



EMERGENCY ACTION PLAN

ROSEWOOD DETENTION BASIN

at

BLAKES ROAD, ROSEWOOD

September 2023

Approved by the delegate of the Chief Executive,
Department of Regional Development, Manufacturing
and Water until 2 June 2025.

Emergency Activation Quick Reference

The Emergency Action Plan (EAP) for Rosewood Detention Basin covers four emergency conditions evaluated within this document. Use the following table to select the relevant section of the EAP that deals with the emergency condition. Note that the Dam Operator is responsible for the decision to activate the EAP.

Activation Level	Alert	Lean Forward	Stand Up	Stand-Down
Decision Authority	Dam Operator	Dam Operator	Dam Operator & Local Disaster Co-Coordinator	Dam Operator
Activation trigger for emergency conditions relating to dam hazards				
Flood Event with No Structural Issues (Flow Chart A)	Water level = 77.58 mAHD (Automatic Flood Gauge Level = 2.98 m) and rising	EAP activated at water level = 78.50 mAHD (Automatic Flood Gauge Level = 3.9 m)	Water level = 79.90 mAHD (Automatic Flood Gauge Level = 5.3 m)	Water level = 77.50 mAHD (Automatic Flood Gauge Level = 2.9 m) and falling with no more rain
Flood Event with Structural Issues (Flow Chart B)	Water level = 77.58 mAHD (Automatic Flood Gauge Level = 2.98 m) and rising	EAP activated at water level = 78.50 mAHD (Automatic Flood Gauge Level = 3.9 m)	Water level = 79.90 mAHD (Automatic Flood Gauge Level = 5.3 m)	Water level = 77.50 mAHD (Automatic Flood Gauge Level = 2.9 m) and falling with no more rain
Earthquake Event (Flow Chart C)	Earthquake occurs of magnitude 4 or greater	Rainfall Event Imminent	-	No safety issue identified/remaining
Terror Event (Flow Chart D)	Terror event occurs	Rainfall Event Imminent	-	No safety issue identified/remaining

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Controlled Copy: Rosewood Detention Basin - EAP - 2023 - Copy#
(Refer Note below)

Authorisation: Signature : 
Date: 29/09/2023

Approved by: 
General Manager, Asset and Infrastructure Services

Copy#	Position*	Location
1	Dam Operator	Ipswich City Council
2	Council Officers	Ipswich City Council
3	Local Disaster Coordinator/Local Disaster Management Group	Emergency Management Unit, Ipswich City Council, TacZ Ipswich
4	Chief Executive/Director Dam Safety	Department of Regional Development, Mining and Water (DRDMW), Brisbane
5	SES Local Controller	Ipswich City SES unit
6	Ipswich District Disaster Management Group	Springfield Police Complex, Disaster Management Support Officer, Springfield

Revisions:

Rev.#	Description	Revision	Revised By
1	Update of 2014 EAP following Basin Upgrade works	25/07/2016	Engeny /ICC
2	Updated with LDMG feedback and DNRME comments	28/9/2016	Engeny /ICC
3	Updated with DEWS comments	25/01/2017	ICC
4	Updated with comments from stakeholders	February 2018	
5	Annual Review	September 2018	ICC
6	Annual Review	September 2019	ICC
7	Annual Review	October 2020	ICC
8	Annual Review	September 2021	ICC
9	New EAP for regulator's approval	February 2022	ICC
10	Annual Review	August 2022	ICC
11	Annual Review	September 2023	ICC

Note: A complete set of documents in hard copy form shall be held in Infrastructure and Environment Department, AssetManagement Section at 1 Nicholas Street Level 7. The electronic copies are held in Council directories and on the USB Drive attached to Controlled Copy No.1 hard copy of Limestone Park Detention Basin EAP.

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1 Introduction

This Emergency Action Plan (EAP) is part of a suite of dam safety and management documents prepared by Ipswich City Council (ICC). When using this plan, reference is also to be made to the current version of *Ipswich City Council Local Disaster Management Plan (LDMP)*. ICC is the owner of Rosewood Flood Detention Basin and any emergency response in relation to the basin is to be managed and directed as per this EAP.

The Rosewood Detention Basin is a flood detention structure located on 2 watercourses immediately upstream of the township of Rosewood. The embankment of the detention basin is accessed via parkland off Roslyn and Matthew Streets, Rosewood. The detention basin was constructed to reduce the impact of flooding on the township of Rosewood and downstream areas, by storing runoff from two tributaries upstream of Rosewood and releasing them at a reduced rate, lowering the probability of inundation of downstream properties and infrastructure.

In the case where there is no storm event occurring within the catchment the basin is effectively dry and as such Sunny Day Failure is not considered within this document. The Rosewood Detention Basin was constructed as an earth embankment over 2001 and 2002, with a height of approximately 9.7 meters and a total length in the order of 420 meters. A spillway located in the embankment towards the left abutment provides the ability to discharge safely when the water level in the basin exceeds capacity.

Two concrete pipes beneath the basin embankment, discharge water from the detention basin. The outlets are located near the centre of the embankment and near the left (eastern) abutment. The outlets consist of:

- Upstream screens which includes a concrete roof slab
- 900 mm diameter concrete pipe with downstream penstock set at 70% closed
- 1050 mm diameter concrete pipe with downstream penstock (completely closed). The closure of this outlet is in accordance with the OMM 2021 of Rosewood Detention Basin.
- Downstream impact type stilling basins.

In 2016 the basin embankment was raised by 0.60 m to provide for additional wave freeboard to meet dam safety requirements. Flow restricting penstocks were placed on the downstream ends of the outlet pipes to restrict outflows and improve the flood mitigation performance of the basin. The outlets now adopted for basin operation are a complete closure of a previously installed 1050 mm diameter pipe, and a 70% closure of the 900mm diameter pipe. The outlet conditions are fixed and not intended to be adjusted at any time, except for maintenance and routine operational testing of the penstocks.

The water level in the detention basin rises to a level that is dependent on the intensity and duration of the rainfall event that has occurred over the upstream catchment area. The detention basin overflow spillway will be engaged for rainfall events greater than the 1% Annual Exceedance Probability (AEP) flood. The basin is designed to pass the PMP Design Flood safely with adequate freeboard to the embankment crest.

Storm water discharges from the basin and downstream catchment inflows are conveyed through the township of Rosewood along a vegetated channel. The channel discharges to Western Creek, a tributary of the Bremer River on the southern side of Rosewood.

Rosewood Detention Basin has been assessed to be a referable dam, Category 2 (population at risk exceeding 100) due to the proximity of the township of Rosewood and the population at risk.

As the detention basin is located a short distance upstream of the township, there will be minimal time to react and implement actions to safeguard the Rosewood community should a dam failure or overtopping event occur. It is estimated that the nearest residences will be impacted within minutes of a dam failure or overtopping event occurring.

Increased levels of inflow to the detention basin during high intensity storm events, will result in the water level in the basin rising and an increase in the downstream water levels. These water levels are within design expectations as noted in Table 1-1.

Table 1.1 - Storm Event Probability versus Storage Level

AEP (%)	ARI (Years)	Storage Level (m AHD)
63%	1	77.04
39%	2	77.58
20%	5	77.80
10%	10	78.50
5%	20	78.92
2%	50	79.46
1%	100	79.89
SPILLWAY LEVEL		79.90
0.1%	1,000	80.23
0.01%	10,000	80.61
0.001%	100,000	80.94
-	PMP-Design Flood	81.73
CREST LEVEL		82.30

To assist with monitoring the rainfall conditions and water level at the Rosewood Detention Basin an automated BOM Enviromon monitoring system have been installed. Manual read gauge boards are also installed on the upstream embankment slopes for onsite monitoring during an event.

Under normal operating conditions expected for the majority of time and inflow conditions, the rate of flow entering the detention basin will pass directly through the detention basin's outlet pipe and will not cause significant rise in water levels in the detention basin. Increased flows and a rise in water level in the downstream flow path can be expected, but will be contained within the downstream banks.

Increased levels of inflow to the detention will result in the water level rising and an increase in the downstream water levels. These water levels are within design expectations and the detention basin is operating as intended.

Once water levels in the detention basin reach or exceed the basin's spillway level, increased discharges to the downstream area will occur and an increased level of flood threat to downstream property and infrastructure will develop. Depending on the severity of the flood inflow, it may be necessary to activate this EAP.

If, during the period when water is impounded in the detention basin a dam safety issue is identified, such as the development of an issue that could lead to failure of the detention basin embankment, then a dam safety situation exists and immediate activation of this EAP will be required.

1.1 Risks and Issues

The following risks and issues may need to be considered with respect to the operation, use and activation of this EAP:

- Storm events leading to water being impounded in the detention basin will be local and the time between the rainfall event and the water entering the detention basin will be less than 1 hour;
- Water levels in the detention basin are likely to rise quickly;
- Both of the outlet pipes are provided with screens on the upstream end. The screens will be prone to blocking with debris. If the water level in the basin rises above the top of the concrete slab over the outlets, it will not be possible to determine if the outlet screens are blocked other than by observing the downstream discharge rate;
- Where possible, Council Officers should be mobilised early to view the developing situation at Rosewood Detention Basin. This action may need to be based on predictions of an event developing;
- Council Officers attending site are to be aware that due to flooding and inundation of local roads they may be isolated at the site until such time as the flood levels recede;
- Access to the detention basin crest area on the left side of the spillway (as viewed looking downstream) is limited and in the event of a flood and discharge through the spillway this area of the embankment is not likely to be accessible. Monitoring of this area of the embankment will have to be from the right side of the spillway;
- Dam failure mechanisms may develop quickly with a high likelihood of Council being unable to undertake any actions to mitigate or reduce the development of the failure in a timely manner;
- In the event that Council Officers identify an issue that is developing into a breach of the embankment, there are minimal actions that they can take to stop or reduce the failure. The main action of the Council Officers under these circumstances will be to observe the situation at the detention basin and provide warning to the Emergency Services and the Coordinator of the event such that downstream evacuations can be undertaken in a timely manner;
- The detention basin embankment has the potential of developing a failure under flood conditions due to:
 - The embankment only experiencing water levels on the upstream side and testing of the embankment structural integrity infrequently;
 - Seepage through the embankment will only be evident when there is water stored in the basin. If seepage is identified then it is likely that an open passage exists through the embankment (highly porous area or a piping mechanism is developing);
 - The embankment fill material will be slowly drying and potentially developing cracks; and
 - The embankment is homogenous clay fill with no filters. Seepage through the embankment or cracks will be uncontrolled and could therefore develop relatively quickly into a dam failure mechanism.

1.2 Technical Data

Table 1.2 - Rosewood Detention Basin Technical Data

Rosewood Detention Basin		
POPULATION AT RISK	<ul style="list-style-type: none"> Sunny Day Failure Flood failure (PMP-DF) Flood failure (AEP 1 in 100,000) 	<p>Not Applicable</p> <p>Total PAR = 399</p> <p>PAR = 151</p>
Type of dam	Earth fill Embankment – Homogenous Fill	
Dam Owner	Ipswich City Council (ICC)	
Construction Completed	Initial 2001/2002, Upgraded 2016	
Watercourse	Masons Gully	
Catchment Area	1.19 km ²	
Length of Dam Wall	420 m	
Maximum Height Dam Wall	10.3 m	
Spillway Type	Broad Crested Weir	
Full Supply Level (Spillway Level)	AHD 79.90 m	
Dam Crest Level	AHD 82.30 m	
Storage Capacity at F.S.L.	128 ML	
Annual Exceedance Probability of Discharge through Spillway	1% AEP	
Peak flow from pipe outlet (900mm diameter 70% closed)	1.7 m ³ /s	

1.3 Monitoring Systems

The monitoring systems provided at the Rosewood Detention Basin are flood markers on the upstream slopes and an automated rainfall and flood gauge.

This automated gauge provides constant monitoring of storage level and rainfall with the data being relayed to the Enviromon monitoring system. Enviromon is an Australian Government, Bureau of Meteorology product with a capacity to collect and monitor rainfall and river level data in real time. Contact Enviromon for current updates at the Bureau of Meteorology, [REDACTED]

Trigger water surface levels given within this document are in both m AHD and the level applicable to the reading on the Enviromon automated instrumentation system. The BOM Enviromon flood gauge zero level (0m) is 74.6 m AHD.

1.4 Maintenance and Inspections

To reduce the likelihood of the Rosewood Detention Basin failing under normal operating conditions a program of regular inspection and maintenance needs to be undertaken. This includes the activities listed in Table 1-3:

Table 1.3 - Rosewood Detention Basin Maintenance & Inspection Schedule

Activity	Description / Details	Timing / Frequency
Dam Safety Inspections	Routine inspections throughout the year.	Every 2 months
	Annual Inspection	yearly
	Special Inspection	After a major flood event
	Comprehensive Inspection	5 yearly
Grass Cutting	Cutting the grass on the embankment crest and embankment slopes	<ul style="list-style-type: none"> ▪ prior to annual inspection ▪ prior to comprehensive inspection ▪ as recommended during routine inspection.
Outlet Pipes	<ul style="list-style-type: none"> • Drain the outlet pipes. Inspection of the upstream screens and clearing of debris and silt from around the screen. • Drainage of the downstream impact type dissipater structures, inspection of the structures and removal of any silt or debris. • Operation (opening and closing) of penstock gates and lubricating as recommended by manufacturer (Hambaker AWE). • Inspection for evidence of erosion or downstream scouring. 	Annually (prior to wet season)
	<ul style="list-style-type: none"> • Isolate and drain the outlet pipes, undertake an inspection of the outlet pipes (inside the pipes). 	During comprehensive inspection
Spillway and Stilling Basin	<ul style="list-style-type: none"> • Inspect shotcrete for signs of loss of coverage and cracking /movement. • Inspect rock gabions and mattresses for signs of deformation, movement of rock or damage to the wire baskets • Inspect stilling basin for erosion and loss of riprap 	During annual inspection

1.5 Glossary

Table 1.4 - Glossary

Term	Acronym	Description
Annual Exceedance Probability	AEP	The probability that a given rainfall total accumulated over a given duration will be exceeded in any one year.
Australian Height Datum	AHD	National datum to which levels referred
Average Recurrence Interval	ARI	The average, or expected, value of the periods between exceedances of a given rainfall total accumulated over a given duration.
Department of Regional Development, Manufacturing and Water	DRDMW	Department responsible for management of dams in Queensland including dam emergencies
Department of Transport and Main Roads	DTMR	Department responsible for management of mainroads including the Warrego Highway
Emergency Action Plan	EAP	Disaster Management Plan providing guidance on the actions required to manage an event associated with Rosewood Detention Basin (this plan)
Ipswich City Council	ICC	Owner of the referable dam and responsible for the operation and management of Rosewood Detention Basin
Local Disaster Coordinator	LDC	Refer to definition in Disaster Management Act
Local Disaster Coordination Centre	LDCC	Location from which the event or disaster is managed
Local Disaster Management Group	LDMG	Refer to definition in Disaster Management Act
Probable Maximum Flood	PMF	The flood that may be expected from the most severe combination of critical meteorological and hydrologic conditions that are reasonably possible in a particular drainage area
Probable Maximum Precipitation	PMP	The maximum depth of precipitation at a location for a given duration that is meteorologically possible
Queensland Fire and Emergency Services	QFES	Primary provider of fire, search and rescue services to the State of Queensland.

2 Roles and Responsibilities

According to Water Supply (Safety and Reliability) Act 2008 (the Act) “An owner of a dam is the owner of land on which the dam is constructed or is to be constructed”.

The Rosewood Detention Basin is built on Lot 2 / SP165090 which is owned by Ipswich City Council. Accordingly, the owner of Rosewood Detention Basin is Ipswich City Council. According to the Act, the owner of a referable dam must have an approved emergency action plan for the dam.

The General Manager, Infrastructure and Environment Department, Ipswich City Council is responsible for the overall management of the referable dams owned by ICC including all other ICC assets. Accordingly, the General Manager, Infrastructure and Environment Department, Ipswich City Council is the **Dam Operator (DOP)** of Rosewood Detention Basin.

The Dam Operator delegates / assigns various tasks of operation and maintenance of Rosewood Detention Basin to **Council Officers** and may include the following:

- Manager, Assets Services, IED
- Manager, Infrastructure Strategy, IED
- Manager, Works and Field Services, IED
- Asset Manager, Asset Services Branch, IED
- Asset Engineers, Asset Services Branch, IED
- Any other Council Officers who have a role in the operation and maintenance of referable dams owned by ICC.

Table 2.1 lists the roles and responsibilities that have been assigned to the Dam Operator and Council Officers under this EAP.

The following roles and responsibilities have been assigned under this EAP:

Table 2.1 - Roles and Responsibilities

Role	Responsibility
Dam Operator	<ul style="list-style-type: none"> • Manage to have an approved emergency action plan for the Rosewood Detention Basin • Activation of this Emergency Action Plan (EAP) • Assign / delegate tasks to Council Officers during EAP activation • Advise the LDC of the developing issue or the event • Issue warning and evacuation messages • Issue media alerts and information • Continue to monitor and provide updates to the LDC • Identify and arrange for additional resources to attend site if required • Maintain a log of the event, actions taken and all communications • At stand down phase deactivate the EAP • Advise and update Chief Executive/Director Dam Safety, Department of Regional Development, Manufacturing and Water (DRDMW) as required • Within thirty (30) working days after the end of the event, submit an Emergency Event Report (EER) to the Director of Dam Safety, DRDMW • Develop and implement an education program for relevant entities including the LDMG and regularly exercise the EAP to ensure its effectiveness • Conduct public education of the EAP
Council Officers	<ul style="list-style-type: none"> • Regular inspection and maintenance of the detention basin and associated infrastructure • Determination of the most fit-for purpose communication method and implementation • Attend the site during a flood event (if safe to do so) and undertake an inspection and make observations of the situation • Reporting of any observations or dam safety issues • Take photographs of any dam safety issues • Maintain a log of the event, actions taken and all communications • Review and maintain a register of lessons learnt with input from all relevant stakeholders • Record data for later analysis

Role	Responsibility
Local Disaster Coordinator(LDC)	<ul style="list-style-type: none"> • Review the data and information received • • Following Local Disaster Management Plan and associated doctrine: <ul style="list-style-type: none"> • Advise the LDMG of the developing issue or the event • Convene the LDMG and manage its functions • Alert/Advice the emergency response agencies to a developing situation and the possible need to mobilise and implement emergency actions • Establish a Local Disaster Coordination Centre (LDCC) including provision of resources • Implement the preparedness, response and recovery strategy as required • Coordinate the response and establish a Local Disaster Coordination Centre (LDCC) including provision of resources • Convene the Local Disaster Management Group (LDMG) • Assign resources as required to support the Dam Operator • Assist police and SES to evacuate residents at risk
Local Disaster Management Group(LDMG)	<ul style="list-style-type: none"> • • Following Local Disaster Management Plan and associated doctrine: <ul style="list-style-type: none"> • Coordination of responses if the event escalates to include a wider area • Review the data and information received • Assign resources as required to support the Dam Operator • Support to to evacuate residents at risk
Police	<ul style="list-style-type: none"> • Provision of additional resources from outside of the area if required • First response and initial evacuation • Emergency evacuation

3 Notification Information

The following section provides guidance on the level of alert to be adopted and the process for engaging this EAP and its escalation from a normal situation to a dam safety emergency situation.

Whilst this EAP provides for a situation to develop in stages, it is to be recognised that under some circumstances the immediate activation of this plan to a 'Stand-Up' (Dam Safety Emergency) level may be required.

Warning messages and communication systems, including relevant contact details, are to be reviewed and confirmed on a regular basis.

3.1 Notification Stages

In this EAP a 4-stage action plan has been adopted as outlined below. Each stage also includes a colour coding which is used to define the level of action outlined in the flow charts and action plans. Water levels given are in both m AHD and between brackets the relative BOM Enviromon reading. Note that the BOM Enviromon flood gauge zero level (0m) is 74.6 m AHD.

In the absence of other reason for triggering alert levels, the nominal water level triggers are given in Table 3.1 and the alert level definition are given in Table 3.2.

Table 3.1 - Basin Water Surface Level Triggers for various Alert Levels

Alert Level	Detention Basin Water Level (m AHD)	Enviromon Water Level (m)	AEP of Flood event
Alert	77.58	2.98	39%
Lean Forward	78.50	3.9	10%
Stand-Up	79.9 (Spillway Crest)	5.3	1%
Stand-Down	77.5	2.9	

Table 3.2 - Alert Level Definitions

Level	Description (Select one or more appropriate description)
<p>ALERT (Dam Safety Alert)</p>	<p>Emergency hazards are developing or have developed that raise the need for closer monitoring of weather conditions that may impact on the Rosewood Detention Basin. Emergency hazards may include:</p> <ul style="list-style-type: none"> • Development of emergency hazard conditions in the Rosewood Detention Basin catchment that warrants frequent or continuous monitoring of weather forecasts, rainfall or basin water levels; • Severe storm warnings received; • Potential for flooding downstream of Rosewood Detention Basin; • Detention basin water level >77.58 m AHD (Environment: > 2.98 m) (2 year ARI – flood event); • Reports or identification of acts of terrorism, sabotage or vandalism that may compromise the structural integrity of the Rosewood Detention Basin. • Reports of strong earthquakes in the region measuring a magnitude of 4 on the Richter Scale, or a IV on the Modified Mercalli Scale
<p>LEAN FORWARD (Dam Safety Event)</p>	<p>Emergency event developing further where Rosewood Detention Basin is filling with water and there is the potential for further water level rises or for dam safety issues to develop or have been observed. Conditions may include:</p> <ul style="list-style-type: none"> • Observed or monitored rainfall and detention basin inflow event that forecasts the potential for the detention basin to partially fill; • Possible minor flooding downstream of the detention basin; • Detention basin water level > 78.50 m AHD (Environment: > 3.9 m) (10 year ARI flood event); • Blockage of the outlet pipe or other condition that leads to a faster rate of rise and higher water levels in Rosewood Detention Basin; • Identification of structural issues that may compromise the structural stability of Rosewood Detention Basin. The embankment is intact but there is the potential for it to fail. <p>At this level contact PAR within the evacuation zone via following means, where appropriate :</p> <ul style="list-style-type: none"> • Text message (within EA polygon via National Emergency Alert System) • Local radio • Door knocking

Level	Description (Select one or more appropriate description)
STAND-UP (Dam Safety Emergency)	<p>Emergency event exists or developing where major flooding downstream of Rosewood Detention Basin is expected and/or failure of the detention basin embankment is expected. Conditions may include:</p> <ul style="list-style-type: none"> • Detention basin water level > 79.90 m AHD (Enviromon: > 5.3 m) (approaching 100 year ARI flood event); • Discharge forecasted or occurring through the overflow spillway; • Major flooding downstream of the detention basin; • Identification of dam safety issues that are likely to develop further and result in a breach developing in the detention basin embankment (irrespective of water level in the detention basin or existing or forecasted inflows); • Failure of the detention basin embankment is imminent or has occurred; or <p>At this level contact PAR within the evacuation zone via following means, where appropriate:</p> <ul style="list-style-type: none"> • Text message (within EA polygon via National Emergency Alert System) • Local radio • Door knocking
STAND-DOWN (Dam Safety Threat Reducing)	<p>Emergency hazard to Rosewood Detention Basin is reducing, and the water level in the detention basin is dropping. Conditions may include:</p> <ul style="list-style-type: none"> • Water levels in the detention basin are < 77.50 m AHD (Enviromon: < 2.9 m) and falling • Dam inspections have not identified any safety issues or structural integrity issues; • Failure of the detention basin embankment is unlikely or not expected; or • Downstream flooding has reduced and is no longer a threat to the public.

