



# Flood Impact Assessment Study

## 153-157 Walker St, North Sydney

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# Report Amendment Register

Issue Ref	Amended Section(s)	Issue/Amendment Details	Author(s)	Reviewer	Date
P01	ALL	Draft Issue for Preliminary Review	Mark Labid	Allen Ang	16/05/25
P02	ALL	Draft Issue for Preliminary Review	Mark Labid	Chris Waite	18/06/25
P03	Sec 1.3	Proposed Development Description	Mark Labid	Allen Ang	28/07/25



# Executive Summary

Robert Bird Group (RBG) were commissioned by Freecity Group Holdings Pty Ltd (Freecity Group) to undertake the flood impact assessment study for the proposed development located at 153-157 Walker Street, North Sydney, 2060. This Flood Report has been prepared on behalf of Freecity Group (the applicant), in support of an NSW State Design Review Panel (SDRP) application for a 51-storey mixed use tower development comprising of apartments and hotels. The SDRP application related to land legally identified as Deposited Plan (DP) 84729 and Strata Plan (SP) 50411.

The purpose of this report is to identify and discuss existing flooding conditions, design requirements and opportunities for flood immunity as well as the implications in the context of the development proposal, which also supports the SDRP for this proposed development.



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# 1. Introduction

This Flood Impact Assessment Study is submitted to the NSW State Design Review Panel (SDRP) on behalf of Freecity Group Holdings Pty Ltd (Freecity) to support a State Significant Development Application (SSDA) for a mixed-used hotel and development at 153-157 Walker Street, North Sydney (the site).

## 1.1 Purpose of the Report

The purpose of this report is to identify and discuss existing flooding conditions, design requirements and opportunities for flood immunity as well as the implications in the context of the development proposal and concept design, which also supports the Development Application for this proposed development.

## 1.2 Secretary's Environmental Assessment Requirements

This Flood Impact Study Report has been prepared in accordance with the following directions contained within the Secretary's Environmental Assessment Requirements (SEARs) that were issued by DPHI for this project [Reference: SSD-82599709]:

Table 1: SEARS Requirements

Requirements	Report Reference
<p>21. Flood Risk</p> <ul style="list-style-type: none"><li>• Identify the flood planning area and level as set out in the relevant EPI and other supporting documents to determine;<ul style="list-style-type: none"><li>- The flood extent and velocity up to the Probable Maximum Flood and risk on-site having regard to adopted flood studies and, floodplain risk management studies and plans.</li><li>- The site access and egress routes</li><li>- The potential effects of climate change,</li><li>- Any relevant provisions of the NSW Flood Risk Management Manual, and any other relevant guidelines</li></ul></li></ul>	Refer to Section 4 of this report
<ul style="list-style-type: none"><li>• Where the development is occurring on flood prone land a flood impact and risk assessment (FIRA) must be prepared having regard to the Flood Impact and Risk Assessment – Flood Risk Management Guide LU01. When determining the scope and category of the FIRA, the requirements outlined in the FIRA guide must be considered.</li></ul>	Refer to Section 3 of this report
<ul style="list-style-type: none"><li>• Detail any flood risk management measures that are to be incorporated as part of the development having regard to relevant guidelines (including any design solutions, flood modification measures, property modification measures, operational procedures or Flood Emergency Response Plan).</li></ul>	Refer to Section 5 of this report

## 1.3 North Sydney Local Environment Plan (LEP)

North Sydney Council's LEP 2013 has been reviewed in terms of flood planning. The assessment against Clause 5.21 is shown in the table below:

Table 2: Clause 5.21 of North Sydney LEP 2013

Provision	Response
(1) The objectives of this clause are as follows—	
(a) to minimise the flood risk to life and property associated with the use of land,	Flood hazard maps are provided in Section 4. No increase in flood risk from the existing condition is expected as the development aims to maintain the current state within the site boundary and its immediate vicinity.
(b) to allow development on land that is compatible with the flood function and behaviour of the land, taking into account projected changes as a result of climate change,	Refer to Section 3 of this report. The land is not tagged within a floodway nor areas with significant flood depth.
(c) to avoid adverse or cumulative impacts on flood behaviour and the environment,	Refer to Section 4 of this report. Any proposed works at the development site will have no impact to the existing flood behaviour or any adverse impact when it comes to flood levels or the extents of flooding to the existing adjacent properties.
(d) to enable the safe occupation and efficient evacuation of people in the event of a flood.	Refer to Section 5. In the unlikely event of extreme flood conditions, an emergency response plan may be implemented to mitigate the residual flood risk to occupants.
(2) Development consent must not be granted to development on land the consent authority considers to be within the flood planning area unless the consent authority is satisfied the development—	
(a) is compatible with the flood function and behaviour on the land, and	Refer to Section 3 of this report. The land is not tagged within a floodway nor areas with significant flood depth.
(b) will not adversely affect flood behaviour in a way that results in detrimental increases in the potential flood affectation of other development or properties, and	Refer to Section 4 of this report. Any proposed works at the development site will have no impact to the existing flood behaviour or any adverse impact when it comes to flood levels or the extents of flooding to the existing adjacent properties.
(c) will not adversely affect the safe occupation and efficient evacuation of people or exceed the capacity of existing evacuation routes for the surrounding area in the event of a flood, and	Refer to Section 5 of this report. In the unlikely event of extreme flood conditions, an emergency response plan may be implemented to mitigate the residual flood risk to occupants.



Provision	Response
(d) incorporates appropriate measures to manage risk to life in the event of a flood, and	Refer to Section 5 of this report. The most practical method of risk mitigation strategy is to provide on-site 'shelter in place' options on-site located above the PMF level.
(e) will not adversely affect the environment or cause avoidable erosion, siltation, destruction of riparian vegetation or a reduction in the stability of river banks or watercourses.	Refer to Section 4 of this report. Any proposed works at the development site will have no impact to the existing flood behaviour or any adverse impact when it comes to flood levels or the extents of flooding to the existing adjacent properties.
(3) In deciding whether to grant development consent on land to which this clause applies, the consent authority must consider the following matters—	
(a) the impact of the development on projected changes to flood behaviour as a result of climate change,	Refer to Section 4. Any proposed works at the development site will have no impact to the existing flood behaviour or any adverse impact when it comes to flood levels or the extents of flooding to the existing adjacent properties.
(b) the intended design and scale of buildings resulting from the development,	Refer to Section 4. Intended use of the building are in compliance with the flood level requirements.
(c) whether the development incorporates measures to minimise the risk to life and ensure the safe evacuation of people in the event of a flood,	Refer to Section 5. In the unlikely event of extreme flood conditions, an emergency response plan may be implemented to mitigate the residual flood risk to occupants.
(d) the potential to modify, relocate or remove buildings resulting from development if the surrounding area is impacted by flooding or coastal erosion.	Not applicable. The site is not subject to coastal erosion hazard(s).
(4) A word or expression used in this clause has the same meaning as it has in the Considering Flooding in Land Use Planning Guideline unless it is otherwise defined in this clause.	Noted

## 1.4 Background

Site-specific technical studies that were recently completed to support the approval of DA393/22 in 2024. The approved commercial office tower under DA393/22 is no longer being progressed. For contextual purposes only, it is noted that a Flood Risk Assessment was prepared to support the approval of DA393/22 this assessment was based on Council's *Draft Floodplain Risk Management Study and Plan (2022)*.

The Flood Risk Assessment that was submitted to support DA393/22 concluded that site conditions were suitable with respect to flood planning matters, and that there were no flood-related constraints that would limit the development of a commercial office tower at the site.

This Flood Impact Assessment for SSD-82599709 is based on Council's finalised *Floodplain Risk Management Study and Plan* and has been prepared to address the mix of land uses (residential; hotel; retail) that is now being sought.

## 1.5 Proposed Development

The proposed development includes:

- Site preparation, including ground excavation and the demolition of existing structures at the site.
- Construction of a new fifty-one (51) storey mixed-use tower, which will accommodate:
  - Residential apartments, including a build-to-rent housing component.
  - Nine (9) affordable housing apartments equating to 3% of the total dwellings proposed.
  - A hotel that will be operated by one entity with a central management structure.
  - Ancillary lounge and wellness facilities.
  - Retail floorspace at ground level.
- Eleven (11) basement levels with car parking facilities and plant rooms to service the proposed development.
- One (1) loading zone at the Lower Ground Level.
- Vehicle access from Little Walker Street.
- Associated building, utilities and service connections.

Further reference should be made to the detailed description of the proposed development within the Environmental Impact Statement (EIS) that has been prepared by Urbis Ltd (Urbis).

## 1.6 Site Description

The site, located within the North Sydney Council area at 153-157 Walker Street, North Sydney, comprises two rectangular lots situated between Walker Street (to the west) and Little Walker Street (to the east). The total site area is 1,928m<sup>2</sup>.

The site benefits from dual street frontages (Refer to **Figure 1**):

- Walker Street (west), with a frontage length of 45.5m.
- Little Walker Street (east), with a frontage length of 45.9m.

The site has two side boundaries:

- The northern side boundary, measuring 42.2 metres in length, abuts the property at 161-165 Walker Street.
- The southern side boundary, also measuring 42.2 metres in length, abuts the property at 141 Walker Street.

The topography of the site features a gentle slope towards the south-east, with a total elevation change of approximately 6.7 metres from the north-western to the south-eastern extent of the site.

The legal lot entities within the site are Lot 1 in Deposited Plan (DP)84729 and Strata Plan (SP)50411.



