Flood Emergency Management Plan (Construction)

Cumberland Cluster (SSD-43065987)

Prepared for Roberts Co (NSW) / 20th December 2023

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Your Partner in Engineering

Contents

PREPARED BY	APPROVED BY	STATUS	ISSUE	DATE
Jamie Marshall	Philip McAteer	Draft	1	22 Nov 2023
Jamie Marshall	Philip McAteer	Rev1	2	24 Nov 2023
Jamie Marshall	Philip McAteer	Rev2	3	30 Nov 2023
Jamie Marshall	Philip McAteer	Final	4	20 Dec 2023

1.0 Introduction

Taylor Thomson Whitting (NSW) Pty. Limited has been engaged by Roberts Co (NSW) to prepare a Construction Flood Emergency Management Plan (CFEMP) to address the SSDA-43065987 requirements (Item B.20, B.21 and B.22) from the Department of Planning and Environment (DPE) for the proposed development at 59-73 Felton Road and 183 Pennant Hills Rd, Carlingford NSW 2118 (The Site).

'B20. Prior to the commencement of each construction stage, a Construction Flood Emergency Management Plan, must be prepared by a suitably qualified and experienced person(s) in consultation with NSW State Emergency Services, submitted to the certifier and a copy the Planning Secretary for information, including but not limited to:

(a) detail on triggers, including rainfall and water level, that require closure of the site (see Section 6.1)

(b) detail on how site closure would be communicated to construction workers, before commencement of the work day (see Section 7.1)

(c) details of drills, frequency and record management of the drills (see Section 5.3).

(d) a map showing the flood-free pedestrian route from each construction site to a suitable location free of inundation (see Section 7.0).

(e) details of any gauges or warning infrastructure that are to be provided to assist with flood management, including frequency of maintenance, and how these will be monitored (see Section 7.1 and 7.2)

(f) identification of suitable locations for evacuation that are free of inundation (see Section 7.3)

(g) flood warning signs around the site to identify areas with Category H3 hazard and higher, in accordance with the Flood Hazard Flood Risk Management Guide FB03, NSW Department of Planning and Environment and are within the overland flow path (see Section 7.1).

B21. The Construction Flood Emergency Management Plan in condition B20, as updated by condition Error! Reference source not found., must be implemented for the duration of that construction stage. (See Section 5).

B22. A copy of the most up to date Construction Flood Emergency Management Plan in condition B20, must be made publicly available on the Applicant's website in accordance with condition A25. (See Section 5).

Note: Construction Flood Emergency Management Plan must include the recommendations made in Section 10.0 Summary and Recommendations of the Flood Impact Assessment Report Cumberland High School and Carlingford West Public School (SSD43065987), revision 12, dated 26 September 2023 and prepared by Taylor Thomson Whitting (NSW) Pty Ltd.'

The proposed development involves upgrades to Carlingford West Public School (CWPS) and Cumberland High School (CHS), collectively referred to as the Cumberland Cluster. The existing Cumberland Cluster is flood affected. The proposed school upgrade works do not worsen the upstream or downstream flood conditions adjacent to the school property. The existing flood risk through the site is improved as a result of the proposed upgrade works as shown in the Flood Impact Assessment report (TTW, September 2023).

This CFEMP has been submitted prior to initial construction works and incorporates emergency strategies for all stages of construction. A CFEMP will be submitted prior to every construction stage and updated, if necessary, to cover the emergency procedures for that stage as outlined in B20.

1.1 Site

The site, located in Carlingford, is surrounded by low-density residential areas, and bounded by Hilar Avenue to the north, Felton Road, Blenheim Road and Dunmore Ave to the east, Pennant Hills Road to the south, and Felton Road to the west, as shown in Figure 1. The site falls within Parramatta Council LGA and zoned as R2 (Low Density Residential) based on Parramatta Local Environmental Plan 2021.

Carlingford West Public School (CWPS) has primary pedestrian and bicycle access on Felton Road East and West, with a secondary pedestrian access on Hilar Avenue. Pedestrians can also access the school from the

south through Cumberland High School (CHS) via Pennant Hills Road, Dunmore Avenue, and Blenheim Road. The main CHS pedestrian and bicycle access are Pennant Hills Road and Dunmore Avenue, with a secondary access located at Felton Road East and West and Hilar Avenue. The two schools are separated by playing grounds in the centre with each school operating independently.

Figure 1 - Site Location and Surrounding Area

The site is located at 59-73 Felton Road and 183 Pennant Hills Road, Carlingford and is legally described as follows.

SCHOOL	LOT AND DP	LOT AREA
CWPS	Lot 1 DP 235625	0.4698ha
	Lot 2 DP 235625	2.363ha
	Lot 5 DP 235625	0.3958ha
CHS	Lot 3 DP 235625 (part CWPS)	4.736ha
	Lot 4 DP 235625	1.421ha

The total site area is about 9.39ha (CWPS-3.2286ha, CHS-6.157) with the highest level at 94.30mAHD at the south-eastern boundary of the site, falling to 77.00 AHD towards the mid-northwest of the site. The site buildings and layout are shown in more detail in Figure 2.

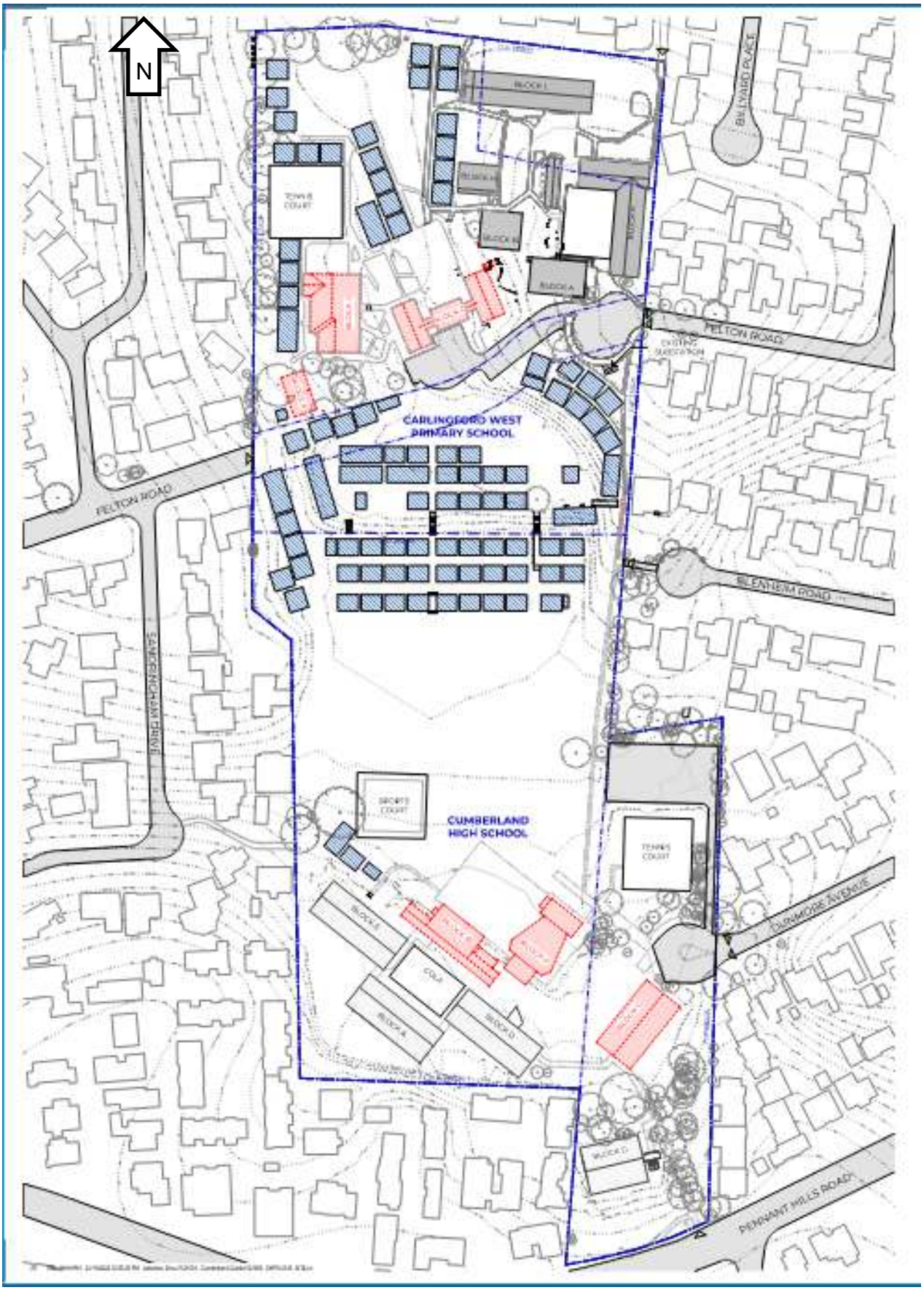


Figure 2 – Woods Bagot SSDA site plan existing CC-WB-DA-10-00-05

2.0 Proposed Development

The proposed development includes upgrades to CWPS and CHS, collectively known as the Cumberland Cluster. Figure 3 show the existing scenario and the proposed development of the site.

