
HAWKESBURY-NEPEAN VALLEY: NSW SES EVACUATION ARRANGEMENTS

Annex D

**Supporting document (NSW SES Response Arrangements) to the
Hawkesbury-Nepean Flood Plan**

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1 INTRODUCTION

1.1 EVACUATION OVERVIEW

- 1.1.1 Evacuations will take place when there is a risk to public safety. Circumstances may include:
- a. Evacuation of people when their homes or businesses are likely to flood;
 - b. Evacuation of people who are unsuited to living in isolated circumstances, due to flood water closing access.
 - c. Evacuation of people where energy and utility services have failed, or are likely to fail and where buildings have been, or may be made uninhabitable.
- 1.1.2 Evacuation is the primary response strategy as isolated properties can lose power, water, phone lines, sewerage services, become a refuge for spiders, snakes and other animals and are at risk of the consequences of secondary emergencies without assistance.

Strategy

- 1.1.3 Evacuate people pre-emptively from dangerous or potentially dangerous places created by the flood hazard to safe locations away from the hazard.

Actions

- 1.1.4 NSW SES will control evacuations throughout the Hawkesbury-Nepean Valley.
- 1.1.5 The evacuation operation will have the following stages:
- a. Decision to evacuate;
 - b. Mobilisation (mobilisation may begin prior to the decision to evacuate);
 - c. Evacuation Warning delivery;
 - d. Evacuation Order delivery;
 - e. Withdrawal;
 - f. Shelter; and
 - g. Return.
- 1.1.6 The following means of evacuation will be used alone or in combination. They are listed in order of preferred selection priority.
- a. Road;
 - b. Rail (where available); and
 - c. Fixed wing aircraft from RAAF Base Richmond (only for Richmond Sector).
- 1.1.7 Due to the very high rate of vehicle ownership throughout the Valley, the most effective means of evacuation is via road, using private vehicles and public buses for those who do not have or unable to use their own vehicles. This allows residents more control over their own evacuation.

- 1.1.8 Evacuation by rail for:
- a. the flood island Sectors in the Hawkesbury LGA is limited since the Richmond railway line is effectively cut at around 12.5 to 13.5 metres near Vineyard.
 - b. the sectors in Penrith is limited due to flood effects on the Western Railway line.
- 1.1.9 Evacuation by air from RAAF Base Richmond is effectively limited to the Richmond Sector only since:
- a. Road access from the Windsor Sector is cut at 9.5m AHD at Rickaby's Creek.
 - b. Road access from the Bligh Park Sector is cut at 14m AHD on Richmond Road and at 15m AHD on George Street.
 - c. The RAAF Base starts to be inundated from around 18 to 19m AHD whilst the last road evacuation route for Richmond Sector is cut at 20.2m AHD.
- 1.1.10 As a result this option is of limited use as a backup means of evacuation for Richmond Sector and if used will be highly dependent on the availability of suitable aircraft that can use the runway and the operational status of the RAAF Base.
- 1.1.11 Within each sector, evacuation will be by stages based on level of inundation and commencing from the lowest affected areas.
- 1.1.12 Evacuees from the Sectors will move along designated regional road evacuation routes to safe areas.
- 1.1.13 The designated regional road evacuation routes for flood operations are:
- a. The Windsor Road Route (closed at 13.5m AHD);
 - b. The Pitt Town Road Route (closed at 16m AHD);
 - c. The George Street Route (closed at 15.0m AHD);
 - d. The Hawkesbury Valley Way Route (closed at 17.3m AHD);
 - e. The Blacktown-Richmond Road Route (closed at 14.2m AHD);
 - f. The Llandilo Road Route (closed at 23.8m AHD);
 - g. The Northern Road Route (closed at 18.1m AHD);
 - h. The Londonderry Road Route (closed at 18m AHD);
 - i. The Castlereagh Road Route (closed at 20.2m AHD);
 - j. The M4 Motorway Route (closed at 32.8m AHD, can also be closed at 28.5m AHD at South Creek);
 - k. The Great Western Highway Route (can also be closed at 25.2m AHD at South Creek);
 - l. The Old Northern Road Route (not closed due to riverine flooding);

- m. The Park Road Route (closed at 39.8m AHD); and
 - n. The Wallacia Alternative Route (closed at 61.3m AHD).
- 1.1.14 The Regional Evacuation Routes and their associated transport arrangements are further outlined in Appendix D2 to this Annex.
- 1.1.15 Either a Mass Care Facility, or else a number of smaller evacuation centres will be established to provide registration, arrangements for emergency accommodation and other services to meet the immediate needs of flood affected people (refer to Section 6 of this Annex).

2 DECISION TO EVACUATE

- 2.1.1 Evacuation decisions are made based on flood risk and the time required to evacuate.
- 2.1.2 The Incident Controller will determine those Sectors and Sub-Sectors to evacuate based on the predicted flood height and associated evacuation timelines.
- 2.1.3 Annex C to the Hawkesbury-Nepean Valley Flood Plan 2020 details the Sub-Sectors to be evacuated and their critical heights.

2.2 DECISION POINTS

- 2.2.1 The Incident Controller will determine to recommend, to the State Controller, the following key decision points for each Sector:
 - a. The decision to mobilise resources from the emergency services and other supporting agencies to assist with evacuation;
 - b. The decision to commence delivery of evacuation warnings;
 - c. The decision to call off evacuation (selection of alternate strategy);
 - d. The decision to initiate supply operations for the sector;
 - e. The decision to initiate rescue operations for the sector.
- 2.2.2 The Incident Controller will communicate the operational intentions regarding these decision points to the NSW SES State Controller.
- 2.2.3 The road evacuation routes for the Windsor (initially), Windsor Downs, Bligh Park, Richmond and Londonderry Sectors all merge into the Northern Road route (refer Appendix D2 to this Annex). Therefore the sequencing of traffic flow from these sectors is critical. Decisions to start road evacuation from any of these Sectors will be made by the Incident Controller.

3 EVACUATION MOBILISATION

3.1 INTRODUCTION

- 3.1.1 Resources are mobilised to assist with the evacuation of people and their animals within the Hawkesbury-Nepean Valley.
- 3.1.2 The Incident Controller will decide when to mobilise resources for evacuations for specific sectors based on predictions of sector thresholds being exceeded.
- 3.1.3 The Incident Controller may request the State Emergency Operations Controller to establish restricted airspace over some or all of the Sectors.
- 3.1.4 For each Sector the key mobilisations steps are:
 - a. Activate Sector control arrangements;
 - b. Prepare communication systems;
 - c. Prepare warning systems;
 - d. Establish road evacuation routes;
 - e. Assemble buses;
 - f. Initiate rail arrangements;
 - g. Activate Evacuation Centres;
 - h. Provide early warning to Vulnerable Institutions;
 - i. Coordinate utility service isolations, disconnections and shut downs;
 - j. Prepare evacuation warnings.

3.2 ACTIVATE SECTOR CONTROL ARRANGEMENTS

- 3.2.1 The Incident Controller will advise the relevant Division Commander to activate the Sector Control Centre where designated.

3.3 PREPARE COMMUNICATION SYSTEMS

- 3.3.1 The Incident Controller will advise NSW SES Units to implement arrangements for radio communications.

3.4 PREPARE WARNING SYSTEMS

- 3.4.1 The Incident Controller will assemble door knock teams from personnel from agencies including the NSW State Emergency Service, NSW Rural Fire Service, Fire+Rescue NSW and the NSW Police Force.
- 3.4.2 The Incident Controller may also request NSW SES State Operations Centre to provide additional personnel from outside the Zone.

- 3.4.3 The Incident Controller will allocate door knock teams to Sectors to supplement door knock teams assembled by the relevant NSW SES Unit Commanders.
- 3.4.4 The Incident Controller will prepare other warning systems in the Zone for activation.
- 3.4.5 The Incident Controller will advise the Joint Media Information Centre that warning systems are being prepared.

3.5 ESTABLISH ROAD EVACUATION ROUTES

- 3.5.1 The Incident Management Team with the assistance of Traffic Police and NSW Transport Management Centre Liaison Officers, will monitor the status of regional road evacuation routes and implement the 'Flood Evacuation Routes, Traffic and Transport Arrangements' in accordance with Appendix D4 and Appendix D5 to this Annex, and the 'Draft Hawkesbury-Nepean Flood Emergency – Traffic and Transport Operations Procedure and Pre-Plan and Traffic Management Task Manual' (1) (2).
- 3.5.2 If evacuation will occur for the following sectors, the Incident Controller will progressively direct that traffic management resources be put into place for the following regional road evacuation routes:
 - a. McGraths Hill Sector;
 - The Windsor Road Route.
 - b. Pitt Town Sector;
 - The Pitt Town Road Route.
 - c. Windsor Sector;
 - The Hawkesbury Valley Way Route,
 - The Blacktown-Richmond Road Route,
 - The Northern Road Route, and
 - The Llandilo Road Route.
 - d. Windsor Downs and Bligh Park Sectors;
 - The Blacktown-Richmond Road Route,
 - The Northern Road Route,
 - The Llandilo Road Route.
 - e. Richmond and Londonderry Sectors;
 - The Castlereagh Road Route,
 - The Londonderry Road Route.
 - f. Emu Plains and Penrith Sectors;
 - M4 Motorway Route,

- Great Western Highway Route.
 - g. Wallacia Sector;
 - Park Road Route,
 - Wallacia Alternative Route.
 - h. Wisemans Ferry, Lower Reaches, Singletons Mill, Macdonald Valley, Webbs Creek and Gunderman Sectors;
 - Old Northern Road Route.
- 3.5.3 Each of these regional evacuation routes will have:
- a. An Entry Point;
 - b. Traffic Control Points; and
 - c. An Exit Point.
- 3.5.4 Traffic management arrangements will not commence until directed by the Incident Controller.

3.6 ASSEMBLE BUSES

- 3.6.1 Buses are required to:
- a. Transport those people without vehicles from sectors to evacuation centres;
 - b. Pick up travellers stranded due to vehicle breakdown on regional evacuation routes.
- 3.6.2 The Incident Controller will determine the allocation of buses to Sectors in consultation with NSW SES Local and Unit Commanders.
- 3.6.3 Note that requests for buses for evacuation might originate from agencies other than the NSW SES (eg Department of Education for evacuation of schools).
- 3.6.4 Requests for bus transport will be passed on by the Incident Controller direct to the Transport Services Functional Area Control Centre.

3.7 INITIATE RAIL ARRANGEMENTS

- 3.7.1 Rail may be used for initial evacuations from the Windsor Sector. However, the rail line is cut relatively early at Vineyard at approximately 12.5 metres AHD.
- 3.7.2 If evacuation from the Windsor Sector is planned:
- a. Road evacuation traffic from the Windsor Sector would cross the Blacktown-Richmond Railway line at the following locations:
 - Cox Street Railway Crossing (at Windsor Railway Station) – where the sector road evacuation route (within Windsor Sector) crosses the rail corridor between Windsor South and Windsor sub-sectors.

- Railway crossings (south of Mulgrave Railway station) – where the Windsor Evacuation Route crosses the rail corridor between Mulgrave and Vineyard railway stations.
 - b. The Incident Controller will advise the Rail Management Centre to mobilise appropriate Protection Officers (PO), as provided in the 'How to Access the Rail Corridor – Procedures for NSW Emergency Services' plan, for the above locations.
 - c. The POs will liaise with the NSW SES Hawkesbury Unit Commander; check on site arrangements, workgroup safety, and security of the rail corridor at these locations.
- 3.7.3 If flood waters are expected to exceed 13.9m (28m AHD) the Victoria rail bridge between Penrith and Emu Plains is expected to be compromised. In this case the Incident Controller, in consultation with the SEOCON and the Transport Functional Area, may place restrictions on the use of the Western Railway Line.

3.8 ACTIVATE EVACUATION CENTRES

- 3.8.1 Incident Controller will request Welfare Services to establish and manage Evacuation Centres.
- 3.8.2 Where a Mass Care Facility is required this will be established by the SEOCON. The principles for the location of the various types of Evacuation Centres are detailed in Section 6 of this Annex.
- 3.8.3 Welfare Services, or in the case of a Mass Care Facility, the Site Management Group, will provide regular operational updates to the Incident Controller detailing when evacuation centres are established and ready to receive evacuees.

3.9 PROVIDE EARLY WARNING TO VULNERABLE INSTITUTIONS

- 3.9.1 If there is sufficient time between the activation of this plan and the evacuation of communities, the Incident Controller will discuss the temporary closure of other appropriate schools with the Department of Education Liaison Officer who will disseminate information to all schools across the Education sector. This will enable pupils to stay at home or be returned home so they can be evacuated (if required) with their families. Details of schools that may be affected are provided in Local Flood Plans.
- 3.9.2 Note that in the Hawkesbury LGA, school principals may close some schools likely to be affected by flooding in the early stages.
- 3.9.3 Due to the long lead time required to mobilise the required resources, the Incident Controller will provide an early notice if any of the following facilities may need to be evacuated:

- a. Schools via the Department of Education Liaison Officer;
- b. Hospitals via the Nepean Blue Mountains Local Health District Functional Area Coordinator;
- c. Residential Aged Care Facilities via the Nepean Blue Mountains Local Health District Functional Area Coordinator;
- d. Aged, disability and other residential care facilities;
- e. Child care centres via the Welfare Services Functional Area Liaison Officer;
- f. Correctional facilities via the Department of Corrective Services Control Centre;
- g. Western Sydney University directly;
- h. National Parks and Wildlife Service via the Environmental Services Functional Area Liaison Officer;
- i. Licenced premises containing hazardous material via the Environmental Services Functional Area Liaison Officer.

4 EVACUATION WARNING AND ORDER DELIVERY

- 4.1.1 The NSW SES State Controller is responsible for the issue of evacuation orders.
- 4.1.2 Evacuation warnings and orders are disseminated to the population at risk within the Hawkesbury-Nepean Valley.
- 4.1.3 People within specific areas (sectors) will be advised to prepare to evacuate through the dissemination of Evacuation Warnings by the NSW SES.
- 4.1.4 The NSW SES will issue Evacuation Orders to specific areas (Sectors) to notify people that they will need to commence evacuation.
- 4.1.5 Evacuation Orders will provide advice to people about which evacuation route they should take and the location of any Evacuation Centres and animal holding areas they may wish to access. Further details regarding these evacuation routes, and which area (sector) should use which route is provided in Appendix D5 to this Annex.
- 4.1.6 The Incident Controller will decide when to issue Evacuation Warnings and Evacuation Orders for specific Sectors.
- 4.1.7 The Incident Controller will advise Police and NSW Transport Management Centre to commence traffic management arrangements on relevant regional evacuation routes (refer Appendix D2 to this Annex).
- 4.1.8 The Incident Controller will distribute Evacuation Warnings and Evacuation Orders to the following:
 - a. NSW SES State Operations Centre;
 - b. Relevant NSW SES Unit Commander;
 - c. Joint Media Information Centre.
 - d. Emergency Alert
 - e. Metropolitan media outlets for immediate broadcast;
- 4.1.9 In addition the State Controller will disseminate Evacuation Warnings and Evacuation Orders for Sectors to the community using the following warning systems where available:
 - a. Emergency Alert;
 - b. Metropolitan media outlets for immediate broadcast;
 - c. Social media channels;
 - d. Email;
 - e. SMS.
- 4.1.10 NSW SES Unit Commanders will, as detailed in NSW SES Local Flood Plans, distribute Evacuation Warnings using:
 - a. Established Warden systems;

- b. Emergency Service personnel using public announcement systems in vehicles and various NSW Government agency rotary wing aircraft (mobile PA) to advise residents; and
- c. Field teams of Emergency Service personnel conducting door to door personal notification (doorknock).

5 WITHDRAWAL

5.1 INTRODUCTION

- 5.1.1 The Incident Controller, through Division and Sector Commanders, will manage the evacuation of people within each Sector up to the point where people enter the Sector's designated regional road evacuation route.
- 5.1.2 Evacuees who have their own accommodation arrangements do not need to be directed to Evacuation Centres. It is not possible to determine in advance how many will fall into this category, however previous experience have shown around 15-20% of the population go to the evacuation centres during emergencies.

5.2 EVACUATION ROUTES

- 5.2.1 Regional Evacuation routes are detailed in Appendix D3 to this Annex.

5.3 MOVEMENT OF PEOPLE

- 5.3.1 Evacuees will:
 - a. Move under local traffic arrangements detailed in Local Flood Plans from the relevant Sectors to the route Entry Point;
 - b. Move under traffic management arrangements to the route Exit Points;
 - c. Continue along the suburban road network to allocated Evacuation Centres, or else to their own alternative arrangements.
- 5.3.2 On each regional evacuation route there will be normally one lane set aside for emergency vehicle traffic into the Sectors. These include:
 - a. Utility service provider vehicles to disconnect services and make safe utility assets;
 - b. Waste service vehicles to make final collections and make safe waste assets;
 - c. Vehicle breakdown repair and towing vehicles;
 - d. Road maintenance repair crews; and
 - e. Road barricade and traffic signage crews.
- 5.3.3 NSW SES Unit Commanders are to provide the following reports to the Incident Control Centre:

- a. Advice of commencement of the evacuation of each Sector;
 - b. Progress reports (by Sectors) during evacuations;
 - c. Advice of completion of the evacuation of each Sector.
- 5.3.4 The NSW Transport Management Centre is to provide the Incident Control Centre with:
- a. Advice when each regional road evacuation route is ready;
 - b. Regular status reports for each route.
- 5.3.5 The NSW Transport Management Centre, via the NSW Transport Management Centre Liaison Officer in conjunction with the Welfare Services Liaison Officer, will provide updates to radio stations on the status of:
- a. Regional evacuation routes;
 - b. Routes to activated evacuation centres;
 - c. Relevant evacuation centres and alternate evacuation centres.
- 5.3.6 After delivery of evacuees by bus to an Evacuation Centre, bus drivers will report to their designated dispatch centre for reassignment or release.

5.4 MOVEMENT OF ANIMALS

- 5.4.1 Livestock at threat from flooding will be evacuated using private arrangements or in accordance with the arrangements in the Agriculture and Animal Services Supporting Plan 2017.

5.5 EVACUATION ROUTE MAINTENANCE

- 5.5.1 The Incident Control Centre will liaise with Transport for NSW and local governments to ensure that road conditions are monitored and that road repair crews are available for rapid response to maintain evacuation routes.

6 SHELTER

6.1 INTRODUCTION

- 6.1.1 The Evacuee management arrangements outlined in this section deal with all levels of flooding where this plan applies.
- 6.1.2 Evacuation centres will be established and managed in accordance with the relevant provisions of the:
- a. NSW State Emergency Management Plan Evacuation Management Guidelines (3).
 - b. NSW State Emergency Management Plan Major Evacuation Centre Guidelines (4).
 - c. Mass Care Facility Guideline
- 6.1.3 Evacuation Centres are established to meet the immediate needs of disaster affected people and their companion animals following evacuation. This may include travellers (commuters and tourists), who are unable to complete their journey (3).
- 6.1.4 Evacuation Centres provide facilities and services including but not limited to (3):
- a. Food and water;
 - b. Personal support;
 - c. Basic health assistance and disability support;
 - d. Information regarding general welfare support;
 - e. Emergency financial assistance;
 - f. Emergency accommodation;
 - g. Material aid;
 - h. Disaster victim registration.
- 6.1.5 Ideally, animal holding facilities will be co-located with evacuation centres.

Strategy

- 6.1.6 Coordinate the temporary provision of shelter for evacuees outside of the flood hazard area.

Actions

- 6.1.7 The NSW Police Force will ensure that all evacuees arriving at Evacuation Centres, or hospitals in the case of medical evacuees, are registered.
- 6.1.8 The Agriculture and Animal Services Functional Area will, with the support of supporting organisations, provide animal care services for domestic animals and for companion pets of victims evacuated to evacuation centres.

