# Construction Flood Emergency Management Sub-Plan

President Private Hospital, Kirrawee, NSW

Final Report

P1907286JR05V01

February 2026

Prepared for Macquarie Health Corporation

**environmental science & engineering**

## Project Details

| | |
|---|---|
| **Report Title** | Construction Flood Emergency Management Sub-Plan : President Private Hospital, Kirrawee, NSW |
| **Client** | Macquarie Health Corporation |
| **Document** | P1907286JR05V01 |
| **Director** | Daniel Martens |
| **Manager** | Stanley Leung |
| **Principal Author** | Mark O'Brien |

## Document History

| Issue | Issue Date | Status | Description / Comment | Author | Reviewer | Approved |
|---|---|---|---|---|---|---|
| **1** | 11/11/2025 | Draft | For client review | MO | SL | SL |
| **2** | 8/12/2025 | Final | For NSW SES comment | MO | SL | SL |
| **3** | 12/02/2026 | Final | Updated in response to NSW SES comments | MO | SL | SL |
| | | | | | | |


Suite 201, 20 George St, Hornsby, NSW 2077, Australia
ACN 070 240 890 ABN 85 070 240 890
P +61-2-9476-9999 | mail@martens.com.au | www.martens.com.au

# Executive Summary

Martens & Associates Pty Ltd (**MA**) have prepared this Construction Flood Emergency Management Sub-Plan (**CFEMSP**) as required by Consent Condition C18 of an approved State Significant Development (**SSD** 10320) for the redevelopment of the President Private Hospital, Kirrawee, NSW.

Review of MA flood modelling results found that:

1. The northern portion of the site is free of hazardous flood waters in both the existing and proposed conditions up to and including the probable maximum flood (**PMF**).
2. The southwest portion of the site is affected by hazardous flood waters in infrequent flood events.
3. The proposed development's finished floors level's (**FFLs**) adjacent to flood affected areas all have freeboard the PMF.
4. President Avenue adjacent to the site and several other roads in the area experience hazardous flooding during the PMF, with flood waters reaching H6, based on ARR hazard definitions.

This site specific CFEMSP has been prepared to ensure that the site can operate safely in the floodplain environment. Whilst the site is partially inundated by hazardous flood waters during infrequent events. Safe access to refuge above the PMF will be made available during all stages of construction and a range of straightforward mitigation measures can be implemented to reduce the flood risks to occupants. In summary:

1. Subscription to a number of warning systems will significantly reduce the likelihood of persons on site during a major flood event.
2. The northern portion of the site is free of hazardous flood waters in both the existing and proposed conditions up to and including the PMF.
3. Access to the southwest portion of the site can be restricted during flood events as it is affected by hazardous flood waters in infrequent events.
4. In the unlikely scenario that persons are on-site during an unanticipated major flood event, risk to persons is managed through a SIP strategy in a building on the northern portion of the site in the nominated area which is above the peak PMF level.
5. With the implementation of the CFEMSP procedures the risk to life is reduced to acceptable levels.

# Contents

## Tables



## Figures



## Maps

## Glossary of Terms

| | |
|---|---|
| AEP | Annual exceedance probability: the probability of a flood event occurring within a year. A 1% AEP flood has a 1% chance of occurring in any given year. |
| ARR | Australian Rainfall & Runoff |
| BoM | Bureau of Meteorology |
| Council | Sutherland Shire Council |
| CFEMSP | Construction Flood Emergency Management Sub-Plan |
| FFL | Finished floor level |
| FPL | Flood planning level |
| OEH | Office of Environment & Heritage |
| MA | Martens & Associates Pty Ltd |
| NSW SES | NSW State Emergency Service |
| PMF | Probable maximum flood: the most extreme flood event possible for a certain location, with an approximate AEP of 100,000 to 10,000,000 years |
| SIP | Shelter-in-place |
| SSD | State Significant Development |

# 1 Introduction

## 1.1 Overview

Martens & Associates Pty Ltd (**MA**) have prepared this Construction Flood Emergency Management Sub-Plan (**CFEMSP**) as required by Consent Condition C18 of an approved State Significant Development (**SSD** 10320) for the redevelopment of the President Private Hospital, Kirrawee, NSW. Refer to Appendix A for site survey and Appendix B for the site layout.

This report should be read in conjunction with the site-specific flood assessment report prepared by MA (2022, REF: P1907286JR02V03, hereafter referred to as 'MA flood assessment').

## 1.2 Project Scope and Objectives

Project scope and objectives are:

1. Summarise local flood characteristics from the MA flood assessment.
2. Prepare a CFEMSP for the construction phase of the President Private Hospital redevelopment.
3. Recommend controls to improve safety in case of the site flooding.

## 1.3 Relevant Guidelines

This report and the MA flood assessment have been prepared in accordance with the following guidelines and policies:

1. Commonwealth of Australia (2019), *Australian Rainfall and Runoff – A Guide to Flood Estimation.*
2. NSW Department of Planning and Environment (2023), *Flood Risk Management Manual.*
3. NSW Department of Planning, Housing and Infrastructure (2025), *Shelter in place guideline for flash flooding.*
4. NSW State Emergency Services (2023), *Sutherland Shire Flood Emergency Sub Plan.*
5. State of NSW and Office of Environment and Heritage, *Floodplain Risk Management Guide (2019).*

## 1.4 Proposed Development

Architectural drawings prepared by Imagescape Design Studios (Appendix B) indicate that the proposed development will include:

- Demolition of existing residential dwellings on site, as well as the timber and rendered buildings in the south-west corner of the site.
- Construction and upgrade of the existing hospital, including a multi-storey west, east and north wing, a western and northern car park, and two driveway accesses.
- Construction of a four-level basement carpark beneath the buildings.
- Development of a landscape area in the south-western corner of the site.

MA also designed a 2 m wide swale in the landscape area at the south-western corner of the site to capture the upstream overland flows and redivert them away from the carpark and hospital buildings eventually discharging them to President Avenue.

## 1.5 Author Credentials

This report was prepared, reviewed, and managed by the following individuals:

- Mark O'Brien – Author, BEng Hons1 & DipProEngPrac
- Stanley Leung – Reviewer & Project Manager, BEng Civil, Chartered Professional Engineer

# 2 State Significant Development (SSD) Consent Conditions

As part of the State Significant Development approval for the redevelopment of the President Private Hospital, Kirrawee, the Independent Planning Commission of NSW provided consent conditions which need to be addressed in the relevant reports for the development.

In Consent Condition C18 a CFEMSP was requested to be prepared prior to the commencement of construction. A list of the CFEMSP requirements provided and where they are addressed is presented in Table 1, which demonstrates that all the applicable requirements for the proposed development site are effectively addressed by this CFEMSP.

**Table 1:** CFEMSP SSD requirements and where they are addressed in the relevant reports.

| SSD Requirements | Responses and relevant report section (s) |
|---|---|
| C19 The Construction Flood Emergency Management Sub-Plan (FEMSP) must address, but not be limited to, the following: | |
| (a) Be prepared by a suitably qualified and experienced person(s); | Refer to Section 1.5. |
| (b) address the provisions of the Floodplain Risk Management Guidelines (EHG); | Refer to the MA flood assessment which was prepared in accordance with the provisions of the flood risk management requirements based on the Floodplain Risk Management Guide (OEH 2019). |
| (c) Include details of: | |
| (i) the flood emergency responses for both construction and operation phases of the development; | Refer to Section 5 for the construction flood phase emergency responses.<br>Details of operation phase responses will be provided in the Operational Flood Emergency Response Management Plan per consent condition E34. |
| (ii) predicted flood levels; | Refer to Section 3 and Appendix C. |
| (iii) flood warning time and flood notification; | Refer to Sections 4.7 and 4.2. |
| (iv) assembly points and evacuation routes; | Refer to Sections 4.5 and 0. |
| (v) evacuation and refuge protocols; | Refer to Sections 4.5 and 0. |
| (vi) awareness training for employees and contractors, and students; and | Refer to Section 4.8 |
| (vii) consultation with NSW State Emergency Service and consideration of any provided advice. | This report was provided to the NSW State Emergency Service (**NSW SES**) for review and has been updated in accordance with the recommendations outlined in their advice letter dated 15 January 2026 (refer to Appendix G). |

# 3 Site Flooding Characteristics

The President Private Hospital is affected by flash flooding due to overland flows generated from the local upstream catchment and the site itself. Flood maps were previously prepared for the site in the MA flood assessment for several events including the 1% annual exceedance probability (**AEP**) and probable maximum flood (**PMF**) events, relevant maps have been reproduced in Appendix C of this report.

Based on the MA flood assessment, we note the following:

1. In both existing and proposed conditions, the southwestern portion of the site is impacted by hazardous flows in infrequent events.
2. In both existing and proposed conditions, the northwestern portion of the site is affecting by hazardous flows in the PMF, with flows continuing across the site from west to east in existing conditions.
3. In the existing conditions the bulk of flood water flows into the site from the west and is funnelled into the narrow flow paths between buildings, through the south-western carpark, and then onto President Avenue.
4. There is no formal site trunk drainage in the existing conditions, resulting in hazardous flows from the west spreading across a large area of the southwestern portion of the site.
5. In the proposed conditions a new swale concentrates and redirects the upstream overland flow, preventing inundation of the proposed south-western carpark and shifting the discharge location further east of the proposed driveway crossing onto President Avenue.
6. The proposed swale contains all flood waters from the upstream catchment in floods up to and including the 1% AEP event, only being overtopped by rare and extreme events.
7. The proposed development's finished floor levels (FFLs) adjacent to flood-affected areas are above the PMF.
8. In both existing and proposed conditions President Avenue and a several other roads in the catchment are affected by high hazard non-trafficable flows, with ARR flood hazards up to H6. (refer to Figure 1).

