NSW STATE EMERGENCY SERVICE

CAMPBELLTOWN LGA

Local Flood Emergency Sub Plan

Volume 1, 2 and 3

March 2023

FloodSafe

CAMPBELLTOWN CITY FLOOD EMERGENCY SUB PLAN

A Sub Plan (FOR THE Bunbury Curran Creek System of the Georges and Nepean River at Menangle Park) of the Local Emergency Management Plan (EMPLAN)

Volume 1 of the Campbelltown Local Flood Plan

Endorsed by the Campbelltown Emergency Management Committee

March 2023

AUTHORISATION

The Campbelltown City Flood Emergency Sub Plan is a sub plan of the Campbelltown City Local Emergency Management Plan (EMPLAN). It has been prepared in accordance with the provisions of the ***State Emergency Service Act 1989*** (**NSW**) and is endorsed by the Local Emergency Management Committee in accordance with the provisions of the ***State Emergency and Rescue Management Act 1989*** **(NSW)**.

Authorised

I Shepherd

NSW SES Unit Commander

Date: 14th March 2023

Endorsed

Chair, Local Emergency Management Committee

Date: 14.3.2023

VERSION HISTORY

Version Number	Description	Date
01	Campbelltown City Flood Emergency Sub Plan	June 2015

AMENDMENT LIST

Suggestions for amendments to this plan should be forwarded to:

Community Planning and Engagement
NSW State Emergency Service
PO Box 6126, Wollongong NSW 2500
nswses.communityplanning@ses.nsw.gov.au

Amendments in the list below have been entered in this plan.

Amendment Number	Description	Updated by	Date
01	Campbelltown Local Flood Plan version 1	Shelly Stingmore	Feb 2021
02	Feedback from NSW SES Campbelltown Unit	Shelly Stingmore	Mar 2021
03	Admin Changes discussed with Council	Shelly Stingmore	September 2021
04	Update of wording to section 5.4.1, 5.12 and 5.13 relating to flood warnings, to reflect the change to the Australian Warning System	Donna McKeon	21.11.2022
05	Update of wording from 'Bureau' to 'Bureau'	Donna McKeon	21.11.2022
06	Update to section 1.8.1b to include commitment of exercising plan every five years and within two years of the plan being reviewed	Donna McKeon	21.11.2022
07	Update of wording from 'DPIE' to 'DPE'	Donna McKeon	21.11.2022
08	Update to section 5.10.1.b, c,d, from State Rescue Board Land Rescue Policy to State Rescue Board NSW State Rescue Policy	Donna McKeon	21.11.2022
09	Under Section 6- Recovery Operations – updated 6.2.2 (c) reference from Resilience NSW to NSW Reconstruction Authority	Shelly Stingmore	14.03.2023
10	Under Section 2.1.3 inserted - Each Dam has a Dam Safety Emergency Plan with direct input from NSW SES to ensure adequate alert levels are adopted to provide enough time to disseminate Emergency Warnings to the at-risk downstream community.	Shelly Stingmore	14.03.2023

DISTRIBUTION LIST

Available for general use and distribution on the following websites - www.emergency.nsw.gov.au or www.ses.nsw.gov.au

Contents

1 OUTLINE AND SCOPE

1.1 PURPOSE

1.1.1 The purpose of this plan is to set out the multi-agency arrangements for the emergency management of flooding in the Campbelltown City Local Government Area (LGA).

1.2 AUTHORITY

1.2.1 This plan is written and issued under the authority of the *State Emergency and Rescue Management Act 1989* (NSW) ('SERM Act'), the *State Emergency Service Act 1989* (NSW) ('SES Act') and the NSW State Emergency Management Plan (EMPLAN).

1.2.2 This plan is a sub plan to the Campbelltown City Local Emergency Management Plan (EMPLAN) and is endorsed by the Campbelltown City Local Emergency Management Committee (LEMC).

1.3 ACTIVATION

1.3.1 This plan does not require activation. The arrangements set out in this plan are always active.

1.3.2 The «Campbelltown City» Emergency Management Plan (EMPLAN) is active at all times in anticipation of the need to coordinate support and resources requested by combat agencies, including the NSW State Emergency Service (NSW SES).

1.4 SCOPE

1.4.1 The area covered by this plan is the Campbelltown City LGA. The Campbelltown City LGA and its principal towns, villages, rivers and creeks are shown in Appendix A.

1.4.2 The Council area is in the NSW SES Metro Zone and for emergency management purposes, is part of the South West Metro Emergency Management Region.

1.4.3 The plan sets out the Campbelltown City level emergency management arrangements for prevention, preparation, response and initial recovery for flooding in the Campbelltown City LGA. Hazard and Risk information can be found in Volume 2 of this document, and NSW SES Response Arrangements can be found in Volume 3.

1.4.4 In this plan a flood is defined as a relatively high water level which overtops the natural or artificial banks in any part of a stream, river, estuary, lake or dam, and/or local overland flooding associated with drainage before entering a watercourse, and/or coastal inundation resulting from super-elevated sea levels and/or waves (including tsunami) overtopping coastline defences.

1.4.5 This plan outlines the local level arrangements for the management of downstream consequences of flooding due to dam failure, however it does not cover the management of flooding of an underground mine by inrush or other cause, which should be covered by the Mine Sub Plan for the respective mine.

1.5 GOALS

1.5.1 The primary goals for flood emergency management in NSW are:

a. Protection and preservation of life.

b. Establishment and operation of flood warning systems.

c. Issuing of community information and community warnings.

d. Coordination of evacuation and welfare of affected communities.

e. Protection of critical infrastructure and community assets essential to community survival during an emergency incident.

f. Protection of residential property.

g. Protection of assets and infrastructure that support individual and community financial sustainability and aid assisting a community to recover from an incident; and

h. Protection of the environment and conservation values considering the cultural, biodiversity and social values of the environment.

1.6 KEY PRINCIPLES

1.6.1 The protection and preservation of human life (including the lives of responders and the community) is the highest priority.

1.6.2 Evacuation is the primary response strategy for people impacted by flooding.

1.7 ROLES AND RESPONSIBILITIES

1.7.1 General responsibilities of emergency service organisations and functional areas are set out in the NSW State EMPLAN and NSW State Flood Plan.

1.7.2 Specific roles and responsibilities for agencies, functional areas and organisations in relation to flooding within Campbelltown City are detailed within this plan, Appendix B and Appendix C.

1.7.3 Any agency with agreed responsibilities in this plan that are temporarily, or no longer able to fulfil their responsibilities must as soon as possible notify the:

a. NSW SES Incident Controller (for local or zone level responsibilities during response operations).

b. NSW SES Zone Duty Commander (for regional level responsibilities outside of response operations).

1.8 PLAN MAINTENANCE AND REVIEW

1.8.1 The NSW SES will maintain the currency of this plan by:

a. Ensuring that all supporting emergency services and functional areas, organisations and officers mentioned in it are aware of their roles and responsibilities.

b. Conduct a minimum of one exercise every five years or within two years of the plan being reviewed.

c. Reviewing the contents of the plan:

- When there are changes which alter agreed plan arrangements.

- When changes to land use strategic plans and policies increase the population at risk.
- After a flood including from after action reviews, reports, or inquiries; and
- As determined by the NSW SES Commissioner.

d. The plan is to be reviewed no less frequently than every five years or after a significant flood event.

1.9 SUPPLEMENTARY DOCUMENTS

1.9.1 Supplementary material published in previous versions of the Local Flood Plan is now maintained on the NSW SES website at: https://www.ses.nsw.gov.au/about-us/flood-storm-and-tsunami-plans/ including:

a. Flood Plan Glossary.

b. NSW SES Dam Failure Notification Flowchart.

c. NSW SES Resupply Flowchart.

2 OVERVIEW OF NSW FLOOD HAZARD AND RISK

2.1 THE FLOOD THREAT

2.1.1 The NSW SES maintains information on the nature of flooding and effects of flooding on the community in the Campbelltown City LGA. This is outlined in Volume 2 – Hazard and Risk in Campbelltown City.

2.1.2 Declared dams in or upstream of the Campbelltown City Local Government Area.

Dam Name	Owner
Campbelltown Link Area Basin 1	Campbelltown City Council
Campbelltown North Detention Basin	Campbelltown City Council
Smiths Creek Ret Basin 1	Campbelltown City Council
Smiths Creek Ret Basin 2	Campbelltown City Council
Smiths Creek Ret Basin 3	Campbelltown City Council
Brenns Creek Dam	James Aidulis - Endeavour Coal Pty Ltd
Avon Dam	Water NSW
Broughton Pass Weir	Bathurst Regional Council
Cataract Dam	Water NSW
Cordeau Dam	Water NSW
Nepean Dam	Water NSW

2.1.3 Each Dam has a Dam Emergency Plan with direct input from NSW SES to ensure adequate alert levels are adopted to provide enough time to disseminate Emergency Warnings to the at-risk downstream community.

3 PREVENTION/ MITIGATION

3.1 INTRODUCTION

3.1.1 The Floodplain Development Manual outlines the NSW Government's Flood Prone Lands Policy which details the framework for managing flood prone land in New South Wales. Incorporation of floodplain risk management into land use planning is one of the key means to limit the exposure to flood risks to our communities and help build long term resilience to future flood events.

3.2 LAND USE PLANNING

3.2.1 **Strategy:** Work with landuse planning and consent authorities to advocate that the risks arising from floods are considered so as to prevent the creation of intolerable impacts of these hazards on the community.

Actions:

a. NSW SES will provide strategic input about land use planning matters which have or will create significant flood risk.

b. NSW SES will provide responses to land use planning proposal referrals that have or will create significant flood risk.

3.3 FLOODPLAIN RISK MANAGEMENT

3.3.1 **Strategy**: NSW SES advocates for the recognition of emergency management considerations through participation in the floodplain risk management program.

Actions:

a. NSW SES will provide coordinated and consistent emergency management advice to councils and other agencies in relation to the management of land that is subject to flooding or coastal inundation; and

b. NSW SES will provide advice, support and technical resources for NSW SES representatives to contribute effectively to local Floodplain Management Committees.

4 PREPARATION

4.1 INTRODUCTION

4.1.1 Preparation includes arrangements or plans to deal with an emergency or the effects of an emergency.

4.2 FLOOD EMERGENCY PLANNING

4.2.1 **Strategy**: NSW SES develop, review and maintain Flood Emergency Sub Plans

4.2.2 **Actions**:

a. Develop and review this NSW SES Local Flood Plan as required. Local Flood Plans outline the specific arrangements for management of flood events within an LGA, and may include cross boundary arrangements; and

b. Review plans as per Section 1.8.

4.2.3 Local EMPLAN Consequence Management Guides (CMG) for flood are not required for communities covered by NSW SES Local Flood Plans.

4.3 FLOOD INTELLIGENCE SYSTEMS

4.3.1 **Strategy**: NSW SES develop and maintain a flood intelligence system to identify flood behaviour, its impact on the community and required response actions.

Actions:

a. Gather and assess flood information for the full range of flood types and severities.

b. Collect, collate, and assess information on the characteristics of communities at risk and the potential effects of flooding on communities at risk; and

c. Share flood intelligence information with supporting agencies.

4.4 DEVELOPMENT OF WARNING SYSTEMS

4.4.1 **Strategy**: Develop, maintain and prepare systems for the provision of flood warnings and associated warning services.

Actions:

a. All levels of government work in partnership to develop and maintain flood warning infrastructure.

b. NSW SES maintains a list of the requirements for flood warnings for flood gauges in NSW (including flood classifications, warning times required and key statistics) and can be found in the supplementary document to the NSW State Flood Plan (see Section 1.9). Gauges of relevance within the Campbelltown City LGA are also listed in Volume 3 of this plan.

c. The NSW SES will recommend new warning services and changes to warning alert levels for gauges to the NSW Flood Warning Consultative Committee.

d. The State Government, in partnership with Local Government, is responsible for developing and maintaining flash flood warning systems for local catchments where required.

e. Campbelltown City has developed and maintains a flash flood warning system for the causeway at Cambridge Avenue, Glenfield.

f. Dam Owners will provide Dam Failure Warning Systems (where required) and consult NSW SES on alert levels and messaging. Alert level definitions are listed in Dam Emergency Plans.

g. NSW SES maintains a dedicated dam failure hotline and procedures to ensure priority dissemination of dam failure warnings.

h. NSW SES develops and maintains warning and flood information products by:

- Utilising flood intelligence data.
- Developing pre-written warning and flood information products.
- Continuously reviewing warning and flood information products; and
- Consulting with affected communities, key stakeholders, Dam Safety NSW and the NSW Flood Warning Consultative Committee; and maintain Operational Readiness.

4.5 BRIEFING, TRAINING AND EXERCISING

4.5.1 **Strategy**: Ensure NSW SES, supporting agencies, functional areas and the community are prepared and familiar with the strategies and arrangements within the Flood Sub Plan and supporting documents.

Actions:

a. NSW SES will consult stakeholders throughout the development of plans.

b. NSW SES will inform stakeholders of content changes after revisions.

c. NSW SES will ensure their facilities and resources are maintained and operationally ready.

d. NSW SES will train personnel for their expected flood operation roles; and

e. NSW SES will regularly brief stakeholders on the exercise arrangements contained in the NSW Flood Emergency Sub Plan.

4.6 COMMUNITY RESILIENCE TO FLOODING

4.6.1 **Strategy**: NSW SES provides and maintains a flexible volunteer workforce to support community resilience.

Actions:

a. Ensure ongoing recruitment and training of a diverse range of volunteers.

b. Ensure pre-planning to facilitate the management of spontaneous volunteers and community members during a flood.

4.6.2 **Strategy**: NSW SES works with individuals, communities, businesses and government agencies to build flood resilience.

Actions:

a. Work with communities to understand and manage the risks associated with floods, including providing business continuity guidance (NSW SES Business FloodSafe), family preparedness (NSW SES Home FloodSafe) and other engagement strategies.

b. NSW SES will collate, assess and disseminate flood information to the community.

c. Collaborate with individuals, businesses, government agencies and communities when developing flood intelligence, preparedness and response information.

d. Plan for floods collaboratively with communities through community and stakeholder participation and engagement.

5 RESPONSE

5.1 INTRODUCTION

5.1.1 Flood response operations will begin:

a. On receipt of a Bureau of Meteorology (Bureau) Severe Weather Warning or Thunderstorm Warning that includes heavy rain or storm surge; or

b. On the receipt of a Bureau Flood Watch or Flood Warning; or

c. On receipt warnings for flash flood; or

d. On receipt of a dam failure alert; or

e. When other evidence leads to an expectation of flooding.

5.2 INCIDENT MANAGEMENT ARRANGEMENTS

5.2.1 **Strategy**: Maintain effective control of flood operations across New South Wales.

Actions:

a. The NSW SES uses the Australasian Inter-service Incident Management System (AIIMS) to manage the flood response.

b. Control of flood response will be at the lowest effective level and may be scaled to suit the incident.

c. The NSW SES State Duty Commander will appoint Incident Controllers and establish Incident Control Centres (see NSW SES facilities on map in Appendix A).

d. The Incident Controller, in consultation with participating supporting emergency services and Functional Areas will determine the appropriate breakdown of an incident area into Divisions and/or Sectors in accordance with the principles of AIIMS as well as the predefined Divisions and Sectors outlined within the NSW SES Intelligence System

5.2.2 **Strategy**: Maintain Incident Control Centre(s).

Actions:

a. NSW SES will operate Incident Control Centre(s) as required.

b. The NSW SES Incident Control Centre(s) will:

- Control resources from NSW SES and coordinate resources of supporting emergency services and functional areas.
- Manage Request for Assistance (RFA) tasking and ensure they are actioned in a timely manner.
- Undertake response planning and determine future resourcing requirements; and
- Coordinate information flow, including warnings, public information and social media.

5.2.3 **Strategy**: Provide effective liaison between the NSW SES and supporting agencies or functional areas in accordance with Local EMPLAN.

Actions:

a. Supporting emergency services and Functional Areas should provide Liaison Officers to NSW SES Incident Control Centre(s) and/or Emergency Operation Centres as required; and

b. NSW SES will provide Liaison Officer(s) to Emergency Operations Centres as required.

5.2.4 **Strategy**: Coordinate resources and logistics support to ensure operational effectiveness.

Actions:

a. The NSW SES Incident Controller will notify agencies of potential access issues between locations, for the consideration of pre-deploying of resources.

b. The NSW SES may request resources and logistics support directly from a supporting emergency service or Functional Area.

c. Wherever possible, supporting organisations are to provide their own logistic support in consultation with NSW SES where appropriate.

d. The NSW SES Incident Controller will control air support operations and may utilise supporting agencies in the management of aircraft.

5.3 USE OF INFORMATION AND COLLECTION OF INTELLIGENCE

5.3.1 **Strategy**: Ensure flood information is effectively communicated and collected during a flood.

Actions:

a. Information relating to the consequences of flooding, response strategies, situational awareness and operational updates will be distributed by NSW SES to supporting emergency services and Functional Areas listed under this Plan.

b. All supporting emergency services and Functional Areas will accurately record and report information relevant to their activities and any real time flood information (including road closure information) to the NSW SES Incident Controller. This may be in the form of a combined Emergency Operations Centre (EOC) report, or direct from agencies where an EOC has not been established.

c. The NSW SES may establish and operate a Joint Intelligence Unit to coordinate the collection, collation, interpretation, mapping, actioning and dissemination of information; and

d. Reconnaissance, mapping, damage assessments, intelligence validation and post flood evaluation will be coordinated by NSW SES. This may occur post impact and continue into the recovery phase.

5.3.2 **Strategy**: Ensure flood intelligence is incorporated into operational decision-making.

Action: The NSW SES will use flood intelligence and official forecasts and warnings, to undertake an assessment of the predicted impact of a flood and to inform operational decision-making.

5.4 PROVISION OF INFORMATION AND WARNINGS TO THE COMMUNITY

5.4.1 **Strategy**: Timely and effective warnings are distributed to the community.

Actions:

a. The Bureau issues public weather and flood warning products before and during a flood. These may include:

- Severe Thunderstorm Warnings with reference to heavy rainfall
- Regional Severe Thunderstorm Warnings with reference to heavy rainfall
- Detailed Severe Thunderstorm Warnings (for Sydney / Newcastle / Wollongong) with reference to heavy rainfall,
- Severe Weather Warnings with reference to heavy rainfall and/or storm surge,

- Flood Watches, and
- Flood Warnings.

b. Dam Owners will utilise Dam Failure Warning Systems to provide warnings and information to NSW SES and communities (where appropriate).

c. NSW SES Incident Controllers will issue the following NSW SES Flood Warnings aligning to the Australian Warning System:

- Advice;
- Watch and Act; and
- Emergency Warning

d. NSW SES liaises with the Bureau of Meteorology to discuss the development of flood warnings as required.

e. NSW SES provides alerts and deliver flood information to affected communities using a combination of the following methods:

- Mobile and fixed public address systems.
- Two-way radio.
- Emergency Alert (SMS and voice message alerting system).
- Telecommunications (including Auto dial systems).
- Facsimile
- Standard Emergency Warning Signal.
- Doorknocking.
- Mobile and fixed sirens.
- Variable message signs.
- Community notices in identified hubs.
- Distribution through established community liaison networks, partnerships and relationships; and
- NSW SES social media and website.

f. NSW SES may request supporting agencies redistribute NSW SES alerts and information, including through the provision of doorknocking teams.

g. Road closure information will be provided to the community through the following agencies/methods:

- Local Government Council websites; and
- Transport for NSW 'Live Traffic' website: www.livetraffic.com or 'Transport InfoLine': 131 500. VMS messaging on roadways may also be used to advise motorists.

h. The Public Information and Inquiry Centre will be established by the NSW Police Force where required to provide information regarding evacuees and emergency information. Contact details will be broadcast once the centre is established.

i. The Disaster Welfare Assistance Line will be established by Disaster Welfare Services where required to provide information on welfare services and assistance. Assistance line contact details will be broadcast once Disaster Welfare Services commence.

5.5 PROTECTION OF PROPERTY

5.5.1 **Strategy**: Coordinate the protection of property from destruction or damage arising from floods.

Action: NSW SES, supporting agencies, and community volunteers will assist the community (where resources are available, feasible and safe to do so) in:

a. The protection of properties through flood protection systems (e.g. sandbagging) to minimise entry of water into buildings; and

b. The raising or moving of household furniture and commercial stock/equipment.

5.6 ROAD AND TRAFFIC CONTROL

5.6.1 **Strategy**: Coordinate the closing and re-opening of flood affected roads.

Actions:

a. Campbelltown City will coordinate the closure and reopening of council managed roads once inspections have been carried out by the relevant authority.

b. The Transport Management Centre (TMC) in coordination with Transport for NSW will coordinate the closure and reopening of the state road network.

c. The NSW Police Force may close and re-open roads but will normally only do so (if the Campbelltown City or Transport for NSW have not already acted and if public safety requires such action;

d. NSW SES will assist with erecting road closure signs and barriers when time and resources permit.

5.6.2 **Strategy**: Coordinate traffic control measures in flood affected areas.

a. The NSW SES Incident Controller may direct the imposition of traffic control measures into flood affected areas in accordance with the provisions of the *State Emergency Service Act, 1989* and the *State Emergency Rescue Management Act, 1989.*

b. The NSW SES Incident Controller may request the Local Emergency Operations Controller provide suitable personnel to assist with traffic coordination.

5.7 PROTECTION OF ESSENTIAL SERVICES

5.7.1 Arrangements for the protection of local assets are outlined in Volume 3 of this NSW SES local Flood Plan. In addition, Local and Region EMPLAN's contain infrastructure inventories.

5.7.2 **Strategy**: Minimise disruption to the community by ensuring protection of infrastructure and supply of essential energy and utility services.

Actions:

a. Transport Services Functional Area will keep the NSW SES informed of the status of transport network infrastructure.

b. The Energy and Utility Services Functional Area is to coordinate the assessment and restoration of essential energy and utility services (not including telecommunications).

c. The Telecommunications Services Functional Area is to coordinate the assessment and restoration of telecommunications and the Government Radio Network.

d. The Engineering Services Functional Area is to coordinate the assessment and restoration of critical public buildings for example hospitals; and

e. Functional Areas will keep the NSW SES informed of the status of utilities and infrastructure.

5.8 EVACUATION

5.8.1 Evacuation is the NSW SES's primary response strategy for managing the population at risk of flooding.

5.8.2 Community specific evacuation arrangements are located in Volume 3 of this Plan.

5.8.3 **Strategy**: Conduct planning to ensure all evacuation constraints are considered.

Actions:

a. Evacuations will take place when there is a risk to public safety. Circumstances may include:

- Evacuation of people when their homes or businesses are likely to flood.
- Evacuation of people who are unsuited to living in isolated circumstances, due to flood water closing access; and
- Evacuation of people where essential energy and/or utility services are likely to fail or where buildings have been or may be made uninhabitable; and

b. The NSW SES will consider the following in evacuation decisions:

- Duration of evacuation.
- Characteristics of the community.
- Numbers requiring evacuation.
- Availability of evacuation routes and transport.
- Time available for evacuation.
- Evacuee management requirements; and
- Resources and delivery of evacuation information.

c. NSW SES Incident Controllers, and flood planners will carefully consider the risks involved in conducting evacuations.

d. All evacuation decisions will be made as per the current NSW SES policies and procedures, and consistent with the NSW Evacuation Management Guidelines.

e. Potential Evacuation Centres are located in Volume 3 / Local EMPLAN; and

f. The NSW Police Force will coordinate the provision of overall security for evacuated areas.

5.8.4 **Strategy**: Evacuate people pre-emptively from dangerous or potentially dangerous places and or locations created by the flood hazard to safe locations away from the hazard.

a. NSW SES will control and coordinate the evacuation of affected communities.

b. The NSW SES Incident Controller will warn communities to prepare for a possible evacuation, where circumstances allow such lead time.

c. The NSW SES Incident Controller will order any necessary evacuations and provide information to the community about when and how to evacuate.

d. Support to evacuation operations may be requested from other emergency services and supporting agencies using arrangements in the local EMPLAN and supporting plans.

e. Health Services Functional Area will coordinate the evacuation of hospitals, health centres and aged care facilities (including nursing homes) in consultation with the NSW SES and Welfare Services.

f. School administration offices (Government and Private) will coordinate the evacuation of schools in consultation with the NSW SES and Welfare Services, if not already closed.

g. Caravan Park proprietors will inform the NSW SES Incident Controller when caravan park evacuations have been completed.

h. People who are reluctant or refuse to comply with any Evacuation Order will be referred to the NSW Police Force.

5.9 EVACUEE MANAGEMENT AND WELFARE

5.9.1 Research and experience in flood operations shows that most evacuees go to family, friends and commercial accommodation outside the impact area.

5.9.2 **Strategy**: Maintain the welfare of communities and individuals affected by the impact of a flood.

Actions:

a. NSW SES will provide initial welfare for evacuees where required but will hand the responsibility over to the Welfare Services Functional Area as soon as possible. In these cases, the NSW SES will brief the Welfare Services Functional Area at the earliest opportunity regarding the level of assistance required.

b. Welfare Services Functional Area will manage evacuation centres for affected residents and travellers in accordance with the Welfare Services Functional Area Supporting Plan.

c. Schools Administration (Government and Private) will manage the safety of students directly affected by flooding and will work with the NSW SES in the temporary closure of schools and will coordinate with NSW SES Transport and Welfare Services in the management of school evacuees.

d. Disaster Victim Registration will be controlled and coordinated by the NSW Police Force with the assistance of NSW SES and Welfare Services Functional Area.

e. NSW SES will provide details of all residents assisted in evacuations to the Welfare Services Functional Area as early as possible.

f. Where the expected remaining number of evacuees and the duration of evacuation is assessed to be beyond the capability and capacity of the established evacuation centre arrangements the SEOCON may establish Major Evacuation Centres or Mass Care facilities; and

g. The decision to establish Major Evacuation Centres or Mass Care Facilities will be made by the NSW SES and SEOCON in consultation with members of the State Emergency Management Committee.

5.9.3 **Strategy**: Coordinate available and accessible health services for flood affected communities.

Action: The provision of environmental health advice, assessment of public health risks and coordination of immediate mental health support will be provided by Health Services Functional Area.

5.9.4 **Strategy**: Coordinate maintenance of food supplies for flood affected communities.

Actions: All matters relating to the primary production, manufacturing, processing and handling of all food from primary industries to retail, inclusive of all restaurants, food services and catering businesses should be referred to the NSW Food Authority through the Agriculture and Animal Services Functional Area.

5.9.5 **Strategy**: Maintain the welfare of animals impacted by a flood.

Actions:

a. Agriculture and Animal Services Functional Area will coordinate the welfare of livestock, pets, companion animals and wildlife including support to primary producers, animal holding establishments and community members; and

b. Agriculture and Animal Services Functional Area role will assist with evacuation, emergency care of animals and assessment, humane destruction and disposal of affected animals, and supply of emergency fodder, water and aerial support where necessary.

5.10 FLOOD RESCUE

5.10.1 **Strategy**: Control and coordinate flood rescue of people and domestic animals.

Actions:

a. NSW SES will perform flood rescue, where training and equipment is suitable and where a risk assessment has indicated that the risk to rescuers is acceptable.

b. Flood rescue operations will be conducted in accordance with the State Rescue Board NSW State Rescue Policy which sets out the framework, governance, responsibilities and requirements for the management and conduct of flood rescue in NSW.

c. NSW SES may request other supporting emergency services to undertake flood rescues on behalf of the NSW SES. Agencies must be authorised/accredited to undertake flood rescue operations in accordance with State Rescue Board requirements, as prescribed by NSW SES. Supporting emergency services must supply information regarding rescues performed to the NSW SES. Notification arrangements with NSW Police Force are outlined in State Rescue Board NSW State Rescue Policy; and

d. Rescue agencies will conduct rescue of domestic small and large animals as per the State Rescue Board NSW State Rescue Policy (and may include Large Animal Rescue of family horses and cows at a residence or property). The rescue of livestock (which includes commercial animals found on farming and breeding enterprises) will be coordinated through Animal and Agriculture Services Functional Area.

5.11 RESUPPLY

5.11.1 **Strategy**: Coordinate resupply to towns and villages isolated by flooding to minimise disruption to the community.

Actions:

a. NSW SES will advise communities and businesses if flood predictions indicate that areas are likely to become isolated, and indicative timeframes where possible.

b. Retailers should be advised to ensure sufficient stock is available for the duration of the flood.

c. When isolation occurs, NSW SES will establish loading points where retailers can instruct suppliers to deliver goods.

d. NSW SES will endeavour to deliver mail to isolated communities but may not be able to do so according to normal Australia Post timetables.

e. NSW SES will assist hospitals with resupply of linen and other consumables where able.

f. NSW SES may request resupply assistance from supporting agencies.

5.11.2 **Strategy**: Coordinate resupply to rural properties isolated by flooding.

Actions:

a. When requested, NSW SES will establish a resupply schedule and coordinate the resupply for isolated rural properties.

b. NSW SES will provide local suppliers with designated loading points. Resupply items are to be packaged by the supplier; and

c. Isolated households unable to afford resupply items will be referred to Welfare Services Functional Area for assistance.

5.12 RETURN

5.12.1 **Strategy**: Coordinate the safe return of communities to flood affected areas when the immediate danger to life and property has passed.

Actions:

a. NSW SES Incident Controller will determine when it is safe to progressively return in consultation with the relevant Emergency Operations Controller and supporting agencies, considering the impact on the following:

- Access and egress
- Communications
- Power supply
- Gas supply

- Infrastructure damage
- Hazardous materials; and
- Public health risks (including sewerage)

b. NSW SES Incident Controller will specify the level of access to affected communities as the following:

- Not suitable for access.
- Limited access by emergency services and response agencies.
- Limited access by residents and/or business operators; or
- Full access

c. NSW SES Incident Controller will issue an Advice Warning advising 'Reduced Threat: Return with Caution' message when the immediate danger to life and property has passed for areas assessed as safe; and

d. The NSW SES will facilitate the return of evacuees to their homes.

5.13 END OF RESPONSE OPERATIONS

5.13.1 **Strategy**: Conclude response operations.

Actions:

a. Response operations will conclude when:

- The physical impact of the flood has ceased.
- All requests for assistance related to the flood have been completed;
- The need for warning and evacuation no longer exist.
- There is no further likelihood of rescuing people.
- Resupply is no longer required (resupply operations may occur concurrently with the recovery phase).
- Response to fire and hazardous material incidents have concluded (not including subsequent clean-up of contaminated sites); and
- All affected areas have had an Advice Warning advising 'Reduced Threat: Return with Caution' issued.

5.14 POST IMPACT ACTIONS

5.14.1 **Strategy**: Learnings from the event are used to inform recovery and future events.

Actions:

a. NSW SES will continue to engage with communities after significant floods through convening one or more community forums, workshops or other opportunities to provide communities a chance to provide feedback, address any concerns and provide input into the recovery process. These will typically include other agencies such as the Bureau of Meteorology, Welfare Services and Campbelltown City representatives.

b. NSW SES will ensure that damage assessment information is provided to the relevant Emergency Operations Controller to inform the recovery impact assessment.

c. NSW SES will conduct After Action Reviews, wherever possible, within three weeks of the end of response operations, which will involve all stakeholders. Findings will be shared and incorporated into improved disaster resilience planning.

d. NSW SES will undertake/coordinate a comprehensive review of intelligence and plans following significant flood events.

5.14.2 **Strategy:** Participate in post flood data collection analysis.

Actions: NSW SES will work with the NSW Department of Planning and Environment (DPE) and Campbelltown City Council on post flood data collection analysis including review of flood intelligence where necessary.

6 RECOVERY OPERATIONS

6.1 INTRODUCTION

6.1.1 Recovery is the process of returning an affected community to its proper level of functioning after an emergency. It will generally commence simultaneously with the Response phase.

6.1.2 Recovery operations will be initiated and conducted as outlined in the NSW State EMPLAN and as further detailed in the NSW Recovery Supporting Plan.

6.2 NSW SES RECOVERY ROLE

6.2.1 **Strategy**: NSW SES will support recovery operations and established Recovery Committees.

6.2.2 **Actions**:

a. NSW SES will provide representation to Recovery Committees as required and may have an ongoing role in the Recovery phase.

b. NSW SES roles on Recovery Committees may include providing information about any continuing response, guidance on mitigation strategies and general advice and assistance to the committee as a subject matter specialist and or expert.

c. NSW SES will provide information to NSW Reconstruction Authority to support applications to Treasury for Natural Disaster Relief and Recovery Arrangements.

d. The NSW SES, in conjunction with a Recovery Committee, will provide a service to support the information needs of a community immediately following a flood; and

e. NSW SES and where required supporting agencies will assist with clean-up operations after floods, where possible when resources and personnel permit.

7 ABBREVIATIONS

For a full list of abbreviations refer to the NSW State Flood Plan - Abbreviations

8 GLOSSARY

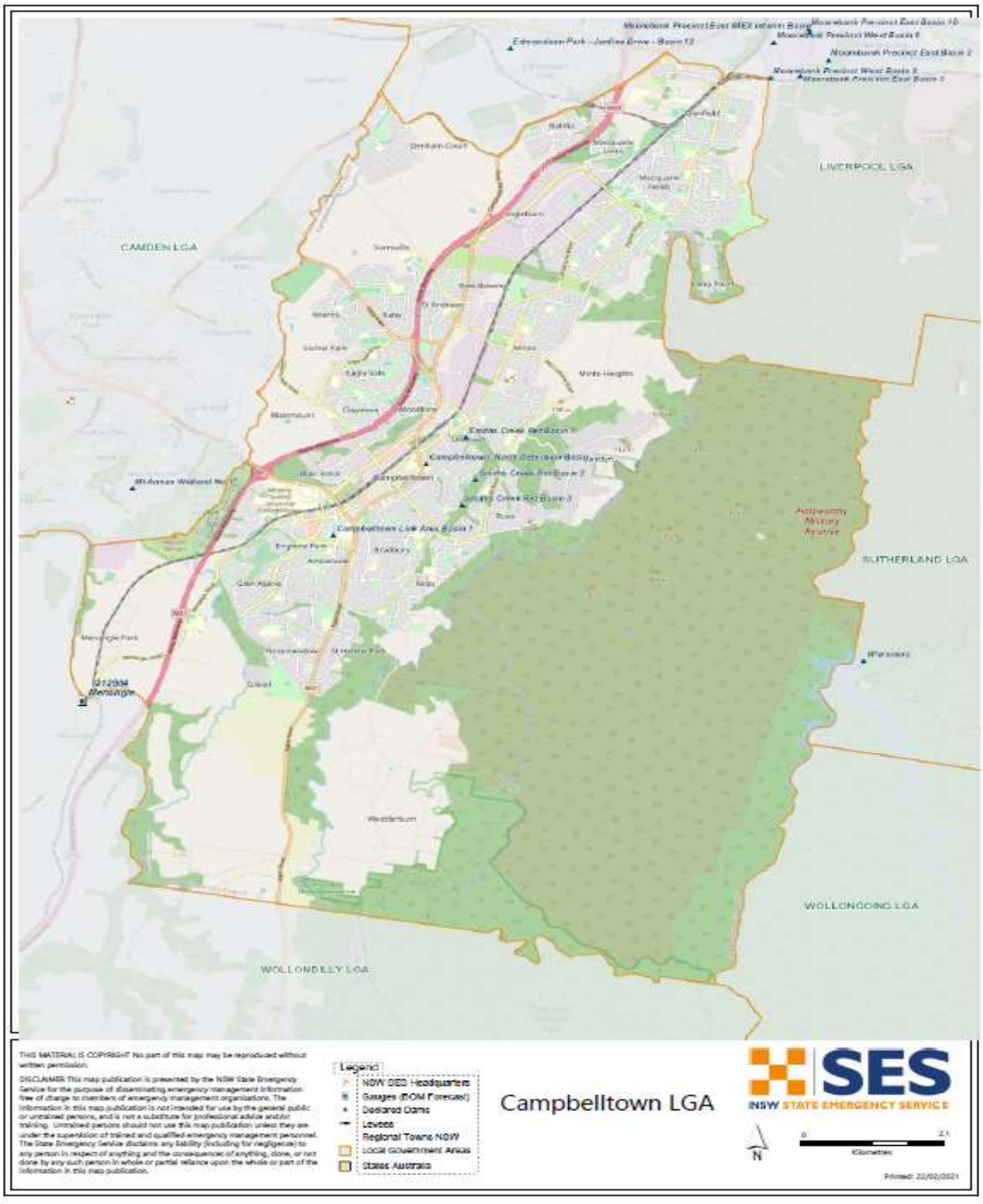
Common emergency service terminology can be found within the Australian Disaster Resilience Glossary.

Readers should refer to EMPLAN Annex 9 – Definitions.

Refer to the NSW State Flood Plan for a complete glossary of terminology used throughout this plan and within NSW SES Flood Plans.

For a full list of definitions refer to the Supporting Document - State Flood Plan Glossary https://www.ses.nsw.gov.au/media/2650/glossary.pdf

9 Appendix A – Map of Campbelltown City Council Area



10 Appendix B – Roles and Responsibilities

AGENCY	RESPONSIBILITIES
NSW State Emergency Service	The NSW SES is the designated Combat Agency for floods, storms and tsunami and controls response operations. NSW SES roles and responsibilities in relation to floods are detailed within the New South Wales State Flood Plan.

AGENCY	RESPONSIBILITIES
Agriculture and Animal Services Functional Area	The roles and responsibilities for Agriculture and Animal Services are outlined in the Agriculture and Animal Services Supporting Plan Roles and responsibilities in addition to the Supporting Plan are: • Disseminate briefing information to participating agriculture and animal services and related stakeholders. • When activated the Agriculture and Animal Services will coordinate the provision of required services which may include: – Coordinate response for animal welfare including pets, livestock and wildlife. – Supply and delivery of emergency fodder. – Emergency water replacement in certain circumstances; and – Financial, welfare and damage assessment assistance to flood affected primary producers. • Support recovery arrangements including: – Administer transport subsidies to primary producers.
Australian Government Bureau of Meteorology	The roles and responsibilities of the Australian Government Bureau of Meteorology are outlined in the NSW State Flood Plan.
Campbelltown City Council	**Preparedness** • Establish and maintain floodplain and coastal risk management committees and ensure that key agencies are represented. • Develop and implement floodplain risk management plans in accordance with the NSW Government's Flood Prone Land Policy and the Floodplain Development Manual. • Provide levee studies, flood studies and floodplain management studies to the NSW SES. • Maintain Dam Safety Emergency Plans for the [Campbelltown City] dams and provide copies to the NSW SES. • Provide information on the consequences of dam failure to the NSW SES for incorporation into planning and flood intelligence.

AGENCY	RESPONSIBILITIES
	• Maintain council-owned flood warning networks and flood mitigation works. • Participate in NSW SES-led flood emergency planning meetings, to assist in the preparation of Flood Sub-Plans. • Maintain a plant and equipment resource list for the council area. • Contribute to community engagement activities. **Response** • Subject to the availability of council resources, assist the NSW SES with flood operations including: – Traffic management on council managed roads. – Provision of assistance to the NSW SES (plant, equipment and personnel where able and requested). – Property protection tasks including sandbagging. – Assist with the removal of caravans from caravan parks – Warning and/or evacuation of residents and other people in flood liable areas. – Provision of back-up radio communications – Resupply of isolated properties; and – Technical advice on the impacts of flooding. – Close and reopen council roads (and other roads nominated by agreement with Transport for NSW) and advise the NSW SES, the NSW Police Force and people who contact the council for road information. – Assist the NSW SES to provide filled sandbags and filling facilities to residents and business in areas which flooding is expected. • Assist with making facilities available for domestic pets and companion animals of evacuees during evacuations. • Operate and maintain a flash flood warning systems at the causeway at Cambridge Avenue, Glenfield.; • Operate flood mitigation works including critical structures such as detention basins and levees and advise the NSW SES regarding their operation. • Manage and protect council-owned infrastructure facilities during floods. • Provide advice to the NSW SES and the Health Services Functional Area during floods about key council managed infrastructure such as sewerage treatment and water supply. • Advise the Environmental Protection Agency of any sewerage overflow caused by flooding.

AGENCY	RESPONSIBILITIES
	• Work with the NSW SES and DPE to collect flood related data during and after flood events. **Recovery** • Provide for the management of health hazards associated with flooding including removing debris and waste. • Ensure premises are fit and safe for reoccupation and assess any need for demolition. • Provide services, assistance and advice to State Government in accordance with the State Recovery Plan.
Childcare Centres and Preschools	• When notified of possible flooding or isolation, childcare centres and preschools should. – Liaise with the NSW SES and arrange for the early release of children whose travel arrangements are likely to be disrupted by flooding and/or road closures; and – Assist with coordinating the evacuation of preschools and childcare centres.
Dams Safety NSW	The roles and responsibilities of the Dams Safety NSW (formerly NSW Dam Safety Committee) are outlined in the NSW State Flood Plan.
Department of Defence	Arrangements for Defence Assistance to the Civil Community are detailed within the State EMPLAN (section 448).
Department of Industry	The roles and responsibilities for the Department of Industry (Crown Lands and Water Division) are outlined in the NSW State Flood Plan.
Energy and Utilities Services Functional Area	The roles and responsibilities for Energy and Utilities Services are outlined in the Energy and Utility Services Supporting Plan (EUSPLAN). Roles and responsibilities in addition to the Supporting Plan are: • Assist NSW SES with identification of infrastructure at risk of flood damage where resources are available. • Facilitate local utility service distribution providers (electricity, gas, water, wastewater) to: – Provide advice to the NSW SES of any need to disconnect power/gas/water/wastewater supplies or of any timetable for reconnection. – Advise the NSW SES of any hazards from utility services during flooding and coastal erosion/inundation. – Advise the public with regard to electrical hazards during flooding and coastal erosion/inundation, and to the availability or otherwise of the electricity supply.

AGENCY	RESPONSIBILITIES
	– Clear or make safe any hazard caused by power lines or electricity distribution equipment. – Reconnect customers' electrical/ gas/ water/wastewater installations, when certified safe to do so and as conditions allow. – Assist the NSW SES to identify infrastructure at risk of flooding for incorporation into planning and intelligence.
Engineering Services Functional Area	The roles and responsibilities for Engineering Services are outlined in the Engineering Services Supporting Plan.
Environmental Services Functional Area	The roles and responsibilities for Environmental Services are outlined in the Environmental Services (ENVIROPLAN) Supporting Plan.
Floodplain Management Australia	The roles and responsibilities of Floodplain Management Australia are outlined in the New South Wales State Flood Plan.
Fire and Rescue NSW (as per NSW State Flood Plan)	**Preparedness** • Identify and notify the NSW SES of any locations at risk of fire (within Fire Districts (13) or hazardous materials that pose a significant threat to surrounding populations due to the impact of a flood for incorporation into NSW SES flood intelligence and planning; and **Response** • Meet the agreed arrangements described in the NSW SES and Fire and Rescue NSW Mutual Aid Agreement. • Provide Incident Management personnel and Liaison Officers to the NSW SES where required. • When requested by NSW SES, provide support to the NSW SES in response to flood emergencies across the State. • Assist the NSW SES with the warning and/or evacuation of at-risk communities. • Assist the NSW SES with the monitoring/reconnaissance of flood prone areas. • Provision of Land Based and In Water Flood Rescue Operators as required. • Provision of appropriately trained personnel to perform Down the Wire (DTW) functions as required. • Conduct Hazmat operations including asbestos risks, rising from flood emergencies in coordination with the SES Incident Controller. • Decontamination of Flood Rescue Operators as required. • Assist the NSW SES with the resupply of isolated communities and/or properties.

AGENCY	RESPONSIBILITIES
	• Assist the NSW SES with property protection tasks including sandbagging. • Provide resources for pumping flood water out of buildings and from low-lying areas. • Assist with clean-up operations, including the hosing out of flood affected properties. • Provide trained staff to support a joint intelligence unit, if established by NSW SES, including Remotely Piloted Aircraft System (RPAS) pilots to assist with field observations. • Assist the NSW SES to undertake damage assessment including structural collapse risks. • Coordinate the pre-deployment of fire resources to communities within NSW Fire Districts if access is expected to be lost, in consultation with the NSW SES; and • Coordinate the deployment of the FRNSW High trans Pump to locations in consultation with NSW SES. **Recovery** • Assist with clean-up operations, including the hosing out of flood affected properties • Participate in After Action Reviews as required.
Forestry Corporation of NSW	**Response** • Close and reopen Forestry Corporation of NSW roads when affected by flood waters and advise the NSW SES of its status. • Manage traffic on Forestry Corporation of NSW roads. • Facilitate the safe reliable access of emergency resources on Forestry Corporation managed roads. • Assist the NSW SES with identification of road infrastructure at risk of flooding. • Assist the NSW SES with the communication of warnings and information provision to the public through variable message signs and other appropriate means; and • Close and relocate people from camping grounds at risk of flooding in State Forest managed areas.
Health Services Functional Area	The roles and responsibilities for Health Services Functional Area are outlined in the Health Services (HEALTHPLAN) Supporting Plan. Roles and responsibilities in addition to the Supporting Plan are:

AGENCY	RESPONSIBILITIES
	• Ensure that appropriate business continuity plans are developed for essential health infrastructure and are activated during floods.
Local Emergency Operations Controller (LEOCON)	• Monitor flood operations. • If requested, coordinate support for the NSW SES Incident Controller.
Local Emergency Management Officer (LEMO)	• If requested by the NSW SES Incident Controller, advise appropriate agencies and officers of the start of response operations.
Manly Hydraulics Laboratory (MHL)	The roles and responsibilities of Manly Hydraulic Laboratory are outlined in the NSW State Flood Plan.
Marine Rescue NSW (as per NSW State Flood Plan)	**Response** • When requested by NSW SES, assist in flood operations when training and equipment are available and suitable including assistance with: – Warning and/or evacuation of at-risk communities. – Providing communications personnel. – Property protection tasks including sandbagging; and – Flood rescue operations.
NSW Ambulance	The roles and responsibilities for NSW Ambulance are outlined in the Health Services (HEALTHPLAN) Supporting Plan.
NSW Department of Education	**Preparedness** • Liaise with the NSW SES and arrange for the early release of students whose travel arrangements are likely to be disrupted by flooding and/or road closures (or where required, for students to be moved to a suitable location until normal school closing time); • Ensure that evacuation plans for flood liable schools have arrangements for flooding; and • Assist NSW SES with community engagement and capacity building programs. **Response** • Assist with the coordination of the evacuation of schools and the immediate welfare of students until returned to the appropriate carer. • Pass information to school bus drivers/companies and/or school principals on expected or actual impacts of flooding; and • Provide space in schools for evacuation centres where necessary.
NSW Department of Industry, Planning and Environment (as per NSW State Flood Plan)	**Prevention** • Oversee the delivery of the NSW Flood Prone Land Policy including financial support through the Floodplain Management Program. Provide technical advice to councils and state agencies including assistance with the identification of risks, the preparation and

AGENCY	RESPONSIBILITIES
	implementation of Floodplain Risk Management Plans and associated mitigation and management actions and understanding flood mitigation schemes including levees. • Work with the NSW SES on the Flood Data Access Program to improve the provision of flood information through the NSW Flood Data Portal. • Assist the Department of Industry-Water in the preparation of rural floodplain management plans under the *Water Management Act 2000* (NSW); and • Provision of strategic technical advice to support floodplain risk management and environmental water management in rural areas of the Murray Darling Basin. **Preparedness** • Assist the NSW SES in the exercising of Flood Sub Plans. • Management of the state government's water level gauges for the flood warning network in tidal areas in NSW (Manly Hydraulic Laboratory operates this system as a service provider on behalf of DPE.). • Advise NSW SES about conditions which may lead to coastal inundation or retarded river drainage near the coast. **Response** • Provide related advice on flood risks to the NSW SES on request; and • Work with the relevant local council and NSW SES to collect flood related data during and after flood events. **Recovery** Support recovery committees as required.
NSW Food Authority	The roles and responsibilities for NSW Food Authority are outlined in the Food Industry Emergency Sub Plan.
NSW National Parks and Wildlife Services (as per NSW State Flood Plan)	**Preparedness** • Assist the NSW SES with identification of road infrastructure in National Parks at risk of flooding. **Response** • Close and reopen National Parks and Wildlife Service roads when affected by flood waters and advise the NSW SES of its status. • Facilitate the safe reliable access by emergency resources on National Parks and Wildlife Service managed roads. • Assist the NSW SES with the communication of warnings and information provision to the public through variable message signs and other appropriate means; and

AGENCY	RESPONSIBILITIES
	Close and direct people to leave camping grounds at risk of flooding in National Parks and Wildlife Service managed areas.
NSW Police Force (as per NSW State Flood Plan)	**Preparedness** • Participate in NSW SES briefings, training and exercises as required. **Response** • Provide a Liaison Officer to the NSW SES Operation Centre if required. • When requested by NSW SES, in flood operations when training and equipment are available and suitable. – Assist with warning and/or evacuation of at-risk communities. – Assist with monitoring / reconnaissance of flood prone areas. – Assist with flood rescue operations. • Conduct road and traffic control operations in conjunction with council and/or Transport NSW. • Coordinate searches for missing people within flood affected areas. • Coordinate security of supply lines evacuated and damaged areas. • Manage Disaster Victim Registration; and • Operate the Public Information and Inquiry Centre, if requested or otherwise needed during flood events. **Recovery** • Participate in After Action Reviews as required.
NSW Rural Fire Service (as per NSW State Flood Plan)	**Preparedness** • Participate in NSW SES briefings, training and exercises as required; and • Meet the agreed arrangements described in the NSW SES/NSW RFS Memorandum of Understanding. **Response** • Provide a Liaison Officer to the NSW SES Operation Centre or Emergency Operations Centre as required. • Provide Incident Management Personnel when requested. • Provide trained staff to support a joint intelligence unit, if established by NSW SES. • Provide aviation support, management and advice as requested through the State Air Desk. • Provide speciality aircraft and appropriately trained personnel to perform Down the Wire (DTW) functions as required. • Assist with Damage Assessments; and

AGENCY	RESPONSIBILITIES
	• Provide Strike Teams during flood operations when requested by NSW SES. This may include assistance with: – Warning and/or evacuation of at-risk communities. – Monitoring / reconnaissance of flood prone areas. – Property protection tasks including sandbagging. – Pumping flood water out of buildings and from low-lying areas. – Back-up radio communications. – Clean-up operations, including the hosing out of flood affected properties. – Deploying resources to communities within Rural Fire Districts where access is expected to be lost in consultation with the NSW SES. – The resupply of isolated communities and/or properties; and – Decontamination of NSW SES Flood Rescue Operators as required. **Recovery** • Participate in After Action Reviews as required.
NSW Volunteer Rescue Association (as per NSW State Flood Plan)	**Response** • Where requested by the NSW SES, assist in flood operations when training and equipment are available and suitable, including assistance with: – The warning and/or evacuation of at-risk communities. – Flood rescue operations. – Monitoring / reconnaissance of flood prone areas. – Resupply of isolated communities and/or properties; and – Property protection tasks including sandbagging.
Owners of Declared Dams within or upstream of the LGA (as per NSW State Flood Plan)	**Preparedness** • Assist the NSW SES with community engagement programs. • Provide NSW SES with information necessary for response planning and warning distribution. • Assist the NSW SES identify correlations between water level and/or discharges at the dam for use in flood response operations (warning and evacuation); and • Consult with the NSW SES State Headquarters in the development of Dam Emergency Plans, including the development of dam failure alerts, in accordance with the Dam Safety Committee Guidelines. **Response** • Where water level monitoring or other instrumentation allows, provide NSW SES with flood advices as per pre-agreed thresholds for use in downstream flood response operations (warnings).

AGENCY	RESPONSIBILITIES
	• Notify NSW SES of potential or actual dam failures in accordance with the Dam Emergency Plan and Dam Safety NSW Guidelines. • Close at-risk camping grounds / recreational areas within their managed areas. • In the case of declared dams whose risks are intolerable, assist the NSW SES in planning to warn and evacuate people at risk of dam failure and maintain and operate any special Dam Failure Warning Systems and/or automatic telemetered monitoring devices to assist with early detection of incidents which are installed until such time that the risks have been lowered to an acceptable level; and Owners of gated dams: • Provide all available information to the Bureau and the NSW SES on storage levels and actual and prospective water releases and their likely impacts on downstream river levels. • Advise the downstream community of prospective and actual water releases, except in those circumstances where the Bureau would issue flood warnings; and • Where possible actively work with NSW SES and the Bureau to reduce the impacts of flooding on communities through management of water releases within identified safe parameters and within statutory licencing provisions under the *Water Management Act 2000* and *Water NSW Act 2014*.
Public Information Services Functional Area	The roles and responsibilities for Public Information Services are outlined in the Public Information Services Supporting Plan. Roles and responsibilities in addition to the Supporting Plan are: • On receipt of advice from NSW SES of any weather event likely to result in significant multi agency operational activity, the Public Information Functional Area Coordinator PIFAC determines if a daily multi-agency teleconference is required to ensure that the information needs of each agency are being met and to address any issues. These teleconferences continue through the response phase into the recovery phase.
Resilience NSW	• The roles and responsibilities of Resilience NSW are outlined in the NSW State Flood Plan.
SEOCON/SEOC	The roles and responsibilities of the SEOCON/SEOC are outlined in the New South Wales State Flood Plan.
Surf Life Saving NSW (as per NSW State Flood Plan)	**Preparedness** • Contribute to NSW SES reviews into plans, policies and procedures as required; and • Participate in NSW SES briefings, training and exercises as required.

AGENCY	RESPONSIBILITIES
	Response • Assist the NSW SES with the warning and/or evacuation of at-risk communities. • Provide accommodation in Surf Life Saving facilities for evacuation centres where required; and • Assist the NSW SES with flood rescue operations, where training and equipment are suitable.
Telecommunications Services Functional Area	The roles and responsibilities for Telecommunications Services are outlined in the Telecommunications Services (TELCOPLAN) Supporting Plan.
Transport for NSW	• Transport for NSW coordinates information on road conditions for emergency services access. • Transport for NSW coordinates the management of the road network across all modes of transport. • Transport for NSW in conjunction will assist the NSW SES with the evacuation of at-risk communities by maintaining access and egress routes. • TMC will assist the NSW SES with the communication of flood warnings and information provision to the public through Live Traffic and Social Media according to the VMS protocols and procedures. **Assist the NSW SES with identification of road infrastructure at risk of flooding.**
Transport Services Functional Area	The roles and responsibilities for Transport Services are outlined in the Transport Services Supporting Plan. Roles and responsibilities in addition to the Supporting Plan are: • Participate in risk management studies. • Assist the NSW SES to identify transport infrastructure at risk of flood damage for incorporation into planning and intelligence; and • Coordinate the provision of traffic and transport operations as consistent with the roles of Transport organisations.
Water NSW	The roles and responsibilities for Water NSW are outlined in the New South Wales State Flood Plan.
Welfare Services Functional Area	The roles and responsibilities for Welfare Services are outlined in the Welfare Services Functional Area Supporting Plan.

11 Appendix C – Community Specific Roles and Responsibilities

Community Members	**PREPAREDNESS** • Understand the potential risk and impact of flooding; • Prepare homes and property to reduce the impact of flooding; • Understand warnings and other triggers for action and the safest actions to take in a flood; • Households, institutions and businesses develop plans to manage flood risks, sharing and practicing this with family, friends, employees and neighbours; • Have an emergency kit; and • Be involved in local emergency planning processes. **RECOVERY** • Assist with community cleanup if required and able to do so. • Participate in After Action Reviews if required.
Tabcorp Park Sporting Club and Club Menangle	**PREPAREDNESS** • Understand the potential risk and impact of flooding; • Prepare property to reduce the impact of flooding; • Understand warnings and other triggers for action and the safest actions to take in a flood; • Clubs to develop plans to manage flood risks, sharing and practicing this with visitors, locals and employees; • Have an emergency kit; and • Be involved in local emergency planning processes. **RECOVERY** • Assist with community cleanup if required and able to do so. • Participate in After Action Reviews if required.
Tharawal Local Aboriginal Land Council	• Act as the point of contact between the NSW SES and the community. • Inform the NSW SES Campbelltown Unit Commander about flood conditions and response needs.

	• Disseminate flood information, including flood and evacuation warnings, to the Tharawal Local Aboriginal Land Council members and local communities

NSW STATE EMERGENCY SERVICE

HAZARD AND RISK IN CAMPBELLTOWN

Volume 2 of the Campbelltown Local Flood Emergency Sub Plan

Last Update: November 2023

FloodSafe

AUTHORISATION

The Hazard and Risk in Campbelltown has been prepared by the NSW State Emergency Service (NSW SES) as part of a comprehensive planning process. The information contained herein has been compiled from the latest available technical studies.

Approved

Signature 

NSW SES NSW SES Coordinator Planning

Name: Shelly Stingmore

Date: 22 November 2023

Approved

Signature: 

NSW SES Metro Deputy Zone Commander

Name Matthew WINLEY

Date: 4 December 2023

Date Tabled at LEMC 15 Nov 2023

PREVIOUS VERSIONS

The following table lists all previously approved versions of this Volume.

Description	Date

AMENDMENT LIST

Suggestions for amendments to this Volume should be forwarded to:

Manager, Emergency Planning

NSW State Emergency Service

PO Box 6126, Wollongong NSW 2500

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Amendments promulgated in the amendments list below have been entered in this Volume.

Amendment Number	Description	Updated by	Date

TABLE OF CONTENTS

LIST OF TABLES

1. THE FLOOD THREAT

OVERVIEW

a. The Campbelltown Local Government Area is situated on the outskirts of the Metropolitan area of Sydney, New South Wales and sits within the Sydney Georges River Basin, between 30-55 Kilometres South-West of Sydney CBD. (1).

b. The Campbelltown LGA itself has a land area of 311.3 square kilometres and an estimated residential population of 174,078 with a population density of 559.1 persons per square km. (2)

LANDFORMS AND RIVER SYSTEMS

The LGA is a part of a larger catchment area for the Georges, Woronora, Nepean River/s and Bow Bowing Bunbury Curran Creek ("BBBC") system.

Georges River Valley

c. The Georges River catchment has a total catchment area of 960 square kilometres. It is one of the most populated catchments in Australia, with a population of around one million. The river itself is about 100km long. From its headwaters near Appin, the river flows north towards Campbelltown, through Liverpool and the Chipping Norton Lakes Scheme, and then east through Bankstown to Botany Bay (refer to Map 1).

d. The river has several major tributaries, including Anzac Creek; Bow Bowing Creek; Bunbury Curran Creek; Cabramatta Creek; Deadmans Creek; Fairfield Creeks System (including Prospect, Orphan School, Clear Paddock, and Green Valley Creeks); Harris Creek; Milperra Drain; O'Hares Creek; Punchbowl Creek; Salt Pan Creek; Stokes Creek; Williams Creek; Spring Creek and Woronora River.

e. The topography of the Lower Georges River is varied. It is comprised of undisturbed deep narrow gorges in the upper catchment area, south of Campbelltown; undulating hills and broad valleys in Liverpool and parts of Fairfield and Bankstown; and narrow steep-sided valleys and gorges in parts of Bankstown. (2).

f. The upper catchment area, south of the Campbelltown is largely undisturbed and is still in its natural forested state. A large portion of the river through this area lies within a deep and narrow gorge. Campbelltown itself, is located on a tributary creek known as the Bunbury Curran Creek and is not directly affected by flooding from the Georges River. (1)

g. The other systems drain from the army range land but have no flood impact within the LGA.

Woronora River Valley

h. The Woronora River is located 22kms south of Sydney central business district and is the largest tributary of the Georges River. The catchment area is approximately 174m^2. It joins the Georges River 10km upstream of the entrance to Botany Bay and flows through the Sutherland Shire (4).

i. The Woronora River is located within Sutherland LGA and borders the eastern boundary of the Campbelltown LGA.

Nepean River Valley

j. The Nepean River contribution to the Campbelltown LGA is flooding impacts on the South-western border in the suburb of Menangle Park and is influenced not only by riverine flooding but by a few Sydney Water dams upstream of Menangle Park that can discharge during flood events.

k. Nepean River within and above Menangle suburb is the boundary of the Campbelltown LGA and immediately downstream of Nepean Dam. The Nepean River flows through steep gorge country for approximately 11.6 kilometres before being joined by the Cordeaux River at Pheasants Nest.

l. From here it continues for another 30 kilometres in gorge country to the Menangle area which sits within the Wollondilly LGA but is bounded by the Southern boundary of the Campbelltown LGA. Although farming and development is widespread on the adjacent land, it is completely curtailed within the boundary of the gorge (1).

Bow Bowing-Bunbury Curran Creek ("BBBC") System

m. The main source of flooding comes from the Bow Bowing-Bunbury Curran Creek System.

n. The drainage of the Campbelltown LGA is by a series of creeks that predominantly drain into the Georges River through the Bow Bowing-Bunbury Curran Creek system, which feeds into the Georges River at Glenfield.

o. These waterways include:

- Ben Bowing Creek Ingleburn
- Biriwiri Creek Leumeah
- Birunji Creek Blair Athol
- Bow Bowing Creek Campbelltown
- Bunbury Curran Creek Campbelltown
- Cottage Creek Denham Court
- Eagle Creek Eschol Park
- Fishers Ghost Creek Campbelltown
- Glenfield Creek Glenfield
- Maxwell Creek Bardia
- McBarron Creek Minto

- Myrtle Creek Kentlyn
- Peter Meadows Creek Kentlyn
- Redfern Creek Ingleburn
- Smith's Creek Ruse

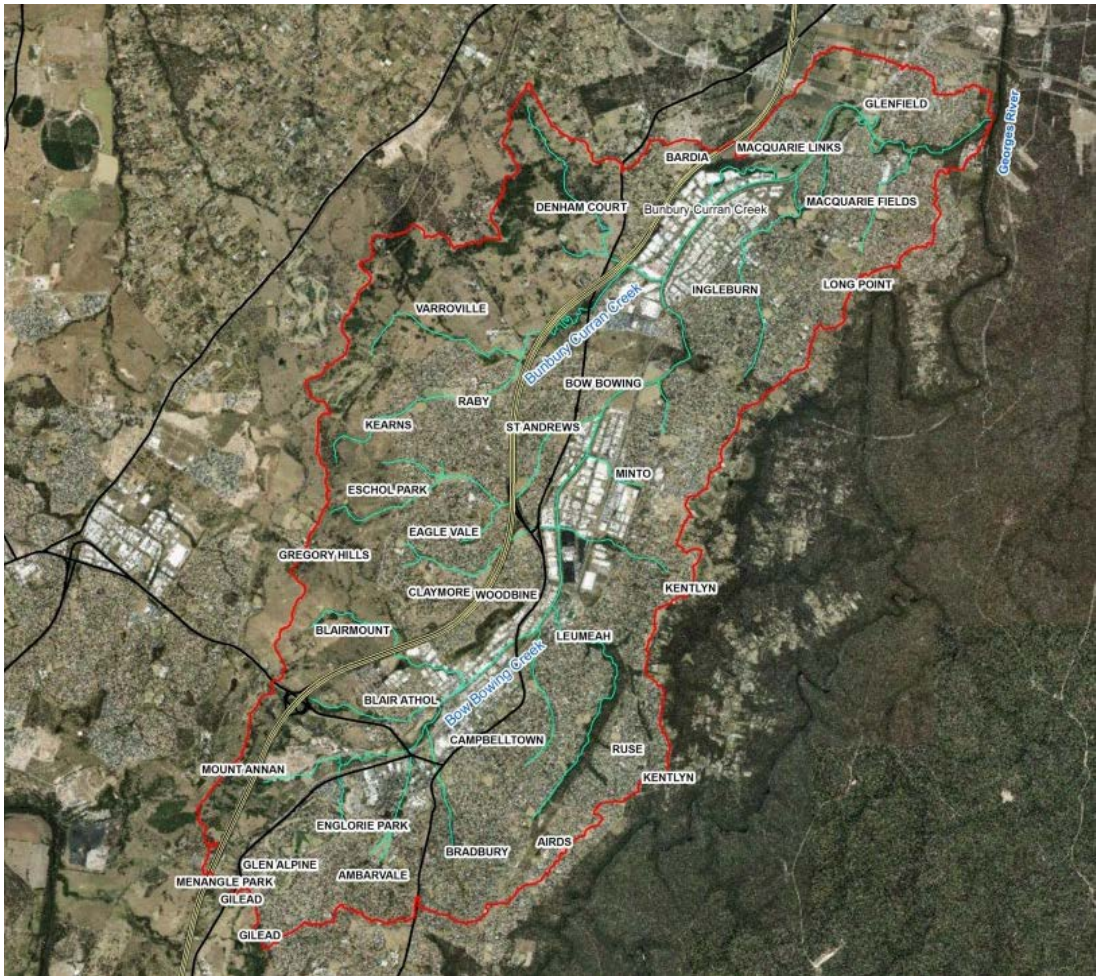
p. All flooding in Campbelltown stems from the Bow Bowing-Bunbury Curran Creek System and its tributaries which flow from both the east and west of the city and by overland flow.

q. The topography of the Bow Bowing-Bunbury Curran Creek is generally mild undulating with some steeper section on the edge of the catchment and a broad flat floodplain along the floor of the valley.

r. Elevation ranges between 3m AHD to 200m AHD. The lowest part of the Bow Bowing-Bunbury Curran Creek catchment is in Glenfield while the highest are along the southeast edge in Ruse and Airds.

s. The Bow Bowing-Bunbury Curran Creek catchments is mostly developed with many lateral tributaries discharging into the Bow Bowing-Bunbury Curran Creek main channel. They include:

- Macquarie Creek
- Raby Main Drain
- Redfern Creek
- Bunbury Curran Creek
- Minto Main Drain No1 and 2
- Thompsons Creek
- Claymore Main Drain
- Smiths Drain
- Smiths Creek
- Dumaresq St Main Drain
- Fishers Ghost Creek
- Birunji Creek
- Biriwiri Creek.



t. Map showing LGA Boundary in red and main tributaries & creeks within: Referenced from the Bow Bowing Bunbury Curran Creek Strategic FRMS&P Volume 2 – Author Molino Stewart, Environmental & Natural Hazards Consultant, March 2019 (4)

u. The Campbelltown area was originally settled in the early 1800s. The Bow Bowing Bunbury Curran Creek System provided an intermittent water supply for the early settlers. The original creek line followed a gently meandering alignment to the confluence with the Georges River. As the need for more land for industry, commence and housing increased, the creek was progressively formalised, straightened and managed so that encroachment into the floodplain could be achieved with reduced risk of flooding. (5)

v. Properties at Risk of Above Flood Flooding:

Event	No of Residential Buildings above floor level	No of Non-Residential above floor level
20% AEP	368	89
5% AEP	571	127
2% AEP	677	145
1% AEP	939	170
0.2% AEP	1330	274
0.1% AEP	1508	318
PMF	6318	1167

STORAGE DAMS

There are (5) Declared Dams within the Campbelltown LGA and No High Risk which meet the threshold of warranting an additional Chapter within the Volume 3 of this plan. See below for summary of information and refer to MAP 1 for Declared Dam locations:

Table/s 1: Declared Dams in Campbelltown LGA

Campbelltown Link Area Basin 1		
Owner/ Operator	Campbelltown City Council	
Description of Dam	The dam is drained into a series of ponds in a park before proceeding towards the Market Fair Shopping Centre and carpark.	
Location	The location of dam is situated on Parkside Crescent, Campbelltown off Birunji Creek, which is a waterway off, Bow Bowing Creek	
Communities Downstream	No information provided	
Monitoring System	Nil	
Warning System	There is no warning system and council have yet to develop a Dam Emergency Plan	
Other	Example short travel times etc	

Smiths Creek Ret Basin 1-3	
Owner/ Operator	Campbelltown City Council
Description of Dam	Not available at this stage
Location	Smith's Creek
Communities Downstream	Leumeah
Monitoring System	Nil
Warning System	There is no warning system and council have yet to develop a Dam Emergency Plan
Other	Not available

Campbelltown North Detention Basin	
Owner/ Operator	Campbelltown City Council
Description of Dam	The dam has been constructed to provide a flood detention basin to give flood protection to the immediate downstream residential properties and the Main Southern Railway. It is zoned earth embankment with a height of 5.4m above the creek bed and 4.5m above adjacent banks. It has a dam crest length of 260m and a dam crest level of RL 69.0m AHD. The outlet consists of an uncontrolled, non-streamlined rectangular drop inlet with a width of 5.22m set into the embankment with reinforced concrete retaining walls on three sides. The level of the sill is RL65.6 and the invert are RL64.0. The

	freeboard to the spillway level (reduced embankment crest) is 2.9m and to the nominal crest of the remainder of the embankment is 3.4m. There is also a 35m wide auxiliary overflow spillway with a sill level of RL 68.5m AHD and capacity of 10.2m3/s. The basin has a capacity of 30ML and catchment area of 1.16km2.
Location	Located on Leumeah Creek (note Fitzroy Creek to the North of Dam) which flows into the Bow Bowing Creek in Campbelltown North within the boundaries of Campbelltown North Primary School and Public Reserve.
Communities Downstream	Campbelltown North residential properties through to the Main Southern Railway. No inundation Map available. PAR 15
Monitoring System	Site Inspections only.
Warning System	There is no telemetry or seismic monitoring installed at the basin.
Other	No travel times available.
Alert Levels	
White	Reservoir level exceeds 67.10 m AHD (1.4m below spillway sill level) - water depth is 1.50m / outflow approx. 10m3/s
Amber	Reservoir level exceeds 67.85 m AHD (0.65m below spillway sill level) - water depth is 2.25m and outflow is approx. 11m3/s
Red	Reservoir level exceeds 68.20 m AHD (0.3m below spillway sill level) - water depth is 2.60m and outflow is approx. 12m3/s

w. There are older former farm dams under Campbelltown Councils' ownership that are not scheduled but have a potential for overtopping. These dams have informal spillways and are unmaintained. They are:

- Burrendah Mandurama Reserve Rosemeadow
- Eagle Farm Reserve Emerald Drive Eagle Vale
- Burrendah Reserve Thunderbolt Drive Raby
- Dams on Biriwiri Creek near Clydesdale Rd Blairmount
- The University Basin dam in the Macarthur Heights Estate.
- Kanbyugal Reserve Dam behind Mill Rd Campbelltown
- Campbelltown Golf Club

x. There is a number of private dams that are not regulated within the LGA. These are:

- Cottage Creek Dams at Denham Court
- Dams either side of St Andrews Rd at Varroville
- Dam at the Maryfields Friary Narellan Rd Blair Athol
- Macarthur Grange Country Club Dam Raby Rd Raby.

y. Dams outside of the Campbelltown Local Government Area

z. There are several Dams that sit outside of the local government area that a have low potential to impact flooding behaviour within the Campbelltown LGA pending the size of the event and other contributing factors along the Nepean River.

aa. These declared dams are located upstream of the Nepean River at Menangle Park and are the dams of Cordeaux, Cataract, Nepean and Avon. These dams have unregulated spillways and are under the control of Sydney Water.

bb. There are no confirmed deficiencies at these noted dams outside the LGA and the risk of failure is low.

