pine Mountain, Mount Forbes, Lower Mount Walker, Mount Mort, Grandchester, Marburg
Power supply	Swanbank Power Station Energy Queensland substations and transformers
Gas supply	Roma to Brisbane Pipeline
Telephone exchanges	Ipswich, Flinders View, Booval, Brassall

Table 11 – Summary of critical infrastructure

Potable water distribution network

Potable (drinkable) water is available from multiple sources including Seqwater's Camerons Hill (Mount Crosby) water treatment plant. Water is also sourced from the Gold Coast through the Southern Regional Water Pipeline.

Water is distributed to 26 service reservoirs and towers owned and operated by Queensland Urban Utilities (QUU). A network of trunk and distribution mains, together with pump stations owned and operated by QUU, disperse the water to properties within the area. QUU also operates a small water treatment plant on Warrill Creek that serves some of the southern suburbs.

Waste water network

The majority of the residential areas of the city are serviced by the sewerage network. The network consists of asbestos cement pipes, polyvinyl chloride pipes, vitreous clay pipes and 62 pump stations. Sewerage is treated by QUU at four treatment plants located at Bundamba, Carole Park, Goodna and Rosewood.

Electricity network

Bulk power is sourced from the Queensland electricity grid (operated by Powerlink) and fed to the Blackwall Switching Station via a series of high voltage transmission lines. Energy Queensland operates the distribution network which consists of 15 sub-stations and approximately 200 km of high and low voltage lines. The bulk of this is located above ground. New housing estates may have their electricity distribution networks underground.

Gas supply

The area is traversed by the Moonie Oil Pipeline (decommissioned) and the Roma to Brisbane Gas Pipeline (owned and operated by the APA Group). Several regulation/monitoring stations are located on these lines within the area. Gas is distributed to homes across the Ipswich area.

Telecommunications

NBN Co, Telstra, Optus and Vodafone maintain telecommunications networks within the city. These include the public switched telephone network (PSTN), broadband (including NBN) and mobile services.

Essential infrastructure

Emergency services

The city is serviced by the following emergency services:

- Queensland Fire and Emergency Service – Fire and Rescue stations
- Queensland Fire and Emergency Service – Rural Fire Service brigades
- Queensland Ambulance Service – Ambulance establishments
- Queensland Police Service – Police establishments
- State Emergency Service – SES depots

Medical and health facilities

The city is serviced by the following medical facilities:

- Ipswich General Hospital, operated by Queensland Health
- St Andrews Private Hospital, operated by Ramsay Health
- Mater Private Hospital Springfield
- an extensive network of medical centres and general practitioners.

Railway

Ipswich is connected to the Brisbane central business district by Queensland Rail's passenger network.

Within the Ipswich area, rail stations are located at Grandchester, Rosewood, Thagoona, Walloon, Karrabin, Wulkuraka, Thomas Street, Ipswich, East Ipswich, Booval, Bundamba, Ebbw Vale, Dinmore, Riverview, Redbank, Goodna, Springfield Central and Springfield.

Airports, airfields and helicopter landing pads

RAAF Base Amberley is situated within the City of Ipswich and is a primary staging point for military air operations.

There are several locations across Ipswich that are suitable for use as helicopter landing pads (helipads) and could be used for evacuation purposes.

The helipad used by Ipswich Hospital is located on Griffith Road, Ipswich.

Tourism, business, industry and agriculture

Tourism sector

Discover Ipswich³⁷ describes the City's appeal to tourists

You only have to venture 30 minutes from Brisbane to discover Queensland's time-honoured heritage region, packed with surprising new adventures. It's where historic homes meet culinary cool. Where the open road leads to beautiful countryside, dotted with unexpected delights.



Where you can float high above the rolling hills and ranges, or chopper in for lunch at a hatted restaurant. Where museums mark the time and vineyards ramble from vale to vale. The pioneering spirit remains alive in Ipswich, bringing a new wave of creativity to this beautiful heritage city.

Craft breweries let off steam in languid laneways, cheek by jowl with eclectic cafés. Art galleries invite you in for a breath of fresh air. Sculptured gardens amble through serene spaces and sprawling parks play host to the restless and the restful.

There's a feeling in the air here, that every turn will uncover a new curiosity — and all you have to do is to be here in the moment. You'll find diversion in diversity, with trails and tracks for motorheads and mountaineers, train lovers and theatre-goers, aviators and acrobats, ecologists and mixologists. It's a place where you're more than likely to encounter extraordinary experiences you were never expecting.

In a local disaster management context, tourists pose additional challenges during a disaster, because:

- The potential for large numbers of visitors needs to be considered during disaster and evacuation planning
- Cultural and linguistic diversity (CALD) need to be considered when communicating in the event of a disaster
- Visitors' preparedness for any given disaster situation may be limited.

Business sector

Ipswich has a number of major business and shopping precincts which include restaurants and several clusters of high-density living. Major shopping centres include Booval, Brassall, Goodna, the Ipswich Central Business District, Karalee, North Ipswich, Redbank, Redbank Plains, Springfield Lakes, Springfield and Yamanto.

Industrial sector

There is a range of industries in the LGA, including coal extraction, railway workshops, livestock slaughtering, meat processing, aluminium manufacturing, power generation, clay-paver production, heavy engineering manufacturing, and defence.

The industrial base serving the area includes many establishments that may be considered to contain hazardous material and/or processes. These include:

- Australian Meat Holdings (Dinmore)
- Carole Park, Karrabin, Redbank and Wulkuraka industrial estates
- Citiswih Industrial Park
- Churchill Abattoir
- RAAF Base Amberley
- Swanbank Enterprise Park
- Waste management facilities – New Chum, Riverview and Swanbank

Major shopping centres and other food storage facilities around the city can also be considered hazardous due to the large amounts of ammonia used for refrigeration.

³⁷Discover Ipswich, 2017 [DiscoverIpswich.com.au/welcome-to-ipswich/](https://www.discoveripswich.com.au/welcome-to-ipswich/)



Day Meets Night by L Jarvis
Enviroplan Photographic Competition

Agricultural sector

Some significant farms are located in the LGA along with cattle farms (beef and dairy).

Proposed future development and infrastructure

Ipswich is a fast growing city and major developments are underway. The rapid growth projected for the city has led to the development of a social infrastructure plan. It identifies requirements for meeting the needs of residents.

Education

Schools

The Ipswich area has numerous schools – public and private. In addition, a number of child care centres, kindergartens and early learning centres are located within the LGA.

Higher education

Ipswich is home to two campuses of the University of Southern Queensland. The city also has multiple campuses of South West TAFE, in addition to a number of other private providers.

Sport, recreation and major events

Sport and recreation

Ipswich has a mix of large and small sporting and recreation facilities. These include open sports fields and community centres. The city has an active racing industry and maintains a large racecourse at Bundamba, with significant numbers of horses located within the LGA.

Major events

The city hosts various high profile national and international events, most of which occur during the cyclone, summer storm and bushfire seasons. Major events for the city pose challenges for evacuation and people management during disaster events.

Council's Economic Development Office maintains a calendar of major events, which is available at DiscoverIpswich.com.au/whats-on/

Hazardous sites

There are a number of facilities on sites across the Ipswich area that contain flammable and combustible liquids and other hazardous substances of varying quantities.

Work Health and Safety Queensland is responsible for maintaining a register and ensuring the safe handling and storage of a range of hazardous substances as per Schedule 11 of the Work Health and Safety Regulation 2011.

Council also registers and monitors a variety of other premises known as 'environmentally relevant activities' under the *Environmental Protection Act 1994*. These premises contain a variety of hazards including chemicals, ignition sources, and wastes.

Risk assessment methodology

The risk assessment process used by Council is defined in AS/NZ ISO 31000:2009³⁸ Risk Management. Risk assessment is a three-phase process and includes: Risk studies for the City of Ipswich have been completed. The risk register resulting from these studies is maintained in Sub Plan 1.02 All Hazard Risk Assessment.

Risk studies for the City of Ipswich have been completed.³⁹ The risk register resulting from these studies is maintained in *Sub Plan 1.02 All Hazard Risk Assessment*.

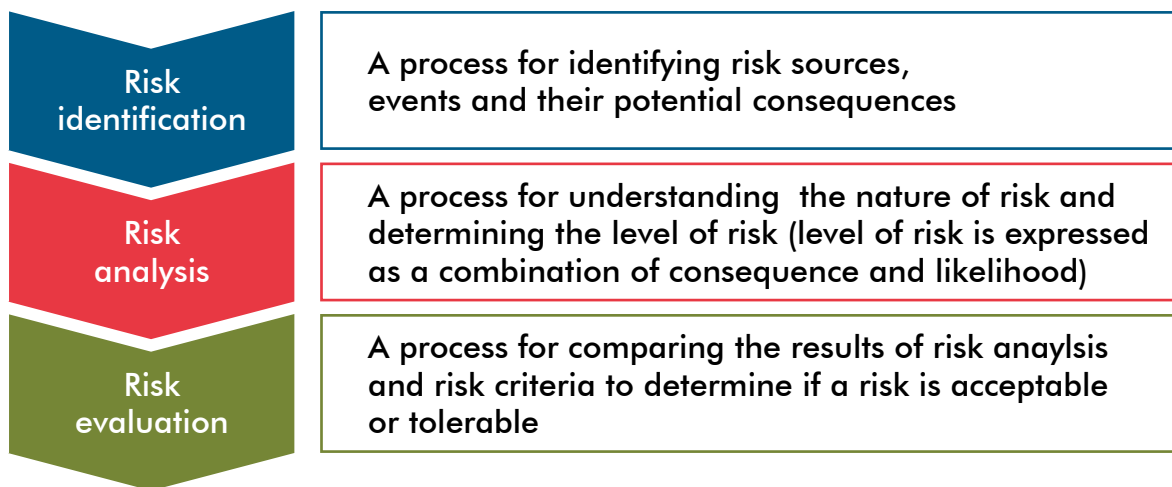


Figure 5 – Risk assessment methodology

³⁸Australian/New Zealand Standard under the International Organization for Standardization

Risk identification

Ipswich City Council and the LDMG has identified several natural and non-natural risks that have the potential to affect the Ipswich community. These are addressed in the following pages.



Figure 6 – Hazards to the City of Ipswich

Floods

Flooding is defined as:

... a general and temporary condition of inundation of normally dry land areas from overflow of inland or tidal waters from the unusual and rapid accumulation or runoff of surface waters from any source.⁴⁰

Ipswich has a complex flood story due to its location on the floodplains of both the Bremer and Brisbane Rivers. The Bremer River is an important part of the much larger Brisbane River catchment (13,570 km² in size) and its water levels are influenced by tides from Moreton Bay.

Flooding has always been a natural occurrence in the region. It was recorded as early as 1824 by the explorer John Oxley. While river floods usually affect a larger area, flooding including flash flooding, also occurs along the many local creeks, as well as from numerous overland flow paths. In terms of rainfall, Ipswich typically receives approximately half its average yearly rainfall in the December to March months.

³⁹In accordance with ISO 31000:2009 Risk Management

⁴⁰Geo Science Australia, What is a Flood? Ga.gov.au/scientific-topics/hazards/flood/basics/what



The majority of the Ipswich LGA lies within the lower Bremer River floodplain. The upper catchment areas lie within the Scenic Rim floodplain, and the north-eastern and north-western parts are located directly on the Brisbane River floodplain. The Brisbane River also forms the city's north-eastern boundary.

The Bremer River catchment has a total size of approximately 2,030km², with a 100 km river length from its source in the Scenic Rim to the Brisbane River. A number of major creeks flow into the Bremer River within Ipswich, namely the Western (Franklin Vale), Warrill (Purga), Ironpot, Mi Hi, Deebing and Bundamba Creeks.

The Six Mile, Goodna, Woogaroo and Sandy Creeks flow directly into the Brisbane River along the city's north-east boundary. Black Snake Creek, which flows through the township of Marburg, also feeds into the Brisbane River at Fernvale.

Urban development in Ipswich has historically been concentrated along the Bremer River and the eastern creeks, primarily along the Deebing, Bundamba, Six Mile, Goodna and Woogaroo Creeks. The city is currently experiencing a high level of urban development in the Ripley Valley area (Bundamba Creek), in the Springfield area (Woogaroo Creek), in Redbank Plains, and Collingwood Park (Six Mile Creek).

The largest floods in Ipswich occurred in:

- February 1893 – town gauge reading of 24.50 m Australian Height Datum⁴¹ (AHD)
- January 1974 – town gauge reading of 20.70 m AHD
- January 2011 – town gauge reading of 19.25 m AHD
- January 2013 – town gauge reading of 13.9 m AHD

For reference information the David Trumpy Bridge, which traverses the Bremer River in the Ipswich has a deck height of 24.90 m AHD.

Bushfires and major fires

*'Bushfires and grassfires are common throughout Australia. Grassfires are fast moving ... They have a low to medium intensity and primarily damage crops, livestock and farming infrastructure, such as fences. Bushfires are generally slower moving, but have a higher heat output ... Fire in the top of the tree canopy can move rapidly.'*⁴²

The bushfire season extends from mid-late winter through to early summer. Seasonal conditions can exacerbate potential bushfire situation. This is especially the case if a relatively wet summer/autumn period (which produces good vegetation growth) is followed by a cold, dry winter and warm spring. This can result in abundant quantities of dried vegetation—especially if the cycle occurs over several years.

Natural bushlands in the following areas are prone to bushfire: Camira, Carole Park, Pine Mountain, Kholo, Marburg Range, Ripley Valley, Walloon and Springfield. Grassland fires are possible in most rural areas depending on seasonal conditions.

Major fires are defined as fires involving or inside a building or structure, including outbuildings, ships, tank farms and petrochemical complexes.⁴³ The City of Ipswich has a number of potential major fire risk localities. Generally these are located in industrial and commercial areas such as Amberley, Bundamba, New Chum, Carole Park and Wulkuraka.

⁴¹An Australian standard measure of altitude above sea level.

⁴²Geoscience Australia, What is a Bushfire? Ga.gov.au/scientific-topics/hazards/bushfire/basics/what

⁴³Country Fire Authority of Victoria

Severe storms

Severe thunderstorms are localised events because they do not, usually not affect areas as widely as tropical cyclones and floods do. Their devastating impact is often underestimated.

Thunderstorms that produce any of the following events are classified as severe if one or more of the following conditions are met in Australia:

- large hail (2 cm or greater in diameter)
- wind gusts (90 km/hr or greater)
- tornadoes
- heavy rainfall conducive to flash flooding.

Severe thunderstorms are likely to cause damage to property, crops and natural vegetation', and have been known to result in death or injury.⁴⁴

Major transport incidents

Major transport incidents are those involving transport or passenger vehicles such as rail and road vehicles, aircraft, and marine vessels.⁴⁵

Aircraft incidents

An aircraft incident is a possibility in the Ipswich LGA, with flight paths of aircraft from the Amberley Air Base, Brisbane Domestic and International Airports, and Archerfield Airport frequently passing over the city. An incident could be caused by either defence or civilian aircraft. The effect of an aircraft coming down, particularly in a built-up area would likely extend emergency services beyond their capacity.

Road incidents

Road incidents of the size or complexity to require the activation of the LDMG would be likely to involve large transport vehicles or buses (as local suburban and school services). The potential for road incidents increases with the number of arterial roads and the type of traffic. Increased commuter, industrial and haulage traffic adds to this probability.

Rail incidents

A serious rail incident could extend emergency services beyond their capacity. The railway line that passes through the city area services South West Queensland. It is electrified from Brisbane to Rosewood. The Westlander service and suburban trains with a carrying capacity of 1,000 passengers also traverse the city.

Marine incidents

Although unlikely, a major incident could occur on the Bremer or Brisbane Rivers, or on a lake or dam within the area. The Moggill Ferry is located at Riverview, and regular water skiing activities occur on various sections of the river.

Hazardous materials incidents

A hazardous material is a:

substance with potential to cause harm to persons, property or the environment because of its chemical, physical, biological or radiological properties.⁴⁶

⁴⁴Bureau of Meteorology, Storm Spotters Handbook Bom.gov.au/storm_spotters/handbook/introduction.shtml

⁴⁵Queensland Police Service, Police.qld.gov.au/corporatedocs/OperationalPolicies/Documents/OPM/Chapter17.pdf

⁴⁶(Queensland) State Chemical/HazMat Plan (2004)



There is potential for emergencies and disaster through the storage, transport, use and discharge of toxic and flammable substances and gases. The effects of this type of disaster could cause severe chemical and/or thermal burns to large numbers of people who would require extensive medical treatment. This may necessitate the evacuation of people from within the disaster area, contaminated areas or damaged buildings.

The Ipswich LGA is crossed by the Moonie Oil Pipeline and high pressure gas mains, all of which could cause a disaster should they break or fail. Both low and high pressure gas lines run throughout the older areas of the city.

Epidemics/pandemics (human-related)

A pandemic is a widespread infectious disease that spreads quickly and widely among human or animal populations.⁴⁷

The outbreak of an infectious disease within the human population could cause the normal response systems within the community to be overwhelmed. It could involve isolation and the quarantine of large numbers of people for a protracted period.

Dam failures

A dam is considered to have failed when part or all of it physically collapses, or where there is an uncontrolled release of any of the contents from the dam.⁴⁸

Owners of referable dams (which are dams that could put people at risk if they were to fail) must prepare emergency action plans (EAPs). Public versions of these EAPs are available on the Department of Emergency and Water Supply's website at Dews.qld.gov.au/water/dams/safety/eap.

Ipswich City Council prepares and maintains EAPs for a number of managed dams and detention basins. Seqwater provides Council with copies of its EAPs for dams that impact on the City of Ipswich. These are Lake Manchester Dam, Moogerah Dam, Somerset Dam and Wivenhoe Dam.

Other dam operators within the City of Ipswich also prepare and provide a copy of their EAP to Council. Each EAP requires the dam operator to provide advice to the LDMG of impending failure situations and the likely impacts.

⁴⁷Queensland Government, Business.qld.gov.au/running-business/protecting-business/disaster-resilience/pandemic-risk-management/defined

⁴⁸Queensland Guidelines for Failure Impact Assessment of Dam Waters Dews.qld.gov.au/__data/assets/pdf_file/0005/78836/guidelines-failure-impact-assessment.pdf

Heatwaves

*A heatwave is any long period of very hot weather. In Australia, heatwaves are usually in the range of 37°C to 42°C.*⁴⁹

The Bureau of Meteorology operates a Heatwave Service between the start of November and the end of March. This covers the entire summer season.⁵⁰

Heatwaves are sometimes described as a silent killer. Weather events such as tornadoes, floods, cyclones or severe thunderstorms tend to receive a lot of media attention, focusing on how many people have lost their lives or been injured. Heatwaves are not associated with these violent events, and therefore are generally not reported in the media to the same extent.

However, heatwaves can result in significant health stress on vulnerable people. This stress may result in death during the heat event, but in many cases, death can occur well after the heatwave has passed. Often it can be difficult to determine whether the heatwave caused death, as many of those who die have a pre-existing or contributing health condition. Intense heatwaves may affect normally reliable infrastructure, such as power, water and transport services.

Tropical cyclones and east coast lows

*A tropical cyclone is defined as a non-frontal low pressure system of synoptic scale developing over warm waters having organised convection and a maximum mean wind speed of 34 knots or greater extending more than half-way around near the centre and persisting for at least six hours.*⁵¹

An east coast low is an intense low-pressure system. East coast lows ... occur on average several times each year off the eastern coast of Australia, in particular southern Queensland, New South Wales and eastern Victoria.⁵²

Although they can occur at any time of the year, they are more common during autumn and winter, with a maximum frequency in June.

The impacts of tropical cyclones and east coast lows are largely similar to flooding and severe storms, these impacts have been defined under the respective headings.

Services disruption

Water supply

Treated water is received in the Ipswich LGA through four major gravity trunk mains from the Mount Crosby Water Treatment Facility (owned and operated by Seqwater). The water is distributed throughout the city and surrounding townships via a complex system of reservoirs, trunk supplies and trunk mains. A small treatment plant located on Warrill Creek and operated by Queensland Urban Utilities supplies water for irrigation purposes only.

A loss of water supply could be disastrous. Minor accidents could occur due to exposure of people to the fracture of a large high pressure water main in a built-up area. Major incidents could overtax the emergency response resources of the city, particularly if they occur in conjunction with other events such as a fire or earthquake.

Sewerage

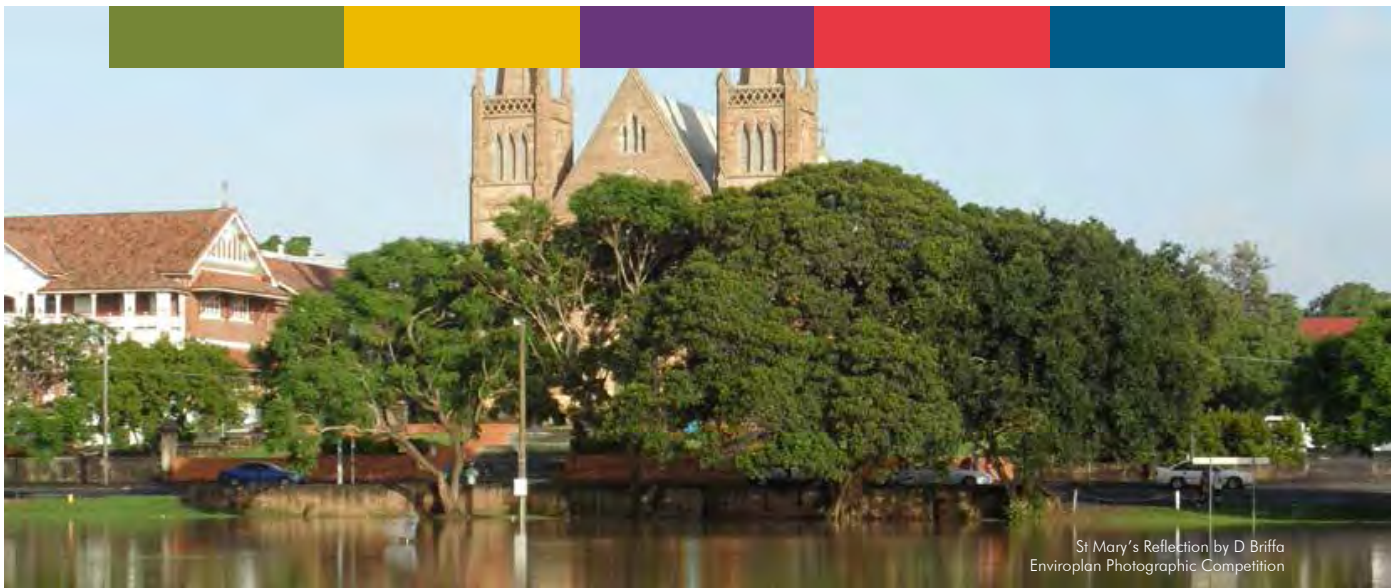
Four major waste water treatment plants located at Bundamba, Rosewood, Goodna and Carole Park treat the domestic and industrial effluent from the city and some surrounding townships.

⁴⁹Queensland Health, Qld.gov.au/emergency/dealing-disasters/heatwave.html

⁵⁰Bureau of Meteorology, Bom.gov.au/australia/heatwave/about.shtml

⁵¹Bureau of Meteorology, Tropical Cyclones, Bom.gov.au/cyclone/faq/

⁵²Bureau of Meteorology, East Coast Low, Bom.gov.au/lam/glossary/epagegl.shtml



St Mary's Reflection by D Briffa
Enviroplan Photographic Competition

Roadways, bridges and stormwater infrastructure

Approximately 1,632 km of roadways and numerous bridges and major culverts service the area.

Disruption of roadways and bridges due to earthquakes or flooding would create traffic congestion and may affect the ability of emergency services to respond. Disruption would also occur to the travelling public, bus and rail networks, and commercial transports.

Refuse disposal

Domestic and industrial refuse is disposed of as landfill at either the Ti Tree BioEnergy facility at Willowbank or the Remondis facility at Swanbank. Council operates two recycling and refuse centres at Riverview and Rosewood.

Council has engaged an appropriate contractor to undertake the disposal of pathological waste in accordance with relevant legislation.

Terrorism

A 'terrorist act' is an act, or a threat to commit an act, that is done with the intention to coerce or influence the public or any government by intimidation to advance a political, religious or ideological cause, and the act causes:

- *death, serious harm or endangers a person*
- *serious damage to property*
- *a serious risk to the health or safety of the public, or*
- *seriously interferes with, disrupts or destroys critical infrastructure such as a telecommunications or electricity network.*⁵³

The National Terrorism Threat Advisory System has a five-level scale that is intended to provide advice about the likelihood of an act of terrorism occurring in Australia. When the threat level changes, the Australian Government provides advice on what the threat level means, where the threat is coming from, potential targets and how a terrorist act may be carried out.

The National Terrorism Threat Level is regularly reviewed in line with the security environment and intelligence.⁵⁴

⁵³Australian Government, Criminal Code Act 1995 (Cth)

Ag.gov.au/NationalSecurity/Counterterrorism/Law/Documents/Australias%20counter%20terrorism%20laws.pdf

⁵⁴Australian Government, National Security, NationalSecurity.gov.au/Securityandyourcommunity/Pages/National-Terrorism-Threat-Advisory-System.aspx



Exotic animal and plant diseases

In Queensland, an exotic animal and plant disease is considered to be a biosecurity event.

A biosecurity event is one:

*... that is, was or may become a significant problem for human health, social amenity, the economy or the environment, and is, was or may be caused by a pest, disease or contaminant.*⁵⁵

Animal and plant diseases could be introduced or spread through movement of livestock and crops through the LGA. These diseases could include Foot and Mouth, Anthrax, Brucellosis, Rabies, Newcastle disease, Screw-worm fly, African swine fever, or Avian influenza (strain H5N1). An outbreak of any of these could cause a major health risk in the area.

Of primary concern are diseases that are transmissible from animals to people (known as zoonotic).

Earthquakes

Earthquakes are a possibility in the Ipswich LGA, although historically the risk is not as severe. The effects of this type of disaster could include personal injury and death (human and animal), building damage, fire, uncontained hazardous materials and chemicals, loss of power and telecommunications and other essential infrastructure, and disruption to transport routes.

The Geoscience Australia website (Ga.gov.au) for recorded seismic activity from 1985–2016 shows three earthquakes in Ipswich: two in 1990 and one in 1992. Other earthquakes have been recorded in South East Queensland over the same time period.

Landslides

*A landslide is 'the movement of rock, debris or earth down a slope'. Landslides are driven by gravity and are also known as landslips, slumps or slope failure.*⁵⁶

A landslide is unlikely in the Ipswich LGA, but is possible in developed and rural hilly areas. The effects of this type of disaster include damage to buildings and infrastructure.

Landslide damage is most likely to be confined to those areas of the city containing the Marburg formation and Walloon Coal Measures. Minor landslides have been observed along the banks of the Bremer and Brisbane Rivers after floods.

⁵⁵Biosecurity Act (QLD) 2014

⁵⁶Geoscience Australia, Ga.gov.au/scientific-topics/hazards/landslide/basics/what

Risk analysis

Risk analysis is the process used to understand the nature of risk and to determine the level of risk. The level (or rating) of risk is expressed as a combination of consequence and likelihood (or probability) and can be represented by the following formula:

$$\text{consequence} \times \text{likelihood} = \text{risk level}$$

Consequence refers to the outcome of an event, whereas likelihood is the chance of the event occurring in the first place. The risk level is the combination of consequence and likelihood expressed as being very low, low, medium, high or extreme.

Likelihood descriptors

The likelihood of an event occurring is expressed in Annual Exceedance Probability (AEP) terms. AEP measures the chance of an event occurring annually and is expressed as a percentage⁵⁷. The AEPs in the following table are based on the information contained in *Sub Plan 1.02 All Hazard Risk Assessment*.

