



GREENWICH HOSPITAL – CONSTRUCTION FLOOD EMERGENCY RESPONSE SUB-PLAN

NOVEMBER 2024

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LIST OF ABBREVIATIONS

BOM	Bureau of Meteorology
CFERSP	Construction Flood Emergency Response Sub-Plan
DCP	Development Control Plan
LEP	Local Environmental Plan
LGA	Local Government Area
PMF	Probable Maximum Flood
SES	State Emergency Service
WMS	Water Modelling Solutions

1 INTRODUCTION

1.1 BACKGROUND

HammondCare (the proponent) owns and operates Greenwich Hospital (referred to as “the site”) at 95-115 River Road, located within the Lane Cove Local Government Area (LGA). HammondCare is preparing the demolition of the existing Greenwich Hospital and the construction of a new health campus, with integrated serviced Seniors Living buildings and a respite care facility. The site is located within the Gore Creek catchment. However, due to its elevation above Gore Creek, it is not subject to mainstream flood risk from Gore Creek itself. The site is subject to flood risk from overland flow, for which design flood behaviour has been defined by a site-specific TUFLOW model established in Greenwich Hospital Flood Assessment Report (WMS Engineering, 2023).

In accordance with the conditions listed in the Development Consent issued by the Department of Planning, Housing and Infrastructure (SSD-13619238, 28 March 2024), a Construction Flood Emergency Response Sub-Plan (CFERSP) must be provided by a qualified chartered engineer to the satisfaction of the Planning Secretary. This CFERSP is consistent with the relevant NSW SES “Floodsafe” Guides, addresses the provisions of the Floodplain Risk Management Guide (prepared by EESG published January 2019) and includes details of:

- the flood emergency responses for the construction phases of the development;
- predicted flood levels;
- flood warning time and flood notification;
- assembly points and evacuation routes;
- evacuation and refuge protocols; and
- awareness training for employees and contractors.

1.2 OBJECTIVE

The key purpose of this CFERSP is to reduce the risk of flood-related impacts and ensure the safety of all workers involved in the construction period of the Greenwich Hospital facilities. It is noted that existing patients and staff at Greenwich Hospital will follow the current *HammondCare Greenwich Hospital Campus Emergency Plan* (2019) during the construction period, then adopt the *Greenwich Hospital – Flood Emergency Response Plan* (WMS, 2023) for the redeveloped hospital.

1.3 STUDY DETAILS

1.3.1 Site Location and Topography

The site (Lot 3 DP584287 and Lot 4 DP584287) is located at 95 -115 River Road in Greenwich in the Lane Cove Municipal Council LGA. The site covers an area of approximately 3.4 Ha and has an upstream contributing catchment area of approximately 20 Ha. The site is around 400 m southwest of the Pacific Highway and 30 m northeast of Gore Creek. The site location and topography are illustrated in **Figure 1-1**.

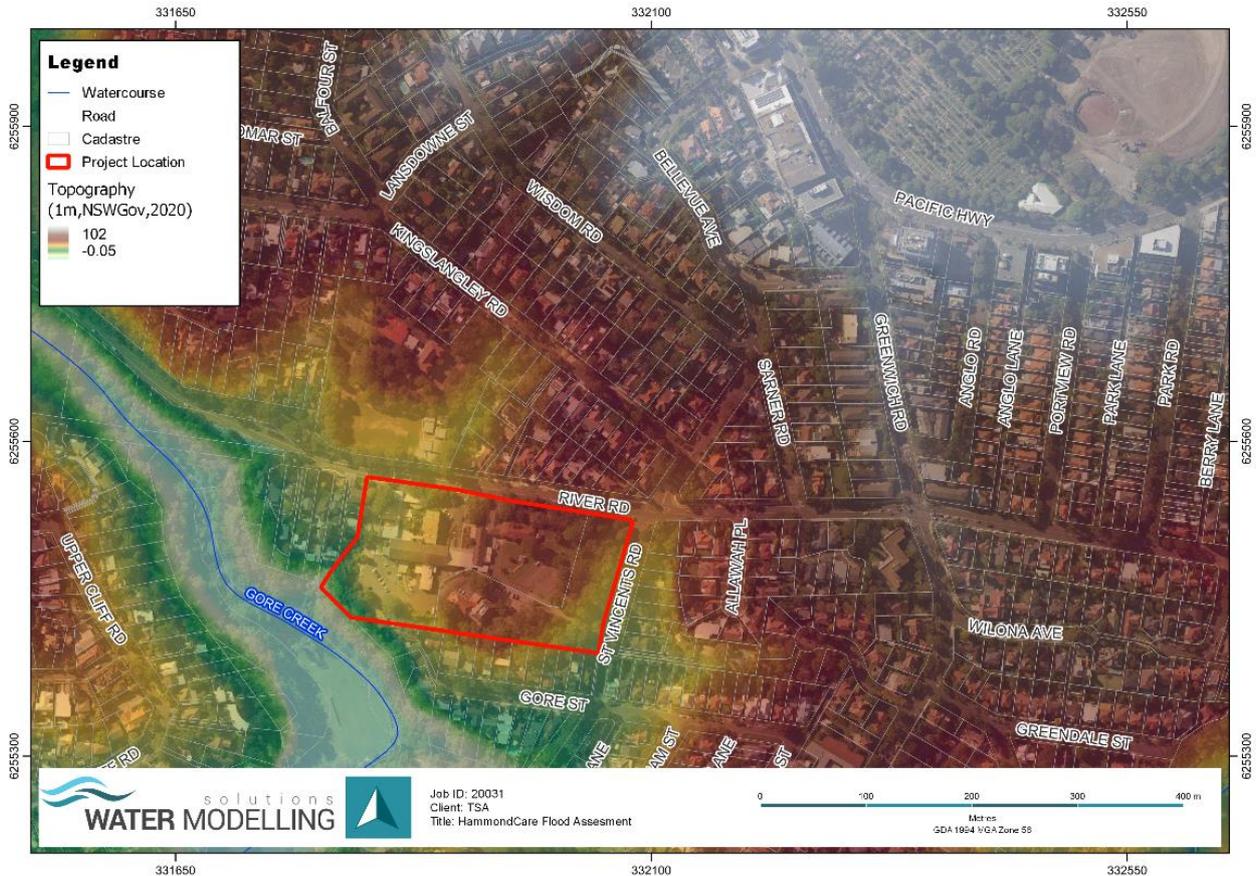


Figure 1-1 Subject Site Topography

1.3.2 Proposed Development

The redevelopment of the hospital is proposed to include:

- Demolition of the existing hospital building and associated facilities at the site;
- Construction of a new hospital facility and integrated healthcare uses and services;
- Construction of associated site facilities and services, including pedestrian and vehicular access and basement parking; and
- Site landscaping and infrastructure works, including a permanent, landscaped bund along the southern boundary.

It is noted that Pallister House will be retained and is to host dementia care and administrative functions under the proposed redevelopment.

The proposed development plan is shown in **Figure 1-2**.