Figure 1 - Site Aerial (Source: Urbis)



Figure 2 - Site Frontage at Walker Street (Top) and Little Walker Street (Bottom)

## 2. Existing Drainage Infrastructure

An existing Council drainage stormwater line of 300mm diameter runs along Walker St to the opposite side of the proposed site. Another 375mm to 450mm diameter Council stormwater line runs through Little Walker St further south of the development. Both lines discharge to the trunk drainage system (in blue as shown in Figure 3) which is owned by the Sydney Water Corporation (SWC).

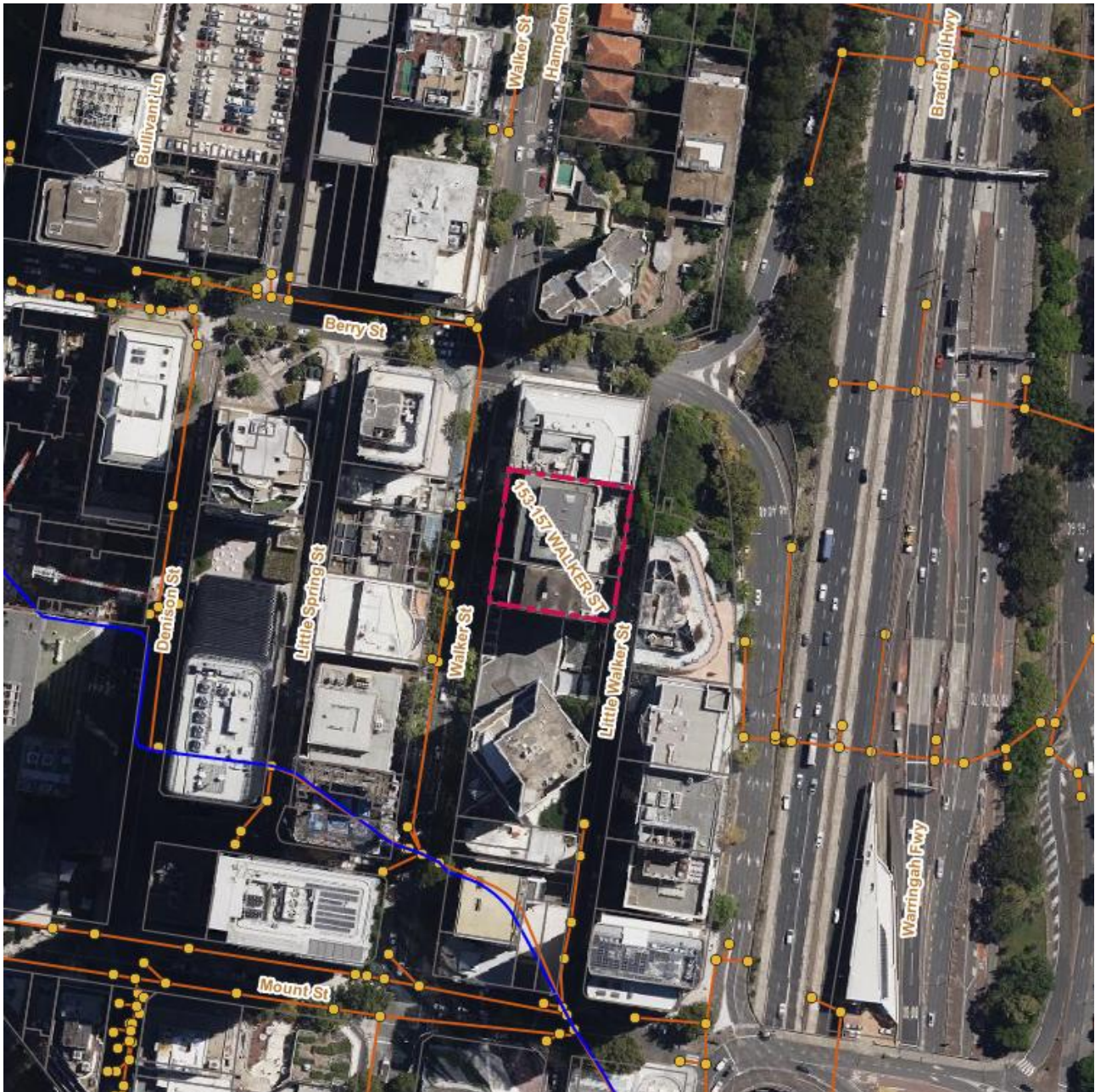


Figure 3 – Existing Drainage Infrastructure from North Sydney Council Maps

The proposed development is located at the southern portion of the North Sydney catchment. The south catchment has a total area of about 396 hectares and is situated within the North Sydney Council LGA (Refer to Figure 4). Most parts of the catchment area are classified as residential, commercial and industrial although there is a big portion of the catchment that is characterized as open space.

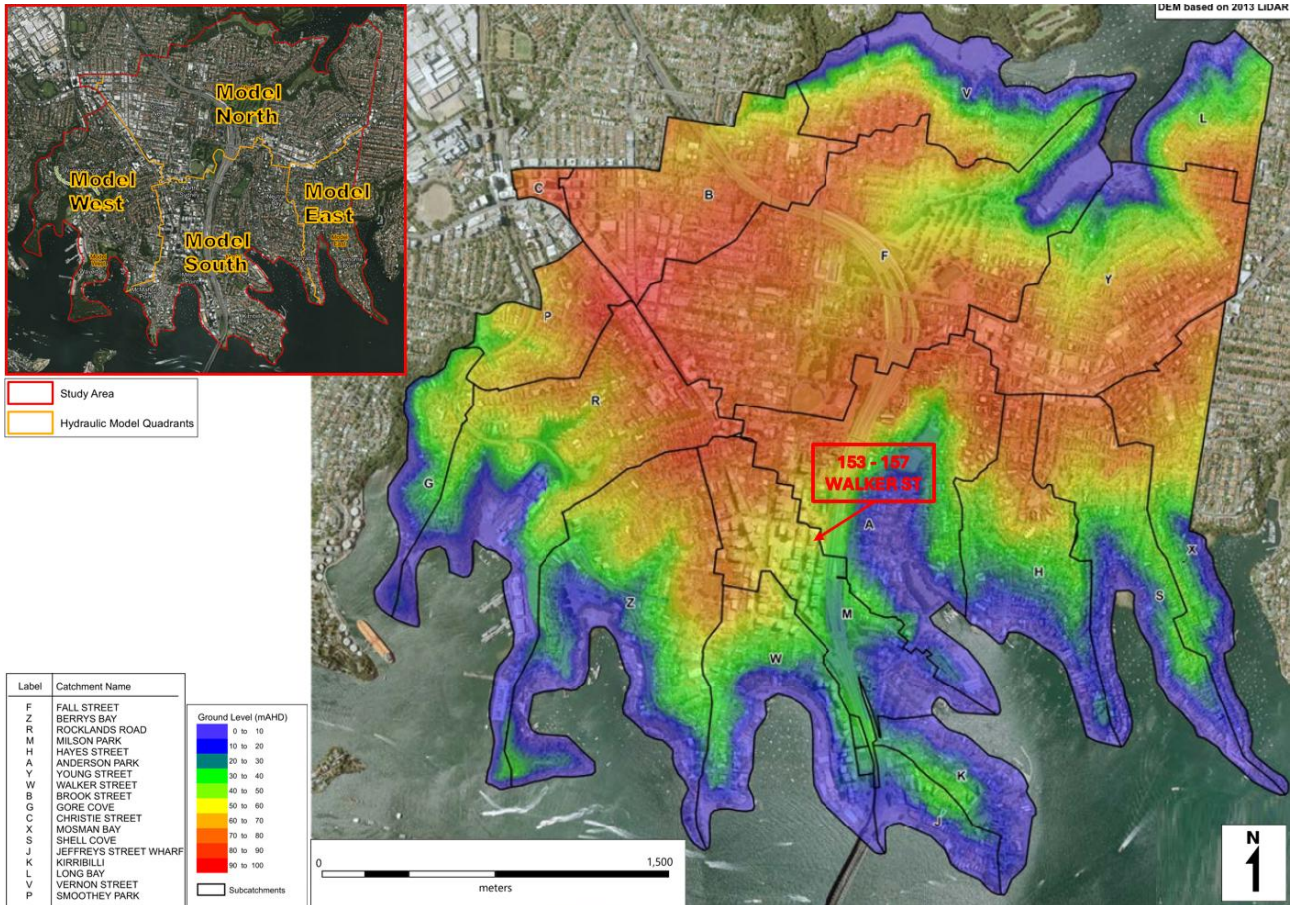


Figure 4 – Catchment Areas and LiDAR Topography from North Sydney Council's Flood Study

### 3. Flood Planning Requirements

According to North Sydney Council's Floodplain Management Policy (Interim), the minimum Flood Planning Level (FPL) can be summarised in the table below.

Table 3: Flood Planning Level Requirements (Section 4.5, North Sydney Council's Floodplain Management Policy Interim)

Type	Flood Planning Level (FPL)
Residential	Habitable – 1% AEP flood level +0.3m freeboard Non-habitable – Min. 1% AEP flood level
Commercial	Retail Floor Levels – Min. 1% AEP flood level
Below ground garage/Carpark	Min. of 1% AEP flood level + 0.3m freeboard, or the PMF flood level (whichever is lower) *
Critical Facilities	Floor level – Min. 1% AEP flood level + 0.5m freeboard or the PMF flood level (whichever is higher) Access to and from critical facility within development site – Min. 1% AEP

\*Note: The below ground garage/car park level applies to all possible ingress points to the car park such as vehicle entrances and exits, ventilation ducts, windows, light wells, lift shaft openings, risers and stairwells.