Figure 3 – Existing and Proposed Development

The proposed upgrade to CWPS will include the construction of four new buildings in the northwest portion of the site known as buildings W, X, Y and Z to cater for approximately 1,610 students. These new buildings range from one to three storeys which includes general learning spaces, library, amenities, staff rooms and combined canteen, out of school hours care (OSHC), gym, hall, construction of a new kiss and ride off Felton Road West, waste loading area, On-Site Detention (OSD) tank and staff carpark. Refer to Figure 4 below for the location of the proposed new buildings.

Figure 4 – Carlingford West Public School Proposed Development Site Plan

Additionally, the proposed upgrade at CHS will include the construction of three new buildings located in the southeast portion of the site know as buildings X, Y and Z to cater for approximately 2,040 students. These new buildings range from one to five storeys which includes general and specialists learning spaces, library, administration, staff and student amenities, and combined lecture theatre, movement space, canteen, stage, and gym/hall. A new one-way bus link road and waste loading area from Dunmore Avenue to Pennant Hills Road are also proposed in the works. Refer to Figure 5 for the location of the proposed new buildings.

Is should be noted that Building X is proposed as part of Stage 2 of the construction.

Associated civil works and landscape works are proposed across both school sites including tree removal and planting and new play areas as well as public domain upgrades by widening nearby footpaths.

Figure 5 – Cumberland High School Proposed Development Site Plan

3.0 Site Flooding

3.1 Existing Site flooding

During construction the site will be initially prone to the existing flood condition upon the site. The *Urban Overland Flow Study, Catchment Simulations (May 2017),* was originally completed for the Hills Shire LGA and covers the full catchment area of this development. This model was updated by TTW in the Flood Impact Assessment (FIA) carried out in September 2023) and flooding characteristics were found to be generally consistent with the original modelling. The TTW flood study shows that there is an existing major overland flow path that runs through the site coming from the east to west through the playing fields. This overland flow path continues northwest towards Hunts Creek, refer to figure 6. Runoff from CWPS flows east to west, while runoff from CHS flows from south to north. An existing overland flow path also runs in the eastern side of CHS draining to the playing fields north of the school.

The flood depth and levels, and flood hazard are shown respectively for the 1% AEP (figures 6 and 7), and PMF (figures 8 and 9).

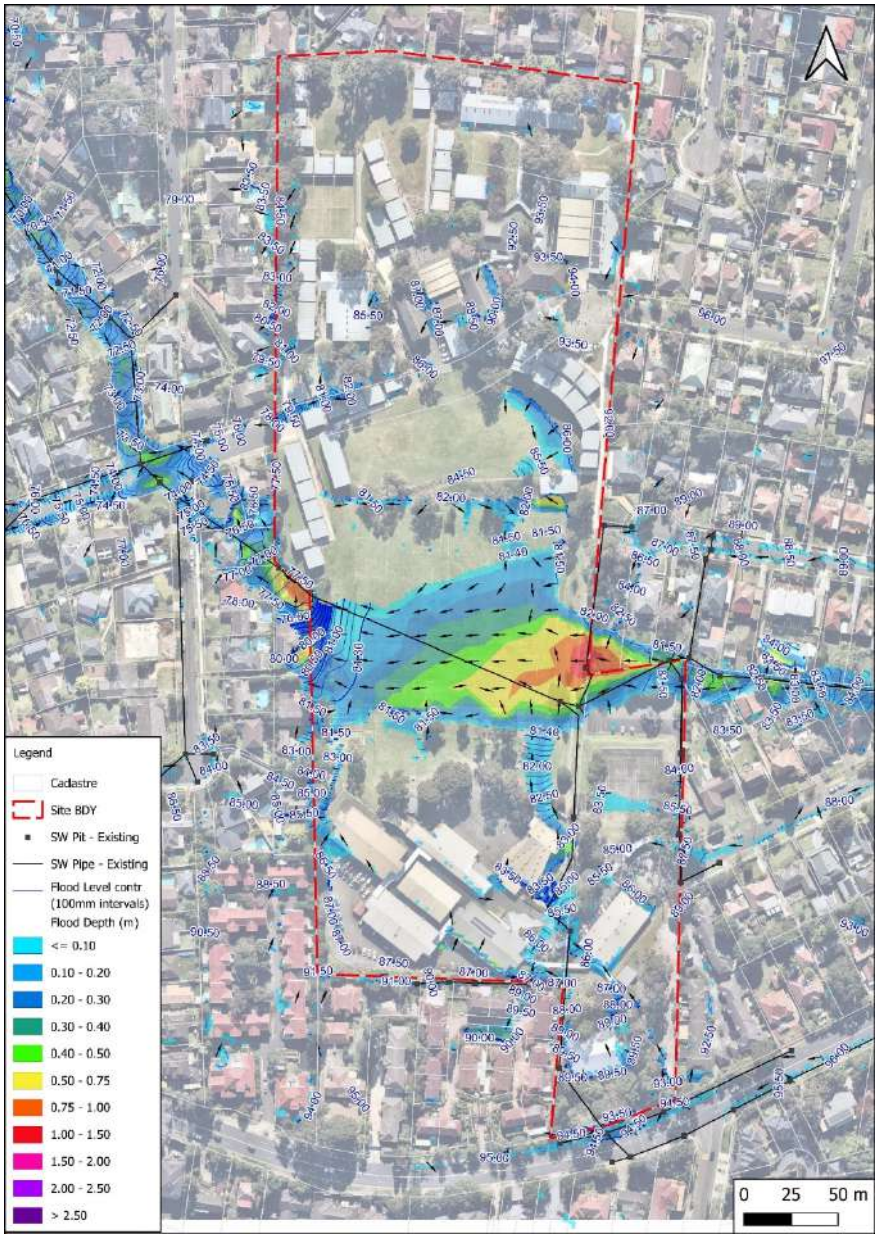
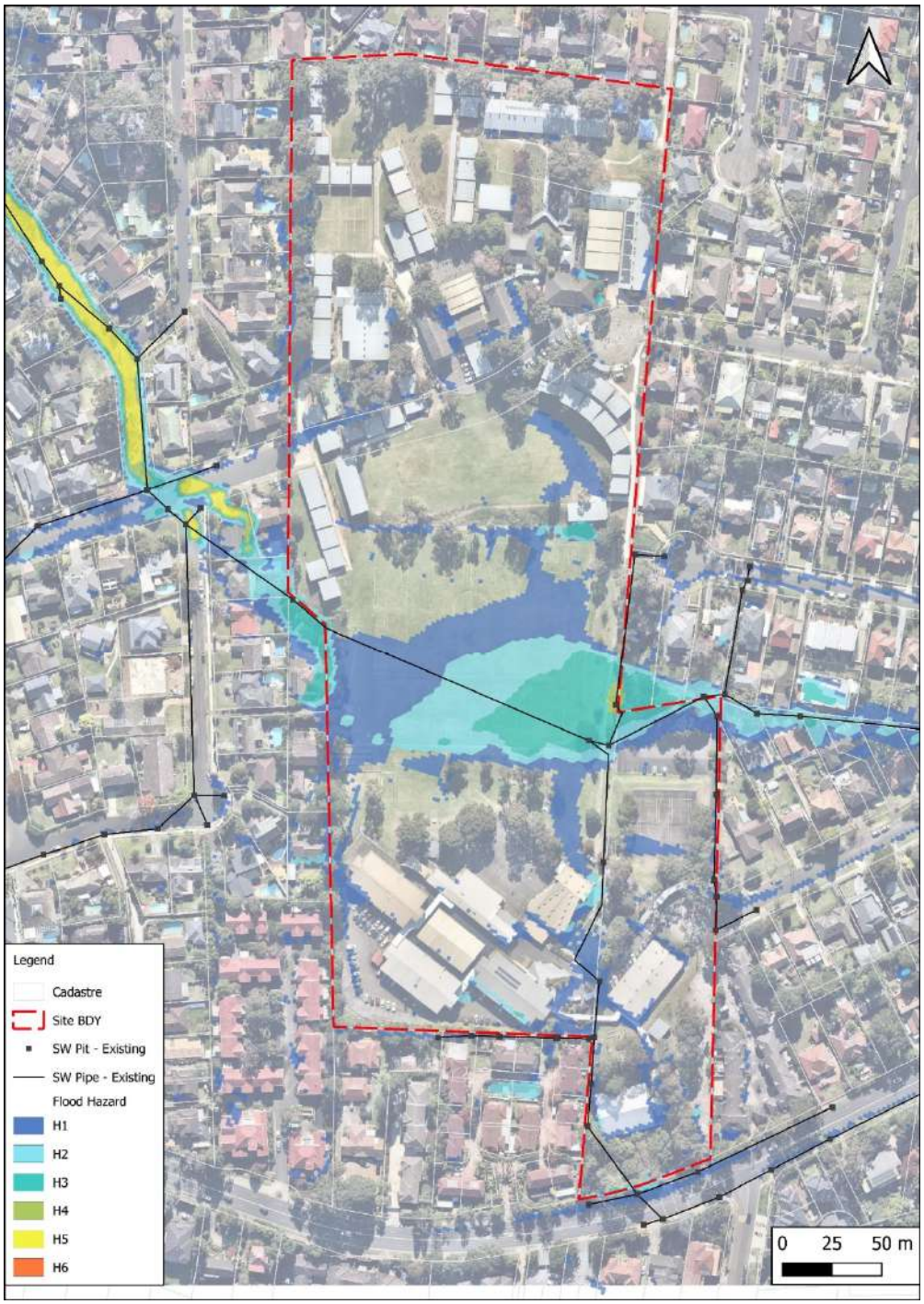


Figure 6 – Existing 1% AEP Flow Depths and Levels



Hazard Classification	Description
H1	Relatively benign flow conditions. No vulnerability constraints.
H2	Unsafe for small vehicles.
H3	Unsafe for all vehicles, children and the elderly.
H4	Unsafe for all people and all vehicles.
H5	Unsafe for all people and all vehicles. Buildings require special engineering design and construction.
H6	Unconditionally dangerous. Not suitable for any type of development or evacuation access. All building types considered vulnerable to failure.

