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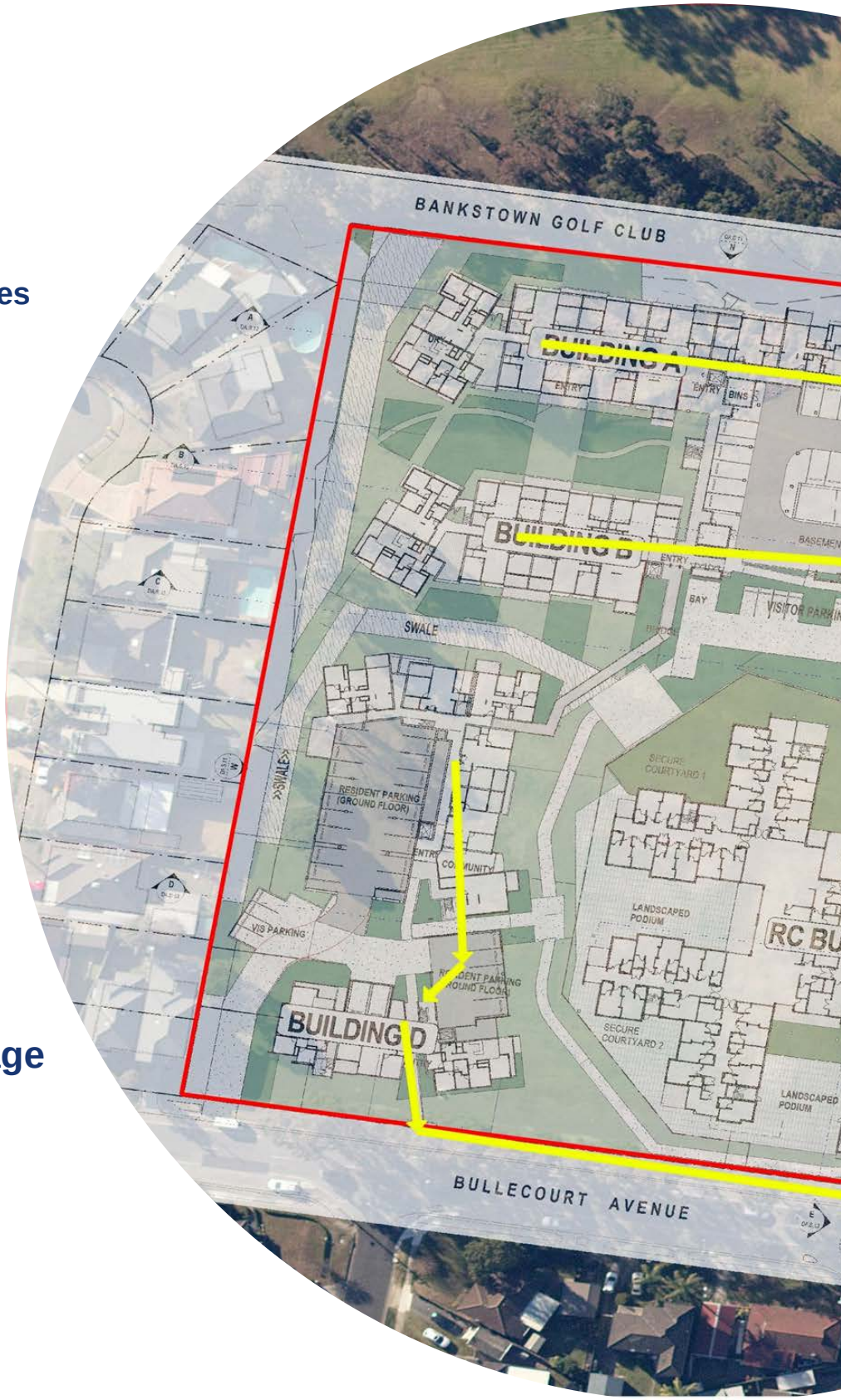

Anglican Community Services

Anglicare Milperra Village

Draft Flood Emergency Response Plan

Anglicare Milperra Village

FLOOD EMERGENCY RESPONSE PLAN

for

Anglican Community Services

by

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EXECUTIVE SUMMARY

The Anglicare Milperra Village at 27 Bullecourt Avenue, Milperra is owned and operated by Anglican Community Services as a retirement village, inclusive of 81 retirement living units (RLUs) and 107 beds in a residential care (RC) facility.

The Village is designed and operated with the comfort and safety of residents and staff in mind and has plans and procedures in place for every possible type of emergency, no matter how rare. This includes this Flood Emergency Response Plan (FERP) for the Village which sets out what actions staff and residents need to take before, during and after a flood to stay safe.

There are two types of flooding which can affect the Village:

- Local stormwater flooding which runs over the ground, down the hill, through the Village and into Bankstown Golf Course on its way to the Georges River. Everywhere in Sydney has some chance of this type of flooding.
- Georges River flooding which happens when there is rain over a wide area and the Georges River overflows its banks and floods Bankstown Golf Course. If it continues to rise it could enter the Village. It would only enter the village in extremely rare events.

Local stormwater flooding can occur at any time during many days of rain or even in a single storm. Most of the time this will be shallow water running over the ground but in very intense storms it could get up to half a metre deep in some parts of the outdoor areas. The Village has been designed so that no water from this type of flooding will enter any of the buildings or covered parking areas in even the largest possible storm.

When this type of flooding is happening the safest place is inside. It is likely only to last for a couple of hours at the most. This FERP stipulates that everyone remain indoors in this type of flooding.

Georges River flooding will occur when there is intense rainfall for many days over South Western Sydney. The Bureau of Meteorology (BoM) will issue severe weather warnings, flood watches or flood warnings and the FERP requires nominated Anglicare staff to be monitoring river levels and BoM warnings regularly. Based on the type of warnings issued, flood levels forecast or river levels observed, the FERP will trigger different sets of actions in anticipation of expected flood behaviour. The triggers have been determined by estimating the time needed to take all necessary actions in advance of flooding and then ensuring that there would be more than that amount of time in the fastest rising floods on the river.

There are 10 Phases set out in the FERP as follows:

- Phase 1: Standby – this the default phase and requires actions to ensure that the FERP and the resources required to implement it are maintained and available when needed.
- Phase 2: Flood Alert – when the BoM issues a severe weather warning and triggers more frequent monitoring of warnings and river levels
- Phase 3: Flood Ready – the BoM issues a specific flood watch or warning for the Georges River but “major” flooding is not expected. This requires staff and RL residents to check resources and contact relevant parties so that preparations can be made for evacuation should that be necessary
- Phase 4: Evacuation Ready – when “major” flooding is expected but it is not yet known if it would flood the Village. This requires staff and RL residents to make necessary preparations so that they are able to evacuate immediately an evacuation notification is issued. This includes converting buses to transport RC residents and preparing Castle Hill Village to receive evacuees. It involves not only arrangements for the preferred evacuation (Plan A) but also for alternative evacuation responses (Plan B, Plan C and Plan D)

- Phase 5: Evacuation Plan A – when flooding of the buildings on site is possible. RC residents ad staff evacuate to Castle Hill along a high level route with a low chance of flooding. RL residents are to make their own transport and alternative accommodation arrangements where possible.
- Phase 6: Evacuation Plan B – implemented for RL residents who cannot make their own way to alternative accommodation or if the route to Castle Hill is blocked for RC residents and staff. Residents and staff will go to the local SES Evacuation Centre as a way point until access to their preferred temporary accommodation is restored
- Phase 7: Evacuation Plan C – implemented when temporary off-site accommodation is not accessible or not all residents have been able to evacuate before the site is isolated. All those remaining on site are to shelter on the first floor of the RC facility. This is above the reach of the highest possible flood and is provisioned with sufficient food, water, medications and power to sustain those on site for the duration of flooding which would not be more than a couple of days.
- Phase 8: Evacuation Plan D – this is the evacuation of last resort should the RC not be available due to a co-incident catastrophe such as a fire during implementation of Plan C. This involves all of those on site walking a very short distance to Milperra Park which is above the reach of all flooding.
- Phase 9: Stand Down – when it is clear from BoM warnings that the updated forecast flood peak will not require site evacuation.
- Phase 10: All Clear – after the flood. This includes any Village clean-up required as well as a review of the FERP

There is no way of forecasting how often flooding will occur and how often phases of the FERP will be activated. Nothing could happen for decades and then similar triggers could be reached multiple times in the same year.

An analysis of flood peaks over the 210 years for which records exist, suggest Milperra Village would have triggered the Flood Ready phase at least 34 times. This would have escalated to Evacuation Ready about thirteen of those times and from those the site would have been Evacuated eight times. The last evacuation would have occurred in 1988 and the time before that in 1956 but the Village would have been evacuated five times between 1860 and 1898, including in 1887 and 1889. It is unlikely that any of these floods would have been high enough to flood the buildings in the Village but it may not be possible to know that at the time the evacuation decision has to be made because sufficient time needs to be allowed for all of the preparations to be made in advance of the actual evacuation.

It should also be noted that an analysis of Bureau of Meteorology Data on flood warnings for the Georges River from 2007 to 2015 indicates that of the nine Flood Watches issued by the Bureau of Meteorology, on seven occasions the river did not rise to a minor flood level. This suggests that the site would have to be in Phase 3 – Flood Ready more often than peak levels alone suggest.

The features incorporated into the design of the Village not only support the reduction in risk to life but also reduce risks to Anglicare, staff and resident property. Maintenance and implementation of this FERP will minimise risks to residents and staff at Milperra Village but also further reduce risks to their property.

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1 INTRODUCTION

1.1 BACKGROUND

The site at 27 Bullecourt Avenue is to be developed by Anglican Community Services as a retirement village, inclusive of 81 retirement living units (RLUs) and 107 beds in a residential care (RC) facility.

The RLUs will be constructed in four residential blocks and the RC facility will be in a single building. The village will also be equipped with community spaces, laundries and parking for both residents and visitors.

City of Canterbury Bankstown Council requires the facility to have a Flood Emergency Response Plan (FERP).

This report is the FERP for the Anglicare Milperra Retirement Village and it:

- Describes the site and surrounding topography
- Explains how the site and surrounds could be affected by flooding
- Describes available flood warnings and design features to mitigate flood risks
- Outlines the flood emergency response philosophy and responsibilities
- Sets out detailed flood emergency response actions that will be taken before, during and after a flood to manage the safety of those on site.

The primary focus of this FERP is managing risk to life with some measures to reduce risk to staff and resident property. It does not include measures to reduce the risks of flooding to corporate property or profitability.

1.2 THE SITE DETAILS

1.2.1 Locality

The site is located on Bullecourt Avenue, Milperra (Figure 1). It is predominately surrounded by residential areas, and backs onto Bankstown Golf Course.

1.2.2 Site Layout and Access

The site plan (Figure 2) shows the layout with access from Bullecourt Avenue to the south and Bullecourt Lane to the east. It is bound by the rear of the residential buildings on Keysor Place to the West, and by Bankstown Golf Course to the north.

The Development includes four, two storey residential apartment buildings. Building A runs east west along the northern boundary of the site with Building B parallel to it and to the south. Buildings C and D occupy the south western corner of the site. The RC facility is in the south eastern corner.

The residential buildings and RC building have a combination of basement and undercroft car parking for residents and staff as well as outdoor visitor parking bays at ground level.

Vehicle access to buildings C and D is provided via a driveway from Bullecourt Avenue, whilst vehicle access to the northern blocks A and B is provided via the northernmost driveway on Bullecourt Lane.

The RC facility will have a service area in the south east corner of the site, accessible by the southernmost driveway on Bullecourt Lane, which will cater to larger, specialised vehicles transporting residents or delivering goods. There will also be a visitor entrance accessible by the middle driveway on Bullecourt Lane.

There will be pedestrian access in two places, both on Bullecourt Avenue. One will access Building D directly, then to the Buildings C and D car park area, the other will lead from the corner of Bullecourt Ave and Bullecourt Lane, around the RC Building, and then further north. Both of these foot paths will enable access to the northern buildings A and B.

Figure 1: Site location

Figure 2: Site Layout

1.2.3 Topography and Drainage

Figure 3 shows the finished ground contours of the site and surroundings. The ground levels fall generally from east to west and south to north.

The ground level at the north western corner is the lowest point on site at 4.25m AHD.

The frontage along Bullecourt Avenue rises from 5.8m AHD in the south western corner to 6.6m AHD on the corner of Bullecourt Lane. Bullecourt Lane falls from this corner to about 5.8m AHD at its northern end.

Bullecourt Avenue continues to rise to the east from the Corner of Bullecourt Lane, reaching 10.5 m AHD on the east side of Ashford Avenue, less than 250m east of the site. Milperra Reserve, on the south eastern corner of Bullecourt Avenue and Ashford Avenue exceeds 12m AHD.

In rainfall events which exceed the capacity of the underground stormwater pipes, water running down Bullecourt Avenue from the east would join a more significant flow from Armentieres Avenue to the south.

The main local stormwater flow path through the site runs north between the RC building and buildings C and D and then under buildings A and B. The undercroft parking areas in the residential buildings are on suspended slabs to ensure that these local stormwater flows can pass through the site unobstructed.

The flow path continues north east through Bankstown Golf Course before draining into an unnamed creek which passes under Henry Lawson Drive and flows south west into the Georges River.

1.2.4 Site Operation

The site will be accessible 24 hours per day because it is a residential facility.

There will be 7 one bedroom, 46 two bedroom and 28 three bedroom RLUs across the four buildings. The estimated 120 residents of the RLUs will be able to come and go as they please and may be at home at any time.

The RC will accommodate 107 residents, including facilities for 33 dementia patients with up to 36 staff present on site. Residents will only leave the site under staff supervision.

Staff and RLU residents will be expected to use a mix of private transport and public transport to access the site.

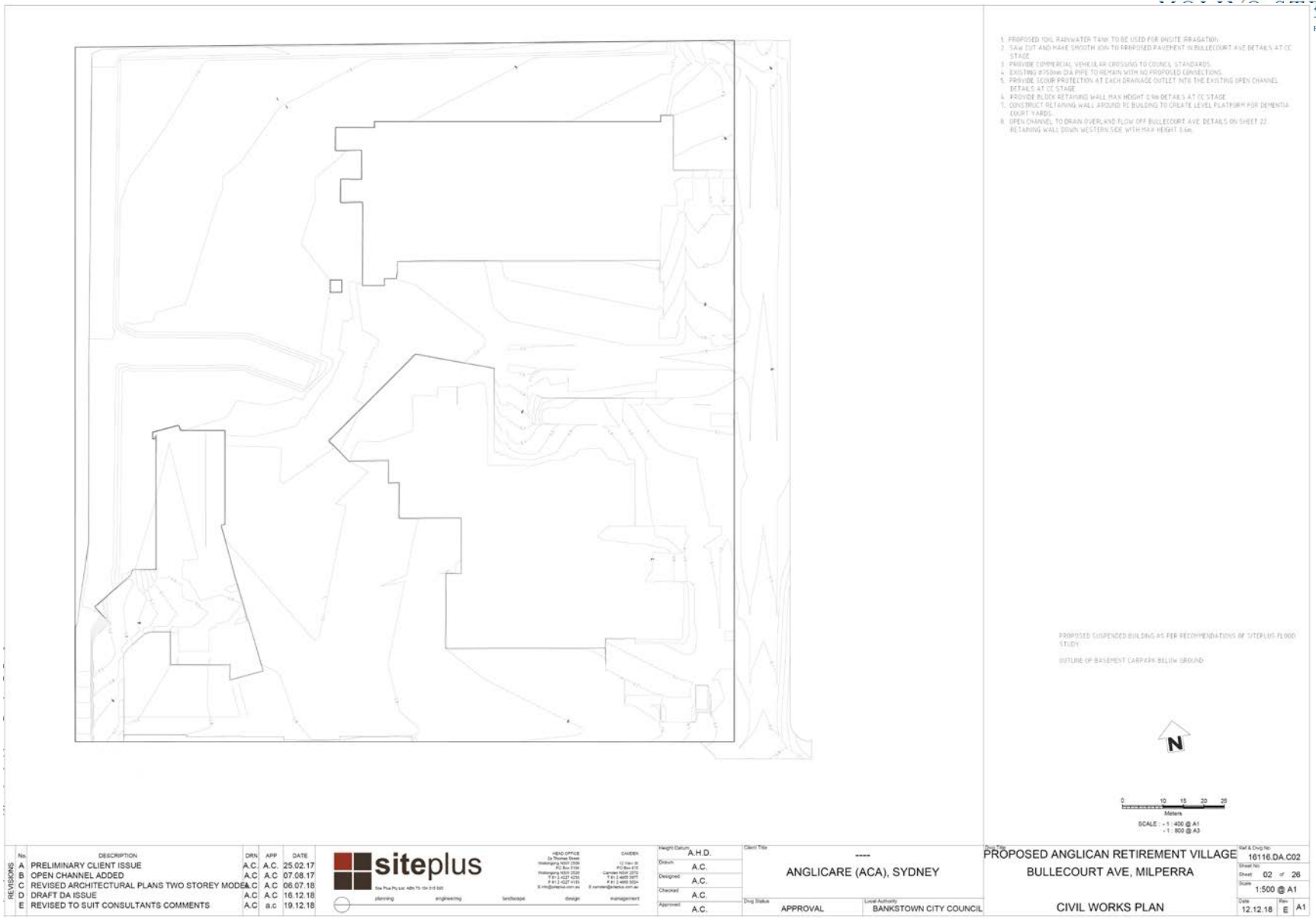

Figure 3: Proposed Contours on Site

2 FLOOD RISKS

2.1 FLOOD GENERATING WEATHER

Coastal areas of eastern Australia mostly receive flooding rains from so-called "east coast lows" that develop from time to time over the adjacent Tasman Sea. These are intense depressions off the coast and can produce thunderstorm activity associated with troughs.

Depressions can develop at any time of year, but are most likely when sea surface temperatures are high and the air is humid. Therefore, these events usually occur in the summer months and over the first half of the year.

Flooding can also be a winter-spring phenomenon, associated with unusually frequent or active extra-tropical depressions and fronts. However some major events have occurred in the summer half-year as systems of tropical origin extend or move south. Flooding over inland areas is usually associated with southward-moving tropical systems, but in the cooler months, may occur when well-developed cloud bands extend across the interior from the oceans north and northwest of Australia.