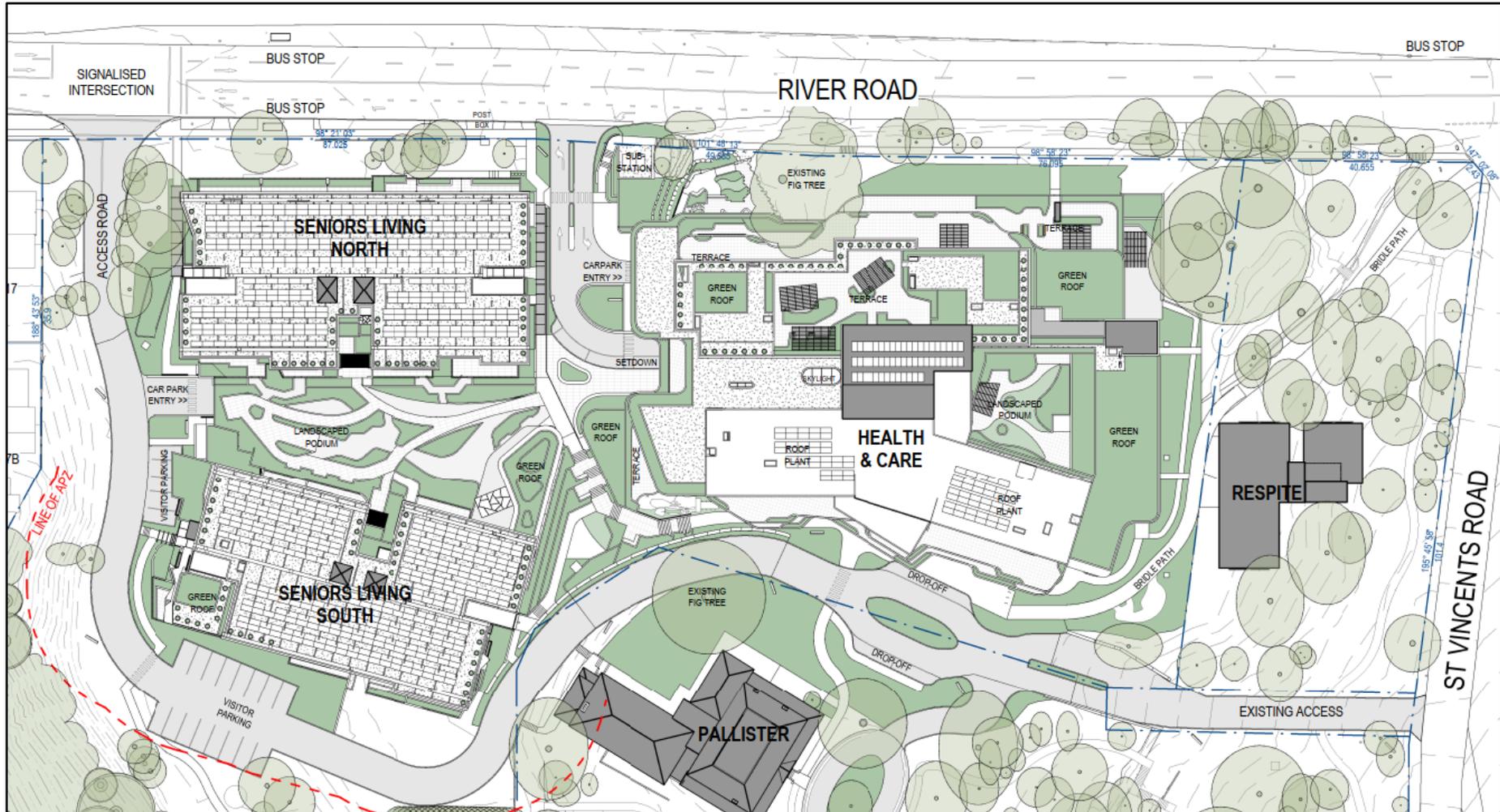


Figure 1-2 Proposed Site Plan

1.4 CONSTRUCTION OVERVIEW

The redevelopment of Greenwich Hospital is proposed to be delivered over four stages to cater for the operational requirements of the hospital and health campus. The proposed stages and timing are anticipated as follows:

- Stage 1 – Early works and external works
 - All activities 12 months
- Stage 2 – New hospital building
 - Site establishment 6 weeks
 - Demolition works 5 weeks
 - Construction 114 weeks
- Stage 3 – Two new Senior Living buildings
 - Site establishment 3 weeks
 - Demolition 10 weeks
 - Excavation 12 weeks
 - Construction 70 weeks
- Stage 4 – New Respite Care Buildings
 - Site establishment 2 weeks
 - Excavation 2 weeks
 - Construction 30 weeks

Figure 1-3 below shows the overall staging of the site. The boundaries and hoarding for the various stages are indicative only.

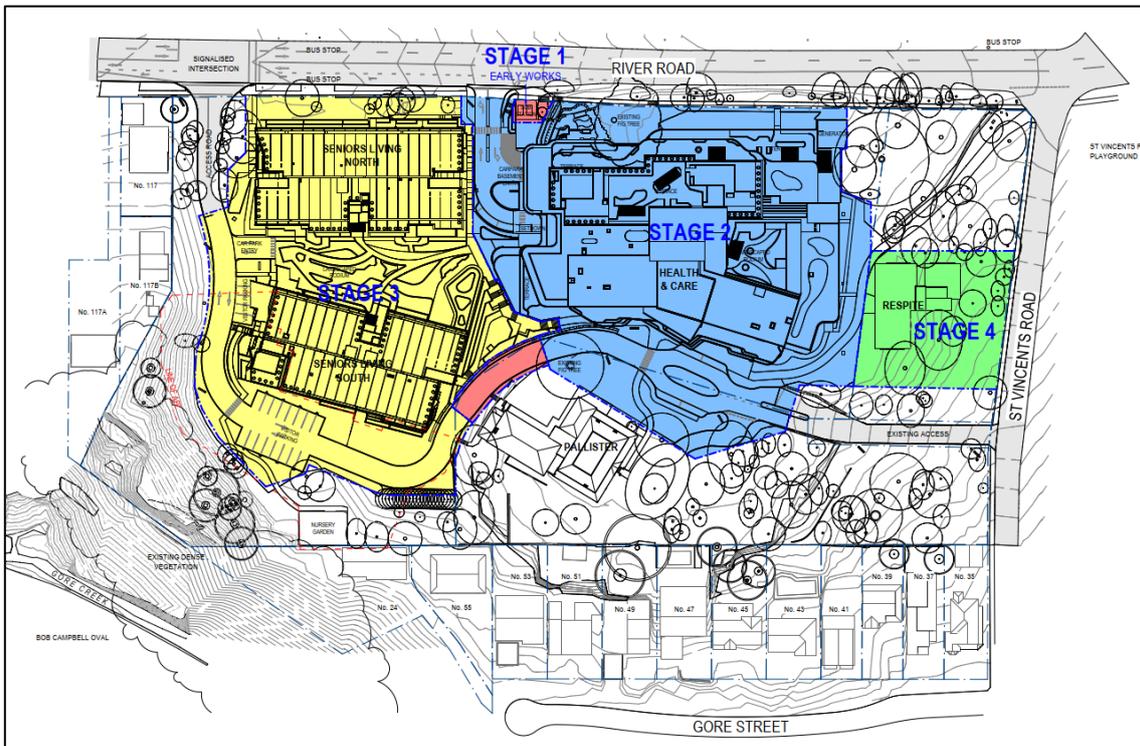


Figure 1-3 Proposed Staging Plan (Bickerton Masters, Drawing No. AR-SW-0120, Rev.P11, 08/07/2024)

1.4.1 Construction Plans

A summary of the proposed construction plan is as follows. A site management plan showing the proposed layout of the construction site at each stage was provided by TSA (see **Appendix D**).

Stage 1 - Early works and external works

Stage 1 involves construction of the external enabling works, including existing services decommissioning and capped, MSB, substations, potable water supply, diverted existing sewer, power supply, and comms supply to hospital and Pallister House, civil stormwater and internal access road work, landscape work including the nursery garden, southern boundary berm and revegetation to southern western slope and other enabling services. Stage 1 is required to ensure that the hospital can maintain operation during the construction of Stage 2 and install services required for Stage 2 and 3.

During the construction of the external enabling works, the existing hospital will continue to operate within the existing facility. The existing on-ground south-western carpark will be destructed during the stormwater work. With the scattered nature of the Stage 1 works, the construction sequence will be detailed to maintain the existing pedestrian access and vehicle access from River Road and St Vincent Road.

Stage 2 – New Hospital Buildings

This stage involves construction of the internal upgrade works to the half of the existing hospital (refurbishment of part of the existing hospital building to enable continuous operation during the Stage 2 construction period), demolition/earthworks and full construction for the new Hospital Building supported by the Stage 1 works.

During the demolition and earthworks, patient and staff in the existing hospital area that is to be demolished will be transferred to the remaining portion of the existing hospital building and continue to operate within the existing facilities. 2 access gates for construction vehicles and 2 turnstiles gates for workers will be proposed for the eastern portion of the site via River Road and St Vincent's Road. Patient and staff pedestrian and vehicular access will be via signalised entry from River Road.

Stage 3 – Two Senior Living Buildings

This stage involves demolition/earthworks and full construction for the Seniors South and North Buildings.

During the demolition and earthworks, patient and staff in the existing hospital will be transferred to the completed new Hospital Building, with no pause in operation. The Stage 3 boundary will encapsulate the future Stage 3 (Seniors Living Buildings) site and provide an area for material handling and storage. The proposed construction traffic access and egress, to be reviewed and approved at the time of construction, will be via signalised entry on River Road and St Vincent's Road. Patient and staff pedestrian and vehicular access will be via the main intersection from River Road and St Vincents Road.