	A	B	C	D	E
Rating	Almost certain	Likely	Possible	Unlikely	Rare
AEP	100%	10%	2%	1%	0.20%

Table 12 – Risk likelihood

So, for example, if something is described as having a likelihood of possible, there is a 2% chance of an event (risk source) occurring in any given year.

Consequence descriptors

The consequences of an event are classified as insignificant, minor, moderate, major or catastrophic. These classifications are described in the below table. The descriptions are broadly based on the principles provided in Handbook 10 – National Emergency Risk Assessment Guidelines (2015).

Insignificant consequence risk	Minor consequence risk
<ul style="list-style-type: none"> no fatalities medical treatment required small number displaced for a short period minimal damage little disruption to the community some impact on the environment with no lasting effects some financial loss. 	<ul style="list-style-type: none"> small number of fatalities hospitalisation required minor temporary displacement significant damage some community disruption serious impact on the environment with no long-term effects significant financial loss.
Moderate consequence risk	Major consequence risk
<ul style="list-style-type: none"> multiple fatalities numerous injuries requiring hospitalisation serious damage requiring some external assistance community functioning with difficulty severe impact on the environment with long term effects serious financial loss. 	<ul style="list-style-type: none"> significant fatalities extensive injuries with hospitalisation large numbers displaced for significant duration severe damage that requires external resources community only partially functioning severe permanent damage to the environment severe financial loss.

⁵⁷Handbook 10 – National Emergency Risk Assessment Guidelines, 2015

Catastrophic consequence risk

- mass fatalities
- large numbers requiring 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.

Table 13 – Consequence descriptors

Consequence category definitions

The consequence descriptions table relate to six distinct categories. These are identified and defined in the table below.

People	Definition
People	This relates to the direct impacts of disaster on the physical health of people/individuals, and on the ability of emergency services (that is, the health system) to manage. Mortality is defined as the ratio of deaths in an area to the population of that area; it is expressed as 1,000 per year.
Environment	This relates to the impacts of a disaster and its effects on the ecosystem of the area, including fauna and flora.
Economy	This relates to the economic impact of the disaster on the governing body as reported in the annual operating statement for the relevant jurisdiction, and on industry sectors as defined by the Australian Bureau of Statistics.
Governance (public administration)	This relates to the impacts of the disaster on the governing body's ability to govern.
Social setting	This relates to the impacts of a disaster on society and its social fabric, including its cultural heritage and the resilience of the community.
Infrastructure	This relates to the impacts of the disaster on the area's infrastructure/lifelines/utilities and its ability to service the community. <ul style="list-style-type: none">• long-term failure: repairs will take longer than six months• mid- to long-term failure: repairs may be undertaken in three to six months• mid-term failure: repairs may be undertaken in one to three months• short- to mid-term failure: repairs may be undertaken in one week to one month.

Table 14 – Consequence category definitions





Risk ratings for the City of Ipswich

In the risk study (*Sub Plan 1.02 All Hazards Risk Assessment*), risk ratings are provided for each month. The overall risk rating shown below is the highest value risk rating for the year.

Risk source	Overall risk rating
Fire	High
Flood	High
Hazardous materials	High
Major transport incident	High
Pandemic	High
Severe storm	High
Critical infrastructure failure	Medium
Dam failure	Medium
East coast low	Medium
Exotic plant or animal disease	Medium
Extreme heatwave	Medium
Major earthquake	Medium
Terrorism	Medium
Landslide	Low

Table 15 – Summary of City of Ipswich risk ratings

Risk evaluation

The purpose of risk evaluation is to assist in decision-making regarding treatment options by comparing risk criteria against risk analysis.

The highest prioritised risks for the City of Ipswich are those associated with:

1. flood
2. severe storm
3. fire

The primary organisation, lead organisation and strategies related to each these risk sources and other risks are identified in the prevention, preparedness, response, relief, and recovery sections of this LDMP.





Risk treatment

There are several ways to treat risks. These are to:

- avoid or remove the risk source
- implement strategies to decrease the consequences of the risk
- implement strategies to decrease the likelihood of the risk
- share the risk (for example, through insurance)
- transfer the risk through the identification of ownership and associated responsibility
- retain the risk through informed decision-making.

Residual risk

The LDMG treats risks by sharing using the above strategies. There will be instances where the LDMG, following a risk assessment, identifies that the application of treatment options at the local level will not be adequate and that unacceptable residual risk remains.

The application of risk sharing at the local level involves the transfer or sharing of the risk with neighbouring LDMGs, the relevant District Disaster Management Group (DDMG), or other stakeholders.

To ensure that shared risks are appropriately managed, the LDMG must consult with the entities with whom the risk will be shared, and ensure that appropriate agreements are in place and documented.



Part 4: Prevention

Super Cell by C McPhillips
Enviroplan Photographic Competition

Prevention (disaster mitigation) is a risk treatment that outlines the steps taken before or after a disaster to decrease future impact on communities, the economy, infrastructure and environment.

Traditionally, implementation of appropriate and targeted mitigation initiatives can offer sustainable cost savings to communities and government in the event of a disaster. Mitigation efforts can reduce the consequences of events, even if they fall short of preventing an event from happening.

Depending on the chosen strategies, mitigation initiatives should work towards reducing the financial and social costs to communities over time, improving the built environment, and reducing impact on the natural environment.

Examples of mitigation strategies include⁵⁸:

- undertaking design improvements to reduce the risk of disaster and to provide more resilient future infrastructure, or updating or hardening existing infrastructure or services
- encouraging land-use planning that recognises the sources of risk
- preparing communities and response agencies
- undertaking resilience activities, including establishing partnerships between sectors and the community
- having a clear understanding of hazards, their behaviour, associated risks and interaction with vulnerable elements, and communicating these.

The development of mitigation strategies should flow from analysis of the risk register. There should also be a clear link to the member organisations of the Local Disaster Management Group. This is to ensure that each risk and strategy is coordinated and managed by the most appropriate entity.

Queensland Government prevention roles and responsibilities

The state level policy and planning roles and responsibilities for prevention are outlined in the Queensland State Disaster Management Plan. They are as follows:

Lead prevention agency	Function
Queensland Reconstruction Authority	Disaster resilience and mitigation policy and planning
Department of Infrastructure, Local Government and Planning	Disaster mitigation and resilience funding
	Land-use planning

Table 16 – Queensland Government prevention policy responsibilities

⁵⁸Queensland State Disaster Management Plan 2016

Land-use planning

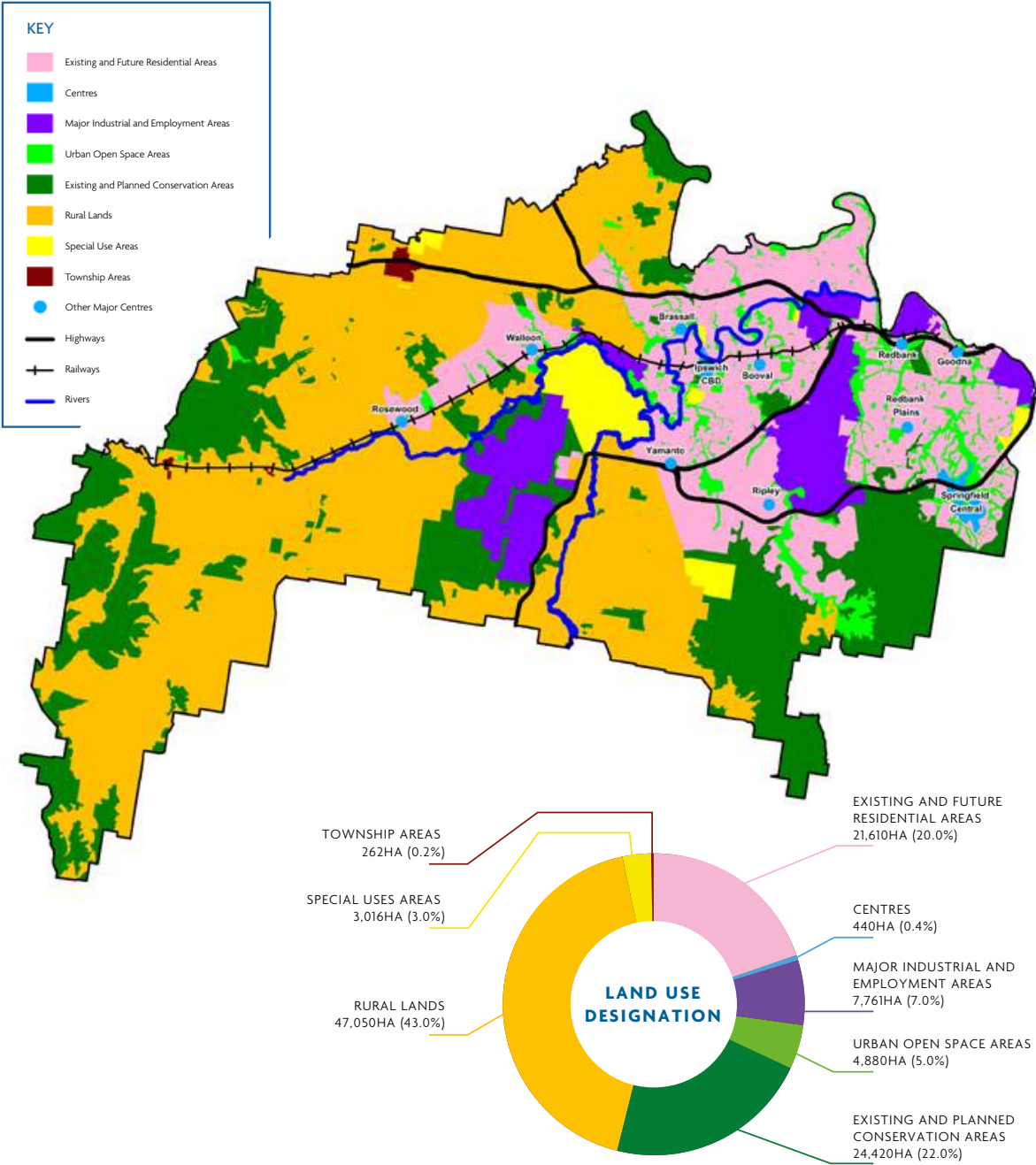


Figure 7 – Land-use designation



Managing land use is a key strategy in reducing disaster risks to minimise the potential for displacement, damage and disruption to communities.

Council prepares and maintains the Consolidated Ipswich Planning Scheme. This scheme includes plans, references for land-use management, codes for development, and requirements relating to the assessment of proposed developments.

As such, the scheme contributes to disaster risk reduction within identified hazard-prone/constraint areas, in particular:

- potential bushfire hazard areas (this allows for the identification of an appropriate class of building construction)
- waterways (allowing for minimum building setbacks)
- areas of unstable soils and areas of potential landslip hazard
- natural hazard (flood) management areas (this allows for the identification of appropriate development standards so that private and community infrastructure can be sited above recommended flood levels).

Design improvements

Major structural mitigation projects completed in Ipswich include two regional detention basins protecting the towns of Marburg and Rosewood. These basins were constructed in 2003 and have proven their worth by reducing the impacts of flooding on properties over a number of heavy rainfall events, such as those in 2008 and 2009.

A number of other structural mitigation works are nearing completion, including a flood levee to protect the township of Thagoona and upgrades to the current Rosewood detention basin, which should provide additional relief from flooding to the township. Other structural mitigation outside the Ipswich LGA – such as work undertaken at Wivenhoe and Somerset Dams - also provides a measure of protection from regional floods originating from the upper Brisbane River catchment.

Community education

The organisations that make up the LDMG are responsible for ensuring the community is aware of the relevant hazards and risks, and of how to prepare for, respond to and recover from them.⁵⁹

The LDMG agree to utilise the statewide Get Ready Queensland campaign as the overriding messaging for disaster awareness within Ipswich.

Each member organisation is responsible for implementing targeted community campaigns, relative to its expertise and primary (hazard) and functional (function) lead agency status.

Hazard reduction programs

The agencies that make up the LDMG are responsible for ensuring risk sources are kept to a minimum and/or reduced wherever possible. Such actions include:

- bushfire fuel load reduction through contemporary land management practices – including prescribed burning, maintenance of existing fire breaks and identification of additional fire breaks
- inspection and maintenance of high risk hazards and structures

⁵⁹Section 30(f), *Disaster Management Act 2003, Functions*



- public education to reduce disaster risks around the home
- catchment management programs (for example, waterway/natural drainage maintenance).

Each organisation undertaking these measures is responsible for implementing and maintaining an appropriate hazard reduction program and reporting on progress and outcomes to the LDMG.

Building codes, regulations and standards

Building codes, regulations and standards are designed to ensure consistent, safe and sustainable development of buildings and infrastructure. Building is regulated by Council under the *Building Act 1974* and the *Building Regulation 2006*. The codes, regulations and standards cover areas including drainage, fire separation, and construction in flood hazard areas.

More information on building standards can be located at lpswich.qld.gov.au/residents/building/building_standards.

Insurance

Residents, businesses and other organisations are encouraged to evaluate their risks and consider appropriate levels of insurance.

The 'Understand Insurance' website (developed by the Insurance Council of Australia) provides practical information to help residents, businesses and other organisations find out more about insurance and make decisions to meet their needs. It looks at what insurers do, how insurance products work and why they might be necessary.

It also covers how to understand risks, what to consider when choosing a product and an insurer, how to manage the cost of a premium, and how to lodge a claim.⁶⁰

More information is available at Understandinsurance.com.au.

The Insurance Council of Australia coordinates liaison between government and the insurance industry during the recovery phase of a disaster event. This focuses on:

- providing senior industry representation to each state and federal recovery group
- providing a 24-hour escalation path for insurance queries from the impacted community
- providing key insurance data and decision support to the community and government
- providing clear public communication about the insurance response to the event
- providing liaison between insurers, assessors, brokers, trades and suppliers at an industry level on issues of collective importance in delivering services to the impacted community.⁶¹

⁶⁰[Insurance Council of Australia Insurancecouncil.com.au/for-consumers](http://InsuranceCouncilofAustralia.com.au/for-consumers)

⁶¹[Insurance Council of Australia Insurancecouncil.com.au/for-consumers/catastrophe-arrangements](http://InsuranceCouncilofAustralia.com.au/for-consumers/catastrophe-arrangements)



Part 5: Preparedness

Smokey Fires by C Poore
Enviroplan Photographic Competition

Preparedness activities are designed to increase the capability of communities in order to reduce the impact of disasters. Examples of preparedness activities include:

- Developing and implementing community awareness programs
- Developing effective information management and collection of historical data events
- Developing concise and effective community communications methods
- Ensuring that accurate and current plans are in place.

The LDMG establishes and maintains relationships with lead and support agencies, local community groups and local volunteer service groups. This is to build a culture of ownership and partnership with the group members to increase the LDMG's overall disaster management capability.

Response capability

Council maintains a response capability⁶² through its funding and extensive support of the Ipswich City State Emergency Service (SES) Unit. Council also collects and distributes the Rural Fire Levy and an Emergency Management Levy on behalf of the Queensland Government.

Internally, Council has identified teams with relevant capabilities and expertise to assist in providing a disaster response capability.

Training

Training is important in ensuring that all agencies can seamlessly integrate within the disaster planning arrangements and contribute to an effective and coordinated response.

The LDMG has adopted the Queensland Disaster Management Training Framework (QDMTF), developed by Queensland Fire and Emergency Services (QFES). QFES delivers the training and maintains records of it using a learning management system.

Exercises

An exercise is a controlled activity used to train or assess personnel, evaluate procedures and test the availability and suitability of resources. It usually uses scenarios and focuses on specific objectives.

Exercises are an essential component of disaster preparedness and can be used by the LDMG and member organisations to enhance capacity and contribute to continuous improvement.

⁶²Section 80(1)(a), *Disaster Management Act 2003*, Functions of local government



Additionally, the Act requires the effectiveness of the LDMP to be reviewed at least once a year.⁶³ Conducting an exercise is one way in which the LDMG can meet this requirement. Should the LDMG have been active during the period (for example dealing with a disaster), this would also satisfy this requirement.

Exercises reinforce training and maintain the disaster management capability of the group. This could include exercising:

- processes within the LDMG (for example, activation, communications and decision-making)
- disaster management activities (for example, coordination centre management, evacuation, and resupply of food and other essentials)
- interactions between the LDMG and the District Disaster Management Group (DDMG)
- response arrangements for specific hazards (for example, pandemics, floods and cyclones).

Exercises can be conducted in a number of ways, including the following:

- Discussion exercises (desktop exercises) can be used by participants to think through scenarios or plans, talk through issues and identify possible solutions.
- Functional exercises can be conducted in an operational environment with participants performing their individual roles and functions. These exercises can be used to practise or evaluate procedures or decision-making, or to assess the interaction of groups (for example, the interactions between coordination centres and field units).
- Field exercises involve the mobilisation of personnel and/or resources to simulated events or incidents. They are the most labour and planning intensive type of exercise; however, they allow participants to be tested under a degree of realistic operational stress in a controlled environment.

Evaluating the exercise

In all cases, those conducting the exercises must define the objectives before they start. Each exercise should be evaluated in terms of:

- its success in meeting its original aim
- the extent to which it met each of its objectives
- how it was conducted.

⁶³Section 59(2), *Disaster Management Act 2003*, *Reviewing and renewing plan*



'Hot debriefs', (conducted immediately following an exercise), allow participants to raise issues while they're still fresh in their minds. A more detailed review, conducted within a few days of the exercise, allows participants time to provide a more considered view of the exercise. All exercises should incorporate both types of debriefs.

Council and the LDMG adopt the P²OST²E framework as their evaluation tool. This framework is based on the premise that 'people, process, organisation, support, technology, training and exercise management' are the critical elements in ensuring a thorough review.

Post-event review

After disaster events occur, the LDMG should review the operational activities undertaken. This is a key component in ensuring capability development and the continuous improvement of disaster management arrangements.

Post-event reviews are conducted to:

- assess disaster operations undertaken, including actions, decisions or processes
- document those processes that worked well and identify a course of action to ensure they are recorded and updated for use in the next operation/event
- assess capability and consider where additional training, community education and/or exercises may be needed.

The LDMG may choose to review its operations following an event through a hot debrief or a post-event debrief (similar to those used to evaluate exercises). During protracted operations the LDMG may choose to conduct multiple hot debriefs to identify significant issues and provide prompt solutions for immediate implementation.

The post-event debrief might be held days or weeks after an operation, when participants have had an opportunity to form a considered view of the effectiveness of the operation. It may also be conducted using a cooperative panel approach, with panel members drawn from various agencies. This process is designed to look for improvements to Queensland Disaster Management Arrangements. It is also designed to identify improvements in relation to the conduct of business between the Queensland Disaster Management Committee, the DDMG and the LDMG.

The report from the post-event analysis may make recommendations regarding how disaster management is delivered within the QDMA. These recommendations can be made to/about any of the three disaster management levels (local, district and state) and/or organisations involved.

Preparedness notification and dissemination

Bureau of Meteorology

Warning products issued by the Bureau of Meteorology (BoM) include severe weather warning, tropical cyclone advice and tsunami warnings. The community is encouraged to subscribe to these. Monitoring may also occur through Bom.gov.au/ or through the BoM App from Google Play Store or Apple Store.

Emergency Management Dashboard

Ipswich City Council's Emergency Management Dashboard provides the Ipswich community with a comprehensive and user-friendly platform for accessing information on the current status of events in Ipswich. It includes emergency news, road conditions, weather warnings, power outages and other information.

To view the dashboard visit Emd.ipswich.qld.gov.au.

My Ipswich Alerts

As part of Ipswich City Council's commitment to community safety and wellbeing, it has teamed up with the Early Warning Network (EWN) to provide residents with early warning alerts for potentially dangerous weather and bushfires within the City of Ipswich. Council encourages residents to become familiar with potential hazards and risks and take early action where needed.

The EWN alerts are provided through Council's innovative My Ipswich Alerts platform, a free service enabling the community to be instantly updated via email or smartphone app with warnings and information about emergency and disaster events in the greater Ipswich region.

To opt in for this service or to find out more information visit ipswich.qld.gov.au/myipswichalerts or search the Google Play Store or Apple Store for *My Ipswich Alerts*.

Seqwater notification service

Seqwater manages three gated dams (Wivenhoe, Somerset and North Pine dams) in South East Queensland. These dams provide water to 3.1 million people in the region. Seqwater provides information on planned releases of water from the dams, in addition to other notices.

For more information visit Seqwater.com.au/dam-release-information-service

LDMG and member organisation responsibilities

The LDMG has established notification and dissemination processes to allow communication between member organisations. This process takes into account the time restrictions of rapid onset events such as dam failures.

LDMG secretariat does not use the LDMG notification system to send out any publically available warnings or notifications to member organisations. Member organisations are required to subscribe and manage their subscription to these services themselves.

Emergency planning

Local Disaster Management Plan principles

The LDMG recognises the importance of planning for disaster events and actively promotes this to the city's disaster management agencies.

When preparing the Local Disaster Management Plan and sub plans, the LDMG:

- Uses risk management principles specified under AS/NZ ISO 31000:2009 and the National Emergency Risk Assessment Guidelines (NERAG)
- Adopts a comprehensive, all-agencies approach to disaster management
- Considers community preparedness
- Consults with agencies and community stakeholders as appropriate.

Council is responsible for maintaining the LDMP, in consultation with member agencies. In addition, Council maintains a number of sub plans detailing coordination and support arrangements for the LDMG.



Primary and lead agency plans

The LDMG expects that primary (hazard/threat-specific) and lead (functional) agencies will prepare and maintain written emergency plans, to support the LDMP and associated sub plans to control hazards and to manage the delivery of the disaster management functions for which they are responsible.

Community emergency plans

The LDMG encourages community groups, businesses, developers and others to prepare emergency and business continuity plans. The group especially encourages organisations that care for vulnerable sectors of the community (for example, aged care facilities) to prepare emergency plans in consultation with the appropriate organisations.

Any organisations that wish to provide Council with copies of their plans may do so by emailing council@ipswich.qld.gov.au

Response and recovery equipment programs

While the LDMG recognises that organisations are responsible for raising and maintaining their own equipment, it will:

- A\Support applications from the city's disaster management organisations for funding through grant programs
- Advocate for increases in state and federal government funding for local disaster management equipment initiatives
- Encourage organisations to support each other with equipment needs through strategies such as funding support and memoranda of understanding.

Community awareness and education

There is an onus on the member agencies that make up the LDMG to ensure the community is aware of the relevant hazards and risks and knows how to prepare for, respond to and recover from them.⁶⁴ The lead agencies are responsible for community education related to their specific hazards.

Examples of this operating locally within the City of Ipswich are:

- Council's website and social media sites
- Emergency management brochures and materials
- Community education newsletters, articles and presentations by Council's Emergency Management team
- Community education activities and presentations by the Ipswich City SES Unit
- QFES's Prepare, Act, Survive campaign
- The Bureau of Meteorology's warnings and website.

Hazards and community characteristics may be similar across local governments, and media broadcast areas will often overlap local government boundaries. In recognition of this, the LDMG will continuously look for opportunities to promote and undertake shared messaging and joint programs with the relevant organisation, including neighbouring LDMGs.

⁶⁴Section 30(f), *Disaster Management Act 2003, Functions*



The LDMG coordinates community education activities conducted by the appropriate organisations to inform the Ipswich community about some of the following matters:

- local disaster risks
- what is likely to happen during a disaster (for example, power outages and road closures)
- the appropriate actions to take in preparing for a disaster event
- who to contact if assistance is needed during a disaster (and contact details)
- local evacuation arrangements (when to evacuate and where)
- information about the Register. Find. Reunite. service
- specific measures available for groups who require particular assistance (for example, the elderly, those with healthcare needs, and people with disability)
- what to do with household pets when evacuating
- types of warnings that are used in the area, what they mean and what to do when a warning is issued
- where and how to obtain information before, during and after a disaster.

LDMG community education activities should be targeted at addressing the specific needs of local communities, and based on the outcomes of *Sub Plan 1.02 All Hazard Risk Assessment*. They should include general information as well as targeted education programs for groups with particular needs.

Community awareness and education strategies currently adopted by the group include:

- publications explaining disaster preparedness and emergency procedures
- media releases explaining disaster preparedness and emergency procedures
- publications prepared by lead agencies detailing the measures that should be taken to prevent, minimise and deal with the effects of emergency and disaster events
- ongoing media campaigns to raise awareness and encourage the community to implement preventative measures and be aware of hazards
- ongoing campaigns to raise awareness of the standard emergency warning signal (SEWS)
- programs that raise awareness of evacuation procedures and the limitations of evacuation centres during a disaster event.



Part 6: Response

Fire Breaks by M. Donovan
Enviroplan Photographic Competition

The principal purpose of emergency response is the preservation of life, property and the environment.

Emergency response and the Local Disaster Management Group

The LDMG is informed of the day-to-day incident response undertaken by primary agencies, including emergency services. Once activated, the LDMG's role is to:

- efficiently and effectively coordinate the response to an event
- minimise the impact of a disaster on the community
- detail the strategic manner in which elements of the LDMG will deal with day-to-day disaster management business
- determine how information will be shared on events that may affect the local government area.

Activation of the LDMG can be authorised by its Chairperson or Deputy Chairperson on receipt of any of the following:

- a warning of an impending threat that would require a coordinated multi-agency response
- a request from:
 - a lead or primary agency for assistance under this plan
 - a support agency for assistance under this plan
 - the Ipswich District Disaster Coordinator (DDC)
 - an affected neighbouring local government (to provide assistance under mutual aid arrangements)
- advice from the state of an impending disaster.

Activation levels for response arrangements

It is critical that the LDMG and its members maintain awareness of events occurring in the LGA. This will ensure an appropriate and measured activation of the LDMG.

There are four activation levels. They are:

- alert
- lean forward
- stand up
- stand down.

The levels are not sequential, and may be skipped depending on the situation. The activation levels are described in the following table.

	Description	Triggers	Ipswich City Council actions
Alert	<ul style="list-style-type: none"> There is an awareness of a hazard that has the potential to affect the LGA No further action is required; however, the situation should be monitored by someone capable of assessing the potential risk 	<ul style="list-style-type: none"> There is awareness of a risk source (threat) that has the potential to affect the Ipswich LGA to an extent that a coordinated multi-agency response would be required or requested 	<ul style="list-style-type: none"> Monitor the risk source through communication with the primary agency Maintain situational awareness Brief the LDC and key staff Provide advice of the LDMG response level to the DDC Report, by exception only, to the DDC and/or LDMG Undertake emergency response activities through LDMG members' core business arrangements.
Lean forward	<ul style="list-style-type: none"> This is an operational state prior to 'stand up', characterised by a heightened level of situational awareness of a disaster event (either current or pending) and a state of operational readiness The Local Disaster Coordination Centre (LDCC) is on standby— prepared but not activated 	<ul style="list-style-type: none"> There is a likelihood that a threat may affect the Ipswich LGA to an extent that a coordinated multi-agency response would be required or requested The threat is quantified but may not yet be imminent There is a need for public awareness 	<ul style="list-style-type: none"> The LDC places the Chairperson and Deputy Chairperson of LDMG on watching brief Establish communication protocols with the primary and warning agencies Maintain situational awareness and confirm level and potential of the threat Provide advice of the LDMG response level to the DDC Issue warning orders to key staff and agencies Prepare LDCC but don't activate it Determine trigger point for move to stand up Conduct initial briefing of LDMG Provide ad-hoc and reporting by exception only to DDC and/or LDMG Initiate public information and warnings
Stand up	<ul style="list-style-type: none"> The operational state following lean forward, at which resources are mobilised, personnel are activated and operational activities are commenced LDCC is activated 	<ul style="list-style-type: none"> The threat is imminent The community will be or has been affected Requests for support received by the LDMG There is a need for coordination 	<ul style="list-style-type: none"> LDC to brief Chairperson and Deputy Chairperson of LDMG LDMG meets LDCC is activated and operational LDMG assumes control of disaster operations in the LGA Implement standard operating procedures Provide regular reporting to DDC and/or LDMG



	Description	Triggers	Ipswich City Council actions
Stand down	<ul style="list-style-type: none"> The transition is made from responding to an event back to normal core business and/or continuance of recovery operations There is no longer a requirement to respond to the event and the threat is no longer present. 	<ul style="list-style-type: none"> There is no requirement for coordinated response Community has returned to normal function Recovery taking place 	<ul style="list-style-type: none"> LDC approves stand down Conduct final checks of outstanding tasks Make the transition to business as usual and/or recovery Debrief staff of the LDCC and LDMG Make a final situation report to DDC and/or LDMG

Table 17 – LDMG response activation levels

Local Disaster Coordination Centre

The LDCC is responsible for coordinating operations under the direction of the LDC and in line with the LDMG's direction. This includes (but is not limited to) the:

- coordination and planning of disaster operations
- dissemination of public information and warnings
- coordination of reporting to the relevant stakeholders.