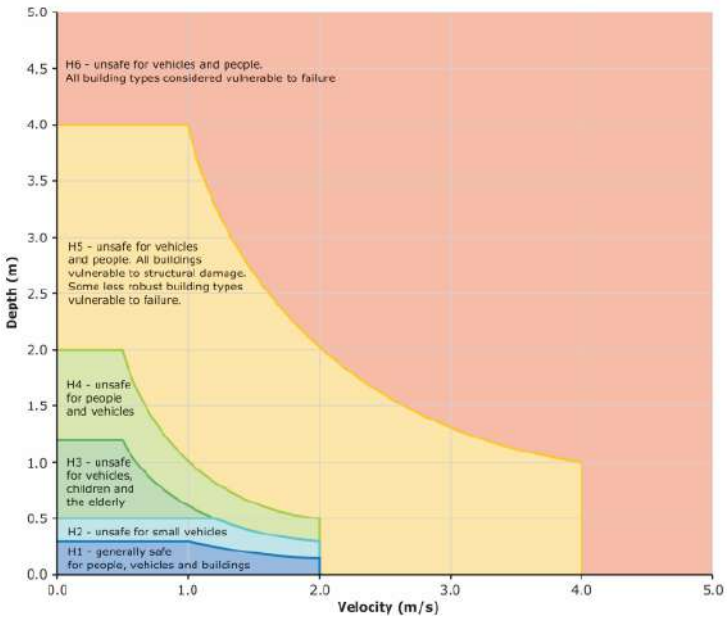



**Figure 1:** Flood Hazard Curves (Geoscience Australia, 2019).

# 4 Construction Flood Emergency Management Sub-Plan

## 4.1 Overview

This CFEMSP makes recommendations to ensure that in the event of a flood at the site during the construction stage, risk to personal safety and the environment is appropriately managed. It should be noted that it is highly unlikely that a major flood event will occur while the site is occupied during the construction stage, which we assume will take 2-5 years, in particular because it is typical for construction sites to cease works when heavy rainfall is anticipated. This approach aligns with the preferred emergency response, which is the pre-emptive closure of the site when warnings indicate that flooding may occur.

The northern portion of the site is free of hazardous flood waters in both the existing and proposed conditions up to and including the PMF. Therefore, if the site is open the primary response is to shelter-in-place (**SIP**) on the ground floor of any buildings in this portion of the site. The secondary response would be to evacuate the site if advised by the NSW SES.

However, the western side of the site, in particular the southwest and south boundaries are affected by hazardous floodwaters during infrequent events. Access to these areas should therefore be restricted on wet days with appropriate signage to warn of the associated flood risk.

## 4.2 Flood Warning Mechanisms

Monitoring weather forecasts and conditions near the site will help to manage the flood risk. A number of methods to monitor the risk of flooding are detailed in the following sections.

### 4.2.1 Bureau of Meteorology

The Bureau of Meteorology (**BoM**) generates a number of information sources useful for monitoring the weather forecast and conditions near the site:

1. Rainfall maps (http://www.bom.gov.au/jsp/watl/rainfall/pme.jsp) can be used to estimate the daily rainfall expected to occur over the next 24, 48, 72, and 96 hours as well as the total rainfall for the next 4 and 8 days.

2. Occasionally BoM issues Weather Warnings for NSW via their website (http://www.bom.gov.au/nsw/warnings/). These warnings provide both general warnings across NSW, and warnings for more specific locations. There are two types of warnings that may indicate that flooding is imminent on the site: Severe Weather Warnings and Severe Thunderstorm Warnings. Specifically, these warnings should be monitored for references to flash flooding in the Sutherland Shire or Sydney areas. Warnings are generally issued with up to 60 minutes notice

however for very large events (i.e. east coast lows), warnings may be issued with 24 hours notice or more.

3. The radar service operated by BoM shows current rainfall location and intensity for the Sydney area (http://www.bom.gov.au/products/IDR713.loop.shtml).

### 4.2.2 Sutherland Shire Disaster Dashboard

In partnership with the NSW SES, Sutherland Shire Council (**Council**) has set up a disaster dashboard that provides important weather updates and live monitoring information for easy access the public (https://sutherland.disasterdashboards.com/dashboard/weather). These updates include severe weather warnings, thunderstorm warnings, flood warnings, rain and waterway monitoring and road and bridge closures. The updates and alerts are sourced from the BoM website and the NSW SES hazard watches page.

### 4.2.3 Other Warnings

Site management may also be alerted to warnings indicating the potential for flooding via the following mechanisms:

- NSW SES emergency alert telephone warning system.
- Media warnings (TV, radio, internet etc.).
- 'Hazards Near Me NSW' app – a tool for receiving official warnings and updates on bushfires, floods, tsunamis, and more, issued by emergency services under the Australian Warning System, including NSW SES.
- HazardWatch website – web-based platform which provides similar warnings to the Hazards Near Me NSW app and uses the same sources.
- Visual observation of flood waters in overland flow path through the sites south-west site boundary.

If site management or occupants receive a warning that flooding could occur via any of the mechanisms described above, they should undertake the SIP procedure immediately as described in Section 4.5, or evacuate the site if instructed to do so, as described in Section 4.6.

## 4.3 Roles and Responsibilities

### 4.3.1 Site Management

The managers of the site have the responsibility to implement and maintain the requirements of this CFEMSP. Specifically, they are to ensure that:

- A suitable number of flood kits are kept on the premises which are to include a first aid kit, portable radio and spare batteries, megaphone, torch and spare batteries, hi-vis vests and hi-vis raincoats.
- A Chief Flood Warden is appointed.

- The Chief Flood Warden and all other Flood Wardens are trained in the application of the CFEMSP and the interpretation of rainfall and weather warning information published by BoM and Council.
- All staff are to be trained in their respective roles and responsibilities in relation to this CFEMSP.
- The CFEMSP is kept up to date.
- The site is checked and cleaned following a flood event.
- In the event of a flood at the site, all loose materials within the PMF extents are to be moved to higher ground if adequate time to do so safely.
- Sufficient financial resources are provided for the above.

Site management, at its discretion may delegate some of the above tasks to the Chief Flood Warden or others. Site Management will however remain legally responsible to ensure that these tasks are occurring.

### 4.3.2 Chief Flood Warden

The Chief Flood Warden will report to site management. It is anticipated that the Site Manager or similar will be the Chief Flood Warden. The Chief Flood Warden will:

- Familiarise themselves with the CFEMSP procedures.
- Appoint a number of Flood Wardens such that a Chief or Flood Warden is on site during all operational hours.
- Organise training for themselves and the Flood Wardens in the implementation of the procedures detailed in this CFEMSP.
- Monitor weather forecasts and storm warnings daily.
- Ensure any alerts received from the BoM, Hazards Near Me app, or otherwise are issued directly to the Flood Wardens / via phone call or text message to all site occupants.
- Ensure the flood response kits are equipped with all required equipment.
- Keep hard copies of the CFEMSP on site and accessible to all staff.
- Implement the procedures in this CFEMSP in the event of a flood, including evacuating and closing the site.
- Liaise with emergency services in the event of a flood.
- Review the CFEMSP following flood events which trigger an emergency response.

### 4.3.3 Flood Wardens

The Flood Wardens will:

- Familiarise themselves with this CFEMSP and the procedures within it.
- Follow the procedures within this CFEMSP in the event of a flood.
- Follow the directions of the Chief Flood Warden.
- Fulfil the role of the Chief Flood Warden in their absence.
- Monitor weather forecasts and flood levels on site during operational hours in the absence of the Chief Flood Warden.

### 4.3.4 Workers & Visitors

Workers and visitors of the premises are to follow the directions of site management, the Chief and/or Flood Wardens and signage related to flooding during a flood event on site.

## 4.4 Flood Response Phases and Triggers

### 4.4.1 Overview

There are four flood response phases for flooding on the site:

- **Prepared** – will apply at all times when the other phases do not apply.
- **Alert** – this is triggered when heavy rainfall is forecast, or the NSW SES issues an 'Advice' warning indicating potential flooding at the site.
- **Respond** – this occurs when a flood response is triggered by one of several means indicating a flood is occurring or is likely to occur at the premises.
- **Recover** – this occurs following a flood response operation of any scale and lasts until operations have returned to normal, after which the 'Prepare' phase applies.

Refer to Appendix D for the Flood Actions Checklist which details the four phases, actions and responsibilities, and refer to Appendix E for the Flood Response Phases and Triggers diagram.

### 4.4.2 Prepared

During the prepared phase, weather forecasts and warnings are checked daily and the flood emergency response plan arrangements are maintained.

### 4.4.3 Alert

The alert phase is triggered by any of the following:

- Heavy rainfall forecast is (≥ 50 mm in the next 24 hours).

- NSW SES issues an 'Advice' warning covering the site.

In the alert phase, the rain forecast, warnings are monitored every 2 hours until BoM advise that heavy rainfall has passed.

### 4.4.4 Respond

The respond phase is triggered by the following:

- BoM issues a severe weather warning for the Sutherland Shire or Sydney areas with a chance of flash flooding at the site.
- NSW SES issues a 'Watch and Act' warning covering the site.
- NSE SES advises the site should be evacuated.

In the respond phase, the Chief flood warden or Flood Warden will:

- Keep the site closed if not yet open.
- Relocate all loose or hazardous materials to sheltered or higher ground if safe to do so.
- Ensure that anyone on the site is notified to SIP on the northern portion of the site inside any temporary structures.
- Determine how many occupants are currently on site.
- Notify the NSW SES and site management that there are occupants sheltering-in-place.
- Evacuate and lockdown the site if instructed by NSW SES.

If site occupants have sheltered-in-place, once emergency services advise that the flood has receded, occupants will evacuate, and the site will be locked down until cleaning and any repairs can be made.

### 4.4.5 Recover

The recovery phase occurs once the flood situation has ended. If flood waters reached the vicinity of the site, the site should be thoroughly cleaned and repaired if necessary. In any case the building should be fully inspected to ensure all structural elements, systems and equipment are in working order and remove any debris from the site.

In any flood event affecting the site, a debrief should be held with site management and all Flood Wardens, and the CFEMSP should be reviewed.

## 4.5 Shelter-in-Place

The primary and preferred emergency response strategy is for pre-emptive site closure in the lead up to an extreme flood event. However, if the site is open, SIP can safely be

undertaken by all occupants as the northern portion of the site free from hazardous flood waters during the PMF.

The SIP duration would be likely be around 2-3 hours, as the site is partially flood free and local roads are not expected to experience long periods of inundation. SIP should take place within any buildings (existing, temporary or proposed) on the northern portion of the site identified by Figure 2.

The following is to be provided to enable safe SIP in accordance with the NSW Department of Planning, Housing and Infrastructure (2025) *Shelter-in-Place Guideline for Flash Flooding* and Australian Red Cross (2014), *Preferred Sheltering Practices for Emergency Sheltering in Australia*:

1. PMF refuge is to be available on the ground floor of a building within the nominated area and located above the PMF flood level.