Rainfall patterns are also dependant on longer term weather patterns. Flooding is more prevalent in a La Nina year when rainfall is significantly greater than the mean average rainfall. Thunderstorms, which generally occur during the summer, can also result in localised flooding which could impact specifically on the site.

In summary there are many different weather events which could cause flooding on the site.

2.2 FLOOD PROBABILITIES

Flood probability can be expressed in more than one way. For example a flood may be described as having a 1 in 100 year average recurrence interval (ARI). This means that over many thousands of years, a flood of this magnitude would occur on average once in 100 years. This does not mean that a flood of this size only occurs once every 100 years. It is possible to have floods of this size in consecutive years or even two in the same year. This happened in several locations in Queensland and Victoria in 2010 and 2011.

Another way of expressing flood probability is in terms of average exceedance probability (AEP). A 1 in 100 year ARI flood has roughly a 1 in 100 AEP. That is, each year and every year it has a 1 in 100 or 1% chance of being reached or exceeded. This is perhaps a more helpful way of thinking about flood probabilities and will be used throughout this document. A flood with a 1% AEP has about a 1 in 2 chance of being reached or exceeded in the average person's life time, the same probability of tossing a coin and getting a head. There were four floods of about this size on the Georges River between 1860 and 1889 but there has not been another since. This underlines the randomness of flood frequency.

Bigger floods can and do occur. There were several floods with greater than a 1% AEP experienced in Eastern Australia in early 2011. Some reached levels which have a 1 in 2,000 (0.005%) AEP. A flood with a 1 in 500 (0.02%) AEP has about a 1 in 6 chance of being reached or exceeded in the average person's life time, the same as tossing a die and getting a 6.

The largest flood that can occur is referred to as the probably maximum flood (PMF). Although it has a very low probability of occurring in any one year (1 in 10,000 or less), events approaching a PMF have been recorded.

In summary, there is no seasonality associated with flooding in Sydney and an event could occur at any time of day or night and on any day of the year.

2.3 FLOODING ON THE SITE

2.3.1 Flood Types

The site is within the Milperra local stormwater flooding catchment as well as sitting on the floodplain of the Georges River (Figure 4). Flood behaviour from both needs to be considered.

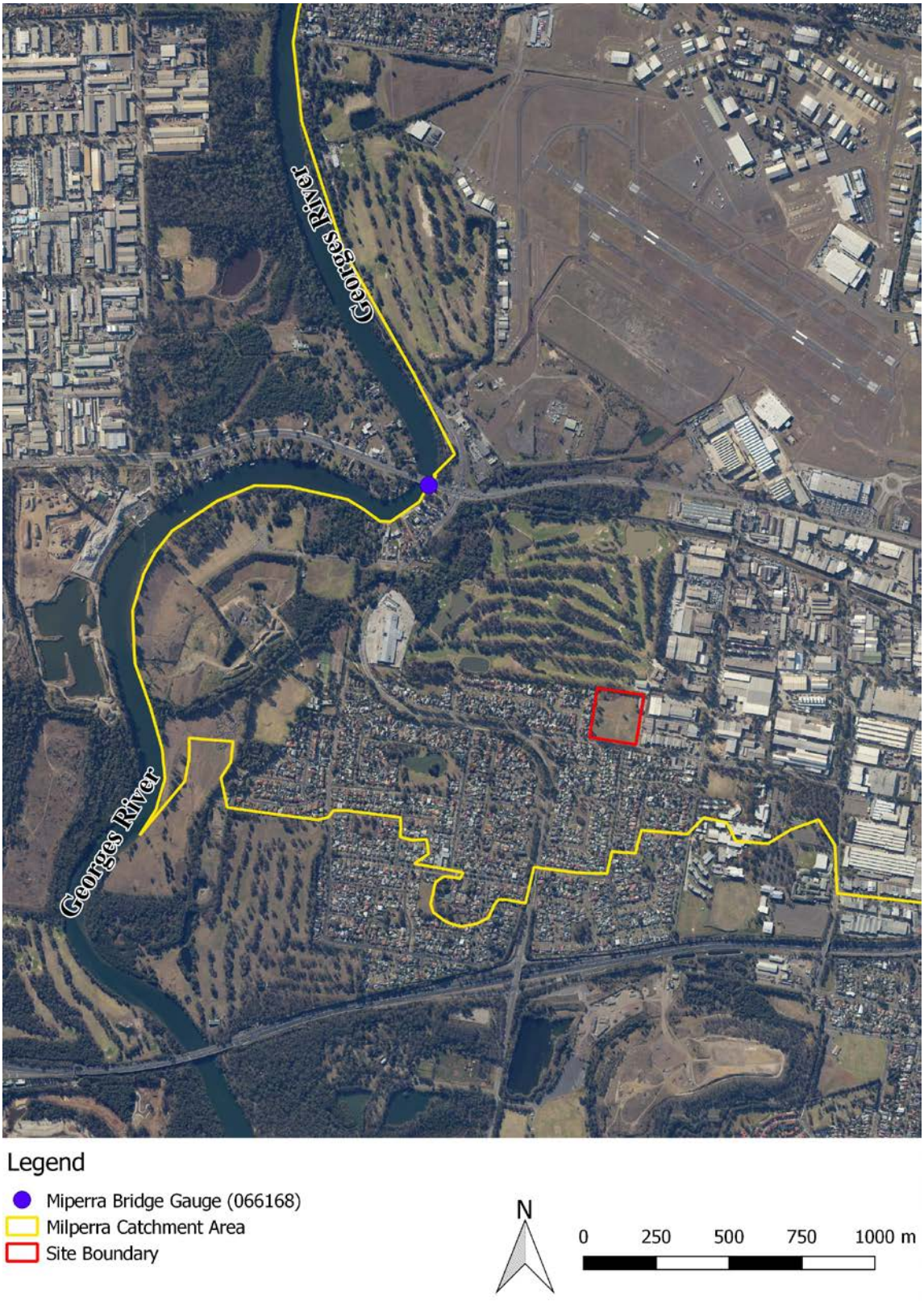

Figure 4. Site location and Georges River

a) Local Stormwater Flooding

Rainfall falling in the local Milperra catchment is carried by underground pipes through the streets into an open drainage network which drains into the Georges River. In the event of very high rainfall the pipe network reaches capacity and the excess flows run across the ground finding the path of least resistance as they flow towards the river.

Bankstown City Council commissioned development of a two dimensional computer model of this type of flooding in the catchment (BMTWBM, 2013). This model has then been used to estimate local stormwater flows through the site, taking into account the effect that the changes in topography and the presence of buildings will have on those flows.

b) Georges River Flooding

Flooding along the Georges River is described in the *Georges River Floodplain Risk Management Study and Plan* (Bewsher Consulting, May 2004).

Appendix D of the report plots Georges River flood level contours and shows the following levels at Milperra Bridge, just upstream of the Anglicare site.

- 1 in 20 AEP – 4.6-4.7m AHD
- 1 in 50 AEP – 5.3-5.4m AHD
- 1 in 100 AEP – 5.8-5.9m AHD
- Extreme flood – 10.3-10.4m AHD

This suggests that flooding from the Georges River is likely to reach the lower parts of the site in a 1 in 20 AEP flood.

It also suggests that in a 1 in 100 AEP flood, most of the site will be flooded with the lowest parts of the site under about 1 metre of water. Floods of this order of magnitude have been recorded on the Georges River in 1860, 1873, 1887 and 1889.

LiDAR mapping of the area shows that at the eastern side of the intersection of Bullecourt Avenue and Ashford Avenue is at 10.5m AHD and continues to rise to the east and south. Therefore Georges River flooding will not extend east and south of this location.

It has been assumed that the extreme flood modelled in the Georges River Flood Study is about equivalent to a PMF.

2.3.2 Levels and Depths

a) Local Stormwater Flooding

During a 1 in 100 AEP event, local stormwater flooding will flow between the buildings and under those sections of the buildings which are raised off the ground (*Figure 5*). Most walkways throughout the site will have less than 300mm depth of water. There will be deeper flows up to 1m deep where they concentrate along the western boundary before flowing north to the golf course.

In a PMF event (Figure 6) the site will experience water 1m to 2m deep along the northern and western boundaries although this will mostly be caused by the elevated water levels which can be expected in the Georges River in such an event.

The north eastern corner and the area between buildings B and C, including walkways, will have depths of 0.50 to 1 m.

Along Bullecourt Lane there will be peak flood depths of 0.10m to 0.20m.

All of the RLUs, their undercover parking facilities and the RC facility will all be protected from local stormwater flooding up to the PMF.

b) Georges River Flooding

Council's flood model used for modelling overland flows in the Milperra Catchment includes a plot of peak water levels in the Georges River which are to be used when modelling local stormwater flows towards the river.

Figure 7 shows a plot of the peak of the 1% AEP flood level in the vicinity of the site. It shows that the peak level at Milperra Bridge is about 5.9m AHD while the flood peak on the site is about 5.0m AHD.

This suggests that Henry Lawson Drive acts as a partial levee and restricts flows from the river to the golf course, and then onto the site, to the small unnamed creek which connects the golf course to the river.

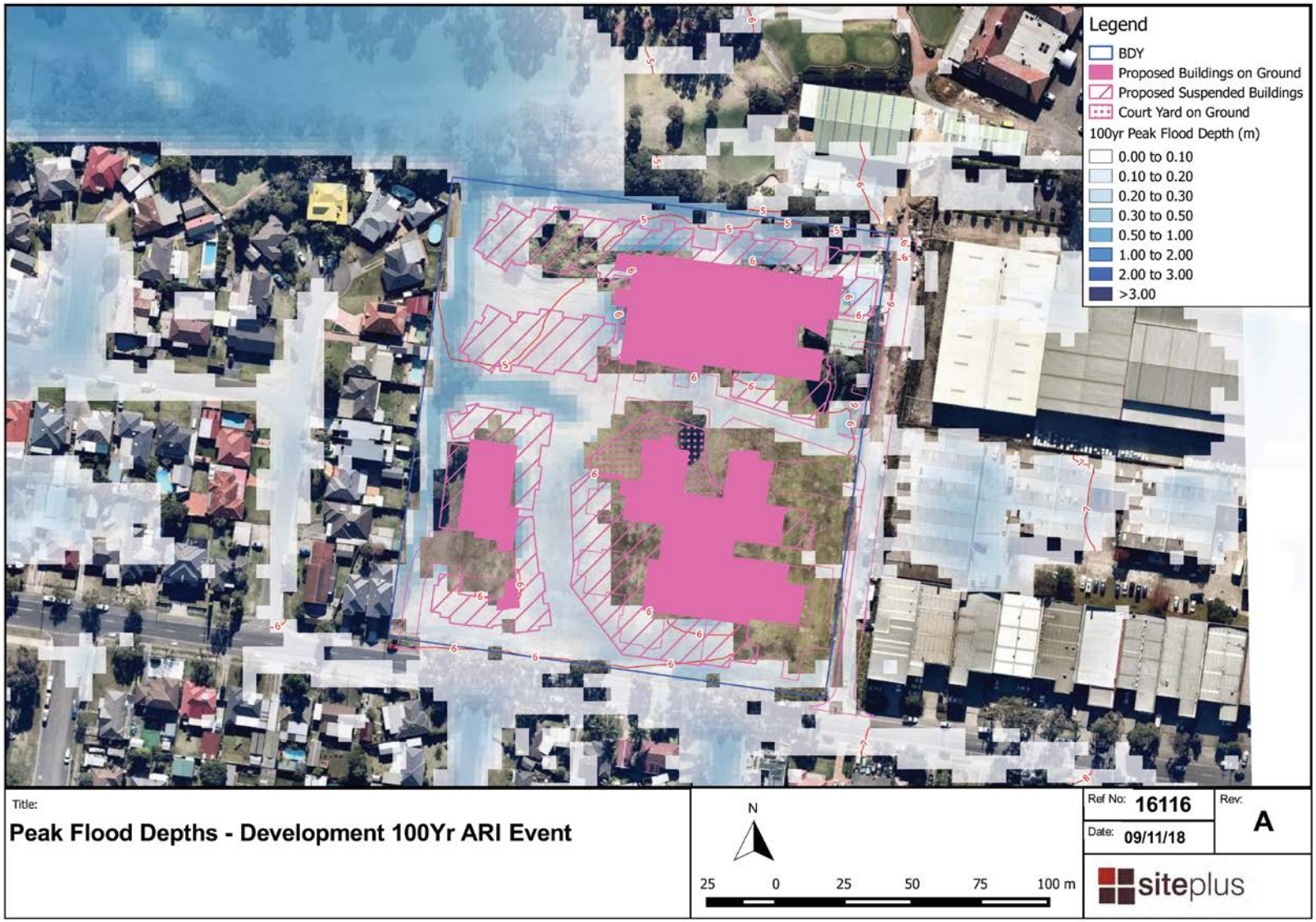

Figure 5: Peak Local Stormwater Flood Depths in a 1 in 100 event

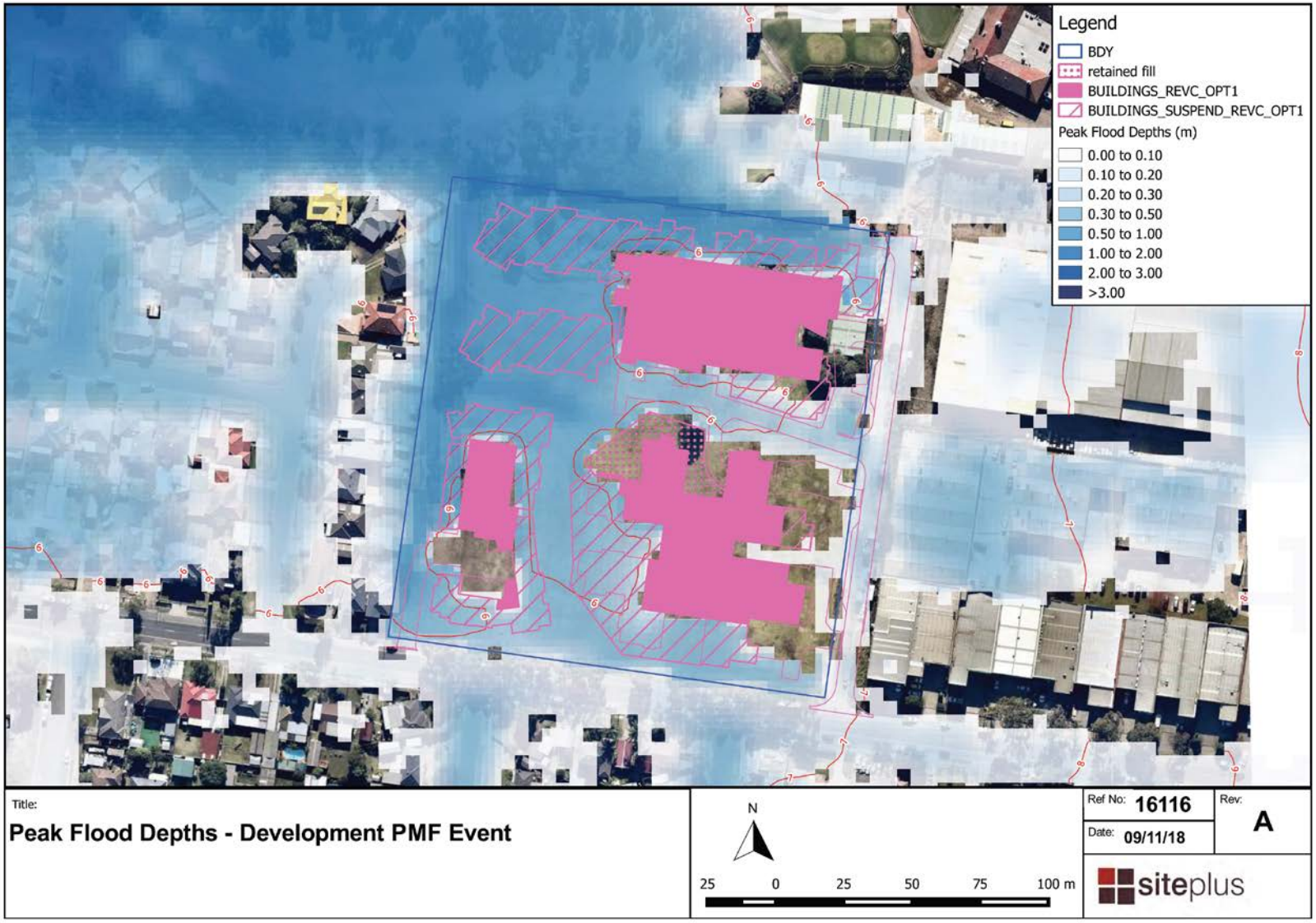

Figure 6: Peak Local Stormwater Flood Depths in a PMF event

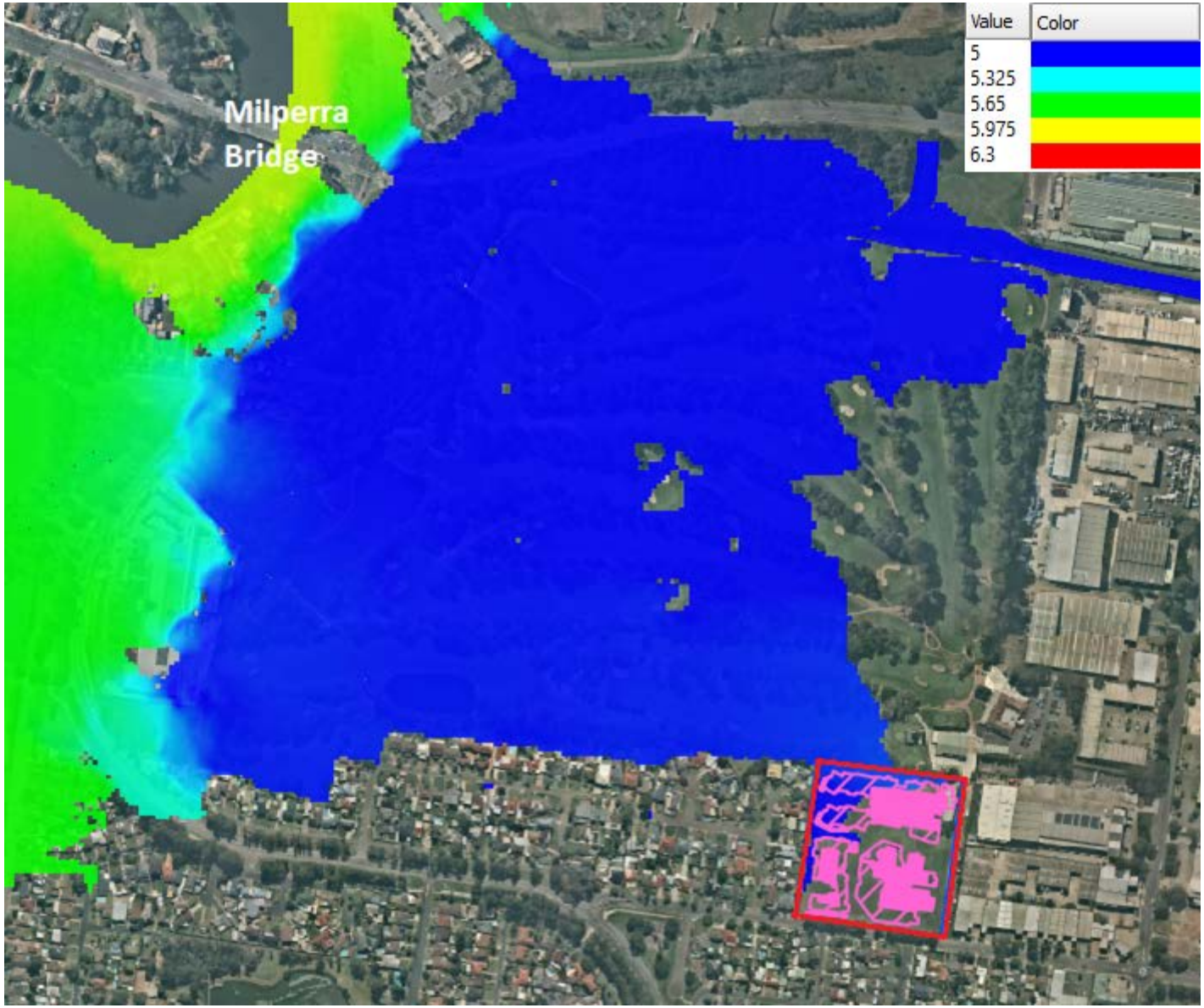

Figure 7: Peak 1% AEP Georges River Flood Levels

The river rises faster than water can flow through this creek or over the low point on Henry Lawson Drive and the river peak has passed before the golf course and site area have filled to the same level as the river.