Council operates and resources the LDCC. Liaison officers from relevant organisations also operate from within the LDCC.

Emergency warning notification and dissemination

The LDMG is responsible for ensuring the community is aware of ways to prevent, prepare for, respond to and recover from a disaster.⁶⁵ This involves raising awareness of identified threats and the means by which the public should respond at an individual and/or household level. It may also include warnings and directions, as provided by primary agencies relating to the particular hazard.

The Chairperson of the LDMG (or delegate), is the official source of public and media information for the group's coordination and support activities.

Primary and functional lead agencies provide media liaison for issues relating to their organisational roles. Individual organisations maintain responsibility for internal reporting on their business in accordance with their established procedures.

Community members may receive warnings and information from a number of different sources—some official, some not. They may include:

Family	Friends	Neighbours	Media releases	River 949 Radio
Facebook	Twitter	Emergency Management Dashboard	Websites	612 ABC Radio
Standard Emergency Warning Signal	Emergency Alert	TV broadcast	Door-knocking	My Ipswich Alerts

Table 18 – Sources of warnings and information

⁶⁵Section 30, *Disaster Management Act 2003, Functions*

Family, friends and neighbours

Family, friends and neighbours are an extremely powerful source of warning information. However, this information should always be verified by official sources.

All members of the community are encouraged to check on family, friends and neighbours and to share official warnings with them.

Social media, websites and notification services

Facebook and Twitter are the two most common social media platforms used by disaster management organisations in Queensland. A search of each of these platforms by organisation name will assist in obtaining relevant information. Social media feeds are available from Qldalerts.com and Council's Emergency Management Dashboard for those who have subscribed to social media platforms.

Detailed contact information, including websites, is provided in the emergency contact list at the front of this plan.

My Ipswich Alerts, dam release notifications and the Emergency Management Dashboard are explained in the previous section – Part 5: Preparedness.

Emergency Alert

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

The Emergency Alert system will only be used in dangerous situations where there is likely to be an impact on human life. It relies on telecommunications networks to send messages, and message delivery cannot be guaranteed.⁶⁶

Standard Emergency Warning Signal (SEWS)

When disasters loom or a major emergency happens, residents will be alerted by the sound of the Standard Emergency Warning Signal (SEWS) before critical television or radio broadcasts.

The SEWS is a wailing siren sound used throughout Australia for various emergency events of major significance, such as cyclones, flooding and severe storms. When community members hear the signal, they should pay careful attention to the message that follows and act immediately on the advice given. There are strict rules on the use of this warning signal in Queensland.⁶⁷

Mainstream media (radio, television and newspapers)

The use of mainstream media is essential for the provision of emergency warnings. Mainstream media channels are generally very proactive in the monitoring of official sources.

Public information and media management

During a disaster, it is critical that the public information provided to the media is consistent across all agencies. To ensure the release of appropriate, reliable and consistent information it is recommended that:

⁶⁶Australian Government, Emergency Alert, Emergencyalert.gov.au/

⁶⁷Queensland Government, Disaster.qld.gov.au/Warnings_and_Alerts/Pages/about_sews.aspx



- joint media conferences be held at designated times involving key stakeholders, including the Chairperson of the LDMG where feasible
- key spokespeople should be senior representatives of the LDMG agencies involved in the event.

Consideration of the following should occur:

- The scheduling of media conferences requires a coordinated approach to ensure there is no conflict between state, district or local announcements.
- Statistics are a potentially contentious issue requiring careful checking with all agencies before release.

Each agency is to comment only on its own areas of responsibility and should consult the LDC (or delegate) to ensure consistent messaging to the community.

During an event, it is recommended that the LDMG develops a flexible media management strategy that:

- identifies key messages to share with the community, including reinforcing the LDMG's role in coordinating support to the affected community
- identifies preferred spokespersons for factual information (for example, evacuation measures and road closures)
- is consistent with the crisis communication network arrangements outlined in the Queensland Government Arrangements for Coordinating Public Information in a Crisis (further details are located Disaster.qld.gov.au).

Coordination and capability support

Each organisation is responsible for ensuring that it has appropriate resources to deliver its agreed roles and responsibilities. Where an organisation's local capacity is exceeded, it can request support through the LDMG.

In a multi-agency response, the LDMG coordinates and supports the response capability of individual organisations. Where the LDMG is unable to provide the requested support for the organisation, it will follow the established processes to seek assistance from the Ipswich DDMG.

Impact assessment

Impact assessment is the organised process of collecting and analysing information after an emergency or disaster to estimate:

- extent of loss of/injury to human life
- damage to property and infrastructure
- the needs of the affected community in terms of response, recovery and future (prevention and preparedness) assistance.

Impact assessments provide the LDMG with a source of comprehensive, standardised information on the effect an event has on various elements of the community. This information is then used to set priorities and make decisions about the response to an emergency or disaster, and to take the initial steps leading to recovery.

There are two basic types of impact assessment:

1. post-impact assessment, which examines the ways in which an event has affected a community
2. needs assessment, which examines the type, amount and priorities of assistance needed.

Post-impact assessment

There are two types of post-impact assessment:

Rapid damage assessments (RDA)

RDAs are undertaken immediately following an event to gather a high-level view of consequences and potential consequences. Sources of information include:

- calls for assistance recorded at emergency services communications centres and through the Council's call centre
- information and assessment data provided by LDMG members, representatives and advisors
- media monitoring and reporting.

The RDAs provide initial and often unconfirmed information. The information collected is used to provide an assessment of the potential overall impact of the event and to set initial priorities.

Comprehensive damage assessment (CDA)

CDAs will commence as soon as possible after an event to accurately establish the impact.

All LDMG members and requested relevant organisations are will undertake detailed impact assessments relating to their area of jurisdiction.

Depending on need, the LDMG may coordinate the formation and operation of multiagency damage assessment teams to systematically collect and analyse impact assessment data.

Needs assessment

Using data from the initial rapid and comprehensive damage assessments, the LDMG will conduct a needs assessment to establish the type, quantity and priorities of assistance required by disaster-affected communities.



Financial management

LDMG member organisations will be responsible for their financial management and procurement matters. Council will assume responsibility for financial management of the LDCC during the event.

When an event occurs, each organisation should immediately begin accounting for personnel and equipment costs relating to disaster operations (in accordance with its own policies and procedures) provide evidence for reimbursement from the various assistance arrangements.

Care and attention to detail must be taken throughout the disaster operations period to maintain logs, formal records and file copies of all expenditure (including personnel timesheets). This will provide clear and reasonable accountability and justification for future audit and potential reimbursement purposes.

Disaster financial assistance arrangements

There are two sets of financial arrangements that, if activated, provide financial support to Queensland communities affected by a disaster event. They do this through the reimbursement of eligible expenditure.

Natural Disaster Relief and Recovery Arrangements (NDRRA)

The intent of the NDRRA is to assist in the relief and recovery of communities whose social, financial and economic wellbeing has been severely affected by a disaster event. The arrangements provide a cost-sharing formula between the Queensland and Australian Government and include a range of pre-agreed relief measures.

Eligible disasters under NDRRA include cyclones, floods, landslides, meteor strikes, storms, bushfires, terrorist events, tornadoes and earthquakes. Droughts, frosts, heatwaves and epidemic events relating from poor environmental planning, commercial development or personal intervention are not eligible events under NDRRA.

To claim for expenditure reimbursement under SDRA or NDRRA arrangements:

- the relevant arrangements must be activated
- the relevant relief measures must be activated and the expenditure must meet the eligibility requirements of that measure
- the claimant must provide documentary support for all eligible expenditure detailed in the claim.

State Disaster Relief Arrangements (SDRA)

The intent of the SDRA is to assist in the relief of communities whose social wellbeing has been severely affected by a disaster event (natural or non-natural). The SDRA are state-funded and not subject to the Australian Government-imposed event eligibility provisions or activation threshold. As a result, the SDRA are able to address a wider range of disaster events and circumstances where personal hardship exists.



Logistics management

When the LDMG requires logistics support and/or resources to meet operational requirements that are beyond local capacity and capability, it sends a request for assistance to the District Disaster Coordination Centre (DDCC).

At times, administrative boundaries may separate resources from affected communities. In planning, the LDMG considers resources in neighbouring LGAs in addition to those locally.

Disaster declaration

In accordance with the Disaster Management Act 2003, and subject to several factors, 'a District Disaster Coordinator for a disaster district may, with the approval of the Minister, declare a disaster situation'⁶⁸ for a district or for one or more local government areas within the district in whole or in part.

The declaration confers extra powers on particular groups to perform actions, give directions and control movements within the declared area.⁶⁹

In declaring a disaster situation:

A district disaster coordinator for a disaster district may, with the approval of the Minister, declare a disaster situation for the district, or a part of it, if satisfied –

- a) a disaster has happened, is happening or is likely to happen in the disaster district; and*
- b) it is necessary, or reasonably likely to be necessary, for the district disaster coordinator or a declared disaster officer to exercise declared disaster powers to prevent or minimise any of the following:*
 - i. loss of life*
 - ii. illness or injury to humans*
 - iii. property loss or damage*
 - iv. damage to the environment⁷⁰.*

⁶⁸Section 64, Disaster Management Act 2003, Declaration

⁶⁹Sections 75 and 77, Disaster Management Act 2003, Authorisation for disaster situation, General powers

⁷⁰Section 64, Disaster Management Act 2003, Declaration



Even when a disaster situation is declared, Council is still primarily responsible for managing operations within the City of Ipswich.

Resupply

The LDMG is responsible for supporting communities in preparing for temporary isolation. It is also responsible for ensuring procedures are in place for resupply of food and other essentials during times of isolation.

Most events that isolate communities occur on a seasonal basis, and their effects on roads can be predicted with reasonable accuracy. Communities that are likely to be affected by such events are expected to prepare well in advance for both the event and the expected period of isolation.

To help with this, the LDMG conducts community education programs that focus on the community and household preparations to be made prior to the expected time of impact.

Planning for resupply operations takes into account the necessity and urgency of the request. It will need to balance the diversion of limited resources from other activities (such as supporting rescue, evacuation centres or similar), with the needs of the isolated community.

Emergency supply

‘Emergency supply’ is the acquisition and management of emergency supplies and services in support of disaster operations. Emergency supply can include:

- resource support in the establishment of forward command posts, community recovery centres and/or disease control centres. This may include furniture, equipment and materials
- resource support for community evacuation centres. This may include furniture, bedding material and health and hygiene products
- bottled water and bulk water supplies
- temporary structures such as marquees and portable ablution facilities
- small plant equipment hire services (such as chainsaws and pressure washers).

Before requesting emergency supply:

- every effort will be made to exhaust local supplies
- attempts will be made to support local economies
- organisations will use their own internal acquisition processes.

Queensland Fire and Emergency Services (QFES) is the functional lead agency for emergency supply.

Accessing support and allocating resources

Requests for support may come from lead agencies, supporting agencies or the community. These requests must be registered and acted on in accordance with the standard operating procedures for Council's LDCC.

The LDC may request assistance from local agencies, businesses and community groups for additional resources.

The LDMG will maintain regular communications with the Ipswich DDMG, to coordinate the actions and resources required to respond and recover from the impact of disaster events. It will also maintain communication with local governments that share a boundary with the area. These are the Brisbane City Council, Somerset Council, Logan City Council, Lockyer Valley Regional Council and Scenic Rim Regional Council.

Any requests for assistance that cannot be met within local resources will be submitted to the District Disaster Coordinator. The LDMG Chairperson or the LDC must endorse these requests.

If the request for assistance cannot be actioned by the District Disaster Coordinator, the he or she will request assistance through the Chairperson of the State Disaster Coordination Centre.

Hazard-specific arrangements

Primary (hazard-specific) agency

A primary agency is the organisation in control of the management of a specific threat. 'Control' relates to managing what should be done, when and by whom. Control operates horizontally across agencies that are contributing to the management of the particular hazard.

For example, during a bushfire threat, the QFES is the primary agency. It will control all agencies that are contributing to management of the bushfire. This includes giving directions and tasks to supporting agencies, allowing access into various zones and/or determining the need for evacuation.

Primary agency status is usually bestowed by legislation, common law, regulations, state plans or by agreement of the LDMG. Table 19 details the primary (hazard-specific) agencies for the City of Ipswich.

Functional arrangements

Lead (function) agencies

A functional lead agency is the organisation in control of the management of a specific function. For example, when an evacuation centre is required, Council is the functional lead agency and will control all agencies that are contributing to the management of the evacuation centre. This includes giving directions and tasks to supporting agencies, and opening and allowing access to centres.

A functional lead agency will be supported by other agencies that have agreed roles in the delivery of the disaster management function. For example, in the management of evacuation shelters/emergency shelters, the Council is assisted by a number of agencies such as the Australian Red Cross, the Queensland Police Service and the State Emergency Service.

Functional lead agency status is usually bestowed by legislation, common law, regulations, state plans or by agreement of the LDMG. Table 20 details the functional lead agencies for the City of Ipswich.



General arrangements related to primary and lead agencies

Coordination of primary and lead agencies

During a disaster, a number of primary and lead agencies may be in operation at the same time. For example, a disaster may involve the management of a number of threats and the delivery of a number of disaster management functions (such as evacuation centre management or public health).

The LDMG's role in coordination is to ensure primary, lead and support agencies have the resources and information needed to carry out their agreed roles.

Coordination operates horizontally across agencies, but does not extend to the control of threats or functions, or to the command of agency resources.

Primary and lead support agencies

Members of the LDMG agree to support other organisations through the provision of mutual aid. A support agency assists the primary or lead agency in the delivery of their objectives.

While under the control of a primary or lead agency, support agencies retain responsibility for commanding their resources and ensuring that their own standard operating procedures are correctly implemented.



Primary (hazard-specific) agencies

Hazard	Primary agency	Other related plans (excluding sub plans)
Air crash	Queensland Police Service	<ul style="list-style-type: none"> Nil
Animal or plant disease	Department of Agriculture, Fisheries and Forestry	<ul style="list-style-type: none"> Queensland Veterinary Emergency Plan Australian Aquatic Veterinary Emergency Plan (AQUAVETPLAN) Australian Veterinary Emergency Plan (AUSVETPLAN) Australian Emergency Plant Pest Response Plan (PLANTPLAN) Biosecurity Emergency Operations Manual (BEOM)
Biological (human related) Communicable disease Radiological	West Moreton Hospital and Health Service	<ul style="list-style-type: none"> Queensland Pandemic Influenza Plan National Action Plan for Influenza Pandemic State of Queensland Multi-Agency Response to Chemical, Biological and Radiological Incidents
Earthquake and landslip	Ipswich City Council	<ul style="list-style-type: none"> Dam Safety Emergency action plans
Fire—structural or bushfire	Queensland Fire and Emergency Services	<ul style="list-style-type: none"> Wildfire Mitigation and Readiness plans
Flood, storm, cyclone or severe weather	Ipswich City Council	<ul style="list-style-type: none"> Flood Intelligence Manual Seqwater Flood Manual for Somerset/Wivenhoe
Hazardous material/s incident	Queensland Fire and Emergency Services	<ul style="list-style-type: none"> State of Queensland Multi-Agency Response to Chemical, Biological and Radiological Incidents
Heatwave	West Moreton Hospital and Health Service	<ul style="list-style-type: none"> Heatwave Response Plan
Rail crash	Queensland Police Service	<ul style="list-style-type: none"> Nil
Road crash	Queensland Police Service	<ul style="list-style-type: none"> Nil
Terrorism	Queensland Police Service	<ul style="list-style-type: none"> Queensland Counter-Terrorism Plan National Counter-Terrorism Plan

Table 19 – Primary (hazard-specific) agencies for the City of Ipswich

Functional lead agencies

Function	Lead agency	Other related plans (excluding sub plans)
Animal rescue	Queensland Fire and Emergency Services	<ul style="list-style-type: none"> Nil
Communications	Ipswich City Council	<ul style="list-style-type: none"> Nil
Community support	Initial response: Ipswich City Council Followed by: Department of Communities, Child Safety and Disability Services	<ul style="list-style-type: none"> Ipswich District Human Social Recovery Plan
Electrical, fuel and gas supply	Department of Energy and Water Supply	<ul style="list-style-type: none"> Nil
Emergency supply	Queensland Fire and Emergency Services	<ul style="list-style-type: none"> Nil
Evacuation	Voluntary: Ipswich City Council Directed and/or mass scale: Queensland Police Service	<ul style="list-style-type: none"> Queensland Evacuation Guidelines
Evacuation centre management	Ipswich City Council	<ul style="list-style-type: none"> Australian Red Cross Preferred Sheltering Practices
Impact and damage assessment	Ipswich City Council	<ul style="list-style-type: none"> Nil
Mass casualty	West Moreton Hospital and Health Service	<ul style="list-style-type: none"> Nil
Public information and warnings	Public Information: Ipswich City Council Public Safety Business Agency Warnings: Ipswich City Council Queensland Fire and Emergency Services on advice from the primary agency	<ul style="list-style-type: none"> Emergency Alert Guidelines Standard Emergency Warning Signal (SEWS) Guidelines
Resupply	Ipswich City Council	<ul style="list-style-type: none"> Queensland Resupply Guidelines
Search and/or rescue	Queensland Police Service	<ul style="list-style-type: none"> Intergovernmental Agreement The National Search and Rescue Manual
Transport	Department of Transport and Main Roads	<ul style="list-style-type: none"> Nil

Table 20 – Functional lead agencies for the City of Ipswich

Part 7: Relief

Relief is a transitional phase that occurs during both response and short-term recovery operations. It is defined as ‘the effort to meet the immediate needs of persons affected by a disaster, to minimise further loss through the provision of immediate shelter and life support.’⁷¹

Evacuation centres

The primary reason for an evacuation is the preservation of life. The process of evacuation is managed through the response phase and follows a defined process with five stages:

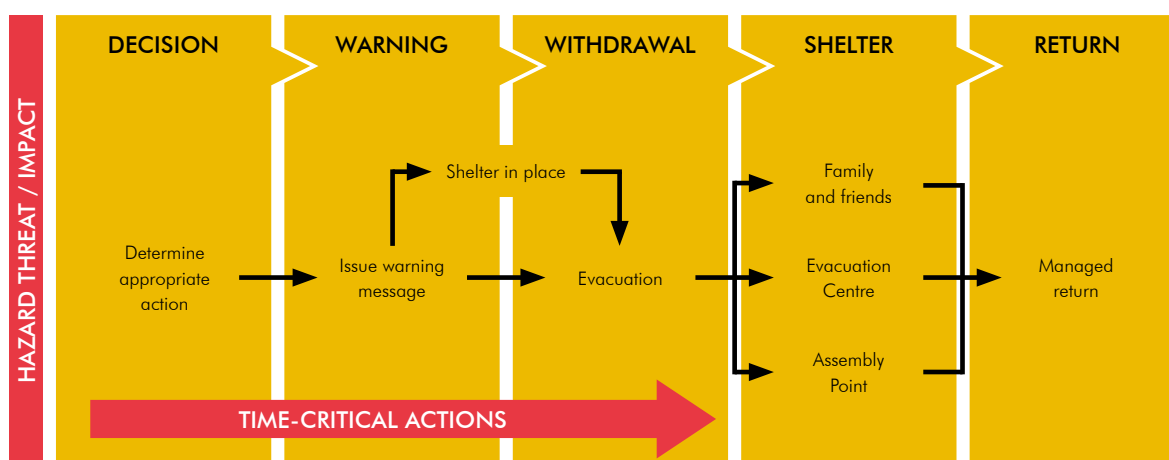


Figure 8 – Stages of an evacuation

Evacuation centres are opened to meet an immediate need for those with no other option, in order to preserve life, wellbeing and safety. They should not be the primary source of shelter or relocation.

Evacuation centres abide by the Australian Red Cross Preferred Emergency Sheltering Practices, which provide for:

- one toilet for every 20 to 50 people
- 1.2m² – 5m² of floor space per evacuee
- one shower for every 30 to 50 people.

Preferred evacuation solutions for community members to consider—in priority order—are:

1. A destination of the person’s choosing (for example, with family, friends or neighbours)
2. Established accommodation (for example, a hotel, motel or caravan park)
3. Evacuation centre.

⁷¹Queensland Interim Recovery Plan 2016



Donating to affected people

Council and the Queensland Government have partnered with GIVIT to manage all offers of donated goods and services (including corporate offers of assistance) following Queensland disasters. Affected people register with GIVIT detailing what their needs are. GIVIT then matches these needs with goods currently being donated. This eliminates the need for organisations to store and sort unexpected donations.

GIVIT also accept donations of money. 100% of funds received by GIVIT during a disaster are spent on urgently needed items. Wherever possible, the items are purchased from businesses in the disaster-affected area to assist recovery of the local economy.

To donate, visit Givit.org.au

Volunteering

The desire to help disaster victims is an indication of the health of the community.

The best way a person can start their volunteering is to find out if family, friends and neighbours need assistance. This should always be done under their direction and with their consent.

It is also imperative that volunteers act safely. WorkCover Queensland provides guidance on how to be safe. For more information, visit Worksafe.qld.gov.au/injury-prevention-safety/workplace-hazards/dangers-in-your-workplace/storms-and-floods.

After assisting family, friends and neighbours, all volunteers should register with Volunteering Queensland's Emergency Volunteer Service by visiting Emergencyvolunteering.com.au/qld or phoning 1800 994 100. They will then be contacted if additional volunteers with their skills are required.

Isolated communities

Communities that become physically isolated, particularly due to flooded roads, have been identified during the risk management process. These communities do not necessarily require evacuation, but additional support may be needed to help people stay in their homes. A number of plans for isolated communities have been prepared to assist with this. These are listed in Annexure 1.

Occupants of areas known to become isolated are strongly encouraged to plan for periods without access to food and essential household items.



Part 8: Recovery

Recovery is ‘the coordinated process of supporting affected communities, families and individuals in the reconstruction of the built environment and the restoration of their emotional, social and economic wellbeing, as well as the natural environment.’⁷²

Queensland has adopted nationally established principles for recovery that recognise that successful recovery relies on:

- understanding the context
- recognising complexity
- using community-led approaches
- ensuring coordination of all activities
- employing effective communication
- acknowledging and building capacity.

Recovery is also defined under the Disaster Management Act 2003 as:

- Providing relief measures to assist persons affected by the disaster who do not have the resources to provide for their own financial and economic wellbeing.*
- Restoring essential infrastructure in the area or areas affected by the disaster.*
- Restoring the environment in areas affected by the disaster.*
- Providing health care to persons affected by the disaster, including temporary hospital accommodation.*⁷³

Phases of recovery

Recovery is undertaken across three phases. These phases are contained in the Interim Queensland Recovery Plan and are summarised below.

Phase 1 – Post impact and early recovery

Includes: Immediate short-term recovery

This phase occurs at the same time as response. It involves addressing and supporting the immediate needs of individuals, businesses and the community affected by the event. In this phase, the objectives are to understand the effect of the event, and to begin planning to support response and recovery.

⁷²Interim Queensland Recovery Plan, 2016

⁷³Disaster Management Act 2003, Dictionary



Phase 2 – Recovery and restoration

Includes: Medium-term recovery

In the recovery and restoration phase, methodical steps are taken to reconstruct and enhance all disaster-affected communities, functions and infrastructure.

Phase 3 – Transition

Includes: Long-term recovery

In the transition phase, recovery and reconstruction is progressively handed over to agencies or organisations—including government, community-based or industry-led sectors. This phase ends when all recovery and reconstruction responsibilities are back to being managed as business as usual.

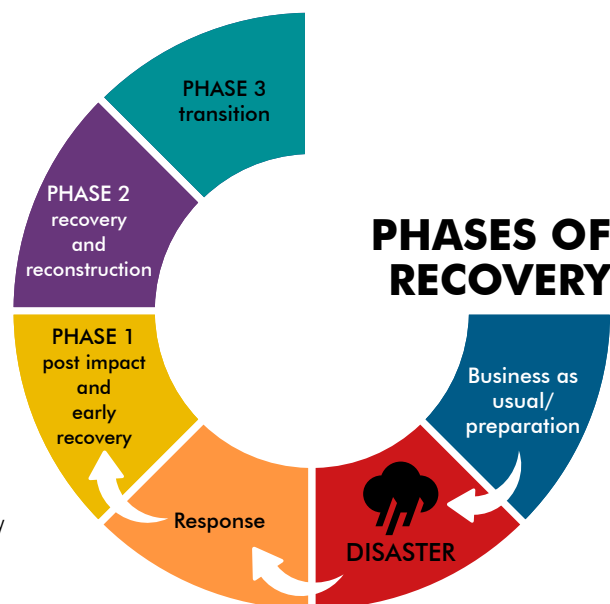


Figure 9 – Phases of recovery

Functions of recovery

Effective recovery requires an integrated, multi-disciplinary approach to analysing needs, engaging the community, and planning. Recovery is a complex and potentially protracted process. To help coordinate this, it is grouped into five functions. These often overlap, and recovery arrangements must reflect the interrelationship between them.



Figure 10 – Five functions of recovery

Economic recovery includes:

- renewal and growth of
 - o the micro economy (within the affected area) and the macro economy (overall economic activity of the state)
 - o individual and household entities (for example, employment, income and insurance claims), private and government business enterprises, and industry
 - o assets, production and flow of goods and services
 - o capacity for the export of goods and services from the affected region
- securing the confidence of overseas markets.

Roads and transport recovery includes repairing and reconstructing roads and transport systems.

Human and social recovery includes addressing:

- personal support and information
- physical and emotional health
- psychological, spiritual, cultural and social wellbeing
- public safety and education
- temporary accommodation
- financial assistance to meet immediate individual needs
- uninsured household loss and damage.

Building recovery includes:

- repairing and reconstructing
 - o residential and public buildings
 - o commercial, industrial and rural buildings and structures
 - o government structures
 - o utility structures, systems and services (water, sewage, energy and communications)
 - o other essential services
- dam safety.

Environment, (or natural environment) recovery includes:

- restoration and regeneration of
 - o biodiversity (species and plants) and ecosystems
 - o natural resources



- o environmental infrastructure
- o amenity/aesthetics (for example, scenic lookouts)
- o culturally significant sites and heritage structures
- management of environmental health, waste, contamination and pollution, and hazardous materials.