The following flow chart provides guidance on how a dam safety emergency situation may develop and the escalation of the situation through the various notification stages.

Figure 3.1 - Rosewood EAP Notification Flow Chart

Ipswich City Council
Rosewood Detention Basin
EAP Notification Flow Chart

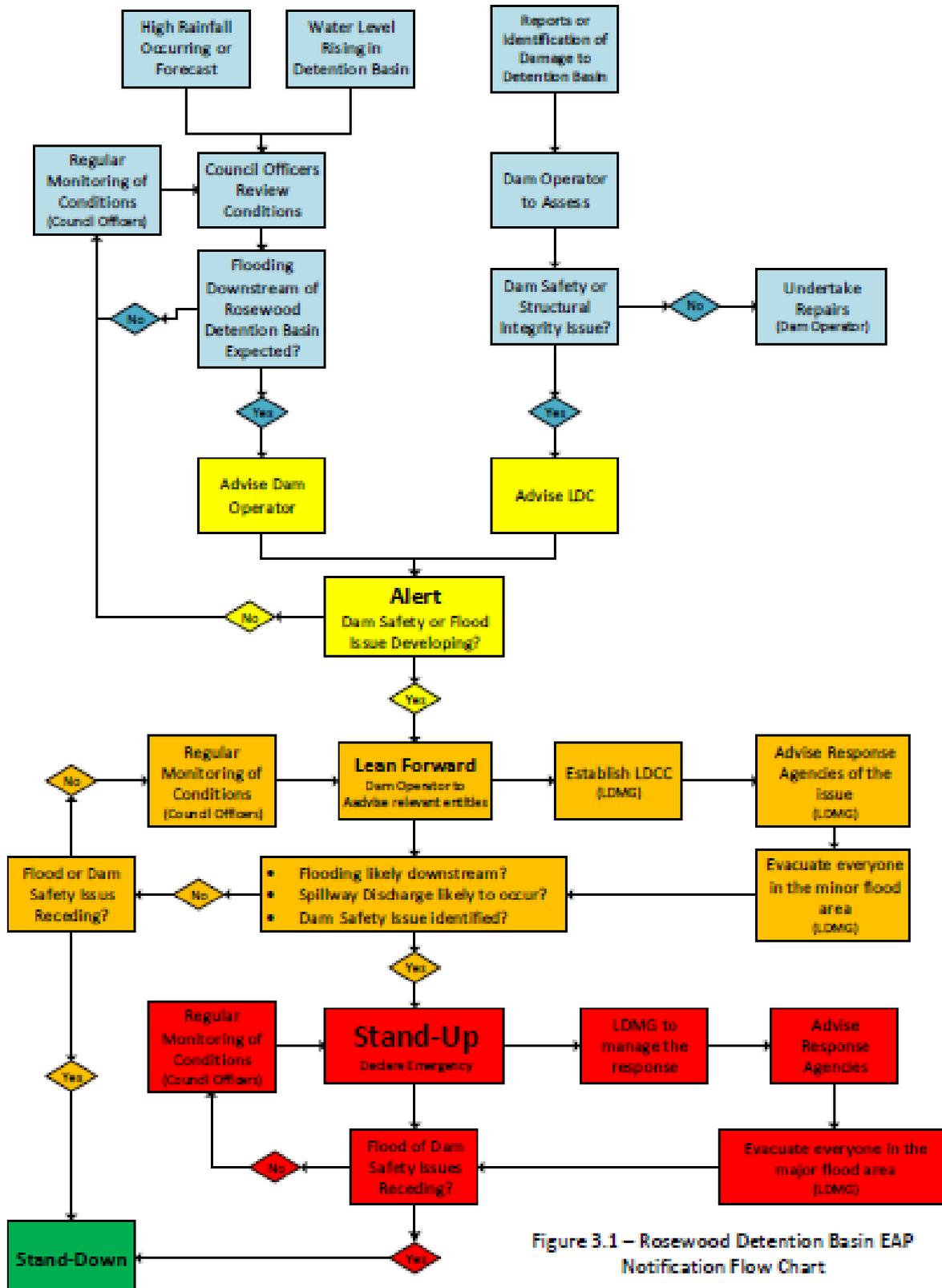


Figure 3.1 – Rosewood Detention Basin EAP Notification Flow Chart

3.2 Emergency Response Notification and Contact List

The following list provides information on persons/organisations who may need to be contacted or called for assistance as part of activation of the EAP.

Table 3.3 - Notification Contact List

SN#	Title/Name	Phone Business	Phone Mobile
Ipswich City Council			
1	Chief Executive Officer	[REDACTED]	[REDACTED]
2	General Manager Asset Infrastructure Service (Dam Operator)	[REDACTED]	[REDACTED]
3	Manager, Assets Services (Council Officer)	[REDACTED]	[REDACTED]
4	Manager, Infrastructure Strategy (Council Officer)	[REDACTED]	[REDACTED]
5	Manager, Works and Field Services (Council Officer)	[REDACTED]	[REDACTED]
Disaster Management Group			
1	City of Ipswich LDMG - Local Disaster Coordination Centre/Flood Intelligence Centre Emergency Management Duty Officer	[REDACTED]	
2	City of Ipswich LDMG - Local Disaster General Manager Environment and sustainability	[REDACTED]	[REDACTED]
3	City of Ipswich LDMG - Deputy Local Disaster Coordinator	[REDACTED]	[REDACTED]
4	City of Ipswich LDMG - Deputy Local Disaster Coordinator & General Manager	[REDACTED]	[REDACTED]
5	Ipswich District Disaster Management Group (District Disaster Coordinator and Chair)	[REDACTED]	[REDACTED]
6	State Disaster Coordination Centre (SDCC)	[REDACTED]	[REDACTED]
7	SES Marburg	132 500 (for public use)	[REDACTED]

8	SES Rosewood	132 500 (for public use)	[REDACTED] [REDACTED] [REDACTED]
9	SES Ipswich	132 500 And 000, [REDACTED]	[REDACTED] [REDACTED] [REDACTED]
10	Marburg Police Station	3437 2600	
10	Rosewood Police Station	3437 2670	
Department of Regional Development, Manufacturing and Water			
1	Chief Executive/Director Dam Safety, Department of Regional Development, Manufacturing and Water (RDMW)	[REDACTED] [REDACTED]	[REDACTED] [REDACTED]
Bureau of Meteorology			
1	Duty Meteorologist in charge	[REDACTED] [REDACTED]	
Other Organisations			
1	Department of Transport and Main Roads Statewide Road Condition Information Service	13 19 40	
2	Geoscience Australia	[REDACTED]	
3	Somerset Regional Council	[REDACTED]	
Table last updated			09/09/2023

SN#	Title/Name	Phone Business	Phone Mobile
6	Queensland Fire and Emergency Service - State Disaster Coordination Centre (SDCC)	[REDACTED]	[REDACTED]
7	SES Marburg	132 500 (for public use)	[REDACTED]
8	SES Rosewood	132 500 (for public use)	[REDACTED]
9	SES Ipswich	132 500 (for public use) [REDACTED] [REDACTED]	[REDACTED] r
10	Rosewood Police Station	3437 2670	
Department of Natural Resources, Mines and Energy			
1	Chief Executive/Director Dam Safety, Department of Regional Development, Manufacturing and Water (RDMW)	[REDACTED] [REDACTED]	[REDACTED]
Bureau of Meteorology			
1	Meteorologist in charge	[REDACTED] [REDACTED]	
Other organisations			
1	Department of Transport and Main Roads State Wide Road Condition Information Service	13 19 40	
2	Geoscience Australia	[REDACTED]	
TABLE LAST UPDATED			22/08/2022

3.3 Impacted Persons / Property

The properties potentially impacted by an emergency event at the Rosewood Detention Basin, are identified on the flood inundation maps included in Appendix A. Inundation maps are provided for a range of flood events.

The extent and depth of inundation detailed on the inundation maps is based on modelling of rainfall / storm events and the ground information provided. The maps provide an indication only of the depth and extent of inundation that can be expected.

For this EAP, the flood categories listed in Table 3.4 have been used.

Table 3.4 - Flood Level Designation

Flood Designation	Description
Minor Flood Level	Flooding in Rosewood as a result of rainfall in the catchment up to and including a 10% AEP rainfall event. <i>For definition of the Minor Flood Area evacuation zone, refer to the 10% AEP Flood Inundation Maps.</i>
Major Flood Level	Flooding in Rosewood as a result of a greater rainfall event than 10% AEP rainfall event and / or a failure of the Rosewood Detention Basin Embankment. <i>For definition of the Major Flood Area evacuation zone, refer to the PMP Flood Inundation Map.</i>

The following issues are to be noted in respect to flooding in Rosewood:

1. Inundation of local roads and streets in Rosewood may commence as a result of more frequent rainfall events than a 10% AEP event. Impacts on property where inundation levels start to exceed 300 mm are likely only after rainfall exceeds a 10% AEP event;
2. Management of road closures for events smaller than a 10% AEP event are to be managed as local flood management issues;
3. When using this EAP, it is to be noted that:
 - a. An issue with floods or an emergency situation with the Rosewood Detention Basin is also likely to be coincident with the development of flooding in the Bremer River;
 - b. Flooding impacts will also result from flows in sub-catchments and along drainage lines entering Rosewood from both the east and west sides of Rosewood, downstream of the Rosewood Detention Basin.
 - c. Releases from the Rosewood Detention Basin during a 10% AEP rainfall event will be through the basin outlet pipe only and are likely to be small compared to the coincident flood inflows downstream of the basin.

This EAP does not include a detailed list of occupants of properties in Rosewood that may be impacted. More than 100 properties may be impacted and the short time available leading to the issue of warnings or evacuation of residents makes it improbable that contacting individual residents by phone or using similar resources at the LDCC is able to be completed in time. It is recommended that any warnings or need for evacuation be undertaken using the following arrangements:

- National Emergency Alert System using the appropriate polygon(s) for the impact area downstream of the Rosewood detention basin;
- Local emergency response personnel making public broadcasts and where necessary door knocking individual residences or places of occupancy.

Where possible, warning is to be given of the developing situation that provides residents and property occupants time to prepare and where necessary make their way safely to higher ground.

The flood inundation mapping included in the appendices of this EAP is to be used as a guide to which properties may be impacted.

Priority is to be given to contacting any occupants of land parcels that are either:

- Close to the Rosewood Detention Basin first; and
- Those located in close proximity to the existing drainage channel through the township (i.e. Masons Gully).

3.4 Road Inundation and Road Closure

The following table provides guidance on the closure of roads and streets for the different floodlevel designations. The following lists are based on any street within the township of Rosewood where water has covered the street, irrespective of water depth:

Table 3.5 - Road Closures for Different Flood Levels (in priority order)

Flood Designation	Roads / Streets Inundated with Water
<p>Minor Flood Level (Up to a 10% AEP Event – refer to inundation map for this event)</p>	<p>Rosewood Township:</p> <ol style="list-style-type: none"> 1. Matthew Street between Walloon Road and Bennett Street 2. Walloon Road east of John Street 3. John Street between Walloon Road and Railway Street 4. Trevlac Street 5. Rosewood Marburg Road (Waight Street) north of Albert Street 6. Dellvene Crescent 7. Creedy Street 8. Ahern Street 9. Just Street 10. Yates Street 11. Kingston Street 12. John Street between Berlin Street and Walloon Road 13. Rosewood Laidley Road (lanefield Road) west of Kingston Street 14. Cabanda Court 15. Skinner Street 16. Cassandra Lane 17. Bernadette Crescent 18. Arthur Street 19. Bennett Street 20. William Street 21. Edward Street 22. Albert Street between William Street and Railway Street 23. Railway Street between John Street and Matthew Street 24. Showgrounds Lane 25. Hospital Road <p>Roads downstream of railway line:</p> <ol style="list-style-type: none"> 26. School Street 27. Madden Lane 28. Bassells Lane 29. Nielsen Road 30. Rosewood Warrill View Road @ Western Creek
<p>Major Flood Level (Flood level greater than a 10% AEP event and/or including dam failure – refer to 1% AEP and PMP flood inundation map for this event)</p>	<p>All of the above listed roads plus the following additional streets / areas:</p> <p>Rosewood Township:</p> <ol style="list-style-type: none"> 1. Berlin Street 2. Albert Street between Rosewood Laidley Road and Railway Street 3. Makepeace Street

Flood Designation	Roads / Streets Inundated with Water
	<p>Roads downstream of railway line:</p> <ol style="list-style-type: none"> 4. Mill Street 5. Ipswich Rosewood Road @ main culvert south of Madden Lane 6. Keanes Road 7. O'Shea Street 8. Mill Lane 9. Matthew Street (the whole street)

Flooding of roads beyond the township of Rosewood can also be expected due to wider flood impacts that are likely to occur under the rainfall conditions being experienced at Rosewood. Refer to the ICC Flood Management Plan for responses and actions required for these roads. Flood or dam failure releases from the Rosewood Detention Basin are not expected to result in any flood impacts downstream of the township of Rosewood.

3.5 Evacuation Routes / Evacuation Centre

The City of Ipswich evacuation centres will be established in accordance with the LDMG's Evacuation Centre Sub Plan. A suitable location will be selected and established according to this plan, based on the best information available for any specific event. The evacuation routes are outlined on the **Evacuation Route Map** in Appendix A. When considering evacuation routes, the following should be considered:

- Flooding along the drainage channel extending downstream from the Rosewood Detention Basin may result in inundation of roads and streets in Rosewood making access to the Evacuation Centre difficult;
- Conditions leading to flooding in Rosewood are also likely to see similar conditions at Marburg. Any evacuation centre being established should consider the potential need to accommodate residents from both communities;
- In order to ensure that the population can safely access the evacuation centre at Rosewood it will be necessary to activate this EAP well in advance of any hazardous weather conditions developing and roads becoming impassable or closed;
- The weather conditions may make road conditions hazardous; and
- Be aware that the weather conditions leading to activation of this EAP may also result in flooding of the Bremer River and its tributaries.
- The LDMG has plans and locations of evacuation routes and centres that are for use across all hazards.

3.6 Warning and Communication Plan

The target audience of emergency warnings is the incremental PAR and those properties and persons which have a high flood risk during a dam hazard or dam emergency event. The maximum incremental PAR is 151 for AEP 1 in 100,000 flood failure event. The purpose of the emergency warnings is to inform the target audience of an impending or current threat and promote an appropriate responsive action.

The incremental population at risk is distributed throughout the Rosewood area for various events. For this reason, all properties within the floodplain have been included in the warning notifications to ensure a consistent approach to evacuation is applied.

This EAP does not include a detailed list of occupants of properties that may be impacted. About 140 properties may be impacted during PMP dam failure and the short time available leading to the issue of warnings or evacuation of residents, makes it improbable that contacting individual residents by phone or similar using resources at the LDCC is unlikely to be completed in time.

Use of National Emergency Alert System through SDCC is the primary means of warning residents. The alert polygons are loaded, tested and held by SDCC with consideration this is a detention basin with no possibility of sunny day failure. The impact extents have to be considered in light of flood conditions at the time.

Ipswich City Council uses live flood modelling and customises messages at the time from its Public Information and Warnings Plan. Developing a special pre- defined wording just for the detention basin EAP without broader flood impacts is not optimal.

Where possible, warning is to be given of the developing situation that provides residents and property occupants time to prepare and where necessary make their way safely to higher ground. It is recommended that any warnings or need for evacuation be undertaken using the following arrangements:

- National Emergency Alert System using the appropriate polygon(s) for the impact area downstream of the Rosewood detention basin;
- Local emergency response personnel making public broadcasts and where necessary door knocking individual residences or places of occupancy;
- The flood inundation mapping included in the Appendix A, is to be used as a guide as to which properties may be impacted.
- Priority is to be given to contacting any occupants of domestic dwellings that are either:
 - Close to the Rosewood Detention Basin first; and
 - Those located in close proximity to the existing drainage channel through the township.

Residents identified as being at risk during an emergency event of the detention basin are to be notified annually that they live within a risk zone. The notification will explain to the resident the nature of the risk and advise that they sign up to emergency notification services.

4 Emergency Events and Action List

Under normal operating conditions where minor or low flows in the catchment upstream of Rosewood Detention Basin are occurring, and there is no water being impounded in the detention basin, there are no dam safety issues or direct threat to the downstream population. As such, Sunny Day Failures are not applicable to this detention basin.

In a flood and dam safety emergency situation, all persons involved in activation, management and implementation of this EAP are to note the following:

- The location of the Rosewood Detention Basin being only a short distance upstream of the township so any emergencies at the dam will have a near immediate impact on the downstream properties;
- **It will be necessary to be pro-active in the implementation of this EAP.** Any actions including the evacuation of the flood inundation area are to be actioned and undertaken well ahead of when the issue actually occurs;
- The situations likely to lead to implementation of this EAP are also likely to see intense rainfall conditions elsewhere in the area. This will increase the hazards and risks associated with implementing this plan. Hazards may include dangerous road conditions, reduced visibility, flooding of local roads, downed power lines and trees being blown over;
- Resources required to respond to a dam safety event at Rosewood may be limited due to these resources being previously deployed elsewhere in the region as a result of the wet weather event, and the time required to organise and for the resources to travel to site;
- The Rosewood Detention Basin has a limited ability only to protect persons and property in the township of Rosewood from flooding and flood impacts. The detention basin provides a buffer that enables time to review the developing situation, activate the EAP and for evacuations to be undertaken;
- If a dam safety issue is developing that is likely to lead to failure of the Rosewood Detention Basin embankment, there is a high likelihood that it will develop at a rate which exceeds the capacity of the dam owner to respond and to undertake repairs or mitigate the issue.

4.1 Potential Emergency Events and Responses

Possible dam safety issues that could develop at the Rosewood Detention Basin include:

Table 4.1 - Possible Dam Safety Issues

Possible Dam Safety Issues	Description / Characteristics	Emergency Issues
Blockage of the active outlet pipe, or malfunction of outlet penstocks	Complete or partial blockage of the active outlet pipe or trash screen at the pipe inlet.	Reduced discharge capacity through the active outlet pipe. Increased rate of rise of the water level in the detention basin. Potential for discharges through the spillway or the embankment being overtopped.
Imminent overtopping of the embankment	Basin is full and water is discharging through the spillway. Further rainfall or inflows to the basin likely. Potential for embankment crest to be overtopped.	Increased flow of water and further downstream inundation. Potential for erosion of the embankment to take place and develop into a breach.
Seepage Erosion or piping	Identification of seepage in the embankment or at the downstream toe of the embankment.	Potential for the seepage to develop into a piping failure.
Scour	Wave scour on upstream embankment	Loss of grass cover and erosion protection. Exposure of the embankment fill material and increased erosion taking place.
	Scour around spillway or outlet structures	Loss of embankment fill and destabilisation of the structure
Rapid increase or cloudy appearance of seepage	Development of a piping mechanism and movement of material out of the embankment.	Development of internal embankment erosion and a flow path through the embankment. Potential for the erosion to rapidly increase and the embankment to fail.
Inundation of toe of embankment	Saturation of the embankment fill at the toe of the embankment (upstream or downstream)	Potential for instability to develop in the embankment slopes, particularly as the downstream water level recedes.

Possible Dam Safety Issues	Description / Characteristics	Emergency Issues
Failure of penstock gates	Sudden increase in pipe outlet flow	Sudden increase in outlet flow
Longitudinal cracks in embankment or crest (cracks parallel with crest alignment)	Straight or curved cracks in the embankment crest or the embankment slopes	Embankment instability leading to slip failures developing. Exposure of the embankment and further development of slips.
Transverse cracks in embankment or crest (cracks running across crest alignment)	Fissures or cracks in the embankment crest or the embankment slopes	Transverse cracks create an open water path through the embankment. Potential for further erosion to develop and lead to development of a breach.
Slips, slumps or settlement in the embankment or the embankment slopes	Depressions in the embankment crest. Depressions or bulges on the embankment slopes	Embankment instability developing that could develop further including a breach of the embankment.
Failure of the Outlet Pipes	Seepage around the outlet pipes.	Erosion around and along the outside of the outlet pipes developing into a piping failure
	Displacement of the outlet pipes	Exposing the inner embankment to water and erosion forces
Erosion at and around the discharge end of the outlet pipes	High flow velocities and turbulence eroding the stream bed and sides at the outlet pipe discharge Turbulence around the end wall structure eroding the downstream embankment.	Development of instability at the downstream end of the outlet pipes. Development of backward erosion mechanism along the outlet pipes
Erosion of the spillway shotcrete	Loss of shotcrete on the spillway approach, crest and downstream chute.	Exposure of the embankment and potential for development of erosion.
Exposure of the spillway gabions or loss of downstream rip rap	Spillway flows exposing the gabions. Turbulence and high flow velocities wash rip rap out of spillway stilling basin.	Loss of spillway crest control structure leading to increased discharge rates and possible breach of embankment. Erosion of the downstream embankment and development of backward erosion in the area around the spillway

4.2 Possible Scenarios Leading to Activation of the EAP

There are a number of different events that may lead to this EAP being activated and requiring a coordinated response. The dam safety emergency events applicable to a water supply dam are not necessarily applicable in this case (i.e. under 'Sunny Day' conditions the basin does not hold any water and there is no likelihood of a dam failure occurring that has an impact on the township of Rosewood).

It should not be expected that this EAP presents response actions for all potential dam failure hazards. There may be dam failure hazards that have not been identified or emergency events that develop outside of those presented in this EAP. In such potential scenarios, responsible officers should be prepared to implement actions that may result in activation or escalation of the EAP if there is an emergency hazard.

The following events are considered to be the most appropriate for Rosewood Detention Basin.

4.2.1 Event A – Flood Event with No Structural Issues (Escalating to Overtopping)

Under this scenario flood inflows into the Rosewood Detention Basin have exceeded the discharge capacity of the basin's outlet pipes and the water level in the detention basin rises. The detention basin spillway is found to be operating as designed and there is no evidence of any dam safety issues (no development of seepage, piping failures, slips, slumps or cracks or other issues likely to impact on the integrity of the embankment).

Under this situation, the detention basin is reducing the flow rate in passing through the township of Rosewood, but it is to be noted that:

- Inundation of roads within the township is likely to occur; and
- Flooding of roads and properties will take place as water levels increase in the detention basin and basin outflows from the pipe increases.

If the water level in the detention basin is predicted to exceed the spillway crest level, there will be an increase in the rate of discharge from the detention basin and increased potential for downstream flooding to develop (Major Flood Levels). Refer to the inundation maps (Appendix A) relating to a 1% AEP event or greater.

If the water level in the detention basin is predicted to exceed the basin's embankment crest level (dam crest), the rate of discharge from the detention basin will increase and the potential for downstream flooding increases. If this occurs, there is a high likelihood of the detention basin embankment scouring and a breach of the embankment developing (dam safety emergency). Refer to the inundation maps (Appendix A) for a PMP event.

Under this scenario, a dam safety emergency could also be triggered by any of the following:

- The outlet pipes passing water under the detention basin embankment are found to be blocked, partially blocked or flow is being restricted. This will lead to an increased rate of rise of water level in the detention basin, the potential for the spillway to discharge flows and possibly overtopping of the detention basin embankment;
- Vandalism, sabotage or other acts, that compromise the structural integrity or ability for the detention basin to operate as intended at the time of a flood event. The detention basin is therefore unable to operate as intended or its structural stability has been compromised.

The likelihood of an act of vandalism or terrorism taking place as a storm inflow event is developing or occurring is considered remote.

Figure 4.1 presents an emergency actions flow chart for Event A (Flood Event, with no Structural Issues) and Table 4.2 provides the recommended responses to this situation.

