

APPENDIX A



ROCKDALE CITY LOCAL FLOOD PLAN

A SUB-PLAN OF THE ST GEORGE AREA LOCAL DISASTER PLAN (DISPLAN)

Chair, Local Emergency
Management Committee

Rockdale SES Local Controller

April 2009 EDITION

TO BE REVIEWED NO LATER THAN April 2013

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AMENDMENT LIST

Suggestions for amendments to this plan should be forwarded to:

The Local Controller
Rockdale State Emergency Service
109 Highgate Street Bexley 2207

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

[illegible]

LIST OF ABBREVIATIONS

The following abbreviations have been used in this plan:

AEP	Annual Exceedance Probability
AHD	Australian Height Datum
ARI	Average Recurrence Interval (Years)
ALERT	Automated Local Evaluation in Real Time
AWRC	Australian Water Resources Council
BoM	Australian Government Bureau of Meteorology
CBD	Central Business District
DCF	Dam Crest Flood
DECC	Department of Environment and Climate Change
DSC	Dams Safety Committee
DISPLAN	Disaster Plan
DoCS	Department of Community Services
DSEP	Dam Safety Emergency Plan
DVR	Disaster Victim Registration
DWE	Department of Water and Energy
GIS	Geographic Information System
GRN	Government Radio Network
HF	High Frequency
IFF	Imminent Failure Flood
PMF	Probable Maximum Flood
PMR	Private Mobile Radio
PMP	Probable Maximum Precipitations
PSTN	Public Switched Telephone Network
RTA	Roads and Traffic Authority
SES	State Emergency Service
SEWS	Standard Emergency Warning Signal
UHF	Ultra High Frequency
VHF	Very High Frequency

GLOSSARY

Annual Exceedance Probability (AEP). The chance of a flood of a given or larger size occurring in any one year, usually expressed as a percentage. For example, if a peak flood level (height) has an AEP of 5%, there is a 5% chance (that is, a one-in-20 chance) of such a level or higher occurring in any one year (see also Average Recurrence Interval).

Assistance Animal. A guide dog, a hearing assistance dog or any other animal trained to assist a person to alleviate the effect of a disability.

Australian Height Datum (AHD). A common national surface level datum approximately corresponding to mean sea level.

Average Recurrence Interval (ARI). The long-term **average** number of years between the occurrence of a flood as big as, or larger than, the selected event. For example, floods reaching a height as great as, or greater than, the 20 year ARI flood event will occur **on average** once every 20 years.

Catchment (river basin). The land area draining through the main stream, as well as tributary streams, to a particular site. It always relates to an area above a specific location.

Design flood (or flood standard). A flood of specified magnitude that is adopted for planning purposes. Selections should be based on an understanding of flood behaviour and the associated flood risk, and take account of social, economic and environmental considerations. There may be several design floods for an individual area.

Essential services. Those services, often provided by local government authorities, that are considered essential to the life of organised communities. Such services include power, lighting, water, gas, sewerage and sanitation clearance.

Flash flooding. Flooding which is sudden and often unexpected because it is caused by sudden local or nearby heavy rainfall. It is sometimes defined as flooding which occurs within six hours of the rain that causes it.

Flood. 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 overtopping coastline defences.

Flood classifications. Locally defined flood levels used in flood warnings to give an indication of the severity of flooding (minor, moderate or major) expected. These levels are used by the State Emergency Service and the Australian Government Bureau of Meteorology in flood bulletins and flood warnings.

Flood intelligence. The product of collecting, collating, analysing and interpreting flood-related data to produce meaningful information (intelligence) to allow for the timely preparation, planning and warning for and response to a flood.

Flood fringe. Is the area of land not classified as a flood way or flood storage area.

Flood liable land. Land susceptible to flooding by the Probable Maximum Flood. (PMF) event. This term also describes the maximum extent of a **floodplain** which is an area of a river valley, adjacent to the river channel, which is subject to inundation in floods up to this event.

Flood of record. Maximum observed historical flood.

Flood Plan. A plan that deals specifically with flooding and is a sub-plan of a Disaster Plan. Flood plans describe agreed roles, responsibilities, functions, actions and management arrangements for the conduct of flood operations and for preparing for them.

Floodplain Management Plan. A plan developed in accordance with the principles and guidelines in the New South Wales Floodplain Development Manual. Such a plan usually includes both written and diagrammatic information describing how particular areas of flood prone land can be used and managed to achieve defined objectives.