Queensland Government responsibilities⁷⁴

Functional Recovery Group	Economic	Roads and transport	Human and social	Building	Environment
Chair / Lead Agency	Director-General State Development	Director-General Transport and Main Roads	Director-General Communities, Child Safety and Disability Services	Director-General Housing and Public Works	Director-General Environment and Heritage Protection
Roles and Responsibilities	Provide strategic advice to the Queensland Government and relevant stakeholders on the economic impacts of an event and the proposed methods to advance economic recovery.	Coordinate the efficient and effective delivery of road and transport recovery activities.	Lead and coordinate planning and implementation of the Human and Social recovery function in Queensland.	Coordinate efficient and effective information exchange, issues identification and resolution between state agencies, local government, building industry and insurance providers.	Lead and coordinate the planning and implementation of the environmental function of recovery in Queensland.
Key Tasks	<p>Liaise with affected stakeholders and local governments, identify and address issues and risks, and measure the ongoing economic impacts and rate of recovery.</p> <p>Monitor the impacts on the affected area's economic viability and develop strategies to minimise the effects on individuals and businesses (as required).</p> <p>Facilitate linkages with job providers and employment agencies to source labour, re-establish supply chains and undertake joint marketing activities (as required).</p>	<p>Identify isolated communities and assign prioritised resources for recovery works.</p> <p>Develop regional reconstruction projects and activities in collaboration with stakeholders.</p> <p>Develop implementation plans for recovery and reconstruction.</p> <p>Develop, review and submit Natural Disaster Relief and Recovery Arrangements (NDRRA) submissions for approval.</p> <p>Implement recovery and reconstruction plans, including monitoring and reporting.</p>	<p>Support local and district disaster management groups.</p> <p>Administer the Personal Hardship Assistance Program.</p> <p>Establish multi-agency recovery hubs.</p> <p>Provide Social Service system navigation.</p> <p>Provide case coordination for vulnerable people and uninsured rebuilds.</p> <p>Purchase extraordinary relief and recovery services if required.</p>	<p>Facilitate temporary accommodation solutions for displaced people.</p> <p>Provide assistance/ advice to support repair and restoration of state-owned public buildings.</p> <p>Facilitate the coordination of building safety inspections.</p> <p>Provide building advice and information to support community recovery.</p> <p>Provide advice to the building industry supply chain.</p>	<p>Manage environmental risk associated with recovery activities.</p> <p>Repair critical flood monitoring infrastructure.</p> <p>Monitor discharges from impacted mine sites.</p> <p>Repair infrastructure on the protected area estate (national parks and state forests).</p> <p>Manage rural and bushfire hazard mitigation on the protected area estate and unallocated state land.</p> <p>Facilitate repair of heritage listed places.</p>

Table 21 – Queensland Government functional lead agencies for recovery

⁷⁴Queensland Interim State Recovery Plan (2017)



The service components of each of the five functions are not necessarily delivered by the lead agency. The lead agency works with multiple private and public sector partners who deal directly with the community and individual families and businesses to achieve recovery.

While these five functions provide the framework for the recovery structure, the final structure depends upon the nature and consequences of an event. For example, events such as cyclones may cause large-scale damage to housing and the built environment and may require more emphasis on infrastructure recovery. Other events, such as pandemics, may require more emphasis on the human-social aspects of recovery.

The LDMG encourages an all-agencies approach to recovery. This involves identifying a range of organisations to support the lead functional agency and the LDMG in implementing an effective recovery over the short-, medium- and long term.

City of Ipswich LDMG recovery governance

The formation of a Local Recovery Group (LRG) may occur on an as-required basis and under the auspices of the City of Ipswich LDMG. Where the LRG is not formed, all recovery functions are managed through the LDMG.

Local Recovery Coordinator

Council appoints the Chief Operating Officer of Works Parks and Recreation to the role of Local Recovery Coordinator.

Planning for recovery

Sub Plan 4.06 Recovery provides a framework for the coordination of recovery operations within the City of Ipswich. The procedures outlined in the Interim Queensland Recovery Plan support this framework. The sub plan is part of the Local Disaster Management Plan. The strategy it outlines is flexible and designed to cater to different types and sizes of disaster events, as required.

Recovery can also offer an opportunity to learn. Communities can further develop their capability and resilience through reconstruction efforts, risk reduction strategies, and hardening of infrastructure and the built environment.

The sub plan includes transition arrangements from 'response' through 'immediate relief arrangements' to 'recovery arrangements', outlining the transfer of all required resources. It also identifies the scope of possible disaster recovery operations, as well as the roles and responsibilities of all stakeholders involved in the process for short-, medium- and long-term recovery requirements.

Part 9: Schedule of annexures

Annexure number	Description
1.	Schedule of sub plans
2.	Schedule of figures and tables
3.	Abbreviations and acronyms
4.	Glossary

Annexure 1 – Schedule of sub plans

General sub plans			
1.01	LDMG Terms of Reference and Secretariat	Endorsed	Restricted
1.02	All Hazard Risk Assessment (GHD report)	Endorsed	Restricted

Hazard sub plans			
2.01	Hazard-Specific Coordination	Endorsed	Restricted

Isolated communities sub plans			
3.01	Isolated Communities (Brassall and North Ipswich)	Endorsed	Restricted
3.02	Isolated Communities (Bundamba)	Endorsed	Restricted
3.03	Isolated Communities (Goodna)	Draft	Restricted
3.04	Isolated Communities (Karalee)	Endorsed	Restricted
3.05	Isolated Communities (Leichhardt and One Mile)	Endorsed	Restricted
3.06	Isolated Communities (Marburg)	Endorsed	Restricted
3.07	Isolated Communities (Moores Pocket)	Endorsed	Restricted
3.08	Isolated Communities (Pine Mountain)	Endorsed	Restricted
3.09	Isolated Communities (Rosewood)	Endorsed	Restricted

Functional sub plans			
4.01	Animal Welfare	Endorsed	Restricted
4.02	Evacuation Process	Endorsed	Restricted
4.03	Resource Management	Endorsed	Restricted
4.04	Evacuation Centres	Endorsed	Restricted
4.05	Public Information and Warnings	Endorsed	Restricted
4.06	Recovery	Endorsed	Restricted

Member organisations of the Local Disaster Management Group, including Ipswich City Council, maintain their own organisational plans and standard operating procedures.

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Annexure 3 – Abbreviations and acronyms

Abbreviation	Full text
ADF	Australian Defence Force (Australian Government)
AEP	Annual Exceedance Probability
AHD	Australian Height Datum
AIIMS	Australasian Inter-service Incident Management System
AIIMS 2017	Australasian Inter-service Incident Management System 2017 guide published by the Australian Fire and Emergency Services Council
AMSA	Australian Maritime Safety Authority (Australian Government)
BoM	Bureau of Meteorology
CBD	Central business district
CCC	Crisis Coordination Centre (Australian Government)
CCN	Crisis Communication Network
CEO	Chief Executive Officer
COAG	Council of Australian Governments
Council	Ipswich City Council
Cr	Councillor
CSIRO	Commonwealth Scientific and Industrial Research Organisation
DACC	Defence Aid to Civil Community
DDC	District Disaster Coordinator
DDCC	District Disaster Coordination Centre
DDMG	Ipswich District Disaster Management Group
DMA2003	Disaster Management Act 2003 (Queensland)
EA	Emergency Alert
ERM	Emergency Risk Management
EWN	Early Warning Network
FRG	Functional Recovery Group
GIS	Geographical Information System
Handbook 7	Handbook 7—Emergency Management Australia: Managing the Floodplain: a guide to best practice in flood risk management in Australia
Handbook 10	Handbook 10—National Emergency Risk Assessment Guidelines
Hazmat	Hazardous Materials
ICA	Insurance Council of Australia
ICC	Incident Control Centre
ICCS Plus	Incident Command and Control System Plus
IGEM	Inspector General Emergency Management
IMT	Incident Management Team
ISO	International Standards Organisation
ISO Guide 73:2009	ISO Guide 73:2009 Risk management—vocabulary
LDC	Ipswich Local Disaster Coordinator
LDCC	Ipswich City Council Local Disaster Coordination Centre
LDMG	Ipswich City Local Disaster Management Group
LDMP	Ipswich City Council Local Disaster Management Plan
LGA	Local government area
Manual 3	Australian Emergency Management Glossary
NBN	National Broadband Network

Abbreviation	Full text
NDRRA	Natural Disaster Relief and Recovery Arrangements
NDRP	National Disaster Resilience Program
NERAG	National Emergency Risk Assessment Guidelines
NGO	Non-Government Organisation
NSP	Neighbourhood Safer Places
PMF	Probable Maximum Flood
PPRR	Preparation, Preparedness, Response and Recovery
PSBA	Public Safety Business Agency
PSTN	Public Switched Telephone Network
QAS	Queensland Ambulance Service
QDMA	Queensland Disaster Management Arrangements
QDMC	Queensland Disaster Management Committee
QDMTF	Queensland Disaster Management Training Framework
QEG	Queensland Evacuation Guidelines for Disaster Management Groups, 2011
QFES	Queensland Fire and Emergency Services
QLDM Guidelines	Queensland Local Disaster Management Guidelines, 2012
QPS	Queensland Police Service
QRA	Queensland Reconstruction Authority
QRP	Queensland Recovery Plan
QUU	Queensland Urban Utilities
RSPCA	Royal Society for the Prevention of Cruelty to Animals
SDCC	State Disaster Coordination Centre
SDMP	(Queensland) State Disaster Management Plan
SDRA	State Disaster Relief Arrangements
SES	State Emergency Service
SEWS	Standard Emergency Warning Signal
SOP	Standard Operating Procedure
SRC	State Recovery Coordinator
SRNR	Sport, Recreation and Natural Resources
SRPPC	State Recovery Policy and Planning Coordinator

Annexure 4 – Glossary of terms

Term	Definition	Reference
All-agencies approach	All agencies should be involved to some extent in disaster management. The context of disaster management for specific agencies varies and may include ensuring the continuity of their business or service, protecting their own interests and personnel, and protecting the community and environment from risks arising from the activities of the organisation.	QLDM Guidelines
All-hazards approach	This means dealing with all types of emergencies or disasters, and civil defence, using the same set of management arrangements.	Manual 3
Annual Exceedance Probability (AEP)	This is the likelihood of the occurrence of an event (normally flood) at a given or larger size occurring in any one year, usually expressed as a percentage. For example, if a peak flood flow of 500m ³ /sec has an AEP of 5%, it means that there is a 5% chance (that is, a one-in-20 chance) of a flow of 500 m ³ /s or larger occurring in any one year.	Handbook 7
Australian Height Datum (AHD)	This is a common national survey height measure used as a reference level for defining reduced levels. 0.0 m AHD corresponds approximately to sea level.	Handbook 7
Catchment	This is the area of land draining to a particular site. It is related to a specific location, and includes the catchment of the main waterway as well as any tributary streams.	Handbook 7
Catchment flooding	This is flooding due to prolonged or intense rainfall (for example, severe thunderstorms, monsoonal rains in the tropics, or tropical cyclones). Types of catchment flooding include riverine, local overland, and groundwater flooding.	Handbook 7
Command	The internal direction of members and resources of an agency in the performance of the organisations roles and tasks. Command operates vertically within an organisation.	AIIMS 2017
Community	This refers to a group of people with a commonality of association. It is generally defined by location, shared experience, or function.	SDMP 2016
Community resilience	A resilient community is one that possesses the capacity, skills and knowledge to prepare for, respond to, and recover effectively from a disaster and adapt positively to a changing environment. It is a community that works together to understand and manage the risks and vulnerabilities that it confronts, and to enhance its capacity to address its vulnerabilities to all hazards.	QLD Strategy for Disaster Resilience 2014
Consequence	This is used to refer to the outcome of an event that affects objectives. Notes: <ul style="list-style-type: none"> • An event can lead to a range of consequences. • A consequence can be certain or uncertain, and can have positive and negative effects on objectives. • Consequences can be expressed qualitatively or quantitatively. • Initial consequences can escalate through knock-on effects. 	ISO Guide 73:2009
Control	This is the overall direction of emergency management activities in an emergency situation. Authority for control is established in legislation or in an emergency plan and carries with it the responsibility for tasking other organisations in accordance with the needs of the situation. Control relates to situations and operates horizontally across organisations.	AIIMS 2017
Coordination	This is the bringing together of organisations and other resources to support an emergency management response. It involves the systematic acquisition and application of resources (organisational, human and equipment in an emergency situation).	AIIMS 2017

Term	Definition	
Coordination centre	This is a centre established at state, disaster district or local level as a centre of communication and coordination during response and recovery operations. (For Ipswich City Council, this is the Local Disaster Coordination Centre).	QLDM Guidelines
Disaster	This is a serious disruption in a community, caused by an event that requires a significant, coordinated response by the state and other entities.	DMA2003
Disaster management	This refers to arrangements for managing the potential adverse effects of an event, for example, arrangements for mitigating, preventing, preparing for, responding to and recovering from a disaster.	DMA2003
Disaster Management Portal	The Queensland Disaster Management Portal provides a mechanism to allow the sharing of information on disaster management, and also provides an information service to the disaster management community.	QFES
Disaster operations	These are activities undertaken before, during or after an event happens to help reduce loss of human life, illness or injury to humans, property loss or damage, or damage to the environment. They include activities to mitigate the adverse effects of the event.	DMA2003
Disaster recovery	This is the coordinated process of supporting affected communities, families and individuals in the reconstruction of the built environment, the restoration of their emotional, social and economic wellbeing, and the restoration of the natural environment.	QRP
Disaster situation	An authorised person may declare a disaster situation for the state, or part of the state, if satisfied – a) a disaster has happened, is happening or is likely to happen in the state; and b) it is necessary, or reasonably likely to be necessary, for a district disaster coordinator or declared disaster officer to exercise declared disaster powers to prevent or minimise any of the following: i. loss of human life; ii. illness or injury to humans; iii. property loss or damage; iv. damage to the environment.;	DMA2003
Emergency management	See Disaster Management.	n/a
Evacuation	This is the planned relocation of people from dangerous or potentially dangerous areas to safer areas.	QEG
Evacuation centre	A designated building specifically selected as a location not anticipated to be adversely affected by the hazard.	QEG
Event	This can refer to any of the following: a cyclone, earthquake, flood, storm, storm tide, tornado, tsunami, volcanic eruption or other natural happening; an explosion or fire, a chemical, fuel or oil spill or a gas leak; an infestation, plague or epidemic; a failure of, or disruption to, an essential service or infrastructure; an attack against the state; or any other event similar to those listed above. An event may be natural or caused by human acts or omissions.	DMA2003
Flash flooding	This is a flood that is sudden and unexpected. It is often caused by sudden local or nearby heavy rainfall. It is generally not possible to issue detailed flood warnings for flash flooding. However, generalised warnings may be possible. It is often defined as flooding that peaks within six hours of the causative rain.	Handbook 7



Term	Definition	
Flooding	Flooding is a natural phenomenon that occurs when water covers land that is normally dry. It may result from coastal or catchment flooding, or a combination of both (see also Catchment flooding).	Handbook 7
Hazard	This is a source of potential harm, or a situation/condition with a potential to cause loss, cause harm to people, or cause damage to property or the environment. It is a source of risk.	ISO Guide 73:2009
Incident	This is an occurrence or set of circumstances that: <ul style="list-style-type: none"> • has a definite spatial extent • has a definite duration • calls for human intervention • has a set of concluding conditions • is or will be under the control of an individual who has authority to make decisions about the means by which it will be brought to an end. 	AIIMS 2017
Intergovernmental agreement	The intergovernmental agreement is an agreement signed by the Australian Government and every state and territory government. It assigns the Australian Defence Force, the relevant police agency and the Australian Maritime Safety Authority as the only search and/or rescue coordination authorities.	National SAR Manual
Likelihood	In risk management terminology, 'likelihood' is used to refer to the chance of something happening, whether defined, measured or determined objectively or subjectively, qualitatively or quantitatively. It is described using general terms or mathematically (such as a probability or a frequency during a given time period).	ISO Guide 73:2009
Lead (function) agency	This is an organisation that, because of its expertise and resources, is primarily responsible for dealing with a particular function within disaster management.	SDMP 2016
Mitigation	This refers to measures taken in advance of a disaster to decrease or eliminate the disaster's impact on society and the environment.	Manual 3
Natural Disaster Relief and Recovery Arrangements (NDRRA)	This is the Australian Government program intended to assist with the recovery of communities whose social, financial and economic wellbeing has been severely affected by a natural disaster or terrorism event. These arrangements provide a cost-sharing formula between the Queensland and Australian governments on a range of pre-agreed relief and recovery measures.	QRP
Neighbourhood Safer Place	This is a local open space or building where people may gather, as a last resort, to seek shelter from a bushfire.	QFES
Preparedness	This refers to measures to ensure that, should an emergency occur, communities, resources, and services are capable of coping with the effects.	Manual 3
Prevention	This refers to measures for eliminating or reducing the incidence or severity of emergencies.	Manual 3
Primary (hazard) agency	This is an agency allocated responsibility to prepare for and respond to a specific hazard based on its legislated and/or technical capability and authority.	SDMP 2016
Probable Maximum Flood (PMF)	The PMF is the largest flood that could conceivably occur at a particular location, usually estimated from probable maximum precipitation and, where applicable, snow melt, coupled with the worst flood-producing catchment conditions. Generally, it is not physically or economically possible to provide complete protection against this event. The PMF defines the extent of flood-prone land—that is, the floodplain.	Handbook 7

Term	Definition	
Probable Maximum Precipitation (PMP)	The PMP is the greatest amount of precipitation for a given duration meteorologically possible over a given-size storm area at a particular location at a particular time of the year. No allowance is made for long-term climatic trends (World Meteorological Organization 1986). It is the primary input to probable maximum flood estimation.	Handbook 7
Probability	See Likelihood	n/a
Recovery	See Disaster Recovery	n/a
Relief	This refers to the efforts undertaken to meet the immediate needs of people affected by a disaster, and to minimise further loss through the provision of immediate shelter and support.	QRP
Residual risk	This is the risk remaining after risk treatment. Notes: <ul style="list-style-type: none"> Residual risk can contain unidentified risks. Residual risk is also known as 'retained risk'. 	ISO Guide 73:2009
Resources	All personnel, vehicles, plant and equipment available or potentially available for incident tasks	AIIMS 2017
Response	This refers to actions taken in anticipation of, during and immediately after a disaster to ensure that its effects are minimised, and that people affected are given immediate relief and support	Manual 3
Risk	This is the effect of uncertainty on objectives. Notes: <ul style="list-style-type: none"> An effect is a deviation from the expected—positive and/or negative. Objectives can have different aspects (for example, financial, health, safety and environmental goals) and can apply at different levels (for example, strategic, organisation wide, project, product and process). Risk is often characterised by reference to potential events and consequences, or a combination of these. Risk is often expressed in terms of a combination of the consequences of an event (including changes in circumstances) and the associated likelihood of occurrence. Uncertainty is the state (complete or partial) of deficiency of information relating to understanding or knowledge of an event, its consequence or likelihood. 	ISO Guide 73:2009
Risk analysis	This refers to the process used to comprehend the nature of risk and determine the level of risk. Notes: <ul style="list-style-type: none"> Risk analysis provides the basis for risk evaluation and decisions about risk treatment. Risk analysis includes risk estimation. 	ISO Guide 73:2009
Risk assessment	This refers to the overall process of risk identification, risk analysis and risk evaluation.	ISO Guide 73:2009
Risk criteria	These are the terms of reference against which the significance of a risk is evaluated. Notes: <ul style="list-style-type: none"> Risk criteria are based on organisational (or jurisdictional) objectives, and external and internal context. Risk criteria can be derived from standards, laws, policies and other requirements. 	ISO Guide 73:2009
Risk descriptions	These are structured statements of risk, usually containing four elements: sources, events, causes and consequences.	ISO Guide 73:2009



Term	Definition	
Risk evaluation	This is the process of comparing the results of risk analysis with risk criteria to determine whether the risk and/or its magnitude is acceptable or tolerable. This assists in making decisions about risk treatment.	ISO Guide 73:2009
Risk identification	<p>This is the process of finding, recognising and describing risks.</p> <p>Notes:</p> <ul style="list-style-type: none"> • Risk identification involves the identification of risk sources, events, their causes and their potential consequences. • Risk identification can involve historical data, theoretical analysis, informed and expert opinions, and stakeholders' needs. 	ISO Guide 73:2009
Risk management	<p>This refers to the coordinated activities of an organisation or a government to direct and control risk. The risk management process includes the activities of:</p> <ul style="list-style-type: none"> • communication and consultation • establishment of the context • risk assessment, which includes <ul style="list-style-type: none"> – risk identification – risk analysis – risk evaluation • risk treatment • monitoring and review. 	ISO Guide 73:2009 adapted
State Disaster Relief Arrangements (SDRA)	This is an all-hazards relief program that is 100% state-funded and covers natural and non-natural disasters. The purpose of the SDRA is to address personal hardship and community response needs for disaster events where the NDRRA is unable to be activated.	QRP
Serious disruption	<p>Serious disruption means:</p> <ul style="list-style-type: none"> • loss of human life, or injury or illness • widespread or severe property loss or damage • widespread or severe damage to the environment. 	DMA2003
Vulnerability	<p>This is the extent to which a community, structure, service or geographic area is likely to be damaged or disrupted by the impact of a particular hazard, because of its nature, construction and proximity to hazardous terrain or a disaster-prone area.</p> <p>Source: United Nations Disaster Management Training Programme, Vulnerability and risk assessment, 2nd edition.</p>	Handbook 10
Warning	This is the dissemination of messages signalling imminent hazard, which may include advice on protective measures.	n/a



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City of Ipswich

Local Disaster Management Group Terms of Reference

A5178608: January 2019



Approval and Endorsement

Approved by resolution at the Infrastructure and Emergency Management Committee No. [[INSERT COMMITTEE NUMBER & DATE 2018(04) of 16 April 2018]] and Council Ordinary Meeting of [[INSERT DATE OF ORDINARY MEETING 23 April 2018.]]

Endorsement by the City of Ipswich Local Disaster Management Group Meeting of [[INSERT DATE 15 May 2018]].





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1.1 Establishment

The City of Ipswich Local Disaster Management Group (City of Ipswich LDMG) is established under section 29 of the *Disaster Management Act 2003* (the Act).

1.2 Authorising Environment

This document should be read in conjunction with the following legislative instruments:

- *Disaster Management Act 2003*
- *Disaster Management Regulation 2014*
- *Local Government Act 2009*
- *Local Government Regulation 2012*

The following instruments contribute to the authorising environment of this procedure:

- a. Emergency Management Assurance Framework, *issued pursuant to section 16N of the Disaster Management Act 2003.*
- b. Disaster Management Strategic Policy Statement *issued by the Queensland Government.*
- c. Queensland Prevention, Preparedness, Response and Recovery Disaster Management Guideline *Issued pursuant to section 63 of the Disaster Management Act 2003.*
- d. Queensland Disaster Management Training Framework *issued in accordance with s16A(c) of the Disaster Management Act 2003.*

1.3 Purpose and Role

Ipswich City Council, through the City of Ipswich LDMG, retains primary responsibility for managing disaster events contained within the local government area¹.

1.4 Scope and Limitations

The City of Ipswich LDMG is unable to direct entities on how to conduct their business and operations, including that of Ipswich City Council. The City of Ipswich LDMG is committed to the concepts of partnership, leadership, public safety and performance².

1.5 Functions

The City of Ipswich LDMG has the following functions pursuant to the Act³:

- a. To ensure that disaster management and disaster operations in the area are consistent with the State group's strategic policy framework for disaster management for the State.
- b. To develop effective disaster management, and regularly review and assess the disaster management.
- c. To help the local government for its area to prepare a local disaster management plan.

¹ Section 4A, Disaster Management Act 2003, Guiding Principles

² Office of the Inspector General Emergency Management, (2018). Emergency Management Assurance Framework

³ Section 4A, Disaster Management Act 2003, Principles



- d. To identify, and provide advice to the relevant district group about, support services required by the local group to facilitate disaster management and disaster operations in the area.
- e. To ensure the community is aware of ways of mitigating the adverse effects of an event, and preparing for, responding to and recovering from a disaster;
- f. To manage disaster operations in the area under policies and procedures decided by the State group.
- g. To provide reports and make recommendations to the relevant district group about matters relating to disaster operations.
- h. To identify, and coordinate the use of, resources that may be used for disaster operations in the area.
- i. To establish and review communications systems in the group, and with the relevant district group and other local groups in the disaster district of the relevant district group, for use when a disaster happens.
- j. To ensure information about a disaster in the area is promptly given to the relevant district group.
- k. To perform other functions given to the group under the Act.
- l. To perform a function incidental to any of the previous functions mentioned.

1.6 Membership

1.6.1 Chairperson

Ipswich City Council appoints, in compliance with the Disaster Management Act 2003, the Local Government Act 2009 and Local Government (Dissolution of Ipswich City Council) Act 2018 appoints the Interim Administrator as the Chairperson of the Group.

1.6.2 General Membership

The LDMG consists of the following members:

- The persons appointed as members of the LDMG by the relevant local government for the group.
- At least 1 person nominated by the Commissioner, Queensland Fire and Emergency Services (QFES).
- At least 1 person who is a councillor of a local government.

1.6.3 Categories of General Membership

The City of Ipswich LDMG has three membership categories, these being

- a. Member – full voting rights
- b. Deputy Member – limited voting rights
- c. Advisor – no voting rights



1.7 Secretariat

Ipswich City Council will function as the Secretariat of the City of Ipswich LDMG

1.7.1 Secretariat Functions

The Secretariat has the following functions:

- a. Arranging, communicating and documenting meetings
- b. Maintaining and updating the terms of reference
- c. Facilitating the appointment and cessation of members to the City of Ipswich LDMG, including induction
- d. Maintaining a register of members with contact information and distributing this after each regular LDMG meeting
- e. Maintaining a process of monitoring and reporting participation and attendance at meetings, training, exercises and presentations by members
- f. Compiling and submitting the District and the State, an annual report which is to include, but not limited to the reporting participation and attendance at meetings, training, exercises and presentations by members
- g. Obtaining a training needs analysis from Queensland Fire and Emergency Services and distributing this after each regular LDMG meeting

1.8 Meetings

1.8.1 Meeting Classification


Meetings will be classified as:

- **Regular** – prearranged meetings to discuss general business, arrangements and other matters.
- **Disaster Operations** – meetings that are a result of the activation of the Queensland Disaster Management Arrangements.

1.8.2 Meeting Frequency

The City of Ipswich will meet three times a year with a specific focus for each meeting. The meetings will be held on the third Tuesday of the month commencing at 1.00pm and concluding by 3.00pm.

Month of Meeting	Theme of Meeting
February	Continuous Improvement
June	Planning and Preparedness
October	Seasonal Briefing and Arrangements



At a minimum the City of Ipswich LDMG is required to meet at least every 6 months⁴ or upon written request by the Minister, the Chairperson of the Ipswich District Disaster Management Group or one half of members of the City of Ipswich LDMG⁵.

1.8.3 Quorum

A quorum⁶ for the City of Ipswich LDMG is established as

- a. one-half of the members holding office plus 1 or
- b. if one-half of the members holding office is not a whole number, the next highest whole number.

1.8.4 Presiding at Meetings⁷

The Chairperson of the City of Ipswich LDMG is to preside at all meetings in which the chairperson is present. If the Chairperson is absent from a meeting of the LDMG, but the deputy chairperson is present, the Deputy Chairperson is to preside.

If the Chairperson and Deputy Chairperson are both absent from a meeting —

- a. The member of the LDMG nominated by the chairperson is to preside; or
- b. If the Chairperson does not nominate a member under paragraph (a) — the member nominated by the Deputy Chairperson is to preside.

If the offices of Chairperson and Deputy Chairperson are vacant, the member of the LDMG chosen by quorum by the members present, is to preside.

1.8.5 Conduct of Meetings⁸

The City of Ipswich LDMG may hold meetings, or allow members of the LDMG to take part in its meetings, by using any technology that reasonably allows members to hear and take part in discussions as they happen.

A member who takes part in a meeting of a disaster management group under subsection (1) is taken to be present at the meeting.

A resolution is validly made by a disaster management group even if it is not passed at a meeting of the group, if

- a. a majority of the members of the group gives written agreement to the resolution; and
- b. notice of the resolution is given under procedures approved by the group.