WEATHER SYSTEMS AND FLOODING

cc. The main flood bearing weather system for Campbelltown is the East Coast low depression centred off the coast between Wollongong and Newcastle causing rainfall across the catchments.

dd. 200mm of rain in a 48-hour period may cause moderate flooding on the Georges and Nepean River systems which will result in localised flooding in the Campbelltown City area.

ee. Floods are characterised by rapid river rises with the flood commencing as quickly as 6 to 12 hours after the commencement of heavy rain if the catchment is already saturated.

ff. The most common form is flash flooding in Campbelltown or overland flow which can occur within 2 hours of heavy rain.

gg. Major floods have traditionally occurred in the period of January to March and May to August.

hh. A summary of Weather Stations / Rain Gauges within the LGA are:

- (Kentlyn) Georges River Rd, Campbelltown
- Holsworthy Aerodrome AWS Site No. 066161
- Ingleburn – Holsworthy Military Defence
- Waminda Oval Leumeah
- Clark Reserve Kearns
- Hazlett Park Macquarie Fields
- Oswald Reserve Rosemeadow
- Wedderburn

ii. Additional summary of Weather Stations / Rain Gauges outside that give early warning to flash flooding within the Campbelltown LGA:

- Mt Annan
- Liverpool
- Bringelly
- Darkes Forest

CHARACTERISTICS OF FLOODING

jj. Floods are characterised by rapid river rises and flooding which can occur in 6 to 12 hours after the commencement of heavy rain.

kk. Flooding can result in the Georges River without localised heavy rainfall as the upper reaches of the Georges River is feed by Punchbowl and Stokes Creeks which drain Darkes Forest and Woronora areas from the coast west to the Georges River. This does not impact the Campbelltown LGA except at the Cambridge Ave Glenfield Causeway.

ll. Flash flooding the most common event in Campbelltown can occur following intense heavy falls on a local area when the rainfall is greater than the design capacity of the local storm water drainage system.

mm. The Bow Bowing - Bunbury Curran Creek is the main drainage system for the Campbelltown LGA.

nn. This main channel has a variety of forms including natural, grass and concrete trapezoidal.

Table 2: Indicative Flow Travel Time for the flood waters in the channel are:

Locations	Length (m)	Velocity (m/s)	Travel Time for 1% AEP Event (mins)	Cumulative Time from Narellan Rd (min)
Narellan Rd - Badgally Rd	1515	2.1	12	12
Badgally Rd - Rose St	610	2.5	4	16
Rose St - Campbelltown Rd	497	2.9	3	19
Campbelltown Rd - Rose Payten Dr	1223	3.0	7	26
Rose Payten Dr - Airds Rd	940	2.9	5	31
Airds Rd - Ben Lomond Rd	1360	2.6	9	40
Ben Lomond Rd - Victoria Rd (Minto Basin)	1450	3.0	8	48
Victoria Rd (Minto Basin) - Freeman Cct	1380	2.7	9	56
Freeman Cct - Stennett Rd	470	3.1	3	59
Stennett Rd - Memorial Ave Ped Bridge	1590	3.0	9	68
Memorial Ave Ped Bridge - Henderson Road	995	2.8	6	74
Henderson Road - Railway Pde	2440	3.1	13	87
Railway Pde - Canterbury Rd	1100	3.0	6	93
Canterbury Rd - Georges River	1665	1.9	14	108

oo. The BBBC studies show that flooding in the catchment is characterised by a quick rate of rise and short duration. The rate of rise and duration of flooding increase slightly as one moves down the catchment.

pp. Flood Study hydrographs of the 1% AEP event, extracted at various locations in creeks from the upper to the lower parts of the catchment indicate multiple flood peaks which reflects the relative timing of flows arriving from different sub-catchments. The flood depth of rate over an hour can reach up to 0.8m, and 1m in 3hrs and reaching its peak height at 1.2m. it shows that flooding can reach its peak depth within 6 hours from the beginning of the rain, after which the level drops rapidly within 6-12hrs thereafter.

FLOOD HISTORY

qq. Campbelltown was originally settled in the early 1800s with the BBBCC providing intermittent water supply for the early settlers. The original creek meandered to the Georges River. With the need for more land for housing and industry the creek system was progressively formalised and straightened to reduce the risk of flooding.

rr. In the 1970s the State Governments 3 City Plan for Macarthur included the filling of extensive section of the natural floodplain and the formalisation of the creek system with trapezoidal flood channels.

ss. Since the 1990s the three levels of government have funded the construction of a system of detention basins and channels to reduce and manage the impact of flooding in events smaller than the 1% AEP flood.

tt. 200mm of rain in a 48-hour period may cause moderate flooding in the Georges River system and hence will result in localised flooding in the Campbelltown City area.

uu. Campbelltown has had a long history of flooding since its early settlement. The flood history of Campbelltown is a mirror of the flood history of the Georges and Nepean Rivers.

vv. The Georges River is considered one of the most flood prone rivers in NSW with the worst flooding occurring away from its coastal mouth.

ww. In 1956 the most damaging flood occurred with repeated floods resulting in evacuations and home inundation. Flooding in the Georges River in Campbelltown is contained within the river's banks for most of its length.

xx. Flooding in the tributaries is the regular impact on Campbelltown.

yy. Repeated floods have occurred in 1969,1975,1976,1978,1986 and 1988.

zz. A bigger flood occurred in 1873.

aaa. Council advised in 2005 that in a 1 in 100-year event there would be 182 properties flooded by mainstream flooding and a further 450 properties affected by local flooding.

bbb. In 2007 a flash flood event at the Broughton Anglican College inundated school buses trapping people in their cars in the school's carpark. This event was calculated as a 1: 200-year event. As an example, this inundated school buses trapping people in their cars in the school's carpark and about 8,500 homes lost power within the area is an example of such an event. (4) -Note BoM radar archives indicate that 1.3.2007 between 630pm and 650pm Campbelltown received 2cm hail and storm later bought 52mm of rain to Badgerys Creek including 52mm in the 36 mins to 8:01pm

ccc. In 2015 a flood event on the Georges River resulted in flooding in the Lansvale area.

ddd. In 2017 Council released a Flood Study of the Bow Bowing-Bunbury Curran Creek which identified up to 1,000 properties at risk of Above Floor Flooding.

eee. On 10 Feb 2020 (event No. 2020-02) a flood event where rainfall totals peaked up to 245mm (Northern areas of Campbelltown) and for 24 hours to 9am were observed across Sydney. Our records indicate Menangle Bridge Gauge peaked at 12.2m.

fff. On 10 August 2020 severe weather and flooding event saw Menangle Bridge Gauge peak at 4.73m.

ggg. In 2021 (event number 2021-03) saw Menangle Bridge Gauge peak on 21/03/21 at 8.51m, on 22/03/2021 at 9.49m and on 23/03/2021 peak at 12.85m.

hhh. On 7 May 2021 Menangle Bridge Peaked at 9.56m in event 2021-05

iii. On 2 March 2022 Menangle Bridge Peaked at 15.58m, then on 6 March 2022 Peaked at 7.55m and 8 March peaked at 15.92m under event number 2022-03.

jjj. 3 July 2022 Menangle Bridge Peaked at 16.6

FLOOD MITIGATION SYSTEMS

kkk. In 1985 Council adopted a Flood Mitigation Scheme to address the flooding in the city. The scheme has been progressively implemented and is still in progress.

lll. The scheme consists of two large basins at Glenfield and Minto and twenty (20) medium size basins distributed throughout the catchment. More than seventy (70) smaller cascading basins exist in Ambarvale, Claymore, Eagle Vale and Eschol Park areas.

mmm. Medium basins have also been constructed at Kooringa Reserve Raby and the large basin at Minto.

nnn. The current flood mitigation system comprises of more than eighty-six (86) detention basins within the BCCC catchment. Twenty-nine (29) of which are major basins with sizes ranging from 50,000 to 1,000.000 m3 with the rest being smaller interconnecting cascading basins which are generally used for active recreation and environmental purposes.

ooo. Several detention basin designs incorporate numerous stormwater structures including weirs, drop structures culverts, bridges, and grill. When under flood condition some will act as a trap point in the event of a person entering the flood water. These likely trap point have been mapped by Council to provide flood rescue teams with the details on how to access the trap point to effect a rescue (if required).

ppp. There are no levees within the Campbelltown Local Government Area.

qqq. **Voluntary purchase** – is not economically justified as a means of reducing flood damages within Campbelltown LGA ruling out this option for voluntary purposes.

rrr. **House raising** – An Analysis of the flood damages database for Campbelltown revealed there are no houses which satisfy the criteria to warrant council investigate a voluntary house raising scheme further.

EXTREME FLOODING

sss. The only example of an extreme flood event was the 2007 a flash flood event at the Broughton Anglican College.

ttt. Historical photographic records flooding over the years including flooding of the Campbelltown CBD Insert detail

2. EFFECTS ON THE COMMUNITY

2.1 COMMUNITY PROFILE

uuu. The land area equates to 311.3 square km for Campbelltown Local Government Area.

vvv. The 2021 estimated resident population for Campbelltown Local Government Area is 175,687, with a population density of 564.3 persons per square km.

www. The three largest ancestries across communities within this region in 2016 were Australian, English, and Irish.

xxx. The Local Government Area is bounded by Glenfield in the north, the Georges River in the east, the suburb of Gilead in the South.

yyy. The areas flagged for future growth within the Campbelltown LGA are Ingleburn Precinct from Glenfield to Macarthur see Urban Renewal Strategy, includes Minto, Leumeah, Campbelltown, Glenlee, Menangle Park, Gilead, North Appin and Appin. These suburbs are either currently undergoing redevelopment or planned future

development as part of a strategy which may impact not only on the physical topography but the community.

zzz. All communities along the floor of the valley from Glenfield to Glen Alpine and Menangle Park are all at risk of flash or riverine flooding

aaaa. In a 5% AEP flood on the Georges River, it is estimated that approximately 571 residential houses would be flooded above floor level, in the Campbelltown Local Government Area.

bbbb. In the 1% AEP flood, it is estimated that approximately 939 residential houses would be flooded above floor level.

cccc. In the probable maximum flood, it is estimated that 6318 residential homes would be flooded above floor.

dddd. Five Hazardous Facilities classified as potentially “hazardous" were identified across the BBBC Creek catchment. These are:

- Pax Australia, 9 Williamson Rd, Ingleburn
- Australian Petro-Chemical Storage, 14 Williamson Rd, Ingleburn
- Toll Jalco Distribution, 4 Inglis Rd, Ingleburn.
- Origin Energy, 26 Pembury Rd Minto
- Supagas, 5 Benson Rd Ingleburn

eeee. The NSW SES considers these facilities hazardous because, if severely damaged by flooding, they could trigger cascading hazards such as the release of harmful pollutants in the environment. The flood model shows that one of these facilities (i.e., Toll Jalco Distribution) is flood free in all AEP events, and the remaining two are affected by floodwaters with hazard greater than H1 only in the PMF.

SPECIFIC RISK AREAS - FLOOD

Refer to **Volume 3 – Locality Arrangements** which outline specific risk areas within Campbelltown Local Government Area.

ROAD CLOSURES AND ISOLATED COMMUNITIES

2.2 ROAD CLOSURES

Roads liable to flooding in the Campbelltown LGA, these locations are shown on **MAP 2** – Campbelltown Town Map.

Table 3Roads liable to flooding in Campbelltown LGA.

Authority	Closure Location	Suburb	Drainage System	Consequence of Closure	Alternate Route	Indicative Gauge Height	AEP	Comments
Council	Creigan Rd	Airds	Overland Flow				5%	1 in 20 Year Flood
	Briar Rd	Airds	Overland flow				20%	
RMS	Campbelltown Rd south of Ingleburn Gardens Dr	Bardia	Maxwell Creek					
Council	Blaxland Rd	Blair Athol					0.20%	
Council	The Parkway and Olympic Crt	Bradbury	Fishers Ghost Creek				20%	1.4m deep
RMS	Kellicar Rd between Tindall and Narellan Rd	Campbelltown	Birunji Creek				0.20%	
RMS	Appin Rd south bound south of Narellan Rd	Campbelltown					20%	
Council	Badgally Rd northbound north of Johnson Rd	Campbelltown					20%	

Authority	Closure Location	Suburb	Drainage System	Consequence of Closure	Alternate Route	Indicative Gauge Height	AEP	Comments
Council	Blaxland Rd in both southwest of Rose St	Campbelltown					20%	
Council	Dumaresq St in both directions at Hurley St	Campbelltown					20%	
RMS	Hume Motorway / Narellan Rd Exit	Campbelltown	Overland Flow				20%	May have been corrected in a recent realignment of the intersection
Council	Hurley St westbound towards Narellan Rd	Campbelltown					20%	
Council	Hurley St and Campbelltown Mall Roundabout	Campbelltown	Fishers Ghost Creek	Bus Service Impacted			20%	0.5m
RMS	Narellan Rd northbound north of Blaxland Rd	Campbelltown	Overland Flow				20%	
RMS	Oxley St southbound south of Dumaresq St	Campbelltown					20%	
Council	Queen St in both directions west of Campbelltown Rd	Campbelltown					20%	
RMS	Tindall St north and southbound at Menangle Rd	Campbelltown	Birunji Creek				20%	Site currently under a redevelopment proposal

Authority	Closure Location	Suburb	Drainage System	Consequence of Closure	Alternate Route	Indicative Gauge Height	AEP	Comments
RMS	Campbelltown Rd south of McCormack Place near Motorway off ramp	Denham Court	Cottage Creek					
Council	Eaglevale Dr	Eagle Vale	Thompson Creek				PMF	
Council	Heritage Way and Glen Alpine Dr	Glen Alpine	Overland Flow				20%	
RMS	Menangle Rd north and southbound of Glen Alpine Dr	Glen Alpine	Campbelltown Golf Course				20%	Hazard >H2
Council	Cambridge Ave	Glenfield	Georges River	No access to Liverpool	Glenfield Rd if open	4.2m (Cambridge Bridge Gauge)		PMF will result in 11.8m
RMS	Glenfield Rd between Hebe Tr and Atlantic Blvd.	Glenfield	Glenfield Creek					
Council	James St and Henderson Rd	Ingleburn	Redfern Creek				0.20%	
Council	Brooks Rd in both directions at Williamson Rd	Ingleburn					20%	
RMS	Collins Prom northbound south of Eagleview Rd	Ingleburn					20%	
Council	Williamson Rd northeast towards Henderson Rd	Ingleburn					20%	

Authority	Closure Location	Suburb	Drainage System	Consequence of Closure	Alternate Route	Indicative Gauge Height	AEP	Comments
Council	Peter Meadows Rd	Kentlyn	Peter Meadows Creek					
Council	Old Leumeah Rd	Leumeah					0.20%	
Council	Leumeah Rd eastbound at Wyangalla Cres	Leumeah					20%	
Council	O'Sullivan Rd	Leumeah					20%	
RMs	Pembroke Rd south of Westmoreland and	Leumeah					20%	
RMS	Pembroke Rd between Old Leumeah Rd and O'Sullivan Rd	Leumeah	Smith's Creek					
Council	Coronata Way	Macquarie Fields	Macquarie Creek				20%	
Council	Saywell Rd	Macquarie Fields	Bunbury Curran Creek					
Council	Victoria Rd East of Harold St	Macquarie Fields	East of Harold St					
RMS	Menangle Rd (at the bridge)	Menangle Park	Nepean River					All Menangle Park data from CCC Nepean River Flood Extents doc. 5% = 17.7m

Authority	Closure Location	Suburb	Drainage System	Consequence of Closure	Alternate Route	Indicative Gauge Height	AEP	Comments
Council	Airds Rd and Ben Lomond	Minto	Minto Main Drain				0.20%	
RMS	Pembroke Rd northbound between Minto Rd and Burrendong Rd and southbound north of Ben Lomond Rd	Minto					20%	Hazard >H2
Council	Townson Ave Northbound towards Ben Lomond and southbound towards Katherine St	Minto	Mc Barron Creek				20%	
Council	Ben Lomond Rd between Eagleview and Hansens Rd	Minto	Myrtle Creek and Overland flow					
RMS	Minto and Pembroke Rd	Minto						
Council	Cook Rd east of Junction Rd	Ruse	Smith's Creek				2%	Floods at lesser AEP events
Council	Junction Rd north of Cook Rd Roundabout both directions	Ruse	Smith's Creek				2%	Floods at lesser AEP events
RMS	Campbelltown Rd between Ben	St Andrews	Thompson Creek					

Authority	Closure Location	Suburb	Drainage System	Consequence of Closure	Alternate Route	Indicative Gauge Height	AEP	Comments
	Lomond Rd and Bouddi St							
RMS	Appin Rd between Woodlands Rd and Fitzgibbon Lane	St Helens Park	Spring Creek					Currently a part of the Spring Creek Flood Study by Campbelltown Council
Council/RMS	Collaroy Rd southbound at Campbelltown Rd	Woodbine					20%	
	Menangle Bridge	Menangle Park	Nepean	Isolation	M5 or via Camden	7.23m on Menangle Bridge Gauge		

LOCATION AND PROPERTIES AT RISK OF ISOLATION / FLOODING

2.3 LIST OF PROPERTIES AT RISK OF ISOLATION / FLOODING

Suburb	Location	Properties at Risk	Risk Level (AEP)	Source of Risk	Reference	No of Properties at risk of AFF or isolation	Property Details	Comments
Airds	Creigan Rd	Residential Properties	1%	Overland flow	V 1 p 52 V 2 Map 14			
Airds	Creigan Rd	Road	5%	Overland flow	V 1 p 52 V 2 Map 14			
Airds	Briar Rd	Road	20%	Overland Flow	V 2 Map 14			
Ambarvale	Tigg and Miggs Place	Residential Properties	0.20%	Birunji Creek	V1 p 51 V 2 Map 11			
Ambarvale	Tigg Place	Residential Properties	0.20%	Birunji Creek	V 1 p 49 V 2 Map 8			
Ambarvale	Tigg Place	Residential Properties	1%	Birunji Creek	V 1 p 49 and 111 V 2 Map 8 and 37	1		5 buildings isolated
Ambarvale	Tigg and Miggs Place	Residential Properties	5%	Overland Flow	V1 p 51 V 2 Map 11			
Ambarvale	Tigg Place	Residential Properties	20%	Birunji Creek	V 1 p 49 and 111 V 2 Map 8 and 37			Backyard of 2 properties
Ambarvale	55 Crisparkle Dr	Vulnerable Facility	PMF		Appendix D		Amber Cottage Childcare Centre	AFF 0.4m
Ambarvale	Tigg Place	Residential Properties	PMF	Birunji Creek	V 1 p 49 and 111 V 2 Map 8 and 37	11		Six buildings may experience structural instability
Ambarvale	Woodhouse Dr	Vulnerable Facility	PMF		Appendix D		Thomas Reddall High School	AFF 0.5m
Ambarvale	Brownlow Pl and Clennam Ave	Residential properties			V 2 p 33	4		AFF caused by local puddles
Ambarvale	Lightwood St	Residential Properties			V 2 p 33	1		AFF
Bardia	Campbelltown Rd	Road			GEMS			
Blair Athol	Blaxland Rd	Road	0.20%		V 1 p 48			
Blair Athol	Industrial Estate	Commercial Properties	PMF	Biriwiri Creek	V 1 p 49 V 2 Map 8			
Blair Athol	Mossberry St	Residential Properties			V 2 p 33	4		AFF caused by local puddles

Suburb	Location	Properties at Risk	Risk Level (AEP)	Source of Risk	Reference	No of Properties at risk of AFF or isolation	Property Details	Comments
Blairmount	Appaloosa Circuit and Clydesdale Cres	Residential Properties	PMF	Biriwiri Creek	V 1 p 49 and 113 V 2 Map 8 and 40	15		Six buildings may experience structural instability
Bow Bowing	Wyperfield place	Flood Island			V 2 p 32			
Bradbury	Bloodwood Pl Karri Pl and Ash Pl	Residential Properties	1%	Overland flow from Guise Rd	V 1 p 52 109 and 110 V 2 Map 13 and 36	6		
Bradbury	Greenoaks Ave	Residential Properties	1%	Overland flow	V 1 p 106 V 2 map 12	8		
Bradbury	The Parkway	Community Facility	5%	Fishers Ghost Creek	V 2 p 35 Map 13 and 57		Gordon Fetterplace Aquatic Centre	
Bradbury	Ash Pl	Flood Island	20%		V 1 p 79			
Bradbury	A townhouse development between Greenoaks Ave and The Parkway	Flood Island	20%		V 1 p 79 and 106 V 2 Map 12 and 35	12		
Bradbury	Bloodwood Pl	Flood Island	20%	Overland flow from Guise Rd	V 1 p 52 109 and 110 V 2 Map 13 and 36	15		
Bradbury	Bloodwood Pl	Residential Properties	20%	Overland flow from Guise Rd	V 1 p 52 109 and 110 V 2 Map 13 and 36	2		
Bradbury	Bloodwood Pl Karri Pl and Ash Pl	Residential Properties	20%	Overland flow from Guise Rd	V 1 p 52 109 and 110 V 2 Map 13 and 36			
Bradbury	Campbellfield and Greenoaks Sts	Residential Properties	20%	Overland flow from Poplar Cres	V 1 p 52 and 106 V 2 Map 12 and 35			
Bradbury	Jacaranda Ave and Tallowwood Cres	Commercial Properties	20%		V 2 p 35 and Map 12	3	Broadway Shopping Centre	AFF managed by floor heights
Bradbury	The Parkway	Community Facility	20%	Fishers Ghost Creek	V 1 p 49 V 2 Map 8 and 13 and 57	3	Gordon Fetterplace Aquatic Centre	Chemical Storage possible Impacted
Bradbury	The Parkway and Olympic Court	Road	20%	Fishers Ghost Creek	V 1 p 128			1.4 m deep
Bradbury	19 Hoddle Ave	Vulnerable Facility	PMF		Appendix D		Mighty Brains Academy Childcare Centre	<0.1m

Suburb	Location	Properties at Risk	Risk Level (AEP)	Source of Risk	Reference	No of Properties at risk of AFF or isolation	Property Details	Comments
Bradbury	Bloodwood Pl	Residential Properties	PMF	Overland flow from Guise Rd	V 1 p 52 and 110 V 2 Map 13 and 36	22		Three buildings may experience structural instability.
Bradbury	Greenoaks Ave	Residential Properties	PMF	Overland flow	V 1 p 106 V2 Map 12	20		One building in Camperfield Ave may experience structural instability
Bradbury	Jacaranda Ave	Vulnerable Facility	PMF		Appendix D		Primary School	AFF 0.7m
Bradbury	Olympic Court	Residential Properties	PMF	Fishers Ghost Creek	V 1 p 49 V 2 Map 8 and 13 and p 35 and Map 57			
Campbelltown	Kellicar Rd	Commercial properties	0.20%	Birunji Creek	V 1 p 49			
Campbelltown	Kellicar Rd	Road	0.20%	Birunji Creek	V 1 p 49			
Campbelltown	Blaxland and Badgally Rd	Commercial properties	5%	Biriwiri Creek	V 1 p 132 V 2 Map 52 and p 35	1		
Campbelltown	Farrow Rd	Commercial properties	5%		V 1 p 87 and p 133 V 2 map 53 and p 35	2		
Campbelltown	Therry Rd	Critical Infrastructure	5%		V 2 p 35		Campbelltown Hospital	AFF - maybe managed by internal stormwater system
Campbelltown	Appin Rd southbound, south of Narellan Rd between Bradbury and Campbelltown	Road	20%		V 1 p 78 ;88 and 137 V 2 Map 57			State Road
Campbelltown	Badgally Rd north bound north of Johnson Rd	Road	20%		V 1 p 78			
Campbelltown	Blaxland and Badgally Rd	Commercial properties	20%	Biriwiri Creek	V 1 p 87 and 132 V 2 Map 52 and p 35	2		
Campbelltown	Blaxland Rd in both directions southwest of Rose St	Road	20%		V 1 p 78			

Suburb	Location	Properties at Risk	Risk Level (AEP)	Source of Risk	Reference	No of Properties at risk of AFF or isolation	Property Details	Comments
Campbelltown	Campbelltown Catholic Club carpark floods from 20% AEP with Club affected in PMF	Commercial properties	20%		V 1 p 81-82		Evacuation Centre	
Campbelltown	Campbelltown Hospitals and Ambulance Station access limited from 20% AEP and no access in PMF with Ambulance Station impacted	Critical Infrastructure	20%		V 1 p 80		Campbelltown Ambulance Station	
Campbelltown	Dumaresq and Queen Sts	Commercial properties	20%	Overland flow	V 1 p 133 V2 Map 53	1		
Campbelltown	Dumaresq St in both directions at Hurley St	Road	20%		V 1 p 78			
Campbelltown	Dumaresq St northern end	Commercial properties	20%	Overland flow	V 1 p 133 V2 Map 53	2		
Campbelltown	Farrow Rd	Commercial Properties	20%	Railway Culvert over tops banks Bow Bowing	V 1 p 48 and 87 and p 133 V 2 Map 53	2	Campbelltown Frames and Oldfields	
Campbelltown	Houses, between Rudd Rd Hughes St and Moore St	Flood Island	20%		V 1 p 79			
Campbelltown	Hume Motorway and Narellan Rd exit	Road	20%		V 1 p 78			Has been reconstructed since flood study impact now unknown
Campbelltown	Hurley St	Rail Corridor	20%	Fishers Ghost Creek	V 1 p 49 and 129	Rail Services		1.0m
Campbelltown	Hurley St and Campbelltown Mall Roundabout	Road	20%	Fishers Ghost Creek	V 1 p 49 and 129		Bus Services impacted	0.5m
Campbelltown	Hurley St westbound towards Narellan Rd, east bound towards Dumaresq St and Broughton St	Road	20%		V 1 p 78			

Suburb	Location	Properties at Risk	Risk Level (AEP)	Source of Risk	Reference	No of Properties at risk of AFF or isolation	Property Details	Comments
Campbelltown	Industrial area from west of Badgally Rd through to Plough Inn Rd	Flood Island	20%		V 1 p 79			
Campbelltown	Narellan Rd northbound north of Blaxland Rd	Road	20%		V 1 p 78			
Campbelltown	Oxley Rd cut southbound south of Dumaresq St	Road	20%		V 1 p 78 ; 88 and 138 V 2 Map 58			
Campbelltown	Queen and Langdon St	Commercial properties	20%		V 2 p35	5		Floor Heights protects properties from AFF
Campbelltown	Queen St in both directions west of Campbelltown Rd	Road	20%		V 1 p 78			
Campbelltown	Shops and townhouses on the corner of Queen and Chamberlain Sts	Flood Island	20%		V 1 p 79			
Campbelltown	Therry Rd	Critical Infrastructure	20%		V 2 p 35		Campbelltown Hospital	AFF - maybe managed by internal stormwater system
Campbelltown	Tindall St	Road	20%	Birunji Creek	V 1 p 49 V2 Map 56			
Campbelltown	Tindall St north and south bound at Menangle Rd	Road	20%		V 1 p 78 and 137 V 2 Map 56			1.0m. Council has discussed this analysis with hospital
Campbelltown	Townhouse development on Queen St north of Rudd Rd	Flood Island	20%		V 1 p 79			
Campbelltown	Badgally and Blaxland Rds	Road	less than PMF	Biriwiri Creek	V 1 p 49 V 2 Map 8			
Campbelltown	181 Narellan Rd	Vulnerable Facility	PMF		Appendix D		TAFE Childcare Centre ?	AFF 0.1m
Campbelltown	31 Lithgow St	Vulnerable Facility	PMF		Appendix D		Lomandra Primary School	AFF 0.5m
Campbelltown	38 Goldsmith Ave	Vulnerable Facility	PMF		Appendix D		WSU Childcare centre	AFF 1.0m
Campbelltown	42 Parkside Cres	Critical Infrastructure	PMF		Appendix D		Campbelltown Private hospital	AFF 0.1m
Campbelltown	5 Howe St	Vulnerable Facility	PMF		Appendix D		St Peters Primary School	AFF 0.1m
Campbelltown	5 Hurley St	Vulnerable Facility	PMF		Appendix D		Namut Childcare Centre	AFF 0.2m

Suburb	Location	Properties at Risk	Risk Level (AEP)	Source of Risk	Reference	No of Properties at risk of AFF or isolation	Property Details	Comments
Campbelltown	6 St Johns Rd	Vulnerable Facility	PMF		Appendix D		St Thomas Moore Primary School	AFF 0.2m
Campbelltown	65 Queen St	Critical Infrastructure	PMF		Appendix D		Campbelltown Police Station	AFF 0.3m
Campbelltown	66 Broughton St	Critical Infrastructure	PMF		Appendix D		Campbelltown Fire Station	AFF 0.1m
Campbelltown	70 Broughton St	Vulnerable Facility	PMF		Appendix D		Busy Bees Childcare Centre	AFF 0.3m
Campbelltown	90 Beverley Rd	Vulnerable Facility	PMF		Appendix D		Campbelltown Performing Arts High School	AFF 0.4m
Campbelltown	98 Beverley Rd	Vulnerable Facility	PMF		Appendix D		Beverley Park Special School	AFF 0.2m
Campbelltown	Centennial Dr	Residential properties	PMF	Birunji Creek	V 1 p 49			
Campbelltown	Downstream of the Campbelltown North Detention Basin	Residential Properties	PMF	Leumeah Creek	V 1 p 49 V 2 Map 8			Regulated Dam Emergency plan required
Campbelltown	Oxley St	Vulnerable Facility	PMF		Appendix D		Childcare Centre	AFF 0.8m
Campbelltown	Parkside Cres	Critical Infrastructure	PMF		V 1 p 80		Campbelltown Ambulance Station	
Campbelltown	Therry Rd	Critical Infrastructure	PMF		Appendix D		Campbelltown Hospital	AFF 1.0m, Council has discussed this analysis with the hospital. Outcome unknown.
Campbelltown	Rose St	Community Facility			V 2 p 35	4	Campbelltown Animal Care Facility	Possible kennels
Claymore	25 Dobell Rd	Vulnerable Facility	0.5%		Appendix D		Claymore Primary School	AFF 0.3m
Claymore	Gould Rd near the Motorway	Residential properties	1%	Claymore Main Drain	V 1 p 50 and 112 V 2 Map 9 and 38	2		
Claymore	Gould Rd near the Motorway	Residential properties	20%	Claymore Main Drain	V 1 p 50 and 112 V 2 Map 9 and 38			
Claymore	17 Dobell Rd	Vulnerable Facility	PMF		Appendix D		Claymore Youth Centre	0.6m
Claymore	Gould Rd near the Motorway	Residential properties	PMF	Claymore Main Drain	V 1 p 50 and 112 V 2 Map 9 and 38	18		15 houses would have their structural integrity affected.
Eaglevale	Eaglevale Drive	Road	PMF	Thompson Creek	V 1 p 50			

Suburb	Location	Properties at Risk	Risk Level (AEP)	Source of Risk	Reference	No of Properties at risk of AFF or isolation	Property Details	Comments
Eaglevale	Gould and feldspar Rds	Critical Infrastructure	PMF		Appendix D		Eaglevale Police Station	AFF 0.2m
Eaglevale	Thompson Creek between the Motorway and Bow Bowing Creek	Residential properties	PMF	Thompson Creek	V 1 p 50			
Eschol Park	Eschol Park Dr	Vulnerable Facility	PMF		Appendix D		Eschol Park Primary School	AFF <0.1m
Glen Alpine	Heritage Way and Glen Alpine Dr	Road	20%	Campbelltown Golf Course Creek	V 1 p 49 V 2 Map 8			
Glen Alpine	Menangle Rd north and south bound between Glen Alpine Dr and Gilchrist Dr and southbound and northbound at two locations north of Glenlee Rd	Road	20%		V 1 p 78 ; 88 and 137 V 2 Map 55			State Road
Glen Alpine	Heritage Way and Glen Alpine Dr	Residential properties	PMF	Campbelltown Golf Course Creek	V 1 p 49 V 2 Map 8			Neighbouring properties
Glenfield	Newton Rd and Fawcett St	Residential Properties	0.20%	Bunbury Curran Creek	V 1 p 48 and 114 V 2 Map 41			
Glenfield	Cambridge Ave	Road	1%					8.4m
Glenfield	Harrow Rd	Residential Properties	1%	Overland Flow	V 1 p 52 and 122 V 2 Map 20 and 49			
Glenfield	Cambridge Ave	Road	5%					7.8m
Glenfield	Hosking Cres and Railway Pde	Commercial Properties	5%		V 2 p 35			Floor level should protect properties from AFF
Glenfield	Cambridge Ave	Road	10%					7.6m
Glenfield	81 Belmont St	Vulnerable Facility	20%		Appendix D		Frank Whiddon Retirement Village	AFF 0.1m
Glenfield	Harrow Rd from O' Malley Place and through to Bensbach Rd	Residential Properties	20%	Overland Flow	V 1 p 52 and 122 V 2 Map 20 and 49	3		

Suburb	Location	Properties at Risk	Risk Level (AEP)	Source of Risk	Reference	No of Properties at risk of AFF or isolation	Property Details	Comments
Glenfield	Shops and dwellings in Railway Pde between Belmont Rd and Hosking Cres	Flood Island			V 1 p 79			
Glenfield	Roy Watts Rd	Vulnerable Facility	PMF	Bunbury Curran Creek	V 1 p 48		Hurlstone Agricultural College Campus - High School	
Glenfield	Cambridge Ave	Road	PMF					11.8 m
Glenfield	Newton Rd and Fawcett St	Residential Properties	PMF	Bunbury Curran Creek	V 1 p 48 and 114 V 2 Map 41	98		62 properties at risk of structural instability
Glenfield	Balimo Pl	Residential Properties			V 2 p 33	1		AFF
Glenfield	Cambridge Ave	Road						Closes at 4.2m
Ingleburn	Airds Rd	Commercial Properties	0.20%	Claymore Main Drain and Bow Bowing Creek	V 1 p 50			
Ingleburn	Ingleburn Rd	Residential Properties	0.20%	Overland flow	V 1 p 52 V 2 Map 18			
Ingleburn	James St and Henderson Rd	Road	0.20%	Redfern Creek	V 1 p 51			
Ingleburn	CBD 37 houses may experience AFF	Residential Properties	1%	Overland flow	V1 p 97 Map 33	37		
Ingleburn	Carlisle, Albert and Ingleburn Sts and Oxford Rd	Commercial properties	5%	Overland flow	V 1 p 52 V 2 Map 19			
Ingleburn	Carlisle, Albert and Ingleburn Sts and Oxford Rd	Residential properties	5%	Overland flow	V 1 p 52 V 2 Map 19			
Ingleburn	Louise Ave and Aero Rd	Commercial properties	5%		V 3 p 35 and V2 map 51	5		AFF
Ingleburn	North and south of Norfolk St at Cumberland Rd	Residential Properties	5%	Redfern Creek	V 1 p 52 V 2 Map 19			Check if Ingleburn PS is at risk

Suburb	Location	Properties at Risk	Risk Level (AEP)	Source of Risk	Reference	No of Properties at risk of AFF or isolation	Property Details	Comments
Ingleburn	Oxford Rd between Wonga and Jacana Places	Residential Properties	5%	Overland flow	V1 p 125 and V 2 Map 49	6		
Ingleburn	A house in Clifford Cres	Flood Island	20%		V 1 p 79	1		
Ingleburn	Between Macquarie Rd the railway and James St	Residential Properties	20%	Koala Walk Drain and Kingfisher Reserve Creek	V 1 p 51			
Ingleburn	Brooks Rd in both directions at Williamson Rd	Road	20%		V 1 p 78			
Ingleburn	CBD	Commercial properties	20%	Overland flow	V 1 p 51			
Ingleburn	CBD	Commercial properties	20%	Overland flow	V 1 p 136 V 2 Map 54	6		71 tenants
Ingleburn	CBD 50 would be isolated	Flood Island	20%	Overland flow	V1 p 97 V 2 Map 33	50		
Ingleburn	CBD 15 houses may experience AFF	Residential Properties	20%	Overland flow	V1 p 97 V 2 Map 33	15		
Ingleburn	CBD bounded by Ingleburn Rd, Cambridge St ,Carlisle St and Norfolk St	Flood Island	20%		V 1 p 79 Map 19			
Ingleburn	CBD has 189 residential properties at risk with flow paths from Redfern Creek and Koala Walk Drain	Residential Properties	20%	Overland flow	V 1 p 97	189		
Ingleburn	Collins Promenade cut north bound south of Eagleview Rd	Road	20%		V1 p 138 and V 2 Map 59			
Ingleburn	Houses on the corner of Chester Rd and Brett Pl	Flood Island	20%		V 1 p 79 and p 122	8		
Ingleburn	Houses at the northern end of Bronzewing St, Jacana Pl and Wonga Pl	Flood Island	20%		V 1 p 79			
Ingleburn	Houses between Cambridge St, Carlisle St and Macquarie Rd	Flood Island	20%		V 1 p 79			
Ingleburn	Houses between James St and Henderson Rd	Flood Island	20%		V 1 p 79			
Ingleburn	Houses in Koala Ave	Flood Island	20%		V 1 p 79 V 2 Map 19			

Suburb	Location	Properties at Risk	Risk Level (AEP)	Source of Risk	Reference	No of Properties at risk of AFF or isolation	Property Details	Comments
Ingleburn	Houses on Chester Rd between Belford St and Ingleburn Rd	Flood Island	20%		V 1 p 79 V 2 Map 18			
Ingleburn	Ingleburn RSL Club (Evacuation Centre) surrounded by floodwater. Building and carpark not affected	Flood island	20%		V 1 p 81 and p 83	1		
Ingleburn	Louise Ave and Aero Rd	Commercial properties	20%		V 2 p 35 and Map 51	5		AFF
Ingleburn	Louise Ave between Stanley St and Memorial Oval	Commercial properties	20%		V 1 p 87 and p 131 V 2 Map 51	5		
Ingleburn	Oxford Rd and Kookaburra St	Residential Properties	20%	Overland flow	V 1 p 52 and 125 V 2 Map 19 and 49	4		
Ingleburn	Oxford Rd between Koala Walk Reserve and Cumberland Rd	Flood Island	20%	Overland flow	Vol 1 p 126 Vol 2 Map 49	10		
Ingleburn	Packard Cl	Flood Island	20%		V 1 p 79			
Ingleburn	The majority of the Industrial Area	Flood Island	20%		V 1 p 79			Extent of Industrial Area
Ingleburn	Townhouses between Macquarie Rd and the railway	Flood Island	20%		V 1 p 79			
Ingleburn	Williamson Rd northeast towards Henderson Rd	Road	20%		V 1 p 78			
Ingleburn	Australian Petro Chemical Storage 14 Williamson Rd	Hazardous Facility	PMF		V1 p 83	1		
Ingleburn	CBD 100 houses may experience AFF	Residential Properties	PMF	Overland flow	V1 p 97 Map 33	100		
Ingleburn	CBD 100 houses may experience AFF with 71 located on a flood island	Flood Island	PMF	Overland flow	V1 p 97 Map 33	100		12 properties at risk of structural instability

Suburb	Location	Properties at Risk	Risk Level (AEP)	Source of Risk	Reference	No of Properties at risk of AFF or isolation	Property Details	Comments
Ingleburn	Chester Rd	Residential properties	PMF	Overland flow from Cumberland Rd and Jacklyn St	V 1 p 122 V 2 Map 47	8		3 properties at risk of structural instability
Ingleburn	Matthew Square	Residential properties	PMF	Redfern Creek	V 1 p 51			
Ingleburn	Oxford Rd between Koala Walk Reserve and Cumberland Rd	Residential Properties	PMF	Overland flow	Vol 1 p 126 Vol 2 Map 49	10		
Ingleburn	Pax Australia 9 Williamson Rd	Hazardous Facility	PMF		V 1 p 83	1		
Ingleburn	Industrial Area	Commercial Properties		Bunbury Curran Creek	V 1 p 48 V 2 Map 10			
Kearns	Epping Forest Dr backing onto Vale Brooke Reserve and Trebbiano Pl	Residential Properties	1%	Overland flow	V 1 p 52 V 2 Map 15 and 34	5		
Kearns	Epping Forest Dr backing onto Vale Brooke Reserve and Trebbiano Pl	Residential Properties	20%	Overland flow	V 1 p 52 V 2 Map 15 and 34	3		
Kearns	Epping Forest Dr backing onto Vale Brooke Reserve and Trebbiano Pl	Residential Properties	PMF	Overland flow	V 1 p 52 V 2 Map 15 and 34	7		
Leumeah	Airds Rd around Ben Lomond	Road	0.20%	Minto Main Drain No 2 Between Pembroke Rd and Airds Rd	V 1 p 50			
Leumeah	Between Pembroke Rd and the Railway	Commercial Properties	0.20%	Smith's Creek	V 1 p 49 V 2 Map 8			
Leumeah	Old Leumeah Rd	Road	0.20%		V 1 p 81			
Leumeah	Wests Leagues (Evacuation Centre) floods from a 5% AEP and all roads cut in PMF	Flood island	5%		V 1 p 81- 82	1		
Leumeah	Leumeah Creek upstream of the railway culvert in O Sullivan Rd	Commercial Properties	20%	Leumeah Creek	V 1 p 49 V 2 Map 8			
Leumeah	Leumeah Rd east bound at Wyangalla Cres	Road	20%		V 1 p 78			

Suburb	Location	Properties at Risk	Risk Level (AEP)	Source of Risk	Reference	No of Properties at risk of AFF or isolation	Property Details	Comments
Leumeah	Minto Main Drain No 2 Between Pembroke Rd and Airds Rd	Road	20%	Minto Main Drain No 2	V 1 p 50			
Leumeah	O'Sullivan Rd	Road	20%		V 1 p 81			
Leumeah	Old Leumeah Rd	Community Facility	20%	Smith's Creek	V 1 p 49 V 2 Map 8		Campbelltown Stadium Carpark	
Leumeah	Ben Lomond between Pembroke Rd and Airds Rd	Road	PMF	Minto Main Drain No 2	V 1 p 50			
Leumeah	4 Burrendong Rd	Vulnerable Facility	PMF		Appendix D		Leumeah Public School	AFF 0.2m
Leumeah	6 Hughes St	Vulnerable Facility	PMF		Appendix D		Cinderella Childcare Centre	AFF 0.5m
Leumeah	Industrial Area	Commercial Properties	PMF	Bow Bowing Creek	V 1 p 48			
Leumeah	Peter Meadows Rd	Road						
Leumeah	Rudd Rd	Flood Island			V 2 p32			
Macquarie Fields	Brooks St between Third Ave and Parliament Rd	Residential properties	0.2%	Macquarie Creek	V 1 p 128 V 2 Map 21 and 50	All properties left hand side of the creek		
Macquarie Fields	Myee Rd and Waratah Cres	Residential Properties	0.20%	Redfern Creek	V 1 p 120 V 2 Map 46			
Macquarie Fields	Victoria St and Coronata Way	Residential Properties	0.20%	Macquarie Creek	V 1 p 51 V 2 Map 21			
Macquarie Fields	10 Brooks Rd	Critical Infrastructure	1%		Appendix D		Macquarie Field Police Station	AFF 0.1m
Macquarie Fields	Clarence St and Alexander Cres	Residential Properties	1%	Redfern Creek	V 1 p 51 V 2 Map 45			
Macquarie Fields	Myee Rd and Waratah Cres	Residential Properties	1%	Redfern Creek	V1 p 51			
Macquarie Fields	East of Eucalyptus Dr in Berrigan Cres and north of Rosewood Dr	Residential properties	2%	Overland flow	V 1 p 52 V 2 Map 21	3		AFF Location unclear
Macquarie Fields	Coronata Way	Road	20%	Macquarie Creek	V1 p 118 V 2 Map 21 and 44			

Suburb	Location	Properties at Risk	Risk Level (AEP)	Source of Risk	Reference	No of Properties at risk of AFF or isolation	Property Details	Comments
Macquarie Fields	Victoria Rd	Residential Properties	20%	Macquarie Creek	V 1 p 118 V 2 Map 43	3		
Macquarie Fields	Brooks St	Residential properties	20%	Macquarie Creek	V 1 p 128 V 2 Map 21 and 50	1 ?		
Macquarie Fields	Dwellings in the Good Samaritan Sisters Village Victoria Rd	Flood Island	20%	Macquarie Creek	V 1 p 79 and V 2 map 43			
Macquarie Fields	Houses in Atchinson Rd and Adrian St	Flood Island	20%	Bunbury Curran Creek	V 1 p 79 and 116 V 2 Map 42	78		
Macquarie Fields	Adrian St	Residential properties	PMF	Bunbury Curran Creek	V 1 p 79 and 116 V 2 Map 42	104		11 houses at risk of structural instability
Macquarie Fields	Coronata Way	Residential Properties	PMF	Macquarie Creek	V1 p 118 V 2 Map 21 and 44	23		22 houses at risk of structural instability
Macquarie Fields	Victoria Rd	Residential Properties	PMF	Macquarie Creek	V 1 p 118 V 2 Map 43	24		9 houses at risk of structural instability
Macquarie Fields	Brooks St between Third Ave and Parliament Rd	Residential properties	PMF	Macquarie Creek	V 1 p 128 V 2 Map 21 and 50	All properties left hand side of the creek		
Macquarie Fields	Clarence St and Alexander Cres	Residential Properties	PMF	Redfern Creek	V 1 p 119 V 2 Map 45	65		15 houses at risk of structural instability
Macquarie Fields	Myee Rd and Waratah Cres	Residential Properties	PMF	Redfern Creek	V 1 p 120 V 2 Map 46	44		35 houses at risk of structural instability
Macquarie Links	Golf Course	Community Facility	5% and up	Bunbury Curran Creek	V 1 p 48		Macquarie Links Golf Course	1m
Menangle Park	Menangle Rd at the bridge over the Nepean River	Road	5%	Nepean River	All Menangle Park data from CCC Nepean River Flood Extents doc.			17.7m
Menangle Park	Racecourse Ave at railway underpass	Road	5%	Nepean River	All Menangle Park data from CCC Nepean River Flood Extents doc.			17.7m
Menangle Park	Menangle Park Paceway Main Building	Commercial properties	20%	Nepean River	CCC Nepean River Flood Extents doc.			Gauge Reading 15.3m
Menangle Park	12 Racecourse Ave	Residential properties		Nepean River	CCC Nepean River Flood Extents doc.			16.3m
Menangle Park	16 Payten St	Residential properties		Nepean River	CCC Nepean River Flood Extents doc.			20.3m

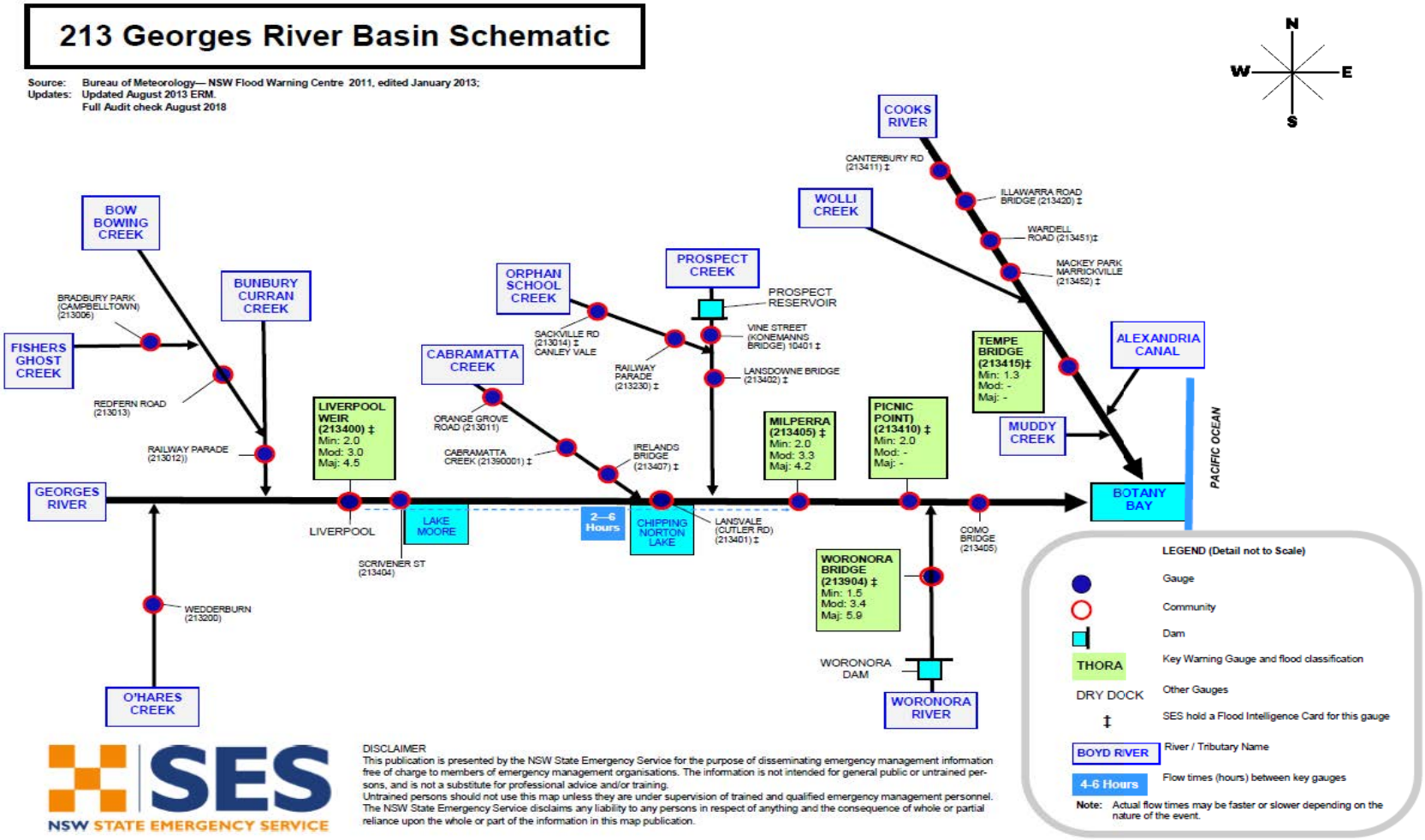
Suburb	Location	Properties at Risk	Risk Level (AEP)	Source of Risk	Reference	No of Properties at risk of AFF or isolation	Property Details	Comments
Menangle Park	190 Menangle Rd	Flood Island		Nepean River	All Menangle Park data from CCC Nepean River Flood Extents doc.			17.5m
Menangle Park	22 Racecourse Ave	Residential properties		Nepean River	CCC Nepean River Flood Extents doc.			17.3m
Menangle Park	32 Racecourse Ave	Residential properties		Nepean River	CCC Nepean River Flood Extents doc.			17.3m
Menangle Park	42 Racecourse Ave	Residential properties		Nepean River	CCC Nepean River Flood Extents doc.			18.3m
Menangle Park	62 Racecourse Ave	Residential properties		Nepean River	CCC Nepean River Flood Extents doc.			18.4m
Menangle Park	72 Racecourse Ave	Residential properties		Nepean River	CCC Nepean River Flood Extents doc.			18.5m
Menangle Park	82 Racecourse Ave	Residential properties		Nepean River	CCC Nepean River Flood Extents doc.			22.7m
Menangle Park	Menangle Rd at the bridge over the Nepean River	Road		Nepean River	All Menangle Park data from CCC Nepean River Flood Extents doc.			4.0m Contact residents
Menangle Park	Menangle Rd at the bridge over the Nepean River	Road		Nepean River	All Menangle Park data from CCC Nepean River Flood Extents doc.			4.6m Minor Flood level Contact DPI
Menangle Park	Menangle Rd at the bridge over the Nepean River	Road		Nepean River	All Menangle Park data from CCC Nepean River Flood Extents doc.			7.2m Road closed
Menangle Park	Menangle Rd at the bridge over the Nepean River	Road		Nepean River	All Menangle Park data from CCC Nepean River Flood Extents doc.			9.2m Moderate flooding
Menangle Park	Menangle Rd at the bridge over the Nepean River	Road		Nepean River	All Menangle Park data from CCC Nepean River Flood Extents doc.			12.2m Major flooding
Menangle Park	Racecourse Ave	Road		Nepean River	All Menangle Park data from CCC Nepean River Flood Extents doc.			Underpass to Paceway and access to 190 Menangle Rd cut off at 14.2m
Menangle Park	Racecourse Ave and Menangle Rd	Road		Nepean River	All Menangle Park data from CCC			18.2m

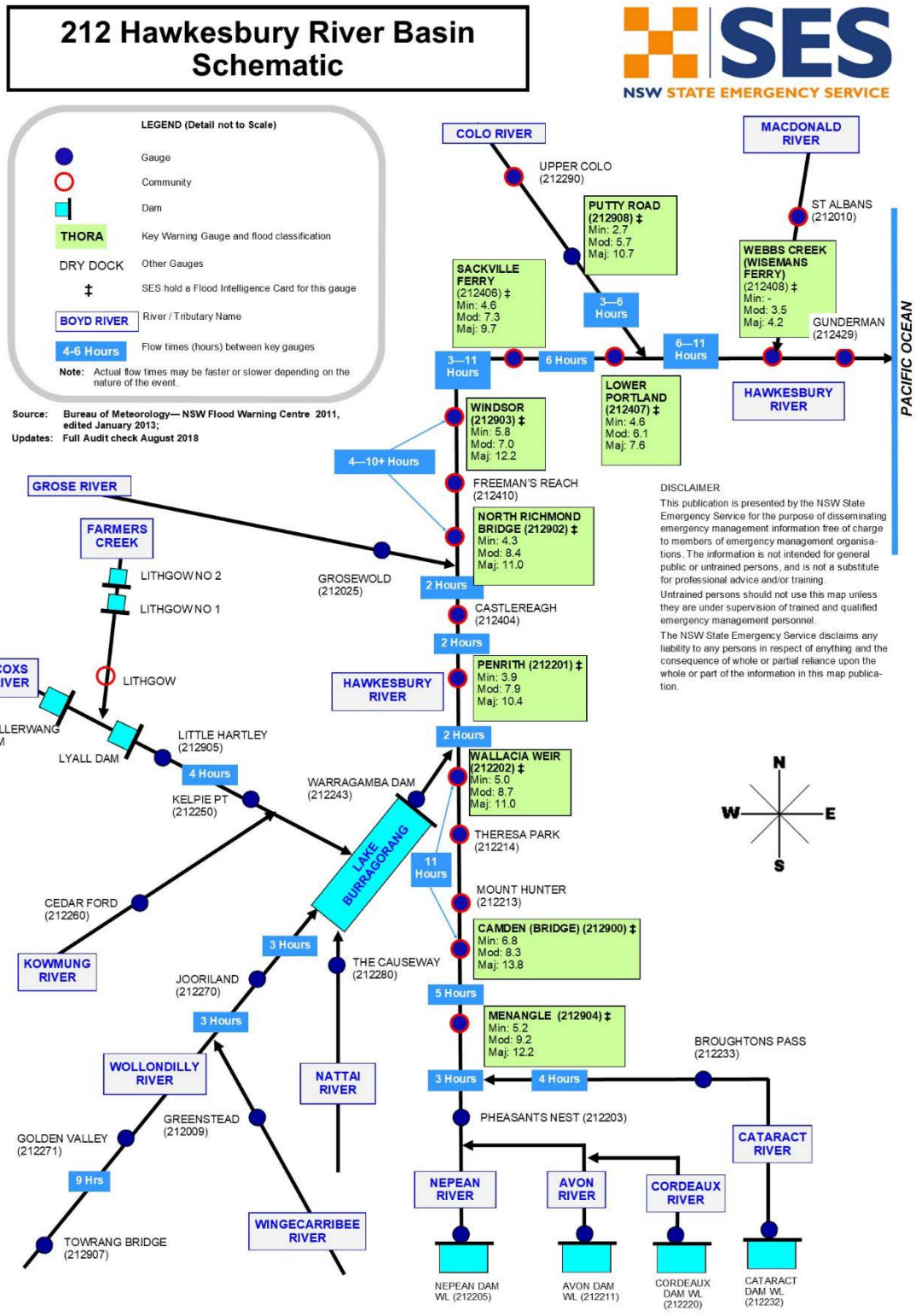
Suburb	Location	Properties at Risk	Risk Level (AEP)	Source of Risk	Reference	No of Properties at risk of AFF or isolation	Property Details	Comments
					Nepean River Flood Extents doc.			
Minto	Kayess Park	Critical Infrastructure	0.2%	Overland flow	V 2 map 17 Appendix D		TransGrid Ingleburn Substation	AFF 0.4m
Minto	Kayess Park	Critical Infrastructure	0.5%	Overland flow	V 2 map 17 Appendix D		TransGrid Ingleburn Substation	AFF 0.2m
Minto	Industrial Area Airds Rd east of Bow Bowing Creek and south of Minto Main Drain No 2	Commercial Properties	5%		V 2 p 35			No AFF
Minto	Airds Rd between Rose Payten Dr and Swaftham Rd	Commercial Properties	20%		V 2 p 35			Could be managed by on site drainage system
Minto	Collins Promenade cut north bound south of Eagleview Rd	Road	20%		V 1 p 78			
Minto	Houses between Sanderford and Murphy Ways	Flood Island	20%		V 1 p 79			
Minto	Industrial Area Airds Rd east of Bow Bowing Creek and south of Minto Main Drain No 2	Commercial Properties	20%		V 2 p 35			No AFF
Minto	Industrial Area between Bow Bowing Creek and the railway from Rose Payten Dr north to Essex St	Flood Island	20%		V 1 p 79			
Minto	Kayess Park	Critical Infrastructure	20%	Overland flow	V 1 p 48 and p 80-81 V 2 Map 17	1	TransGrid Ingleburn Substation	Council has discussed this analysis with the owner. Outcome unknown
Minto	Pembroke Rd northbound between Minto Rd and Burrendong Rd including north and south bound south of Westmoreland Rd south bound north of Ben Lomond Rd and northbound north of Derby St	Road	20%		V 1 p 78 and p 88			

Suburb	Location	Properties at Risk	Risk Level (AEP)	Source of Risk	Reference	No of Properties at risk of AFF or isolation	Property Details	Comments
Minto	Pembroke Rd south of Westmoreland and north of Ben Lomond and north of Derby Sts	Road	20%		V 1 p 138 V 2 Map 60			
Minto	Townhouses in Fletcher St	Flood Island	20%		V 1 p 79			
Minto	18 Alderney St	Critical Infrastructure	PMF		Appendix D		SES Headquarters	AFF 0.1m
Minto	32 Guernsey Ave	Vulnerable Facility	PMF		Appendix D		Kabbarli Childcare Centre	<0.1m
Minto	53 Guernsey Ave	Vulnerable Facility	PMF		Appendix D		Passfield Park Special School	0.1m
Minto	Industrial Area	Commercial Properties	PMF	Bow Bowing Creek	V 1 p 48			
Minto	Kayess Park	Critical Infrastructure	PMF	Overland flow	V 2 map 17 Appendix D		TransGrid Ingleburn Substation	AFF 4.0m
Minto	Pembroke Rd	Residential properties	PMF	Minto Main Drain No 1	V 1 p 50 V2 Map 60			
Minto	Townson Ave northbound towards Ben Lomond Rd and south bound towards Katherine St	Road	20%		V 1 p 78			
Raby	Kittyhawk and Hurricane 2 houses AFF	Residential Properties	1%		V1 p 95 V2 Map 16 and 32	2		
Raby	Sopwith Av and Spitfire Dr with wider flow 8 houses affected by AFF	Residential Properties	1%		V 1 p 95 V 2 Map 16 and 32	8		
Raby	Spitfire Dr north of Lockheed St to Bunbury Curran Creek	Residential Properties	20%	Overland flow	V 1 p 52 V 2 Map 16 and 32			
Raby	Starfighter and Sopwith Aves water is 1 m deep then heads north between houses in Sopwith Ave and Spitfire Dr with 3 houses experiencing AFF	Residential Properties	20%	Overland flow	V 1 p 52 and 95 V 2 Map 16 and 32	3		
Raby	Starfighter Ave 4 properties may experience AFF	Residential Properties	20%		V 1 p 95 V 2 Map 16 and 32	4		
Raby	Matra Pl, Spitfire Dr and Wessex Pl	Residential Properties	PMF	Bunbury Curran Creek	V 1 p 48 V 2 Map 9 and 39	16		5 houses at risk of structural instability

Suburb	Location	Properties at Risk	Risk Level (AEP)	Source of Risk	Reference	No of Properties at risk of AFF or isolation	Property Details	Comments
Raby	15 Shuttleworth Ave	Vulnerable Facility	PMF		Appendix D		Robert Townson High School	AFF 0.2m
Raby	Sopwith Ave and Spitfire Dr with 26 houses affected by AFF	Residential Properties	PMF		V 1 p 95 V2 Map 16 and 32	26		2 properties at risk of structural instability
Ruse	Junction Rd in both directions north of Cook Rd	Road	20%		V 1 p 78			Warning sign installed
Ruse	36 Cudgegong Rd	Vulnerable Facility	PMF		Appendix D		Ruse Childcare Centre	AFF 0.1m
Ruse	Cook and Junction Rd	Road	PMF	Smith's Creek	V 1 p 50			Frequency of flooding Warning sign installed
St Andrews	89 Ballantrae Dr	Vulnerable Facility	1%		Appendix D		St Andrews Primary School	AFF 0.2m
St Andrews	89 Ballantrae Dr	Vulnerable Facility	2%		Appendix D		St Andrews Primary School	AFF 0.2m
St Andrews	89 Ballantrae Dr	Vulnerable Facility	5%		Appendix D		St Andrews Primary School	AFF 0.1m
St Andrews	89 Ballantrae Dr	Vulnerable Facility	20%		Appendix D		St Andrews Primary School	AFF 0.1m
St Andrews	Houses between Campbelltown Rd and Wyperfield Pl	Flood Island	20%		V 1 p 79			
St Andrews	74 Stranraer Dr	Vulnerable Facility	PMF		Appendix D		Community Hall - Childcare	AFF 0.3m
St Andrews	87 Ballantrae Dr	Vulnerable Facility	PMF		Appendix D		Childcare	AFF 0.3m
St Andrews	89 Ballantrae Dr	Vulnerable Facility	PMF		Appendix D		St Andrews Primary School	AFF 0.6m
Woodbine	Collaroy Rd southbound at Campbelltown Rd		20%		V 1 p 78			