However, if the river were to continue to rise in a larger flood, more of Henry Lawson Drive would overtop and the gold course and site area would fill more rapidly. In the PMF the level at the river and on-site are virtually the same.

The site would start to flood in its north western corner in a 1 in 20 AEP flood. A 1 in 100 AEP flood would be about 5.0m AHD on site and it could be about 0.7m deep in the north western corner. However, all of the RLUs and the RC facility will have their ground floor levels at least 1.2m above this level. Basement car parks will be tanked to prevent water getting into them in floods up to this level.

Expected peak flood levels in a Georges River PMF will be about 10.4m AHD. This would be 6.1m deep in the north western corner of the site and 3.8m deep in the south eastern corner which is the highest part of the site. This is an extremely low probability event and may have a probability in the order of about a 1 in 1 million chance of occurring on this site in any year.

2.3.3 Hazard

Flood hazard represents the impact that flooding would have on people, vehicles and buildings and is usually represented by a combination of depth and velocity.

Figure 8 illustrates the current understanding of flood hazard in Australia for various combinations of flood depth and velocity.

a) Local Stormwater Flooding

Figure 9 maps the flood hazard categories across the site in a PMF local stormwater event. As can be seen, the flood hazard on Bullecourt Avenue and Bullecourt Lane is generally quite low and would not prevent emergency service vehicles accessing the site or evacuation on foot or in larger vehicles.

Within the site there are areas of medium to high hazard which would be dangerous for pedestrian and vehicular access and accordingly it is not recommended that internal access paths be used if they are covered by floodwaters.

b) Georges River Flooding

In the case of flooding from the Georges River, the velocities are not expected to be high and the hazard will be principally caused by the flood depths.

Most of the site would not flood in a 1 in 20 AEP flood and any flooding would not be deep enough to be hazardous.

In a 1 in 100 AEP event, some of the areas between buildings, including some of the walkways would be 0.1m deep and could be hazardous for the site's residents to traverse mainly because of the contaminants likely to be in the water. The site would still be accessible by vehicle from Bullecourt Lane.

In a PMF the whole site would be covered by flood waters with most of it more than 4m deep, making it extremely hazardous to be at ground level on the site. The site would not be accessible by any type of vehicle.

2.3.4 Rate of Rise

a) Local Stormwater Flooding

Stage hydrographs show how flood levels vary over time in given storm events. The TUFLOW model of local flooding was used to extract hydrographs for the PMF at the two locations in Figure 10. These show that it will take less than an hour for local stormwater flooding to reach its peak on site (Figure 11 and Figure 12**Error! Reference source not found.**).

b) Georges River Flooding

The 1 in 100 AEP and the Extreme Flood (indicative PMF) stage hydrographs were extracted from the Georges River MIKE-11 flood model assembled for the 2004 Floodplain Risk Management Study at the nearest node location to the site (Figure 13).

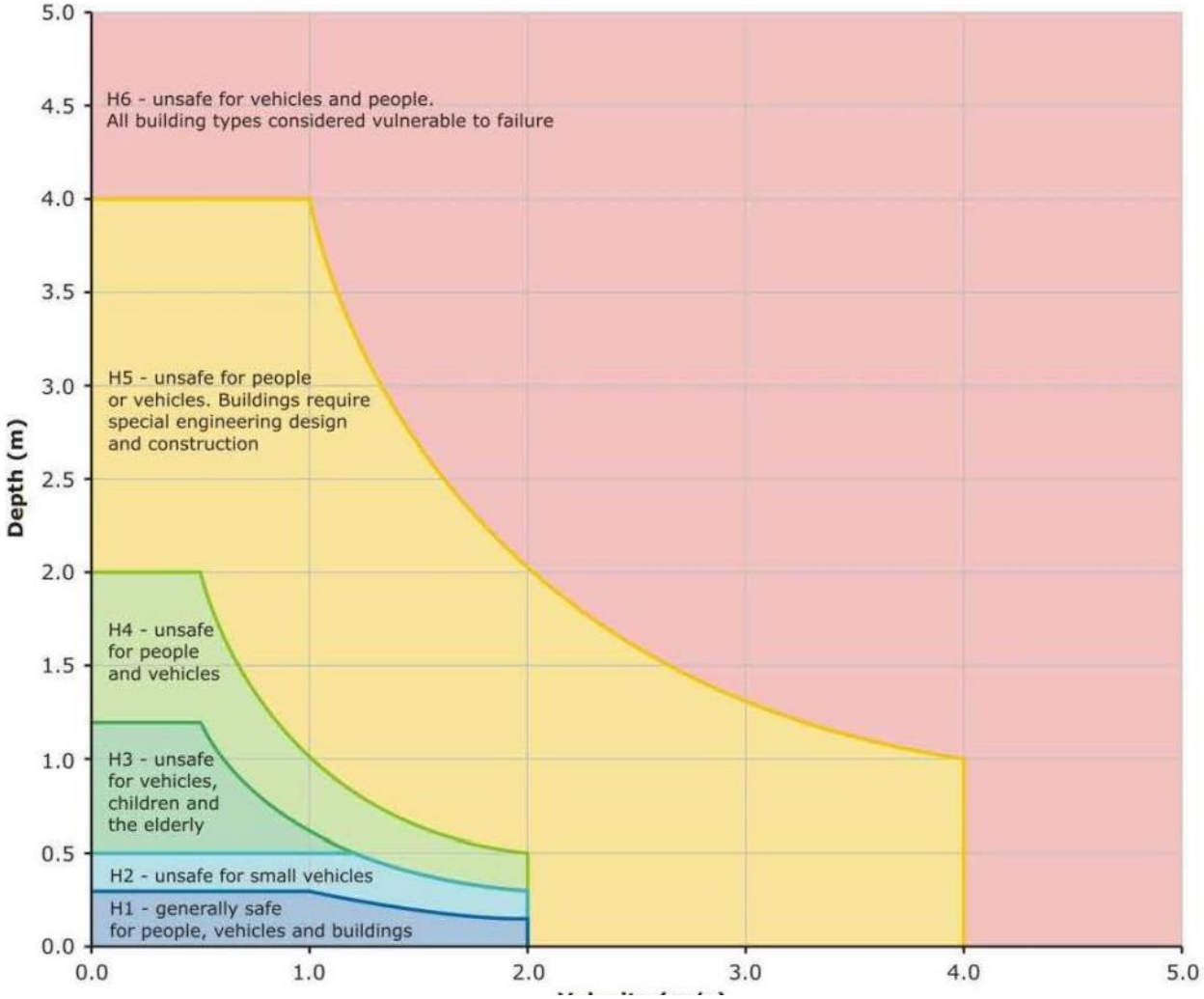

Figure 8. Flood Hazard Vulnerability Curves (Source: Smith et al. 2015)