⁴ Section 12, Disaster Management Regulation 2014, Time and place of the meeting

⁵ Section 12, Disaster Management Regulation 2014, Time and place of the meeting

⁶ Section 13, Disaster Management Regulation 2014, Quorum

⁷ Section 16 Disaster Management Regulation 2014, Presiding at meetings

⁸ Section 17 Disaster Management Regulation 2014, Conduct of meetings



1.8.6 Notice of Resolution

When resolutions are proposed outside of a meeting, for example by email, two weeks' notice of a resolution is to be provided, unless emergent circumstances exist.

1.8.7 Minutes⁹

The Secretariat, on behalf of the City of Ipswich LDMG must maintain minutes of meetings and copies of these are to be made available to members following each meeting.

1.8.8 Correspondence

Where correspondence is sent or received under the name of the City of Ipswich Local Disaster Management Group it will be listed in the agenda and available for inspection by the membership.

LDMG correspondence does not include correspondence to, or between individual member organisations. Each organisation will be responsible for maintaining communications in accordance with their organisational procedures.

1.8.9 LDMG Member (Deputy)¹⁰

A member of the LDMG may, with the approval of the Chairperson, appoint by signed notice another person as the person's deputy.

The deputy may attend LDMG meetings in the member's absence and exercise the member's functions and powers under the Act at the meeting.

A deputy attending a group meeting is to be counted in deciding if there is a quorum for the meeting.

1.8.10 LDMG Member (Advisor)

Advisors do not have voting rights for resolutions, and as such they do not contribute to consideration of deciding if there is a quorum.

1.8.11 Observers and Special Guests

Observers and special guests may attend the City of Ipswich LDMG meeting upon approval from either the Chairperson, Deputy Chairperson, Local Disaster Coordinator, Deputy Local Disaster Coordinator or Secretariat. Observers and special guests do not have voting rights, and as such they do not contribute to consideration of deciding if there is a quorum.


1.9 Obligations of Member

Each full member has the following obligations to maintain their status with the LDMG

- a) Be nominated and maintain that nomination by the organisation that they represent

⁹ Section 18, Disaster Management Regulation 2014, Minutes

¹⁰ Section 14, Disaster Management Regulation 2014, Meeting deputies for particular members

- 
- b) Fully comply, within 12 months of membership with mandatory requirements of the Queensland Disaster Management Training Framework issued pursuant to the Act¹¹.
 - c) Attend 2 out of 3 of every scheduled (non-disaster operations) LDMG meeting
 - d) Submit or arrange for a deputy to submit a written member status report for each meeting
 - e) Submit a written response regarding disaster planning consultation and endorsement for all disaster plans
 - f) Participate actively in meetings and exercises
 - g) Provide updates as to absences from their member's role (e.g. annual leave) and changes in contact information
 - h) Maintain their own situational awareness for weather events by registration with My Ipswich Alerts, Bureau of Meteorology or similar

1.10 Obligations of a Deputy Member

Each deputy member has the following obligations to maintain their status with the LDMG

- i) Be nominated and maintain that nomination by the organisation that they represent
- j) Fully comply, within 12 months of membership with mandatory requirements of the Queensland Disaster Management Training Framework issued pursuant to the Act¹².
- k) Attend 1:3 of every scheduled (non-disaster operations) meeting
- l) Participate actively in meetings and exercises in which they attend
- m) Provide updates as to absences from their deputy member role (e.g. annual leave) and changes in contact information
- n) Maintain their own situational awareness for weather events by registration with My Ipswich Alerts, Bureau of Meteorology or similar

1.11 Obligations of an Advisory Member

Each deputy member has the following obligations to maintain their status with the LDMG

- o) Be nominated and maintain that nomination by the organisation that they represent
- p) Fully comply, within 12 months of membership with mandatory requirements of the Queensland Disaster Management Training Framework issued pursuant to the Act¹³.
- q) Attend 1:3 of every scheduled (non-disaster operations) meeting
- r) Submit or arrange to submit a written member status report for each meeting
- s) Participate actively in meetings and exercises in which they attend
- t) Provide updates as to absences from their advisor role (e.g. annual leave) and changes in contact information
- u) Maintain their own situational awareness for weather events by registration with My Ipswich Alerts, Bureau of Meteorology or similar

¹¹ Section 16A(c) Disaster Management Act 2003, Functions of the Chief Executive

¹² Section 16A(c) Disaster Management Act 2003, Functions of the Chief Executive

¹³ Section 16A(c) Disaster Management Act 2003, Functions of the Chief Executive



1.12 Annual Reporting

Council will prepare for the financial year an LDMG annual report, which will be published on the Council website, sent to the District Disaster Management Group and the Office of the Inspector-General Emergency Management.

This report will include, but is not limited to

- Listing of all member organisations and their attendance at, and participation in the LDMG
- Listing of all members that attended any exercises and a brief overview of the exercise itself
- Any time that a change in status of the LDMG itself occurred.

1.13 Amendments

Minor and inconsequential amendments to these terms of reference may be authorised and recorded below by the Local Disaster Coordinator or delegate.

Substantial amendments must be approved by Council resolution and endorsement of the City of Ipswich Local Disaster Management Group.

The below table outlines amendments to this terms of reference.

Vers	Date	Comment
1.00	January 2019	New version.

Table 1 – Amendment Register

Environment Committee	
Mtg Date: 19.02.19	OAR:
Authorisation: Bryce Hines	

MP:MP

H:\Departmental\Committee Reports\3101 MP Isolated Community Sub Plan.docx

31 January 2019

MEMORANDUM

TO: ACTING SPORT RECREATION AND NATURAL RESOURCES MANAGER

FROM: PRINCIPAL OFFICER (EMERGENCY MANAGEMENT)

RE: CONSOLIDATION OF ISOLATED COMMUNITY SUB PLANS

INTRODUCTION:

This is a report by the Principal Officer (Emergency Management) dated 31 January 2019 concerning the review and consolidation of Local Disaster Management Isolated Community Sub Plans.

ADVANCE IPSWICH THEME LINKAGE:

The nature of this report is aligned to the following Advance Ipswich theme:

- Caring for the Community
- Caring for the Environment

BACKGROUND:

Council maintains a number of Isolated Community Sub Plans, which are supplementary documents to the Local Disaster Management Plan which support the coordination of events. The development of these plans is guided by the disaster management guideline issued by the State of Queensland pursuant to the *Disaster Management Act 2003* (the Act).

Amendments to plans, which result in changes that are greater than those considered minor and inconsequential must be approved by Council pursuant to section 80(1)(b) of the Act. Further, post Council approval, these changes must then be formally endorsed by the Local Disaster Management Group.

Isolated Community Sub Plans exist to provide a pro-active approach to enhancing resilience within potentially isolated communities. The risk of physical isolation following a disaster can occur anywhere throughout the City. The arrangements to respond and recovery to

isolation is generally dealt with through the Local Disaster Management Plan. In instances where a whole community has a history of physical isolation and the risk of that isolation still exists (for example there has been no significant change in infrastructure for access/egress), sub plans have been prepared and maintained.

At the Council Ordinary Meeting held on the 29 May 2018 it was resolved:

- A. *That the Local Disaster Management Sub Plans, as detailed in Attachments B through to J, of the report by the Principal Officer (Emergency Management) dated 4 May 2018, be adopted.*
- B. *That the Local Disaster Management Sub Plans as detailed in Attachments B through to J, of the report by the Principal Officer (Emergency Management) dated 4 May 2018, be provided to the Local Disaster Management Group for review.*
- C. *That the Chief Operating Officer (Works, Parks and Recreation), in consultation with the Mayor and the Chairperson of Infrastructure and Emergency Management Committee, be authorised to make any minor amendments deemed necessary on the basis of comment received from the Local Disaster Management Group.*

A copy of this report is shown in Attachment A.

ISOLATED COMMUNITIES SUB PLAN:

Maintenance of eight sub plans (excluding the proposed Goodna element) as individual, but interrelated documents is inefficient. Each individual document follows a similar format, often repeating the same (relevant) information. To allow easier reference, it is proposed to consolidate the eight Isolated Community Sub Plans into a single *Isolated Communities, Ipswich Local Government Area Sub Plan*.

Further it is proposed that the Goodna community be included in the *Isolated Communities, Ipswich Local Government Area Sub Plan* (Attachment J).

CONCLUSION:

The consolidation of eight sub plans and one draft sub plan into a single source provides efficiency and easy reference.

ATTACHMENTS:

Name of Attachment	Attachment
Update to Isolated Community & Recovery Sub Plans report from Committee No. 2018(05) of 21 May 2018 and Council Ordinary Meeting of 29 May 2018.	 Attachment A
Isolated Communities Sub Plan (Brassall and North Ipswich)	 Attachment B
Isolated Communities Sub Plan (Bundamba)	 Attachment C
Isolated Communities Sub Plan (Karalee)	 Attachment D
Isolated Communities Sub Plan (Leichhardt and One Mile)	 Attachment E
Isolated Communities Sub Plan (Marburg)	 Attachment F
Isolated Communities Sub Plan (Moores Pocket)	 Attachment G
Isolated Communities Sub Plan (Pine Mountain)	 Attachment H
Isolated Communities Sub Plan (Rosewood)	 Attachment I
Proposed Isolated Communities, Ipswich Local Government Area Sub Plan	 Attachment J

RECOMMENDATION:

That the Interim Administrator of Ipswich City Council resolve:

- A. That the Isolated Communities, Ipswich Local Government Area Sub Plan as outlined in Attachment J, which includes the Goodna community, to the report by the Principal Officer (Emergency Management) dated 31 January 2019, be adopted.
- B. That the Chief Operating Officer (Works, Parks and Recreation), in their role as the Local Disaster Coordinator and in consultation with the Interim Administrator, be

authorised to make any amendments deemed necessary on the basis of comment subsequently received from the Local Disaster Management Group.

Matthew Pinder

PRINCIPAL OFFICER (EMERGENCY MANAGEMENT)

I concur with the recommendation contained in this report.

Kaye Cavanagh

SPORT RECREATION AND NATURAL RESOURCES MANAGER

I concur with the recommendation contained in this report.

Bryce Hines

CHIEF OPERATING OFFICER (WORKS, PARKS AND RECREATION)

Infrastructure and Emergency Management Committee	
Mtg Date: 21.05.18	OAR: Yes
Authorisation: Bryce Hines	

ATTACHMENT A

MP:MP

H:\Departmental\Committee Reports\0518 MP Update to Isolated Community & Recovery Sub Plans.docx

4 May 2018

MEMORANDUM

TO: ACTING SPORT RECREATION AND NATURAL RESOURCES MANAGER

FROM: PRINCIPAL OFFICER (EMERGENCY MANAGEMENT)

RE: UPDATE TO THE LOCAL DISASTER MANAGEMENT RECOVERY AND ISOLATED COMMUNITY SUB PLANS

INTRODUCTION:

This is a report by the Principal Officer (Emergency Management) dated 4 May 2018 concerning review of the Local Disaster Management Isolated Community Sub Plans

BACKGROUND:

Council maintains a number of sub plans, which are supplementary documents to the Local Disaster Management Plan to support the coordination of disaster events. The development of these plans is guided by ten guidelines issued pursuant to the Disaster Management Act 2003.

In mid-2017, Queensland Fire and Emergency Services (QFES) announced that they would revise the existing ten guidelines, and as a result issued on the 19 January 2018 a single consolidated document titled the *Queensland Prevention, Preparedness, Response and Recovery Disaster Management Guideline*. QFES advised the revised guideline would have an implementation time, of May 2018 (Attachment A).

The Emergency Management team commenced a body of works to ensure that Council was able to implement the revisions by the transition deadline of May 2018.

REVISED SUB PLANS

Isolated Community Sub Plans

The risk of physical isolation following a disaster event can occur throughout the City resulting in residents being affected. The arrangements to support these residents is generally dealt with through the Local Disaster Management Plan itself. However in the instance where a whole community has a history of physical isolation and the risk of that isolation still exists (for example there has been so significant change in infrastructure for access/egress) isolated community sub plans are prepared and maintained (Attachments B – I).


Recovery Sub Plan

The purpose of the Recovery Sub Plan is to provide a framework in the provision recovery assistance to affected members of the public during and post a disaster event (Attachment J).

CONCLUSION:

As result of the release of the Queensland Prevention, Preparedness, Response and Recovery Disaster Management Guideline, a statutory instrument of the Disaster Management Act 2003, a number of the City of Ipswich sub plans have been revised.

ATTACHMENTS:

Name of Attachment	Attachment
Release of Queensland Prevention, Preparedness, Response and Recovery Disaster Management Guideline.	 Attachment A
Isolated Communities Sub Plan (Brassall and North Ipswich)	
Isolated Communities Sub Plan (Bundamba)	
Isolated Communities Sub Plan (Karalee)	
Isolated Communities Sub Plan (Leichhardt and One Mile)	
Isolated Communities Sub Plan (Marburg)	
Isolated Communities Sub Plan (Moores Pocket)	
Isolated Communities Sub Plan (Pine Mountain)	
Isolated Communities Sub Plan (Rosewood)	
Recovery Sub Plan	

RECOMMENDATION:

- A. That the Local Disaster Management Sub Plans, as detailed in Attachments B through to J, of the report by the Principal Officer (Emergency Management) dated 4 May 2018, be adopted.

- B. That the Local Disaster Management Sub Plans as detailed in Attachments B through to J, of the report by the Principal Officer (Emergency Management) dated 4 May 2018, be provided to the Local Disaster Management Group for review.
- C. That the Chief Operating Officer (Works, Parks and Recreation), in consultation with the Mayor and the Chairperson of Infrastructure and Emergency Management Committee, be authorised to make any minor amendments deemed necessary on the basis of comment received from the Local Disaster Management Group.

Matthew Pinder

PRINCIPAL OFFICER (EMERGENCY MANAGEMENT)

I concur with the recommendation contained in this report.

Kaye Cavanagh

ACTING SPORT RECREATION AND NATURAL RESOURCES MANAGER

I concur with the recommendation contained in this report.

Bryce Hines

ACTING CHIEF OPERATING OFFICER (WORKS, PARKS AND RECREATION)



Ph: 3635 2468
Our Ref: 00249-2018



Office of the
Commissioner

**Queensland Fire and
Emergency Services**

ATTACHMENT Aa

Dear Disaster Management Stakeholder

As you are aware, Queensland Fire and Emergency Services (QFES) undertook a recraft of Disaster Management (DM) Guidelines on behalf of DM stakeholders.

The approach taken was to recraft an all-inclusive, single source DM Guideline which aligns its chapters to the four phases of Prevention, Preparedness, Response and Recovery (PPRR).

I wish to thank stakeholders who provided feedback and I am pleased to provide you with the final recrafted PPRR DM Guideline.

The Guideline is supported by a robust toolkit, providing manuals, reference guides, forms, templates, maps, diagrams, handbooks and links to related publications to assist DM stakeholders. These toolkit items are continuing to be developed and will be progressively rolled out prior to the Guideline implementation in May 2018.

Concurrently, the www.disaster.qld.gov.au website has been refreshed to provide an interactive and usable platform for the recrafted DM Guideline, with improved navigation, search function and homepage. A fact sheet and user tutorial are attached to assist with navigating the new website and the Guideline.

As this timing sees the state preparing for the severe weather season, training and support in relation to changes in the Guideline will be provided in early 2018. Full adoption of any changes in the Guideline will not be expected before **May 2018**.

I would like to take this opportunity to acknowledge the efforts of the local, district and state members of the content development working groups who have contributed to the development of the PPRR DM Guideline.

Should you require any further information in relation to Guideline recraft, please contact Ms Coralie Muddle, A/Principal Program Officer, DM Guidelines Unit, QFES on telephone (07) 3635 2468 or email coralie.muddle@qfes.qld.gov.au.

Yours sincerely

Katarina Carroll APM
Commissioner

Emergency Services Complex
125 Kedron Park Road Kedron
GPO Box 1425 Brisbane
Queensland 4001 Australia
Telephone 13 QGOV
Facsimile +61 3247 4683
Website www.qfes.qld.gov.au
ABN 93 035 163 778

City of Ipswich

Local Disaster Management Sub Plan

Isolated Communities (Brassall and North Ipswich)

A3980083: May 2018



Approval and Endorsement

Sub Plan approval and endorsement information – inserted post approval and endorsement.



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PART 1: ADMINISTRATION AND GOVERNANCE

1.1. Authority to Plan

This plan is prepared by Ipswich City Council under the auspices of the Local Disaster Management Plan (LDMP) for the City of Ipswich under the provisions of Section 57(1) of the Disaster Management Act 2003.

1.2. Sub Plan Principles

This sub plan has been prepared as subordinate to the LDMP. Accordingly this sub plan must be read in conjunction with the LDMP. With the exception of pertinent information, reference to existing statements, definitions and acronyms will be excluded from this document.

1.3. Planning and Review Cycle

This plan will be reviewed at least annually¹ with relevant amendments made and distributed as needed. The review process will be in accordance with the state guidelines. Minor amendments that do not materially affect the plan are able to be authorised by the Principal Officer (Emergency Management).

It is acknowledged that feedback from stakeholders is essential. Proposals for amendments or inclusions can be addressed in writing to:

Post Chief Executive Officer
 Attention: Emergency Management
 Ipswich City Council
 PO Box 191, Ipswich QLD 4305

Email council@ipswich.qld.gov.au

¹ Section 59, Disaster Management Act 2003, Reviewing and Renewing (the) Plan

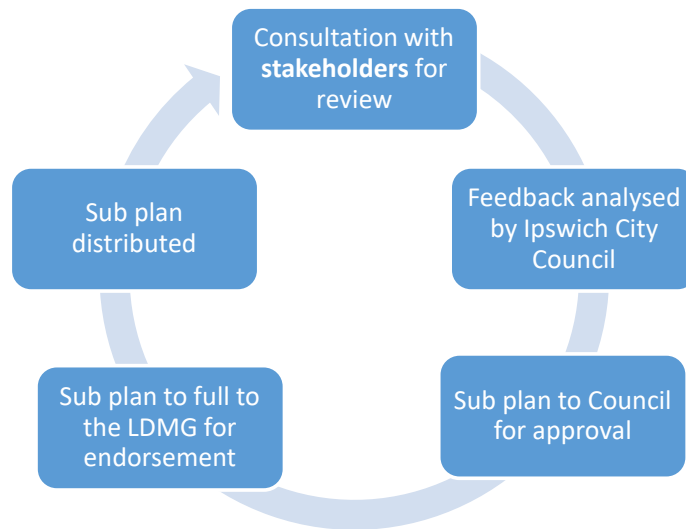


Figure 1 – Sub Plan Review Cycle

1.4. Amendment Register

Document version history is maintained through Council’s internal electronic document management system. The below table outlines amendments minor and inconsequential amendments.

Vers.	Date	Comment
3.00	May 2018	Approved and endorsed version

Table 1 – Amendment Register

1.5. Purpose of the Sub Plan

The purpose of this sub plan is to provide a pro-active approach to enhancing community resilience within the potentially isolated communities of Brassall, North Ipswich and its surrounding areas.

1.6. Key objectives

- Identification of preparatory initiatives for the physical isolation of the community.
- Enhance response for the physical isolation of the community.

1.7. Context

The risk of physical isolation following a disaster event can occur throughout the City resulting in residents being affected. The arrangements to support these residents is generally dealt with through the Local Disaster Management Plan itself. However in the instance where a whole community has a history of physical isolation and the risk of that isolation still exists (for example there has been so significant change in infrastructure for access/egress) isolated community sub plans are prepared and maintained. It is important to note these plans are supplementary



documents to local disaster management plan and the functional sub plans. Accordingly they are not intended to be the sole source of information for disaster operations and disaster recovery activities.

The emergency risk assessment for the City of Ipswich identifies that Brassall, North Ipswich and surrounding communities are at risk of isolation from flood. Whilst this plan has been prepared on that basis, an all-hazards approach has been applied wherever possible.

PART 2: COMMUNITY PROFILE

2.1. Locality

For planning purposes the Brassall and North Ipswich isolated communities clusters the suburbs of **Brassall, North Ipswich and Tivoli** which have the potential to be impacted by the Bremer River, the Mihi Creek and the Tivoli Creek.

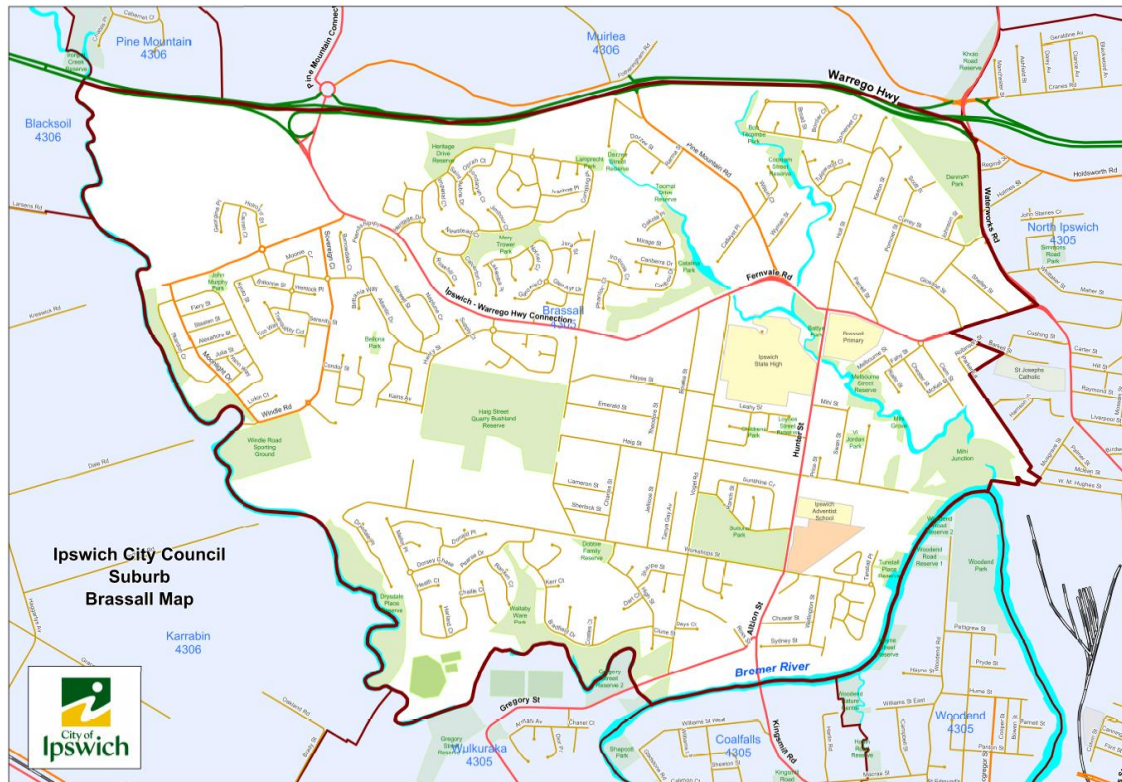


Figure 2 – Brassall Community Boundary

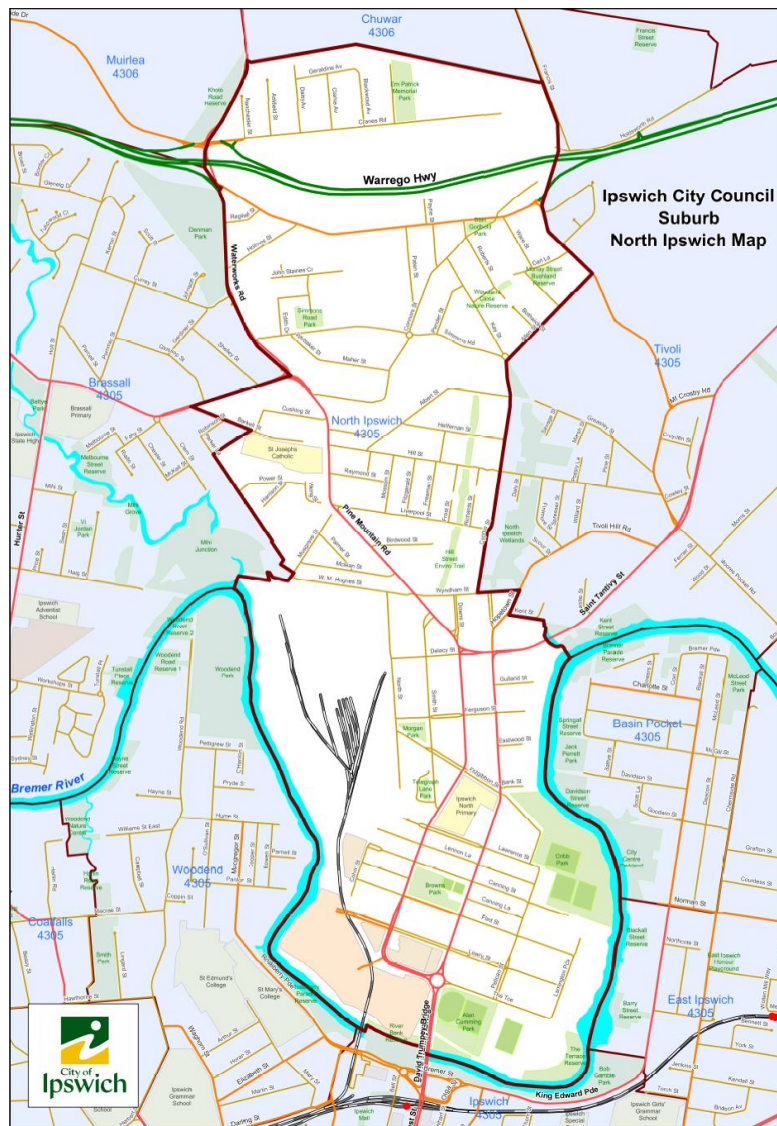


Figure 3 – North Ipswich Community Boundary

2.2. Population

The Brassall and North Ipswich community has an approximate population of 15,564.²

	0-19 years	20-49 years	50 and over
Male	2,133	3,125	2,302
Female	2,179	3,199	2,626
Total	4,312	6,324	4,928

Table 2 – Population Data

² Profile ID – Community Profile (2016) <http://profile.id.com.au/ipswich/five-year-age-groups>

2.3. Educational Institutions

Located within the Brassall and North Ipswich community are the following educational institutions:

Institution	Contact Number	Address	Lat/Long
Aussie Kindies Early Learning	07 3812 9372	33 Lawrence St, North Ipswich QLD 4305	-27.604820, 152.764605
Brassall Child Care Centre	07 3201 8831	4 Clem St, Brassall QLD 4305	-27.589883, 152.752222
Brassall Early Learning Centre	07 3201 5094	30A Workshops St, Brassall QLD 4305	-27.598489, 152.744609
Brassall State School	07 3813 4333	132 Pine Mountain Rd, Brassall QLD 4305	-27.588903, 152.748052
Bush Kidz Daycare	07 3813 0975	68 Hunter St, Brassall QLD 4305	-27.597176, 152.746694
Earlybird Childhood and Learning Centre	07 3201 5366	99 Haig Street, Brassall QLD 4305	
Ipswich Adventist School	07 3201 6233	56 Hunter St, Brassall QLD 4305	-27.596152, 152.746512
Ipswich Kiddie Care	07 3812 1234	10 Wyndham St, North Ipswich QLD 4305	-27.594945, 152.762835
Ipswich North State School	07 3813 5888	Cnr Downs St & Fitzgibbon St, North Ipswich QLD 4305	-27.601904, 152.763198
Ipswich State High School	07 3813 4488	1 Hunter St, Brassall QLD 4305	-27.590087, 152.745044
North Ipswich Child Care Centre	07 3281 0351	84 Hill St, Tivoli QLD 4305	-27.591581, 152.768763
St Joseph's Primary School	07 3201 6188	42 Pine Mountain Rd, North Ipswich QLD 4305	-27.590767, 152.757281
Tivoli State School	07 3813 7444	108 Mount Crosby Rd, Tivoli QLD 4305	-27.583257, 152.777242

Table 3 – Educational Institutions

2.4. Aged and Vulnerable Persons Facilities

Located within the Brassall and North Ipswich community are the following aged and vulnerable person facilities:

Facility	Contact Number	Address	Lat/Long
Brassall Village Retirement Living	07 3201 8355	9 Charles St, Brassall QLD 4305	-27.594459, 152.737546
Bremer Waters Over 55's Lifestyle Resort	07 3813 5002	102A Moores Pocket Rd, Tivoli QLD 4305	-27.598702, 152.780361
Bundaleer Lodge Nursing Home	07 3201 8772	100 Holdsworth Rd, North Ipswich QLD 4305	-27.581867, 152.763264
Gainsborough Downs Home Village	07 3201 7288	1380 Warrego Hwy, Brassall QLD 4305	-27.580612, 152.716889
Sunnycove	1800 867 368	56A Moores Pocket Rd, Tivoli QLD 4305	-27.597002, 152.776337

Table 4 – Aged and Vulnerable Persons Facilities

2.5. Vet Surgeries

Located within the Brassall and North Ipswich community are the following vet surgeries:

Facility	Contact Number	Address	Lat/Long
Brassall Veterinary Surgery	07 3201 6464	17 Hunter St, Brassall QLD 4305	-27.593246, 152.745901
Pine Mountain Veterinary	07 3201 8862	24 Fernvale Rd, Brassall QLD 4305	-27.588090, 152.741768
Ipswich Family Veterinary Clinic	07 3202 1554	9 Pine Mountain Rd, North Ipswich QLD 4305	-27.595798, 152.761765

Table 5 – Vet Surgeries

2.6. Public Transport

The Brassall and North Ipswich community is serviced by the following public transport arrangements:

- Bus Services
- Taxi Services

2.7. Emergency Services

The following table details the emergency services that are located within the Brassall and North Ipswich community. Services may be provided from other locations to the Brassall and North Ipswich community and these are not listed in the below table.