- 6.1.9 The Welfare Services Functional Area will provide operational updates to the NSW SES Hawkesbury-Nepean Incident Control Centre detailing:
- d. Advice of the arrival of the first evacuee;
 - e. Hourly totals of arrivals (wherever possible);
 - f. Status of evacuation centre capacity.
- 6.1.10 The Welfare Services Functional Area may request the Transport Services Functional Area Control Centre to provide buses to transport evacuees from Evacuation Centres to other locations.
- 6.1.11 When an evacuation is ordered, evacuees will be encouraged to take their pets and companion animals with them. Arrangements for the care and accommodation of animals are determined by the Agriculture and Animal Services Functional Area.
- 6.1.12 When an evacuation order is issued evacuees will be advised to go to friends or relatives outside of the flood affected area, or else to an evacuation centre. Experience in past flood operations in NSW shows that most evacuees make their own accommodation arrangements with family, friends or motels/hotels.
- 6.1.13 There may be a greater demand for evacuation centres during major Hawkesbury-Nepean Floods if people fail to evacuate in time using their own vehicles and instead require rescue by either boat or helicopter.

6.2 ACTIVATION OF EVACUATION CENTRES

- 6.2.1 The Welfare Services Functional Area Coordinator will coordinate the establishment and management of evacuation centres with the exception of the Mass Care Facility.
- 6.2.2 The establishment of evacuation centres would also require the involvement of the following liaison officers based at the Incident Control Centre:
- a. Welfare Services Liaison Officer;
 - b. Health Services Liaison Officer;
 - c. Transport Services Liaison Officer; and
 - d. Animal and Agriculture Services Liaison Officer.
- 6.2.3 Where the scale and duration of the emergency is anticipated to be beyond the capability and capacity of the established local / regional evacuation centre arrangements the need for the establishment of a Mass Care Facility is to be assessed (4). This assessment will be done by the Incident Controller and the State Emergency Operations Controller (SEOCN) in consultation with the following (4):
- a. Welfare Services Functional Area;
 - b. Health Services Functional Area;
 - c. Animal and Agriculture Services Functional Area;

- d. Transport Services Functional Area; and
 - e. State Emergency Recovery Controller (SERCON).
- 6.2.4 If a Mass Care Facility is required, this will be established and managed within the Sydney Metropolitan area by the SEOCN (4).
- 6.2.5 Not all evacuees will be able to access a Mass Care Facility located in the Sydney Metropolitan area due to bridge, road and ferry closures. As such one or two evacuation centres may also need to be established in areas to the west and/or north west of the Hawkesbury-Nepean River where resources allow.

6.3 EVACUATION CENTRE LOCATIONS

- 6.3.1 The principles to be followed in establishing Evacuation Centres include:
- a. They are to be established outside the area bounded by the upper limit of flooding (PMF).
 - b. They are to be established in areas that are not anticipated to be affected by the loss of essential services such as electricity, water and sewage.
 - c. They are to be established in areas with infrastructure capable of dealing with the anticipated numbers of evacuees that may require assistance.
 - d. In floods that are predicted to reach a moderate or major level or higher (Above 11m at the Windsor Bridge gauge and above 7.9m / 22m AHD at the Victoria Bridge gauge, Penrith) the need for a Mass Care Facility in Sydney, with possible evacuation centres on the west and/or north western side of the Hawkesbury-Nepean River should be considered.
- 6.3.2 A Mass Care Facility in Sydney should be located in accordance with the Mass Care Facility Guideline (4).
- 6.3.3 Potentially suitable facilities that may be chosen from for use during minor to moderate flood events are listed in Table 1. Only one or two of these evacuation centres would be opened at any one time based on the requirements for the event.

Table 1: Potential facilities that may be able to be used as evacuation centres during minor to moderate Hawkesbury-Nepean flood events

LGA	Location	Address	Relevant Sectors
Penrith	Penrith High School	High St, Penrith	Penrith Penrith South
	Jamison High School	Evan & Maxwell Sts, Penrith	Penrith Penrith South
	Nepean College of TAFE – Kingswood	12-44 O’Connell St, Kingswood	Penrith Penrith South

LGA	Location	Address	Relevant Sectors
	Nepean Campus UWS	O'Connell St and Second Ave	Penrith Penrith South
	Kingswood High School	Corner of Bringelly Rd and Smith St, Penrith	Penrith Penrith South Wallacia
	Colyton High School	Carpenter St, St Marys	South Creek A
	Cambridge Park High School	Harrow Rd, Cambridge Park	South Creek A
	Cranebrook High School	Hosking St Cranebrook	Penrith North
Blue Mountains	Glenbrook Bowling Club	8 Hare St, Glenbrook	Emu Plains
	Blaxland High School	Coughlan St, Blaxland	Emu Plains
	Winmalee High School	High School Drive, Winmalee	Emu Plains Yarramundi
Blacktown	Rooty Hill RSL	55 Sherbrooke St, Rooty Hill	Windsor Londonderry Wallacia
	Blacktown RSL	Second Ave, Blacktown	Windsor
Blacktown	Blacktown Workers Club	55 Campbell St, Blacktown	Windsor Bligh Park Richmond
	Seven Hills/Toongabbie RSL	Best Rd, Seven Hills	Windsor
The Hills	Castle Hill RSL	77 Castle St, Castle Hill	Pitt Town Oakville/Cattai
	Dural Country Club	662A Old Northern Rd, Dural	Cattai to Lower Portland
	Glenorie RSL	Post Office Road, Glenorie	Pitt Town Oakville/Cattai
	Dural Sport & Leisure Centre (Round Corner Dural)	1 Pellitt Lane, Dural	Wisemans Ferry Lower Reaches Singletons Mill
	Castle Hill Showground (Harvey Lowe Pavilion)	Doran Drive, Castle Hill	Prior to ferries closing: Macdonald Valley Webbs Creek Gunderman
	Rouse Hill Community Centre	Clover Avenue, Rouse Hill	
	South Maroota Community Centre	Cnr Pauls and Wisemans Ferry Roads, South Maroota	
	Wrights Road Community Centre	Wrights Road Castle Hill	
Hawkesbury	Colo High School	218 Bells Line of Rd, North Richmond	North Richmond

LGA	Location	Address	Relevant Sectors
	Hawkesbury High School	Hibberts Lane, Freemans Reach	Wilberforce
Parramatta	Parramatta Leagues Club	13-15 O'Connell St, Parramatta	McGraths Hill Eastern Creek A Eastern Creek B Eastern Creek C South Creek B
	Wentworthville Leagues	50 Smith St, Wentworthville	Windsor
Gosford	Mangrove Mountain Memorial Golf Club and Golf Course	18 Hallards Road, Central Mangrove	Macdonald Valley Gunderman Webbs Creek

Note: Only one or two would operate at any one time

7 SECURING EVACUATED AREAS

- 7.1.1 The NSW Police Force will coordinate security for the evacuated areas and will mount security patrols. Using those resources initially committed to evacuations and the clearance, control and security of evacuation routes. Security arrangements will most likely continue into the recovery phase.
- 7.1.2 In addition to maintaining security of evacuated areas, some of the traffic management arrangements for the regional evacuation routes will need to be kept in place.
- 7.1.3 As NSW Police Force resources initially committed to the control of the regional evacuation routes become available, they will be redeployed to form an outer cordon to control traffic moving towards evacuated areas.
- 7.1.4 The ground security system may be backed up by aerial and water-borne security measures as arranged by the NSW Police Force.
- 7.1.5 As part of the State's arrangements a further outer cordon will be established to the north and west as follows:
- a. Putty Road;
 - b. Bells Line of Road;
 - c. Hawkesbury Road;
 - d. Wisemans Ferry through to Wollombi Road;
 - e. Wisemans Ferry through to Mangrove Road.

8 Appendix D1 -Transport Management Arrangements

8.1 INTRODUCTION

- 8.1.1 The Transport Services Functional Area will coordinate the provision of bus transport resources including:
- a. Movement of emergency service personnel.
 - b. Buses in support of transport infrastructure impacts:
 - Richmond and Western rail line closures.
 - c. Buses in support of evacuation:
 - Assisting in the evacuation of residents who do not have their own vehicles.
 - Assisting the Health Services Functional Area in evacuating nursing homes, aged care facilities and hospitals (note that health facilities would generally require more specialised transport than buses).
 - The evacuation of critical facilities including schools where other transport is not available.
 - Pick up stranded people from broken down vehicles on regional road evacuation routes.
 - Possible transport of evacuees from evacuation centres to other locations.
 - d. Buses in support of rescue operations:
 - Assist with the transport of people that have been rescued via flood boat or helicopter.
- 8.1.2 Requests for aero-medical transport will be referred to the NSW Ambulance Service.

8.2 RELATIONSHIP BETWEEN PLANS

- 8.2.1 The emergency management requirements for traffic management on regional evacuation routes are detailed in this Annex.
- 8.2.2 The Draft Hawkesbury-Nepean Traffic and Transport Operations Procedure and Pre-Plan (1) and Traffic Management Task Manual (2) (prepared and maintained by Transport for NSW) provides the detailed traffic management arrangements for the Regional evacuation routes.
- 8.2.3 Traffic management arrangements for sector evacuation routes are detailed in Local Flood Plans. Traffic Control Plans (TCP) for each location specified in the Hawkesbury-Nepean Traffic and Transport Operations Procedure and Pre-Plan (1) and Traffic Management Task Manual (2) are developed by the, TMC

and/or Council. The TCPs describe the detailed traffic management arrangements and resources required for that specific location.

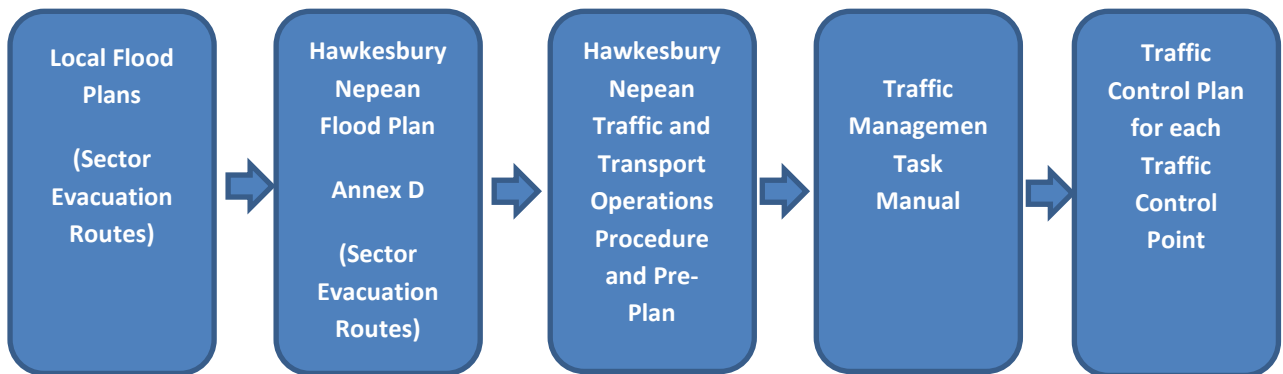


Figure 1: Relationship between Plans outlining the Flood Transport and Traffic Management Arrangements

8.3 BUS REQUIREMENTS AND ARRANGEMENTS

Sourcing of Resources

- 8.3.1 The Transport Services Functional Area has agreements in place for the use of privately owned resources during emergencies. The Functional Area holds detailed lists of both Government and privately owned bus operators. For effective coordination of the available resources, requests for bus transport should be made through the Incident Control Centre to the Transport Liaison Officer.
- 8.3.2 School buses will be organised separately under existing arrangements between bus companies and schools (5). Schools will be provided with early advice regarding the need to evacuate as detailed in Volume 1 of this plan.
- 8.3.3 Sydney Trains also has arrangements in place for the replacement of rail services with buses should they be required.

Tasking

- 8.3.4 The Transport Liaison Officer at the EOC will coordinate the allocation of buses where there are competing bus resource needs. The rationale to be used for the tasking will be the best use of available resources to meet the needs and requirements of the NSW SES and other agencies.
- 8.3.5 A mixture of strategies can be deployed to allow the successful evacuation of affected people. Planning will need to take into consideration variants such as, bus availability, number of people to be evacuated, timeframe available to execute the evacuation and distance/time taken including the return trip to travel.

Bus Requirements

- 8.3.6 It is expected that up to 3% of the population would require bus transport as they do not have their own vehicle access (5). During an extreme PMF event up to 84 bus journeys are expected to be required to transport these people. This estimate is based on a population of approximately 139,000 people requiring evacuation (Table 5 Annex A), and assumes that each bus would hold 50 people (5).
- 8.3.7 Buses may also be required to assist stranded motorists within evacuation routes where a mechanical breakdown of their vehicle has occurred.

9 Appendix D2 - Evacuation Routes

9.1 OVERVIEW

- 9.1.1 Road evacuation routes are defined in this Plan and supporting plans as one of the following:
- a. **Sector evacuation routes** - road evacuation routes within Sectors with traffic management primarily carried out by Councils;
 - b. **Regional evacuation routes** – road evacuation routes from Sectors to areas well outside the extent of the PMF with a high level of traffic management carried out by Police, TMC and RMS or their agents with some assistance from Councils.

9.2 SECTOR EVACUATION ROUTES

- 9.2.1 Sector evacuation routes are indicative routes within a Sector to show the main traffic pattern leading to the exit from the Sector to one or more Regional Evacuation Routes. These are further detailed within Local Flood Plans.
- 9.2.2 Sector evacuation routes do not necessarily require controlled traffic management arrangements.

9.3 REGIONAL EVACUATION ROUTES

- 9.3.1 A number of Regional Evacuation Routes have been identified for Hawkesbury-Nepean Valley. These routes require controlled traffic management arrangements.
- 9.3.2 The designated regional road evacuation routes for Hawkesbury-Nepean flood operations are listed and described in detail in Appendix D3 to Annex D.
- 9.3.3 Regional Evacuation Routes are further classified in this Plan as one of the following:
- a. **Initial** used during the initial stages of flooding or low levels of flooding until the Primary evacuation route is activated;
 - b. **Primary** the main evacuation route used by that area (i.e. sector);
 - c. **Secondary** used if the Primary or Initial evacuation routes become unavailable for use due to factors such as local catchment flooding.

- 9.3.4 Each Regional Evacuation Route has:
- a. An **Entry Point** from which controlled traffic management arrangements apply;
 - b. A number of **Traffic Management Points** as detailed within the Hawkesbury-Nepean Traffic and Transport Operations Procedure and Pre-Plan (1) and Traffic Management Task Manual (2);
 - c. An **Exit Point** that is beyond the PMF flood extent and at a point where the route enters the wider traffic network and normal traffic arrangements apply.
- 9.3.5 Refer to Map 1 for an overview of the flood evacuation route network. More detailed maps of the Regional Evacuation Routes are also provided in Appendix D5 (see Maps 2 to 12) to Annex D.

9.4 SIGNAGE ON EVACUATION ROUTES

Fixed signs

- 9.4.1 Fixed signs identifying Regional Evacuation Routes have been installed along the Routes. The location of these signs is detailed in the Hawkesbury-Nepean Traffic and Transport Operations Procedure and Pre-Plan (1) and Traffic Management Task Manual (2). Figure 2 shows the types of signs used in the installed signage system.

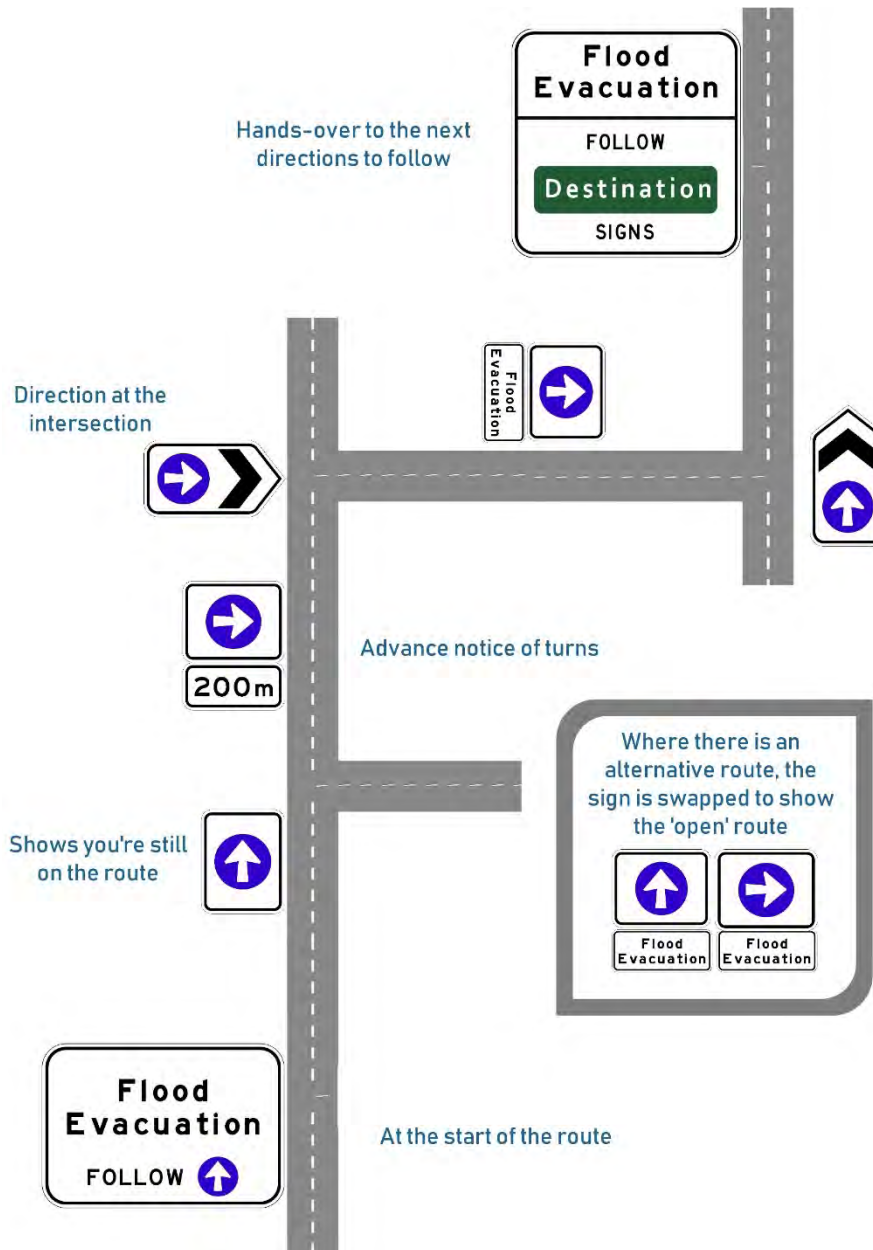
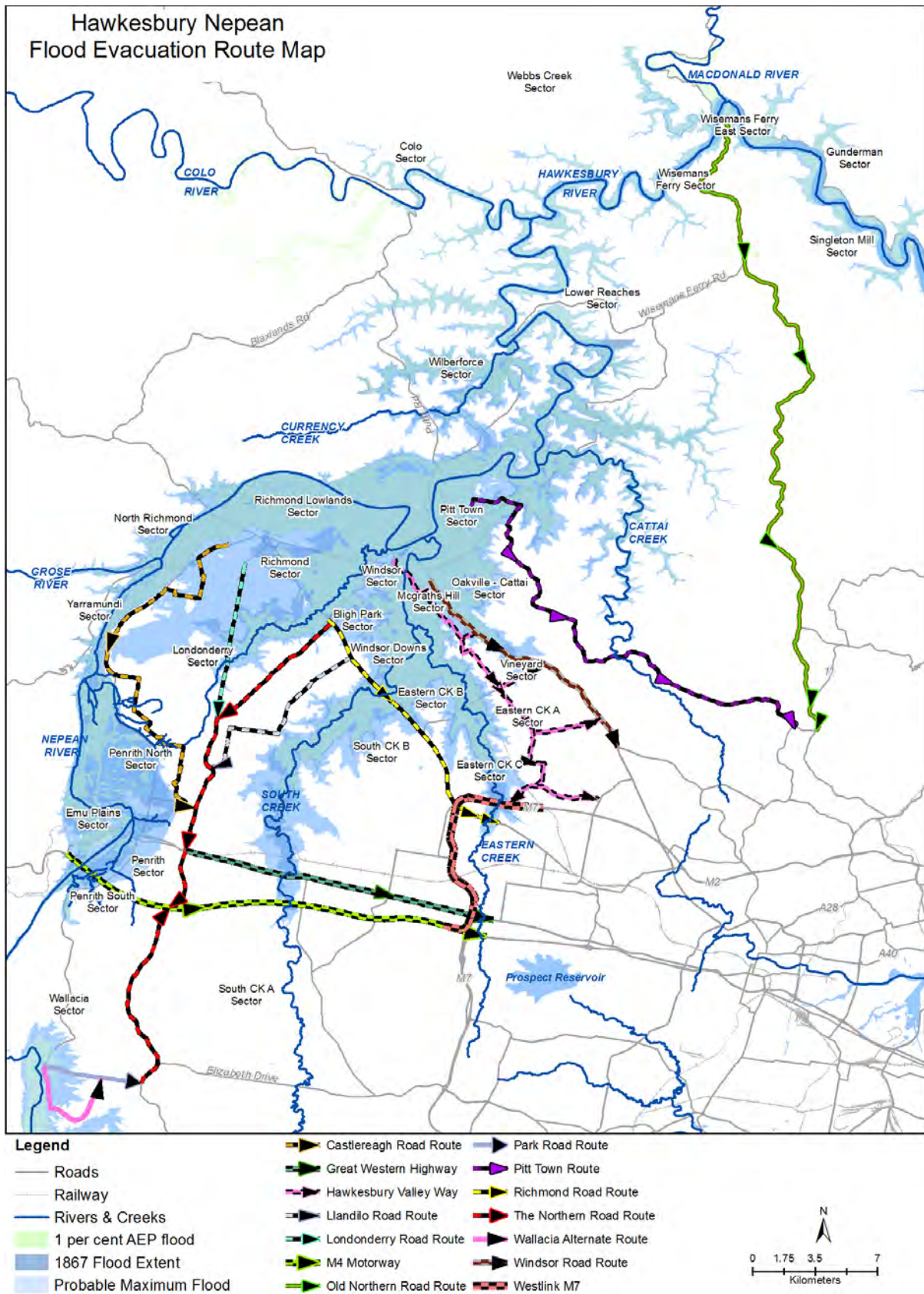


Figure 2: Regional Evacuation Route Signage System

VMS and Portable VMS

9.4.2 Fixed Variable Message Signs (VMS) will be used where available to provide information to evacuation traffic and other motorists. The location of VMS signage is detailed within the Hawkesbury-Nepean Traffic and Transport Operations Procedure and Pre-Plan (1) and Traffic Management Task Manual (2).