Floodway. An area where a significant volume of water flows during floods. Such areas are often aligned with obvious naturally-defined channels and are areas that, if partially blocked, would cause a significant redistribution of flood flow which may in turn adversely affect other areas. They are often, but not necessarily, the areas of deeper flow or the areas where higher velocities occur.

Flood Storage. Are areas of the floodplain that are important for the temporary storage of floodwaters during the passage of a flood. If the capacity of a flood storage area is reduced, flood levels in nearby areas will rise and the peak discharge downstream may be increased. It can also cause a significant redistribution of flood flows.

Flood Watch. A Flood Watch is a notification of the potential for a flood to occur as a result of a developing weather situation and consists of short generalised statements about the developing weather including forecast rainfall totals, description of catchment conditions and indicates streams at risk. The BoM will also attempt to estimate the magnitude of likely flooding in terms of the adopted flood classifications. Flood Watches are normally issued 24 to 36 hours in advance of likely flooding. Flood watches are issued on a catchment wide basis.

Flood Warning. A Flood Warning is a gauge specific forecast of actual or imminent flooding. Flood Warnings specify the river valley, the locations expected to be flooded, the likely severity of flooding and when it will occur.

Geographic Information System (GIS). A computerised database for the capture, storage, analysis and display of locationally defined information. commonly, a GIS

portrays a portion of the earth's surface in the form of a map on which this information is overlaid.

Local overland flooding. Inundation by local runoff rather than overbank discharge from a stream, river, estuary, lake or dam.

Major flooding. Flooding which causes inundation of extensive rural areas, with properties, villages and towns isolated and/or appreciable urban areas flooded.

Minor flooding. Flooding which inconvenience such as closing of minor roads and the submergence of low-level bridges. The lower limit of this class of flooding, on the reference gauge, is the initial flood level at which landholders and/or townspeople begin to be affected in a significant manner that necessitates the issuing of a public flood warning by the Australian Government Bureau of Meteorology.

Moderate flooding. Flooding which inundates low-lying areas, requiring removal of stock and/or evacuation of some houses. Main traffic routes may be covered.

Peak height. The highest level reached, at a nominated gauging station, during a particular flood event.

Probable Maximum Flood (PMF). The largest flood that could conceivably be expected to occur at a particular location, usually estimated from probable maximum precipitation. The PMF defines the maximum extent of flood prone land, that is, the floodplain. It is difficult to define a meaningful Annual Exceedance Probability for the PMF, but it is commonly assumed to be of the order of 10^4 to 10^7 (once in 10,000 to 10,000,000 years).

Runoff. The amount of rainfall which ends up as streamflow, also known as 'rainfall excess' since it is the amount remaining after accounting for other processes such as evaporation and infiltration.

Stage height. A level reached, at a nominated gauging station, during the development of a particular flood event.

Stream gauging station. A place on a river or stream at which the stage height is routinely measured, either daily or continuously, and where the discharge is measured from time to time so as to develop a relationship between stage and discharge or rating curve.

PART 1 - INTRODUCTION

1.1 Purpose

- 1.1.1 This plan covers preparedness measures, the conduct of response operations and the coordination of immediate recovery measures from flooding within the Rockdale City Council area. It covers operations for all levels of flooding within the council area.
- 1.1.2 The plan also covers arrangements for the management of coastal erosion/inundation in the council area.

1.2 Authority

- 1.2.1 This plan is issued under the authority of the State Emergency and Rescue Management Act 1989 and the State Emergency Service Act 1989. It has been accepted by the Sydney Southern SES Region Controller and the Rockdale City Council Local Emergency Management Committee.

1.3 Area Covered By The Plan

- 1.3.1 The area covered by the plan is the Rockdale City Council area which includes Rockdale, Bexley, Arncliffe, Wolli Creek (formerly known as North Arncliffe) Turrella, Banksia, Kyeemagh, Brighton-Le-Sands, Ramsgate, Monterey, Sans Souci, Dolls Point and Kingsgrove. The area is shown in Map 2 (Council Map).
- 1.3.2 The Rockdale LGA is drained by a number of creeks. **Wolli Creek** is a major tributary of the Cooks River; **Bardwell Creek** is the principle tributary of Wolli Creek which it joins 2.5km upstream the Cooks River junction and **Muddy Creek** drains the suburbs of Carlton and Bexley and parts of Hurstville and is a tributary of the Cooks River.
- 1.3.3 The council area and its principal rivers and creeks are shown in Map 1.
- 1.3.4 The council area is in the Sydney Southern SES Region and for emergency management purposes is part of the Georges River Emergency Management District.