Facility	Contact Number	Address	Lat/Long
Brassall Fire Station	000	Cnr Diamantina Blvd & Sovereign Cl, Brassall QLD 4305	-27.585142, 152.724663
North Ipswich Neighbourhood Police Beat	07 3201 5297	26 Hill St, North Ipswich QLD 4305	-27.590561, 152.761125

Table 6 – Emergency Service Facilities

2.8. Medical Facilities

The following table details the medical service providers that are located within the Brassall and North Ipswich community. Services may be provided from other locations to the Brassall and North Ipswich community and these are not listed in the below table.

Facility	Contact Number	Address	Lat/Long
Brassall Medical Clinic	07 3201 6766	19 Albion St, Brassall QLD 4305	-27.598623, 152.745347
Riverlink Family Practise	07 3812 8231	Riverlink Shopping Centre, Cnr The Terrace & Downs St, North Ipswich QLD 4305	
Riverlink Medical and Dental Centre	07 3413 6666	Riverlink Shopping Centre, Cnr The Terrace & Downs St, North Ipswich QLD 4305	-27.605620, 152.757975

Table 7 – Medical Facilities

PART 3: RISK PROFILE

3.1. Risk Assessment

Risk management forms the foundations of disaster and emergency plans for the City of Ipswich. Council adopts the Queensland Emergency Risk Management Framework. For more information regarding risk assessment refer to the Local Disaster Management Plan.

3.2. Potential Isolation Areas

Within the Brassall and North Ipswich community the following areas are potentially vulnerable to isolation as a result of flood. The areas are based off historical flood lines of 1974 and 2011 events.

Road	Suburb
Albion Street	Brassall
Backhouse Court	Brassall
Bottomley Street	Brassall
Bradfield Drive	Brassall
Clem Street	Brassall
Coates Court	Brassall
Collins Street	Brassall
Haig Street	Brassall
Holt Street	Brassall
Hunter Street	Brassall
Ipswich Warrego Highway Connection Road	Brassall
Kenworth Street	Brassall
Leahy Street	Brassall
Mckell Street	Brassall
Melbourne Street	Brassall
Mellor Place	Brassall
Mihi Street	Brassall
Parcell Street	Brassall
Parker Lane	Brassall
Pathway	Brassall
Pine Mountain Road	Brassall
Pommer Street	Brassall
Price Street	Brassall
Ranken Court	Brassall
Robinson Street	Brassall
Rowan Drive	Brassall
Swan Street	Brassall
Sydney Street	Brassall
Tunstall Place	Brassall
Vogel Road	Brassall



Road	Suburb
Workshops Street	Brassall
Bank Street	North Ipswich
Canning Street	North Ipswich
Colvin Street	North Ipswich
Cyprus Street	North Ipswich
Delacy Street	North Ipswich
Ferguson Street	North Ipswich
Fitzgibbon Street	North Ipswich
Flint Street	North Ipswich
Gulland Street	North Ipswich
Hopetown Street	North Ipswich
Kent Street	North Ipswich
Lamington Parade	North Ipswich
Lennon Lane	North Ipswich
Lowry Street	North Ipswich
Norma Brown Street	North Ipswich
North Street	North Ipswich
Pelican Street	North Ipswich
Pine Street	North Ipswich
Telegraph Lane	North Ipswich
Telegraph Street	North Ipswich
The Terrace	North Ipswich
Wyndham Street	North Ipswich

Table 8 – Potentially Isolated Areas



PART 4: PUBLIC INFORMATION AND WARNINGS

The Public Information and Warnings Sub Plan and Council Public Information and Warnings Manual detail Council's overall communication and warning strategy. It is however recognised that this community has particular needs related to communications.

4.1. Lead Times

Flood modelling and predication is a highly complex and subjective art that relies on a range of variables and assumptions. Factors that can affect the occurrence of inundation include location, intensity and length of the rainfall; current soil and ground moisture levels; overland water flow conditions; overland flow rates; current riverine and creek levels. Council possess predictive software that its Engineers (Floodplain Management) use to provide educated predictions based on real time data and conditions. This in itself is not 100% accurate. **The information of flooding provided below is extremely generalised and does not supplement or replace the knowledge and skill of Council Engineers. It is provided as highly generalised, non-contextualised information and process tool.**

The possible and highly indicative timeframes for effect on the community are as follows:

- Overland flows and gullies – 0 to 1 hour
- Local Creeks – 2 to 4 hours
- Bremer River – 12 to 24 hours
- Brisbane River – 48 to 72 hours

4.2. General Communication Strategies

Council employs the following communication strategies generally:

- Emergency Alert
- Emergency Broadcast
- Social Media
- Media Release
- Media Broadcast
- Website Publication

4.3. Community Specific Communication Strategies

Creek systems present unique challenges in determining lead time. Predictive modelling is far less accurate than that of riverine flood modelling. Council still however invests heavily in flood studies to improve this based on current industry best practice.

4.3.1. Door-Knocking

Council works in partnership with the Ipswich City SES Unit to undertake door knocking in areas during events, where it is anticipated they will be directly affected by inundation. The aim is to



encourage residents to remain aware of their situation. At this time contact details of residents are obtained.

4.3.2. My Ipswich Alerts (Early Warning Network)

Council has engaged the Early Warning Network to provide opt-in severe and dangerous weather warnings to residents, community groups and businesses within the City.

As part of this arrangement Council is able to send custom notifications and warnings to residents that have opted in, based on their residential address or location of their mobile device. The mobile device located must have the smart phone app installed and location services switched on.

PART 5: EVACUATION

5.1. General Evacuation Information

The Evacuation Process Sub Plan and Evacuation Centre Sub Plan outline the detailed considerations and general strategies for evacuations. The below information is summarised to provide context to the more detailed information provided.

Evacuation is a risk management strategy used to mitigate the effects of an emergency on the community. It involves the movement of people to a safer location and their return. Evacuations, if unplanned, may cause greater adverse impacts than the disaster itself, including the potential to overwhelm agencies undertaking response and recovery actions. Shelter in place should be considered as an alternative where possible.



Figure 4 – Types of Evacuation

Mandatory evacuations may be ordered under the following acts:

- Disaster Management Act 2003
- Fire and Emergency Services Act 1990
- Public Safety Preservation Act 1986

It is the responsibility of the primary agency to order and control the evacuation process and overview the associated planning.

5.2. Evacuation Process

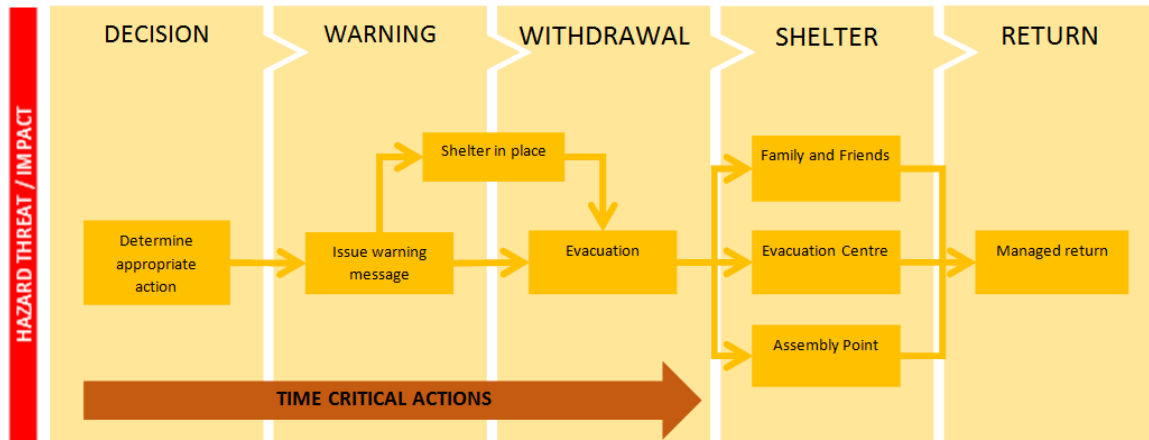


Figure 5 – Evacuation Process

5.3. Specific Evacuation and Isolation Information

The below table provides specific information related to the community.

Evacuation Coordinator	Officer in Charge Ipswich Police Station 37 Ellenborough St, Ipswich QLD 4305 Lat/Long: -27.615727, 152.757266
Assembly Area <i>within the Isolated Community</i>	<u>OPTION 1</u> St Joseph's Primary School Assemble at: Oval 42 Pine Mountain Rd, North Ipswich QLD 4305 Lat/Long: -27.590634, 152.756436
<i>Meeting point for movement to other locations.</i>	<u>OPTION 2</u> Sutton Park Assemble at: Grass area Cnr of Vogel Rd & Workshops St, Brassall QLD 4305 Lat/Long: -27.597260, 152.741432
	<u>OPTION 3</u> Ipswich North State School Assemble at: Oval Cnr Downs St & Fitzgibbon St, North Ipswich QLD 4305 Lat/Long: -27.602558, 152.762739
Emergency Shelter <i>within the Isolated Community</i>	<u>OPTION 1</u> St Joseph's Primary School 42 Pine Mountain Rd, North Ipswich QLD 4305 Lat/Long: -27.590767, 152.757281
<i>Meeting point for movement to other locations.</i>	<u>OPTION 2</u> Ipswich North State School Assemble at: Oval Cnr Downs St & Fitzgibbon St, North Ipswich QLD 4305 Lat/Long: -27.601904, 152.763198
Neighbourhood Safer Places (NSP)	Queensland Fire and Emergency Services have not identified a need and/or location for a neighbourhood safer place in this community.



Primary Evacuation Centre	<p>Ipswich Showgrounds Salisbury Rd, Ipswich QLD 4305 Lat/Long: -27.628809, 152.758960</p> <p><i>This is the primary evacuation centre, dependent on the hazard and impacts, other evacuation centres may be established.</i></p>
Helicopter Landing Zones within the Isolated Community	<p>St Joseph's Primary School Oval 42 Pine Mountain Rd, North Ipswich QLD 4305 Lat/Long: -27.590634, 152.756436</p>
Major Roads or Routes for Access/Egress	<ul style="list-style-type: none"> • Mt Crosby Rd impacted from Lumbye Pl to Hutchins St. • Pine Mountain Rd impacted from Clem St to Bourke St. • Albion St/Kingsmill Rd heavily impacted.
Potential Transport (persons) Providers located within the Isolated Community	<p><u>Courtesy Buses</u> Ipswich Jets Leagues Club 15 Downs St, North Ipswich QLD 4305 07 3202 1887 Lat/Long: -27.606802, 152.760919</p> <p>Club Services Ipswich 5A Lowry St, North Ipswich QLD 4305 07 3812 3366 Lat/Long: -27.607138, 152.759685</p>
Potential Cold Storage Providers located within the Isolated Community	<p>Coles Supermarket Riverlink Shopping Centre, Cnr The Terrace & Downs Street, North Ipswich QLD 4305 07 3281 3496 Lat/Long: -27.607854, 152.758720</p> <p>Woolworths Supermarket 68 Hunter Street, Brassall QLD 4305 07 3819 7114 Lat/Long: -27.597347, 152.746646</p>
Potential Supply Providers located within the Isolated Community	<p>Coles Supermarket Riverlink Shopping Centre, Cnr The Terrace & Downs Street, North Ipswich QLD 4305 07 3281 3496 Lat/Long: -27.607854, 152.758720</p> <p>Woolworths Supermarket 68 Hunter Street, Brassall QLD 4305 07 3819 7114 Lat/Long: -27.597347, 152.746646</p>
Potential Security Providers located within the Isolated Community	N/A

Table 9 – Specific Evacuation Information



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6.2. Annexure 2 – Contacts

Organisation/Person	Contact Details	Availability
Ipswich City Council	07 3810 6666 council@ipswich.qld.gov.au	Public
Ipswich City Council – Division 5 Councillor Wayne Wendt	07 3281 8700 wayne.wendt@ipswich.qld.gov.au div5office@ipswich.qld.gov.au	Public
Ipswich City Council – Division 6 Councillor Cheryl Bromage	07 3810 6556 cbromage@ipswich.qld.gov.au div6office@ipswich.qld.gov.au	Public
Queensland Police Service – Public Contact	131 444 www.policelink.qld.gov.au	Public
Queensland Police Service – Ipswich Police Station	Officer in Charge Ipswich Police Station 37 Ellenborough St, Ipswich QLD 4305	Restricted
State Emergency Service	132 500 www.132500.qld.gov.au	Public

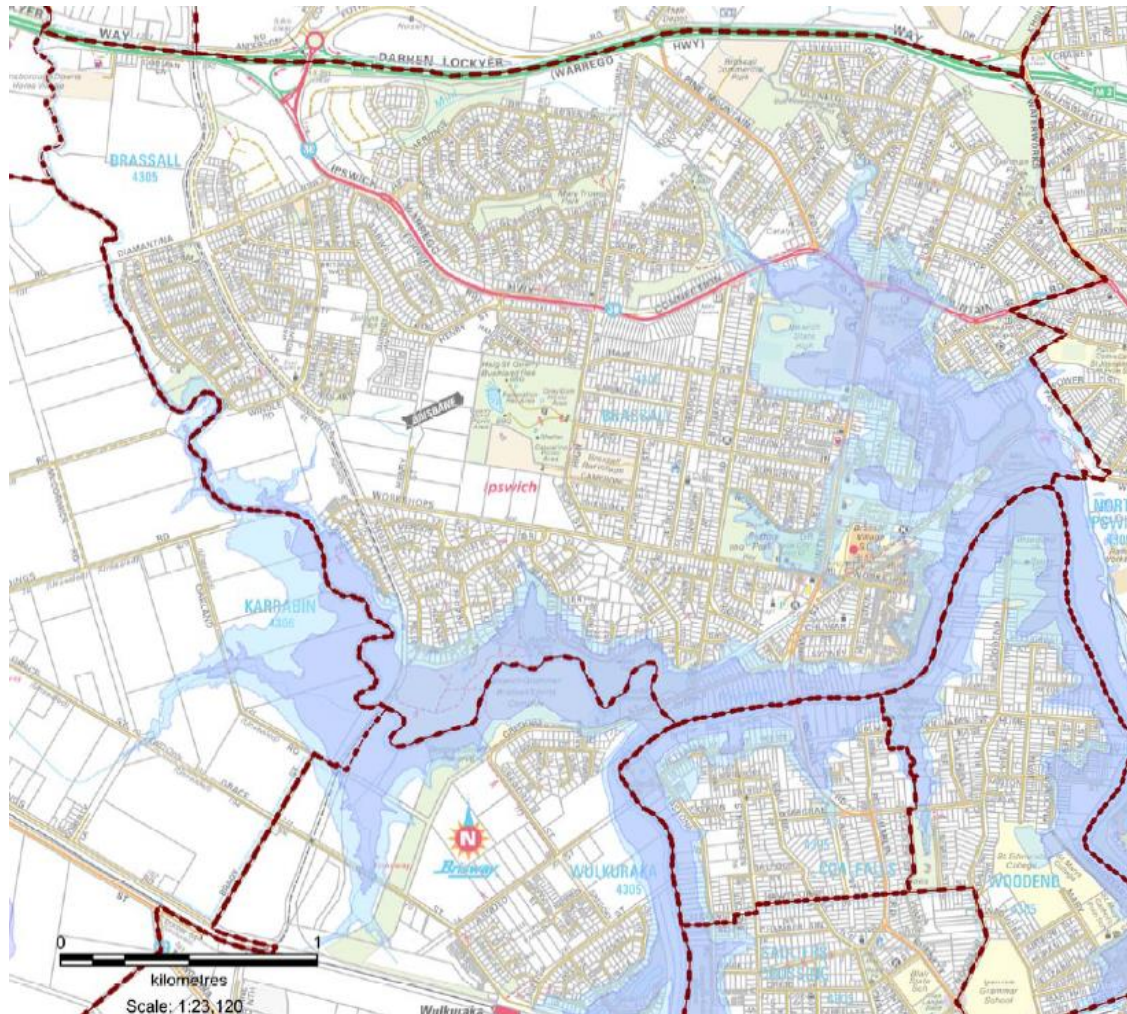
Other Public Emergency Contact Information is maintained in the front cover of the Local Disaster Management Plan which is located on Council's website www.ipswich.qld.gov.au/emergency.

Community Support Contact Information is maintained through Council's partnership with My Community Directory. Listings on the community directory are provided as a free service to the Ipswich public by service providers primarily located within the Ipswich region. Inclusion in these directories does not imply Ipswich City Council endorses, promotes or guarantees the products and, or services provided.

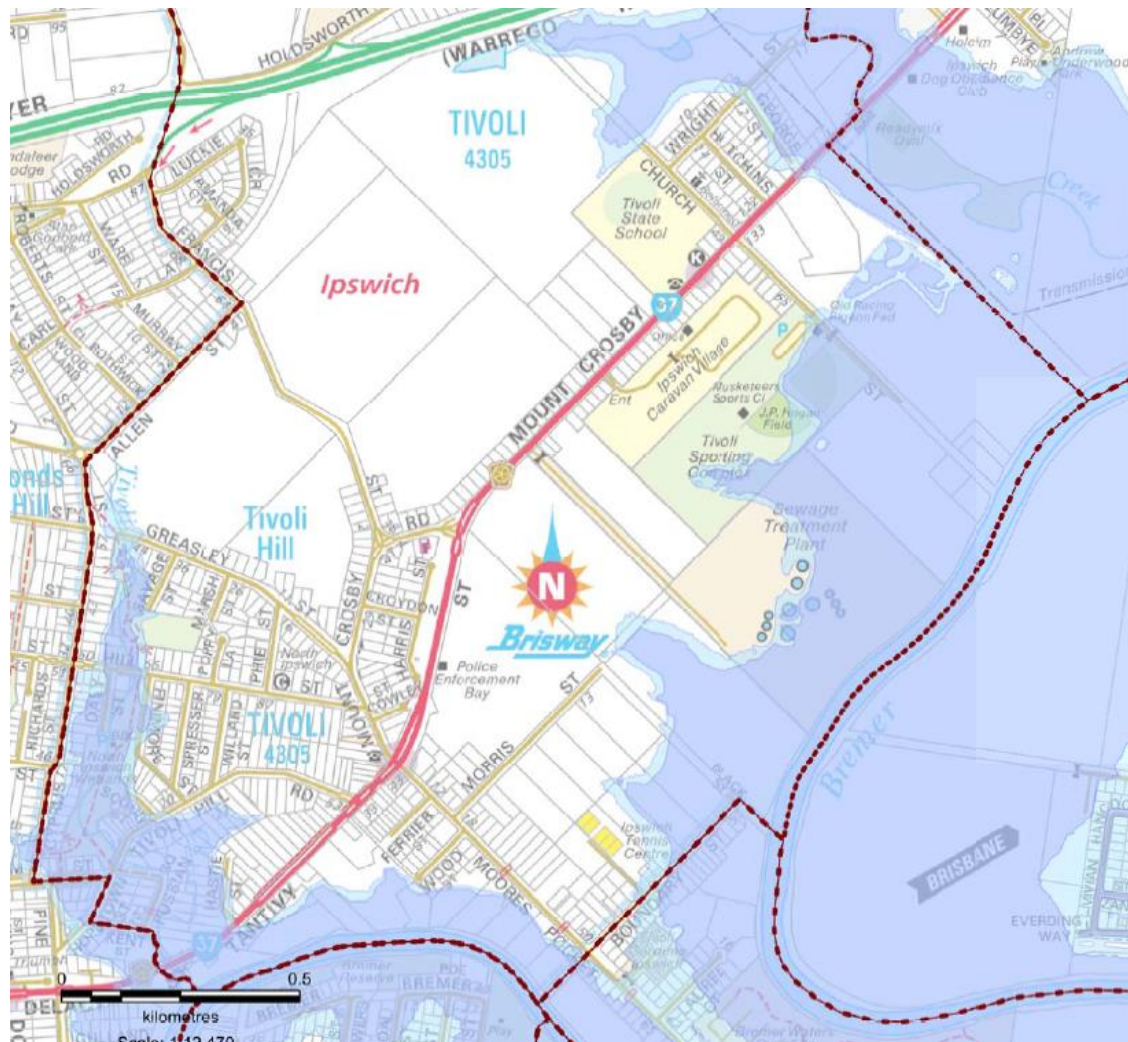
To view the directory visit: <https://www.mycommunitydirectory.com.au/Queensland/Ipswich>

Operational Contact Information, including Local Disaster Management Group data is maintained within Council's internal systems.

6.3. Annexure 3 – Brassall (1974 and 2011 Flood Lines)



6.5. Annexure 5 – Tivoli (1974 and 2011 Flood Lines)



City of Ipswich

Local Disaster Management Sub Plan

Isolated Communities (Bundamba)

A3931782: May 2018



Approval and Endorsement

Sub Plan approval and endorsement information – inserted post approval and endorsement.



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PART 1: ADMINISTRATION AND GOVERNANCE

1.1 Authority to Plan

This plan is prepared by Ipswich City Council under the auspices of the Local Disaster Management Plan (LDMP) for the City of Ipswich under the provisions of Section 57(1) of the Disaster Management Act 2003.

1.2 Sub Plan Principles

This sub plan has been prepared as subordinate to the LDMP. Accordingly this sub plan must be read in conjunction with the LDMP. With the exception of pertinent information, reference to existing statements, definitions and acronyms will be excluded from this document.

1.3 Planning and Review Cycle

This plan will be reviewed at least annually¹ with relevant amendments made and distributed as needed. The review process will be in accordance with the state guidelines. Minor amendments that do not materially affect the plan are able to be authorised by the Principal Officer (Emergency Management).

It is acknowledged that feedback from stakeholders is essential. Proposals for amendments or inclusions can be addressed in writing to:

Post Chief Executive Officer
 Attention: Emergency Management
 Ipswich City Council
 PO Box 191, Ipswich QLD 4305

Email council@ipswich.qld.gov.au

¹ Section 59, Disaster Management Act 2003, Reviewing and Renewing (the) Plan

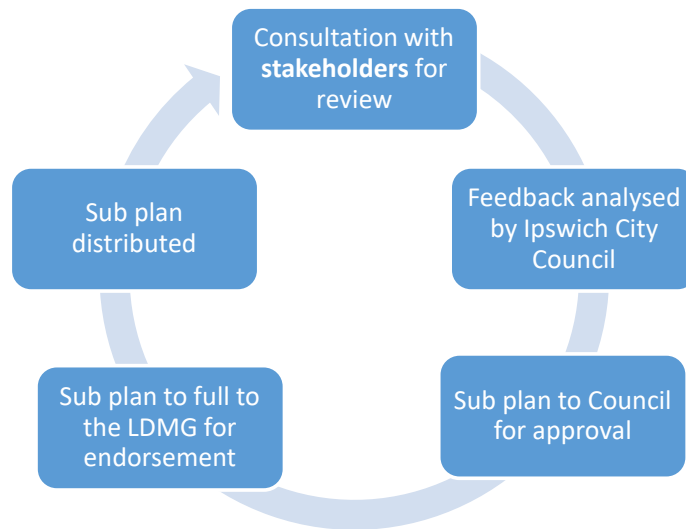


Figure 1 – Sub Plan Review Cycle

1.4 Amendment Register

Document version history is maintained through Council’s internal electronic document management system. The below table outlines amendments minor and inconsequential amendments.

Vers.	Date	Comment
2.00	May 2018	Approved and endorsed version

Table 1 – Amendment Register

1.5 Purpose of the Sub Plan

The purpose of this sub plan is to provide a pro-active approach to enhancing community resilience within the potentially isolated community of Bundamba and its surrounding areas.

1.6 Key objectives

- Identification of preparatory initiatives for the physical isolation of the community.
- Enhance response for the physical isolation of the community.

1.7 Context

The risk of physical isolation following a disaster event can occur throughout the City resulting in residents being affected. The arrangements to support these residents is generally dealt with through the Local Disaster Management Plan itself. However in the instance where a whole community has a history of physical isolation and the risk of that isolation still exists (for example there has been so significant change in infrastructure for access/egress) isolated community sub plans are prepared and maintained. It is important to note these plans are supplementary documents to local disaster management plan and the functional sub plans. Accordingly they are



not intended to be the sole source of information for disaster operations and disaster recovery activities.

The emergency risk assessment for the City of Ipswich identifies that Bundamba and surrounding communities are at risk of isolation from flood. Whilst this plan has been prepared on that basis, an all-hazards approach has been applied wherever possible.

PART 2: COMMUNITY PROFILE

2.1 Locality

For planning purposes the Bundamba isolated community clusters the suburbs of **Bundamba**, **North Booval** and **Booval** which have the potential to be impacted by the Bremer River and Bundamba Creek.