Map 1: Regional Evacuation Routes within the Hawkesbury-Nepean Valley

9.5 CRITICAL FLOODING POINTS ON EVACUATION ROUTES

9.5.1 The regional and sector evacuation routes can be cut by mainstream flooding from the Nepean and Hawkesbury Rivers as well as from local flooding due to localised storms.

Mainstream Flooding

9.5.2 The critical locations at which mainstream flooding from the Hawkesbury River cuts Regional Evacuation Routes are provided in Table 2 (17) (18).

Local Flooding

9.5.3 Most of the regional road evacuation routes have a number of local flooding points that may cut the route due to localised catchment flooding.

9.5.4 A number of the critical points have been upgraded to cope with up to 0.2% AEP (1 in 500 year) local flood event (as distinct from the Hawkesbury River flooding).

9.5.5 However there are several critical local flooding points that still exist including:

- a. The Northern Road between Fourth Avenue and Seventh Avenue, Llandilo;
- b. The Northern Road between the Richmond Road and Londonderry Road intersection;
- c. Blacktown-Richmond Road between The Northern Road and Llandilo Road;
- d. Llandilo Road;
- e. Hinxman Road on the Castlereagh Evacuation Route.

9.5.6 The traffic management arrangements in this Appendix try to take into account many of the key local flooding points, however there are still locations where no alternative currently exists.

Table 2: Regional Evacuation Routes and Critical Points at which they are cut by Mainstream River Flooding

Evacuation Route	Height Cut (m AHD)	Gauge Height (m)	Relevant Gauge	Sectors using this route
Windsor Road Route (MH1, MH1a, MH1b) (19)	13.5	13.5	Windsor Bridge	McGraths Hill (P)
Blacktown-Richmond Road Route (Bridge over Sth Creek) (WN16) (10)	14.2	14.2	Windsor Bridge	Windsor (I) Bligh Park (I) Windsor Downs (I) Eastern Ck B (P) Eastern Creek C (P) South Creek B (P)
Pitt Town Road Route (RL2032) (20)	16	16	Windsor Bridge	Pitt Town (P)
Hawkesbury Valley Way Route (Windsor1) (12) (11)	17.3	17.3	Windsor Bridge	Windsor (P)
Northern Road (WN4c) (21) (19)	18.1	18.1	N/A	Windsor (I) Penrith North (P)
Old Northern Road Route	Not flooded	N/A	N/A	Wisemans Ferry and surrounds (P)
Londonderry Road Route (R4) (19)	18.0	18.0	Windsor Bridge	Londonderry (P) Richmond (S)
Castlereagh Road Route (RA0) (12)	20.2	20.2	Windsor Bridge	Richmond (P)
Llandilo Road Route (WN14A) (19) (21)	23.8	23.8	Windsor Bridge	Bligh Park (P) Windsor Downs (P)
M4 Western Motorway Route (7)	32.8m		NA	Emu Plains (P)
Great Western Highway (7)	25.2m		NA	Penrith (P), Windsor (S) Bligh Park (S), Richmond (S)
Park Road Route, Wallacia (WA1) (22)	39.8m		Wallacia	Wallacia (P)
Wallacia Alternative Route(Greendale Rd) (21)	61.3m		Wallacia	Wallacia (S)

- (a) I – Initial Evacuation Route used during lower levels of flooding
- (b) P – Primary Evacuation Route
- (c) S – Secondary Evacuation Route used if local flooding cuts either the Initial or Primary Evacuation Route
- (d) Unless otherwise indicated, gauge height relates to the Windsor Bridge gauge

10 Appendix D3 - Regional Road Evacuation Route Descriptions

10.1 REGIONAL EVACUATION ROUTES

- 10.1.1 The designated regional road evacuation routes for flood operations are:
- a. The Windsor Road Route;
 - b. The Pitt Town Road Route;
 - c. The Hawkesbury Valley Way Route;
 - d. The Blacktown-Richmond Road Route;
 - e. The Llandilo Road Route;
 - f. The Northern Road Route;
 - g. The Londonderry Road Route;
 - h. The Castlereagh Road Route;
 - i. The Great Western Highway Route;
 - j. The M4 Motorway Route;
 - k. The Old Northern Road Route;
 - l. The Park Road Route;
 - m. The Wallacia Alternative Route.
- 10.1.2 This Appendix provides the detailed specification of these designated regional road evacuation routes for prevention, preparedness and response purposes.

10.2 THE WINDSOR ROAD EVACUATION ROUTE

- 10.2.1 The Windsor Road Evacuation Route is shown pictorially in Map 3 in this Annex and is further described below.
- 10.2.2 The Windsor Road Evacuation Route is the Regional Evacuation Route for the McGraths Hill Sector which includes the areas of McGraths Hill and Mulgrave.
- 10.2.3 The Entry Point for the Windsor Road Evacuation Route is located at the intersection of McGraths Road and Windsor Road, McGraths Hill.
- 10.2.4 Use of this evacuation route would involve travelling:
- a. South east along Windsor Road McGraths Hill, past the intersection of the Bandon Road Evacuation Route, along Windsor Road, Vineyard;
 - b. South east along Windsor Road Vineyard to Windsor Road, Riverstone, past the intersection of Garfield Road East (Hawkesbury Valley Way Evacuation Route);

- c. South east along Windsor Road via Box Hill and Rouse Hill passing the intersection of Schofields Road (alternate Hawkesbury Valley Way Evacuation Route);
- d. South east on Windsor Road via Kellyville Ridge and Beaumont Hills.

10.2.5 The Exit Point for the Windsor Road Evacuation Route is the intersection of Windsor Road and Old Windsor Road, Kellyville. From that point people are able to access the M2/M7 if required.

10.3 THE PITT TOWN ROAD EVACUATION ROUTE

10.3.1 The Pitt Town Road Evacuation route is shown pictorially in Map 4 and is further described below.

10.3.2 The Pitt Town Road Evacuation Route is the Regional Evacuation Route for the Pitt Town Sector.

10.3.3 The Entry Point for the Pitt Town Road route is located at the intersection of the Bathurst Street and Buckingham Street, Pitt Town.

10.3.4 The Pitt Town Road Evacuation Route continues:

- a. North along Bathurst Street to the intersection of Bootles Lane;
- b. East along Bootles Lane, then continues north east along Redfern Place;
- c. South east at the intersection of Redfern Place and Mitchell Road Pitt Town;
- d. At the intersection of Mitchell Road and Cattai Road continues north east along Cattai Road;
- e. At the intersection of Cattai Road continues east along Pitt Town Dural Road;
- f. At the intersection of Pitt Town Dural Road and Old Stock Route Road continues south west to the intersection of Old Pitt Town Road;
- g. South east on the intersection of Old Stock Route Road and Old Pitt Town Road;
- h. South along Old Pitt Town Road to the intersection with Scheyville Rd;
- i. East along Scheyville Road, Scheyville until the intersection of Old Pitt Town Road;
- j. South east along Old Pitt Town Road, Oakville crossing over Boundary Road;
- k. South east along Old Pitt Town Road, Box Hill to the intersection of Nelson Road and Edwards Road;
- l. East along Edwards Road to the intersection of Annangrove Road, Annangrove;
- m. East along Annangrove Road to the intersection of Kenthurst Road;

- n. South east along Kenthurst Road to the roundabout at the intersection of Kenthurst and Maple Street;
 - o. South west along Kenthurst Road to the intersection of Old Northern Road, Dural.
- 10.3.5 The Exit point for the Pitt Town Road evacuation route is at the intersection of Kenthurst Road and Old Northern Road, Dural.

10.4 THE NORTHERN ROAD EVACUATION ROUTE

- 10.4.1 The Northern Road Evacuation Route is shown pictorially in Map 5, Map 7 and Map 9 and is further described below.
- 10.4.2 The Northern Road Evacuation Route is the initial Regional Evacuation Route for the Windsor Sector which can be used before George Street is closed due to flooding at around 14.85m at the Windsor gauge (15m AHD).
- 10.4.3 The Entry Point for The Northern Road Evacuation Route is located at the intersection of The Northern Road and Blacktown-Richmond Road.
- 10.4.4 The Northern Road Evacuation route continues:
- a. South west along The Northern Road via Berkshire Park, Llandilo, Londonderry to the roundabout at Londonderry Road and Cranebrook Road;
 - b. South along The Northern Road, Llandilo past the intersection of Ninth Ave, where the Llandilo Evacuation Route ends at McGarrity's Hill;
 - c. South on The Northern Road at McGarrity's Hill via Jordan Springs to the intersection with Andrews Road, where the Castlereagh Evacuation Route ends at Cambridge Gardens. The road now is known as Richmond Road;
 - d. South along Richmond Road, via Cambridge Gardens, Cambridge Park, Kingswood, to the intersection with Coreen Avenue where the road is now known as Parker Street; and
 - e. South along Parker Street, Cambridge Park until the intersection with the Great Western Highway, Kingswood where the Great Western Highway Evacuation Route begins.
- 10.4.5 The Exit Point for the Route is the intersection of Parker Street and the Great Western Highway, Kingswood.
- 10.4.6 However, the Exit Point may be extended from the intersection of the Great Western Highway and Parker Street, Kingswood to the intersection of The Northern Road Kingswood, and the M4 Western Motorway at South Penrith depending on traffic conditions and if the Emu Plains Sector is also being evacuated.
- 10.4.7 From these points normal traffic management arrangements will apply.

- 10.4.8 To assist with the evacuations from the Wallacia floodplain traffic will be directed along The Northern Road Evacuation Route to the M4 Western Motorway. Entry Point for The Northern Road Evacuation Route from Wallacia is located at the intersection of The Northern Road and Park Road at Luddenham.
- 10.4.9 The Northern Road Evacuation route from Wallacia continues:
- a. North east along The Northern Road to the roundabout at Elizabeth Drive;
 - b. North east through the roundabout to continue along The Northern Road at Luddenham;
 - c. North along The Northern Road via Orchard Hills and Mulgoa; and
 - d. North along The Northern Road to intersection of the M4 Western Motorway.
- 10.4.10 The Exit Point for the Route is the intersection of The Northern Road and the M4 Western Motorway, Mulgoa.

10.5 THE LLANDILO ROAD EVACUATION ROUTE

- 10.5.1 The Llandilo Road Evacuation route is shown pictorially in Map 5 and Map 7 and is further described below.
- 10.5.2 The Llandilo Road Evacuation Route is the Primary Regional Evacuation Route for the Bligh Park and the Windsor Downs Sectors.
- 10.5.3 The Entry Point for the Llandilo Road Evacuation Route is located at the intersection of Llandilo Road and Blacktown-Richmond Road, Windsor Downs.
- 10.5.4 The Llandilo Road Evacuation route continues:
- a. South west along Llandilo Road, Berkshire Park until the intersection of Llandilo Road and Fourth Avenue;
 - b. West along Fourth Avenue until the intersection of Terrybrook Road;
 - c. South along Terrybrook Road until the intersection of Ninth Avenue, Jordan Springs; and
 - d. South west along Ninth Avenue until it meets The Northern Road Evacuation Route at McGarritys Hill.
- 10.5.5 Evacuation traffic from the Llandilo Evacuation Route will then merge onto The Northern Road Evacuation Route.

10.6 THE HAWKESBURY VALLEY WAY EVACUATION ROUTE

Evacuation Route (Bandon Road)

- 10.6.1 The Hawkesbury Valley Way Route is shown pictorially in Map 6 and is further described below.

- 10.6.2 The Hawkesbury Valley Way Evacuation Route is the Regional Evacuation Route for the Windsor Sector which includes the areas of Windsor, North Windsor and South Windsor.
- 10.6.3 The Entry Point for the Hawkesbury Valley Way Evacuation Route is located at the intersection of Macquarie Street and Day Street, Windsor.
- 10.6.4 The Hawkesbury Valley Way Evacuation route continues:
- a. South onto Day Street, Windsor until the intersection of Hawkesbury Valley Way;
 - b. South east along the Hawkesbury Valley Way across the Jim Anderson Bridge over South Creek at McGraths Hill;
 - c. South east from the Jim Anderson Bridge continuing along the Hawkesbury Valley Way, until the road is known as Railway Road North at Mulgrave;
 - d. South west from Railway Road West, across the emergency rail crossing to the southern side of the railway line, continue south east along Railway Road South;
 - e. South east along Railway Road South via Mulgrave and Vineyard, until the intersection of Level Crossing Road at Vineyard;
 - f. North east along Level Crossing Road, across the rail line heading north east along Level Crossing Road until the intersection of Wallace Road at Vineyard;
 - g. South east along Wallace Road, Vineyard until the intersection of Bandon Road; and
 - h. North east onto Bandon Road continue to the intersection of Windsor Road.
- 10.6.5 At the corner of Bandon Road and Windsor Road the Hawkesbury Valley Way Evacuation Route joins with the Windsor Road Evacuation Route.

Alternative Routes

- 10.6.6 To cater for possible local flooding there are several alternate routes for Windsor traffic travelling along the Hawkesbury Valley Way Evacuation Route to the south of Bandon Road. The alternative exit points include the:
- a. Intersection of Garfield Road and Windsor Road;
 - b. Intersection of Schofield Road and Windsor Road;
 - c. Intersection of Quakers Hill Parkway and Sunnyholt Road; and the
 - d. Intersection of Quakers Hill Parkway and the M7 Motorway.
- 10.6.7 From these Exit points normal traffic management arrangements apply.

Garfield Road Alternative Route

- 10.6.8 If there is local flooding on Bandon Road then evacuation traffic will continue:

- a. South on Riverstone Parade to the intersection of Otago Street;
- b. North east on Otago Street to the intersection of Hamilton Street;
- c. South east on Hamilton Street, Riverstone to the intersection of Garfield Road east; and
- d. North east on Garfield Road East to Windsor Road.

Schofields Road Alternative Route

- 10.6.9 If there is local flooding on Garfield Road East then evacuation traffic will continue:
- a. South east on to McCulloch Street, Riverstone to the intersection of Kensington Park Road;
 - b. North east on Kensington Park Road to the intersection of Boundary Road;
 - c. South east on Boundary Road to the intersection of Schofields Road; and
 - d. East on Schofields Road, via Rouse Hill and The Ponds to connect with Windsor Road.

Quakers Hill Parkway Alternative Route

- 10.6.10 If there is local flooding on Schofields Road then evacuation traffic will continue:
- a. South on Alex Avenue to the intersection of Burdekin Road;
 - b. East on Burdekin Road to the intersection of Hambeldon Road, Quakers Hill;
 - c. South west on Hambeldon Road to the intersection of Quakers Hill Parkway; and
 - d. East or west on the Quakers Hill Parkway to continue onto either Sunnyholt Road, Parklea or the M7 Motorway, Quakers Hill.

10.7 THE BLACKTOWN-RICHMOND ROAD EVACUATION ROUTE

- 10.7.1 The Blacktown-Richmond Road Evacuation route is shown pictorially in Map 7 and is further described below.
- 10.7.2 The Blacktown Richmond Road Evacuation Route is used as the Initial Evacuation Route for the Bligh Park Sector until it is cut at around 14.2m AHD at the bridge crossing over South Creek.
- 10.7.3 East of the South Creek Bridge, the Blacktown-Richmond Road Evacuation Route will be used as the Primary Evacuation Route by the following sectors:
- a. Eastern Creek B (Marsden Park);
 - b. Eastern Creek C (Colebee and Dean Park); and

- c. South Creek B (Marsden Park).
- 10.7.4 Part of the Blacktown-Richmond Road Evacuation Route is also used by the following sectors to access The Northern Road and Llandilo Road Evacuation Routes once the road is cut at South Creek:
- a. Windsor; and
 - b. Windsor Downs.
- 10.7.5 The Entry Point for the Blacktown-Richmond Road route is located at the roundabout at intersection of Blacktown Road and George Street.
- 10.7.6 The Blacktown-Richmond Road Route continues:
- a. South east at the roundabout along Richmond Road past The Northern Road Evacuation Route at Berkshire Park;
 - b. South east on Richmond Road past the Evacuation Route for Llandilo Road, Windsor Downs;
 - c. South east along Richmond Road via Windsor Downs, Marsden Park, Colebee and across the Westlink M7; and
 - d. South east along Richmond Road at Dean Park to the intersection with the Quakers Hill Parkway at Glendenning.
- 10.7.7 The Exit Point for the route is located at the intersection of Richmond Road and Quakers Hill Parkway. From this point normal traffic management arrangements apply.

10.8 THE LONDONDERRY ROAD EVACUATION ROUTE

- 10.8.1 The Londonderry Road Evacuation Route is shown pictorially in Map 8 and is further described below.
- 10.8.2 The Londonderry Road Evacuation Route is used as an alternative evacuation route for Richmond if the Castlereagh Evacuation Route is not able to be used. It is also an evacuation route for the Londonderry Sector.
- 10.8.3 The Entry point for the Londonderry Road Evacuation Point is located at the intersection of Vines Drive and Londonderry Road, Richmond.
- 10.8.4 The Londonderry Road Route continues:
- a. South along Londonderry Road Richmond and across the Driftway; and
 - b. South along Londonderry Road, Londonderry to the point at which the route merges with The Northern Road Route at the intersection of Londonderry Road and The Northern Road at Llandilo.

10.9 THE CASTLEREAGH ROAD EVACUATION ROUTE

- 10.9.1 The Castlereagh Road Evacuation Route is shown pictorially in Map 8 and is further described below.