Stage 4 – New Respite Care Buildings

This stage involves full construction for the Respite Building.

During the construction of the Respite Building, the new hospital and senior living buildings will be operational. Construction vehicle and workers access will be via St Vincent Road. Hospital and Senior Living buildings access and egress will be maintained via River Road.

1.4.2 Working Hours and People on Site

Working hours (including the delivery of materials to and from the site) are noted in the conditions of consent and are limited to:

- Between 7:30 am and 5:30 pm, Mondays to Fridays inclusive.
- Between 8am and 1 pm Saturdays.
- No work may be carried out on Sundays or public holidays.

During peak construction period it is estimated 150 workers will be present at the site in addition to hospital staff and patients

1.5 ROLES AND RESPONSIBILITIES

The key persons responsible for implementing this CFERSP are defined in **Table 1-1**. The New South Wales State Emergency Service (SES) is the control agency for flooding in New South Wales, and are responsible for planning for floods, supporting community preparedness, and managing flood response if they do occur. The NSW SES is the legislated lead combat agencies for flooding in NSW. **Any directives issued by the NSW SES and/or Police are to take precedence over the contents of this CFERSP.**

Successful implementation of this CFERSP is the responsibility of the Site Project Manager, assisted by Flood Wardens. There is to be at least two Flood Wardens appointed for the site. These may be the same persons nominated as Fire Wardens if appropriate.

Table 1-1 Key Roles and Responsibilities used in this CFERSP

Organisation/Person	Roles and Responsibilities
NSW SES	The NSW SES is the legislated lead combat agency for flooding in NSW. Any flood directive issued by the SES must be followed by all the staff. This includes any order to evacuate the site, or not evacuate the site, irrespective of the instructions given in this CFERSP or as decided by the Site Project Manager.
Site Project Manager	<p>The Site Project Manager is responsible for:</p> <ul style="list-style-type: none"> Ensuring that all deputy wardens who are on site are aware of the flood risks and the flood management procedures detailed in this CFERSP; Support the wardens in their duties; Maintain a register of all staff and subcontractors on site at all times, including contact details and emergency contacts; Lead the annual shelter in place/ flood emergency response drill (to be undertaken with the Deputy Wardens only, not other staff); Monitor flood warnings and alert mode triggers in accordance with this CFERSP; Escalate alert modes in accordance with the relevant triggers set in this CFERSP; Communicate flood response messages to Wardens and staff in accordance with this CFERSP; Coordinate all flood emergency procedures; Participate in a review of this CFERSP annually and following a major flood.
Flood Wardens (at least 2)	<ul style="list-style-type: none"> Assist the Site Project Manager to implement flood emergency procedures as required; Assist in distributing communications from the Site Project Manager to all staff on site; Participate in the annual flood emergency response drill; Participate in a review of this CFERSP annually and following a major flood.
All other staff and contractors	<ul style="list-style-type: none"> Follow directions of the flood wardens; Report any concerns to their respective flood warden.

1.6 MAINTENANCE OF THIS CFERSP

This CFERSP shall be reviewed and updated on an annual basis by the Site Project Manager and following all major flood events that trigger implementation of the CFERSP. Any modifications to the Actions Checklist (**Appendix A**) should be made in this document and recorded in **Appendix C**.

As a minimum the following items should be reviewed to ensure:

- Web addresses and links to other sources (e.g., Bureau of Meteorology etc.) are correct;
- Contact details are up to date and the list is complete (see **Appendix B**);
- All signage is in good condition and installed as required; and
- The CFERSP Review Record is up to date (see **Appendix C**).

2 FLOOD BEHAVIOUR

2.1 SITE FLOODING CONDITIONS

The site is affected by one type of flooding: local overland flow flooding. As such, a site-specific TUFLOW flood model has been established to define flood behaviour at the site. The model details were included in the Greenwich Hospital Flood Assessment (WMS Engineering, 2023).

2.1.1 Flood Behaviour

Under existing (construction) conditions, the overland flow in the upper reaches of the catchments travels from north to south through the catchment, making its way to Gore Creek via two main flowpaths: In a westerly direction along River Road and in a southerly direction along St Vincents Road (along the eastern boundary of the site). When the capacity of the gutter system along River Road is exceeded a shallow flow path enters the site through the western driveway and continues to the southwest. Aside from this western flowpath, there is quite limited flood risk in the site, with shallow runoff generated only by local rainfall falling within the site.

The 1% AEP and PMF flood levels and depths at the existing site entry are summarised in **Table 2-1**. The proposed layout of the construction site at stages 2 and 3 are overlayed on the top of the 1% AEP event to ensure the site access routes and mobile office are not in the flood extent, as shown in **Figure 2-1** and **Figure 2-2**.

Table 2-1 Flood Levels and Depths Summary

Location	1% AEP Event		PMF Event	
	Flood Depth (m)	Flood Level (mAHD)	Flood Depth (m)	Flood Level (mAHD)
Western Access at River Road	0.01	38.69	0.19	38.88
Eastern Access at River Road	0.01	43.48	0.03	43.50
Access at St Vincents Road	0.01	37.99	0.03	38.02

The flood impact assessment has been undertaken for both events. It is noted that there is a localised redistribution of runoff as a direct result of the changes in building footprints and ground levels around the site, however no material changes to flood risk occur, nor creation/removal of flow paths as a result of the proposed development. Outside of the site boundary there is a minor reduction in flood levels on River Road (0.02-0.05 m) as a result of slight changes to the grading of the western driveway.