2. All Flood Wardens on duty will remain with persons sheltering in place and manage SIP.

3. Facility management will maintain emergency kits including torches with spare batteries, a portable radio with spare batteries, a first aid kit, high-visibility vests, raincoats, non-slip footwear and a megaphone, and will ensure access to potable water, existing on-site sanitary facilities and adequate sheltered indoor space.

4. Adequate sheltered space will be available to accommodate all site occupants sheltering in place.

5. Persons sheltering in place will not leave the site until instructed to do so by the on-site Flood Wardens or NSW SES.


**Figure 2:** Acceptable Area nominated for the site flood emergency assembly building

Secondary risks, including fire hazards and medical emergencies, will continue to be actively managed during SIP. Flood Wardens will monitor site conditions, maintain access to first aid equipment and emergency contacts, and coordinate with emergency services as required.

**Ill or vulnerable persons, including those with limited mobility, medical conditions or medication requirements, will be identified by Flood Wardens and provided with appropriate assistance, supervision and access to required care and information for the duration of the** SIP **period.**

## 4.6 Evacuation

All site occupants can likely safely SIP in the site above the PMF level and will not be subjected to flood risks. This is considered safer and more appropriate than attempting to evacuate. However, if advised by the NSW SES that it is safe to do so, site occupants can proceed to their own homes, family or friends or an evacuation centre.

Following a major flood event the NSW SES and Council will likely advise when it is safe to travel home or to an evacuation centre and any roads may be closed.

## 4.7 Flood Warning Times

The site is affected by flash flooding from the local catchment which can be characterised by short, intense bursts of rain that in infrequent events will result in hazardous flood waters flowing through the southwest corner of the site.

Warnings for these events are generally issued with up to 60 minutes notice, however for very large events, warnings may be issued with several hours notice or more.

## 4.8 Flood Awareness Training

Flood awareness training should be provided to employees, contractors, site users and visitors to understand site flood behaviour, which will help to prepare site occupants and reduce flooding risks.

Training with respect to site flood hazards and emergency procedures should be provided for all staff as part of the site induction process, and yearly flood awareness training is to be provided for all staff. Materials contained within this report and the MA flood assessment should be utilised to inform the training.

## 4.9 Emergency Contact List

NSW SES can be contacted during a flood emergency if required on 132 500. In a life-threating situation it is advised to call triple zero (000) for assistance from police, ambulance or the fire brigade.

The following are the key points that need to be followed after logging a call with NSW SES in case of an emergency:

1. Keeping phones nearby so that it is easy for NSW SES to make contact after assistance request call.
2. Stay away from power lines and fallen tress during the storm period.
3. Follow directions given by NSW SES staff.
4. NSW SES attends to requests for assistance in a priority-based order. Therefore, it is necessary to outline the priority of the call.
5. Cancel the call request if help is not needed anymore stating the reference number given prior.

See Appendix F for full details of emergency contact list for NSW SES and other emergency services during flooding.

NSW SES does not have the resources to provide site-specific warnings during flood events. Accordingly, flood wardens should maintain awareness of weather conditions and respond promptly to publicly issued forecasts and warnings, following the procedures outlined in this FERP. However, in any emergency where life is at risk, wardens should contact the appropriate emergency services without hesitation.

# 5 Summary

This site specific CFEMSP has been prepared to ensure that the site can operate safely in the floodplain environment. Whilst the site is partially inundated by hazardous flood waters in the 1% AEP and PMF events, safe access to refuge above the PMF will be made available during all stages of construction. In summary:

1. Subscription to a number of warning systems will significantly reduce the likelihood of persons on site during a major flood event.
2. The northwest portion of the site is free of hazardous flood waters in both the existing and proposed conditions up to and including the PMF.
3. The western side of the site is affected by hazardous flood waters in infrequent flood events.
4. The proposed development's FFL's adjacent to flood affected areas all have freeboard the PMF.
5. In the unlikely scenario that persons are on-site during an unanticipated major flood event, risk to persons is managed through a SIP strategy in a building on the northern portion of the site in the nominated area which is above the peak PMF level.
6. With the implementation of the CFEMSP procedures the risk to life is reduced to acceptable levels.

# 6 References


Australian Red Cross (2014), *Preferred Sheltering Practices for Emergency Sheltering in Australia*, prepared by Claire Smith and Carolyn Parsons.

Ball J, Babister M, Nathan R, Weeks W, Weinmann E, Retallick M, Testoni I, (Editors) (2019), *Australian Rainfall and Runoff: A Guide to Flood Estimation*, Commonwealth of Australia.

Martens and Associates (February 2022), *Preliminary Flood Assessment: President Private Hospital Kirawee (P1907286JR02V03).*

NSW Department of Planning, Housing and Infrastructure (2025), *Shelter in place guideline for flash flooding.*

NSW Department of Planning and Environment (2023), *Flood Risk Management Manual.*

NSW State Emergency Services (2023), *Sutherland Shire Flood Emergency Sub Plan.*

State of NSW and Office of Environment and Heritage, *Floodplain Risk Management Guide* (2019).

# Appendix A – Site Survey

NOTES:

1. THESE NOTES AND LEGEND (IF SHOWN) FORM PART OF THE PLAN AND SURVEY AND MUST REMAIN WITH THE PLAN IN ANY REPRODUCTION IN WHOLE OR PART.
2. THE CAD FILE USES METRES AS ITS BASE UNIT AND IS IN A "GROUND" COORDINATE SYSTEM. IF THE SURVEY IS STATED AS MGA, ANY POINT IN THE FILE WILL BE AN APPROXIMATE MGA COORDINATE.
3. SOME SYMBOLS REPRESENTING PHYSICAL STRUCTURES SUCH AS POWER POLES AND PITS ARE DIAGRAMMATIC ONLY AND DO NOT NECESSARILY REPRESENT THE ACTUAL SIZE AND EXTENT OF THESE FEATURES.
4. THE SURVEY INFORMATION SHOWN HERE WAS PREPARED FOR A SPECIFIC PURPOSE FOR THE CLIENT SHOWN. THIS INFORMATION IS NOT INTENDED TO BE USED FOR ANY OTHER PURPOSE OR BY ANYONE NOT AUTHORISED BY THIS CLIENT.
5. BOUNDARY DIMENSIONS AND AREAS HAVE BEEN DETERMINED BY CURRENT CADASTRAL SURVEY AND THE BOUNDARY AND EASEMENT LINES IN THE ELECTRONIC FILE HAVE BEEN INCLUDED USING THOSE SURVEYED DIMENSIONS. THE TITLE DIMENSIONS SHOWN ON THE HARD COPY PLAN TAKE PRECEDENCE OVER THE LINES IN THE ELECTRONIC FILE.
6. THE TITLE/S TO THE SUBJECT LAND HAS BEEN REVIEWED AND THE POSITION OF ALL EASEMENTS AFFECTING THE LAND ARE SHOWN. THE TERMS OF ANY EASEMENT, RESTRICTION ON THE USE OF LAND OR COVENANT AFFECTING THE LAND HAVE NOT BEEN INVESTIGATED. LEASES AND OTHER NOTATIONS MAY ALSO EXIST WHICH AFFECT THE LAND.
7. UNDERGROUND SERVICES OTHER THAN THOSE SHOWN HAVE NOT BEEN INVESTIGATED. PRIOR TO DEMOLITION, EXCAVATION OR CONSTRUCTION WORK ON THE SITE, THE RELEVANT SERVICE AUTHORITY SHOULD BE CONTACTED TO ESTABLISH DETAILED LOCATION AND DEPTH.
8. THIS SURVEY IS LIMITED TO IMPROVEMENTS AND OTHER DETAIL WHICH WERE VISIBLE AND ACCESSIBLE AT THE TIME OF SURVEY. THE LOCATION OF DETAIL SUCH AS PRIVATE UNDERGROUND SERVICE LINES AND BUILDING FOUNDATIONS WITHIN THE SITE IS UNKNOWN.
9. THE COORDINATES WITHIN THIS DRAWING RELATE TO THE DATUM SHOWN IN THE TITLE BLOCK. REFER TO A REGISTERED LAND SURVEYOR FOR FURTHER CLARIFICATION. CAUTION SHOULD BE TAKEN WHEN IMPORTING INFORMATION OBTAINED FROM OTHER SUB-CONSULTANTS OR SOURCES TO ENSURE THAT THE DATA IS ON A MATCHING COORDINATE SYSTEM.
10. CONTOURS SHOWN HEREON DEPICT THE GENERAL TOPOGRAPHY ONLY. EXCEPT AT SPOT LEVELS SHOWN, THEY DO NOT NECESSARILY REPRESENT THE EXACT LEVEL AT ANY PARTICULAR POINT.
11. CONTOUR INTERVAL 0.5m
12. ANY GUTTER, RIDGE, ROOF AND WINDOW DETAILS AND LEVELS SHOWN HAVE BEEN OBTAINED VIA INDIRECT SURVEY METHODS WHERE VISIBLE FROM GROUND LEVEL AND ARE SHOWN ON THIS PLAN IN THEIR APPROXIMATE LOCATION FOR THE PURPOSE OF GENERAL SITE ANALYSIS ONLY.
13. ANY TREE CANOPIES, TRUNK DIAMETERS AND HEIGHTS SHOWN ARE APPROXIMATE ONLY AND SHOULD BE VERIFIED BY FURTHER SURVEY WORKS IF CRITICAL TO DESIGN OR SITE ANALYSIS.
14. SMALL TREES, SHRUBS, GARDEN FEATURES, PATHWAYS AND OTHER MINOR DETAIL MAY NOT BE SHOWN ON THIS PLAN, FOR THE PURPOSES OF THIS SURVEY.
15. PRIOR TO ANY CONSTRUCTION WORKS BEING UNDERTAKEN, BOUNDARIES SHOULD BE MARKED

PROPOSED LOT 10 IS A CONSOLIDATION OF LOTS 53 & 54 DP29493, 23 & 24A DP26995 AND 1 DP841502

| NOTATIONS SHOWN ON PROPOSED LOT 10 |
|---|
| AFFECTING THE LAND:<br>(A) EASEMENT FOR DRAINAGE 3.66 WIDE (G348146)(G359151)<br>COVENANT (H344316) |
| THE TERMS AND LOCATIONS OF COVENANTS & RESTRICTIONS HAVE NOT BEEN INVESTIGATED. |

ORIGIN OF LEVELS: PM 50891
R.L. 77.62 (AHD)