- 10.9.2 The Castlereagh Road Route is the primary evacuation route for the Richmond Sector.
- 10.9.3 The Entry Point for the Castlereagh Road Evacuation Route is located at the intersection of Southee Street and Castlereagh Road, Hobartville.
- 10.9.4 This route extends through the following roads:
- a. South west along Castlereagh Road, Richmond to the intersection of The Driftway at Richmond;
 - b. South east along The Driftway at Agnes Banks to the intersection of Jockbet Street;
 - c. South along Jockbet Street, Agnes Banks to the intersection of Wilshire Road;
 - d. West along Wilshire Road, Agnes Banks to the intersection of Brooks Lane;
 - e. North then west along Brooks Lane, Agnes Banks to the intersection of Castlereagh Road;
 - f. South along Castlereagh Road, Agnes Banks to the intersection of Hinxman Road, Castlereagh;
 - g. East along Hinxman Road, Castlereagh to the intersection of Sheredan Road;
 - h. South along Sheredan Road, Castlereagh to the intersection of East Wilchard Road;
 - i. South east along East Wilchard Road, Castlereagh to the intersection of Church Street, Castlereagh;
 - j. South west along Church Street, Castlereagh to the intersection of Church Lane;
 - k. South east along Church Lane, Cranebrook to the intersection of Cranebrook Road;
 - l. South west along Cranebrook Road, Cranebrook to the intersection of Vincent Road, Cranebrook;
 - m. East along Vincent Road, Cranebrook to the roundabout at the intersection of Grays Lane Cranebrook;
 - n. South at the roundabout along Grays Lane, Cranebrook to the intersection of Hindmarsh Street, Cranebrook;
 - o. South west along Hindmarsh Street, Cranebrook to the roundabout at Dulhunty Court, Cranebrook;
 - p. South at the roundabout to Laycock Street, to intersection of Borrowdale Way, Cranebrook;
 - q. East along Borrowdale Road, Cranebrook to The Northern Road.

- 10.9.5 The Exit Point for the Castlereagh Road Route is the intersection of Borrowdale Way and Parker Street, at which point the Castlereagh Road Evacuation Route merges with The Northern Road Evacuation Route.

10.10 THE OLD NORTHERN ROAD EVACUATION ROUTE

- 10.10.1 The Old Northern Road Evacuation Route is shown pictorially in Map 12, and is further described below.
- 10.10.2 The Old Northern Road Route is the Regional Evacuation Route for the Wisemans Ferry and Lower Reaches Sectors. It can also service those sectors on the northern side of the Hawkesbury River whilst the Webbs Creek and Wisemans Ferry vehicle ferries are still operating including:
- a. Macdonald River;
 - b. Webbs Creek; and
 - c. Gunderman.
- 10.10.3 The entry point for the Old Northern Road Evacuation Route is located at the intersection of River Road, Singleton Road and Old Northern Road, Wisemans Ferry.
- 10.10.4 The Old Northern Road Evacuation Route continues:
- a. South west along the Old Northern Road via Metheringhams Hill, Wisemans Ferry, Maroota, past the intersection of Wisemans Ferry Road; and
 - b. South east along Old Northern Road via Forest Glen, Glenorie, Middle Dural, and Dural.
- 10.10.5 The Exit Point is located on the Old Northern Road at the roundabout where it becomes New Line Road near Dural.

10.11 THE M4 WESTERN MOTORWAY EVACUATION ROUTE

- 10.11.1 The M4 Western Motorway Route is shown pictorially on Map 10 and is further described below.
- 10.11.2 The M4 Western Motorway Route is the Regional Evacuation Route for the Emu Plains Sector. Other sectors are also directed onto the M4 evacuation route from various other Regional Evacuation Routes that converge onto The Northern Road.
- 10.11.3 The entry point for the M4 Western Motorway Regional Evacuation Route is located at the roundabout located on Russell Street / Leonay Parade, Emu Plains.
- 10.11.4 Additional evacuation traffic also joins the M4 motorway further to the east from Mulgoa Road and also The Northern Road Regional Evacuation Route.
- 10.11.5 The M4 Western Motorway Evacuation Route continues:

- a. South east at the roundabout at Leonay across the bridge over the Nepean River, continues via Regentville, Jamisontown and Glenmore Park, then crosses the Evacuation Route for The Northern Road at South Penrith; and
 - b. East along the M4 Western Motorway via Orchard Hills, Caddens, Claremont Meadows, St Clair, Colyton and Minchinbury.
- 10.11.6 The Exit point for the M4 Western Motorway is located just beyond where the M4 Motorway meets with the M7 Motorway at Eastern Creek. From here people are able to take either the M7 or M4 motorways.

10.12 THE GREAT WESTERN HIGHWAY EVACUATION ROUTE

- 10.12.1 The Great Western Highway Regional Evacuation Route is shown pictorially on Map 8 and Map 9 and is further described below.
- 10.12.2 The Great Western Highway Regional Evacuation Route may be used to direct traffic from the north on The Northern Road towards Sydney to ease congestion on the M4 Western Motorway. This would be particularly the case if Emu Plains is being evacuated in addition to Bligh Park, Windsor and Richmond.
- 10.12.3 The Entry Point for the Great Western Highway Evacuation Route is located at the roundabout at the intersection of Parker Street and the Great Western Highway.
- 10.12.4 The Great Western Highway Regional Evacuation Route continues:
- a. East via Kingswood, Caddens, Claremont Meadows, St Marys, Oxley Park, Colyton, Mount Druitt and Minchinbury.
- 10.12.5 The Exit Point for the Great Western Highway Evacuation Route is just beyond where the Great Western Highway meets with the M7 Motorway at Eastern Creek. From here people are able to take either the M7 or M4 motorways.

10.13 THE PARK ROAD EVACUATION ROUTE

- 10.13.1 The Park Road Evacuation Route is shown pictorially in Map 11 and is further described below.
- 10.13.2 The Park Road Evacuation Route is the Regional Evacuation Route for Wallacia including the sectors of Wallacia, Wallacia South **and** Bents Basin.
- 10.13.3 The Entry Point for the Park Road Evacuation Route is located at the roundabout intersection of Park Road, Greendale Road, Silverdale Road and Mulgoa Road.
- 10.13.4 The Park Road Evacuation Route continues:
- a. South east along Park Road past the intersection of Wallacia Alternate Evacuation Route, Wallacia; and

- b. East along Park Road until it meets The Northern Road Evacuation Route at Luddenham.
- 10.13.5 The Exit Point for the Park Road Evacuation Route is the intersection of Park Road and The Northern Road, Luddenham.
- 10.13.6 From that point on traffic will be directed north along The Northern Road Evacuation Route. Where The Northern Road meets the M4 Western Motorway traffic will be directed east along the M4 Western Motorway Evacuation Route.

10.14 THE WALLACIA ALTERNATIVE EVACUATION ROUTE

- 10.14.1 The Wallacia Alternative Route is shown pictorially on Map 11 and is further described below.
- 10.14.2 The Wallacia Alternative Route is the Regional Evacuation Route for Wallacia once the Park Road Route is no longer viable.
- 10.14.3 The Entry Point for the Wallacia Alternative Route is located at the roundabout intersection of Park Road, Greendale Road, Silverdale Road and Mulgoa Road, Wallacia.
- 10.14.4 The Wallacia Alternative Evacuation Route continues:
- a. South along Greendale Road Wallacia;
 - b. South east along Greendale Road, Wallacia, then continues along an unsealed road through a private property; and
 - c. North along the unsealed road, Wallacia and continues along to join up with Park Road Evacuation Route.
- 10.14.5 The Exit Point for the Wallacia Alternative Route is at this point where the private road meets up with Park Road. From there, evacuation traffic will be directed onto The Northern Road Evacuation Route and the M4 Western Motorway.

11 Appendix D4 - Traffic Management Arrangements For Evacuation

11.1 TRAFFIC MANAGEMENT PRINCIPLES FOR REGIONAL EVACUATION

ROUTES

11.1.1 All designated regional road evacuation routes are to be managed using the following principles:

a. Outbound Traffic:

- When floodwaters reach the road level, then evacuation traffic will be stopped from crossing the flooded point (this is for safety reasons due to flow velocity, stalled vehicles, buoyancy issues for different type of vehicles, aquaplaning and to minimise road pavement damage).
- Once an evacuation route has been closed, and where alternative routes exist, traffic will be redirected onto these alternative routes.
- On advice from the Transport Liaison Officer at the Incident Control Centre, traffic updates for Regional evacuation routes will be provided by TMC Traffic Information Officers, using existing arrangements, to television stations, radio stations and the Live Traffic web site. This may involve some coordination with the Joint Media Information Centre (See Section 5.3).
- Fixed and portable VMS signs will be used to primarily provide advisory messages to outbound traffic on evacuation routes to provide directions to outside of the PMF area and secondly if available to evacuation centres.
- TMC Traffic Emergency Patrols may be used to supplement traffic management at key points.
- TMC will coordinate provision and allocation of tow trucks (light and heavy). Broken down vehicles will be relocated to the nearest safe location off the evacuation route.
- Buses will be despatched (regularly or as required) for people and their companion animals to collect those who do not have their own vehicles and to pick up the occupants of broken down vehicles.
- Buses will transport people either to a transport hub, or else to the allocated evacuation centre/s.

b. Inbound traffic:

- Police will coordinate overall security of evacuated areas. This includes where necessary support to TMC and Councils to manage inbound traffic at key points on the outer perimeter of the traffic control area.

- Inbound traffic (mostly residents) will be allowed into the area until the Incident Controller determines that inbound traffic will cease.
- At that time access to the route is to be denied to all traffic except emergency vehicles, buses being used for evacuation and supporting services as per the list below.
- Normally one inbound lane is to be kept clear at all times for use by:
 - ◆ Emergency vehicles,
 - ◆ Utility service provider vehicles,
 - ◆ Waste service vehicles,
 - ◆ Vehicle breakdown repair and towing vehicles,
 - ◆ Road maintenance and repair crews; and
 - ◆ Road barricade and traffic signage crews.

11.2 CONTROL AND COORDINATION

- 11.2.1 The security, control and keeping clear of the Regional Evacuation Routes are the joint responsibility of the Police North West Metropolitan Region, via the Police Traffic Co-ordinator, and the NSW Transport Management Centre (TMC).
- 11.2.2 Management responsibilities are as follows:
- a. Council will manage specified locations on local roads and local roads connecting to RMS roads used as part of Regional Evacuation Routes.
 - b. TMC will manage State roads used as part of Regional Evacuation Routes and at specified locations on those roads.
 - c. Police will oversee the management of key locations on the Regional Evacuation Routes supported by TMC and/or Council.
- 11.2.3 Resources for the designated locations will be provided by the relevant authority as details in the TCP for each location on a priority basis.
- 11.2.4 Overall coordination of the regional road evacuation routes will be conducted from the Evacuation Coordination Desk at the Incident Control Centre (Figure 3). The evacuation coordination desk will include:
- a. An Evacuation Coordinator provided by the NSW SES;
 - b. A Transport liaison officer provided by Transport for NSW;
 - c. A Police Traffic liaison officer provided by the North West Region Police Commander.
- 11.2.5 The Evacuation Desk will work closely with the Welfare Services Liaison Officer at the Incident Control Centre.
- 11.2.6 TMC and/or Transport for NSW will provide barriers for state roads. Barriers for local roads in the Hawkesbury, Penrith, Blacktown, The Hills, Gosford,

Hornsby, Wollondilly and Liverpool LGAs will be provided as detailed in the relevant TCPs whilst resources are available.

- 11.2.7 Additional traffic management resources, beyond local arrangements, may be requested by Council Liaison Officers at NSW SES Unit Operations Centre from the Evacuation Coordination Desk. These additional resources may include:
- a. Barriers;
 - b. Traffic management personnel from other local councils.
- 11.2.8 The Evacuation Coordination Desk will liaise with the NRMA Road Service control centre regarding response to vehicle breakdowns in evacuation areas and along regional road evacuation routes.

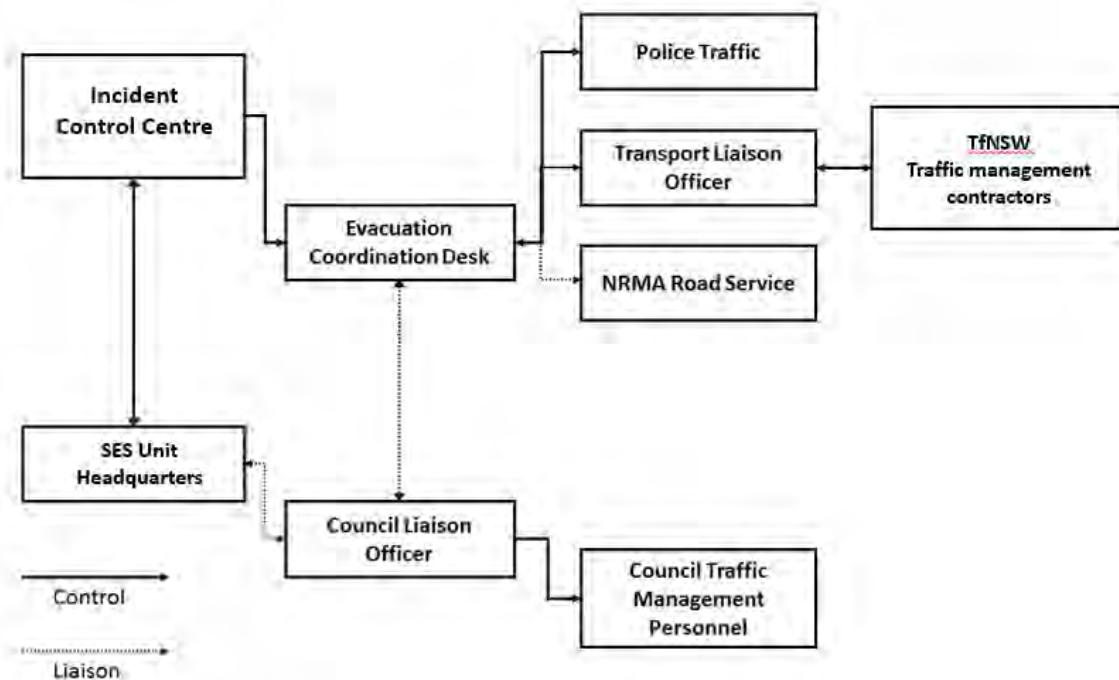


Figure 3: Evacuation Coordination Desk Control Arrangements

11.3 COMMUNICATIONS

- 11.3.1 Information on the status of roads will be available from:
- a. The Live Traffic NSW web site (www.livetraffic.com);
 - b. The Transport Information Line (131 500);
 - c. The relevant Council web-sites.
- 11.3.2 Police and TMC will allocate working channels from their radio networks (GRN or UHF) for the traffic management of the Regional Evacuation Route network.
- 11.3.3 Back up communications will be provided by:
- a. Private Mobile Radio (PMR) network should the GRN fail;

- b. Ground station independent satellite phones to provide essential links between Sector controllers, NSW SES Unit Headquarters, NSW SES Zone Headquarters and NSW SES State Headquarters.

11.4 NOTIFICATIONS

11.4.1 For each regional road evacuation route, the Incident Controller will advise the Transport Liaison Officer and Police Liaison Officer when:

- a. Traffic management resources are to be positioned during the mobilisation phase for relevant sectors.
- b. Traffic management arrangements are to be put into effect when evacuation is commenced.
- c. Inbound traffic to particular sectors is to cease.

11.4.2 The Police Traffic Liaison Officer and Transport Liaison Officer will advise the Incident Controller:

- a. When the traffic management structure is established and ready for each of the Regional Evacuation Routes.
- b. Once traffic management arrangements are put into effect, the status of traffic movement on evacuation routes. This would include:
 - if traffic is flowing steadily, or
 - if traffic movement becomes impeded.
- c. When each of the regional road evacuation routes is clear of evacuation traffic.
- d. When normal traffic management arrangements for the evacuation route have been reinstated.

11.5 ADVISING OF EVACUATION CENTRES

11.5.1 If a major evacuation centre is established it will be located within the Sydney Metropolitan area, as detailed in Section 6 of Annex D. Fixed and portable VMS may be used if available to advise evacuation traffic to proceed to this major evacuation centre.

11.5.2 During smaller flood events evacuees will be directed to one or more of the evacuation centres listed in Section 6 of Annex D. Advisory messages for outbound evacuation traffic may be displayed on both fixed and portable VMS.

11.6 KEY TRAFFIC CONTROL POINTS

- 11.6.1 Whilst the Hawkesbury-Nepean Traffic and Transport Operations Procedure and Pre-Plan (1) and Traffic Management Task Manual (2) outlines the control arrangements at all traffic control points, there are a number of key locations which are important for the overall co-ordination and management of evacuations within the Hawkesbury-Nepean Valley. These include:
- a. **Key Directional Control Points** which determine the sequencing and use of the alternate regional evacuation route options at that point;
 - b. **Key Convergence Points** where traffic management arrangements will be required to control converging traffic streams;
 - c. **Inbound Traffic Control Points** to prevent re-entry into the flood effected areas and allow for the staged re-entry of people following a flood event.

Key Directional Control Points

- 11.6.2 The key directional points for the control of these various evacuation routes are provided in Table 3, with further descriptions of the arrangements for each sector provided in Appendix D5 to this Annex in Maps 2 to 12. Detailed descriptions of each evacuation route are provided in Appendix D3 to this Annex.
- 11.6.3 The Incident Controller will determine which regional evacuation route traffic is to be directed onto based on:
- a. Which Sector evacuation streams are active at that point;
 - b. The prevailing conditions on the regional evacuation routes such as local flooding.

Key Traffic Convergence Points

- 11.6.4 The key traffic convergence points for the various Regional Evacuation Routes are provided in Table 4, with further descriptions of the arrangements for each sector provided in Maps 2 to 12. The details of each evacuation route are further described in Appendix D3 to this Annex.

Inbound Traffic Control Points

- 11.6.5 The key inbound traffic control points are detailed in the Hawkesbury-Nepean Traffic and Transport Operations Procedure and Pre-Plan (1) and Traffic Management Task Manual (2).

Table 3: Key Directional Points for the Control of Evacuation Routes

Key Directional Control Point	Available Regional Evacuation Routes	Comment
Intersection of Richmond Road and The Northern Road	Northern Road Evacuation Route; Llandilo Road Evacuation Route	To direct vehicles either onto The Northern Road Evacuation Route or the Llandilo Road Evacuation Route.
George St near Rifle Range Road, South Windsor	Northern Road Evacuation Route; Hawkesbury Valley Way Evacuation Route	Once George St, Windsor is cut, traffic from Windsor will need to be directed onto the Hawkesbury-Valley Way Evacuation Route instead of the Northern Road Evacuation Route.
Intersection of Llandilo Road and Richmond Road	Blacktown-Richmond Road Evacuation Route; Llandilo Road Evacuation Route; Northern Road Evacuation Route	Once the Blacktown-Richmond Rd is cut at South Creek (14.2m AHD) evacuation traffic will need to be directed onto either The Northern Road Evacuation Route or the Llandilo Road Evacuation Route dependent on local flooding.
Intersection of Parker Street and the Great Western Highway	Northern Road Evacuation Route and Great Western Highway Evacuation Route	Evacuation traffic from the Northern Road Evacuation Route can be directed either onto the Great Western Highway Evacuation route or the M4 Western Motorway route depending on if Emu Plains is being evacuated.
Roundabout at the intersection of Mulgoa Road, Silverdale Road and Greendale Road, Wallacia	Park Road Evacuation Route and Wallacia Alternative Evacuation Route	To direct people either onto the Park Road or Wallacia Alternative Evacuation Routes for Wallacia.
Intersection of Riverstone Parade and Bandon Road	Hawkesbury Valley Way Evacuation Route	If there is no flooding on Bandon Road it can be used, however if it is flooded evacuation traffic will be directed to continue along Riverstone Parade.
Intersection of Garfield Road East and McCulloch St, Riverstone	Hawkesbury Valley Way Evacuation Route	If there is no flooding on Garfield Road East it can be used, however if it is flooded evacuation traffic will be directed to continue south east on McCulloch Street.
Intersection of Schofields Road, Boundary Road and Alex Avenue	Hawkesbury Valley Way Evacuation Route	If there is no flooding on Schofields Road it can be used. However if there is flooding on evacuation traffic will be directed to continue south on Alex Avenue.
Intersection of Londonderry Road and Southee Road	Londonderry Road Evacuation Route, Castlereagh Road Evacuation Route	Once Londonderry Road is cut at (18m AHD), evacuation traffic will need to be redirected onto the Castlereagh Road Evacuation Route.