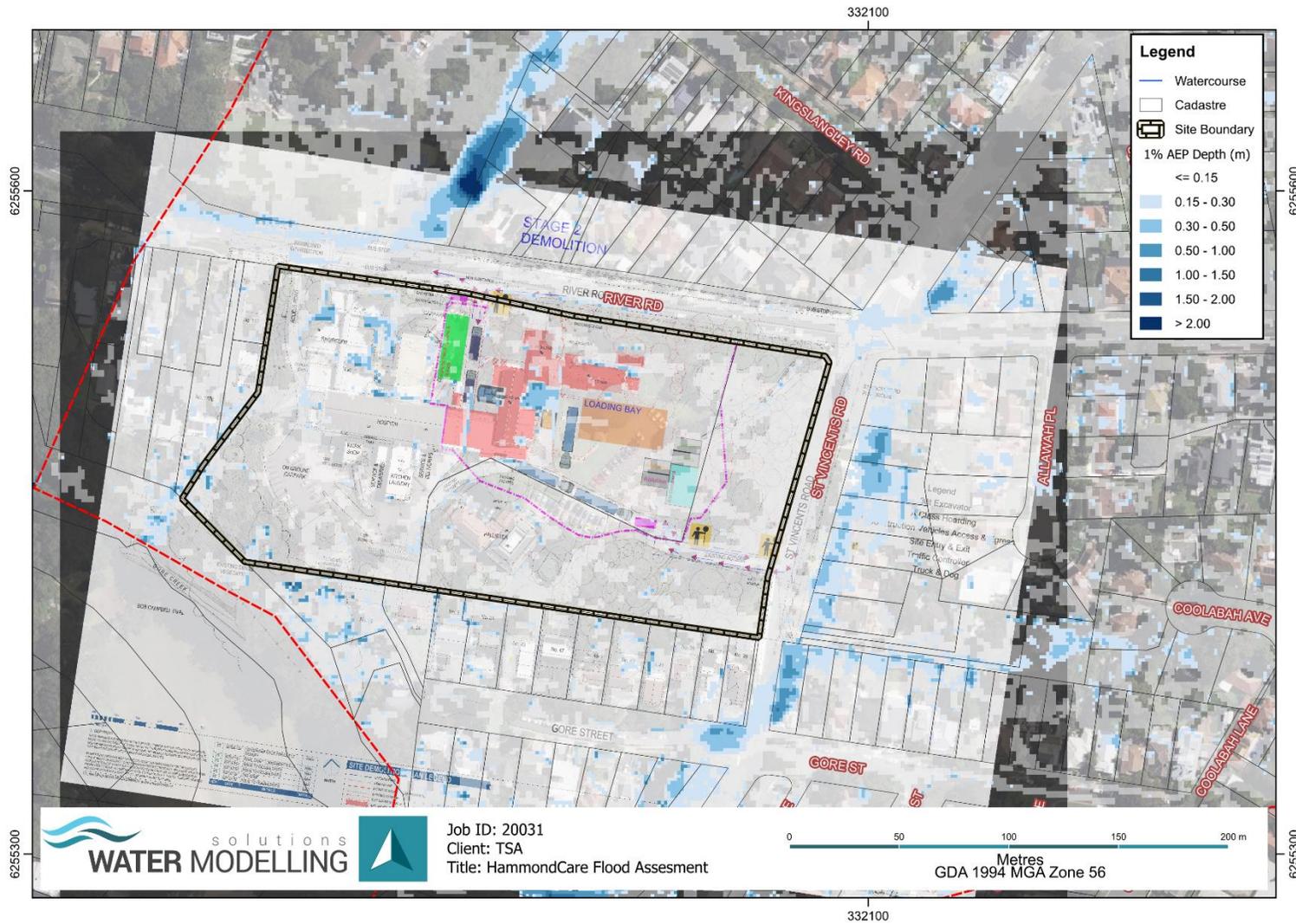


Figure 2-1 Existing Conditions 1% AEP Peak Depth with Stage 2 Demolition Plan

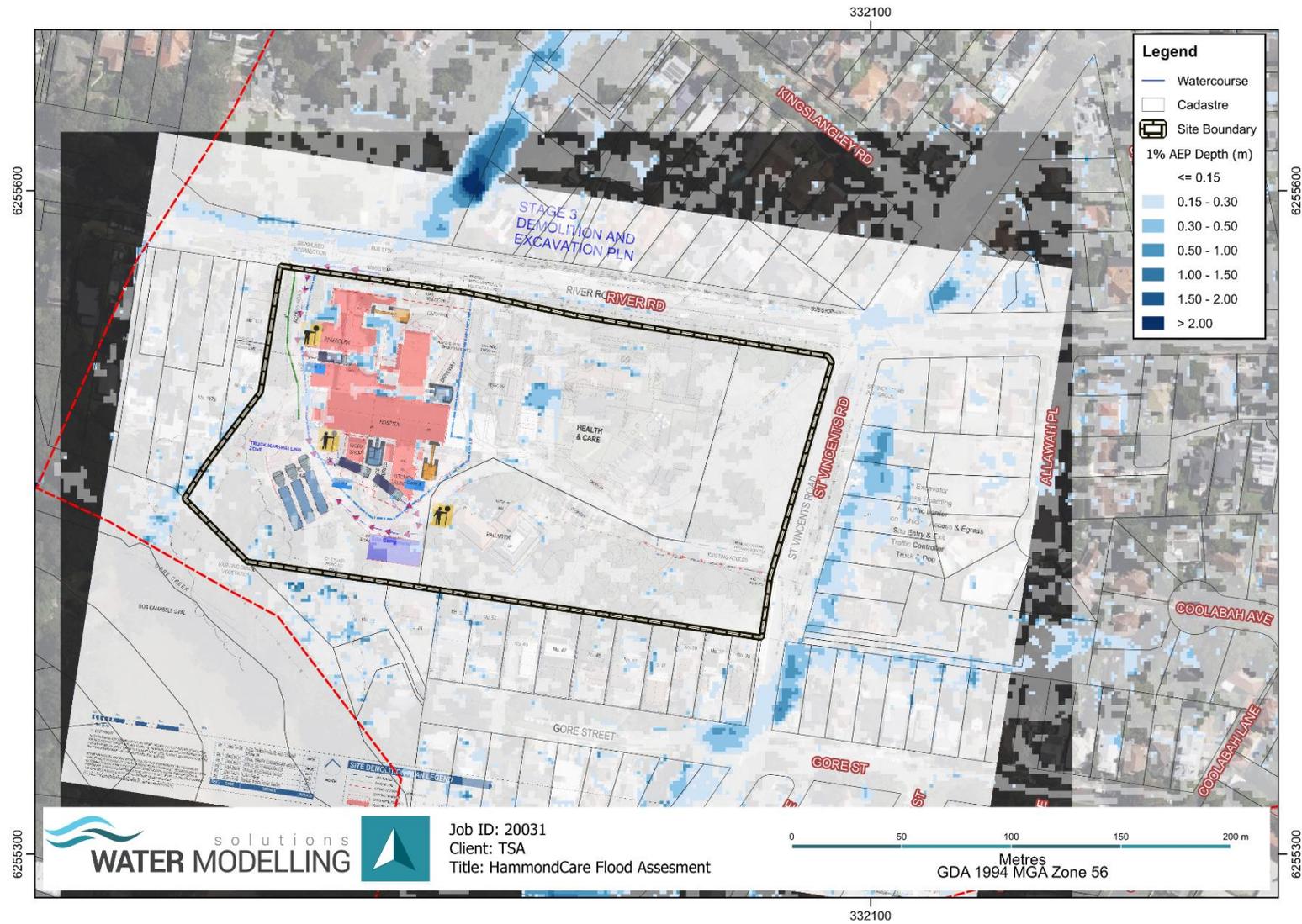


Figure 2-2 Existing Conditions PMF Peak Depth with Stage 3 Demolition Plan

2.1.2 Rate of Rise and Duration of Inundation

The flow hydrographs for River Road in the 1% AEP and PMF events of the proposed conditions have been extracted in **Figure 2-3**. The chart indicates that floodwater in the vicinity of the hospital is “flashy” in nature and will rise and fall within approximately 1 hour. Floodwater would not reach the ground floor of the site during both 1% and PMF events.

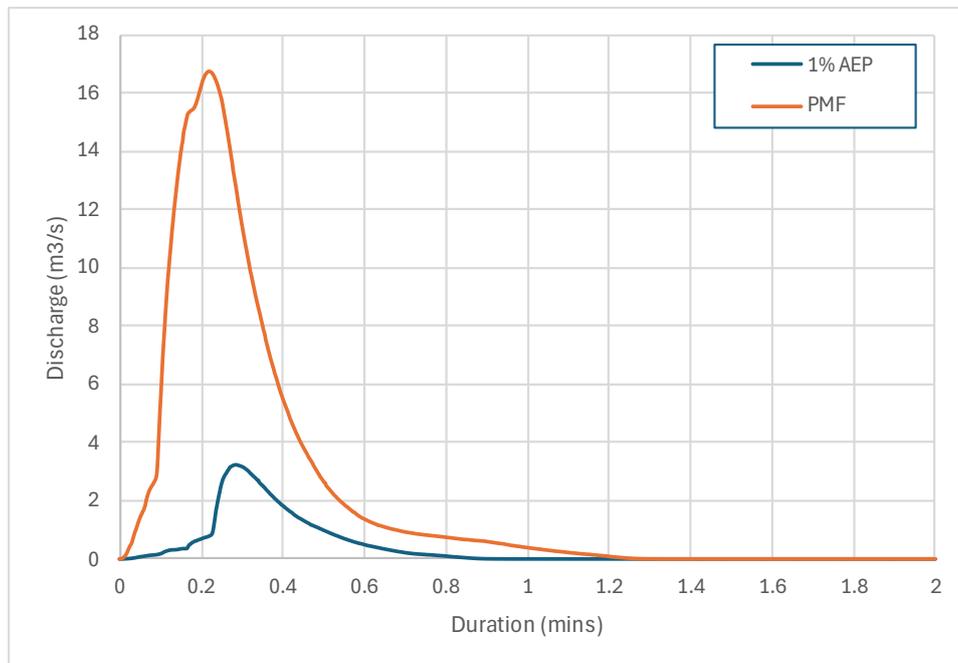


Figure 2-3 Hydrographs – Flow path west of River Road

2.2 FLOOD HAZARD THRESHOLDS

The relative vulnerability of the community and its built assets to flood hazard can be assessed by using flood velocity and depth thresholds. The thresholds are related to the stability of both people and vehicles in flood waters, and to buildings affected by flooding. **Figure 2-4** identifies thresholds that enable categorisation of flood hazard across the floodplain and for flood events of different scales using information readily derived from hydraulic models into 6 categories. These are H1 to H6, which range from least to most hazardous conditions.

The peak hazard of existing conditions in the 1% AEP and PMF event are shown in **Figure 2-5** and **Figure 2-6**. Flooding across most of the site is classified as H1 or No Restrictions in the 1% AEP and PMF events. There are small, isolated areas surrounding some of the buildings in the north-western corner with areas of H2 classification or *unsafe for small vehicles* in the 1% AEP event; and small areas reaching up to H4 *Unsafe for People and Vehicles* along the eastern driveway from St Vincents Road and the western driveway entrance from River Road in the PMF event. The PMF event also has areas of up to H6 Not Suitable for People, Vehicles or Buildings along (and predominantly outside) the western boundary in the vicinity of the steep slopes down into Gore Creek.