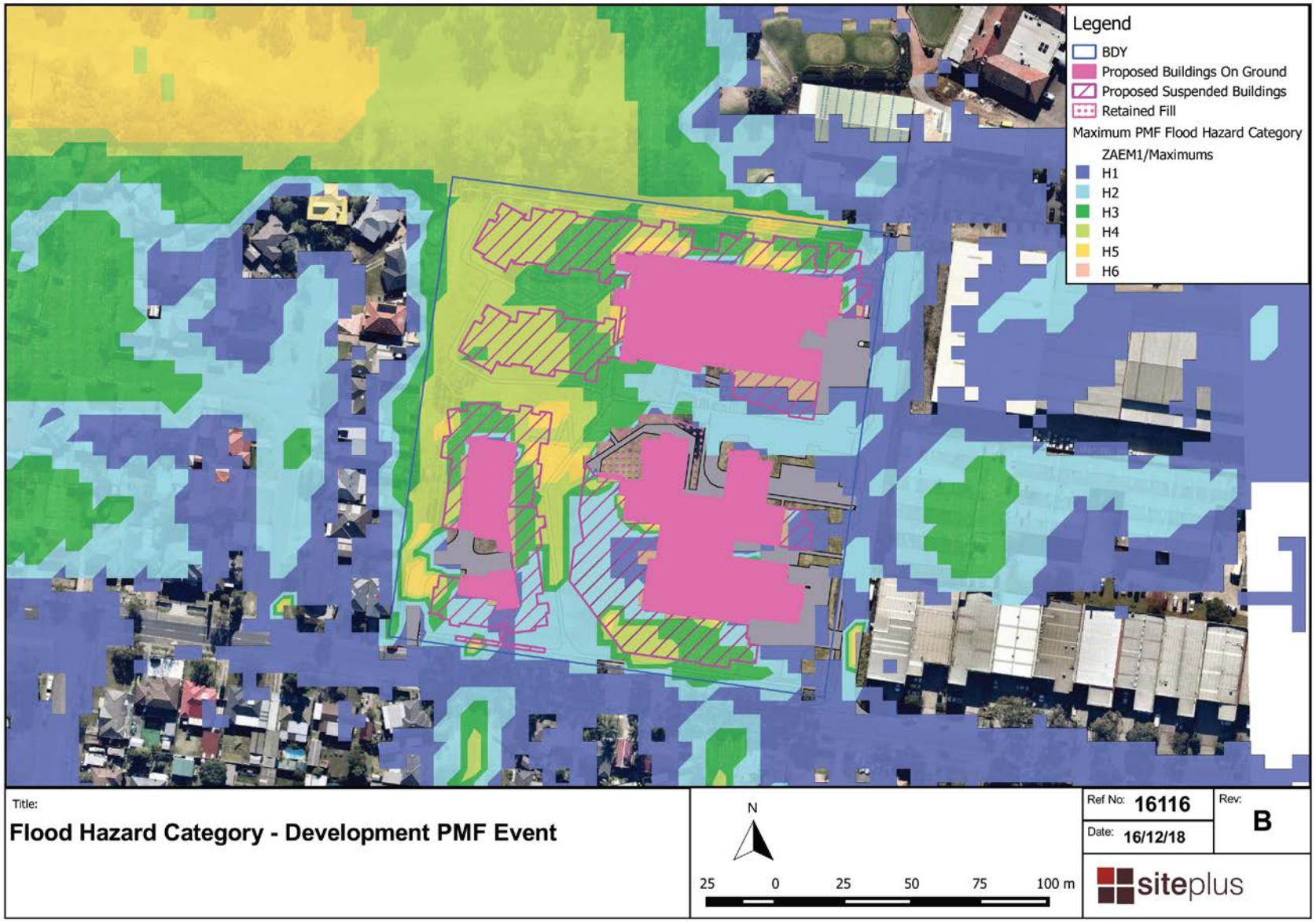

Figure 9 Flood Hazard Mapping in a PMF Event

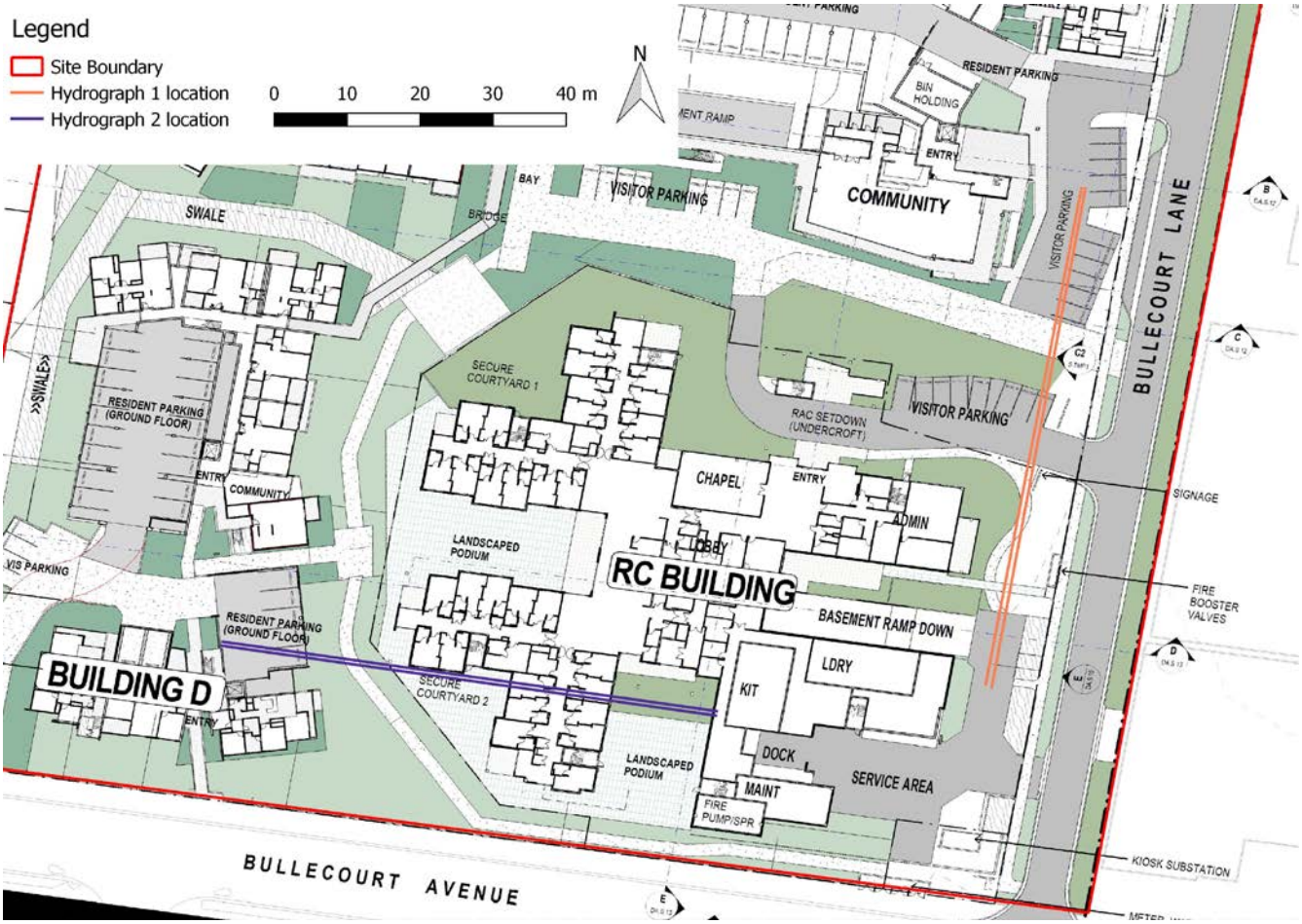

Figure 10 PMF Event Hydrograph level locations

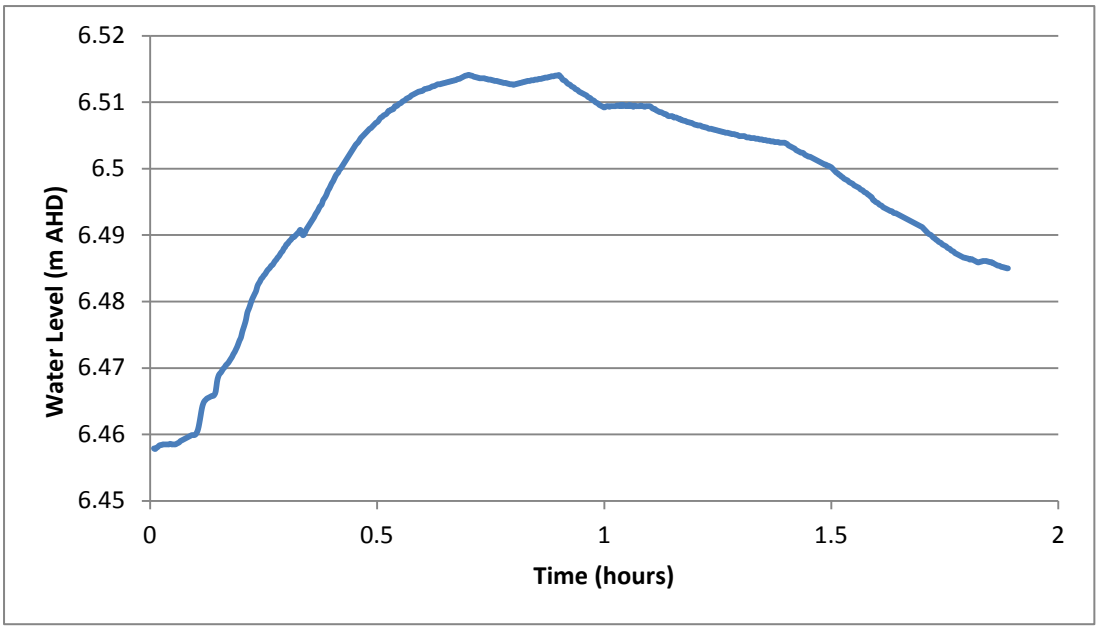

Figure 11 Hydrograph for local stormwater PMF between the RC and Building A

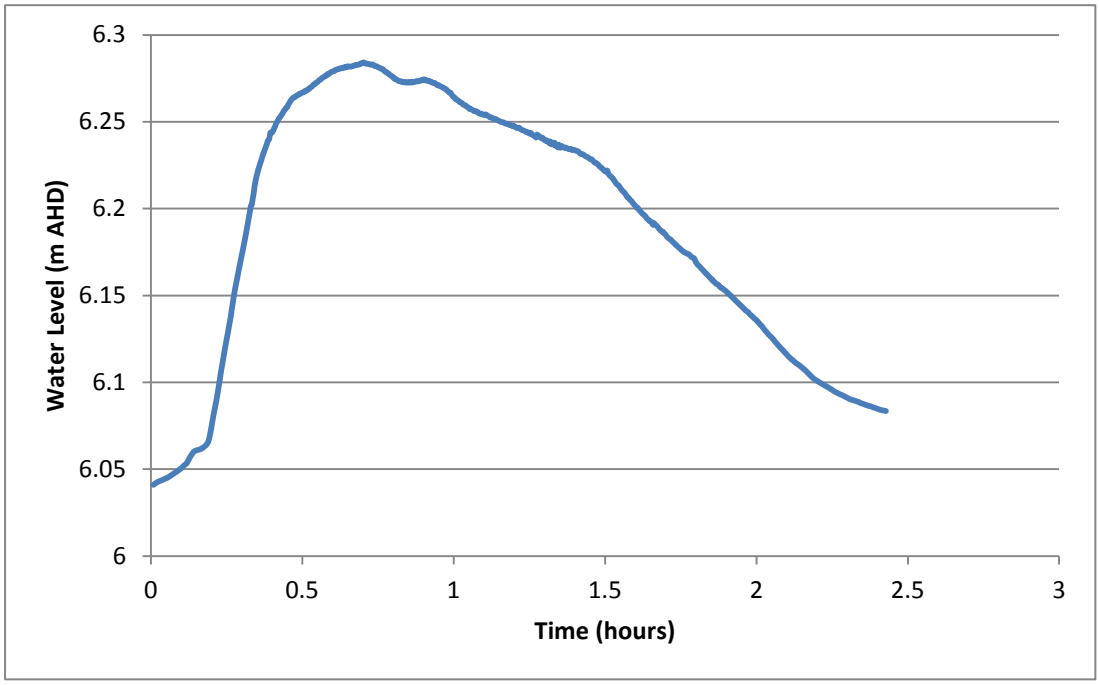

Figure 12 Hydrograph for local stormwater PMF between the RC and Building D

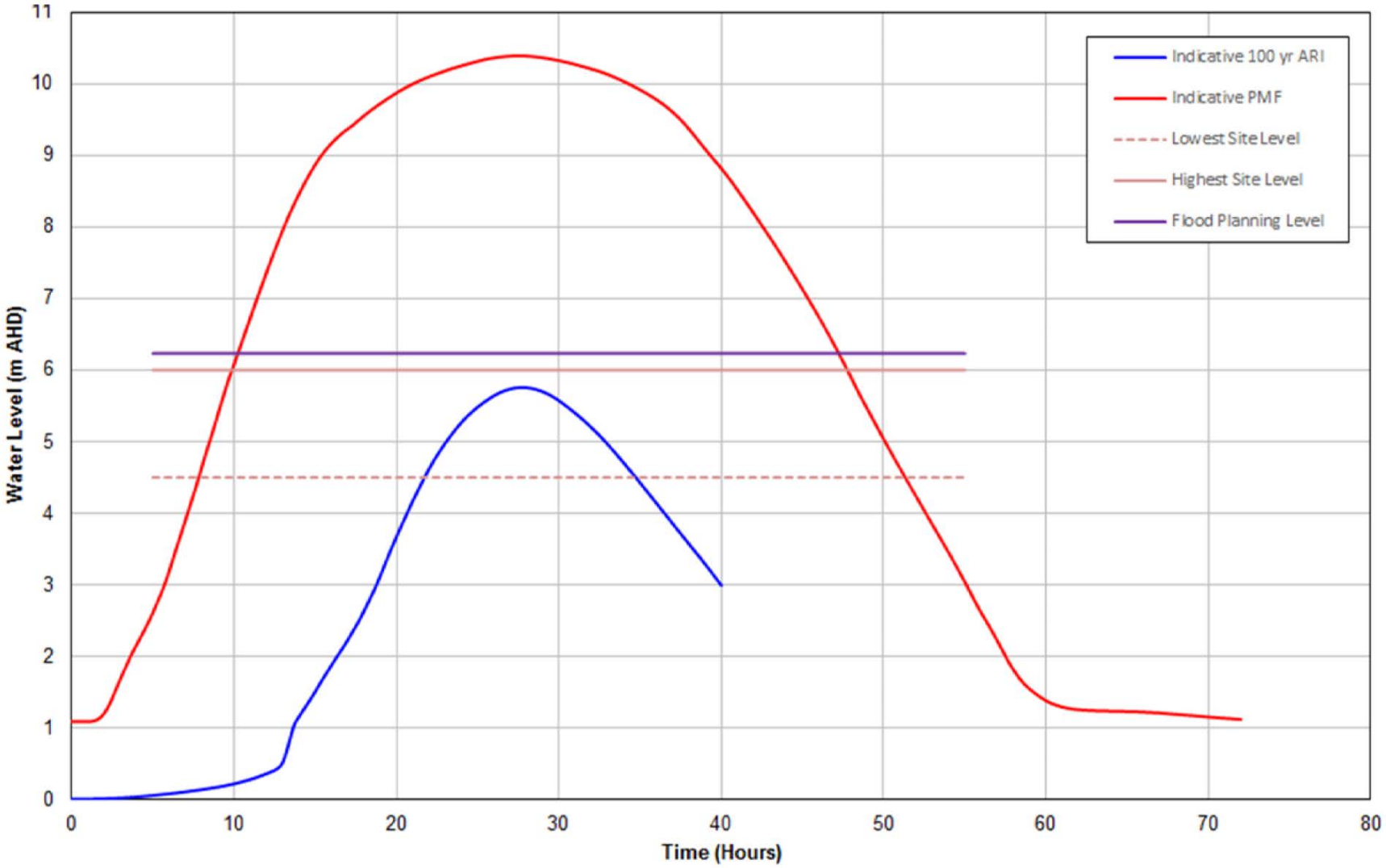

Figure 13 Stage Hydrographs at Georges River MIKE-11 node near the site

These give a sense of how quickly floodwaters could rise in the Georges River and flood onto the site.

The Georges River starts upstream of Campbelltown and has a substantial catchment with multiple rain gauges and stream gauges upstream of Milperra. This enables the Bureau of Meteorology to issue quantified flood warnings for the Georges River at Milperra.

According to the NSW State Flood Sub Plan (June, 2008), 6 hours' notice is required of Milperra flood gauge heights from 2.0-3.9m. It also states that 12 hours' notice is required of gauge heights 4.0m and above but only 9 hours is generally available. It notes that flooding of 4.2m is classified as major flooding.

It should be noted that the "gauge zero" (its '0' reading level) on the Milperra Bridge gauge corresponds to -0.5m AHD. In other words it is about 0.5m below mean sea level. This means a gauge reading of 4.2m AHD corresponds to a flood level 3.7m AHD which would not be sufficient to flood the site.

It should also be noted that because Henry Lawson drive restricts the flow of floodwaters onto the site, in the initial stages of an extreme flood event the flood level on site will rise more slowly than the PMF Stage Hydrograph shown in Figure 13. However, once the road is substantially overtopped the flood waters in site will rise faster on site than on the river until they are both at the same level, sometime before the peak of the flood.

2.3.5 Duration

a) Local Stormwater Flooding

As can be seen in Figure 11 and Figure 12, local stormwater flooding in a PMF will not last more than a few hours and would be of even shorter duration during a more frequent event. It many instances this flooding could come and go without residents or staff being aware of it if it happens during the night or while they are otherwise occupied.

b) Georges River Flooding

The Georges River flood hydrographs (Figure 13) suggest that in a flood equivalent to the design 1 in 100 AEP event there could be water on site for about half a day. Larger floods are likely to remain on site for even longer with the PMF possible on site for nearly two days.

For the purposes of this flood emergency response plan it has been assumed that the site would not be isolated by flooding (i.e. higher than 6.6m) for more than a day or two although there could be water on site for longer than this.

2.4 FORECASTS AND WARNINGS

Monitoring the weather forecasts and warnings will be an integral step in managing the flood risk of the site. This will be critical to being able to evacuate the site before flooding commences.

The Bureau of Meteorology (BoM) has forecast rainfall maps which can be used to estimate the amount of rain expected to fall over the next eight and four days, as well as the next 24 hours. This information is available at: www.bom.gov.au/jsp/watl/rainfall/pme.jsp

NSW Weather Warnings are issued by the Bureau of Meteorology and can be found at the following link: www.bom.gov.au/nsw/warnings/The radar service on the BoM website also shows current rainfall location and intensities. The radar station to be used for the site would be the Sydney radar at: http://www.bom.gov.au/products/IDR713.loop.shtml#skip.

The Bureau of Meteorology also has rainfall and river gauges which show the amount of rainfall that has fallen in the previous 24 hour period and stream gauges which indicate water heights. These can be monitored at: www.bom.gov.au/australia/flood/

There are several gauges in the region that could assist with flood forecasting and warning. These include the river gauges at Liverpool Weir and at Milperra Bridge. The

data on the website is updated every hour or so. (http://www.bom.gov.au/fwo/IDN60233/IDN60233.066168.plt.shtml)

The Bureau issues four types of specific flood warnings for the Georges River. All four might be issued in sequence during a specific event or only one or two types of warning will be used.

It could provide a **Flood Watch** for the Georges and Woronora Rivers which is early advice of a developing situation that may lead to flooding. A Flood Watch is not a warning of imminent flooding and about 25% of the time a flood does not develop after a Flood Watch has been issued. A Flood Watch could be issued up to four days in advance or less than 24 hours in advance of an actual flood depending on current river levels, catchment conditions and developing weather events. A Flood Watch could be for either Local Flooding or Local and Riverine Flooding.

A **Generalised Flood Warning** could be issued for the Georges River which states that flooding is expected but no qualitative or quantitative information can be provided based on the available data.

A **Qualitative Flood Warning** could be issued for the Georges River which will provide an indication that either minor, moderate or major flooding is expected and a broad timeframe in which that might occur. At the Milperra Gauge, the following gauge levels correspond to each flood category:

- Minor - 2.0m
- Moderate – 3.3m
- Major - 4.2m

As explained previously, “Gauge Zero” at this gauge -0.5m AHD so when a forecast of 3.3m (a moderate flood) is given, the flood will reach a level of 2.8m AHD

Finally, it can issue a **Quantitative Flood Warning**, this will provide forecast levels at specific locations such as the Milperra Gauge and when those levels are likely to be reached. While these forecast levels are quite precise and are usually within about 0.3m of the actual level reached, they rely upon data collected by upstream rain gauges and stream gauges and at best can be made about 9 hours in advance on the Georges River.

Flood forecasts are updated every few hours as weather conditions evolve and new data comes in. Both qualitative and quantitative forecasts can be escalated to higher forecast levels as more rain falls.

With regards to local stormwater flows, there will be no specific warning from the Bureau that this is about to occur at the site. Key warnings which will indicate the possibility of this occurring include Severe Weather Warnings or Flash Flood Warnings for the Sydney Metropolitan area or a Flood Watch for Local or Local and Riverine Flooding for the Georges River.

3 FLOOD EMERGENCY RESPONSE

3.1 Emergency Response Philosophy

This Flood Emergency Response Plan recognises that protection of life is of critical and primary importance.

The protection of all lives is the first priority, the comfort of staff and patrons is second and the protection of property is third.

While this Plan recognises the need for Anglican Community Services managers to consider financial implications, this will not be consciously done to the detriment of protecting life. It is incumbent on Anglican Community Services to take all necessary measures outside of this Plan to manage the financial risks which flooding poses to their property and assets.

All of the buildings on site (including undercroft car parks) will have their floor levels at least 0.5m above the higher of the 1 in 100 AEP local stormwater flood level and 1 in 100 AEP riverine flood level and above the local stormwater PMF level. While basement car parks will be below this level, their entry ramps will be 0.5m above the highest 1 in 100 AEP flood level so that all property within buildings on site will have this level of protection as a minimum.

However, floodwaters could rise higher than the 1 in 100 AEP levels in the Georges River in which case flooding could reach hazardous depths within the buildings. In fact, such flooding could be as much as 4.5m higher than the 1 in 100 AEP Georges River level and so the first floor of buildings might not be a suitable place of refuge during an extreme flood on the Georges River.

Accordingly, the proposed response to an expected extreme flood on the Georges River is the evacuation of all staff and residents. If for some reason evacuation cannot be completed before the site is isolated by flooding, upper floors of the RC facility will be used as a place of flood refuge as they will be above the reach of the Georges River PMF and will have suitable supplies and facilities for a couple of days of isolation.

3.2 Flood Risk Management Features

The following features have been integrated into the design, construction and operation of the buildings to minimise the risk to life from both local stormwater flooding and Georges River Flooding on the site:

- All buildings have ground floor levels at least 0.5m above the local stormwater 1 in 100 AEP flood level and Georges River 1 in 100 AEP flood level. This places them above the local stormwater PMF level.
- All basement car parks are protected from floodwaters entering the car park up to at least 0.5m above the local 1 in 100 AEP flood level and 1 in 100 AEP Georges River flood level. This means they are also protected from the local stormwater PMF.
- There are exit points from buildings A, B, C and D, and the RC facility that are at least 0.5m higher than the Georges River 1 in 100 AEP flood level. This means that all buildings can be safely accessed or exited during a 1 in 100 AEP flood on the Georges River.
- All pedestrian pathways on site lead from buildings to off site on a continually rising gradient.
- There are exit points from buildings A, B and D and the RC facility, and a high level connection between building C and D, which allow pedestrian egress from the site without the need to walk through high hazard flooding in a local PMF.
- The pickup location for RC facility residents is 0.5m higher than the 1 in 100 AEP flood level.
- The first floor apartments have floor levels at 10.15m AHD which would mean that each building has a place of refuge above all but the very largest floods.
- The RC facility has a first floor at 10.9m AHD which places it 0.5m above the Georges River PMF.
- All buildings are constructed to withstand the static, dynamic and debris forces of flooding up to the PMF.

- The RC facility has a fire suppression system.
- The RC facility has medically trained staff on site 24/7.
- The RC facility has a diesel generator and sufficient fuel for operating essential power for two days.
- The generator, fuel storage, water storage and gas storage are all above PMF level on the community centre roof.
- The RC facility has sufficient stock of food and medical supplies for at least two days under "business as usual" conditions and can rely upon these in an emergency.
- Anglicare subscribes to a hazards monitoring service which pushes out warnings of floods and other hazards.
- The apartments are fitted with telephones, intercoms and public address system.
- The RC facility has a public address system and two way radios.
- Meeting rooms on first floor of RC facility can be converted to staff sleeping quarters.

In addition to the above, Anglicare has the following resources which can be utilised to assist during a flood emergency

- A fleet of buses which can be used for resident transport. Sixteen buses are required for full evacuation of the RC facility. These buses are on various Anglican sites with an average distance from Milperra of 53km including 44km of motorway. Average driving time would be 41mins with no traffic. All buses are usually parked within 15-60min drive of Milperra. Each bus can be adapted for wheelchairs within 10mins.
- A large, flood-free, retirement living and aged care facility at Castle Hill which can temporarily accommodate evacuees
- Several retirement living and aged care facilities throughout the Sydney Metropolitan area and beyond which can provide medium term alternative accommodation to evacuees who are unable to immediately return to Milperra from Castle Hill after the flood.

3.3 Concept of Operations

The flood emergency response plan for Anglicare Milperra Village includes a preferred primary response along with alternative plans should the primary and secondary responses fail for any reason. In this way the risk to lives and the need for rescue are reduced to very remote possibilities. The various preferred plans are referred to as:

Plan A will be for the complete evacuation of the site by motor vehicle. RC residents will be evacuated to the Anglicare Castle Hill Village and RL residents will be asked to find their own accommodation with relatives or friends.

Plan B will be implemented if it is not possible for all RC and RL residents to be directly transported to their proposed accommodation under Plan A. In Plan B residents will be sent to the local SES evacuation centre as an interim location until their transport to their final destination can be completed. Anglicare staff will go with the residents to care for them at the evacuation centre until they are moved on to Castle Hill or back to Milperra.

Plan C is implemented should vehicular evacuation of any of the RL and/or RC residents fail before the site is isolated by hazardous floodwaters. In this scenario all remaining residents and staff are to relocate to the top floor of the RC facility. This is designed, equipped and resourced to be operational as a fully functional safe refuge for two days.

Plan D should vehicular evacuation fail (causing Plan C to be implemented) and for some reason it is not possible to use the top floor of the RC as a place of refuge, pedestrian evacuation to Milperra Park should be effected before the site is isolated by hazardous floodwaters. Rescue can be safely effected from there. This would only occur in the rarest of circumstances, for example, if there were a fire in the RC building and complete vehicular evacuation from site were not possible.