ANNEX 1: RIVER BASIN SCHEMATIC/S




212 Hawkesbury River Basin Schematic
SES
NSW STATE EMERGENCY SERVICE
LEGEND (Detail not to Scale)
Gauge
Community
Dam
THORA
Key Warning Gauge and flood classification
DRY DOCK
Other Gauges
‡
SES hold a Flood Intelligence Card for this gauge
BOYD RIVER
River / Tributary Name
4-6 Hours
Flow times (hours) between key gauges
Note: Actual flow times may be faster or slower depending on the nature of the event.
Source: Bureau of Meteorology— NSW Flood Warning Centre 2011, edited January 2013;
Updates: Full Audit check August 2018
COLO RIVER
UPPER COLO (212290)
PUTTY ROAD (212908) ‡ Min: 2.7 Mod: 5.7 Maj: 10.7
MACDONALD RIVER
ST ALBANS (212010)
WEBBS CREEK (WISEMANS FERRY) (212408) ‡ Min: - Mod: 3.5 Maj: 4.2
GUNDERMAN (212429)
SACKVILLE FERRY (212406) ‡ Min: 4.6 Mod: 7.3 Maj: 9.7
3—6 Hours
6—11 Hours
3—11 Hours
6 Hours
LOWER PORTLAND (212407) ‡ Min: 4.6 Mod: 6.1 Maj: 7.6
HAWKESBURY RIVER
PACIFIC OCEAN
WINDSOR (212903) ‡ Min: 5.8 Mod: 7.0 Maj: 12.2
4—10+ Hours
GROSE RIVER
FREEMAN'S REACH (212410)
NORTH RICHMOND BRIDGE (212902) ‡ Min: 4.3 Mod: 8.4 Maj: 11.0
FARMERS CREEK
LITHGOW NO 2
LITHGOW NO 1
GROSEWOLD (212025)
2 Hours
CASTLEREAGH (212404)
2 Hours
COXS RIVER
LITHGOW
PENRITH (212201) ‡ Min: 3.9 Mod: 7.9 Maj: 10.4
HAWKESBURY RIVER
WALLERWANG DAM
LYALL DAM
LITTLE HARTLEY (212905)
2 Hours
WALLACIA WEIR (212202) ‡ Min: 5.0 Mod: 8.7 Maj: 11.0
4 Hours
KELPIE PT (212250)
WARRAGAMBA DAM (212243)
THERESA PARK (212214)
LAKE BURRAGORANG
11 Hours
MOUNT HUNTER (212213)
CEDAR FORD (212260)
CAMDEN (BRIDGE) (212900) ‡ Min: 6.8 Mod: 8.3 Maj: 13.8
KOWMUNG RIVER
3 Hours
THE CAUSEWAY (212280)
JOORILAND (212270)
5 Hours
MENANGLE (212904) ‡ Min: 5.2 Mod: 9.2 Maj: 12.2
3 Hours
BROUGHTONS PASS (212233)
WOLLONDILLY RIVER
NATTAI RIVER
3 Hours
4 Hours
PHEASANTS NEST (212203)
GREENSTEAD (212009)
GOLDEN VALLEY (212271)
CATARACT RIVER
9 Hrs
NEPEAN RIVER
AVON RIVER
CORDEAUX RIVER
WINGECARRIBEE RIVER
TOWRANG BRIDGE (212907)
NEPEAN DAM WL (212205)
AVON DAM WL (212211)
CORDEAUX DAM WL (212220)
CATARACT DAM WL (212232)
DISCLAIMER
This publication is presented by the NSW State Emergency Service for the purpose of disseminating emergency management information free of charge to members of emergency management organisations. The information is not intended for general public or untrained persons, and is not a substitute for professional advice and/or training.
Untrained persons should not use this map unless they are under supervision of trained and qualified emergency management personnel.
The NSW State Emergency Service disclaims any liability to any persons in respect of anything and the consequence of whole or partial reliance upon the whole or part of the information in this map publication.
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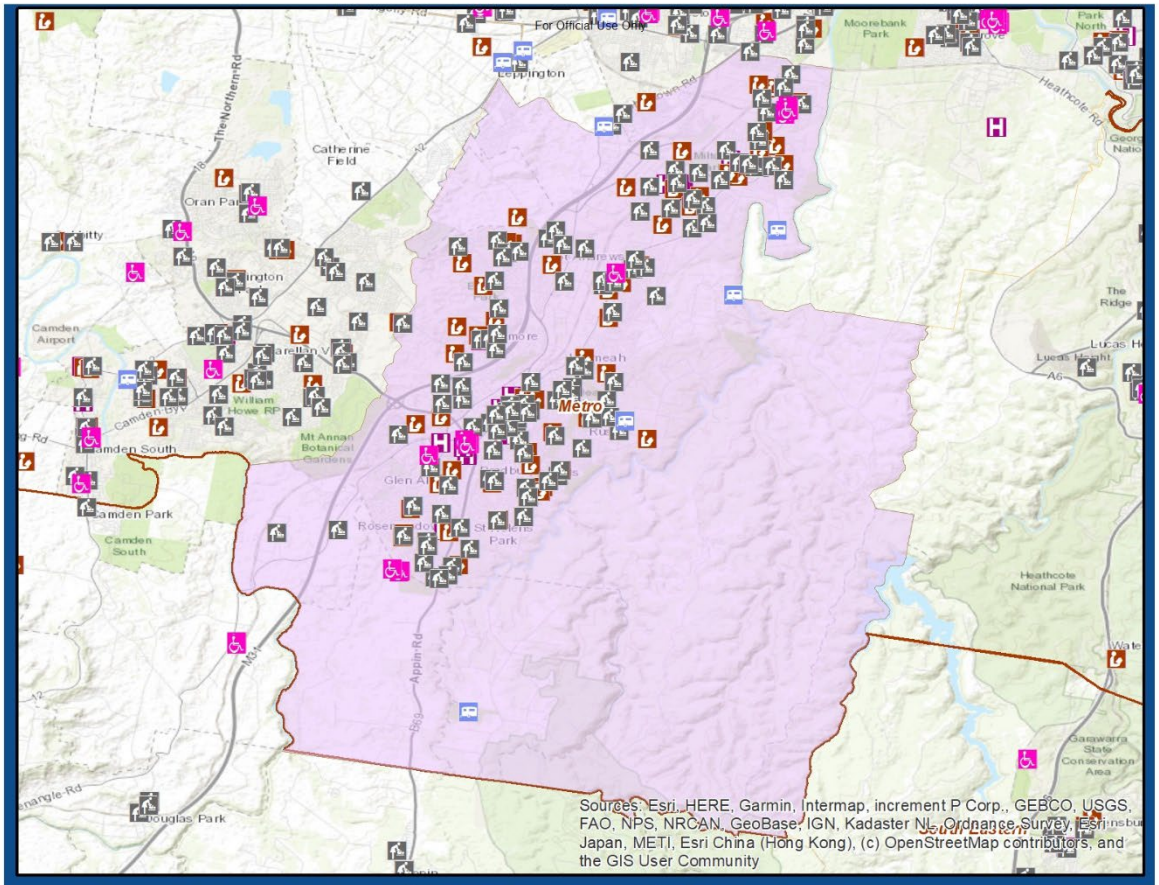
ANNEX 2: GEOSPATIAL EXPOSURE ANALYSIS REPORT



CAMPBELLTOWN
Geospatial Exposure Analysis Report

Report Produced at: Wednesday, 24 February 2021 13:24

Emergency Service and Public Administration Exposure

NSW SES Zones:	2
NSW SES Units:	6
NSW Electorates:	6
NSW LGAs:	6

(see emailed spreadsheet for more details)

Key Infrastructure Exposure:

Aged Care Facilities	12
Caravan Park / Camping	4
Child Care Facilities	121
Educational Facilities	60
Hospitals	17

People and Built Environment Exposure:

Population:	157,200
Dwellings:	52,850
Total Roads (km):	1,570
Major Roads (km):	130
Building RV:	$B 32
Contents RV:	$B 4

(RV = replacement value)

Map publication prepared by the NSW State Emergency Service
Geospatial Intelligence Branch
SES State Headquarters
gis@ses.nsw.gov.au

0 1.5 3 4.5 6
Kilometres
Datum/Proj: GDA94/geographic

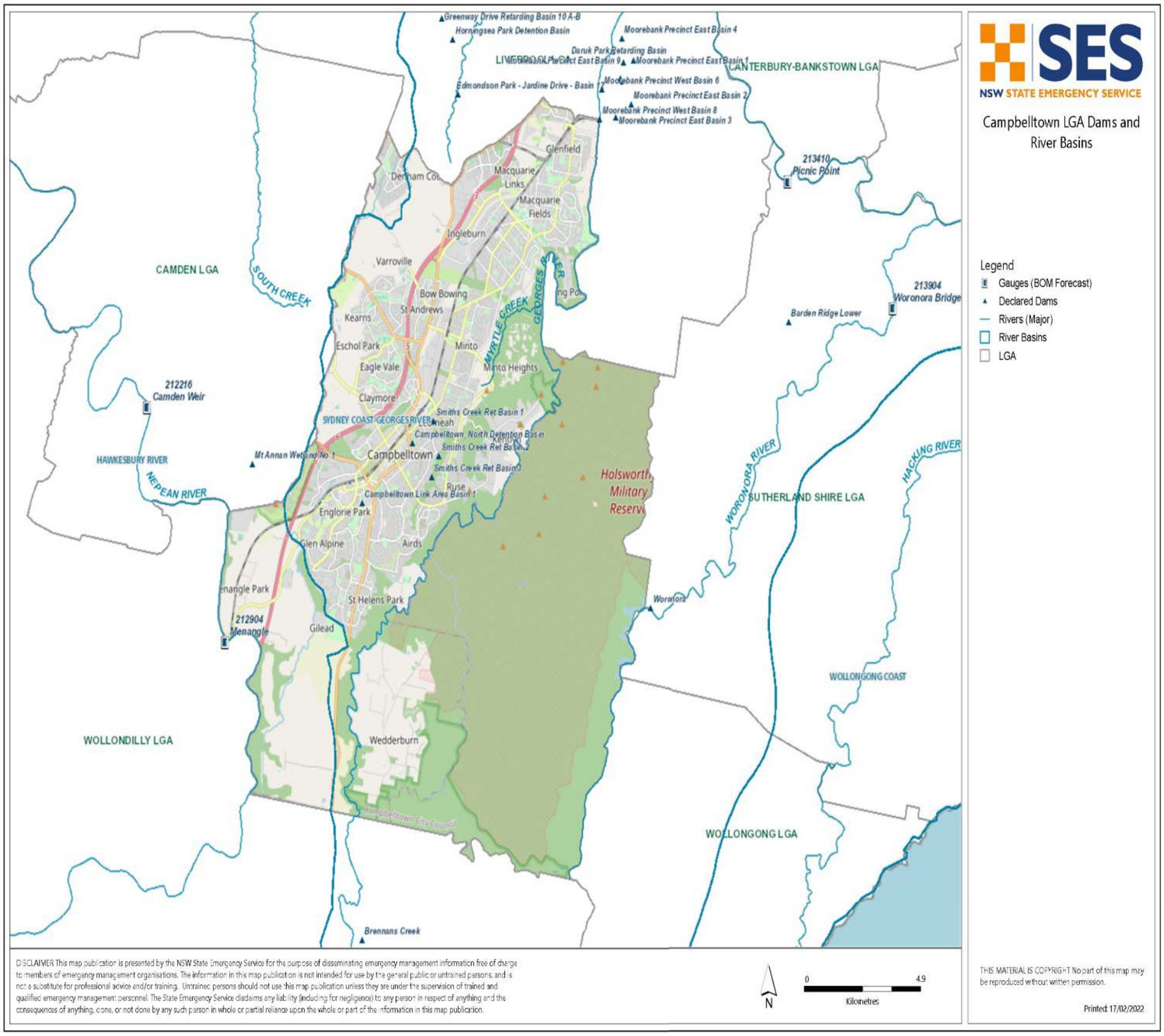
SES
NSW STATE EMERGENCY SERVICE

ANNEX 3: FACILITIES AT RISK OF FLOODING AND/OR ISOLATION UNDER SHORT DURATION STORM EVENT

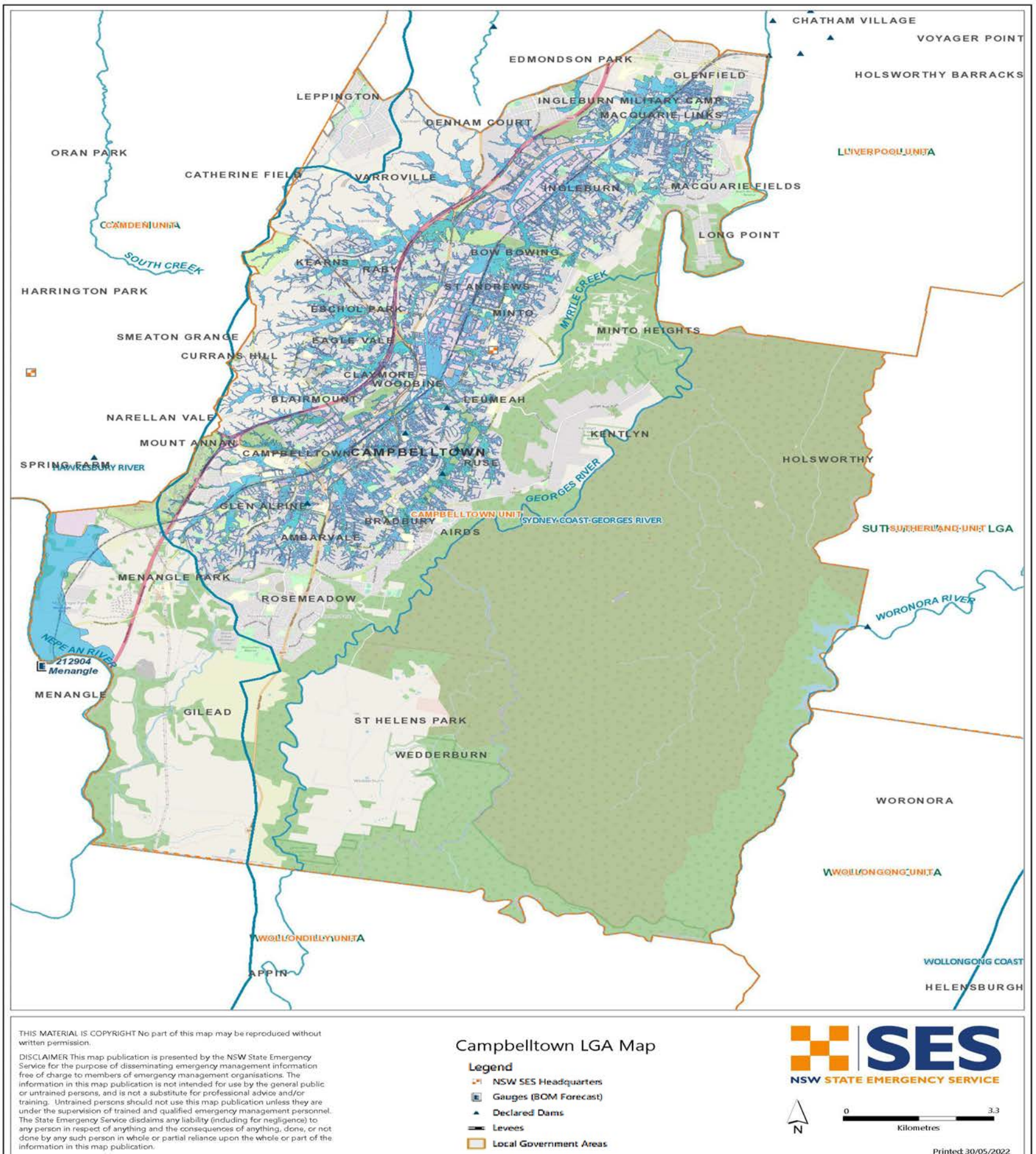
Table 4: Vulnerable facilities at risk of flooding in the Campbelltown LGA

Facility Name	Street	Suburb	Comment
Schools			
Leumeah PS	4 Burrendong Rd	Leumeah	PMF AFF 0.2m
Thomas Reddall HS	Woodhouse Dr	Ambarvale	PMF AFF 0.5m
Campbelltown Performing Arts HS	Beverley Rd	Campbelltown	PMF AFF 0.4m
Bradbury PS	Jacaranda Ave	Bradbury	PMF AFF 0.7m
Beverley Park Special School	98 Beverley Rd	Campbelltown	PMF AFF 0.2m
Lomandra PS	31 Lithgow St	Campbelltown	PMF AFF 0.5m
St Thomas Mooren PS	6 St Johns Rd	Campbelltown	PMF AFF 0.2m
St Peters PS	5 Howe St	Campbelltown	PMF AFF 0.1m
Claymore PS	25 Dobell Rd	Claymore	AEP 0.5% AFF 0.3m
Eschol Park PS	Eschol Park Dr	Eschol Park	PMF AFF <0.1m
Hurlstone Agriculture College HS	Roy Watts Rd	Glenfield	PMF
Passfield Park Special School	53 Guernsey Rd	Minto	PMF AFF 0.1m
St Andrews PS	89 Ballantrae Dr	St Andrews	AEP 20% AFF 0.1m to 0.2m
Robert Townson HS	15 Shuttleworth Ave	Raby	PMF AFF 0.2m
Child Care Centres			
Amber Cottage	55 Crisparkle Dr	Ambarvale	PMF AFF 0.4m
Mighty Brains Academy	19 Hoddle Ave	Bradbury	PMF AFF <0.1m
Busy Bees	70 Broughton St	Campbelltown	PMF AFF 0.3m
Western Sydney Uni (WSU)	38 Goldsmith Ave	Campbelltown	PMF AFF 1.0m
Campbelltown TAFE	181 Narellan Rd	Campbelltown	PMF AFF 0.1m
Namut	5 Hurley St	Campbelltown	PMF AFF 0.2m
The Family Care Centre	Oxley St	Campbelltown	PMF AFF 0.8m
Cinderella Pre School	6 Hughes St	Campbelltown	PMF AFF 0.5m
Kabbarli ELC	32 Guernsey Ave	Minto	PMF AFF <0.1m
Ruse ELC	36 Cudgegong Rd	Ruse	PMF AFF 0.1m
St Andrews Community	74 Stranraer Dr	St Andrews	PMF AFF 0.3m
Facilities for the aged and/or infirm			
Frank Whiddon Retirement Village	81 Belmont St	Glenfield	AEP 20% AFF 0.1m
Utilities and infrastructure			
Campbelltown Public Hospital	Therry Rd	Campbelltown	AEP 20% Managed by internal stormwater
SES Headquarters	18 Alderney St	Minto	PMF AFF 0.1m
Campbelltown Ambulance Station	Parkside Cres	Campbelltown	AEP 20%
Campbelltown Private Hospital	42 Parkside Cres	Campbelltown	PMF AFF 0.1m
Campbelltown Fire Station	66 Broughton St	Campbelltown	PMF AFF 0.1m
Campbelltown Police Station	65 Queen St	Campbelltown	PMF AFF 0.3m
Eaglevale Police Station	Gould and Feldspar Rds	Eaglevale	PMF AFF 0.2m
Macquarie Fields Police Station	10 Brooks Rd	Macquarie Fields	AEP 1% AFF 0.1m
TransGrid Ingleburn Sub Station	Kayess Park	Minto	AEP 20% AFF 0.2m to 4.0m
Camping Ground / Caravan Parks			
NIL			

ANNEX 4: Campbelltown LGA – Dam & River Basin Map



ANNEX 5: Campbelltown Local Government Area Map



3. LIST OF REFERENCES

NOTES	
REFERENCES = DATA SOURCES **>> consider if LCC id is both reference and data source or replace with ABS as data source**	
1	https://profile.id.com.au/campbelltown-sa
2	https://www.campbelltown.nsw.gov.au/home
3	https://profile.id.com.au/campbelltown-sa/about
4	https://dbr.abs.gov.au/region.html?lyr=lga&rgn=11500
5	H-N State FP (latest)
6	GW State FP (draft)
7	Adapted from pages Bow Bowing Bunbury Creek System FRMS & Plan
8	Draft Campbelltown LFP Volume 2, 2016
9	http://www.bom.gov.au/water/about/publications/document/InfoSheet_6.pdf
10	Flood Database Portal – Available Flood Studies has been references in each section against citation information.

DATA SOURCES / REFERENCES = as (or to be) published from CC and NSW SES

[1] data source = CC website (community id)

[2] data source = CC website (maps)

[3] data source = CC website (our community)

[4] data source = CC website (about)

[5] NSW SES reference = H-N Flood Plan (latest issue / draft)

[6] NSW SES reference = G-W Flood Plan (latest draft)

DATA SOURCES / REFERENCES = Campbelltown, Dam Safety

[7] Dam Safety Authority Declared Dams 2022

NSW STATE EMERGENCY SERVICE

CAMPBELLTOWN LGA FLOOD WARNING SYSTEMS AND ARRANGEMENTS

Volume 3 - Chapter 1

NSW SES Response Arrangements for Campbelltown LGA

Last Update: November 2023

CONTENTS

1. Flood Gauges Monitored Within and Affiliated To The Campbelltown Local Government Area

1.1 The gauges monitored within and affiliated to the Campbelltown Local Government Area are listed in Table 1.

1.2 The key warning gauges for each river regional area are shaded light grey in the table, as it may be useful for referencing in determining behaviour extending beyond or within the LGA pending event, if needed.

1.3 A select few gauges in Table 1 are warning gauges for which the NSW SES holds flood intelligence cards for and can be used to inform decisions around when it is appropriate to respond.

1.4 Some automatic gauges are used by the Bureau to predict flood heights at the key warning gauges.

1.5 The proxy gauges are key locations for downstream predictions, critical for the provision of a quantitative flood forecasting service to downstream sites (showing + in the Forecast Location column in Table 1).

1.6 In Table 1 the abbreviation EES refers to the Environment, Energy and Science Group within the NSW Department of Planning, Industry and Environment.

1.7 Real-time data available at:

a. Bureau of Meteorology latest River heights
b. Bom Weather Observation Stations
b. https://www.mhl.nsw.gov.au/
c. https://realtimedata.waternsw.com.au/

1.8 Table 1 corresponds to the gauges in Schedules 2 and 3a of the NSW Service Level Specification, for which the Bureau of Meteorology provide flood warnings.

2. GAUGES MONITORED BY THE NSW SES CAMPBELLTOWN LOCAL HEADQUARTERS

Table 1: Gauges monitored by the NSW SES Campbelltown Local Headquarters

Bureau No.	AWRC No.	Forecast location	Station owner	Gauge type	Flood Classification (m)			Flood Intelligence Card Held	Gauge Zero (m)	Target warning lead time		70% of peak forecasts within	Comments
					Min	Mod	Maj			Time (hrs)	Trigger height (m)		
Weather / Rain Stations													
566057		Ingleburn (Long Point)	BOM	Auto - Weather Station Gauge									
		KENTLYN (Georges River Road)	BOM	Auto - Weather Station Gauge									
	068263	Holsworthy Defence AAWS		Auto - Weather Station Gauge									Station Details Lat:-34.08 Lon: 150.90 Height: 165.0
	068257	Campbelltown (Mount Annan)	BOM	Auto - Weather Station Gauge									Station details Lat: -34.06Lon: 150.77 Height: 112.0 m
River / Stream Gauges													

	10077	Cambridge Avenue, Glenfield	Council	Automatic - River	5.2	9.2	12.2	Yes					Council will advise SES when they are closing the road and the reading. Access to gauge restricted to council.
567088	213012	Bunbury Curran Creek at Railway Parade	Water NSW	Automatic				Yes					
568171		Menangle Weir*			2.80	6.50	9.30						This gauge is used by the Bureau ONLY when the Menangle Bridge gauge is faulty. It is then they apply the correlation chart to ensure warnings align
ur06821 6	212904	Menangle Bridge*			5.20	9.20	12.20	Yes					
213013	568145	Redfern Road	Water NSW	Automatic-River				Yes					Create classification/ask Water if they know when breaks banks
213018	5666082	Minto Heights	Water NSW	Automatic-River									
66168	213405	Milperra*	MHL	Automatic-River	2.00	3.30	4.20	Yes	AHD - TBC	6 hrs 12 hrs	>2.0 >4.2	+/-0.3	The average travel time of the peak between Milperra and Picnic Point gauge is 1-2 hrs – dependant on tides
566011	213410	Picnic Point*	MHL	Automatic - River	2.00	N/A	N/A	yes	AHD	6 hrs	>2.0	+/-0.3m	As above
566007	213411	Canterbury Road	MHL	Automatic									Water Levels shown on MHL website (Salt Pan Creek

													upstream of Canterbury Rd)
566054	213400	Liverpool Weir*	MHL	Automatic-river	2.0	3.0	4.5	Yes	2.819	6 hrs 12 hrs	>2.0m >4.0m	+/-0.3m	The Bureau refers to this gauge as "Liverpool Bridge"
566012	213415	Tempe Bridge *	Environment, Energy & Science ("EES")	Automatic-river	1.3	N/A	N/A	Yes		3 hrs	>1.3m	+/-0.3	The travel time between Canterbury Rd and Tempe bridge is 15-30 minutes

Notes: The Bureau of Meteorology provides flood warnings for the gauges marked with an asterisk (*).

NSW SES Local Flood Advice is provided for the gauges marked with a single cross (†).

The NSW SES holds a Flood Intelligence Card / Flood Rescue Pre Incident Plan for the gauges marked with a double cross (‡)

3. DISSEMINATION OPTIONS FOR NSW SES INFORMATION AND WARNING PRODUCTS

The NSW SES Metro Incident Control Centre distributes NSW SES Flood Bulletins, NSW SES Evacuation Warnings and NSW SES Evacuation Orders to the following media and regional outlets and agencies:

Television Stations:

Station	Location
ABC TV News	Sydney
Channel 7 TV News	Sydney
Channel 9 TV news	North Sydney
Channel 10 TV News	Pyrmont
Sky News	Macquarie Park

Radio Stations:

Station	Location	Frequency	Modulation
90.1 2NBC FM	Peakhurst	90.1	FM
89.3 2 GLF	Liverpool	89.3	FM
2SSR 99.7FM	Sutherland	99.7	FM
ABC Radio Sydney	Sydney	702	AM
SBS Radio	Crows Nest	1107	AM
2GB Radio	Pyrmont	873	AM
2UE	Pyrmont	954	AM
2DAY FM	Sydney	104.1	FM
WSFM	North Ryde	101.7	FM
C91.3	Wollongong	91.3	FM
2MCR	Campbelltown	100.3	FM

Newspapers / Noticeboards:

Name	Location
Macarthur Advertiser	Macarthur
Macarthur Noticeboard	Macarthur
Hillcroft Estate Claymore	Claymore
Macarthur Heights Noticeboard	Macarthur Heights
Bradbury St Helens Park Noticeboard	Bradbury / St Helens Park
Rosemeadow and Surrounding suburbs	Rosemeadow
Glenfield Community Noticeboard	Glenfield
Ingleburn Community Noticeboard	Ingleburn

The NSW Flood Information and Warnings Products are also distributed via the NSW SES Website and relevant NSW SES Social Media Facebook Pages.

- Campbelltown Facebook Page

Note: Additional national media outlets contacts are managed by the NSW SES State Media Team

Other Agencies:

Regional Emergency Management Officer – LEMC's

CAMPBELLTOWN LGA NSW SES LOCALITY RESPONSE ARRANGEMENTS

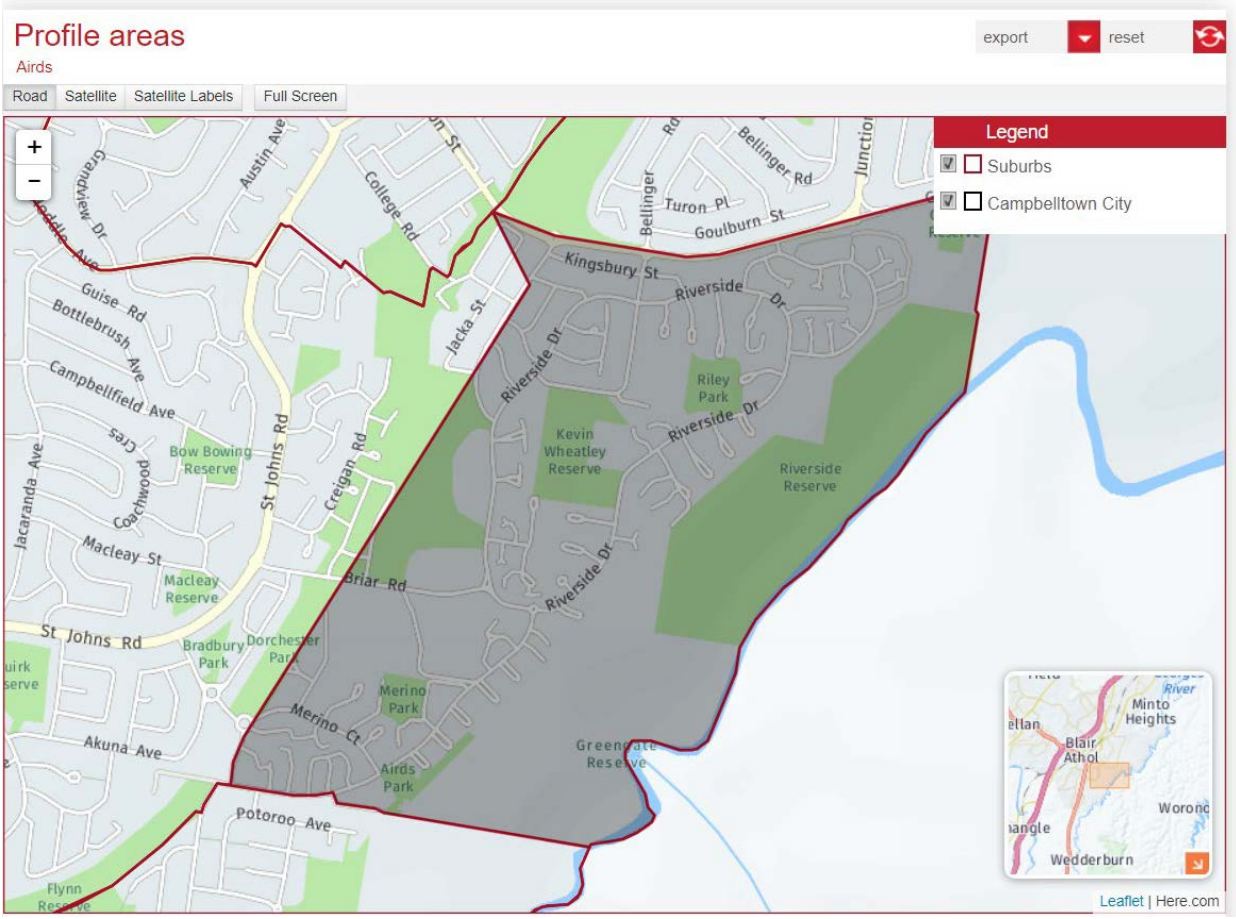
Chapter 2 of Volume 3 (NSW SES Response Arrangements for Campbelltown LGA) of the Campbelltown LGA Local Flood Plan

Last Update: November 2023

Document Issue: V3.2-07042014

CONTENTS

1. AIRDS SECTOR / COMMUNITY



1.1. AIRDS RESPONSE ARRANGEMENTS

Refer to Volume 2: Hazard and Risk in Campbelltown LGA for more information about this Sector/Community.

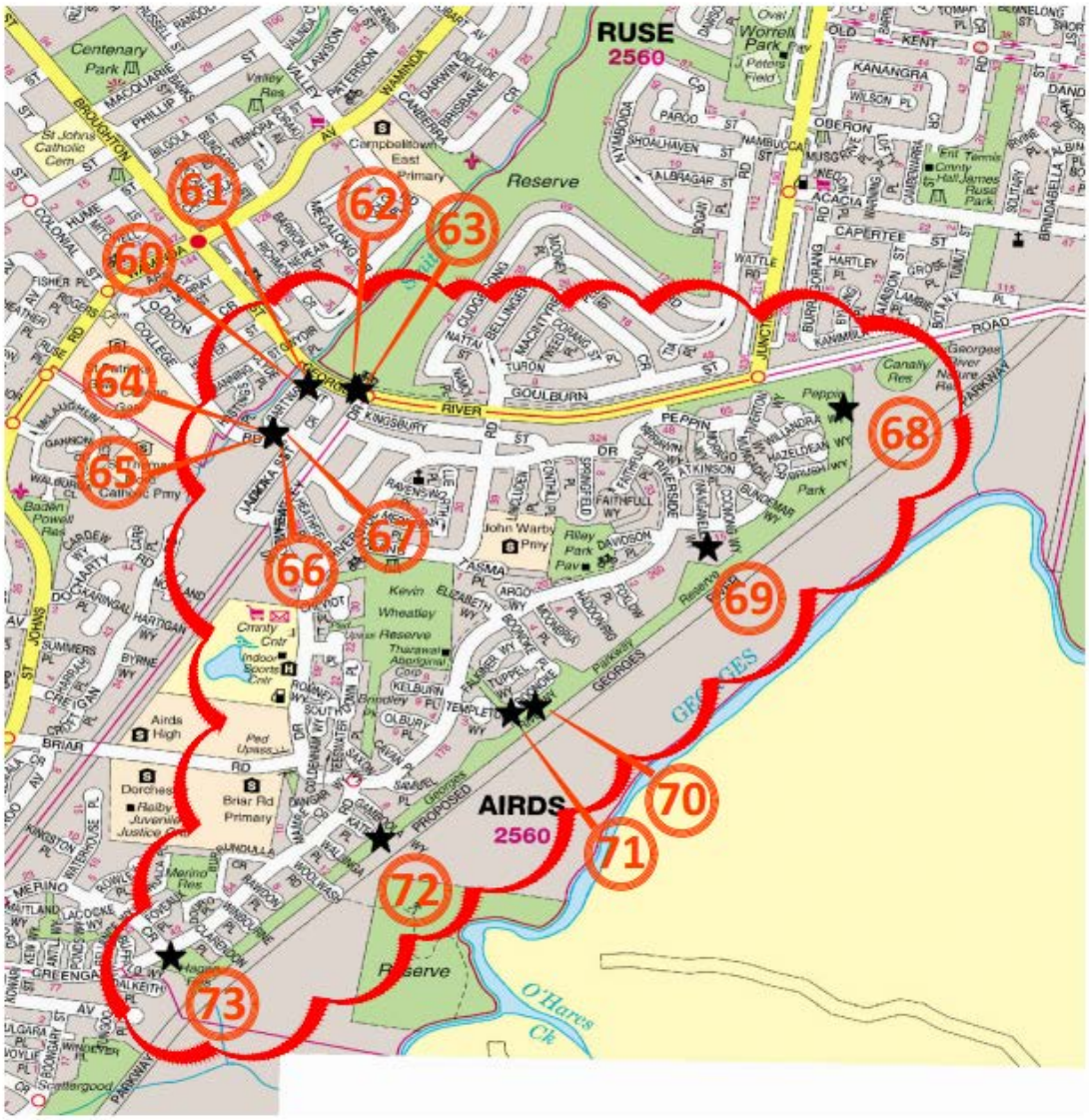
Sector Description	Airds is located at the southeast of the LGA and is bounded by Georges River Road to the North, George River to the East, the suburb of St Helens Park to the South. The 2021 resident population for Airds community is 3,265. The three largest ancestries across communities within this region in 2021 were Australian, English, and Samoan.
Hazard	The main source of flooding within the Airds community is via the Bow Bowing Creek tributaries - Smiths Creek and O'Hares Creek. The flow path originates near the crossroad between Maitland Way and Merino Cr. From this point, the flow path runs north into Kullaroo Avenue, and it reaches further north until it is channelled in Creigan Road. From this point to the confluence with Smiths Creek, floodwaters become relatively hazardous, even in events as frequent as the 5% AEP. However, flooding in frequent events is generally contained within Creigan Rd, with the adjacent properties experiencing minor affectation from the 1% AEP, and more significant affectation in the PMF.
Triggers	The following triggers will activate a response from Campbelltown SES Unit and consideration of activation of the LEMC: • BoM releasing a flood or severe storm warning for the Campbelltown LGA • Requests for Assistance indicating a flood event.

<table>
<tr><td></td><td colspan="5">• When directed by Metro Zone or the REOCON or SEOCON.</td></tr>
<tr><td>Flood Affect Classification</td><td colspan="5">No FERC for this sector to identify and plan emergency response mechanisms however there are known hot spot properties adjacent to Creigan Road that experience AFF at a 1% AEP that will require monitoring / property protection.
No known Flood Rescue Hotspots within this sector.</td></tr>
<tr><td>At risk properties</td><td>3</td><td colspan="2">Total number of properties within Sector/Community</td><td colspan="2"></td></tr>
<tr><td>At risk Facilities</td><td colspan="5"></td></tr>
<tr><td>Sector Control</td><td colspan="5"></td></tr>
<tr><td>Key Warning Gauge Name</td><td>Name</td><td>AWRC No.</td><td>Min (m)</td><td>Mod (m)</td><td>Maj (m)</td></tr>
<tr><td></td><td>Manual - Woolwash Flood Gauge</td><td></td><td>6.0</td><td>-</td><td>-</td></tr>
<tr><td>Additional Notes</td><td colspan="5">The above gauge is a manual gauge that captures inflow volumes of water from the upper Georges River and O'Hares Creek. Access to the manual Woolwash Flood Gauge is accessed from the Woolwash fire trail off Woolwash Rd, Airds. It should be noted that O Hares Creek is the larger inflow as it drains all the plateau from the edge of the Illawarra Escarpment. The gauge has a higher level of risk in the wet and should only be access by experienced 4-wheel drivers.
The BOM rain Gauge located at Darkes Forest (http://www.bom.gov.au/cgi-bin/wrap_fwo.pl?IDN60175.html) will provide likely estimates of inflows from O Hares and Punchbowl Creeks into the Georges River.</td></tr>
<tr><td>General Strategy</td><td colspan="5">• Monitor
• Promote Property Protection
• Community Engagement
Potential for isolation but only for short duration 24hrs so potential resupply / rescue may be required if secondary emergencies occur during this short isolation period.</td></tr>
<tr><td>Key Risks / Consequences</td><td colspan="5">Closure of Creigan Road and Briar Road at frequent 20% AEP event which can cause short duration isolation to several property owners within the vicinity.</td></tr>
<tr><td rowspan="2">Information and Warnings</td><td colspan="5">The trigger would be a Severe Weather Warnings issued by BOM,
Release messages around Property Protection Measures / if time available set up Sandbag point for those local properties potentially impacted - flash flooding across low lying areas.</td></tr>
<tr><td colspan="5">N/A for Evac Sequencing however isolation for short duration will be required.
Early Community Education on the threat coupled with social media advice.
Ask Council to consider the Flash flood Warning System as a mitigation measure as SES cannot warn to this community.</td></tr>
<tr><td rowspan="3">Property Protection</td><td colspan="5">Property protection measures:
The property protection measures for the threat of flash flooding could be move valuable household goods to protect from flow path for AFF preventing water damage, sandbag around doors and gaps to prevent water getting into at risk homes.
Established a known point for sandbagging and advertise on Social Media Facebook Pages as a property protection measure.</td></tr>
<tr><td colspan="5">Assistance with property protection:
Specific assistance with property protection by way of sandbagging and lifting or transporting of furniture, personal effects etc may be available – consider</td></tr>
<tr><td colspan="5">Protection of essential infrastructure:</td></tr>
</table>

	Not applicable in Airds
	Levee consideration: Not applicable in Airds
Evacuation and/or Isolation Triggers	Closure of evacuation roads occur at frequent flood events 20% AEP. Flooding is quick to rise reaching peak within 6hrs and receding quickly resulting no time being available to evacuate effectively.
Evacuation Triggers	Not feasible due to nature of flooding being flash flooding.
Sequencing of evacuation	Not feasible due to nature of flooding being flash flooding.
Evacuation Routes	St Johns Rd and Broughton St towards Campbelltown.
Evacuation Route Closure	Not feasible due to nature of flooding being flash flooding.
Method of Evacuation	Not feasible due to nature of flooding being flash flooding.
Evacuation Centre /Assembly Point	Campbelltown Civic Hall Queen St Campbelltown.
Large scale evacuations	Refer to the Georges and Woronora River Valley Subplan and Hawkesbury Nepean State Flood Plan for further information as flowing is likely to be occurring across the Georges and Woronora River and Hawkesbury Nepean Rivers concurrently.
Rescue	There are no known flood rescue hotspots within the area however there are trap point locations that are identified in the map below.
Resupply	N/A
Aircraft Management	***Helicopter Landing Points:***
	Airports:
Other	Refer to the Georges and Woronora River Valley Subplan and State Flood Plan for further information as flowing is likely to be occurring across the Georges and Woronora Rivers.

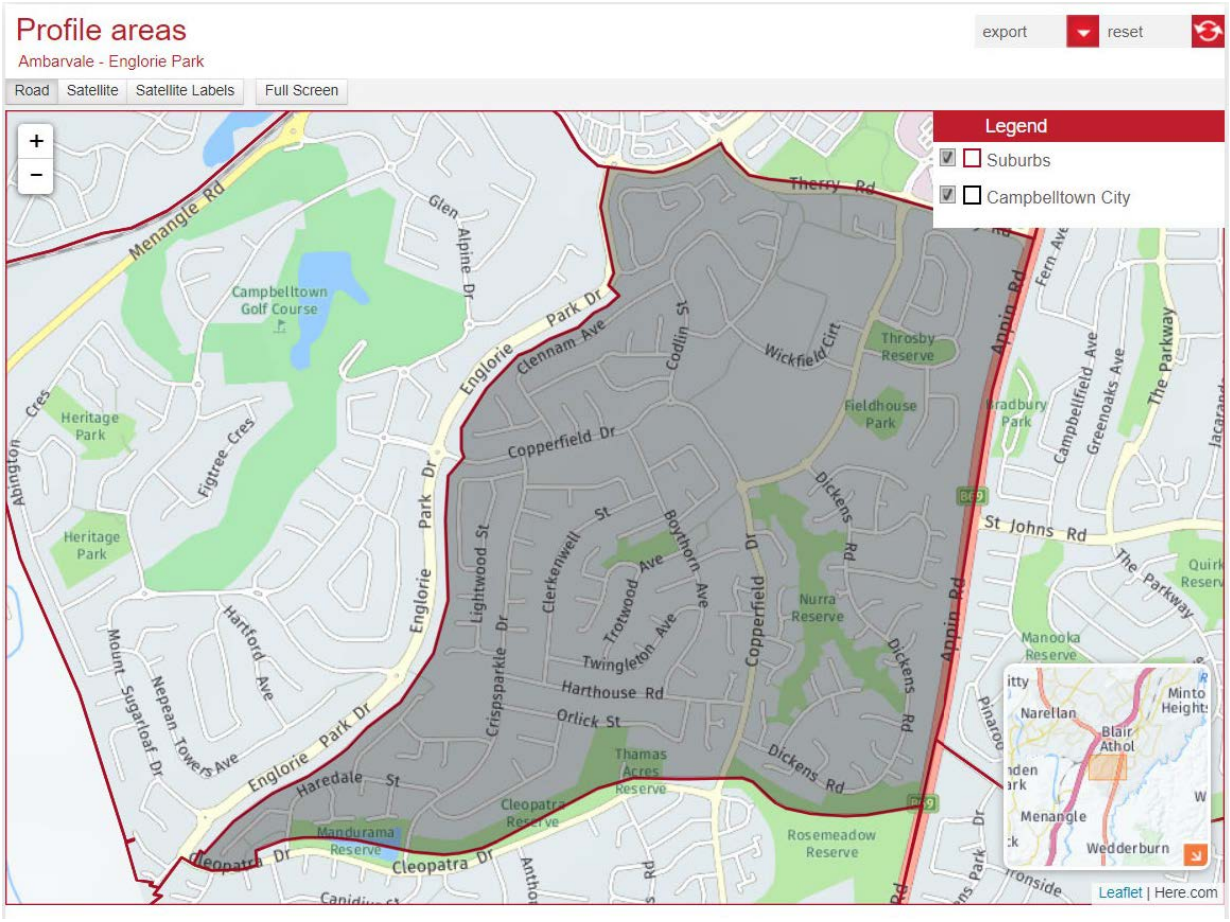
1.2. AIRDS SECTOR/COMMUNITY TRAP POINTS MAP

Intro re the map and its purpose and elaborate on what trap points are and why it is necessary to identify here:



WQD No.	Asset_Type	Asset_Description
60	Gross Pollutant Trap 600mm Diameter (HumeGard18)	16 Cartwright Crescent Gross Pollutant Trap opposite To HN 29
61	Jellyfish Filter 1800mm Diameter	02 Jellyfish Filter Media - Cartwright Crescent - Opposite To HN 27
62	Jellyfish Filter 2400mm Diameter	06 Jellyfish Filter Media - Georges River Road - Opposite To HN 26 (Cartwright Crescent)
63	Gross Pollutant Trap 900mm Diameter (HumeGard30A)	17 Georges River Road 2gross Pollutant Trap Opposite To HN 26 Cartwright Crescent
64	Jellyfish Filter 3000mm Diameter	03 Jellyfish Filter Media - College Road/Cartwright Crescent Intersection Corner (No1)
65	Jellyfish Filter 3000mm Diameter	04 Jellyfish Filter Media - Coolego/RoadCartwright Crescent Intersection Corenr (No2)
66	Jellyfish Filter 3000mm Diameter	05 Jellyfish Filter Media - Coolego/RoadCartwright Crescent Intersection Corenr (No3)
67	Gross Pollutant Trap 900mm Diameter (HumeGard45)	15 Cartwright Crescent Gross Pollutant Trap Corner College Road
68	Gross Pollutant Trap 600mm Diameter (HumeGard18)	07 Georges River Parkway Reserve Gross Pollutant Trap Georges River Road opp Junction Road Airds in Canally Reserve
69	Gross Pollutant Trap 600mm Diameter (HumeGard18)	06 Riverside Drive - rear house 280 end walkway in reserve - Airds
70	Gross Pollutant Trap 600mm Diameter (HumeGard18)	04 Georges River Parkway Reserve Gross Pollutant Trap opp 21 Boonoke Place Airds
71	Gross Pollutant Trap 600mm Diameter (HumeGard18)	05 Georges River Parkway Reserve Gross Pollutant Trap rear Templeton Way Airds
72	Gross Pollutant Trap 600mm Diameter (HumeGard18)	03 Georges River Parkway Reserve Gross Pollutant Trap end of street Katella Way Airds
73	Gross Pollutant Trap 600mm Diameter (HumeGard18)	02 Hagan Reserve Gross Pollutant Trap Greengate Road opp Merino Cr Airds

2. AMBARVALE – ENGLORIE PARK SECTOR / COMMUNITY



2.1. AMBARVALE ENGLORIE PARK RESPONSE ARRANGEMENTS

Refer to Volume 2: Hazard and Risk in Campbelltown LGA for more information about this Sector/Community.

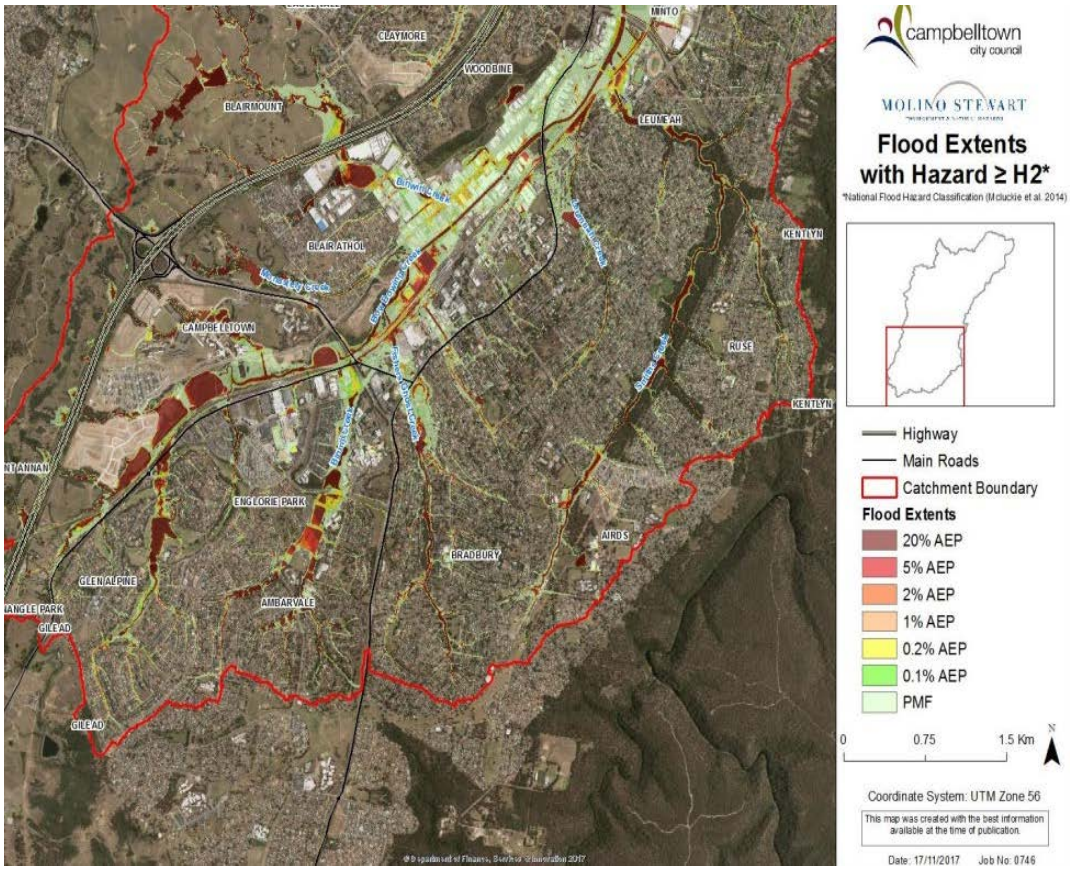
Sector Description	The community is bounded by Gilchrist Drive and Therry Road in the north, Appin Road in the east, Spring Creek, and Cleopatra Drive in the south, and Englorie Park Drive in the west. The 2021 resident population for Ambarvale – Englorie Park community is 7,254, with a population density of 2,627 persons per square km. The three largest ancestries across communities within this region in 2021 were Australian, English, and Samoan. This suburb has not been identified in the regional development strategy as a focus area and is not currently undergoing redevelopment which means no impact on the physical topography or the community.
Hazard	The Hazard is Flash Flooding because of overland flow - The Birunji Creek runs through Ambarvale and joins Bow Bowing Creek downstream of Campbelltown. Flood from Birunji Creek is generally well contained within the creeks' banks and with the numerous detention basins in Ambarvale. Overland flooding is caused by rainwater running downhill. This is called an overland flow path. In an overland flow path, flow depth and velocity can reach levels high enough to become a risk to life and property.

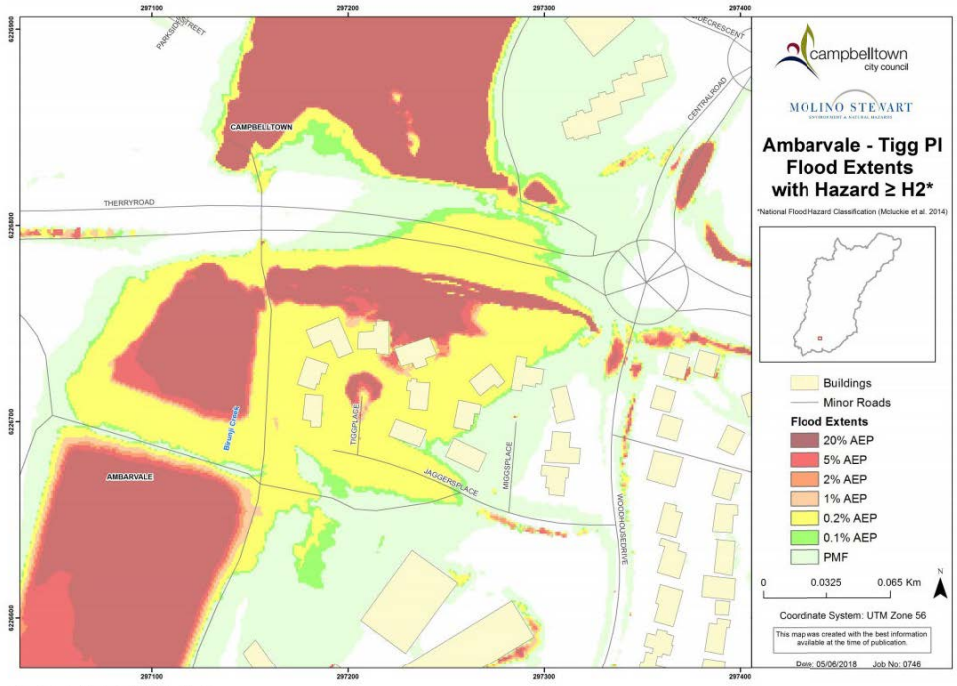
	Overland Flow paths in the BBBC Creek catchment form on both sides of the main creek and generally run along roads or through properties until they join the main creek or one of the tributaries. In Ambarvale, an overland flow path runs off in east to west direction along the southern end of Therry Rd, at the back of the residential properties in Tigg Pl and Miggs Pl. Some of these properties experience mild flooding from the 5% AEP (Map 11, Vol. 2). From the 0.2% AEP event, the site is affected by mainstream flooding from Birunji Creek. Tigg PI. Events less frequent than the 0.2% AEP, the creek's flow exceeds the capacity of the culvert under Therry Rd and overtops its banks, affecting residential properties in Tigg PI. It should be noted that some of these properties experience local overland flooding also in events more frequent than the 0.2% AEP. Tigg PI and the adjacent Miggs PI are just to the east of Birunji Creek where it passes under Therry Rd. There is a complexity of overland flow paths from the east which flow towards Birunji Creek. One comes through Jaggers PI which Tigg PI and Miggs PI run off, but more flow follows a drainage line along the southern side of Therry Rd which runs behind the houses in Tigg PI and Miggs PI. This drain passes through a pipe under an embankment which supports a footpath. Water from Jaggers PI flows down Tigg PI and Miggs PI and through properties and into the drain and the drain fills up behind the Therry Rd and footpath embankments until it reaches a level where all the properties in Tigg PI and Miggs PI flood. a. 20% AEP - In the 20% AEP event there is only mild overland flooding, with the backyards of two properties in Tigg PI being affected, in addition to floodwaters ponding in the Cul-de-sac. The model does not show any buildings with Above Floor Flooding in this event. b. 1% AEP - In the 1% AEP event, the overland flow extent widens to surround two buildings in Tigg PI, one of which experiences AFF depths up to 10mm. The Cul de sac is affected by a larger flood extent, and access is cut to at least five buildings in Tigg PI. Of these, the flood model shows that six may experience structural instability in the PMF. All these buildings are single-store. c. Water from Jaggers Pl flows down Tigg Pl and Miggs Pl and through properties and into the drain and the drain fills up behind the Therry Rd and footpath embankments until it reaches a level where all the properties in Tigg Pl and Miggs Pl flood. d. PMF - In a PMF event, floodwaters from Birjunji Creek become highly hazardous throughout Tigg Pl and the western side of Migg Pl, resulting in 11 buildings experiencing AFF depths over 0.5m. Of these, the flood model shows that six may experience structural instability in the PMF. All these buildings are single-storey.
Triggers	The following triggers will activate a response from Campbelltown SES Unit and consideration of activation of the LEMC: • BoM releasing a flood or severe storm warning for the Campbelltown LGA. • Requests for Assistance indicating a flood event. • When directed by Metro Zone or the REOCON or SEOCON.
Flood Affect Classification	There are several HFI and LFI within the community
At risk properties	**Total number of properties within Sector/Community**
At risk facilities	Amber Cottage CCC 55 Crisparkle Dr AFF 0.4m Thomas Reddall High School Woodhouse Dr AFF 0.5m

<table>
<tr><td>Sector Control</td><td colspan="5"></td></tr>
<tr><td rowspan="2">Key Warning Gauge Name</td><td>Name</td><td>AWRC No.</td><td>Min (m)</td><td>Mod (m)</td><td>Maj (m)</td></tr>
<tr><td></td><td></td><td></td><td></td><td></td></tr>
<tr><td>General Strategy</td><td colspan="5">• Monitor
• Promote Property Protection
• Community Engagement
• In events of 20% AEP or higher potential for isolation but only for short duration 24hrs so potential resupply / rescue may be required if secondary emergencies occur during this short isolation period.</td></tr>
<tr><td rowspan="2">Key Risks / Consequences</td><td colspan="5">The following Residential Properties are at risk:
• From a 20% AEP Event Tigg Place
• From 5% AEP event Migg Place.
• Jagger Place
• Clennam Ave and Brownlow Pl
• Lightwood St
The following roads become closed:
• Tigg and Migg Places and Jagger Place</td></tr>
<tr><td colspan="5"></td></tr>
<tr><td rowspan="2">Information and Warnings</td><td colspan="5">The trigger would be a Severe Weather Warnings issued by BOM.
Release messages around Property Protection Measures / if time available set up Sandbag point for those local properties potentially impacted - flash flooding across low lying areas.</td></tr>
<tr><td colspan="5">N/A for Evac Sequencing however isolation for short duration will be required.
Early Community Education on the threat coupled with social media advice.
Ask Council to consider the Flash flood Warning System as a mitigation measure as SES cannot warn to this community.</td></tr>
<tr><td rowspan="3">Property Protection</td><td colspan="5">Property protection measures:
The property protection measures for the threat of flash flooding could be move valuable household goods to protect from flow path for AFF preventing water damage, sandbag around doors and gaps to prevent water getting into at risk homes.
Established a known point for sandbagging and advertise on Social Media Facebook Pages as a property protection measure.</td></tr>
<tr><td colspan="5">Assistance with property protection:
Specific assistance with property protection by way of sandbagging and lifting or transporting of furniture, personal effects etc may be available – consider.</td></tr>
<tr><td colspan="5">Protection of essential infrastructure:</td></tr>
<tr><td>Evacuation and/or Isolation Triggers</td><td colspan="5">Upon Severe Weather Event</td></tr>
<tr><td>Evacuation Triggers</td><td colspan="5">Not feasible due to nature of flooding being flash flooding.</td></tr>
<tr><td>Sequencing of evacuation</td><td colspan="5">Not feasible due to nature of flooding being flash flooding.</td></tr>
<tr><td>Evacuation Routes</td><td colspan="5">Appin Road and Moore Oxley to Broughton St Campbelltown - Not feasible due to nature of flooding being flash flooding.</td></tr>
</table>

Evacuation Route Closure	Tigg and Migg Places and Jagger Place.
Method of Evacuation	Not feasible due to nature of flooding being flash flooding.
Evacuation Centre / Assembly Point	Evacuation Centre is the Campbelltown Civic Centre Queen St Campbelltown.
Large scale evacuations	Not feasible due to nature of flooding being flash flooding.
Rescue	*Upon receipt of RFA via Beacon*
Resupply	Not relevant due to nature of flooding being flash flooding.
	Table 2, in Volume 2 provides information about isolated communities in the Campbelltown LGA and potential periods of isolation. A flowchart illustrating the Resupply process is shown in Volume 1 of the Local Flood Plan, Attachment 1.
Aircraft Management	***Helicopter Landing Points:***
	Airports:
Other	

2.2. AMBARVALE SECTOR/COMMUNITY FLOOD EXTENT WITH HAZARD >H2 MAP



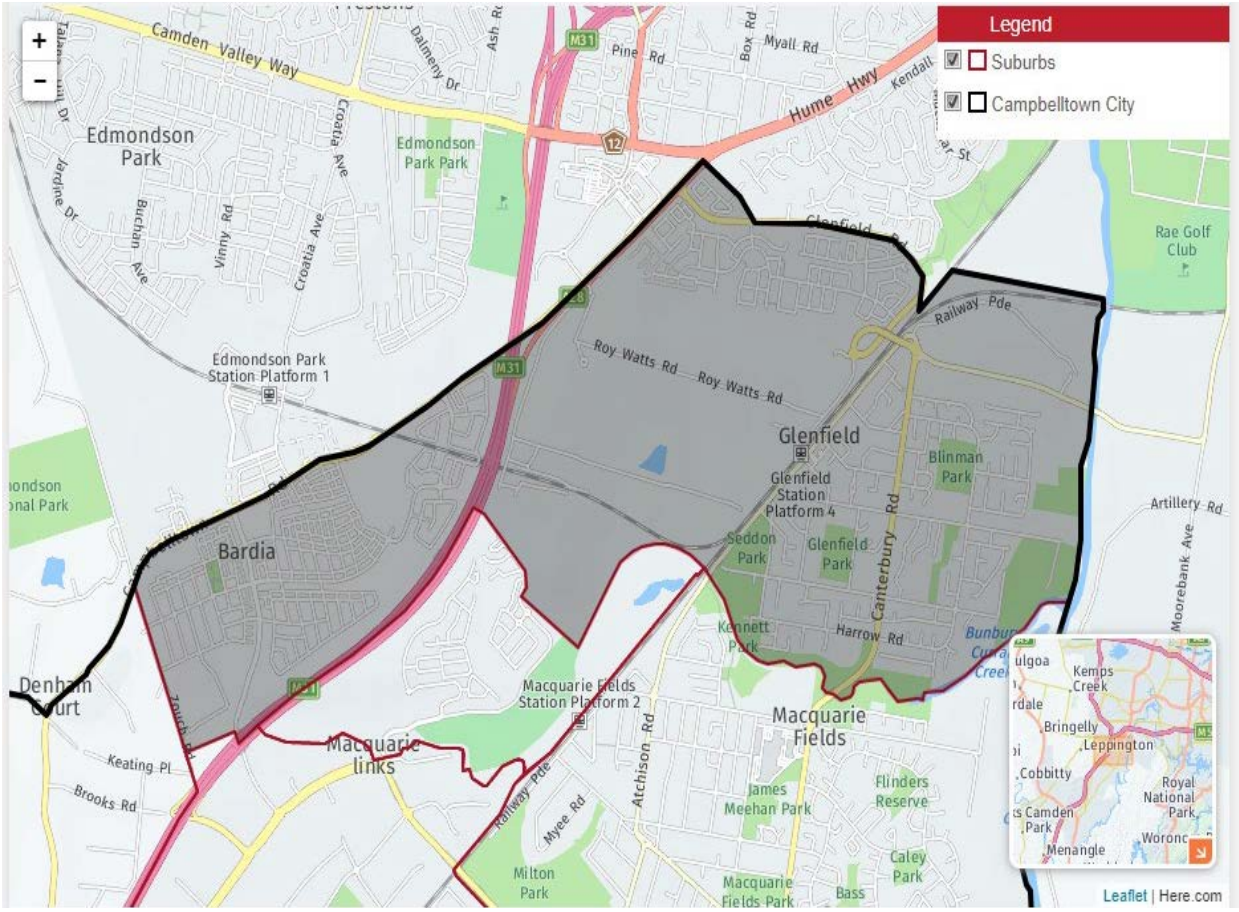


Map 11. Overland flooding in Ambarvale – Tigg Pl.

Map 37 Residential Hotspot 9: Tigg Place, Ambarvale

2.3. MANDURAMA RESERVE UNREGULATED DAM MAP

3. GLENFIELD - BARDIA SECTOR / COMMUNITY



3.1. GLENFIELD - BARDIA RESPONSE ARRANGEMENTS

Refer to Volume 2: Hazard and Risk in Campbelltown LGA for more information about this Sector/Community.

Sector Description	Glenfield - Bardia is bounded by Old Glenfield Road, Glenfield Road and Liverpool City in the north, the Georges River in the east, Bunbury Curran Creek, Macquarie Field House, the suburb of Macquarie Links, the Hume Highway and Zouch Road in the south, and Campbelltown Road in the west. The 2021 resident population for Glenfield - Bardia community is 16,283 with a population density of 1,547 persons. The three largest ancestries in Glenfield – Bardia in 2021 were Australian, English and Indian. There are not many residential or non-residential buildings in Glenfield or Macquarie Fields which are likely to experience frequent above floor flooding so there are no real strategic planning solutions for these areas. This suburb has not been identified in the regional development strategy as a focus area and is not currently undergoing redevelopment which means no impact on the physical topography or the community.
Hazard	In Glenfield, a flow path flows from the corner of Fawcett St and Canterbury Rd south-west towards Bow Bowing Creek passing through Harrow Rd and affecting some residential properties from the 20% AEP event. (Map 20 Vol. 2). Flooding is also caused by two overland flow paths, both of which form west of the crossroad between Newtown Rd and Fawcett St and run-in opposite directions. One runs south towards Bunbury Curran Creek, where floodwaters build up against the

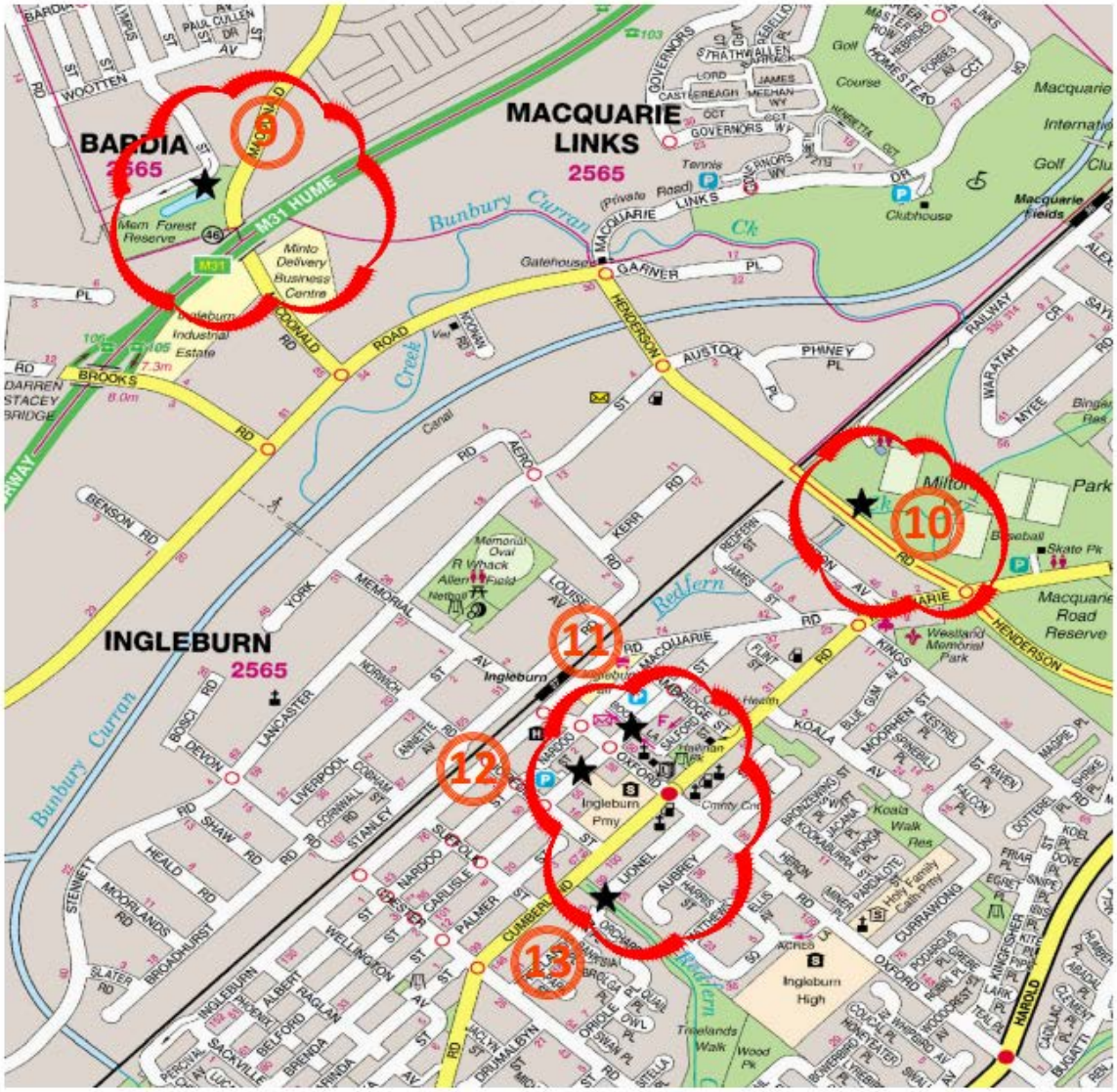
	riverbank. The other one runs north-west and builds up when it encounters the embankment of Railway Pde. Flooding then expands eastward and affects residential properties along Newtown Rd and Fawcett St (in events greater than the 0.2% AEP). The model shows that 98 buildings (that are single storey) would experience a depth of AFF exceeding 0.5m in the PMF. Of these, the flood model suggests at least 52 may incur structural instability because of high hazard floodwaters. There are also 10 two storey buildings which may not be structurally stable in a PMF. Flooding caused by Redfern Creek overtopping its banks upstream of the culvert under the railway and, to a lesser extent, upstream of the culvert under Saywell Rd. There is no flooding of any buildings in events more frequent than the 0.2% AEP, and most buildings are only affected in the PMF. Overall, the model shows that 65 single-storey buildings would experience AFF depths exceeding 0.5m in the PMF, of which the flood model suggests that 15 may experience structural instability due to highly hazardous floodwaters. There are also three two-storey buildings which the flood model suggests may be at risk of structural instability in the PMF. In Glenfield, a flow path flows from the corner of Fawcett St and Canterbury Rd south-west towards Bow Bowing Creek passing through Harrow Rd and affecting some residential properties from the 20% AEP event. (Map 20 Vol. 2). Flooding is also caused by two overland flow paths, both of which form west of the crossroad between Newtown Rd and Fawcett St and run-in opposite directions. One runs south towards Bunbury Curran Creek, where floodwaters build up against the riverbank. The other one runs north-west and builds up when it encounters the embankment of Railway Pde. Flooding then expands eastward and affects residential properties along Newtown Rd and Fawcett St (in events greater than the 0.2% AEP). The model shows that 98 buildings (that are single storey) would experience a depth of AFF exceeding 0.5m in the PMF. Of these, the flood model suggests at least 52 may incur structural instability because of high hazard floodwaters. There are also 10 two storey buildings which may not be structurally stable in a PMF. Flooding caused by Redfern Creek overtopping its banks upstream of the culvert under the railway and, to a lesser extent, upstream of the culvert under Saywell Rd. There is no flooding of any buildings in events more frequent than the 0.2% AEP, and most buildings are only affected in the PMF. Overall, the model shows that 65 single-storey buildings would experience AFF depths exceeding 0.5m in the PMF, of which the flood model suggests that 15 may experience structural instability due to highly hazardous floodwaters. There are also three two-storey buildings which the flood model suggests may be at risk of structural instability in the PMF.
Triggers	The following triggers will activate a response from Campbelltown SES Unit and consideration of activation of the LEMC: • BoM releasing a flood or severe storm warning for the Campbelltown LGA • Requests for Assistance indicating a flood event. • When directed by Metro Zone or the REOCON or SEOCON
Flood Affect Classification	There are a few High Flood Islands and Low Flood Islands identified in this suburb however due to the flash flood nature of flooding that relate to all defined flood events up to a PMF with floods hitting its peak within 6hrs and receding within the following 6-12 hrs the duration is short. Community engagement and continual monitoring of isolation and flood threat in case of PMF is required. No known Flood Rescue Hotspots within this sector. Flood risk locations are: • None of the properties in this hotspot are flooded in any event other than the PMF.