Figure 4.1 - Flow Chart A – Flood Inflow, No Embankment Issues

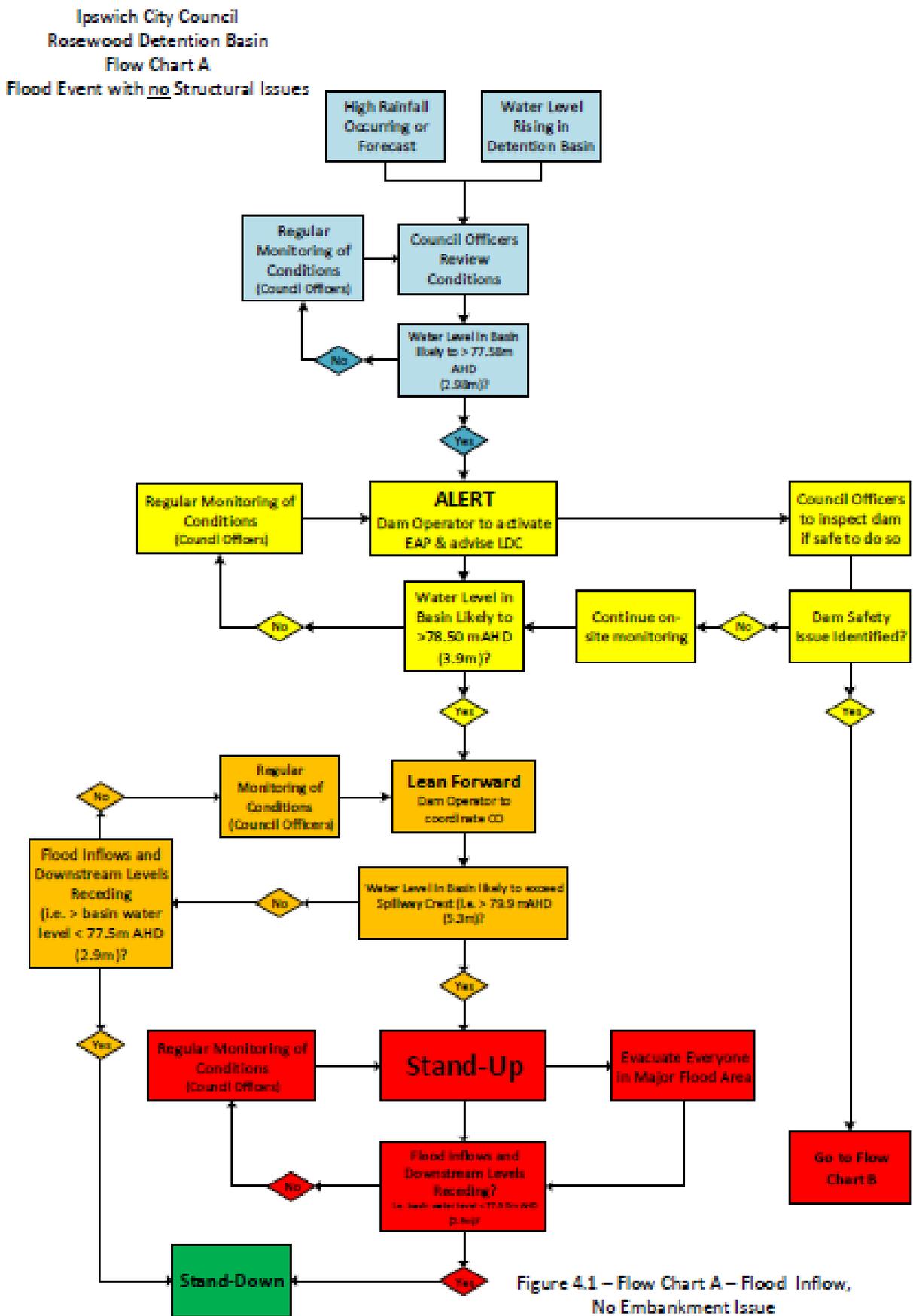


Figure 4.1 – Flow Chart A – Flood Inflow, No Embankment Issue

Table 4.2 - Flood Inflow, No Embankment Issues (Flow Chart A) – Recommended Actions

	Role	Actions
Event Identification (Flow Chart A) High rainfall occurring or water levels rising	Dam Operator (DOP)	<ul style="list-style-type: none"> • Increase awareness of, or potential for a flood situation to develop • Delegate tasks to Council Officers • Advise the Local Disaster Coordinator of the developing emergency hazard • Commence recording of data and information and maintain a log of all communications
	Council Officers (CO)	<ul style="list-style-type: none"> • Monitor regional and local weather conditions • Identify conditions that may lead to flooding in the Rosewood Detention Basin catchment • Identify conditions or events likely to result in water levels rising in Rosewood Detention Basin • Monitor the rainfall and flood (water level) gauge (BOM, Enviromon) • Contact Dam Operator if there are concerns about a potential flood situation developing at Rosewood • Commence recording of data and information and maintain a log of all communications
	Local Disaster Coordinator (LDC)	<ul style="list-style-type: none"> • Receive information from the Dam Operator regarding event development and make aware LDMG
	Local Disaster Management Group (LDMG)	<ul style="list-style-type: none"> • Through the Local Disaster Coordinator increase awareness of, or potential for a flood situation to develop

	Role	Actions
ALERT (Flow Chart A) Basin water level > 77.58 m AHD (Automatic Flood Gauge Level: 2.98 m)	Dam Operator (DOP)	<ul style="list-style-type: none"> • Activate the EAP • Arrange for resources to attend site • Coordinate with Council Officers and assign tasks to: <ol style="list-style-type: none"> 1. monitor the rainfall and flood (water level) gauge (BOM, Enviromon) 2. attend the site for dam inspection and storage level gauge monitoring • Provide updates of site conditions and the developing issue or event in a priority order to: <ol style="list-style-type: none"> 1. LDC 2. SDCC 3. CEO of ICC 4. Director Dam Safety, DRDMW • Advise residents that the dention basin is operating as intended and starting to fill and to monitor the Council Facebook and Disaster Dashboard. Prepare for closure of local roads in Rosewood • Record data of the event and maintain a log of all actions and communications
	Council Officers (CO)	<ul style="list-style-type: none"> • Continue to monitor the rainfall and flood (water level) gauge (BOM, Enviromon) • Attend the site (if safe to do so) • Undertake an inspection of the embankment and associated infrastructure • Provide updates of site conditions to DOP • Take photographs of any issues • Record data of the event and maintain a log of all actions and communications
	Local Disaster Coordinator (LDC)	<ul style="list-style-type: none"> • Review the data and information received • Advise the LDMG of the developing issue or the event • Alert the emergency response agencies to a developing situation and the possible need to mobilise and implement emergency actions • Maintain a log of all actions taken and communications
	Local Disaster Management Group (LDMG)	<ul style="list-style-type: none"> • Increase awareness of, or potential for a flood situation to develop • Review the emergency response plan and required actions
	Ipswich City Council (ICC)	<ul style="list-style-type: none"> • Prepare for closure of local roads in Rosewood

	Role	Actions
<p style="writing-mode: vertical-rl; transform: rotate(180deg);">LEAN-FORWARD (Flow Chart A)</p> <p style="writing-mode: vertical-rl; transform: rotate(180deg);">Basin water level > 78.50 m AHD (Automatic Flood Gauge Level > 3.9 m)</p>	<p>Dam Operator (DOP)</p>	<ul style="list-style-type: none"> • Continue to coordinate with Council Officers • Request SDCC to issue a warning / evacuation notice to residents (PAR) and others via the National Emergency Alert System • Provide updates of site conditions and the developing issue or event in a priority order to: <ol style="list-style-type: none"> 1. LDC 2. SDCC 3. CEO of ICC 4. Director Dam Safety, DRDMW • Issue media alerts and information • Prepare for closure of local roads due to flooding • Record data of the event and maintain a log of all actions and communications
	<p>Council Officer (CO)</p>	<ul style="list-style-type: none"> • Continue to monitor the rainfall and water level (BOM, Enviromon) • Continue to undertake dam inspections and observe conditions until situation eases and if safe to do so • Provide regular updates to DOP • Take photographs of any issues • Record the date of the event and maintain a log of all actions taken and communications
	<p>Local Disaster Coordinator (LDC)</p>	<ul style="list-style-type: none"> • Establish a Local Disaster Coordination Centre (LDCC) including provision of resources • Convene the Local Disaster Management Group (LDMG) • Advise emergency response agencies of the developing situation and forecast conditions and impacts • Assign resources as required to support the Dam Operator • Place evacuation centre(s) on notice as per local disaster management plan • Maintain a log of all actions taken and communications
	<p>Local Disaster Management Group(LDMG)</p>	<ul style="list-style-type: none"> • Attend the LDCC and undertake assigned roles and responsibilities to manage the event • Manage the responses to the event as directed by LDC • Provide advice emergency response agencies and provide guidance on the need to close roads and for the evacuation of residents • Prepare the evacuation centre(s) • Consider the provision of public information and/or warnings based on risk and the local disaster management plans • Maintain a log of all actions taken and communications
	<p>Queensland Fire and Emergency Services</p>	<ul style="list-style-type: none"> • Coordination of responses if the event escalates to include a wider area
	<p>Ipswich City Council (ICC)</p>	<ul style="list-style-type: none"> • Prepare for closure of local roads due to flooding

	Role	Actions
<p style="text-align: center;">STAND-UP (Flow Chart A)</p> <p style="text-align: center;">Basin water level > 79.90 m AHD (Automatic Flood Gauge Level > 5.3 m)</p>	Dam Operator (DOP)	<ul style="list-style-type: none"> • Continue to coordinate with Council Officers • Request SDCC to issue an evacuation notice to residents (PAR) and others via the National Emergency Alert System • Provide updates of site conditions and the developing issue or event in a priority order to: <ol style="list-style-type: none"> 1. LDC 2. SDCC 3. CEO of ICC 4. Director Dam Safety, DRDMW • Issue media alerts and information • Request closure of local roads due to flooding • Record data of the event and maintain a log of all actions and communications
	Council Officer (CO)	<ul style="list-style-type: none"> • Continue to monitor the rainfall and water level gauge (BOM, Enviromon) • Continue to undertake dam inspections and observe conditions until situation eases and if safe to do so • Provide regular updates to DOP • Take photographs of any issues • Record the date of the event and maintain a log of all actions taken and communications
	Local Disaster Coordinator (LDC)	<ul style="list-style-type: none"> • Assign resources and responsibilities as required • Assign resources as required to support the Dam Operator • Consider the provision of public information and/or warnings based on risk and the local disaster management plans • Consider appropriate response strategies based on context, risk and the local disaster management plan. • Maintain a log of all actions taken and communications
	Local Disaster Management Group(LDMG)	<ul style="list-style-type: none"> • Manage the responses to the event as directed by LDC • Contact the emergency response agencies and provide guidance on the need to close roads and for the evacuation of residents • Alert all other residents of the possible need to evacuate at short notice • Operate and manage the evacuation centre(s) • Maintain a log of all actions taken and communications
	Queensland Fire andEmergency Services (QFES)	<ul style="list-style-type: none"> • Coordination of responses if the event escalates to include a wider area • Provision of additional resources from outside of the area if required
	Ipswich City Council (ICC)	<ul style="list-style-type: none"> • Close road as per advise received from Dam Operator and in coordination with LDMG

	Role	Actions
STAND-DOWN (Flow Chart A) Basin water level drops below 77.5 m AHD (Automatic Flood Gauge Level < 2.9 m)	Dam Operator (DOP)	<ul style="list-style-type: none"> • Deactivate the EAP • Advise that emergency event at the dam has passed in a priority order to: <ol style="list-style-type: none"> 1. LDC 2. SDCC 3. CEO of ICC 4. Director Dam Safety, DRDMW • Arrange for special inspection if needed • Prepare a report on the event within forty-eight hours (48) of becoming aware of the incident or failure to the Director Dam Safety, DRDMW • Prepare an Emergency Event Report (EER) and submit to the Director Dam Safety within thirty (30) working days after the end of the event • Advise all entities previously notified of the situation. • Coordinate and conduct a review of the event and the responses • Review the adequacy of the monitoring systems and their operation • Register and address lessons learnt in conjunction with other relevant stakeholders
	Council Officer (CO)	<ul style="list-style-type: none"> • Undertake a full inspection of Rosewood Detention Basin and advise DOP if Special Inspection is needed. • Assist Dam Operator with preparation of incident and EER report to DDS
	Local Disaster Coordinator (LDC)	<ul style="list-style-type: none"> • Advise LDMG that event has passed and emergency response services can stand down • Stand down the LDMG • Provide input to a review of the event with the Dam Operator
	Local Disaster Management Group (LDMG)	<ul style="list-style-type: none"> • Organise response agencies in respect to restoration of services to Rosewood and return of residents • Participate in a review of the event and the responses

4.2.2 Event B – Flood Event with Structural Issues

Under this scenario an issue related to the structural integrity of the dam is identified while the following is occurring:

- The flood level has risen in the detention basin but has not necessarily reached the level of the spillway;
- During this period an inspection of the dam is undertaken and identified a structural deficiency or a report is received that a structural integrity issue has been identified;
- From the information available there is a concern that failure of the detention basin embankment is possible / likely or imminent.

In the event of a structural issue at the basin, the failure modes could be any of a range of options, including excessive seepage, piping, undermining scour, settlement of the embankment and structures, cracking of structural elements, etc., all having the potential for further deterioration and leading to a dam failure. This would increase the rate of discharge through the detention basin and an increased level of downstream flooding.

If structural damage to the dam is identified, the initial action is to register an incident on the dam inspection form. Table 4-1 provides a list of potential indicators of structural damage to the Dam. Structural damage to the dam can be caused in many ways including earthquake, explosion, vandalism, or large objects crashing into the dam or reservoir. Structural damage can be identified through visual inspection on a regular basis in accordance with ANCOLD guidelines.

For this scenario, reference should be made to flood inundation mapping for a PMP event + Dam Break (**Major Flood Level**) in Appendix A.

Under this scenario, a dam safety emergency could be triggered by any of the following:

- Excessive seepage identified at the downstream toe of the detention basin embankment or from the abutments of the detention basin;
- Sand boils developing along the toe of the downstream embankment or in the vicinity of the toe;
- Water flowing from cracks or development of 'piping' holes in the embankment and the movement of material out of the embankment;
- Slips, slumps or movement of material on the embankment;
- Development of cracks, horizontal movement or settlement of the detention basin embankment;
- Scour and erosion around the downstream end of the outlet pipes that is compromising the integrity of the downstream embankment toe;
- Other stability issue or combination of any of the above that leads to concerns around the stability of the detention basin embankment, its outlets or spillway.

Refer to Flow Chart B (Figure 4.2) and Table 4.3 for the responses to this situation.

Figure 4.2 - Flow Chart B – Flood Inflow, Embankment Issue Identified

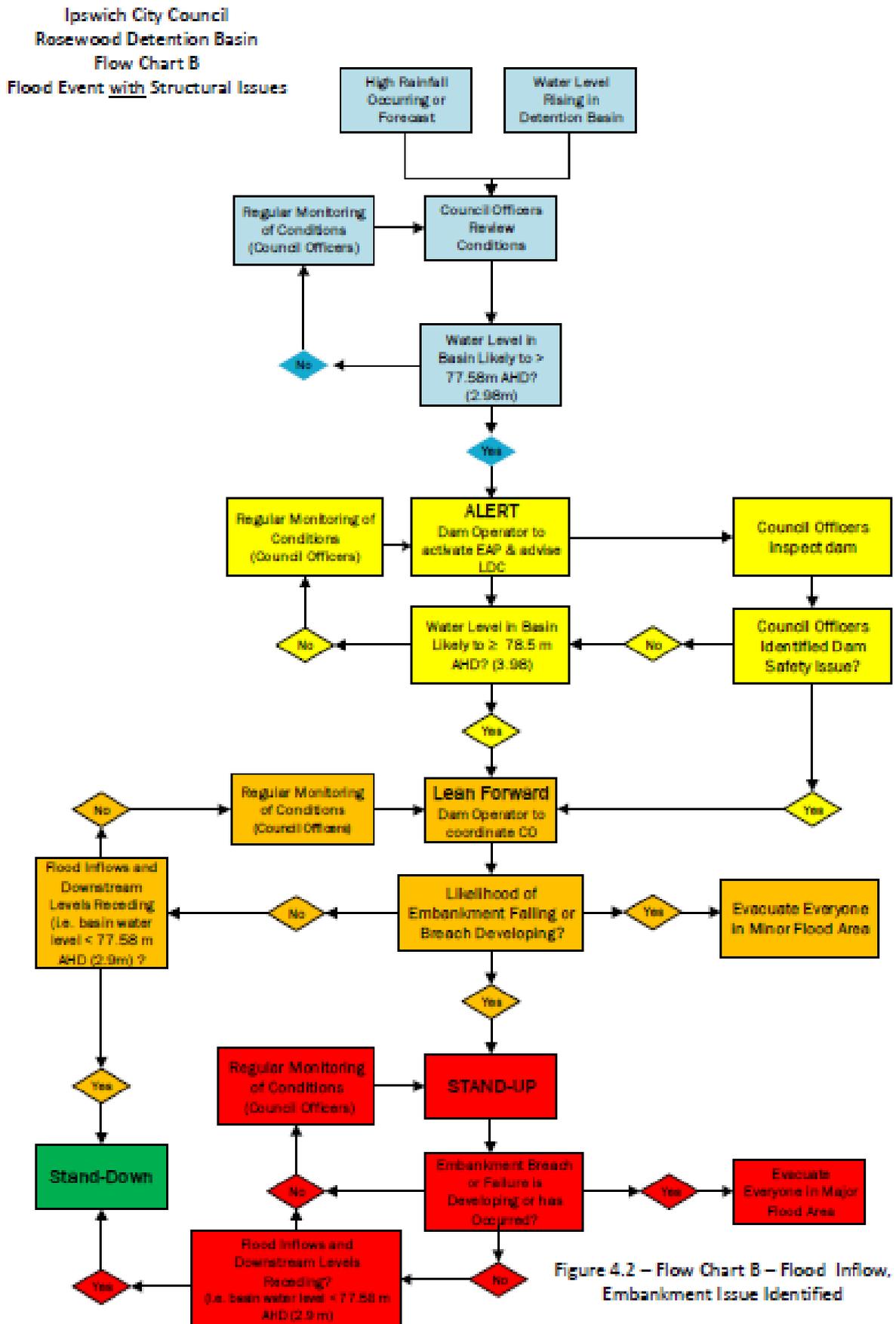


Figure 4.2 – Flow Chart B – Flood Inflow, Embankment Issue Identified

Table 4.3 - Flood event with dam structural issues (Flow Chart B) – Recommended Actions

	Role	Actions
Event Identification (Flow Chart B) High rainfall occurring or water levels rising	Dam Operator (DOP)	<ul style="list-style-type: none"> • Increase awareness of, or potential for a flood situation to develop • Coordinate with Council Officers if there are concerns about a potential flood situation developing at Rosewood • Advise the Local Disaster Coordinator of the developing emergency hazard • Commence recording of data and information and maintain a log of all communications
	Council Officer (CO)	<ul style="list-style-type: none"> • Monitor regional and local weather conditions • Identify conditions that may lead to flooding in the Rosewood Detention Basin catchment • Identify conditions or events likely to result in water levels rising in Rosewood Detention Basin • Monitor the rainfall and flood (water level) gauge (BOM, Enviromon) • Advise the DOP of the developing emergency hazard • Commence recording of data and information and maintain a log of all communications
	Local Disaster Coordinator (LDC)	<ul style="list-style-type: none"> • Receive information from the Dam Operator regarding event development and make aware LDMG
	Local Disaster Management Group (LDMG)	<ul style="list-style-type: none"> • Through the Local Disaster Coordinator increase awareness of, or potential for a flood situation to develop

	Role	Actions
<p style="text-align: center;">ALERT (Flow Chart B) Basin water level > 77.58 m AHD (Automatic Flood Gauge Level > 2.98m)</p>	<p>Dam Operator (DOP)</p>	<ul style="list-style-type: none"> • Activate the Emergency Action Plan (EAP) • Arrange for additional resources to attend site if required • Coordinate with Council Officers and assign tasks to: <ul style="list-style-type: none"> • monitor the rainfall and flood (water level) gauge (BOM, Enviromon) • attend the site for dam inspection and storage level gauge monitoring • Provide updates of site conditions and the developing issue or event in a priority order to: <ol style="list-style-type: none"> 1. LDC 2. SDCC 3. CEO of ICC 4. Director Dam Safety, DRDMW • Request SDCC to issue an alert to local residents warning of potential flooding via the National Emergency Alert System • Where possible take actions to address dam safety issues or to reduce the impact or development of a dam safety issue • Prepare for closure of local roads in Rosewood • Record data of the event and maintain a log of all actions and communications
	<p>Council Officers (CO)</p>	<ul style="list-style-type: none"> • Continue to monitor the rainfall and water level gauge (BOM, Enviromon) • Attend the site (if safe to do so) • Undertake an inspection of the embankment and associate infrastructure • Provide updates of site conditions to DOP • Where possible take actions to address dam safety issues or to reduce the impact or development of a dam safety issue • Continue to undertake inspections and observe conditions until situation eases • Take photographs of any issues • Record data of the event and maintain a log of all actions and communications
	<p>Local Disaster Coordinator (LDC)</p>	<ul style="list-style-type: none"> • Review the data and information received • Advise the LDMG of the developing issue or the event • Alert the emergency response agencies to a developing situation and the possible need to mobilise and implement emergency actions • Maintain a log of all actions taken and communications • Consider the provision of public information and/or warnings based on risk and the local disaster management plans • Consider appropriate response strategies based on context, risk, and the local disaster management plan.
	<p>Local Disaster Management Group(LDMG)</p>	<ul style="list-style-type: none"> • Increase awareness of, or potential for a flood situation to develop • Review the emergency response plan and required actions
	<p>Ipswich City Council (ICC)</p>	<ul style="list-style-type: none"> • Prepare for closure of local roads in Rosewood

	Role	Actions
LEAN-FORWARD (Flow Chart B) Basin water level > 78.50 m AHD (Automatic Flood Gauge Level > 3.9 m)	Dam Operator (DOP)	<ul style="list-style-type: none"> • Continue to coordinate with Council Officers • Request SDCC to issue a warning / evacuation notice to residents (PAR) and others via the National Emergency Alert System • Provide updates of site conditions and the developing issue or event in a priority order to: <ol style="list-style-type: none"> 1. LDC 2. SDCC 3. CEO of ICC 4. Director Dam Safety, DRDMW • Issue media alerts and information • If possible undertake repairs or actions to mitigate or reduce a dam safety issue • Prepare for closure of local roads due to flooding • Record data of the event and maintain a log of all actions and communications
	Council Officer (CO)	<ul style="list-style-type: none"> • Continue to monitor the rainfall and water level gauge (BOM, Enviromon) • Continue to undertake dam inspections and observe conditions until situation eases if safe to do so • Where possible take actions to address dam safety issues or to reduce the impact or development of a dam safety issue • Provide regular updates to DOP • Take photographs of any issues • Record the date of the event and maintain a log of all actions taken and communications
	Local Disaster Coordinator(LDC)	<ul style="list-style-type: none"> • Establish a Local Disaster Coordination Centre (LDCC)including provision of resources • Convene the Local Disaster Management Group (LDMG) • Advise emergency response agencies of the developing situation and forecast conditions and impacts • Assign resources as required to support the Dam Operator • Place evacuation centre(s) on notice as per local disaster management plan • Consider the provision of public information and/or warnings based on risk and the local disaster management plans • Consider appropriate response strategies based on context, risk and the local disaster management plan. • Maintain a log of all actions taken and communications
	Local Disaster Management Group(LDMG)	<ul style="list-style-type: none"> • Attend the LDCC and undertake assigned roles and responsibilities to manage the event • Manage the responses to the event as directed by LDC • Contact the emergency response agencies and provide guidance on the need to close roads and for the evacuation of residents • Prepare the evacuation centre(s) • Maintain a log of all actions taken and communications
	Queensland Fire andEmergency Services (QFES)	<ul style="list-style-type: none"> • Coordination of responses if the event escalates to include a wider area
	Ipswich City Council	<ul style="list-style-type: none"> • Prepare for closure of local roads due to flooding