1.4 Description Of Flooding And Its Effects

- 1.4.1 The nature of flooding in the Rockdale City Council area is described in Annex A.
- 1.4.2 The effects of flooding on the community are detailed in Annex B.

1.5 Responsibilities

1.5.1 The general responsibilities of emergency service organisations and supporting services (functional areas) are listed in the Local Disaster Plan (DISPLAN). Some specific responsibilities are expanded upon in the following paragraphs. The extent of their implementation will depend on the severity of the flooding. Specific responsibilities of agencies and organisations as they relate to tsunami are detailed in the State Tsunami Emergency Sub Plan.

1.5.2 **Rockdale SES Local Controller.** The Rockdale SES Local Controller is responsible for dealing with floods as detailed in the State Flood Plan, and will:

- a. Control flood operations; coastal erosion/inundation operations when severe storm activity is occurring or forecast; and tsunami operations in particular warning and evacuation. This includes:
 - Directing the activities of the SES units operating within the council area.
 - Coordinating the activities of supporting agencies and organisations and ensuring that liaison is established with them.
- b. Maintain a Local Headquarters at 109 Highgate Street, Bexley in accordance with the SES Controllers' Handbook and the SES Operations Manual.
- c. Ensure that SES members are trained to undertake operations in accordance with current policy as laid down in the SES Controllers' Handbook and the SES Operations Manual.
- d. Develop and operate a flood intelligence system.
- e. Develop and operate a coastal erosion/inundation intelligence system
- f. Coordinate the development and operation of a flood warning service for the community.
- g. Participate in floodplain risk and coastal zone management initiatives organised by the Rockdale City Council.
- h. Coordinate a public education program
- i. Ensure that the currency of this plan is maintained.
- j. Identify and monitor people and/or communities at risk of flooding, coastal erosion/inundation and tsunami.
- k. Direct the conduct of flood rescue operations.

- l. Direct the evacuation of people and/or communities.
- m. Provide immediate welfare support for evacuated people.
- n. Coordinate the provision of emergency food and medical supplies to isolated people and/or communities.
- o. Provide an information service in relation to:
 - Flood heights and flood behaviour.
 - Road conditions and closures.
 - Advice on methods of limiting property damage.
 - Confirmation of evacuation warnings.
- p. Coordinate operations to protect property, for example by:
 - Arranging resources for sandbagging operations.
 - Lifting or moving household furniture.
 - Lifting or moving commercial stock and equipment.
- q. Assist the Rockdale City Council to organise temporary repairs or improvements to levees.
- r. Arrange for support (for example, accommodation and meals) for emergency service organisation members and volunteers assisting them.
- s. If SES resources are available, assist the NSW Police Force, RTA and Council with road closure and traffic control operations.
- t. Exercise financial delegations relating to the use of emergency orders as laid down in the SES Controllers' Handbook.
- u. Coordinate the collection of flood and coastal erosion/inundation intelligence.
- v. Submit Situation Reports to the Sydney Southern SES Region Headquarters and agencies assisting within the council area. These will contain information on:
 - Road conditions and closures.
 - Current flood behaviour.
 - Current operational activities.
 - Likely future flood behaviour.

- Likely future operational activities.
 - Probable resource needs.
- w. Keep the Local Emergency Operations Controller advised of the flood situation and the operational response.
 - x. Issue the 'All Clear' when flood operations have been completed.
 - y. Ensure that appropriate After Action Reviews are held after floods.
 - z. Assist in the establishment and deliberations of the Recovery Coordinating Committee.

1.5.3 Rockdale SES Unit Members:

- a. Carry out flood, coastal erosion/inundation and tsunami response tasks. These may include:
 - The management of the Rockdale SES Local Headquarters Operations Centre.
 - Gathering flood and coastal erosion/inundation intelligence.
 - Flood rescue.
 - Evacuation.
 - Providing immediate welfare for evacuated people.
 - Delivery of warnings and information.
 - Levee monitoring.
 - Sandbagging.
 - Lifting and/or moving household furniture and commercial stock.
 - Assisting in repairing or improving levees.
 - Assisting with road closure and traffic control operations.
- b. Assist with preparedness activities.
- c. Undertake training in flood operations and coastal erosion/inundation.