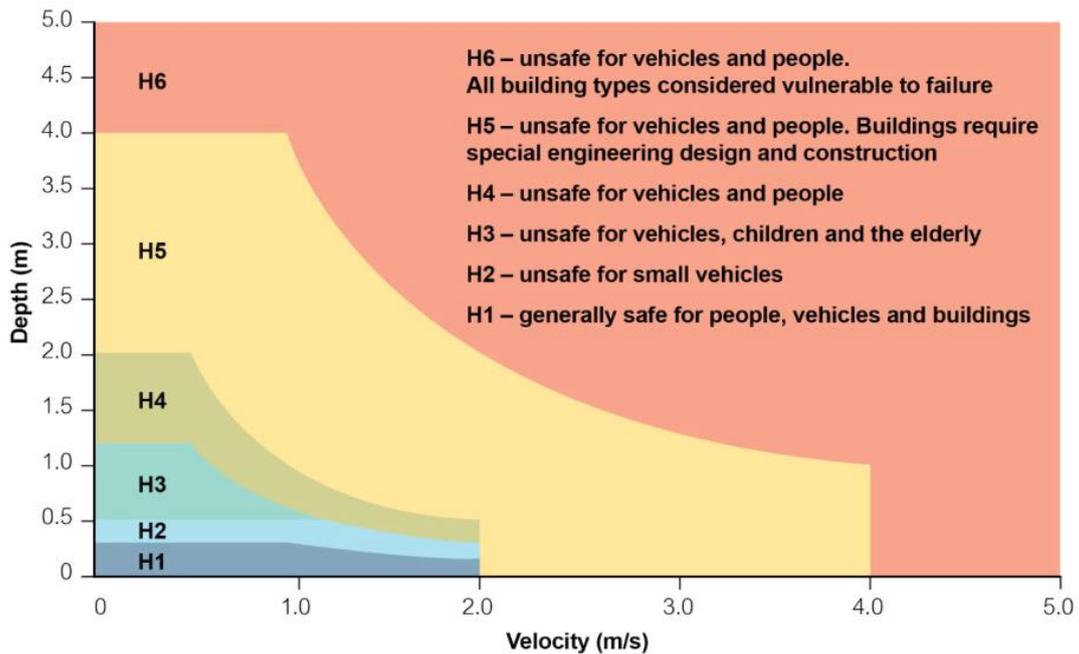


Figure 2-4 General Flood Hazard Vulnerability Curve (AIDR, 2017)

As shown in **Table 2-2**, the maximum hazard vulnerability classification at the driveway entrances to site is H5 (unsafe for vehicles and people) for all storm durations. However, access to the site via River Road and St Vincents Road is only inaccessible for less than 10 minutes during the critical flood duration (15 mins). Outside of this 10-minute window, the hazard classification is only H1 (generally safe for vehicles, people, and buildings), as shown in **Table 2-3** and **Table 2-4**. For the longer storm duration, St Vincents Road will be flooded for a shorter period of time than River Road.

Further investigation has been conducted for the critical storm event for both River Road and St Vincents Road, depicted in **Figure 2-7** and **Figure 2-8** respectively. It was found that the high hazard classification along these two roads is predominantly caused by the high flood velocities, as demonstrated by the flood depth and flood velocity variation. The flood depth for the critical storm duration does not exceed 0.5 m in PMF flood event, however the velocity exceeds 2.0 m/s, which is deemed unsafe for vehicles.

Table 2-2 River Road & St Vincents Road Hazard Vulnerability Classification During PMF Event

Storm Duration [min]	Time Inundated (Unsafe for vehicles)		Maximum Hazard Vulnerability Classification at Driveway Entrances to Site
	River Road	St Vincents Road	
90	55 min	30 min	H5 – Unsafe for vehicles and people
60	40 min	25 min	H5 – Unsafe for vehicles and people
45	30 min	15 min	H5 – Unsafe for vehicles and people
30	25 min	10 min	H5 – Unsafe for vehicles and people
15	10 min	5 min	H5 – Unsafe for vehicles and people