	Role	Actions
STAND-UP (Flow Chart B) Likelihood of embankment failing or breach developing	Dam Operator (DOP)	<ul style="list-style-type: none"> • Continue to coordinate with Council Officers • Request SDCC to issue an evacuation notice to residents (PAR) via the National Emergency Alert System • Provide updates of site conditions and the developing issue or event in a priority order to: <ol style="list-style-type: none"> 1. LDC 2. SDCC 3. CEO of ICC 4. Director Dam Safety, DRDMW • Issue media alerts and information • If possible undertake repairs or actions to mitigate or reduce a dam safety issue • Request closure of local roads due to flooding • Record data of the event and maintain a log of all actions and communications
	Council Officer (CO)	<ul style="list-style-type: none"> • Continue to monitor the rainfall and flood (water level) gauge (BOM, Enviromon) • Continue to undertake inspections and observe conditions until situation eases if safe to do so • Provide regular updates to DOP • Where possible take actions to address dam safety issues or to reduce the impact or development of a dam safety issue • Take photographs of any issues • Record the date of the event and maintain a log of all actions taken and communications
	Local Disaster Coordinator (LDC)	<ul style="list-style-type: none"> • Manage the LDMG and assign resources and responsibilities as required • Assign resources as required to support the Dam Operator • Advise QFES of the developing situation • Maintain a log of all actions taken and communications
	Local Disaster Management Group (LDMG)	<ul style="list-style-type: none"> • Manage the responses to the event as directed by LDC • Contact the emergency response agencies and provide guidance on the need to close roads and for the evacuation of residents • Evacuate all residents located within the major flood zone • Alert all other residents of the possible need to evacuate at short notice • Operate and manage the evacuation centre(s) • Maintain a log of all actions taken and communications
	Queensland Fire and Emergency Services (QFES)	<ul style="list-style-type: none"> • Coordination of responses if the event escalates to include a wider area • Provision of additional resources from outside of the area if required
	Ipswich City Council (ICC)	<ul style="list-style-type: none"> • Close road as per advise received from Dam Operator and in coordination with LDMG

	Role	Actions
STAND-DOWN (Flow Chart B) Basin water level drops below 77.5 m AHD (Automatic Flood Gauge Level: 2.9 m)	Dam Operator (DOP)	<ul style="list-style-type: none"> • Deactivate the EAP • Advise that emergency event at the dam has passed in a priority order to: <ol style="list-style-type: none"> 1. LDC 2. SDCC 3. CEO of ICC 4. Director Dam Safety, DRDMW • Arrange for special inspection if needed to investigate into the cause of the dam safety issue • Arrange for any repair works to be undertaken • Prepare a report on the event within forty-eight hours (48) of becoming aware of the incident or failure to the Director Dam Safety, DRDMW • Prepare an Emergency Event Report (EER) and submit to the Director Dam Safety within thirty (30) working days after the end of the event • Advise all entities previously notified of the situation. • Coordinate and conduct a review of the event and the responses • Review the adequacy of the monitoring systems and their operation • Register and address lessons learnt in conjunction with other relevant stakeholders
	Council Officer (CO)	<ul style="list-style-type: none"> • Undertake a full inspection of Rosewood Detention Basin and advise DOP if Special Inspection is needed. • Prepare a report on works or actions to be undertaken to restore the embankment and associated infrastructure • Assist Dam Operator with preparation of incident and EER report to DDS
	Local Disaster Coordinator (LDC)	<ul style="list-style-type: none"> • Advise LDMG that event has passed and emergency response services can stand down • Stand down the LDMG • Provide input to a review of the event with the Dam Operator
	Local Disaster Management Group (LDMG)	<ul style="list-style-type: none"> • Organise response agencies in respect to restoration of services to Rosewood and return of residents • Participate in a review of the event and the responses

4.2.3 Event C – Earthquake Event

In the event of an earthquake an inspection is to be undertaken to ensure structural integrity of the detention basin is maintained. Table 4.1 provides a list of potential indicators of general structural damage to the dam. The dam is required to be inspected and a report issued if an earthquake is of a high enough magnitude, the magnitude will be reported by Geoscience Australia and can be referenced against the Modified Mercalli (MM) intensity scale, shown in Table 4.4 below. A damage assessment is required when an earthquake is rated at an MM intensity of IV which correlates to a magnitude 4.0 event.

Refer to Flow Chart C (Figure 4.3) and Table 4.5 for responses to this situation.

Table 4.4 - Modified Mercalli Scale

Earthquake Magnitude	Typical Maximum Modified Mercalli Intensity
1.0-3.0	I
3.0-3.9	II-III
4.0-4.9	IV-V
5.0-5.9	VI-VII
6.0-6.9	VII-IX
7.0 and higher	VIII or higher
Abbreviated Modified Mercalli Intensity Scale	
I	Not felt except by a very few under especially favourable conditions.
II	Felt only by a few persons at rest, especially on upper floors of buildings.
III	Felt quite noticeably by persons indoors, especially on upper floors of buildings. Many people do not recognize it as an earthquake. Standing motor cars may rock slightly. Vibrations similar to the passing of a truck. Duration estimated.
IV	Felt indoors by many, outdoors by few during the day. At night, some awakened. Dishes, windows, doors disturbed; walls make cracking sound. Sensation like heavy truck striking building. Standing motor cars rocked noticeably.
V	Felt by nearly everyone; many awakened. Some dishes, windows broken. Unstable objects overturned. Pendulum clocks may stop.
VI	Felt by all, many frightened. Some heavy furniture moved; a few instances of fallen plaster. Damage slight.
VII	Damage negligible in buildings of good design and construction; slight to moderate in well-built ordinary structures; considerable damage in poorly built or badly designed structures; some chimneys broken.
VIII	Damage slight in specially designed structures; considerable damage in ordinary substantial buildings with partial collapse. Damage great in poorly built structures. Fall of chimneys, factory stacks, columns, monuments, walls. Heavy furniture overturned.
IX	Damage considerable in specially designed structures; well-designed frame structures thrown out of plumb. Damage great in substantial buildings, with partial collapse. Buildings shifted off foundations.
X	Some well-built wooden structures destroyed; most masonry and frame structures destroyed with foundations. Rails bent.
XI	Few, if any (masonry) structures remain standing. Bridges destroyed. Rails bent greatly.
XII	Damage total. Lines of sight and level are distorted. Objects thrown into the air.

Figure 4.3 - Flow Chart C – Earthquake Event

Ipswich City Council
Rosewood Detention Basin
Flow Chart C
Earthquake Response

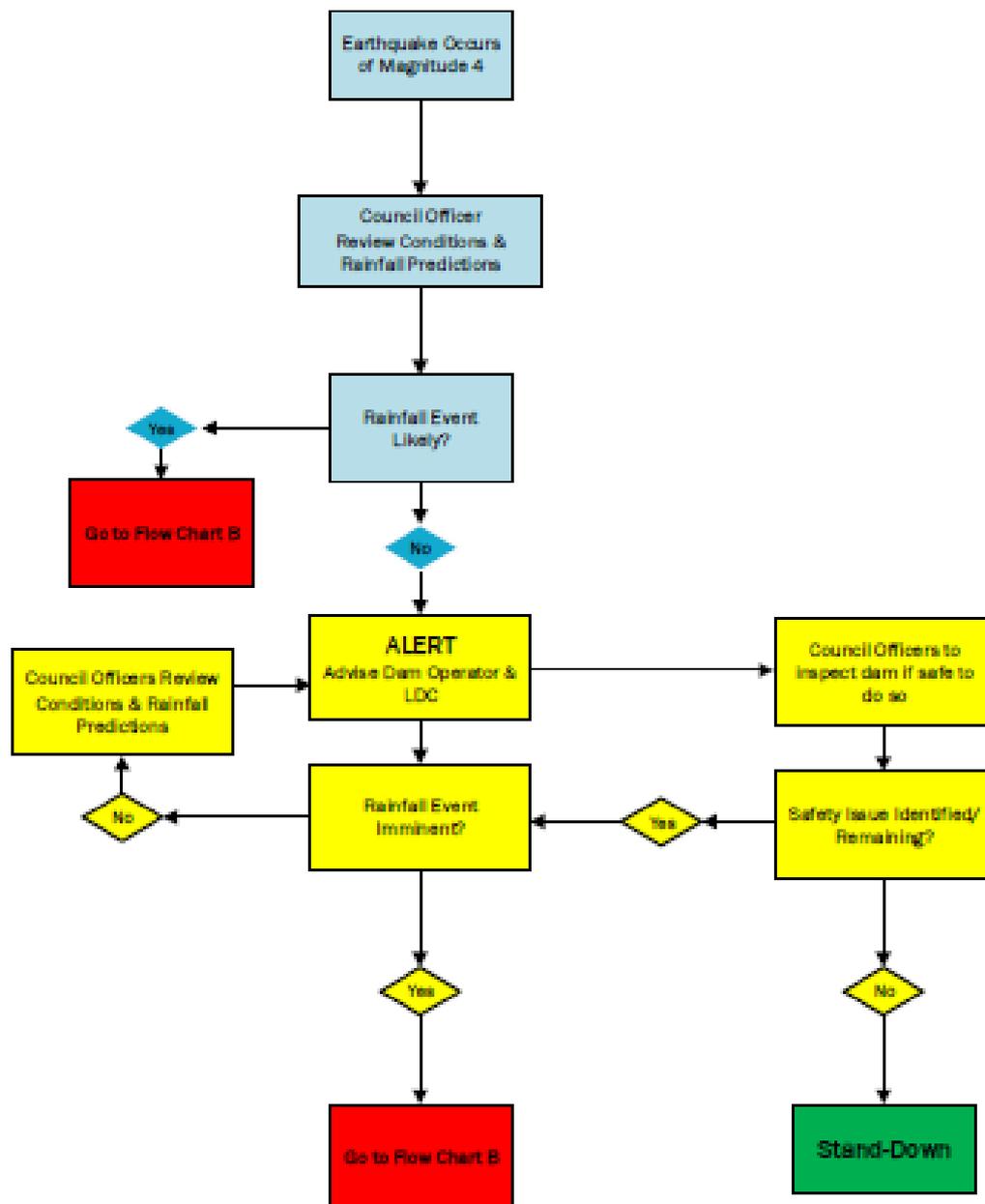


Figure 4.3 – Flow Chart C – Earthquake Event

Table 4.5 - Earthquake Event (Flow Chart C) – Recommended Actions

	Role	Actions
Event Identification (Flow Chart C) Magnitude 4 (or Greater) Earthquake Occurs	Dam Operator (DOP)	<ul style="list-style-type: none"> • Contact Council Officer if there are concerns about a potential emergency hazard developing at Rosewood Detention Basin if an earthquake event of magnitude 4 and over occurs near the dam • Advise the Local Disaster Coordinator (LDC) of the developing emergency hazard
	Council Officer (CO)	<ul style="list-style-type: none"> • Monitor Geoscience Australia for Earthquake severity • Contact DOP if an earthquake event has occurred • Monitor regional and local weather conditions • Identify conditions that may lead to flooding in the Rosewood Detention Basin catchment • Identify conditions or events likely to result in water levels rising in Rosewood Detention Basin • Monitor the rainfall and flood (water level) gauge (BOM, Enviromon) • Contact Dam Operator if there are concerns about a potential flood situation developing at Rosewood • Commence recording of data and information and maintain a log of all communications

	Role	Actions
ALERT (Flow Chart C) No Rainfall Event Likely	Dam Operator (DOP)	<ul style="list-style-type: none"> ● Activate the Emergency Action Plan (EAP) ● Coordinate with Council Officers and assign tasks to: <ol style="list-style-type: none"> 1. monitor the rainfall and flood (water level) gauge (BOM, Enviromon) 2. attend the site for dam inspection and storage level gauge monitoring ● Provide updates of site conditions and the developing issue or event in a priority order to: <ol style="list-style-type: none"> 1. LDC 2. SDCC 3. CEO of ICC 4. Director Dam Safety, DRDMW ● Request SDCC to issue an alert to local residents warning if there is a potential flooding ● Where possible take actions to address dam safety issues or to reduce the impact or development of a dam safety issue ● Prepare for closure of local roads in Rosewood ● Record data of the event and maintain a log of all actions and communications
	Council Officer (CO)	<ul style="list-style-type: none"> ● Continue to monitor the rainfall and flood (water level) gauge (BOM, Enviromon) ● Attend the site (if safe to do so) ● Undertake an inspection of the embankment and associated infrastructure ● Provide updates of site conditions to DOP ● Where possible take actions to address dam safety issues or to reduce the impact or development of a dam safety issue ● Continue to undertake inspections and observe conditions until situation eases ● Take photographs of any issues ● Record data of the event and maintain a log of all actions and communications

	Role	Actions
STAND-DOWN (Flow Chart C) No Structural Damage to Basin	Dam Operator (DOP)	<ul style="list-style-type: none"> • Deactivate the EAP • Advise that emergency event at the dam has passed in a priority order to: <ol style="list-style-type: none"> 1. LDC 2. SDCC 3. CEO of ICC 4. Director Dam Safety, DRDMW • Arrange for special inspection if needed • Arrange for any repair works to be undertaken • Prepare a report on the event within forty-eight hours (48) of becoming aware of the incident or failure to the Director Dam Safety, DRDMW • Prepare an Emergency Event Report (EER) and submit to the Director Dam Safety within thirty (30) working days after the end of the event • Advise all entities previously notified of the situation. • Coordinate and conduct a review of the event and the responses • Review the adequacy of the monitoring systems and their operation • Register and address lessons learnt in conjunction with other relevant stakeholders
	Council Officers (CO)	<ul style="list-style-type: none"> • Undertake a full inspection of Rosewood Detention Basin and advise DOP if Special Inspection is needed. • Prepare a report on works or actions to be undertaken to restore the embankment and associated infrastructure • Assist Dam Operator with preparation of an incident and EER report to DDS

4.2.4 Event D – Terrorist Event

A response to terrorist activity is the responsibility of the Queensland Police Service (QPS), as such QPS must be notified on 000. Observations of suspicious behaviour not requiring an emergent response should first be reported to the National Security Hotline on 1800 123 400. It is a whole-of-government commitment to safeguard the community through effective and collaborative arrangements to counter terrorism and its consequences. For more information, refer to the Queensland Counter-Terrorism Strategy 2013-2018.

Refer to Figure 4.4 - Flow Chart D and Table 4-6 for responses to this situation.

Figure 4.4 - Flow Chart D – Terrorist Event

Ipswich City Council
Rosewood Detention Basin
Flow Chart D
Terror Event Response

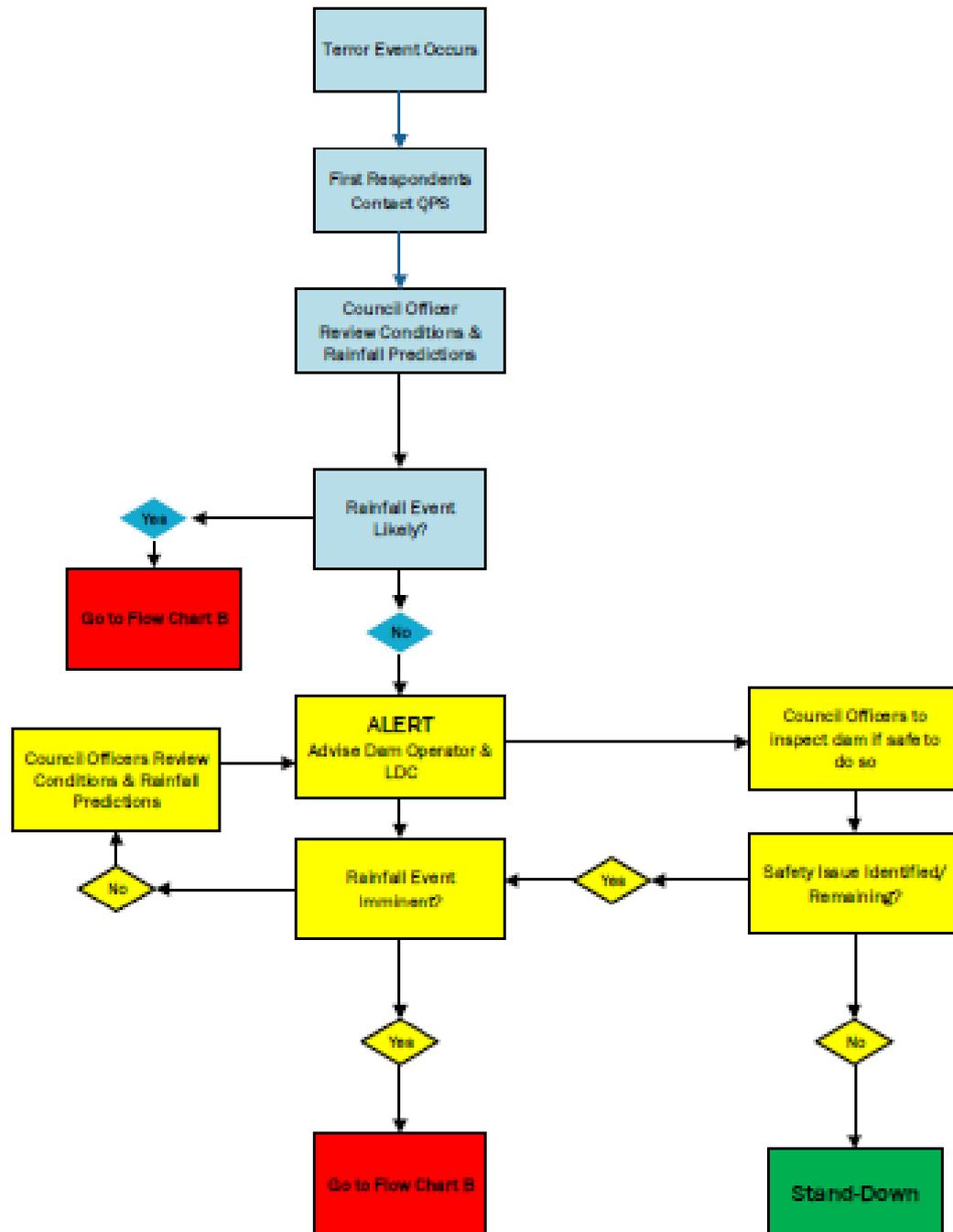


Figure 4.4 – Flow Chart D – Terrorist Event

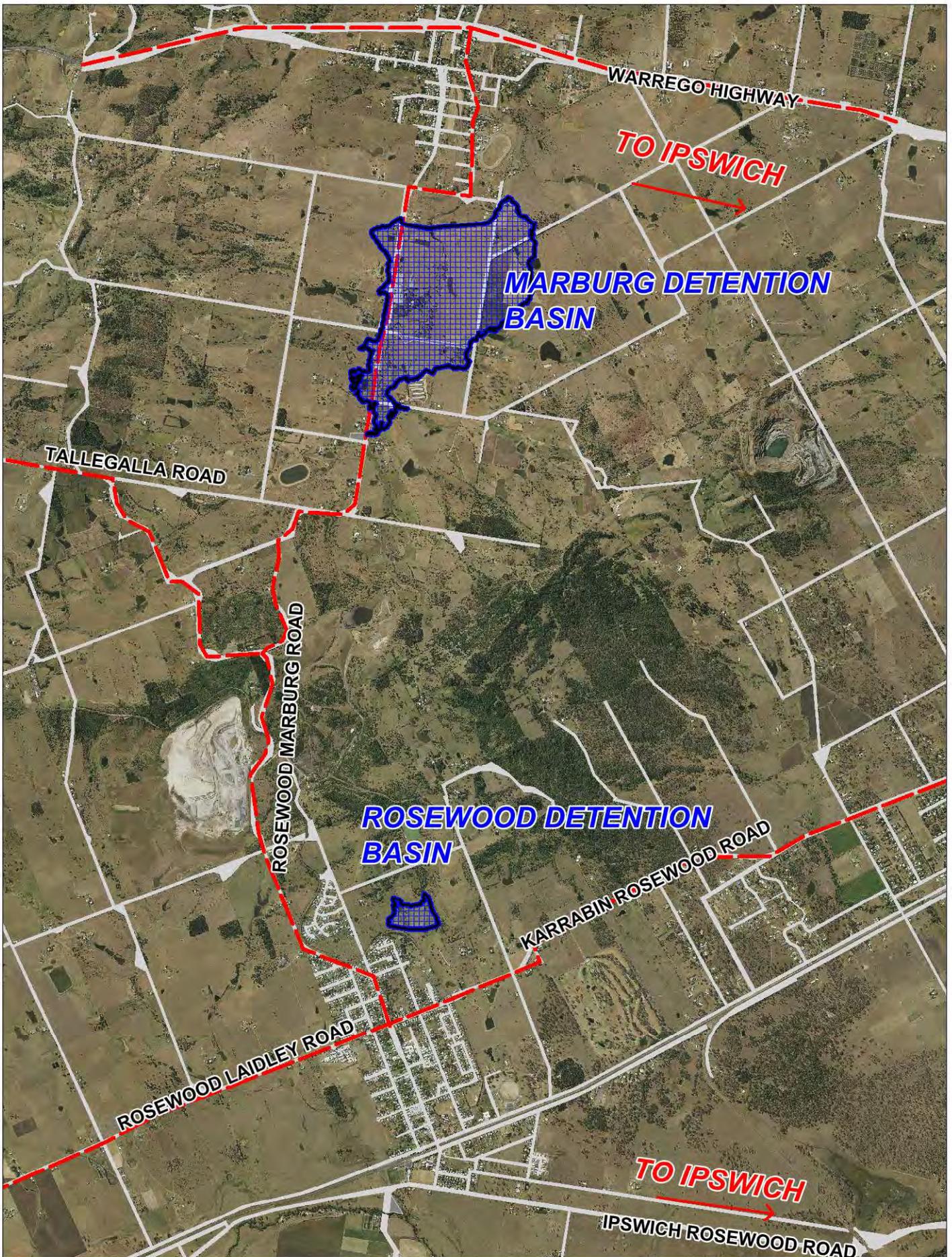
Table 4.6 - Terrorist Event (Flow Chart D) – Recommended Actions

	Role	Actions
Event Identification (Flow Chart D) Terror Event Occurs	Dam Operator (DOP)	<ul style="list-style-type: none"> • Contact QPS (000) • Contact Council Officer if there are concerns about a potential emergency hazard developing at Rosewood Detention Basin • Advise the Local Disaster Coordinator of the developing emergency hazard
	Council Officers (CO)	<ul style="list-style-type: none"> • Monitor regional and local weather conditions • Identify conditions that may lead to flooding in the Rosewood Detention Basin catchment • Identify conditions or events likely to result in water levels rising in Rosewood Detention Basin • Monitor the rainfall and flood (water level) gauge (BOM, Enviromon) • Contact Dam Operator if there are concerns about a potential flood situation developing at Rosewood • Commence recording of data and information and maintain a log of all communications

