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NAME OF BUILDING (DRAFT)

Template Flood Mitigation Plan
for Kurilpa Apartments

Document Control

This Flood Mitigation Plan for *NAME OF BUILDING* is a “controlled document”. Should the recipient (user) become aware of any changes or corrections that are required please photocopy this page with relevant page(s) to be changed, note the corrections, and send them to:

- Chairman and Secretary of **NAME OF BUILDING** Body Corporate

Document Revisions

The **NAME OF BUILDING** Body Corporate Committee is responsible for controlling and ensuring revisions to this Plan.

The Flood Mitigation Plan will be reviewed and revised (if required) in the following circumstances:

- Following an event resulting in the activation of the Plan; or
- Following significant changes to the applicable Body Corporate procedures or relevant legislation

Revision No.	Revision Date	Compiled	Reviewed	Approved	Comment

Disclaimer

The **NAME OF BUILDING** Body Corporate and authors of the **NAME OF BUILDING** Mitigation Plan do not and shall not assume any responsibility whatsoever arising out of any use or reliance by any party on the content and guidance included in this Plan.

The authors have used a reasonable level of skill, care, and diligence to prepare this Plan based on site investigations at **NAME OF BUILDING** and information readily available from published sources. The authors cannot warrant the accuracy of the information provided as assumptions are in part based on third party information and will be subject to further testing and experience over time.

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1. INTRODUCTION

Since the February 2022 flood event, Resilient Kurilpa has worked with community groups, developers, building Owners, body corporates, Residents and elected member to develop a template for a Flood Mitigation Plan that can be applied by apartment Owners and body corporate committees. Applying the principles outlined in this guidance will enhance flood resilience; it does not guarantee buildings will be flood free or flood proof to any or all potential events.

Each flood event will have different characteristics and so the application of the principles and practices in the template to **NAME OF BUILDING** provide guidance only, for planning, preparation, response, and recovery pre and post flood events and must be adjusted and applied as appropriate for the actual flood event being addressed.

*Note: To produce a Flood Mitigation Plan for **NAME OF BUILDING**, this template needs to be amended to include the specific building related information for **NAME OF BUILDING**.*

1.1. CONTEXT

This document has been compiled by the **NAME OF BUILDING** Corporate Committee.

During the February 2022 floods considerable damage was sustained to the below-ground car parks and assorted infrastructure in several apartment buildings on the Kurilpa peninsula in inner Brisbane.

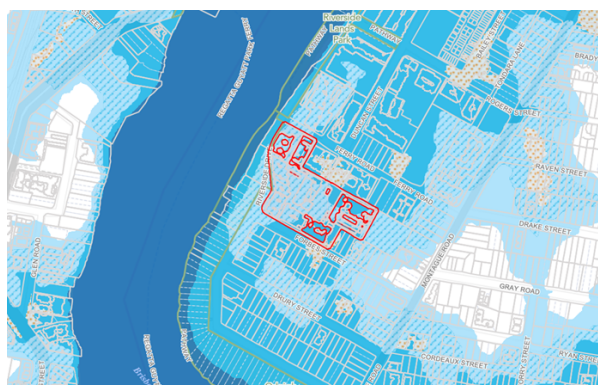
During the post flood clean-up, it was acknowledged that considerable work was undertaken by a number of Residents and volunteers of apartments to return their complexes to a habitable and functional state, but that a systematic approach to flood mitigation and response was necessary.

The below map illustrates the immediate area surrounding **NAME OF BUILDING** that was affected by the February 2022 floods. This information is obtainable online at *Flood Awareness Maps - Brisbane City Council*.

Figure 1 – Local Flood Mapping

Ref: Flood Map from BCC website – <https://fam.brisbane.qld.gov.au/?page=Map---Standard>

NOTE: DELETE THIS MAP AND ADD MAP RELEVANT TO YOUR BUILDING



1.2. OBJECTIVE

The Objective of this Flood Mitigation Plan is: To identify actions and provide guidance to the **NAME OF BUILDING** Body Corporate Committee, Owners, Residents and Building Managers on how to prepare for and respond to a flood event impacting or with the potential to impact the site.

This Flood Mitigation Plan acts as a guide and provides information on site actions and resources available to ensure that effective and timely preparation, response, and recovery is undertaken in a flood event.

The following elements of emergency management apply in order of priority:

People:	Avoid loss of or injury to human life
Liability:	Reasonably meet legal and insurance responsibilities
Assets:	Minimise loss and damage of plant and equipment
Environment:	Protect the environment generally

Any and all persons acting under this Plan are expected to stop or cease any action or activity in order to protect a person or persons from death or physical injury.

Whilst the procedures outlined in this plan should be followed to the greatest possible extent, during emergency event preparation and response, reasonable variations based upon sound management and/or engineering judgement and experience are at the discretion of the **NAME OF BUILDING** Site Coordinator or relevant authorised person.

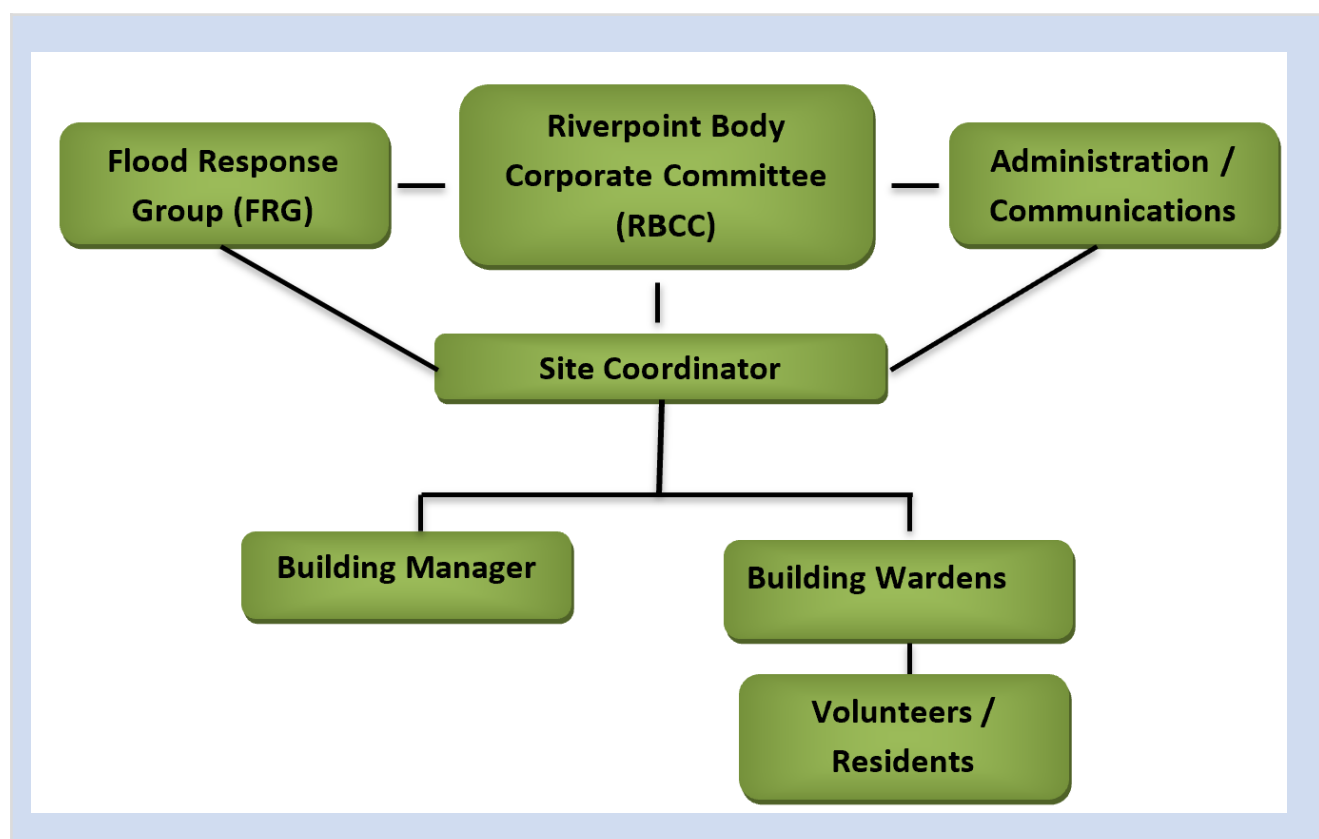
2. ROLES & RESPONSIBILITIES

2.1. STRUCTURE & ROLES

The ***NAME OF BUILDING*** Body Corporate Committee acknowledges that Queensland Emergency Services (Queensland Police, Queensland Fire and Emergency Services and Queensland Ambulance) are the primary response agencies in a flood event and any advice or requirements will be complied with.

Figure 2: Structure of the *NAME OF BUILDING* Body Corporate Flood Mitigation

NOTE: *This is an example only. It is likely that a simpler structure will be necessary for most apartment complexes. For example, a site coordinator may undertake the tasks of building wardens. The structure below was developed for a 3ha site with 10 buildings and 331 apartments.*



See section 2.2 for summary responsibilities for each role and Appendix A for Duty Cards that provide further guidance.

Determine roles and names suitable to your building – this list is an example only.

Role	Responsibility
NAME OF BUILDING Body Corporate Committee (BCC)	● Maintain and update the Plan and ensure consistency with Emergency Services and legislative requirements ● Facilitate Plan familiarisation and reviews on an annual basis ● Coordinate event debriefs and capture any lessons learnt in order to improve the Plan ● Ensure handover to new committee member(s), Building Manager, Site Coordinator & Building Wardens ● Appoint persons to key roles with responsibilities under this Plan and ensure they are suitably aware and competent, including all members of the Flood Response Group (FRG) ● Nominate 2 x BCC members for membership of the FRG ● Nominate a BCC member to coordinate communications between key persons and Residents ● Authorise certain expenditure as recommended by the FRG (within Body Corporate approved financial management arrangements)
Flood Response Group (FRG)	● Appointed by the BCC – reviewed annually ● Comprised of 2 x BCC members, Site Coordinator, and Residents with relevant skills if possible. ● FRG will initially meet on published BOM notifications related to minor flood warnings in the lower Brisbane River catchment ● Experienced representatives will utilise BOM information and the flood predictor model to monitor and report on the developing event and advise on trigger points and actions related to power supply and installation of flood control measures ● FRG will meet periodically as event develops ● Manage liaison with external stakeholders – including Government, Emergency Services, community organisations
Administration / Communications Officer	● Appointed by the BCC ● Suitably experienced person to ensure a record of communications and actions in event planning and response is maintained throughout ● This role will use multiple forms of communication including social media, emails, text messages, phone calls etc to ensure all Residents are informed of expectations/updates of the situation before, during and after an event
Site Coordinator (SC) (and Deputy Site Coordinators)	● Appointed by the BCC – reviewed annually ● Removed from the immediate preparation or reactive response activities to undertake an operational planning leadership role ● The role is responsible for overseeing the planning/response for an event and will ensure that the preparation measures are complete