Figure 7 – Existing 1% AEP Flow Hazard (Flood Hazard Category)

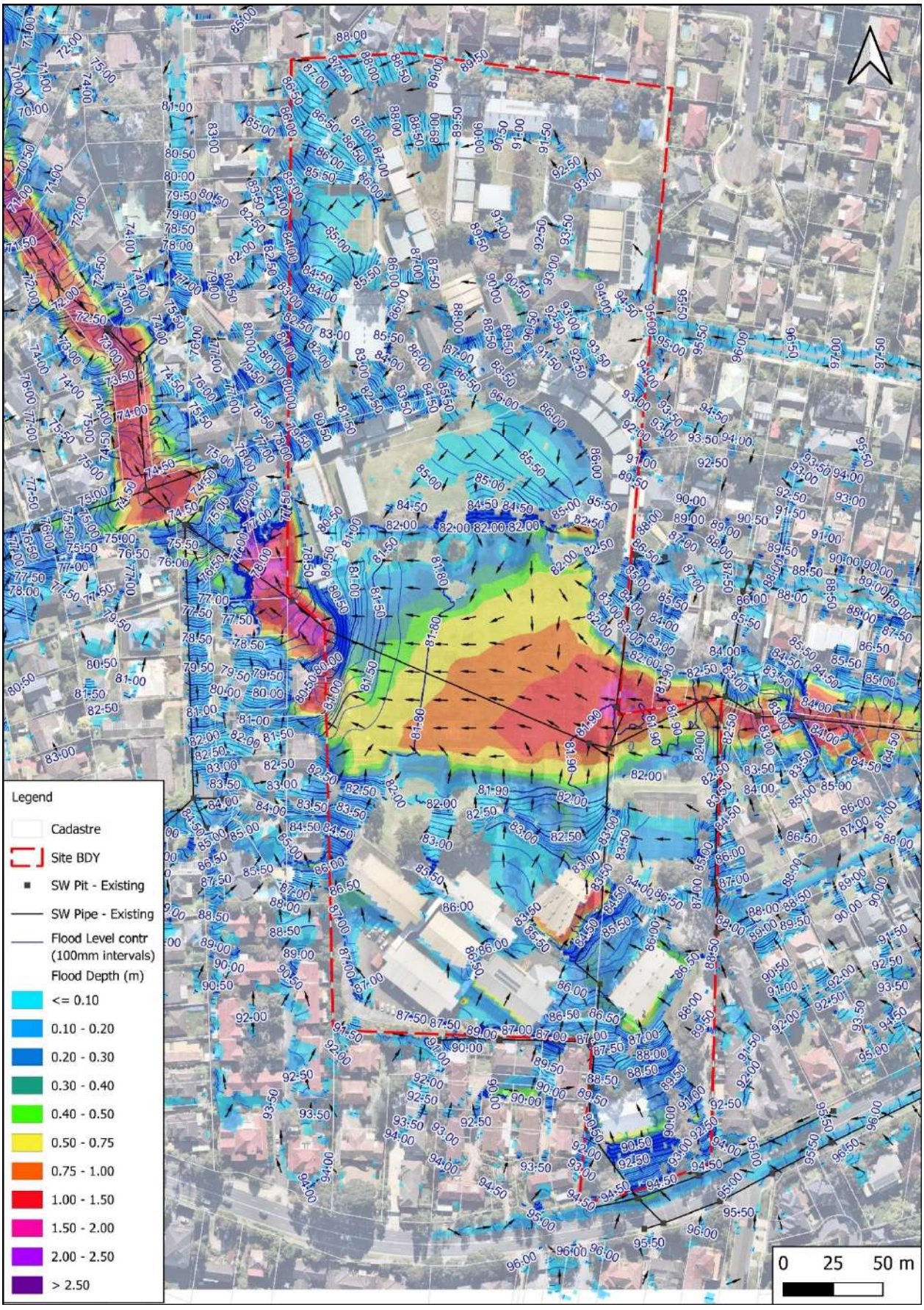


Figure 8 – Existing PMF Flow Depths and Levels

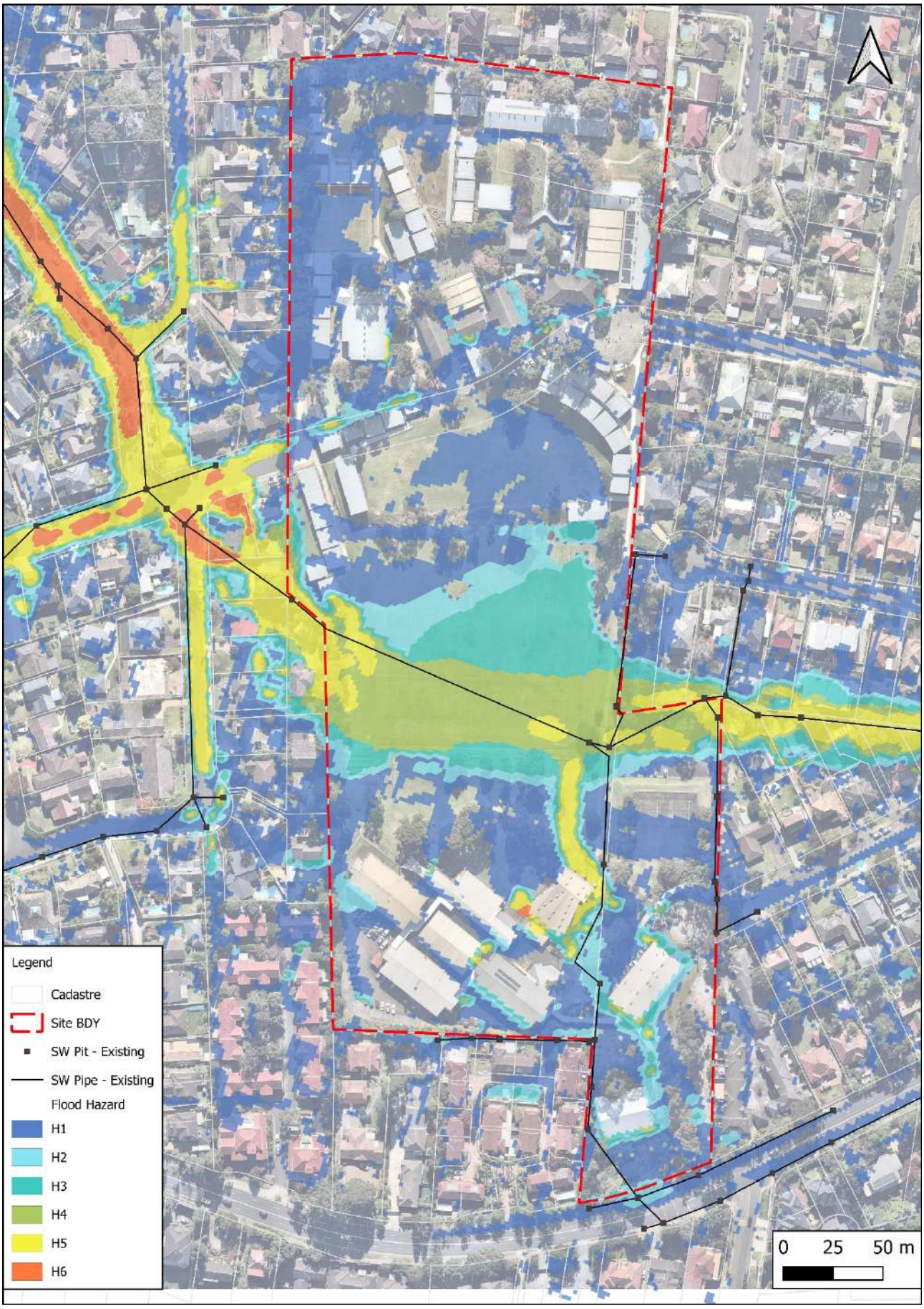


Figure 9 – Existing PMF Flow Hazard (Flood Hazard Category)

3.2 Post Development Flooding

As construction continues and changes to the development made the site will also be prone to mid to post development flood conditions. Post development conditions have been modelled by TTW and reported in the Flood Impact Assessment report (Sep 2023). Flood mitigation options have been included as reported in the FIA which include a flood wall and stormwater upgrades and redirections. The post development flood depths & levels, and flood hazards for the 1% AEP flow depths & levels, and flow hazards for the proposed site conditions are represented in figures 10 and 11 respectively.

The proposed development does not worsen the upstream or downstream flood conditions within accepted tolerance for the 5% AEP, 1% AEP or PMF flood events.