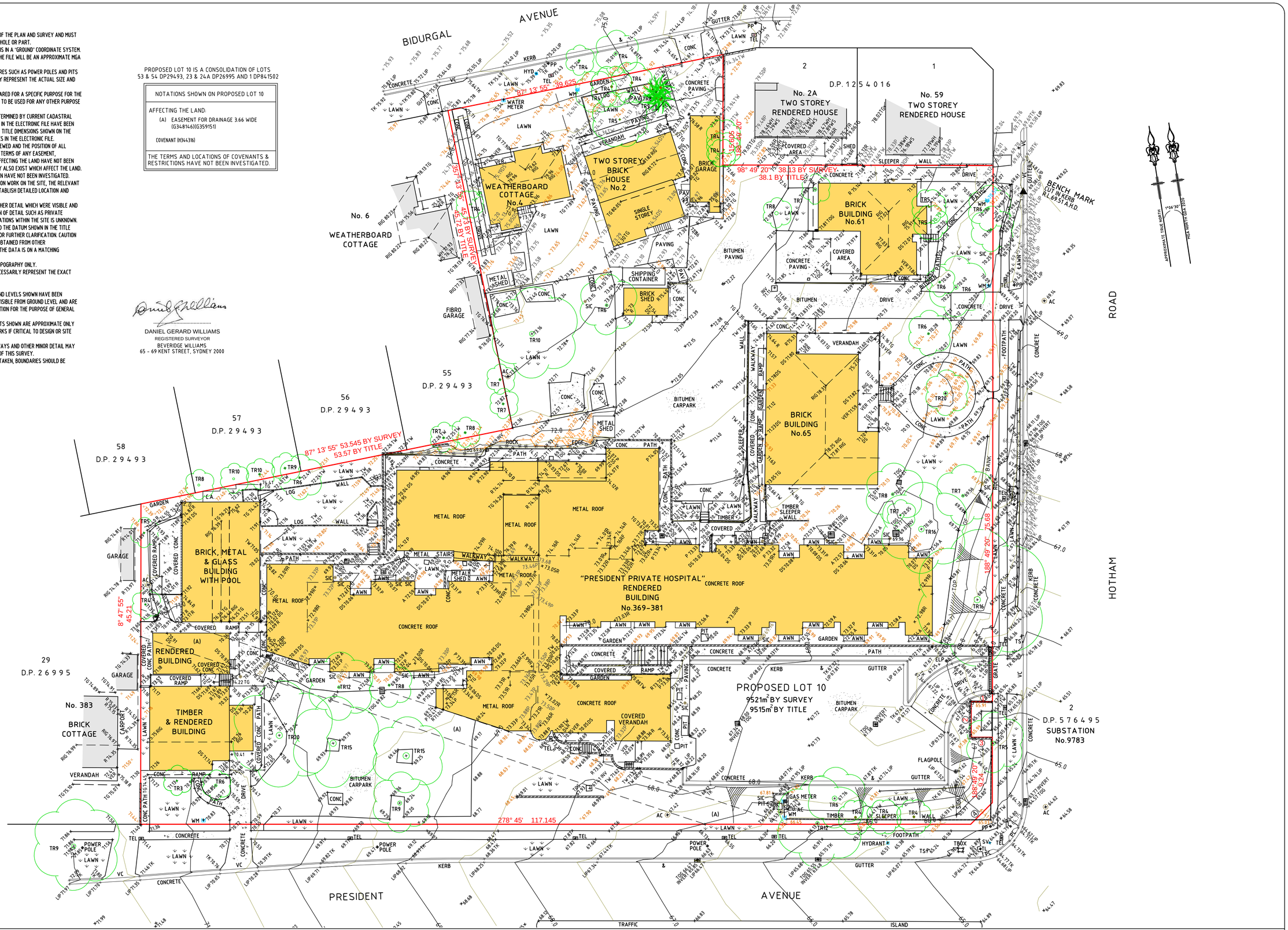
SCHEDULE OF SHORT DISTANCES

| No. | BEARING | DISTANCE |
|---|---|---|
| 1 | 278° 49' 20" | 3.000 |
| 2 | 188° 49' 20" | 5.000 |
| 3 | 98° 49' 20" | 3.000 |
| 4 | 233° 47' 10" | 4.315 |

LEGEND:

| | |
|---|---|
| A | AWNING |
| AC | ACCESS CHAMBER |
| AWN | AWNING |
| C.A. | COVERED AREA |
| CONC | CONCRETE |
| DH | DOOR HEAD |
| DS | DOOR SILL |
| ELP | ELECTRIC LIGHT POLE |
| HYD | HYDRANT |
| INV | INVERT |
| P | PARAPET |
| PC | PRAM CROSSING |
| PP | POWER POLE |
| R | ROOF |
| RIG | RIDGE |
| SIC | SEWER INSPECTION COVER |
| SV | STOP VALVE |
| TEL | TELECOMMUNICATIONS |
| TG | TOP GUTTER |
| TK | TOP KERB |
| TL | TRAFFIC LIGHT |
| TOG | TOP GRATE |
| TR3 | TREE ABOUT 3 HIGH |
| TS | TRAFFIC SIGN |
| TW | TOP WALL |
| VC | VEHICLE CROSSING |
| VER | VERANDAH |
| WH | WINDOW HEAD |
| WM | WATER METER |
| WS | WINDOW SILL |
| ZZZ | BRICK/RENDERED WALL |
| | STONE WALL |

DANIEL GERARD WILLIAMS
REGISTERED SURVEYOR
BEVERIDGE WILLIAMS
65 - 69 KENT STREET, SYDNEY 2000




| VER | BY | AMENDMENTS | DATE |
|---|---|---|---|
| A | R.O. | INITIAL ISSUE | 8.10.24 |
| B | | | |
| C | | | |
| D | | | |
| E | | | |
| F | | | |
| G | | | |

- THE POSITION OF SERVICES SHOWN ON THIS DRAWING ARE INDICATIVE ONLY AND HAVE BEEN PLOTTED FROM PLANS AND DRAWINGS SUPPLIED BY RELEVANT AUTHORITIES.
- SERVICE AUTHORITY PITS, MANHOLES, POLES, MARKER POSTS, ETC., WHERE SIGHTED AT TIME OF SURVEY, HAVE BEEN LOCATED. THE SURVEY DOES NOT INCLUDE INVESTIGATION OR LOCATION OF UNDERGROUND INFRASTRUCTURE.
- SERVICES INFORMATION SHOWN ON THIS DRAWING HAS BEEN OBTAINED THROUGH A BEFORE YOU DIG AUSTRALIA SEARCH AND IS VALID FOR THE PERIOD OF TIME FROM THE DATE OF ISSUE NOMINATED BY THE AUTHORITY.
- PRIOR TO ANY DEMOLITION, EXCAVATION OR CONSTRUCTION ON OR ADJACENT TO THE SITE IT IS THE RESPONSIBILITY OF THE DEVELOPER AND CONTRACTORS TO APPLY FOR AND OBTAIN UP TO DATE PLANS THROUGH A NEW BEFORE YOU DIG AUSTRALIA SEARCH AND TO CONTACT ALL THE RELEVANT AUTHORITIES TO ESTABLISH AND CONFIRM THE DETAILED LOCATION AND DEPTH OF ALL UNDERGROUND SERVICES.

BEFORE YOU DIG www.byda.com.au

CLIENT: MAQUARIE HEALTH CORPORATION

Beveridge Williams
Land Development Consultants
Registered Surveyors
Central Coast (02) 4351 2233 www.beveridgewilliams.com.au

DETAILS:
DETAIL SURVEY PLAN FOR
DEVELOPMENT APPLICATION PURPOSES
PROPOSED LOT 10
369-381 PRESIDENT AVENUE, KIRRAWEE

ORIGINAL
SCALE 1:250 SHEET SIZE A1
CAD REFERENCE: 2402285-DET-003-A
0 5 10 15
SCALE ON ORIGINAL DRAWING AT 1:250

| | |
|---|---|
| SURVEYOR: | R.O. |
| DRAWN: | R.O. |
| CHECKED: | J.G. |
| SURVEY DATE: | 24.09.2024 |
| VERTICAL DATUM: | AHD |
| HORIZONTAL DATUM: | MGA |

| | |
|---|---|
| PROJECT No. | 2402285 |
| DRAWING REF. | SUR-003 |
| VERSION | A |
| SHEET | 1 OF 1 |

# Appendix B – Proposed Site Layout

BIDURGAL Ave.

187 14'50" 39.625

188 50'15" 15.605

98 50'15" 38.100

8 48'55" 45.210

278 45'55" 117.145

PRESIDENT AVE

HOTHAM Rd.

HOTHAM STREET

No 6
Bidrugal Ave

Emergency Generator

Stair Ground Level above

Service Vehicles Car Parking Spaces

Landscape

Truck turning

Ramp up

Fire Stair

Plant

Hydrant booster and meters

loading

Store

Kitchen

WC

Tenancy

Plant

Lift

Bicycle rack

Staff outdoor

Staff Lunch Room

F Change 4 x shr

M Change 4 x shr

Admin

MAIN ENTRANCE

Patient Drop Off

Fire Stair from Base ment

CSSD

OT 1

OT 4 Orthopedic

OT3

OT 2

ANIN

PBTR - 6

Pre-Op

Cafe

Fire Stair From Above

Fire Stair from basement

CLRM

DTUR 10

EAST WING 30

EXISTING AWNING

Landscape

Deck

Rehabilitation Gym

Change & WC

Existing Hydrotherapy Pool

Change

Education

Consult 1

Consult 2

Consult 3

Foyer

Reception & Admin

Theatre Staff Change

Recovery Stage 1

Recovery Stage 2

PBTR - 5

DTUR 11

Waiting

WEST WING

Office

Medical Imaging

Ramp up

Store

OFF CLN

Fire Stair

Coms Rm

SSTN 20

DTUR 12

GPE

COURTYARD

Lounge

double

Overland Flow Path

Car Parking Spaces

STORMWATER DETENTION

Basement Wall

Landscape Setback

Ex.P

Department

- Administration
- Courtyard
- Inpatient
- Services
- Therapy
- Treatment
- Ward Area