<table>
<tr><td></td><td colspan="5">Most of the buildings in this hotspot are within a low flood island and some of them become isolated in frequent events. There is a low point just south of the Cul de sac in Adrian St where overland flooding builds up from the 20% AEP event and cuts vehicular access to some of the buildings nearby. Adrian St also floods in the 20% AEP event at the corner with Fraser St, cutting access to most buildings in the eastern part of the hotspot. In less frequent events the flood expands and starts running off Adrian St in all directions (north, south-west and east), isolating more buildings. In the PMF, the overland flow path inundates all buildings located in the western part of the hotpots. At the same time, Redfern Creek overtops its banks just upstream of the confluence with Bunbury Curran Creek and generates fast mainstream flooding running north-east between the creek and the railway, then veering south-east to follow the path of Bunbury Curran Creek. Part of this flow then runs south through some of the properties on the eastern side of the hotspot, along Adrian St. Here flood hazards are very high in the PMF, and the model shows that 11 buildings may experience structural instability.
Overall, the flood model shows that 104 buildings in this hotspot may experience AFF depths exceeding 0.5m in the PMF. Of these, 78 are on a low flood island from the 20% AEP, and 11 may become structurally unstable in the PMF.
Shops and dwellings in Railway Pde between Belmont Rd and Hosking Cres (AEP 5%)</td></tr>
<tr><td>At risk properties</td><td></td><td colspan="3">Total number of properties within Sector/Community</td><td></td></tr>
<tr><td>At risk Facilities</td><td colspan="5">The following Schools is at risk of flooding and / or isolation:
Glenfield Public School – AFF From 20% AEP up to PMF
Hurlstone agriculture College PMF
The following Facilities for the aged and / or infirmed:
The Frank Whiddon Masonic Homes Facility AFF 0.1m</td></tr>
<tr><td>Sector Control</td><td colspan="5"></td></tr>
<tr><td>Key Warning Gauge Name</td><td>Name</td><td>AWRC No.</td><td>Min (m)</td><td>Mod (m)</td><td>Maj (m)</td></tr>
<tr><td></td><td>Cambridge Avenue Bridge
Lowe Ave Bardia Water Sensor
Railway Pde</td><td>567088</td><td>5.20</td><td>9.20</td><td>12.20</td></tr>
<tr><td>Additional Notes</td><td colspan="5">Flash Flood Points
Campbelltown Road and Ingleburn Garden Drive
Macdonald Rd where it crosses under the M31</td></tr>
<tr><td>General Strategy</td><td colspan="5">Monitor
Promote Property Protection
Community Engagement
Potential for isolation but only for short duration 24hrs so potential resupply / rescue may be required if secondary emergencies occur during this short isolation period.</td></tr>
<tr><td>Key Risks / Consequences</td><td colspan="5"></td></tr>
</table>

Information and Warnings	The trigger would be a Severe Weather Warnings issued by BOM. Release messages around Property Protection Measures / if time available set up Sandbag point for those local properties potentially impacted - flash flooding across low lying areas.
	N/A for Evac Sequencing however isolation for short duration will be required. Early Community Education on the threat coupled with social media advice. Ask Council to consider the Flash flood Warning System as a mitigation measure as SES cannot warn to this community.
Property Protection	***Property protection measures:*** The property protection measures for the threat of flash flooding could be move valuable household goods to protect from flow path for AFF preventing water damage, sandbag around doors and gaps to prevent water getting into at risk homes. Established a known point for sandbagging and advertise on Social Media Facebook Pages as a property protection measure.
	Assistance with property protection: Specific assistance with property protection by way of sandbagging and lifting or transporting of furniture, personal effects etc may be available – consider.
	Protection of essential infrastructure:
	Levee consideration:
Evacuation and/or Isolation Triggers	Closure of evacuation roads occur at frequent flood events 20% AEP. Flooding is quick to rise reaching peak within 6hrs and receding quickly resulting no time being available to evacuate effectively.
Evacuation Triggers	Not feasible due to nature of flooding being flash flooding.
Sequencing of evacuation	Not feasible due to nature of flooding being flash flooding.
Evacuation Routes	Via Campbelltown Road.
Evacuation Route Closure	Not feasible due to nature of flooding being flash flooding.
Method of Evacuation	Not feasible due to nature of flooding being flash flooding.
Evacuation Centre / Assembly Point	Campbelltown Civic Hall Queen St Campbelltown.
Large scale evacuations	Refer to the Georges and Woronora River Valley Subplan and State Flood Plan for further information as flowing is likely to be occurring across the Georges and Woronora River.
Rescue	They're known flood rescue hotspots within the area however there are trap point locations that are identified in the map below. • Campbelltown Road and Ingleburn Garden Drive • Macdonald Rd where it crosses under the M31
Resupply	N/A

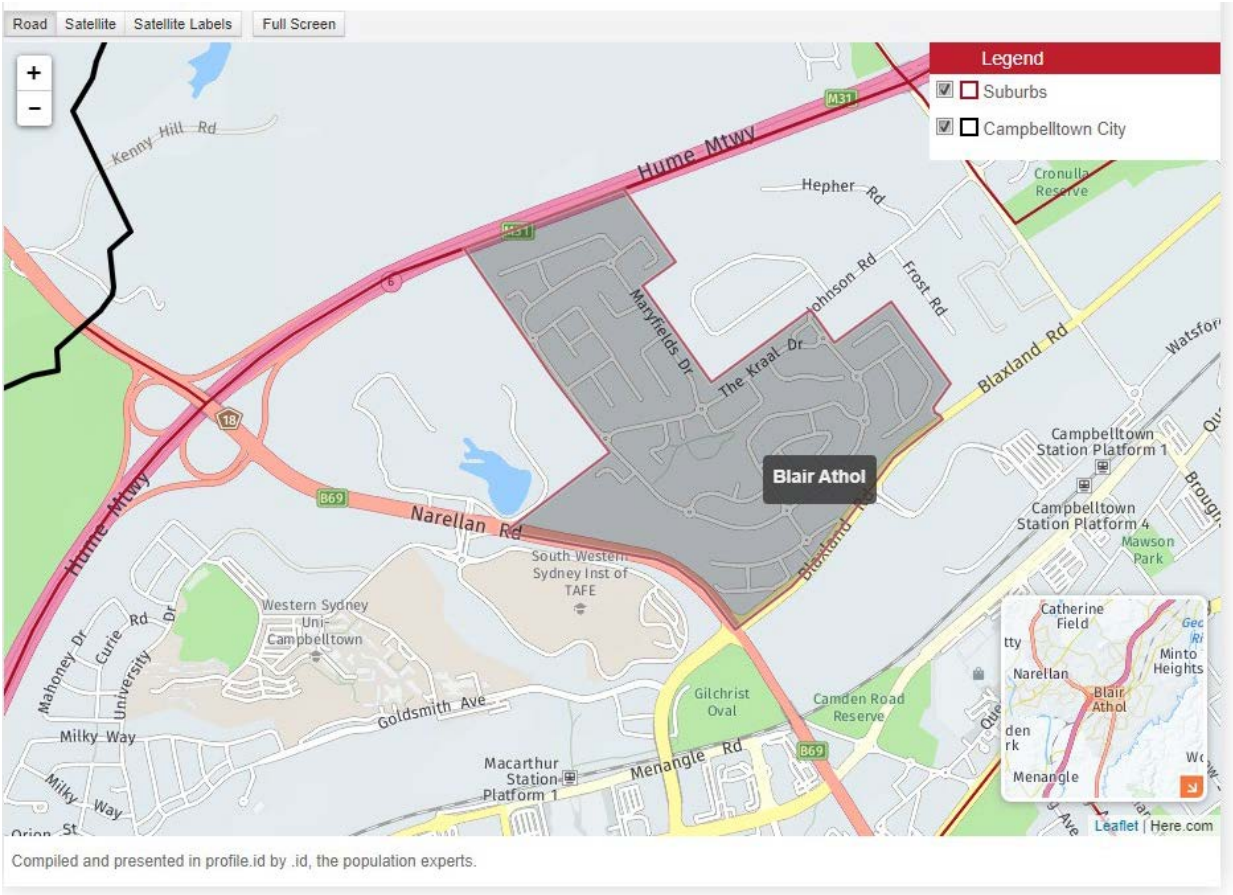
Aircraft Management	***Helicopter Landing Points:***
	Airports:
Other	Refer to the Georges and Woronora River Valley Subplan and Hawkesbury Nepean State Flood Plan for further information as flowing is likely to be occurring across the Georges and Woronora River and Hawkesbury Nepean Rivers concurrently.

3.2. GLENFIELD – BARDIA SECTOR/COMMUNITY TRAP POINTS MAP



WQD No.	Asset_Type	Asset_Description
9	Gross Pollutant Trap 600mm Diameter (HumeGard18)	WQD 28 1300 W010 Mount Olympus Street
10	Triple Steel Trash Rack	Redfern Creek Triple Steel Trash Rack under Henderson Rd/Milton Park Macquarie Fields
11	Pit Baskets	23.4 Carlisle St in front of fire station Ingleburn Central Business District Pit Baskets
12	Pit Baskets	23.1 Oxford & Carlisle Sts Ingleburn Central Business District Pit Baskets
13	Steel Trash Rack	Redfern Creek Steel Trash Rack (Treelands Ave end cul de sac)

4. BLAIR ATHOL SECTOR / COMMUNITY



4.1. BLAIR ATHOL RESPONSE ARRANGEMENTS

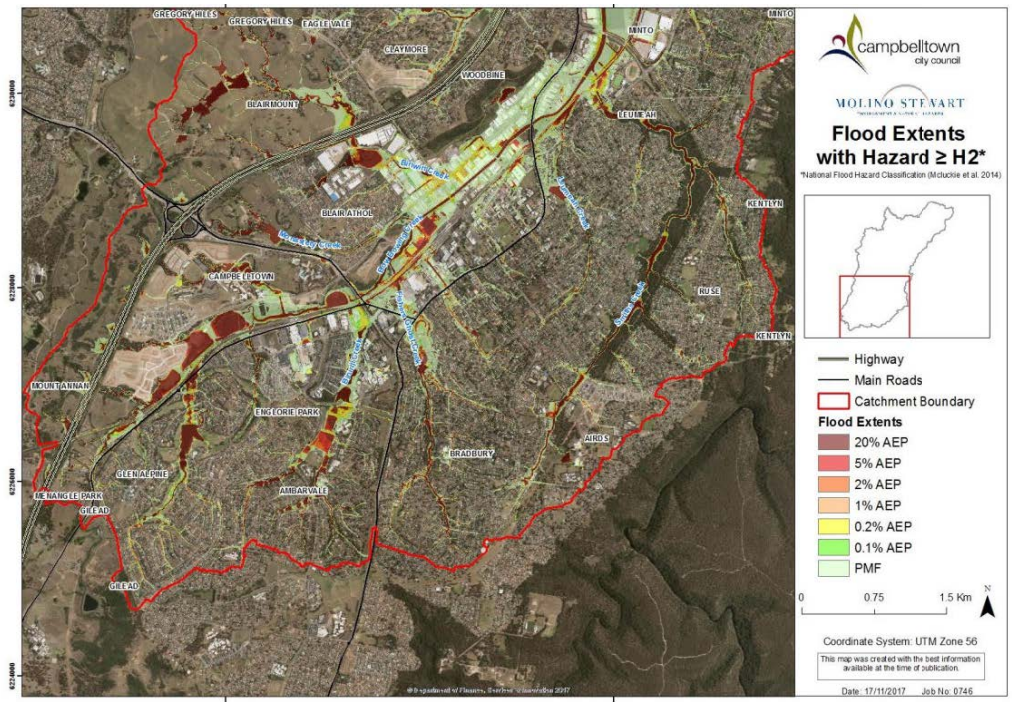
Refer to Volume 2: Hazard and Risk in Campbelltown LGA for more information about this Sector/Community.

Sector Description	The 2021 resident population for Blair Athol community is 2,725. In Blair Athol, 48.3% of people spoke a language other than English at home in 2021. Blair Athol is bounded by the Hume Highway and the suburb of Campbelltown in the north, The Kraal Drive, Johnson Road, Sophia Place and John Kidd Drive in the east, Blaxland Road and Narellan Road in the south, and the suburb of Campbelltown and Maryfields Drive in the west. This suburb has not been identified in the regional development strategy as a focus area and is not currently undergoing redevelopment which means no impact on the physical topography or the community.
Hazard	The area northeast of Blair Athol, with flooding observed only in events greater than the 0.2% AEP, although in more frequent events some of the local roads get cut (e.g., Blaxland Road). No significant affectation of residential or commercial buildings can be observed. Downstream of the Motorway, floodwaters affect only open space until the creek passes through the Blair Athol industrial estate. However, for the most part more frequent events can cause flooding of the roads and properties around the intersection of Badgally Rd and Blaxland Rd which become flow paths for the creek water which cannot pass through the culverts under the industrial estate.

<table>
<tr><td>Triggers</td><td colspan="5">The following triggers will activate a response from Campbelltown SES Unit and consideration of activation of the LEMC:
BoM releasing a flood or severe storm warning for the Campbelltown LGA.
Requests for Assistance indicating a flood event.
When directed by Metro Zone or the REOCON or SEOCON.</td></tr>
<tr><td>Flood Affect Classification</td><td colspan="5">Emergency response classifications are used to describe evacuation constraints of communities (or parts of communities known as sectors). Low Flood Islands and Low trapped Perimeter Areas have the highest flood risks.
There are no flood emergency response classifications identified in the suburb.
High risk hotspots are:
Blaxland Rd (20% AEP)
Mossberry St (4) Properties
Industrial Estate in a PMF</td></tr>
<tr><td>At risk properties</td><td></td><td colspan="3">Total number of properties within Sector/Community</td><td></td></tr>
<tr><td>At risk Facilities</td><td colspan="5"></td></tr>
<tr><td>Sector Control</td><td colspan="5"></td></tr>
<tr><td>Key Warning Gauge Name</td><td>Name</td><td>AWRC No.</td><td>Min (m)</td><td>Mod (m)</td><td>Maj (m)</td></tr>
<tr><td></td><td>Johnsons Rd and Hepher Rd Water Sensor
Farrow Rd and Kraal Dr Water Sensor</td><td></td><td>-</td><td>-</td><td>-</td></tr>
<tr><td>Additional Notes</td><td colspan="5"></td></tr>
<tr><td>General Strategy</td><td colspan="5">Monitor
Promote Property Protection
Community Engagement
Potential for isolation but only for short duration 24hrs so potential resupply / rescue may be required if secondary emergencies occur during this short isolation period.</td></tr>
<tr><td>Key Risks / Consequences</td><td colspan="5">Closure of the following roads Badgally Rd and Blaxland Rd</td></tr>
<tr><td rowspan="2">Information and Warnings</td><td colspan="5">The trigger would be a Severe Weather Warnings issued by BOM. Release messages around Property Protection Measures / if time available set up Sandbag point for those local properties potentially impacted - flash flooding across low lying areas.</td></tr>
<tr><td colspan="5">N/A for Evac Sequencing however isolation for short duration will be required.
Early Community Education on the threat coupled with social media advice.
Ask Council to consider the Flash flood Warning System as a mitigation measure as SES cannot warn this community.</td></tr>
<tr><td>Property Protection</td><td colspan="5">Property protection measures:
The property protection measures for the threat of flash flooding could be move valuable household goods to protect from flow path for AFF preventing water damage, sandbag around doors and gaps to prevent water getting into at risk homes.
Established a known point for sandbagging and advertise on Social Media Facebook Pages as a property protection measure.</td></tr>
</table>

	Assistance with property protection: Specific assistance with property protection by way of sandbagging and lifting or transporting of furniture, personal effects etc may be available – consider.
	Protection of essential infrastructure:
	Levee consideration:
Evacuation and/or Isolation Triggers	Closure of evacuation roads occur at frequent flood events 20% AEP. Flooding is quick to rise reaching peak within 6hrs and receding quickly resulting no time being available to evacuate effectively.
Evacuation Triggers	Not feasible due to nature of flooding being flash flooding.
Sequencing of evacuation	Not feasible due to nature of flooding being flash flooding.
Evacuation Routes	Bagdally and Blaxland roads, if open.
Evacuation Route Closure	Not feasible due to nature of flooding being flash flooding.
Method of Evacuation	Not feasible due to nature of flooding being flash flooding.
Evacuation Centre / Assembly Point	Campbelltown Civic Hall Queen St Campbelltown.
Large scale evacuations	Refer to the Georges and Woronora River Valley Subplan and Hawkesbury Nepean State Flood Plan for further information as flowing is likely to be occurring across the Georges and Woronora River and Hawkesbury Nepean Rivers concurrently.
Rescue	There are no known flood rescue hotspots within the area however there are trap point locations that are identified in the map below.
Resupply	N/A
Aircraft Management	***Helicopter Landing Points:***
	Airports: Nil
Other	Refer to the Georges and Woronora River Valley Subplan State Flood Plan for further information as flowing is likely to be occurring across the Georges and Woronora River.

4.2. BLAIR ATHOL SECTOR/COMMUNITY FLOOD EXTENT WITH HAZARD >H2 MAP



Maryfields Unprescribed Dam

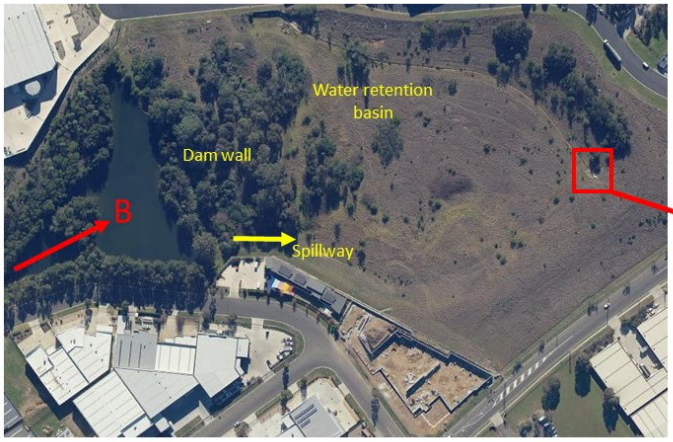
Ponds located on the Monastery site adjacent to Blair Athol is retained by a earthen wall which also has two points that act as a spillway.

In the event that the dam wall would collapse a significant amount of debris would flow towards the lower end of Blair Athol and reach a pinch point at Krall Drive.

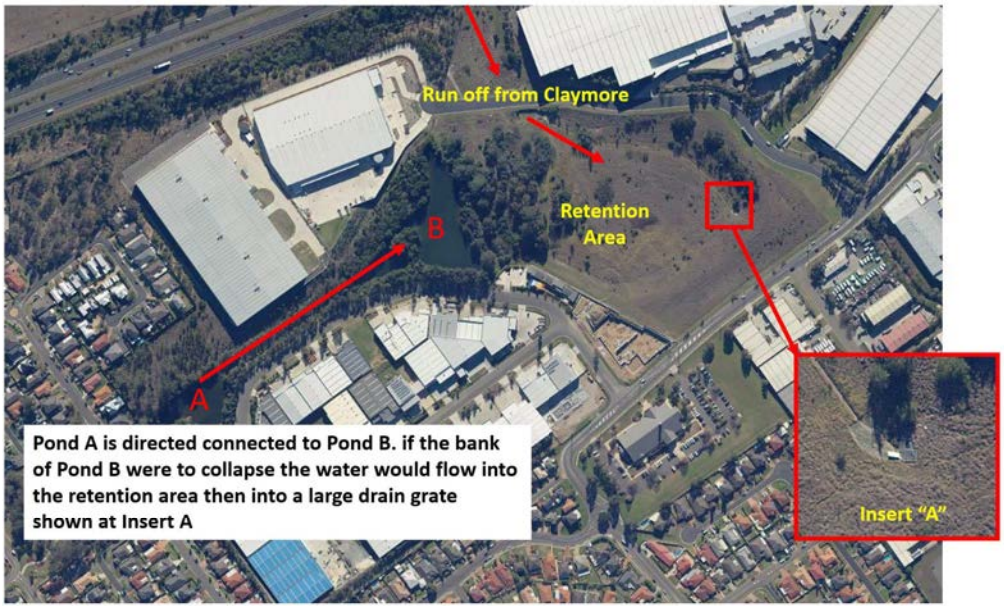
The damming effect at the pinch point would not adversely effect residence or create flooding across the roadway as the wide oped unlined drain is sufficient in size to retain the water from the dam.

Water will eventually flow into Bow Bowing Creek

Blair Athol Industrial Area Maps



INSERT A – Large drain grate



Blair Athol Ponds

Water is collected from residential and industrial areas and flows into both ponds "A" & "B"

Penetration of dam wall will be contained within the retention basin and released via a grated drain.

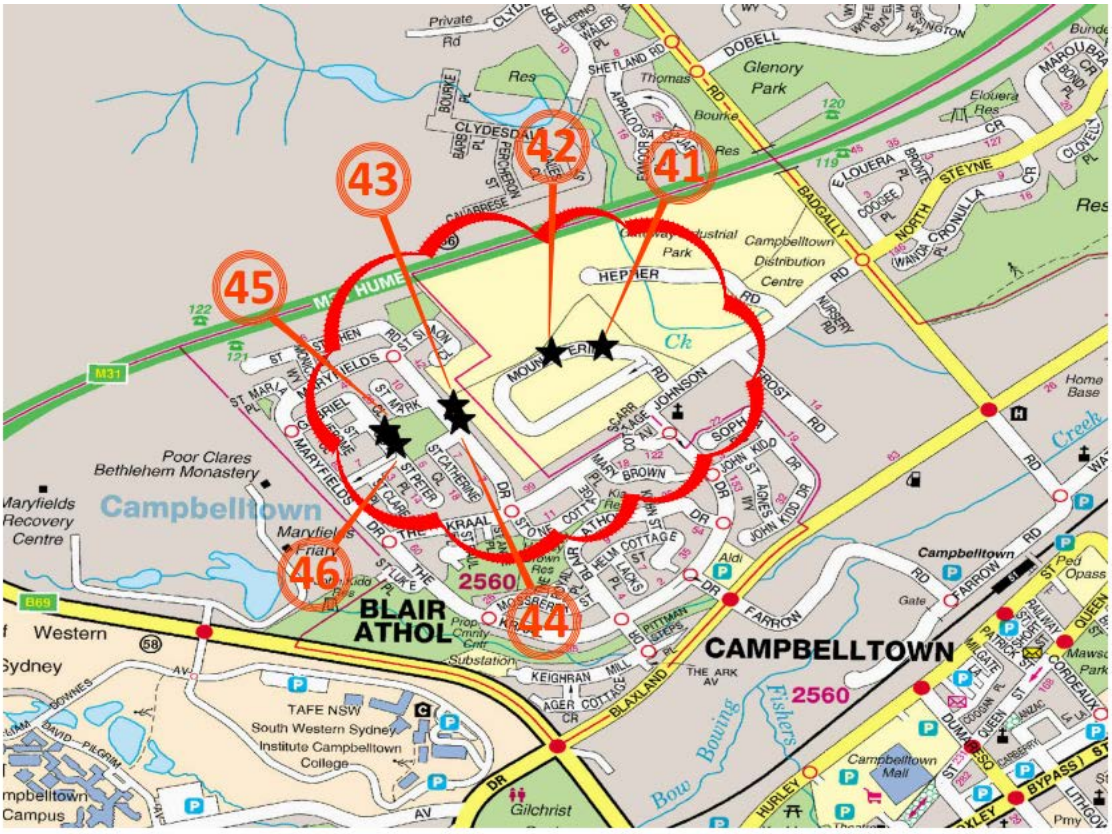
It would appear that the retention basin is of sufficient size to contain all water from ponds "A" & "B"

The dam wall is sufficient size and slope to prevent breakthrough. A spillway has been installed.

There is no perceived danger to residential and industrial areas in close proximity.

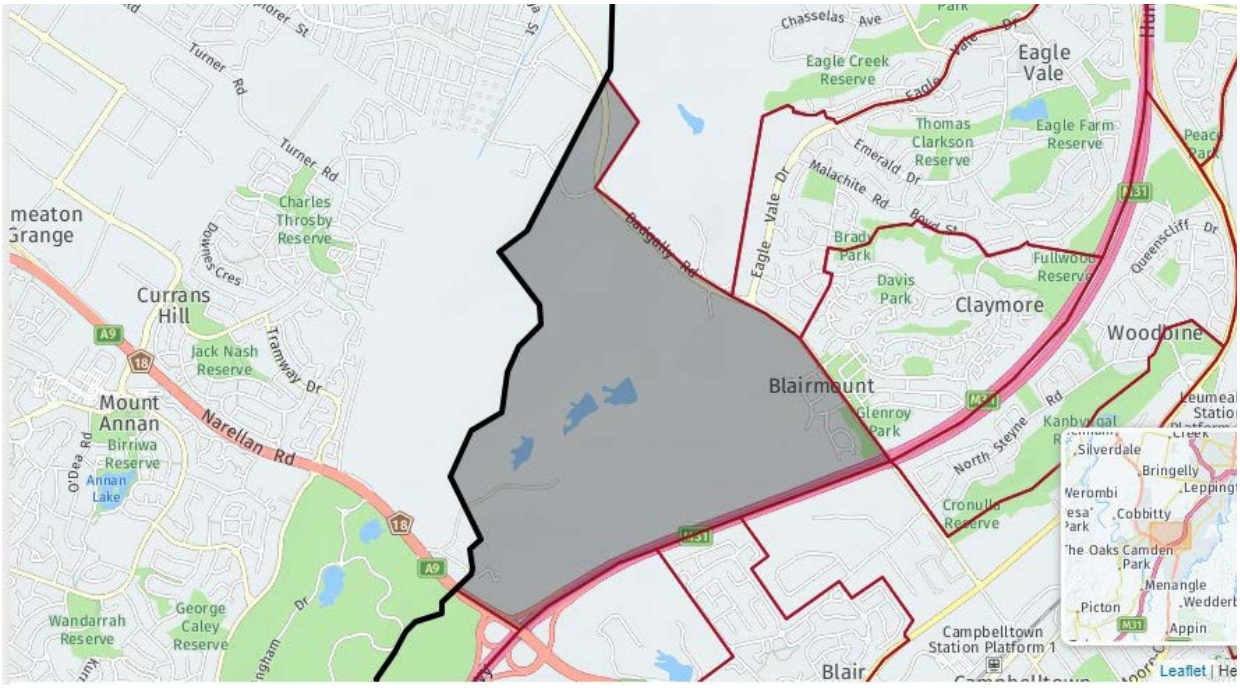
Storm water flows downhill towards Bow Bowing Creek.

4.3. BLAIR ATHOL SECTOR/COMMUNITY TRAP POINTS MAP



WQD No.	Asset_Type	Asset_Description
41	CDS Unit	Biriwiri Creek CDS unit opp 38 Erin Road Campbelltown
42	CDS Unit	Biriwiri Creek CDS unit opp 30 Erin Road Campbelltown
43	Gross Pollutant Trap 600mm Diameter (HumeGard18)	10 Biriwiri Creek Gross Pollutant Trap 30 Maryfields Drive Blair Athol
44	Gross Pollutant Trap 600mm Diameter (HumeGard18)	09 Biriwiri Creek Gross Pollutant Trap (Maryfields Drive 28)
45	Gross Pollutant Trap 600mm Diameter (HumeGard18)	11 Biriwiri Creek Gross Pollutant Trap opp 21 Gabriel Cct Blair Athol
46	Gross Pollutant Trap 600mm Diameter (HumeGard18)	08 Biriwiri Creek Gross Pollutant Trap opp 15 Gabriel Cct Blair Athol

5. BLAIRMOUNT SECTOR / COMMUNITY



5.1. BLAIRMOUNT RESPONSE ARRANGEMENTS

Refer to Volume 2: Hazard and Risk in Campbelltown LGA for more information about this Sector/Community.

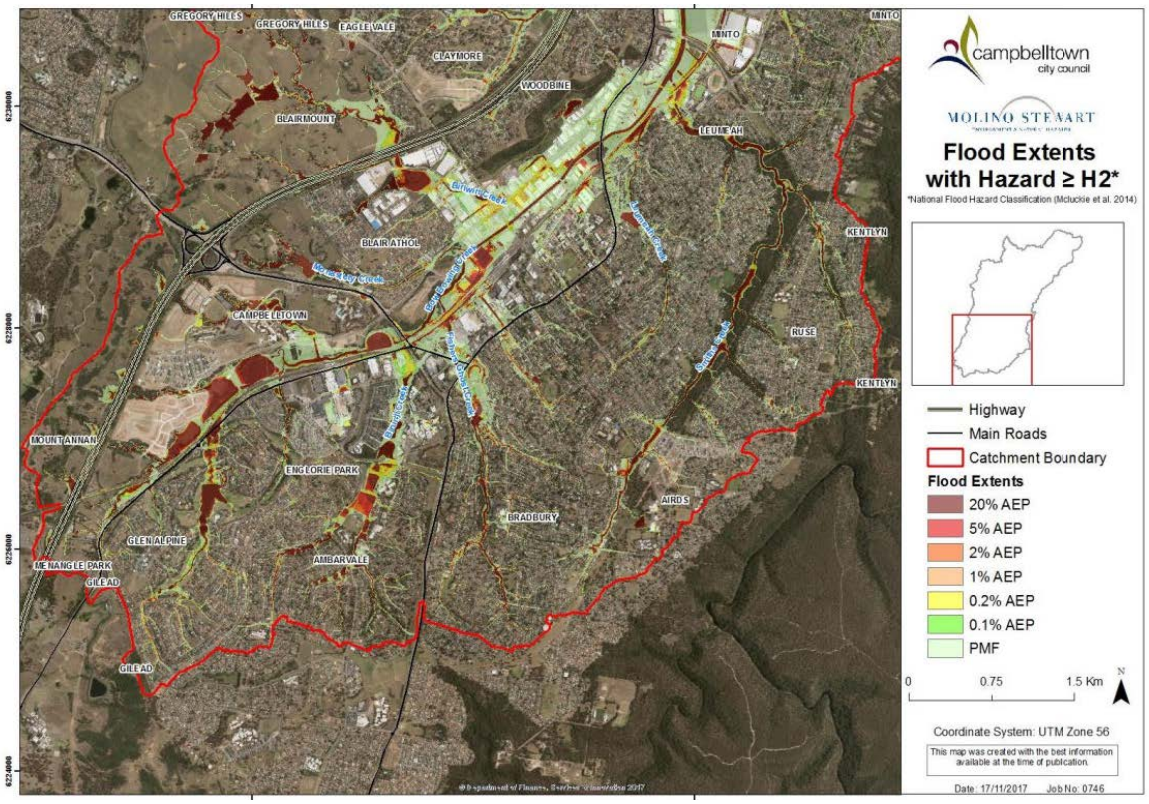
Sector Description	Blairmount is bounded by the suburb of Eschol Park and Badgally Road in the north, the Hume Highway in the east and south, and the Camden Council area in the west. The small suburb includes the locality of Blairmount and the Campbelltown City part of the locality Gregory Hills. Most of the locality of Gregory Hills is located in the Camden Council area. The 2021 resident population for Blairmount community is 409. This suburb has not been identified in the regional development strategy as a focus area and is not currently undergoing redevelopment which means no impact on the physical topography or the community.		
Hazard	Biriwiri Creek (Map 8, Vol. 2) starts in rural areas of Gregory Hills and Blairmount. It causes some local flooding in Blairmount upstream of where it passes under the motorway. Here the flooding affects mostly undeveloped areas, but in the PMF a small number of residential properties flood. Appaloosa Circuit and Clydesdale Cres in a PMF; 15 properties maybe impacted with 6 having structural instability.		
Triggers	The following triggers will activate a response from Campbelltown SES Unit and consideration of activation of the LEMC: • BoM releasing a flood or severe storm warning for the Campbelltown LGA. • Requests for Assistance indicating a flood event. • When directed by Metro Zone or the REOCON or SEOCON.		
Flood Affect Classification	There are no flood emergency response classifications identified in the suburb. No known Flood Rescue Hotspots within this sector.		
At risk properties	15	**Total number of properties within Sector/Community**	

<table>
<tr><td>At risk Facilities</td><td colspan="5"></td></tr>
<tr><td>Sector Control</td><td colspan="5"></td></tr>
<tr><td rowspan="2">Key Warning Gauge Name</td><td>Name</td><td>AWRC No.</td><td>Min (m)</td><td>Mod (m)</td><td>Maj (m)</td></tr>
<tr><td></td><td></td><td>-</td><td>-</td><td>-</td></tr>
<tr><td>Additional Notes</td><td colspan="5"></td></tr>
<tr><td>General Strategy</td><td colspan="5">Monitor
Promote Property Protection
Community Engagement
Potential for isolation but only for short duration 24hrs so potential resupply / rescue may be required if secondary emergencies occur during this short isolation period.</td></tr>
<tr><td>Key Risks / Consequences</td><td colspan="5">Appaloosa Circuit and Clydesdale Cres in a PMF; 15 properties maybe impacted with 6 having structural instability.</td></tr>
<tr><td rowspan="2">Information and Warnings</td><td colspan="5">The trigger would be a Severe Weather Warnings issued by BOM. Release messages around Property Protection Measures / if time available set up Sandbag point for those local properties potentially impacted - flash flooding across low lying areas.</td></tr>
<tr><td colspan="5">N/A for Evac Sequencing however isolation for short duration will be required.
Early Community Education on the threat coupled with social media advice.
Ask Council to consider the Flash flood Warning System as a mitigation measure as SES cannot warn this community.</td></tr>
<tr><td rowspan="4">Property Protection</td><td colspan="5">Property protection measures:
The property protection measures for the threat of flash flooding could be move valuable household goods to protect from flow path for AFF preventing water damage, sandbag around doors and gaps to prevent water getting into at risk homes.
Established a known point for sandbagging and advertise on Social Media Facebook Pages as a property protection measure.</td></tr>
<tr><td colspan="5">Assistance with property protection:
Specific assistance with property protection by way of sandbagging and lifting or transporting of furniture, personal effects etc may be available – consider</td></tr>
<tr><td colspan="5">Protection of essential infrastructure:</td></tr>
<tr><td colspan="5">Levee consideration:</td></tr>
<tr><td>Evacuation and/or Isolation Triggers</td><td colspan="5">Closure of evacuation roads occur at frequent flood events 20% AEP. Flooding is quick to rise reaching peak within 6hrs and receding quickly resulting no time being available to evacuate effectively.</td></tr>
<tr><td>Evacuation Triggers</td><td colspan="5">Not feasible due to nature of flooding being flash flooding.</td></tr>
<tr><td>Sequencing of evacuation</td><td colspan="5">Not feasible due to nature of flooding being flash flooding.</td></tr>
<tr><td>Evacuation Routes</td><td colspan="5"></td></tr>
<tr><td>Evacuation Route Closure</td><td colspan="5">Not feasible due to nature of flooding being flash flooding.</td></tr>
</table>

Method of Evacuation	Not feasible due to nature of flooding being flash flooding.
Evacuation Centre / Assembly Point	Campbelltown Civic Hall Queen St Campbelltown
Large scale evacuations	Refer to the Georges and Woronora River Valley Subplan and Hawkesbury Nepean State Flood Plan for further information as flowing is likely to be occurring across the Georges and Woronora River and Hawkesbury Nepean Rivers concurrently.
Rescue	There are no known flood rescue hotspots within the area however there are trap point locations that are identified in the map below.
Resupply	N/A
Aircraft Management	***Helicopter Landing Points:***
	Airports: Nil
Other	Refer to the Georges and Woronora River Valley Subplan and State Flood Plan for further information as flowing is likely to be occurring across the Georges and Woronora River.

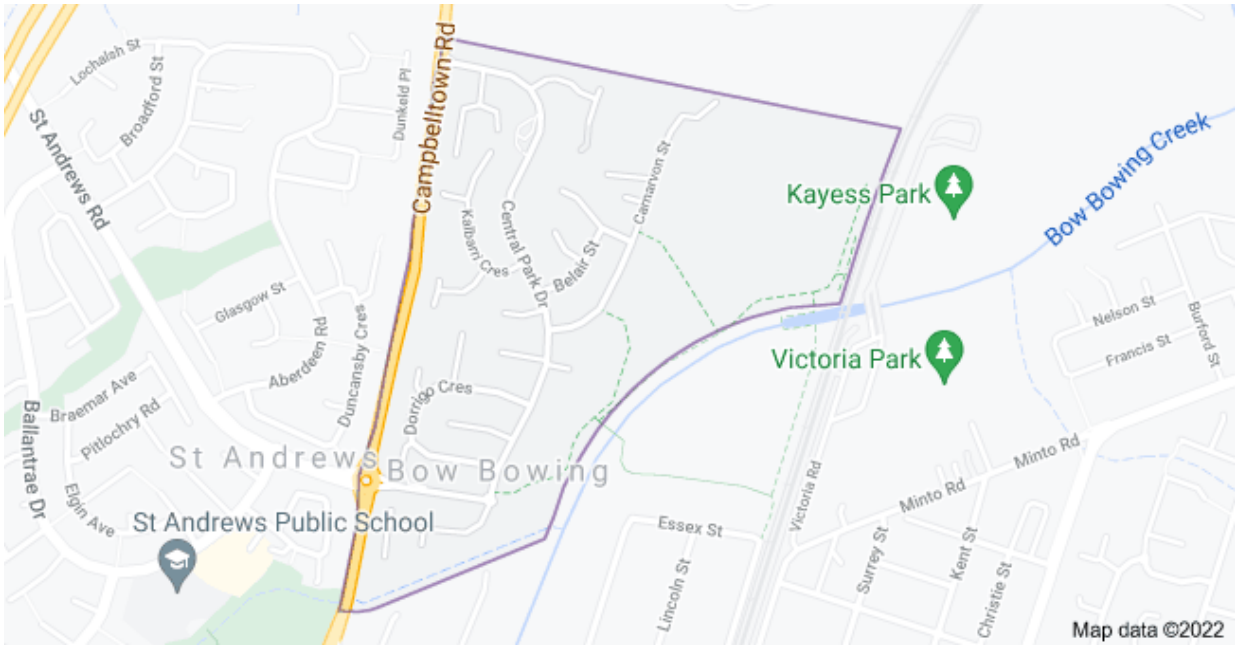
5.2. BLAIRMOUNT SECTOR/COMMUNITY FLOOD EXTENTS WITH HAZARD >H2 MAP

Intro re the map and its purpose and elaborate on what trap points are and why it is necessary to identify here:



Map 40 Residential Hotspot 13: Appaloosa Circuit, Blairmont

6. ST ANDREWS - BOW BOWING SECTOR / COMMUNITY



6.1. ST ANDREWS - BOW BOWING RESPONSE ARRANGEMENTS

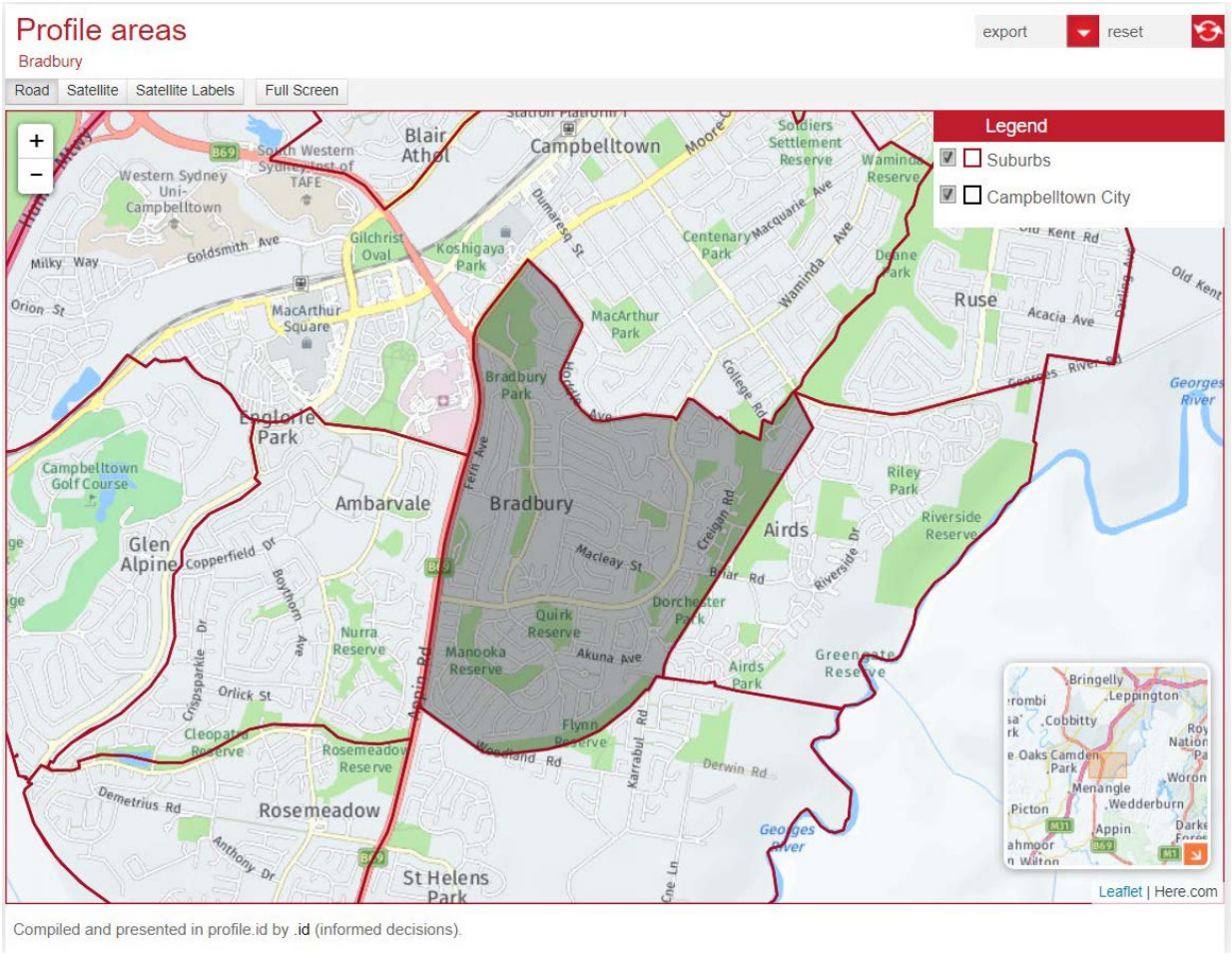
Refer to Volume 2: Hazard and Risk in Campbelltown LGA for more information about this Sector/Community.

Sector Description	St Andrews - Bow Bowing is bounded by the transmission line in the north, the railway line, Thompson Creek and Campbelltown Road in the east, the Campbelltown Road off-ramp in the south, and the Hume Highway in the west. The 2021 resident population for St Andrews – Bow Bowing community is 5,785. The three largest ancestries across communities within this region in 2021 were Australian, English, and Irish.					
Hazard						
Triggers	The following triggers will activate a response from Campbelltown SES Unit and consideration of activation of the LEMC: • BoM releasing a flood or severe storm warning for the Campbelltown LGA • Requests for Assistance indicating a flood event. • When directed by Metro Zone or the REOCON or SEOCON					
Flood Affect Classification	No known Flood Rescue Hotspots within this sector.					
At risk properties		**Total number of properties within Sector/Community**				
At risk Facilities	St Andrews Primary School 20% AEP AFF 0.6m 74 Stranraer Dr Childcare AFF 0.3m					
Sector Control						
	Name		**AWRC No.**	**Min (m)**	**Mod (m)**	**Maj (m)**

Key Warning Gauge Name	Aberfeldy Cres and Canna Pl Water Sensor behind St Andrews Public School.		-	-	-
Additional Notes					
General Strategy	Monitor Promote Property Protection Community Engagement Potential for isolation but only for short duration 24hrs so potential resupply / rescue may be required if secondary emergencies occur during this short isolation period.				
Key Risks / Consequences					
Information and Warnings	The trigger would be a Severe Weather Warnings issued by BOM. Release messages around Property Protection Measures / if time available set up Sandbag point for those local properties potentially impacted - flash flooding across low lying areas.				
	N/A for Evac Sequencing however isolation for short duration will be required. Early Community Education on the threat coupled with social media advice. Ask Council to consider the Flash flood Warning System as a mitigation measure as SES cannot warn to this community.				
Property Protection	***Property protection measures:*** The property protection measures for the threat of flash flooding could be move valuable household goods to protect from flow path for AFF preventing water damage, sandbag around doors and gaps to prevent water getting into at risk homes. Established a known point for sandbagging and advertise on Social Media Facebook Pages as a property protection measure.				
	Assistance with property protection: Specific assistance with property protection by way of sandbagging and lifting or transporting of furniture, personal effects etc may be available – consider.				
	Protection of essential infrastructure:				
	Levee consideration:				
Evacuation and/or Isolation Triggers	Closure of evacuation roads occur at frequent flood events 20% AEP. Flooding is quick to rise reaching peak within 6hrs and receding quickly resulting no time being available to evacuate effectively.				
Evacuation Triggers	Not feasible due to nature of flooding being flash flooding.				
Sequencing of evacuation	Not feasible due to nature of flooding being flash flooding.				
Evacuation Routes					
Evacuation Route Closure	Not feasible due to nature of flooding being flash flooding.				
Method of Evacuation	Not feasible due to nature of flooding being flash flooding.				
Evacuation Centre / Assembly Point					

Large scale evacuations	Refer to the Georges and Woronora River Valley Subplan and State Flood Plan for further information as flowing is likely to be occurring across the Georges and Woronora River.
Rescue	There are no known flood rescue hotspots within the area however there are trap point locations that are identified in the map below.
Resupply	N/A
Aircraft Management	***Helicopter Landing Points:***
	Airports:
Other	Refer to the Georges and Woronora River Valley Subplan and State Flood Plan for further information as flowing is likely to be occurring across the Georges and Woronora River.

7. BRADBURY SECTOR / COMMUNITY



7.1. BRADBURY RESPONSE ARRANGEMENTS

Refer to Volume 2: Hazard and Risk in Campbelltown LGA for more information about this Sector/Community.

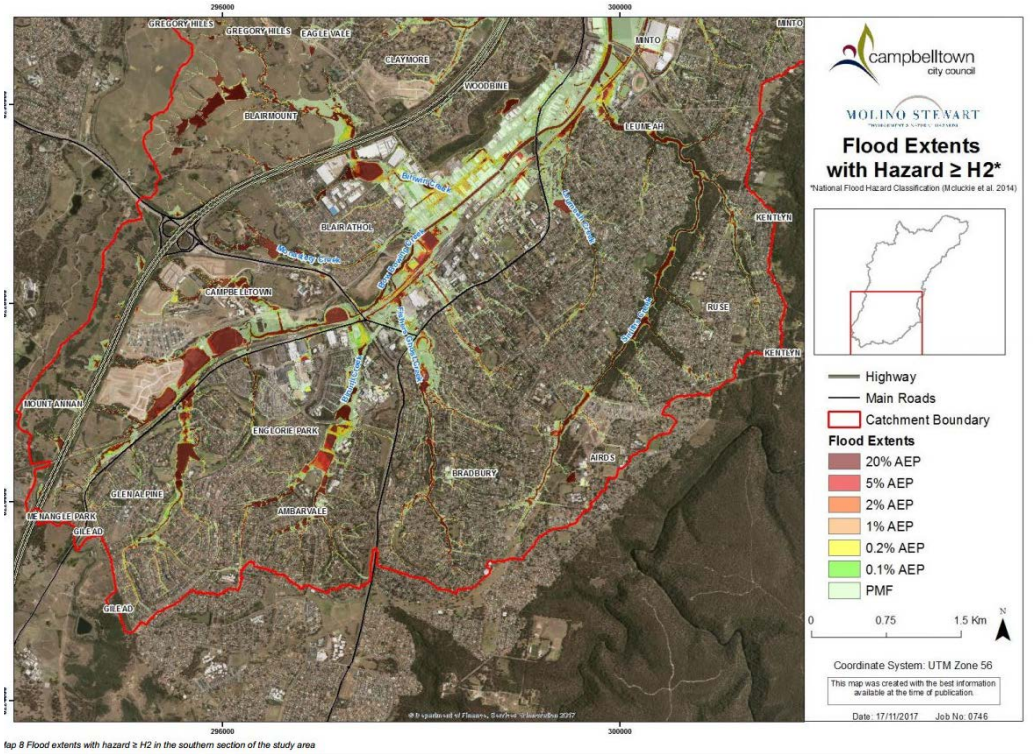
Sector Description	The 2021 resident population for Bradbury community is 9,433. 16.8% of people spoke a language other than English at home in 2021 with Arabic the most common other language. Bradbury is bounded by Bradbury Avenue, Hoddle Avenue, St Johns Rad and St Patricks College in the north, the linear parkland in the east, Woodland Road in the south, Appin Road in the west. This suburb has not been identified in the regional development strategy as a focus area and is not currently undergoing redevelopment which means no impact on the physical topography or the community.
Hazard	Fishers Ghost Creek starts in the southern parts of Bradbury and remains within its banks for most of its length up to the culvert under The Parkway, where the Gordon Fetterplace Aquatic Centre is partly affected from the 20% AEP, while some of the properties in Olympic Ct show minor flooding in the PMF only. Further downstream, more flooding is observed where the Creek passes under Hurley St and the railway line, with Hurley St cut in frequent events (i.e. from the 20% AEP). In Bradbury, water runs off The Parkway across St Johns Rd and down Campbellfield Ave to the corner of Poplar Cr. From there it cuts across numerous properties between Campbellfield Ave and Greenoaks Ave, continuing down Greenoaks Ave, then through residential properties towards Fishers Ghost Creek. Here, minor property flooding is observed from the 20% AEP.

<table>
<tr><td></td><td colspan="5">There is another overland flow path in Bradbury which starts in Alliot St and runs northwest along the rear of properties along Guise Rd with another flow route running along Guise Rd. These converge at Karri Pl then the water flows along Bloodwood Pl as well as along the rear of houses in Bloodwood Pl and into Ash Pl before joining Fishers Ghost Creek. It causes flooding from the 20% AEP event to some properties in Bloodwood Pl, Karri Pl and Ash Pl.</td></tr>
<tr><td>Triggers</td><td colspan="5">The following triggers will activate a response from Campbelltown SES Unit and consideration of activation of the LEMC:
BoM releasing a flood or severe storm warning for the Campbelltown LGA
Requests for Assistance indicating a flood event.
When directed by Metro Zone or the REOCON or SEOCON</td></tr>
<tr><td>Flood Affect Classification</td><td colspan="5">Emergency response classifications are used to describe evacuation constraints of communities (or parts of communities known as sectors). Low Flood Islands and Low trapped Perimeter Areas have the highest flood risks.
There are a number of High Flood Islands and Low Flood Islands identified in this suburb however due to the flash flood nature of flooding that relate to all defined flood events up to a PMF with floods hitting its peak within 6hrs and receding within the following 6-12 hrs the duration is short.
Community engagement and continual monitoring of isolation and flood threat in case of PMF is required.</td></tr>
<tr><td>At risk properties</td><td></td><td colspan="3">Total number of properties within Sector/Community</td><td></td></tr>
<tr><td>At risk Facilities</td><td colspan="5">The following schools are at risk of flooding and / or Isolation:
Bradbury Public School, PMF AFF 0.7m
Gordon Fetterplace Aquatic Centre 20% AEP 1.4m
Mighty Brains CCC PMF AFF0.1m</td></tr>
<tr><td>Sector Control</td><td colspan="5"></td></tr>
<tr><td>Key Warning Gauge Name</td><td>Name</td><td>AWRC No.</td><td>Min (m)</td><td>Mod (m)</td><td>Maj (m)</td></tr>
<tr><td></td><td>Campbelltown Art Centre Water Sensor</td><td></td><td>-</td><td>-</td><td>-</td></tr>
<tr><td>Additional Notes</td><td colspan="5">Fishers Ghost Creek (in Bradbury, downstream of Greenoaks Ave - this gauge has been removed with the construction of the Billabong in Bradbury Oval and has been replaced with a water sensor and camera at the Art Centre. It provides warning to flash flooding events in Koshigaya Park and Hurley St.</td></tr>
<tr><td>General Strategy</td><td colspan="5">Monitor
Promote Property Protection
Community Engagement
Potential for isolation but only for short duration 24hrs so potential resupply / rescue may be required if secondary emergencies occur during this short isolation period.</td></tr>
<tr><td>Key Risks / Consequences</td><td colspan="5"></td></tr>
<tr><td>Information and Warnings</td><td colspan="5">The trigger would be a Severe Weather Warnings issued by BOM. Release messages around Property Protection Measures / if time available set up Sandbag point for those local properties potentially impacted - flash flooding across low lying areas.</td></tr>
</table>

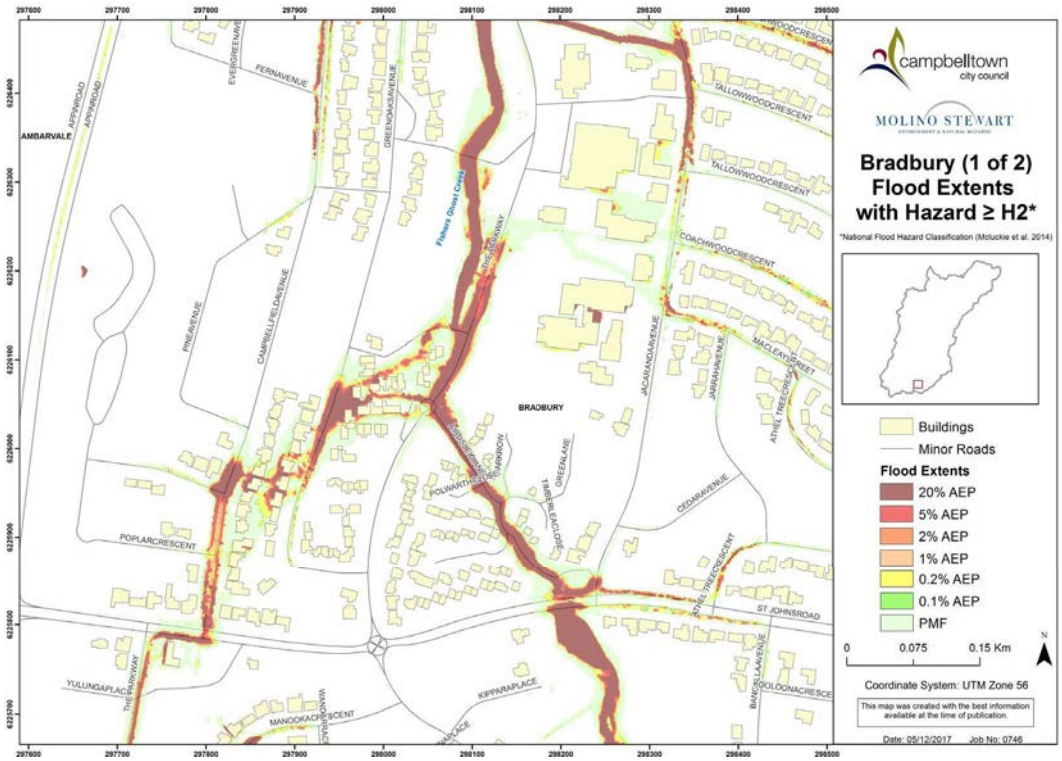
	N/A for Evac Sequencing however isolation for short duration will be required. Early Community Education on the threat coupled with social media advice. Ask Council to consider the Flash flood Warning System as a mitigation measure as SES cannot warn to this community.
Property Protection	***Property protection measures:*** The property protection measures for the threat of flash flooding could be move valuable household goods to protect from flow path for AFF preventing water damage, sandbag around doors and gaps to prevent water getting into at risk homes. Established a known point for sandbagging and advertise on Social Media Facebook Pages as a property protection measure.
	Assistance with property protection: Specific assistance with property protection by way of sandbagging and lifting or transporting of furniture, personal effects etc may be available – consider
	Protection of essential infrastructure:
	Levee consideration:
Evacuation and/or Isolation Triggers	
Evacuation Triggers	Not feasible due to nature of flooding being flash flooding.
Sequencing of evacuation	Not feasible due to nature of flooding being flash flooding.
Evacuation Routes	Moore Oxley Bypass
Evacuation Route Closure	Not feasible due to nature of flooding being flash flooding.
Method of Evacuation	Not feasible due to nature of flooding being flash flooding.
Evacuation Centre / Assembly Point	Campbelltown Civic Hall Queen St Campbelltown
Large scale evacuations	Refer to the Georges and Woronora River Valley Subplan and Hawkesbury Nepean State Flood Plan for further information as flowing is likely to be occurring across the Georges and Woronora River and Hawkesbury Nepean Rivers concurrently.
Rescue	There are no known flood rescue hotspots within the area however there are trap point locations that are identified in the map below.
Resupply	N/A
Aircraft Management	***Helicopter Landing Points:***
	Airport
Other	Refer to the Georges and Woronora River Valley Subplan and State Flood Plan for further information as flowing is likely to be occurring across the Georges and Woronora River.

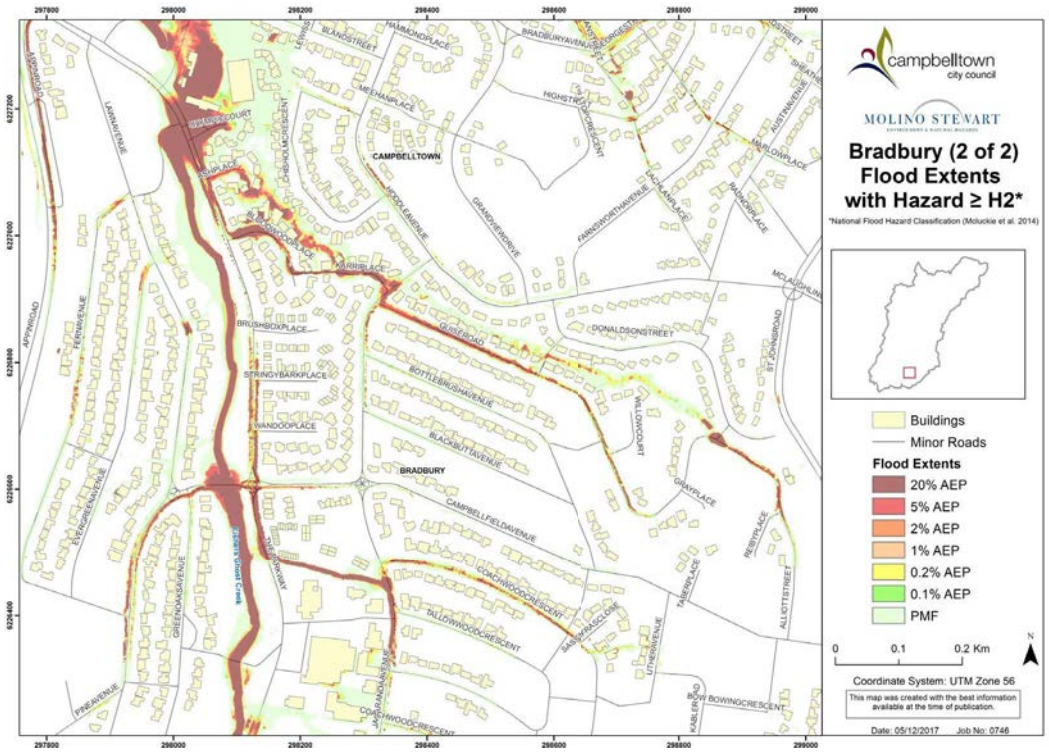
7.2. BRADBURY SECTOR/COMMUNITY FLOOD EXTENTS WITH HAZARD >H2 MAPS

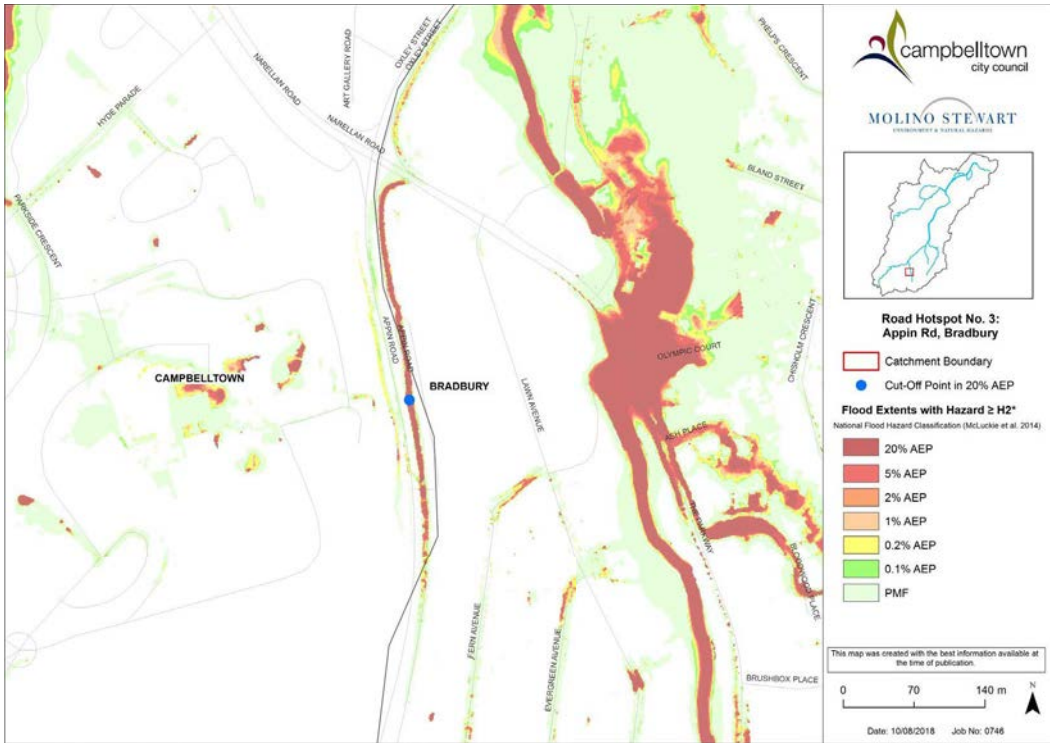
Intro re the map and its purpose and elaborate on what trap points are and why it is necessary to identify here:



Map 8 Flood extents with hazard ≥ H2 in the southern section of the study area

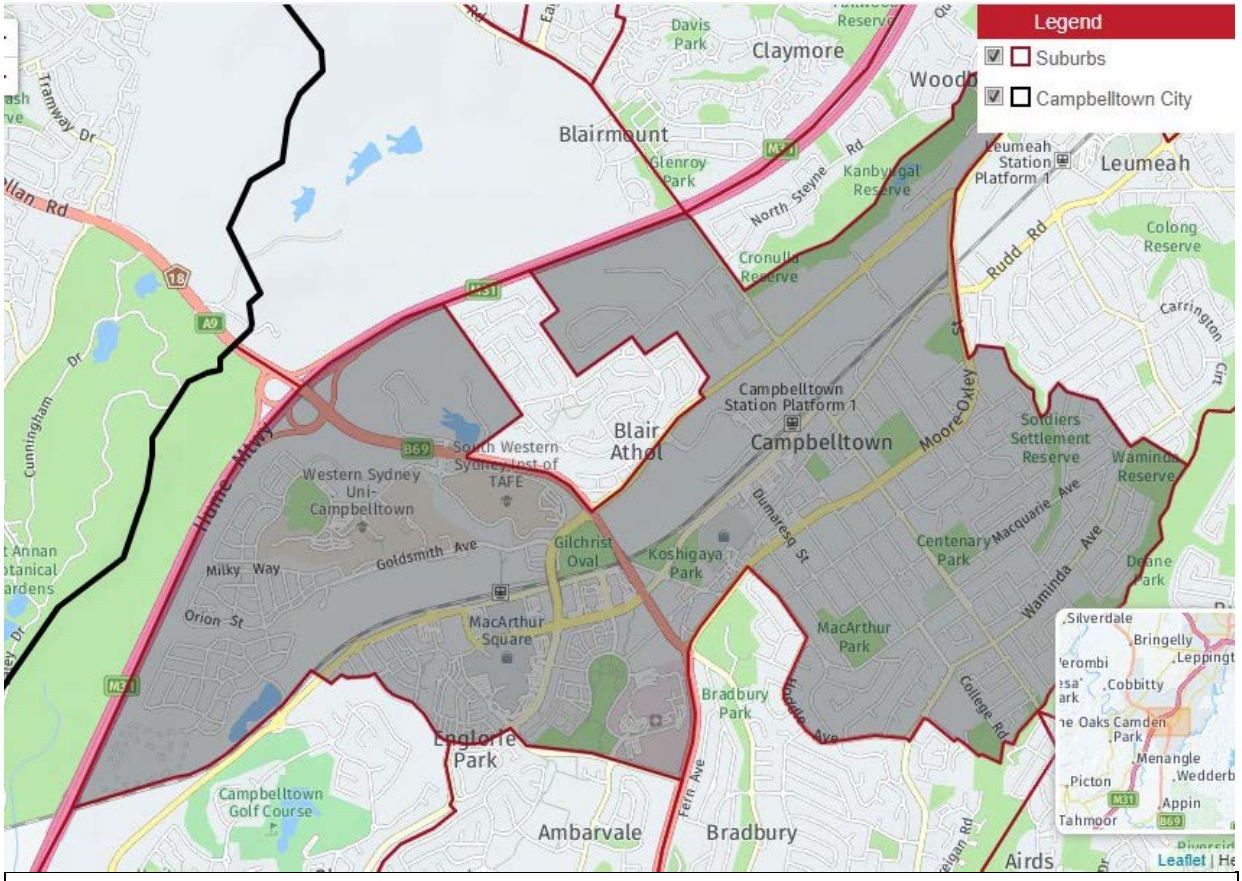



campbelltown city council
MOLINO STEWART
Bradbury (2 of 2) Flood Extents with Hazard ≥ H2*
*National Flood Hazard Classification (Mcluckie et al. 2014)
Buildings
Minor Roads
Flood Extents
20% AEP
5% AEP
2% AEP
1% AEP
0.2% AEP
0.1% AEP
PMF
0 0.1 0.2 Km
N
Coordinate System: UTM Zone 56
This map was created with the best information available at the time of publication.
Date: 05/12/2017 Job No: 0746
CAMPBELLTOWN
BRADBURY


campbelltown city council
MOLINO STEWART
Road Hotspot No. 3: Appin Rd, Bradbury
Catchment Boundary
Cut-Off Point in 20% AEP
Flood Extents with Hazard ≥ H2*
National Flood Hazard Classification (McLuckie et al. 2014)
20% AEP
5% AEP
2% AEP
1% AEP
0.2% AEP
0.1% AEP
PMF
This map was created with the best information available at the time of publication.
0 70 140 m
N
Date: 10/08/2018 Job No: 0746
CAMPBELLTOWN
BRADBURY

Map 36 Residential Hotspot 5: Bloodwood Place, Bradbury

8. CAMPBELLTOWN SECTOR / COMMUNITY



8.1. CAMPBELLTOWN RESPONSE ARRANGEMENTS

Refer to Volume 2: Hazard and Risk in Campbelltown LGA for more information about this Sector/Community.