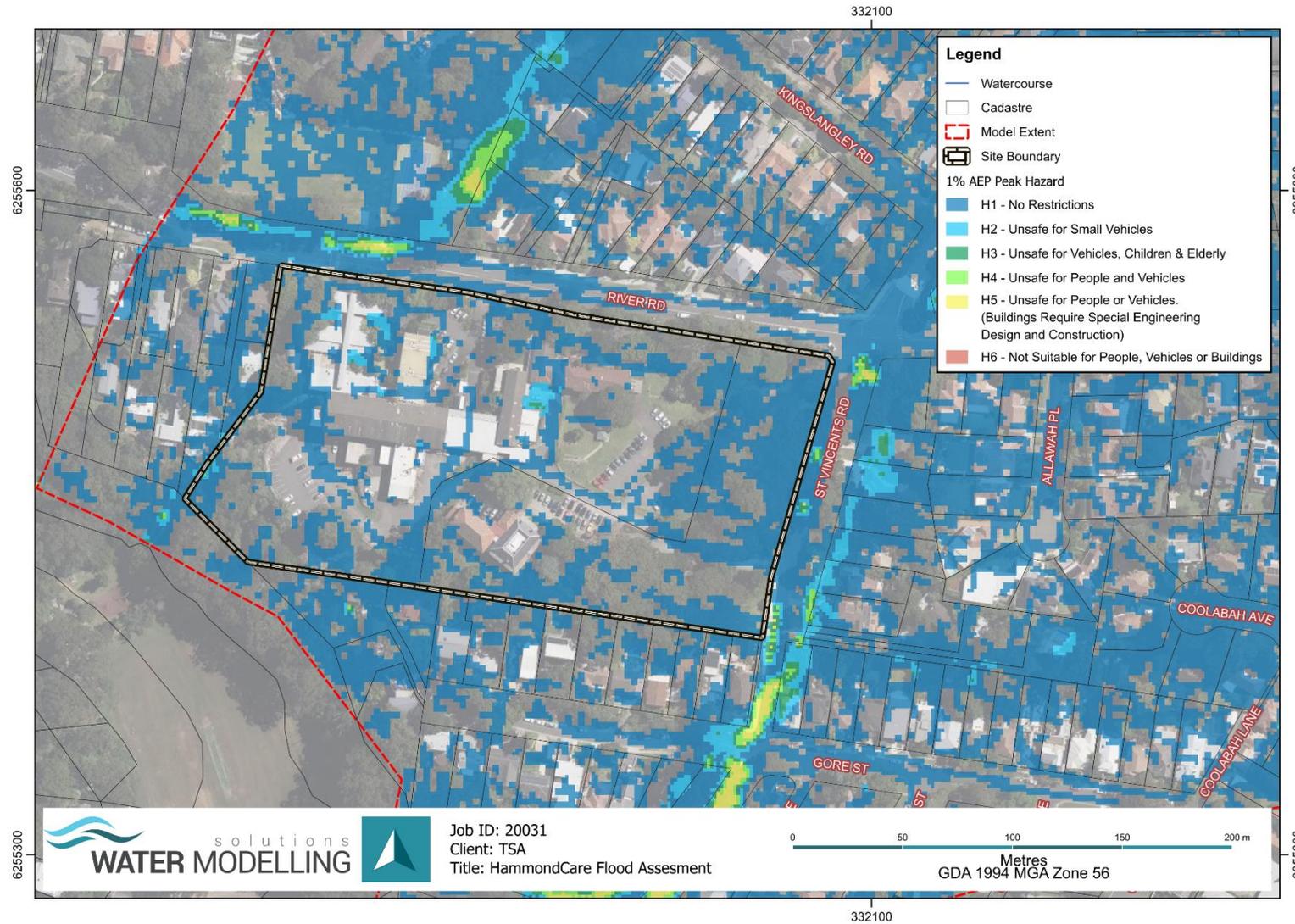


Figure 2-5 1% AEP Peak Hazard – Existing Conditions

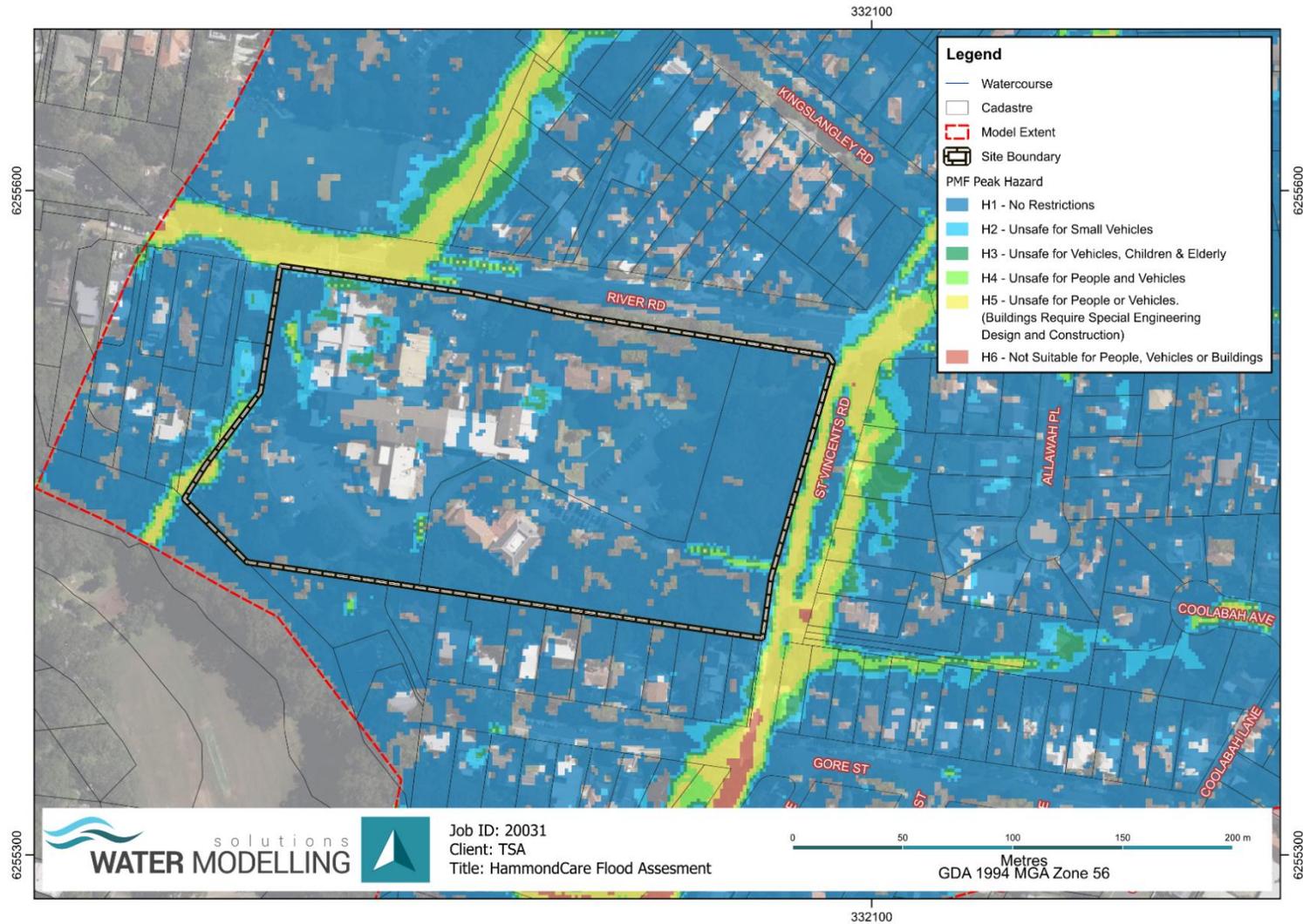


Figure 2-6 PMF Peak Hazard – Existing Conditions

Table 2-3 River Road Hazard Classification During PMF Event

Storm Duration	Hazard Vulnerability Classification (5-minute interval)																						
	[min]	0	5	10	15	20	25	30	35	40	45	50	55	60	65	70	75	80	85	90	95	...	115
90	H1				H5												H1						
60	H1			H5											H1								
45	H1		H5								H1												
30	H1	H5						H1															
15	H1	H5		H1																			

Table 2-4 St Vincents Road Hazard Classification During PMF Event

Storm Duration	Hazard Vulnerability Classification (5-minute interval)																						
	[min]	0	5	10	15	20	25	30	35	40	45	50	55	60	65	70	75	80	85	90	95	...	115
90	H1				H5												H1						
60	H1			H5											H1								
45	H1		H5								H1												
30	H1	H5		H1																			
15	H1	H5	H1																				

H1	Generally safe for vehicles and people
H5	Unsafe for vehicles and people

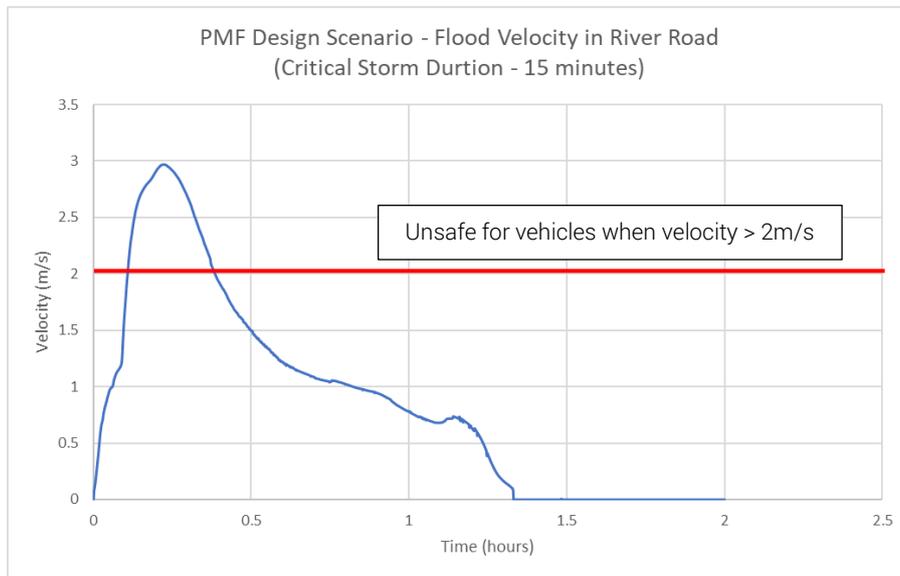


Figure 2-7 Flood Velocity in River Road for PMF Design Scenario

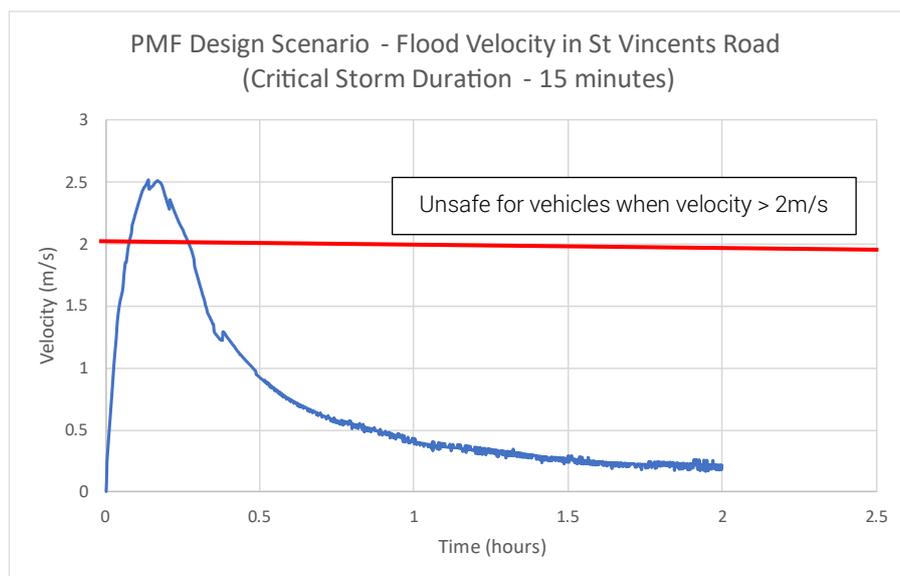


Figure 2-8 Flood Velocity in St Vincents Road for PMF Design Scenario

3 SOURCES OF FLOOD INFORMATION, FORECAST AND WARNINGS

Monitoring weather forecasts is key to managing flood risk at the site and ensuring the CFERSP is enacted at the appropriate time. Information about current and impending flood risks can be found through the following sources.