1.5.4 Ambulance Service of NSW, Rockdale:

- a. Assist with the evacuation of elderly and/or infirm people.
- b. Deploy ambulance resources to areas likely to become isolated, in consultation with the Rockdale SES Local Controller.

1.5.5 Australian Government Bureau of Meteorology (BoM):

- a. Provide Flood Watches for the Sydney Coast - Georges River Basin.
- b. Provide Flood Warnings for Cooks River.
- c. Provide severe weather warnings when large waves and/or storm surge conditions are forecast to result in coastal erosion/inundation.
- d. Provide severe weather warnings when flash flooding is likely to occur.
- e. Provide Severe Thunderstorm Warnings when flash flooding is likely to occur.

1.5.6 Australian Volunteer Coast Guard:

- a. Assist with the delivery of evacuation warnings.
- b. Assist with the conduct of evacuations.

1.5.7 Caravan Park Proprietor, Sheralee (Rockdale) & The Grand Pines (San Souci) Caravan Parks,:

- a. Prepare a Flood Management Plan for the Caravan Park.
- b. Ensure that owners and occupiers of caravans are aware that the caravan park is flood liable and what they must do to facilitate evacuation and van relocation when flooding occurs.
- c. Ensure that occupiers are informed of flood warnings and flood watches.
- d. Coordinate the evacuation of people and the relocation of moveable vans when floods are rising and their return when flood waters have subsided.
- e. Inform the SES of the progress of evacuation and/or van relocation operations and of any need for assistance in the conduct of these tasks.

1.5.8 Childcare Centres and Preschools:

- a. If notified child care centres should:
 - Liaise with the SES and arrange for the early release of children whose travel arrangements are likely to be disrupted by flooding and/or road closures.
 - Assist with coordinating the evacuation of preschools and childcare centres

1.5.9 Energy Australia:

- a. Provide advice to the Rockdale SES Local Controller of any need to disconnect power supplies or of any timetable for reconnection.
- b. Clear or make safe any hazard caused by power lines or electrical reticulation equipment.
- c. Assess the necessity for and implement the disconnection of customers' electrical installations where these may present a hazard.
- d. Advise the public with regard to electrical hazards during flooding and to the availability or otherwise of the electricity supply.
- e. Inspect, test and reconnect customers' electrical installations as conditions allow.
- f. Assist the SES to identify infrastructure at risk of flooding for incorporation into planning and intelligence.

1.5.10 Department of Community Services (DoCS):

- a. Manage evacuation centres.
- b. Provide clothing, accommodation, food and welfare services for flood affected people, including stranded travellers.

1.5.11 Department of Water and Energy:

- a. Provide technical advice to the SES regarding hydrological information for streams and rivers in the Sydney Coast-Georges River basin.

1.5.12 Department of Primary Industries, Sydney & South East Region:

- a. Provide advice on dealing with dead and injured animals.
- b. Coordinate the operation of animal shelter compound, facilitate for the domestic pets and companion animals of evacuees.

1.5.13 NSW Fire Brigades, Arncliffe:

- a. Assist with the delivery of evacuation warnings.
- b. Assist with the conduct of evacuations.
- c. Provide equipment for pumping flood water out of buildings and from low-lying areas.
- d. Assist with cleanup operations, including the hosing out of flood affected properties.
- e. Deploy fire resources to areas likely to become isolated, in consultation with the Rockdale SES Local Controller.

1.5.14 NSW Police Force, St George LAC:

- a. Assist with the delivery of evacuation warnings.
- b. Assist with the conduct of evacuation operations.
- c. Conduct road and traffic control operations in conjunction with council and/or RTA.
- d. Coordinate the registration of all evacuees.
- e. Secure evacuated areas.

1.5.15 Rail Corporation New South Wales (CityRail)

- a. Close and re-open railway lines as necessary and advise the Rockdale SES Local Controller
- b. Arrange trains for evacuations, commuting and/or resupply purposes.

1.5.16 Rockdale City Council Local Emergency Operations Controller:

- a. Monitor flood operations.
- b. Coordinate support to the Rockdale SES Local Controller if requested to do so.

1.5.17 Rockdale City Council Local Emergency Management Officer:

- a. Provide executive support to the Local Emergency Operations Controller in accordance with the Rockdale City Council Local Disaster Plan.
- b. At the request of the Rockdale SES Local Controller, advise appropriate agencies and officers of the activation of this plan.