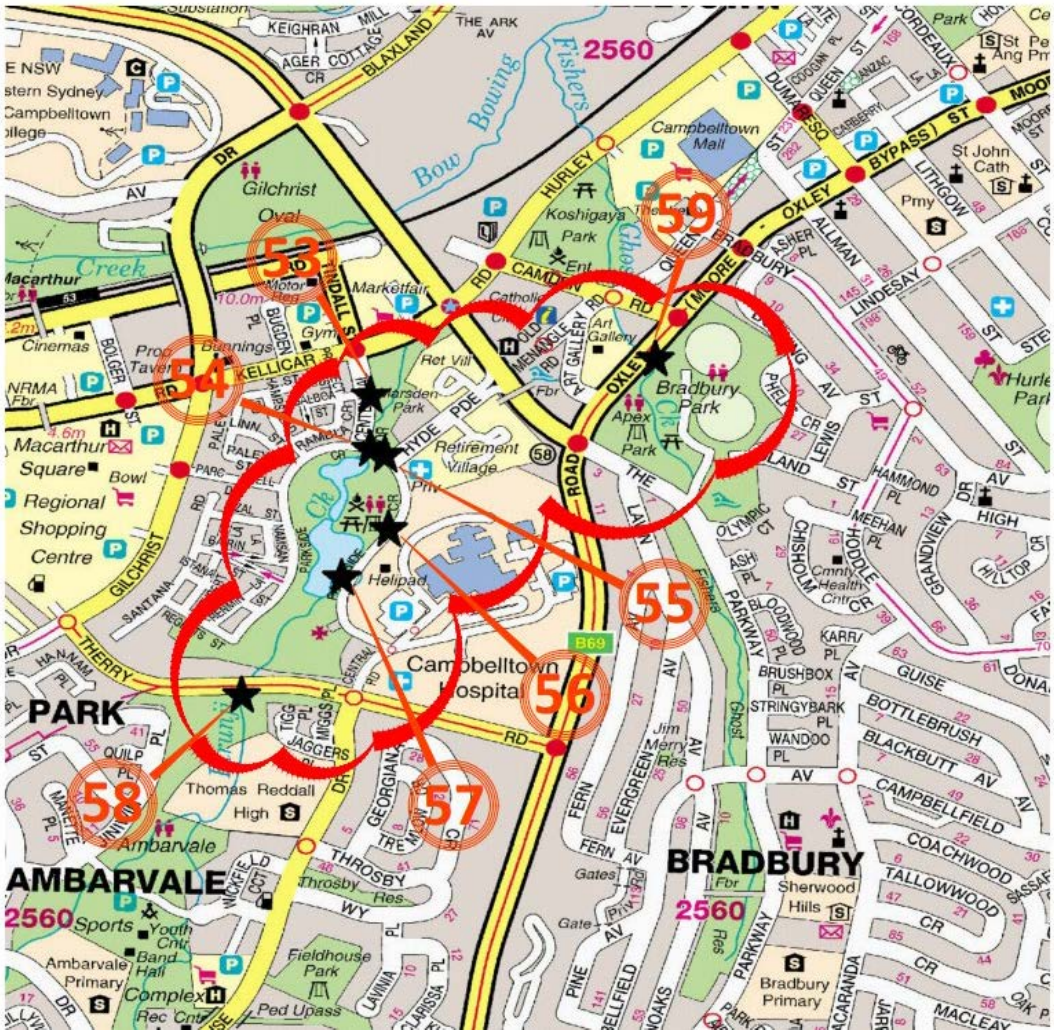
Sector Description	The 2021 resident population for Campbelltown community is 16,577. In Campbelltown, 23.9% of people spoke a language other than English at home in 2021. 69% speak English only. Campbelltown is bounded by the Hume Highway, Badgally Road, Kanbyugal Reserve, Campbelltown Road, Leumeah Creek and Burns Road in the north, Smiths Creek in the east, St Patricks College, St Johns Road, Hoddle Avenue, Bradbury Avenue, Appin Road, Therry Road, Gilchrist Drive and the southern railway in the south, and the Hume Highway, Maryfields Drive, Narellan Road, Blaxland Road, John Kidd Drive, Sophia Place, The Kraal Drive, Maryfields Drive and the suburb of Blair Athol in the west. Campbelltown has been identified as a growth area.
Hazard	Birunji creek causes some minor flooding along Centennial Drive, however the neighbouring properties are only affected in the PMF. Further flooding is seen just upstream of the junction with Bow Bowing Creek, where it affects Kellicar Road (from the 0.2% AEP Event), Tindall St (from the 20% AEP event), and the car parking areas surrounding the adjacent industrial properties (from the 0.2% AEP event). Dumaresq St in both directions at Hurley St in a 20% AEP. Oxley Street, Campbelltown, cut south bound, south of Dumaresq Street. Fishers Ghost Creek passes under Hurley Street and the railway line, with Hurley St cut in frequent events (i.e. 20% AEP). Hurley Street is also impacted West bound towards

	Narellan Road, east bound towards Dumaresq Street and Broughton Street in a 20% AEP. Tindall Street Campbelltown, cut north and south bound, near the crossroad with Menangle Road.
Triggers	The following triggers will activate a response from Campbelltown SES Unit and consideration of activation of the LEMC: • BoM releasing a flood or severe storm warning for the Campbelltown LGA • Requests for Assistance indicating a flood event. • When directed by Metro Zone or the REOCON or SEOCON
Flood Affect Classification	There are a number of FERC for this sector however due to the flash flood environment under all flood events up to a PMF all floods hit its peak within 6 hrs and receding within the following 6-12 hrs the duration is short. Flood risk locations need to be determined from the maps showing the FERC – • Between Rudd Rd, Hughes St & Moore St • Queen St North of Rudd Rd • Blaxland and Badgally Roads (commercial & industrial hot spot 2) Biriwiri Creek surcharges into Blaxland Road which overflows into surrounding commercial properties. • Farrow Road & Dumaresq St (commercial & Industrial hot spot 3) overland flow path running north along Dumaresq. • Queen St and Langdon Streets • Industrial area from West Badgally Road through to Plough Inn Rd • Corner of Queen St and Chamberlain St • Campbelltown Catholic Club Carpark
At risk properties	**Total number of properties within Sector/Community**
At risk Facilities	**The following Preschool / Childcare Facilities at risk of flooding and / or Isolation:** • Broughton St Early Learning Centre, 70 Broughton St, PMF AFF 0.3m • Namut Early Learning Centre, 5 Hurley St, PMF AFF 0.2m • WSU Childcare Goldsmith Ave PMF AFF 0.1m **The following Primary / High School Facilities at risk of flooding and / or Isolation:** • Beverley Park School, Beverley Rd, PMF AFF 0.2m • Campbelltown East Public School, Waminda Ave, Ph: 02 4626 2022 • Campbelltown Performing Arts High School, Beverley Rd, PMF AFF 0.4m • Lomandra School, Beverley St, PMF AFF 0.5m • St Peters Anglican, Howe St, 0.1m AFF • St Thomas Moore, 6 St Johns Rd, PMF AFF 0.2m **The following Critical Facilities are at risk of flooding and / or Isolation:** • Campbelltown Private Hospital PMF AFFF 0.1m • Campbelltown Police station PMF AFF 0.3m • Campbelltown Fire Station PMF AFF0.1m **The following TAFE is at risk of flooding and / or Isolation:** • Campbelltown TAFE, Narellan Rd, Ph: 02 4628 4303 **The following Animal Care Facility is at risk of flooding and / or Isolation:** • Campbelltown Animal Care Facility, 2 Rose St, Ph: 02 4645 4790 **The following Hospital / Ambulance Station is at risk of flooding and / or Isolation** • Campbelltown Hospital, Therry Rd, 20% AEP

<table>
<tr><td></td><td colspan="5">• Campbelltown Ambulance Station, 100 Parkside Cres, PMF</td></tr>
<tr><td>Sector Control</td><td colspan="5"></td></tr>
<tr><td rowspan="2">Key Warning Gauge Name</td><td>Name</td><td>AWRC No.</td><td>Min (m)</td><td>Mod (m)</td><td>Maj (m)</td></tr>
<tr><td>Goldsmith Ave and Gilchrist Dr Water Sensor
Kellicar and Centennial Dr Water Sensor
Badgally Rd Water Sensor</td><td></td><td>-</td><td>-</td><td>-</td></tr>
<tr><td>Additional Notes</td><td colspan="5"></td></tr>
<tr><td>General Strategy</td><td colspan="5">Monitor
Promote Property Protection
Community Engagement
Potential for isolation but only for short duration 24hrs so potential resupply / rescue may be required if secondary emergencies occur during this short isolation period.</td></tr>
<tr><td>Key Risks / Consequences</td><td colspan="5">Flash flood Point Hurley St and Campbelltown mall roundabout.
Critical Facilities within area of high risk:
• Rose St Animal Care Facility
• Campbelltown Hospital
• Campbelltown Ambulance Station (PMF)</td></tr>
<tr><td rowspan="2">Information and Warnings</td><td colspan="5">The trigger would be a Severe Weather Warnings issued by BOM. Release messages around Property Protection Measures / if time available set up Sandbag point for those local properties potentially impacted - flash flooding across low lying areas.</td></tr>
<tr><td colspan="5">N/A for Evac Sequencing however isolation for short duration will be required.
Early Community Education on the threat coupled with social media advice.
Ask Council to consider the Flash flood Warning System as a mitigation measure as SES cannot warn to this community.</td></tr>
<tr><td rowspan="4">Property Protection</td><td colspan="5">Property protection measures:
The property protection measures for the threat of flash flooding could be move valuable household goods to protect from flow path for AFF preventing water damage, sandbag around doors and gaps to prevent water getting into at risk homes.
Established a known point for sandbagging and advertise on Social Media Facebook Pages as a property protection measure.</td></tr>
<tr><td colspan="5">Assistance with property protection:
Specific assistance with property protection by way of sandbagging and lifting or transporting of furniture, personal effects etc may be available – consider</td></tr>
<tr><td colspan="5">Protection of essential infrastructure:</td></tr>
<tr><td colspan="5">Levee consideration:</td></tr>
<tr><td>Evacuation and/or Isolation Triggers</td><td colspan="5">Closure of evacuation roads occur at frequent flood events 20% AEP. Flooding is quick to rise reaching peak within 6hrs and receding quickly resulting no time being available to evacuate effectively.</td></tr>
<tr><td>Evacuation Triggers</td><td colspan="5">Not feasible due to nature of flooding being flash flooding.</td></tr>
<tr><td>Sequencing of evacuation</td><td colspan="5">Not feasible due to nature of flooding being flash flooding.</td></tr>
</table>

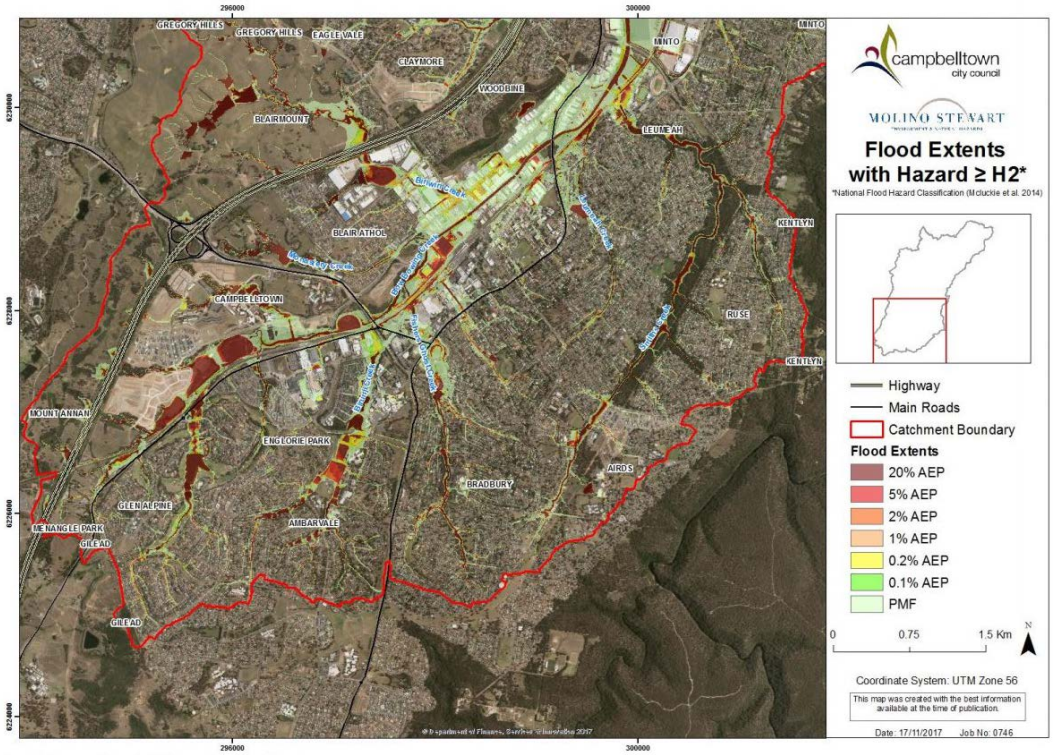
Evacuation Routes	
Evacuation Route Closure	Not feasible due to nature of flooding being flash flooding.
Method of Evacuation	Not feasible due to nature of flooding being flash flooding.
Evacuation Centre / Assembly Point	Campbelltown Civic Hall Queen St Campbelltown
Large scale evacuations	Refer to the Georges and Woronora River Valley Subplan and State Flood Plan for further information as flowing is likely to be occurring across the Georges and Woronora River.
Rescue	There are no known flood rescue hotspots within the area however there are trap point locations that are identified in the map below.
Resupply	N/A
Aircraft Management	***Helicopter Landing Points:***
	Airports:
Other	Refer to the Georges and Woronora River Valley Subplan State Flood Plan for further information as flowing is likely to be occurring across the Georges and Woronora River.

8.2. CAMPBELLTOWN SECTOR/COMMUNITY TRAP POINTS MAP

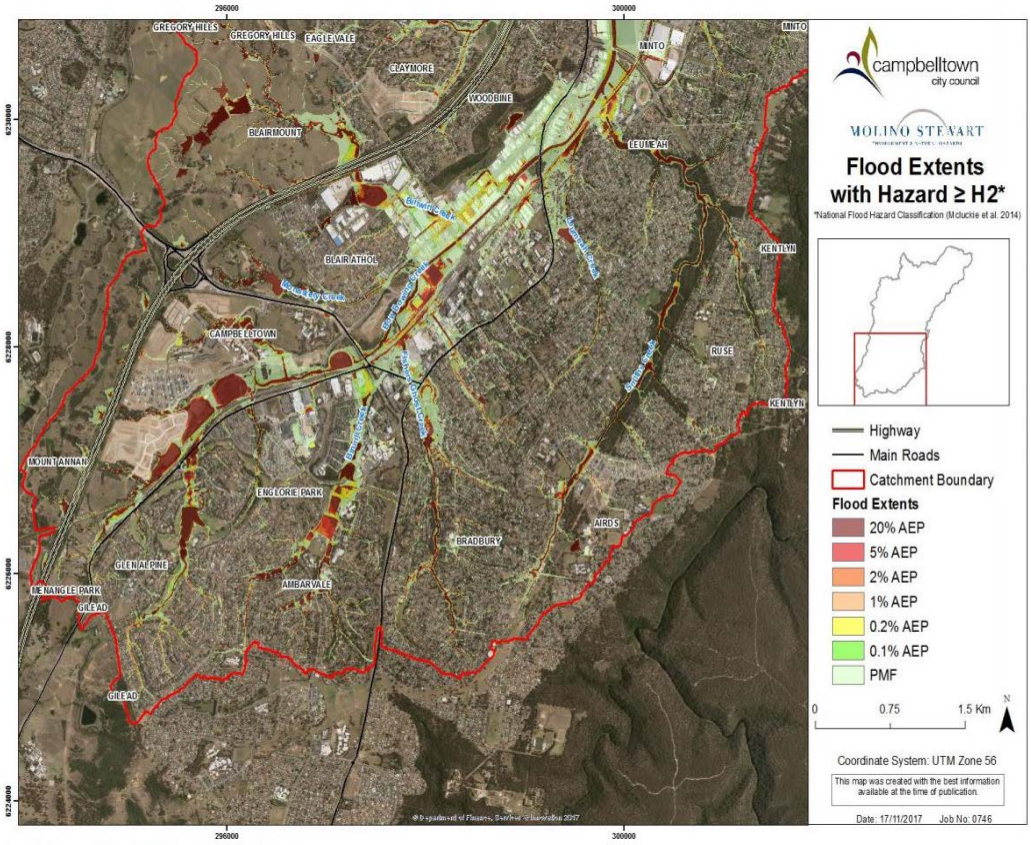


WQD No.	Asset_Type	Asset_Description
53	CDS Unit	26. Park Central CDS Unit Centennial Dr RHS towards Kellicar Rd
54	CDS Unit	26. Park Central CDS Unit (West) Parkside Cres between Centennial Dr & Hyde Pde
55	CDS Unit	26. Park Central CDS Unit (East) Parkside Cres between Centennial Dr & Hyde Pde
56	CDS Unit	26. Park Central CDS Unit Parkside Cres near play equipment
57	CDS Unit	26. Park Central CDS Unit south of play equipment along Parkside Cres
58	Steel Trash Rack	Ambarvale Cascade - between Jaggers Pl and Therry Rd - Ambarvale
59	Dual Steel Trash Rack	Bradbury Oval upstream Moore Oxley Road Campbellktown Fishers Ghost Creek Dual Steel Trash Rack

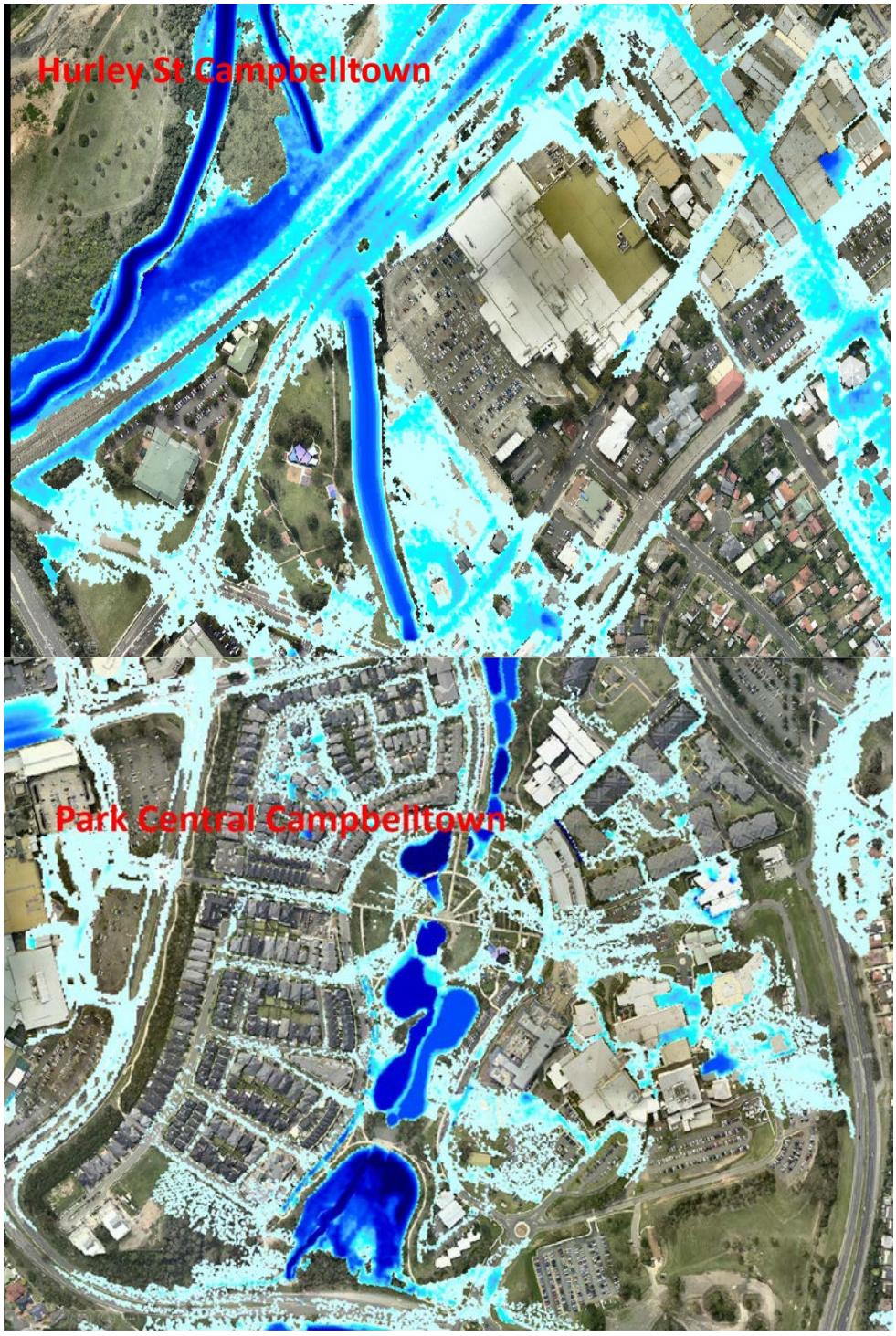
Maps

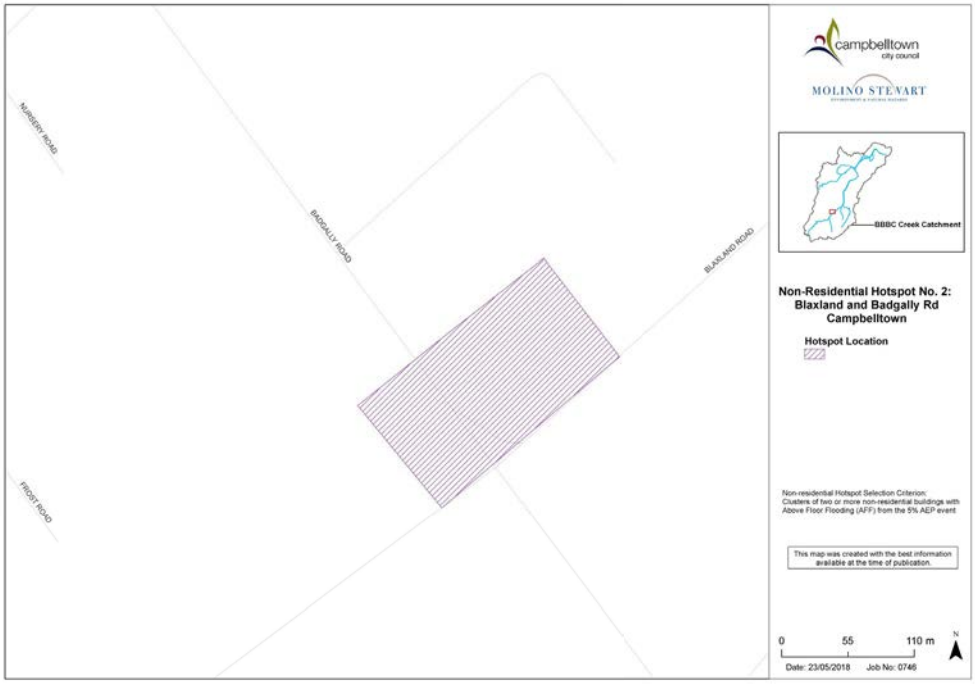


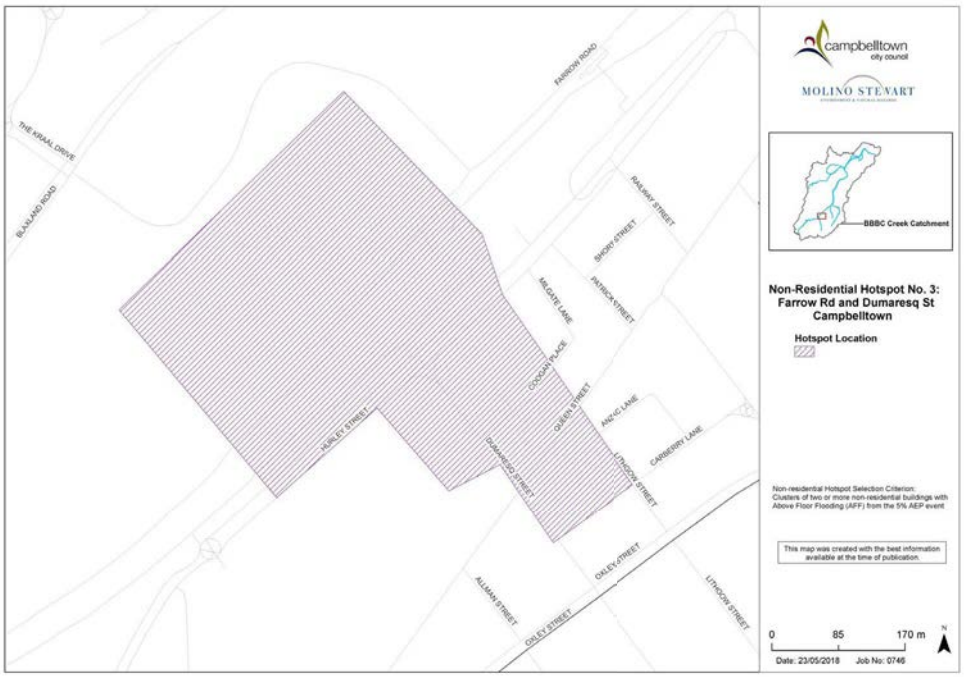
Map 8 Flood extents with hazard ≥ H2 in the southern section of the study area

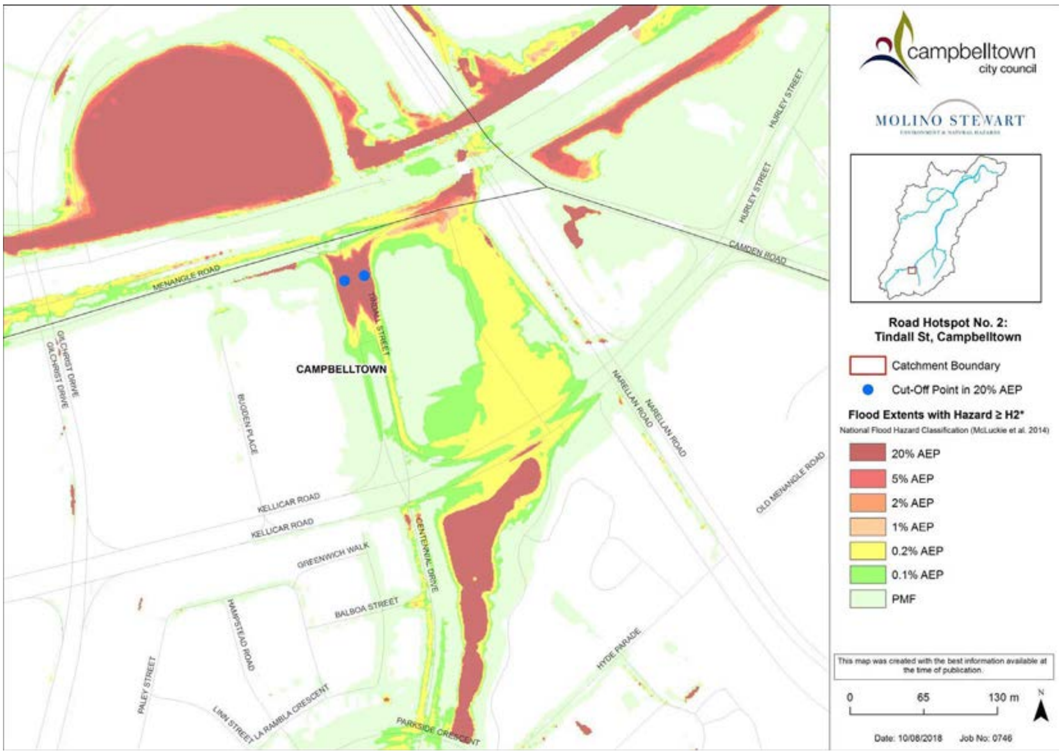


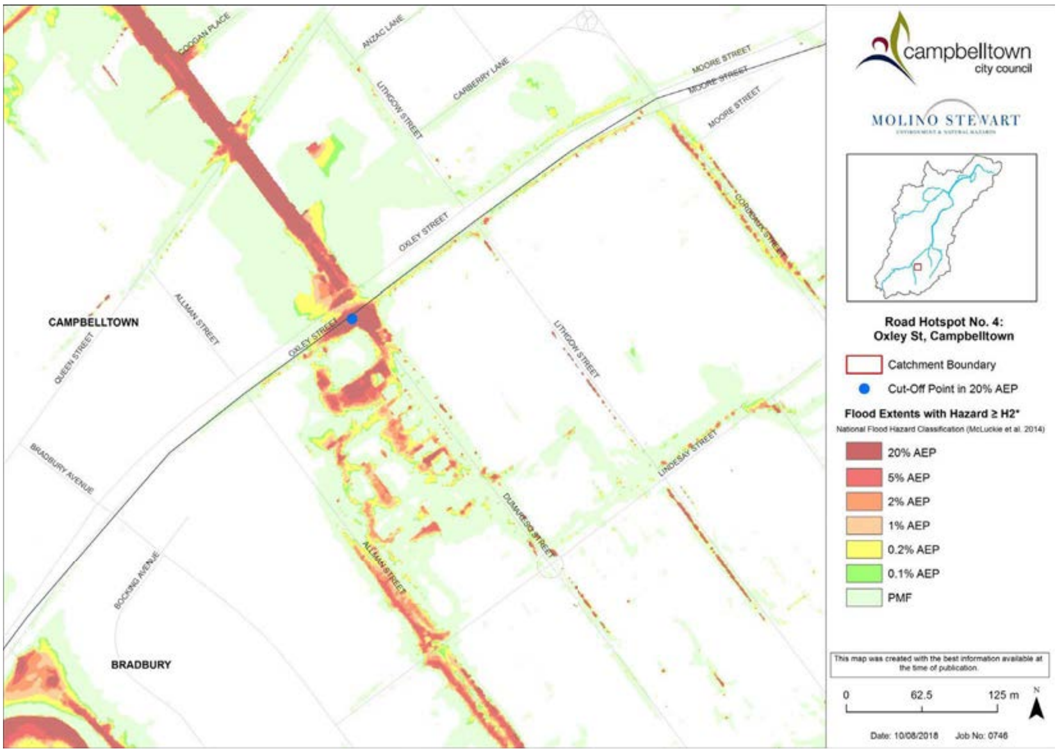
Map 8 Flood extents with hazard ≥ H2 in the southern section of the study area


Hurley St Campbelltown
Park Central Campbelltown

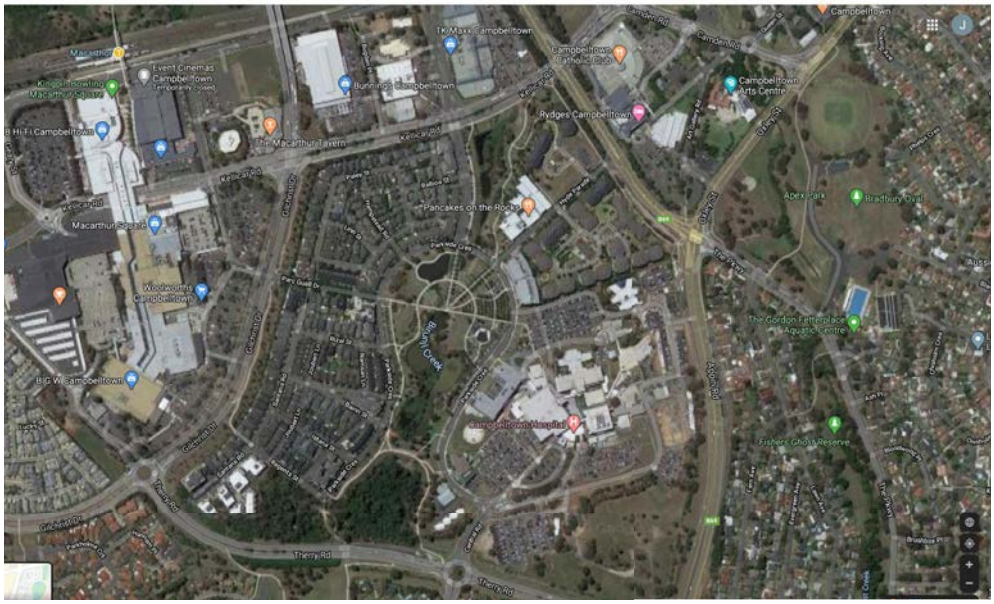

NURSERY ROAD
BADGALLY ROAD
BLAXLAND ROAD
FROST ROAD
campbelltown city council
MOLINO STEWART
BBBC Creek Catchment
Non-Residential Hotspot No. 2: Blaxland and Badgally Rd Campbelltown
Hotspot Location
Non-residential Hotspot Selection Criterion: Clusters of two or more non-residential buildings with Above Floor Flooding (AFF) from the 5% AEP event
This map was created with the best information available at the time of publication.
0 55 110 m
N
Date: 23/05/2018 Job No: 0746


FARROW ROAD
THE KRAAL DRIVE
BLAXLAND ROAD
RAILWAY STREET
SHOPP STREET
PATRICK STREET
MILGATE LANE
DOOGAN PLACE
QUAIN STREET
ANNIC LANE
CANBERRY LANE
HUXLEY STREET
DUMARESQ STREET
LITHGOW STREET
OXLEY STREET
ALLMAN STREET
campbelltown city council
MOLINO STEWART
BBBC Creek Catchment
Non-Residential Hotspot No. 3: Farrow Rd and Dumaresq St Campbelltown
Hotspot Location
Non-residential Hotspot Selection Criterion: Clusters of two or more non-residential buildings with Above Floor Flooding (AFF) from the 5% AEP event
This map was created with the best information available at the time of publication.
0 85 170 m
N
Date: 23/05/2018 Job No: 0746

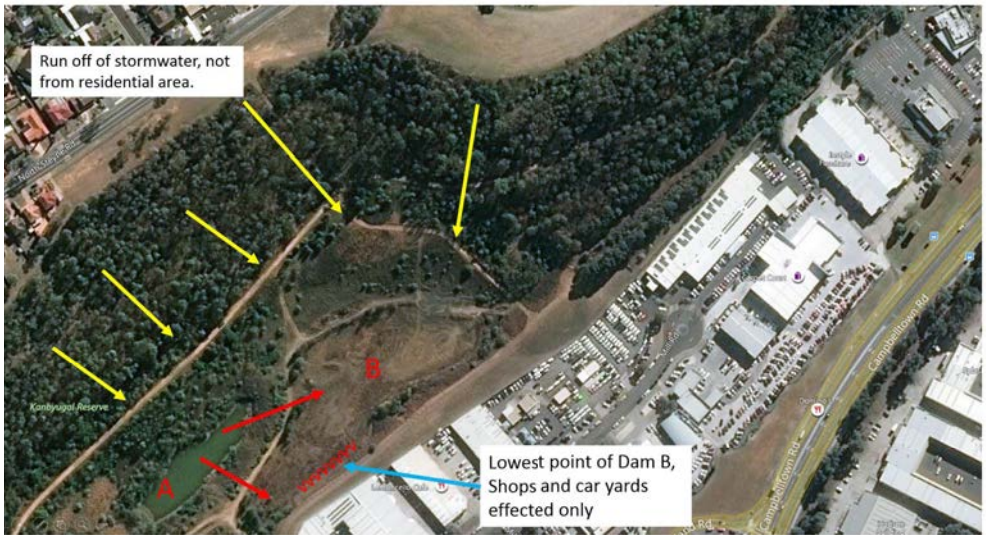

campbelltown city council
MOLINO STEWART
Road Hotspot No. 2: Tindall St, Campbelltown
Catchment Boundary
Cut-Off Point in 20% AEP
Flood Extents with Hazard ≥ H2*
National Flood Hazard Classification (McLuckie et al. 2014)
20% AEP
5% AEP
2% AEP
1% AEP
0.2% AEP
0.1% AEP
PMF
This map was created with the best information available at the time of publication.
0
65
130 m
Date: 10/08/2018 Job No: 0746
CAMPBELLTOWN
MENANGLE ROAD
TINDALL STREET
KELLICAR ROAD
CENTENNIAL DRIVE
NARELLAN ROAD
CAMDEN ROAD
PARKSIDE CRESCENT


campbelltown city council
MOLINO STEWART
Road Hotspot No. 4: Oxley St, Campbelltown
Catchment Boundary
Cut-Off Point in 20% AEP
Flood Extents with Hazard ≥ H2*
National Flood Hazard Classification (McLuckie et al. 2014)
20% AEP
5% AEP
2% AEP
1% AEP
0.2% AEP
0.1% AEP
PMF
This map was created with the best information available at the time of publication.
0
62.5
125 m
Date: 10/08/2018 Job No: 0746
CAMPBELLTOWN
BRADBURY
OXLEY STREET
MOORE STREET
LITHGOW STREET
ALLMAN STREET

Park Central Dam

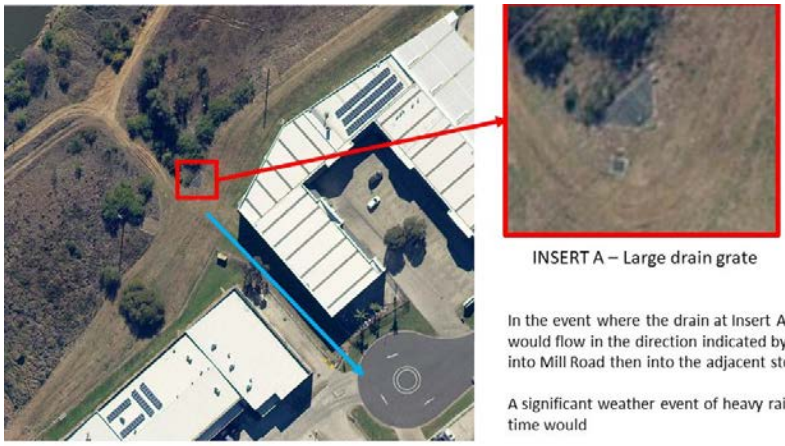


KANBYUGAL RESERVE DAMS



INSERT A – Large drain grate

If Dam A were to collapse water would flow into Retention Basin at "B".
Water in the retention base would flow towards a large drain grate shown at Insert A.
It is considered that during a storm event the drain at Insert B could become blocked.



INSERT A – Large drain grate

In the event where the drain at Insert A became blocked water would flow in the direction indicated by the blue arrow and flow into Mill Road then into the adjacent stormwater drains.

A significant weather event of heavy rain over a long period of time would

Water flow through the access

It is speculated that the drainage system in this area would flow to Bow Bowing Creek.

9. CLAYMORE SECTOR / COMMUNITY

9.1. CLAYMORE RESPONSE ARRANGEMENTS

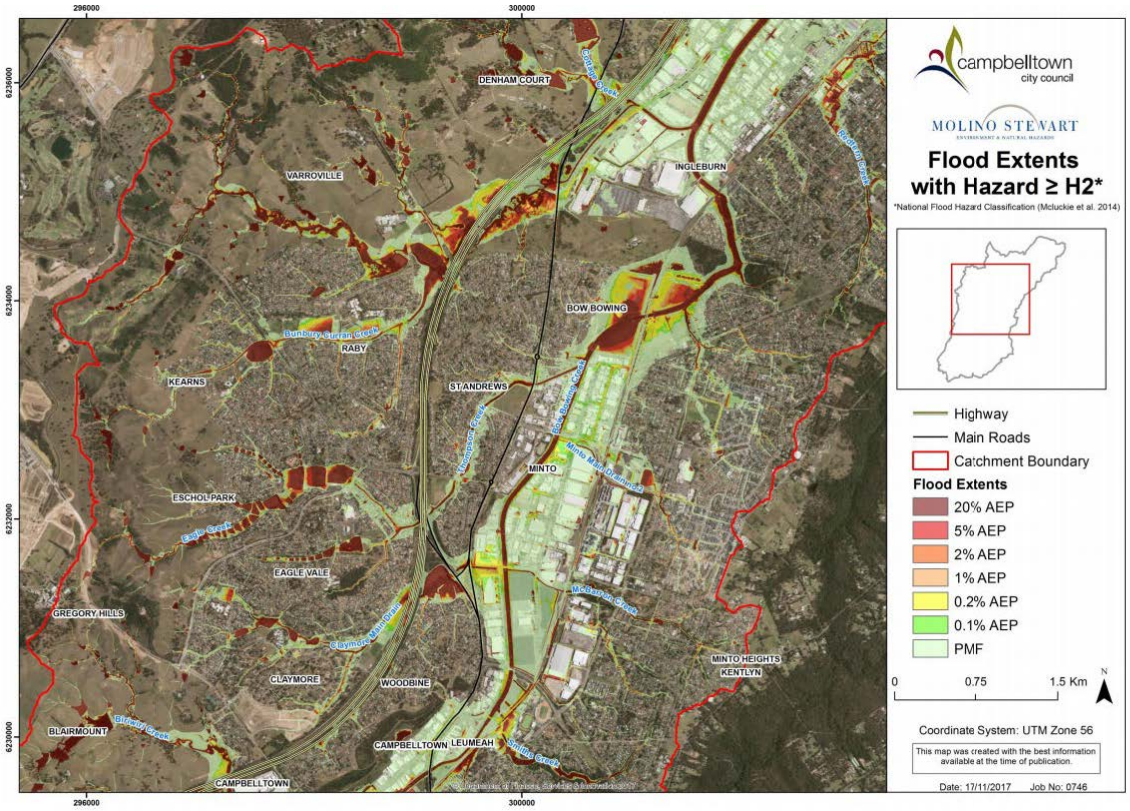
Refer to Volume 2: Hazard and Risk in Campbelltown LGA for more information about this Sector/Community.

Sector Description	The 2021 resident population for Claymore community is 2,579, with a population density of 1,906. In Claymore, 19.9% of people spoke a language other than English at home in 2021 with Samoan and Arabic being the two most common. Claymore is bounded by Brady Park, Boyd Street and Gould Road in the north, the Hume Highway in the east and south, and Badgally Road in the west. This suburb has not been identified in the regional development strategy as a focus area and is not currently undergoing redevelopment which means no impact on the physical topography or the community.
Hazard	Claymore Main Drain has its headwaters in rural land in Gregory Hills and flows in a general easterly direction between the suburbs of Claymore and Eagle Vale. A series of detention basins keep most of the flows in Claymore Main Drain (Map 9, Vol. 2 BCCC FRMS&P) within public open space. Where the drain flows under the motorway, water backs up in extreme events resulting in the floodwaters affecting some residential properties along Gould Road. Further downstream at the confluence with Bow Bowing Creek, more flooding of industrial properties can be observed, largely from events rarer than the 0.2% event. This flooding is caused by the drain not being able to discharge quickly enough into Bow Bowing Creek.

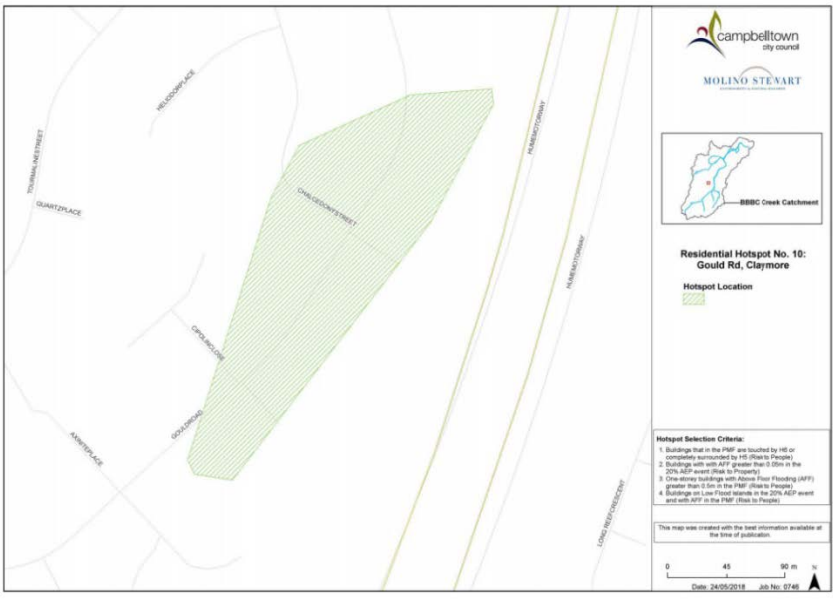
<table>
<tr><td></td><td colspan="5"></td></tr>
<tr><td>Triggers</td><td colspan="5">The following triggers will activate a response from Campbelltown SES Unit and consideration of activation of the LEMC:
BoM releasing a flood or severe storm warning for the Campbelltown LGA
Requests for Assistance indicating a flood event.
When directed by Metro Zone or the REOCON or SEOCON</td></tr>
<tr><td>Flood Affect Classification</td><td colspan="5">FERC - There are a number of High Flood Islands and Low Flood Islands identified in this suburb however due to the flash flood environment that relate to all defined flood events up to a PMF with floods hitting its peak within 6hrs and receding within the following 6-12 hrs the duration is short.
Community engagement and continual monitoring of isolation and flood threat in case of PMF is required.
Flood risk locations need to be determined from the maps showing the FERC – Gould Rd Claymore - Row of houses on the SE side of Gould Rd which back onto a creek before it passes under the Hume Motorway - overland flow path along Gould Rd which overflows between some of the houses into the creek. Water backs up from drain under motorway. (AEP 20%) - This location is presented in detail in Map 38, Vol 2.</td></tr>
<tr><td>At risk properties</td><td></td><td colspan="2">Total number of properties within Sector/Community</td><td colspan="2"></td></tr>
<tr><td>At risk Facilities</td><td colspan="5">The following Childcare / Preschool Facilities s risk of flooding and / or Isolation:
The following Primary School is at risk of flooding and / or isolation:
Claymore Primary School, 05% AEP AHH 0.3m:
Claymore Youth Centre PMF AFF 0.6m</td></tr>
<tr><td>Sector Control</td><td colspan="5"></td></tr>
<tr><td rowspan="2">Key Warning Gauge Name</td><td>Name</td><td>AWRC No.</td><td>Min (m)</td><td>Mod (m)</td><td>Maj (m)</td></tr>
<tr><td></td><td></td><td>-</td><td>-</td><td>-</td></tr>
<tr><td>Additional Notes</td><td colspan="5"></td></tr>
<tr><td>General Strategy</td><td colspan="5">Monitor
Promote Property Protection
Community Engagement
Potential for isolation but only for short duration 24hrs so potential resupply / rescue may be required if secondary emergencies occur during this short isolation period.</td></tr>
<tr><td>Key Risks / Consequences</td><td colspan="5"></td></tr>
<tr><td rowspan="2">Information and Warnings</td><td colspan="5">The trigger would be a Severe Weather Warnings issued by BOM. Release messages around Property Protection Measures / if time available set up Sandbag point for those local properties potentially impacted - flash flooding across low lying areas.</td></tr>
<tr><td colspan="5">N/A for Evac Sequencing however isolation for short duration will be required
Early Community Education on the threat coupled with social media advice
Ask Council to consider the Flash flood Warning System as a mitigation measure as SES cannot warn to this community.</td></tr>
<tr><td>Property Protection</td><td colspan="5">Property protection measures:</td></tr>
</table>

	The property protection measures for the threat of flash flooding could be move valuable household goods to protect from flow path for AFF preventing water damage, sandbag around doors and gaps to prevent water getting into at risk homes. Established a known point for sandbagging and advertise on Social Media Facebook Pages as a property protection measure.
	Assistance with property protection: Specific assistance with property protection by way of sandbagging and lifting or transporting of furniture, personal effects etc may be available – consider
	Protection of essential infrastructure:
	Levee consideration:
Evacuation and/or Isolation Triggers	Closure of evacuation roads occur at frequent flood events 20% AEP. Flooding is quick to rise reaching peak within 6hrs and receding quickly resulting no time being available to evacuate effectively.
Evacuation Triggers	Not feasible due to nature of flooding being flash flooding.
Sequencing of evacuation	Not feasible due to nature of flooding being flash flooding.
Evacuation Routes	
Evacuation Route Closure	Not feasible due to nature of flooding being flash flooding.
Method of Evacuation	Not feasible due to nature of flooding being flash flooding.
Evacuation Centre / Assembly Point	Campbelltown Civic Hall Queen St Campbelltown
Large scale evacuations	Refer to the Georges and Woronora River Valley Subplan and State Flood Plan for further information as flowing is likely to be occurring across the Georges and Woronora River.
Rescue	There are no known flood rescue hotspots within the area however there are trap point locations that are identified in the map below.
Resupply	N/A
Aircraft Management	***Helicopter Landing Points:***
	Airports:
Other	Refer to the Georges and Woronora River Valley Subplan and State Flood Plan for further information as flowing is likely to be occurring across the Georges and Woronora River.

9.2. CLAYMORE SECTOR/COMMUNITY FLOOD EXTENTS WITH HAZARD >H2 MAPS

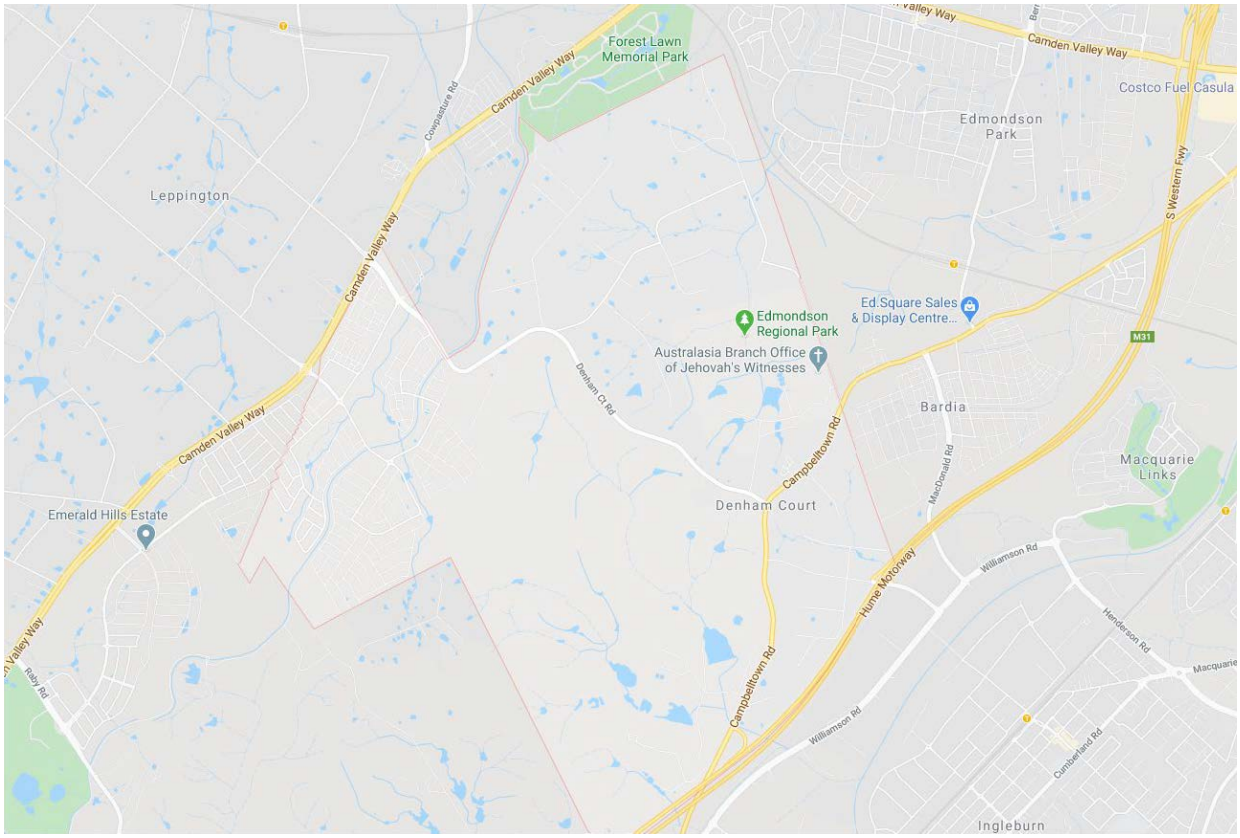


Map 9 Flood extents with hazard ≥ H2 in the centre of the study area



Map 38 Residential Hotspot 10: Gould Road, Claymore

10. DENHAM COURT SECTOR / COMMUNITY



10.1. DENHAM COURT RESPONSE ARRANGEMENTS

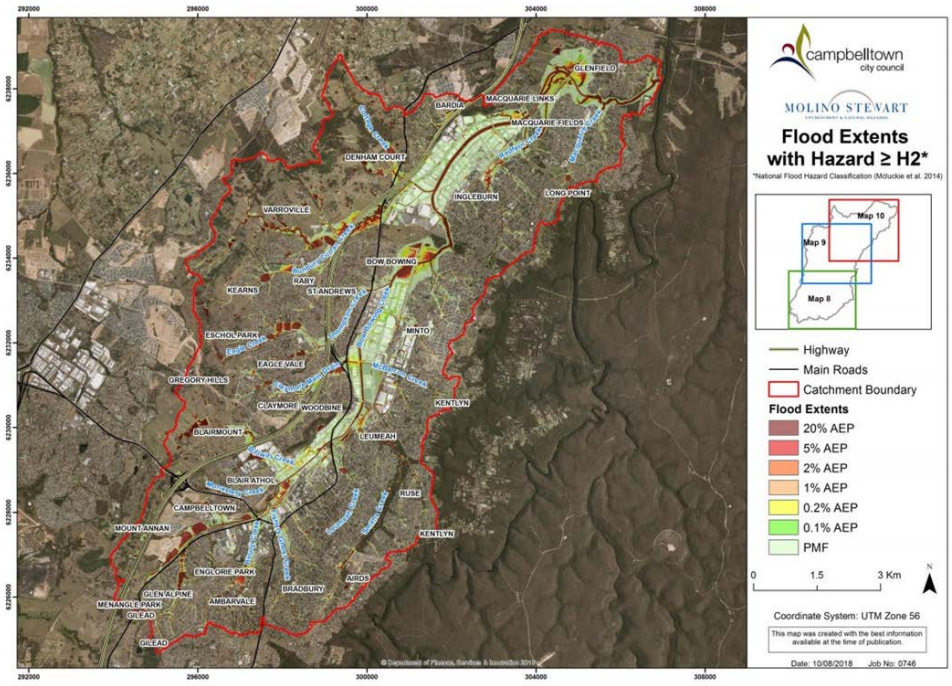
Refer to Volume 2: Hazard and Risk in Campbelltown LGA for more information about this Sector/Community.

Sector Description	Denham Court is bounded by Liverpool City, Denham Court Road and Campbelltown Road in the north, Zouch Road and the Hume Highway in the east, the suburbs of Raby and Kearns in the south, and the Camden Valley Way and the Camden Council area in the west. 2021 resident population is 9,129. The new housing estate of Willowvale is the largest concentration of people in the suburb.
Hazard	Denham Court at its western edge drain into the South Creek System that flows to the Nepean. Easterly the suburb is drained by Cottage creek which joins into the Bow Bowing Creek system Flood Risk location is Campbelltown Road south of Mc Cormack Place
Triggers	The following triggers will activate a response from Campbelltown SES Unit and consideration of activation of the LEMC: • BoM releasing a flood or severe storm warning for the Campbelltown LGA • Requests for Assistance indicating a flood event. • When directed by Metro Zone or the REOCON or SEOCON
Flood Affect Classification	No FERC for this sector to identify and plan emergency response mechanisms however there are known hot spot –Flood Risk location which is Campbelltown Road south of Mc Cormack Place No known Flood Rescue Hotspots within this sector.

<table>
<tr><td>At risk properties</td><td></td><td>Total number of properties within Sector/Community</td><td></td></tr>
<tr><td>At risk Facilities</td><td colspan="3">The following Facilities for the aged and / or informed:.</td></tr>
<tr><td>Sector Control</td><td colspan="3"></td></tr>
<tr><td>Key Warning Gauge Name</td><td colspan="3"><table>
<tr><th>Name</th><th>AWRC No.</th><th>Min (m)</th><th>Mod (m)</th><th>Maj (m)</th></tr>
<tr><td></td><td></td><td>-</td><td>-</td><td>-</td></tr>
</table></td></tr>
<tr><td>Additional Notes</td><td colspan="3"></td></tr>
<tr><td>General Strategy</td><td colspan="3">Monitor
Promote Property Protection
Community Engagement
Potential for isolation but only for short duration 24hrs so potential resupply / rescue may be required if secondary emergencies occur during this short isolation period.</td></tr>
<tr><td>Key Risks / Consequences</td><td colspan="3">Flood Risk location which is Campbelltown Road south of Mc Cormack Place No known Flood Rescue Hotspots within this sector.</td></tr>
<tr><td rowspan="2">Information and Warnings</td><td colspan="3">The trigger would be a Severe Weather Warnings issued by BOM.
Release messages around Property Protection Measures / if time available set up Sandbag point for those local properties potentially impacted - flash flooding across low lying areas.</td></tr>
<tr><td colspan="3">N/A for Evac Sequencing however isolation for short duration will be required.
Early Community Education on the threat coupled with social media advice.
Ask Council to consider the Flash flood Warning System as a mitigation measure as SES cannot warn to this community.</td></tr>
<tr><td rowspan="4">Property Protection</td><td colspan="3">Property protection measures:
The property protection measures for the threat of flash flooding could be move valuable household goods to protect from flow path for AFF preventing water damage, sandbag around doors and gaps to prevent water getting into at risk homes.
Established a known point for sandbagging and advertise on Social Media Facebook Pages as a property protection measure.</td></tr>
<tr><td colspan="3">Assistance with property protection:
Specific assistance with property protection by way of sandbagging and lifting or transporting of furniture, personal effects etc may be available – consider.</td></tr>
<tr><td colspan="3">Protection of essential infrastructure:</td></tr>
<tr><td colspan="3">Levee consideration:</td></tr>
<tr><td>Evacuation and/or Isolation Triggers</td><td colspan="3">Closure of evacuation roads occur at frequent flood events 20% AEP. Flooding is quick to rise reaching peak within 6hrs and receding quickly resulting no time being available to evacuate effectively.</td></tr>
<tr><td>Evacuation Triggers</td><td colspan="3">Not feasible due to nature of flooding being flash flooding.</td></tr>
<tr><td>Sequencing of evacuation</td><td colspan="3">Not feasible due to nature of flooding being flash flooding.</td></tr>
<tr><td>Evacuation Routes</td><td colspan="3">Via Camden Valley Way and Denham Court Road.</td></tr>
</table>

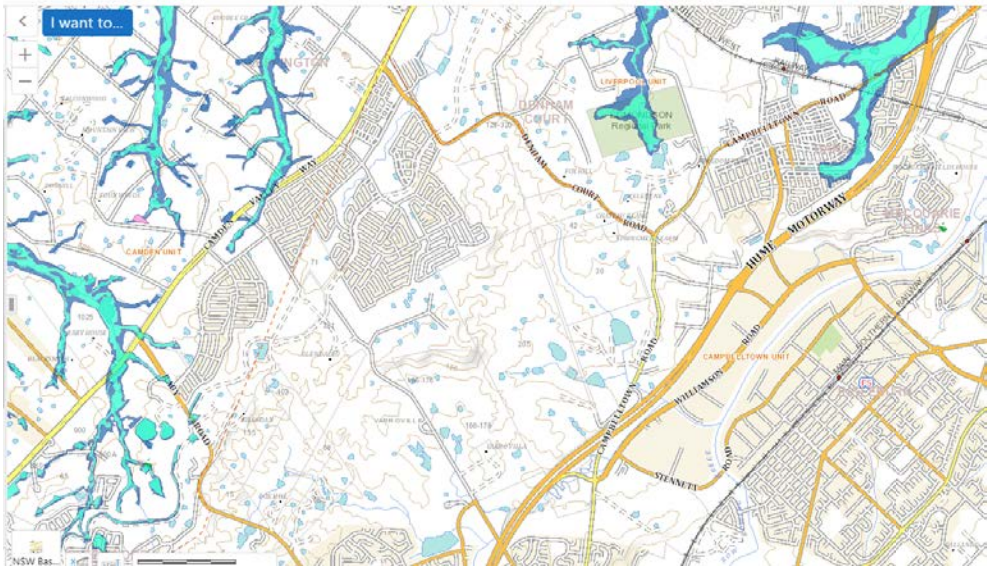
Evacuation Route Closure	Not feasible due to nature of flooding being flash flooding.
Method of Evacuation	Not feasible due to nature of flooding being flash flooding.
Evacuation Centre / Assembly Point	
Large scale evacuations	Refer to the Georges and Woronora River Valley Subplan and Hawkesbury Nepean State Flood Plan for further information as flowing is likely to be occurring across the Georges and Woronora River and Hawkesbury Nepean Rivers concurrently.
Rescue	There are no known flood rescue hotspots within the area however there are trap point locations that are identified in the map below.
Resupply	N/A
Aircraft Management	***Helicopter Landing Points:***
	Airports:
Other	Refer to the Georges and Woronora River Valley Subplan and State Flood Plan for further information as flowing is likely to be occurring across the Georges and Woronora River.

10.2. DENHAM COURT SECTOR/COMMUNITY FLOOD EXTENTS WITH HAZARD > H2* MAP

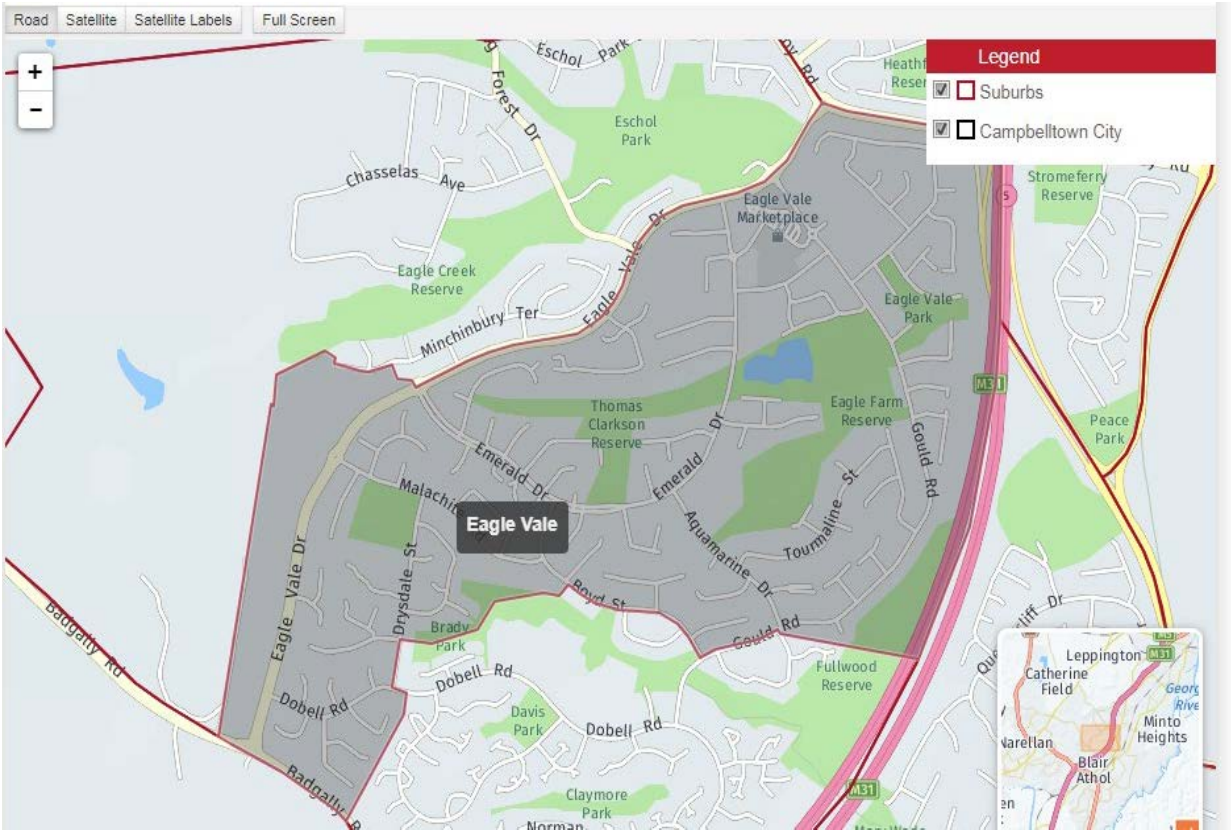


Unregulated Dam across Cottage Creek

Denham Court from GEMS



11. EAGLE VALE SECTOR / COMMUNITY



11.1. EAGLE VALE RESPONSE ARRANGEMENTS

Refer to Volume 2: Hazard and Risk in Campbelltown LGA for more information about this Sector/Community.