	Role	Actions
ALERT (Flow Chart D) No Rainfall Event Likely	Dam Operator (DOP)	<ul style="list-style-type: none"> • Activate the Emergency Action Plan (EAP) • Arrange for resources to attend site • Coordinate with Council Officers and assign tasks to: <ol style="list-style-type: none"> 1. monitor the rainfall and flood (water level) gauge (BOM, Enviromon) 2. attend the site for dam inspection and storage level gauge monitoring • Provide updates of site conditions and the developing issue or event in a priority order to: <ol style="list-style-type: none"> 1. LDC 2. SDCC 3. CEO of ICC 4. Director Dam Safety, DRDMW • Where possible take actions to address dam safety issues or to reduce the impact or development of a dam safety issue • Record data of the event and maintain a log of all actions and communications
	Council Officer (CO)	<ul style="list-style-type: none"> • Continue to monitor the rainfall and flood (water level) gauge (BOM, Enviromon) • Attend the site (if safe to do so) • Undertake an inspection of the embankment and associated infrastructure • Provide updates of site conditions to DOP • Where possible take actions to address dam safety issues or to reduce the impact or development of a dam safety issue • Take photographs of any issues • Record data of the event and maintain a log of all actions and communications

	Role	Actions
STAND-DOWN (Flow Chart D) No Structural Damage to Basin	Dam Operator (DOP)	<ul style="list-style-type: none"> • Deactivate the EAP • Advise that emergency event at the dam has passed in a priority order to: <ol style="list-style-type: none"> 1. LDC 2. SDCC 3. CEO of ICC 4. Director Dam Safety, DRDMW • Arrange for special inspection if needed • Arrange for any repair works to be undertaken • Prepare a report on the event within forty-eight hours (48) of becoming aware of the incident or failure to the Director Dam Safety, DRDMW • Prepare an Emergency Event Report (EER) and submit to the Director Dam Safety within thirty (30) working days after the end of the event • Advise all entities previously notified of the situation. • Coordinate and conduct a review of the event and the responses • Review the adequacy of the monitoring systems and their operation • Register and address lessons learnt in conjunction with other relevant stakeholders
	Council Officers (CO)	<ul style="list-style-type: none"> • Undertake a full inspection of Rosewood Detention Basin and advise DOP if Special Inspection is needed. • Prepare a report on works or actions to be undertaken to restore the embankment and associated infrastructure • Assist Dam Operator with preparation of the incident and EER report to DDS

**APPENDIX A
MAPPING**



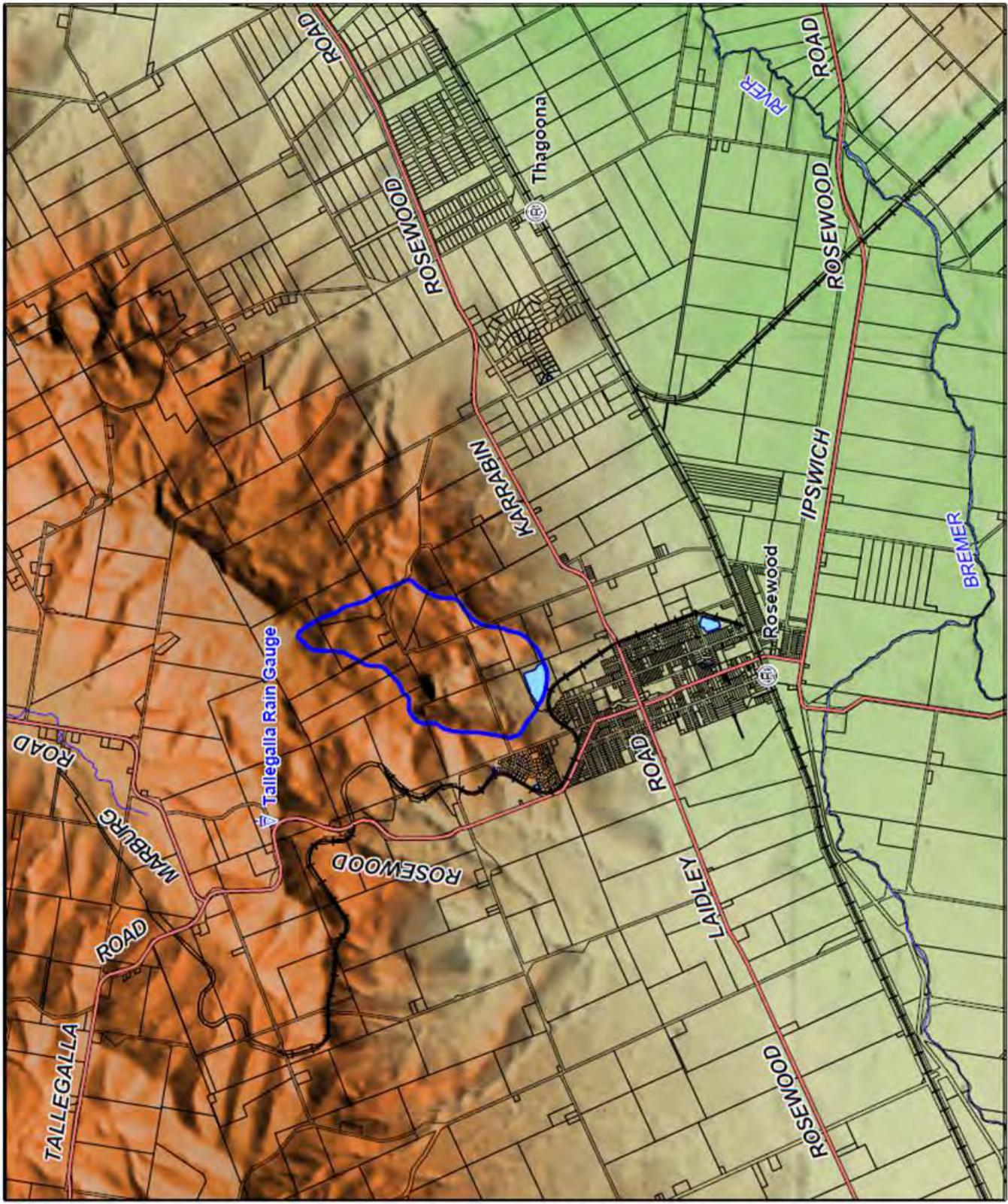
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	TITLE LOCALITY MAP	

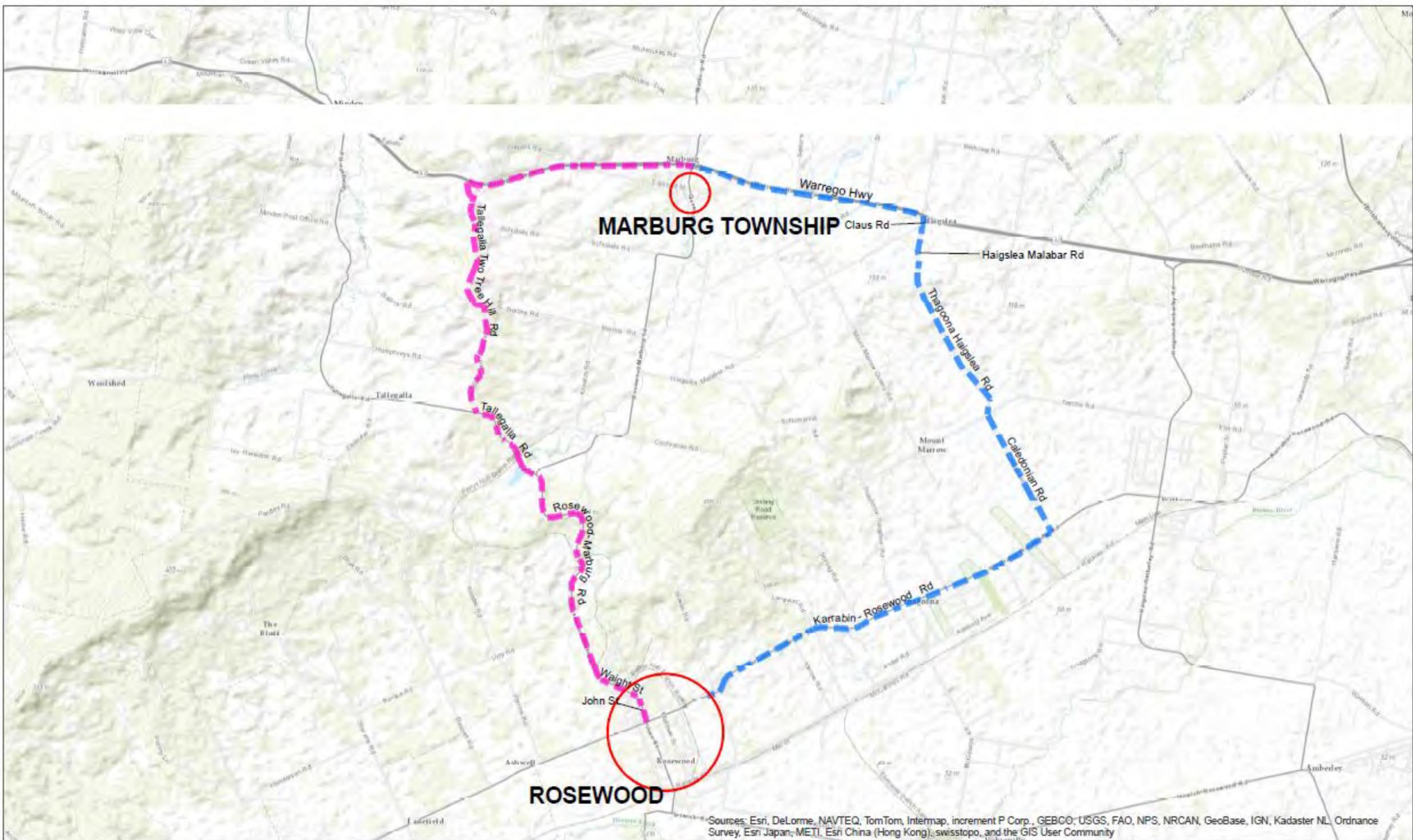
**DETAILED OPERATING AND
 MAINTENANCE MANUALS**
ROSEWOOD DETENTION BASIN
FIGURE 2
 Storage Catchment Area &
 Location of Rainfall Gauge Map

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 Map Grid : Geocentric Datum of Australia (GDA)
 Level Datum : Australian Height Datum (A.H.D.)
 Scale : 1 : 32 500
 Printed Date : 14-Sep-2007
 Data Compiled by : Asset Information Management Section, Works Department
 Phone : (07) 3810 7366

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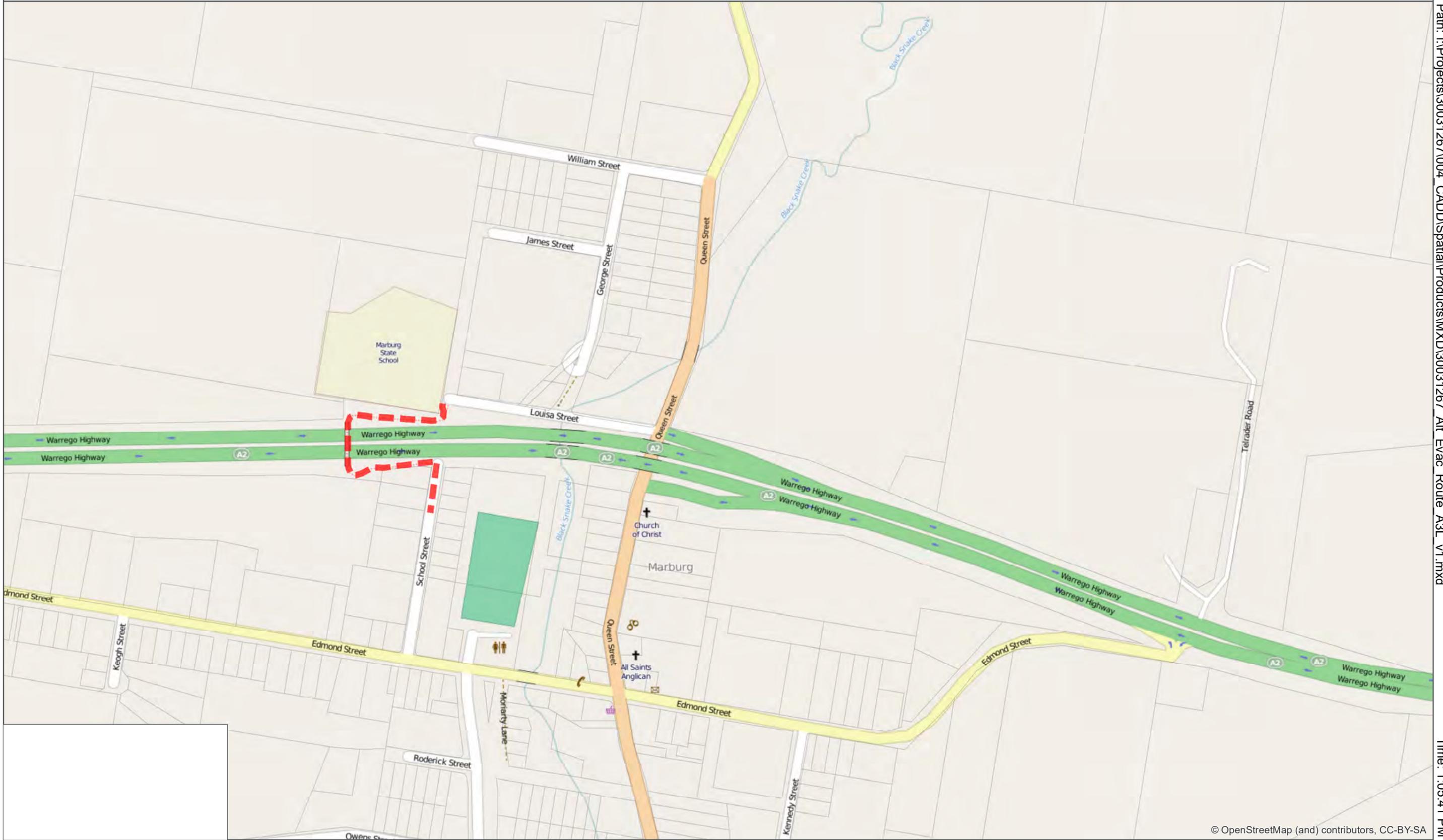


Sources: Esri, DeLorme, NAVTEQ, TomTom, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong), swisstopo, and the GIS User Community

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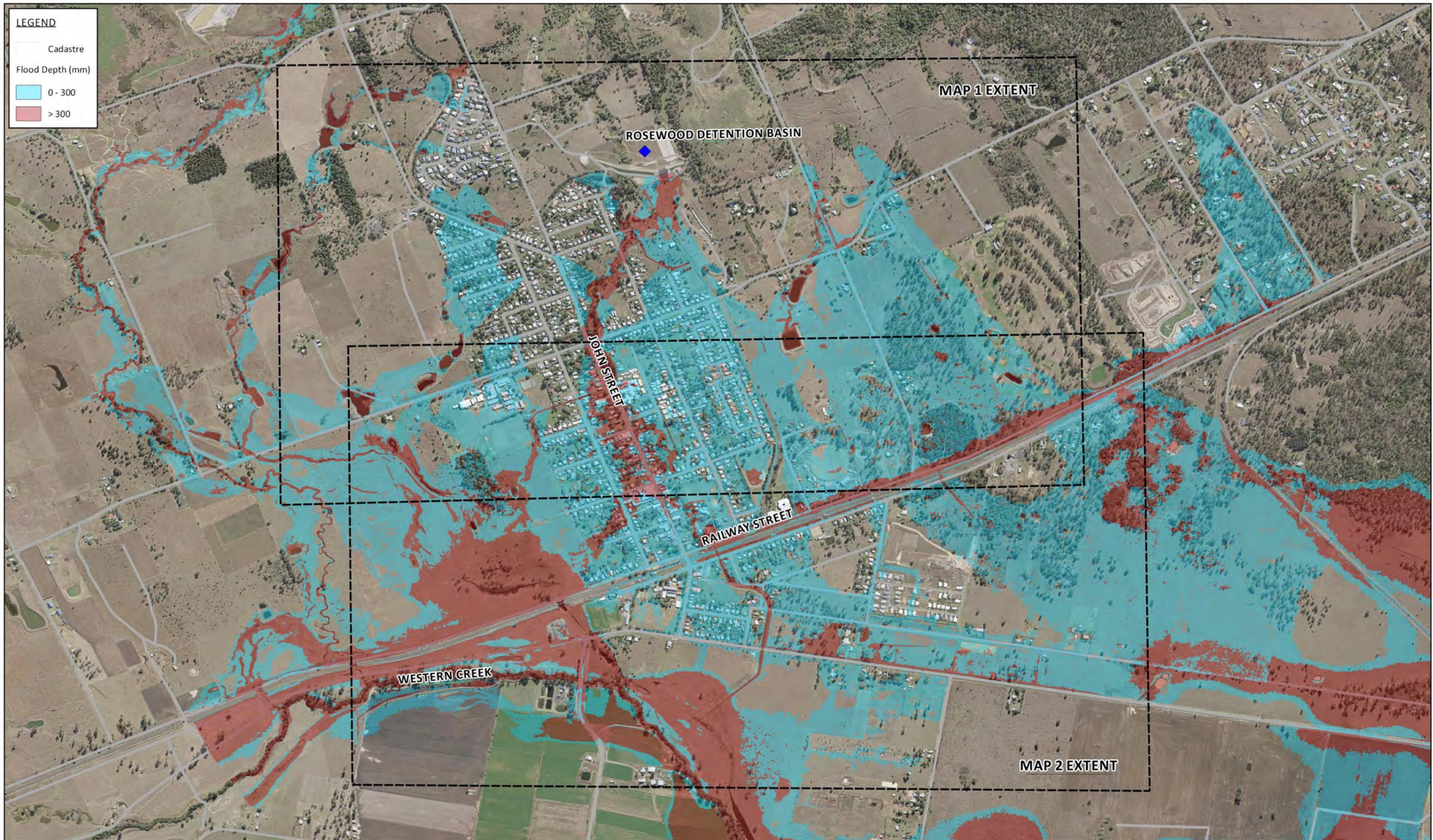
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LEGEND

- Cadastre
- Flood Depth (mm)
- 0 - 300
- > 300

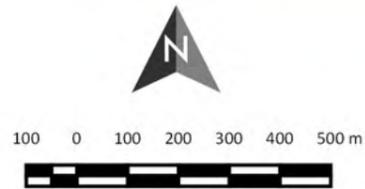
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Emergency Action Plan

PROJECT NO: 30031999

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MAP NO: 01

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REVISION: 01

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AUTHOR: JG

SOURCES: ESRI IMAGERY

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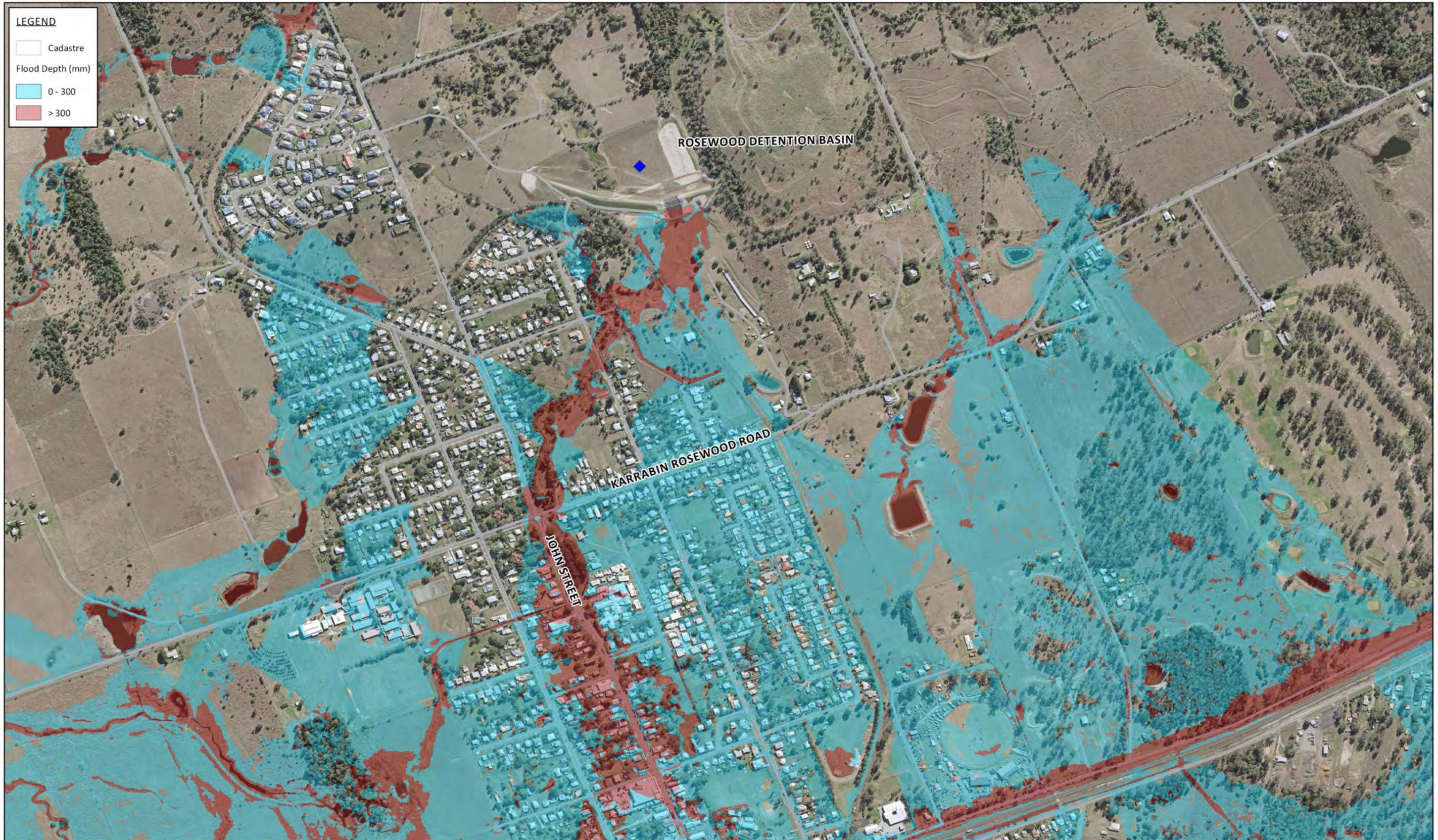
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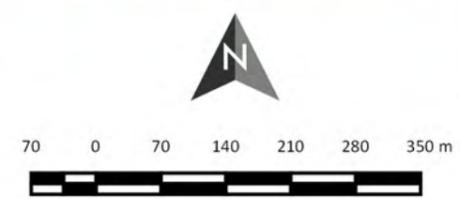
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Emergency Action Plan

PROJECT NO: 30031999

MAP TITLE: Flood Depths, PMP DF Event, Map 1 of 2

MAP NO: 02

COORDINATE SYSTEM: GDA 94 / MGA ZONE 56



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STATUS: DRAFT

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AUTHOR: JG

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CONSULTANT:



Member of the Surbana Jurong Group



PROJECT TITLE: Rosewood Detention Basin Upgrade
Emergency Action Plan

PROJECT NO: 30031999

MAP TITLE: Flood Depths, PMP DF Event, Map 2 of 2

MAP NO: 03

COORDINATE SYSTEM: GDA 94 / MGA ZONE 56

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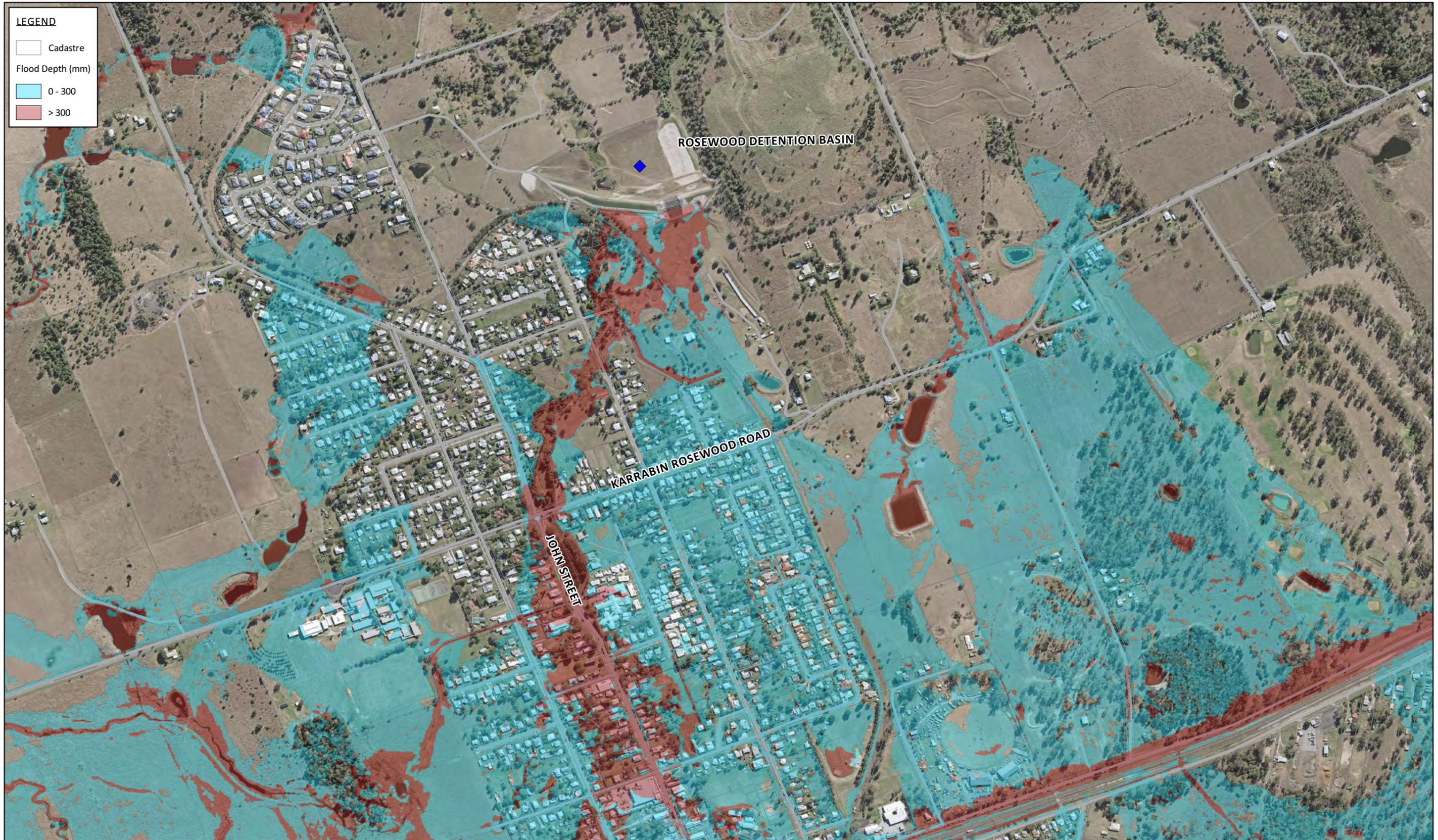
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CLIENT:

CONSULTANT:

Member of the Surbana Jurong Group



LEGEND

- Cadastre
- Flood Depth (mm)
- 0 - 300
- > 300

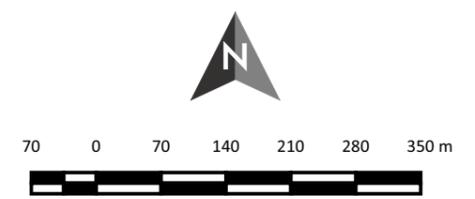
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Emergency Action Plan

PROJECT NO: 30031999

MAP TITLE: Flood Depths, PMP DF Event with Dam Failure,
Map 1 of 2

MAP NO: 04

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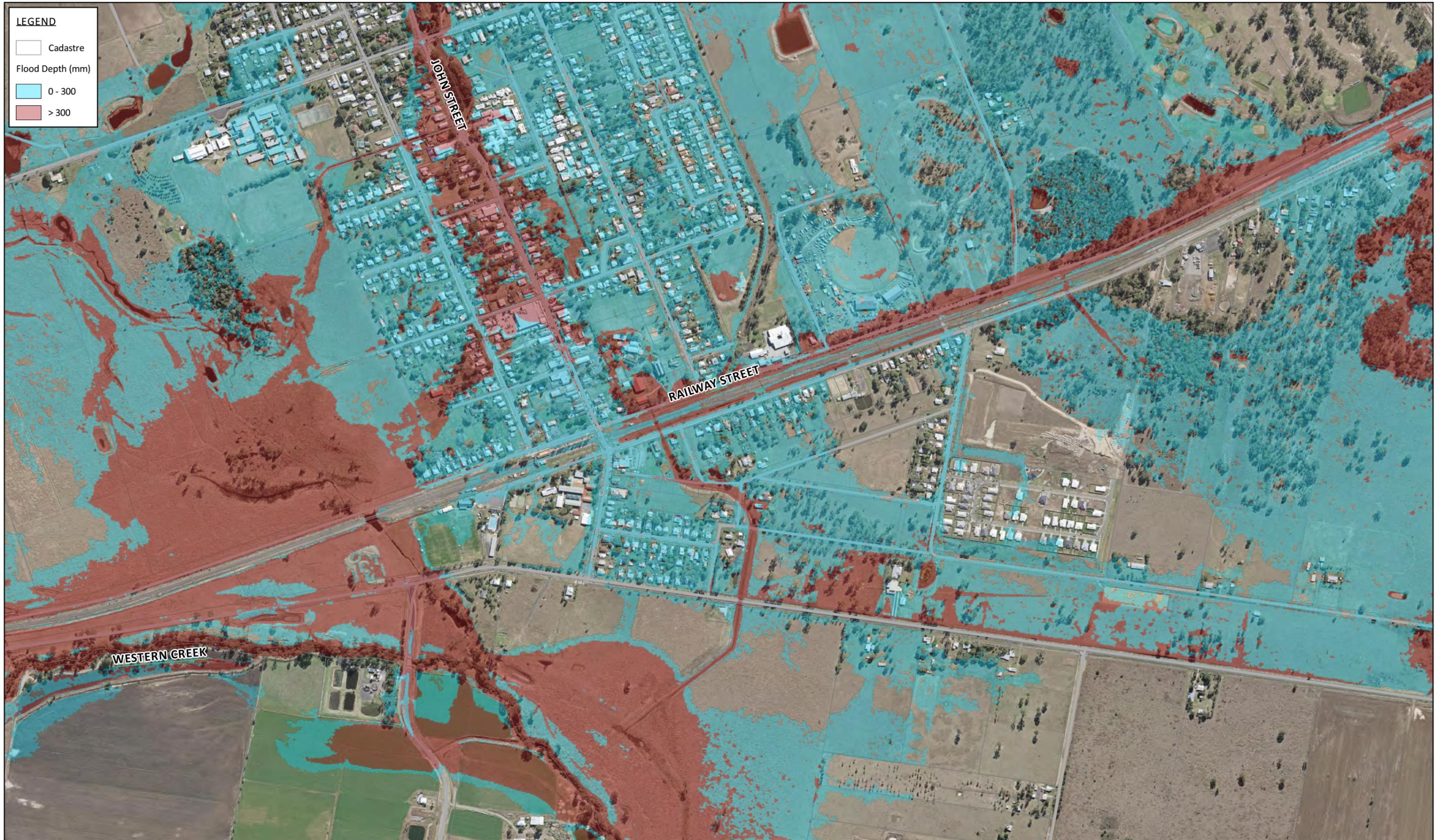
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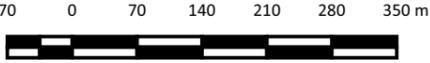
Member of the Surbana Jurong Group



LEGEND

 Cadastre
 Flood Depth (mm)
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PROJECT TITLE: Rosewood Detention Basin Upgrade
 Emergency Action Plan
PROJECT NO: 30031999
MAP TITLE: Flood Depths, PMP DF Event with Dam Failure,
 Map 2 of 2
MAP NO: 05
COORDINATE SYSTEM: GDA 94 / MGA ZONE 56

REVISION: 01
STATUS: DRAFT
PAGE SIZE: A3
AUTHOR: JG
SOURCES: ESRI IMAGERY
DATE: 01/12/17

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 Disclaimer: While all reasonable care has been taken to ensure the information contained on this map is up to date and accurate, this map contains data from a number of sources - no warranty is given that the information contained on this is free from error or omission. Any reliance placed on such information shall be at the sole risk of the user. Please verify the accuracy of all information prior to using it. This map is not a design document.

CLIENT:



CONSULTANT:



Member of the Surbana Jurong Group



PROJECT TITLE: Rosewood Detention Basin Upgrade
Emergency Action Plan

PROJECT NO: 30031999

MAP TITLE: Flood Depths, 1% AEP Event, Map 1 of 2

MAP NO: 06

COORDINATE SYSTEM: GDA 94 / MGA ZONE 56

REVISION: 01

STATUS: DRAFT

PAGE SIZE: A3

AUTHOR: JG

SOURCES: ESRI IMAGERY

DATE: 01/12/17

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CLIENT:

CONSULTANT:

Member of the Surbana Jurong Group



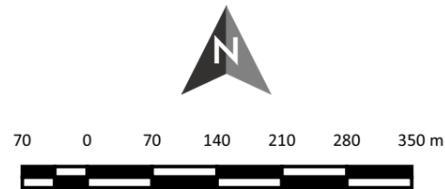
PROJECT TITLE: Rosewood Detention Basin Upgrade
Emergency Action Plan

PROJECT NO: 30031999

MAP TITLE: Flood Depths, 1% AEP Event, Map 2 of 2

MAP NO: 07

COORDINATE SYSTEM: GDA 94 / MGA ZONE 56



REVISION: 01

STATUS: DRAFT

PAGE SIZE: A3

AUTHOR: JG

SOURCES: ESRI IMAGERY

DATE: 01/12/17

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CLIENT:

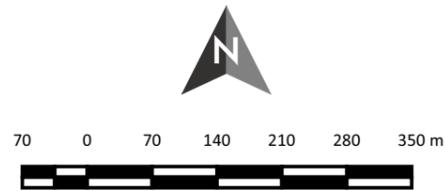


CONSULTANT:





PROJECT TITLE: Rosewood Detention Basin Upgrade
Emergency Action Plan
PROJECT NO: 30031999
MAP TITLE: Flood Depths, 1% AEP Event with Dam Failure,
Map 1 of 2
MAP NO: 08
COORDINATE SYSTEM: GDA 94 / MGA ZONE 56



REVISION: 01
STATUS: DRAFT
PAGE SIZE: A3
AUTHOR: JG
SOURCES: ESRI IMAGERY
DATE: 01/12/17

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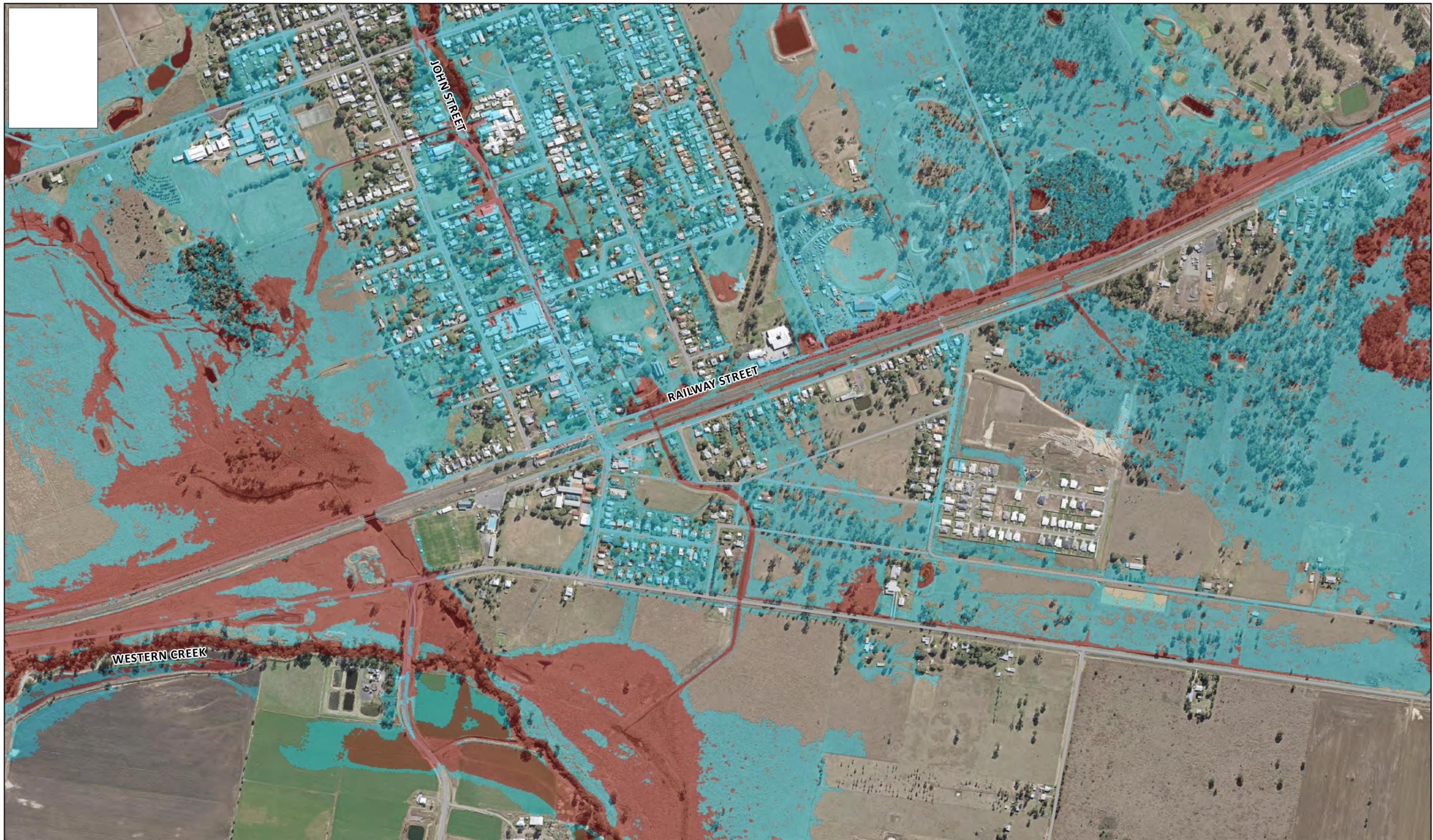
Disclaimer: While all reasonable care has been taken to ensure the information contained on this map is up to date and accurate, this map contains data from a number of sources - no warranty is given that the information contained on this is free from error or omission. Any reliance placed on such information shall be at the sole risk of the user. Please verify the accuracy of all information prior to using it. This map is not a design document.

CLIENT:

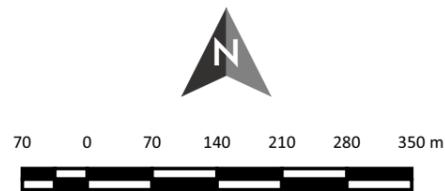


CONSULTANT:





PROJECT TITLE: Rosewood Detention Basin Upgrade
 Emergency Action Plan
PROJECT NO: 30031999
MAP TITLE: Flood Depths, 1% AEP Event with Dam Failure,
 Map 2 of 2
MAP NO: 09
COORDINATE SYSTEM: GDA 94 / MGA ZONE 56



REVISION: 01
STATUS: DRAFT
PAGE SIZE: A3
AUTHOR: JG
SOURCES: ESRI IMAGERY
DATE: 01/12/17

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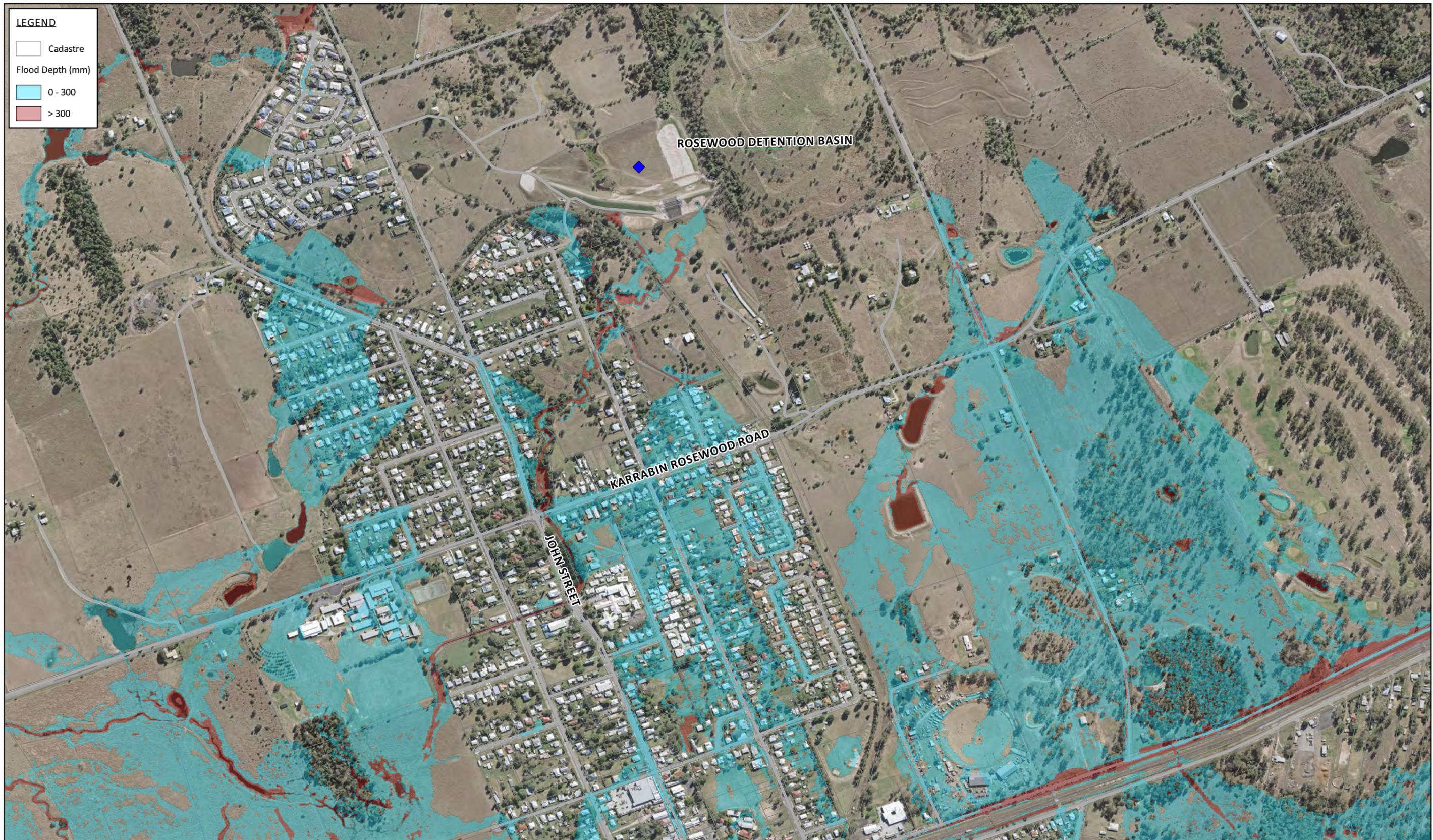
Disclaimer: While all reasonable care has been taken to ensure the information contained on this map is up to date and accurate, this map contains data from a number of sources - no warranty is given that the information contained on this is free from error or omission. Any reliance placed on such information shall be at the sole risk of the user. Please verify the accuracy of all information prior to using it. This map is not a design document.

CLIENT:



CONSULTANT:





LEGEND

- Cadastre
- Flood Depth (mm)**
- 0 - 300
- > 300

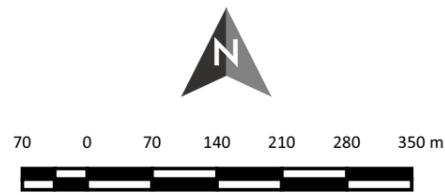
PROJECT TITLE: Rosewood Detention Basin Upgrade
Emergency Action Plan

PROJECT NO: 30031999

MAP TITLE: Flood Depths, 10% AEP Event, Map 1 of 2

MAP NO: 10

COORDINATE SYSTEM: GDA 94 / MGA ZONE 56



REVISION: 01

STATUS: DRAFT

PAGE SIZE: A3

AUTHOR: JG

SOURCES: ESRI IMAGERY

DATE: 01/12/17

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CLIENT:



CONSULTANT:





PROJECT TITLE: Rosewood Detention Basin Upgrade
Emergency Action Plan

PROJECT NO: 30031999

MAP TITLE: Flood Depths, 10% AEP Event, Map 2 of 2

MAP NO: 11

COORDINATE SYSTEM: GDA 94 / MGA ZONE 56

REVISION: 01

STATUS: DRAFT

PAGE SIZE: A3

AUTHOR: JG

SOURCES: ESRI IMAGERY

DATE: 01/12/17

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Disclaimer: While all reasonable care has been taken to ensure the information contained on this map is up to date and accurate, this map contains data from a number of sources - no warranty is given that the information contained on this is free from error or omission. Any reliance placed on such information shall be at the sole risk of the user. Please verify the accuracy of all information prior to using it. This map is not a design document.

CLIENT:

CONSULTANT:

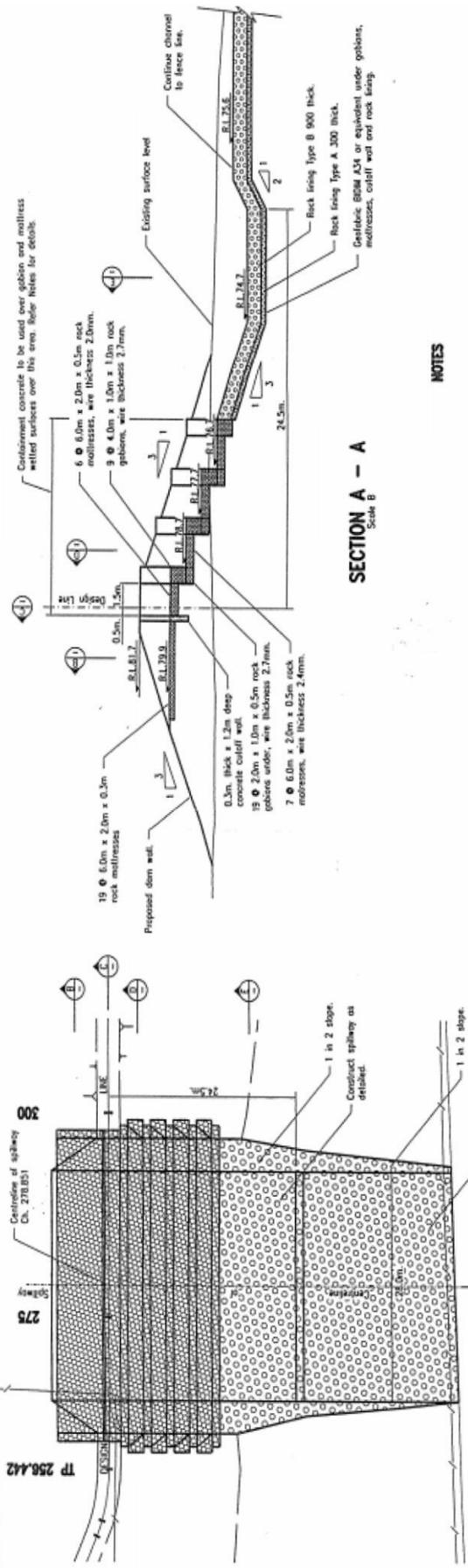
Member of the Surbana Jurong Group

**APPENDIX B
SUPPORTING INFORMATION**

The following supporting information and documentation has been included with this EAP:

Document	Details
Engineering Details	Plans and sections detailing original Rosewood Detention Basin, and the 2016 embankment crest raise upgrade
Spillway Discharge Curve	Chart detailing spillway discharge flow rate versus water level
Log Form	Form that can be used to record events and actions
Communications Form	Form that can be used for sending of information relating this EAP
Water Level Rate of Rise Record Sheet	Blank sheets for recording storage levels and time of reading. Data is used to develop rate of rise charts
Water Level Rate of Rise Chart	Blank chart that can be used to plot the water level in the Rosewood Detention Basin versus time (assist in predicting water levels). Charts can be used to assess when basin water levels may reach critical levels (spillway crest, embankment crest)
Location of Monitoring Instrumentation Map	An aerial map for the location of Monitoring Instrumentation

APPENDIX B



NOTES

MATRESSES AND GABIONS:

- Material for mattresses and gabions shall consist of hard, dense, durable, rock fragments. Water absorption (AS 2758) not exceeding 2.3%.
- Wire for mattresses and gabions shall be plastic coated.
- 100% of the gabions shall be 60mm x 60mm x 60mm for mattresses and 80mm x 120mm x 250mm for gabions.
- Rock for mattresses and gabions shall have a porosity size between 125mm and 250mm.