The PMF flow depths & levels, and flow hazards for the proposed site conditions are represented in figures 12 and 13 respectively.

The post development flood impact afflux analysis shown in the FIA (TTW, Sep 2023) shows the difference between proposed flood levels and the existing flood scenario. The flood impact map confirms that there is less than 20mm increase due to the proposed development of the site and is therefore consistent with the council flood policy.

The proposed flood mitigation works also enable the proposed buildings, at their proposed design levels, to be above the 100-year (1% AEP) flood levels across the site with a 500mm freeboard. There is more that 500mm freeboard available for the proposed buildings to the mainstream flooding (TTW, Sep 2023).

The FIA (TTW, 2023) also illustrates the need for an Operational FEMP to be in place for the schools once construction is complete, prior to use, targeting areas where high hazards need to be addressed.

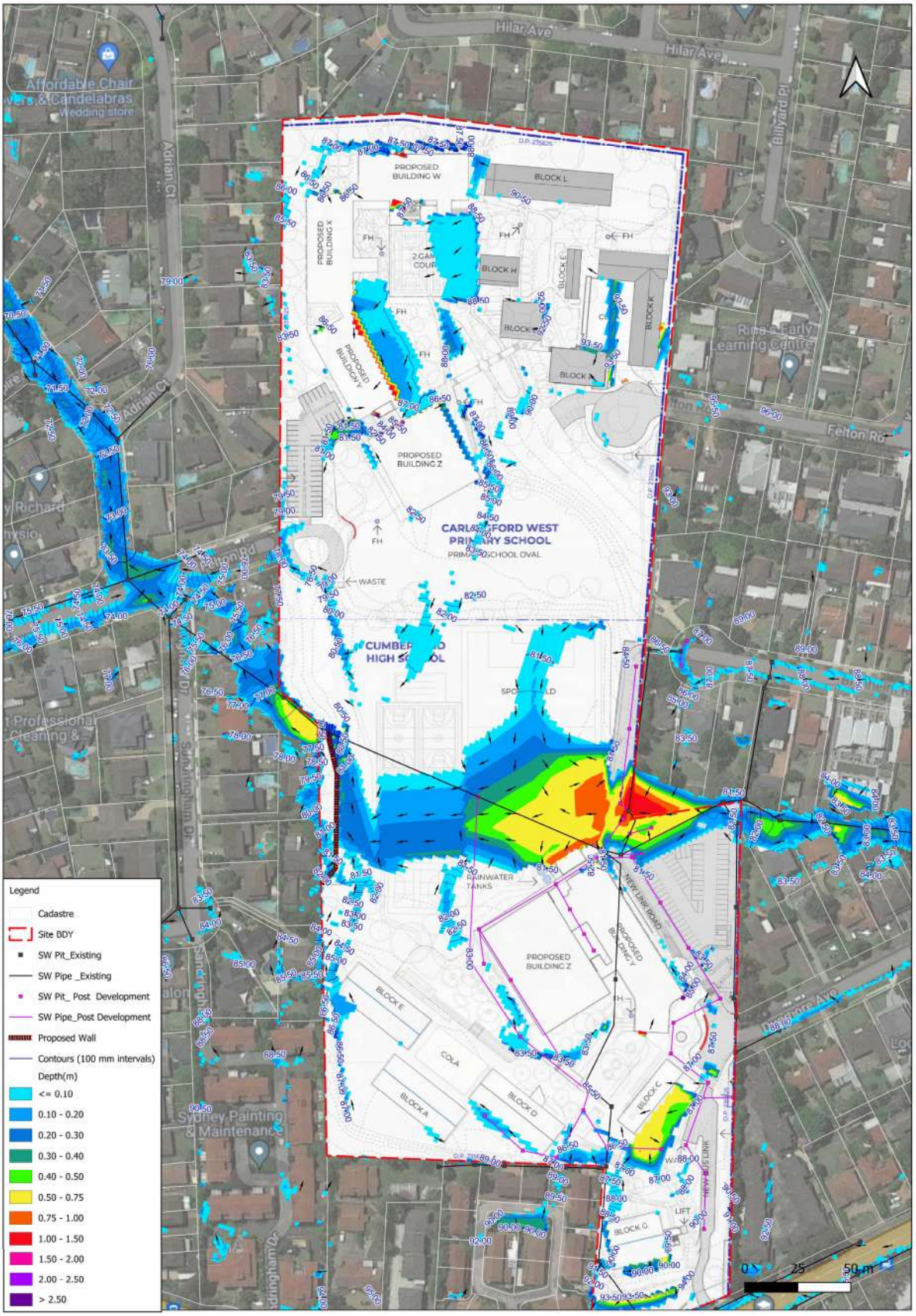


Figure 10 – Post Development 1% AEP Flood Depths and Levels

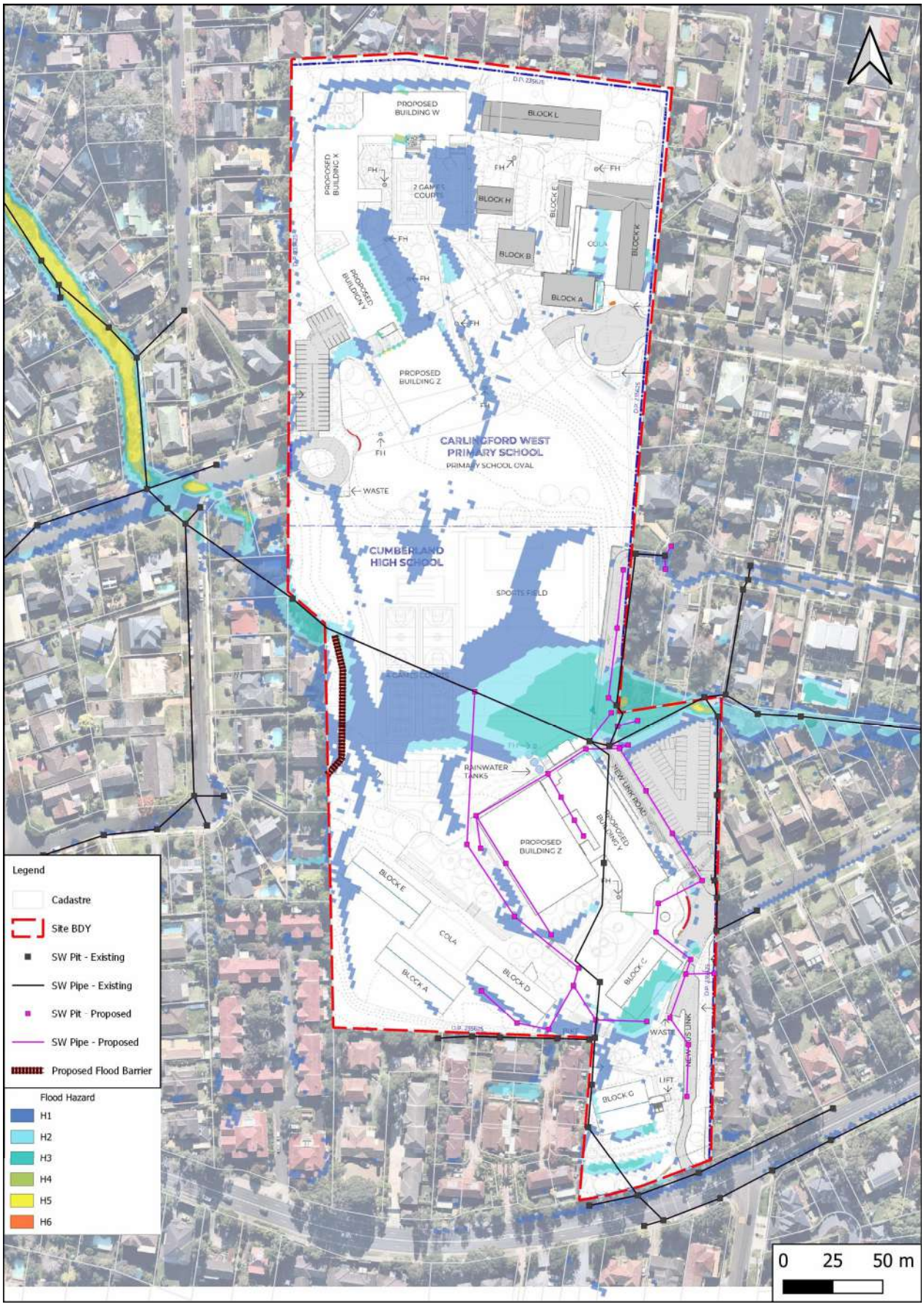


Figure 11 – Post Development 1% AEP Flood Hazard Category

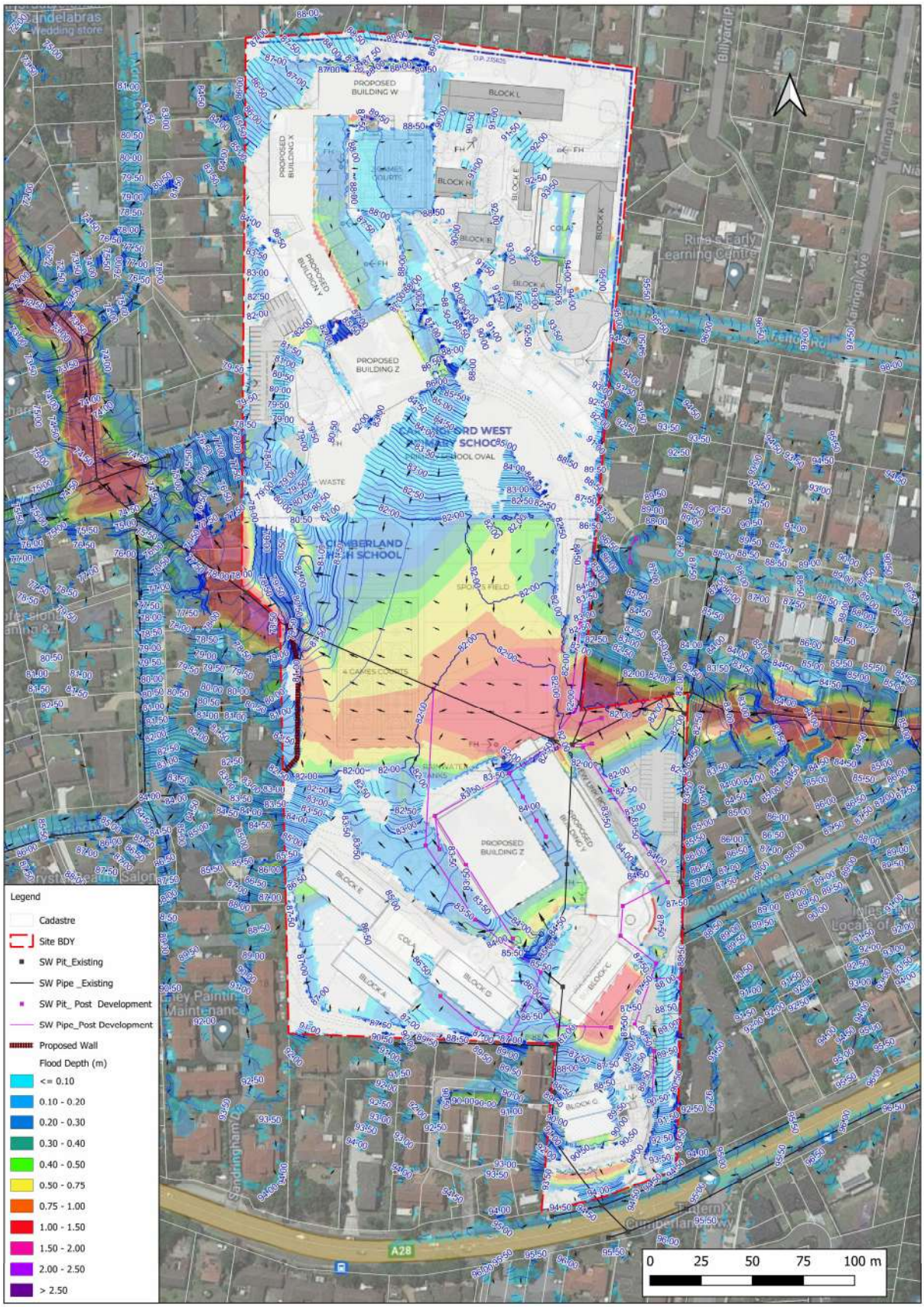


Figure 12 – Post Development PMF Flood Depths and Levels

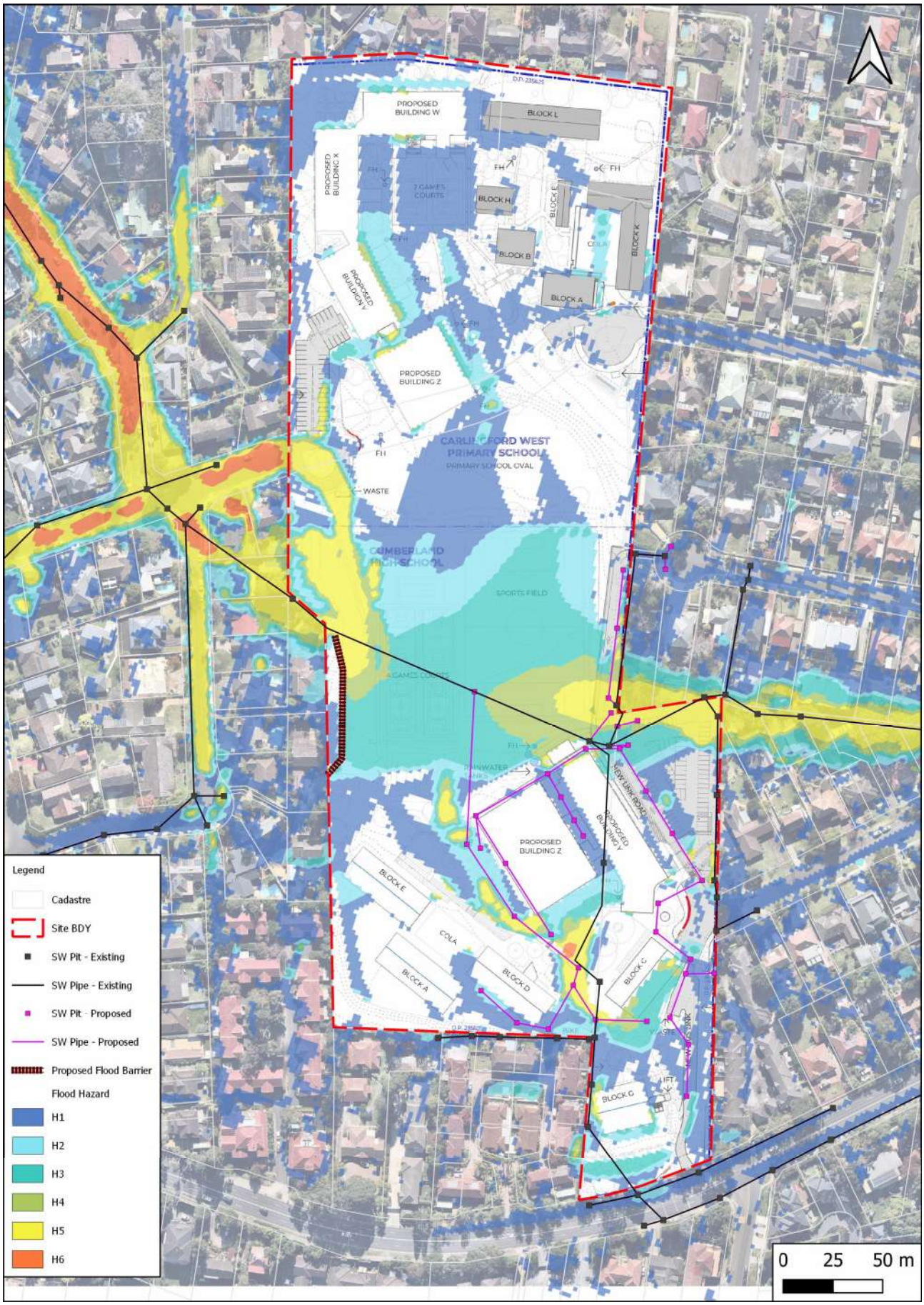
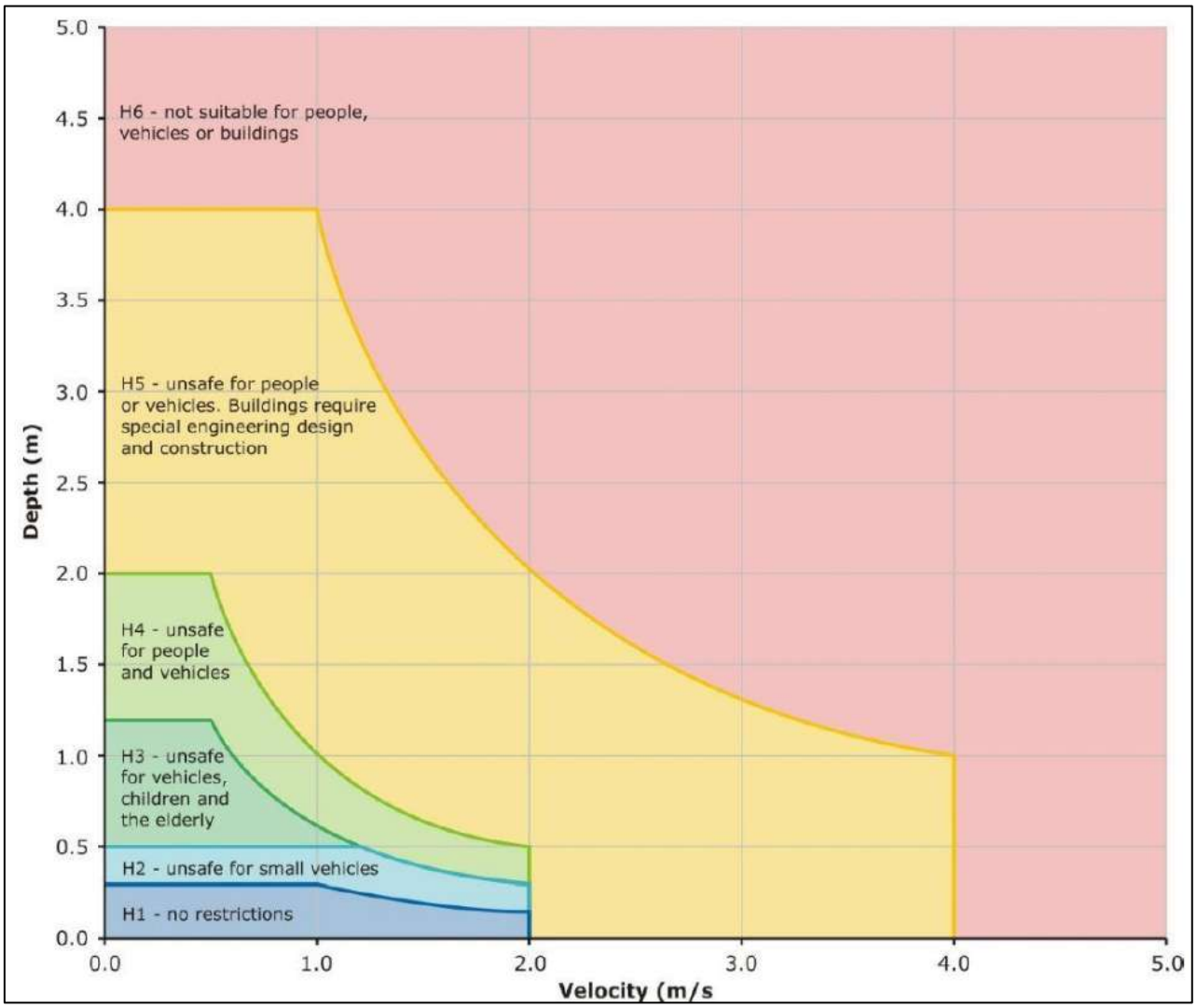