# RESPONSE TO SUBMISSIONS

## Consultant Team:

| | | |
|---|---|---|
| Traffic Engineer: | ML Traffic Engineers | - Ph. 02 8004 2434 |
| BCA Consultant: | Blackett Maguire and Goldsmith | - Ph. 02 9211 7777 |
| Electrical Consultant: | Erbas and Associates | - Ph. 02 9437 1022 |
| Hydraulic Consultant: | Erbas and Associates | - Ph. 02 9437 1022 |
| Mechanical Services Engineer: | Erbas and Associates | - Ph. 02 9437 1022 |
| Landscape Architect: | Habit 8 | - Ph. 04 2520 6047 |
| Surveyor: | Dunlop Thorpe & Co. | - Ph. 02 9283 6677 |

Amendment Issue:

| No. | Description | Date |
|---|---|---|
| 57 | Submissions Response | 27/04/2021 |
| 58 | Revision 58 | 08/06/2021 |
| 59 | Response to Submission | 23/12/2021 |
| 60 | Response to Submission | 24/2/2022 |
| 62 | Carpark Space | 08/08/2023 |
| | | |
| | | |

imagescape design studios
C 10 56 Miller St, Pyrmont NSW 2009 02 9518 8800 02 8078 8877 studio@imagescape.com.au imagescape.com.au



Macquarie HEALTH CORPORATION

Redevelopment of President Private Hospital

**Macquarie Health Corporation**

369-381 President Ave, 61-65 Hotham Rd, 2-4 Bidurgal Ave, Kirrawee NSW

NORTH POINT

Ground Floor General Arrangement Plan

| | | | |
|---|---|---|---|
| Project number | MacHealth-06 | A 104 | |
| Date | 06/07/2023 | | |
| Drawn by | NA | Scale @ A1 | Plot stamp: 21/03/2024 12:23:02 PM |
| Checked by | SP | 1 : 250 | Version: 62 |

Y:\MacHealth\MACHEALTH-06\DP\revit\JK230821-MacHealth-06-R23.rvt

# Appendix C – Flood Maps


0 6 12 18 24 30 m

1:500 @ A3

Notes:
- Aerial from Nearmap (2022).
- Cadastre and site boundary from NSW Spatial Services (2022) 'Clip & Ship' SIX Maps.

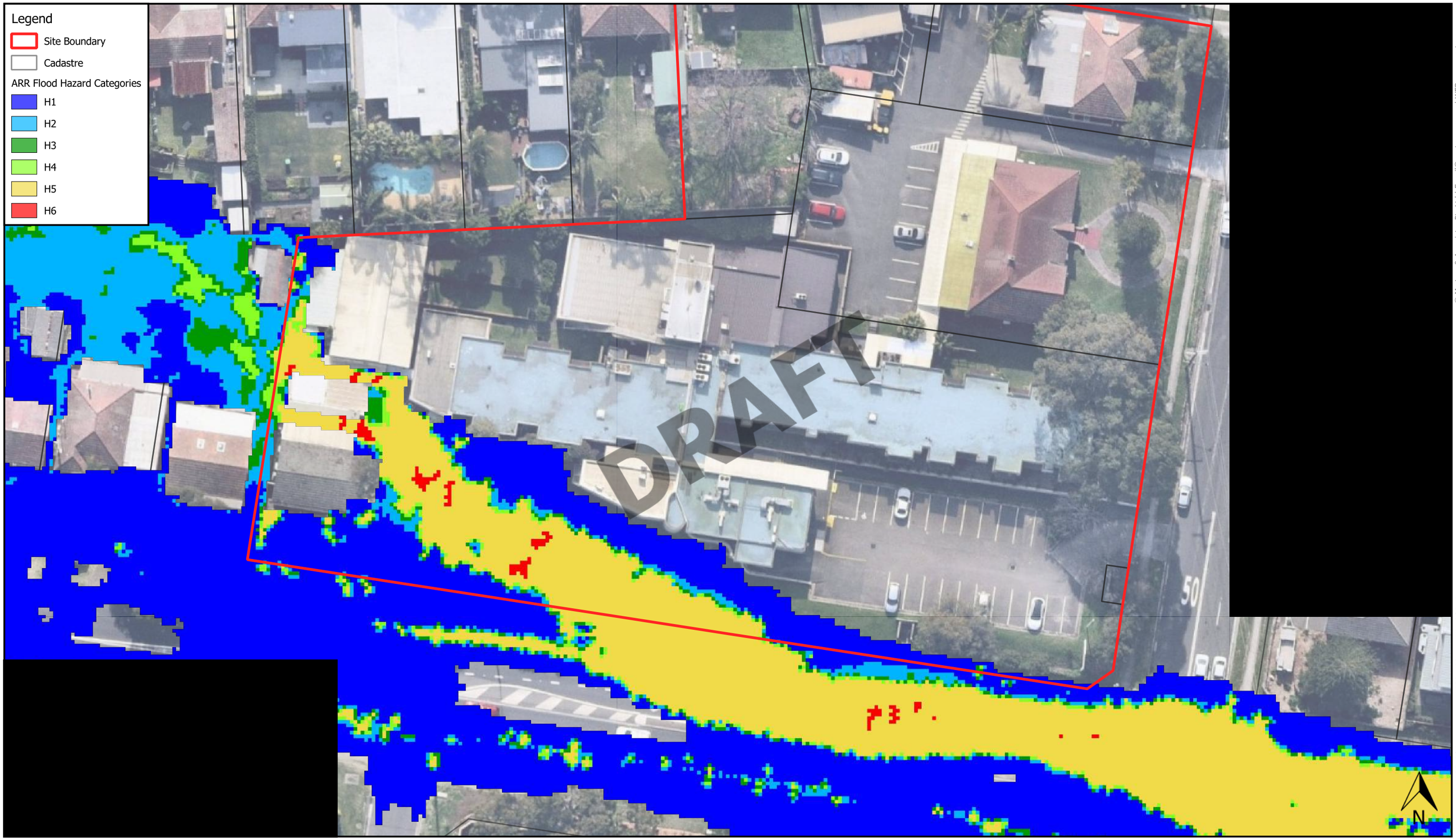
martens
**Environment | Water | Geotechnics | Civil | Projects**

Map Title / Figure:

# 1% AEP Critical Storm Duration
# Existing Condition Water Level (mAHD) & Water Depth (m)

| | |
|---|---|
| Map 01 | Map |
| President Private Hospital, Kirrawee, NSW | Site |
| President Private Hospital | Project |
| Updated Preliminary Flood Modelling Results | Sub-Project |
| Macquarie Health Corporation C/- John Simpson | Client |
| 06/11/2025 | Date |

Project No: P1907286 Map Set: MS03-R02 EPSG: 28356




0 6 12 18 24 30 m

1:500 @ A3

Notes:
- Aerial from Nearmap (2022).
- Cadastre and site boundary from NSW Spatial Services (2022) 'Clip & Ship' SIX Maps.
- Flood hazard based on Australian Rainfall and Runoff (2019) 'A Guide to Flood Estimation' combined flood hazard curves.

martens
**Environment | Water | Geotechnics | Civil | Projects**

Map Title / Figure:

# 1% AEP Critical Storm Duration
# Existing Condition Provisional ARR Flood Hazard Categories

| | |
|---|---|
| Map 02 | Map |
| President Private Hospital, Kirrawee, NSW | Site |
| President Private Hospital | Project |
| Updated Preliminary Flood Modelling Results | Sub-Project |
| Macquarie Health Corporation C/- John Simpson | Client |
| 06/11/2025 | Date |

Project No: P1907286 Map Set: MS03-R02 EPSG: 28356


0 6 12 18 24 30 m

1:500 @ A3

Notes:
- Aerial from Nearmap (2022).
- Cadastre and site boundary from NSW Spatial Services (2022) 'Clip & Ship' SIX Maps.

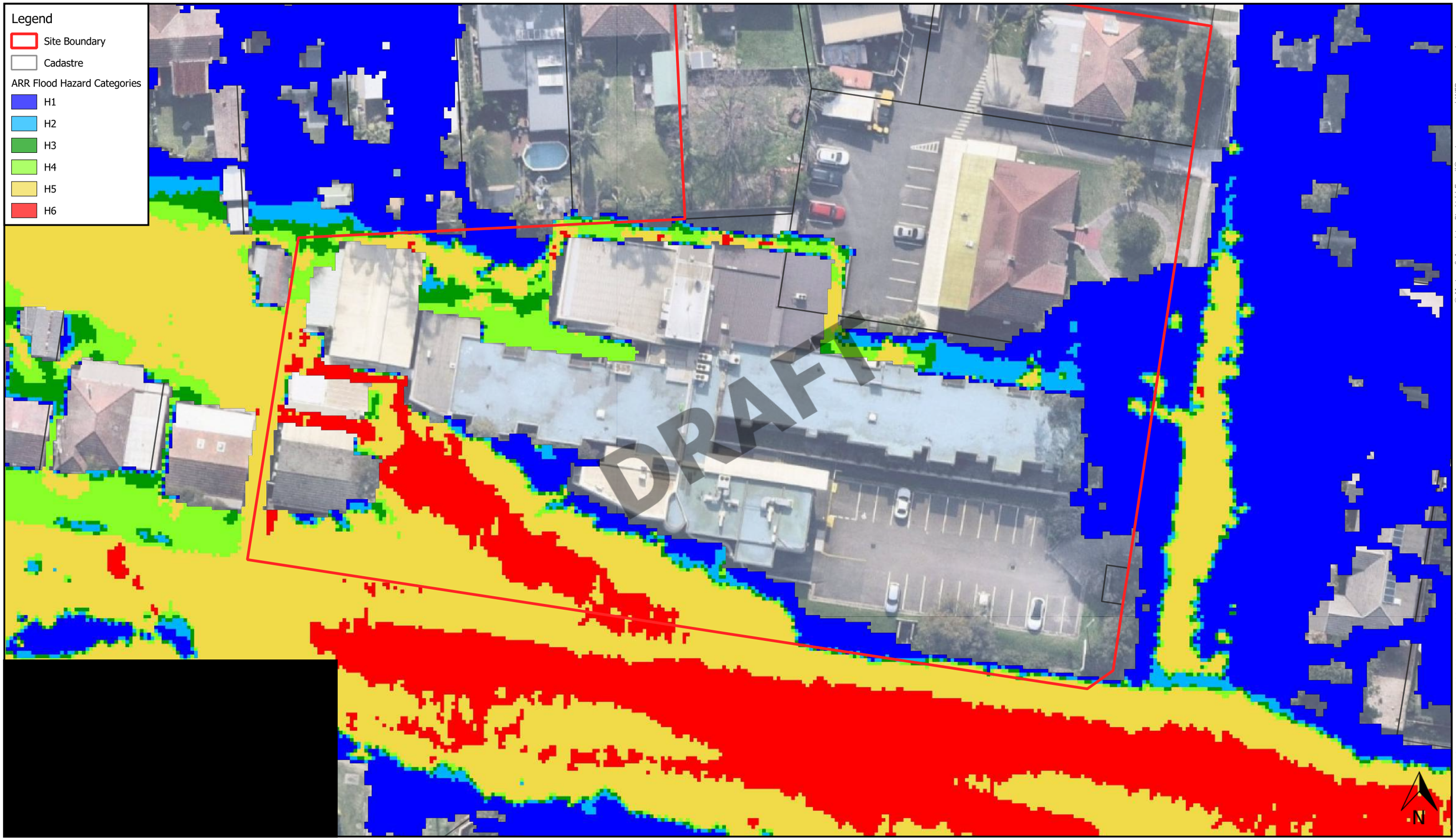
martens
**Environment | Water | Geotechnics | Civil | Projects**