3.1 BUREAU OF METEOROLOGY (THE BUREAU)

The following types of warnings are provided by the Bureau and could provide an indication of increased flood risk at the site.

3.1.1 Types of Warnings

Severe Weather Warnings

The Bureau issues Severe Weather Warnings whenever severe weather is occurring in an area or is expected to develop or move into an area. The warnings describe the area under threat and the expected hazards. Warnings are issued with varying lead-times, depending on the weather situation, and range from just an hour or two to 24 hours or sometimes more.

Severe Weather Warnings can contain the following information:

- Standard Emergency Warning Signal (SEWS) - sounded only for the most serious events
- List of severe weather phenomena expected in the warning area
- Threat area
- Warning issue time
- (Usually) Description of the weather pattern, including forecast developments of significant weather systems
- Description of the threat
- Action statements
- Advice of next issue time

As part of its Severe Weather Warning Service, the Bureau also provides warnings for severe weather that may cause flash flooding. State emergency services or local authorities may provide flash flood warnings in some locations.

Note: The Bureau does not provide flash flood warnings (i.e., flooding that occurs within 6 hours of the rainfall).

Severe Thunderstorm Warnings

The Bureau of Meteorology issues Severe Thunderstorm Warnings to alert communities of the threat of these more dangerous thunderstorms.

A severe thunderstorm is one that produces any of the following:

- Large hail (2cm in diameter or larger)
- Giant hail (5cm in diameter or larger)
- Damaging or destructive wind gusts (generally wind gusts exceeding 90 km/h)
- Heavy rainfall which may cause flash flooding
- Tornadoes

Most thunderstorms do not reach the level of intensity needed to produce these dangerous phenomena so the Bureau does not warn for all thunderstorms.

3.1.2 Accessing The Bureau Warnings

Bureau warnings can be accessed via the following:

- On the web at: www.bom.gov.au/australia/warnings
- Via the Bureau mobile app: <http://www.bom.gov.au/app/>
- Through pre-recorded messages via the Bureau Telephone Weather Service. Charges apply. Key phone numbers relevant to the site are listed in **Table 3-1**. Full list can be found at: <http://www.bom.gov.au/other/tws/twsdir.shtml>

Table 3-1 Bureau of Meteorology telephone weather service key phone numbers

Service	Phone Number
Full State Service	1300 945 108
Sydney Metropolitan Service	1300 068 419
Sydney Local Waters Service	1300 871 802

3.2 NSW STATE EMERGENCY SERVICES (SES)

The NSW SES is the legislated lead combat agency for flooding in NSW. Any flood directive issued by the SES must be followed. This includes any order to evacuate the site, or not evacuate the site, irrespective of the instructions given in this CFERSP or as decided by the Facility Manager.

There are three warning levels within the Australian Warning System (AWS) that may be issued by the SES: Advice, Watch & Act and Emergency Warning. For each level, there are a series of clear action statements to guide positive action by the community. These include 'stay informed', 'prepare to evacuate' and 'move to higher ground' as shown below and in **Figure 3-1**:

- **Advice** - an incident has started. Stay up to date in case the situation changes.
 - Stay informed
 - Monitor conditions
 - Reduced threat: return with caution
- **Watch and Act** - conditions are changing and you need to start taking action now to protect you and your family.
 - Do not enter floodwater
 - Prepare to evacuate
 - Prepare to isolate
 - Avoid the area
- **Emergency Warning** - the highest level of warning. You may be in danger and need to take action immediately.
 - Evacuate now / Evacuate before [time]
 - Shelter now
 - Move to higher ground



Figure 3-1 AWS Warning Levels

NSW SES communications and warnings can be found in the following social media pages:

- NSW SES Facebook Page: <https://www.facebook.com/NSW.SES/>
- NSW SES Willoughby-Lane Cove Unit Facebook Page: <https://www.facebook.com/SESWilloughbyLaneCove/>

3.3 OTHER SOURCES

In each state, Flood Warnings, Watches and River Height Bulletins are available via some or all of the following:

- Local Response Organisations: these include the Council, Police, and NSW SES in the local area.
- Radio and television: radio stations, particularly local ABC and local commercial stations broadcast flood warning information as part of their new bulletins, or whenever practicable. Some of the local emergency broadcasters in Greenwich are:
 - ABC Sydney 702
 - 2day FM 104.1

4 EMERGENCY REPSONSE

The following emergency response is intended solely for construction staff and contractors to ensure the safety of all workers. Given that construction will be staged, existing patients, staff, and residents should adhere to the actions outlined in the *Greenwich Hospital Flood Emergency Response Plan* (WMS, 2023) for the redeveloped hospital.

4.1 SITE PREPARATION

Construction compounds and stockpile areas are to be located outside of 1% AEP flood extent in accordance with Section 2 of this report, in order to mitigate the impact of potential flooding during construction. The flood extent maps and modelling details can be found in the *Greenwich Hospital Flood Assessment* (WMS Engineering, 2023).

The following measures will be implemented to reduce the likelihood of damage to site equipment and the environment and to protect the safety of personnel:

- Every morning, check the Bureau of Meteorology weather forecast and warnings.
- The Bureau weather forecast and warnings for NSW were available at the following link: New South Wales Warnings Summary (<http://www.bom.gov.au/nsw/>).