Figure 13 – Post Development PMF Flood Hazard category

3.3 Flood hazard Vulnerability

Flood hazard vulnerability as presented in AIDR (2017) is based on the combined flood hazard curves (presented in Figure 14) which set hazard thresholds that relate to the vulnerability of the community when interacting with floodwaters. The combined curves are divided into hazard classifications that relate to specific vulnerability thresholds. This classification includes six categories, ranging from H1 (no restrictions) to H6 (not suitable for people, vehicles, or buildings) as described below.



Hazard Classification	Description
H1	Relatively benign flow conditions. No vulnerability constraints.
H2	Unsafe for small vehicles.
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H4	Unsafe for all people and all vehicles.
H5	Unsafe for all people and all vehicles. Buildings require special engineering design and construction.
H6	Unconditionally dangerous. Not suitable for any type of development or evacuation access. All building types considered vulnerable to failure.

Figure 14 - General flood hazard vulnerability curve

3.4 Thresholds for people stability in floods

Vulnerability curves specifically for people stability based on Cox et al. (2010) is shown in Figure 15.

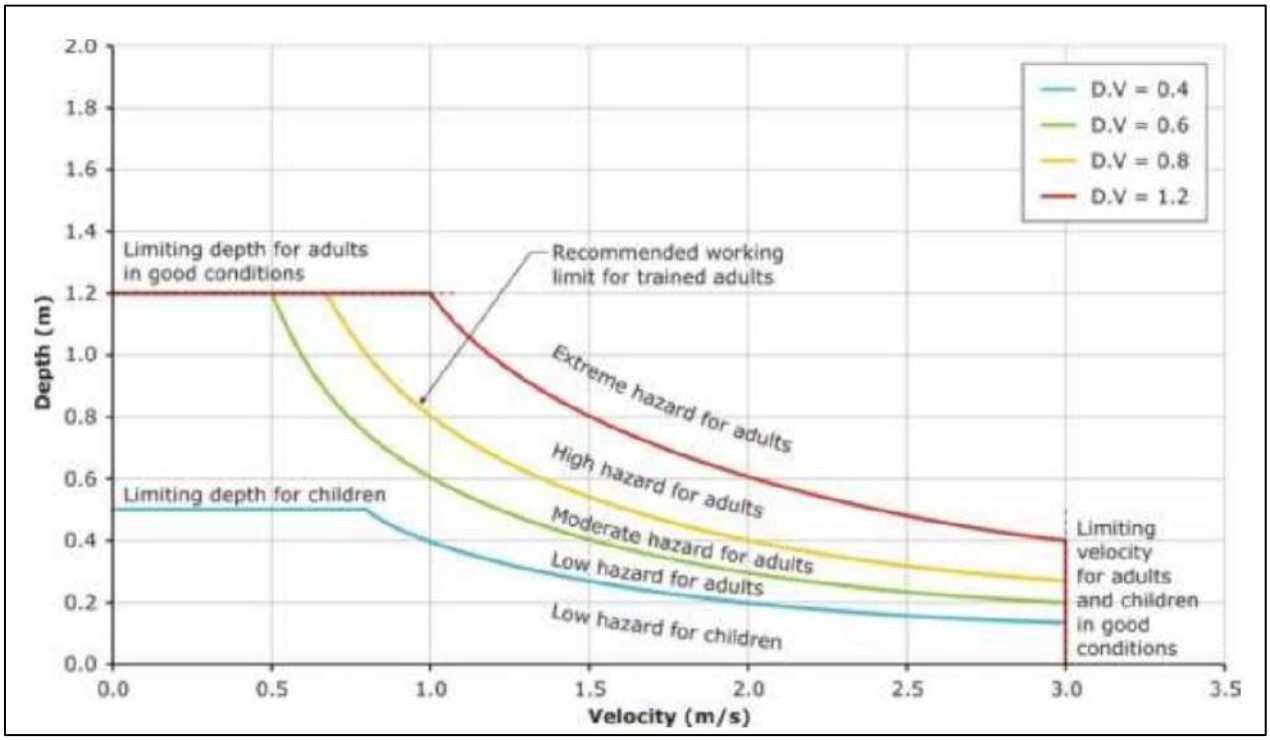

Figure 15 - Thresholds for People Stability in Floods

4.0 Flood Planning Requirements

The floor levels of the new buildings meet the 1% AEP plus 500mm freeboard criteria of Section 5.1.1. of the Draft DCP.

The proposed flood mitigation works enable the proposed buildings at their design levels to be above the 100-year (1% AEP) flood levels across the site with a 500mm freeboard. There is more that 500mm freeboard available for the proposed buildings to the mainstream flooding.

5.0 Flood Emergency Plan - Preparedness

This construction Flood Emergency Management Plan (FEMP) will be implemented for the duration of the construction phase of the project. It will be reviewed when there is a triggering event such as an incident, audit or modification (as per consent conditions A32 Revision of Strategies, Plans and Programs) inclusive of drills on site (see Section 5.3). This is the responsibility of the Chief Warden. The plan will be practiced, assessed and updated to increase awareness and ensure it remains applicable and consistent with contemporary emergency management arrangements.

This FEMP will be made available to all key site personal and will be readily available in the site offices. It will also be made publicly available on the SI website.

5.1 Emergency Contact Details

In the event of a flood emergency evacuation, it is vital that the key personal and contact detail are readily available so that an efficient evacuation can take place. These key contact details will be accessible on site and be updated as necessary. The following personnel are required at a minimum to be identified and trained in the evacuation tasks they need to carry out. External contacts are also listed here and should also be contacted as necessary. It is the responsibility of the Chief Warden to keep this table updated and contact external services as necessary.

In the event of flooding, key contact details are included in the table below.

Table 1 Emergency Contact Details

Emergency Coordinator	**Phone Contact**
Site Manager/Chief Warden (Principal)	Roger Thompson 0408232523
Deputy Chief Warden (Deputy Principal)	Stewart Agus 0488764503
Safety/First Aid Manager	Nicholas Whitbread 0488 464 800
Building Wardens	TBC
External Contacts	
Service	**Phone Contact**
Police/Ambulance	000
State Emergency Services	132 500
Fire and Rescue NSW Eastwood Fire Station	02 9493 1059
Eastwood Police Station	02 9858 9299
Westmead Hospital	02 8890 5555

5.2 Education

The awareness of flooding is a significant issue within floodplains due to the infrequency of severe floods and the anticipated depths of flooding at the site location.

During the construction phase, as part of the preparation for a flood event, all workers and visitors on site will be made aware of the flood risk and the flood protocols & procedures (including their responsibilities) via briefing and signage. This will form part of the mandatory site inductions that all workers and visitors must undertake prior to gaining access to the site. A copy of this construction FEMP will be made available to all new staff, managers, contractors and site visitors. Completion of site induction and safety training for existing and new workers is the responsibility of the Chief Warden.

5.3 Evacuation Drills

Evacuation drills will be held prior to construction and every 6 months to ensure all staff are and workers are aware of and familiar with their flood response actions, the sound of the alerts and warning systems, and the location of the assembly point. It is the responsibility of the Chief Warden to ensure that Evacuation drills are organised and that any issues with these drills be attended to, and if necessary, rerun. If issues highlight changes that should be made to the response procedure this plan will be reviewed and updated. The Chief Waren will also ensure that all site drills are recorded in an appropriate records book and any non-conformities reported and responded to.