The Flood Planning Area (FPA) has been identified in the North Sydney Council Floodplain Risk Management Study and Plan (2022) Section 6.7.1 as illustrated in Figure 5. Two categories were defined for the lots within the FPA:

- Category A (dark green) – located on/in the proximity of an identified/designated floodway; and
- Category B (light green) – located on/adjacent to a localised flood with significant flood depth or flow (that is not part of the identified/designated floodway).

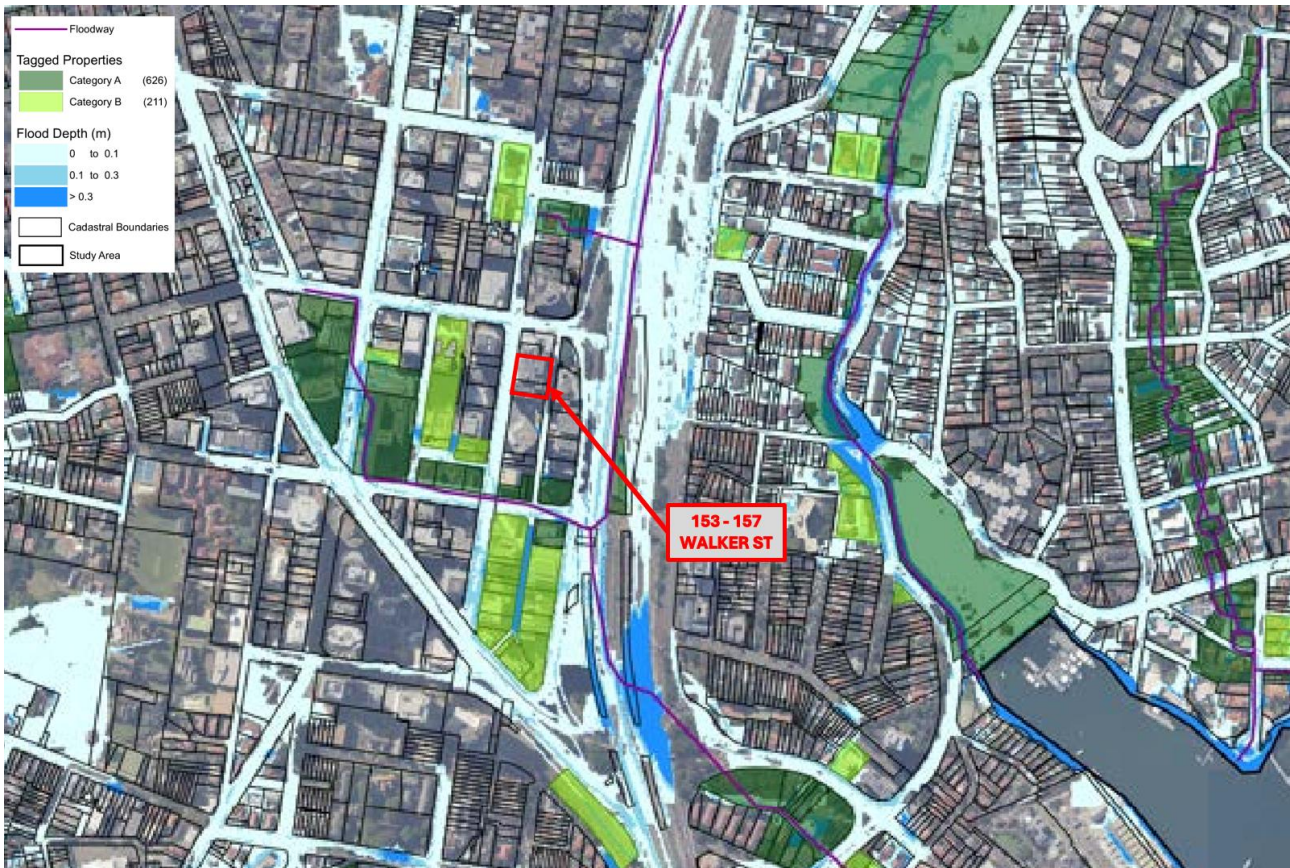


Figure 5 – Flood Planning Area from the Floodplain Risk Management Study and Plan (endorsed by the Council in 2022)

The FPA identifies those properties that are subject to flood related development controls stated in Table 3. It is an important planning tool for managing and mitigating the flood risk in a Local Government Area (LGA).

The proposed development (in red outline above) is not tagged within the Category A or B which denotes that the site is outside the FPA. North Sydney Council has further confirmed that the development is not within the Flood Planning Area as per email dated 3rd February 2025 (Appendix A-2).

## 4. Preliminary Flood Study

### 4.1 Hydraulic Model

In order to assess the flooding impacts of the proposed development, a 2-dimensional flood model has been run using the existing TUFLOW model dated 2022 as provided by the North Sydney Council for the sole purpose of analysis of the flooding impact for this site. RBG engaged directly with the Council to acquire the models (received on the 23<sup>rd</sup> of January 2025). RBG take no responsibility to validate the existing model.

## 4.2 Hydrological Data

The critical storm durations at the site location have been identified below as part of the existing TUFLOW model provided by North Sydney Council on 23<sup>rd</sup> of January 2025, see Table 4 below.

Table 4: Critical Storm Durations

Design Storms	Critical Storm Duration
1% AEP	45 minutes
PMF	15 minutes

## 4.3 Hydraulic Roughness

Various land uses have been assigned with different hydraulic roughness values in the existing TUFLOW model. The hydraulic roughness is measured using the Manning's 'n' value (dimensionless constant) as follows:

Table 5: Manning Coefficients

Surface Types	Manning Coefficient 'n'
Default	0.05
Roads/Pavements	0.025
Light Vegetation/Grass/Field	0.04
Medium Vegetation/Crop/Plantation	0.07
Heavy Vegetation/Light Forest	0.10
Residential Low/High Density	0.05
Industrial/Commercial	0.03
Lake or Estuary/Ocean	0.03
Concrete-lined Channel	0.02
Waterway/channels - minimal vegetation	0.03
Waterway/channels - vegetated	0.07
Site Perimeter Fence	10.00

In the proposed development, the new buildings, landscaping, carparks, and driveways at ground level have the same 'n' values as above.

## 4.4 Site Topography

The existing Council flood model utilised topography from 1m LIDAR survey as shown in Figure 4. The LGA's topography is mainly characterized by a central ridge running east to west, sloping down to Sydney Harbour to the south, and Middle Harbour to the north. The topographic profile of the site is consistent with the immediate surrounds and is not unanticipated in the context of the North Sydney CBD.



The buildings were modelled as inactive areas, which allows the model to force flowing water to find a flow path around the buildings.

## 4.5 Results and Analysis

Outputs from the TUFLOW model are provided in Appendix A for both the 1% AEP and PMF flood events. The outputs show graphically the following:

- Peak Flood Height (H)
- Peak Flood Depth (D)
- Peak Flood Velocity (V); and
- Flood Hazard

The flood hazard is determined by the product of the maximum depth and flow velocity. Within properties and pedestrian areas within road reserves, the maximum  $D \times V$  product for safety of children and vehicles is  $0.4 \text{ m}^2/\text{s}$ .

### 4.5.1 Pre-development Scenario

The existing flood maps show that there is a minor overland flow within Berry Street to the north, Walker Street to the west and Little Walker St to the east of the proposed site. The overland flow is being conveyed across the ground surface due to the rainfall exceeding the capacity of the stormwater network.

Based on the North Sydney Council Flood map as appended in Appendix A-1, the overland flow at the site's frontage at Walker Street is generally shallow reaching depths of about 120mm in 1% AEP and 250mm in PMF. On the other side, the frontage at Little Walker Street experiences less flooding with depths reaching about 87mm only in the PMF and is virtually not inundated by flood in the 1% AEP. Refer to Figure 6 and Figure 7 for the flood depth maps.