3.4 Evacuation Routes and Destinations

The Anglicare Castle Hill Village includes 5 residential aged care facilities with a total of 600 beds along with six separate retirement villages. There are large common areas and facilities at each including Dover Hall which is a large multi-purpose space with a commercial kitchen. It is situated on a ridgeline Castle Hill Road and is therefore not affected by flooding.

The evacuation route from Milperra to Castle Hill (**Error! Reference source not found.**) follows local roads, which are above the reach of local and riverine flooding, to the M5 Motorway. The route goes from the M5 Motorway onto the M7 Motorway and then onto the M2 Motorway. The M5 has a high level crossing of the Georges River.

All three Motorways cross numerous creeks however, the probability of them being cut by flooding is low. From the M2 the route follows Norwest Boulevarde, Windsor Road and Old Northern Road which generally follow ridgelines and have a low probability of flooding.

While the route has been selected to have a low probability of being cut by floodwaters, that could still occur or the route could be blocked by heavy traffic during and evacuation, particularly if other parts of Sydney are using these roads as flood evacuation routes.

For this reason, if the routes are not trafficable, residents will be ferried to the nearest SES flood evacuation centre established on the Milperra side of the Georges River as an interim place of refuge for residents and accompanying staff. When the route to Castle Hill is again open the residents will be moved from the evacuation centre to Castle Hill.

Figure 15 shows pedestrian evacuation routes within the site which avoid areas of high hazard flooding. This includes first floor access between buildings C and D. It also shows the offsite access route to Milperra Park should this be necessary. All of these routes have a continuously rising gradient away from rising Georges River floodwaters and are not affected by high hazard local flooding.

3.5 Response Phases and Triggers

10 different response phases and triggers have been identified and actions, responsibilities and resources identified for each. The following is an overview of the response phases and their triggers.

This plan provides two types of triggers. Both are indicators of impending rising water levels and need to be acted upon accordingly.

The Primary Trigger is based on flood forecasts and may give more advanced notice of flooding but may be inaccurate or may not be issued at all. This might include severe weather warnings, flood watches, generalised flood warnings or even quantified flood warnings.

A secondary trigger, referred to as the Critical Trigger is required. The Critical Trigger is based on actual observed levels at the Milperra Gauge or on site. The time estimated to complete the actions in each response phase has been compared to the time available from the Critical Trigger to the time flooding would prevent the actions being completed if the flood were rising as fast as the modelled Probable Maximum Flood (PMF).

3.5.1 Phase 1 - Standby

This is the mode for day to day operations of the facility. It includes all of the actions required to ensure this FERP and the resources that support it are maintained ready for use when required. It includes daily checks of weather forecasts and warnings.

3.5.2 Phase 2 - Flood Alert

Whenever the Bureau of Meteorology issues a Severe Weather Warning more regular checks of weather forecasts, warnings and river levels are required.

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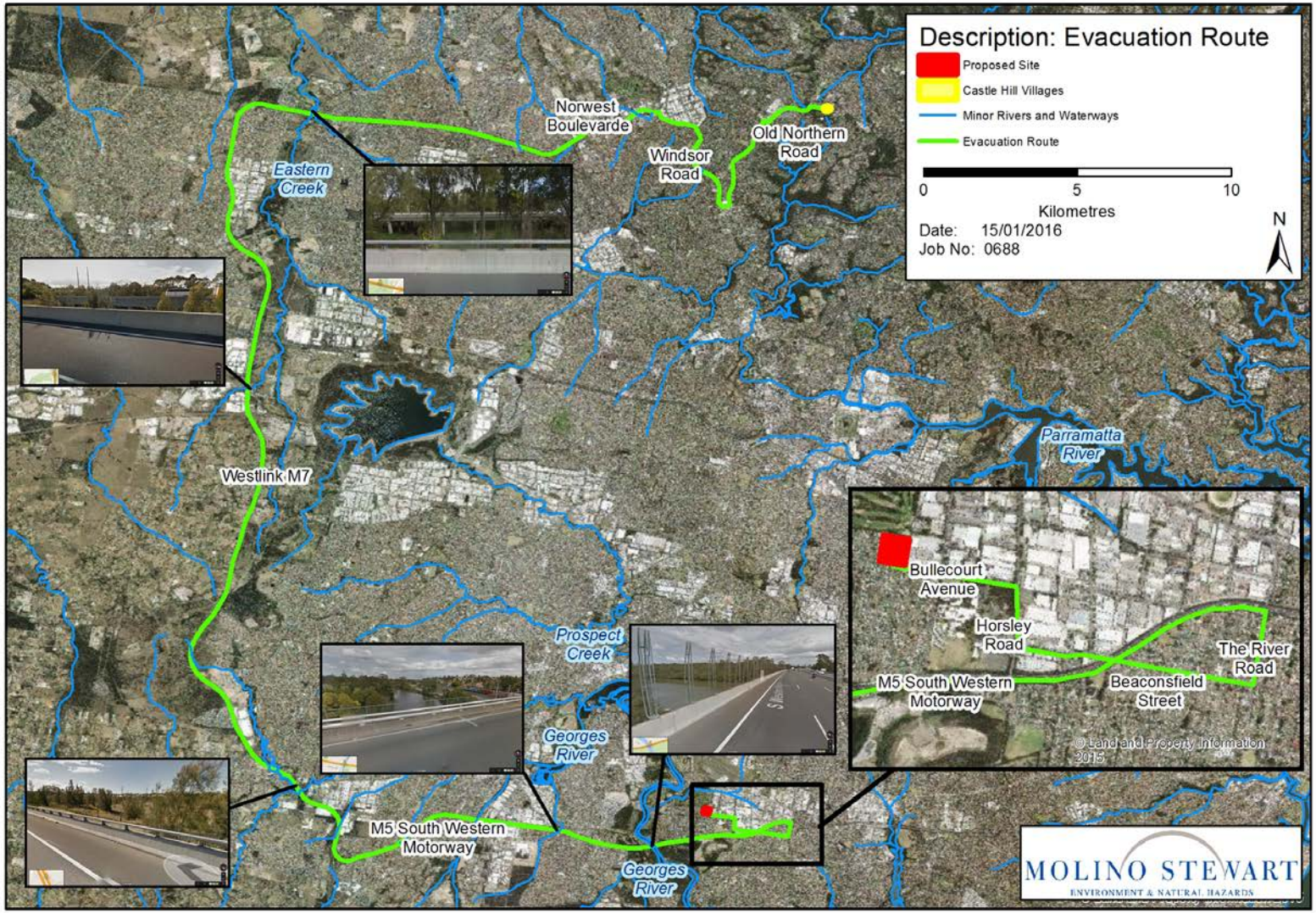


Figure 14 Vehicular Evacuation Routes

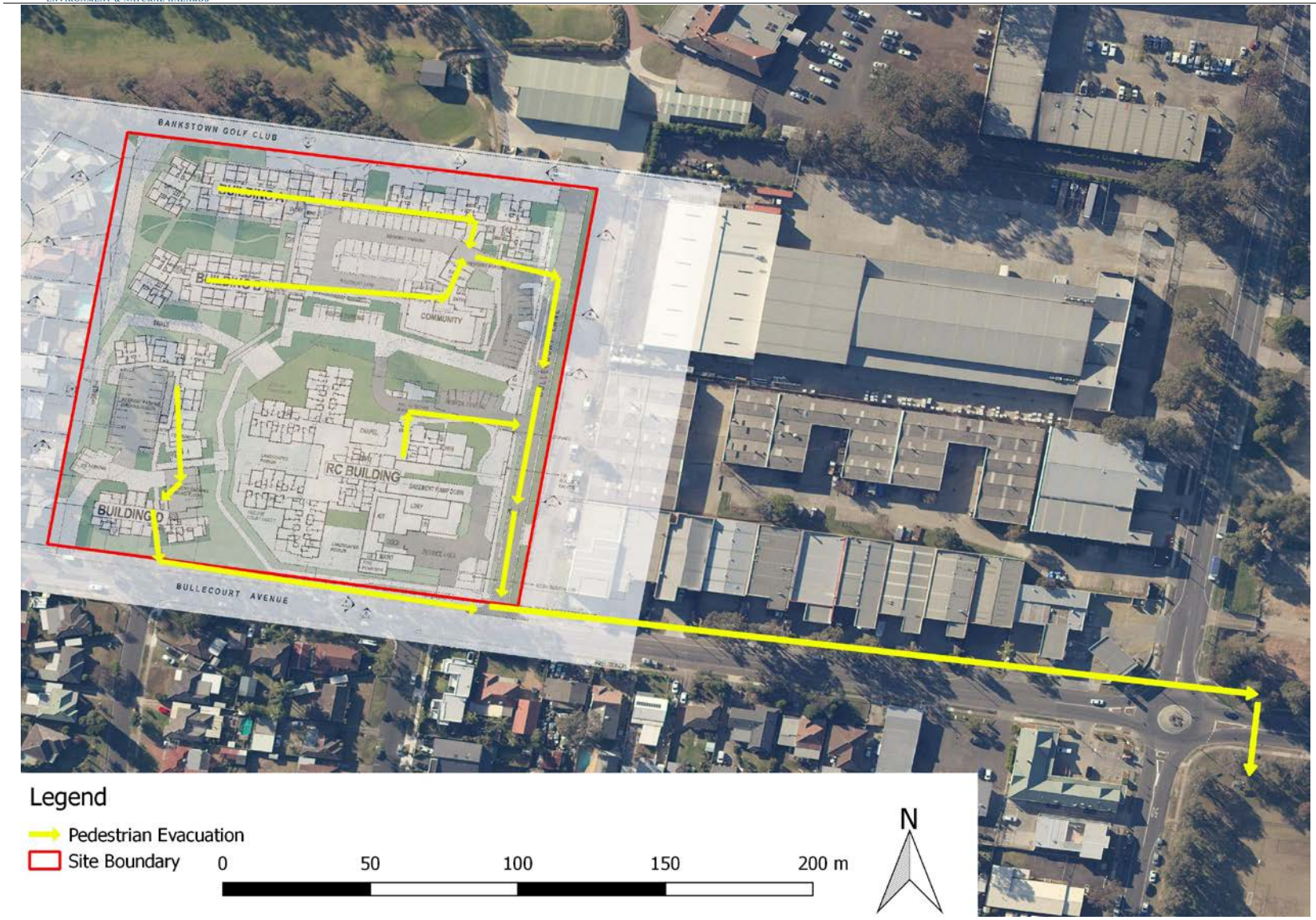


Figure 15 Pedestrian Evacuation Route

3.5.3 Phase 3 - Flood Ready

This occurs when a Flood Watch or Flood Warning for the Georges River is issued or the Milperra gauge level reaches 3m. In this phase checks and notifications are made on-site and offsite to ensure all resources are available and staff and residents are aware of the potential for evacuation. Checks are made of resources and knowledge needed for implementing Plans A, B, C and D because at this stage it cannot be known which will need to be followed.

3.5.4 Phase 4 - Evacuation Ready

If the Bureau of Meteorology issues a quantified flood warning of 5.8m or higher or the gauge reaches Major flood level (4.2m) then preparations need to be made to evacuate the site. This will include on-site and offsite preparations for Plans A, B, C and D.

3.5.5 Phase 5 - Plan A Evacuation

If the gauge level reaches 5.2m then site evacuation is initiated with Castle Hill being the destination of all RC residents.

3.5.6 Phase 6 - Plan B Evacuation

If the gauge level reaches 5.2m and the route to Castle Hill is not trafficable the evacuation will be diverted, as an interim measure, to the closest SES Evacuation Centre on the Milperra side of the Georges River.

3.5.7 Phase 7 - Plan C Evacuation

If the gauge level reaches 5.2m, the route to Castle Hill is not trafficable and there is not a suitable SES Evacuation Centre available and accessible then all evacuees who have not reached alternative accommodation will be directed to the first floor of the RC Facility.

3.5.8 Phase 8 - Plan D Evacuation

If Plan C evacuation has been initiated but the RC facility has a fire or back up utilities have failed, then pedestrian evacuation will be initiated.

3.5.9 Phase 9 - Stand Down

If flood waters stop rising before they have entered any buildings on site and the Bureau of Meteorology forecasts that further rises are not likely then the Stand Down phase is triggered irrespective of which phases have already been initiated and at what stage of implementation they are at.

3.5.10 Phase 10 - All Clear

The all clear phase is initiated if either:

- the stand down phase has been completed;
- or the facilities have flooded but emergency services have given the all clear for the site to be reoccupied

3.6 Roles and Responsibilities

The following sets out the broad responsibilities of individuals and groups in the maintenance and implementation of this FERP.

3.6.1 Anglican Community Services Executive Management

The executive management of Anglican Community Services will have ultimate responsibility for ensuring that the Anglicare Milperra Village is adequately maintained and properly equipped and resourced and that staff are appropriately trained so that this FERP can be implemented when required. They will appoint a Flood Team.

3.6.2 Anglicare Flood Team

The Flood Team is a specialised team within Anglicare that have been trained to deal with flood emergencies with members located both

on and off-site. Team members include fleet, staff and project managers.

The Flood Team will be responsible for:

Plan A

- annually checking that all resources required to implement this FERP are in place and in working order
- reviewing the FERP every five years or following a flood
- maintaining a subscription service to a hazards monitoring service
- checking Bureau of Meteorology forecasts and warnings daily
- continuously monitoring flood warnings, river levels and rainfall forecasts if primary warning for Milperra is triggered
- organising additional staff for Milperra Village in case Milperra needs to evacuate
- notifying Castle Hill of the need to be ready in case Milperra needs to evacuate and organise additional staff for Castle Hill
- notifying bus drivers to be on standby in case Milperra needs to evacuate
- notifying next of kin of Residential Care residents when there is the possibility of evacuation
- notifying the next of kin of uncontactable Retirement Living residents when there is the possibility of evacuation
- refreshing SES contact details and proposed evacuation centre closest to the Milperra Village when there is the possibility of evacuation
- providing the Village Manager with a safe route to the local SES centre if available
- notifying Anglicare Food Services of additional food required at Milperra for shelter in place and Dover Hall if evacuation from Milperra is required
- notifying staff when vertical evacuation is no longer required once flood levels have dropped below the trigger height for this stage and confirmation has been received that no further flooding is forecast.
- notifying RL residents when evacuation is no longer required
- notifying next of kin when evacuation is no longer required
- notifying catering when additional stock is no longer required at Milperra or Castle Hill
- notifying Castle Hill evacuation centre when evacuation is no longer required
- notifying on-site and on-call staff when they are no longer required
- notifying bus drivers when buses are no longer required
- notifying the Village Manager of the need to prepare for evacuation of RL buildings
- notifying next of kin of any RL residents that are uncontactable of the need to evacuate
- keeping RC residents' next of kin of flood current and forecast situation
- instructing additional staff to make their way to Milperra Village. Provide details of location to park car above flood waters
- advising SES of the need to shelter in place and provide number of residents and staff to remain on site
- ensuring buses are fuelled and placed on standby.
- providing bus drivers and staff with route to Milperra village and Castle Hill including waiting location in Milperra.
- providing bus drivers with Flood Wardens and Flood Team contact telephone numbers
- checking routes to and from Milperra are still open and revising bus routes as required
- organising for flooded buildings to be cleaned and checked for safety before trades and residents can re-enter

Plan B

- confirming that building evacuation is to commence
- directing staff at bus locations to reconfigure buses to suit ambulant requirements of residents
- directing buses to relocate to Milperra village waiting area confirming route there and to Castle Hill
- providing Flood Wardens contact details to all drivers.
- organising buses to ferry residents and staff to the SES evacuation centre to wait

for available transport to Castle Hill, in the event of shortfall in bus numbers

- notifying RC residents next of kin of the need to evacuate to Castle Hill where residents can be picked up
- organising vacant rooms for evacuated residents
- requesting additional staff attend Castle Hill temporary hostel
- checking with Anglicare Food Services that adequate allocation has been made for Milperra evacuees
- commencing transformation into temporary Hostel in Castle Hill
- notifying residents' next of kin of commencement of evacuation
- notifying bus drivers, catering and Castle Hill evacuation centre of cancellation of evacuation
- continuous monitoring of road routes and advise drivers of any possible closures
- contacting buses in transit with residents. Dependant on proximity to Milperra/Castle Hill and health of residents the Flood Team will decide on whether bus is to return to Milperra directly or continue to Castle Hill evacuation centre for resident to eat and rest prior to returning to Milperra
- providing updates to Catering on number of residents and staff requiring food at the Castle Hill evacuation centre
- notifying Castle Hill evacuation centre when evacuation is no longer required.

Plan C

- confirming that building evacuation is to commence
- confirming location and preferred route to local SES evacuation centre
- contacting RC residents next of kin and advise residents are being evacuated to the SES Evacuation Centre
- notifying SES evacuation centre of number of residents moving to evacuation centre
- notifying bus drivers of safe route to SES evacuation centre to pick up residents
- redirecting busses to SES evacuation centre to pick up residents
- continuous monitoring of road routes and advise drivers of any possible closures
- notifying bus drivers, catering and Castle Hill evacuation centre of revised numbers of residents being evacuated.

3.6.3 Village Manager

The Village Manager will be responsible for:

When new RL residents arrive:

- providing residents with the flood emergency response summary plan (Appendix C)
- explaining the flood emergency response procedures

Plan A

- appointing sufficient flood wardens to implement FERP for RLUs
- providing annual training for flood wardens on their responsibilities under the FERP
- annually reminding RL residents of the flood emergency response procedures
- checking staff levels for current shift and next 48 hrs for shelter in place plus the following scenarios:

  - Evacuation of all Residential Care (RC) residents to Castle Hill;

  - Evacuation of all RC residents to SES Evacuation Centre;
- notifying staff of risks of flood event and roster changes
- confirming with the Flood Team the number of Residential Care residents detailing those that are oxygen, gurney and wheelchair dependant
- checking food, water and medical stock is sufficient for RC residents and staff (including additional) for 48hrs. Requesting delivery of shortfall
- recording which retirement living residents have been notified of the flood risk and those that will require assistance to get to the SES flood evacuation centre
- ensuring Milperra Village staff relocate cars to above flood locations in max groups of 3 once staff levels are above 20

- notifying the Flood Team when flood water has inundated the village grounds.
- providing details of residents and staff that will be remaining in the village for the duration of the flood.