ROCK PROTECTION:

- Material for rock protection shall consist of hard, dense, durable rock fragments. Water absorption (AS 2758) not exceeding 2.3%.
- Rock protection Type A shall be wet grouted with the following limits:
 - (1) Minimum size: 500mm.
 - (2) Not less than 50% by mass longer than 200mm.
 - (3) Not more than 10% smaller than 50mm.
- Rock protection Type B shall consist of boulders not more than 100mm maximum dimension, which shall be at least 50% longer than 500mm, and not less than 100mm.
- Rock protection shall be spread to the thickness shown on the drawing, in such a manner that the fair material is generally toward the underside of the layer, that the rock protection is stable without the use of mortar.

CONSUMMATE CONCRETE:

- The surface type of the rock mattresses and gabions where indicated shall be finished by placing and working concrete down into the voids. The concrete shall have a characteristic strength of 20MPa, and a maximum aggregate size of 10mm, and shall be worked down into the voids by hand. The concrete shall be placed in accordance with the drawing, and shall be finished in accordance with the drawing. The depth of concrete placed shall be between 150mm and 200mm. Slump shall be 60mm - 80mm. The concrete cover over the wire fabric of the mattresses shall be 20mm.

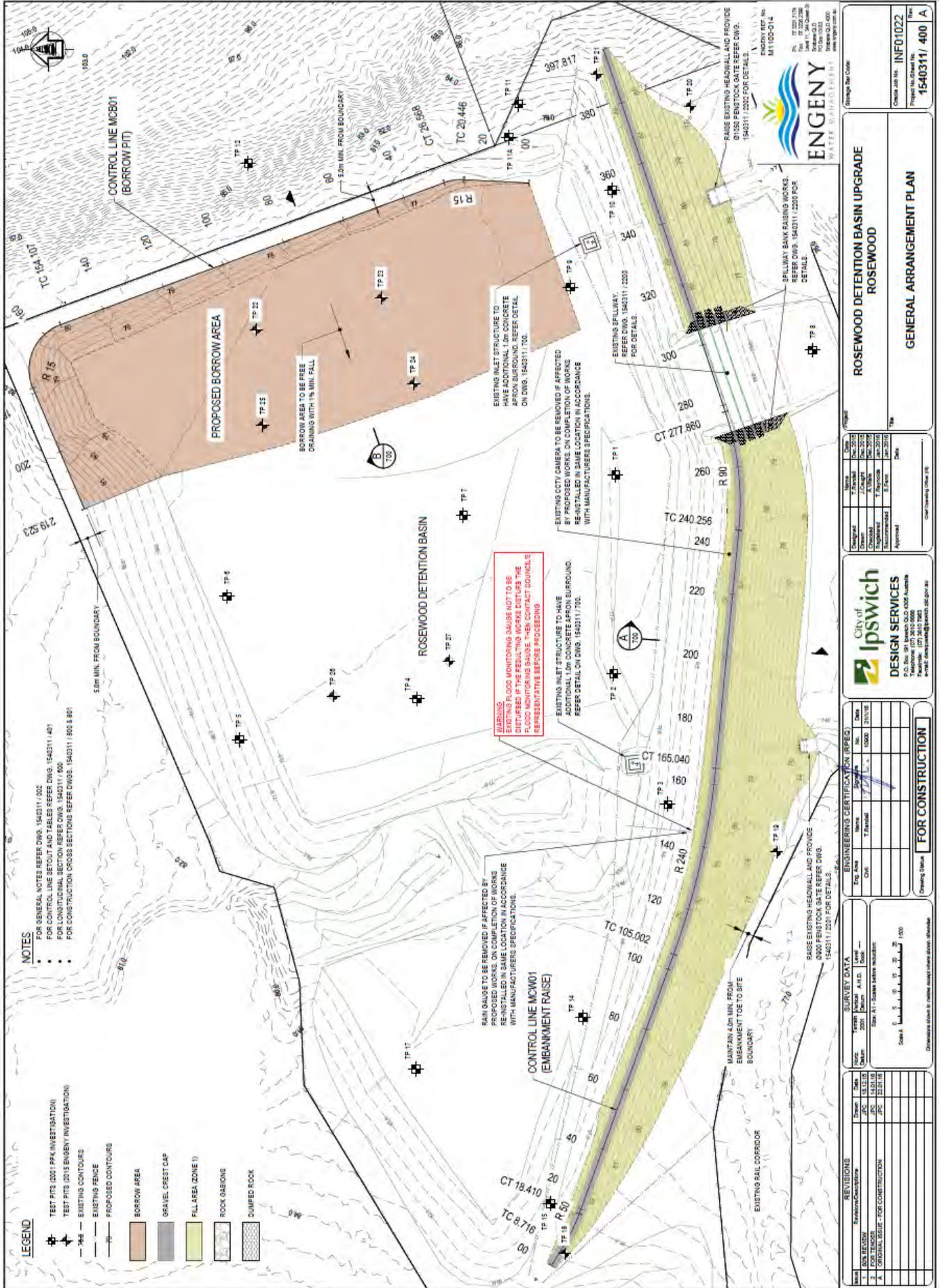
EMBANKMENT PROTECTION:

- Gravel, sand, etc. into embankment surfaces as directed by the Engineer.
- All disturbed/exposed areas to be hydroseeded.

LEGEND

- Proposed Top of Earthworks
- Proposed Bottom of Earthworks
- Existing Fence
- Proposed Outlet Pipe

<p>ROSEWOOD DETENTION BASIN ROSEWOOD SPILLWAY DETAILS - APPENDIX B</p> <p>Doc Status: SCHEME Scale: A1 No: 198 Rev: A Day: 2001028.201</p>	
<p>DESIGNED BY: []</p> <p>CHECKED BY: []</p> <p>APPROVED BY: []</p>	<p>SCALE A: 1:100</p> <p>SCALE B: 1:125</p>
<p>IPSWICH CITY COUNCIL</p> <p>Phone (07) 3810 7894 Fax (07) 3810 7937</p> <p>9 SOUTH STREET IPSWICH QNSW P.O. BOX 101</p>	
<p>IPSWICH</p> <p>Project: []</p> <p>Drawn: []</p> <p>Checked: []</p> <p>Scale: []</p> <p>Date: []</p>	



NOTES

- FOR GENERAL NOTES REFER DWG. 1540311/002
- FOR CONTROL LINE SETOUT AND TABLES REFER DWG. 1540311/401
- FOR LONGITUDINAL SECTION REFER DWG. 1540311/400
- FOR CONSTRUCTION CROSS SECTIONS REFER DWGS. 1540311/800 & 801

LEGEND

TP 1-27	TEST PITS (D01 SPA INVESTIGATION)
--- (dashed)	EXISTING CONTOURS
--- (solid)	PROPOSED CONTOURS
■ (brown)	BORROW AREA
■ (grey)	GRAVEL CREST CAP
■ (green)	FILL AREA (ZONE 1)
■ (hatched)	ROCK GABIONS
■ (cross-hatched)	DUMPED ROCK



Storage Bar Code
ROSEWOOD DETENTION BASIN UPGRADE
ROSEWOOD
GENERAL ARRANGEMENT PLAN

Client Job No.	INFO1022
Project No. (Client Ref.)	1540311/400 (A)

Checked	Date
Drawn	Date
Designed	Date
Engineered	Date
Approved	Date

City of Ipswich
DESIGN SERVICES
 P.O. Box 91 Ipswich QLD 4702 Australia
 Telephone (07) 3610 0000
 Email: design@cityofipswich.qld.gov.au

FOR CONSTRUCTION

Engineering Officer	_____
Contract No.	_____

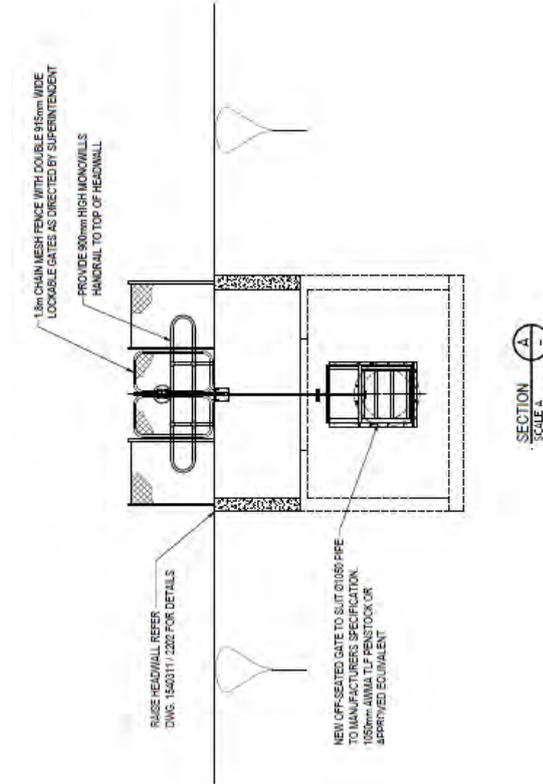
ENGINEERING CERTIFICATION (RPEP)

Eng. Name	_____	No.	_____
Eng. No.	_____	Issue Date	_____
Exp. Date	_____	Rev.	_____

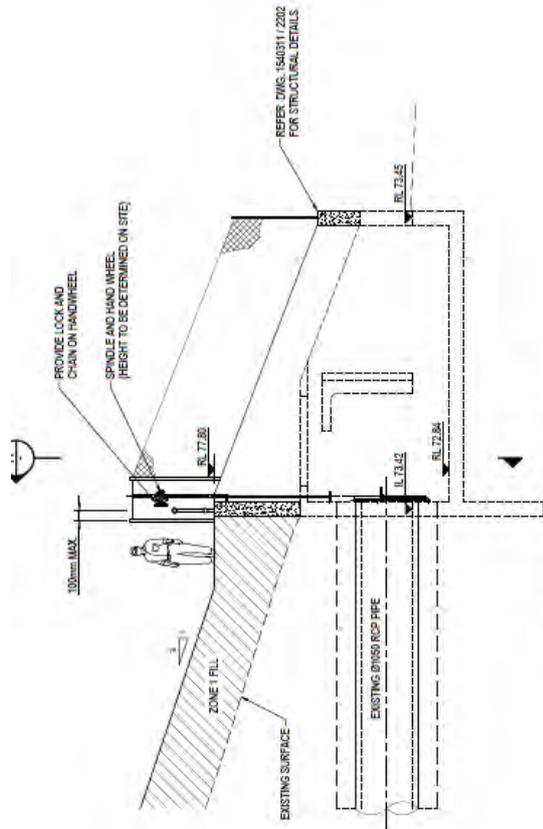
REVISIONS

No.	Date	By	Description
1	15/01/18	JPC	FOR TENDER
2	15/01/18	JPC	FOR CONSTRUCTION

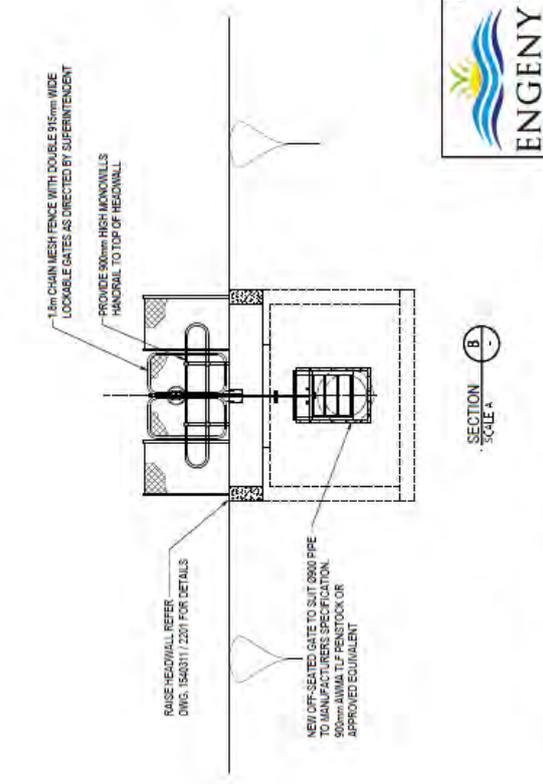
Scale: 1:1000
 Date: 15/01/2018
 Drawing No: 1540311/2301



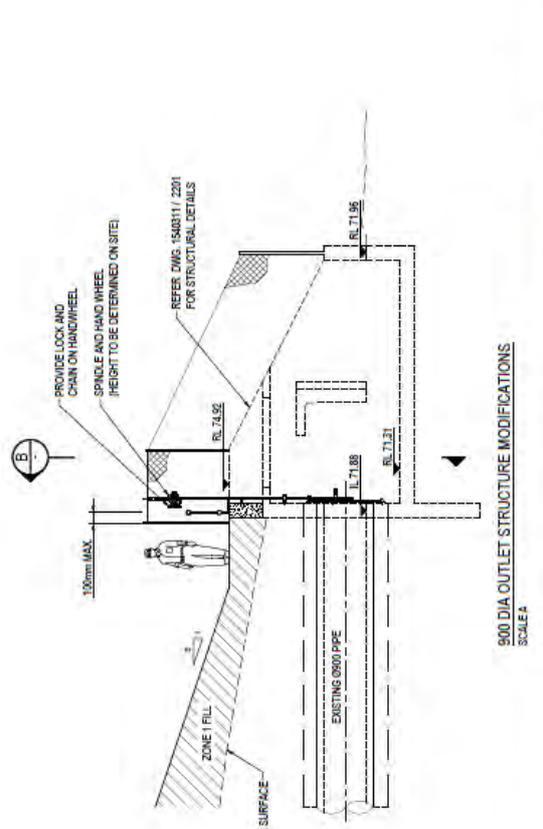
SECTION A
SCALE 1:10



1050 DIA OUTLET STRUCTURE MODIFICATIONS
SCALE 1:10



SECTION B
SCALE 1:10



900 DIA OUTLET STRUCTURE MODIFICATIONS
SCALE 1:10



 ENGENY
 WATER SERVICES AUSTRALIA
 1540311/701 A

ROSEWOOD DETENTION BASIN UPGRADE ROSEWOOD	
Project No./Draw No.	1540311/ 701 A
Check No.	INF01022
Issue	1

Check	Date
Checked	20/07/16
Approved	20/07/16



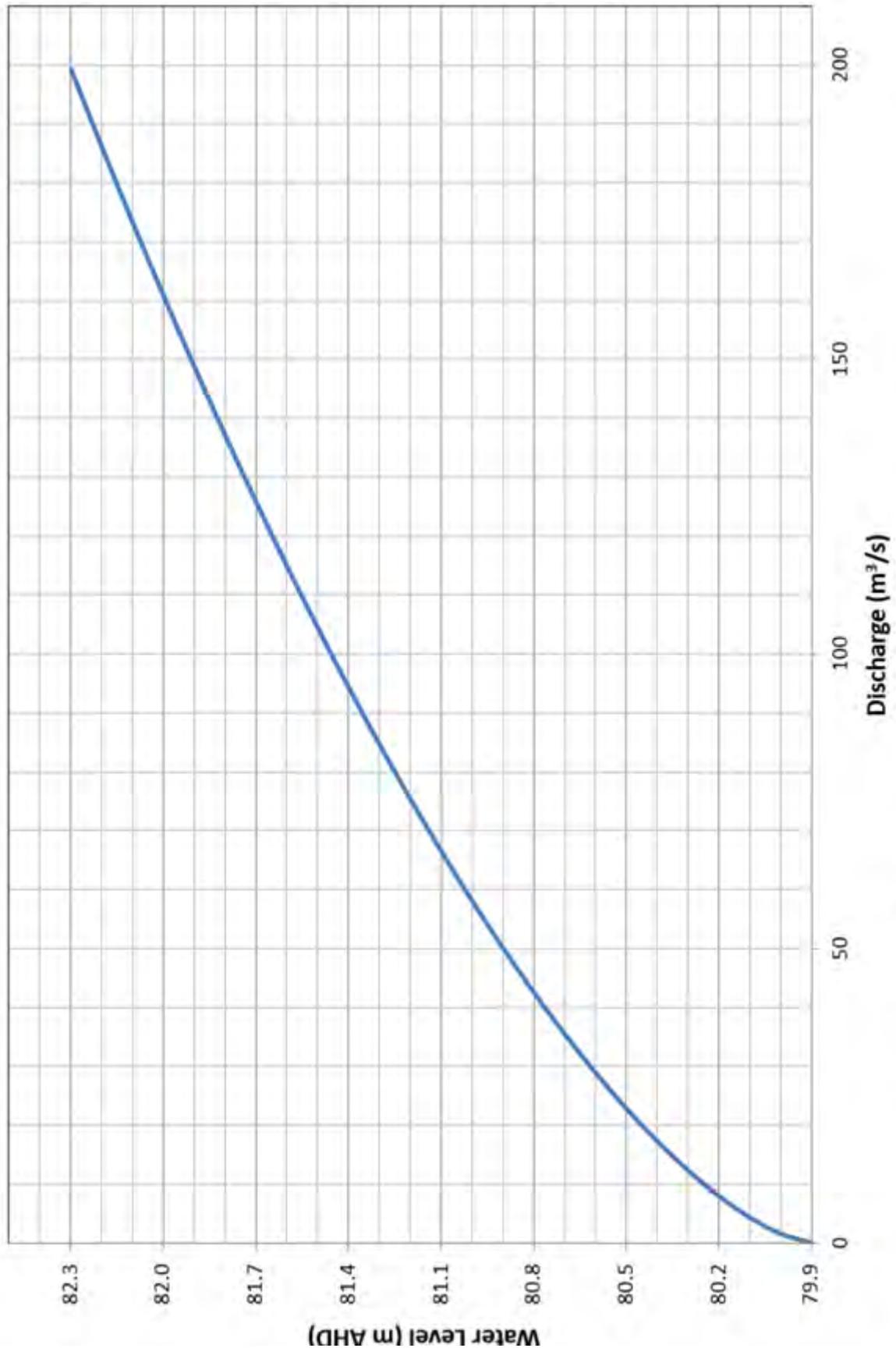
 City of Ipswich
 DESIGN SERVICES
 P.O. Box 151 Ipswich QLD 4705 Australia
 Telephone (07) 3510 0906
 Email: design@ipswich.qld.gov.au

REVISIONS	DATE	BY	DESCRIPTION
1	20/07/16	JAC	FOR TENDER
2	14/07/16	JAC	FOR TENDER
3	22/07/16	JAC	FOR CONSTRUCTION

ENGINEERING CERTIFICATION (PEEC)	NAME	NO.	DATE
Eng. Area	1747	1	20/07/16
City	1	10000	20/07/16

REVISIONS	DATE	BY	DESCRIPTION
1	20/07/16	JAC	FOR TENDER
2	14/07/16	JAC	FOR TENDER
3	22/07/16	JAC	FOR CONSTRUCTION

FOR CONSTRUCTION



Discharge Rating Curve for Overflow Spillway

City of Ipswich

**ROSEWOOD FLOOD DETENTION BASIN
EMERGENCY ACTION PLAN COMMUNICATION
Communications Form**

Communication To:

Name / Title *Date* *Time (24 hr)*.....
Phone / Fax Number *Email Address*.....

Communication From:

Name / Title
Phone / Fax Number *Email Address*.....