Role	Responsibility
	• The Site Coordinator will provide direction to Building Wardens, if part of the Response Structure • Ensure that they (or the nominated Deputy) will be available/able to be onsite 24/7 leading up to and during an event • Have a competent understanding of the building layout including basement/drainage plan & infrastructure • Be suitably familiar with this Plan and the supporting documents and competent and capable with their implementation • Review plans and procedures annually prior to wet season/forecasted events with FRG, Building Manager & Building Wardens • Participate in annual preparation exercise
Building Manager	• Ensure Residents Contact List is updated & current and available for electronic distribution of information to support implementation of actions under this Plan • Ensure equipment registers and maintenance programs are current • Ensure emergency response equipment is maintained, readily accessible, ready for use and available at all times • Participate in annual review of Plan and any exercise of the Plan • Engaged directly by the Flood Response Group and the Site Coordinator • Given that the FRG may be required to meet outside of normal working hours, the FRG may meet without the Building Manager but will keep the Building Manager informed on critical matters • Support the Site Coordinator and Building Wardens during an event
Building Wardens (BW) (and Deputy Building Wardens) In smaller apartment complexes the Site Coordinator might undertake the tasks of a Building Warden(s)	• Appointed by the BCC – reviewed annually • Ensure that one or more Wardens will be available/able to be onsite 24/7 leading up to and during an event • Be suitably familiar with this Plan and the supporting documents and competent and capable with their implementation • Review plans and procedures annually prior to wet season/forecasted events with the Flood Response Group (including the Site Coordinator) & Building Manager • Participate in annual exercise of preparation • Actions directed by the Site Coordinator • Coordinate teams of Residents/volunteers in preparations or response actions (Communications) • Prepare each building adequately in reference to the basement carpark areas & storage cages • Report to the Communications Officer vehicle details/storage cage details that have not been cleared so that they can follow up contact to advise/gain permission to remove on Owners' behalf
Unit Owners / Residents	• Maintain individual premises/garages, storage cages in such a condition as to mitigate damage created by flood/water ingress

Role	Responsibility
	• Recognise, respect, and comply with the directions of the Site Coordinator and Building Wardens before, during and after a flood event • Assist the Building Wardens/volunteers with the implementation of this Plan within personal capabilities • Ensure contact information is updated and arrangements prepared if not anticipated to be onsite during vulnerable events (e.g. emergency contacts arranged if on holidays)

2.3. DUTY CARDS

Appendix A includes Duty Cards. These provide detail for the key roles and responsibilities to minimise confusion, ensure all essential emergency response activities are carried out and that routine operations resume as quickly as possible after the conclusion of an event.

The detailed actions are not a fixed set of prescribed rules or duties allocated to the role. Rather, they are designed as a checklist of flexible suggestions or prompts.

3. PROCEDURES

It is acknowledged that many minor emergencies can be managed by local site persons and timely, professional response actions will assist in controlling the emergency and prevent its escalation.

Whilst the following procedures should be followed to the greatest reasonable extent during a planning or response event, they act as a guide/prompt only. Variations to these procedures should be based upon sound management and operational judgement and are at the reasonable discretion of key persons within the limits of their responsibilities and competence.

3.1. EMERGENCY CONTACT LISTS & RESIDENTS CONTACT LIST

Emergency Contact Lists and Resident Contact Lists are critical components of this Plan as they contain a list of the contact details for persons who are most likely to be required to assist in the event.

The Contact Lists are to be reviewed annually by the Body Corporate Committee/Building Manager and if required, updated. When revised, relevant parties of the update will be advised via email with a link to the latest copy.

At the time of an emergency event, the Building Manager will provide a copy of the relevant lists to the appropriate nominated persons to enable them to provide communications to Residents.

3.2. COMMUNICATIONS

Preparations include the setting up of communications as a priority such as having mobile phone communications available and tested.

The nominated Administration/Communications Officer will communicate all necessary information to Owners/onsite & offsite Residents via email, telephone, text messages and social media.

NOTE: EXPAND TO REFLECT ESTABLISHED COMMS FOR THE SITE e.g. use of intercoms.

3.3. TRIGGERS, EVACUATION AND FLOOD RESPONSE TIMING

Note: Develop this section for your Building complex – worked example below

Guidance on monitoring river levels and applying the chart can be found in the document 'Predicting River Levels on the Forbes St to Davies Park Reach in Flood Conditions' included in Appendix C.

The **NAME OF BUILDING** Flood Response Group (FRG) will initially meet on published Weather Bureau (BOM) notifications related to minor flood warnings in the lower Brisbane River catchment.

The FRG will meet periodically as an event develops and will provide direction on trigger points and actions related to power supply and installation of flood control measures.

The FRG must include suitably experience persons who will use an interactive chart to predict water level rises and time to critical entry levels for **NAME OF BUILDING** The chart information, dam release information, past and forecast rainfall will be used to determine actual trigger timings for evacuating the basements of cars and stored property.

The timing of warnings and time available for actions will vary depending on the rate of river level rise, e.g., 1m/12hr period rate of rise at the St Lucia Gauge (as 2022) = 48hrs from minor level to major level.

If an evacuation is required, this will be coordinated in conjunction with Qld Police, Qld Fire and Emergency Services and the **NAME OF BUILDING** Site Coordinator. Information will be communicated to Residents in person by Wardens, via text alerts, social media and through our PA systems.

Critical major flood level **NAME OF BUILDING** impacts:

?AHD	Impact: Energex cut power supply. Response: Engage emergency power if available at NAME OF BUILDING for power supply to water pumps, if and when necessary.
? AHD	Impact: Impending breaching of lowest floodwater entry point to basement. Response: Installation of flood barriers if available at NAME OF BUILDING
?AHD	Impact: Other critical events pertinent to NAME OF BUILDING Response:

Key visual reference points on the river at Ferry Road include the following:

- 1.25m AHD - Ferry Road stormwater outfall invert (below park)
- 2.45m AHD - Ferry Road stormwater outfall river wall concrete edging
- 3.00m AHD - Lower pergola concrete slab (pergola includes mark up of 4m and 5m level on NE post)
- 4.20m AHD - Second tier of retaining wall near pergola
- 4.60m AHD - third tier of retaining wall near pergola
- 4.30m AHD – Forbes Street gulley grate at base of Building 1 up ramp
- 5.00m AHD – Ferry Road footpath at low point east of Encore

3.4. SAFETY

NAME OF BUILDING Body Corporate's priority is the safety of the building community and our contractors and visitors. To ensure the safety of persons before, during and after flood event actions may include but are not limited to:

- Installation of warning signage and barriers
- Wearing of suitable PPE and ensuring good personal hygiene
- Making safe vehicle(s) and machinery
- Security of the premises against:
 - Further water ingress
 - Trespass by unknown persons

Residents must follow reasonable instructions from the **NAME OF BUILDING** Body Corporate, Site Coordinator, Building Manager and Building Wardens.

3.5. CHECKLISTS

The procedures and checklists in the Appendices include detail on all actions relevant to ensuring a safe environment in the preparation, response, and recovery phases of an event.

The extent of implementation will depend on the nature and scale of the event and the effectiveness of the flood resilience works.

3.6. SPECIAL NEEDS

Residents with special needs are requested to lodge an Emergency Preparedness Plan (EPP), in addition to their Residents Contact Information Form. The EPP will assist the Resident to:

- Assess their preparedness and their exposure and vulnerability to risks arising from a flood event and consequential impacts on the building
- Identify the Resident's support needs if intending to live on-site when services may be limited

To be effective, the EPP must be current, updated annually. In doing so, the information will assist in managing the timeliness of actions on site in the event of flood.

All Emergency Preparedness Plans will be assessed by BCC /Building Wardens in the Monitoring Phase, to ascertain whether the Resident is planning evacuation or living on-site and if assistance is required to relocate items from the basement.

If the Resident chooses to live on-site, then the Building Warden must monitor the circumstances according to the EPP.

The Emergency Preparedness Plan is to include the following:

- The Resident's preference to leave the building in the event of a flood or to live on-site for the duration of the event
- The Resident's support needs if choosing to live on-site is to be assessed and whether these needs are able to be supported adequately
- If the decision is made by QLD Emergency Services that the building must be evacuated, as with all other Residents, that plans are in place for support/ somewhere to live/ plan for relocation
- Whether a vehicle has to be moved from the underground carpark
- Whether there are items in storage cages to be relocated

A link & QR code to a workbook/planner is provided below:

Person – Centred Emergency Preparedness Workbook (P-CEP):

https://collaborating4inclusion.org/wp-content/uploads/2020/08/2020-08-19-Person-Centred-Emergency-Preparedness-P-CEP-WORKBOOK_FINAL.pdf



3.7. CONTACTS

Appendix G includes contact lists for the following:

- Building contacts
 - Body Corporate Members
 - Building Manager
 - Building Wardens
 - Resilience & Response Leads
- External Contacts
 - Emergency Services
 - Utilities
 - Elected representatives
 - Contractors

3.8. REVIEW

Members of the Body Corporate Committee, including the Building Manager(s), Site Coordinator and Building Wardens shall be familiar with this Flood Mitigation Plan to enable effective execution of the requirements of this document.

The Plan effectiveness and relevance is to be reviewed annually as a scheduled activity in the Body Corporate Committee meeting agenda.

APPENDIX A - DUTY CARDS

NOTE: Adapt to determine roles/duties suitable to your building – this list is an example only.