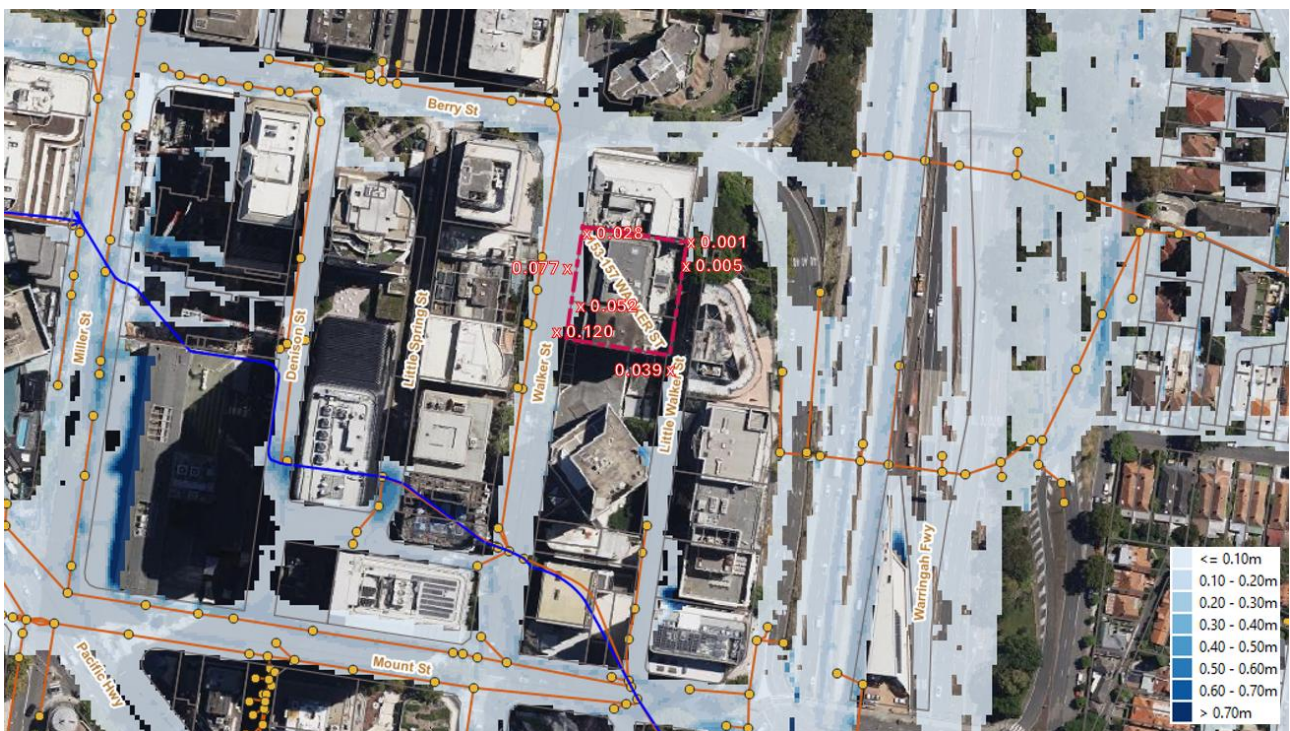


Figure 6 – Existing 1% AEP Flood Depths

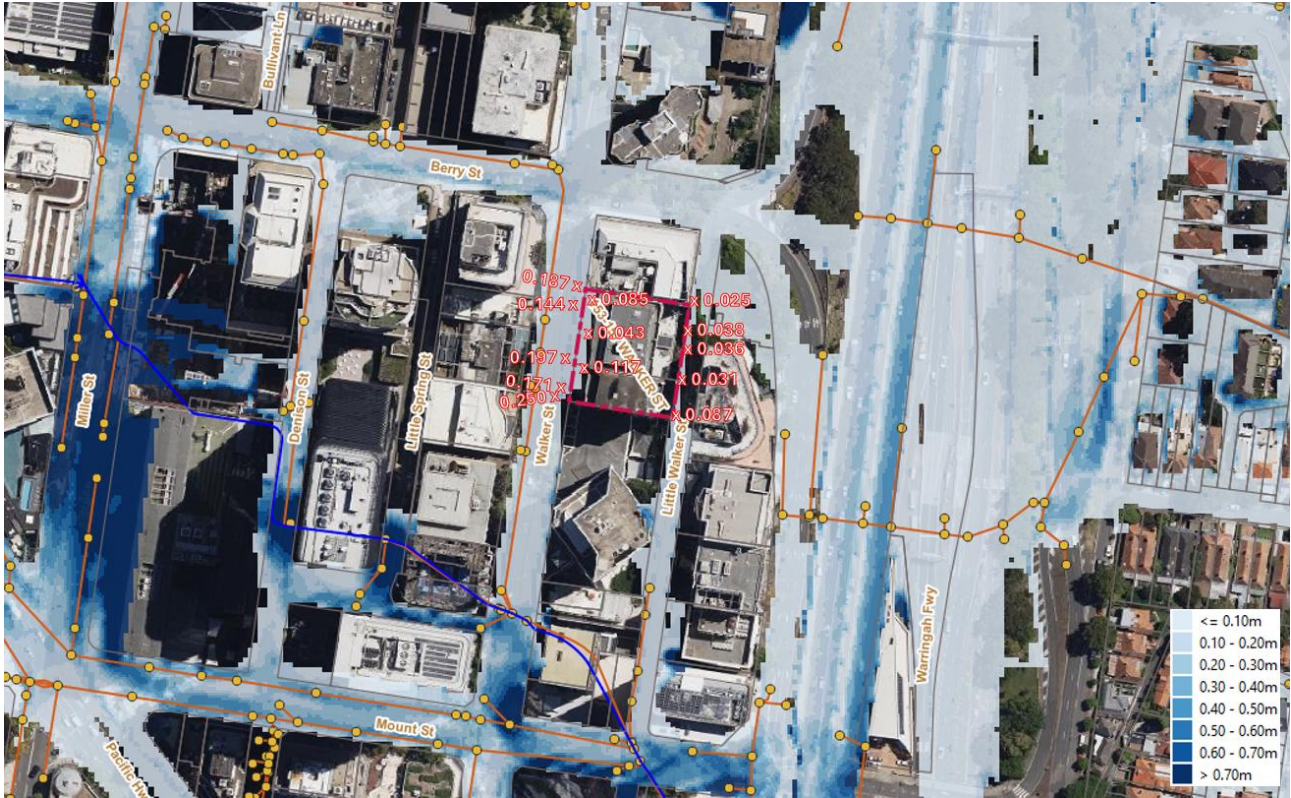


Figure 7 – Existing PMF Flood Depths

The flood hazard around the vicinity of the proposed site for the 1% AEP is generally low (H1) or is negligible while for the PMF case, it varies from H1 to H3 (low to medium). Refer to Figure 8 and Figure 9 for the flood hazard maps.