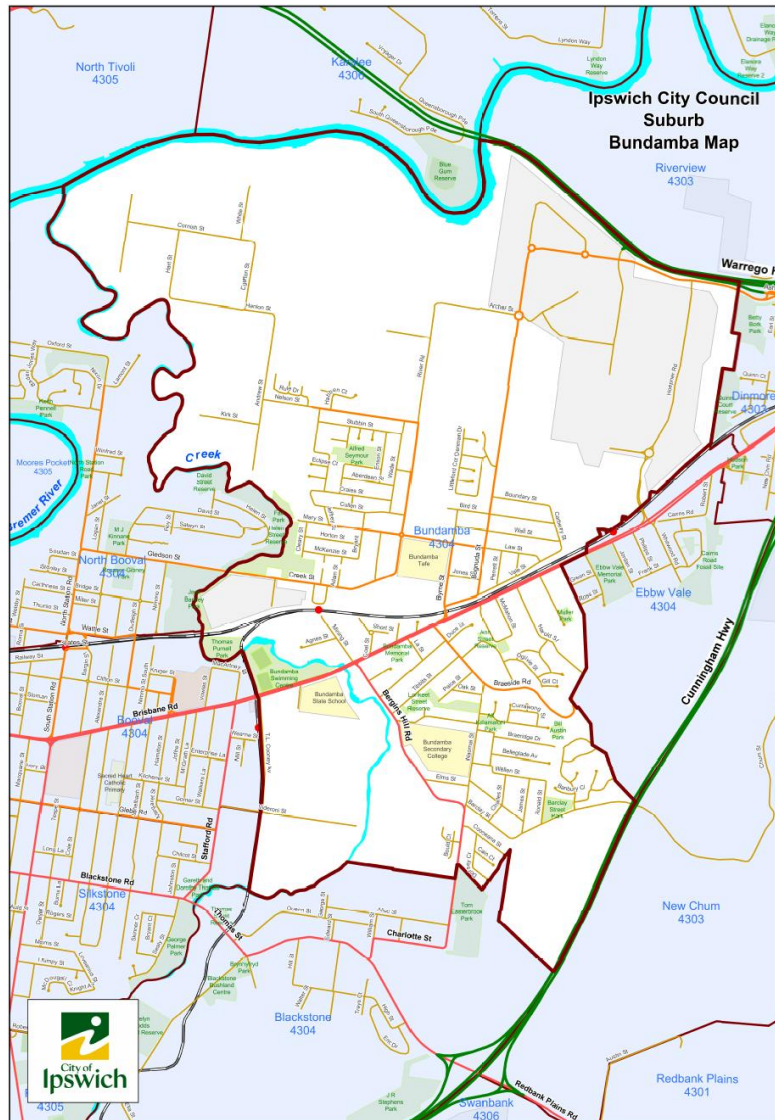


Figure 2 – Bundamba Community Boundary

2.2 Population

The Bundamba community has an approximate population of 8,905.²

	0-19 years	20-49 years	50 and over
Male	1,226	1,920	1,389
Female	1,071	1,874	1,411
Total	2,297	3,794	2,800

Table 2 – Population Data

2.3 Educational Institutions

Located within the Bundamba community are the following educational institutions:

Institution	Contact Number	Address	Lat/Long
Bindarra Daycare	07 3282 4011	18 Cole St, Booval QLD 4304	-27.615840, 152.791242
Bremer Institute Of TAFE	07 3817 3000	Cnr Mary St & Byrne St, Bundamba QLD 4304	-27.604512, 152.810830
Bundamba Child Care Centre	07 3282 4023	1 Adam St, Booval QLD 4304	-27.605825, 152.806181
Bundamba State School	07 3816 6666	221 Brisbane Rd, Bundamba QLD 4304	-27.612192, 152.805212
Bundamba State Secondary College	07 3816 6333	15A Naomi St, Bundamba QLD 4304	-27.614009, 152.813634
Byrneville House Child Care Centre	07 3282 6648	8 Byrne St, Bundamba QLD 4304	-27.606565, 152.811738
C&K Jacaranda Street Community Preschool & Kindergarten	07 3281 7173	114 Jacaranda St, North Booval QLD 4304	-27.607719, 152.785299
Goodstart Early Learning	07 3282 6552	8 Stafford St, Booval QLD 4304	-27.613546, 152.799967
Sacred Heart Primary School	07 3282 1976	25 Cothill Rd, Booval QLD 4304	-27.615816, 152.793567
The Bremer Community Child Care Centre	07 3816 3296	4 Mary St, North Booval QLD 4304	-27.626024, 152.799358

Table 3 – Educational Institutions

² Profile ID – Community Profile (2011) <http://profile.id.com.au/ipswich/five-year-age-groups>

2.4 Aged and Vulnerable Persons Facilities

Located within the Bundamba community are the following aged and vulnerable person facilities:

Facility	Contact Number	Address	Lat/Long
Christine Court Assisted Living	07 3816 2533	13-21 Christine Ct, North Booval QLD 4304	-27.604234, 152.795275
Oxford Crest Bundamba	07 3869 6688 07 3869 6699	9 Lindsay St, Bundamba QLD 4304	-27.611862, 152.809754
Thomas Henry House	07 3282 4904	8 Wearne St, Booval QLD 4304	-27.614090, 152.800853

Table 4 – Aged and Vulnerable Persons Facilities

2.5 Vet Surgeries

Located within the Bundamba community are the following vet surgeries:

Facility	Contact Number	Address	Lat/Long
Booval Veterinary Hospital	07 3282 6722	12 South Station Rd, Booval QLD 4304	-27.610121, 152.790043
Little Critters Veterinary Care	07 3816 0210	19 Mining St, Bundamba QLD 4304	-27.608301, 152.805726

Table 5 – Vet Surgeries

2.6 Public Transport

The Bundamba community is serviced by the following public transport arrangements:

- Rail Services
- Bus Services
- Taxi Services

2.7 Emergency Services

The following table details the emergency services that are located within the Bundamba community. Services may be provided from other locations to the Bundamba community and these are not listed in the below table.

Facility	Contact Number	Address	Lat/Long
Booval Police Station	000	2 Cothill Rd, Booval QLD 4304	-27.613998, 152.793898
Bundamba Fire Station	000	61 Brisbane Rd, Bundamba QLD 4304	-27.607440, 152.814478

Table 6 – Emergency Service Facilities

2.8 Medical Facilities

The following table details the medical service providers that are located within the Bundamba community. Services may be provided from other locations to the Bundamba community and these are not listed in the below table.

Facility	Contact Number	Address	Lat/Long
Booval Fair Medical and Therapy Centre	07 3143 5955	59/139 Brisbane Rd, Booval QLD 4304	-27.6159, 152.7900
Booval Medical Centre	07 3281 1177	123 Brisbane Rd, Booval QLD 4304	-27.614631, 152.788488
Piaggio Medical Services	07 3463 9181	32 South Station Rd, Booval QLD 4304	-27.612064, 152.789522
Station Road Medical Centre	07 3816 1155	50 South Station Rd, Booval QLD 4304	-27.613305, 152.789562
UFS Medical Centre	07 3282 1288	42 Station Rd, Booval QLD 4304	-27.612984, 152.789570

Table 7 – Medical Facilities

PART 3: RISK PROFILE

3.1 Risk Assessment

Risk management forms the foundations of disaster and emergency plans for the City of Ipswich. Council adopts the Queensland Emergency Risk Management Framework. For more information regarding risk assessment refer to the Local Disaster Management Plan.

3.2 Potential Isolation Areas

The following areas are potentially vulnerable to isolation as a result of flood. The areas are based off historical flood lines of 1974 and 2011 events.

Road	Suburb
Bergin Street	Booval
Brisbane Road	Booval
Macartney Street	Booval
Mill Street	Booval
Ross Llewellyn Drive	Booval
Stafford Street	Booval
Vowles Street	Booval
Wattle Street	Booval
Wearne Street	Booval
Yates Street	Booval
Agnes Street	Bundamba
Andrew Street	Bundamba
Archer Street	Bundamba
Ashburn Road	Bundamba
Barclay Street	Bundamba
Bergins Hill Road	Bundamba
Bognuda Street	Bundamba
Boyce Street	Bundamba
Brisbane Road	Bundamba
Cleary Street	Bundamba
Coal Street	Bundamba
Cornish Street	Bundamba
Creek Street	Bundamba
Egerton Street	Bundamba
Elizabeth Street	Bundamba
Elms Street	Bundamba
Hanlon Street	Bundamba
Hart Street	Bundamba
Hawkins Crescent	Bundamba
Herbert Street	Bundamba
Horton Street	Bundamba
Keith Street	Bundamba
Kirk Street	Bundamba
Lane Street	Bundamba
Lindsay Street	Bundamba
Mary Street	Bundamba
Mckenzie Street	Bundamba
Mining Street	Bundamba



Road	Suburb
River Road	Bundamba
Short Street	Bundamba
T L Cooney Avenue	Bundamba
Thompson Street	Bundamba
Tibbits Street	Bundamba
Videroni Street	Bundamba
Warrego Highway	Bundamba
White Street	Bundamba
Wickham Street	Bundamba
Alexandra Street	North Booval
Baden Jones Way	North Booval
Bergin Street	North Booval
Beth Street	North Booval
Bickle Place	North Booval
Bridge Street	North Booval
Christine Street	North Booval
David Street	North Booval
Diane Court	North Booval
Dudleigh Street	North Booval
Elaine Street	North Booval
Everding Way	North Booval
Gledson Street	North Booval
Heit Court	North Booval
Helen Street	North Booval
Jacaranda Street	North Booval
Janet Street	North Booval
Lamont Street	North Booval
Logan Street	North Booval
Merrell Street	North Booval
Miller Street	North Booval
Nixon Drive	North Booval
North Station Road	North Booval
Oxford Street	North Booval
Roy Street	North Booval
Selwyn Street	North Booval
Tuggerah Street	North Booval
Vivian Hancock Drive	North Booval

Table 8 – Potential Isolation Areas

PART 4: PUBLIC INFORMATION AND WARNINGS

The Public Information and Warnings Sub Plan and Council's Public Information and Warnings Manual detail Council's overall communication and warning strategy. It is however recognised that this community has particular needs related to communications.

4.1 Lead Times

Flood modelling and predication is a highly complex and subjective art that relies on a range of variables and assumptions. Factors that can affect the occurrence of inundation include location, intensity and length of the rainfall; current soil and ground moisture levels; overland water flow conditions; overland flow rates; current riverine and creek levels. Council possess predictive software that its Engineers (Floodplain Management) use to provide educated predictions based on real time data and conditions. This in itself is not 100% accurate. **The information of flooding provided below is extremely generalised and does not supplement or replace the knowledge, and skill of trained personnel. It is provided as highly generalised, non-contextualised information and process tool.**

The **possible and highly indicative timeframes** for effect on the community are as follows:

- Overland flows and gullies – 0 to 1 hour
- Local Creeks – 2 to 4 hours
- Bremer River – 12 to 24 hours
- Brisbane River – 48 to 72 hours

4.2 General Communication Strategies

Council employs the following communication strategies generally:

- Emergency Alert
- Emergency Broadcast
- Social Media
- Media Release
- Media Broadcast
- Website Publication

4.3 Community Specific Communication Strategies

Creek systems present unique challenges in determining lead time. Predictive modelling is far less accurate than that of riverine flood modelling. Council still however invests heavily in flood studies to improve this based on current industry best practice.

4.3.1 Door-Knocking

Council works in partnership with the Ipswich City SES Unit to undertake door knocking in areas during events, where it is anticipated they will be directly affected by inundation. The aim is to



encourage residents to remain aware of their situation. At this time contact details of residents are obtained.

4.3.2 My Ipswich Alerts (Early Warning Network)

Council has engaged the Early Warning Network to provide opt-in severe and dangerous weather warnings to residents, community groups and businesses within the City.

As part of this arrangement Council is able to send custom notifications and warnings to residents that have opted in, based on their residential address or location of their mobile device. The mobile device located must have the smart phone app installed and location services switched on.

PART 5: EVACUATION

5.1 General Evacuation Information

The Evacuation Process Sub Plan and Evacuation Centre Sub Plan outline the detailed considerations and general strategies for evacuations. The below information is summarised to provide context to the more detailed information provided.

Evacuation is a risk management strategy used to mitigate the effects of an emergency on the community. It involves the movement of people to a safer location and their return. Evacuations, if unplanned, may cause greater adverse impacts than the disaster itself, including the potential to overwhelm agencies undertaking response and recovery actions. Shelter in place should be considered as an alternative where possible.



Figure 3 – Types of Evacuation

Mandatory evacuations may be ordered under the following acts:

- Disaster Management Act 2003
- Fire and Emergency Services Act 1990
- Public Safety Preservation Act 1986

It is the responsibility of the primary agency to order and control the evacuation process and overview the associated planning.

5.2 Evacuation Process

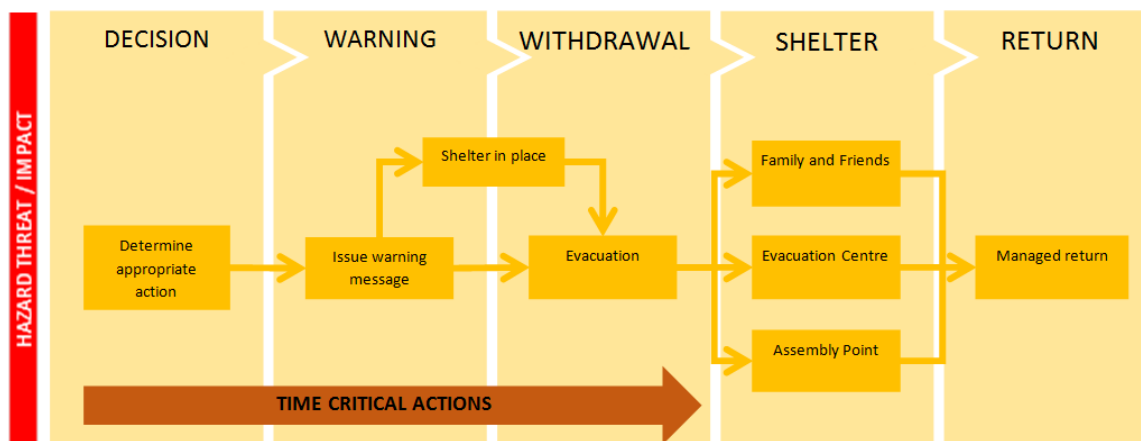


Figure 4 – Evacuation Process

5.3 Specific Evacuation and Isolation Information

The below table provides specific information related to the community.

Evacuation Coordinator	Officer in Charge Booval Police Station 2 Cothill Rd, Booval, Qld 4304 Lat/Long: -27.614047, 152.793799
Assembly Area <i>within the Isolated Community</i>	<u>OPTION 1</u> South West TAFE, Bundamba Campus Assemble at: Car Park Cnr Mary St & Byrne St, Bundamba QLD 4304 Lat/Long: -27.604947, 152.809852
<i>Meeting point for movement to other locations.</i>	<u>OPTION 2</u> Silkstone State School Assemble at: Oval Blackstone Rd, Silkstone QLD 4304 Lat/Long: -27.620389, 152.783903
	<u>OPTION 3</u> CitiSwich Business Park, Assemble at: Car Park 100 Hoepner Rd, Bundamba QLD 4304 Lat/Long: -27.599298, 152.825720
Emergency Shelter <i>within the Isolated Community</i>	<u>OPTION 1</u> South West TAFE, Bundamba Campus Cnr Mary St & Byrne St, Bundamba QLD 4304 Lat/Long: -27.604512, 152.810830
<i>Meeting point for movement to other locations.</i>	<u>OPTION 2</u> Silkstone State School Blackstone Rd, Silkstone QLD 4304 Lat/Long: -27.618989, 152.784343
Neighbourhood Safer Places (NSP)	Queensland Fire and Emergency Services have not identified a need and/or location for a neighbourhood safer place in this community.
Primary Evacuation Centre	Ipswich Showgrounds (Greyhound Track)



	<p>Salisbury Rd, Ipswich QLD 4305 Lat/Long: -27.628809, 152.758960</p> <p><i>This is the primary evacuation centre, dependent on the hazard and impacts, other evacuation centres may be established.</i></p>
Helicopter Landing Zones within the Isolated Community	<p>Silkstone State School Oval Blackstone Rd, Silkstone QLD 4304 Lat/Long: -27.620389, 152.783903</p>
Major Roads or Routes for Access/Egress	<ul style="list-style-type: none"> • Brisbane Rd impacted around Ipswich Racecourse. • Blackstone Rd impacted at Creek Street. • Gledson St heavily impacted. • South Station Rd impacted at North Booval.
Potential Transport (persons) Providers located within the Isolated Community	<p><u>Private Bus Provider</u> Sunshine Buses 16 Coal St, Bundamba QLD 4304 07 3282 5400 Lat/Long: -27.608184, 152.806646</p> <p><u>Courtesy Buses</u> CODI PO Box 654, Ipswich QLD 4305 07 3282 7877 CODI parks their buses at Lifeline on Jacaranda St. Lat/Long: -27.605398, 152.780970</p>
Potential Cold Storage Providers located within the Isolated Community	<p><u>ALDI</u> 22 South Station Rd, Booval QLD 4304 13 25 34 Lat/Long: -27.611269, 152.789820</p> <p><u>Woolworths Supermarket</u> Booval Fair Shopping Centre, Cnr Brisbane Rd & South Station Rd, Booval QLD 4304 07 3819 7111 Lat/Long: -27.616598, 152.790057</p> <p><u>South West TAFE Catering Block</u> Cnr Mary St & Byrne St, Bundamba QLD 4304 1300 914 754 Lat/Long: -27.604512, 152.810830</p> <p><u>Supa IGA</u> 76 Naomai St, Bundamba QLD 4304 07 3333 2424 Lat/Long: -27.621044, 152.812198</p>
Potential Supply Providers located within the Isolated Community	<p><u>ALDI</u> 22 South Station Rd, Booval QLD 4304 13 25 34 Lat/Long: -27.611269, 152.789820</p> <p><u>Woolworths Supermarket</u> Booval Fair Shopping Centre, Cnr Brisbane Rd & South Station Rd, Booval QLD 4304 07 3819 7111 Lat/Long: -27.616598, 152.790057</p>



	<u>Supa IGA</u> 76 Naomai St, Bundamba QLD 4304 07 3333 2424 Lat/Long: -27.621044, 152.812198
Potential Security Providers located within the Isolated Community	N/A

Table 9 – Specific Evacuation Information

5.4 Livestock & Race Horses

In the Bundamba community it has been identified that a number of the population have livestock. To complicate matters further, many do not have access to properties in close proximity or the ability to move the livestock long distances should an evacuation be required. Livestock has the potential to cause havoc if left to their own devices; deceased livestock poses a risk of disease to other livestock, and to neglect livestock unnecessarily is inhumane.

Council has entered into a Memorandum of Understanding (MoU) with Seqwater for short term secure holding for a limited number of livestock. More information on this MoU can be located in **Document ID: A3794632**. The MoU contains maps, contact procedures and relevant indemnity forms required to be completed by users.

Livestock and racehorse owners are responsible for all transport to and from the holding area, in the event that it is opened for use.



PART 6: ANNEXURES

6.1 Annexure 1 – Schedule of Tables and Figures

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6.2 Annexure 2 – Contacts

Organisation/Person	Contact Details
Ipswich City Council	07 3810 6666 council@ipswich.qld.gov.au
Ipswich City Council – Division 4 Councillor Kylie Stoneman	07 3816 2444 kylie.Stoneman@ipswich.qld.gov.au div4office@ipswich.qld.gov.au
Queensland Police Service – Public Contact	131 444 www.policelink.qld.gov.au
Queensland Police Service – Booval Police Station	Officer in Charge Booval Police Station 2 Cothill Rd, Booval QLD 4304
State Emergency Service	132 500 www.132500.qld.gov.au

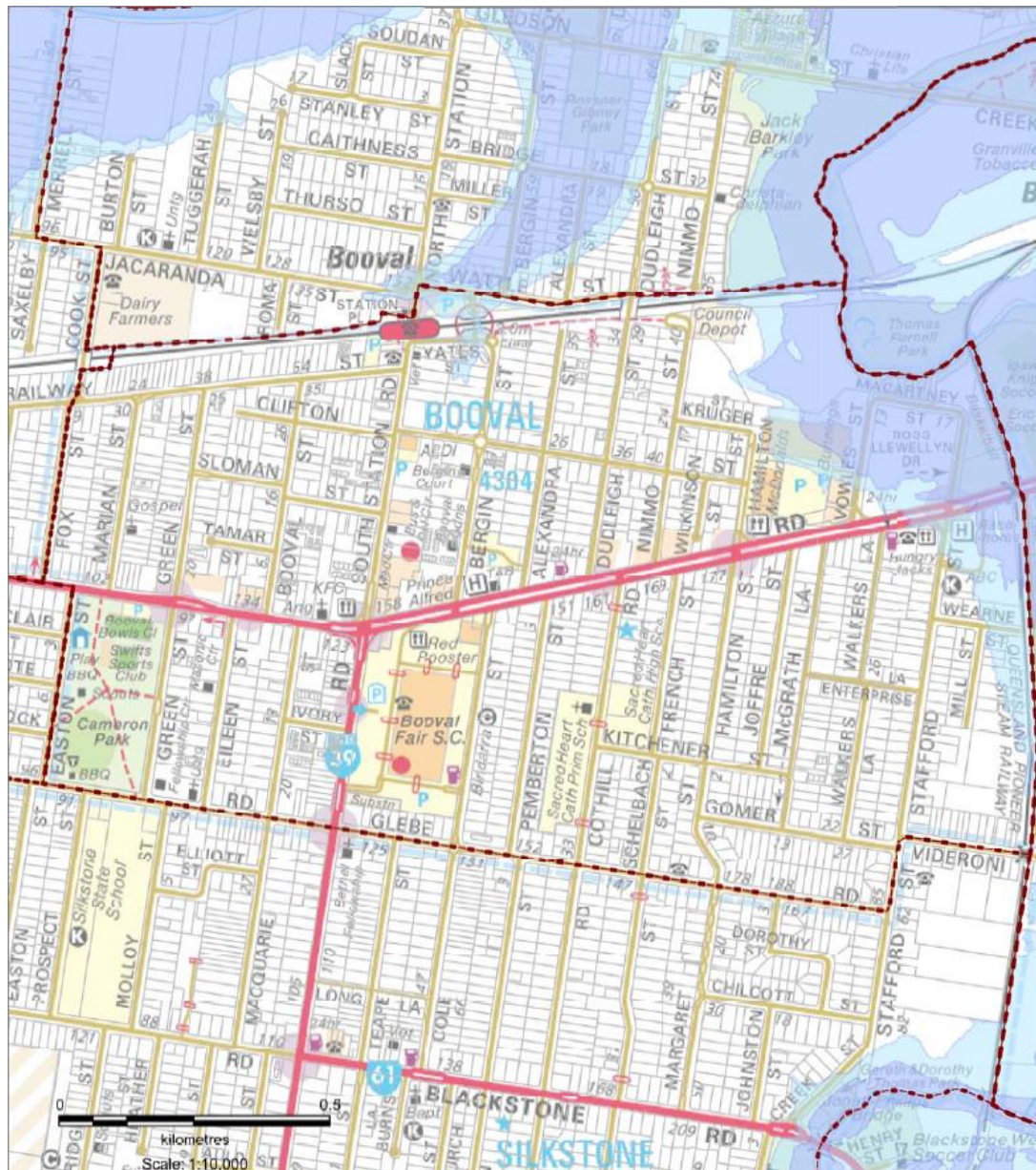
Other Public Emergency Contact Information is maintained in the front cover of the Local Disaster Management Plan which is located on Council's website www.ipswich.qld.gov.au/emergency.

Community Support Contact Information is maintained through Council's partnership with My Community Directory. Listings on the community directory are provided as a free service to the Ipswich public by service providers primarily located within the Ipswich region. Inclusion in these directories does not imply Ipswich City Council endorses, promotes or guarantees the products and, or services provided.

To view the directory visit: <https://www.mycommunitydirectory.com.au/Queensland/Ipswich>

Operational Contact Information, including Local Disaster Management Group data is maintained within Council's internal systems.

6.3 Annexure 3 – Booval (1974 and 2011 Flood Lines)



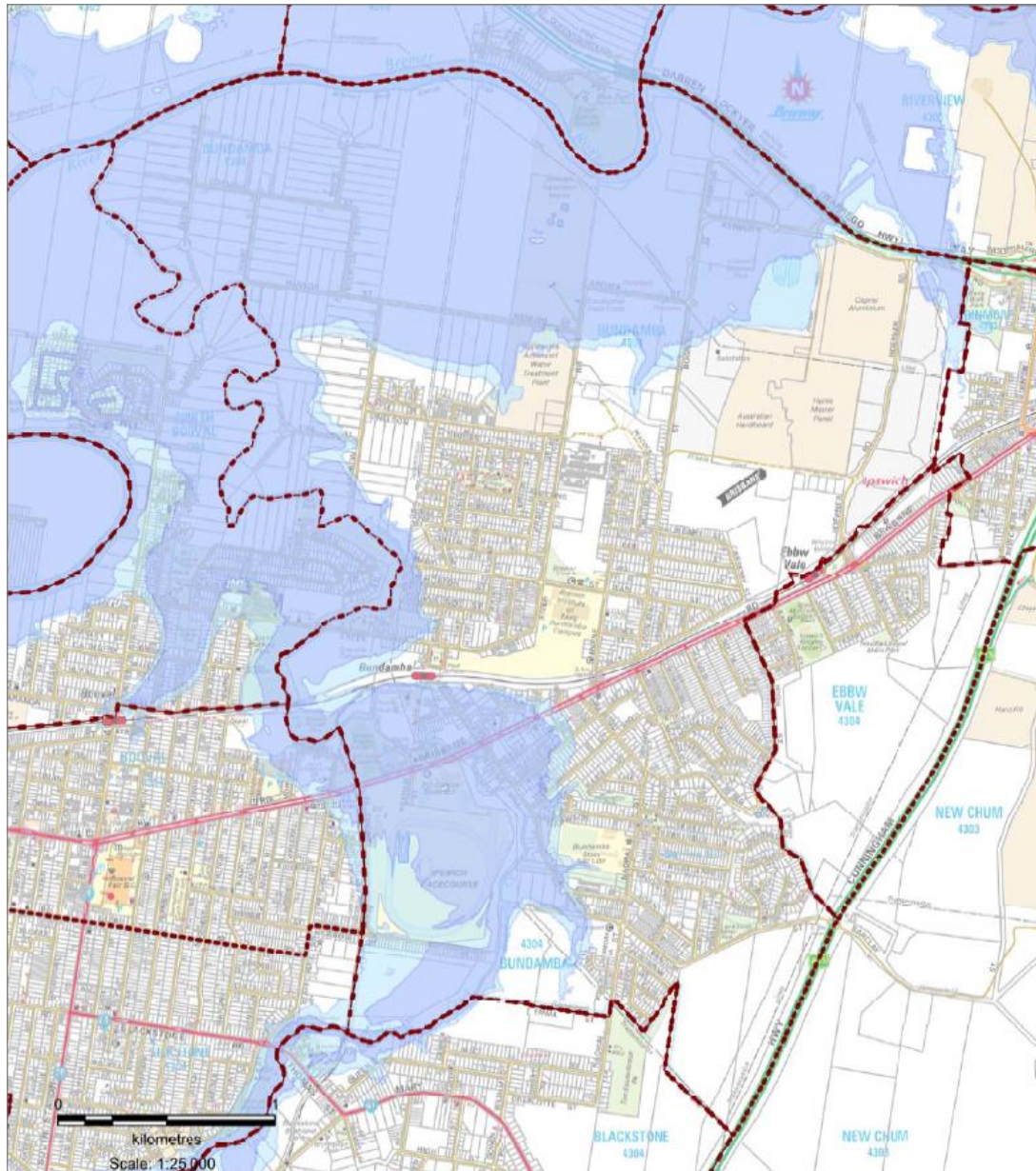
Legend:

Suburb Boundary

1974 Flood Boundary

2011 Flood Boundary

6.4 Annexure 4 – Bundamba (1974 and 2011 Flood Lines)



Legend:

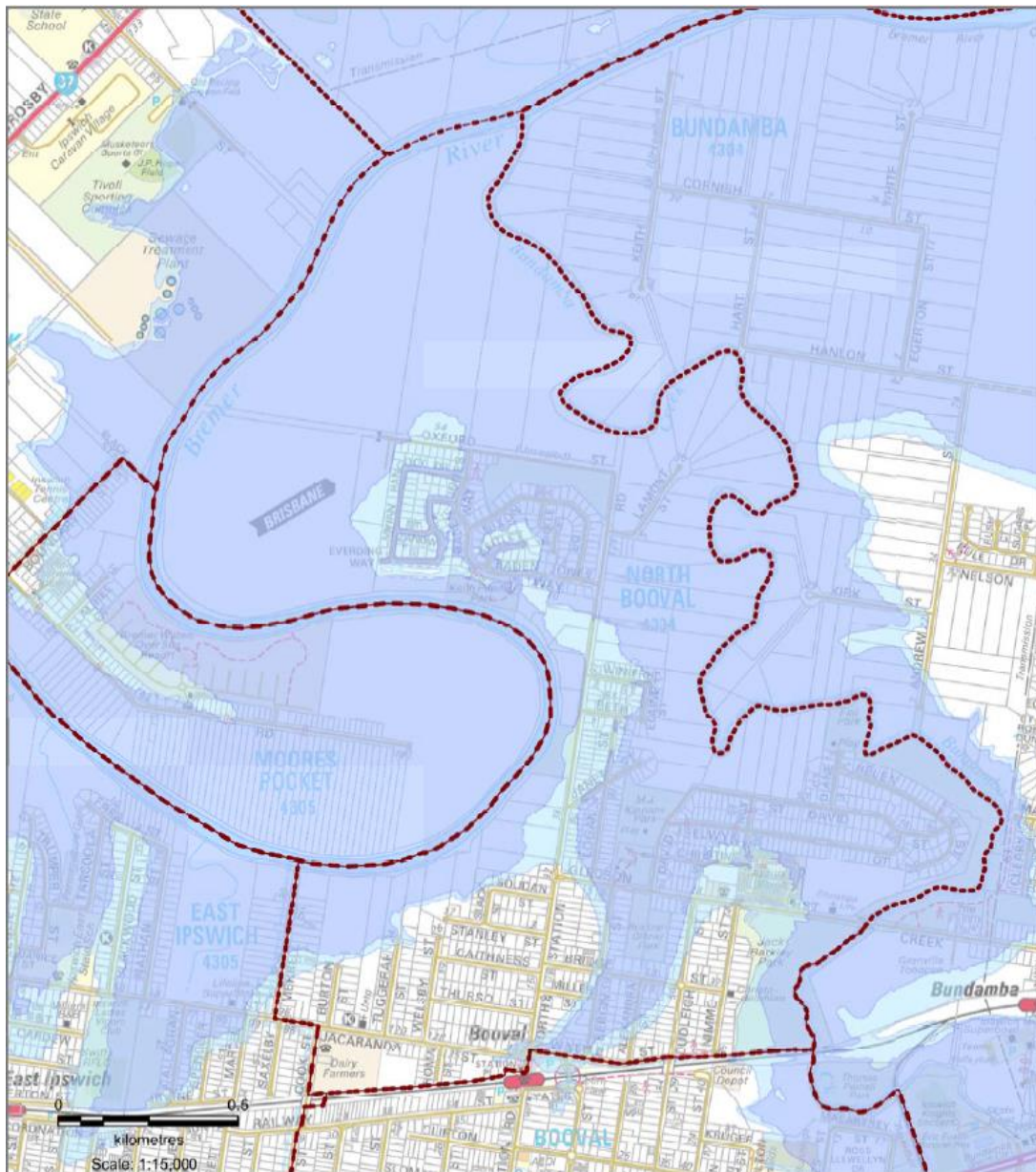
Suburb Boundary

1974 Flood Boundary

2011 Flood Boundary



6.5 Annexure 5 – North Booval (1974 and 2011 Flood Lines)

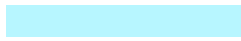


Legend:

Suburb Boundary



1974 Flood Boundary



2011 Flood Boundary



City of Ipswich

Local Disaster Management Sub Plan

Isolated Communities (Karalee)

A3980085: May 2018



Approval and Endorsement

Sub Plan approval and endorsement information – inserted post approval and endorsement.