Duty Card 1:	Site Coordinator
Role:	• Overall responsibility for the management of the Emergency Preparation and Response • Lead and supervise activities of persons, develop objectives, approve plans, and ensure that the response is carried out in a safe and legally sound manner • Can delegate authority to Flood Response Group members/Body Corporate Committee members/Building Wardens/Building Manager to act on behalf
Responsibilities: Supported by the Flood Response Group, of which this role is a member, the Site Coordinator is responsible for overseeing the planning/response for an event and will ensure that the preparation measures are complete. The Site Coordinator will: • provide direction to Building Wardens, if part of the Response Structure • ensure that they (or the nominated Deputy) will be available/able to be onsite 24/7 leading up to and during an event • have a competent understanding of the building layout including basement/drainage plan & infrastructure • be suitably familiar with this Plan and the supporting documents and competent and capable with their implementation • review plans and procedures annually prior to wet season/forecasted events with FRG, Building Manager & Building Wardens	
Pre-Incident: • Attend review/training activities • Remain familiar and current with responsibilities	
During Incident: • Lead the preparation and response briefing/s (enforce deadlines and completion of tasks early on) • Ensure the Flood response Group/Body Corporate Committee members/Building Wardens are supported in their activities (they have the resources required) • Ensure there are established lines of communication – Contact numbers of each Flood response Group/Body Corporate Committee member leading a team/activity - Exchange information and coordinate activities with other body corporate committees in the area • Ensure all Flood response Group/Body Corporate Committee members/Building Wardens/Building Manager are briefed and understand their individual and team responsibilities • Review the response by convening briefing updates at regular intervals • Oversee planning and set recovery and business continuity/resumption paths and objectives • Approve and authorise implementation of incident specific response and recovery plans • Ensure active and on-going engagement with all relevant local stakeholders • Ensure all actions, decisions and events are accurately recorded and documented in a log • Decide when the incident is over and communicate an end of incident response internally and externally • Monitor health, fatigue, morale, and stress level of people assisting	

Post Incident:

- Allocate tasks and supervise the implementation of the recovery plan
- Chair the post-incident review and ensure all lessons learnt are recorded and implemented

Duty Card 2:	Administration/Communications Officer
Reports To:	Site Coordinator
Role:	Responsible for maintaining an accurate and up to date record of the decisions and actions of the emergency preparation/response
Responsibilities: The Administration/Communications Officer will ensure a record of decisions, communications and actions in event planning and response is maintained throughout This role will use multiple forms of communication including social media, emails, text messages, phone calls etc. to ensure all Residents are informed of expectations/updates of the situation before, during and after an event.	
Pre-Incident: - Attend review/training activities - Remain familiar with responsibilities	
Immediate Actions: - Respond if an emergency is activated and proceed to the Coordination Centre – attend the initial briefing - Start a personal log	
During Incident: - Maintain a chronological log of events - Pay special attention to the times of significant activities, decisions and events and record them as they arise - Manage the flow of hard copy information and retain copies for the permanent log - Regularly collate the logs from the Site Coordinator and other Flood Response Group members/Body Corporate Committee members/Building Wardens - Alert the Site Coordinator and other Flood Response Group members/Body Corporate Committee members/Building Wardens to major changes, issues, and outstanding actions - Issue all communications to Residents via the preferred mode of contact using the Residents Contact List provided by the Building Manager - Ensure communications from Building Wardens are delivered to all Residents until the building preparation is completed to the satisfaction of the Site Coordinator & Building Wardens - Take digital photos of records before they are updated (if possible) - Proactively monitor all communication	
Post Incident: - Assist the collection and filing of all documentation - Ensure allocated post-incident follow-up actions are completed - Contribute to the post-incident debrief	

Duty Card 3:	Building Warden
Performed By:	Annually Nominated Persons – 1-2 Wardens per building as necessary for size
Reports To:	Site Coordinator
Role:	• Manages support and services activities for the response • Obtains persons, equipment, facilities, and materials required to carry out preparation and response operations • Provides food, shelter, transportation, facilities, security, communication, and other necessities for response persons on site • Develops specific support plans
Responsibilities: The Building warden will: • Ensure that one or more Wardens will be available/able to be onsite 24/7 leading up to and during an event • Be suitably familiar with this Plan and the supporting documents and competent and capable with their implementation • Review plans and procedures annually prior to wet season/forecasted events with Flood Response Group (including the Site Coordinator) & Building Manager • Coordinate teams of Residents/volunteers in preparations or response actions (Communications) • Prepare each building adequately in reference to the basement carpark areas & storage cages • Report to the Communications Officer vehicle details/storage cage details that have not been cleared so that they can follow up contact to advise/gain permission to remove on Owners' behalf	
Pre-incident: • Attend review/training activities • Remain familiar with responsibilities	
Immediate Actions: • Respond if an emergency is activated and proceed to the Coordination Centre – attend the initial briefing • Start a personal log • Nominate and recruit additional persons for the situation - Be clear and concise when allocating roles and initial tasks	
During Incident: • Manage the activities of the team • Ensure all team members are briefed and understand the individual and team responsibilities • Identify the location and status of off-site equipment and persons suitable to deal with the issue and coordinate the obtaining and deployment as required	

- Ensure an inventory is maintained of all equipment, materials and supplies purchased, rented, borrowed, and otherwise obtained
- Inform the Flood Response Group and the Site Coordinator specifically, and the Body Corporate Committee of logistical movements
- Develop a Support Plan in support of the response plan to:
 - a. Prioritise needs
 - b. Identify alternative resources and supplies
 - c. Coordinate delivery/deployment
- Attend update briefings and keep the coordinator informed of the actions of the team
- Contribute to the development of the response and recovery plan
- Ensure that all team actions, decisions, and events are accurately recorded and documented in a personal log and are also captured in the Committee log

Post Incident:

- Inform team members when the incident is over
- Identify any team follow-up actions required and allocate responsibilities and deadlines
- Attend the post-incident debrief

Should this be more generic – can you reference use of Fire Alarm intercom?

Procedure for *NAME OF BUILDING* Communications via Fire Panel Public Address Communication System

- **Introduction:**
 - The ***NAME OF BUILDING*** public address system is operated via the Fire Alarm system.
- **Insert Location of fire panels here.**
- **Procedure in Event of Emergency:**
 - The first Flood Response Group meeting will authorise the appropriate person to get access to the key to the fire panel.
 - That person will have experience in operating the fire panel public address system.
 - An information sheet on how to operate the address system should be available within the Fire Panel cabinet with a copy held by the Site Coordinator.
 - The announcement should be repeated 3 times and the panel locked after use.
- The content of a set of announcements for use as appropriate to circumstances should be determined by the BCC in consultation with Qld Fire and Emergency Services.

NOTES:

Fire System Maintenance is carried out monthly by [Insert relevant details]. Ensure that a monthly log is kept by the Building Manager and that this includes monthly testing of the basement loudspeakers (function & volume).

- Fire Panel Power – Fire Panels are powered both from the mains electricity and battery backup. Battery backup life is approximately 72-96 hrs (3-4 days) after which the batteries need to be replaced. This should be determined relevant for ***NAME OF BUILDING***.

APPENDIX C - PREDICTING RIVER LEVELS FROM FORBES STREET TO DAVIES PARK IN FLOOD CONDITIONS

Advice Note – November 2022

Predicting Flood Levels on the Forbes St to Davies Park Reach in Flood Conditions

Introduction

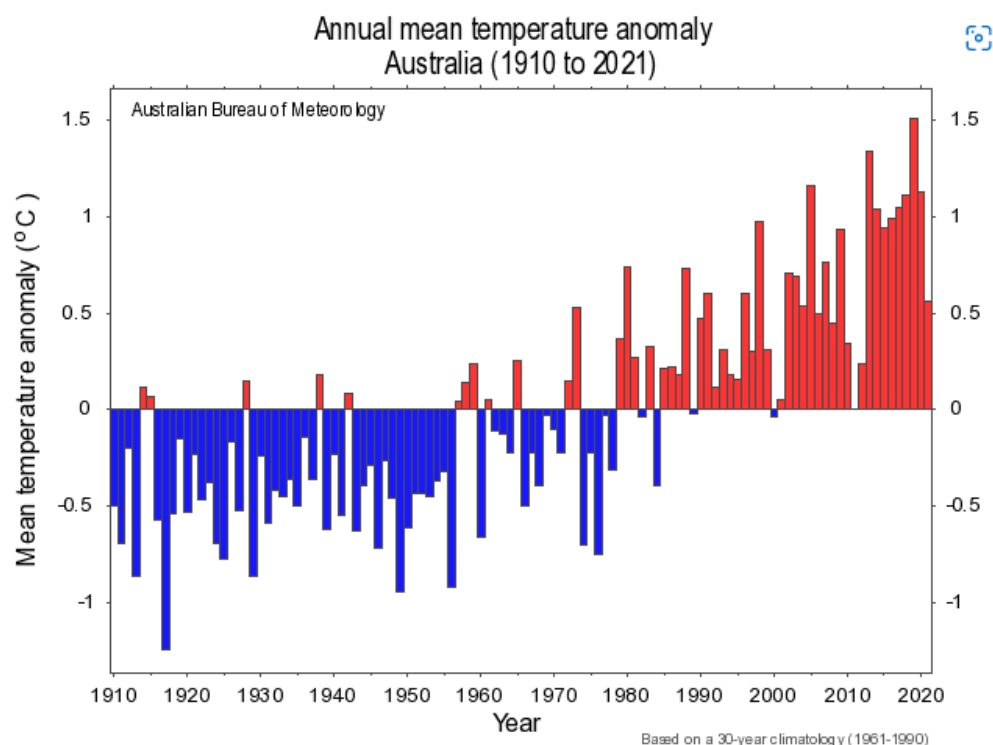
Factors affecting river runoff and local flood levels include:

1. Rainfall intensity and duration - Historical data may understate possible future events due to global warming.
2. Rainfall patterns over the catchments
3. Catchment conditions (e.g. wet or dry)
4. Dam storage capacities, current dam levels, and dam release flows
5. Tide conditions
6. Local rainfall ponding (obstructed or constricted drainage) and overland flows to the river

Predicting river levels is thus not a precise science. However, some guidance can be provided by observing past events and extrapolating river levels from known start levels and known rates of rise in a preceding period.

Climate Change

Observed and projected climate change is expected to lead to higher intensity rainfall events (larger rainfall amounts in short periods of time) for Brisbane and surrounds. Hence floods are expected to increase in frequency and flood levels are expected to rise.



Flooding from Forbes Street to Davies Park, West End

NAME OF BUILDING is located on the Brisbane River approximately midway between the City gauge and the St Lucia gauge which measure and publicly report river height and hence flood levels in the river.

Observing these two gauges provides an insight into likely river levels at **NAME OF BUILDING**. The St Lucia gauge was installed in 2014 so no data is available from that gauge for the 2011 event. The data from the City gauge for 2011 is shown on the graph below (Figure 4). The rate of rise was of the order of 1.5m per 12-hour period.

For buildings between Forbes Street and Davies Park, the flood level peaked at Ferry Road at RL* 6.5m above the Australian Height Datum (AHD). AHD is taken from mean sea level and is not to be confused with tides which are measured from the lowest sea level.