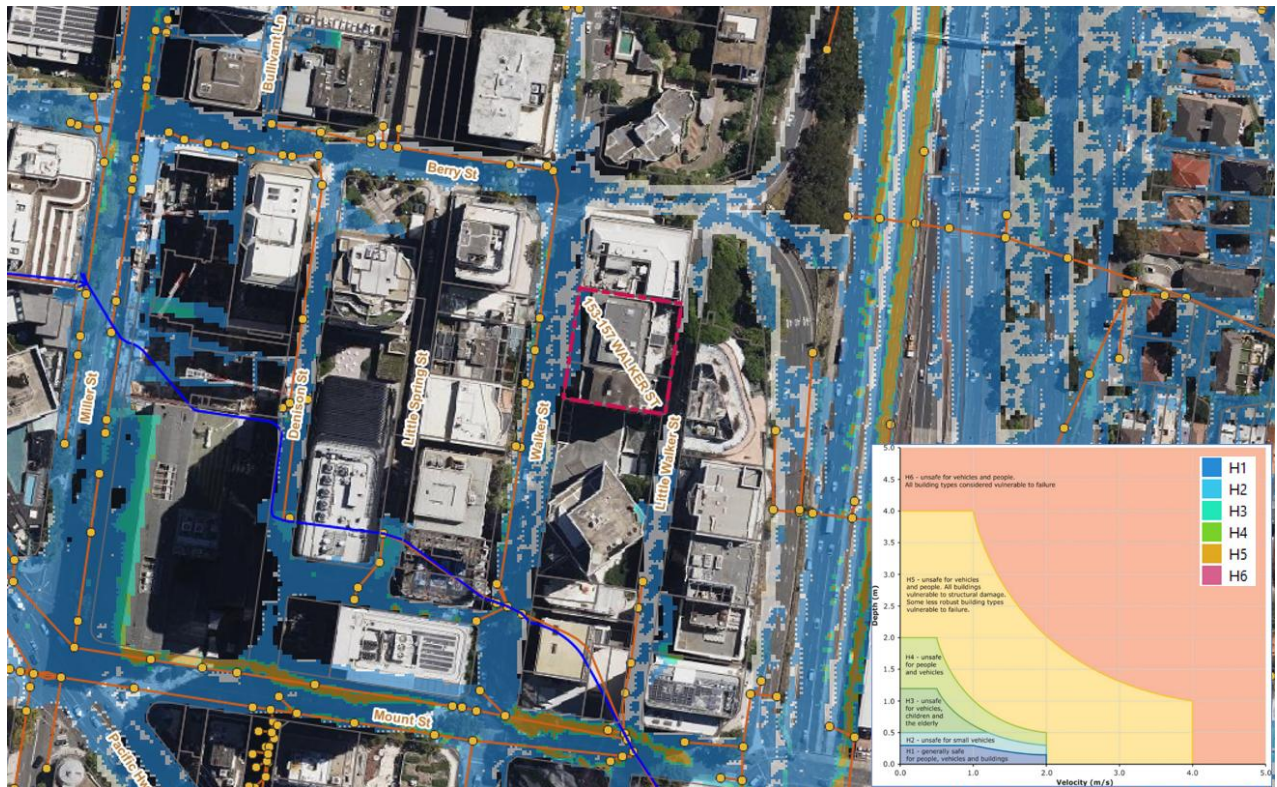


Figure 8 – Existing 1% AEP Flood Hazards



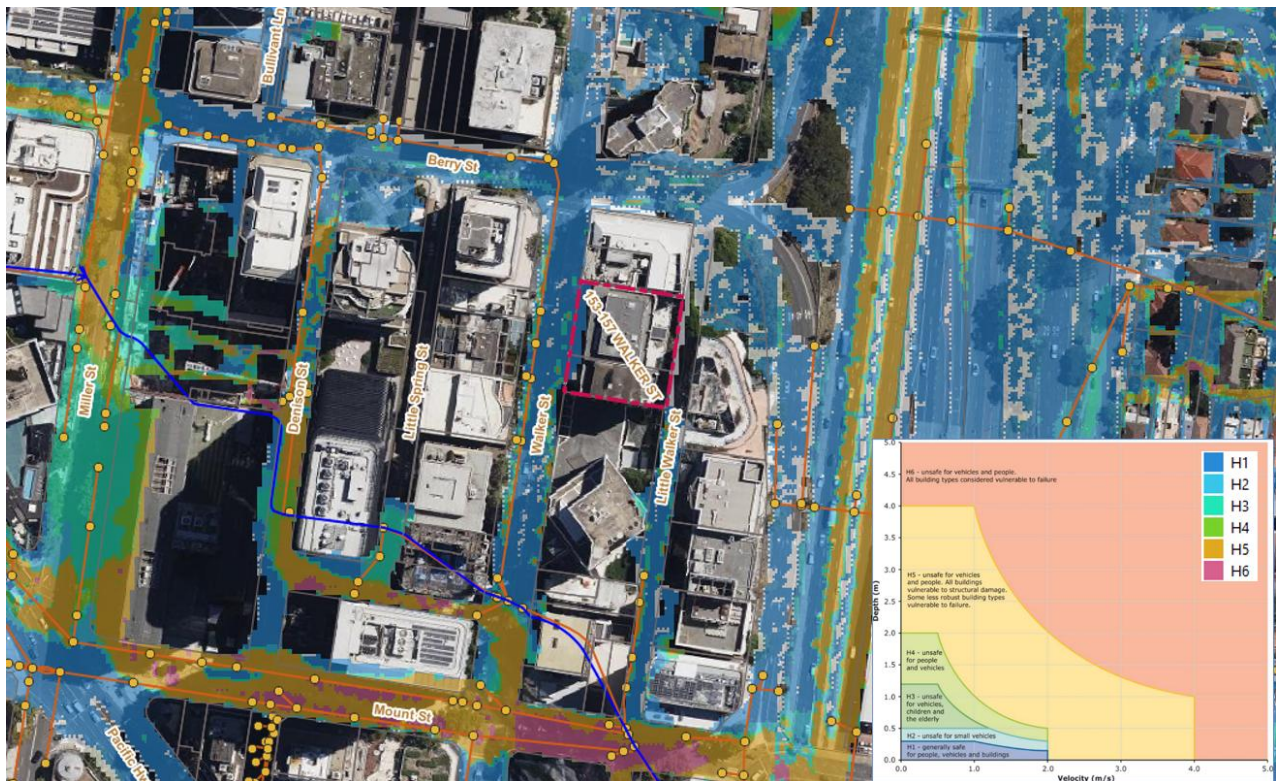


Figure 9 – Existing PMF Flood Hazards

## 4.5.2 Post-development Scenario

The development site is situated above the PMF flood. Flood depths are less than 250mm within the road system and only minor flows are present in the existing footpath in front of Walker St. The proposed site is not expected to experience any flood since it is not impacted by overland flow. Any proposed works at the development site will have no impact to the existing flood behaviour or any adverse impact when it comes to flood levels or the extents of flooding to the existing adjacent properties.

## 4.5.3 Flood Planning Levels

The North Sydney Councils' Floodplain Management Policy (Interim) requires that flood levels be set at the required Flood Planning Level (FPL). The proposed building is classified as "residential or commercial", though the site is not subject to 1% AEP flood levels, a due-diligence review on the flood planning level are provided based on the requirements as highlighted in Table 3. At the ground or lower ground level, residential and hotel lobbies are considered as residential non-habitable. Residential and hotel habitable areas are located in the upper levels.

Table 6: Flood Level Threshold Requirement

Location Point	Location Description	Development	Flood Planning Level (FPL) Criteria	Proposed Finished Floor Level (m AHD)	1%AEP Flood Level (m AHD)	PMF Flood Level (m AHD)	Compliant
P01	Emergency Exit	Residential non-habitable	1% AEP	59.00	58.36	58.73	Yes



Location Point	Location Description	Development	Flood Planning Level (FPL) Criteria	Proposed Finished Floor Level (m AHD)	1%AEP Flood Level (m AHD)	PMF Flood Level (m AHD)	Compliant
P02	Fire Control Room	Residential non-habitable	1% AEP	59.50	59.10	59.27	Yes
P03	Booster Valve	Residential non-habitable	1% AEP	59.80	59.77	59.78	Yes
P04	Residential Lobby	Residential non-habitable	1% AEP	60.40	60.37	60.39	Yes
P05	Hotel Lobby	Residential non-habitable	1% AEP	61.40	61.34	61.37	Yes
P06	Basement entry ramp	Residential non-habitable	PMF	55.30	Not Applicable	55.20	Yes
P07	Basement entry ramp	Residential non-habitable	PMF	56.30	Not Applicable	55.30	Yes
P08	Emergency Exit	Residential non-habitable	1% AEP	56.20	Not Applicable	55.95	Yes
P09	Residential Lobby	Residential non-habitable	1% AEP	56.42	Not Applicable	56.11	Yes
P10	Hotel Lobby	Residential non-habitable	1% AEP	56.42	56.35	56.40	Yes

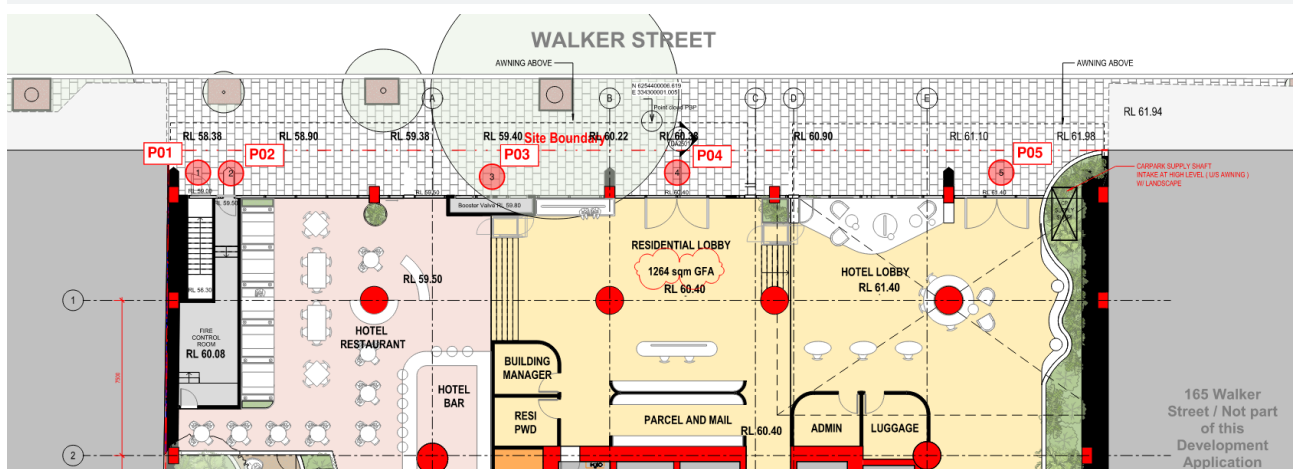


Figure 10 - Reference Point on the Ground Floor Plan (Interface to Walker Street)



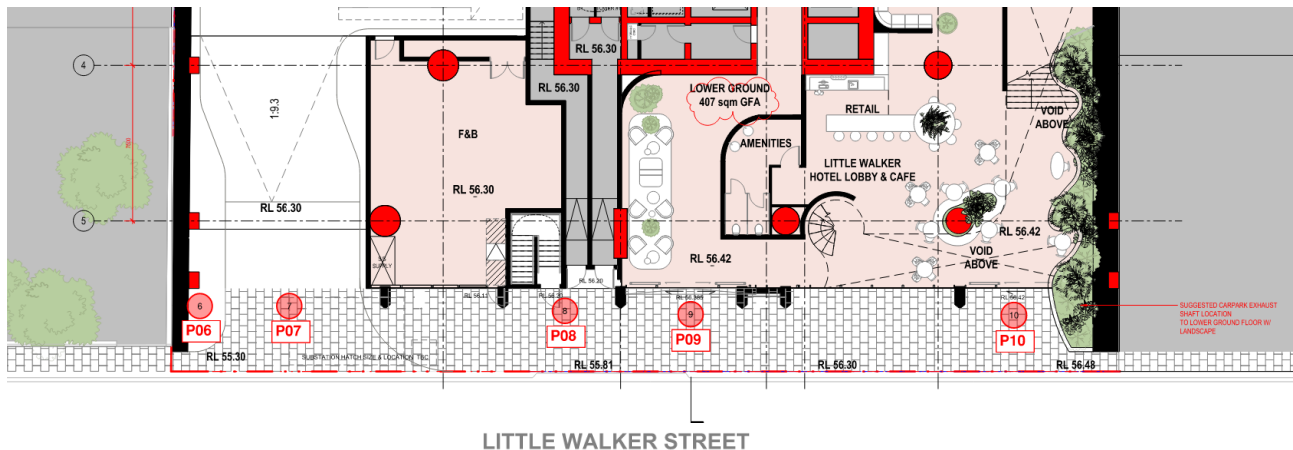


Figure 11 - Reference Point on the Lower Ground Floor Plan (Interface to Little Walker Street)

Table 6 summarises the finished floor levels and their respective flood protection threshold levels with reference to the location shown in Figure 10 and Figure 11.

## 5. Flood Emergency Response Plan

### 5.1 Flood Behaviour

Based on the TUFLOW flood model dated 2022 provided by North Sydney Council, as illustrated in Figure 6 and Figure 7, peak flood depth at the frontage to the Walker Street within the property boundary reached 52mm and 117mm during the 1% AEP and PMF storm events, respectively. The frontage at Little Walker Street experiences almost no flooding in the 1% AEP and about 87mm only to the southeast corner of the site in the PMF event.