Table 4: Key Traffic Convergence Points for the control of Evacuation Routes

Evacuation Routes Affected	Key Convergence Point	Comment
The Northern Road Evacuation Route and Londonderry Road Evacuation Route	The roundabout located at the intersection of Londonderry Road, The Northern Road and Cranebrook Road.	The Londonderry Road Evacuation Route mainly used if there is an issue that prevents the use of the Castlereagh Road Evacuation Route.
The Northern Road Evacuation Route and Llandilo Road Evacuation Route	The intersection of The Northern Rd and Ninth Ave, Llandilo.	Only two traffic lanes are available between Ninth Ave Llandilo and Andrews Rd, Castlereagh. If the Llandilo Rd Evacuation Route is activated, traffic convergence issues will need to be managed for Windsor sector traffic, and Bligh Park Sector traffic.
The Northern Road Evacuation Route and Castlereagh Road Evacuation Route	The intersection of Borrowdale Road and The Northern Road / Richmond Road, Castlereagh	There are two southbound and two northbound lanes from Borrowdale Way to the Great Western Highway and the M4 Western Motorway. However, there is only single lanes on The Northern Road north of the intersection with Borrowdale Way. If the Castlereagh Road Evacuation Route is activated (in addition to The Northern Road and Llandilo Road routes), then the convergence of these traffic streams will need to be managed.
The Northern Road Evacuation Route and the M4 Western Motorway	M4 Western Motorway and the M4 motorway	Evacuation traffic from both the southern and northern sections of The Northern Road Evacuation Route will converge onto the M4 Western Motorway.

11.7 SEQUENCING OF SECTORS ONTO REGIONAL ROAD EVACUATION

ROUTES

- 11.7.1 The traffic management arrangements for directing traffic onto Regional Evacuation Routes are complex.
- 11.7.2 All potentially flood effected areas within the Hawkesbury-Nepean Valley have been defined by areas known as Sectors based on their flood classification as shown on Map 2.
- 11.7.3 In each sector, vehicles will be advised to proceed via Sector Evacuation Routes either:
- a. Directly outside of the flood affected area, or
 - b. Onto their relevant Regional Evacuation Route.

- 11.7.4 However, for some sectors the evacuation route that is used may vary dependant on:
- a. The predicted flood height;
 - b. What other sectors are also being evacuated at the same time;
 - c. If there are issues of evacuation traffic converging onto the same evacuation routes;
 - d. Any local flooding on the Regional Evacuation Route;
 - e. When the Regional Evacuation Route has been closed due to riverine flooding.
- 11.7.5 Where this occurs people coming from specific sectors will be directed onto various alternative Regional Evacuation Routes as outlined in Table 5 and Table 6.
- 11.7.6 There are particular traffic management and convergence issues where a number of Regional Evacuation Routes merge onto the Northern Road Evacuation Route and the M4 Western motorway.
- 11.7.7 Due to convergence of Regional Evacuation Routes, the Incident Controller will determine the sequencing of sectors onto the relevant regional road evacuation routes as outlined in Tables 5 and 6 and as shown in Maps 2 to 12.
- 11.7.8 Note that some sectors, particularly on the western side of the Hawkesbury-Nepean River, between the Grose River and Macdonald River, use sector evacuation routes rather than Regional Evacuation Routes. These sectors and their sector evacuation routes are further described within the relevant local flood plans (i.e these are the uncoloured sectors in Map 2).

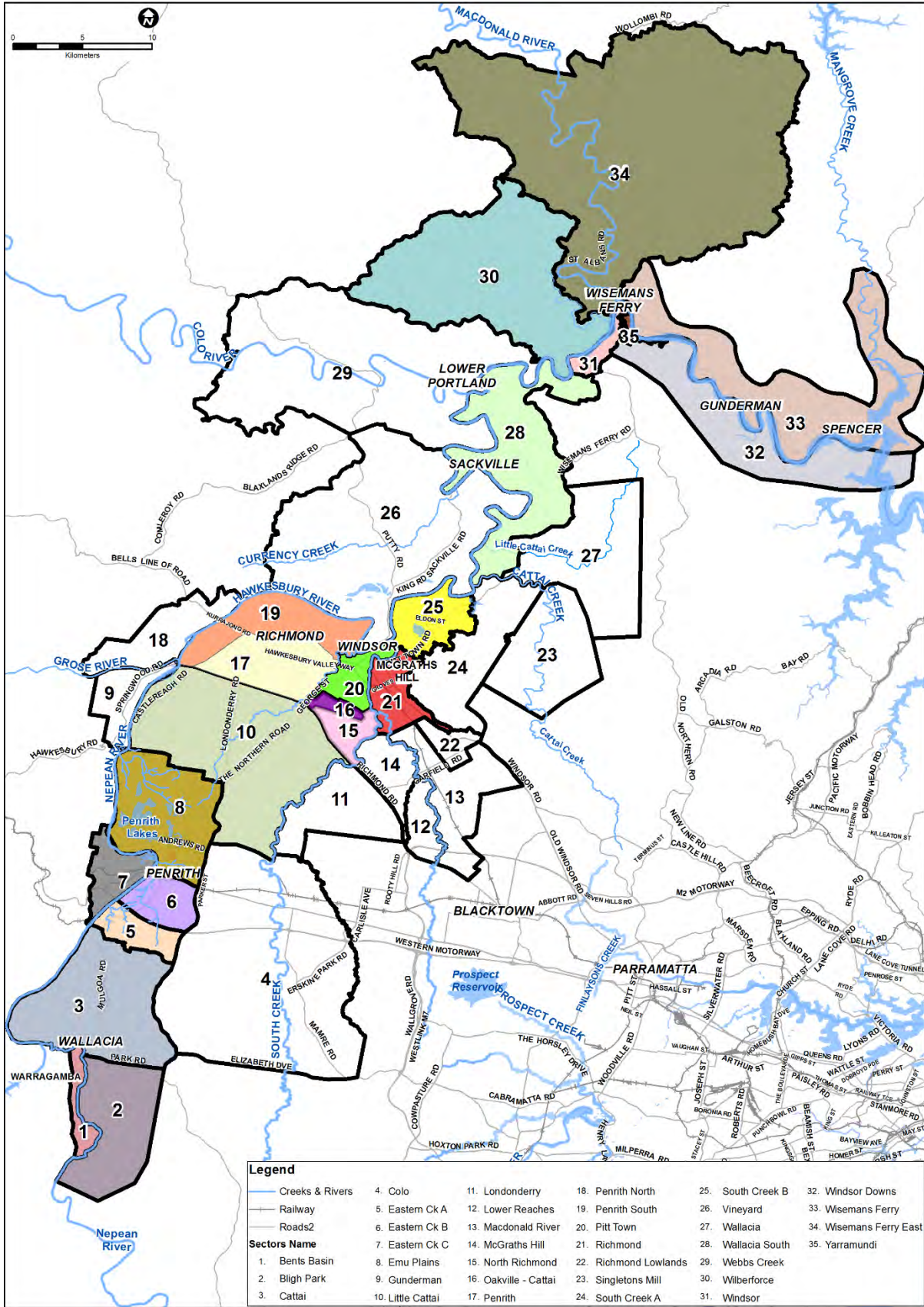
11.8 TRAFFIC MANAGEMENT PRINCIPLES FOR RETURN

- 11.8.1 Following the flood, traffic will only be allowed back into flood affected areas when an 'All clear' has been given, or under controlled staged return arrangements as outlined the Hawkesbury-Nepean Flood Plan.
- 11.8.2 Traffic management at the key traffic control points will need to be managed to enable this staged return.

12 Appendix D5 - Regional Evacuation Route Arrangements By Sector

12.1 INTRODUCTION

- 12.1.1 Dependant on the predicted flood height not every sector will need to be evacuated and not every evacuation route activated.
- 12.1.2 Each Regional Evacuation Route will be activated as described below. These are generally listed in the order that they are likely to be required.
- 12.1.3 Note that earlier evacuations may be required from individual properties within each sector as they are gradually inundated.



Map 2: Hawkesbury-Nepean Valley Emergency Management Sector Map

Table 5: Sectors using Regional Road Evacuation Routes on the Windsor /Richmond / Wilberforce Floodplain

Sequence	Sector	Flood Classification	Regional Road Evacuation Route	Type	Comments
1st	McGraths Hill	Low Flood Island	Windsor Road Route	Primary	Used as primary evacuation route until cut at 13.5m AHD. No alternative route.
2nd	Pitt Town	Low Flood Island	Pitt Town Road Route	Primary	Used as primary evacuation route until cut at 16m AHD. No alternative route.
3rd	Windsor	Low Flood Island	The Northern Road Route	Initial	Used initially until George St is cut at 15m AHD or until it is itself cut at 18.1m AHD.
			Llandilo Road Route	Secondary	Used as alternative if there is local flooding on the Northern Road until cut at 23.8m AHD.
			Hawkesbury Valley Way Route	Primary	This is the last evacuation route for Windsor and is cut at 17.3m AHD.
4th	Bligh Park Sector and Windsor Downs Sector	Low Flood Island	Blacktown-Richmond Road	Initial	Used initially until this road is cut at 14.2m AHD at South Creek.
			Llandilo Road Route	Primary	Used once the Blacktown-Richmond Road is cut. It is cut itself at 23.8m AHD
			The Northern Road Route	Secondary	Used if Llandilo Road is cut by local flooding. Is itself cut at 18.1m AHD. Traffic convergence issues.
6th	Richmond Sector	Low Flood Island	Castlereagh Road Route	Primary	Used until cut at 20.2m AHD.
			Londonderry Road Route	Secondary	Used as an alternative to Castlereagh Rd if required until cut at 18.0m AHD.
7th	Londonderry Sector	Overland Access	Londonderry Road Route Northern Road Route Llandilo Road Route	Primary	The Londonderry Sector crosses a number of Regional Evacuation Routes. Different subsectors will use different routes.

Table 6: Sectors using Regional Road Evacuation Routes on Emu Plains/Penrith, Wallacia and Lower Floodplains

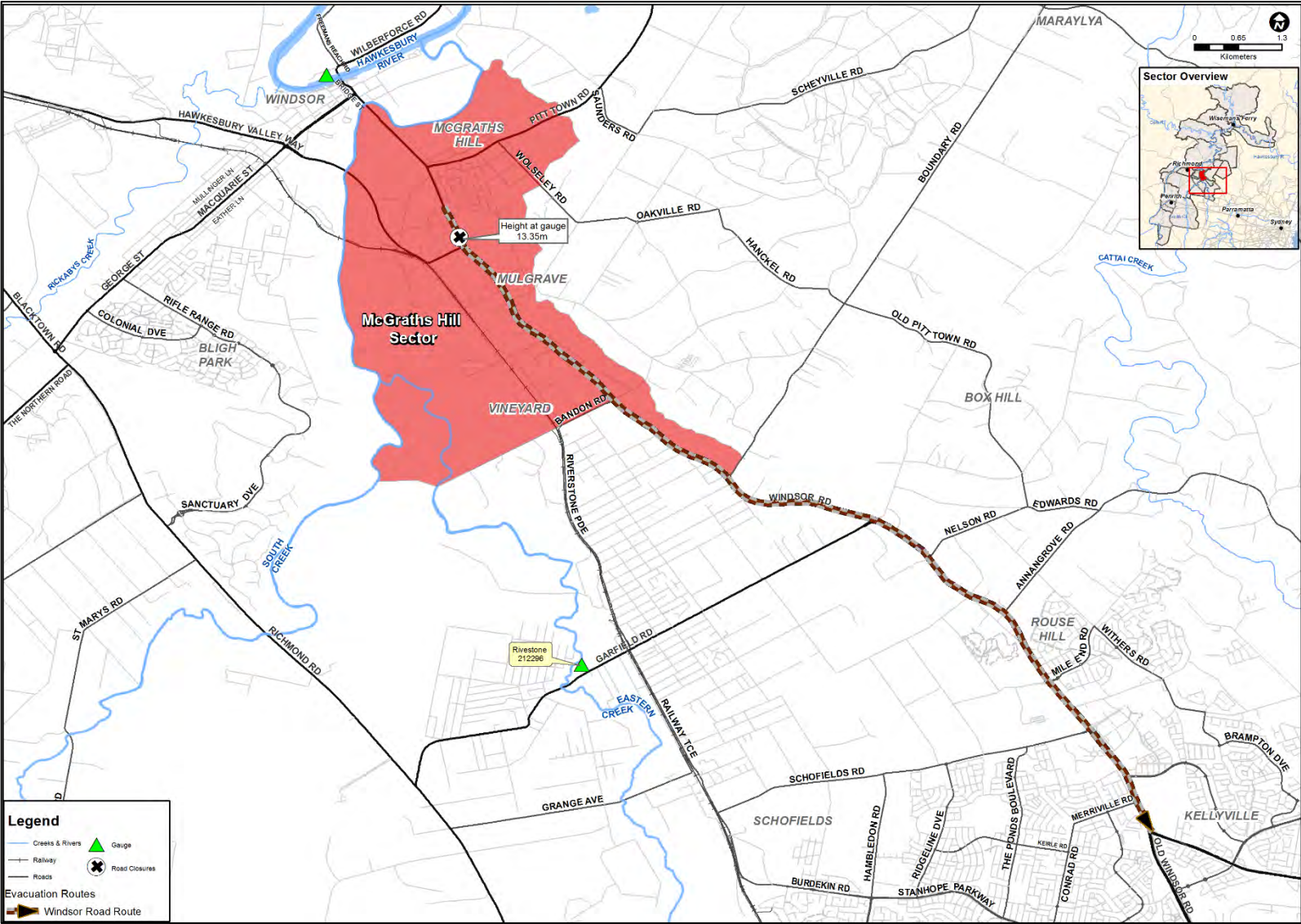
Floodplain	Sector	Flood Area Type	Regional Road Evacuation Route	Type	Comments
Emu Plains / Penrith	Emu Plains Sectors	Low Flood Island	M4 Motorway Route	Primary	This route may experience localised catchment flooding
	Penrith and others from Northern Rd Route	Rising Road Access / Other	Great Western Highway Route	Primary / Secondary	Evacuation Traffic from the Northern Road Route can be directed onto the Great Western Highway Route instead of the M4 if Emu Plains is also being evacuated. This is in order to ease congestion on the M4.
Wallacia	Wallacia Sector	High Flood Island	Park Road Route	Primary	Used initially until cut at 39.8m AHD
			Wallacia Alternative Route	Secondary	Used only if required / able. Note that this is an unsealed road through private property. Road condition may not be suitable. Cut at around 61.3m AHD.
Lower Hawkesbury	Webbs Creek, Gunderman and MacDonald Valley	Trapped Perimeter	Old Northern Road Route	Primary	Sectors must evacuate early before the ferries are closed and local roads are flooded. Alternative access out is via Wisemans Ferry Road or Wollombi Road, however these roads are cut early during floods.
	Lower Reaches, Wisemans Ferry, Singeltons Mill	Trapped Perimeter	Old Northern Road	Primary	Local roads leading onto the Regional Evacuation Route including River Road are cut early by flooding (from 1.54m AHD) and Singelton Rd (1.3m AHD) The Old Northern Road itself is not affected by mainstream flooding.

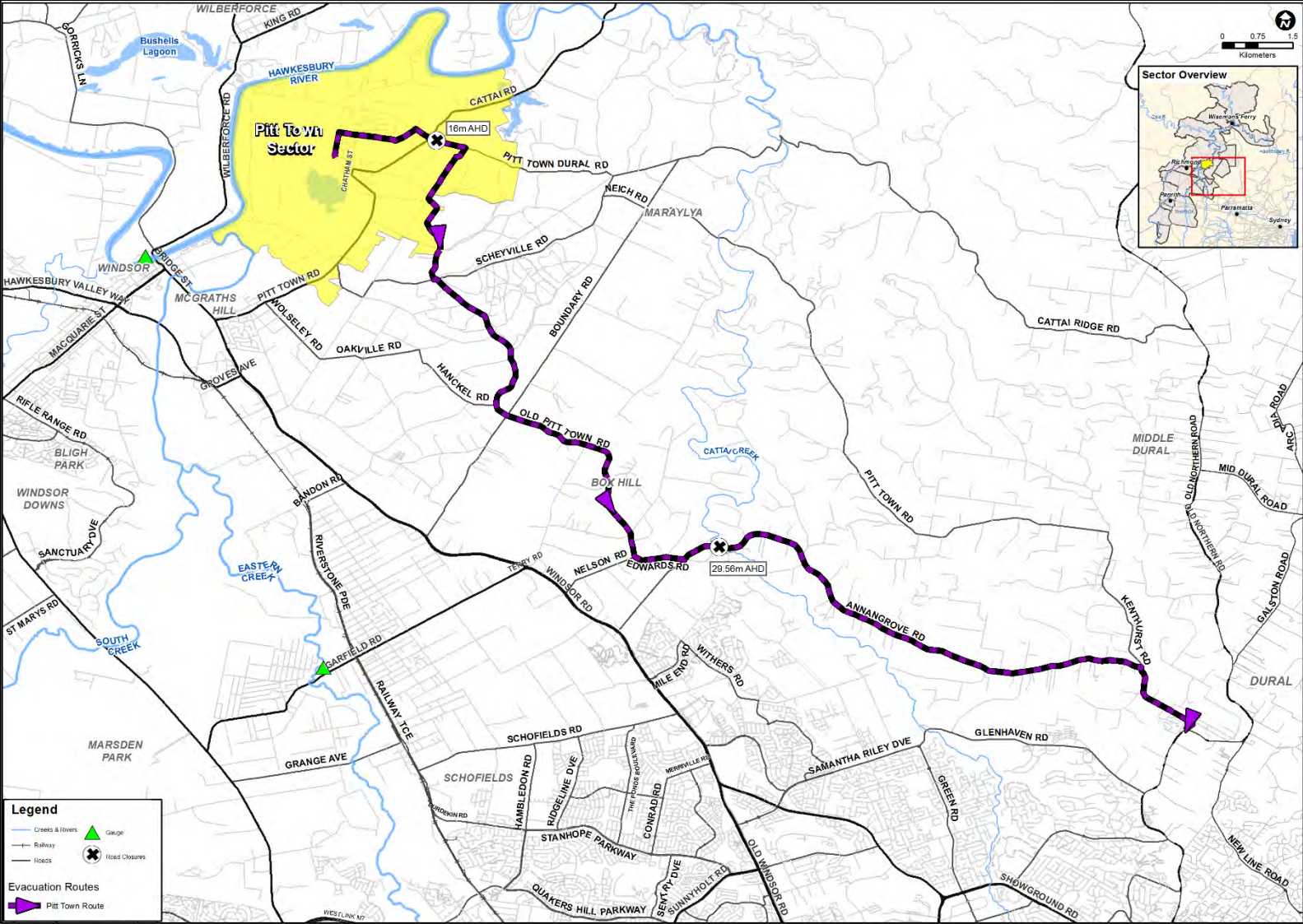
12.2 MCGRATHS HILL SECTOR

- 12.2.1 The McGraths Hill Sector including McGraths Hill and Mulgrave will need to be completely evacuated if the predicted flood height exceeds 13.5m at the Windsor gauge (13.5m AHD).
- 12.2.2 This will cause the activation of the Windsor Road Evacuation Route as shown in Map 3. The details of the Windsor Road Evacuation Route are further described in Section 10.2.
- 12.2.3 Two streams of evacuation traffic are able to utilise this route, with one stream from the Mulgrave subsector and one stream from the McGraths Hill subsector travelling along the two allocated lanes.
- 12.2.4 The Windsor Road Evacuation Route is cut by mainstream flooding at 13.5m at the Windsor Bridge gauge (13.5 metres AHD) at a number of points between Curtis Road, Mulgrave and Park Road, Vineyard.
- 12.2.5 There are no alternative evacuation routes for McGraths Hill and Mulgrave.