1.5.18 Rockdale City Council:

- a. Maintain a plant and equipment resource list for the council area.
- b. Contribute to the development and implementation of a public education program.
- c. At the request of the Local SES Controller, deploy personnel and resources for flood, coastal erosion/inundation or tsunami related activities.
- d. Close and reopen council roads (and other roads nominated by agreement with the RTA) and advise the Rockdale SES Local Controller, the Police and people who telephone the council for road information.
- e. Provide filled sandbags to urban areas in which flooding is expected.
- f. Assist with the removal of caravans from caravan parks.
- g. Provide back-up radio communications.
- h. Provide for the management of health hazards associated with flooding. This includes maintaining water supply and sewerage systems and removing debris and waste.
- i. Establish and maintain floodplain risk and coastal zone management committees and ensure that key agencies are represented on such committees.
- j. Provide flood studies, floodplain risk management studies and coastal zone management studies to the SES.
- k. During periods of coastal erosion as a result of storms at sea:
 - Assist the SES with reconnaissance of coastal erosion trouble spots
 - Liaise with the SES Local Controller to determine the need for response actions by the SES such as evacuations.

1.5.19 Roads and Traffic Authority (RTA):

- a. Close and reopen state roads affected by flood waters and advise the Rockdale SES Local Controller.
- b. Monitor the Bexley Road – Wolli Creek Flood Detection System. A summary of this system and it's triggers can be found in Annex H.

1.5.20 Royal Volunteer Coastal Patrol:

- a. Assist with the delivery of evacuation warnings.
- b. Assist with the conduct of evacuations.

1.5.21 School Administration Offices (including Catholic Education Office, Sydney Central Office; Department of Education & Training, Ultimo and Private Schools):

- a. Liaise with the 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).
- b. Pass information to school bus drivers/companies and/or other school principals on expected or actual impacts of flooding.
- c. Assist with coordinating the evacuation of schools
- d. Provide space in schools for evacuation centres where necessary.

1.5.22 Telstra:

- a. Maintain telephone services.
- b. Repair and restore telephone facilities damaged by flooding.
- c. Provide additional telecommunications support for the Rockdale SES Local and/or Unit Headquarters as required.
- d. Assist the SES to identify infrastructure at risk of flooding for incorporation into planning and intelligence.

1.5.23 Transport Services Coordinator:

- a. Arrange transport facilities for evacuations and/or commuting purposes.

PART 2 - PREPAREDNESS

2.1 Maintenance Of This Plan

2.1.1 The Rockdale SES Local Controller will maintain the currency of this plan by:

- a. Ensuring that all agencies, organisations and officers mentioned in it are aware of their roles and responsibilities.
- b. Conducting exercises to test arrangements.
- c. Reviewing the contents of the plan:
 - After each flood operation.
 - When significant changes in land-use or community characteristics occur.
 - When new information from flood studies become available.
 - When flood control or mitigation works are implemented or altered.
 - When there are changes that alter agreed plan arrangements.

2.1.2 In any event, the plan is to be reviewed no less frequently than every five years.

2.2 Floodplain Risk and Coastal Zone Management

2.2.1 The Rockdale SES Local Controller will ensure that the SES:

- a. Participates in floodplain risk and coastal zone management committee activities when those committees are formed.
- b. Consults with the flood prone community about the nature of the flood and coastal erosion /inundation problem and its management.
- c. Informs the Sydney Southern SES Region Headquarters of involvement in floodplain risk and coastal zone management activities.

2.3 Development of Flood Intelligence

2.3.1 Flood intelligence describes flood behaviour and its effects on the community.

2.3.2 The SES will develop and maintain a flood intelligence system.

2.4 Development of Warning Systems

- 2.4.1 The SES will establish and/or maintain a flood warning system for areas affected by flooding. This requires:
- a. An identification of the potential clients of flood warning information at different levels of flooding (ie. who would be affected in floods of differing severities).
 - b. Available information about the estimated impacts of flooding at different heights.
 - c. Identification of required actions and the amounts of time needed to carry them out.
 - d. Appropriate means of disseminating warnings to different clients and at different flood levels.