(*RL = Reduced Level - the difference between the level measured at any point and the standardised point of reference, the Australian Height Datum)

Flood Heights at Brisbane City

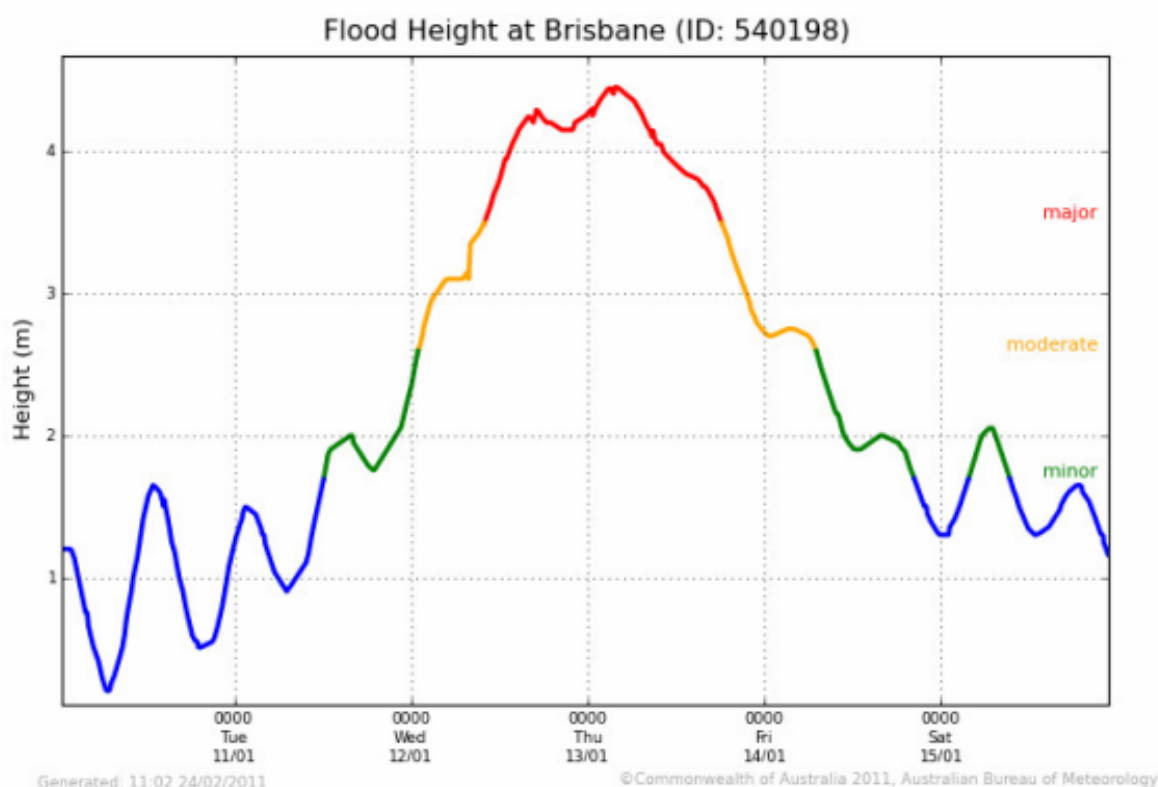
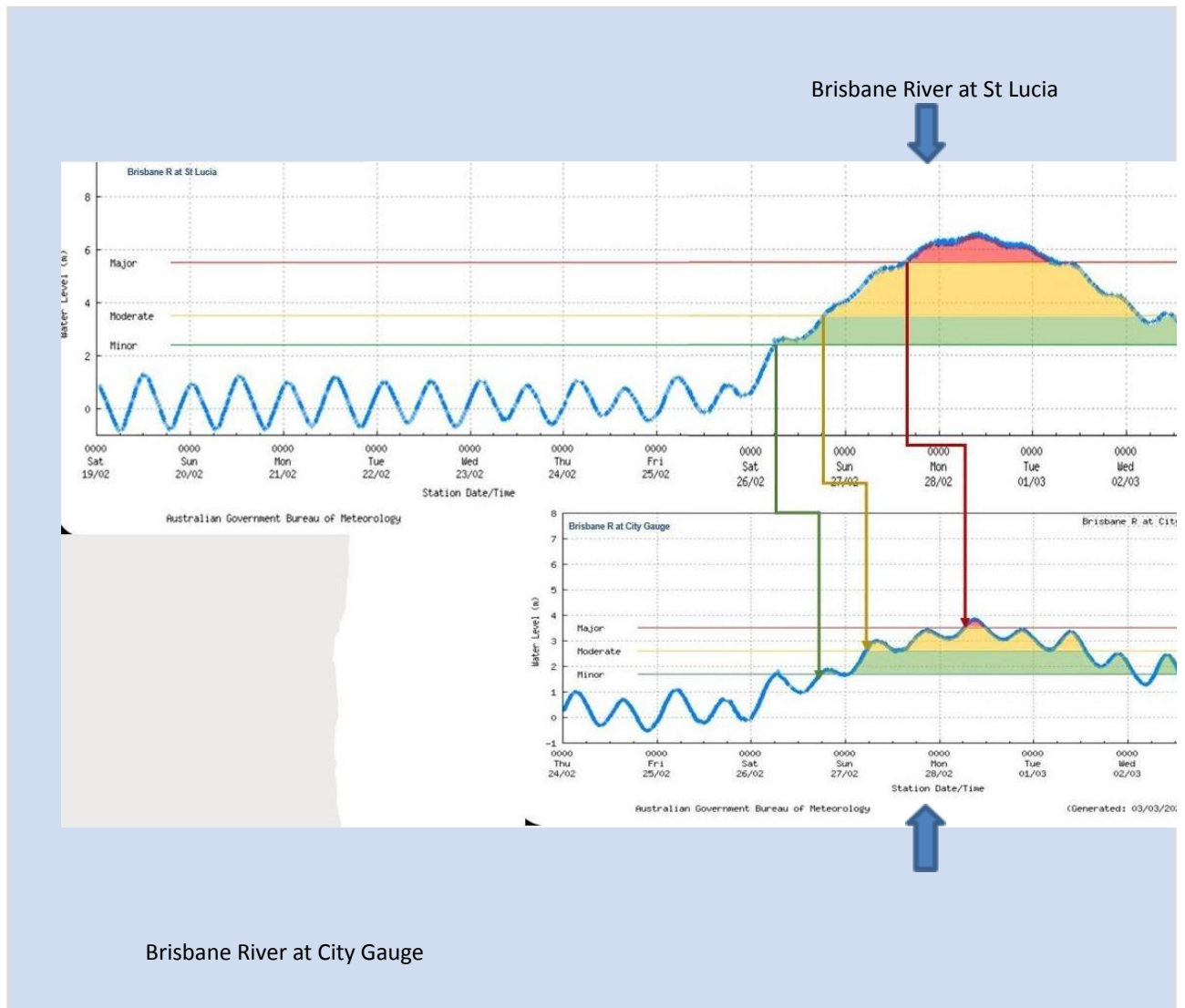


Figure 4. Flood Heights at Brisbane City (Thornton Street Ferry) gauge for January 2011.

The following chart illustrates the river levels at the St Lucia gauge and the City Gauge for the 2022 event. For comparison the rate of rise at City Gauge for the 2022 event was of the order of 1m per

12-hour period. For buildings from Forbes Street to Davies Park, the flood level peaked at RL 5.4m AHD at Ferry Road.

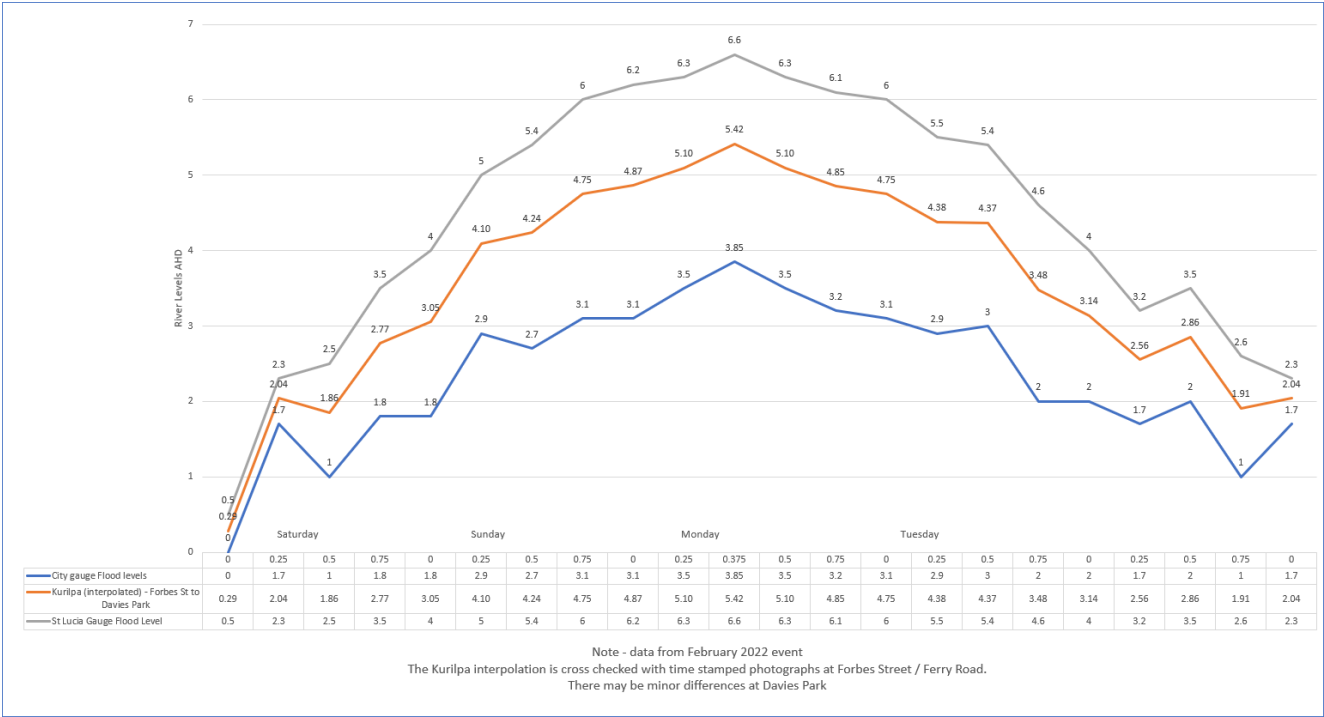
Note that the rate of rise is not constant and not linear and requires regular monitoring to inform flood level forecasting. Also note that the February 2022 rate of rise at the early stage of the developing flood was very rapid and the river reached minor flood levels at 6-12hrs.



The river level from Forbes Street to Davies Park determines when flood water backs up via the drainage system and has the potential to breach at various entry points.

To guide decision making It is necessary to understand the river levels at any point in time and to forecast ahead for 24 and 48-hour periods.