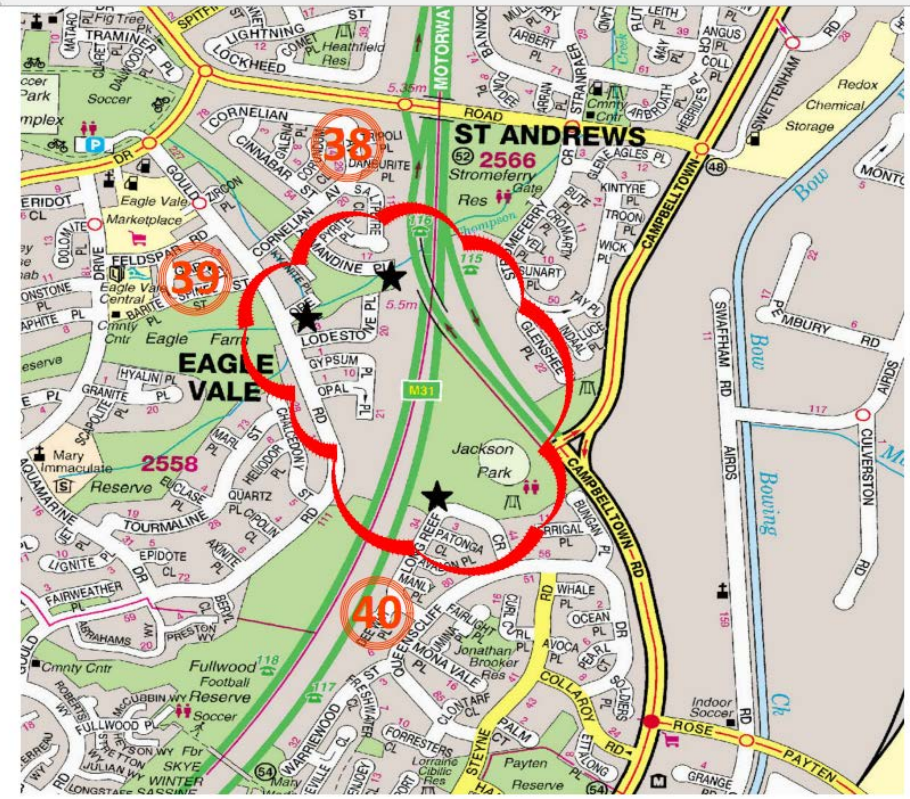
Sector Description	The 2021 resident population for Eagle Vale community is 5,789, with a population density of 2,376 persons per square km. In Eagle Vale, 29.3% of people spoke a language other than English at home in 2021. Eagle Vale is bounded by Eagle Vale Drive and Raby Road in the north, the Hume Highway in the east, Gould Road, Boyd Street and Brady Park in the south, and Badgally Road and the suburb of Eschol Park in the west. This suburb has not been identified in the regional development strategy as a focus area and is not currently undergoing redevelopment which means no impact on the physical topography or the community.
Hazard	Claymore Main Drain has its headwaters in rural land in Gregory Hills and flows in a general easterly direction between the suburbs of Claymore and Eagle Vale. A series of detention basins keep most of the flows in Claymore Main Drain. Flooding from Eagle Creek is very well contained by a series of cascading detention basins upstream of Eagle Vale Dr and in Thompsons Creek by a similar series of basins upstream of Gould Rd and there are no properties affected by PMF flooding along these reaches of the creeks. Eagle Creek is a major tributary of Thompson Creek with its headwaters in the rural areas of Eschol Park. Flooding from Eagle Creek is very well contained by a series of cascading detention basins upstream of Eagle Vale Dr and in Thompsons Creek by a similar series of basins upstream of Gould Rd and there are no properties affected by PMF flooding along these reaches of the creeks. Between these roads and the motorway flooding is contained within the open space reserves but the PMF flows

<table>
<tr><td></td><td>overflow Eagle Vale Dr and also back up behind the motorway and many homes would experience above floor flooding.
Between the motorway and Bow Bowing Creek, there is basically no property affectation in any AEP event smaller than the PMF, however, in the PMF numerous residential properties located in proximity of the creek would be affected, particularly upstream and downstream of the culvert under Campbelltown Rd.
Note: Between Eagle Vale Drive and Gould Rd, the motorway flooding is contained within the open space reserves, but the PMF flows overflow Eagle Vale Dr and also back up behind the motorway and many homes would experience above floor flooding. Between the motorway and Bow Bowing Creek, there is basically no property affectation in any AEP event smaller than the PMF, however, in the PMF numerous residential properties located in proximity of the creek would be affected, particularly upstream and downstream</td></tr>
<tr><td>Triggers</td><td>The following triggers will activate a response from Campbelltown SES Unit and consideration of activation of the LEMC:
BoM releasing a flood or severe storm warning for the Campbelltown LGA
Requests for Assistance indicating a flood event.
When directed by Metro Zone or the REOCON or SEOCON</td></tr>
<tr><td>Flood Affect Classification</td><td>There are a number of High Flood Islands and Low Flood Islands identified in this suburb however due to the flash flood nature of flooding that relate to all defined flood events up to a PMF with floods hitting its peak within 6hrs and receding within the following 6-12 hrs the duration is short.
Community engagement and continual monitoring of isolation and flood threat in case of PMF is required.
No known Flood Rescue Hotspots within this sector.</td></tr>
<tr><td>At risk properties</td><td>Total number of properties within Sector/Community</td></tr>
<tr><td>At risk Facilities</td><td>Eagle Vale Police Station, Feldspar Rd and Gould at risk of flooding / Isolation – at risk in PMF AFF 0.2m.</td></tr>
<tr><td>Sector Control</td><td></td></tr>
<tr><td>Key Warning Gauge Name</td><td><table><tr><th>Name</th><th>AWRC No.</th><th>Min (m)</th><th>Mod (m)</th><th>Maj (m)</th></tr><tr><td>Almandine pl and Pyrite Pl Water Sensor</td><td></td><td>-</td><td>-</td><td>-</td></tr></table></td></tr>
<tr><td>Additional Notes</td><td></td></tr>
<tr><td>General Strategy</td><td>Monitor
Promote Property Protection
Community Engagement
Potential for isolation but only for short duration 24hrs so potential resupply / rescue may be required if secondary emergencies occur during this short isolation period.</td></tr>
<tr><td>Key Risks / Consequences</td><td>Residential Properties - Between Eagle Vale Drive and Gould Rd, the motorway flooding is contained within the open space reserves but the PMF flows overflow Eagle Vale Dr and also back up behind the motorway and many homes would experience above floor flooding. Between the motorway and Bow Bowing Creek, there is basically no property affectation in any AEP event smaller than the PMF, however, in the PMF numerous residential properties located in proximity of the creek would be affected, particularly upstream and downstream.
Roads - Between Eagle Vale Drive and Gould Rd, the motorway flooding is contained within the open space reserves but the PMF flows overflow Eagle Vale Dr and also back</td></tr>
</table>

	up behind the motorway and many homes would experience above floor flooding. Between the motorway and Bow Bowing Creek, there is basically no property affectation in any AEP event smaller than the PMF, however, in the PMF numerous residential properties located in proximity of the creek would be affected, particularly upstream and downstream
Information and Warnings	The trigger would be a Severe Weather Warnings issued by BOM. Release messages around Property Protection Measures / if time available set up Sandbag point for those local properties potentially impacted - flash flooding across low lying areas.
	N/A for Evac Sequencing however isolation for short duration will be required Early Community Education on the threat coupled with social media advice Ask Council to consider the Flash flood Warning System as a mitigation measure as SES cannot warn to this community.
Property Protection	***Property protection measures:*** The property protection measures for the threat of flash flooding could be move valuable household goods to protect from flow path for AFF preventing water damage, sandbag around doors and gaps to prevent water getting into at risk homes. Established a known point for sandbagging and advertise on Social Media Facebook Pages as a property protection measure.
	Assistance with property protection: Specific assistance with property protection by way of sandbagging and lifting or transporting of furniture, personal effects etc may be available – consider
	Protection of essential infrastructure: Not applicable in Eagle Vale
	Levee consideration: Not applicable in Eagle Vale
Evacuation and/or Isolation Triggers	Closure of evacuation roads occur at frequent flood events 20% AEP. Flooding is quick to rise reaching peak within 6hrs and receding quickly resulting no time being available to evacuate effectively.
Evacuation Triggers	Not feasible due to nature of flooding being flash flooding.
Sequencing of evacuation	Not feasible due to nature of flooding being flash flooding.
Evacuation Routes	Raby Road
Evacuation Route Closure	Not feasible due to nature of flooding being flash flooding.
Method of Evacuation	Not feasible due to nature of flooding being flash flooding.
Evacuation Centre / Assembly Point	Campbelltown Civic Hall Queen St Campbelltown
Large scale evacuations	Refer to the Georges and Woronora River Valley Subplan and State Flood Plan for further information as flowing is likely to be occurring across the Georges and Woronora River .
Rescue	There are no known flood rescue hotspots within the area however there are trap point locations that are identified in the map below.
Resupply	N/A

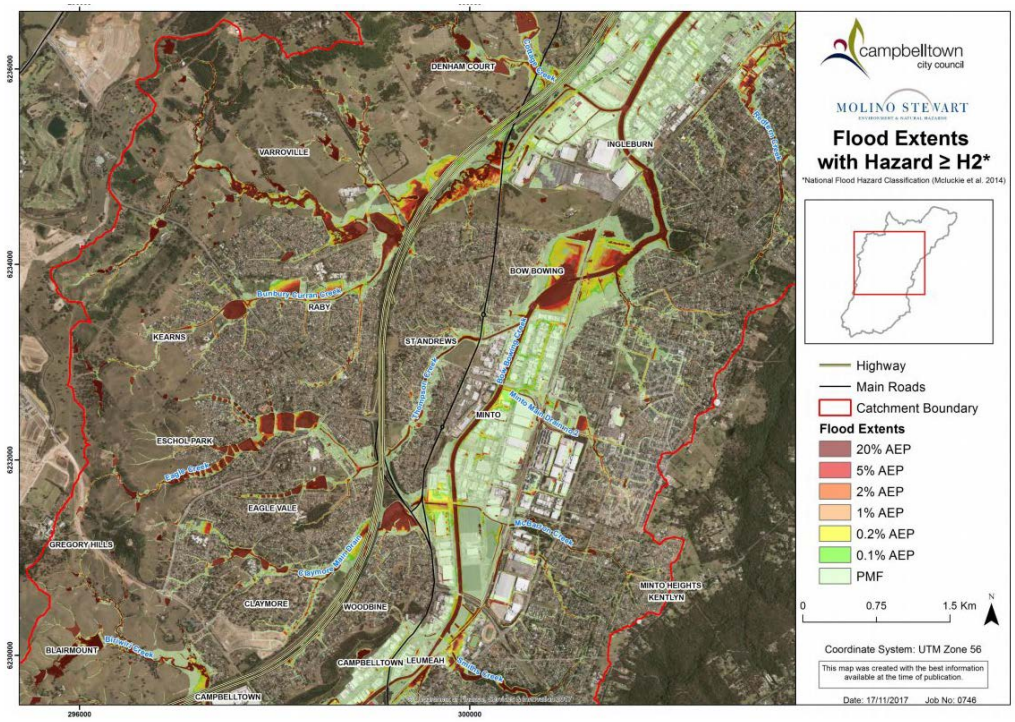
Aircraft Management	***Helicopter Landing Points:***
	Airports: No suitable landing points are located within this suburb
Other	Refer to the Georges and Woronora River Valley Subplan and State Flood Plan for further information as flowing is likely to be occurring across the Georges and Woronora River and Hawkesbury Nepean Rivers concurrently.

11.2. EAGLE VALE SECTOR/COMMUNITY TRAP POINTS MAP



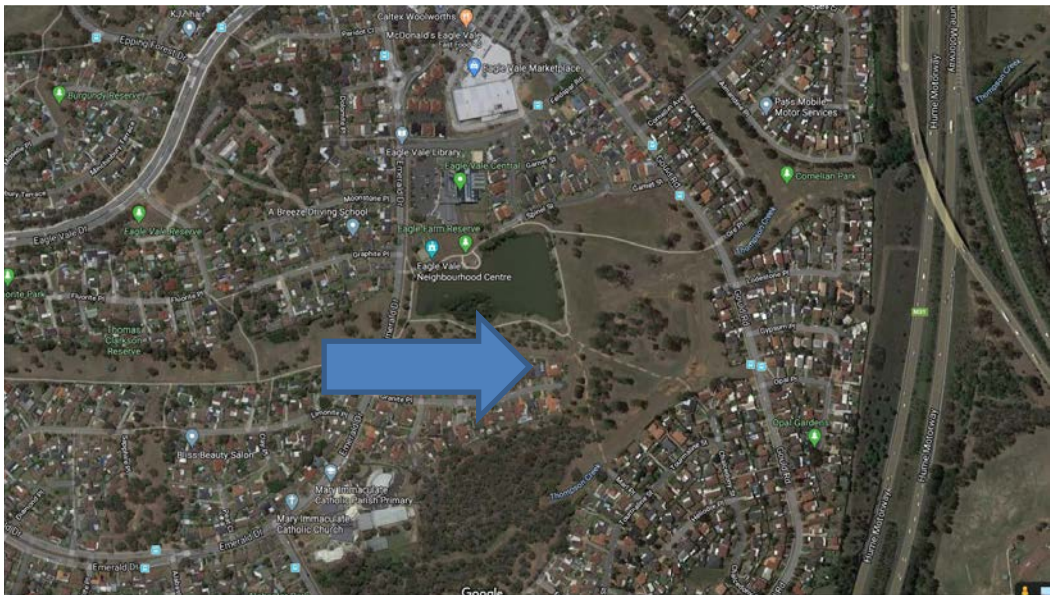
WQD No.	Asset_Type	Asset_Description
38	Steel Trash Rack	Thompson Creek Steel Trash Rack Almandine Place end cul de sac Eagle Vale
39	Steel Trash Rack	Eagle Farm Reserve - downstream Gould Rd. End Eagle Vale - Trash Rack (4m)
40	Steel Trash Rack	Claymore Main Drain Steel Trash Rack Jackson Park Longreef Cresent rear 42 Woodbine

11.3. EAGLE VALE SECTOR/COMMUNITY FLOOD EXTENT WITH HAZARD >H2 MAP

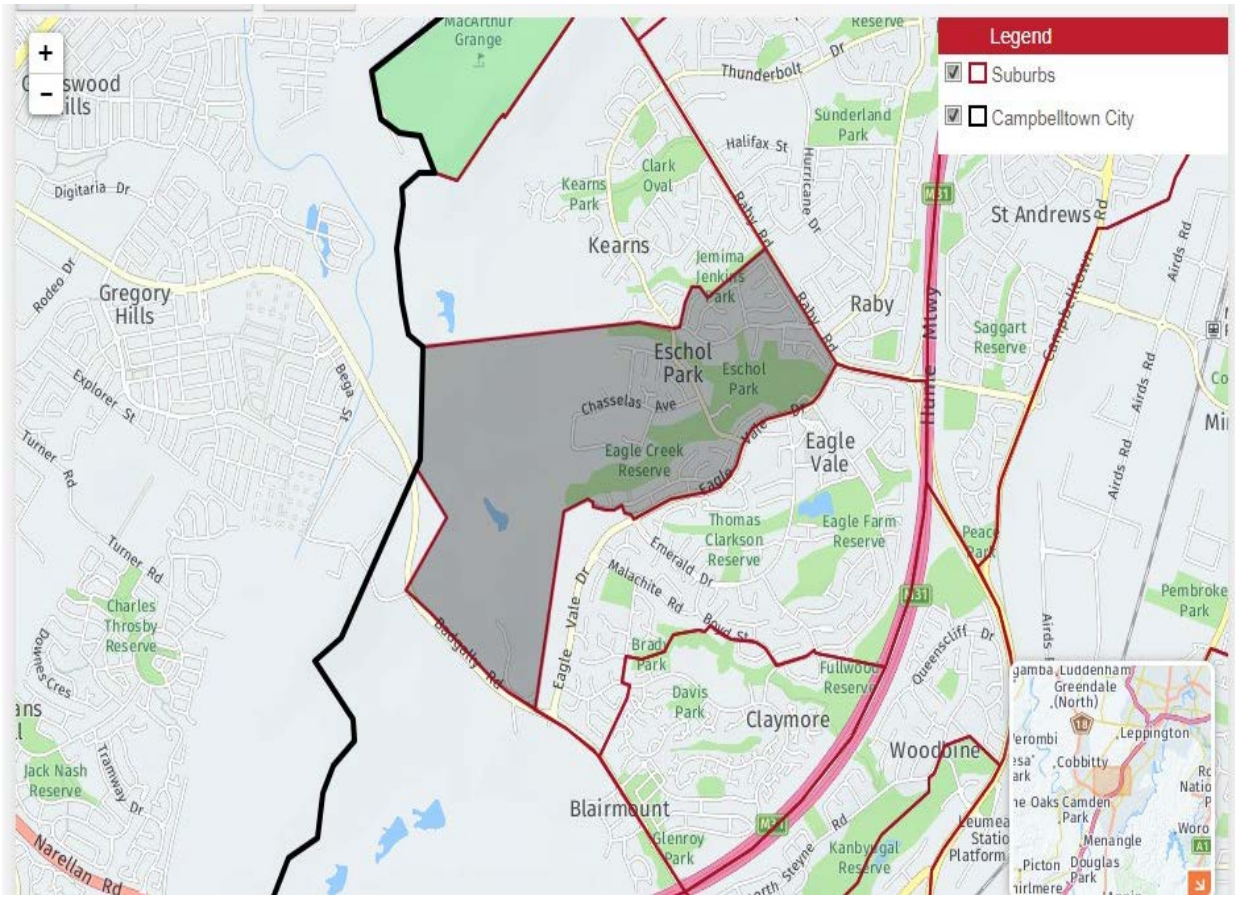


Map 9 Flood extents with hazard ≥ H2 in the centre of the study area

Eagle Farm Unregulated Dam



12. ESCHOL PARK SECTOR / COMMUNITY



12.1. ESCHOL PARK RESPONSE ARRANGEMENTS

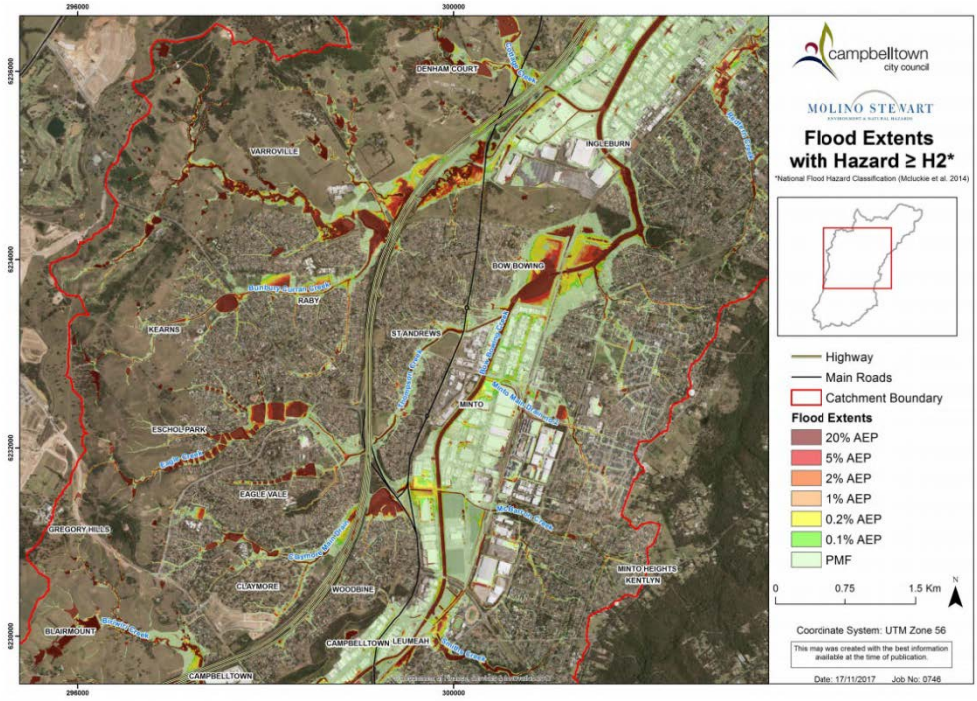
Refer to Volume 2: Hazard and Risk in Campbelltown LGA for more information about this Sector/Community.

Sector Description	The 2021 resident population for Eschol Park community is 2,607, with a population density of 955.4 persons per square km. In Eschol Park, (insert) of people spoke a language other than English at home in 2021. Eschol Park is bounded by the suburb of Kearns in the north, Raby Road in the east, Eagle Vale Drive, the suburb of Eagle Vale and Badgally Road in the south, and the Camden Council area in the west. This suburb has not been identified in the regional development strategy as a focus area and is not currently undergoing redevelopment which means no impact on the physical topography or the community.
Hazard	Eagle Creek is a major tributary of Thompson Creek with its headwaters in the rural areas of Eschol Park. Flooding from Eagle Creek is very well contained by a series of cascading detention basins upstream of Eagle Vale Dr. Flooding from Eagle Creek is very well contained by a series of cascading detention basins upstream of Eagle Vale Dr and in Thompsons Creek by a similar series of basins upstream of Gould Rd and there are no properties affected by PMF flooding along these reaches of the creeks.
Triggers	The following triggers will activate a response from Campbelltown SES Unit and consideration of activation of the LEMC: • BoM releasing a flood or severe storm warning for the Campbelltown LGA • Requests for Assistance indicating a flood event.

<table>
<tr><td></td><td colspan="5">• When directed by Metro Zone or the REOCON or SEOCON</td></tr>
<tr><td>Flood Affect Classification</td><td colspan="5">There is a High Flood Island identified in this suburb however due to the flash flood nature of flooding that relate to all defined flood events up to a PMF with floods hitting its peak within 6hrs and receding within the following 6-12 hrs the duration is short.
Community engagement and continual monitoring of isolation and flood threat in case of PMF is required.
No known Flood Rescue Hotspots within this sector.</td></tr>
<tr><td>At risk properties</td><td></td><td colspan="3">Total number of properties within Sector/Community</td><td></td></tr>
<tr><td>At risk Facilities</td><td colspan="5">Eschol Park Public School Eschol Park Drive – at risk in a PMF</td></tr>
<tr><td>Sector Control</td><td colspan="5"></td></tr>
<tr><td rowspan="2">Key Warning Gauge Name</td><td>Name</td><td>AWRC No.</td><td>Min (m)</td><td>Mod (m)</td><td>Maj (m)</td></tr>
<tr><td></td><td></td><td>-</td><td>-</td><td>-</td></tr>
<tr><td>Additional Notes</td><td colspan="5"></td></tr>
<tr><td>General Strategy</td><td colspan="5">Monitor
Promote Property Protection
Community Engagement
Potential for isolation but only for short duration 24hrs so potential resupply / rescue may be required if secondary emergencies occur during this short isolation period.</td></tr>
<tr><td>Key Risks / Consequences</td><td colspan="5"></td></tr>
<tr><td rowspan="2">Information and Warnings</td><td colspan="5">The trigger would be a Severe Weather Warnings issued by BOM. Release messages around Property Protection Measures / if time available set up Sandbag point for those local properties potentially impacted - flash flooding across low lying areas.</td></tr>
<tr><td colspan="5">N/A for Evac Sequencing however isolation for short duration will be required
Early Community Education on the threat coupled with social media advice
Ask Council to consider the Flash flood Warning System as a mitigation measure as SES cannot warn to this.</td></tr>
<tr><td rowspan="4">Property Protection</td><td colspan="5">Property protection measures:
The property protection measures for the threat of flash flooding could be move valuable household goods to protect from flow path for AFF preventing water damage, sandbag around doors and gaps to prevent water getting into at risk homes.
Established a known point for sandbagging and advertise on Social Media Facebook Pages as a property protection measure.</td></tr>
<tr><td colspan="5">Assistance with property protection:
Specific assistance with property protection by way of sandbagging and lifting or transporting of furniture, personal effects etc may be available – consider</td></tr>
<tr><td colspan="5">Protection of essential infrastructure:
Not applicable in Eschol Park</td></tr>
<tr><td colspan="5">Levee consideration:
Not applicable in Eschol Park.</td></tr>
</table>

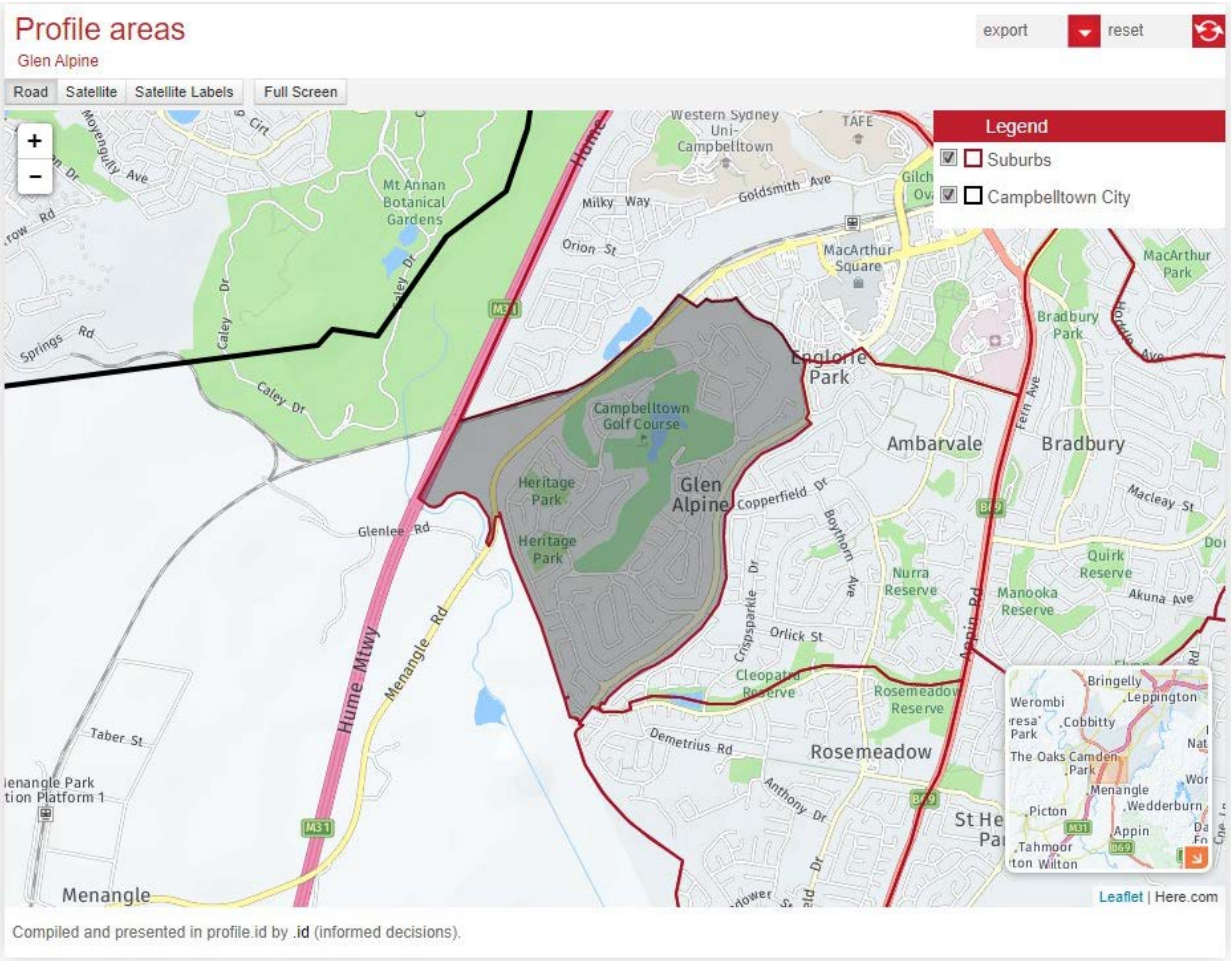
Evacuation and/or Isolation Triggers	Closure of evacuation roads occur at frequent flood events 20% AEP. Flooding is quick to rise reaching peak within 6hrs and receding quickly resulting no time being available to evacuate effectively.
Evacuation Triggers	Not feasible due to nature of flooding being flash flooding.
Sequencing of evacuation	Not feasible due to nature of flooding being flash flooding.
Evacuation Routes	Raby Road
Evacuation Route Closure	Not feasible due to nature of flooding being flash flooding.
Method of Evacuation	Not feasible due to nature of flooding being flash flooding.
Evacuation Centre / Assembly Point	Campbelltown Civic Hall Queen St Campbelltown
Large scale evacuations	Refer to the Georges and Woronora River Valley Subplan and State Flood Plan for further information as flowing is likely to be occurring across the Georges and Woronora River.
Rescue	There are no known flood rescue hotspots within the area however there are trap point locations that are identified in the map below.
Resupply	N/A
Aircraft Management	***Helicopter Landing Points:*** No suitable landing points are located within this suburb
	Airports: No suitable landing points are located within this suburb
Other	Refer to the Georges and Woronora River Valley Subplan State Flood Plan for further information as flowing is likely to be occurring across the Georges and Woronora River.

12.2. ESCHOL PARK SECTOR/COMMUNITY FLOOD EXTENTS WITH HAZARD >H2 MAP



Map 9 Flood extents with hazard ≥ H2 in the centre of the study area

13. GLEN ALPINE SECTOR / COMMUNITY



13.1. GLEN ALPINE RESPONSE ARRANGEMENTS

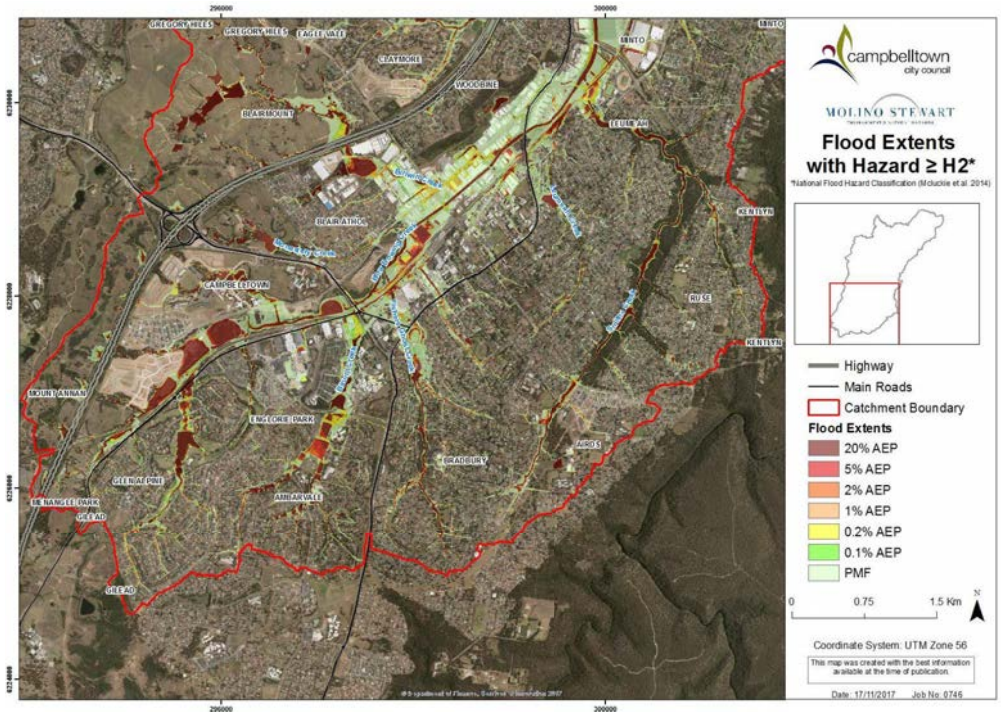
Refer to Volume 2: Hazard and Risk in Campbelltown LGA for more information about this Sector/Community.

Sector Description	The 2021 resident population for Glen Alpine community is 4,429 with a population density of 1,669 persons per square km. In Glen Alpine, 21.8% of people spoke a language other than English at home in 2021 with the predominate languages being Arabic and Filipino. Glen Alpine is bounded by the southern railway line, Callaway Avenue and Gilchrist Drive in the north, Englorie Park Drive in the east, generally by the water supply channel, Abington Crescent and Menangle Road in the south, and the Hume Highway in the west. This suburb has not been identified in the regional development strategy as a focus area and is not currently undergoing redevelopment which means no impact on the physical topography or the community.
Hazard	A creek runs from the southwest end of the Campbelltown Golf Course through a series of cascading detention basins across Glen Alpine (Map 8, Vol. 2). The Creek overtops its banks within the Golf Course from about the 0.2% AEP, but it does not affect any buildings. More flooding is observed further downstream, before and after the culvert under Heritage Way, as well as after Glen Alpine Drive. Here the Creek causes significant

<table>
<tr><td></td><td>flooding from the 20% AEP event, without affecting any of the neighbouring properties up to the PMF.</td></tr>
<tr><td>Triggers</td><td>The following triggers will activate a response from Campbelltown SES Unit and consideration of activation of the LEMC:
BoM releasing a flood or severe storm warning for the Campbelltown LGA.
Requests for Assistance indicating a flood event.
When directed by Metro Zone or the REOCON or SEOCON.</td></tr>
<tr><td>Flood Affect Classification</td><td>FERC - There is a High Flood Island identified in this suburb however due to the flash flood nature of flooding that relate to all defined flood events up to a PMF with floods hitting its peak within 6hrs and receding within the following 6-12 hrs the duration is short.
Community engagement and continual monitoring of isolation and flood threat in case of PMF is required.
No known Flood Rescue Hotspots within this sector.</td></tr>
<tr><td>At risk properties</td><td><table><tr><td></td><td>Total number of properties within Sector/Community</td><td></td></tr></table></td></tr>
<tr><td>At risk Facilities</td><td>There are no identified vulnerable facilities critical Infrastructure that are at risk of flooding and/or isolation within this suburb.</td></tr>
<tr><td>Sector Control</td><td></td></tr>
<tr><td>Key Warning Gauge Name</td><td><table><tr><th>Name</th><th>AWRC No.</th><th>Min (m)</th><th>Mod (m)</th><th>Maj (m)</th></tr><tr><td></td><td></td><td>-</td><td>-</td><td>-</td></tr></table></td></tr>
<tr><td>Additional Notes</td><td></td></tr>
<tr><td>General Strategy</td><td>Monitor
Promote Property Protection
Community Engagement
Potential for isolation but only for short duration 24hrs so potential resupply / rescue may be required if secondary emergencies occur during this short isolation period.</td></tr>
<tr><td>Key Risks / Consequences</td><td>Flash Flood Locations are Menangle Rd and Heritage Way.
Menangle Rd (Glen Alpine). The road is cut from the 20% AEP at three locations: (1) north and south bound, between Glen Alpine Dr and Gilchrist Dr; (2) south bound and (3) north bound, at two different locations north of Glenlee Rd.
Heritage Way and Menangle Rd will be impacts by a 20% AEP.</td></tr>
<tr><td rowspan="2">Information and Warnings</td><td>The trigger would be a Severe Weather Warnings issued by BOM. Release messages around Property Protection Measures / if time available set up Sandbag point for those local properties potentially impacted - flash flooding across low lying areas.</td></tr>
<tr><td>N/A for Evac Sequencing however isolation for short duration will be required
Early Community Education on the threat coupled with social media advice
Ask Council to consider the Flash flood Warning System as a mitigation measure as SES cannot warn to this community.</td></tr>
<tr><td>Property Protection</td><td>Property protection measures:
The property protection measures for the threat of flash flooding could be move valuable household goods to protect from flow path for AFF preventing water damage, sandbag around doors and gaps to prevent water getting into at risk homes.
Established a known point for sandbagging and advertise on Social Media Facebook Pages as a property protection measure.</td></tr>
</table>

	Assistance with property protection: Specific assistance with property protection by way of sandbagging and lifting or transporting of furniture, personal effects etc may be available – consider
	Protection of essential infrastructure: Not applicable in Glen Alpine
	Levee consideration: Not applicable in Glen Alpine.
Evacuation and/or Isolation Triggers	Closure of evacuation roads occur at frequent flood events 20% AEP. Flooding is quick to rise reaching peak within 6hrs and receding quickly resulting no time being available to evacuate effectively.
Evacuation Triggers	Not feasible due to nature of flooding being flash flooding.
Sequencing of evacuation	Not feasible due to nature of flooding being flash flooding.
Evacuation Routes	Englorie Park Drive to Gilchrist depending on local flooding.
Evacuation Route Closure	Not feasible due to nature of flooding being flash flooding.
Method of Evacuation	Not feasible due to nature of flooding being flash flooding.
Evacuation Centre / Assembly Point	Campbelltown Civic Hall Queen St Campbelltown
Large scale evacuations	Refer to the Georges and Woronora River Valley Subplan and State Flood Plan for further information as flowing is likely to be occurring across the Georges and Woronora River .
Rescue	There are no known flood rescue hotspots within the area however there are trap point locations that are identified in the map below.
Resupply	N/A
Aircraft Management	***Helicopter Landing Points***
	Airports:
Other	Refer to the Georges and Woronora River Valley Subplan and State Flood Plan for further information as flowing is likely to be occurring across the Georges and Woronora River .

13.2. GLEN ALPINE SECTOR/COMMUNITY FLOOD EXTENTS WITH HAZARD > H2 MAPS



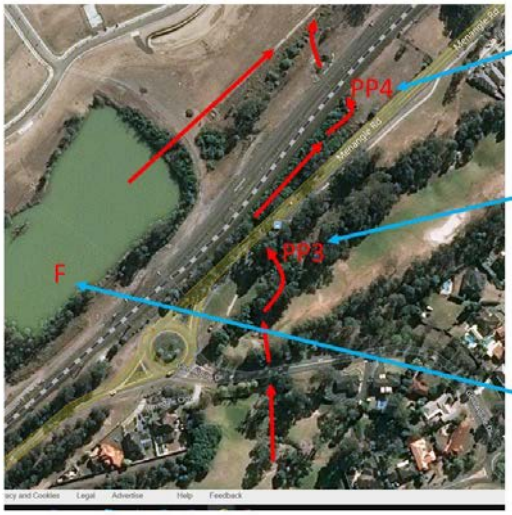
CAMPBELLTOWN GOLF COURSE DAMS

NOTE:- At this location there are no issues of water egress into residential areas with the collapse of a dam as Dam A runs downhill into Dam B.

Dam C, collects rainwater from the surrounding areas, refer yellow arrows.

Dam B, collects rainwater from the surrounding areas (refer yellow arrows) water then flows into Dam C.

Dam A, collects rainwater from the surrounding areas (refer yellow arrows) water then flows into Dam B



Water and debris passing PP4 will flow into an open lined drain that will eventually reach Bow Bowing Creek.

Water and debris passing PP3 will created a dam at Menangle Road and the rail corridor identified as PP4. At this location there are no issues of water egress into residential properties, undermining of the rail corridor is a very low possibility.

Dam F, collects rainwater from the surrounding areas and has a small spillway associated with it to maintain a constant water level. A collapse at Dam F would result in water flowing towards Bow Bowing Creek. At this location there are no residential properties.

NOTE:- At Pinch Point 1 (PP1) debris from a dam collapse would create a dam at the drain under Heritage Way. this location there are no issues of water egress into residential properties as any damming effect at PP1 would simply overflow across Heritage Way.

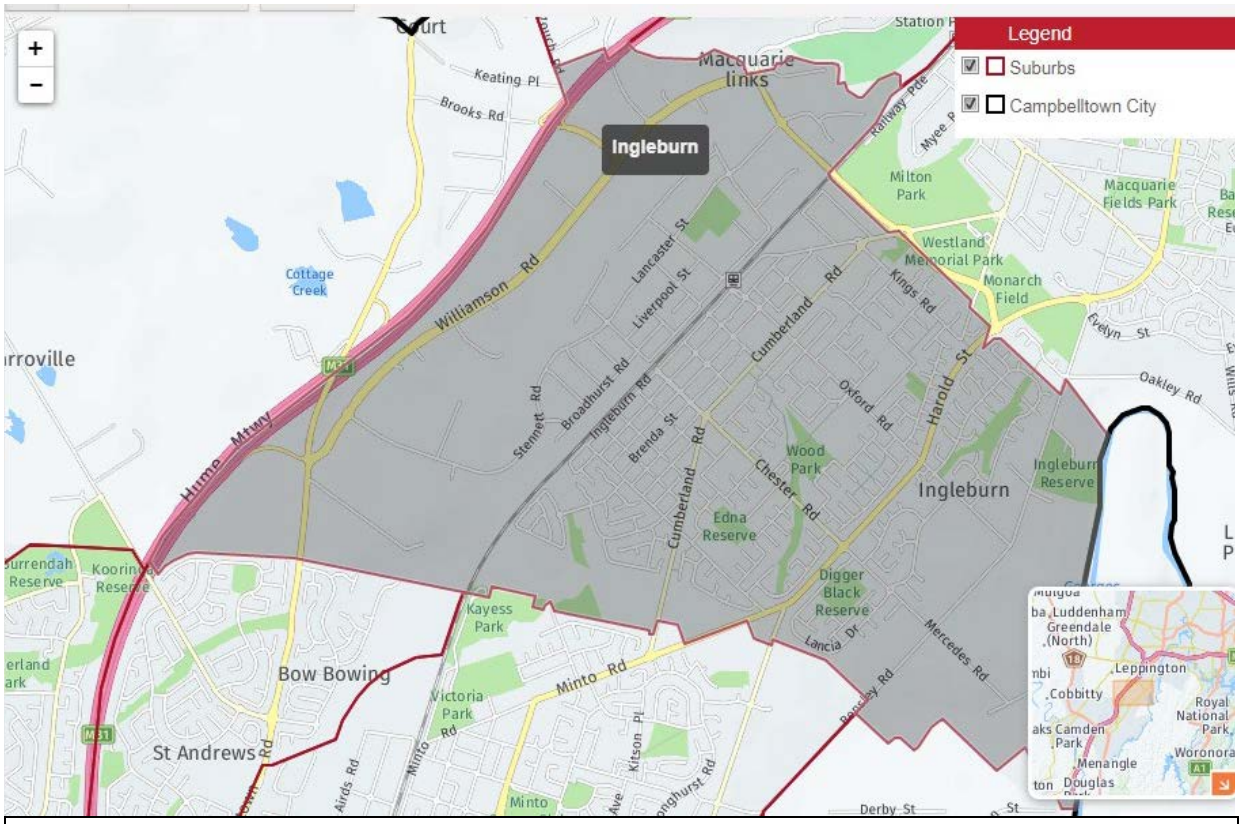
Dam E, collects rainwater from the surrounding areas and has a small spillway associated with it to maintain a constant water level.

Dam D, collects rainwater from the surrounding areas or receives overflow from Dam C

Spillway, allows for a water level to be maintained for Dam C.

Dam C, collects rainwater from the surrounding areas refer Slide 1

14. INGLEBURN SECTOR / COMMUNITY



14.1. INGLEBURN RESPONSE ARRANGEMENTS

Refer to Volume 2: Hazard and Risk in Campbelltown LGA for more information about this Sector/Community.

Sector Description	The 2021 resident population for Ingleburn community is 15,264. In Ingleburn, 38.1% of people spoke a language other than English at home in 2021 with the main languages being Bengali Tagalog and Hindi. Ingleburn is bounded by Bunbury Curran Creek, the railway line, Henderson Road and the suburb of Macquarie Fields in the north, the Georges River in the east, the suburb of Minto Heights, Myrtle Creek, and the suburb of Minto and the transmission line in the south, and the Hume Highway and Zouch Road in the west. A large area west of the railway line is a major industrial estate which includes hazardous facilities the second largest in Western Sydney. Ingleburn has been identified as a growth area.
Hazard	In this area there are 189 residential buildings and numerous commercial buildings at risk. It should be noted that some of the commercial buildings host multiple tenancies. Redfern Creek (Map 10, Vol. 2) runs in northwest direction from Porter Reserve, at the north end of Minto, towards Ingleburn CBD. At Cumberland Rd, the creek is channelled into two culverts that run underneath the CBD and resurfaces at the north end of Ingleburn Rd. Floodwaters are conveyed towards and through Ingleburn CBD by two main flow paths: Redfern Creek, running in a NW direction and approaching Ingleburn CBD through Cumberland Rd and Norfolk St; and A flow path along Koala Walk drain from Kingfisher Reserve, entering the northern end of the CBD across Carlisle St and Macquarie Rd. **20% AEP** - The area experiences overland flooding and high hazard levels from the 20% AEP event. Modelling suggests that in a 20% AEP flood, 15 residential buildings may

	experience above floor flooding. More than 50 residential buildings would be isolated by flooding in the 20% AEP event. **1% AEP** - In a 1% AEP flood about 37 residential buildings may experience above floor flooding. Flooding as deep as 0.8m may be experienced in roadways. **PMF** - About 100 single-storey residential buildings may experience above floor flooding in a PMF more than 0.5m deep. Of these, the model shows that 71 are located in low flood islands and 12 would be exposed to flood hazards which may affect their structural stability. **Residential properties** - At the southern end of Ingleburn, two overland flow paths run parallel to each other from Euroka St to Ingleburn Rd, in a south-east to north-west direction. These affect several properties, however mostly in rare events (i.e., from the 0.2% AEP) (Map 1 8, Vol. 2). At the eastern end of Ingleburn CBD, an overland flow path runs from Oxford Rd in a north-west direction towards Koala Walk Reserve, where it joins Koala Walk Drain. The path causes above floor flooding from the 20% AEP in four buildings in Oxford Rd (Map 19, Vol. 2); Two clusters of buildings in Ingleburn, at the southwestern end of Macquarie Rd and east of the train station would experience AFF up to 0.75m (Map 23, Vol. 2). A similar spatial pattern is observed in the 1% AEP event for non–residential buildings, with a cluster of higher AFF depths in Ingleburn, at the northern end of Oxford Road. **Commercial Properties -** A significant overland flow path runs from south-east to north-west direction through Ingleburn CBD. This starts south-west of the CBD, downstream of the culvert under Cumberland St, on Redfern Creek. Here, Redfern Creek exceeds the culvert capacity from the 5% AEP event, resulting in floodwaters affecting residential and commercial properties north and south of Norfolk St, and continuing downstream towards the CBD through properties on Carlisle St, Albert St, Oxford Rd and Ingleburn St. The overland flow path re-joins Redfern Creek once this exits the CBD culvert system, north-west of the crossroad between Macquarie Rd and Ingleburn St (Map 19, Vol. 2). All access roads to **Ingleburn RSL** in Chester Rd are cut from the 5% AEP event, however: - The 20% AEP event cuts Chester Rd south east bound towards Warbler Ave.- The 20% AEP event cuts Lorikeet Ave. The 20% AEP event cuts Wagtail Cres. **Chester Road** is affected by overland flooding running from Cumberland Rd and Jacklyn St towards Ingleburn Rd and Chester Rd. The model shows that there is no building affectation in frequent events and no significant risk to property. However, in the PMF, seven single-storey buildings may experience AFF depths exceeding 0.5m. The model shows that two of these, as well as an additional two-storey building, may experience structural instability in the PMF due to impact from high-hazard floodwaters. There are also eight buildings classified as being located within a low flood island which is isolated from the 20% AEP; however it was observed that these are isolated by low hazard floodwaters in frequent events. **Collins Prom** (Ingleburn), cut north bound south of Eagleview Rd. **Oxford Rd** An overland flow path runs north-west along the alignment of Oxford Rd (both in pipes and overland) from approximately Wood Crest Ave to a local depression in line with Wonga Place. Water then flows perpendicular to Oxford Rd, along a local depression, through several properties between Oxford Rd and Kookaburra St and subsequently along Wonga Pl, toward Koala Walk Reserve. Here, it joins another overland flow path running north-west through Kola Walk Reserve to Cumberland Rd. ***20% AEP*** Four houses in between Oxford Rd and Kookaburra St experience AFF from the 20% AEP event. Three of these have two storeys, and one is single storey.

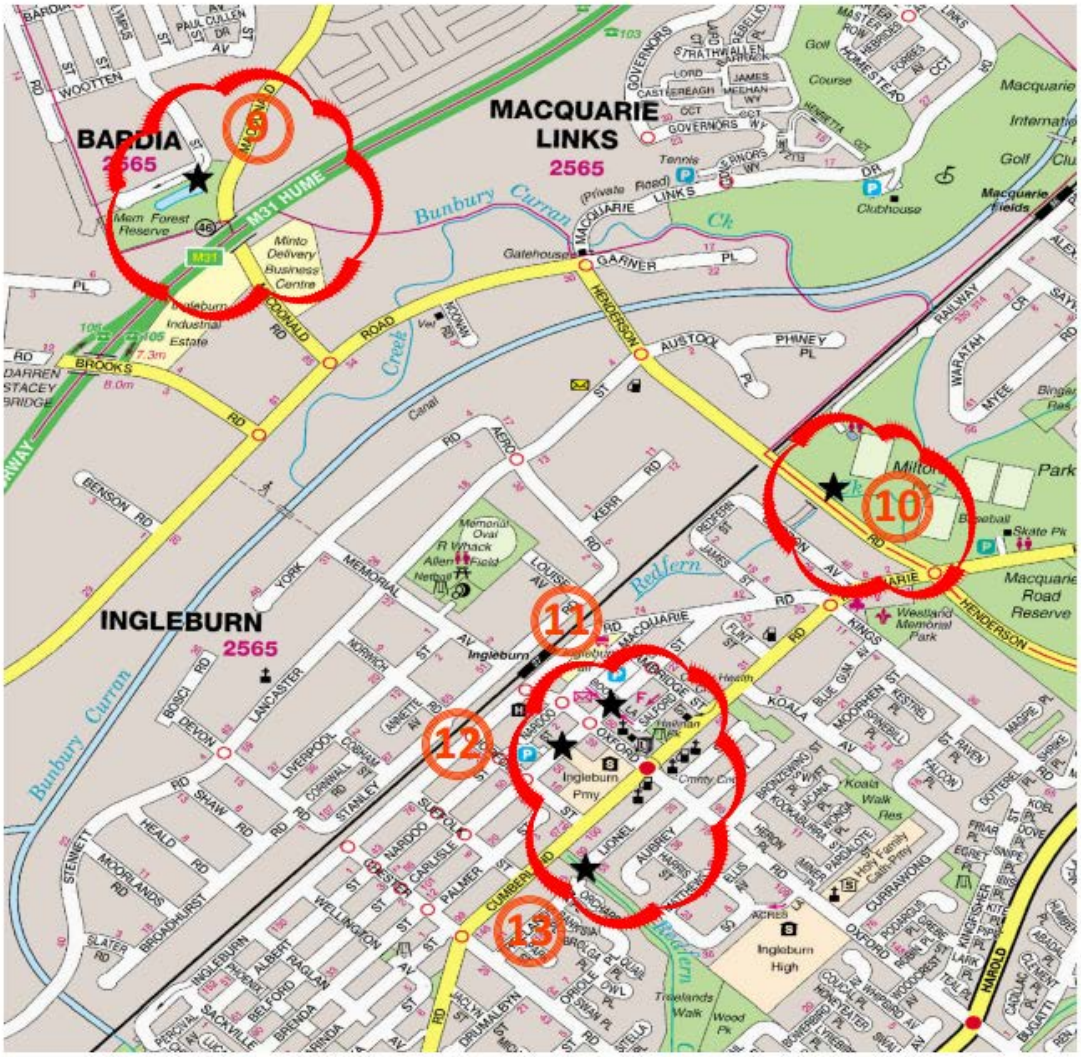
	1% AEP In addition to the four houses mentioned above, two more houses between Wonga Pl and Jacana Pl experience AFF from the 5% AEP. Even though the six houses mentioned above have AFF in events as frequent as the 1% AEP, only two satisfied the risk to people criteria in the PMF because they are single storey, whereas the remaining four are two storeys. In addition to these, between Koala Walk Reserve and Cumberland Rd there are ten more buildings with risk to people, because they are located in a low flood island (isolated from the 20% AEP event) and have AFF in the PMF. Two of these have also AFF depths exceeding 0.5m (in the PMF) and are single storey. It should be noted that three of the buildings classified as being within a low flood island (the ones closer to Cumberland Rd) are isolated in frequent events only by low-hazard floodwaters. **Louise Ave** Five industrial buildings between Louise Ave and Aero Rd show with AFF from the 5% or 20% AEP. An overland flow path runs northeast along Stanley Rd and continues north-west in Louise Ave and Aero Rd. In Louise Ave, floodwaters build up at a low point half-way between Stanley Rd and Memorial Oval. From here, another flow path heads north-east towards Aero Rd, causing AFF in five industrial properties (in four from the 20% AEP). Although some of these are former residential houses currently used as businesses, and as such have a floor level higher than what was assumed in the model, the remainder are known to Council to experience relatively frequent AFF. **Ingleburn CBD** Six large commercial buildings with AFF from the 20% AEP. It was estimated that these buildings host about 71 commercial tenancies.
Triggers	The following triggers will activate a response from Campbelltown SES Unit and consideration of activation of the LEMC: • BoM releasing a flood or severe storm warning for the Campbelltown LGA • Requests for Assistance indicating a flood event. • When directed by Metro Zone or the REOCON or SEOCON.
Flood Affect Classification	There are a few High Flood Islands and Low Flood Islands identified in this suburb however due to the flash flood nature of flooding that relate to all defined flood events up to a PMF with floods hitting its peak within 6hrs and receding within the following 6-12 hrs the duration is short. Community engagement and continual monitoring of isolation and flood threat in case of PMF is required. Flood Island locations are: • Clifford Cres • Houses on the corner of Chester Rd and Brett Pl Ingleburn; • Houses and townhouses in Packard Cl Ingleburn; • Houses on Chester Rd Ingleburn between Belford St and Ingleburn Rd; • Houses in Koala Ave Ingleburn; • Houses at the northern end of Bronzewing St, Jacana Pl and Wonga Pl; Houses at the northern end of • Bronzewing St, Jacana Pl and Wonga Pl; • Ingleburn commercial area bounded by Ingleburn Rd, Cambridge St, Carlisle St and Norfolk St; • Houses between Cambridge St, Carlisle St and Macquarie Rd Ingleburn; • Townhouses between Macquarie Rd and the railway Ingleburn; • The majority of the Ingleburn industrial area; • Houses between James St and Henderson Rd Ingleburn;

<table>
<tr><td></td><td colspan="5">None of the properties in this hotspot are flooded in any event other than the PMF.
Most of the buildings in this hotspot are within a low flood island and some of them become isolated in frequent events. There is a low point just south of the Cul de sac in Adrian St where overland flooding builds up from the 20% AEP event and cuts vehicular access to some of the buildings nearby. Adrian St also floods in the 20% AEP event at the corner with Fraser St, cutting access to most buildings in the eastern part of the hotspot. In less frequent events the flood expands and starts running off Adrian St in all directions (north, south-west and east), isolating more buildings.
In the PMF, the overland flow path inundates all buildings located in the western part of the hotpots. At the same time, Redfern Creek overtops its banks just upstream of the confluence with Bunbury Curran Creek and generates fast mainstream flooding running north-east between the creek and the railway, then veering south-east to follow the path of Bunbury Curran Creek. Part of this flow then runs south through some of the properties on the eastern side of the hotspot, along Adrian St. Here flood hazards are very high in the PMF, and the model shows that 11 buildings may experience structural instability.
Overall, the flood model shows that 104 buildings in this hotspot may experience AFF depths exceeding 0.5m in the PMF. Of these, 78 are on a low flood island from the 20% AEP, and 11 may become structurally unstable in the PMF.
Shops and dwellings in Railway Pde between Belmont Rd and Hosking Cres (AEP 5%).</td></tr>
<tr><td>At risk properties</td><td>104</td><td colspan="2">Total number of properties within Sector/Community</td><td colspan="2"></td></tr>
<tr><td>At risk Facilities</td><td colspan="5">The following Schools is at risk of flooding and / or isolation:
• Ingleburn Primary School, 51 Oxford St, Ph: 9605 1423
The following Hazardous Facilities:
• Ingleburn RSL Club, the building is surrounded by very low hazard floodwaters (H1) in every event from the 20% AEP to the PMF. Floodwaters do not enter the building in any event. The car park is not flood affected.
• Pax Australia, are affected by floodwaters with hazard greater than H1 only in the PMF.
• Australian Petro-Chemical Storage is affected by floodwaters with hazard greater than H1 only in the PMF
• Toll Jalco Distribution (is flood free in all but AEP events)</td></tr>
<tr><td>Sector Control</td><td colspan="5"></td></tr>
<tr><td rowspan="2">Key Warning Gauge Name</td><td>Name</td><td>AWRC No.</td><td>Min (m)</td><td>Mod (m)</td><td>Maj (m)</td></tr>
<tr><td>Williamson Rd Water Sensor
Memorial Ave Footbridge Water Sensor</td><td></td><td>-</td><td>-</td><td>-</td></tr>
<tr><td>Additional Notes</td><td colspan="5"></td></tr>
<tr><td>General Strategy</td><td colspan="5">Monitor
Promote Property Protection
Community Engagement
Potential for isolation but only for short duration 24hrs so potential resupply / rescue may be required if secondary emergencies occur during this short isolation period.</td></tr>
</table>

Key Risks / Consequences	
Information and Warnings	The trigger would be a Severe Weather Warnings issued by BOM. Release messages around Property Protection Measures / if time available set up Sandbag point for those local properties potentially impacted - flash flooding across low lying areas.
	N/A for Evac Sequencing however isolation for short duration will be required. Early Community Education on the threat coupled with social media advice. Ask Council to consider the Flash flood Warning System as a mitigation measure as SES cannot warn to this community.
Property Protection	***Property protection measures:*** The property protection measures for the threat of flash flooding could be move valuable household goods to protect from flow path for AFF preventing water damage, sandbag around doors and gaps to prevent water getting into at risk homes. Established a known point for sandbagging and advertise on Social Media Facebook Pages as a property protection measure.
	Assistance with property protection: Specific assistance with property protection by way of sandbagging and lifting or transporting of furniture, personal effects etc may be available – consider.
	Protection of essential infrastructure: Not applicable in this suburb
	Levee consideration: Not applicable in this suburb
Evacuation and/or Isolation Triggers	Closure of evacuation roads occur at frequent flood events 20% AEP. Flooding is quick to rise reaching peak within 6hrs and receding quickly resulting no time being available to evacuate effectively.
Evacuation Triggers	Not feasible due to nature of flooding being flash flooding.
Sequencing of evacuation	Not feasible due to nature of flooding being flash flooding.
Evacuation Routes	
Evacuation Route Closure	Not feasible due to nature of flooding being flash flooding.
Method of Evacuation	Not feasible due to nature of flooding being flash flooding.
Evacuation Centre / Assembly Point	Ingleburn Community Centre Oxford Rd Ingleburn
Large scale evacuations	Refer to the Georges and Woronora River Valley Subplan and State Flood Plan for further information as flowing is likely to be occurring across the Georges and Woronora River .
Rescue	There are no known flood rescue hotspots within the area however there are trap point locations that are identified in the map below.
Resupply	N/A

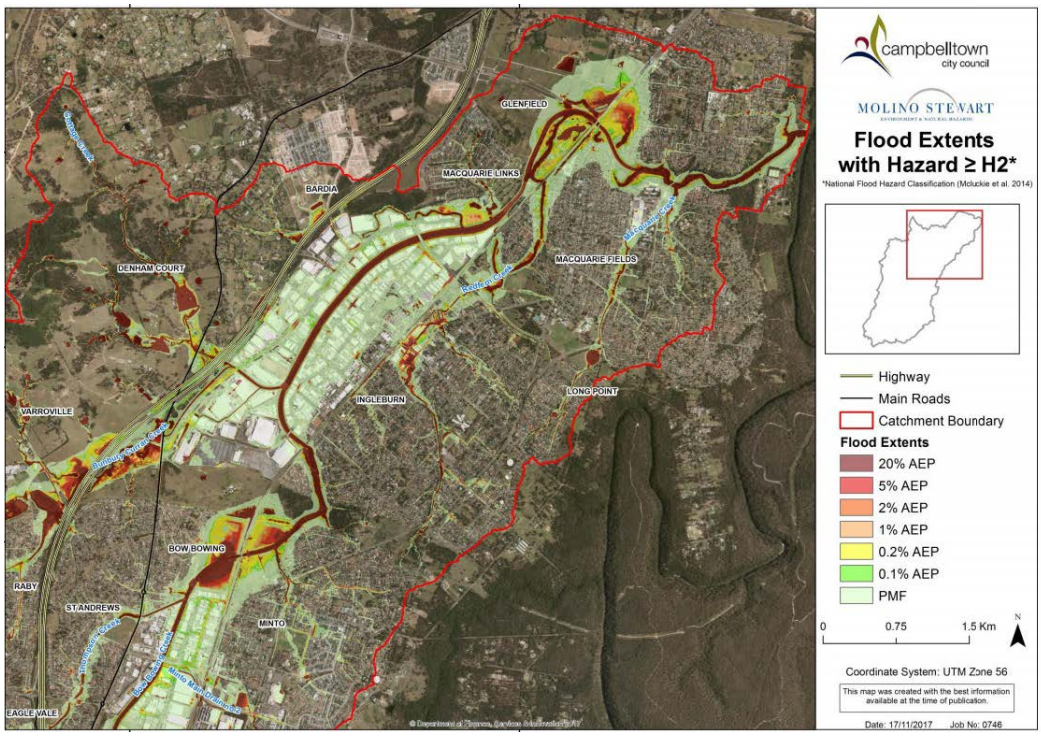
Aircraft Management	***Helicopter Landing Points:*** No suitable landing points are located within this suburb
	Airports: No suitable landing points are located within this suburb
Other	Refer to the Georges and Woronora River Valley Subplan and State Flood Plan for further information as flowing is likely to be occurring across the Georges and Woronora River.

14.2. INGLEBURN SECTOR/COMMUNITY TRAP POINTS MAP



WQD No.	Asset_Type	Asset_Description
9	Gross Pollutant Trap 600mm Diameter (HumeGard18)	WQD 28 1300 W010 Mount Olympus Street
10	Triple Steel Trash Rack	Redfern Creek Triple Steel Trash Rack under Henderson Rd/Milton Park Macquarie Fields
11	Pit Baskets	23.4 Carlisle St in front of fire station Ingleburn Central Business District Pit Baskets
12	Pit Baskets	23.1 Oxford & Carlisle Sts Ingleburn Central Business District Pit Baskets
13	Steel Trash Rack	Redfern Creek Steel Trash Rack (Treelands Ave end cul de sac)

14.3. INGLEBURN SECTOR/COMMUNITY FLOOD EXTENT WITH HAZARD >H2 MAPS



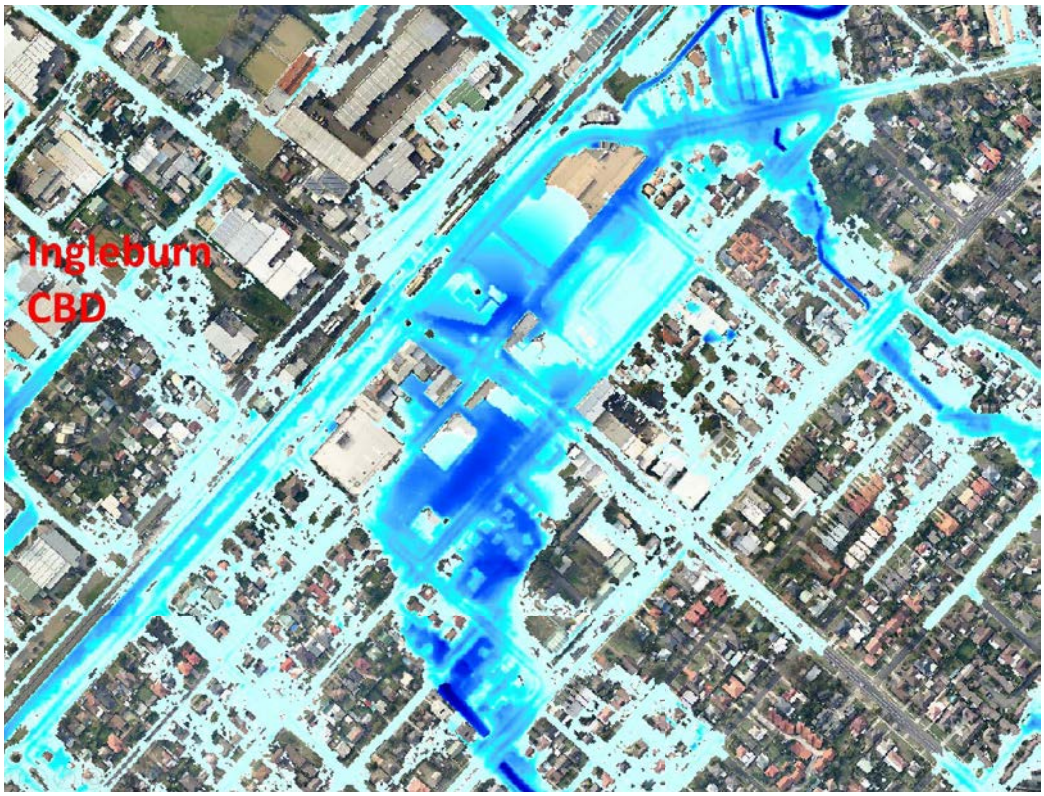
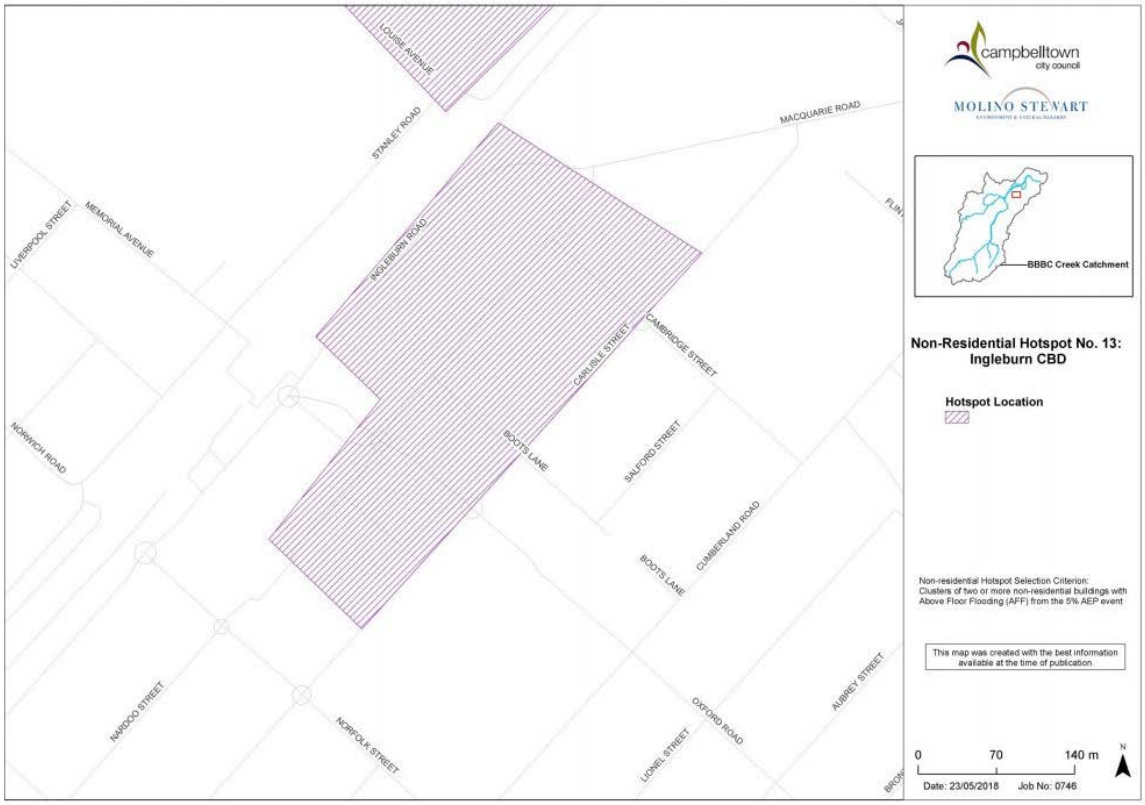
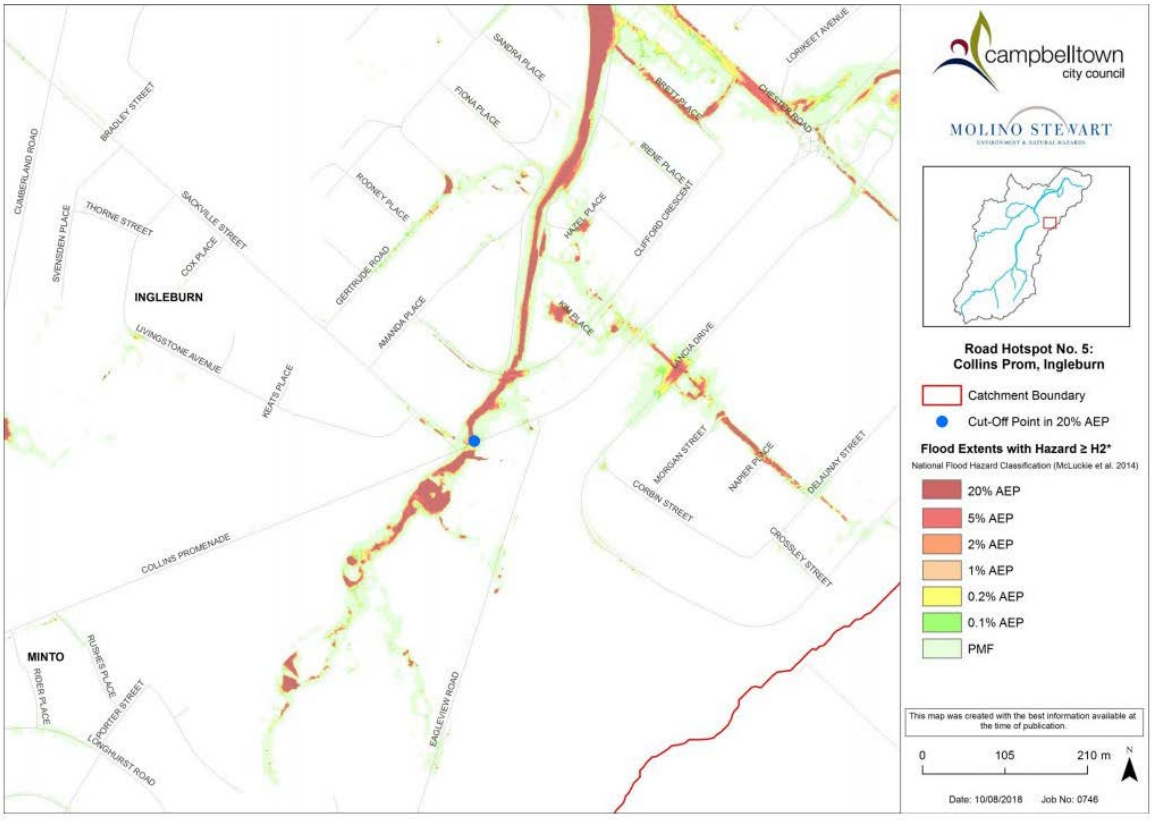


Figure 30. Flood risk to the proposed evacuation centre at Ingleburn RSL.


campbelltown city council
MOLINO STEWART
BBBC Creek Catchment
Residential Hotspot No. 20:
Chester Rd, Ingleburn
Hotspot Location
Hotspot Selection Criteria:
1. Buildings that in the PMF are touched by H6 or completely surrounded by H5 (Risk to People)
2. Buildings with with AFF greater than 0.05m in the 20% AEP event (Risk to Property)
3. One-storey buildings with Above Floor Flooding (AFF) greater than 0.5m in the PMF (Risk to People)
4. Buildings on Low Flood Islands in the 20% AEP event and with AFF in the PMF (Risk to People)
This map was created with the best information available at the time of publication.
0
62.5
125 m
N
Date: 24/05/2018
Job No: 0746
DEVONROAD
STANLEYROAD
BRONDHURSTROAD
NARDOOSTREET
SUFFOLKSTREET
PALMERSTREET
CARLISLESTREET
WELLINGTONSTREET
INGLEBURNROAD
ALBERTSTREET
CUMBERLANDROAD
CHESTERROAD
TREELANDSAVENUE
BELFORDSTREET
RAGLANAVENUE
BRENDASTREET
CARINDASTREET
EUROKASTREET
JACLYNSTREET
PHOENIXAVENUE

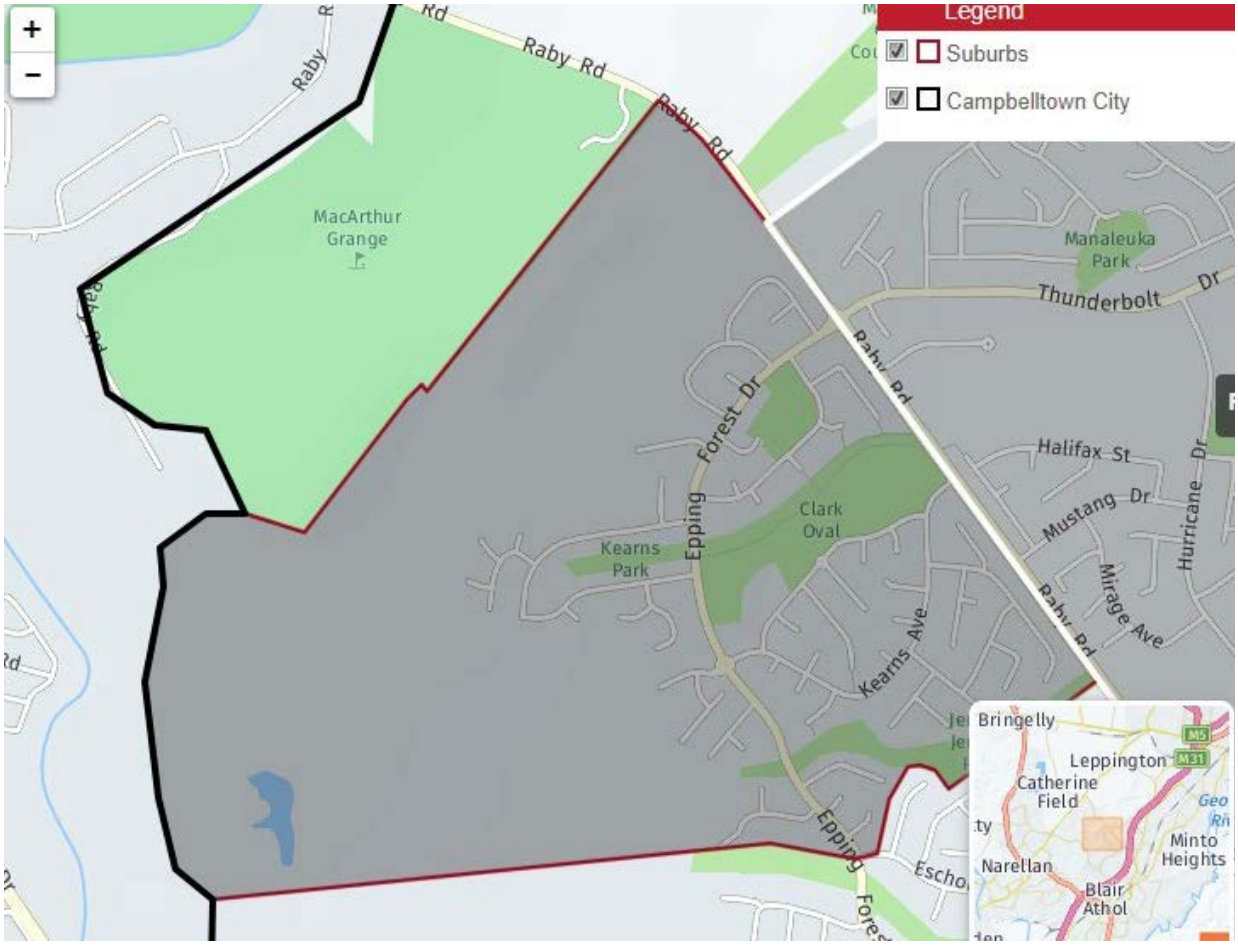

campbelltown city council
MOLINO STEWART
BBBC Creek Catchment
Residential Hotspot No. 24:
Oxford Rd, Ingleburn
Hotspot Location
Hotspot Selection Criteria:
1. Buildings that in the PMF are touched by H6 or completely surrounded by H5 (Risk to People)
2. Buildings with with AFF greater than 0.05m in the 20% AEP event (Risk to Property)
3. One-storey buildings with Above Floor Flooding (AFF) greater than 0.5m in the PMF (Risk to People)
4. Buildings on Low Flood Islands in the 20% AEP event and with AFF in the PMF (Risk to People)
This map was created with the best information available at the time of publication.
0
55
110 m
N
Date: 24/05/2018
Job No: 0746
CAMBRIDGESTREET
CUMBERLANDROAD
BLUE GUMAVENUE
KESTRELPLACE
KOALAAVENUE
MOORHENSTREET
SPINEBILLPLACE
LIONELSTREET
CURRAWONGSTREET
FALCONPLACE
SWIFTPLACE
AUBRETSTREET
JACANAPLACE
BRONZEWINGSTREET
KOOKABURRASTREET
WONGAPLACE
OXFORDROAD
PARADISESTREET
ELISAAVENUE
MINERPLACE





Map 59 Road Hotspot 5: Collins Promenade, Ingleburn

15. KEARNS SECTOR / COMMUNITY



15.1. KEARNS RESPONSE ARRANGEMENTS

Refer to Volume 2: Hazard and Risk in Campbelltown LGA for more information about this Sector/Community.