2.5 Public Education

- 2.5.1 The Rockdale SES Local Controller, with the assistance of the Rockdale City Council, the Sydney Southern SES Region Headquarters and SES State Headquarters, is responsible for ensuring that the residents of the council area are aware of the flood threat in their vicinity and how to protect themselves from it.
- 2.5.2 Specific strategies to be employed include:
- a. Dissemination of flood-related brochures and booklets in flood liable areas.
 - b. Talks and displays orientated to community organisations and schools.
 - c. Publicity given to this plan and to flood-orientated SES activities through local media outlets, including articles in local newspapers about the flood threat and appropriate responses.

2.6 Training

- 2.6.1 Throughout this document there are references to functions that must be carried out by the members of the Rockdale SES. The Rockdale SES Local Controller is responsible for ensuring that the members are:
- a. Familiar with the contents of this plan.
 - b. Trained in the skills necessary to carry out the tasks allocated to the SES.

2.7 Resources

- 2.7.1 The Rockdale SES Local Controller is responsible for maintaining the condition and state of readiness of SES equipment and the Rockdale SES Local Headquarters.

PART 3 - RESPONSE

3.1 Control

- 3.1.1 The SES is the legislated Combat Agency for floods and is responsible for the control of flood operations. This includes the coordination of other agencies and organisations for flood management tasks. It also includes the planning for and responding to tsunami, particularly for warning and evacuation.
- 3.1.2 The SES is the designated Combat Agency for damage control for storms. This includes damage control for coastal erosion/inundation from storm activity, specifically the protection of life and the coordination of the protection of readily moveable household goods and commercial stock and equipment.

3.2 Operations Centres

- 3.2.1 The Rockdale SES maintains an Operations Centre at 109 Highgate Street, BEXLEY NSW 2207.
- 3.2.2 The Rockdale City Council Emergency Operations Centre is located at the Rockdale Council Depot, 10-14 Rye Avenue, BEXLEY.
- 3.2.3 Rockdale SES Unit will operate an after hours duty officer system during non-operational periods.

3.3 Operational Management

- 3.3.1 The flood affected area is divided into 4 sectors. Each sector has an SES Sector Controller appointed to oversee flood operations.
 - a. Bexley Sector
 - b. Industrial Sector
 - c. Airport Sector
 - d. Penninsula Sector

- 3.3.2 A full description of these sectors can be found in Annex G

3.4 Liaison

- 3.4.1 At the request of the Rockdale SES Local Controller, each agency with responsibilities identified in this plan will provide liaison (including a liaison officer where necessary) to the Rockdale SES Operations Centre.
- 3.4.2 Liaison officers are to:
 - a. have the authority to deploy the resources of their parent organisations at the request of the Rockdale SES Local Controller,
 - b. advise the Rockdale SES Local Controller on resource availability for their service, and

- c. be able to provide communications to their own organisations.

3.5 Communications

- 3.5.1 The primary means of office-to-office communications is by telephone and facsimile.
- 3.5.2 The primary means of communication to and between deployed SES resources is by SES GRN radio.
- 3.5.3 All other organisations will provide communications as necessary to their deployed field teams.
- 3.5.4 Back-up communications are provided as follows:
 - a. Additional telephone installed by Telstra/Optus as required by LC
 - b. Council Radio Network

3.6 Start of Response Operations

- 3.6.1 This plan is always active to ensure that preparedness actions detailed in this plan are completed.
- 3.6.2 Response operation will begin:
 - a. On receipt of a Bureau of Meteorology Preliminary Flood Warning, Flood Warning, Flood Watch, a Severe Weather Warning for flash flooding or a Severe Thunderstorm Warning for flash flooding.
 - b. Upon receipt of the automated alarm at Bexley Road, North Bexley via RTA automatic warning system (more details on this Alert System can be found in Annex H)
- 3.6.3 Contact with the Bureau of Meteorology to discuss the development of flood warnings will normally be through the Sydney Southern SES Region Headquarters.
- 3.6.4 The following persons and organisations will be advised of the start of response operations regardless of the location and severity of the flooding anticipated:
 - a. Rockdale City Council Local Emergency Operations Controller (for transmission to the NSW Police Force Local Area Command Headquarters).
 - b. Rockdale, SES Unit.
 - c. Rockdale, SES Local Controller.
 - d. Sydney Southern SES Region Headquarters.

- e. Rockdale City Council Local Emergency Management Officer (for transmission to appropriate council officers and departments).
 - f. Rockdale City Council Mayor.
- 3.6.5 Other agencies listed in this plan will be advised by the LEMO on the request of the Rockdale SES Local Controller and as appropriate to the location and nature of the threat.