5.4 Flood Emergency Kit

A Flood Emergency Kit will be available prior to a flood event taking place and periodically checked to ensure that supplies within the kit are sufficient and in working condition. This check should also occur after each evacuation, and the kit should include:

- Radio with spare batteries
- Torch with spare batteries
- First aid kit and other medicines
- Waterproof bags
- A copy of this Flood Emergency Response Plan
- Emergency contact numbers.

This Emergency Kit will be stored in a waterproof container and is the responsibility of the Site Safety Manager/First Aid Officer during the construction phase.

6.0 Flood Emergency Plan - Warnings and Notifications

6.1 Flood Watches and Warnings

BOM and SES Monitoring

It will be the responsibility of the Chief Warden and Deputy Warden to be aware of rainfall and flood warnings in the wider area. Severe weather and thunderstorm warnings are issued by the Bureau of Meteorology (BOM) www.bom.gov.au. These warnings are continually updated with a description of the likely conditions (including predicted extreme rainfall depth). Warnings are issued with varying lead-times, depending on the weather situation, and range from just an hour or two to 24 hours or sometimes more.

A **Flood Watch** is issued by the BOM up to four days prior to a flood event. A watch is generally updated daily and may be issued before, during or after rainfall has occurred.

Flood warnings are issued by the BOM when flooding is occurring or is expected to occur in a particular area. Warnings may include specific predictions of flood depths dependent on real-time rainfall and river level data. These warnings are distributed to Council, Police, and the relevant local SES, as well as being available on the BOM website through telephone weather warnings and radio broadcasts.

NSW SES advise that NSW SES and BOM do not provide specific flood warning services for the subject area, although the Chief Warden should still be aware of BOM warnings in the surrounding areas, via the BOM site, as they may be indicative of significant events in the site area. BOM radar also gives an indicative waning if heavy rain is likely, and how it may be tracking across the catchment, and will ensure that the Chief Warden is more alert to potential rainfall and overland flows.

NSW SES has recently implemented the **Australian Warning System (AWS)** which replaces their previous evacuation orders and warnings system. The NSW SES utilises a range of sources to build detailed flood intelligence within local communities – including information from flood studies and historical flood data. As part of the transition to the Australian Warning System, the NSW SES has increased flexibility to tailor warnings at the community level, based on the expected consequences of severe weather events.

Again, although NSW SES advise the warnings will not be accessible upon the site area itself, the Chief Warden will keep himself informed of potential hazards in the wider surrounding areas through use of the AWS system and all hazards warning platform, Hazard Watch (and the Hazards Near Me app). This will allow the Chief Warden to assess if there are potential hazards in the wider surrounding aera which may be indicative of significant events at the subject site and allow the Chief Warden to be on a higher alert to potential overflows upon the site.

Locally impacted communities, and the Chief Warden, will continue to receive flood warnings through the NSW SES website, NSW SES social media channels and by listening to local ABC radio stations. These should all be monitored by the Chief Warden for the wider surrounding area. The NSW SES all-hazards warning platform, Hazard Watch, provides an additional channel for communities to access important warning information.

Each flood warning that may be received in the surrounding areas has three components:

- Location + Hazard: The location and the type of hazard impacting the community.
- Action statement: For each warning level there are a range of action statements to guide protective action by the community. These statements evolve as the warning levels increase in severity. Statements range from ‘stay informed’ at the Advice level, to ‘prepare to evacuate’ at the Watch and Act level, to ‘evacuate now’ in the Emergency Warning level. As the situation changes and the threat is reduced, the level of warning will decrease accordingly.
- The warning level: The severity of the natural hazard event based on the consequence to the community.

Visual Observation

As SES NSW have informed that there are no specific flood warnings generated in the site area itself, meaning that any of the afore mentioned warnings in the surrounding areas will only be indicative of potential flows in the site area. The primary trigger for an emergency response and evacuation will be through visual observation onsite.

In addition to lack of specific flood warnings upon site, the short time between onset of significant events upon the site's catchment, and the need to evacuate, it will be necessary for site managers to also be aware of rising waters upon the site and initiate flood response procedures in the event of flood levels approaching significant inundation. Warnings in surrounding areas may not be issued in sufficient time to indicate this type of flooding.

During rainfall events it will be the responsibility of the Chief Warden and other dedicated site managers to visually observe water levels upon the site (via markers/gauges located in prevalent areas) and activate the evacuation procedures when the critical flood level is reached. The proposed level for evacuation is 150mm, which will mean the site is not evacuated with every event or hint of rainfall, as this may not produce significant flow, but will inform the site when immediate evacuation procedures are required.

6.2 Flood Inundation Time

Peak flood levels for the 1% AEP and smaller events are produced during the critical 45 minute storm event, and the critical 15 minutes for the PMF event. This high intensity short duration flood behaviour is considered flash flooding and there would be only a short warning time, following the start of the storm event. This short duration 'flash flooding' would mean that the warning provided would be for immediate safety precautions to be activated, such as evacuation of the open car park and taking temporary refuge, as well as accounting for all people on site. As described in Section 6.1 this warning will come from onsite observations of the localised flood waters rising, due to the low time to inundation from onset of the storm.

It is expected that flood levels would recede within 60 -120 minutes after the start of the storm, however, there still may be areas of deep ponding in trapped low points that may require flood waters to be pumped out. It is the responsibility of the Chief Warden on site to open up areas of the site as they become safe, as flood waters recede. At all times any advice from the SES will take precedence during the evacuation procedure should they provide it. Due to the construction machinery required, dampness of the site, and potential muddiness and ponding the site may still not be available for construction purposes for a considerably lengthier time after the flood levels have receded.

7.0 Flood Signage, Warnings Apparatus and Evacuation Route

7.1 Signage and Gauges

Flood evacuation signage, similar to that shown in Figure 16 below, must be installed at appropriate places throughout the site during the construction phase to clearly identify the evacuation route. In addition, depth gauges which will also indicate the 5% AEP, 1% AEP and PMF levels will be installed in areas where flow is predicted such as the car park area. This will allow for visual warnings of required evacuation to be given and will also provide long term education of the potential of flooding at the site to users of the site. The Chief Warden will be responsible for overseeing the installation of the signage and gauges which will occur prior to construction works.

Signs around the site will identify areas with Category H3 hazard and higher, in accordance with the Flood Hazard Flood Risk Management Guide FB03, NSW Department of Planning and Environment that are located within the overland flow path. This area is highlighted in Figure 17. Other indicative locations for signage and depth gauges are presented in Figure 17. Suitable and exact locations will be established upon site set up to ensure the signage will have optimal impact and that they can be located in a practical place, where they will not cause other hazards themselves and will be able to withstand weather elements.

Each assembly point will have a sign indicating an assembly point (see Figure 17). This will be large, and easily visible to site workers. Onsite signs will indicate the direction of the quickest way to these assembly points from each construction area. These locations will be detailed upon layout of the construction site. External evacuation signage will be in place along the evacuation routes identified in Figure 17.

Given the short response time of the significant storms it is proposed that evacuation take place when the gauge levels reach 0.15m, which would be marked onto the gauge. This will ensure that the site is not evacuated too frequently (i.e., there will need to be some flow generated upon site – not just very shallow ponding) and will still allow for onsite evacuation to take place. The gauges will be monitored frequently (half hourly) when Flood warnings are in place for the wider region and every two hours during the course of a 'normal' working day by the dedicated site/building wardens.

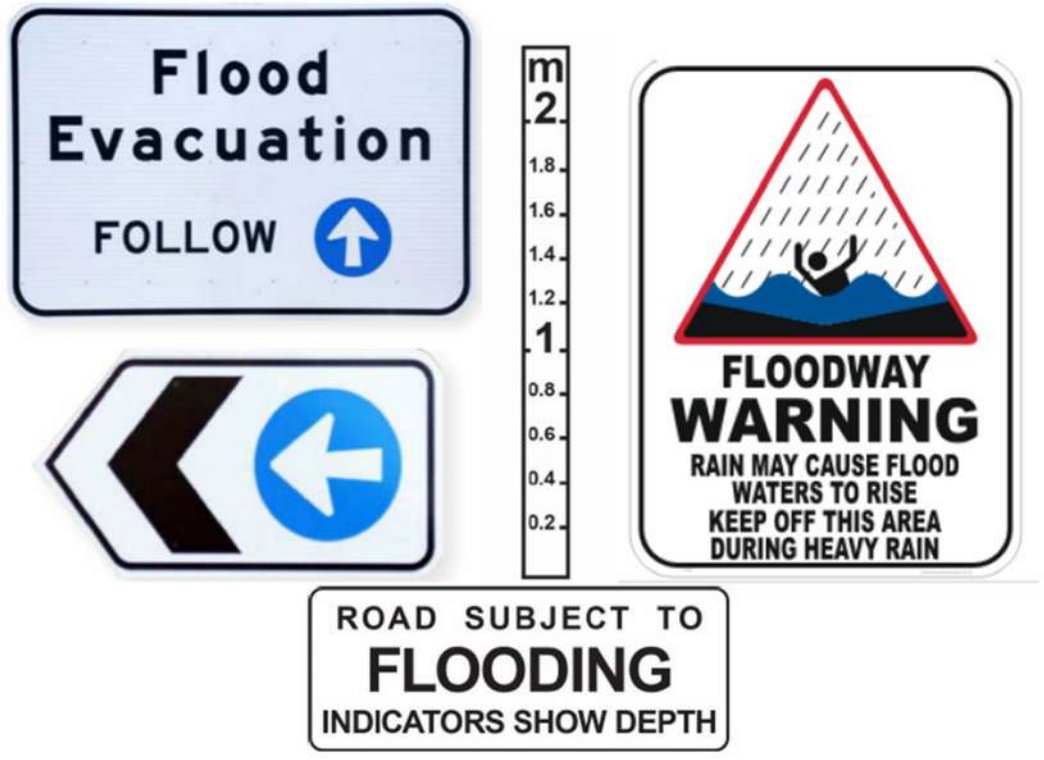

Figure 16 – Signage and Gauges

7.2 Warning Systems

Each separate construction zone will have an audio system which will signal the flood alert once activated by the Chief Warden. All workers on site will be equipped with two-way radio devices so that they can be informed if an alert takes place. All audio equipment will be regularly checked/maintained (weekly) to ensure they are not faulty when required. One of the building wardens will be allocated this responsibility.