Interpolated River Levels – February 2022 event

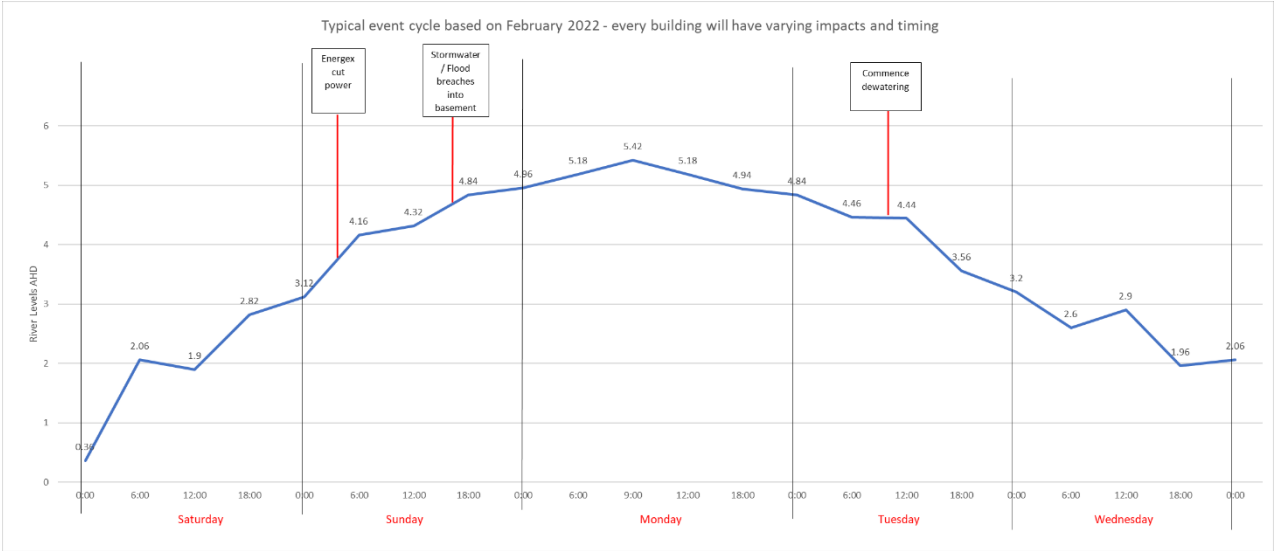


The critical flood level for **NAME OF BUILDING** (possibly when the basement is breached) needs to be determined and over-laid on the Interpolated River Level Graph above.

NAME OF BUILDING's Flood Response Group should attempt to document critical levels for their building against River AHD levels, for example when Energex cut power, when storm water lids lift or street gullies overflow and when stormwater flows into the basement.

The following graph of critical events of a building, shows how to record the critical events for any building.

Typical Event Cycle – based on February 2022 event



The water level from Forbes Street to Davies Park at any point in time is approximately midway between the river level at City gauge and the river level at St Lucia gauge. These gauge levels are available in a timely manner from the BOM internet site.

Estimating what the river levels may be in the future requires knowledge of the rate of rise at both the above stations and projecting that forward for 24, 48 hours or longer.

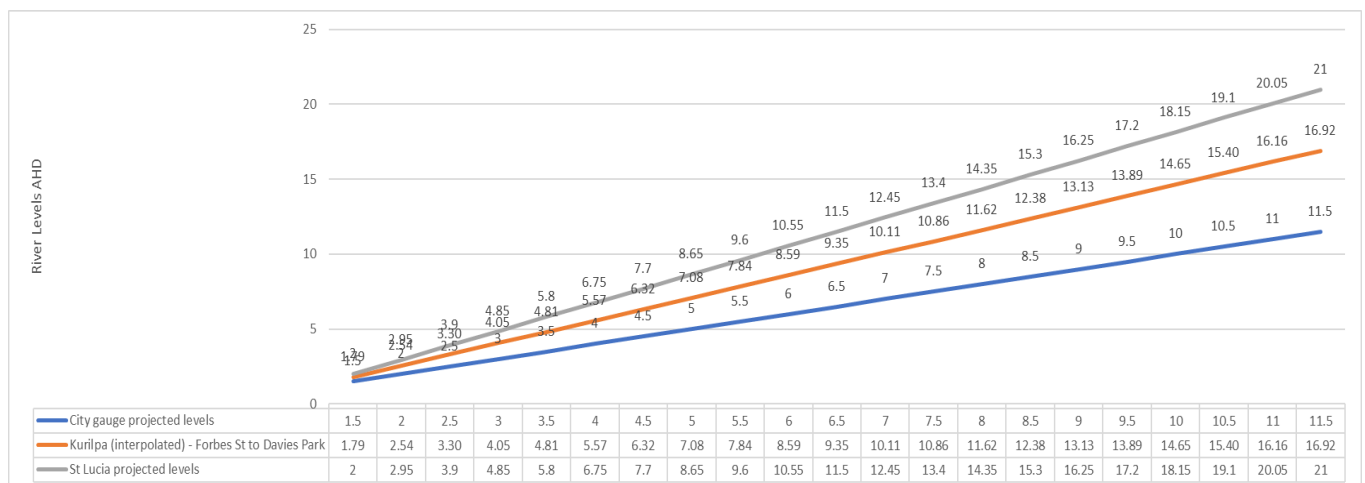
As the rate of rise is influenced by the tides, the best estimate of rate of rise is from high tide peak to high tide peak approximately 12 hours later.

Hence given the starting river levels at both City gauge and St Lucia gauge and calculating the rate of rise at both stations in the past 12-hour period, an estimate can be made of river levels 24 or 48 hours into the future.

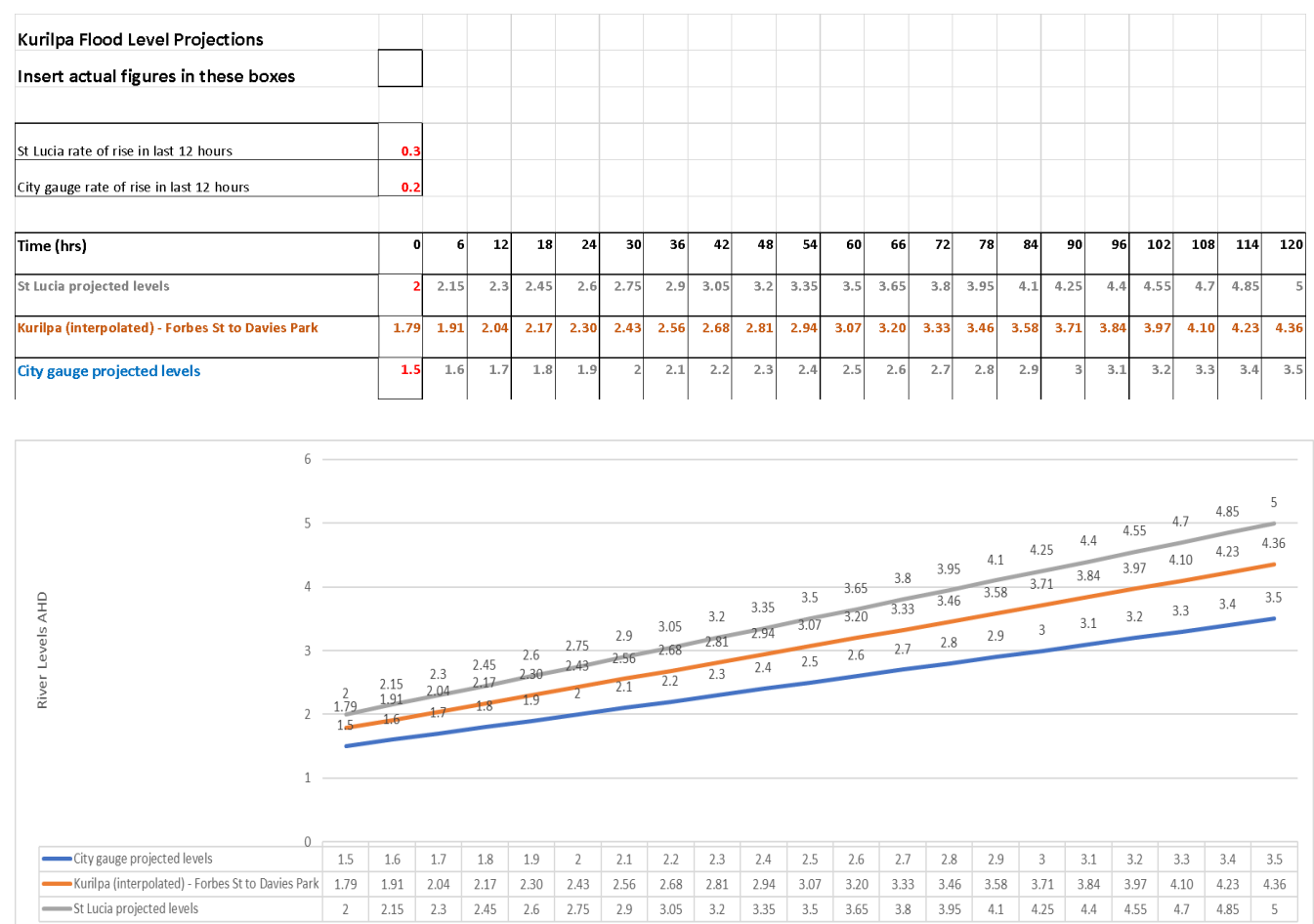
This will allow assessment of when building impacts, including breaches, are likely and allow for timely evacuation. The forecast for the river level in the future should be recalculated every 12 hours based on the current river level and the rate of rise in the preceding 12-hour period. A chart has been prepared to facilitate/automate this calculation.

A typical calculation prepared retrospectively as if calculated at midnight on Friday 25th February is shown below.

Kurilpa Flood Level Projections																						
Insert actual figures in these boxes																						
St Lucia rate of rise in last 12 hours	1.9																					
City gauge rate of rise in last 12 hours	1																					
Time (hrs)	0	6	12	18	24	30	36	42	48	54	60	66	72	78	84	90	96	102	108	114	120	
St Lucia projected levels	2	2.95	3.9	4.85	5.8	6.75	7.7	8.65	9.6	10.55	11.5	12.45	13.4	14.35	15.3	16.25	17.2	18.15	19.1	20.05	21	
Kurilpa (interpolated) - Forbes St to Davies Park	1.79	2.54	3.30	4.05	4.81	5.57	6.32	7.08	7.84	8.59	9.35	10.11	10.86	11.62	12.38	13.13	13.89	14.65	15.40	16.16	16.92	
City gauge projected levels	1.5	2	2.5	3	3.5	4	4.5	5	5.5	6	6.5	7	7.5	8	8.5	9	9.5	10	10.5	11	11.5	



By comparison another version of the above projection was prepared at 8pm on Thursday 12th April 2022 showing significantly lower rates of river rises and thus a much longer time for any breaches to occur, even though the starting river levels were higher than the previous chart. The river rises subsequently decreased and the calculations in the following 12-hour period lowered the projected river levels for the following days.



Data can be entered into this chart for any event in the future and the projections, along with other data (BOM advices, BCC advices, SEQ advices), will inform management and Residents of expected outcomes.

It is particularly useful in moderate events (e.g. 12th April 2022) to avoid the premature and unnecessary evacuation of vehicles and goods from basement areas.

However, with major events the rate of river rise can be very rapid (2m to 3m in a 24-hour period). Management and Residents will need to be vigilant to be in a position to respond at short notice.

The following charts provide guidance on how trigger points have been determined and the approximate notification periods for a range of scenarios.