12.3 PITT TOWN SECTOR

- 12.3.1 The Pitt Town Sector will need to be completely evacuated if the predicted flood height exceeds 16m at the Windsor gauge (16m AHD).
- 12.3.2 Traffic from the Pitt Town Sector including Pitt Town Bottoms and Pitt Town will utilise the Pitt Town Road Evacuation Route as shown in Map 4.
- 12.3.3 The details of the Pitt Town Road Evacuation Route are further described in Section 10.3.
- 12.3.4 The Pitt Town Road Evacuation Route is cut by riverine flooding at 16m (16m AHD) at the Windsor gauge.
- 12.3.5 There is a chance that local flooding could affect the Pitt Town evacuation route at Murphy's Bridge on Annangrove Road over Cattai Creek. If this occurs, traffic may be:
 - a. Rediverted to Windsor Road depending on the other evacuation traffic using this route.
 - b. Alternatively, given that this road closure point is outside of the PMF, people may be re-directed to temporary shelter in the vicinity.
- 12.3.6 This is the last evacuation route for Pitt Town.





Map 4: Pitt Town - Pitt Town Road Evacuation Route

12.4 WINDSOR SECTOR

12.4.1 The Northern Road Evacuation Route is activated if the predicted flood level will exceed 16m AHD resulting in the need to evacuate the Windsor Sector.

12.4.2 Traffic from the Windsor Sector will:

- a. Initially be directed from George Street to Blacktown-Richmond Road then to the Northern Road Route.
- b. However, if flooding cuts the Northern Road between Richmond Road and the roundabout at Londonderry Road, then traffic may be redirected to the Llandilo Road Route via the Blacktown-Richmond Road depending on the expected duration of local flooding (See Figure 4 and Map 5 and Section 10.4).
- c. When George Street is inundated at 15m at the Windsor gauge (15m AHD) near Rifle Range Road at Bligh Park, evacuation traffic will be directed onto the Hawkesbury Valley Way route (See Figure 4, Map 6 and Section 10.6).

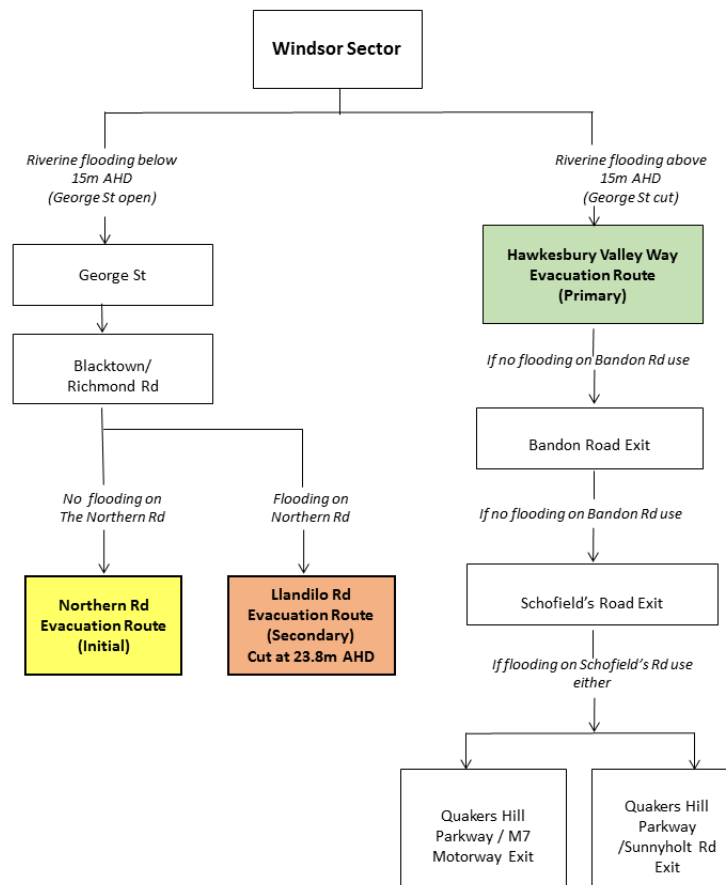


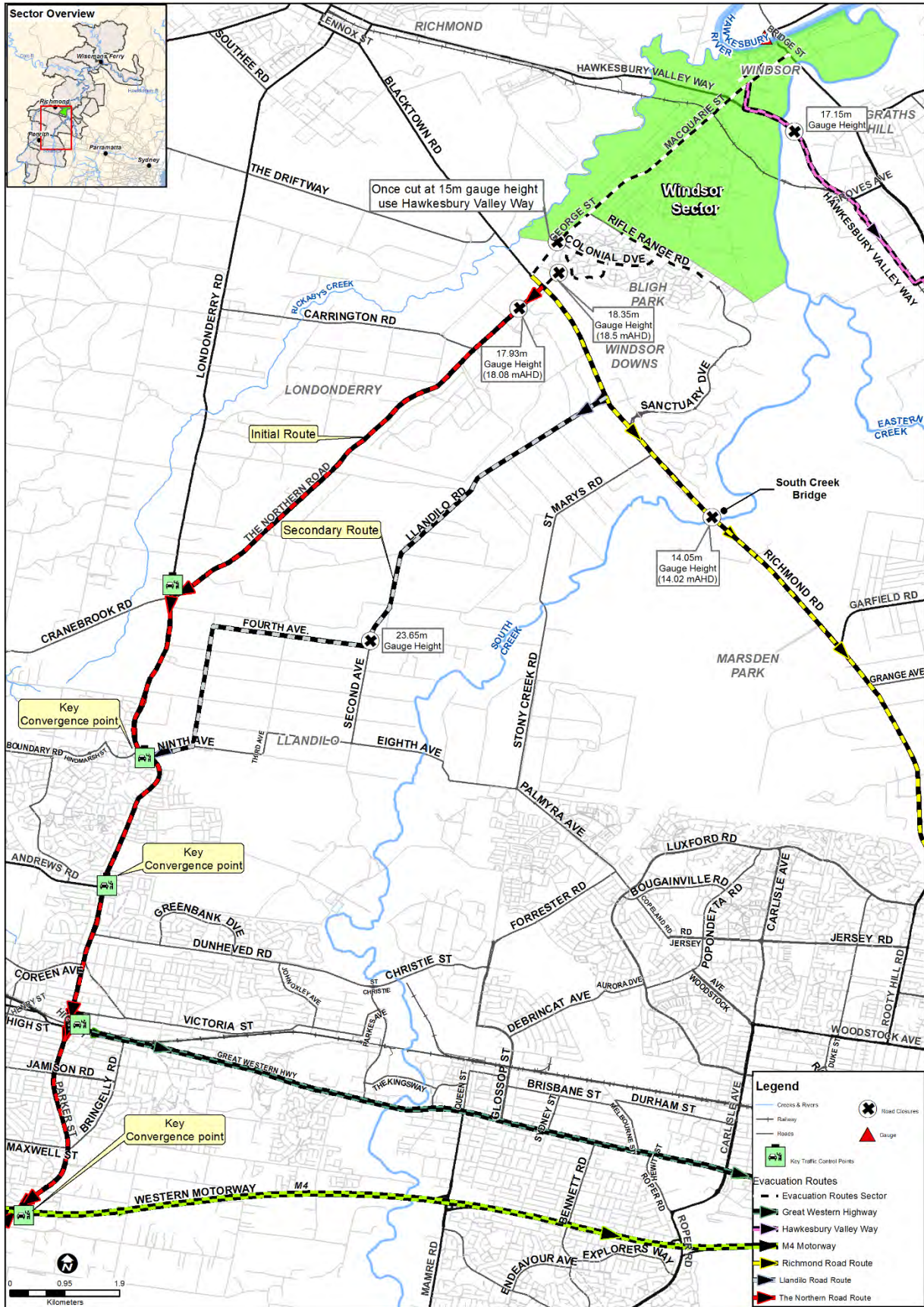
Figure 4: Windsor Sector Evacuation Route Sequencing

The Northern Road Evacuation Route

- 12.4.3 The Northern Road Evacuation route is cut at 18.1m at the Windsor gauge (18.1m AHD) near Toorah Road, Llandilo opposite the John Morony Correctional Complex.
- 12.4.4 Local flooding can also affect the Northern Road between:
- a. Richmond Road and the roundabout at Londonderry Road;
 - b. Fourth Avenue and Ninth Avenue.
- 12.4.5 If flooding cuts the Northern Road between Richmond Road and the roundabout at Londonderry Road, then traffic may be redirected onto the Llandilo Route.
- 12.4.6 If local flooding cuts Northern Road between Fourth Avenue and Ninth Avenue then southbound traffic on The Northern Road may be diverted via the following alternate route:
- a. Off the Northern Road to Fourth Avenue;
 - b. Terrybrook Road;
 - c. Ninth Avenue to the Northern Road.
- 12.4.7 Note that the normal southbound lane on Terrybrook Road may contain traffic from the Llandilo Road Route (if activated for evacuation from the Bligh Park Sector).
- 12.4.8 If an emergency vehicle lane is required then the Northern Road traffic stream will need to be merged with the Llandilo Road traffic stream into one southbound lane on Terrybrook Road.
- 12.4.9 Regional Evacuation Routes from a number of other sectors including Richmond, Bligh Park, Windsor Downs and Penrith North also converge onto the Northern Road Evacuation Route.

The Llandilo Road Evacuation Route

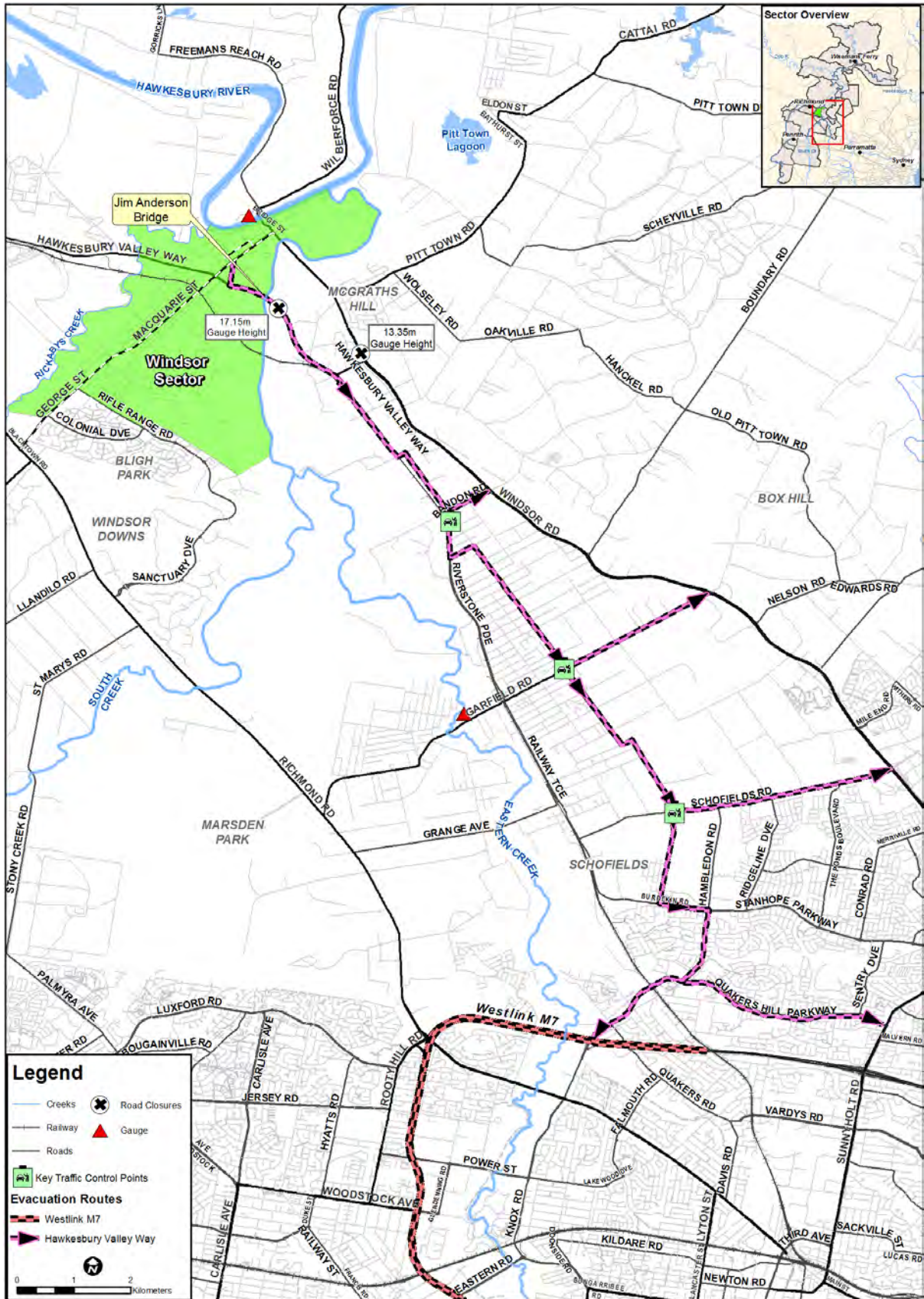
- 12.4.10 The route is cut near the corner of Second Avenue and Forth Avenue by mainstream flooding originating from South Creek at 23.8m at the Windsor gauge (23.8 m AHD).
- 12.4.11 Local flooding can also affect this evacuation route at numerous locations.



Map 5: Windsor - Windsor Evacuation Route – Floods below 15m AHD

Hawkesbury Valley Way Evacuation Route

- 12.4.12 Once George Street is closed evacuation traffic from Windsor will be directed onto the Hawkesbury Valley Way Evacuation Route.
- 12.4.13 To cater for possible local flooding there are several alternate routes for Windsor traffic travelling along the Hawkesbury Valley Way Evacuation Route to the south of Bandon Road. The alternative exit points include the:
- a. Intersection of Garfield Road and Windsor Road;
 - b. Intersection of Schofield Road and Windsor Road;
 - c. Intersection of Quakers Hill Parkway and Sunnyholt Road; and the
 - d. Intersection of Quakers Hill Parkway and the M7 Motorway.
- 12.4.14 The Hawkesbury Valley Way Evacuation Route is cut at the Jim Anderson Bridge by mainstream flooding at 17.3m at the Windsor gauge (17.3 metres AHD). This is the last evacuation route for the Windsor Sector.
- 12.4.15 Local flooding can potentially cut Bandon Road, Garfield Road East and Schofields Road.



Map 6: Windsor – Hawkesbury Valley Way Evacuation Route – Floods above 15m AHD

12.5 BLIGH PARK SECTOR

- 12.5.1 If the predicted flood level is expected to exceed 17.05m to 18.35m (18) at the Windsor gauge (17.2m AHD to 18.5m) the Bligh Park Sector will need to be evacuated.
- 12.5.2 Traffic leaving the Bligh Park Sector via the Thorley Street exit will use (See Figure 5 and Map 7):
- The Blacktown-Richmond Road Evacuation Route until cut by mainstream backup flooding at South Creek at 14.05m on the Windsor Bridge gauge (14.2m AHD);
 - Blacktown-Richmond Road and then onto the Llandilo Road Evacuation Route;
 - Blacktown-Richmond Road between Northern Road and Llandilo Road has a local flooding capacity up to a 0.2% AEP (1 in 500) local storm event. If the road is cut by local flooding then traffic will be directed onto the Northern Road Route however this itself will be cut by 17.95m at the Windsor gauge (18.1m AHD) (refer to Appendix D3 this Annex for detailed route descriptions).

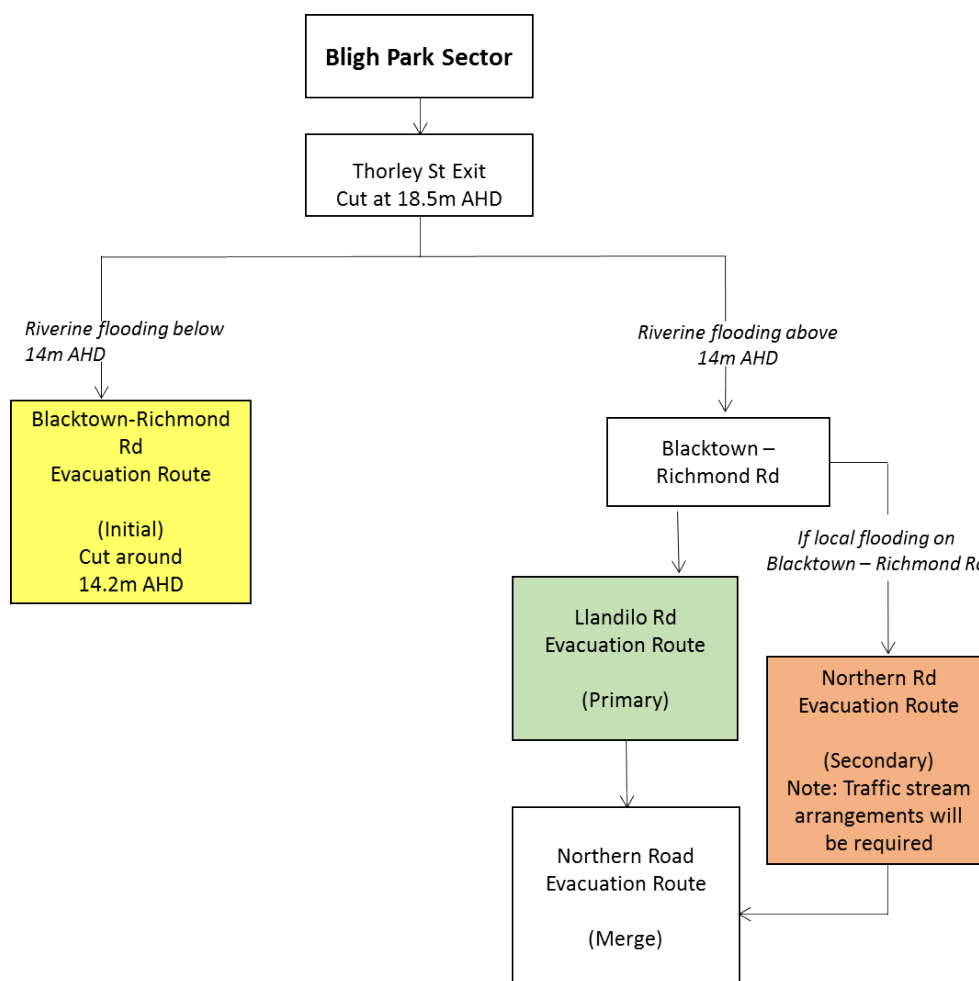


Figure 5: Bligh Park Sector Evacuation Route Sequencing

The Blacktown-Richmond Road Evacuation Route

- 12.5.3 The route is cut by mainstream flooding at 14.3m at the Windsor gauge (14.2m AHD) at the bridge over South Creek.
- 12.5.4 The road is also cut at Rickaby's Creek at around 14.3m at the Windsor gauge (14.3m AHD) (20)).
- 12.5.5 Once the Blacktown-Richmond Road is cut at South Creek, traffic from the Bligh Park and Windsor Downs Sectors is directed onto the Llandilo Road Evacuation Route.

The Northern Road Evacuation Route

- 12.5.6 In the case that traffic is directed onto the Northern Road route the Incident Controller will:
 - a. Direct that the two traffic streams (from Windsor Sector and Bligh Park Sector) are merged into one southbound lane on The Northern Road leaving the northbound lane free for emergency vehicles.
- 12.5.7 Note that the Windsor Sector traffic stream will cease when George Street is cut by mainstream backup flooding near Rifle Range Road at 15m at the Windsor gauge (15m AHD). Once this occurs Bligh Park traffic is able to be directed to proceed straight ahead from Thorley Street onto the Northern Road Route.
- 12.5.8 The Northern Road Route will be cut at around 18.15m at the Windsor gauge (18.1m AHD).
- 12.5.9 The Bligh Park Sector traffic stream will cease when the Thorley Street exit is cut at 18.5m at the Windsor gauge (18.5m AHD).