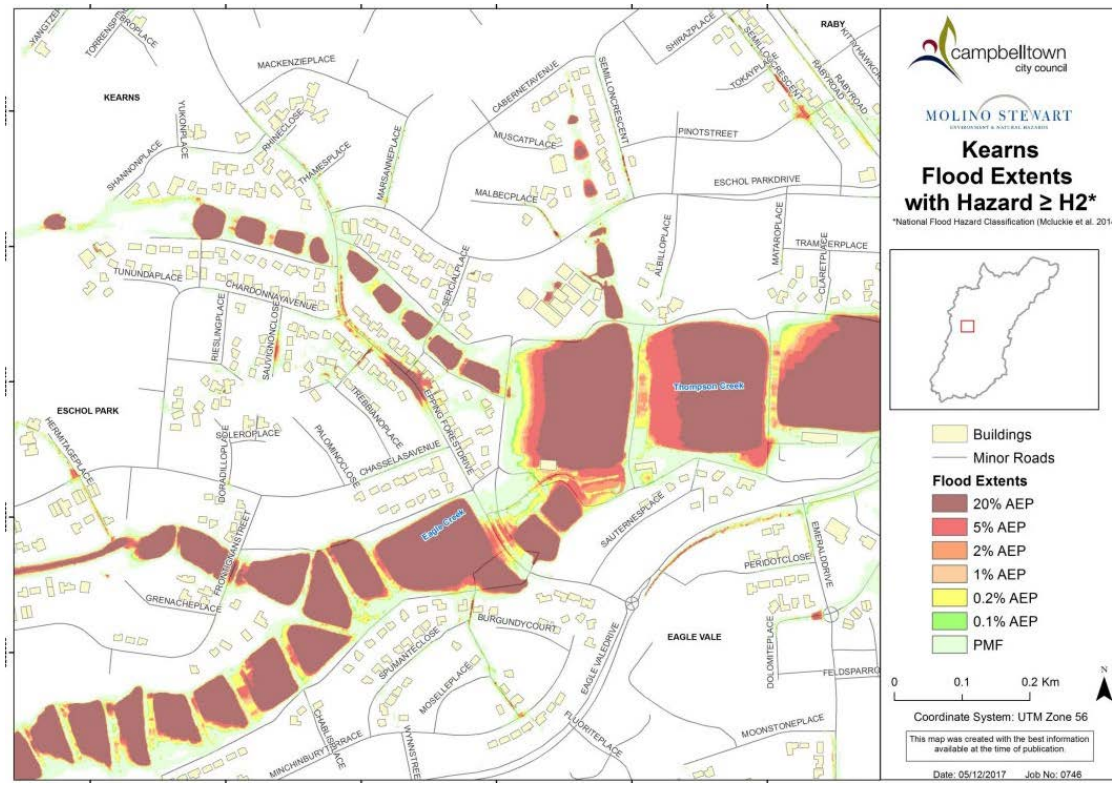
Sector Description	The 2021 resident population for Kearns community is 2,693. In Kearns, 20% of people spoke a language other than English at home in 2021 with the main languages being Arabic, Spanish and Hindi. Kearns is bounded by the locality of Varroville in the north, Raby Road in the east, the suburb of Eschol Park in the south, and the Camden Council area in the west. This suburb has not been identified in the regional development strategy as a focus area and is not currently undergoing redevelopment which means no impact on the physical topography or the community.
Hazard	In Kearns, an overland flow path runs south along Epping Forest Drive until it reaches a low spot in front of some houses which back onto Vale Brooke Reserve. From here the flow heads through the residential properties to join Thompson Creek (Map 15, Vol. 2). There is an overland flow path running south along Epping Forest Dr until it reaches a low spot in front of some houses which back onto Vale Brooke Reserve. From here the flow heads through the residential properties to join the main flow path through the reserve. There is also a second flow path running northeast from Trebbiano Pl to Epping Forest Dr, along a pedestrian pathway. **In a 20% AEP** event, modelling suggests that two houses in Epping Forest Dr and one house in Trebbiano Pl may expect above floor flooding.

<table>
<tr><td></td><td colspan="5">In a 1% AEP event, above floor flooding is occurring at four houses in Epping Forest Dr (including the two mentioned above) and at the house in Trebbiano Pl.
In a PMF, six buildings in Epping Forest Dr and the above-mentioned building in Trebbiano Pl are surrounded by flooding up to 1m deep and can experience more than 0.5m depth of above floor flooding. These are all single-storey buildings.</td></tr>
<tr><td>Triggers</td><td colspan="5">The following triggers will activate a response from Campbelltown SES Unit and consideration of activation of the LEMC:
BoM releasing a flood or severe storm warning for the Campbelltown LGA
Requests for Assistance indicating a flood event.
When directed by Metro Zone or the REOCON or SEOCON</td></tr>
<tr><td>Flood Affect Classification</td><td colspan="5">There are a few High Flood Islands identified in this suburb however due to the flash flood nature of flooding that relate to all defined flood events up to a PMF with floods hitting its peak within 6hrs and receding within the following 6-12 hrs the duration is short.
Community engagement and continual monitoring of isolation and flood threat in case of PMF is required.
No known Flood Rescue Hotspots within this sector.</td></tr>
<tr><td>At risk properties</td><td></td><td colspan="3">Total number of properties within Sector/Community</td><td></td></tr>
<tr><td>At risk Facilities</td><td colspan="5">The following Childcare / School Facilities at risk of flooding / isolation:</td></tr>
<tr><td>Sector Control</td><td colspan="5"></td></tr>
<tr><td>Key Warning Gauge Name</td><td>Name</td><td>AWRC No.</td><td>Min (m)</td><td>Mod (m)</td><td>Maj (m)</td></tr>
<tr><td></td><td></td><td></td><td>-</td><td>-</td><td>-</td></tr>
<tr><td>Additional Notes</td><td colspan="5"></td></tr>
<tr><td>General Strategy</td><td colspan="5">Monitor
Promote Property Protection
Community Engagement
Potential for isolation but only for short duration 24hrs so potential resupply / rescue may be required if secondary emergencies occur during this short isolation period.</td></tr>
<tr><td>Key Risks / Consequences</td><td colspan="5">There is an overland flow path running south along Epping Forest Dr until it reaches a low spot in front of some houses which back onto Vale Brooke Reserve. From here the flow heads through the residential properties to join the main flow path through the reserve.
There is also a second flow path running northeast from Trebbiano Pl to Epping Forest Dr, along a pedestrian pathway.<ol type="i">
In a 20% AEP event, modelling suggests that two houses in Epping Forest Dr and one house in Trebbiano Pl may expect above floor flooding.
In a 1% AEP event, above floor flooding is occurring at four houses in Epping Forest Dr (including the two mentioned above) and at the house in Trebbiano Pl.
In a PMF, six buildings in Epping Forest Dr and the above-mentioned building in Trebbiano Pl are surrounded by flooding up to 1m deep and can experience more than 0.5m depth of above floor flooding. These are all single-storey buildings.
Roads impacted by flooding is Epping Forest Drive, Trebbiano Pl and Raby Rd.</td></tr>
<tr><td></td><td colspan="5">The trigger would be a Severe Weather Warnings issued by BOM.</td></tr>
</table>

Information and Warnings	Release messages around Property Protection Measures / if time available set up Sandbag point for those local properties potentially impacted - flash flooding across low lying areas.
	N/A for Evac Sequencing however isolation for short duration will be required. Early Community Education on the threat coupled with social media advice. Ask Council to consider the Flash flood Warning System as a mitigation measure as SES cannot warn to this community.
Property Protection	Property protection measures: The property protection measures for the threat of flash flooding could be move valuable household goods to protect from flow path for AFF preventing water damage, sandbag around doors and gaps to prevent water getting into at risk homes. Established a known point for sandbagging and advertise on Social Media Facebook Pages as a property protection measure.
	Assistance with property protection: Specific assistance with property protection by way of sandbagging and lifting or transporting of furniture, personal effects etc may be available – consider
	Protection of essential infrastructure: Not applicable in Kearns
	Levee consideration: Not applicable in Kearns.
Evacuation and/or Isolation Triggers	Closure of evacuation roads occur at frequent flood events 20% AEP. Flooding is quick to rise reaching peak within 6hrs and receding quickly resulting no time being available to evacuate effectively.
Evacuation Triggers	Not feasible due to nature of flooding being flash flooding.
Sequencing of evacuation	Not feasible due to nature of flooding being flash flooding.
Evacuation Routes	Raby Road
Evacuation Route Closure	Not feasible due to nature of flooding being flash flooding.
Method of Evacuation	Not feasible due to nature of flooding being flash flooding.
Evacuation Centre / Assembly Point	Campbelltown Civic Hall Queen St Campbelltown
Large scale evacuations	Refer to the Georges and Woronora River Valley Subplan and Hawkesbury Nepean State Flood Plan for further information as flowing is likely to be occurring across the Georges and Woronora River and Hawkesbury Nepean Rivers concurrently.
Rescue	There are no known flood rescue hotspots within the area however there are trap point locations that are identified in the map below.
Resupply	N/A
Aircraft Management	***Helicopter Landing Points***
	Airports: No suitable landing points are located within this suburb

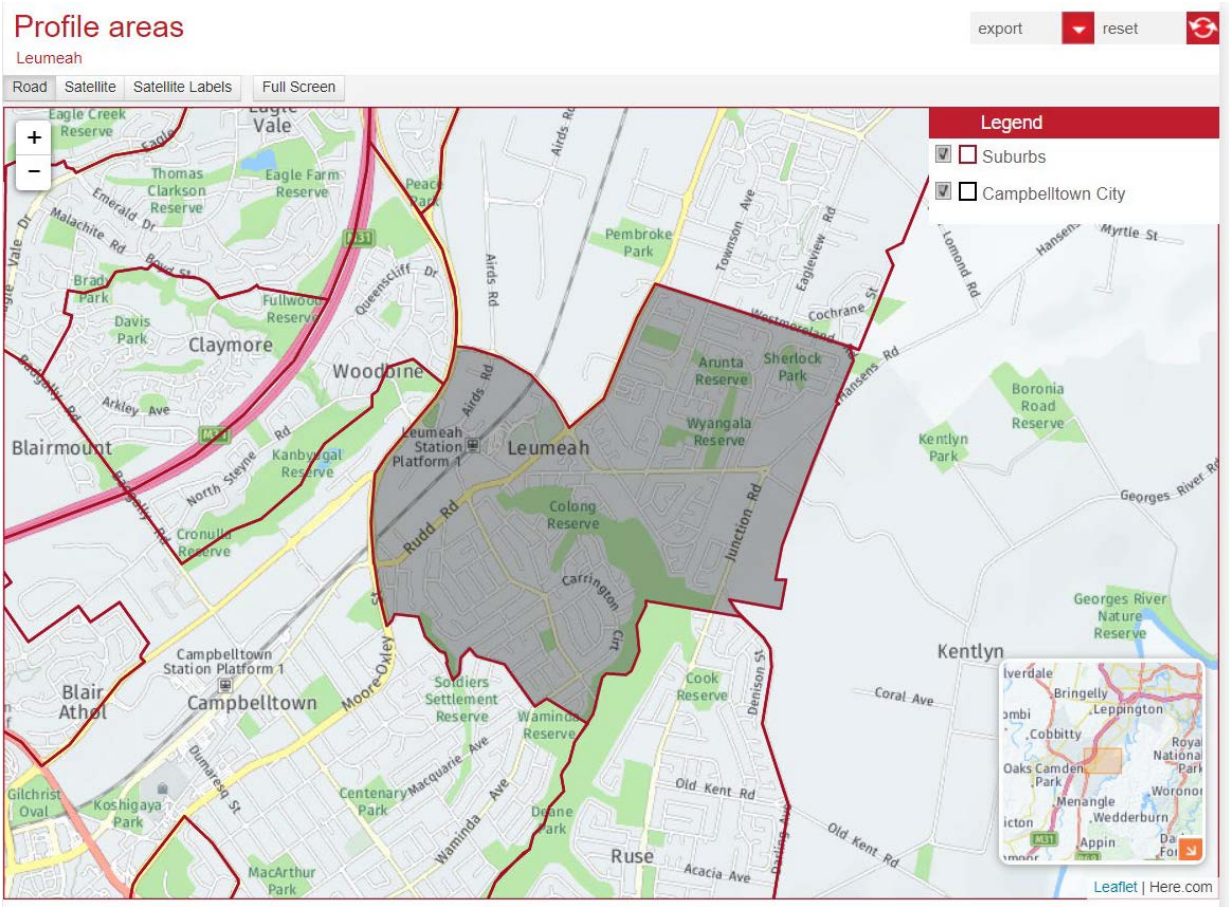
Other	Refer to the Georges and Woronora River Valley Subplan and State Flood Plan for further information as flowing is likely to be occurring across the Georges and Woronora River .

15.2. KEARNS SECTOR/COMMUNITY FLOOD EXTENTS WITH HAZARD >H2 MAPS



Map 34 Residential Hotspot 3: Epping Forest Drive, Kearns

16. LEUMEAH SECTOR / COMMUNITY



16.1. LEUMEAH RESPONSE ARRANGEMENTS

Refer to Volume 2: Hazard and Risk in Campbelltown LGA for more information about this Sector/Community.

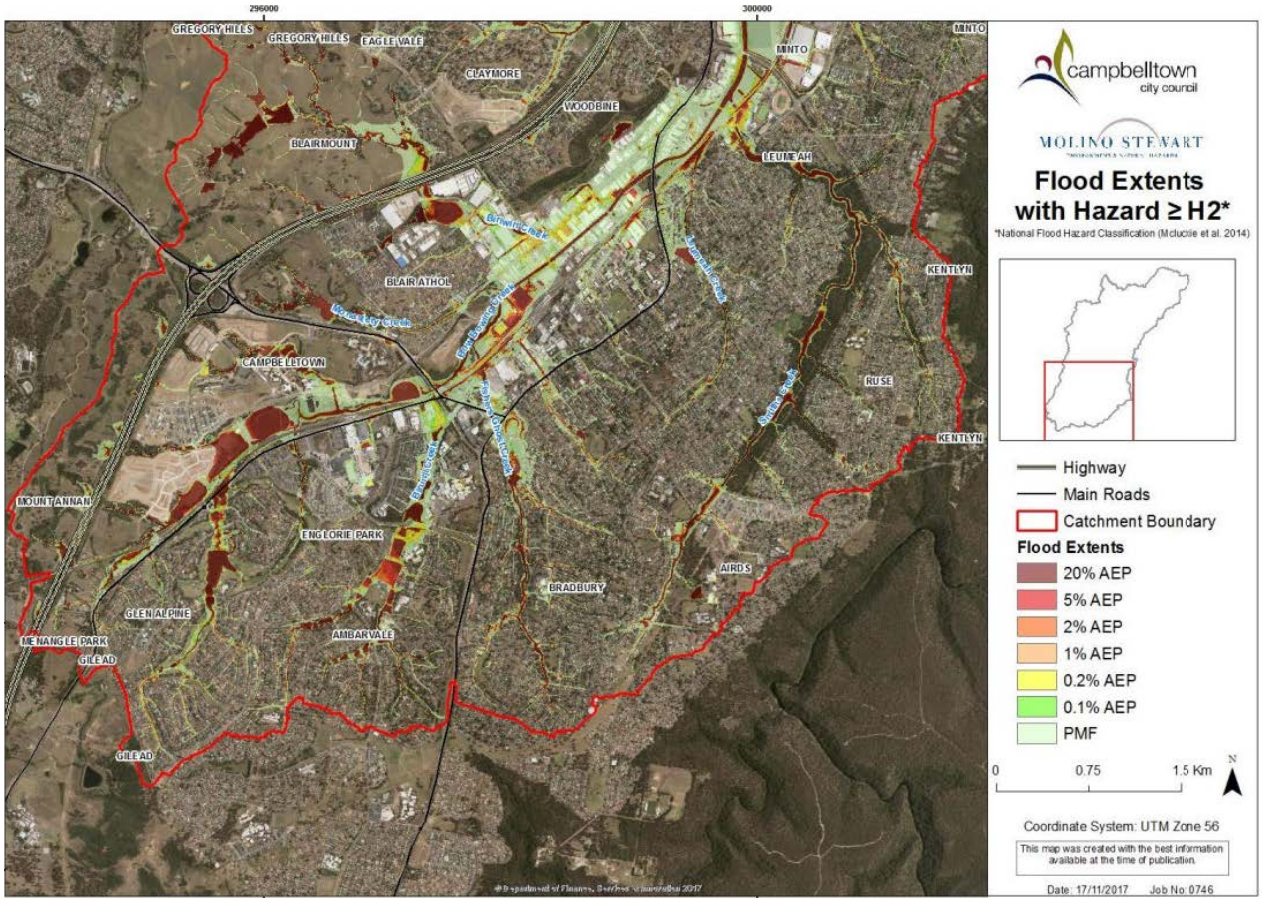
Sector Description	The 2021 resident population for Leumeah community is 9,992. In Leumeah, 26.1% of people spoke a language other than English at home in 2021 with the main languages being Bengali Tagalog and Hindi. Leumeah is bounded by Rose Payten Drive, Pembroke Road and Westmoreland Road in the north, the locality of Kentlyn in the east, Smiths Creek Reserve, Macquarie Avenue, Burns Road, Lindesay Street and Leumeah Creek in the south, and Campbelltown Road in the west. The suburb is home to the Campbelltown Stadium and Wests Club. Leumeah has been identified as a growth area.
Hazard	From Biriwiri Creek to Leumeah Creek, the creek overflows its banks only in the PMF, affecting the industrial areas in Leumeah. In Leumeah, Leumeah Creek (Map 8, Vol. 2) is well contained within its banks, although some road and property flooding can be seen in the PMF downstream of Campbelltown North Detention Basin, between Leumeah Creek and Campbelltown Rd. There is also some flooding occurring along Leumeah Creek, upstream of the railway culvert, but this affects mostly open space and only a couple of properties from the 20% AEP. From Biriwiri Creek to Leumeah Creek, the creek overflows its banks only in the PMF, affecting the industrial areas in Leumeah.

<table>
<tr><td></td><td>Leumeah is very similar to Minto in that there are few existing residential properties with significant flood risk but quite a few commercial and industrial buildings which can be isolated and flooded in frequent floods.
Smith's Creek causes some flooding between Pembroke Rd and the railway, affecting some of the nearby properties in very rare events (i.e. from the 0.2% AEP) and the stadium car park from the 20% AEP
Roads cut - Leumeah Rd East bound at Wyangalla Crescent (AEP 20%):-
O Sullivan Rd (AEP 20%)
• Old Leumeah Rd (AEP 0.20%)
• Peter Meadows Rd
• Ben Lomond Rd between Pembroke and Airds Rd (AEP 20%)
• Airds Rd around Ben Lomond Rd (AEP 0.20%)</td></tr>
<tr><td>Triggers</td><td>The following triggers will activate a response from Campbelltown SES Unit and consideration of activation of the LEMC:
• BoM releasing a flood or severe storm warning for the Campbelltown LGA
• Requests for Assistance indicating a flood event.
• When directed by Metro Zone or the REOCON or SEOCON</td></tr>
<tr><td>Flood Affect Classification</td><td>There is a Low Flood Island identified in this suburb however due to the flash flood nature of flooding that relate to all defined flood events up to a PMF with floods hitting its peak within 6hrs and receding within the following 6-12 hrs the duration is short.
Community engagement and continual monitoring of isolation and flood threat in case of PMF is required.
Rudd Rd, Leumeah low flood islands are confined by floodwaters (AEP 5%) Wests Leagues Club (AEP 5%).</td></tr>
<tr><td>At risk properties</td><td>Total number of properties within Sector/Community</td></tr>
<tr><td>At risk Facilities</td><td>• Leumeah Public School PMF AFFF 0.2m.
• Cinderella Childcare 6 Hughes St PMF AFF 0.2m.
• West club - The model indicates that central part of the site may flood from the 5% AEP, with the flood affecting also, the western part of the site in greater events. All access roads are cut in the PMF, however – the 20% AEP event cuts O'Sullivan Toad – The 0.2% AEP event cuts Old Leumeah Road entrance to the Centre.
• Campbelltown Sports Stadium Carpark 20% AEP</td></tr>
<tr><td>Sector Control</td><td></td></tr>
<tr><td>Key Warning Gauge Name</td><td>
<table>
<tr><th>Name</th><th>AWRC No.</th><th>Min (m)</th><th>Mod (m)</th><th>Maj (m)</th></tr>
<tr><td>Pembroke Rd and Onslow Pl Water Sensor
Opposite 43 Rudd Rd Water Sensor</td><td></td><td>-</td><td>-</td><td>-</td></tr>
</table>
</td></tr>
<tr><td>Additional Notes</td><td></td></tr>
<tr><td>General Strategy</td><td>Monitor
Promote Property Protection
Community Engagement
Potential for isolation but only for short duration 24hrs so potential resupply / rescue may be required if secondary emergencies occur during this short isolation period.</td></tr>
</table>

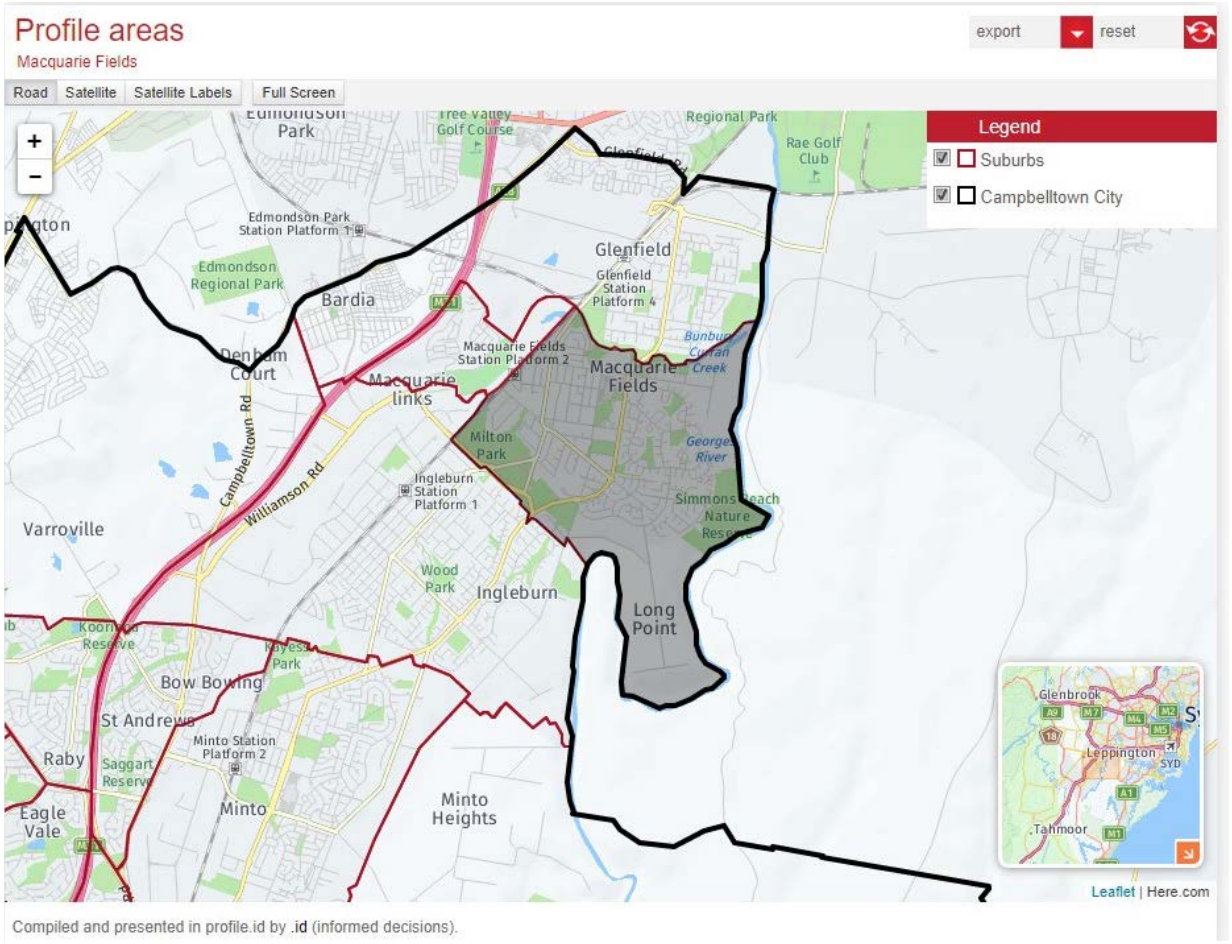
Key Risks / Consequences	
Information and Warnings	The trigger would be a Severe Weather Warnings issued by BOM. Release messages around Property Protection Measures / if time available set up Sandbag point for those local properties potentially impacted - flash flooding across low lying areas.
	N/A for Evac Sequencing however isolation for short duration will be required Early Community Education on the threat coupled with social media advice Ask Council to consider the Flash flood Warning System as a mitigation measure as SES cannot warn to this community.
Property Protection	Property protection measures: The property protection measures for the threat of flash flooding could be move valuable household goods to protect from flow path for AFF preventing water damage, sandbag around doors and gaps to prevent water getting into at risk homes. Established a known point for sandbagging and advertise on Social Media Facebook Pages as a property protection measure.
	Assistance with property protection: Specific assistance with property protection by way of sandbagging and lifting or transporting of furniture, personal effects etc may be available – consider.
	Protection of essential infrastructure: Not applicable in Leumeah
	Levee consideration: Not applicable in Leumeah.
Evacuation and/or Isolation Triggers	Closure of evacuation roads occur at frequent flood events 20% AEP. Flooding is quick to rise reaching peak within 6hrs and receding quickly resulting no time being available to evacuate effectively.
Evacuation Triggers	Not feasible due to nature of flooding being flash flooding.
Sequencing of evacuation	Not feasible due to nature of flooding being flash flooding.
Evacuation Routes	Raby Road
Evacuation Route Closure	Not feasible due to nature of flooding being flash flooding.
Method of Evacuation	Not feasible due to nature of flooding being flash flooding.
Evacuation Centre / Assembly Point	Campbelltown Civic Hall Queen St Campbelltown
Large scale evacuations	Refer to the Georges and Woronora River Valley Subplan and Hawkesbury Nepean State Flood Plan for further information as flowing is likely to be occurring across the Georges and Woronora River and Hawkesbury Nepean Rivers concurrently.
Rescue	There are no known flood rescue hotspots within the area however there are trap point locations that are identified in the map below.
Resupply	N/A
	Helicopter Landing Points:

Aircraft Management	***Airports:*** No suitable landing points are located within this suburb
Other	Refer to the Georges and Woronora River Valley Subplan State Flood Plan for further information as flowing is likely to be occurring across the Georges and Woronora River

16.2. LEUMEAH SECTOR/COMMUNITY FLOOD EXTENT WITH HAZARD >H2 MAP



17. MACQUARIE FIELDS SECTOR / COMMUNITY



17.1. MACQUARIE FIELDS RESPONSE ARRANGEMENTS

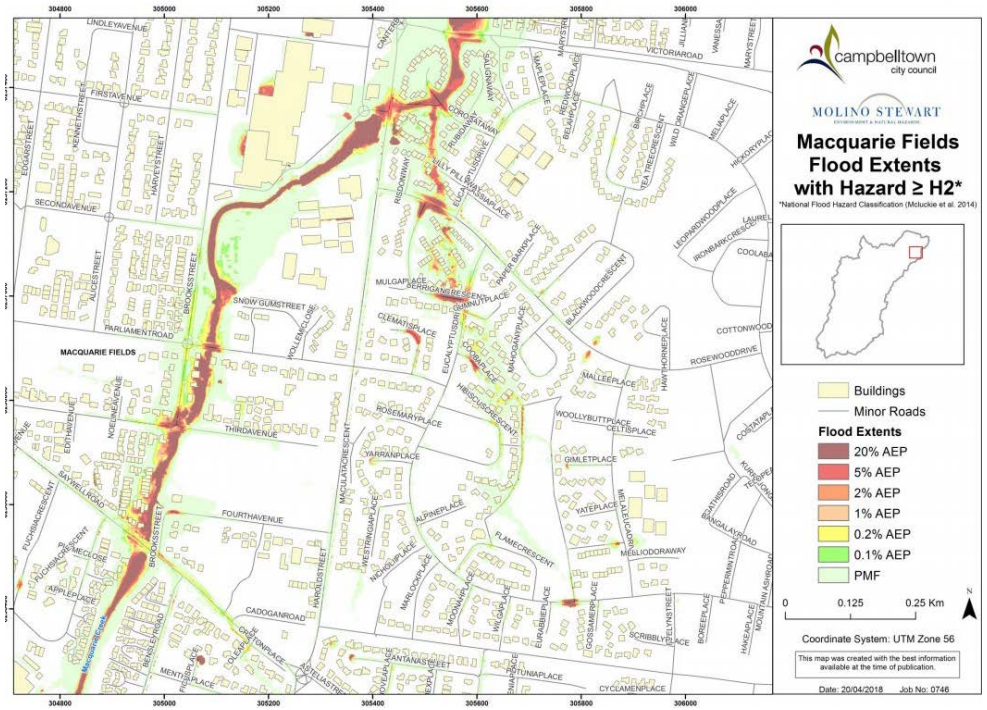
Refer to Volume 2: Hazard and Risk in Campbelltown LGA for more information about this Sector/Community.

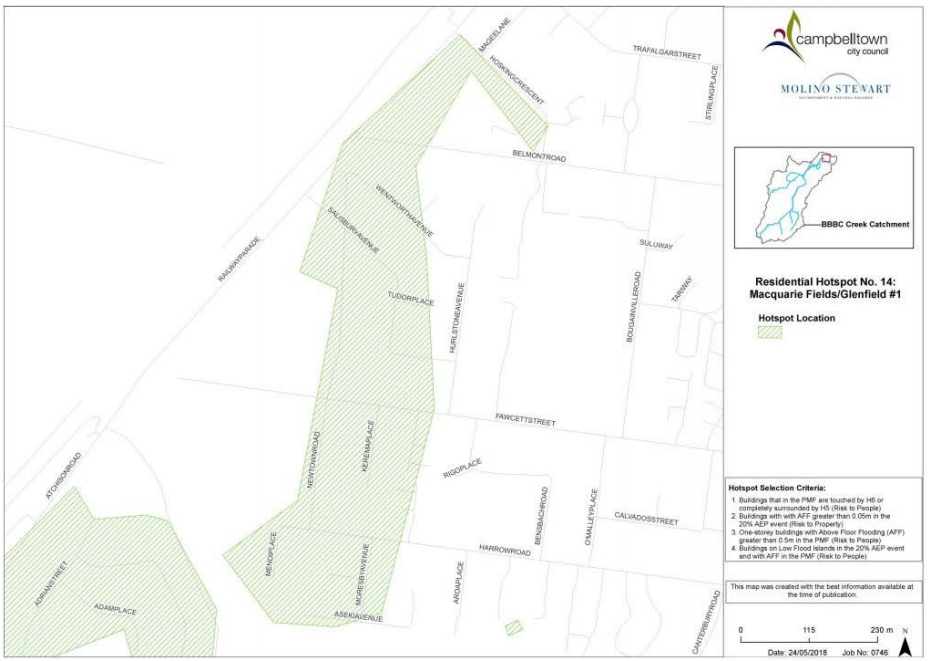
Sector Description	The 2021 resident population for Macquarie Fields community is 14,023. In Macquarie Fields, 40% of people spoke a language other than English at home in 2021 with the main languages being Bengali, Arabic and Samoan. Macquarie Fields is bounded by Bunbury Curran Creek in the north, the Georges River in the east and south-east, the suburb of Ingleburn and Henderson Road in the south-west, and the railway line in the west. Macquarie Fields has been identified as a growth area.
Hazard	
Triggers	The following triggers will activate a response from Campbelltown SES Unit and consideration of activation of the LEMC: • BoM releasing a flood or severe storm warning for the Campbelltown LGA • Requests for Assistance indicating a flood event. • When directed by Metro Zone or the REOCON or SEOCON
Flood Affect Classification	There are a number of Low Flood Islands and High Flood Islands identified in this suburb however due to the flash flood nature of flooding that relate to all defined flood events up to a PMF with floods hitting its peak within 6hrs and receding within the following 6-12 hrs the duration is short.

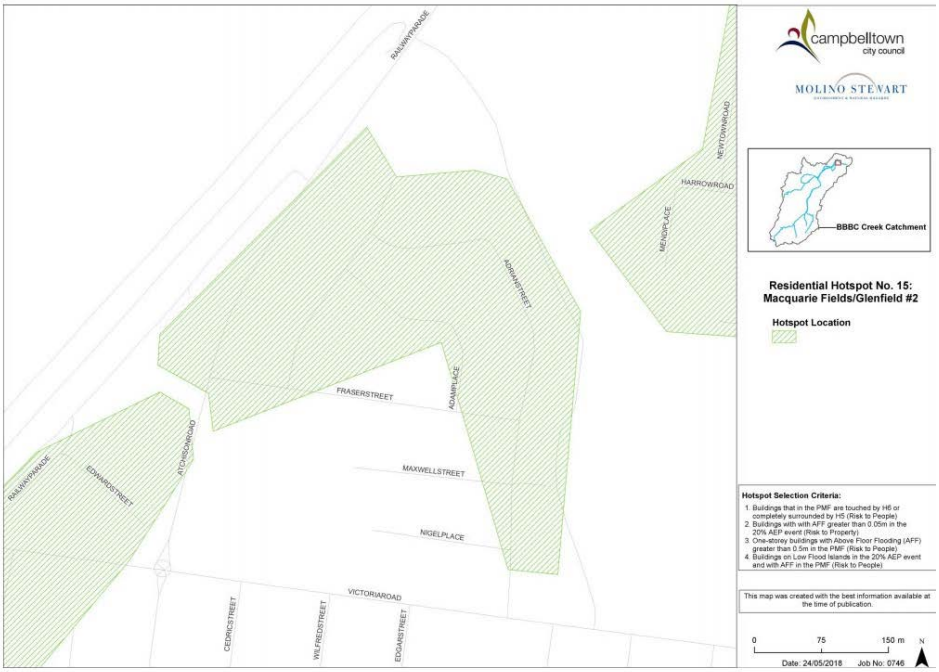
<table>
<tr><td></td><td>Community engagement and continual monitoring of isolation and flood threat in case of PMF is required.
Flood Islands:
• Houses in Atchinson Rd and Adrian St Macquarie Fields (AEP 20%).
• Good Samaritan Sisters Village in Victoria Rd Macquarie Fields (AEP 20%).</td></tr>
<tr><td>At risk properties</td><td><table><tr><td></td><td>Total number of properties within Sector/Community</td><td></td></tr></table></td></tr>
<tr><td>At risk Facilities</td><td>Macquarie Fields Police Station 1% AEP AFF 0.1m</td></tr>
<tr><td>Sector Control</td><td></td></tr>
<tr><td>Key Warning Gauge Name</td><td><table><tr><th>Name</th><th>AWRC No.</th><th>Min (m)</th><th>Mod (m)</th><th>Maj (m)</th></tr><tr><td>Railway Pde Gauge (Bunbury Curran Creek) and Water Sensor</td><td></td><td>-</td><td>-</td><td>-</td></tr></table></td></tr>
<tr><td>Additional Notes</td><td></td></tr>
<tr><td>General Strategy</td><td>Monitor
Promote Property Protection
Community Engagement
Potential for isolation but only for short duration 24hrs so potential resupply / rescue may be required if secondary emergencies occur during this short isolation period.</td></tr>
<tr><td>Key Risks / Consequences</td><td></td></tr>
<tr><td>Information and Warnings</td><td>The trigger would be a Severe Weather Warnings issued by BOM. Release messages around Property Protection Measures / if time available set up Sandbag point for those local properties potentially impacted - flash flooding across low lying areas.</td></tr>
<tr><td></td><td>N/A for Evac Sequencing however isolation for short duration will be required.
Early Community Education on the threat coupled with social media advice.
Ask Council to consider the Flash flood Warning System as a mitigation measure as SES cannot warn to this community.</td></tr>
<tr><td>Property Protection</td><td>The property protection measures for the threat of flash flooding could be move valuable household goods to protect from flow path for AFF preventing water damage, sandbag around doors and gaps to prevent water getting into at risk homes. Established a known point for sandbagging and advertise on Social Media Facebook Pages as a property protection measure.</td></tr>
<tr><td></td><td>Assistance with property protection:
Specific assistance with property protection by way of sandbagging and lifting or transporting of furniture, personal effects etc may be available – consider</td></tr>
<tr><td></td><td>Protection of essential infrastructure:
Not applicable in Macquarie Fields</td></tr>
<tr><td></td><td>Levee consideration:
Not applicable in Macquarie Fields.</td></tr>
<tr><td>Evacuation and/or Isolation Triggers</td><td>Closure of evacuation roads occur at frequent flood events 20% AEP. Flooding is quick to rise reaching peak within 6hrs and receding quickly resulting no time being available to evacuate effectively.</td></tr>
<tr><td>Evacuation Triggers</td><td>Not feasible due to nature of flooding being flash flooding.</td></tr>
</table>

Sequencing of evacuation	Not feasible due to nature of flooding being flash flooding.
Evacuation Routes	
Evacuation Route Closure	Not feasible due to nature of flooding being flash flooding.
Method of Evacuation	Not feasible due to nature of flooding being flash flooding.
Evacuation Centre / Assembly Point	Ingleburn Community Centre Oxford Rd Ingleburn.
Large scale evacuations	Refer to the Georges and Woronora River Valley Subplan and Hawkesbury Nepean State Flood Plan for further information as flowing is likely to be occurring across the Georges and Woronora River and Hawkesbury Nepean Rivers concurrently.
Rescue	There are no known flood rescue hotspots within the area however there are trap point locations that are identified in the map below.
Resupply	N/A
Aircraft Management	***Helicopter Landing Points:***
	Airports: No suitable landing points are located within this suburb
Other	Refer to the Georges and Woronora River Valley Subplan and State Flood Plan for further information as flowing is likely to be occurring across the Georges and Woronora River .

17.2. MACQUARIE FIELDS SECTOR/COMMUNITY FLOOD EXTENT WITH HAZARD >H2 MAP





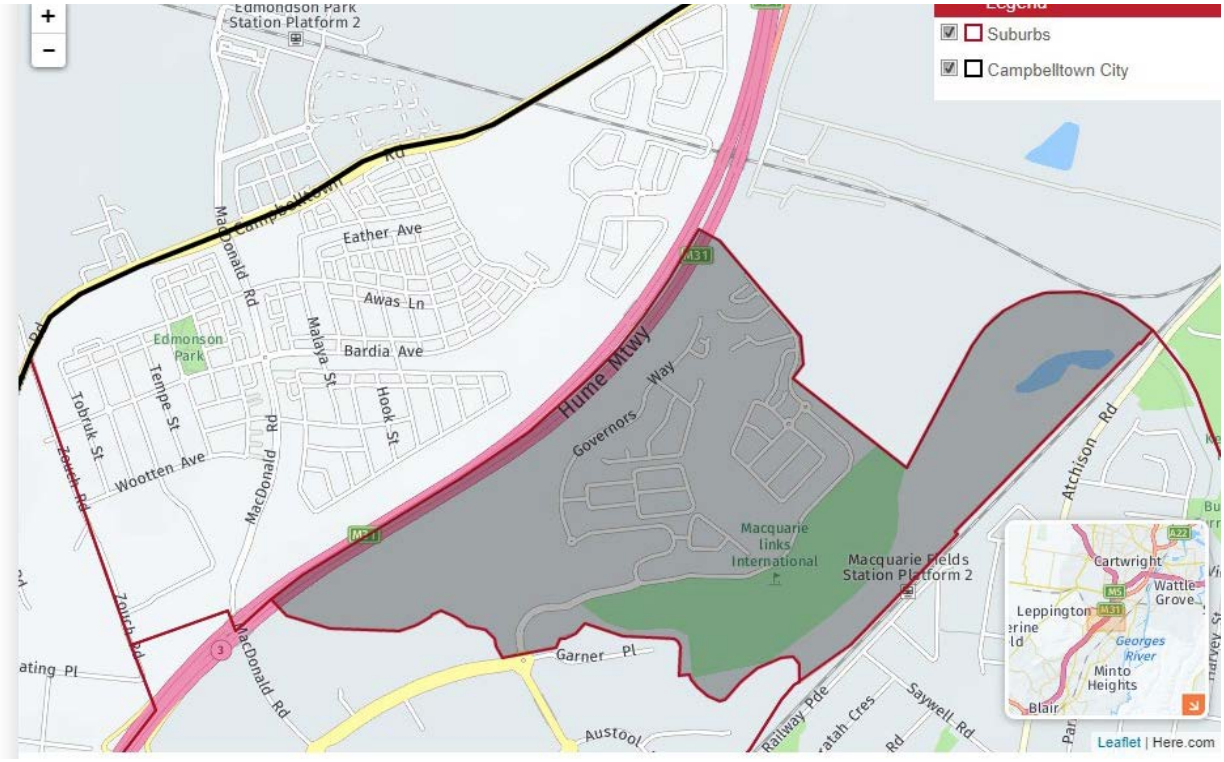

RAILWAYPARADE
NEWTOWNROAD
HARROWROAD
MENGPLACE
ADAMSTREET
FRASERSTREET
ADAMPLACE
MAXWELLSTREET
NIGELPLACE
VICTORIAROAD
EDWARDSTREET
ATCHISONROAD
CEDRICSTREET
WILFREDSTREET
EDGARSTREET
campbelltown city council
MOLINO STEWART
BBBC Creek Catchment
Residential Hotspot No. 15:
Macquarie Fields/Glenfield #2
Hotspot Location
Hotspot Selection Criteria:
1. Buildings that in the PMF are touched by H6 or completely surrounded by H5 (Risk to People)
2. Buildings with with AFF greater than 0.05m in the 20% AEP event (Risk to Property)
3. One-storey buildings with Above Floor Flooding (AFF) greater than 0.5m in the PMF (Risk to People)
4. Buildings on Low Flood Islands in the 20% AEP event and with AFF in the PMF (Risk to People)
This map was created with the best information available at the time of publication.
0
75
150 m
N
Date: 24/05/2018
Job No: 0746


MARYSTREET
VICTORIAROAD
campbelltown city council
MOLINO STEWART
BBBC Creek Catchment
Residential Hotspot No. 16:
Victoria Rd, Macquarie Fields
Hotspot Location
Hotspot Selection Criteria:
1. Buildings that in the PMF are touched by H6 or completely surrounded by H5 (Risk to People)
2. Buildings with with AFF greater than 0.05m in the 20% AEP event (Risk to Property)
3. One-storey buildings with Above Floor Flooding (AFF) greater than 0.5m in the PMF (Risk to People)
4. Buildings on Low Flood Islands in the 20% AEP event and with AFF in the PMF (Risk to People)
This map was created with the best information available at the time of publication.
0
20
40 m
N
Date: 24/05/2018
Job No: 0746

ap 44 Residential Hotspot 17: Coronata Way, Macquarie Fields

Map 45 Residential Hotspot 18: Macquarie Fields/Glenfield #3

18. MACQUARIE LINKS SECTOR / COMMUNITY



18.1. MACQUARIE LINKS RESPONSE ARRANGEMENTS

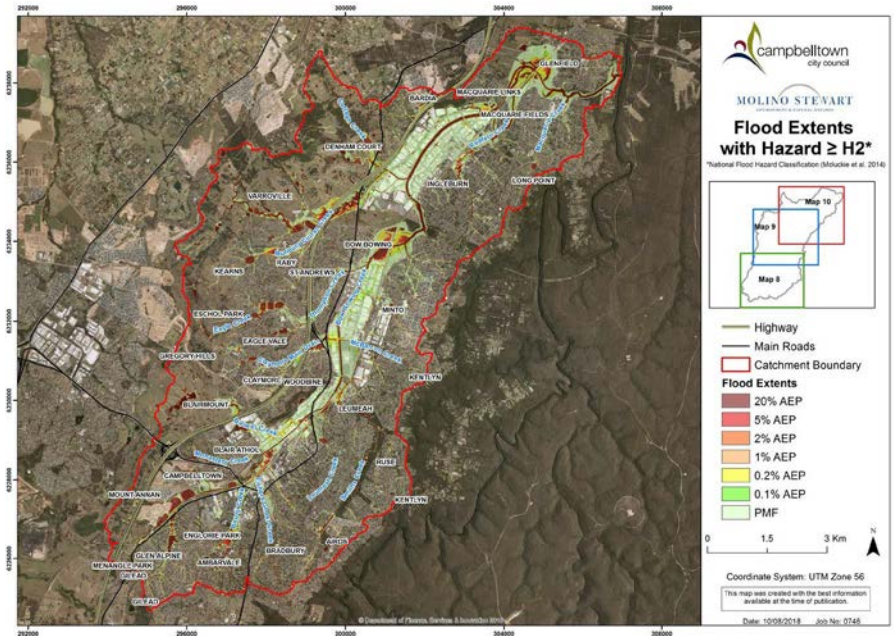
Refer to Volume 2: Hazard and Risk in Campbelltown LGA for more information about this Sector/Community.

Sector Description	Macquarie Links is bounded by the suburb of Glenfield, Macquarie Field House and Bunbury Curran Creek in the north, the railway line in the east, Bow Bowing Canal and Bunbury Curran Creek in the south, and the Hume Highway in the west. In 2021 the Resident Population for Macquarie Links was 1,455, with a population density of 896.0 persons per square km. In 2021 44% of Macquarie Links population do not speak English at home. The top 3 languages spoken are Bengali, Filipino/Tagalog and Hindi. This suburb has not been identified in the regional development strategy as a focus area and is not currently undergoing redevelopment which means no impact on the physical topography or the community.
Hazard	The BBBCC passes through the Golf course and contains a large drop structure for slowing the speed of the flood water. The golf course will be impacted by an AEP 5% event.
Triggers	The following triggers will activate a response from Campbelltown SES Unit and consideration of activation of the LEMC: • BoM releasing a flood or severe storm warning for the Campbelltown LGA. • Requests for Assistance indicating a flood event. • When directed by Metro Zone or the REOCON or SEOCON.
Flood Affect Classification	There is a Low Flood Island identified in this suburb however due to the flash flood nature of flooding that relate to all defined flood events up to a PMF with floods hitting its peak within 6hrs and receding within the following 6-12 hrs the duration is short.

<table>
<tr><td></td><td colspan="5">Community engagement and continual monitoring of isolation and flood threat in case of PMF is required.</td></tr>
<tr><td>At risk properties</td><td></td><td colspan="3">Total number of properties within Sector/Community</td><td></td></tr>
<tr><td>At risk Facilities</td><td colspan="5">Macquarie Links Golf Course 5% AEP 1.0 m</td></tr>
<tr><td>Sector Control</td><td colspan="5"></td></tr>
<tr><td rowspan="2">Key Warning Gauge Name</td><td colspan="2">Name</td><td>AWRC No.</td><td>Min (m)</td><td>Mod (m)</td><td>Maj (m)</td></tr>
<tr><td colspan="2"></td><td></td><td>-</td><td>-</td><td>-</td></tr>
<tr><td>Additional Notes</td><td colspan="5"></td></tr>
<tr><td>General Strategy</td><td colspan="5">Monitor
Promote Property Protection
Community Engagement
Potential for isolation but only for short duration 24hrs so potential resupply / rescue may be required if secondary emergencies occur during this short isolation period.</td></tr>
<tr><td>Key Risks / Consequences</td><td colspan="5">Closure of Creigan Road and Briar Road at frequent 20% AEP event which can cause short duration isolation to several property owners within the vicinity.</td></tr>
<tr><td rowspan="2">Information and Warnings</td><td colspan="5">The trigger would be a Severe Weather Warnings issued by BOM. Release messages around Property Protection Measures / if time available set up Sandbag point for those local properties potentially impacted - flash flooding across low lying areas.</td></tr>
<tr><td colspan="5">N/A for Evac Sequencing however isolation for short duration will be required.
Early Community Education on the threat coupled with social media advice.
Ask Council to consider the Flash flood Warning System as a mitigation measure as SES cannot warn to this community.</td></tr>
<tr><td rowspan="4">Property Protection</td><td colspan="5">Property protection measures:
The property protection measures for the threat of flash flooding could be move valuable household goods to protect from flow path for AFF preventing water damage, sandbag around doors and gaps to prevent water getting into at risk homes.
Established a known point for sandbagging and advertise on Social Media Facebook Pages as a property protection measure.</td></tr>
<tr><td colspan="5">Assistance with property protection:
Specific assistance with property protection by way of sandbagging and lifting or transporting of furniture, personal effects etc may be available – consider</td></tr>
<tr><td colspan="5">Protection of essential infrastructure:
Not applicable</td></tr>
<tr><td colspan="5">Levee consideration:
Not applicable</td></tr>
<tr><td>Evacuation and/or Isolation Triggers</td><td colspan="5">Closure of evacuation roads occur at frequent flood events 20% AEP. Flooding is quick to rise reaching peak within 6hrs and receding quickly resulting no time being available to evacuate effectively.</td></tr>
<tr><td>Evacuation Triggers</td><td colspan="5">Not feasible due to nature of flooding being flash flooding.</td></tr>
<tr><td>Sequencing of evacuation</td><td colspan="5">Not feasible due to nature of flooding being flash flooding.</td></tr>
</table>

Evacuation Routes	
Evacuation Route Closure	Not feasible due to nature of flooding being flash flooding.
Method of Evacuation	Not feasible due to nature of flooding being flash flooding.
Evacuation Centre / Assembly Point	Campbelltown Civic Hall Queen St Campbelltown or Ingleburn Community Hall subject to access.
Large scale evacuations	Refer to the Georges and Woronora River Valley Subplan and Hawkesbury Nepean State Flood Plan for further information as flowing is likely to be occurring across the Georges and Woronora River and Hawkesbury Nepean Rivers concurrently.
Rescue	There are no known flood rescue hotspots within the area however there are trap point locations that are identified in the map below.
Resupply	N/A
Aircraft Management	***Helicopter Landing Points:***
	Airports: No suitable landing points are located within this suburb.
Other	Refer to the Georges and Woronora River Valley Subplan State Flood Plan for further information as flowing is likely to be occurring across the Georges and Woronora River.

18.2. MACQUARIE LINKS SECTOR/COMMUNITY FLOOD EXTEND WITH HAZARD >H2 MAP



19. MENANGLE PARK SECTOR / COMMUNITY

19.1. MENANGLE PARK RESPONSE ARRANGEMENTS

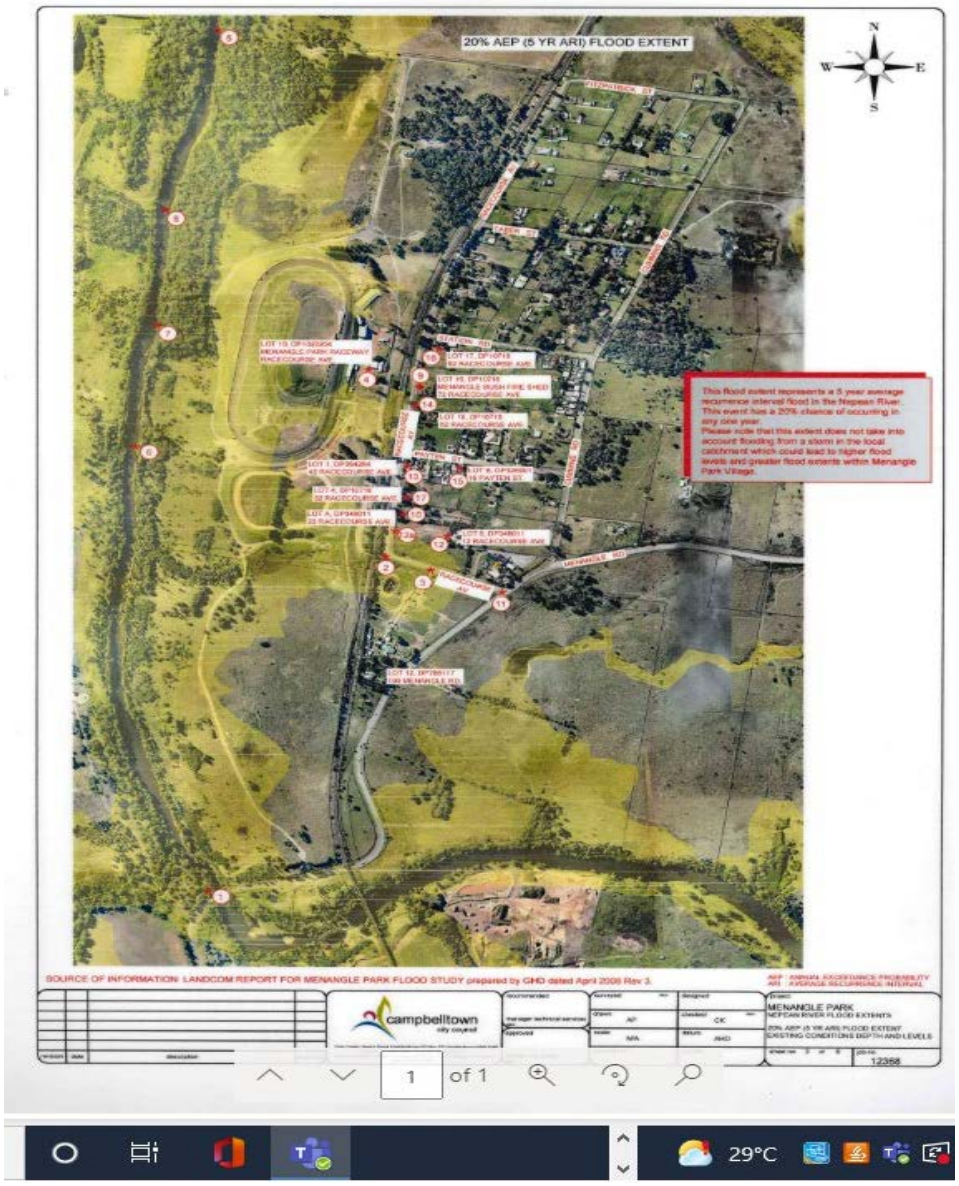
Refer to Volume 2: Hazard and Risk in Campbelltown LGA for more information about this Sector/Community.

Sector Description	Menangle Park is effectively divided from the eastern neighbouring suburb of Gilead by the M31 Hume Motorway. On the eastern side of the motorway are Broughton Anglican College, established in 1986 and the Campbelltown Steam and Machinery Museum. The suburb has a population of around 224 with a strong community interested based around trotting horses and the Club Menangle facility. In the village on the western side, there is a small General Store, and a Rural Fire Brigade Shed, as well as the Menangle House Tavern, built in 1834 and now part of the Club Menangle complex. The railway station is not currently part of the Sydney electrical network. Menangle Park Paceway or Club Menangle is a harness racing track operating in Menangle Park on the western side of the railway line. This suburb has not been identified in the regional development strategy as a focus area and is not currently undergoing redevelopment which means no impact on the physical topography or the community.
Hazard	**Flash flood Points are:** • Menangle Bridge • Racecourse Ave at the underpass to TABCORP Menangle Road can flood at a number of locations but until it closes at Glen Alpine it should be closed at Menangle and Racecourse Ave once the bridge over the Nepean is closed. A Road closed sign is located on Menangle Rd just pass Heritage Way is controlled by the RMS. To have this road closed contact the Traffic Management Centre on 137788 or 83961425.

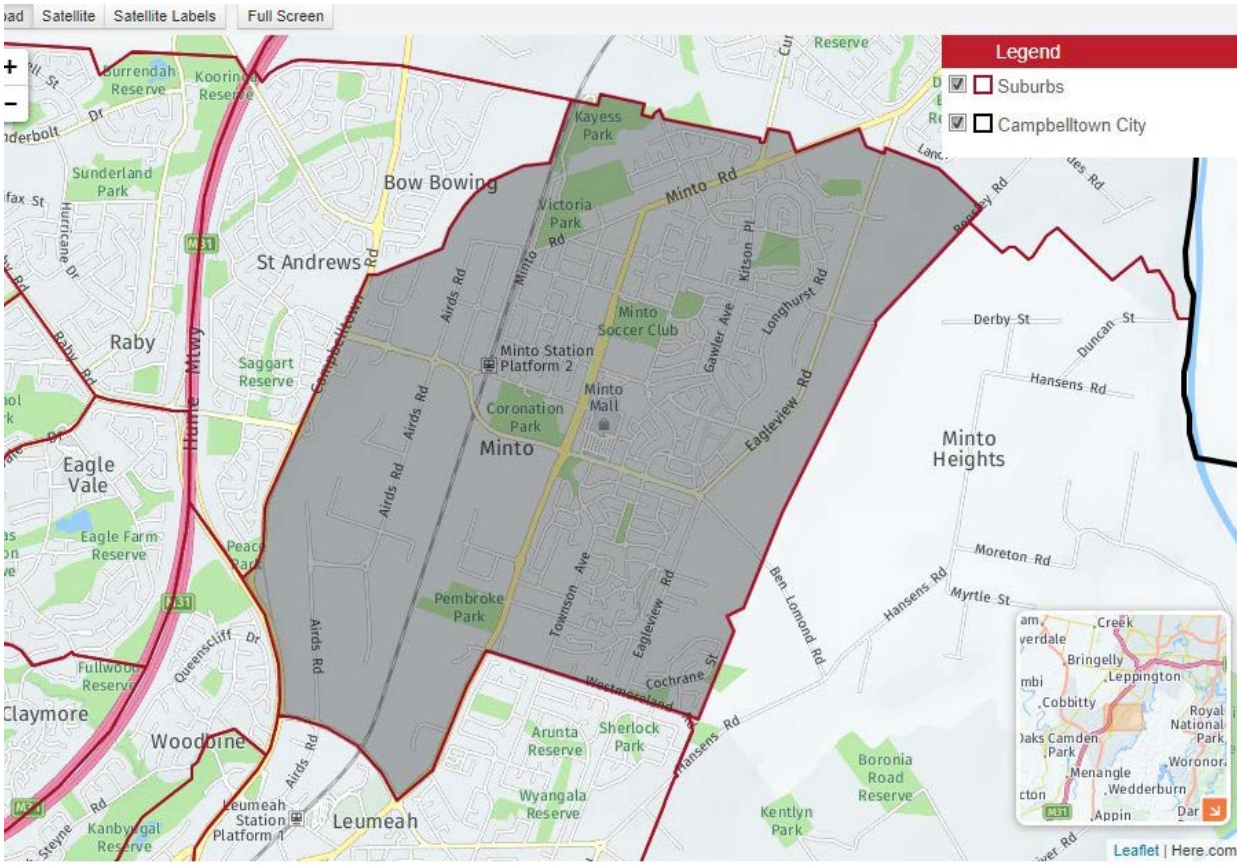
<table>
<tr><td>Triggers</td><td colspan="5">The following triggers will activate a response from Campbelltown SES Unit and consideration of activation of the LEMC:
BoM releasing a flood or severe storm warning for the Campbelltown LGA.
Requests for Assistance indicating a flood event.
When directed by Metro Zone or the REOCON or SEOCON.</td></tr>
<tr><td>Flood Affect Classification</td><td colspan="5">On the Tabcorp land there is a stable/ workshop complex built on raised land that will become a flood island</td></tr>
<tr><td>At risk properties</td><td></td><td colspan="2">Total number of properties within Sector/Community</td><td colspan="2"></td></tr>
<tr><td>At risk Facilities</td><td colspan="5">Menangle Park Paceway or TABCORP Park.</td></tr>
<tr><td>Sector Control</td><td colspan="5"></td></tr>
<tr><td>Key Warning Gauge Name</td><td>Name</td><td>AWRC No.</td><td>Min (m)</td><td>Mod (m)</td><td>Maj (m)</td></tr>
<tr><td></td><td>Menangle Bridge</td><td>068216</td><td>5.2</td><td>9.2</td><td>12.2</td></tr>
<tr><td>Additional Notes</td><td colspan="5">Flood gauge at the bridge over the Nepean River is part of the BOM electronic network and range from AHD 65 to AHD 72
The Wollondilly side has gauges from 12 Metres to 18metres are most likely linked to the BOM network.
Flood gauges in Racecourse Ave at its intersection with Menangle Road range from AHD 77.5 to an AHD of 70.5 at the underpass.
The flood gauge at the underpass attached to the railway embankment ranges from AHD71 to 75.
Currently when a minor or higher flood warning is issued residents impacted by flooding are contact by telephone by SES and advised of the threat.
Upstream of the village are a series of dams and weirs in the catchments of the Cataract, Cordeaux, Avon and Nepean rivers. Discharge from these dams during flood can impact on the expected flood heights.
Based on the BOM electronic gauge:
Minor Flooding 4.6m
Bridge closes 7.2m
Moderate flooding 9.2mMajor Flooding 12.2m</td></tr>
<tr><td>General Strategy</td><td colspan="5">Monitor
Promote Property Protection
Community Engagement
Potential for isolation but only for short duration 24hrs so potential resupply / rescue may be required if secondary emergencies occur during this short isolation period.</td></tr>
<tr><td>Key Risks / Consequences</td><td colspan="5">Closure of Creigan Road and Briar Road at frequent 20% AEP event which can cause short duration isolation to several property owners within the vicinity.</td></tr>
<tr><td>Information and Warnings</td><td colspan="5">The trigger would be a Severe Weather Warnings issued by BOM. Release messages around Property Protection Measures / if time available set up Sandbag point for those local properties potentially impacted - flash flooding across low lying areas.</td></tr>
<tr><td></td><td colspan="5">N/A for Evac Sequencing however isolation for short duration will be required.
Early Community Education on the threat coupled with social media advice.
Ask Council to consider the Flash flood Warning System as a mitigation measure as SES cannot warn to this community.</td></tr>
</table>

Property Protection	***Property protection measures:*** The property protection measures for the threat of flash flooding could be move valuable household goods to protect from flow path for AFF preventing water damage, sandbag around doors and gaps to prevent water getting into at risk homes. Established a known point for sandbagging and advertise on Social Media Facebook Pages as a property protection measure.
	Assistance with property protection: Specific assistance with property protection by way of sandbagging and lifting or transporting of furniture, personal effects etc may be available – consider.
	Protection of essential infrastructure: Not applicable in Airds.
	Levee consideration: Not applicable in Airds.
Evacuation and/or Isolation Triggers	Closure of evacuation roads occur at frequent flood events 20% AEP. Flooding is quick to rise reaching peak within 6hrs and receding quickly resulting no time being available to evacuate effectively.
Evacuation Triggers	Not feasible due to nature of flooding being flash flooding.
Sequencing of evacuation	Not feasible due to nature of flooding being flash flooding.
Evacuation Routes	Currently there is only one road in and out of the suburb being Menangle Rd. This road will cut first at the bridge and depending on rainfall can cut at Glen Alpine isolating the suburb. The proposed Spring Farm Parkway may provide a future alternative flood free route out of the suburb once constructed. Stage 1 of the construction is programmed for 2022.
Evacuation Route Closure	
Method of Evacuation	
Evacuation Centre / Assembly Point	Campbelltown Civic Hall Queen St Campbelltown
Large scale evacuations	Refer to the Hawkesbury Nepean and State Flood Plan for further information as flowing is likely to be occurring across the Georges and Woronora River and Hawkesbury Nepean Rivers concurrently.
Rescue	
Resupply	N/A
Aircraft Management	***Helicopter Landing Points:***
	Airports: No suitable landing points are located within this suburb
Other	Refer to the Georges and Woronora River Valley Subplan and Hawkesbury Nepean State Flood Plan for further information as flowing is likely to be occurring across the Georges and Woronora River and Hawkesbury Nepean Rivers concurrently.