Current Rosewood Detention Basin EAP Response Level (Circle Current Level)

ALERT

LEAN-FORWARD

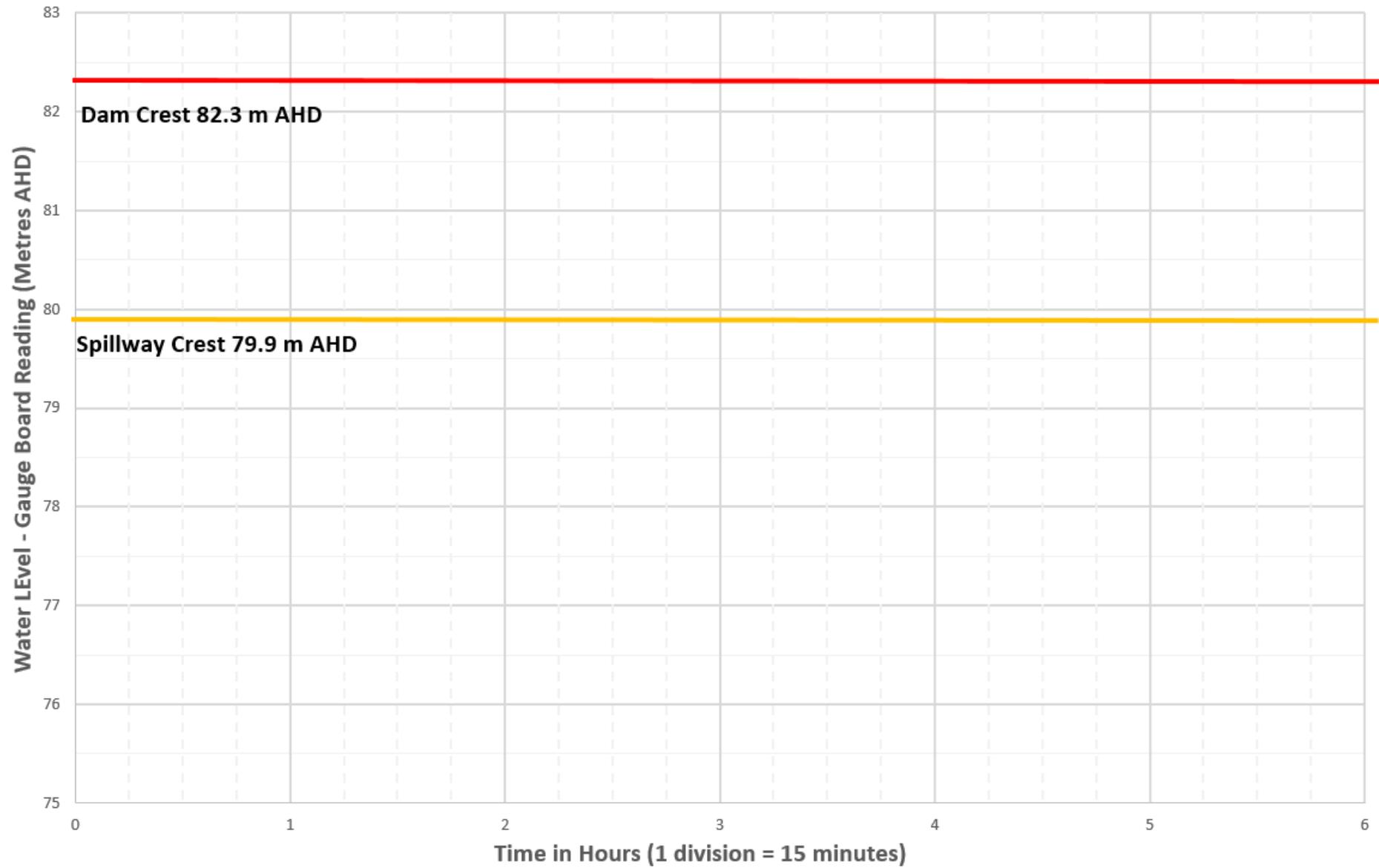
STAND-UP

STAND-DOWN

MESSAGE:

Rosewood Flood Detention Basin Water Level Vs Time

6 hour chart



**LOCATION OF MONITORING INSTRUMENTATION
(Rosewood Detention Basin)**



APPENDIX F EMERGENCY ALERT REQUEST FORMS

**APPENDIX F1
SUNNY DAY FAILURE EMERGENCY ALERT REQUEST FORM**



EMERGENCY ALERT REQUEST

Location: Springfield Lakes Dams

Date: / /
Time: : hrs

Requesting Officer:

Telephone:

Agency/Position:

Email:

Event Type	<input type="checkbox"/> Cyclone	<input type="checkbox"/> Storm Surge	<input type="checkbox"/> Flash Flood	<input type="checkbox"/> Flood
	<input type="checkbox"/> Bushfire	<input type="checkbox"/> Fire Incident	<input type="checkbox"/> Smoke or Toxic Plume	<input type="checkbox"/> Chemical Spill
	<input type="checkbox"/> Tsunami (NOTE Tsunami EA campaigns will be sent as Location Based Text Message ONLY)			
	<input checked="" type="checkbox"/> Other (please specify): Dam Failure – Sunny Day Dam Failure			
Message Severity	<input checked="" type="checkbox"/> Emergency Warning (NOTE activates the SEWS)		<input type="checkbox"/> Watch & Act	<input type="checkbox"/> Advice
Campaign Mode	<input checked="" type="checkbox"/> Voice		<input checked="" type="checkbox"/> SMS – Location Based	<input type="checkbox"/> SMS – Service Address Based
LDMG Advised	<input type="checkbox"/> YES <input type="checkbox"/> NO	DDMG Advised	<input type="checkbox"/> YES <input type="checkbox"/> NO	

Threat Direction Required?	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	Note: Can only be used for Emergency Warnings. Indicate direction on map
----------------------------	---	--

STEP 1. EA Polygon Area: <input type="checkbox"/> Map attached	STEP 2. Filename:
STEP 3. Spatial format: (Indicate the format used) <input checked="" type="checkbox"/> KML *.kml (preferred format as per Spatial guidelines) <input type="checkbox"/> ESRI *.dbf, *.prj, *.shp, *.shx <input type="checkbox"/> GML *.gml, *.xsd <input type="checkbox"/> MapInfo TAB *.dat, *.id, *.map, *.tab <input type="checkbox"/> MapInfo Mid/Mif *.MIDI Sequence, *.mif <input type="checkbox"/> OTHER(insert)	STEP 4. Messaging/spatial data, is it supplied via <input checked="" type="checkbox"/> DMportal - specify filenames below <input type="checkbox"/> FTP - specify filenames below <input type="checkbox"/> Email <input type="checkbox"/> Other (please specify) Filename: _____

Type (please use capitals for clarity) or handwrite Voice message (Ideally message should be less than 450 characters).

Emergency emergency this is a dam failure warning message from Ipswich city council. imminent failure of Rosewood detention basin. Localities affected Rosewood and Karrabin take action to protect life now warn neighbours and move to higher ground. for more information listen to ABC radio or visit www.disaster.qld.gov.au

Type or handwrite SMS below (maximum of 160 characters including spaces)

Emergency Emergency. Ipswich Council advises imminent failure of Springfield Lakes dams. Take action Now. Warn Others. Move to Higher Ground. Visit [www dot disaster dot q l d dot gov dot a u](http://www.disaster.qld.gov.au).

SEND TO _____ TO CONFIRM _____

FOR USE BY SDCC			
Requesting Officer:	Signature	/ /20	<input type="checkbox"/> Manual Transmission <input type="checkbox"/> EMS Transmission EA Campaign No. _____ EMS Report ID: _____
EA User Name:	Signature	/ /20	
Authorising Officer Name:	Signature	/ /20	
EA Manual and the Emergency Alert Request Form Template are available at: www.disaster.qld.gov.au			

DO NOT SEND THIS PAGE

GUIDE TO COMPLETE STEPS 1 – 4

STEP 1.	EA Polygon Area (e.g. detailed description and location reference to allow positive identification of message area, including street names with cross street, areas of interest such as parks, rivers, dams, coastal areas) it is preferable to attach a map identifying the message area. If a Threat Direction has been requested, please clearly indicate it on the map.
STEP 2.	Tick applicable box and note the file name.
STEP 3.	<p>Voice Message: type or handwritten the required message. As the message will be translated by a text-to-speech process it is important that words are not unintelligible when translated e.g. "qld" used in a web site address must be entered as "q l d", similarly the word "dot" must be entered into a web address instead of a full stop.</p> <p>Voice Message ideally should have no more than 450 characters including spaces. Do not use special characters – refer to EA Manual for details. Warning message must start with "Emergency Emergency"</p>
STEP 4.	SMS Is restricted to a maximum of 160 characters including spaces and punctuation. Either type the message or handwrite the characters into the boxes.

Example: *SMS Flash Flood Warning from SES for Opal Valley-immediate threat to life/property-Warn others-Leave area/prepare NOW or seek higher ground-Listen to local radio*

If using template EA messages, please provide the appropriate variables that are in the template message guides. Refer to the Queensland Emergency Alert Manual for copies of the template message guides.

//RELEVANTAUTHORITY//

//DIRECTIONANDAREA//

//NAME//

//NUMBER//

//TIME//

//TIMEandDAY//

//DIRECTIONandPLACE//

//HOURSMINUTES//

//PLACE//

//PLACEPLACE//

//EXTERNAL/INTERNAL//

//SUBURBS//

//FireIncident//

APPENDIX F2
PMF Failure – Lean Forward Activation Level
Emergency Alert Request Form



EMERGENCY ALERT REQUEST

Location: Springfield Lakes Dams

Date: / /
Time: : hrs

Requesting Officer:

Telephone:

Agency/Position:

Email:

Event Type

- Cyclone Storm Surge Flash Flood Flood
 Bushfire Fire Incident Smoke or Toxic Plume Chemical Spill
 Tsunami (NOTE Tsunami EA campaigns will be sent as Location Based Text Message ONLY)
 Other (please specify): Extreme Flood Event Dam Failure

Message Severity

- Emergency Warning (NOTE activates the SEWS) Watch & Act Advice

Campaign Mode

- Voice SMS – Location Based SMS – Service Address Based

LDMG Advised

- YES NO

DDMG Advised

- YES NO

Threat Direction Required?

- YES NO

Note: Can only be used for Emergency Warnings. Indicate direction on map

STEP 1. EA Polygon Area: Map attached

STEP 2. Filename:

STEP 3. Spatial format: (Indicate the format used)

- KML *.kml (preferred format as per Spatial guidelines)
 ESRI *.dbf, *.prj, *.shp, *.shx
 GML *.gml, *.xsd
 MapInfo TAB *.dat, *.id, *.map, *.tab
 MapInfo Mid/Mif *.MIDI Sequence, *.mif
 OTHER(insert)

STEP 4. Messaging/spatial data, is it supplied via

- DMportal - specify filenames below
 FTP - specify filenames below
 Email
 Other (please specify)

Filename:

Type (please use capitals for clarity) or handwrite Voice message (Ideally message should be less than 450 characters).

Emergency emergency this is a dam failure warning message from Ipswich city council. imminent failure of Rosewood detention basin. Localities affected Rosewood and Karrabin take action to protect life now warn neighbours and move to higher ground. for more information listen to ABC radio or visit www.disaster.qld.gov.au

Type or handwrite SMS below (maximum of 160 characters including spaces)

Emergency Emergency. Ipswich Council advises possible failure of Springfield Lakes dam. Take action Now. Warn Others. Plan move to Higher Ground. Visit www.disaster.qld.gov.au

SEND TO

TO CONFIRM

FOR USE BY SDCC

Requesting Officer:

Signature

/

/20

EA User Name:

Signature

/

/20

Authorising Officer Name:

Signature

/

/20

Manual Transmission

EMS Transmission

EA Campaign No. _____

EMS Report ID: _____

EA Manual and the Emergency Alert Request Form Template are available at: www.disaster.qld.gov.au

DO NOT SEND THIS PAGE

GUIDE TO COMPLETE STEPS 1 – 4

STEP 1.	EA Polygon Area (e.g. detailed description and location reference to allow positive identification of message area, including street names with cross street, areas of interest such as parks, rivers, dams, coastal areas) it is preferable to attach a map identifying the message area. If a Threat Direction has been requested, please clearly indicate it on the map.
STEP 2.	Tick applicable box and note the file name.
STEP 3.	<p>Voice Message: type or handwritten the required message. As the message will be translated by a text-to-speech process it is important that words are not unintelligible when translated e.g. “qld” used in a web site address must be entered as “q l d”, similarly the word “dot” must be entered into a web address instead of a full stop.</p> <p>Voice Message ideally should have no more than 450 characters including spaces. Do not use special characters – refer to EA Manual for details. Warning message must start with “Emergency Emergency”</p>
STEP 4.	SMS Is restricted to a maximum of 160 characters including spaces and punctuation. Either type the message or handwrite the characters into the boxes.

Example: *SMS Flash Flood Warning from SES for Opal Valley-immediate threat to life/property-Warn others-Leave area/prepare NOW or seek higher ground-Listen to local radio*

If using template EA messages, please provide the appropriate variables that are in the template message guides. Refer to the Queensland Emergency Alert Manual for copies of the template message guides.

//RELEVANTAUTHORITY//

//DIRECTIONANDAREA//

//NAME//

//NUMBER//

//TIME//

//TIMEandDAY//

//DIRECTIONandPLACE//

//HOURSMINUTES//

//PLACE//

//PLACEPLACE//

//EXTERNAL/INTERNAL//

//SUBURBS//

//FireIncident//

APPENDIX F3
PMF Failure – Stand Up Activation Level Emergency
Alert Request Form



EMERGENCY ALERT REQUEST

Location: Springfield Lakes Dams

Date: / /
Time: : hrs

Requesting Officer:

Telephone:

Agency/Position:

Email:

Event Type

- Cyclone Storm Surge Flash Flood Flood
 Bushfire Fire Incident Smoke or Toxic Plume Chemical Spill
 Tsunami (NOTE Tsunami EA campaigns will be sent as Location Based Text Message ONLY)
 Other (please specify): Extreme Flood Event Dam Failure

Message Severity

- Emergency Warning (NOTE activates the SEWS) Watch & Act Advice

Campaign Mode

- Voice SMS – Location Based SMS – Service Address Based

LDMG Advised

- YES NO

DDMG Advised

- YES NO

Threat Direction Required?

- YES NO

Note: Can only be used for Emergency Warnings. Indicate direction on map

STEP 1. EA Polygon Area: Map attached

STEP 2. Filename:

STEP 3. Spatial format: (Indicate the format used)

- KML *.kml (preferred format as per Spatial guidelines)
 ESRI *.dbf, *.prj, *.shp, *.shx
 GML *.gml, *.xsd
 MapInfo TAB *.dat, *.id, *.map, *.tab
 MapInfo Mid/Mif *.MIDI Sequence, *.mif
 OTHER(insert)

STEP 4. Messaging/spatial data, is it supplied via

- DMportal - specify filenames below
 FTP - specify filenames below
 Email
 Other (please specify)

Filename:

Type (please use capitals for clarity) or handwrite Voice message (Ideally message should be less than 450 characters).

Emergency emergency this is a dam failure warning message from Ipswich city council. imminent failure of Rosewood detention basin. Localities affected Rosewood and Karrabin take action to protect life now warn neighbours and move to higher ground. for more information listen to ABC radio or visit www.disaster.qld.gov.au

Type or handwrite SMS below (maximum of 160 characters including spaces)

Emergency Emergency. Ipswich Council advises imminent failure of Springfield Lakes dams. Take action Now. Warn Others. Move to Higher Ground. Visit [www dot disaster dot q l d dot gov dot a u](http://www.disaster.qld.gov.au).

SEND TO

TO CONFIRM

FOR USE BY SDCC

Requesting Officer:

Signature

/ /20

Manual Transmission

EA User Name:

Signature

/ /20

EMS Transmission

Authorising Officer Name:

Signature

/ /20

EA Campaign No. _____

EMS Report ID: _____

EA Manual and the Emergency Alert Request Form Template are available at: www.disaster.qld.gov.au

DO NOT SEND THIS PAGE

GUIDE TO COMPLETE STEPS 1 – 4

STEP 1.	EA Polygon Area (e.g. detailed description and location reference to allow positive identification of message area, including street names with cross street, areas of interest such as parks, rivers, dams, coastal areas) it is preferable to attach a map identifying the message area. If a Threat Direction has been requested, please clearly indicate it on the map.
STEP 2.	Tick applicable box and note the file name.
STEP 3.	<p>Voice Message: type or handwritten the required message. As the message will be translated by a text-to-speech process it is important that words are not unintelligible when translated e.g. "qld" used in a web site address must be entered as "q l d", similarly the word "dot" must be entered into a web address instead of a full stop.</p> <p>Voice Message ideally should have no more than 450 characters including spaces. Do not use special characters – refer to EA Manual for details. Warning message must start with "Emergency Emergency"</p>
STEP 4.	SMS is restricted to a maximum of 160 characters including spaces and punctuation. Either type the message or handwrite the characters into the boxes.

Example: *SMS Flash Flood Warning from SES for Opal Valley-immediate threat to life/property-Warn others-Leave area/prepare NOW or seek higher ground-Listen to local radio*

If using template EA messages, please provide the appropriate variables that are in the template message guides. Refer to the Queensland Emergency Alert Manual for copies of the template message guides.

//RELEVANTAUTHORITY//

//DIRECTIONANDAREA//

//NAME//

//NUMBER//

//TIME//

//TIMEandDAY//

//DIRECTIONandPLACE//

//HOURSMINUTES//

//PLACE//

//PLACEPLACE//

//EXTERNAL/INTERNAL//

//SUBURBS//

//FireIncident//

Appendix G – Australian Warning System Pre-prepared Messages

Appendix G shows pre-prepared Australian Warning System (AWS) messages, in accordance with the Queensland flood warning templates (July 2023) issued by the Queensland Fire and Emergency Services. The **yellow highlighted** fields indicate content that will likely requires adapting/input according to specific circumstances.

E1 FLASH FLOOD > WATCH AND ACT > PREPARE TO LEAVE

PREPARE TO LEAVE

Watch and Act - Flood



Rosewood

Warning area: Rosewood.

Warning issued: xx

Details: Flash flood conditions may occur., with possible failure of Rosewood detention basin.

Act now: Prepare to leave so you can go quickly if conditions worsen. Decide where you will go. Warn friends, family, and neighbours.

Flash Flood > Watch and Act > Prepare to Leave

PREPARE TO LEAVE – Rosewood – possible failure of Rosewood Detention Basin as at [time, day, date, year].

Warning Level: Watch and Act

Warning Area: Rosewood are downstream of Rosewood Park detention basin

People in the following places must prepare to leave:

- Rosewood

[Provide link to map of affected area – Appendix 1 of EAP]

Water levels in roads may rise rapidly in addition to rainfall. Prepare to move to higher ground.

Do not expect emergency services to come to your door.

If your life is in danger, call Triple Zero (000) immediately. For flood and storm emergency help, call the SES on 132 500.

Impacts in your area:

- Flooding above ground floor level possible in some places.
- Roads may be closed due to flooding.
- Evacuation routes might be cut off. You could be stuck.
- Power, phones, internet and water might stop working.
- Public transport could stop soon.

What you should do

- Go and stay in a safe place in a high part of Rosewood, away from the warning area. This could be with family or friends.
- If you do not have a safe place, [an evacuation centre has / evacuation centres have] been set up at:
 - venue name and full address [add map link if available].

- If you find it hard to move quickly leave as soon as you can. If you do not drive, call your support service, a family member or a friend to organise transport.
- Decide how you will get to your safe place. If you come to a flooded road, turn around and go another way. Do not drive through floodwater.
- Take your pets, pet food, pet lead or crate, mobile phone, charger, enough clothes for two days, important documents (like identification, insurance papers and passports), medicine, cash and keys with you.
- If you have very young children, pack enough nappies for up to five days, wipes, bottles, formula or baby food. Plan to not have a fridge or microwave.
- If you have children make sure they stay with you or a responsible adult.
- If it is still safe, prepare your home quickly before you leave:
 - Lift important things onto benches, tables, high shelves or upstairs.
 - Block toilets, sinks and drains with sandbags to stop sewerage backflow if you can.
 - Move cars to high ground.
 - Lock doors and windows.
 - Help others if you can.
- Stay informed:
 - Click here for all warnings [insert website/channel where this warning will be published].
 - Listen to your local radio station 94.9FM.

More information

- Ipswich City Council updates and a map of areas that flood near you, go to [\[website link\]](#)
- Weather warnings go to [Bureau of Meteorology Queensland warnings page](#).
- Power outage information, go to [Energex / Ergon](#).
- Traffic information and closed roads, go to [QLD Traffic](#) or call 13 19 40.
- Public transport information go to [Translink](#).

The next update will be issued at **[time, day, date]** or when the situation changes.

E2 FLASH FLOOD > EMERGENCY WARNING > LEAVE IMMEDIATELY

LEAVE IMMEDIATELY

Emergency Warning - Flood



Rosewood Township

Warning area: Rosewood Township

Warning issued: xx

Details: Flash flood conditions likely, with potential failure of Rosewood detention basin.

Act now: Leave immediately, or move to higher ground away from flash floodwater now.

Flash Flood > Emergency Warning > Leave Immediately

LEAVE IMMEDIATELY – Rosewood – potential failure of Rosewood Park Detention Basin as at [time, day, date, year].

Warning Level: Emergency Warning

Warning Area: Rosewood are downstream of Rosewood detention basin

People in the following places must prepare to leave:

- Rosewood

[Provide link to map of affected area – Appendix A1 of EAP]

People in these places must leave immediately. Fast moving flash floodwater may occur.

Do not expect emergency services to come to your door.

If your life is in danger, call Triple Zero (000) immediately. For flood and storm emergency help, call the SES on 132 500.

Impacts in your area:

- Flooding above ground floor level possible in some places.
- Roads may be closed due to flooding.
- Evacuation routes might be cut off. You could be stuck.
- Power, phones, internet and water might stop working.
- Public transport could stop soon.

What you should do

- Go now to a safe place in a high part of Ipswich, away from the warning area. This could be with family or friends.
- If you do not have a safe place, [an evacuation centre has / evacuation centres have] been set up at:
 - venue name and full address [add map link if available].

- If you do not drive, call your support service, a family member or a friend to organise transport.
- Take your pets, pet food, pet lead or crate, mobile phone, charger, enough clothes for two days, important documents (like identification, insurance papers and passports), medicine, cash and keys with you.
- If you have very young children, pack enough nappies for up to five days, wipes, bottles, formula or baby food. Plan to not have a fridge or microwave.
- If you have children make sure they stay with you or a responsible adult.
- Stay informed:
 - Click here for all warnings [\[insert website / channel where this warning will be published\]](#).
 - Listen to your local radio station 94.9FM.

If you are inside and can't leave safely

- Stay inside and be aware of rising floodwater.
- If floodwater comes inside, move to a higher point like the kitchen bench or second storey and call Triple Zero (000).

If you are outside

- Stay away from trees, drains, low areas, creeks, canals and floodwater.
- Move indoors away from floodwater now.

If you need to drive to get to a safe place

- Slow right down.
- Do not drive through floodwater. If the road is flooded, go a different way.
- Watch for mud, debris, damaged roads, fallen trees and landslides.
- If driving is dangerous, find a high safe place to pull over – away from trees and drains.
- Listen to your local radio station 94.9 FM for warnings and traffic updates.

More information

- Ipswich City Council updates and a map of areas that flood near you, go to [\[website link\]](#)
- Weather warnings go to [Bureau of Meteorology Queensland warnings page](#).
- Power outage information, go to [Energex / Ergon](#).
- Traffic information and closed roads, go to [QLD Traffic](#) or call 13 19 40.
- Public transport information go to [Translink](#).

The next update will be issued at [\[time, day, date\]](#) or when the situation changes.

E3 FLASH FLOOD > ADVICE > RETURN SAFELY

<h1>RETURN SAFELY</h1> <h2>Advice - Flood</h2>		
Rosewood		
Warning area:	Rosewood	
Warning issued:	XX	
Details:	Failure of Rosewood detention basin no longer possible. Flash flooding conditions have ceased.	
Act now:	If you have left, it is now safe to come back.	

Flash Flood > Advice > Return safely

RETURN SAFELY – Rosewood – flash flood conditions ceased at [time, day, date, year].

Warning Level: Advice

Warning Area: Rosewood are downstream of Rosewood Park detention basin:

- Rosewood

[Provide link to map of affected area – Appendix A1 of EAP]

Failure of detention basin no longer likely. Flash flood conditions has stopped and water has gone down. If you left, it is now safe to come back. Be careful of damage.

What you should do

- Return to your home or business to check the damage.
- Stay away from creeks, rivers and drains.
- If you have children make sure they are with you or an adult you trust.
- Drive slowly, obey all road signs and never drive through floodwaters. If the road is flooded or damaged, go another way.
- Stay away from the area unless you live or work there, or you are helping.

If your home or business has been flooded

- Check for building damage before you go inside.
- Have all electrical and gas equipment professionally tested before use.
- If water went above power points have the house checked by an electrician before turning the power back on.
- Clean and dry out the building as soon as you can.
- Be careful where you walk – do not trip or slip.
- Protect your health and safety:
 - Wear strong boots, gloves and protective clothing when cleaning up.
 - Wash your hands and clothes often.
 - Do not eat food that has touched floodwater or mud.
 - Throw away food that should be kept cold or frozen if you lost power.

- Drink only fresh drinking water, like bottled water.
- For flood and storm emergency help, call the SES on 132 500 or download the SES Assistance Queensland app. Help yourself and others if you can.

Support and recovery help

- Go to Ipswich City Council [[website](#)] for clean-up and recovery information.
- Recovery services are available [[insert details of organisations actively involved; ideally on the ground](#)]:
 - Agency – Location, full address and times.
 - Agency – Location, full address and times.
- For general relief and recovery information go to getready.qld.gov.au/after-disaster.
- Natural disasters can affect your mental health. If you need help, call any of these groups:
 - Lifeline: Go to www.lifeline.org.au or phone 13 11 14.
 - Beyond Blue: Go to www.beyondblue.org.au or phone 1300 224 636.
 - Kids Helpline: Go to www.kidshelpline.com.au or phone 1800 551 800.

This will be the last warning issued for this flood in Rosewood.