Map Title / Figure:

# PMF Critical Storm Duration
# Existing Condition Water Level (mAHD) & Water Depth (m)

| | |
|---|---|
| Map 03 | Map |
| President Private Hospital, Kirrawee, NSW | Site |
| President Private Hospital | Project |
| Updated Preliminary Flood Modelling Results | Sub-Project |
| Macquarie Health Corporation C/- John Simpson | Client |
| 06/11/2025 | Date |

Project No: P1907286 Map Set: MS03-R02 EPSG: 28356




0 6 12 18 24 30 m

1:500 @ A3

Notes:
- Aerial from Nearmap (2022).
- Cadastre and site boundary from NSW Spatial Services (2022) 'Clip & Ship' SIX Maps.
- Flood hazard based on Australian Rainfall and Runoff (2019) 'A Guide to Flood Estimation' combined flood hazard curves.

martens
**Environment | Water | Geotechnics | Civil | Projects**

Map Title / Figure:

# PMF Critical Storm Duration
# Existing Condition Provisional ARR Flood Hazard Categories

| | |
|---|---|
| Map 04 | Map |
| President Private Hospital, Kirrawee, NSW | Site |
| President Private Hospital | Project |
| Updated Preliminary Flood Modelling Results | Sub-Project |
| Macquarie Health Corporation C/- John Simpson | Client |
| 06/11/2025 | Date |



Project No: P1907286 Map Set: MS03-R02 EPSG: 28356

Legend

- Site Boundary
- Cadastre
- Water Level (mAHD)

Water Depth (m)

- <= 0.1
- 0.1 - 0.2
- 0.2 - 0.3
- 0.3 - 0.4
- 0.4 - 0.5
- 0.5 - 0.6
- 0.6 - 0.7
- 0.7 - 0.8
- 0.8 - 0.9
- > 0.9


0 6 12 18 24 30 m

1:500 @ A3

Notes:
- Aerial from Nearmap (2022).
- Cadastre and site boundary from NSW Spatial Services (2022) 'Clip & Ship' SIX Maps.

martens
**Environment | Water | Geotechnics | Civil | Projects**

Map Title / Figure:

# 1% AEP Critical Storm Duration
# Proposed Condition Water Level (mAHD) & Water Depth (m)

| | |
|---|---|
| Map 05 | Map |
| President Private Hospital, Kirrawee, NSW | Site |
| President Private Hospital | Project |
| Updated Preliminary Flood Modelling Results | Sub-Project |
| Macquarie Health Corporation C/- John Simpson | Client |
| 06/11/2025 | Date |

Project No: P1907286 Map Set: MS03-R02 EPSG: 28356

Legend

- Site Boundary
- Cadastre

ARR Flood Hazard Categories

- H1
- H2
- H3
- H4
- H5
- H6



0 6 12 18 24 30 m

1:500 @ A3

Notes:
- Aerial from Nearmap (2022).
- Cadastre and site boundary from NSW Spatial Services (2022) 'Clip & Ship' SIX Maps.
- Flood hazard based on Australian Rainfall and Runoff (2019) 'A Guide to Flood Estimation' combined flood hazard curves.

martens
**Environment | Water | Geotechnics | Civil | Projects**

Map Title / Figure:

# 1% AEP Critical Storm Duration
# Proposed Condition Provisional ARR Flood Hazard Categories

| | |
|---|---|
| Map 06 | Map |
| President Private Hospital, Kirrawee, NSW | Site |
| President Private Hospital | Project |
| Updated Preliminary Flood Modelling Results | Sub-Project |
| Macquarie Health Corporation C/- John Simpson | Client |
| 06/11/2025 | Date |

Project No: P1907286 Map Set: MS03-R02 EPSG: 28356

Legend

- Site Boundary
- Cadastre
- Water Level (mAHD)

Water Depth (m)

- <= 0.1
- 0.1 - 0.2
- 0.2 - 0.3
- 0.3 - 0.4
- 0.4 - 0.5
- 0.5 - 0.6
- 0.6 - 0.7
- 0.7 - 0.8
- 0.8 - 0.9
- > 0.9





Project No: P1907286 Map Set: MS03-R02 EPSG: 28356

N

0 6 12 18 24 30 m

1:500 @ A3

Notes:
- Aerial from Nearmap (2022).
- Cadastre and site boundary from NSW Spatial Services (2022) 'Clip & Ship' SIX Maps.

martens
**Environment | Water | Geotechnics | Civil | Projects**

Map Title / Figure:

# PMF Critical Storm Duration
# Proposed Condition Water Level (mAHD) & Water Depth (m)

| | |
|---|---|
| Map 07 | Map |
| President Private Hospital, Kirrawee, NSW | Site |
| President Private Hospital | Project |
| Updated Preliminary Flood Modelling Results | Sub-Project |
| Macquarie Health Corporation C/- John Simpson | Client |
| 06/11/2025 | Date |

Legend

- Site Boundary
- Cadastre

ARR Flood Hazard Categories

- H1
- H2
- H3
- H4
- H5
- H6





Project No: P1907286 Map Set: MS03-R02 EPSG: 28356

N

0 6 12 18 24 30 m

1:500 @ A3

Notes:
- Aerial from Nearmap (2022).
- Cadastre and site boundary from NSW Spatial Services (2022) 'Clip & Ship' SIX Maps.
- Flood hazard based on Australian Rainfall and Runoff (2019) 'A Guide to Flood Estimation' combined flood hazard curves.

martens
**Environment | Water | Geotechnics | Civil | Projects**

Map Title / Figure:

# PMF Critical Storm Duration
# Proposed Condition Provisional ARR Flood Hazard Categories

| | |
|---|---|
| Map 08 | Map |
| President Private Hospital, Kirrawee, NSW | Site |
| President Private Hospital | Project |
| Updated Preliminary Flood Modelling Results | Sub-Project |
| Macquarie Health Corporation C/- John Simpson | Client |
| 06/11/2025 | Date |

# Appendix D – Flood Actions Checklist

| Prepared – Before A Flood | | | |
|---|---|---|---|
| **Trigger** | **Action** | **Responsibility** | **Requirements** |
| **Always** | Appoint a Chief Flood Warden and ensure that there is always someone in this role. | Site Management | CFEMSP |
| | Subscribe Chief Flood Warden and the Flood Wardens to a warning alert service so that they receive BOM severe weather warnings direct to their mobile phone. | Site Management | CFEMSP, subscription to service, mobile device, access to BOM website |
| | Supply and maintain all of the equipment necessary to implement the CFEMSP. | Site Management | Flood response kits including first aid kits, portable radio and megaphone, sufficient torches and hi-vis vests and raincoats for all Flood Wardens, spare batteries for all the above |
| | Ensure the Chief Flood Warden and Flood Wardens are trained in the implementation of the CFEMSP and interpretation of the rainfall, flood information and warning information published by BoM. | Site Management | CFEMSP, training resources |
| | Keep this CFEMSP up to date and review it following a flood emergency. | Site Management | CFEMSP |
| | Appoint sufficient Flood Wardens such that there will be a Flood Warden on duty at all times, and on site during opening hours. | Chief Flood Warden | CFEMSP |
| | Appoint sufficient Flood Wardens for the implementation of the CFEMSP in any event. | Chief Flood Warden | CFEMSP |
| | Monitor BoM weather forecasts and storm warnings daily. | Chief or Flood Warden | Mobile or computer with internet connection |
| | A database of Site Management, Chief Flood Warden, and Warden mobile phone numbers will be maintained and kept up to date. | Site Management | Phone Numbers |
| | A list of emergency contacts will be maintained which will include emergency services and utility providers. | Chief Flood Warden | Emergency contact list |
| | This CFEMSP and the list of contacts will be kept on site in electronic and hard copy. | Chief Flood Warden | Electronic and hard copy of CFEMSP |

| Alert – When a Flood is Possible | | | |
|---|---|---|---|
| **Trigger** | **Action** | **Responsibility** | **Requirements** |
| Either of the following:<br>-BoM forecasts heavy rainfall (50 mm or more in the next 24 hours).<br>- BoM issues a severe weather warning for the Sydney metropolitan areas. | Check BoM severe weather warnings for flash flooding in the Sydney area and BoM radar service every 2 hours while the site is open, and 2 hours before opening. | All Flood Wardens | Mobile or computer with internet connection |
| **Respond – During a Flood Event** | | | |
| **Trigger** | **Action** | **Responsibility** | **Requirements** |
| Either of the following:<br>- BoM issues a severe weather warning for the Sutherland Shire or Sydney areas with a chance of flash flooding at the site.<br>- The NSW SES issues a Watch and Act warning for the local area. | If the site is closed: | | |
| | Visit the site, if safe to do so, ensure no one is on site, ensure gates are locked and place a sign on the gates advising premises are closed until further notice due to risk of flooding. | Chief Flood Warden or delegate | Informative signs |
| | Cancel any upcoming deliveries. | Chief Flood Warden or delegate | CFEMSP |
| | If the site is open: | | |
| | Order all site personnel and occupants to move to shelter-in-place inside a temporary structure or building located within the nominated site flood assembly area on the northern portion of the site, and clearly advise that evacuation is not currently safe or required. | All Flood Wardens | Flood response kits including first aid kits, portable radio and megaphone, sufficient torches and hi-vis vests and rain coats for all Flood Wardens, spare batteries for all of the above |
| | Sweep the site to ensure all personnel and occupants are aware of the shelter-in-place instruction and are located within the nominated assembly area. | Flood Wardens | Torches, megaphone, informative signs |
| | Explain why shelter-in-place is required, the shelter-in-place arrangements and the expected duration, and clearly communicate this information to all occupants **via direct verbal instructions by Flood Wardens, supported by megaphones, site sweeps and informative signage**. | All Flood Wardens | This CFEMSP, megaphone |