12.6 WINDSOR DOWNS SECTOR

- 12.6.1 If the predicted flood level is expected to exceed 23.8m at the Windsor gauge (23.8m AHD) the Windsor Downs Sector will need to be completely evacuated.
- 12.6.2 Note that this sector will be progressively inundated from around 16m AHD. Some internal roads will be cut isolating parts of Windsor Downs from around 16.7m AHD.
- 12.6.3 Traffic from the Windsor Downs Sector will be directed to Blacktown-Richmond Road then to the Llandilo Road Route (Figure 6 and Map 7).

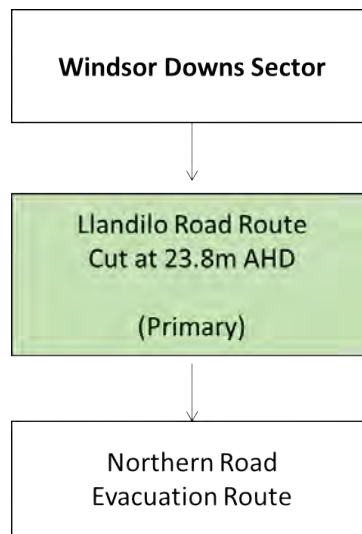
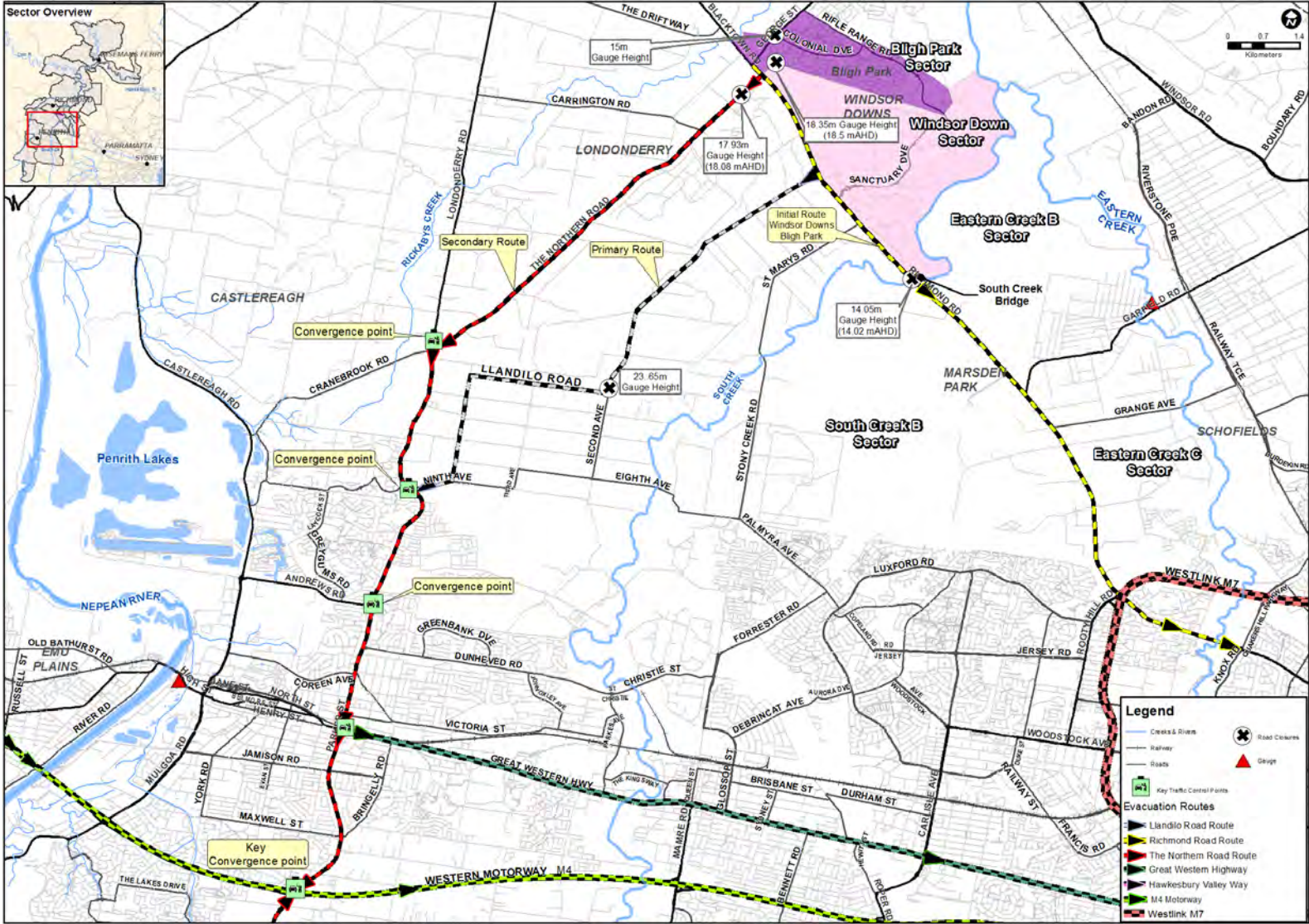


Figure 6: Windsor Downs Sector Evacuation Route Sequencing



Map 7: Bligh Park and Windsor Downs – Evacuation Routes

12.7 RICHMOND AND RICHMOND LOWLANDS SECTORS

- 12.7.1 The Richmond Sector will need to be completely evacuated if the predicted flood level will exceed 20.2m AHD. Note that the Richmond Lowlands Sector will begin to flood from 7m (at the Windsor gauge) and will already need to have evacuated into Richmond prior to becoming isolated at around 8.2 to 8.5m (Windsor gauge).
- 12.7.2 The Richmond Sector will use the Castlereagh Road Route as the primary evacuation route as shown in Figure 7 and Map 8.
- 12.7.3 The Londonderry Road Route is available for use as the secondary route if required. Note that the:
- Londonderry Road is cut between Wilshire Road and Spencer Street when floodwaters reach 17.85m (18m AHD) at the Windsor Bridge gauge.
 - Castlereagh Road Route is cut on The Driftway near Agnes Banks when the floodwaters reach 20.2m AHD.

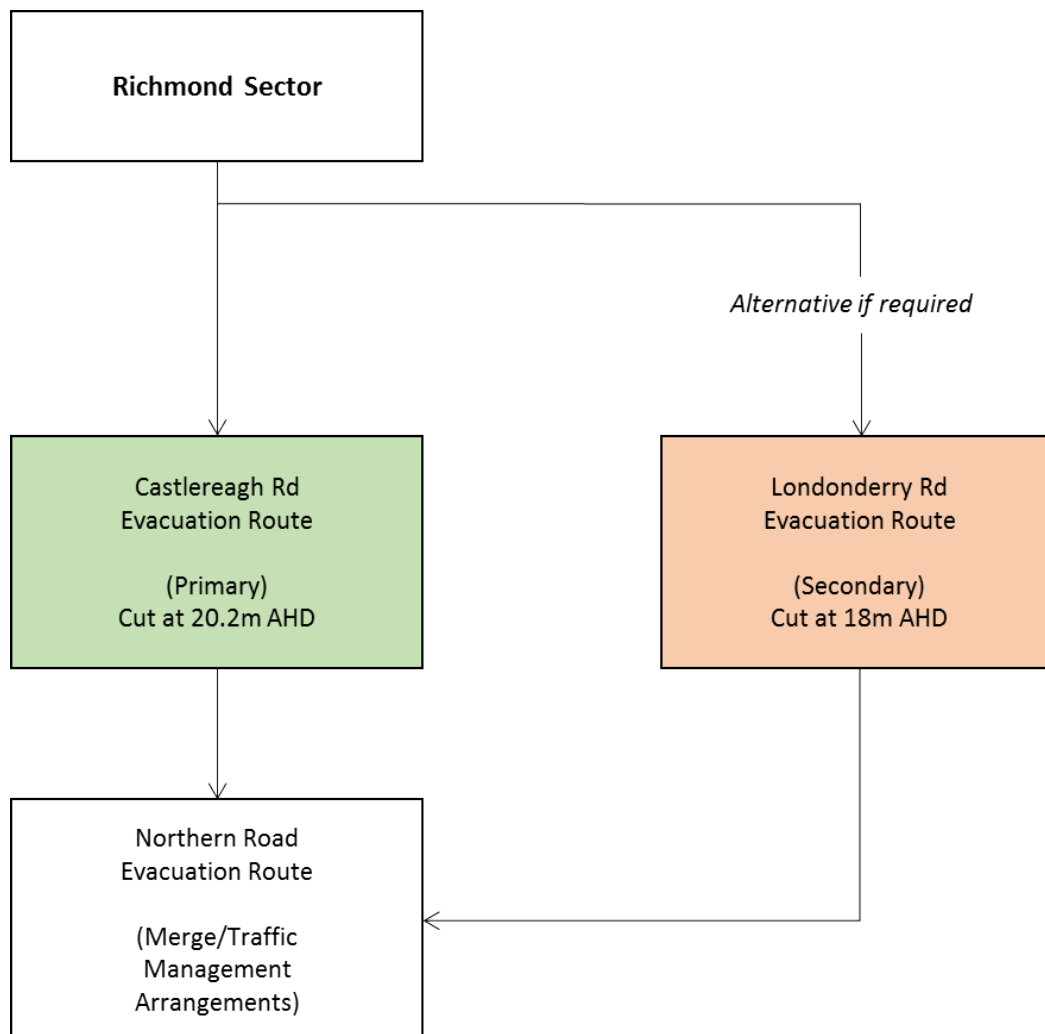
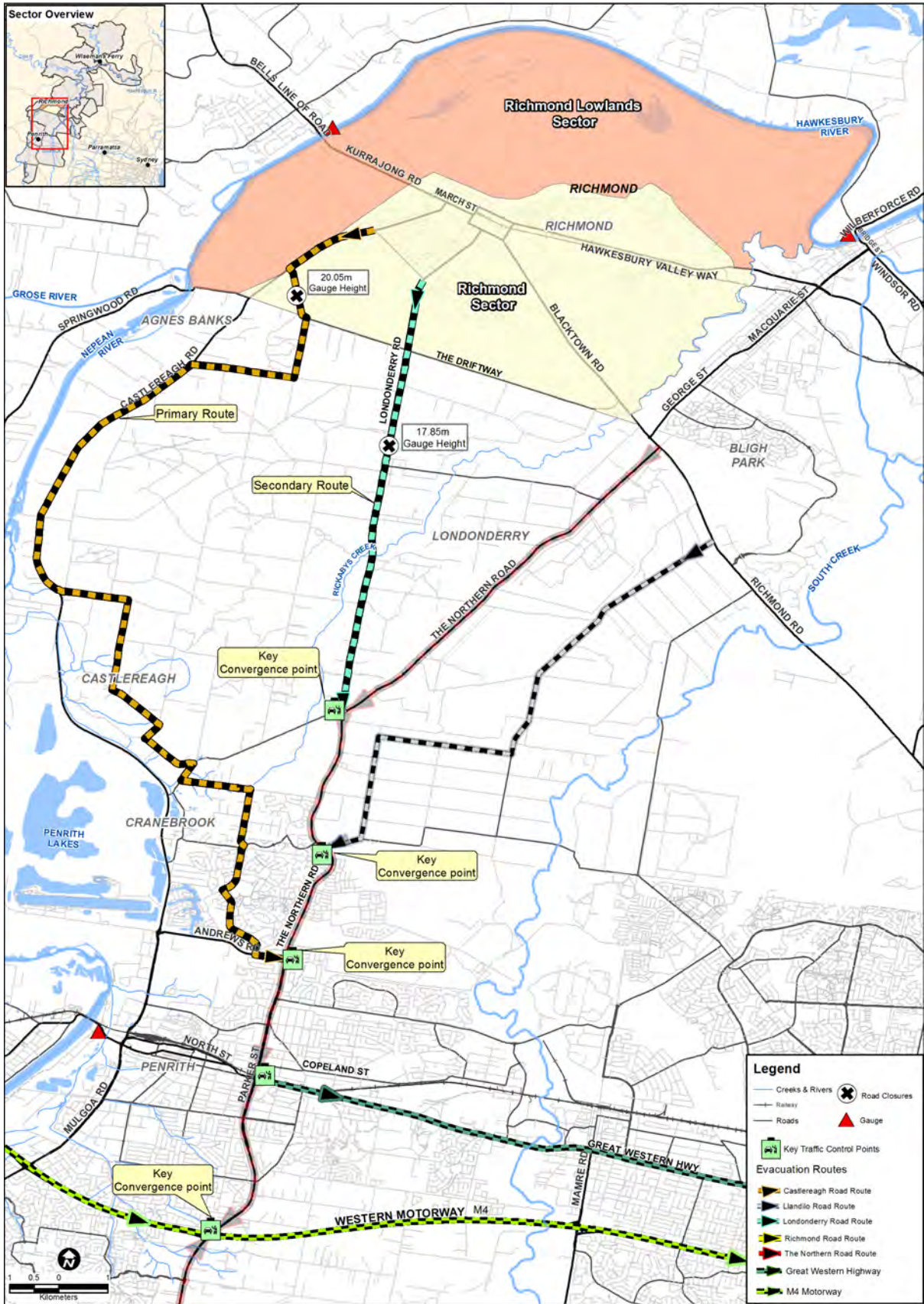


Figure 7: Richmond Sector Evacuation Route Sequencing

- 12.7.4 The Castlereagh Road Route merges onto the Northern Road Route at the intersection of Andrews Road and Northern Road.
- 12.7.5 The Northern Road has four lanes (two northbound and two southbound) from Borrowdale Way to the Great Western Highway.
- 12.7.6 If both the Northern Road Evacuation Route and the Llandilo Road evacuation routes are already operating they will be already using these two southbound lanes.



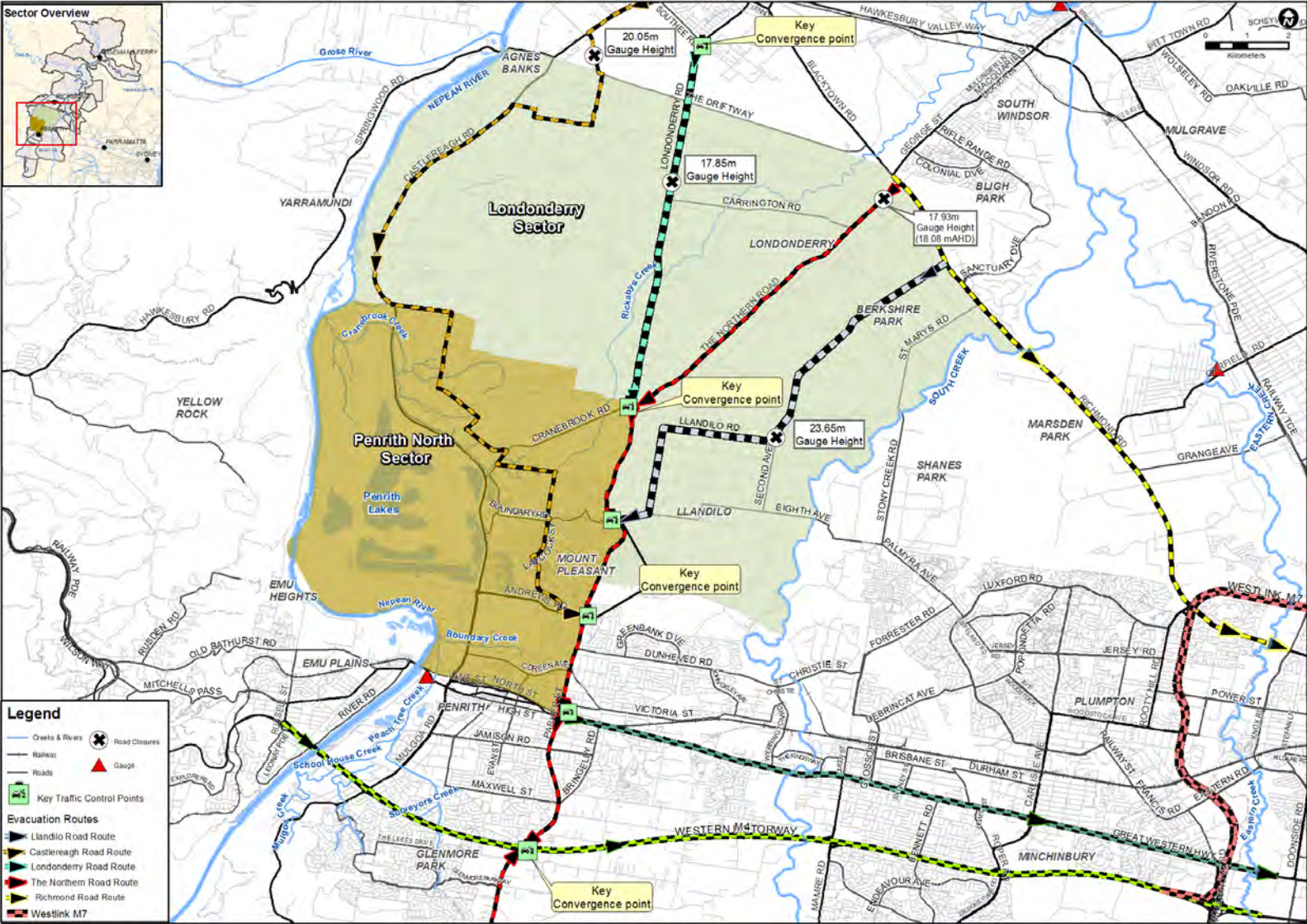
Map 8: Richmond – Castlereagh Road and Londonderry Road Evacuation Routes

12.8 LONDONDERRY SECTOR

- 12.8.1 The Londonderry Sector is a large Sector that crosses a number of Regional Evacuation Routes including (See Map 9):
- a. Castlereagh Road Evacuation Route;
 - b. Londonderry Road Evacuation Route;
 - c. Llandilo Road Evacuation Route.
- 12.8.2 These evacuation routes all eventually merge onto the Northern Road Evacuation Route.
- 12.8.3 The choice of evacuation route will be dependent on where within the sector the people evacuating live. This sector is broken into sub-sectors. The sub-sector level evacuation arrangements for the Londonderry Sector are provided within the Penrith City Local Flood Plan.
- 12.8.4 These Regional Evacuation Routes are each further described in Section 10 of this Annex.

12.9 PENRITH NORTH SECTOR

- 12.9.1 The Penrith North Sector will need to be completely evacuated if the predicted flood level will exceed 8.2m (22.3m AHD) at the Penrith gauge.
- 12.9.2 Traffic from the Penrith North Sector will utilise the Northern Road Evacuation Route as shown in Map 9 and as is further described in Section 10 of this Annex.
- 12.9.3 From the Northern Road Evacuation Route the Penrith North Sector will either be directed onto the Great Western Highway Evacuation Route or the M4 Western Motorway Evacuation Route. This will depend on what other sectors are also being evacuated at the same time.



Map 9: Londonderry and Penrith North - Evacuation Routes

12.10 EMU PLAINS SECTOR

- 12.10.1 A number of Emu Plains sub-sectors will need to be evacuated at different predicted flood heights as outlined within the Penrith City Local Flood Plan. The internal sector evacuation routes will begin closing from around 23.8m AHD (9.7m) at the Penrith gauge (16).
- 12.10.2 Traffic from the Emu Plains Sector will use the M4 Western Motorway Evacuation Route and be directed east towards Sydney (See Figure 8 and Map 10).