3.7 Flood Intelligence

3.7.1 Sources of flood intelligence during times of flooding are:

- a. **Bureau of Meteorology.** The Bureau provides:
 - Flood Watches, which give an early appreciation of developing meteorological situations that could lead to flooding. These are normally provided on a whole-catchment basis for the Sydney Coast-Georges River basin.
 - Flood Warnings, which include river height readings and height-time predictions. The gauges for which predictions are provided for are listed in Annex C.
 - Severe Weather Warnings & Severe Thunderstorm Warnings for flash flooding.
 - Weather Forecasts warning of potential storm activity
 - Warnings of dangerous surf and storm tide conditions
 - Rainfall reading from rain gauges located in catchment areas.
- b. **Sydney Southern SES Region Headquarters.** The Region Headquarters provides information on flooding and its consequences, including those in nearby council areas.
- c. The Department of Commerce's, **Manly Hydraulics Laboratory automated river watch system** funded by the Department of Environment and Climate Change. This system provides river height and rainfall readings for a number of gauges as indicated in Annex C. Recent data from this system is available on the Manly Hydraulic Laboratory website: <http://www.mhl.nsw.gov.au>. A history of area floods is also available upon request via the website.

- d. **Active Reconnaissance.** The SES monitors the following problem areas:
- Bexley Road / Stormwater canal North Bexley – UBD 273/ D10
 - Subway Street under railway Banksia - UBD 274/K11
 - Barton Street cross Scarborough Park pond Monterey– UBD 294/L8
 - Spring Street, Banksia – UBD 274/M11
 - The Strand at Rockdale – UBD 294/K1

3.8 Warnings

3.8.1 Warning services operate according to the following arrangements:

- a. The Rockdale SES Local Headquarters:
- Provides advice to the Sydney Southern SES Region Headquarters on current and expected impacts of flooding.
 - Coordinates the delivery of warnings to the community by door-knocking, telephone, mobile public address systems, local radio stations and two-way radio.
- b. The Sydney Southern SES Region Headquarters issues warning information in the form of SES Region Flood Bulletins to Media organisations and agencies listed in Annex D.

3.8.2 Warnings are provided as follows:

- a. **Bureau of Meteorology Flood Watches.** If there are signs of impending floods, Flood Watches will be incorporated in SES Flood Bulletins issued by the Sydney Southern SES Region Headquarters.
- b. **Bureau of Meteorology Flood Warnings.** Flood Warnings are issued for the locations detailed in Annex C. On receipt of such warnings, the Rockdale SES Local Controller will:
- Advise the Rockdale City Council and the Rockdale City Council Local Emergency Operations Controller.
 - Provide the Sydney Southern SES Region Headquarters with information for inclusion in SES Flood Bulletins on the estimated impacts of flooding at the predicted heights.
- c. **Bureau of Meteorology Severe Weather Warnings for Flash Flooding.** Provide a warning of the possibility for flash flooding as a

result of intense rainfall. These warnings are issued when severe weather is expected to affect land based communities with 6 to 24 hours. These are issued direct to the media by the BoM and incorporated into SES Bulletins.

- d. **Bureau of Meteorology Severe Thunderstorm Warning.** These are issued direct to the media by the BoM.
- e. **SES Local Flood Advices.** The SES may issue Local Flood Advices for the gauges listed in Annex C. These are issued in SES Region Flood Bulletins and/or direct from the Rockdale SES Local Controller
- f. **Bexley Road** water level monitoring & alert system at Wolli Creek. A summary of this system and its triggers can be found in Annex H.
- g. **Standard Emergency Warning Signal (SEWS).** This signal may be played over radio and television stations to alert communities to Evacuation Warnings, Special Warnings. Approval to use the signal will be obtained by the Rockdale SES Local Headquarters from the Sydney Southern SES Region Headquarters.