| | | | |
|---|---|---|---|
| | Contact site management and advise that there are people sheltering on site. | All Flood Wardens | Telephone and emergency contact list |
| | Contact the NSW SES (131 500) advise that there are people sheltering on site. | All Flood Wardens | Telephone and emergency contact list |
| **Respond – During a Flood Event** | | | |
| **Trigger** | **Action** | **Responsibility** | **Requirements** |
| - The NSW SES advises the local area should be evacuated. | Order an immediate site evacuation. | All Flood Wardens | Flood response kits including first aid kits, portable radio and megaphone, sufficient torches and hi-vis vests and raincoats for all Flood Wardens, spare batteries for all of the above |
| | Advise site management that the site is being evacuated. | Chief Flood Warden, or Warden (whoever has called the evacuation) | Telephone, emergency contact list |
| | Sweep the site to ensure everyone has left the site before locking the gates and placing a sign on the gates advising premises are closed until further notice due to risk of flooding. | Chief Flood Warden, or Warden in charge | Torches, megaphone, informative signs |
| | Cancel any upcoming deliveries, and/or interrupt any ongoing deliveries and instruct vehicles to leave site. | Chief Flood Warden or delegate | CFEMSP |
| - NSW SES or BoM advises that heavy rainfall has passed and its safe to travel. | If safe to do so, advise workers and occupants that evacuation of any remaining occupants can take place via roads which are clear of flooding. | Chief Flood Warden | Megaphone |
| | If not safe to do so, contact NSW SES (131 500) and await further instructions. | Chief Flood Warden | Telephone and emergency contact list |
| | Advise site management of status. | Chief Flood Warden | Telephone and emergency contact list |

| Recover – After a Flood | | | |
|---|---|---|---|
| **Trigger** | **Action** | **Responsibility** | **Requirements** |
| Chief Flood Warden advises that it is safe to return. | No one will be allowed to return to the site while flooding is still occurring or has recently occurred. | Site Management and Chief Flood Warden | Informative signs |
| | Site access roads will need to be cleared of debris before the site is accessed. This should only be undertaken under the direction of the Chief Flood Warden, due to risks from electricity, gas, debris and venomous animals. | Site Management and Chief Flood Warden | Telephone and emergency contact list |
| | Normal site usage should be able to resume once the site has been checked to ensure that utilities are restored, and no structural damage has occurred. These checks need to be undertaken by professionals qualified to do so. Although landscaping areas would need cleaning that would not prevent use of the premises if the building is in working order. | Site Management and Chief Flood Warden | Contact details for structural engineer, electricians and plumbers |
| | Before any cleaning or repair work is undertaken on site, a hazard assessment will be undertaken, safe work methods statements (SWMS) prepared and personal protective equipment supplied consistent with the known hazards which can be associated with floods:<br>- Slips, trips and falls<br>- Sharp debris<br>- Venomous animals<br>- Contaminated water and sediments | Site Management and Chief Flood Warden | Correct SWMS and PPE |
| | A debrief will be held and may involve emergency services. The flood event and response, including the use of this CFEMSP and any emergency procedures will be reviewed. | Site Management, Chief Warden and other wardens who were involved in response | CFEMSP, a log of actions taken during the event. This check list can be used for that purpose with times and notes recorded against each action. |
| | Changes may be made to the CFEMSP and the requirements for future emergency response should the review identify any improvements which may be made. | Site Management and Chief Flood Warden | CFEMSP |

# Appendix E – Flood Response Phases and Triggers

# Flood Response Phases and Triggers

## Prepared

- Keep CFERP up to date
- Keep flood response kits fully equipped
- Keep any weather alert subscriptions up to date (i.e. Early Warning Network)
- Monitor weather forecasts and warnings daily
- Maintain PA system to ensure its kept in working order
- Maintain CFERP documentation and systems

## Alert

Heavy rainfall is forecast (50 mm or more in 24 hours).
Or
BoM issues a severe weather warning for the Sydney metropolitan areas.

Monitor forecasts and warnings hourly while the site is open and 2 hours before the site opens.

Does BoM advise that heavy rainfall has passed.

No

Yes

## Respond

NSW SES issues an Emergency Warning advising the site should be evacuated.

BoM issues a severe weather warning for the Sutherland Shire or Sydney areas with a chance of flash flooding at the site.
Or
NSW SES issues a flood alert covering the site.

No

Yes

Evacuate the site.

Lock-down the site and keep closed.

No

Is the site currently open?

Yes

Shelter-in-place in a building located in the nominated area for site flood assembly buildings.

## Recovery

All clear given by NSW SES, BoM or Flood Warden.

Yes

No

Did flooding affect the site?

No

Yes

Ensure site fully operational before reopening.

Close site until the it has been cleaned and thoroughly checked and repaired as necessary.

Debrief and review CFERP.

Resume normal operations.

# Appendix F – Emergency Contact List

# When to call the NSW SES

NSW STATE EMERGENCY SERVICE

## 132 500

For emergency help in flood, storm and tsunami

000 EMERGENCY

**IN LIFE-THREATENING EMERGENCIES**

## CALL TRIPLE ZERO (000)

*Due to flood or storm is anyone trapped or injured?*

**YES** — Call **Triple Zero (000)**.

**NO**

*Has a fallen tree blocked access? (i.e. front door/driveway/road)*

**OR**

*Is a tree threatening to fall on your property or driveway?*

**OR**

*Is your property flooded or in danger of flooding?*

**OR**

*Is your roof damaged or leaking?*

**OR**

*Is there damage to your property that you cannot fix yourself?*

**NO**

Contact your insurance company or a private contractor to assess and complete the job, or repair it yourself if safe to do so.

**YES**

**Call the NSW SES on 132 500**

Your request for assistance will be logged by our operations centre who will give you a reference number. Your request will then be forwarded onto the nearest SES unit for action.

NSW SES Volunteers undertake temporary emergency measures to make your home and the situation safe. It is important that you contact either your insurance company or a private contractor to make permanent repairs to damage resulting from a flood or storm or to remove any remaining debris.

# When to call the NSW SES

NSW STATE EMERGENCY SERVICE

## 132 500

For emergency help in flood, storm and tsunami

000 EMERGENCY

**IN LIFE-THREATENING EMERGENCIES**

## CALL TRIPLE ZERO (000)

The ***NSW SES*** experiences many calls during floods and storms.

Assisting people in our communities who are overwhelmed by damage and impacts of natural disasters as quickly as possible is important to all ***NSW SES*** volunteers.

---

### What to do after logging a call with us:

- Make sure you keep your phone close by so we can easily contact you about your request for assistance.
- Stay away from any fallen trees and/or power lines that may have been brought down in the storm.
- Follow any safety recommendations you are given by the ***NSW SES***.
- ***NSW SES*** attends to request for assistance in a priority based order. A life threatening emergency will always be given immediate priority.
- If you no longer require emergency assistance, call us on **132 500** quoting your reference number to cancel the request. This helps free up our emergency crews if you no longer need us.

**For great tips on how you can Get Ready this Storm Season, or to find out more information about the *NSW SES*, head to our website at www.ses.nsw.gov.au**

# NSW Emergency Contact Numbers

NORTHERN SETTLEMENT SERVICES LIMITED

| Services | Disaster | Service Name | Telephone Number | Details | Social Media | App | Website |
|---|---|---|---|---|---|---|---|
| 000 EMERGENCY | All Emergencies | Emergency | TRIPLE ZERO (000) | All life threatening emergencies | | | www.triplezero.gov.au |
| | All Emergencies | NSW Police Force | TRIPLE ZERO (000) | Police Assistance Line - 131 444, Crime Stoppers - 1800 333 000 **Report crimes that are not in progress** | | – | www.police.nsw.gov.au |
| | | NSW Fire & Rescue | TRIPLE ZERO (000) | Helps the community during building fires, car accidents, rescues & accidents involving hazardous material | | | www.fire.nsw.gov.au |
| | | NSW Rural Fire Service - RFS | TRIPLE ZERO (000) | Info Line - 1800 679 737 Help the community during bush, grass & building fires, as well as car accidents | | NSW RFS | www.rfs.nsw.gov.au |
| SES NSW STATE EMERGENCY SERVICE | | NSW Emergency Service - SES | 132 500 | For general help in a flood or storm | | | www.ses.nsw.gov.au |
| TIS TRANSLATING AND INTERPRETING SERVICE | – | Translating Interpreting Service - TIS | 13 14 50 | If you do not speak English well, you can call TIS (not an emergency service) | – | – | www.tisnational.gov.au |

## Updates During and After an Emergency

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| | All Emergencies | Emergency NSW | – | Alerts and Updates | – | – | www.emergency.nsw.gov.au |
| ABC Local Radio Your Emergency Broadcaster Be prepared. Stay informed. | All Emergencies | ABC Local Radio ABC Emergency | – | Emergency Broadcasts Updates | | | www.abc.net.au/news/emergency/ |
| NSW Emergency New South Wales | All Disasters | State Disaster Welfare Services | 1800 018 444 | Disaster Relief Grants | – | – | www.emergency.nsw.gov.au |

Developed by Northern Settlement Services Ltd. Natural Disaster Awareness Program in partnership with NSW State Emergency Service and NSW Rural Fire Service. Project funded by the Commonwealth and NSW Governments under the Community Resilience Innovation Program. Resource funded by Westpac Natural Disaster Recovery Fund. **www.nsservices.com.au**

# Appendix G – NSW SES Consultation Letter

Our Ref: ID 3562
Your Ref: SSD-10320

15 January 2026

Mark O'Brien
Martens
Suite 201, 20 George Street
Hornsby NSW 2077

email: mobrien@martens.com.au
CC: claire.flashman@ses.nsw.gov.au

via email

Dear Mark,

**Flood Emergency Response Plan for President Private Hospital, Kirrawee SSD-10320**

Thank you for the opportunity to provide advice on the Flood Emergency Response Plan (FERP) for the redevelopment of the existing President Private Hospital at 369-381 President Avenue in Kirrawee SSD-10320, which will include:[1]

- Demolition of existing residential dwellings on site, as well as the timber and rendered buildings in the south-west corner of the site.
- Construction and upgrade of the existing hospital, including a multi-storey west, east and north wing, a western and northern car park, and two driveway accesses.
- Construction of a four-level basement carpark beneath the buildings.
- Development of a landscape area in the south-western corner of the site.