Key River Gauge Levels and interpolated levels

	Minor (m AHD) 1	Moderate (m AHD) 2	Major (m AHD) 3		2	2
City					0	0
Gauge Forbes Street to Davies Park	27	35	45		1	2
St Lucia	0	3	6		6	5
Jinda	9	0	2		/	.
Lee Mo gill	1	1	0		2	
	0	3	5		.9	
			5		7	

NOTES:

1. The following charts are indicative only
2. The rate of rise of river levels is not constant or linear in each event and therefore this may impact on forecasts in any one 12-hour period
3. The data informing this chart is based on actual river levels measured at the City gauge and the St Lucia gauge in the February 2022 flood event
4. Base data includes BOM published minor/moderate/major levels for both sites
5. There is currently no 2011 data available for St Lucia
6. Future events will enable the forecasting tool to be calibrated and refined
7. Impacts beyond 24 hours are very likely to vary and more accurate information will be advised as any particular flood event unfolds
8. At the lower rates of rise of less than 0.5m/12hr, the expectation is that the rate of rise will decrease, and an evacuation program will generally not be needed.
9. Energex advice is required on the timing of power disconnection for **NAME OF BUILDING** Transformers

Once **NAME OF BUILDING** has determined the critical flood levels for their building in the chart above, a Flood Event Trigger Level Chart can be created for that building showing the river level rise, against time and when the critical events such as Energex cuts power, stormwater lids pop, breach of basement.

ST WDA					1 DAY					2 DAYS					3 DAYS					4 DAYS				
Hrs	0	6	12	18	24	30	36	42	48	54	60	66	72	78	84	90	96							
0.25	Rate of rise /12hrs	2.4	2.525	2.65	2.775	2.9	3.025	3.15	3.275	3.4	3.525	3.65	3.775	3.9	4.025	4.15	4.275	4.4						
0.5	Rate of rise /12hrs	2.4	2.65	2.9	3.15	3.4	3.65	3.9	4.15	4.4	4.65	4.9	5.15	5.4	5.65	5.9	6.15	6.4						
0.75	Rate of rise /12hrs	2.4	2.775	3.15	3.525	3.9	4.275	4.65	5.025	5.4	5.775	6.15	6.525	6.9	7.275	7.65	8.025	8.4						
1	Rate of rise /12hrs	2.4	2.9	3.4	3.9	4.4	4.9	5.4	5.9	6.4	6.9	7.4	7.9	8.4	8.9	9.4	9.9	10.4						
1.25	Rate of rise /12hrs	2.4	3.025	3.65	4.275	4.9	5.525	6.15	6.775	7.4	8.025	8.65	9.275	9.9	10.525	11.15	11.775	12.4						
KURRPA estimated using sliding scale					1 DAY					2 DAYS					3 DAYS					4 DAYS				
Hrs	0	6	12	18	24	30	36	42	48	54	60	66	72	78	84	90	96							
0.25	Rate of rise /12hrs	2.09	2.20	2.30	2.40	2.50	2.60	2.70	2.80	2.90	3.00	3.10	3.20	3.31	3.41	3.51	3.61	3.71						
0.5	Rate of rise /12hrs	2.09	2.28	2.46	2.64	2.83	3.01	3.19	3.37	3.55	3.73	3.91	4.10	4.28	4.46	4.64	4.82	5.00						
0.75	Rate of rise /12hrs	2.09	2.36	2.63	2.90	3.16	3.43	3.69	3.96	4.23	4.49	4.76	5.02	5.29	5.55	5.82	6.09	6.35						
1	Rate of rise /12hrs	2.09	2.45	2.81	3.16	3.52	3.87	4.23	4.58	4.93	5.29	5.64	6.00	6.35	6.71	7.06	7.41	7.77						
1.25	Rate of rise /12hrs	2.09	2.55	3.00	3.45	3.89	4.34	4.79	5.24	5.69	6.14	6.59	7.03	7.48	7.93	8.38	8.83	9.28						

Visual Prompts

Visual prompts on the river front or in the adjacent streets can be used to assist with flood level prediction, including rate of rise. The following illustrate a typical example. Timing has been established from time-stamped images and correlates with interpolated river levels based on the graphs above.



7pm Sat 26 Feb 2022 – 3.0m AHD



10am Sun 27 Feb 2022 – 4.0m AHD



9am Mon 28 Feb 2022 – 5.4m AHD



NE post marker 3m - 5m

Disclaimer

This advice note has been modified by Resilient Kurilpa from a report produced by a 3rd party. The authors of the advice did not and shall not assume any responsibility whatsoever to any party, arising out of any use or reliance by any party on the content of this document.

The authors have used a reasonable level of skill, care, and diligence to prepare this advice note based on information readily available from published sources. As such, the authors cannot warrant the accuracy of the information provided as assumptions will be subject to further testing over time.

APPENDIX D - FLOOD EVENT PROCEDURE CHECKLISTS – PREPARE

Note: The following is to be updated as flood plank walls, auxiliary pump installation and emergency power supply are finalised.

PRE-PREPARATION ACTIVITIES RBCC (1)	Complete
TIMING: BOM Forecast Minor Flood Risks in Lower Brisbane River Catchment	
Call meeting of Flood Response Group (FRG)	☐
FRG to meet on at least 12hr cycle to review forecasts	☐
BCC to announce to Residents that FRG is meeting	☐
PRE-PREPARATION ACTIVITIES RBCC (2)	Complete
TIMING: Event triggers and actions	
FRG to provide advice to BCC and Site Coordinator	☐
RBCC to announce to Residents timing for actions and commence pre-preparation activities as per below checklist in chronological order	☐
Building Manager/BCC to ensure distribution of Master Key/Master Fob & Fire Panel keys to Site Coordinator & Building Wardens	☐
Identify safe storage areas for equipment that is too big to store in Residents' apartments – e.g., undercover podium areas in buildings, hallways, gyms	☐
Advise Building Wardens to collect Emergency Boxes from storage area and be responsible for boxes until event is finished	☐
Arrange for all Flood Mitigation Equipment to be removed from storage area and stored in accessible/flood free area until required for use	☐
Arrange for Skip Bins to be delivered to <Insert relevant location> to allow Residents to place unwanted contents from storage areas	☐
Contact Brisbane City Council to identify closest sandbagging sites	☐
Contact equipment suppliers – pumps, generators, ventilation fans etc. in preparation for hire/rental agreement, utility hire to transport sandbags	☐
Contact materials/equipment suppliers to arrange purchase and collection of plastic sheeting, brooms, squeegees etc.	☐

Communicate the required preparation actions of individual Residents – refer to Individual Resident Cards (located in each apartment)	☐
Allocate tasks to members of Body Corporate Committee/Building Wardens	☐

NOTE: There is a lot of site-specific information in this table referring to specific locations within the building – Some tasks are retained in table. But a completely new table with suggested actions to be selected as relevant to each building is recommended.

PREPARATION OF SITE EQUIPMENT/INFRASTRUCTURE	
TIMING: On direction from FRG Actions to be directed by Site Coordinator	
Install flood planks to basement lift doors.	☐
Lower pool level.	☐
Review all potential services breach locations into the basement, including manholes and pipes related to sewer and stormwater.	☐
Consider all options to prevent breaching pertinent to the building's pipe configuration including securing manhole covers with bolts if possible or props (Acrow or similar). Check integrity of pipes including joints.	☐
Consider back flow risks where building connects to trunk main sewer	☐
Check drainer grates are clear of obstructions.	☐
Authorised person to check the switchboards are progressively switched as necessary to Essential Power circuits only – timing is guided by the documented trigger point and instruction given by the Site Coordinator. NOTE - guidance manuals on switching to be followed by authorised person(s) ONLY	☐
Ensure ramp flood planks, if on premises, are accessible and stored above forecast flood level – install as documented trigger point and instruction given by FRG and Site Coordinator	☐
Ensure available fuel supply to generator and test functional (if installed)	☐
Switch diesel Fire Pumps to town water pressure to avoid the override of automatic pump switch on – maintain this set up to avoid risk of diesel pump start up if electrical power fails	☐
Check Resident lists for mobility impaired/people with a disability – understand their requirements and needs if wanting to leave/stay (refer to section 3.2)	☐

NOTE: Adapt to determine roles/duties suitable to your building –example only.

PREPARATION OF SITE - RESIDENTS' PROPERTY/VEHICLES	
TIMING: On direction from FRG - Actions to be directed by Site Coordinator	
Coordinate Building Wardens to commence preparation of basement carpark for evacuation & removal of all vehicles & storage cage contents whilst power is still connected, lifts are able to be used and cars are available to remove goods	☐
Ensure all vehicles are removed first - this allows easy access to storage cages & prevents risks associated with people emptying cages & vehicles moving through basement	☐
Any contents in storage cages remaining after Residents have been advised to remove them are to be relocated to the podium level area closest to the Resident's building and if possible, covered with tarps to protect	☐
Ensure ALL contents/equipment where feasible is removed from the basement to mitigate necessity to require a bobcat to be used for clean up after event	☐
Coordinate Building Manager to work with volunteers to remove all equipment/contents from Caretaker's storage areas – identify to where	☐
Coordinate Building Wardens to arrange volunteer Residents into teams and allocate tasks – flood mitigating ground floor premises – plastic sheeting, collection, and allocation of sandbags from stations if necessary to individual vulnerable points within basement/ground floor facilities/gates	☐
Check lifts to level two (2) and secure/lock off with lift key	☐
Communication systems on site – Fire PA System - Ensure Fire Panel has adequate back up power to prevent back up battery failing	☐
Lock off bin chutes/tape up to avoid use and attach signage advising Residents not to use	☐
Remove all waste bins and relocate to street level - bins must not impede driveway access	☐
Apply plastic sheeting and sandbags to toilets of ground floor units/facilities, gyms etc. to prevent back flow of sewage – subject to forecast flood height being at or above major flood level	☐
Raise all personal garage roller doors in basement carpark to mitigate damage to doors/allow access for cleaning floor areas	☐
Enable manual operation of all garage roller doors to assist with actions in above point during event & turn off power – to prevent safety switches tripping during cleanup	☐
Board up, cover with plastic sheeting & sandbag all lift well doors on basement level and any surrounding access points if necessary – for lifts not fitted with flood protection panels	☐

Install <Flood Gates as relevant> driveway – after all vehicles and necessary equipment has been removed	☐
Ensure all vehicles and equipment are not allowed to stand on Ferry Road driveway to allow access for appropriate vehicles & equipment for dewatering/cleanup process	☐
Install barriers to driveways to prevent access to basements	☐

APPENDIX E - FLOOD EVENT PROCEDURE CHECKLISTS – RESPOND

Note – basement may be fully flooded due to river flood or partially flooded due to stormwater inundation.

Checklists and procedures for the period that the river and/or streets are in flood during a major event.

NOTE: Adapt to determine roles/duties suitable to your building – this list is an example only.