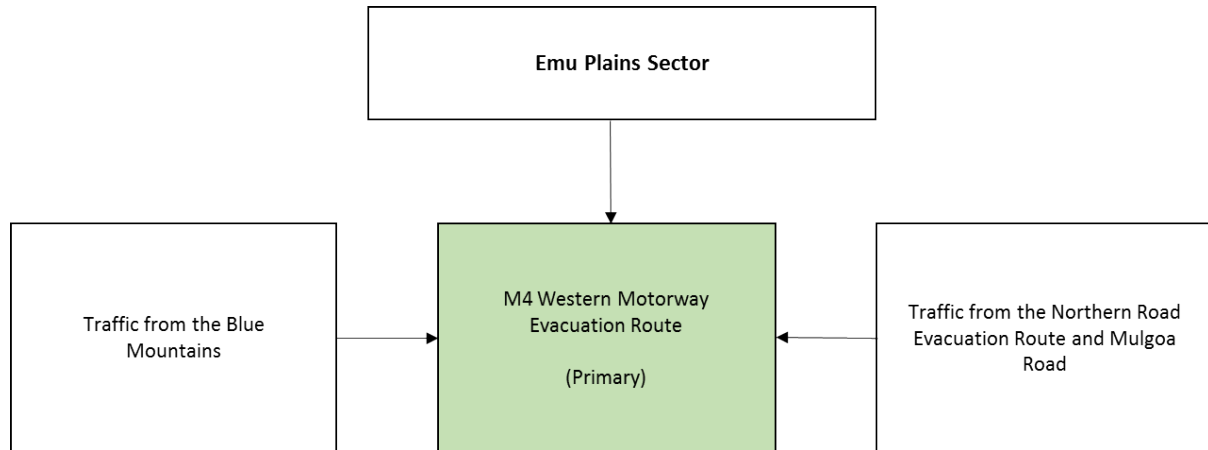
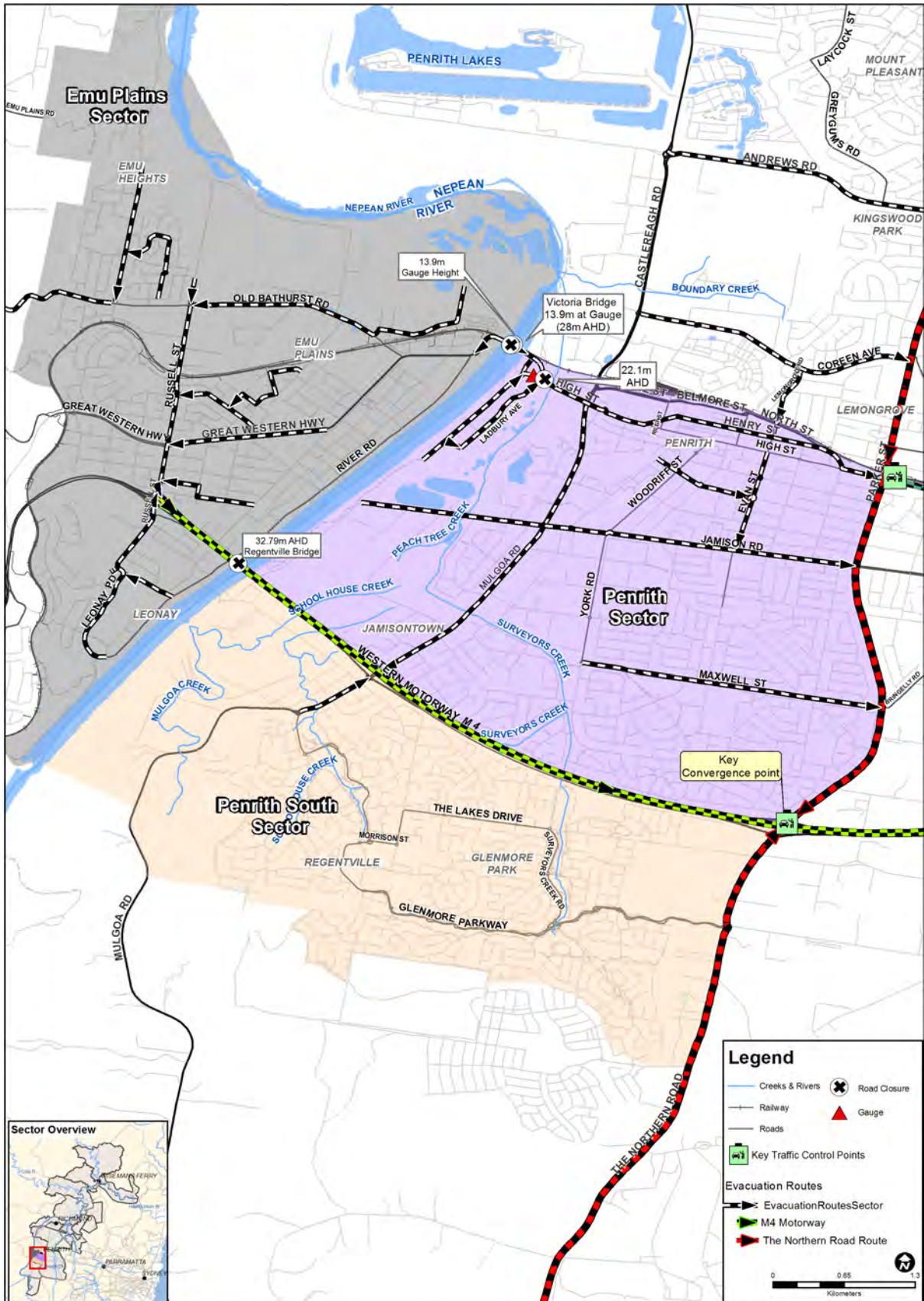


Figure 8: Emu Plains Sector Evacuation Route Sequencing

- 12.10.3 Evacuation traffic will converge onto the M4 Western Motorway from:
- Emu Plains M4 Western Motorway Evacuation Route;
 - The Northern Road Evacuation Route (north) from Richmond, Londonderry, Bligh Park and South Windsor;
 - Mulgoa Road Sector Evacuation Route for South Penrith;
 - The Northern Road Evacuation Route (south) from Wallacia.
- 12.10.4 There will also be general traffic heading east from the Blue Mountains.
- 12.10.5 Whilst people will be directed to stay with friends and family in the first instance, those heading to a Major Evacuation Centre will be directed onto the M4 Western Motorway east towards Sydney.
- 12.10.6 The M4 Western Motorway may be temporarily inundated by local catchment flooding where:
- It crosses South Creek near St Mary's (25.2m AHD) and also
 - Ropes Creek near Erskine Park (28.5m AHD).



Map 10: Emu Plains and Penrith - Evacuation Routes

12.11 WALLACIA SECTORS

- 12.11.1 Wallacia will need to be evacuated if floods are predicted to be above 39.8m to 61.3m AHD. The Bents Basin Sector will become isolated unless evacuated prior to Bents Basin Road closing around 33.9m AHD.
- Traffic from the Wallacia, Wallacia South and Bents Basin Sectors will (refer to Figure 9 and Map 11):
 - Initially be directed onto the Park Road Route until cut by backwater flooding from the Nepean River up local creeks at 39.8m AHD. From Park Road evacuation traffic will be directed north along the Northern Road and then east onto the M4 Western Motorway (M4).
 - Once Park Road is cut at 39.8m AHD traffic will be directed onto the Wallacia Alternative Route. This route consists of travelling south along Greendale Road, then traversing an unsealed road through a private property before meeting up with Park Road and onto the Northern Rd.
 - Traffic is then directed north on the Northern Road and onto the M4.
 - The Wallacia Alternative Route may itself be cut during an extreme flood event at 61.3m AHD or by local flooding.
 - Traffic from the Bents Basin Sector can use this route until either Bents Basin Road or Blaxland’s Crossing Bridge is cut by floodwaters.

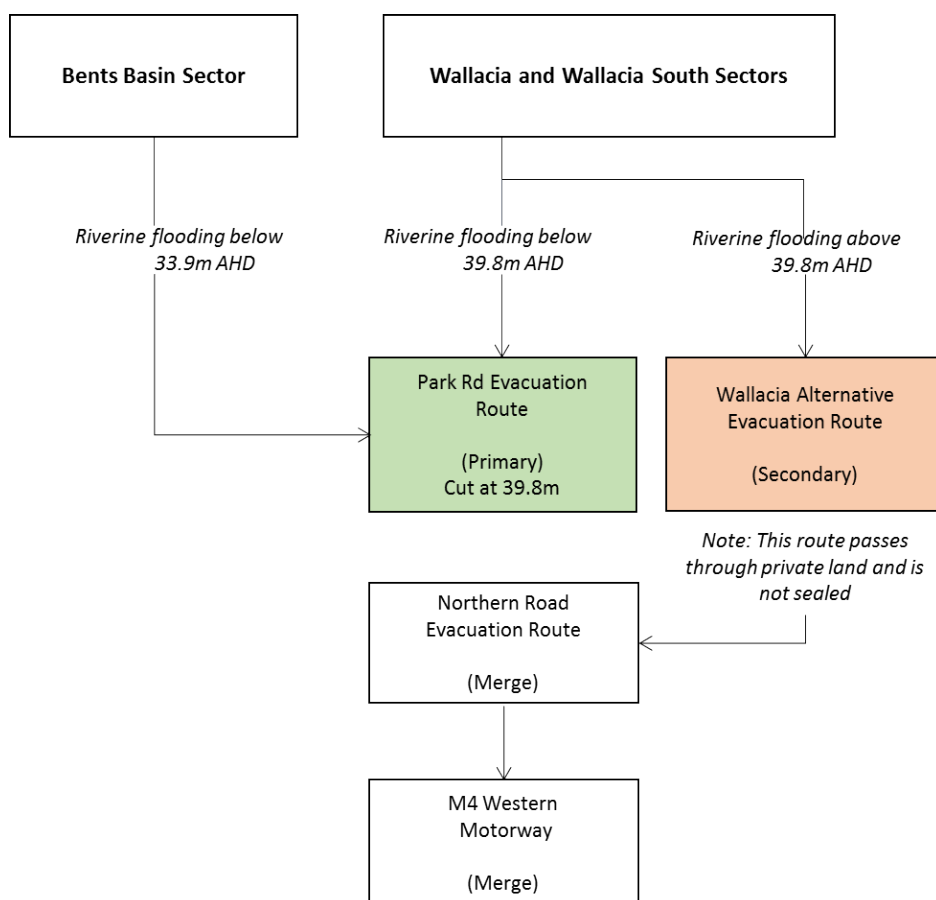
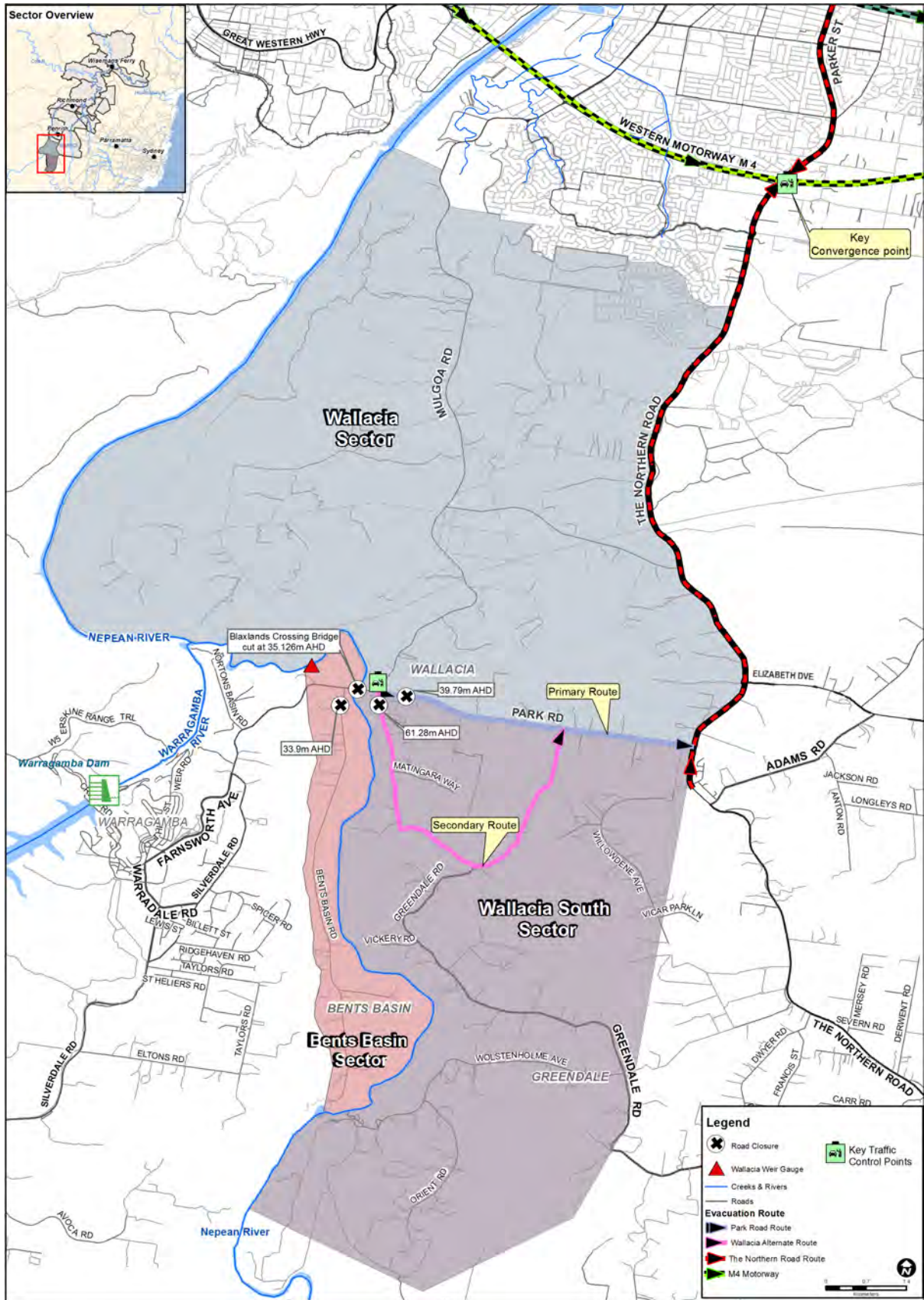


Figure 9: Wallacia Sectors Evacuation Route Sequencing



Map 11: Wallacia – Park Road and Wallacia Alternative Evacuation Routes

12.12 LOWER HAWKESBURY SECTORS

- 12.12.1 Sectors in the Lower Hawkesbury will need to be evacuated early or else risk being isolated. Many properties in these sectors could also become flooded during larger flood events.
- 12.12.2 The Old Northern Road Route is the Regional Evacuation Route for the Wisemans Ferry, Singeltons Mill **and** Lower Reaches Sectors. It can also service those sectors on the northern side of the Hawkesbury River whilst the Webbs Creek and Wisemans Ferry vehicle ferries are still operating including (refer Figure 10 and Map 12):
- Macdonald River;
 - Webbs Creek;
 - Gunderman.
- 12.12.3 River Road is the sector evacuation route for the Wisemans Ferry and Lower Reaches Sectors. It can be cut in numerous places from around 1.54m AHD. It is also subject to rock falls and slumping into the river at various locations along its length. Properties along this road will need to be evacuated early.
- 12.12.4 Once the Webbs Creek and Wiseman Ferry ferries have ceased operation at around 3m to 3.5m at the Windsor gauge, the sectors on the northern side of the river will need to evacuate using local roads such as River Road, Wisemans Ferry Road and Wollombi Road. However these roads are also cut at low levels of flooding (around 1.2 to 1.5m AHD).
- 12.12.5 The Old Northern Road Evacuation Route is shown on Map 12 and is further described in Section 8.10.

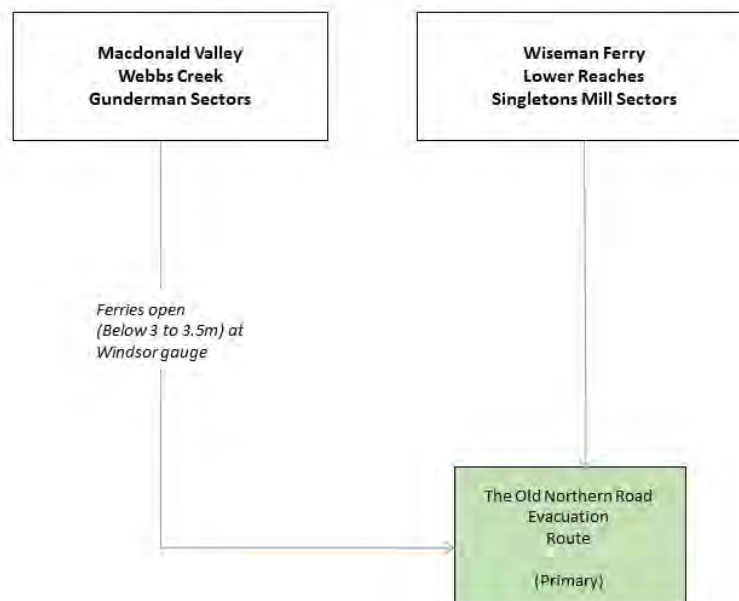
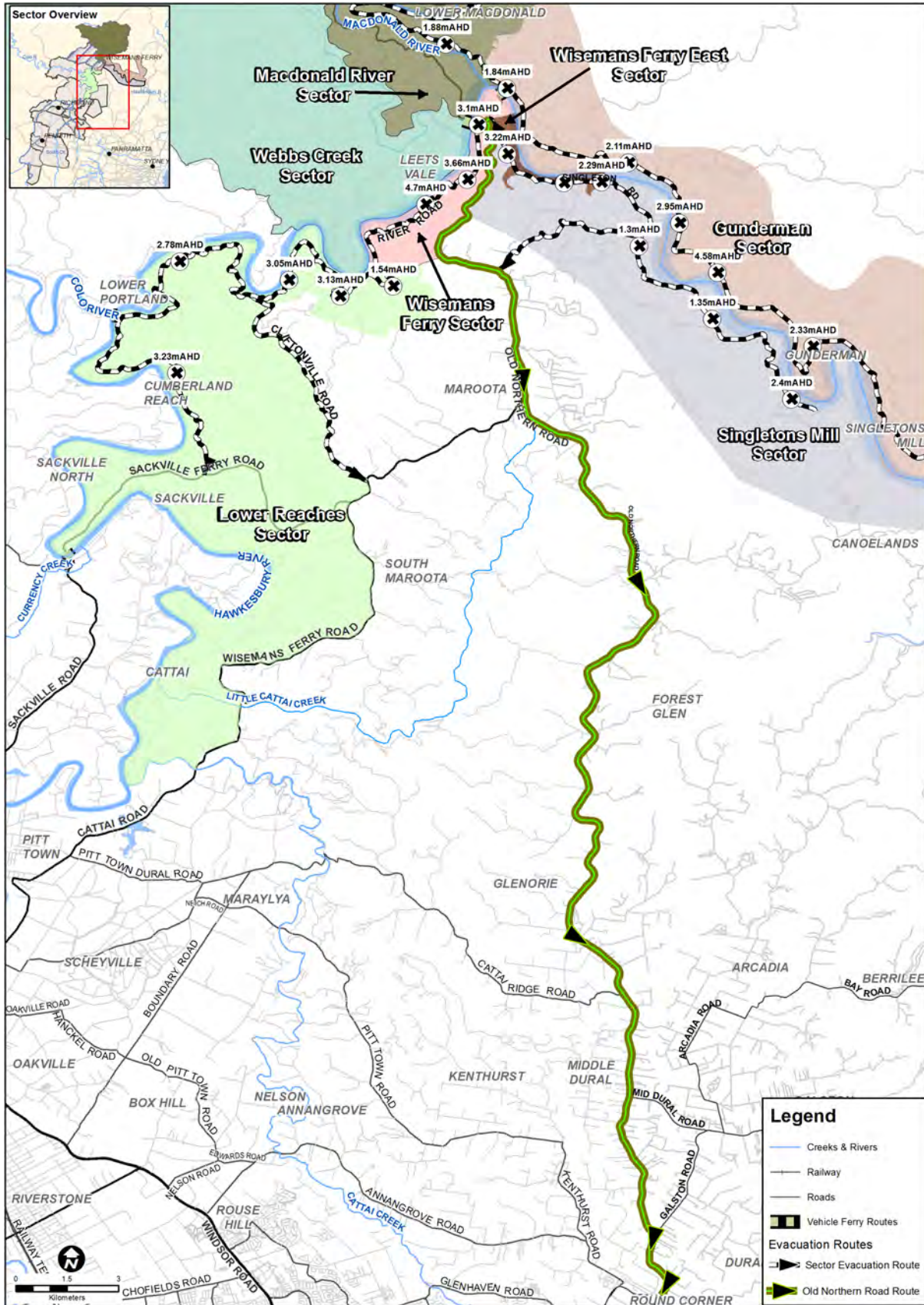


Figure 10: Lower Hawkesbury Evacuation Route Sequencing



Map 12: Lower Hawkesbury – Old Northern Road Evacuation Route

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