If an AWS warning 'prepare to evacuate' is given in a nearby area, or visual observation of inundation has occurred before commencement of the daily work, all workers, contractors and known visitors of the site will be phoned and texted informing of the closure of the site immediately. Contact details will be kept by the Chief Warden who will manage the informing of users of the site with assistance from delegated building wardens. The chief Warden will also be responsible for informing workers and users of the site when the warnings have passed or inundation waters have receded, and the site is safe for construction works to recommence. The short warning time available, and short-lived inundation means that such an early closure warning is unlikely. Any AWS or SES advice to evacuate the site will be heeded if given.

7.3 Evacuation Route and Short Stay Area

Evacuation will take place from the site via the routes shown in Figure 17 and, for the very short period of the event, workers on the site will relocate to the James Rouse High School Oval, outside of the PMF zone (see Figure 17) as required by DPE. For site workers using the high school area (Area C) evacuation will take place via Dunmore Avenue, to ensure no workers or users of the site enter the main flood waters bisecting the site and potential hazards these pose. The evacuation route will be via Dunmore Road, taking a right onto Baker Street, and then via the route indicated to reach the James Rouse High School Oval.

For workers on the site. evacuating from the Primary School area. the dedicated evacuation route for vehicles and pedestrians is via Felton Road to the east of the site and then north towards the James Rouse High School Oval via Baker Street. The pedestrian evacuation route from the secondary school area is via Hillar avenue and Billyard Place to connect to Felton Road.

As evacuation will only be required in rare significant events and this short stay area will not require regular usage. In addition, the duration of the critical events is very short and as such relocating to to the James Rouse High School Oval, will not be for a long period, as flood levels will recede rapidly allowing the site to be accessed again.

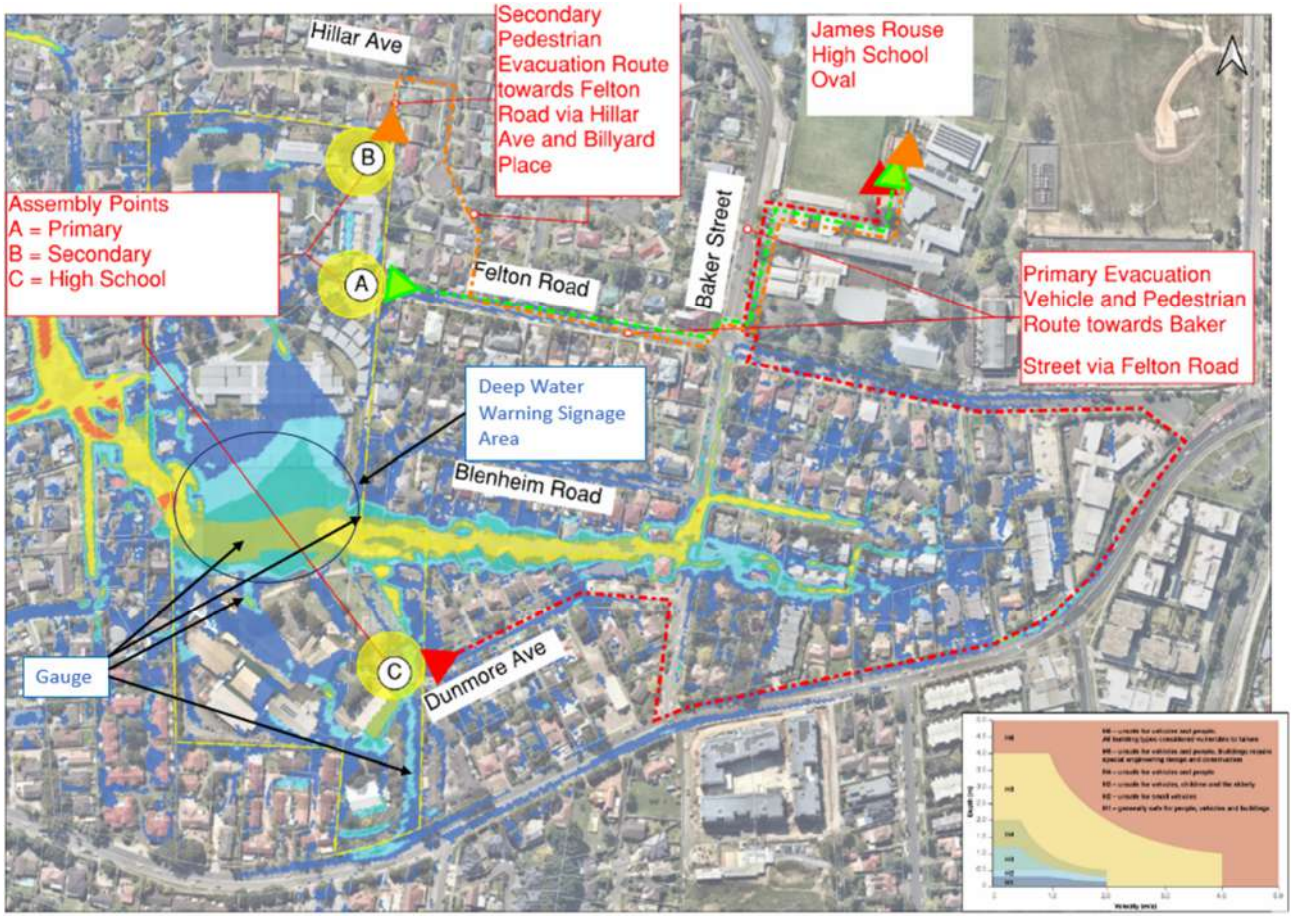

Figure 17 – Evacuation Routes and Refuge Area

8.0 Coordination of Flood Evacuation and FEMP

During a flood event, the Chief Warden will be responsible for monitoring information from the SES regarding evacuations required in the wider regional area and evacuation of the site if. The Chief Warden will decide when to initiate the Flood Emergency Management Plan for the site and manage its evacuation. Warnings in surrounding area are unlikely to be given in sufficient time by authorities, and as such the Chief Warden will initiate evacuation when the water depth trigger levels are observed to be reached on site.

Flood Emergency Management Plan –Construction Phase	
Flood Warning and Notification Procedures	**Evacuation and Refuge Protocols**
1) Monitor NSW SES and AWS, Local Council, or Bureau of Meteorology (BOM) radar, alerts, advice, or warning in nearby surrounding areas.	If monitoring shows severe events in the surrounding areas **Chief Warden** to be on alert and prepared to activate further sections of the flood management plan. Notify all site workers and planned visitors to be alert to potential flood waters entering the site if monitoring indicates there could be the potential for flows on site.
2) Regularly (half hourly) check-up of relevant authorities to monitor events and anticipated severity as well as onsite gauges. If significant flooding is observed on site, even without authorities' warnings.	If a potential flood event is anticipated to impact the site, the Chief Warden is to continue hourly checks and postpone high risk activities. Notify all site workers and planned visitors and deliveries that a Flood alert is in place.
	If flood event reaches the trigger levels on site the site, the Chief Warden will instruct the site to close immediately in coordination with the site emergency response procedures. This will include an alert and warning message over an audio system confirming a significant flood event.
	All future site visits, deliveries and construction activities are postponed until all flood warnings are lifted. Remove or secure all plant, materials, and equipment ideally above the PMF level if time is available. . The **Chief Warden** is to follow any action statements provided by the SES should they provide any advice and direction. All site workers are to evacuate site via the evacuation routes indicated in Section 7.0, under the direction of the **Chief Warden**, until they receive notification that it is safe to return to site. Site should be left secured with signage located above the PMF level explaining the site is closed due to a flood event. Close the entire site as quickly and safely as possible. .
	A contingency emergency evacuation route from the site and assembly point will be in place for all site workers and visitors, refer to Section 7.0.
3) Flood water have rescinded and any flood event that occurred has passed.	Once it has been confirmed that the water level has reduced to a level that will not produce inundation, and if determined safe, the **Chief Warden** will announce the site can reopen. The **Chief Warden** is to confirm floodwater has subsided below the ground level and that there is no ponding within the site. Flooded areas are to remain off limits until ponding has cleared. Site is to be inspected by the **Chief Warden.** Once it is determined that the site is safe essential workers can return to verify that all plant and services are safe. Following completion of these checks site may reopen with all workers returning to site and construction activities and deliveries recommencing.

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