The flood hazard around the vicinity of the proposed site for the 1% AEP is low (H1) or is generally safe for people, vehicles and buildings; while for the PMF case, it varies from H1 to H3 (low to medium). H3 means it is unsafe for vehicles, children and the elderly and this is only contained within the road below the footpath at Walker Street.

### 5.2 Flood Evacuation Requirement and Preparation

The proposed development is not expected to impact the existing flooding conditions of the site, as it aims to maintain the current state within the site boundary and its immediate vicinity. Passive design solutions such as ramping up or steps at access points are being considered to protect the proposed structure from potential flooding. However, it is important to note that, according to the Flood Planning Area (FPA) from the draft Floodplain Risk Management Study and Plan endorsed by the Council in 2022, the site is not subject to flood related development controls. This aligns with the advice provided by the Council's Engineering department (Refer to Appendix A-2).

In the unlikely event of extreme flood conditions, an emergency response plan may be implemented to mitigate the residual flood risk to occupants. The primary objective of this plan is to ensure the safe evacuation of building occupants to the secure locations in the event of floodwater inundation. Enclosed ground or below-ground floor spaces are particularly vulnerable, as they can fill rapidly once flood protection measure are breached, thereby reducing the time available for evacuation.

While off-site evacuation is preferable, it may not always be feasible due to limited warning time, rapid rise in floodwaters, or other site-specific factors. Overland flow flooding can lead to a swift increase in on-site flood levels, potentially preventing safe evacuation within a required timeframe. As a result, the most practical method of risk mitigation strategy to provide on-site 'shelter in place' options on-site located above the PMF level. It is also understood that the structure would be designed to withstand the force of water and debris for all storm conditions up the PMF.

## 6. Conclusion & Recommendations

This report outlines the flood modelling exercise undertaken by RBG to assess the flooding impact of the proposed development at 153-157 Walker Street in the 1% AEP and PMF critical storms.

The existing overland flow is mostly contained within the road kerb and gutter system with depths below the top of the kerb for the 1% AEP event. Minor flows in the footpath in front of Little Walker St are present in the PMF event but is considered generally shallow. This means that all entrances to the proposed building will be protected against any flood up to PMF.

The development lies outside the Flood Planning Area, meaning that there are no strict flood related development controls that need to be applied on site. Although this is the case, the proposed thresholds and openings into the building will be raised as high as practically possible, whilst considering the site constraints, existing external public domain / footpath levels, existing services and access requirements.



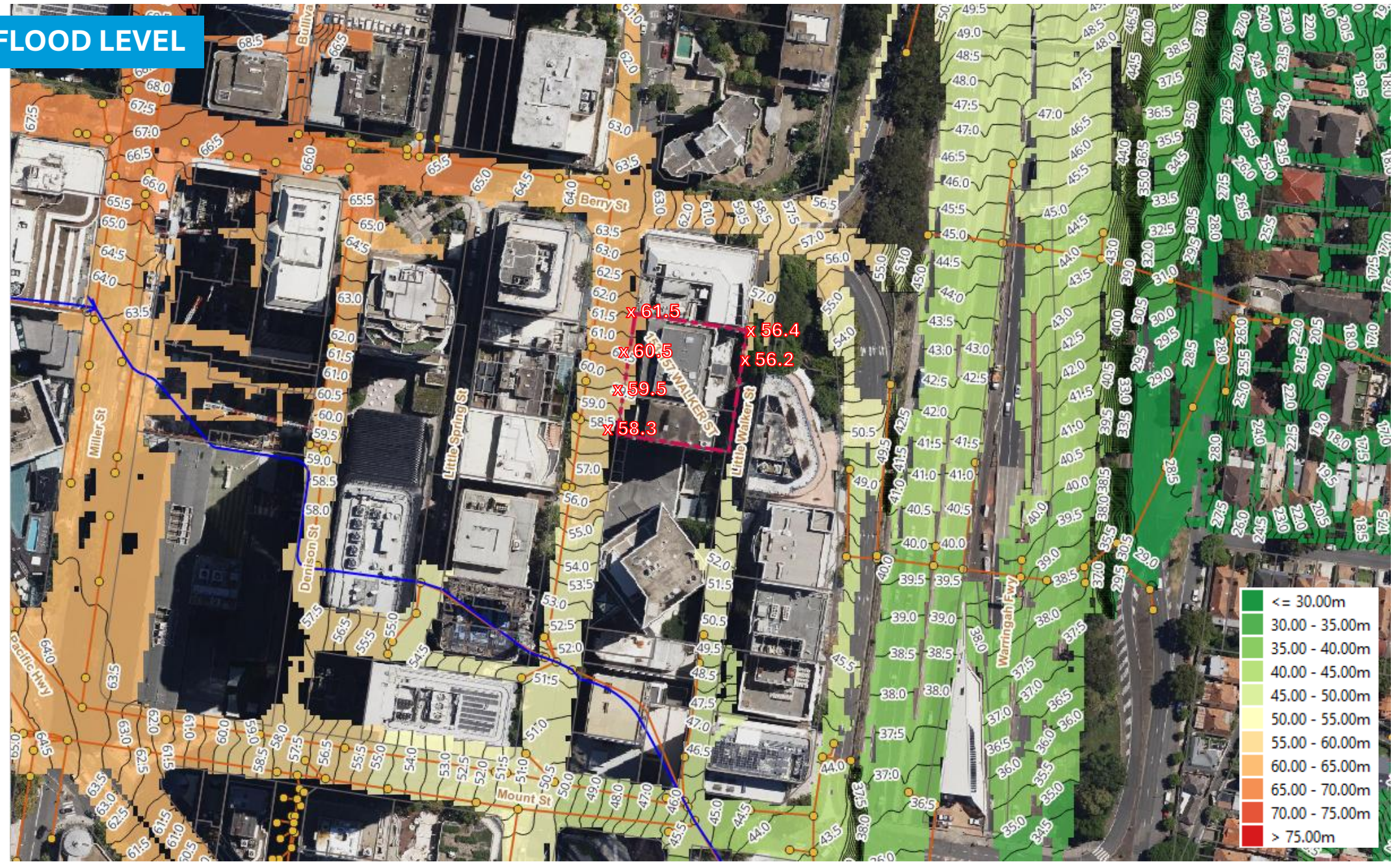
Robert Bird Group  
Member of the International Group