3.9 Information

- 3.9.1 The Sydney Southern SES Region Headquarters issues SES Flood Bulletins to media outlets and agencies on behalf of all SES units in the Region. SES Flood Bulletins contain the following information relating to all council areas in which flooding is occurring:
 - a. Current warnings, together with indications of the likely impact of flooding at any predicted heights.
 - b. Current flood heights and flood behaviour.
 - c. Details of conditions and closures of main roads.
 - d. Advice on safety matters and means of protecting property.
 - e. When operations relating to coastal erosion/inundation are being undertaken, SES Region Bulletins will contain information and advice about property damage mitigation measures and evacuation in affected areas.
- 3.9.2 The Rockdale SES Local Headquarters provides a “phone-in” information service for the community in relation to current warnings, river heights, flood behaviour, coastal erosion/inundation, road conditions and closures of local and main roads and advice on safety matters and means of protecting property.
- 3.9.3 Collation and dissemination of road information is actioned as follows:
 - a. The Rockdale SES Local Controller provides road status reports for main roads in the council area to the Sydney Southern SES Region Headquarters Road Information Cell and to the St George Police Local

Area Command Headquarters. The Road Information Cell obtains information from the Police, Council and RTA.

- b. The Sydney Southern SES Region Headquarters distributes information on main roads to SES units, media outlets and agencies as part of SES Flood Bulletins.
- c. The Road Information Cell also provides a “phone-in” service to the public.

3.9.4 The Rockdale SES Local Controller is to ensure that the Sydney Southern SES Region Controller is regularly briefed on the progress of operations and on future resource needs.

3.10 Road Control

3.10.1 A number of roads within the council area are affected by flooding. Details are provided in Annex B.

3.10.2 The council closes and re-opens its own roads.

3.10.3 The NSW Police Force has the authority to close and re-open roads but will normally only do so (if the council or the RTA have not already acted) if public safety requires such action.

3.10.4 When resources permit, the SES assists Council or the Police by erecting road closure signs and barriers.

3.11 Traffic Control

3.11.1 In the event of major flooding, the Rockdale SES Local Controller may direct the imposition of traffic control measures. The entry into flood affected areas will be controlled in accordance with the provisions of the State Emergency Service Act, 1989 (Part 5, Sections 19, 20, 21 and 22) and the State Emergency Rescue Management Act, 1989 (Part 4, Sections 60KA, 60L and 61).

3.12 Flood Rescue

3.12.1 The Rockdale SES Local Controller is responsible for the coordination of flood rescue.

3.12.2 Flood rescues, may be carried out by accredited units using high clearance vehicles, flood boats and (under some circumstances) helicopters.

3.12.3 Additional flood boats and crews can be requested through the Sydney Southern SES Region Headquarters.

3.13 Evacuations

3.13.1 The Rockdale LGA is primarily affected by flash flooding resulting from heavy rainfall in the creek catchments. The strategy for this area is to shelter

in place. Evacuation triggers will depend on critical levels above which access roads begin to inundate. Constant reconnaissance in the area will be required to determine if evacuations are necessary. Annex E contains further evacuation information.

3.14 Essential Services

- 3.14.1 The Rockdale SES Local Controller will ensure that the providers of essential services (electricity, water, sewerage, medical and public health) are kept advised of the flood situation. Essential service providers must keep the Rockdale SES Local Controller abreast of their status and ongoing ability to provide those services.

3.15 Logistics

- 3.15.1 The Rockdale SES Local Headquarters maintains a small stock of sandbags, and back-up supplies are available through the Sydney Southern SES Region Headquarters. A motorised sandbag-filling machine is available from Sutherland SES. Alternatively, local concrete trucks may be used.

3.16 Aircraft Management

- 3.16.1 Aircraft can be used for a variety of purposes during flood operations including evacuation, rescue, resupply, reconnaissance and emergency travel.
- 3.16.2 Air support operations will be conducted under the control of the SES Region Headquarters, which may allocate aircraft to units if applicable. The SES Local Controller may task aircraft allocated by the Region Headquarters for flood operations within the Council area.
- 3.16.3 **Helicopter Landing Points.** Suitable landing points are located at:

Landing Point	UBD Reference
Bexley Park. Stoney Creek Road, Bexley North	274 B14
Jubilee Oval.	294 F6
Rockdale Bicentennial Park	294 L3
St George Hospital Kogarah	MEDICAL PURPOSES ONLY

- 3.19.4 **Airport.** Access to the Sydney International airport remains. The airport is capable of handling all aircraft types but access is restricted.

3.17 All Clear

- 3.17.1 When the danger to life and property has passed, the Rockdale SES Local Controller will issue an 'All Clear' message signifying that response operations have been completed. This message will also advise details of arrangements for evacuated residents to return to their homes or indicate what longer-term accommodation arrangements have been made for those unable to do so.