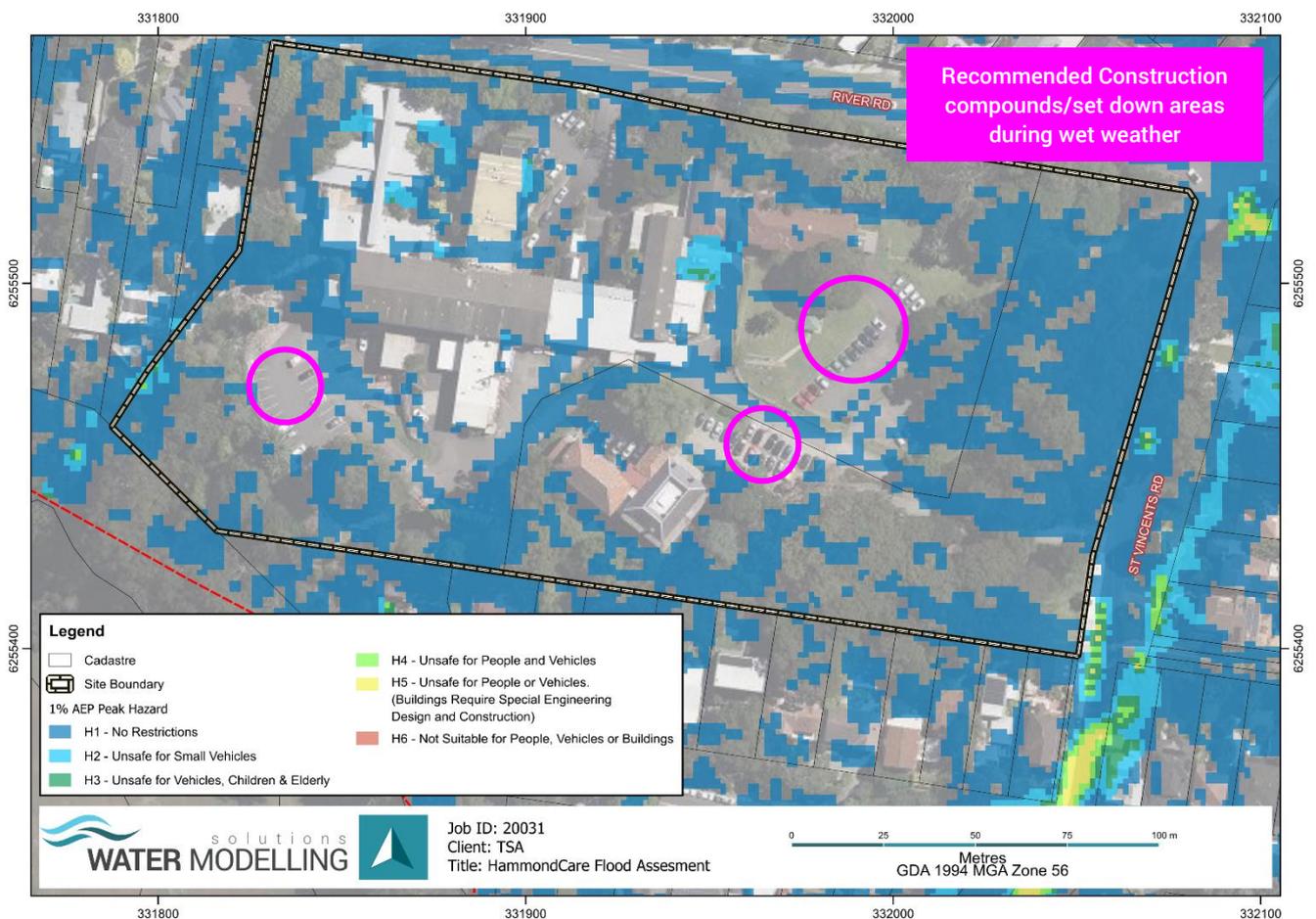


Figure 4-1 Site Preparation Guide

4.2 RECOMMENDED FLOOD RESPONSE

The site is subject to limited flood risk, as it is only associated with the overland flow path that traverses the northwestern corner of the site as discussed in Section 2.1. A summary of recommended strategies is provided in **Table 4-1** and a detailed Action Plan is provided in **Appendix A**. It is important to note that, regardless of flood risk, the construction site will often be closed during any rainfall, including light showers or when severe thunderstorms are expected, as the majority of construction activities are unable to proceed in bad weather conditions.

Table 4-1 Flood Response Strategy Overview

Type of Warning Issued by BOM	Overview of Actions Required
Severe Weather/Thunderstorm Warnings	<ul style="list-style-type: none"> All staff and contractors must be informed by the site project manager about the upcoming flood conditions. Construction equipment, extra materials, skips, and hazardous substances will be moved to higher ground. Loose materials must either be removed from flood-prone areas or secured. Emergency erosion and sediment controls will be put in place to minimize risk to nearby properties. Staff will be evacuated to a designated safe refuge away from flood-prone zones. Power will be turned off and the construction site will be closed. The Flood Wardens will closely monitor the flood situation and keep up to date with Severe Weather Warnings and Flood Warnings issued on the Bureau of Meteorology website and act on all advice provided by the NSW SES.

4.3 PERSONNEL PREPARATION AND TRAINING

Construction teams should undergo flood awareness training as part of the site induction process. At a minimum training should include the following:

- Staff and contractors to be made aware of this CFERSP and where to find it.
- The locations of overland flow paths.
- The dangers of crossing flood waters.
- The action in severe weather/thunderstorm warnings.
- The recommended construction compounds/set down areas during wet weather.

5 REFERENCES

NSW Government (2016). Evacuation Decision Guidelines for Private Health and Residential Care Facilities

WMS (2023). Greenwich Hospital Flood Assessment

APPENDIX A

ACTION PLAN

A.1 BEFORE A FLOOD

Trigger/ Frequency	Action
Always	The Site Project Manager will make all staff on site aware of the possibility of flooding and the procedures to be followed in a flood.
	The Site Project Manager will appoint a Flood Warden. This should be a senior staff member who is familiar with this Flood Emergency Response Plan and who is always on site when the site is open. If necessary, to ensure that at least one Flood Warden is always on site, the Site Project Manager may appoint two or more Flood Wardens.
	An airhorn will be kept on site at all times. This is to be used to alert everyone on site in case of emergency if there is a power outage. All staff on site will be trained during their site induction to immediately go to the muster point at the front of the site when the airhorn sounds.
	A set of at least two wireless radio communication transceivers with charged spare batteries will be kept on site at all times. The Flood Warden will make sure that the main and spare batteries are changed at all times.
	A flood warning sign will be kept on the premises. The sign should read a message to this effect: "The site is temporarily closed due to flood risk. For your own safety, leave the area immediately. You will be notified once it is safe to come back"
	The Site Project Manager and Flood Warden are to always have a smartphone/tablet available, with 3G/4G/5G internet access and at least 12 hours independent power supply.
Daily	Every morning, the Site Project Manager will check the Bureau of Meteorology weather forecast and warnings. At the time this report was prepared, the Bureau weather forecast and warnings for NSW were available at the following link: New South Wales Warnings Summary (bom.gov.au).
Always	An emergency contact sheet will be kept in hardcopy format on site. A suggested format for these details and other necessary contact details is provided in Appendix B.
Always	The Site Project Manager will keep an updated register of the people who are on site at all times. The list will have to include as a minimum name, mobile number, and emergency contact details.
Always	The Site Project Manager will maintain an emergency kit including a portable radio and torch with spare batteries and a first aid kit.
Annually	The Site Project Manager will host a Flood Emergency Response Drill, in which Shelter in Place arrangements are practised by flood wardens.

A.2 WHEN A FLOOD IS POSSIBLE AND DURING A FLOOD

Trigger/ Frequency	Action
<i>During working hours</i>	The Site Project Manager will notify the Flood Warden(s) that there is a risk that the site may flood and the procedures to be followed in a flood.
When a BOM Severe Weather and Thunderstorm Warnings is issued.	The Site Project Manager and the Flood Warden(s) will notify everyone on site, as well as any workers arriving to the site later in the day, that there is a risk that the site may flood and the procedures to be followed in a flood.
	The Flood Wardens will closely monitor the flood situation and keep up to date with Severe Weather Warnings and Flood Warnings issued on the Bureau of Meteorology website and act on all advice provided by the NSW SES.
<i>Outside working hours</i>	The Site Project Manager will monitor the Severe Weather Warnings and Flood Warnings issued on the Bureau of Meteorology website every two hours, and one last time one hour before any works commence at the site.
	Upon opening of the site, the actions to be undertaken during working hours, listed above, will apply.

Trigger/ Frequency	Action
Thunderstorm Warnings is issued.	The Site Project Manager will keep monitoring the THE BUREAU Severe Weather Warnings and Flood Warnings every two hours.

A.3 AFTER A FLOOD

Trigger/ Frequency	Action
When the BOM cancels the Severe Weather and Thunderstorm Warnings	<ul style="list-style-type: none"> • The Site Project Manager will inspect the site to check if access roads are clear and if the site was affected by flooding. • If access roads are clear and the site was not affected, the emergency has passed and the site can re-open. • If access roads are not clear, the Site Project Manager will return for an inspection after at least two hours. Under no circumstances should the Site Project Manager drive through floodwaters. • If access roads are clear but site was affected by flooding, the Site Project Manager will organise access to the seniors housing development making sure that any precautionary measures recommended by the NSW SES are put in place. • Extra care of potential slips on muddy floors will be taken if floodwaters have entered the mobile offices or other structures. • All flood-affected parts of the premises will be appropriately cleaned, and utilities checked by professionals before anyone can return to the site. • A hazard assessment will be undertaken for the clean-up, safe work methods statements will be prepared, and personal protective equipment supplied consistent with the known hazards which can be associated with floods: slips, trips and falls; sharp debris; venomous animals; contaminated water and sediments. • Following the re-commencement of the site, a de-brief will be held with key management staff and may involve Council flood staff or the NSW SES. The flood event and response, including the use of this CFERSP and any emergency procedures will be reviewed. • Changes may be made to the CFERSP and the requirements for future emergency response should the review identify any improvements which may be made.

APPENDIX B

EMERGENCY CONTACT LIST

B.1 EMERGENCY CONTACT LIST

Category	Contact Name	Contact Phone Number
Emergency Services and Sources of Information	Emergency – Police, Fire, Ambulance	000
	NSW SES	132 500 https://www.ses.nsw.gov.au/
	NSW Live Traffic	https://www.livetraffic.com/
	Lane Cove Council	Phone: (02) 9911 3555 Email: service@lanecove.nsw.gov.au https://www.lanecove.nsw.gov.au/Home
	Emergency Broadcasters	ABC Sydney 702 2day FM 104.1
	Bureau of Meteorology	1300 659 217 NSW Warnings: http://www.bom.gov.au/nsw/warnings/
	Utilities and Providers	Electricity Retailer
Electricity Distributor		
Gas Retailer		
Water and Sewer Retailer		
Doctor		
Insurance		Policy Number: Contact Phone:
Key On-Site Personnel (<i>Add as necessary</i>)	Project Manager	
	Deputy Wardens	

APPENDIX C

CFERSP REVIEW RECORD

APPENDIX D

SITE MANAGEMENT PLAN