RESPONSE PROCEDURES - During Flood Event	
Flood Event Period - basement may be fully flooded due to river flood or partially flooded due to stormwater inundation	
Continue to monitor trigger points, levels of expected water, dam releases, etc., with advice from Flood Control Group	☐
Update Residents & Owners (onsite & offsite) of procedures, further actions, community resources, assistance – Admin/Communications Officer to action via email, text messages, social media, announcements using Fire Panels PA System.	☐
If Energex cut power to <Insert details of site-specific transformers> – switch power to generator back up power supply.	☐
Action pump/water management and monitoring in lower basement area if required - ensure all vehicles and property removed (see following detailed guidance note)	☐
Install emergency lighting in vulnerable areas if power is disconnected and no back up power supply (2022) e.g., entry gates, fire stairs (not required if provided by emergency electrical power)	☐
Advise/coordinate building security as power outage may affect security access entry points at gates/driveways. This could be actioned with an outside security company or volunteer Residents using a roster system for appropriate times (e.g., 10.00pm – 6.00am (in 1-hour intervals))	☐
Check security of site – establish volunteer security/employed security	☐
If water levels are proposed to inundate podium level (+7.0m) – coordinate with Building Wardens and volunteers to assist Residents of ground floor units with moving furniture and protecting entry points	☐
Check emergency plans for mobility impaired Residents/those with special needs – understand their requirements and needs if wanting to leave/stay - (see Section 4)	☐
If required evacuate Residents that require assistance in line with personal emergency plans	☐
Advise Residents of garbage collection points when bin chutes are out of use	☐
Advise Residents of power supply points for charging devices – Recreation Room Hub or alternative(s)	☐

RESPONSE PROCEDURES - During Flood Event	
Flood Event Period - basement may be fully flooded due to river flood or partially flooded due to stormwater inundation	
Confirm to Residents that normal mail procedures will be discontinued	☐
Action Recreation Room set up as a hub for community – donations of food, supply of electricity, information regarding status of site	☐
Advise Residents where assistance can be provided with moving within, in and out of site	☐
Check personal emergency plans for information on assistance with shopping, medical needs	☐
Advise Residents of use of lifts/stairwells/entry & exit point procedures	☐
Secure lifts at 'home' levels if Energex power supply disconnected	☐

APPENDIX F - FLOOD EVENT PROCEDURE CHECKLISTS – RECOVER

NOTE: Adapt to determine roles/duties suitable to your building – this list is an example only.

RECOVERY PROCEDURES FLOOD CLEAN UP, RE-STATEMENT & RE-COMMISSIONING PLAN			
Descriptor	Tasks and Details	Persons	Resources
Dewatering	Aim: <i>To dewater flooded basement</i> - Flooded basement will be dewatered by auxiliary and main basement pumps - Refuelling of generator may be required – see Appendix L - Safe pedestrian access to basement car parks needs to be identified	Authorised persons for pump operation Site Supervisor	
Scoping and Preparation	Aim: <i>To facilitate re-establishment of services and the most efficient and safe clean up possible</i> - Photograph and record water levels and extent - Photograph and record any potential entry points or areas of concern - Inspect, photograph and scope entire site after water levels subside - Identify any potential dangers and undertake concise Risk Analysis and Risk Management - Create a brief 'Scope of Works' and timeline for works - Gather Flood Kits and any other resources - Meet with and brief Building Wardens - Set up worker cleaning stations at car park entrances - Open all garages and doors to ensure maximum air flow – keep open at all times if at all possible	BC representative Site Supervisor Building Wardens	Flood Kits Camera/phones One Drive Cleaning kits
Clean Slate	Aim: <i>To create an empty space to facilitate a thorough and efficient cleaning process</i> - Building Wardens to gather Residents (volunteers) under respective buildings - Brief workers on risks and processes - Identify and mark disposal site/s - Sort, salvage or dispose of any remaining items and belongings in cages and car parks (Residents and volunteers) - Site Supervisor to engage Bob Cat depending on amount of remaining contents and level of mud contamination (in consultation with BC representative) - Site Supervisor to engage with Residents and arrange removal of any remaining vehicles (if any) - Site Supervisor to engage with Flood Resilience Representative and identify drains (and mark with marking paint)	Site Supervisor Building Wardens Residents Volunteers Tradespeople	Trolleys Bob Cat (as required) Trades-people (as required) Marking paint

RECOVERY PROCEDURES

FLOOD CLEAN UP, RE-INSTATEMENT & RE-COMMISSIONING PLAN

Descriptor	Tasks and Details	Persons	Resources
	Professional tradespeople to be engaged asap to begin to restore infrastructure (PRIORITY ITEM) – on going		
Mud /Silt Removal	Aim: <i>To clear the majority of mud/silt and any remaining debris before hardening</i> - Site Supervisor briefs Building Warden on effective drain location and likely paths of water and debris - Site Supervisor briefs Building Warden on fire hose and any other water outlet locations - Building Wardens brief Resident and volunteer workers on the aim and task of mud removal - Building Warden to monitor drains in their area and ensure water is draining - Site Supervisor co-ordinates overall site and order of works - Site Supervisor to arrange process for removal of disposed items from disposal sites Processes: - Work from high to low – don't forget walls, wire cages and all surfaces - Identify and work with the falls of the floor – do the higher areas first and work towards the lower areas and drains - Have the fire hoses and water running as much as possible – keep surfaces wet - Scoop deeper mud into barrows or buckets - Hose, squeegee, and brush shallower mud towards the drains - Work in teams in areas – Building Warden to direct in each zone - Avoid cross contamination between teams	Site Supervisor Building Wardens Residents Volunteers	Flood Kits Fire hoses Shovels Wheel-barr ows Buckets Brushes
Flushing	Aim: <i>To clear the remaining mud and create clean surfaces</i> - Site Supervisor briefs Building Wardens on effective drain location and likely paths of water and debris - Site Supervisor briefs Building Wardens on fire hose and any other water outlet locations - Building Wardens brief Resident and volunteer workers on the aim and task of flushing - Site Supervisor co-ordinates overall site and order of works - Building Wardens to monitor drains in their area and ensure water is draining Processes:	Site Supervisor Building Wardens Residents Volunteers	Fire hoses Flood Kits High pressure washers Brushes

RECOVERY PROCEDURES

FLOOD CLEAN UP, RE-STATEMENT & RE-COMMISSIONING PLAN

Descriptor	Tasks and Details	Persons	Resources
	- Work from high to low – don't forget walls, wire cages and all surfaces - Identify and work with the falls of the floor – do the higher areas first and work towards the lower areas and drains - Have the fire hoses and water running continuously - Hose, squeegee, and brush running water towards the drains - Re-do the same areas multiple times until clean - Work in teams in areas – Building Warden to direct in each zone - Avoid cross contamination between teams - Be patient as this is a process reliant on many passes to be effective - Fire hoses in first stages - Use high pressure washers on final runs wherever possible		
Spot Cleaning	Aim: To clean the remaining small 'problem areas' and create clean surfaces - Site Supervisor and Building Wardens inspect all areas and identify areas of concern - Site Supervisor and Building Wardens create small teams (4 – 6 workers) and assign to areas identified - Building Wardens brief Resident and volunteer workers on the aim and task of spot cleaning - Site Supervisor co-ordinates overall site and order of works Processes: - Identify and work with the falls of the floor – do the higher areas first and work towards the lower areas and drains - Use high pressure washers rather than fire hoses unless the area is large - Hose, squeegee, and brush running water towards the drains as required - Re-do the same areas multiple times until clean - Avoid cross contamination between teams - Be patient as this process may be repetitive - Use a mop and bucket in small hard-to-get-at areas - Use a wet vacuum if available to remove muddy residue without cross contamination	Site Supervisor Building Wardens Residents Volunteers	High pressure washers Flood Kits Brushes Mop and buckets Wet/dry vacuums

RECOVERY PROCEDURES

FLOOD CLEAN UP, RE-STATEMENT & RE-COMMISSIONING PLAN

Descriptor	Tasks and Details	Persons	Resources
Disinfection, Drying & Re-commission	Aim: To disinfect all flood affected surfaces and return to a clean and dry condition - Site Supervisor and Building Wardens inspect all areas and confirm clean - Site Supervisor and Building Wardens create small teams (4 – 6 workers) and assign to areas identified - Building Wardens brief Resident and volunteer workers on the aim and task of disinfecting - Site Supervisor coordinates overall site and order of works - Site Supervisor and BC representative to make final inspection and decision to re-commission Processes: - Identify and work with the shape of the space – have a plan - Use handheld or wheeled high pressure sprays - Ensure correct concentration of disinfecting solution - Re-do the same areas a minimum of twice – ideally three times - Be patient as this is process may be repetitive - Ensure transition areas between buildings are covered - Pay extra attention to corners or spaces with low air flow - Ensure adequate PPE is worn at all times - Ensure all garage doors and doors are open to maximise air flow - Allow drying time between runs - Use fans or airflow boosters if available	Site Supervisor Building Wardens Residents Volunteers	Pressure sprays Disinfectant Trolleys (if required) Fans (if available)

APPENDIX G – EMERGENCY CONTACT LISTS

{Enter Building Name} Key Contacts

- Body Corporate members
- Building Manager
- Building Wardens
- Resilience & Response leads

External Contacts

- Emergency Services
- Elected members
- Utilities
- Contractors

TO BE FINALISED AFTER APPOINTMENT OF KEY PERSONS

EXTERNAL SUPPLIER CONTACTS TO BE COMPLETED

BUILDING KEY CONTACTS

Adapt table as required

Name	Company and Position Title	Mobile	Email

EXTERNAL CONTACTS

DIAL '000' FOR ALL EMERGENCIES or '112' FOR AN EMERGENCY FROM A MOBILE PHONE

Adapt table as required

Organisation/Service	Name	Phone number
Emergency services	Fire/police/ambulance	000
Police	West End Police Station	0738 409 100
Policelink	Alerts police cars nearby	131444
Local Government/Stormwater	Brisbane City Council	0734038888
State Emergency Services (SES)		132500
Water Supply and Sewerage	Urban Utilities	132364
Poison information line		131126
COVID-19 information lines		134268
Local Councillor	Jonathan Sriranganathan	07 3403 2165
State Member	Amy MacMahon	07 32553615
Federal Member	Max Chandler-Mather	(02) 6277 2150
Electricity	Energex	136262
Insurance Broker		
Legal Council		
Gas (street reticulation)		1800 007 427
Reception	Office	
After hours service		
Security	First Response	
Lock Out Help	First Response	
Fire Services		
Electrical		
Plumbing		
Gas Plumbing		
Parcel Lockers	My Parcel Locker	07 3123 2862
Lifts		
Pump Services		
Mechanical Trade/s		

Organisation/Service	Name	Phone number
Diesel Generator Supplier/s		
Diesel Pump Supplier/s		
Security gates to car parks		
Air Conditioning	Any Provider	
Gardens		
Cleaning		
Glass		
Fuel	Any Provider	
Towing	Any provider	
Underground Services	Dial before you Dig	1100
Ventilation Fan Provider		
Pool		
Painting		
Waste Compactors		
Locksmith – coded keys		
Locksmith – general work		
Gym Equipment		
Kennards Hire		
1800-Got Junk		

- **Notice to Residents**
- **Resident Card – Prepare/Respond/Recover**
-

Notice from the Body Corporate

TO THE RESIDENT

The Building Flood Mitigation Plan – (Draft) November 2022 requires the understanding and co-operation of all Residents living in this community. The plan acts as a guide and provides information on site actions and resources available to ensure an effective and timely preparation and response is undertaken in a flood event.