Plan B

- notifying Flood Team of the need to evacuate the residential care home
- evacuating residents to buses
- ensuring a minimum of 1 staff member for every 5 residents on each bus
- ensuring all residents have been evacuated
- notifying the Flood Team when evacuation is no longer required

Plan C

- confirming the need to evacuate to the SES evacuation centre and providing resident and staff details of those to be evacuated
- reviewing staff numbers required to remain at evacuation centre with residents making allowances for shift changes
- ensuring staff are given the opportunity to notify their relatives that they are evacuating to the SES Evacuation centre
- providing accompanying staff with route map to the local SES evacuation centre
- ensuring a minimum of 1 staff member for every 5 residents on each bus
- ensuring all residents have been evacuated
- Notifying the Flood Team when evacuation is no longer required.

3.6.4 Flood Wardens

The Flood Wardens will be responsible for:

Plan A

- advising village staff of above flood location for the relocation of cars
- charging all 2 way radios

Plan B

- confirming bus numbers as they arrive. Details required of actual buses that did not make it and advise this to Flood Team
- instructing buses to move to the loading area on Bullecourt Lane
- directing ambulances to the main entrance, in the case of a medical emergency

Plan C

- directing ambulances to the main entrance, in the case of a medical emergency
- attending evacuation centre and notify Village manager of number of residents in centre. In case of shortfalls accompanying staff member is to be contacted. Failing that SES member to be notified

3.6.5 Staff

The Staff will be responsible for:

Plan A

- notifying RL residents of possible flood
- Notifying retirement living residents that vertical evacuation is no longer required
- notifying RL residents of the need for them to evacuate
- informing RC residents of extent of flood
- arriving staff are to advise village manager of their arrival
- converting meeting rooms to meet staff sleeping requirements
- Notifying residential care residents of the extent of the flood.
- Notifying residential care residents that flood waters are receding

Plan B

- Attending bus waiting area and report arrival of buses to Flood Warden.
- Notifying Residential Care residents of the need to evacuate

3.6.6 Maintenance Personnel

The Maintenance staff will be responsible for:

Plan A

- Checking generator has been fuelled and is operational.

3.6.7 Driver

The Drivers will be responsible for:

Plan B

- Notifying Flood Team if delays are expected.
- Notifying Flood Team of number of residents on bus and ETA.

Plan C

- Notifying Flood Team of number of residents on bus and ETA.

3.6.8 Clinical Leader

The Clinical Leader will be responsible for:

Plan B

- Ensuring least able residents are evacuated first.

Plan C

- Ensuring least able residents are evacuated first.

3.6.9 Anglicare Retirement Village Staff

All staff will be responsible for:

- becoming familiar with the flood emergency response procedures set out in the FEMP
- following the procedures set out in this FEMP in the event of a flood

Duty managers may delegate any of the actions set out in this FERP that need to be taken during or after a flood but bear ultimate responsibility for their implementation.

3.6.10 Anglicare Retirement Village Residents

Residents are to follow the directions of staff during a flood alert and evacuation.

Likelihood of Triggers

3.7 Chances of Implementation

There is no way of forecasting how often flooding will occur and how often phases of the FERP will be activated. Nothing could happen for decades and then similar triggers could be reached multiple times in the same year.

What we do know are significant flood peaks on the Georges River over the past 200 years although these have not always measured at the same locations or with the same level of accuracy.

The table on the next page provides a summary of known historic peak flood peaks and suggests which phases of this FERP would be triggered were they to occur again. These are estimates based on Milperra Bridge flood peaks where they are available and relative flood peaks for other locations.

It suggests that over the 210 years for which records exist, Milperra Village would have triggered the Flood Ready phase at least 34 times. This would have escalated to Evacuation Ready about thirteen of those times and from those the site would have been Evacuated eight times. The last evacuation would have occurred in 1988 and the time before that in 1956 but the Village would have been evacuated five times between 1860 and 1898, including in 1887 and 1889. It is unlikely that any of these floods would have been high enough to flood the buildings in the Village but it may not be possible to know that at the time the evacuation decision has to be made.

It should also be noted that an analysis of Bureau of Meteorology Data on flood warnings for the Georges River from 2007 to 2015 indicates that of the nine Flood Watches issued by the Bureau of Meteorology, on seven occasions the river did not rise to a minor flood level. This suggests that the site would have to be in Phase 3 – Flood Ready more often than peak levels alone suggest.

Date	Level (m AHD)			Likely FERP Phase which would be activated today
	Liverpool Weir	Lansdowne Bridge	Milperra Bridge	
May 1809		8.2		Phase 5 - Evacuate
Apr 1860		7.5		Phase 5 - Evacuate
Feb 1873	10.5	8.0		Phase 5 - Evacuate
Apr 1887	9.2			Phase 5 - Evacuate
May 1889	9.7	7.2		Phase 5 - Evacuate
1892	6.3			Phase 3 – Flood Ready
Jan 1895	7.1			Phase 3 – Flood Ready
Feb 1898	9.0	5.5		Phase 5 - Evacuate
July 1900	7.3			Phase 4 – Evacuation Ready
Mar 1914	7.4			Phase 4 – Evacuation Ready
1927	6.7			Phase 3 – Flood Ready
1943	7.0			Phase 3 – Flood Ready
Jun 1949	7.6			Phase 4 – Evacuation Ready
Jun 1950	7.4	5.3	3.5	Phase 3 – Flood Ready
Feb 1956	8.3	5.7	4.8	Phase 5 - Evacuate
Nov 1961	7.1	4.6	3.8	Phase 4 – Evacuation Ready
Dec 1962	5.6			Phase 3 – Flood Ready
Aug 1963	6.7		3.3	Phase 3 – Flood Ready
Jun 1964	7.1		3.6	Phase 3 – Flood Ready
Apr 1967	5.9			Phase 3 – Flood Ready
Mar 1978	5.8	3.7	2.9	Phase 3 – Flood Ready
April 1981	3.8			Phase 3 – Flood Ready
Apr 1982			3.0	Phase 3 – Flood Ready
Aug 1986	7.2	5.1	4.4	Phase 3 – Flood Ready
Oct 1987	6.0		2.4	Phase 3 – Flood Ready
Apr 1988	7.4	5.8	4.9	Phase 5 - Evacuate
Jul 1988			2.9	Phase 3 – Flood Ready
Feb 1990	5.1	3.1	2.9	Phase 3 – Flood Ready
Aug 1990			2.4	Phase 3 – Flood Ready
Jun 1991	6.6	4.7	3.8	Phase 4 – Evacuation Ready
Aug 1996	5.8	2.4	2.0	Phase 3 – Flood Ready
Feb 2008			2.1	Phase 3 – Flood Ready
Mar 2012			2.2	Phase 3 – Flood Ready
Apr 2015			2.8	Phase 3 – Flood Ready

Source: George River Floodplain Risk Management Study and Plan (Bewsher, 2004) and MHL Historical Gauge Data (1982-2015)

4 MANAGEMENT ACTIONS

The following management actions are applicable in each phase in response to the listed triggers.

4.1.1 Phase 1: Standby

Trigger for action: Every 5 years

- Review FERP

Trigger for action: Annually

Actions

- Appoint Flood Team
- Approve financial resources to maintain and implement FERP
- Ensure adequate human resources to maintain and implement FERP
- Ensure Flood Team is appropriately trained
- Ensure there is a fleet of at least 16 buses suitable for transporting RC patients
- check that all resources required to implement this FERP are in place and functional
- maintain a subscription service to a hazards monitoring service
- organise training for Village Manager and other key staff in use of this FERP
- refresh all staff and RL residents on the provisions of this FERP

Trigger for action: Quarterly

Actions

- ensure diesel fuel tanks have fresh fuel

Trigger for action: Weekly

Actions

- ensure at least two days' worth of food and medical supplies are available in RC

Trigger for action: Daily

Actions

- check weather and flood forecasts

Trigger for action: As Required

Actions

- Induct all new staff into use of this FERP
- maintain latest version of FERP on in hard copy and centrally electronically
- appoint and train sufficient flood wardens
- maintain all resources required to implement this FERP
- provide RL residents with a summary FERP upon arrival
- Maintain RL and RC residents next of kin contact details hard copy on site and central soft copy
- Maintain RL resident contact details hardcopy on site and central soft copy

4.1.2 Phase 2: Flood Alert

Trigger for action: BOM issues Severe Weather Warning for Sydney Metropolitan Area OR BOM issues Flood Watch

Actions

- check weather and flood forecasts and monitor flood levels every 4 hours

4.1.3 Phase 3: Flood Ready

Trigger for action:

Primary Trigger - BOM Issues Flood Watch, Minor or Moderate Flood Warning of 3m Quantified Flood Warning

OR

Critical Trigger - Milperra Bridge gauge reaches +3m (equivalent to +2.5m AHD) or a Major Flood Warning or +4.2m Qualified Flood Warning

Actions

- check weather and flood forecasts and monitor flood levels every 2 hours
- Notify Village Manager of the rising flood levels
- Check staff levels for current shift and next 48 hrs for the following scenarios:
  a. Plan A - Evacuate all RC residents to Castle Hill;
  b. Plan B - Evacuate all RC residents to SES Evacuation Centre
  c. Plan C - All RC residents relocate to first floor of RC Facility
- Notify staff of risks of flood event and roster changes.
- Staff to be given the opportunity to notify their relatives of the possibility of a flood
- Confirm with the FT the number of Residential Care residents detailing those that are oxygen, gurney and wheelchair dependant.
- Advise staff of above-flood location for the relocation of cars
- Maintenance technician to attend site
- Check generator has been fuelled and is operational.
- Check food, water and medical stock is sufficient for Residential Care residents and staff (including additional) for 48hrs. Request delivery of shortfall.
- Charge all 2 way radios.
- Village staff to notify RL residents of possible flood. Residents to be asked to congregate on each floor to be updated. Use of phone, intercoms and announcement system are possible.
- RL residents asked to make own arrangements for evacuation transport and temporary accommodation - if able
- Record which RL residents have been notified of the flood risk and those that will require assistance to evacuate.
- Contact additional staff for village and temporary hostel at Castle Hill advise of flood status.
- Notify bus drivers that they are on standby for the evacuation of the Village.
- Notify next of kin of RC residents of possible flood event.
- Notify next of kin of uncontactable RL residents of possible flood event.
- Refresh SES contact details and proposed evacuation centre closest to the Milperra village - taking into account flood path
- Provide VM with safe route to local SES centre if available.
- Notify Anglicare Food Services of additional food required at Milperra for shelter in place and Dover Hall if evacuation from Milperra is require

4.1.4 Phase 4: Evacuation Ready

Primary Trigger - Trigger for action: BOM issues Major Event Flood Warning forecast of +5.8 m (+5.3m AHD) or higher

OR

Milperra Bridge gauge reaches +4.2m (equivalent +3.7m AHD)

Actions

- check weather and flood forecasts and monitor flood levels every 2 hours
- Flood Team to notify the Village manager of the need to prepare for evacuation of RL buildings.
- Staff and Flood Wardens to notify Retirement Living residents of the need for them to evacuate. Residents unable to evacuate themselves to be transferred to

the local SES Evacuation Centre using the Milperra Village bus. Refer to Phase 6.

- Flood Team to notify next of kin of any retirement living residents that are uncontactable of the need to evacuate. Flood Team to contact next of kin.
- Staff to inform Residential Care residents of extent of flood.
- Flood Team to advise Residential Care resident's next of kin (NOK) of flood extent.
- Instruct additional staff to make their way to Milperra village. Provide details of location to park car above flood waters.
- Medically trained staff member to remain at Milperra until site completely evacuated
- Staff to be given the opportunity to update relatives on circumstances.
- Arriving staff are to advise village manager of their arrival.
- Village Manager to notify staff of rosters and sleeping arrangements.
- Milperra village staff to relocate cars to above flood locations in max groups of 3 once staff levels are above 20
- Conversion of meeting rooms to accommodate staff sleeping requirements.
- If not already received provide Village Manager with safe route to local SES centre.
- Ensure buses are fuelled and placed on standby. Provide bus drivers and staff with route to Milperra village and Castle Hill including waiting location in Milperra. Provide bus drivers with flood warden's and Flood Team contact telephone numbers. 2 additional buses for contingency plus an additional 2 in case retirement living residents require assistance.
- Check routes to and from Milperra are still open and revise bus routes as required

4.1.5 Phase 5: Plan A - Village Evacuation to Castle Hill

Trigger for action: Georges River flood level reaches +5.2m (equivalent +4.7m AHD). Flood waters have now entered the site and are at least 1.1m lower than Bullecourt Lane and Avenue

Actions

- check weather and flood forecasts and monitor flood levels every 2 hours
- Village Manager to notify the flood team that flood water has inundated the village grounds.
- Flood Team to confirm that retirement living evacuation is to commence
- Village manager to provide details of RL residents that will be evacuating to SES Evacuation Centre - refer Phase 6.
- Staff to notify residential care residents of the extent of the flood.
- Flood Team to advise residential care resident's next of kin of the extent of the flood, the possible length of time that the village will be shut and that residents will be transported to Castle Hill.
- Staff to be given the opportunity to update relatives on circumstances.
- Maintain vigil on the Milperra to Castle Hill route and advise if route is blocked and of alternative route
- Village Manager to notify Flood Team of the need to evacuate the residential care home.
- Flood Team to confirm that building evacuation is to commence
- Direct staff at bus locations to reconfigure buses to suit ambulant requirements of residents.
- Direct buses to relocate to Milperra village waiting area confirming route there and to Castle Hill. Provide Flood Wardens contact details to all drivers.
- Staff member to attend bus waiting area and report arrival of buses to Flood Warden.
- Flood Warden to confirm bus numbers as they arrive. Details required of actual buses that did not make it so FW can advise Flood Team.

- Buses to be at Milperra within 1hr. Bus drivers to notify Flood Team if delays are expected.
- Where there is a shortfall in bus numbers the Flood Team is to organise buses to ferry residents and staff to the SES evacuation centre to wait for available transport to Castle Hill.
- Staff to notify Residential Care residents of the need to evacuate
- Flood Team to notify Residential Care residents' next of kin of the need to evacuate to Castle Hill where residents can be picked up.

At Castle Hill

- Organise vacant rooms for evacuated residents
- Request additional staff attend Castle Hill temporary hostel
- Check with Anglicare Food Services that adequate allocation has been made for Milperra evacuees
- Commence transformation into temporary Hostel in Castle Hill

Upon arrival of buses at Milperra

- Least able residents to be evacuated first.
- Flood Team to notify residents' next of kin of commencement of evacuation.
- Buses to be instructed to move to the loading area on Bullecourt Lane
- In the case of a medical emergency ambulances are to be directed to the main entrance.
- Residents to be evacuated to buses.
- Minimum 1 staff member for every 5 residents on each bus
- Village manager to sweep facility to ensure all residents have been evacuated
- Bus driver to notify Flood Team of number of residents on bus and ETA.

At Castle Hill

- Additional staff have reached Dover Hall
- Dover Hall has been transformed into temporary Hostel
- Anglicare Food Services is ready to provide meals for Milperra evacuees

4.1.6 Phase 6: Plan B - Village Evacuation to SES Evacuation Centre

Trigger for action: Georges River flood level reaches +5.2m (equivalent +4.7m AHD). Flood waters have now entered the site and are at least 1.1m lower than Bullecourt Lane and Avenue.

AND

RL Residents cannot organise their own evacuation to a safe location out of the floodplain OR The route to Castle Hill is not trafficable

Actions

- check weather and flood forecasts and monitor flood levels every 2 hours
- Village manager to confirm the need to evacuate to the SES evacuation centre and provide resident and staff details of those to be evacuated.
- Flood Team to confirm that building evacuation is to commence.
- Confirm location and preferred route to local SES evacuation centre.
- Review staff numbers required to remain at evacuation centre with residents making allowances for shift changes.
- Flood Team to contact Residential Care residents' next of kin and advise residents are being evacuated to the SES Evacuation Centre.
- Staff to be given the opportunity to notify their relatives that they are evacuating to the SES Evacuation centre
- Flood Team to notify SES evacuation centre of number of residents and staff moving to evacuation centre
- Flood Team to notify bus drivers of safe route to SES evacuation centre to pick up residents

- Direct staff at bus locations to reconfigure buses to suit ambulant requirements of residents.
- Direct buses to relocate to Milperra Village waiting area confirming route there and to Castle Hill. Provide Flood Wardens contact details to all drivers
- Staff member to attend bus waiting area and report arrival of buses to Flood Warden.
- Flood Warden to confirm bus numbers as they arrive including. Details required of actual buses that did not make it so FW can advise Flood Team.
- Buses to be at Milperra within 1hr. Bus drivers to notify Flood Team if delays are expected
- Where there is a shortfall in bus numbers the Flood Team is to organise buses to ferry residents and staff to the SES evacuation centre to wait for available transport to Castle Hill.
- Staff to notify Residential Care residents of the need to evacuate
- Flood Team to notify Residential Care residents' next of kin of the need to evacuate to Castle Hill where residents can be picked up.

Upon arrival of buses

- Least able residents to be evacuated first.
- Village Manager to give instruction to evacuate building.
- In the case of a medical emergency ambulances are to be directed to the main entrance.
- Village manager to provide accompanying staff with route map to the local SES evacuation centre
- Minimum 1 staff member for every 5 residents on each bus
- Village manager to sweep facility to ensure all residents have been evacuated

Upon arrival at evacuation centre

- Flood warden to attend evacuation centre and notify Village manager of number of residents in centre. In case of shortfalls accompanying staff member is to be contacted. Failing that SES member to be notified
- Temporary accommodation arrangements to be provided for RL residents

When route to Castle Hill reopens

- Buses to be redirected to SES evacuation centre to pick up residents
- Least able residents to be evacuated first.
- Bus driver to notify Flood Team of number of residents on bus and ETA.