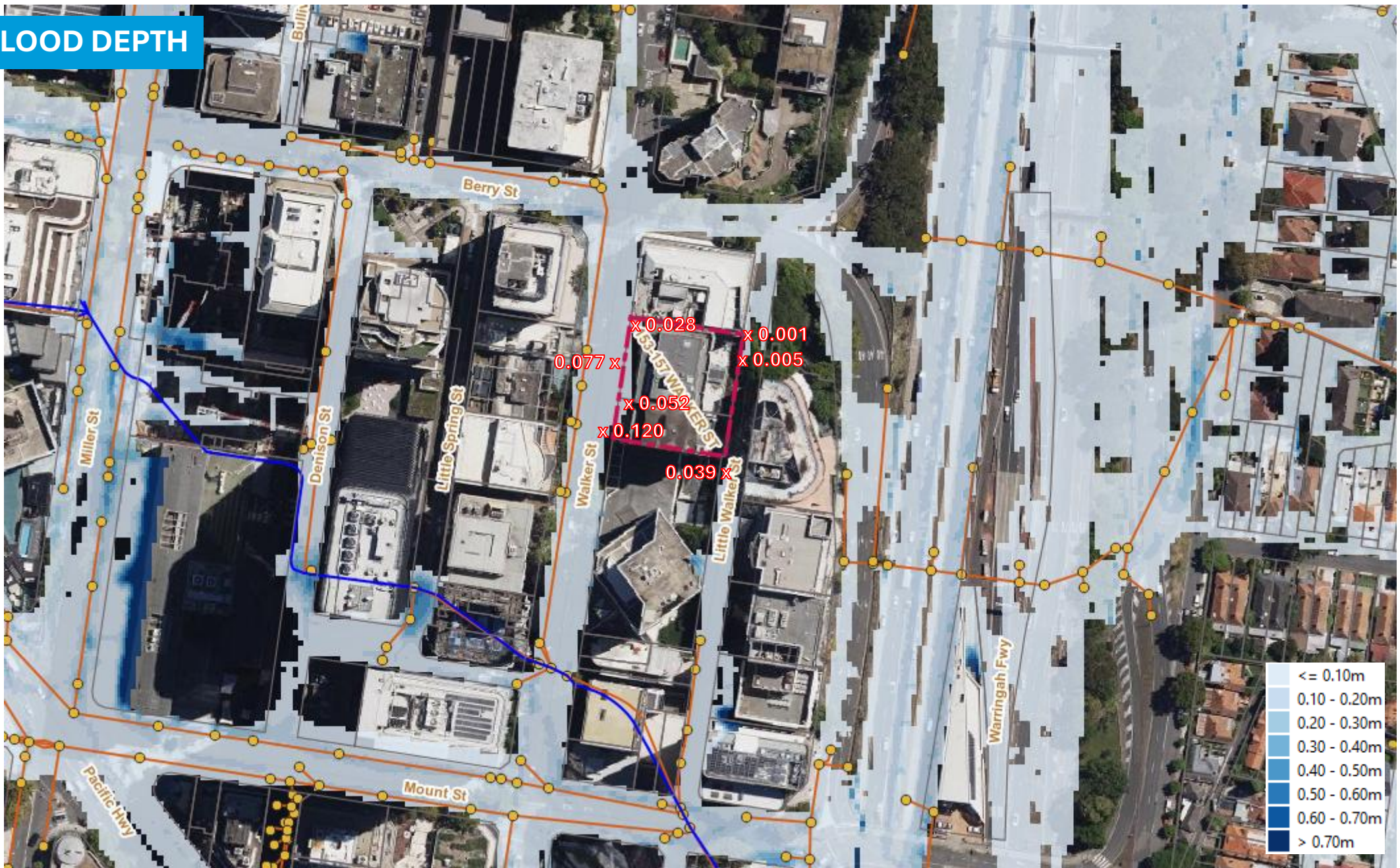
# Appendix A Flood Maps

153-157 Walker St, North Sydney

# 1% AEP FLOOD LEVEL



# 1% AEP FLOOD DEPTH

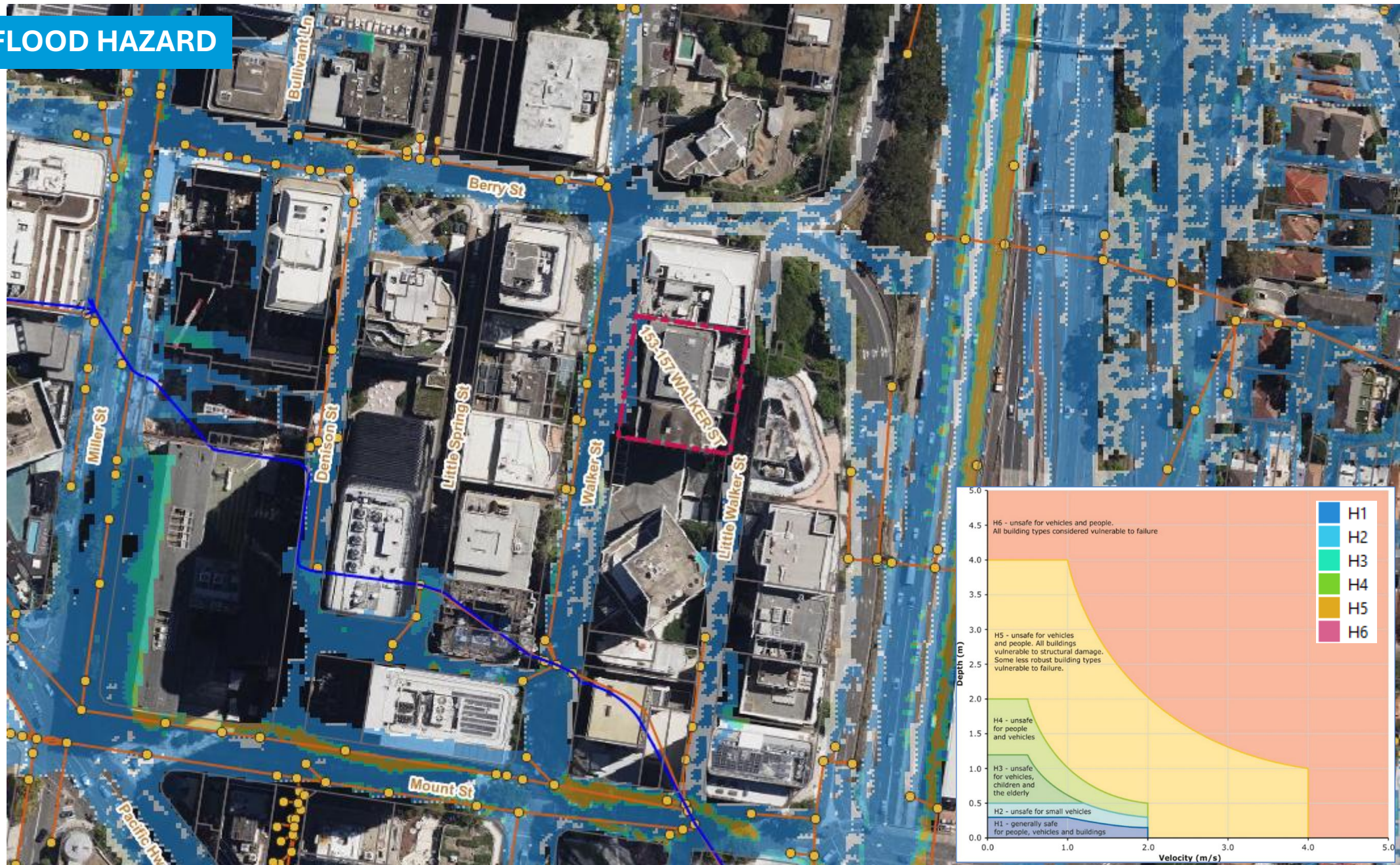


<= 0.10m
0.10 - 0.20m
0.20 - 0.30m
0.30 - 0.40m
0.40 - 0.50m
0.50 - 0.60m
0.60 - 0.70m
> 0.70m