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PART 1: ADMINISTRATION AND GOVERNANCE

1.1 Authority to Plan

This plan is prepared by Ipswich City Council under the auspices of the Local Disaster Management Plan (LDMP) for the City of Ipswich under the provisions of Section 57(1) of the Disaster Management Act 2003.

1.2 Sub Plan Principles

This sub plan has been prepared as subordinate to the LDMP. Accordingly this sub plan must be read in conjunction with the LDMP. With the exception of pertinent information, reference to existing statements, definitions and acronyms will be excluded from this document.

1.3 Planning and Review Cycle

This plan will be reviewed at least annually¹ with relevant amendments made and distributed as needed. The review process will be in accordance with the state guidelines. Minor amendments that do not materially affect the plan are able to be authorised by the Principal Officer (Emergency Management).

It is acknowledged that feedback from stakeholders is essential. Proposals for amendments or inclusions can be addressed in writing to:

Post Chief Executive Officer
 Attention: Emergency Management
 Ipswich City Council
 PO Box 191, Ipswich QLD 4305

Email council@ipswich.qld.gov.au

¹ Section 59, Disaster Management Act 2003, Reviewing and Renewing (the) Plan

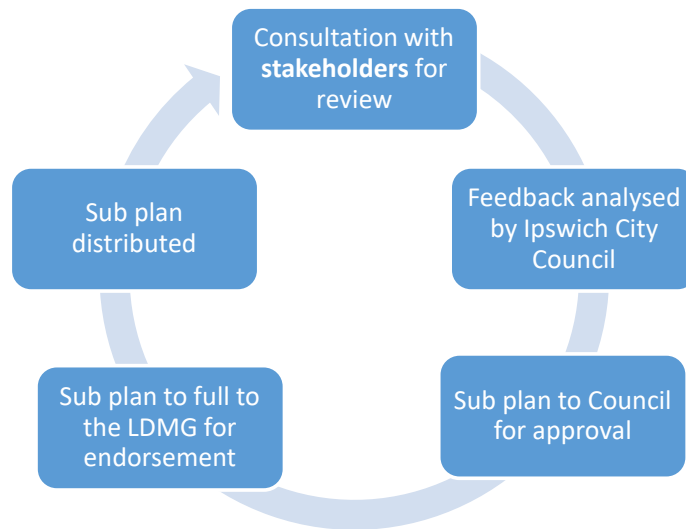


Figure 1 – Sub Plan Review Cycle

1.4 Amendment Register

Document version history is maintained through Council’s internal electronic document management system. The below table outlines amendments minor and inconsequential amendments.

Vers.	Date	Comment
3.00	May 2018	Approved and endorsed version

Table 1 – Amendment Register

1.5 Purpose of the Sub Plan

The purpose of this sub plan is to provide a pro-active approach to enhancing community resilience within the potentially isolated community of Karalee and its surrounding areas.

1.6 Key objectives

- Identification of preparatory initiatives for the physical isolation of the community.
- Enhance response for the physical isolation of the community.

1.7 Context

The risk of physical isolation following a disaster event can occur throughout the City resulting in residents being affected. The arrangements to support these residents is generally dealt with through the Local Disaster Management Plan itself. However in the instance where a whole community has a history of physical isolation and the risk of that isolation still exists (for example there has been so significant change in infrastructure for access/egress) isolated community sub plans are prepared and maintained. It is important to note these plans are supplementary documents to local disaster management plan and the functional sub plans. Accordingly they are



not intended to be the sole source of information for disaster operations and disaster recovery activities.

The emergency risk assessment for the City of Ipswich identifies that Karalee and surrounding communities are at risk of isolation from flood. Whilst this plan has been prepared on that basis, an all-hazards approach has been applied wherever possible.

PART 2: COMMUNITY PROFILE

2.1 Locality

For planning purposes the Karalee isolated community clusters the suburbs of **Karalee & Barellan Point** which have the potential to be impacted by the Bremer and Brisbane River.

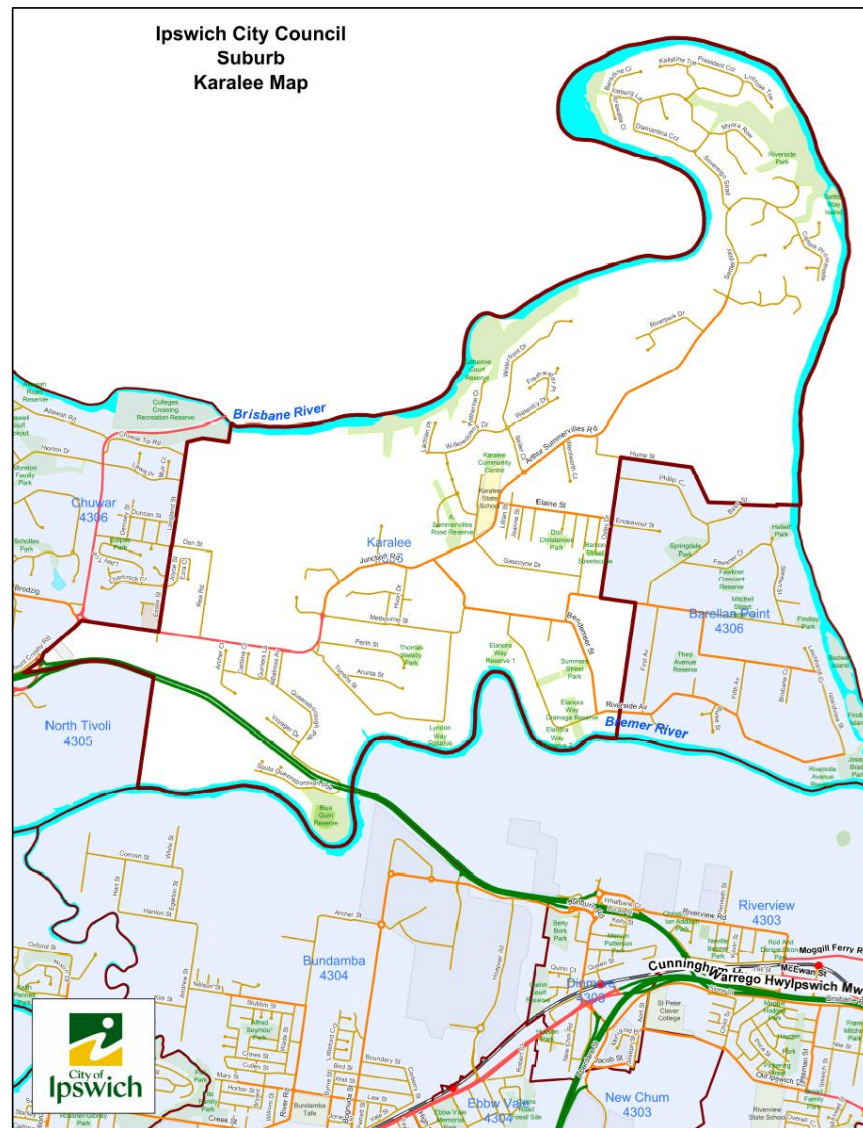


Figure 2 – Karalee Community Boundary

2.2 Population

The Karalee community has an approximate population of 5,504.²

	0-19 years	20-49 years	50 and over
Male	853	1034	889
Female	815	1079	831
Total	1668	2113	1720

Table 2 – Population Data

2.3 Educational Institutions

Located within the Karalee community are the following educational institutions:

Institution	Contact Number	Address	Lat/Long
Karalee Kindergarten and Early Years Learning	07 3294 7200	32-36 Arthur Summervilles Rd, Karalee QLD 4306	-27.565027, 152.825408
Karalee Community Kindergarten	07 3294 6699	56 Harold Summervilles Rd, Karalee QLD 4306	-27.560108, 152.825258
Karalee State School	07 3294 5333	77 Arthur Summervilles Rd, Karalee QLD 4306	-27.562178, 152.825132
123 4Kids	07 3294 7455	229-231 Junction Rd, Karalee QLD 4306	-27.570744, 152.811438

Table 3 – Educational Institutions

2.4 Aged and Vulnerable Persons Facilities

There are no aged or vulnerable persons facilities located within the Karalee community.

2.5 Vet Surgeries

Located within the Karalee community are the following vet surgeries:

Facility	Contact Number	Address	Lat/Long
Karalee Karana Veterinary Surgery	07 3282 7888	304 Mt Crosby Rd, Karalee QLD 4306	-27.569696, 152.793019
Karalee Village Vet Clinic	07 3282 9009	Karalee Shopping Village, 17/39-51 Junction Rd, Karalee QLD 4306	-27.570640, 152.798315

Table 4 – Vet Surgeries

² Profile ID – Community Profile (2011) <http://profile.id.com.au/ipswich/five-year-age-groups>

2.6 Public Transport

The Karalee community is serviced by the following public transport arrangements:

- Bus Services
- Taxi Services

2.7 Emergency Services

The following table details the emergency services that are located within the Karalee community. However, due to the probable impact to Junction Road during a flooding event these services will be unable to reach the Karalee community. Services may be provided from other locations to the Karalee community and these are not listed in the below table.

Facility	Contact Number	Address	Lat/Long
Karana Downs Fire Station	000	2 College Rd, Karana Downs QLD 4306	-27.552411, 152.806920
Karana Downs Police Station	000	6 College Rd, Karana Downs QLD 4306	-27.552331, 152.807341

Table 5 – Emergency Service Facilities

2.8 Medical Facilities

The following table details the medical service providers that are located within the Karalee community. However, due to the probable impact to Junction Road during a flooding event these services will be unable to reach the Karalee community. Services may be provided from other locations to the Karalee community and these are not listed in the below table.

Facility	Contact Number	Address	Lat/Long
Health Matters Karalee	07 3812 3133	Karalee Shopping Village, 17/39-51 Junction Rd, Karalee QLD 4306	-27.571185, 152.797976

Table 6 – Medical Facilities

PART 3: RISK PROFILE

3.1 Risk Assessment

Risk management forms the foundations of disaster and emergency plans for the City of Ipswich. Council adopts the Queensland Emergency Risk Management Framework. For more information regarding risk assessment refer to the Local Disaster Management Plan.

3.2 Potential Isolation Areas

Within the Karalee community the following areas are particularly vulnerable to flood. The 'at risk' areas are based off historical flood lines of 1974 and 2011 events.

Road	Suburb
Brisbane Crescent	Barellan Point
Burke Street	Barellan Point
Cook Street	Barellan Point
Endeavour Street	Barellan Point
Fawcner Crescent	Barellan Point
Fifth Avenue	Barellan Point
Findlay Drive	Barellan Point
First Avenue	Barellan Point
Fourth Avenue	Barellan Point
Hartog Street	Barellan Point
Islandview Street	Barellan Point
Junction Road	Barellan Point
Logan Crescent	Barellan Point
Northy Street	Barellan Point
Phillip Crescent	Barellan Point
Riverside Avenue	Barellan Point
Riverside Court	Barellan Point
Stuart Street	Barellan Point
Tasman Court	Barellan Point
Third Avenue	Barellan Point
Albatross Avenue	Karalee
Arthur Summervilles Road	Karalee
Barcoo Street	Karalee
Bendemeer Street	Karalee
Carlock Promenade	Karalee
Diamantina Circle	Karalee
Dock Street	Karalee
Elaine Street	Karalee
Elanora Way	Karalee
Fleet Street	Karalee



Road	Suburb
Freshwater Place	Karalee
Gascoyne Drive	Karalee
Gayundah Street	Karalee
Huon Drive	Karalee
Keimarie Street	Karalee
Krait Street	Karalee
Lyndon Way	Karalee
Marilyn Street	Karalee
Queensborough Parade	Karalee
Riverpark Drive	Karalee
Ronan Lane	Karalee
South Queensborough Parade	Karalee
Stuart Court	Karalee
Torrens Street	Karalee
Venus Court	Karalee
Voyager Drive	Karalee
Warrego Highway	Karalee
Yarra Court	Karalee
Riverside Drive	Muirlea

Table 7 – Potential Isolation Areas

PART 4: PUBLIC INFORMATION AND WARNINGS

The Public Information and Warnings Sub Plan and Council's Public Information and Warnings Manual detail Council's overall communication and warning strategy. It is however recognised that this community has particular needs related to communications.

4.1 Lead Times

Flood modelling and predication is a highly complex and subjective art that relies on a range of variables and assumptions. Factors that can affect the occurrence of inundation include location, intensity and length of the rainfall; current soil and ground moisture levels; overland water flow conditions; overland flow rates; current riverine and creek levels. Council possess predictive software that its Engineers (Floodplain Management) use to provide educated predictions based on real time data and conditions. This in itself is not 100% accurate. **The information of flooding provided below is extremely generalised and does not supplement or replace the knowledge, and skill of trained personnel. It is provided as highly generalised, non-contextualised information and process tool.**

The **possible and highly indicative timeframes** for effect on the community are as follows:

- Overland flows and gullies – 0 to 1 hour
- Local Creeks – 2 to 4 hours
- Bremer River – 12 to 24 hours
- Brisbane River – 48 to 72 hours

4.2 General Communication Strategies

Council employs the following communication strategies generally:

- Emergency Alert
- Emergency Broadcast
- Social Media
- Media Release
- Media Broadcast
- Website Publication

4.3 Community Specific Communication Strategies

Creek systems present unique challenges in determining lead time. Predictive modelling is far less accurate than that of riverine flood modelling. Council still however invests heavily in flood studies to improve this based on current industry best practice.

4.3.1 Door-Knocking

Council works in partnership with the Ipswich City SES Unit to undertake door knocking in areas during events, where it is anticipated they will be directly affected by inundation. The aim is to



encourage residents to remain aware of their situation. At this time contact details of residents are obtained.

4.3.2 My Ipswich Alerts (Early Warning Network)

Council has engaged the Early Warning Network to provide opt-in severe and dangerous weather warnings to residents, community groups and businesses within the City.

As part of this arrangement Council is able to send custom notifications and warnings to residents that have opted in, based on their residential address or location of their mobile device. The mobile device located must have the smart phone app installed and location services switched on.

PART 5: EVACUATION

5.1 General Evacuation Information

The Evacuation Process Sub Plan and Evacuation Centre Sub Plan outline the detailed considerations and general strategies for evacuations. The below information is summarised to provide context to the more detailed information provided.

Evacuation is a risk management strategy used to mitigate the effects of an emergency on the community. It involves the movement of people to a safer location and their return. Evacuations, if unplanned, may cause greater adverse impacts than the disaster itself, including the potential to overwhelm agencies undertaking response and recovery actions. Shelter in place should be considered as an alternative where possible.



Figure 3 – Types of Evacuation

Mandatory evacuations may be ordered under the following acts:

- Disaster Management Act 2003
- Fire and Emergency Services Act 1990
- Public Safety Preservation Act 1986

It is the responsibility of the primary agency to order and control the evacuation process and overview the associated planning.

5.2 Evacuation Process

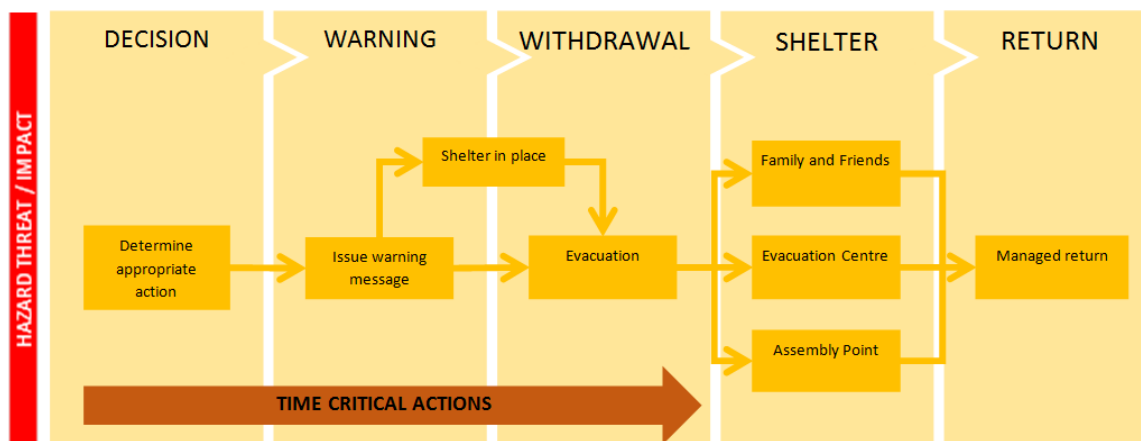


Figure 4 – Evacuation Process

5.3 Specific Evacuation and Isolation Information

The below table provides specific information related to the community.

Evacuation Coordinator	Officer in Charge Karana Downs Police Station 8 College Rd, Karana Downs QLD 4306 Lat/Long: -27.552537, 152.807436
Assembly Area <i>within the Isolated Community</i>	Karalee State School Assemble at: Oval 77 Arthur Summervilles Rd, Karalee QLD 4306 Lat/Long: -27.560949, 152.825183
<i>Meeting point for movement to other locations.</i>	
Emergency Shelter <i>within the Isolated Community</i>	Karalee State School 77 Arthur Summervilles Rd, Karalee QLD 4306 Lat/Long: -27.562178, 152.825132
<i>Meeting point for movement to other locations.</i>	
Neighbourhood Safer Places (NSP)	Queensland Fire and Emergency Services have not identified a need and/or location for a neighbourhood safer place in this community.
Primary Evacuation Centre	Ipswich Showgrounds (Greyhound Track) Salisbury Rd, Ipswich QLD 4305 Lat/Long: -27.628809, 152.758960 <i>This is the primary evacuation centre, dependent on the hazard and impacts, other evacuation centres may be established.</i>
Helicopter Landing Zones <i>within the Isolated Community</i>	Karalee State School Oval 77 Arthur Summervilles Rd, Karalee QLD 4306 Lat/Long: -27.560949, 152.825183



Major Roads or Routes for Access/Egress

- Junction Rd *heavily impacted*.

Potential Transport (persons) Providers located within the Isolated Community

Private Bus Provider
Southern Cross Transit
251 Mount Crosby Rd, Karalee QLD 4306
07 3812 2520
Lat/Long: -27.573225, 152.791515

NOTE: During a flooding event these services will be unable to reach the Karalee community, due to the probable impact to Junction Road.

Potential Cold Storage Providers located within the Isolated Community

Woolworths Karalee
Karalee Shopping Village,
39-51 Junction Road, Karalee QLD 4306
07 3819 7123
Lat/Long: -27.570521, 152.798577

NOTE: During a flooding event these services will be unable to reach the Karalee community, due to the probable impact to Junction Road.

Potential Supply Providers located within the Isolated Community

Woolworths Karalee
Karalee Shopping Village,
39-51 Junction Road, Karalee QLD 4306
07 3819 7123
Lat/Long: -27.570521, 152.798577

NOTE: During a flooding event these services will be unable to reach the Karalee community, due to the probable impact to Junction Road.

Potential Security Providers located within the Isolated Community

N/A

Table 8 – Specific Evacuation Information



PART 6: ANNEXURES

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6.2 Annexure 2 – Contacts

Organisation/Person	Contact Details
Ipswich City Council	07 3810 6666 council@ipswich.qld.gov.au
Ipswich City Council – Division 5 Councillor Wayne Wendt	07 3281 8700 wayne.wendt@ipswich.qld.gov.au div5office@ipswich.qld.gov.au
Queensland Police Service – Public Contact	131 444 www.policelink.qld.gov.au
Queensland Police Service – Karana Downs Police Station	Officer in Charge Karana Downs Police Station 8 College Road, Karana Downs QLD 4306
State Emergency Service	132 500 www.132500.qld.gov.au

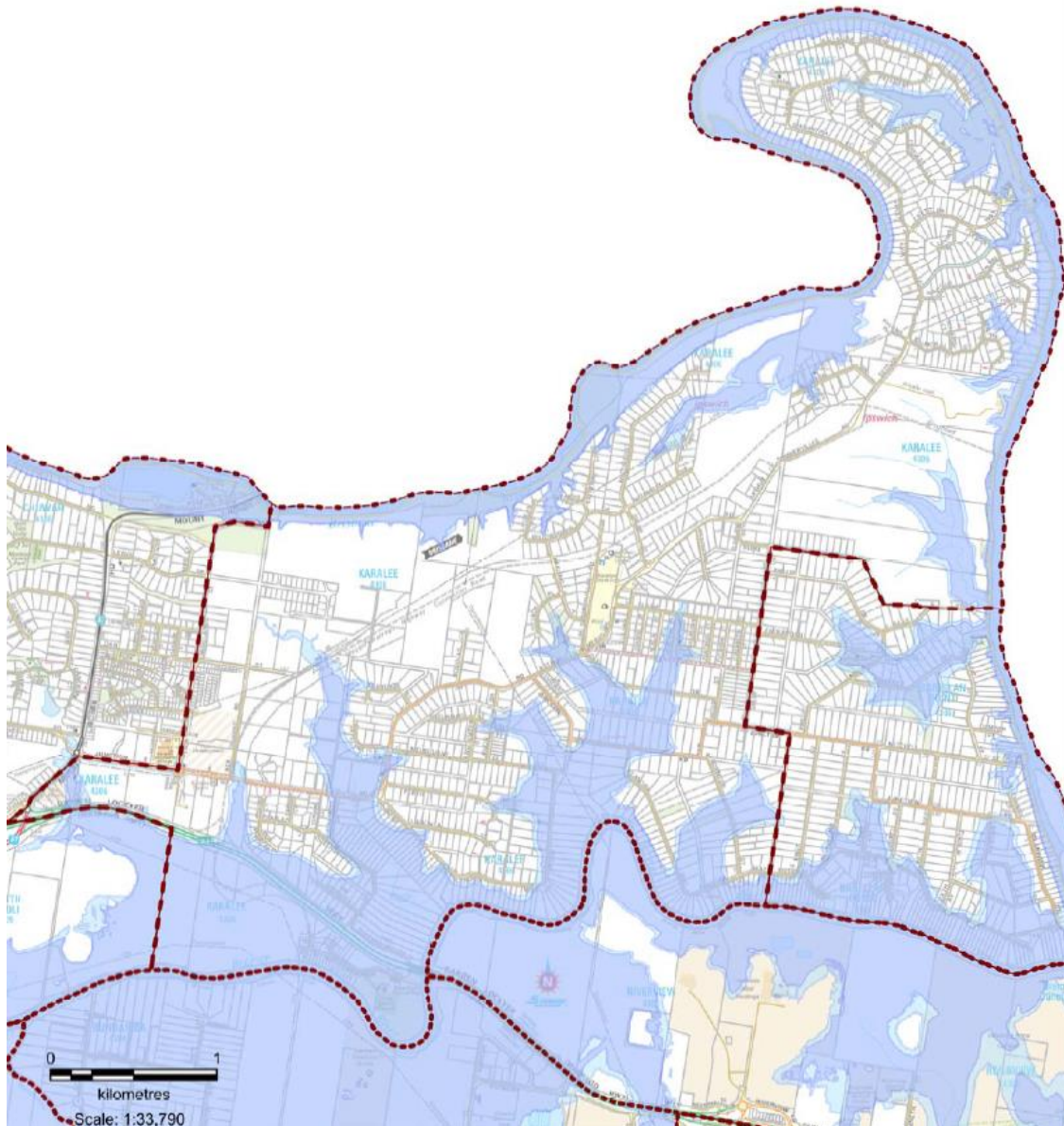
Other Public Emergency Contact Information is maintained in the front cover of the Local Disaster Management Plan which is located on Council's website www.ipswich.qld.gov.au/emergency.

Community Support Contact Information is maintained through Council's partnership with My Community Directory. Listings on the community directory are provided as a free service to the Ipswich public by service providers primarily located within the Ipswich region. Inclusion in these directories does not imply Ipswich City Council endorses, promotes or guarantees the products and, or services provided.

To view the directory visit: <https://www.mycommunitydirectory.com.au/Queensland/Ipswich>

Operational Contact Information, including Local Disaster Management Group data is maintained within Council's internal systems.

6.3 Annexure 3 – Karalee (1974 and 2011 Flood Lines)



Legend:

Suburb Boundary



1974 Flood Boundary



2011 Flood Boundary



6.4 Annexure 4 – Barellan Point (1974 and 2011 Flood Lines)



Legend:

Suburb Boundary



1974 Flood Boundary



2011 Flood Boundary