We note the proposed hospital redevelopment will include:[2]

- 110 surgical and rehabilitation in-patient accommodation suites
- 72 mental health in-patient suites
- Out-patients clinic, including X-ray
- Ancillary main entry/front of house support facilities including reception area, kitchen and loading dock
- 158 car-parking spaces
- An ambulance bay
- Clinical and non-clinical support services

[1] Martens. 2025. Construction Flood Emergency Management Plan - President Private Hospital, page 9
[2] Imagescape Design Studios. 2020. Environmental Impact Statement – Redevelopment of President Private Hospital, page 17

STATE HEADQUARTERS
93 - 99 Burelli Street, Wollongong 2500
PO Box 6126, Wollongong NSW 2500
P (02) 4251 6111
F (02) 4251 6190
www.ses.nsw.gov.au
ABN: 88 712 649 015

- Outpatients and allied health services
- Amalgamation of the sites and alignment of the easement to the existing stormwater line

The NSW State Emergency Service (NSW SES) is the agency responsible for dealing with floods, storms and tsunami in NSW. This role includes planning for, responding to and coordinating the initial recovery from floods. As such, the NSW SES has an interest in the public safety aspects of the development of flood prone land, particularly the potential for changes to land use to either exacerbate existing flood risk or create new flood risk for communities in NSW.

It is the preference of NSW SES that all development follows the application of sound land use planning and flood risk management in accordance with the Flood Prone Land Policy, the Flood Risk Management Manual 2023 (the Manual) and supporting guidelines including the Support for Emergency Management Planning and relevant planning circulars and directions under the *Environmental Planning and Assessment Act, 1979*, including 4.1 Flooding and PS24-001.

We refer to our previous correspondence in relation to this proposal, dated **16 August 2022, with reference ID1698,** and note that this SSD **has been approved by the Independent Planning Commission of NSW on 16 April 2024, with conditions.**

The NSW SES has reviewed the proposed construction Flood Emergency Management Plan (FERP) and the flood risk information available to the NSW SES, and provide the following advice based on the principles outlined in the Guidelines as detailed in Attachment A:

- **Note** this FERP is for the construction phase and recommend **ensuring** a FERP for hospital operations is appropriately updated to include the hospital upgrades and additions and maintained. It should include a regular testing, monitoring and review schedule to ensure the FERP is regularly exercised and updated at regular intervals and whenever additional flood information is available or highlighted during the drills or flood events. Please be advised that the **NSW SES does not have statutory authority to endorse or approve flood emergency response plans.**
- **Emphasise** that due to the short critical storm durations, between 5 and 15 minutes, there will be no timely warnings for the community to respond to a flood threat in an appropriate manner. As the site is affected by flash flooding there are no Bureau of Meteorology quantitative flood warnings available, and Severe Weather Warnings and Thunderstorm Warnings (SWW/STW) will be the most likely form of advice about the potential for flood producing storms and rainfall. Therefore, it is important to **ensure** that areas of the site subject to flooding are closed early, in advance of the onset of rainfall, based on the SWW/STW, particularly noting the high hazard H5 – H6

flooding impacting the southwestern and southern parts of the site[3] and the sensitive uses of the site.

- **Recommend** the FERP is updated to demonstrate consistency with the Shelter in Place Guideline and that it can adequately manage and/or mitigate risk to life, including:
    - how shelter in place will be used as part of the site's emergency management response and communicated to occupants (9)
    - an understanding of the **secondary risks** (such fire and medical emergencies) and how the proponent proposes they will be managed. (10) The FERP should also advise the ill or vulnerable who have specific support requirements with respect to mobility, special needs, medications and management to ensure they continue to receive appropriate care and information.
    - that any proposed refuge location is above the height of the PMF and aligns with the design criteria in the Guideline[4] and the Red Cross Preferred Sheltering Practices for Emergency Sheltering in Australia,[5] including water supply, waste management, sanitation, food, and shelter and space management. The FERP should outline what the proposed refuge locations are and their capacity to accommodate all people expected to be at the site at any given time, **both during the construction and operation phases**.
- **Recommend** removing the references to *'flood warning', 'door knocking'* and '*Emergency Warnings'* from the FERP,[6] as these are not available in a flash flood environment. NSW SES issued '*Emergency Warnings'* refer to riverine flooding only. In addition, there will be no NSW SES or BoM advice that the flood peak has passed, that it is safe to return,[7] or *'all clear'*[8].
- **Advise** that the NSW SES does not have the resources to provide individual site-specific warnings or advice during a flood event, or to receive notifications of flood response actions at individual sites.[9] **Contact NSW SES at 132500 if assistance is required.** We therefore advise business owners/operators must be self-reliant and weather aware, and act early on publicly broadcast weather forecast information and warnings.

Further useful information can be found here:

- NSW SES website
- Emergency Business Continuity Plan

[3] Martens. 2025. Construction Flood Emergency Management Plan - President Private Hospital, Appendix C, Map 06 & 08
[4] NSW Department of Planning, Housing and Infrastructure.2024. Shelter-in-place guideline for flash flooding, page 5
[5] Smith, C., and Parsons, C. 2015. Preferred Sheltering Practices for Emergency Sheltering in Australia. Retrieved from https://www.redcross.org.au/globalassets/cms-assets/documents/emergency-services/2015-preferrred-sheltering-practices-for-emergency-sheltering-in-australia.pdf
[6] Martens. 2025. Construction Flood Emergency Management Plan - President Private Hospital, page 14 - 16
[7] Martens. 2025. Construction Flood Emergency Management Plan - President Private Hospital, page 39
[8] Martens. 2025. Construction Flood Emergency Management Plan - President Private Hospital, page 42
[9] Martens. 2025. Construction Flood Emergency Management Plan - President Private Hospital, page 38 - 39

- The Department of Climate Change, Energy, the Environment and Water website

Please feel free to contact Ana Chitu via email at rra@ses.nsw.gov.au should you wish to discuss any of the matters raised in this correspondence. The NSW SES would also be interested in receiving future correspondence regarding the outcome of this referral via this email address.

Yours sincerely,

Kate Dawes
A/Manager Emergency Risk Assessment
**NSW State Emergency Service**

## ATTACHMENT A: Principles Outlined in the Support for Emergency Management Planning Guideline[10]

**Principle 1 Any proposed Emergency Management strategy should be compatible with any existing community Emergency Management strategy.**

Any proposed Emergency Management strategy for an area should be compatible with the evacuation strategies identified in the relevant local or state flood plan or by the NSW SES. As per the NSW State Flood Plan,[11] and the Sutherland Shire Flood Emergency Sub Plan,[12] evacuation is the primary emergency management strategy for people impacted by flooding.

The Flood Risk Management Manual 2023 notes flood risk management plans are 'living documents' which need to be regularly reviewed to ensure they remain appropriate to address the flood risk to the community, can be practically implemented and consider changing information and lessons learnt from any floods since the last review.

Although NSW SES encourages businesses to be prepared, even well written plans are dependent on human application and often rely on technical support systems. Most plans will rely on the actions of one or more third parties and all plans require regular maintenance and review, and most importantly an ongoing commitment from all participants. These conditions are difficult to implement and are unlikely to be achieved at all in a private ownership context where there is no external audit or monitoring.

**Principle 2 Decisions should be informed by understanding the full range of risks to the community.**

Decisions relating to future development should be risk-based and ensure Emergency Management risks to the community of the full range of floods, are effectively understood and managed.

**Principle 3 Development of the floodplain does not impact on the ability of the existing community to safely and effectively respond to a flood.**

The ability of the existing community to effectively respond (including self-evacuating) within the available timeframe on available infrastructure is to be maintained. It is not to be impacted on by the cumulative impact of new development.

Risk assessment should have regard to flood warning and evacuation demand on existing and future access/egress routes. Consideration should also be given to the impacts of localised

[10] NSW Government. 2023. Principles Outlined in the Support for Emergency Management Planning Guideline
[11] NSW Government. 2021. NSW State Flood Plan. Section 1.6 Key Principles, page 5
[12] NSW SES. 2023. Sutherland Shire Flood Emergency Sub Plan. Section 1.6.2, page 7

flooding on evacuation routes. **Evacuation must not require people to drive or walk through flood water.**

Development strategies relying on an assumption that mass rescue may be possible where evacuation either fails or is not implemented are not acceptable to the NSW SES.

**Principle 4 Decisions on development within the floodplain does not increase risk to life from flooding.**

Managing risks associated with flooding requires careful consideration of development type, likely users, and their ability respond to minimise their risks. This includes consideration of:

- **Isolation** – There is no known safe period of isolation in a flood, the longer the period of isolation the greater the risk to occupants who are isolated.
- **Secondary risks** – This includes fire and medical emergencies that can impact on the safety of people isolated by floodwater. The potential risk to occupants needs to be considered and managed in decision-making.
- **Consideration of human behaviour** – The behaviour of individuals such as choosing not to remain isolated from their family or social network in a building on a floor above the PMF for an extended flood duration or attempting to return to a building during a flood, needs to be considered.

**Principle 5 Risks faced by the itinerant population need to be managed.**

Any Emergency Management strategy needs to consider people visiting the area or using a development.

**Principle 6 Recognise the need for effective flood warning and associated limitations.**

An effective flood warning strategy with clear and concise messaging understood by the community is key to providing the community an opportunity to respond to a flood threat in an appropriate and timely manner.

However, neither the NSW SES nor the Bureau of Meteorology can undertake to provide special individual flood warning services for each business site. Business owners/operators must be weather aware and act early on publicly broadcast weather forecast information and warnings.

**Principle 7 Ongoing community awareness of flooding is critical to assist effective emergency response.**

Development within a floodplain will necessitate ongoing involvement from the NSW State Emergency Service (SES) in community awareness, preparedness, and response activities. It is

essential that all site users, both during and after the construction phase, are informed of the flood risk and the measures in place to reduce risk to life. This includes:

- Raising awareness of flood risk
- Strengthening community connections
- Promoting preparedness actions
- Installing appropriate signage
- Conducting emergency drills