19.2. MENANGLE PARK SECTOR/COMMUNITY TRAP POINTS MAPS



20. MINTO SECTOR / COMMUNITY



20.1. MINTO RESPONSE ARRANGEMENTS

Refer to Volume 2: Hazard and Risk in Campbelltown LGA for more information about this Sector/Community.

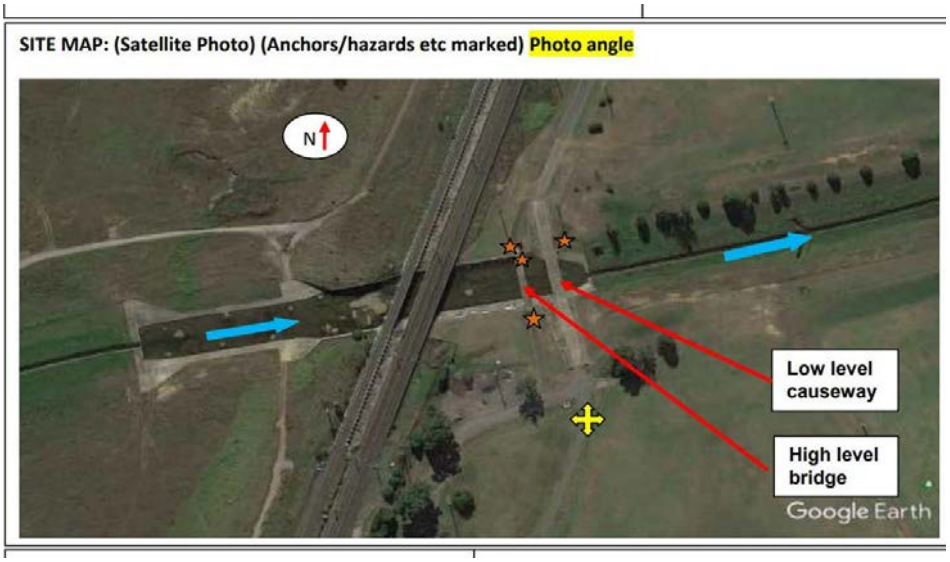
Sector Description	Minto is bounded by the transmission line, Collins Promenade and the locality of Ingleburn in the north, Bensley Road and the locality of Minto Heights in the east, Westmoreland Road, Pembroke Road and Rose Payten Drive in the south, and Campbelltown Road and Bow Bowing Creek in the west. The 2021 Resident Population for Minto is 13,940. Overall, 48.1% of people spoke English only, and 5.6% spoke another language and English not well or not at all, compared with 63.8% and 3.8% respectively for Campbelltown City with Bengali and Hindi being the most common other languages. Minto has the third largest industrial and urban services precincts in Western Sydney. This suburb has been identified in the regional development strategy as a focus area for future development which means flood behaviour changes and changes on the physical topography and community.
Hazard	a. **Bow Bowing Creek** from Biriwiri Creek to Leumeah Creek, the creek overflows its banks only in the PMF affecting the industrial areas in Leumeah and Minto. It continues like this through Minto to the confluence with Thompson Creek (Map 9, Vol. 2). As it passes through the Leumeah and Minto industrial areas, flooding from the main creek overlaps with local runoff (i.e. overland flooding). Thompson Creek joins Bow Bowing Creek just upstream of Minto Basin. The detention basin begins to fill in the 20% AEP event. Downstream of the railway the flooding affects the electrical substation in Minto from the 20% AEP but this is caused by local overland flows passing through the substation on their way to the creek. From here the creek remains within its

	banks in each AEP event, other than the PMF, up to its confluence with Bunbury Curran Creek. b. **McBarron Creek** (Map 9, Vol. 2) flows from Minto Heights to Minto and remains mostly within its banks in each AEP event but the PMF. Even in the PMF there is no significant property affectation. Floodwaters build up against Townson Ave, Pembroke Rd and the railway culvert in Minto, causing some local flooding from the 20% AEP. However, this flooding ponds for the most part in open space areas, although a small number of the neighbouring properties are affected in the PMF. c. **Minto Main Drain no.2** Minto Main Drain no.2 starts in Rose Park upstream of the intersection of Pembroke Rd and Ben Lomond Rd, and runs north-west along Ben Lomond Rd. The drain remains within its banks up to the railway line in all events but the PMF, in which it causes minor localised flooding that does not significantly affect any buildings. The drain however causes some flooding in frequent events (from the 20% AEP) before and after the railway culvert, with potential minor affectation of the railway from events greater than the 20% AEP. More flooding can be seen further downstream, around the culvert under Airds Rd, which may result in Airds Rd being cut from the 0.2% AEP. d. **Minto Main Drain no.1** Minto's other main drain (no. 1) runs from south-east of Durham St in a north-west direction up to Pembroke Rd, where it continues north along Pembroke Rd up to Minto Rd. The drain then passes through an open vegetated area of one property in a north-west direction and continues through Victoria Park until it joins with Bow Bowing Creek, just upstream of Ingleburn. The drain remains within its banks in all events but in the PMF, when it may cause minor flooding to some of the properties in Pembroke Rd. In Minto, the electric power substation is affected by local overland flooding from the 20% AEP event. The flooding locally runs off towards Bow Bowing Creek (Map 17, Vol. 2). The proximity of the Minto industrial area to Bow Bowing Creek means that flood depths in this area are considerable in more extreme floods and there is a risk to people (particularly as many buildings are single storey). Emergency response classifications are used to describe evacuation constraints of communities (or parts of communities known as sectors). Low Flood Islands and Low trapped Perimeter Areas have the highest flood risks.
Triggers	The following triggers will activate a response from Campbelltown SES Unit and consideration of activation of the LEMC: • BoM releasing a flood or severe storm warning for the Campbelltown LGA • Requests for Assistance indicating a flood event. • When directed by Metro Zone or the REOCON or SEOCON
Flood Affect Classification	There are several Low Flood Islands and High Flood Islands identified in this suburb however due to the flash flood environment that relate to all defined flood events up to a PMF with floods hitting its peak within 6hrs and receding within the following 6-12 hrs the duration is short. Flood Islands: • The Minto industrial area between Bow Bowing Creek and the railway from Rose Payten Dr north to Essex St; (AEP 20%) • Houses between Sandeford Wy and Murphy Wy Minto (AEP 20%) • Townhouses in Fletcher St Minto; (AEP 20%) No known Flood Rescue Hotspots within this sector.
At risk properties		**Total number of properties within Sector/Community**	

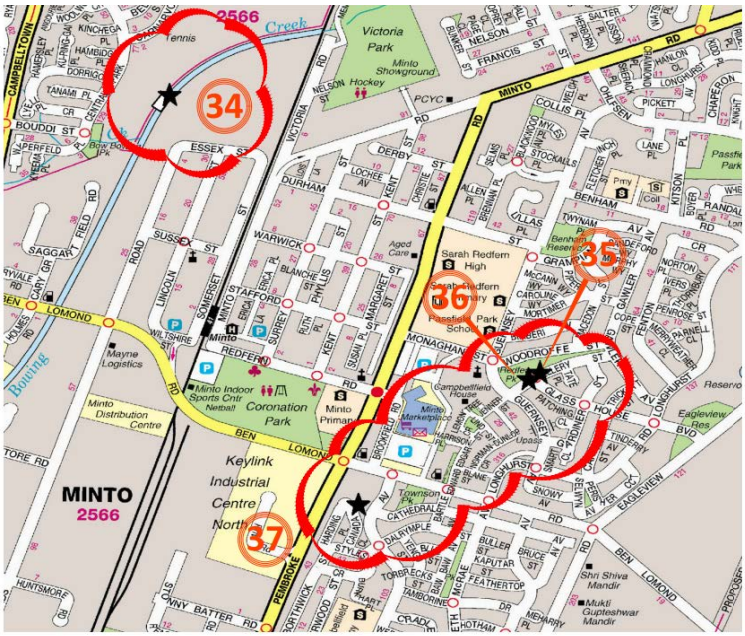
<table>
<tr><td>At risk Facilities</td><td colspan="5">The following educational and facilities are at risk of flooding / isolation:
Kabbarli Early Learning Centre PMF AFF 0.1m
NSW SES Campbelltown Unit and RFS Headquarters PMF AFF 0.1m
The following additional vulnerable facilities are at risk of flooding / isolation:
Transgrid Ingleburn Sub Station AEP 20%</td></tr>
<tr><td>Sector Control</td><td colspan="5"></td></tr>
<tr><td rowspan="2">Key Warning Gauge Name</td><td>Name</td><td>AWRC No.</td><td>Min (m)</td><td>Mod (m)</td><td>Maj (m)</td></tr>
<tr><td>A manual flood gauge is located at Victoria St where it crosses Bow Bowing Creek next to the low-level causeway</td><td></td><td>-</td><td>-</td><td>-</td></tr>
<tr><td>Additional Notes</td><td colspan="5"></td></tr>
<tr><td>General Strategy</td><td colspan="5">Monitor
Promote Property Protection
Community Engagement
Potential for isolation but only for short duration 24hrs so potential resupply / rescue may be required if secondary emergencies occur during this short isolation period.</td></tr>
<tr><td>Key Risks / Consequences</td><td colspan="5">Flash Flood Points:
Ben Lomond Road between Eagleview and Hansens Rds
Pembroke and Minto Road
Essex Street footpath across Bow Bowing Creek
Road Closures:
Airds Rd from a 0.2% AEP.
Pembroke Rd North bound, between Minto Rd and Burrendong Rd; south bound, north of Ben Lomond Rd (AEP 20%).
Townson Ave North bound towards Ben Lomond Rd and south bound towards Katherine St (AEP 20%).
Pembroke Rd (Minto). The road is cut from the 20% AEP at three locations: (1) north and south bound, south of Westmoreland Rd; (2) south bound, north of Ben Lomond Dr; (3) north bound, north of Derby Street.
Collins Prom northbound south of Eagleview Rd (AEP 20%).</td></tr>
<tr><td rowspan="2">Information and Warnings</td><td colspan="5">The trigger would be a Severe Weather Warnings issued by BOM. Release messages around Property Protection Measures / if time available set up Sandbag point for those local properties potentially impacted - flash flooding across low lying areas.</td></tr>
<tr><td colspan="5">N/A for Evac Sequencing however isolation for short duration will be required
Early Community Education on the threat coupled with social media advice
Ask Council to consider the Flash flood Warning System as a mitigation measure as SES cannot warn to this community.</td></tr>
<tr><td rowspan="2">Property Protection</td><td colspan="5">Property protection measures:
The property protection measures for the threat of flash flooding could be move valuable household goods to protect from flow path for AFF preventing water damage, sandbag around doors and gaps to prevent water getting into at risk homes.
Established a known point for sandbagging and advertise on Social Media Facebook Pages as a property protection measure.</td></tr>
<tr><td colspan="5">Assistance with property protection:</td></tr>
</table>

	Specific assistance with property protection by way of sandbagging and lifting or transporting of furniture, personal effects etc may be available – consider.
	Protection of essential infrastructure
	Levee consideration:
Evacuation and/or Isolation Triggers	Closure of evacuation roads occur at frequent flood events 20% AEP. Flooding is quick to rise reaching peak within 6hrs and receding quickly resulting no time being available to evacuate effectively.
Evacuation Triggers	Not feasible due to nature of flooding being flash flooding.
Sequencing of evacuation	Not feasible due to nature of flooding being flash flooding.
Evacuation Routes	
Evacuation Route Closure	Not feasible due to nature of flooding being flash flooding.
Method of Evacuation	Not feasible due to nature of flooding being flash flooding.
Evacuation Centre / Assembly Point	Campbelltown Civic Hall Queen St Campbelltown.
Large scale evacuations	Refer to the Georges and Woronora River Valley Subplan State Flood Plan for further information as flowing is likely to be occurring across the Georges and Woronora River.
Rescue	There are no known flood rescue hotspots within the area however there are trap point locations that are identified in the map below.
Resupply	N/A
Aircraft Management	***Helicopter Landing Points:***
	Airports: No suitable landing points are located within this suburb
Other	Refer to the Georges and Woronora River Valley Subplan and State Flood Plan for further information as flowing is likely to be occurring across the Georges and Woronora River.

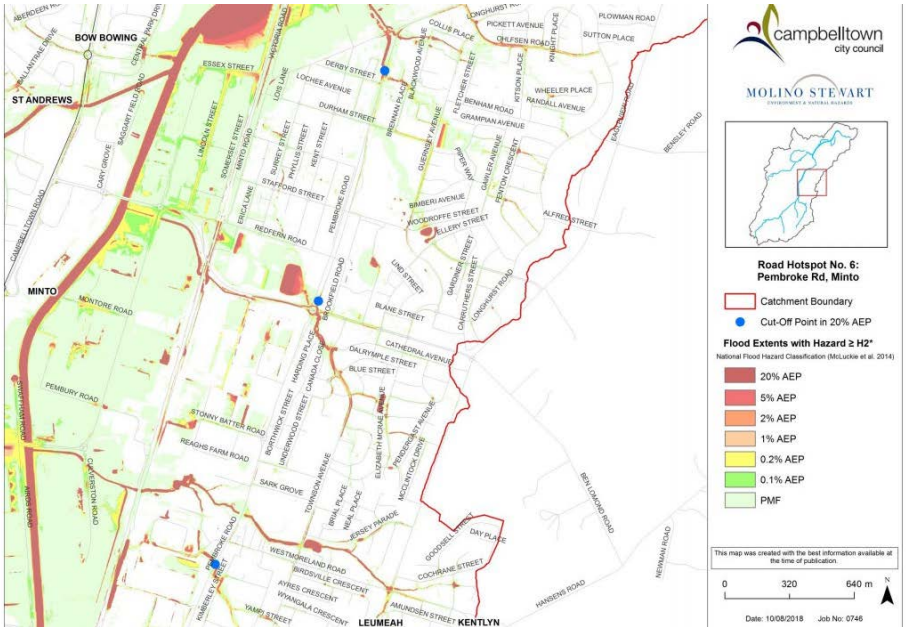
Kayess park is accessed through a low-level causeway through Bow Bowing Creek. There are two alternative access points once the road is covered by floodwater. Firstly, a narrow high-level bridge just upstream of the causeway which has steep access ramps or a narrow trail that leads north to a fire trail gate.



20.2. MINTO SECTOR/COMMUNITY TRAP POINTS MAP



WQD No.	Asset_Type	Asset_Description
34	Steel Trash Rack with Water Quality Pond	Minto Basin (Bow Bowing Creek) - Steel Trash Rack With Water Quality Pond Central Park Drive rear 107 Bow Bowing
35	CDS Unit	Minto CDS Unit intersection at Glass House Boulevard and Ellery St - Minto
36	CDS Unit	Minto CDS Unit Glass House Boulevard intersection at Ellery St - Minto
37	Gross Pollutant Trap 1050mm Diameter (HumeGard35A)	18 Rose Park gross Polutant Trap Opposite To HN 134 Townson Avenue


BOW BOWING
ST ANDREWS
MINTO
LEUMEAH
KENTLYN
campbelltown
city council
MOLINO STEWART
Road Hotspot No. 6:
Pembroke Rd, Minto
Catchment Boundary
Cut-Off Point in 20% AEP
Flood Extents with Hazard ≥ H2*
National Flood Hazard Classification (McLuckie et al. 2014)
20% AEP
5% AEP
2% AEP
1% AEP
0.2% AEP
0.1% AEP
PMF
This map was created with the best information available at the time of publication.
0
320
640 m
N
Date: 10/08/2018
Job No: 0746

21. RABY SECTOR / COMMUNITY

21.1. RABY RESPONSE ARRANGEMENTS

Refer to Volume 2: Hazard and Risk in Campbelltown LGA for more information about this Sector/Community.

Sector Description	The 2021 Resident Population for Raby is 6,196, with a population density of 23.41 persons per hectare. In Raby, 174 people who were able to speak another language in 2021, reported difficulty speaking English. Arabic, Spanish and Hindi were the 3 most common languages other than English. Raby is bounded by the locality of Varroville in the north, the Hume Highway in the east, and Raby Road in the south and west. This suburb has not been identified in the regional development strategy as a focus area and is not currently undergoing redevelopment which means no impact on the physical topography or the community.
Hazard	In Raby, the flooding is well managed by the existing detention basins. However, where the creek passes under the motorway the build-up of water in the PMF is sufficient to flood some residential properties around Matra Pl, Spitfire Dr and Wessex Pl in Raby. A flow path forms between Raby Rd and Harrier Ave, then runs north through properties towards the corner of Starfighter Ave and Sopwith Ave and then further north through the back of residential properties to Spitfire Dr. Here, some properties experience flooding from the 20% AEP. The flow path then continues north along Spitfire Dr all the way to Bunbury Curran Creek (Map 16). **Spitfire Dr and Sopwith Ave Raby *20% AEP* -**The water forms a pond more than a metre deep at the intersection of Starfighter Ave and Sopwith Ave before heading north along a flow path between the houses in Sopwith Ave and Spitfire Dr, and then flowing between houses into Spitfire Drive. On its way, two houses in Sopwith Ave and

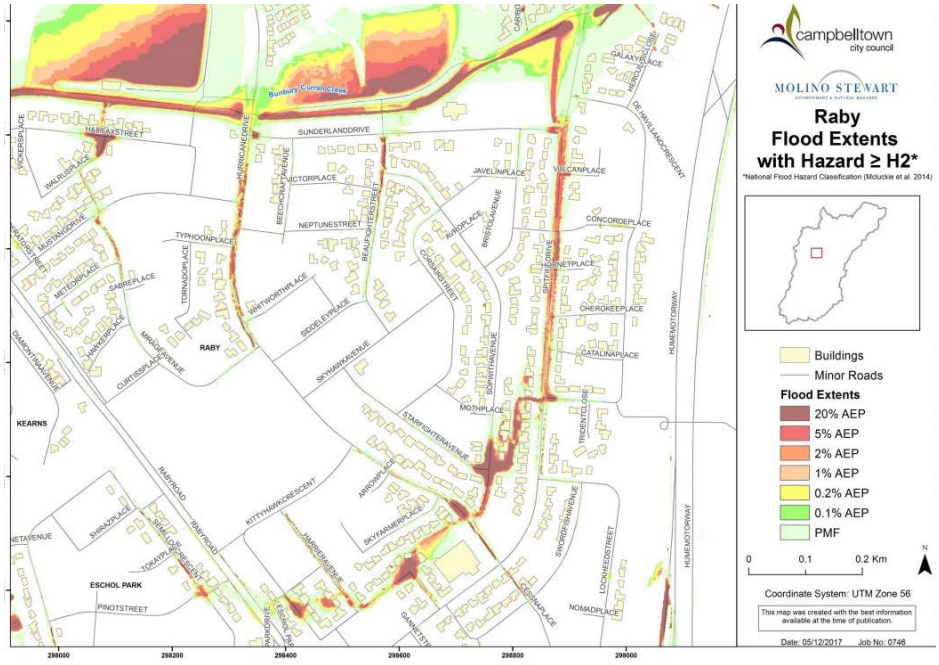
<table>
<tr><td></td><td colspan="5">one in Spitfire Dr may experience Above Floor Flooding (AFF). In addition to these, the model shows four buildings in Starfighter Ave with mild AFF depths from the 20% AEP, however upon close inspection it was observed that this is caused by local puddles that are likely to be managed by the private stormwater system of the affected buildings.
In the 1% AEP flood, the above flow paths are wider and deeper and there are about eight houses potentially affected by AFF in Sopwith Ave and Spitfire Dr. In addition to these, AFF may be experienced by two houses between Kittyhawk Cres and Hurricane Dr.
In the PMF 22 houses are surrounded by flooding around 1m deep, with peaks of 1.5m. All of these could have AFF exceeding 0.5m deep. In this event there are also 26 single storey houses, some of which are part of the 22 mentioned above, which experience over 0.5m deep AFF, and the flood model suggests two of these may be at risk of structural instability, because they are affected by floodwaters with hazard of H5 and H6.
Matra Pl, Raby -This location is presented in detail in Map 39, Vol. 2.
Houses in Matra Pl, Wessex Pl and Spitfire Dr back onto Bunbury Curran Creek before it passes under St Andrews Rd. These houses are flood free in frequent events but in the PMF 16 of them would experience above floor flooding deeper than 0.5m and the model shows that five of them may be at risk of structural instability because of the depth of flooding.
Floodwaters could be conveyed through the culvert under St Andrews Rd and then the motorway via flood modification measures, but this would only be effective in the PMF, because there is no significant risk in the 1% AEP event.</td></tr>
<tr><td>Triggers</td><td colspan="5">The following triggers will activate a response from Campbelltown SES Unit and consideration of activation of the LEMC:
BoM releasing a flood or severe storm warning for the Campbelltown LGA
Requests for Assistance indicating a flood event.
When directed by Metro Zone or the REOCON or SEOCON</td></tr>
<tr><td>Flood Affect Classification</td><td colspan="5">There are a number of Low Flood Islands identified in this suburb however due to the flash flood nature of flooding that relate to all defined flood events up to a PMF with floods hitting its peak within 6hrs and receding within the following 6-12 hrs the duration is short.
No known Flood Rescue Hotspots within this sector.</td></tr>
<tr><td>At risk properties</td><td></td><td colspan="3">Total number of properties within Sector/Community</td><td></td></tr>
<tr><td>At risk Facilities</td><td colspan="5">Robert Townson High School PMF AFF 0.2m</td></tr>
<tr><td>Sector Control</td><td colspan="5"></td></tr>
<tr><td>Key Warning Gauge Name</td><td>Name</td><td>AWRC No.</td><td>Min (m)</td><td>Mod (m)</td><td>Maj (m)</td></tr>
<tr><td></td><td>Kooringa Reserve St Andrews Rd Water Sensor</td><td></td><td>-</td><td>-</td><td>-</td></tr>
<tr><td>Additional Notes</td><td colspan="5"></td></tr>
<tr><td>General Strategy</td><td colspan="5">Monitor
Promote Property Protection
Community Engagement
Potential for isolation but only for short duration 24hrs so potential resupply / rescue may be required if secondary emergencies occur during this short isolation period.</td></tr>
<tr><td>Key Risks / Consequences</td><td colspan="5">Road Closures:
Spitfire Drive,
Sopwith Ave,</td></tr>
</table>

	• Matra Pl • Wessex Pl • Starfighter Ave • Harrier Ave **Residential Properties impacted:** • Sopwith and Spitfire Dr (AEP 20%) • Matra Pl, Wessex Pl (AEP PMF)
Information and Warnings	The trigger would be a Severe Weather Warnings issued by BOM. Release messages around Property Protection Measures / if time available set up Sandbag point for those local properties potentially impacted - flash flooding across low lying areas.
	N/A for Evac Sequencing however isolation for short duration will be required Early Community Education on the threat coupled with social media advice Ask Council to consider the Flash flood Warning System as a mitigation measure as SES cannot warn to this community.
Property Protection	Property protection measures: The property protection measures for the threat of flash flooding could be move valuable household goods to protect from flow path for AFF preventing water damage, sandbag around doors and gaps to prevent water getting into at risk homes. Established a known point for sandbagging and advertise on Social Media Facebook Pages as a property protection measure.
	Assistance with property protection: Specific assistance with property protection by way of sandbagging and lifting or transporting of furniture, personal effects etc may be available – consider.
	Protection of essential infrastructure: Not applicable
	Levee consideration: Not applicable
Evacuation and/or Isolation Triggers	Closure of evacuation roads occur at frequent flood events 20% AEP. Flooding is quick to rise reaching peak within 6hrs and receding quickly resulting no time being available to evacuate effectively.
Evacuation Triggers	Not feasible due to nature of flooding being flash flooding.
Sequencing of evacuation	Not feasible due to nature of flooding being flash flooding.
Evacuation Routes	Raby Road is the main access from the suburb
Evacuation Route Closure	Not feasible due to nature of flooding being flash flooding.
Method of Evacuation	Not feasible due to nature of flooding being flash flooding.
Evacuation Centre / Assembly Point	Campbelltown Civic Hall Queen St Campbelltown
Large scale evacuations	Refer to the Georges and Woronora River Valley Subplan State Flood Plan for further information as flowing is. likely to be occurring across the Georges and Woronora River.

Rescue	There are no known flood rescue hotspots within the area however there are trap point locations that are identified in the map below.
Resupply	N/A
Aircraft Management	***Helicopter Landing Points:***
	Airports:
Other	Refer to the Georges and Woronora River Valley Subplan State Flood Plan for further information as flowing is likely to be occurring across the Georges and Woronora River.

The overflow from the Burrendah Dam overflows through a pedestrian underpass into Kooringa Reserve.

21.2. RABY SECTOR/COMMUNITY FLOOD EXTENT WITH HAZARD >H2 MAP



Map 16 Overland flooding in Raby

Map 32 Residential Hotspot 1: Sopwith Ave and Spitfire Drive- Raby

Map 39 Residential Hotspot 12: Matra Place, Raby

22. ROSEMEADOW SECTOR / COMMUNITY

22.1. ROSEMEADOWN RESPONSE ARRANGEMENTS

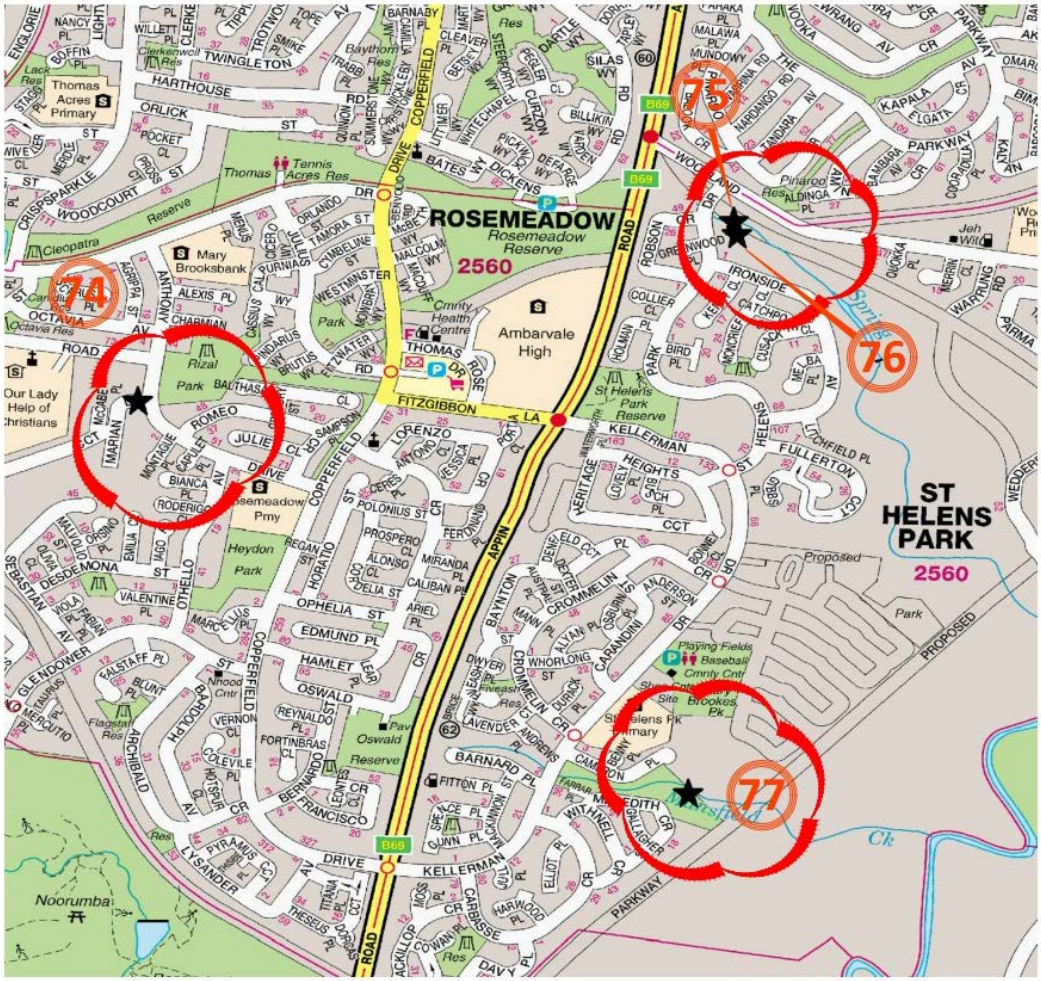
Refer to Volume 2: Hazard and Risk in Campbelltown LGA for more information about this Sector/Community.

Sector Description	Rosemeadow is bounded by Cleopatra Drive and Spring Creek in the north, Appin Road in the east, and the locality of Gilead in the south and west. The 2021 Resident Population for Rosemeadow is 8,007, with a population density of 26.96 persons per hectare. Spanish, Arabic and Vietnamese are the three most common languages other than English. This suburb has not been identified in the regional development strategy as a focus area and is not currently undergoing redevelopment which means no impact on the physical topography or the community.
Hazard	Rosemeadow has not been the subject of a flood study. Rosemeadow does have an open drainage system that flows from Mandurama Reserve through Cleopatra and Acres Reserve to Rosemeadow Reserve which flows into Spring Creek and the Georges River.
Triggers	The following triggers will activate a response from Campbelltown SES Unit and consideration of activation of the LEMC: • BoM releasing a flood or severe storm warning for the Campbelltown LGA. • Requests for Assistance indicating a flood event. • When directed by Metro Zone or the REOCON or SEOCON.
Flood Affect Classification	There are no Flood Islands identified in this suburb however due to the flash flood nature of flooding that relate to all defined flood events up to a PMF with floods

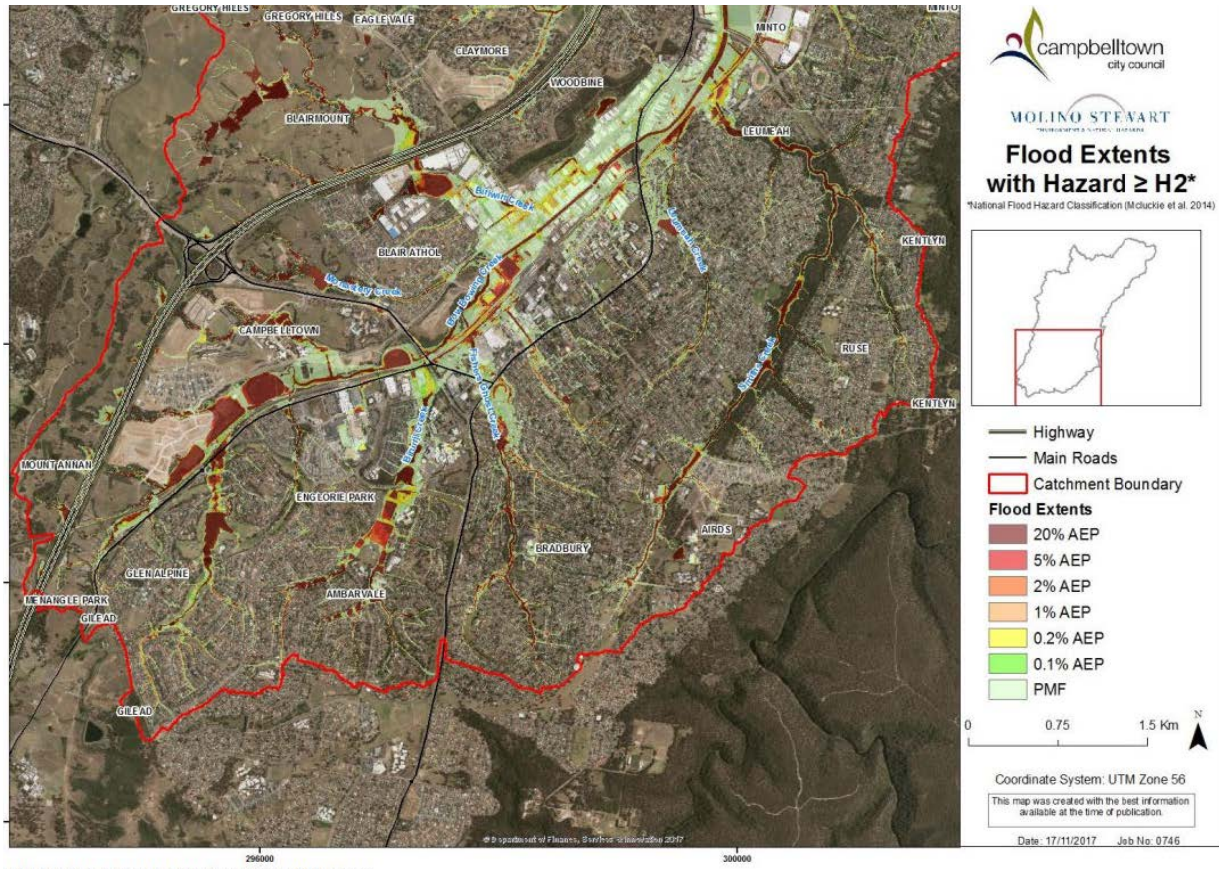
<table>
<tr><td></td><td colspan="5">hitting its peak within 6hrs and receding within the following 6-12 hrs the duration is short.
No known Flood Rescue Hotspots within this sector.</td></tr>
<tr><td>At risk properties</td><td>53</td><td colspan="2">Total number of properties within Sector/Community</td><td colspan="2"></td></tr>
<tr><td>At risk Facilities</td><td colspan="5">The following education facilities are at risk of flooding / isolation:</td></tr>
<tr><td>Sector Control</td><td colspan="5"></td></tr>
<tr><td rowspan="2">Key Warning Gauge Name</td><td colspan="2">Name</td><td>AWRC No.</td><td>Min (m)</td><td>Mod (m)</td><td>Maj (m)</td></tr>
<tr><td colspan="2"></td><td></td><td>-</td><td>-</td><td>-</td></tr>
<tr><td>Additional Notes</td><td colspan="5"></td></tr>
<tr><td>General Strategy</td><td colspan="5">Monitor
Promote Property Protection
Community Engagement
Potential for isolation but only for short duration 24hrs so potential resupply / rescue may be required if secondary emergencies occur during this short isolation period.</td></tr>
<tr><td>Key Risks / Consequences</td><td colspan="5">Closure of Creigan Road and Briar Road at frequent 20% AEP event which can cause short duration isolation to several property owners within the vicinity.</td></tr>
<tr><td rowspan="2">Information and Warnings</td><td colspan="5">The trigger would be a Severe Weather Warnings issued by BOM. Release messages around Property Protection Measures / if time available set up Sandbag point for those local properties potentially impacted - flash flooding across low lying areas.</td></tr>
<tr><td colspan="5">N/A for Evac Sequencing however isolation for short duration will be required.
Early Community Education on the threat coupled with social media advice.
Ask Council to consider the Flash flood Warning System as a mitigation measure as SES cannot warn to this community.</td></tr>
<tr><td rowspan="4">Property Protection</td><td colspan="5">Property protection measures:
The property protection measures for the threat of flash flooding could be move valuable household goods to protect from flow path for AFF preventing water damage, sandbag around doors and gaps to prevent water getting into at risk homes.
Established a known point for sandbagging and advertise on Social Media Facebook Pages as a property protection measure.</td></tr>
<tr><td colspan="5">Assistance with property protection:
Specific assistance with property protection by way of sandbagging and lifting or transporting of furniture, personal effects etc may be available – consider</td></tr>
<tr><td colspan="5">Protection of essential infrastructure:
Not applicable</td></tr>
<tr><td colspan="5">Levee consideration:
Not applicable</td></tr>
<tr><td>Evacuation and/or Isolation Triggers</td><td colspan="5">Closure of evacuation roads occur at frequent flood events 20% AEP. Flooding is quick to rise reaching peak within 6hrs and receding quickly resulting no time being available to evacuate effectively.</td></tr>
<tr><td>Evacuation Triggers</td><td colspan="5">Not feasible due to nature of flooding being flash flooding.</td></tr>
<tr><td>Sequencing of evacuation</td><td colspan="5">Not feasible due to nature of flooding being flash flooding.</td></tr>
</table>

Evacuation Routes	Appin Rd and Moor Oxley Bypass.
Evacuation Route Closure	Not feasible due to nature of flooding being flash flooding.
Method of Evacuation	Not feasible due to nature of flooding being flash flooding.
Evacuation Centre / Assembly Point	Campbelltown Civic Hall Queen St Campbelltown
Large scale evacuations	Refer to the Georges and Woronora River Valley Subplan and State Flood Plan for further information as flowing is likely to be occurring across the Georges and Woronora River.
Rescue	There are no known flood rescue hotspots within the area however there are trap point locations that are identified in the map below.
Resupply	N/A
Aircraft Management	***Helicopter Landing Points:***
	Airports:
Other	Refer to the Georges and Woronora River Valley Subplan State Flood Plan for further information as flowing is likely to be occurring across the Georges and Woronora River.

22.2. ROSEMEADOW SECTOR/COMMUNITY TRAP POINTS MAP



22.3. ROSEMEADOW SECTOR/COMMUNITY FLOOD EXTENDS WITH HAZARD >H2*



ap 8 Flood extents with hazard ≥ H2 in the southern section of the study area

23. RUSE SECTOR / COMMUNITY

23.1. RUSE RESPONSE ARRANGEMENTS

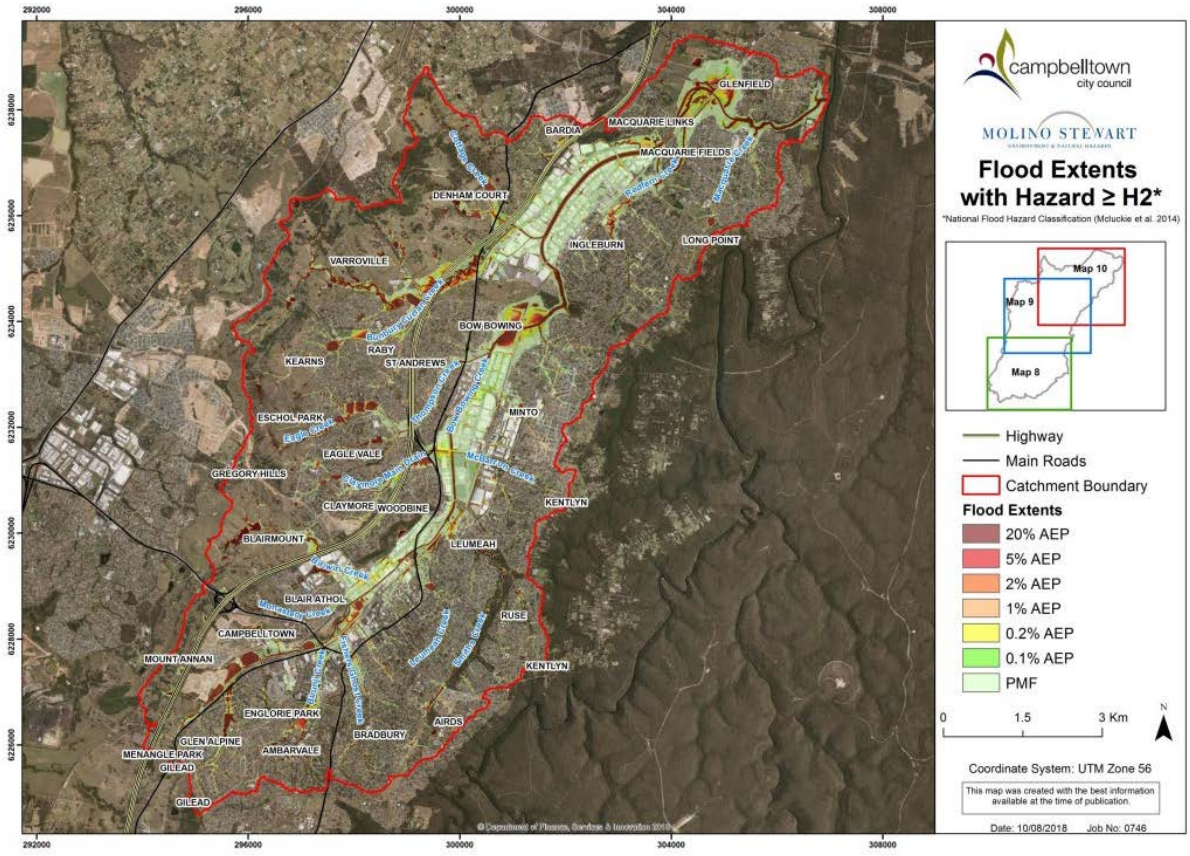
Refer to Volume 2: Hazard and Risk in Campbelltown LGA for more information about this Sector/Community.

Sector Description	Ruse is bounded by the suburb of Leumeah in the north, Darling Avenue in the east, Georges River Road in the south, and Smiths Creek in the west. The 2021 Resident Population for Ruse is 5,632. 779 people spoke a language other than English at home, Arabic, Spanish and Hindi were the 3 most common languages other than English. This suburb has not been identified in the regional development strategy as a focus area and is not currently undergoing redevelopment which means no impact on the physical topography or the community.
Hazard	Ruse is at the top end of the catchment and the local creeks are the only flood risk.
Triggers	The following triggers will activate a response from Campbelltown SES Unit and consideration of activation of the LEMC: • BoM releasing a flood or severe storm warning for the Campbelltown LGA. • Requests for Assistance indicating a flood event. • When directed by Metro Zone or the REOCON or SEOCON.
Flood Affect Classification	There are no Flood Islands identified in this suburb however due to the flash flood nature of flooding that relate to all defined flood events up to a PMF with floods hitting its peak within 6hrs and receding within the following 6-12 hrs the duration is short. **Flash Flood Points**: Cook and Junction Rd, Peter Meadows Rd where it crosses the creek.

<table>
<tr><td>At risk properties</td><td></td><td>Total number of properties within Sector/Community</td><td></td></tr>
<tr><td>At risk Facilities</td><td colspan="3">Ruse Childcare, PMF AFF 0.1m</td></tr>
<tr><td>Sector Control</td><td colspan="3"></td></tr>
<tr><td>Key Warning Gauge Name</td><td colspan="3"><table>
<tr><th>Name</th><th>AWRC No.</th><th>Min (m)</th><th>Mod (m)</th><th>Maj (m)</th></tr>
<tr><td></td><td></td><td>-</td><td>-</td><td>-</td></tr>
</table></td></tr>
<tr><td>Additional Notes</td><td colspan="3"></td></tr>
<tr><td>General Strategy</td><td colspan="3">Monitor
Promote Property Protection
Community Engagement
Potential for isolation but only for short duration 24hrs so potential resupply / rescue may be required if secondary emergencies occur during this short isolation period.</td></tr>
<tr><td>Key Risks / Consequences</td><td colspan="3"></td></tr>
<tr><td rowspan="2">Information and Warnings</td><td colspan="3">The trigger would be a Severe Weather Warnings issued by BOM.
Release messages around Property Protection Measures / if time available set up Sandbag point for those local properties potentially impacted - flash flooding across low lying areas.</td></tr>
<tr><td colspan="3">N/A for Evac Sequencing however isolation for short duration will be required
Early Community Education on the threat coupled with social media advice
Ask Council to consider the Flash flood Warning System as a mitigation measure as SES cannot warn to this community.</td></tr>
<tr><td rowspan="4">Property Protection</td><td colspan="3">Property protection measures:
The property protection measures for the threat of flash flooding could be move valuable household goods to protect from flow path for AFF preventing water damage, sandbag around doors and gaps to prevent water getting into at risk homes.
Established a known point for sandbagging and advertise on Social Media Facebook Pages as a property protection measure.</td></tr>
<tr><td colspan="3">Assistance with property protection:
Specific assistance with property protection by way of sandbagging and lifting or transporting of furniture, personal effects etc may be available – consider.</td></tr>
<tr><td colspan="3">Protection of essential infrastructure:
Not applicable</td></tr>
<tr><td colspan="3">Levee consideration:
Not applicable</td></tr>
<tr><td>Evacuation and/or Isolation Triggers</td><td colspan="3"></td></tr>
<tr><td>Evacuation Triggers</td><td colspan="3">Not feasible due to nature of flooding being flash flooding.</td></tr>
<tr><td>Sequencing of evacuation</td><td colspan="3">Not feasible due to nature of flooding being flash flooding.</td></tr>
<tr><td>Evacuation Routes</td><td colspan="3">Junction and Georges River Rd.</td></tr>
</table>

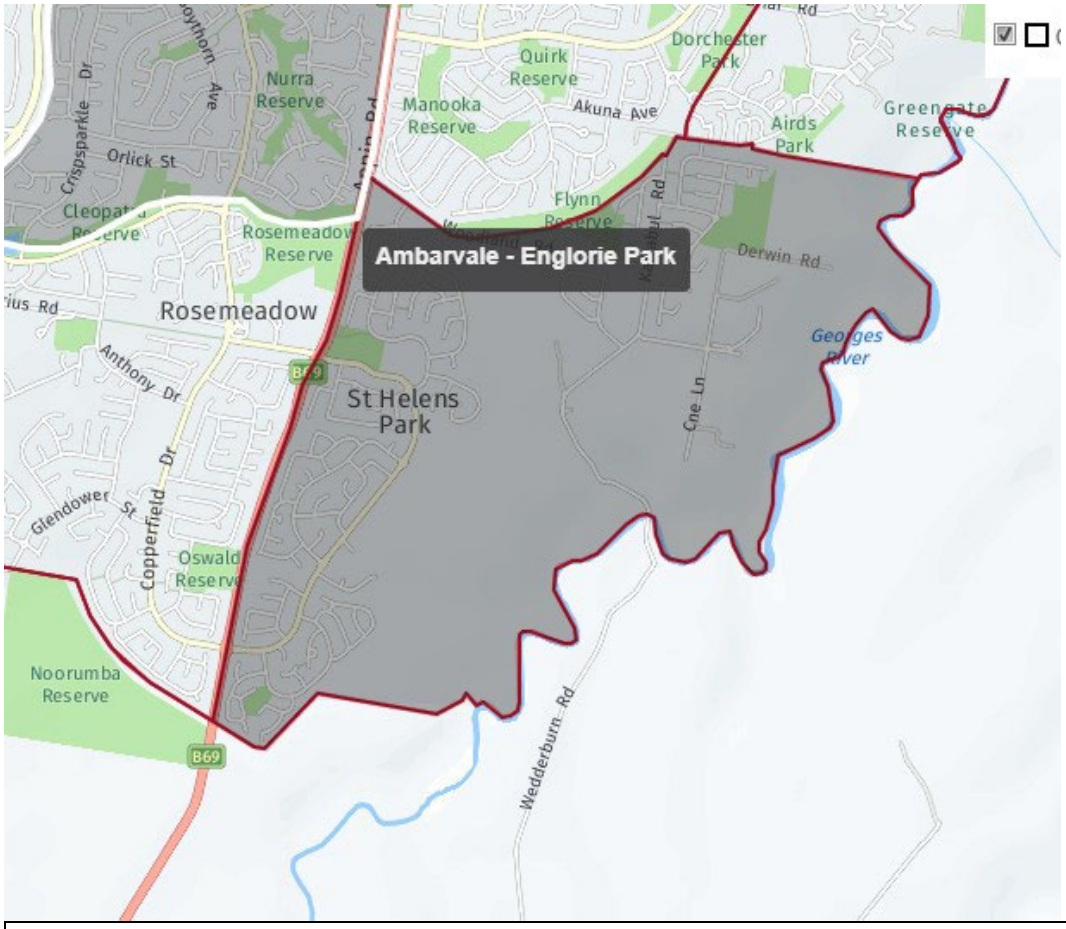
Evacuation Route Closure	Not feasible due to nature of flooding being flash flooding.
Method of Evacuation	Not feasible due to nature of flooding being flash flooding.
Evacuation Centre / Assembly Point	Campbelltown Civic Hall Queen St Campbelltown.
Large scale evacuations	Refer to the Georges and Woronora River Valley Subplan State Flood Plan for further information as flowing is likely to be occurring across the Georges and Woronora River
Rescue	
Resupply	N/A
Aircraft Management	***Helicopter Landing Points:***
	Airports:
Other	Refer to the Georges and Woronora River Valley Subplan and Hawkesbury Nepean State Flood Plan for further information as flowing is likely to be occurring across the Georges and Woronora River and Hawkesbury Nepean Rivers concurrently.

23.2. RUSE SECTOR/COMMUNITY FLOOD EXTENT WITH HAZARD >H2 MAP



7 Flood extents with hazard ≥ H2

24. ST HELENS PARK SECTOR / COMMUNITY



24.1. ST HELENS PARK RESPONSE ARRANGEMENTS

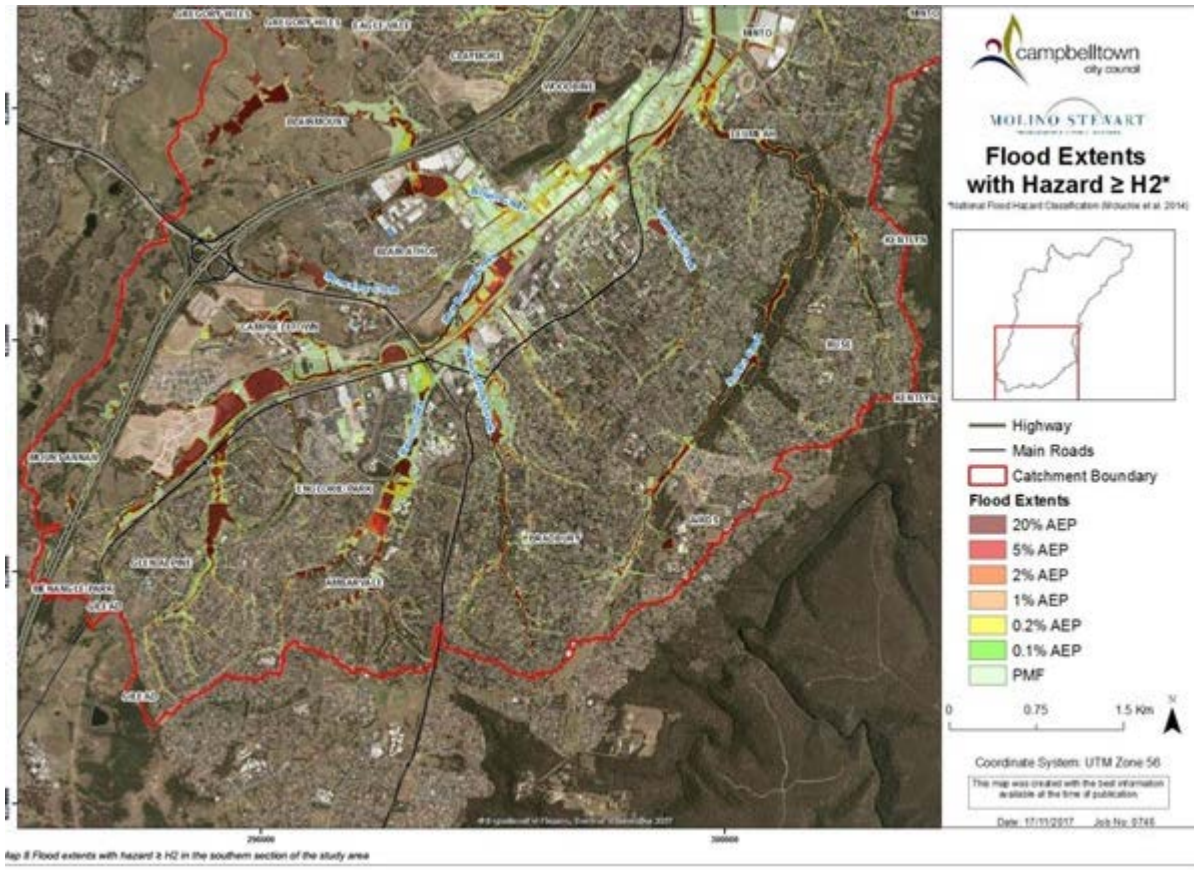
Refer to Volume 2: Hazard and Risk in Campbelltown LGA for more information about this Sector/Community.

Sector Description	St Helens Park is bounded by Woodland Rd the suburb of Airds in the north, the Georges River in the east, Gilead in the South and Appin Rd in the west. In 2021 the population of St Helens Park was 6,696. In 2021, 73.0% of people spoke English only, and 3.3% spoke another language and English not well or not at all. This suburb has not been identified in the regional development strategy as a focus area and is not currently undergoing redevelopment which means no impact on the physical topography or the community.		
Hazard			
Triggers	The following triggers will activate a response from Campbelltown SES Unit and consideration of activation of the LEMC: • BoM releasing a flood or severe storm warning for the Campbelltown LGA • Requests for Assistance indicating a flood event. • When directed by Metro Zone or the REOCON or SEOCON		
Flood Affect Classification			
At risk properties	85	**Total number of properties within Sector/Community**	

<table>
<tr><td>At risk Facilities</td><td colspan="5"></td></tr>
<tr><td>Sector Control</td><td colspan="5"></td></tr>
<tr><td rowspan="2">Key Warning Gauge Name</td><td>Name</td><td>AWRC No.</td><td>Min (m)</td><td>Mod (m)</td><td>Maj (m)</td></tr>
<tr><td></td><td></td><td>-</td><td>-</td><td>-</td></tr>
<tr><td>Additional Notes</td><td colspan="5"></td></tr>
<tr><td>General Strategy</td><td colspan="5">Monitor
Promote Property Protection
Community Engagement
Potential for isolation but only for short duration 24hrs so potential resupply / rescue may be required if secondary emergencies occur during this short isolation period.</td></tr>
<tr><td>Key Risks / Consequences</td><td colspan="5"></td></tr>
<tr><td rowspan="2">Information and Warnings</td><td colspan="5">The trigger would be a Severe Weather Warnings issued by BOM. Release messages around Property Protection Measures / if time available set up Sandbag point for those local properties potentially impacted - flash flooding across low lying areas.</td></tr>
<tr><td colspan="5">N/A for Evac Sequencing however isolation for short duration will be required
Early Community Education on the threat coupled with social media advice
Ask Council to consider the Flash flood Warning System as a mitigation measure as SES cannot warn to this community.</td></tr>
<tr><td rowspan="4">Property Protection</td><td colspan="5">Property protection measures:
The property protection measures for the threat of flash flooding could be move valuable household goods to protect from flow path for AFF preventing water damage, sandbag around doors and gaps to prevent water getting into at risk homes.
Established a known point for sandbagging and advertise on Social Media Facebook Pages as a property protection measure.</td></tr>
<tr><td colspan="5">Assistance with property protection:
Specific assistance with property protection by way of sandbagging and lifting or transporting of furniture, personal effects etc may be available – consider.</td></tr>
<tr><td colspan="5">Protection of essential infrastructure:
Not applicable</td></tr>
<tr><td colspan="5">Levee consideration:
Not applicable</td></tr>
<tr><td>Evacuation and/or Isolation Triggers</td><td colspan="5">Closure of evacuation roads occur at frequent flood events 20% AEP. Flooding is quick to rise reaching peak within 6hrs and receding quickly resulting no time being available to evacuate effectively.</td></tr>
<tr><td>Evacuation Triggers</td><td colspan="5">Not feasible due to nature of flooding being flash flooding.</td></tr>
<tr><td>Sequencing of evacuation</td><td colspan="5">Not feasible due to nature of flooding being flash flooding.</td></tr>
<tr><td>Evacuation Routes</td><td colspan="5"></td></tr>
<tr><td>Evacuation Route Closure</td><td colspan="5">Not feasible due to nature of flooding being flash flooding.</td></tr>
</table>

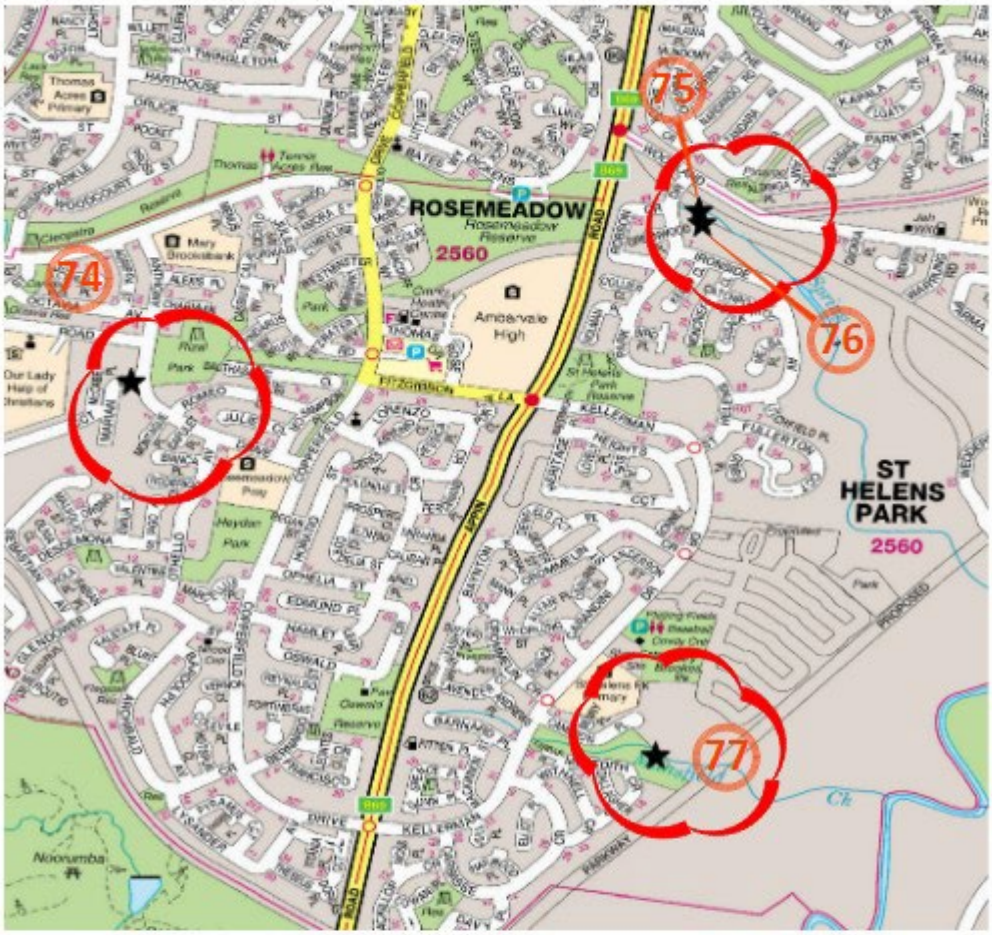
Method of Evacuation	Not feasible due to nature of flooding being flash flooding.
Evacuation Centre / Assembly Point	Campbelltown Civic Hall Queen St Campbelltown
Large scale evacuations	Refer to the Georges and Woronora River Valley Subplan and State Flood Plan for further information as flowing is likely to be occurring across the Georges and Woronora River.
Rescue	There are no known flood rescue hotspots within the area however there are trap point locations that are identified in the map below.
Resupply	N/A
Aircraft Management	***Helicopter Landing Points:***
	Airports: No suitable landing points are located within this suburb
Other	Refer to the Georges and Woronora River Valley Subplan and Hawkesbury Nepean State Flood Plan for further information as flowing is likely to be occurring across the Georges and Woronora River.

24.2. ST HELENS PARK SECTOR/COMMUNITY FLOOD EXTENT WITH HAZARD >H2 MAP



Map 8 Flood extents with hazard ≥ H2 in the southern section of the study area

24.3. ST HELENS PARK SECTOR/COMMUNITY TRAP POINTS MAP



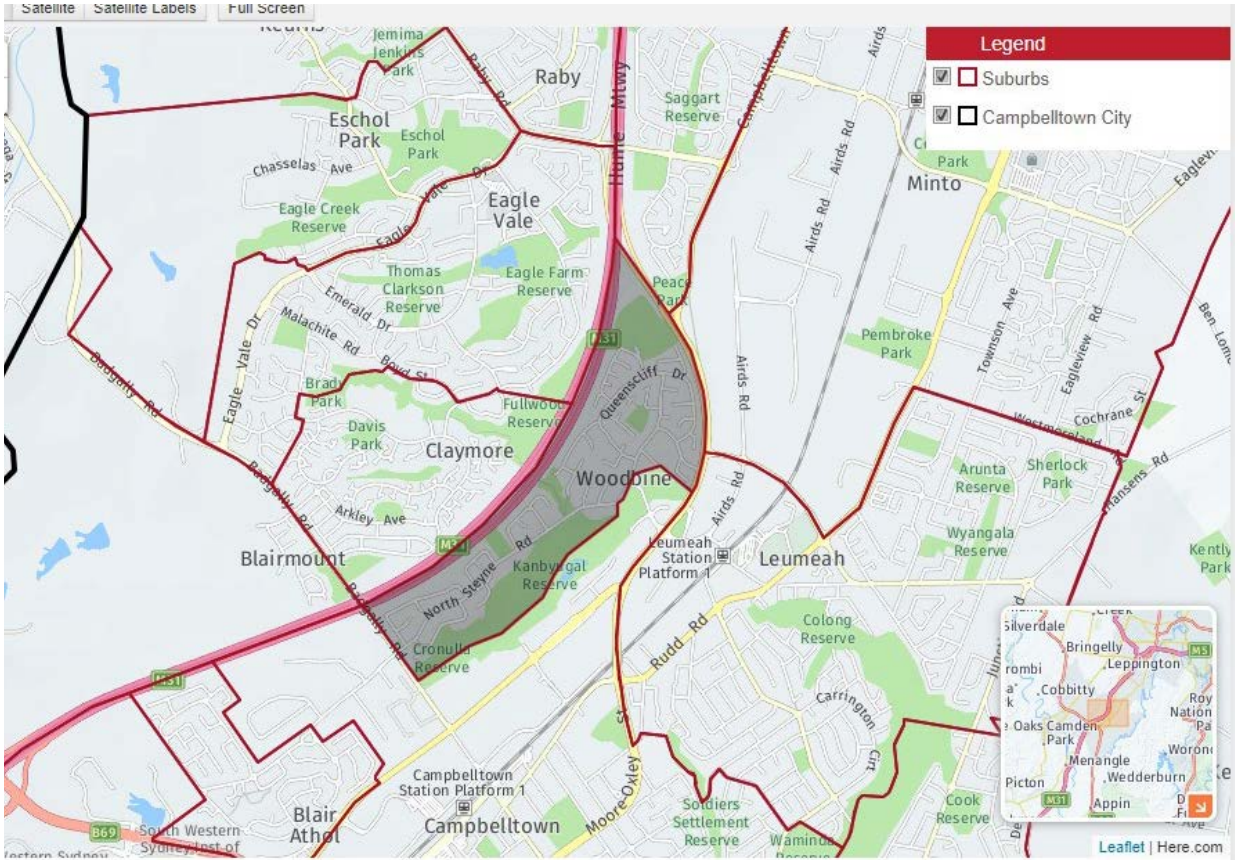
WQD No.	Asset_Type	Asset_Description
74	Gross Pollutant Trap 600mm Diameter (HumeGard1E)	Pit - 39 2130 7005 Marian Drive opp 3 Rosemeadow
75	Dual Steel Trash Rack	Spring Creek Dual Steel Trash Rack St Helens Park Drive opp 33 St Helens Park
76	Gross Pollutant Trap 600mm Diameter (HumeGard1E)	01 Spring Creek Gross Pollutant Trap St Helens Park Drive opp 29 St Helens Park
77	Dual Steel Trash Rack	Mansfield Creek Dual Steel Trash Rack Meredith St St Helens Park

CAMPBELLTOWN CITY COUNCIL

CAMPBELLTOWN LGA AREAS
ROSEMEADOW AND ST HELENS PARK
WATER QUALITY DEVICES

* Data source from Asset Section

25. WOODBINE SECTOR / COMMUNITY



25.1. WOODBINE RESPONSE ARRANGEMENTS

Refer to Volume 2: Hazard and Risk in Campbelltown LGA for more information about this Sector/Community.

Sector Description	In 2021 the population of Woodbine was 2,780 and is comprised of approximately 50.5% females and 49.5% males. In 2021, 31.6% of people living in the suburb spoke people spoke a language other than English at home, Arabic, Hindi and Spanish and Hindi were the 3 most common languages other than English. This suburb has not been identified in the regional development strategy as a focus area and is not currently undergoing redevelopment which means no impact on the physical topography or the community.		
Hazard			
Triggers	The following triggers will activate a response from Campbelltown SES Unit and consideration of activation of the LEMC: • BoM releasing a flood or severe storm warning for the Campbelltown LGA. • Requests for Assistance indicating a flood event. • When directed by Metro Zone or the REOCON or SEOCON.		
Flood Affect Classification	There are a number of Flood Islands identified in this suburb however due to the flash flood nature of flooding that relate to all defined flood events up to a PMF with floods. No known Flood Rescue Hotspots within this sector.		
At risk properties		**Total number of properties within Sector/Community**	

<table>
<tr><td>At risk Facilities</td><td colspan="5"></td></tr>
<tr><td>Sector Control</td><td colspan="5"></td></tr>
<tr><td rowspan="2">Key Warning Gauge Name</td><td>Name</td><td>AWRC No.</td><td>Min (m)</td><td>Mod (m)</td><td>Maj (m)</td></tr>
<tr><td>Jackson Park Water Sensor</td><td></td><td>-</td><td>-</td><td>-</td></tr>
<tr><td>Additional Notes</td><td colspan="5"></td></tr>
<tr><td>General Strategy</td><td colspan="5">Monitor
Promote Property Protection
Community Engagement
Potential for isolation but only for short duration 24hrs so potential resupply / rescue may be required if secondary emergencies occur during this short isolation period.</td></tr>
<tr><td>Key Risks / Consequences</td><td colspan="5">Flood impacted at 20% AEP – Council / R M5 - Collaroy Rd southbound at Campbelltown Road Woodbine.</td></tr>
<tr><td rowspan="2">Information and Warnings</td><td colspan="5">The trigger would be a Severe Weather Warnings issued by BOM. Release messages around Property Protection Measures / if time available set up Sandbag point for those local properties potentially impacted - flash flooding across low lying areas.</td></tr>
<tr><td colspan="5">N/A for Evac Sequencing however isolation for short duration will be required
Early Community Education on the threat coupled with social media advice
Ask Council to consider the Flash flood Warning System as a mitigation measure as SES cannot warn to this community.</td></tr>
<tr><td rowspan="4">Property Protection</td><td colspan="5">Property protection measures:
The property protection measures for the threat of flash flooding could be move valuable household goods to protect from flow path for AFF preventing water damage, sandbag around doors and gaps to prevent water getting into at risk homes.
Established a known point for sandbagging and advertise on Social Media Facebook Pages as a property protection measure.</td></tr>
<tr><td colspan="5">Assistance with property protection:
Specific assistance with property protection by way of sandbagging and lifting or transporting of furniture, personal effects etc may be available – consider.</td></tr>
<tr><td colspan="5">Protection of essential infrastructure:
Not applicable</td></tr>
<tr><td colspan="5">Levee consideration:
Not applicable</td></tr>
<tr><td>Evacuation and/or Isolation Triggers</td><td colspan="5">Closure of evacuation roads occur at frequent flood events 20% AEP. Flooding is quick to rise reaching peak within 6hrs and receding quickly resulting no time being available to evacuate effectively.</td></tr>
<tr><td>Evacuation Triggers</td><td colspan="5">Not feasible due to nature of flooding being flash flooding.</td></tr>
<tr><td>Sequencing of evacuation</td><td colspan="5">Not feasible due to nature of flooding being flash flooding.</td></tr>
<tr><td>Evacuation Routes</td><td colspan="5">Badgally Rd.</td></tr>
<tr><td>Evacuation Route Closure</td><td colspan="5">Not feasible due to nature of flooding being flash flooding.</td></tr>
</table>

Method of Evacuation	Not feasible due to nature of flooding being flash flooding.
Evacuation Centre / Assembly Point	Campbelltown Civic Hall Queen St Campbelltown
Large scale evacuations	Refer to the Georges and Woronora River Valley Subplan and Hawkesbury Nepean State Flood Plan for further information as flowing is likely to be occurring across the Georges and Woronora River and Hawkesbury Nepean Rivers concurrently.
Rescue	There are no known flood rescue hotspots within the area however there are trap point locations that are identified in the map below.
Resupply	N/A
Aircraft Management	***Helicopter Landing Points:***
	Airports: No suitable landing points are located within this suburb.
Other	Refer to the Georges and Woronora River Valley Subplan and State Flood Plan for further information as flowing is likely to be occurring across the Georges and Woronora River.