4.1.7 Phase 7 Plan C: Village Evacuation to First floor RC

Trigger for action: Georges River flood level reaches +5.2m (equivalent +4.7m AHD). Flood waters have now entered the site and are at least 1.1m lower than Bullecourt Lane and Avenue

AND

Castle Hill and SES Evacuation Centre are not accessible OR it is apparent the evacuation of entire Village off site will not be complete in time

Actions

- Check weather and flood forecasts and monitor flood levels relocate all RC residents and staff to first floor
- Redirect any RL residents who have not yet left site to the first floor of RC building
- Contact NSW SES and advise of number and condition of people sheltering on site and status of power, food, water and medical provisions

4.1.8 Phase 8 Plan D: Village Evacuation to Milperra Park

Trigger for action: Georges River flood level reaches +6.5m (equivalent +6m AHD). Flood waters are now about to cut all access to the RC Facility

AND

something occurs make building an unsafe refuge (e.g. a fire in the building)

Actions

- check weather and flood forecasts and monitor flood levels every 2 hours
- all staff and residents walk along Bullecourt Avenue to Milperra Park
- contact NSW SES to advise of situation

4.1.9 Phase 9: Stand Down

Trigger for action: BOM flood peak forecast 7.5m (equivalent to 7m AHD) or less with no potential for further flood rises

Actions

- Notify staff that evacuation is no longer required.
- Notify retirement living residents that evacuation is no longer required.
- Notify next of kin that evacuation is no longer required.
- Notify on-call staff that they are no longer required.
- Notify Anglicare Food Services that additional stock is no longer required at Milperra or Caste Hill
- Notify bus drivers that buses are no longer required
- Notify Castle Hill evacuation centre that evacuation is no longer required. Evacuation centre to remain operational until all residents have been returned
- Buses that have not picked up residents are to return to base.
- Flood team to contact buses in transit with residents. Dependant on proximity to Milperra/Castle Hill and health of residents the Flood Team will decide on whether bus is to return to Milperra directly or continue to Castle Hill evacuation centre for resident to eat and rest prior to returning to Milperra.
- Residents in the Castle Hill evacuation centre are able to eat and rest before returning to Milperra.
- Flood Team to provide updates to Anglicare Food Services on number of residents and staff requiring food at the Castle Hill evacuation centre.
- Residents in the Castle Hill evacuation centre are to remain there until secondary accommodation is made available or flood waters recede.

4.1.10 Phase 10: All Clear

Trigger for action: Upon advice from SES

Actions

- All buildings to be checked for vermin and pests
- All buildings to be checked by structural engineer and defects rectified
- All buildings and grounds to be cleaned ready for use
- Plumbing to be checked by engineer and defects rectified
- Electrical to be checked by engineer and defects rectified
- Gas to be checked by engineer and defects rectified
- Potable water supply to be sampled and tested prior to use.
- All engineers, trades, etc to adhere to relevant Health and Safety practises
- Review of each step actioned regardless of outcomes or final flood level
- Review of FERP and amend where required.

APPENDIX A – FLOOD ACTIONS CHECKLIST

MILPERRA FLOOD EMERGENCY RESPONSE PLAN - TRIGGERS, ACTIONS AND RESPONSIBILITIES

DEFINITIONS

Executive Management (EM)	Anglican Community Services Executive Management Team responsible for the overall running of the organisation
Flood Team (FT)	The FT is a specialised team within Anglicare that has been trained to deal with flood emergencies with members located both on and off-site. Team members will include fleet, staff and project managers.
Hazard Monitoring Services	An external hazard montoring subscription service will provide The Anglicare Flood Team with timely "push alerts" with all hazard alerts relevant to the site including information on the flooding in the Georges River.
Village Manager (VM)	Manager with responsibility for the overall Milperra site include RC and RL. This role will be delegated to the most senior manager in the village during a flood emergency response
Flood Warden (FW)	The Milperra Village will have a number of nominated flood wardens with specific roles as described in the following plan. There will be sufficient flood wardens in each RL building to ensure that there is at least one FW per building when a flood occurs. FW will also be nominated for each floor of the RC Facility
Residential Care (RC)	The Residential Care facility is the aged care facility on site which is staffed 24/7 and provides variious levels of care from low care to high care.
Retirement Living (RL)	Retirement Living residents are those living independently in the apartments in buildings A, B, C and D. These residents are to make their own evacaution arrangements in response to the notifications provided to them in accordance with this FERP. If they are unable to do so they must notify the VM that they will require assistance.
Primary and Critical Triggers	This plan provides 2 types of triggers. Both are indicators of impending rising water levels and need to be acted upon accordingly. The Primary Trigger is based on flood forecasts and may give more advanced notice of flooding however due to it's unreliability (Flood Watches and Warnings are not always issued during flood events) a Critical Trigger is required. The Critical Trigger is based on actual levels rather than predicted and as such the period to carry out the required tasks is shortened. The time constraints given for each period is based on the maximum rate of rise of water between Critical Trigger levels at Milperra Bridge Gauge based on a modelled Probable Maximum Flood (PMF) - See Flood Water Rate of Rise
Permanent Provisions	The following features have been incorportated into the design of Milperra Village to improve safety of staff and residents in a flood. These features must be maintained.On-site generator to receive routine maintenance: The following Emergency equipment to receive routine maintenance Jobmatch currently manages Anglicare's staffing requirements for day to day and emergencies.
Flood Water Rate of Rise	The rate of rise used to calculate the time constraints on the evacuation is equal to the rate of rise of flood waters druing the fastest rising Probable Maximum Flood (PMF) event that has been modelled to date for the Georges River. This is equal to 640mm rise per hour. Most floods are likely to rise more slowly than this but it is also possible that some could rise more quickly

PHASE 1 - Standby

REF NO	ACTION DESCRIPTION	PRIMARY TRIGGER	CRITICAL TRIGGER	DELIVERY PERIOD	ACTION WHEN	ACTION ITEM	RESPONSIBLE	INFORM	RESOURCE	Date and Time Completed
1.1	Resource FERP	Not applicable	Not applicable	Not applicable	annually	Appoint Flood Team	EM			
					annually	Approve financial resources to maintain and implement FERP	EM			
					annually	Ensure adequate human resources to maintain and implement FERP	EM			
					annually	Ensure Flood Team is appropriately trained	EM		FERP	
					annually	Ensure there is a fleet of at least 16 buses suitable for transporting RC patients	EM		Fleet register Use of Anglicare bus to relay Retirement Living residents to local SES centre. 16 Buses required for full evacuation of Residential Care Home in the case of fire or major utility failure. Averages for buses: distance 53km; motorway driving 44km; time 41mins with no traffic. All buses are within 15-60min drive. Each bus can be adapted for wheelchairs within 10mins.	
					every 5 years	review FERP	FT		FERP	
					annually	check that all resources required to implement this FERP are in place and functional	FT			
					annually	maintain a subscription service to a hazards monitoring service	FT			
					annually	organise training for Village Manager and other key staff in use of this FERP	FT		FERP	
					daily	check weather and flood forecasts	FT/VM		Internet Access	
					annually	refresh staff and RL residents on provisions of this FERP	VM		FERP	
					as required	maintain latest version of FERP on in hard copy and centrally electronically	VM		FERP	
					as required	induct all new staff into use of this FERP	VM		FERP	
					as required	appoint and train sufficient flood wardens	VM		FERP	
					as required	maintain all resources required to implement this FERP	VM		FERP	
					as required	provide RL residents with a summary FERP upon arrival	VM		FERP	
					as required	Maintain RL and RC residents next of kin contact details hard copy on site and central soft copy	VM		Resident Register	
					as required	Maintain RLresident contact details hardcopy on site and central soft copy	VM		Resident Register	
					quarterly	ensure diesel fuel tanks have fresh fuel	VM		fuel	
					weekly	ensure at leasr 2 days worth of food and medical supplies are available in RC	VM		food and medical supplies	

PHASE 2 - Flood Alert

REF NO	ACTION DESCRIPTION	PRIMARY TRIGGER	CRITICAL TRIGGER	DELIVERY PERIOD	ACTION WHEN	ACTION ITEM	RESPONSIBLE	INFORM	RESOURCE	Date and Time Completed
2.1	Milperra Village on Alert	BOM Issues Severe Weather Warning for Sydney Metropolitan Area	BOM Issues Flood Watch	8-48 hours	every four hours	check weather and flood forecasts and monitor flood levels	FT/VM	FW	Internet Access	

PHASE 3 - Flood Ready

REF NO	ACTION DESCRIPTION	PRIMARY TRIGGER	CRITICAL TRIGGER	DELIVERY PERIOD	ACTION WHEN	ACTION ITEM	RESPONSIBLE	INFORM	RESOURCE	Date and Time Completed
3.1	Milperra Village Readiness	BOM Issues Flood Watch, Minor or Moderate Flood Warning or 3m Quantified Flood Warning	Milperra Bridge gauge reaches +3m (equivalent +2.5m AHD) or a Major Flood Warning or +4.2m Quantified Flood Warning	Approximately 2hrs needed to implement all actions. Minimum 4.5hrs available until flood waters reach Bullecourt Lane and Bullecourt Avenue (+5.3m AHD) if failure to receive *Flood Watch* and activated by gauge levels only and flood rising as fast as fastest rising flood modelled to date.	every two hours	check weather and flood forecasts and monitor flood levels	FT/VM	FW		
					Upon activation of either trigger.	Notify village manager of the rising flood levels	FT	VM	Flood monitoring service	
						Check staff levels for current shift and next 48 hrs for the following scenarios: * Plan A - Evacuate all RC residents to Castle Hill; * Plan B - Evacuate all RC residents to SES Evacuation Centre * Plan C - All RC residents relocate to first floor of RC Facility	VM		JobMatch	
						Notify staff of risks of flood event and roster changes.	VM	Staff		
						Staff to be given the opportunity to notify their relatives of the possibility of a flood	Staff			
						Confirm with the FT the number of Residential Care residents detailing those that are oxygen, gurney and wheelchair dependant.	VM	FT	Resident register	
						Advise staff of above-flood location for the relocation of cars	FW		Map of extent of PMF event	
						Maintenance technician to attend site	Maintenance			
						Check generator has been fuelled and is operational.	Maintenance	VM	Maintenace log book	
						Check food, water and medical stock is sufficient for Residential Care residents and staff (including additional) for 48hrs. Request delivery of shortfall.	VM		Anglicare Food Services	
						Charge all 2 way radios.	FW		2-Way Radios	
						Village staff to notify RL residents of possible flood. Residents to be asked to congregate on each floor to be updated. Use of phone, intercoms and announcement system are possible.	Staff	VM		
						Record which RL residents have been notified of the flood risk and those that will require assistance to evacuate.	VM		Resident Register	
						RL residents asked to make own arrangements for evacuation transport and temporary accommodation - if able	RL Residents	VM		
3.2	Off-Site Readiness				Upon receipt of staff levels	Contact additional staff for village and temporary hostel at Castle Hill advise of flood status.	FT		Jobmatch	
						Notify bus drivers that they are on standby for the evacuation of the Village.	FT	bus drivers	JobMatch	
					Upon receipt of list of current RC residents	Notify next of kin of RC residents of possible flood event.	FT	next of kin	Resident register	
					Upon receipt of RL residents not contacted	Notify next of kin of uncontactable RL residents of possible flood event.	FT	next of kin	Resident register	
					Upon activation of either trigger.	Refresh SES contact details and proposed evacuation centre closest to the Milperra village - taking into account flood path	FT	VM	SES Flood Evacuation Plan	
						Provide VM with safe route to local SES centre if available.	FT	VM	SES Flood Evacuation Plan	
					Upon confirmation of number of RL residents who will need assistance	Notify Anglicare Food Services of additional food required at Milperra for shelter in place and Dover Hall if evacuation from Milperra is required.	FT	Anglicare food service	Anglicare Food Services	

PHASE 4 - Evacuation Ready										
REF NO	ACTION DESCRIPTION	PRIMARY TRIGGER	CRITICAL TRIGGER	DELIVERY PERIOD	ACTION WHEN	ACTION ITEM	RESPONSIBLE	INFORM	RESOURCE	Date and Time Completed
4.1	Milperra Village Readiness	BOM Issues Major Event Flood Warning forecast of +5.8m (+5.3m AHD) or higher	Milperra Bridge gauge reaches +4.2m (equivalent +3.7m AHD).	Approximately 1.5hrs needed to implement all actions. Minimum 2.5hrs available until flood waters reach Bullecourt Lane and Bullecourt Avenue (+5.3m AHD) if failure to receive Flood Watch and activated by gauge levels only and flood rising as fast as fastest rising flood modelled to date.	every two hours	check weather and flood forecasts and monitor flood levels	FT/VM	FW		
					Upon activation of either triggers.	Flood Team to notify the Village manager of the need to prepare for evacuation of RL buildings.	FT	VM	Flood Monitoring Service	
						Staff and Flood Wardens to notify Retirement Living residents of the need for them to evacuate. Residents unable to evacuate themselves to be transferred to the local SES Evacuation Centre using the Milperra Village bus. Refer to Phase 6	Staff	Resident	Milperra Bus	
						Flood Team to notify next of kin of any retirement living residents that are uncontactable of the need to evacuate. Flood Team to contact next of kin.	FT		Resident Register	
						Staff to inform Residential Care residents of extent of flood.	Staff	Resident		
						Flood Team to advise Residential Care resident's next of kin (NOK) of flood extent.	FT	NOK	Resident Register	
						Instruct additional staff to make there way to Milperra village. Provide details of location to park car above flood waters.	FT	Staff	Emergency staff register	
						Medically trained staff member to remain at Milperra until site completely evacuated	Staff			
						Staff to be given the opportunity to update relatives on circumstances.	Staff			
						Arriving staff are to advise village manager of their arrival.	Staff	VM		
						Village Manager to notify staff of rosters and sleeping arrangements.	VM	Staff		
						Milperra village staff to relocate cars to above flood locations in max groups of 3 once staff levels are above 20	Staff	VM		
						Conversion of meeting rooms to accommodate staff sleeping requirements.	Staff	FT	Conversion Plan	
						If not already received provide Village Manager with safe route to local SES centre.	VM			
4.2	Transport Readiness				Upon receipt of route from FT	Ensure buses are fuelled and placed on standby. Provide bus drivers and staff with route to Milperra village and Castle Hill including waiting location in Milperra. Provide bus drivers with flood warden's and Flood Team contact telephone numbers. 2 additional buses for contingency plus an additional 2 in case retirement living residents require assistance.	FT	VM / Bus drivers	Fleet register Use of Anglicare bus to relay Retirement Living residents to local SES centre. 16 Buses required for full evacuation of Residential Care Home in the case of fire or major utility failure. Averages for buses: distance 53km; motorway driving 44km; time 41mins with no traffic. All buses are within 15-60min drive. Each bus can be adapted for wheelchairs within 10mins.	
						Check routes to and from Milperra are still open and revise bus routes as required	FT	VM / bus drivers	Traffic and flood monitoring services	

PHASE 5 PLAN A VILLAGE EVACUATION TO CASTLE HILL										
REF NO	ACTION DESCRIPTION	PRIMARY TRIGGER	TRIGGER FOR ACTION	DELIVERY PERIOD	ACTION WHEN	ACTION ITEM	RESPONSIBLE	INFORM	RESOURCE	Date and Time Completed
5.1	Milperra Village Pre Evacuation	Not Required For This Phase	Georges River flood level reaches +5.2m (equivalent +4.7m AHD). Flood waters have now entered the site and are at least 1.1m lower than Bullecourt Lane and Avenue.	Approximately 2hr needed from activation of flood indicator. Aproximately 2.5hrs available until flood water reaches 1:100 flood level (+6.32m AHD) 0.5m above lowest level in evacuation route. Based on PMF and failure to receive Flood Warning and activated by gauge levels.	every two hours	check weather and flood forecasts and monitor flood levels	FT/VM	FW		
					Upon activation of flood indicator	Village Manager to notify the flood team that flood water has inundated the village grounds.	VM	FT		
						Flood Team to confirm that retirement living evacuation is to commence	FT	VM		
						Village manager to provide details of RL residents that will be evacuating to SES Evacuation Centre - refer Phase 6.	VM	FT	Resident, Staff and Fleet registers	
						Staff to notify residential care residents of the extent of the flood.	Staff	Residents		
						Flood Team to advise residential care residents next of kin of the extent of the flood, the possible length of time that the village will be shut and that residents will be transported to Castle Hill.	FT	GM	Resident Register	
						Staff to be given the opportunity to update relatives on circumstances.	Staff			
						Maintain vigil on the Milperra to Castle Hill route and advise if route is blocked and of alternative route	FT	VM / bus drivers	Monitoring Services	
						Village Manager to notify Flood Team of the need to evacuate the residential care home.	VM	FT		
						Flood Team to confirm that building evacuation is to commence	FT	VM		
5.2	Transport				Upon activation of flood indicator	Direct staff at bus locations to reconfigure buses to suit ambulant requirements of residents.	FT	Drivers	Refurbishment instruction booklet. Drivers have received prior training.	
						Direct buses to relocate to Milperra village waiting area confirming route there and to Castle Hill. Provide Flood Wardens contact details to all drivers.	FT	Drivers	Fleet Register	
						Staff member to attend bus waiting area and report arrival of buses to Flood Warden.	Staff	FW	Fleet Register/2-Way Radio	
						Flood Warden to confirm bus numbers as they arrive. Details required of actual buses that did not make it so FW can advise Flood Team.	FW	FT	Fleet Register	
						Buses to be at Milperra within 1hr. Bus drivers to notify Flood Team if delays are expected.	Drivers	FT	Fleet Register	
						Where there is a shortfall in bus numbers the Flood Team is to organise buses to ferry residents and staff to the SES evacuation centre to wait for available transport to Castle Hill.	FT	FW	Fleet Register	
						Staff to notify Residential Care residents of the need to evacuate	Staff	Residents	Resident Register	
						Flood Team to notify Residential Care residents' next of kin of the need to evacuate to Castle Hill where residents can be picked up.	FT	Residents	Resident Register	
5.3	Castle Hill Village Final Preparations				Upon notification that Milperra village is to be evacuated.	Organise vacant rooms for evacuated residents	FT	GM	Care Information Centre	
						Request additional staff attend Castle Hilll temporary hostel	FT	GM	JobMatch	
						Check with Anglicare Food Services that adequate allocation has been made for Milperra evacuees	FT	nglicare Food Services		
						Commence transformation into temporary Hostel in Castle Hill	FT	GM	Dover Hall emergency evacuation centre gudie	
5.4	Milperra Village Evacuation				Upon arrival of buses	Least able residents to be evacuated first.	Clinical Leader		Resident Register	
						Flood Team to notify residents next of kin of commencement of evacuation.	FT	Residents		
						Buses to be instructed to move to the loading area on Bullecourt Lane	FW	Drivers		
						In the case of a medical emergency ambulances are to be directed to the main entrance.	FW			
						Residents to be evacuated to buses.	VM			
						Minimum 1 staff member for every 5 residents on each bus	VM		Resident Register	
						Village manager to sweep facility to ensure all residents have been evacuated	VM			
						Bus driver to notify Flood Team of number of residents on bus and ETA.	Drivers	FT		
5.5	Castle Hill Village Ready					Additional staff have reached Dover Hall	FT		Jobmatch	
						Dover Hall has been transformed into temporary Hostel	FT		Dover Hall emergency evacuation centre guide	
						Anglicare Food services are ready to provide meals for Milperra evacuees	FT			