The Building will have assigned Building Wardens who will monitor the area around and under their building in the event of a flood.

In a flood event, Residents need to be aware of the following likely consequences:

- Power may be turned off for the length of the event
- Gas is likely to remain on
- The underground carpark may be inundated with water
- Garbage chutes will be closed off
- The Recreation Room will become a Residents' hub with access to power supply

It is important that all Residents provide their current contact details to the onsite Manager. It is also important that Residents provide the contact details of a person who can act on their behalf and has access to their apartment if that Resident will be absent from their apartment for an extended amount of time.

In a flood event, communications from the Body Corporate to Residents will be via:

- The Fire P/A System
- Email
- Facebook, text or mobile

Communications will advise Residents about the following:

- Updates on the status of flooding and power supply
- When to remove cars from underground carpark
- When to relocate items from storage cages
- Call for volunteers to assist in the Preparation Phase and the Response and Recovery (clean up) Phase

In the event of an evacuation of the building this will occur by order of Emergency Services.

Residents should refer to the following 'Flood Emergency – Resident Card' for guidance on Preparation, Response and Recovery actions. These cards should be retained in each apartment.

NAME OF BUILDING **FLOOD PREPAREDNESS -RESIDENT CARD**

PREPARE	RESPOND	RECOVER
• Complete a Resident Information Form & send it to the Building Manager. • Prepare a Personal Emergency Plan. • Submit a Personal Emergency Plan with the Building Manager if you require mobility assistance or have special needs. • Prepare a home emergency kit – what do you need if you stay onsite or if you leave? Ensure you have adequate supplies of non-perishable food, bottled water & medications. • Ensure basement storage areas are tidy, unwanted items are removed prior to the wet season & remaining items are stored in appropriate containers. • Before you go away on holidays – ensure a friend, family member or onsite contact has your details & access to keys (apartment, storage cage & vehicles) to assist in removing items for safe storage if necessary. • If going on holidays - consider moving valuable items from storage prior to leaving. • If onsite during a pending event - remove your personal belongings & vehicles from the basement garage. Offer assistance to other residents who may not be able to physically move their own vehicles & belongings. • Assist Building Wardens to prepare the building/sandbag/install equipment. • Prepare for living onsite with/without power & lifts, organise alternative refrigeration for food & leave your mailbox empty and unlocked. • Have a plan about where you can go in the event of an evacuation: friends/family/community shelter? • Register for early warnings of severe weather events on Brisbane City Council's website: bswa.brisbane.qld.gov.au	• Ensure you are receiving / checking communications during an event (onsite public announcements, emails, sms & social media). • Continue to monitor information about the weather & forecasts on public broadcasts. • Check that all of your personal belongings/vehicles are secure & out of vulnerable areas. • Offer assistance to other residents that may need it - check on the welfare of others, offer to get groceries, help to charge mobile phones/devices. • Follow all directions issued by the Body Corporate, Building Wardens & Site Coordinator to ensure the safety & security of the building and residents. • Volunteer for rosters that may be set up (eg, the security roster for the building & personal belongings stored on podium areas). • Ensure you follow all directions for the disposal of rubbish as the bin chute may be locked & the skips moved to the street. • Follow all directions for the use of communal facilities like the recreation room (power hub), pools & gyms. • If an evacuation is required, this will be coordinated in conjunction with Qld Police, Qld Fire & Emergency Services & the Riverpoint Site Coordinator.	• Once the emergency is declared as over the recovery process may take some time depending on factors such as how high the water level was, what infrastructure was damaged, whether power is connected, and how long pumps/generators will need to be running for (including through the night). There may not be access to carparks, storage cages or other areas of the complex for an extended period. Please be patient during this time. • The clean-up process will be advised to all residents via public announcements & communication channels. • Volunteer to help with the cleanup process. • Follow all directions from the Body Corporate, Building Wardens & Site Coordinator. • Ensure your personal safety & the safety of others - wear appropriate PPE & footwear (flood water is likely to be contaminated). • Assist other residents who may not be able to easily access food, power & water, & ask for assistance from other residents if you need it - advise your Building Warden what you need. • Follow directions for returning vehicles / belongings to the basement & storage cages.

NAME OF BUILDING **FLOOD PREPAREDNESS -RESIDENT CARD**

USEFUL RESOURCES:

Person – Centred Emergency Preparedness Workbook (**P-CEP**):

https://collaborating4inclusion.org/wp-content/uploads/2020/08/2020-08-19-Person-Centred-Emergency-Preparedness-P-CEP-WORKBOOK_FINAL.pdf

RESILIENT KURILPA WEBSITE- TOOLBOX FOR FLOOD PREPARATION RESOURCES

<https://sites.google.com/view/resilientkurilpa/home?pli=1>



BRISBANE CITY COUNCIL WEBSITE – COMMUNITY AND SAFETY/DISASTERS

<https://www.brisbane.qld.gov.au/community-and-safety/community-safety/disasters-and-emergencies>

WEST END EMERGENCY CONTACT NUMBERS

Organisation/Service	Name	Phone number
Emergency services	Fire/police/ambulance	000
Police	West End Police Station	0738 409 100
Policelink	Alerts police cars nearby	131444
Local Government/Stormwater	Brisbane City Council	0734038888
State Emergency Services (SES)		132500
Water Supply and Sewerage	Urban Utilities	132364
Poison information line		131126
Electricity	Energex	136262
Reception	Office	
NAME OF BUILDING after hours service (automatic diversion for D Wilson)		
Security	First Response	
Building Manager		

WHAT SHOULD I PACK IN AN EMERGENCY KIT?



NAME Body Corporate (CTS.....)

___/___/___

Designated Weather/Emergency Event

THIS BIN AREA IS
CLOSED

EMERGENCY BINS ARE
LOCATED AT:

.....

...

NAME Body Corporate (CTS.....)

__/_/_/

Designated Weather/Emergency Event

GARBAGE CHUTES ARE
CLOSED

EMERGENCY BINS ARE
LOCATED AT:

.....

...

NAME Body Corporate (CTS.....)

__/_/_

Designated Weather/Emergency Event

LIFT IS OUT OF ORDER

IN AN EMERGENCY

CONTACT:

.....

.....

Appendix J – Assets & Equipment

- **Flood Management Asset Register**
- **Flood Asset Maintenance Schedule**
- **Emergency Equipment Boxes**

TO BE REVIEWED AND COMPLETED WITH BUILDING MANAGER

Flood Management Asset Register

Adapt table as required

Item	Quantity	Checked	Date
Current spreadsheet of building/apartment number/carpark number/storage cage number			
Brooms			
Wheelbarrows			
Long-handled shovels			
Short-handled shovels			
Squeegees			
Bollards			
Barricade mesh			
Submersible pumps - electric			
Submersible pumps - petrol			
Hoses for pumps			
Exhaust fans/ducting			
Trolleys to move items			
Pressure cleaners			
Sensor lights/batteries for stairwells			
Tripod lights			
Portable CO Monitor			
Spray bottles			
Disinfectant			
Fuel Cans – clearly & correctly labelled for fuel type			
Drill/driver for removing fire doors			

Item	Quantity	Checked	Date
Large gum boots x 10 pairs?			
Bolt cutters			
Grinder?			
Generator (hire?)			
Builders black plastic (rolls)			
Duct tape (rolls)			
Sandbags			
Marine ply boards for lift protection			
Building Flood Emergency Boxes & Contents – see following contents list			
Torches	In Emergency Box		
Spare batteries	In Emergency Box		
Emergency tape (rolls)	In Emergency Box		
Extension leads	In Emergency Box		
Gloves - mixed sizes x 20 sets	In Emergency Box		
First Aid kit	In Emergency Box		
Hand sanitiser			

Flood Asset Maintenance Schedule

Adapt table as required

Item	Actions
Test basement stormwater and car park bay pumps and clear wells	Biannual test of 12 x pumps and cleaning of 6 x pump wells
Test the auxiliary pumps annually	Set up a small reservoir and run pumps to driveway with: (i) mains power and (ii) generator back up power supply
Test the diesel generator annually	Text from supplier documentation – could be an annual maintenance contract as well as our own trial run with pumps and essential community services
Access driveway flood planks	Annual Installation exercise – check all components in store (October)
Lift well flood planks	Annual Installation exercise – check all components in store (October)
Corridor flood planks	Annual installation exercise – check all components in store (October)
Inspect structural integrity of vulnerable assets	Walls etc

Emergency Equipment Box Schedule of Contents

Adapt table as required

	ITEM	DESCRIPTION	QTY	BUNNINGS CODE	STOCK-TAKE	TOP-UP NEEDED
1	Storage box - plastic	Tactix 85L	1	6942629276098		
2	Stocktake List - laminated		1			
4	Signs for closure of bin chutes - laminated		levels in bldg			
5	Sign for closure of bin area - laminated	Red, Yellow, Visitors	3			
6	Signs for lifts on each level - laminated		levels in bldg			
7	Fire Panel Instruction Sheet - laminated		1			
8	Building Plan/Drainage Plan - laminated		1			
9	Flood Prepare Procedure List - laminated		no. of captains			
10	Flood Recovery Procedure List - laminated		no. of captains			
11	First Aid kit - small	Protector Traveller	1	9318262006229		
12	Torches	Dolphin Waterproof	2	8888021301908		
13	Head lamps - pivoting	Energizer 200 Lumen	5	4891138959737		
	Spare batteries					
14	Masks	From Terry White	1x50 box	n/a		
15	Gloves - heavy duty	Sabco large	1x100 box	9310205800451		
16	Goggles (for spraying disinfectant)	Sealing type	5	9318262200382		
17 a	Hazmat Suits	Dupont Proshield XL	2	9318262010608		

17 b	Hazmat Suits	Dupont Proshield L	2	9318262010592		
17 c	Hazmat Suits	Dupont Proshield XXL	1	9310063144902		
18	Hi Viz vests	XXL Orange	5	9318262013319		
19	Safety/caution tape - yellow/black striped	Brutus 50mmx33m	2 rolls	9328968029200		
20	Insulating duct tape (for closing garbage chutes)	48mmx50mtr	1 roll	9339338000781		
21	Utility knife - heavy duty	Kinchrome 150mm	1	9312753905473		
22	Pointed scissors - heavy duty	Kinchrome 200mm	1	9312753044745		
23	Power board with safety switch	Arlec 4xOutlet	1	9311644098935		
24	Electrical extension Leads	DETA 30mtr	2	9311644077930		
25	Bag of rags	Partner 1.5kg	1	6291107349756		

Appendix K – Drainage Plans

Insert Drainage Plan to provide guidance on practical clean up sequence – include locations of sumps, drains and grades of basement slab

Appendix L – Emergency Generator Power Supply to Auxiliary Pumps

Add procedures if installed either permanently or hired for temporary use during flood