PHASE 6 PLAN B VILLAGE EVACUATION TO SES EVACUATION CENTRE										
REF NO	ACTION DESCRIPTION	PRIMARY TRIGGER	TRIGGER FOR ACTION	DELIVERY PERIOD	ACTION WHEN	ACTION ITEM	RESPONSIBLE	INFORM	RESOURCE	Date and Time Completed
6.1	Milperra Village Pre Evacuation	Not Required For This Phase	Georges River flood level reaches +5.2m (equivalent +4.7m AHD). Flood waters have now entered the site and are at least 1.1m lower than Bullecourt Lane and Avenue.	Approximately 2hr needed from activation of flood indicator. Aproximately 2.5hrs available until flood water reaches 1:100 flood level (+6.32m AHD) 0.5m above lowest level in evacuation route. Based on PMF and failure to receive Flood Warning and activated by gauge levels.	every two hours	check weather and flood forecasts and monitor flood levels	FT/VM	FW		
					RL Residents cannot organise their own evacuation to a safe location out of the floodplain OR The route to Castle Hill is not trafficable	Village manager to confirm the need to evacuate to the SES evacuation centre and provide resident and staff details of those to be evacuated.	VM	CMT		
						Flood Team to confirm that building evacuation is to commence.	FT	VM		
						Confirm location and preferred route to local SES evacuation centre.	FT	VM	Route Map	
						Review staff numbers required to remain at evacuation centre with residents making allowances for shift changes.	VM	CMT	Jobmatch	
						Flood Team to contact Residential Care residents next of kin and advise residents are being evacuated to the SES Evacuation Centre.	FT	Relatives/GM	Resident Register	
						Staff to be given the opportunity to notify their relatives that they are evacuating to the SES Evacuation centre	VM			
						Flood Team to notify SES evacuation centre of number of residents and staff moving to evacuation centre	FT		SES Flood Evacuation Plan	
						Flood Team to notify bus drivers of safe route to SES evacuation centre to pick up residents	FT	Drivers	Fleet Register	
6.2	Transport					Direct staff at bus locations to reconfigure buses to suit ambulant requirements of residents.	FT	Drivers	Refurbishment instruction booklet. Drivers have received prior training.	
						Direct buses to relocate to Milperra village waiting area confirming route there and to Castle Hill. Provide Flood Wardens contact details to all drivers.	FT	Drivers	Fleet Register	
						Staff member to attend bus waiting area and report arrival of buses to Flood Warden.	Staff	FW	Fleet Register/2-Way Radio	
						Flood Warden to confirm bus numbers as they arrive. Details required of actual buses that did not make it so FW can advise Flood Team.	FW	FT	Fleet Register	
						Buses to be at Milperra within 1hr. Bus drivers to notify Flood Team if delays are expected.	Drivers	FT	Fleet Register	
						Where there is a shortfall in bus numbers the Flood Team is to organise buses to ferry residents and staff to the SES evacuation centre to wait for available transport to Castle Hill.	FT	FW	Fleet Register	
						Staff to notify Residential Care residents of the need to evacuate	Staff	Residents	Resident Register	
						Flood Team to notify Residential Care residents next of kin of the need to evacuate to Castle Hill where residents can be picked up.	FT	Residents	Resident Register	
6.3	Milperra Village Evacuation				Upon arrival of buses	Least able residents to be evacuated first.	Clinical Leader		Resident Register	
						Village Manager to give instruction to evacuate building.	VM	Staff and Residents		
						In the case of a medical emergency ambulances are to be directed to the main entrance.	FW			
						Village manager to provide accompanying staff with route map to the local SES evacuation centre	VM			
						Minimum 1 staff member for every 5 residents on each bus	VM		Resident Register	
						Village manager to sweep facility to ensure all residents have been evacuated	VM			
6.4	SES Evacuation Centre Processing				Upon arrival at evacuation centre	Flood warden to attend evacuation centre and notify Village manager of number of residents in centre. In case of shortfalls accompanying staff member is to be contacted. Failing that SES member to be notified.	FW	CMT,VM		
						Temporary accommmodation arrangements to be provided for RL residents	NSW Family and Community Services	FW		
					When Route to Castle Hill Reopens	Buses to be redirected to SES evacuation centre to pick up residents	FT	Drivers		
						Least able residents to be evacuated first.	Clinical Leader		Resident Register	
						Bus driver to notify Flood Team of number of residents on bus and ETA.	Drivers	FT		

PHASE 7 PLAN C VILLAGE EVACUATION TO First floor of RC										
REF NO	ACTION DESCRIPTION	PRIMARY TRIGGER	TRIGGER FOR ACTION	DELIVERY PERIOD	ACTION WHEN	ACTION ITEM	RESPONSIBLE	INFORM	RESOURCE	Date and Time Completed
7.1	Milperra Village Shelter on Site	Not Required For This Phase	Georges River flood level reaches +5.2m (equivalent +4.7m AHD). Flood waters have now entered the site and are at least 1.1m lower than Bullecourt Lane and Avenue		Castle Hill AND SES Evacuation Centre are not accessilbe OR It is apparent the evacuation of entire Village off site will not be completed in time	check weather and flood forecasts and monitor flood levelsrelocate all RC residents and staff to first floor	VM	FT		
						redirect any RL residents who have not yet left site to the first floor of RC building	VM	FT		
						Contact NSW SES and advise of number and condition of people sheltering on site and status of power, food, water and medical provisions	VM	NSWSES		

PHASE 8 PLAN D VILLAGE EVACUATION TO Milperra Park										
REF NO	ACTION DESCRIPTION	PRIMARY TRIGGER	TRIGGER FOR ACTION	DELIVERY PERIOD	ACTION WHEN	ACTION ITEM	RESPONSIBLE	INFORM	RESOURCE	Date and Time Completed
8.1	Offsite Pedestrian Evacuation	Not Required For This Phase	Georges River flood level reaches +6.5m (equivalent +6m AHD). Flood waters are now about to cut all access to the RC Facility AND something occurs make building an unsafe refuge (e.g. a fire in the building)		every two hours	check weather and flood forecasts and monitor flood levels	FT/VM	FW		
					Fire within the RC facility or for some other reason it is not safe to remain within the building	all staff and residents walk along Bullecourt Avenue to Milperra Park	VM	FT		
						contact NSW SES to advise of situation	VM	NSWSES		

PHASE 9 Stand Down										
REF NO	ACTION DESCRIPTION	PRIMARY TRIGGER	TRIGGER FOR ACTION	DELIVERY PERIOD	ACTION WHEN	ACTION ITEM	RESPONSIBLE	INFORM	RESOURCE	Date and Time Completed
1.3	Stand-down	Not Required For This Phase	BOM flood peak forecast 7.5m (equivalent to 7m AHD) or less with no potential for further flood rises		Upon notification from flood monitoring service or when BOM indicates a flood peak which does not require site evacaution	notify staff that evacuation is no longer required.	FT	VM	Flood Monitoring Service	
						Notify retirement living residents that evacuation is no longer required.	Staff		Resident Register	
						Notify next of kin that evacuation is no longer required.	FT		Resident Register	
						Notify Anglicare Food Services that additional stock is no longer required at Milperra or Caste Hill	FT		Anglicare Food Services	
						Notify on-call staff that they are no longer required.	FT		JobMatch	
						Notify bus drivers that buses are no longer required	FT		Fleet Register	
						Notify Castle Hill evacuation centre that evacuation is no longer required. Evacuation centre to remain operational until all residents have been returned	FT			
						Buses that have not picked up residents are to return to base.	Drivers			
						Flood team to contact buses in transit with residents. Dependant on proximity to Milperra/Castle Hill and health of residents the Flood Team will decide on whether bus is to return to Milperra directly or continue to Castle Hill evacuation centre for resident to eat and rest prior to returning to Milperra.	FT	Drivers	Fleet Register	
						Residents in the Castle Hill evacuation centre are able to eat and rest before returning to Milperra.	Staff			
						Flood Team to provide updates to Anglicare Food Services on number of residents and staff requireing food at the Castle Hill evacuation centre.	FT		Anglicare Food Services	
						Residents in the Castle Hill evacuation centre are to remain there until secondary accommodation is made available or flood waters recede.	Residents			

PHASE 10 all clear										
REF NO	ACTION DESCRIPTION	PRIMARY TRIGGER	TRIGGER FOR ACTION	DELIVERY PERIOD	ACTION WHEN	ACTION ITEM	RESPONSIBLE	INFORM	RESOURCE	Date and Time Completed
4.2	Return to Site Checklist		Upon advice from SES			All buildings to be checked for vermin and pests	FT			
						All buildings to be checked by structural engineer and defects rectified	FT			
						All buildings and grounds to be cleaned ready for use	FT			
						Plumbing to be checked by engineer and defects rectified	FT			
						Electrical to be checked by engineer and defects rectified	FT			
						Gas to be checked by engineer and defects rectified	FT			
						Potable water supply to be sampled and tested prior to use.	FT			
						All engineers, trades, etc to adhere to relevant Health and Safety practises	FT			
4.1	Post Implemantation Review		Upon completion of evacuation process and prior to any rectification works.			Review of each step actioned regardless of outcomes or final flood level	FT/VM/Staff/FW		FERP	
						Review of FERP and amend where required.	FT/VM/Staff/FW		FERP	

APPENDIX B – EMERGENCY CONTACTS LIST

Name	Organisation	Role	Contact
	Anglicare Food Services	Food Supplies	
	Emergency Services	Fire/ambulance/police	000
	State Emergency Service	SES Local Controller	132 500
	Bureau of Meteorology	NSW Flood Warning Centre	9296 1511
	Bankstown Hospital		9722 8000
		Electricity Supply	
	Sydney Water	Water and Sewerage	
		Gas Supply	
		Telecommunications	
		Waste Disposal	

APPENDIX C – RLU SUMMARY FERP

MY FLOOD EMERGENCY RESPONSE PLAN

The Anglicare Milperra Village is designed and operated with your comfort and safety in mind. That is why we have plans and procedures in place for every possible type of emergency, no matter how rare. This includes a Flood Emergency Response Plan for the Village and this document summarises how that plan affects you and what actions you need to take before, during and after a flood to stay safe.

Types of Flooding

There are two types of flooding which can affect the village:

- **Local stormwater flooding** runs over the ground, down the hill, through the Village and into Bankstown Golf Course on its way to the Georges River. Everywhere in Sydney has some chance of this type of flooding.
- **Georges River flooding** which happens when there is rain over a wide area and the Georges River overflows its banks and floods Bankstown Golf Course. If it continues to rise it could enter the Village. It would only enter the village in extremely rare events.

How to Stay Safe

Local Flooding

Local stormwater flooding can occur at any time during many days of rain or even in a single storm. Most of the time this will be shallow water running over the ground but in very intense storms it could get up to half a metre deep in some parts of the outdoor areas. The Village has been designed so that no water from this type of flooding will enter any of the buildings or covered parking areas in even the largest possible storm.

When this type of flooding is happening the safest place is inside. Please stay inside until the storm has passed and the flooding has stopped. It is likely only to last for a couple of hours at the most.

Georges River Flooding

This will occur when there is intense rainfall for many days over South Western Sydney. The Bureau of Meteorology will issue flood warnings and Anglicare's management team will be monitoring river levels. Flooding would have to reach one metre higher than the "Major" flood level on the Georges River for the lowest outdoor parts of the site to start flooding. It would have to be two and half metres higher than the "Major" flood level before floodwaters entered buildings or car parks.

Such floods are very rare but they could happen and a few were recorded close to these levels on the Georges River in the late 1800's. Extremely rare floods could go even higher than these although there is no record of this type of flooding having occurred in the past 230 years.

If this type of flooding is forecast it is important that everyone leaves the Village well before the floodwaters arrive. Follow the steps on the back of this sheet to keep yourself and others safe.

Always

- Keep this plan in a readily accessible place to be used when needed
- Know the flood free routes out of the Village (see the map)
- Keep a copy of important papers (insurance documents, passports, emergency contact numbers) in a waterproof bag
- Have a first aid kit, a portable radio with spare batteries and a torch with spare batteries ready to take with you

When you hear any flood warning for the Georges River

- Check that you have all of the things listed above ready to take with you
- Check that you have a good supply of necessary medications
- If you have a car, make sure it has a full tank of fuel
- Make sure you have some snacks and drinks you can take with you

When the Village Manager or your building's Flood Warden tells you to <u>GET READY</u> to evacuate

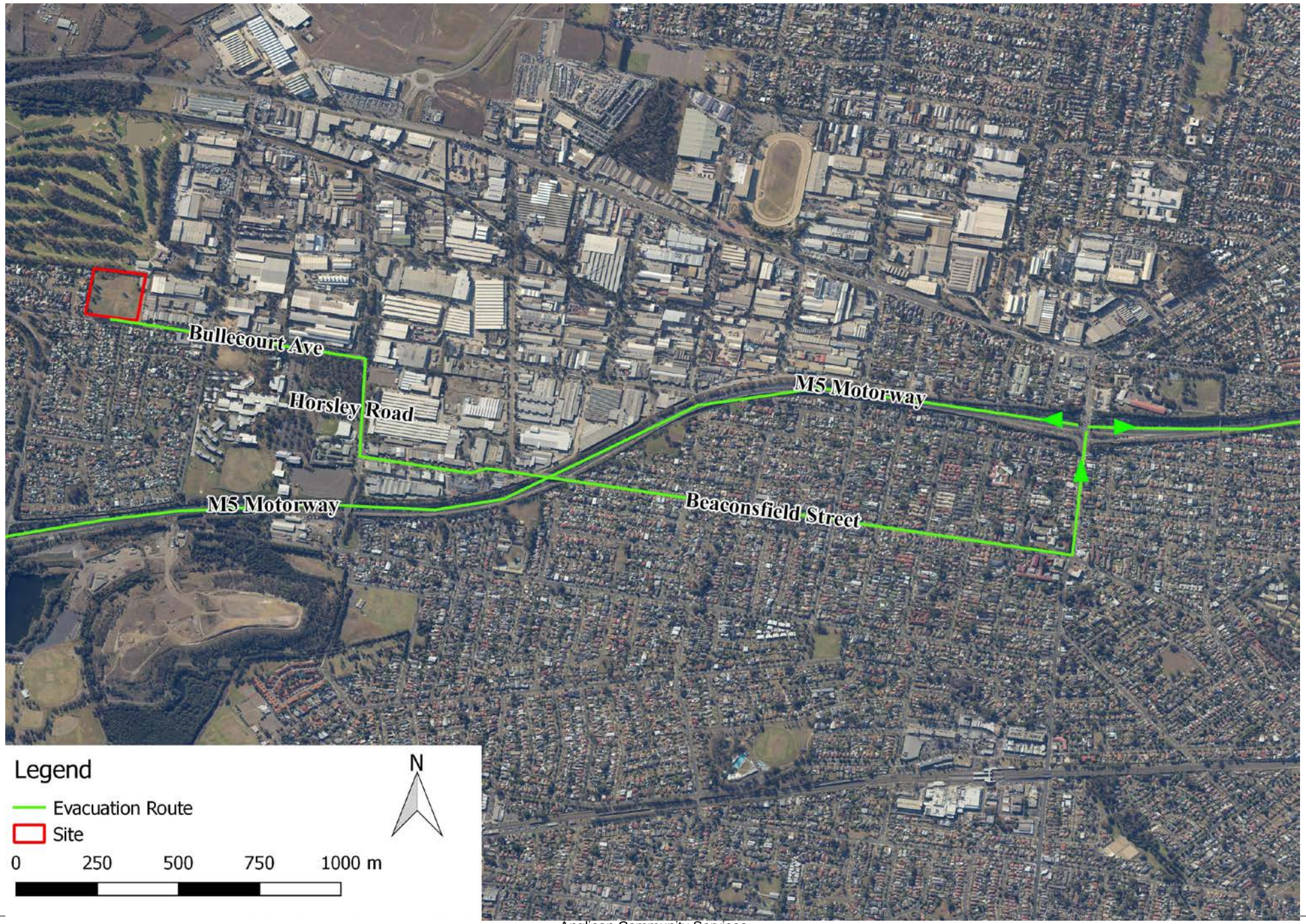
- Contact relatives or friends with whom you can stay overnight if you need to evacuate
- Advise the Village Manager if you cannot find someone to stay with
- If you do not have your own car, organise for someone to pick you up as soon as you have completed your evacuation preparations
- Advise the Village Manager if you have not been able to organise your own evacuation transport
- Charge your mobile phone if you have one
- Pack a bag with:
    - Your important papers
    - First aid kit, portable radio, torch and spare batteries
    - A good supply of medications
    - Any medical aids which you use
    - Glasses and hearing aids if you wear them
    - A change of shoes and clothing including clothing suitable for cold and wet weather even if it is hot right now
    - Toiletries
    - Snacks and drinks
    - Any valuables you would not want to get damaged by water
- Place electrical items on kitchen benches and dining table
- Place on top of beds shoes and clothing which are normally stored lower than beds

When the Village Manager or your building's Flood Warden tells you to <u>EVACUATE</u>

- Evacuate immediately via the flood free evacuation route (see map) to your pre-arranged evacuation destination

After a Flood

- Only return to the Village when Anglicare has contacted you to advise that it is safe to return
- Follow any directions provided by Anglicare Staff
- Revise your personal flood emergency preparations in light of your experience and Anglicare Staff advice.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