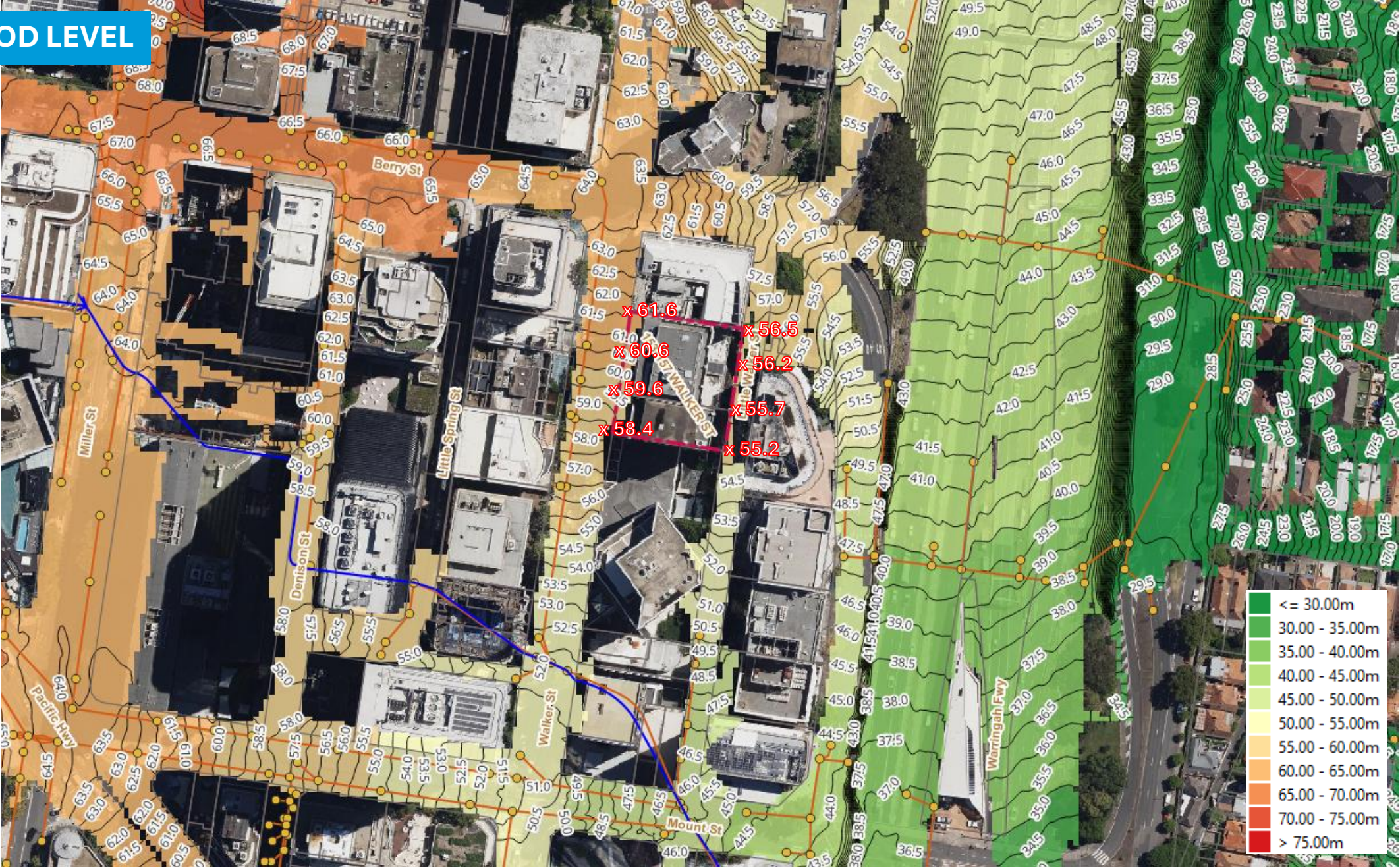
# 1% AEP FLOOD VELOCITY



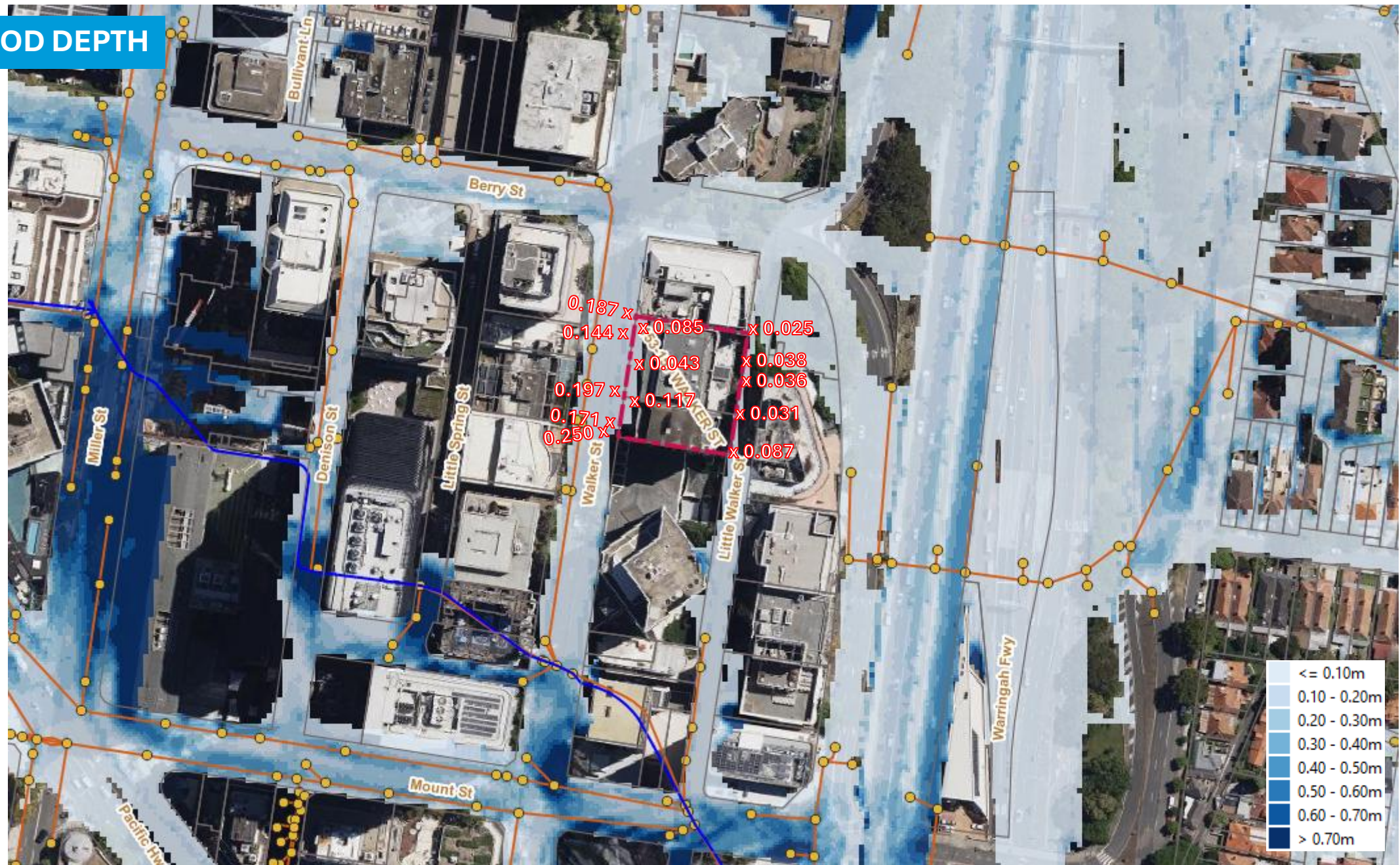
# 1% AEP FLOOD HAZARD



# PMF FLOOD LEVEL



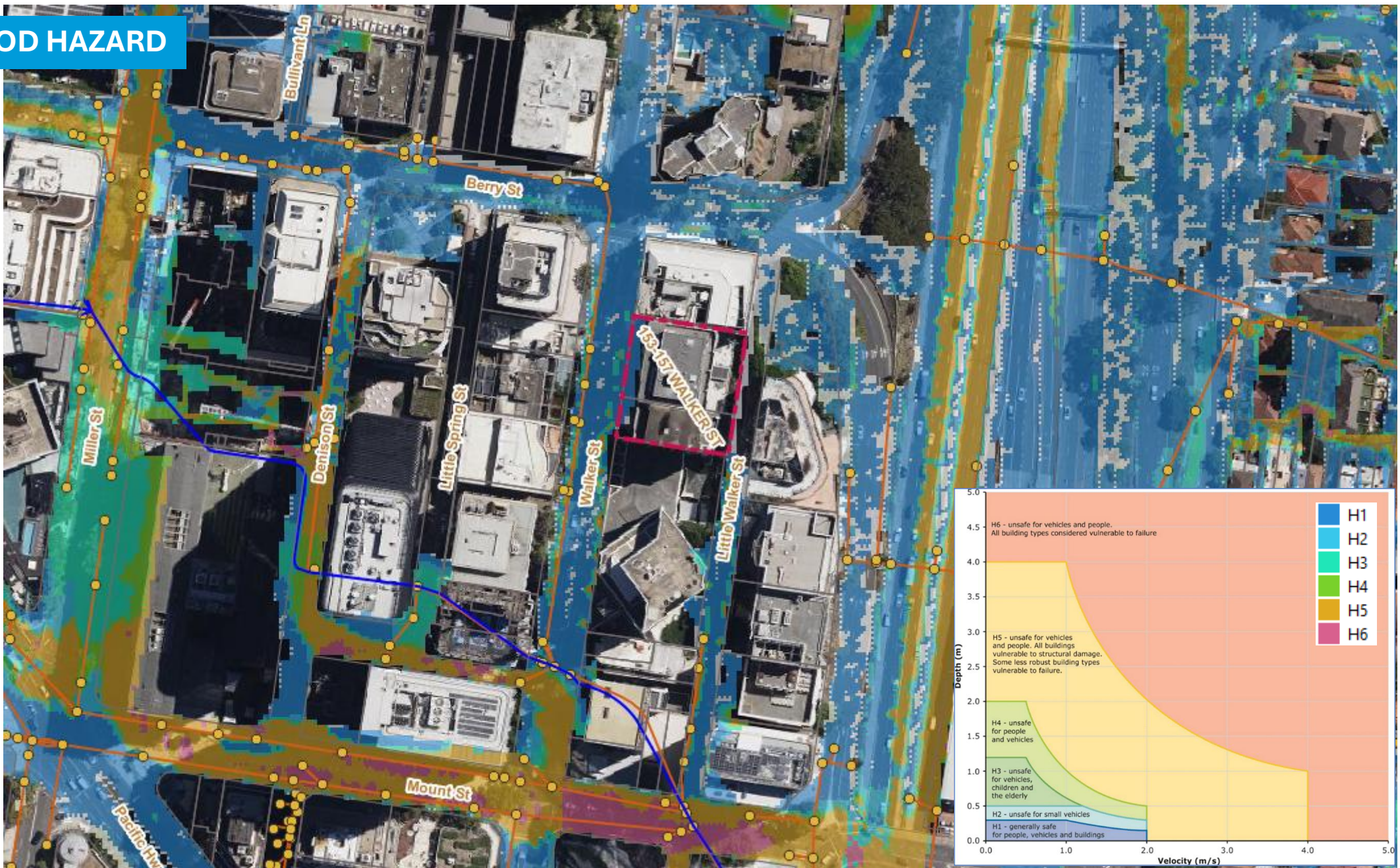
# PMF FLOOD DEPTH



# PMF FLOOD VELOCITY



# PMF FLOOD HAZARD





# Appendix B

## Council Correspondence

153-157 Walker St, North Sydney

**From:** Jim Moore <Jim.Moore@northsydney.nsw.gov.au>  
**Sent:** Monday, 3 February 2025 10:34 AM  
**To:** Mark LABID  
**Cc:** Allen ANG  
**Subject:** RE: Flood Information - 153-157 Walker Street North Sydney

**Follow Up Flag:** Follow up  
**Flag Status:** Flagged

**This message is From an External Sender**

Please do not click the links or attachments and do not respond to this message if you are unsure of its origin.

Hi Mark,

I can confirm that 153 -157 Walker Street are not located within the FPA.

I have asked our development engineers to reach out to you with regards to the development application with respect to Flooding / Stormwater design.

Kind regards,  
Jim Moore



**Jim Moore**  
Engineering Project Manager

**P** +61 2 9936 8233 | **M**  
[Jim.Moore@northsydney.nsw.gov.au](mailto:Jim.Moore@northsydney.nsw.gov.au)



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**From:** Mark LABID <[Mark.Labid@robertbird.com.au](mailto:Mark.Labid@robertbird.com.au)>  
**Sent:** Friday, 31 January 2025 2:09 PM  
**To:** Jim Moore <[Jim.Moore@northsydney.nsw.gov.au](mailto:Jim.Moore@northsydney.nsw.gov.au)>  
**Cc:** Allen ANG <[Allen.Ang@robertbird.com.au](mailto:Allen.Ang@robertbird.com.au)>  
**Subject:** Flood Information - 153-157 Walker Street North Sydney

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**CAUTION:** Do not click links or open attachments unless you recognise the sender and know the content is safe.

Hi Jim,

I hope you are doing well. I am Mark, a flood engineer from Robert Bird Group. We are looking at a proposed development for application within the North Sydney LGA. The site is located at 153-157 Walker Street, North Sydney.

In line with this, we would like to ask regarding the Council requirements for development

application with respect to Flooding / Stormwater design. We are also curious if the proposed development falls under the Council's definition of 'flood prone land' . Is it defined to be flood inundated within 1% AEP or the PMF event?

Thank you and have a good day.

Best regards,

**Mark Labid**

Engineer  
Camberaygal Country, Level 6, 100 Pacific Highway, North Sydney, NSW, 2060, Australia  
P 02 82463200



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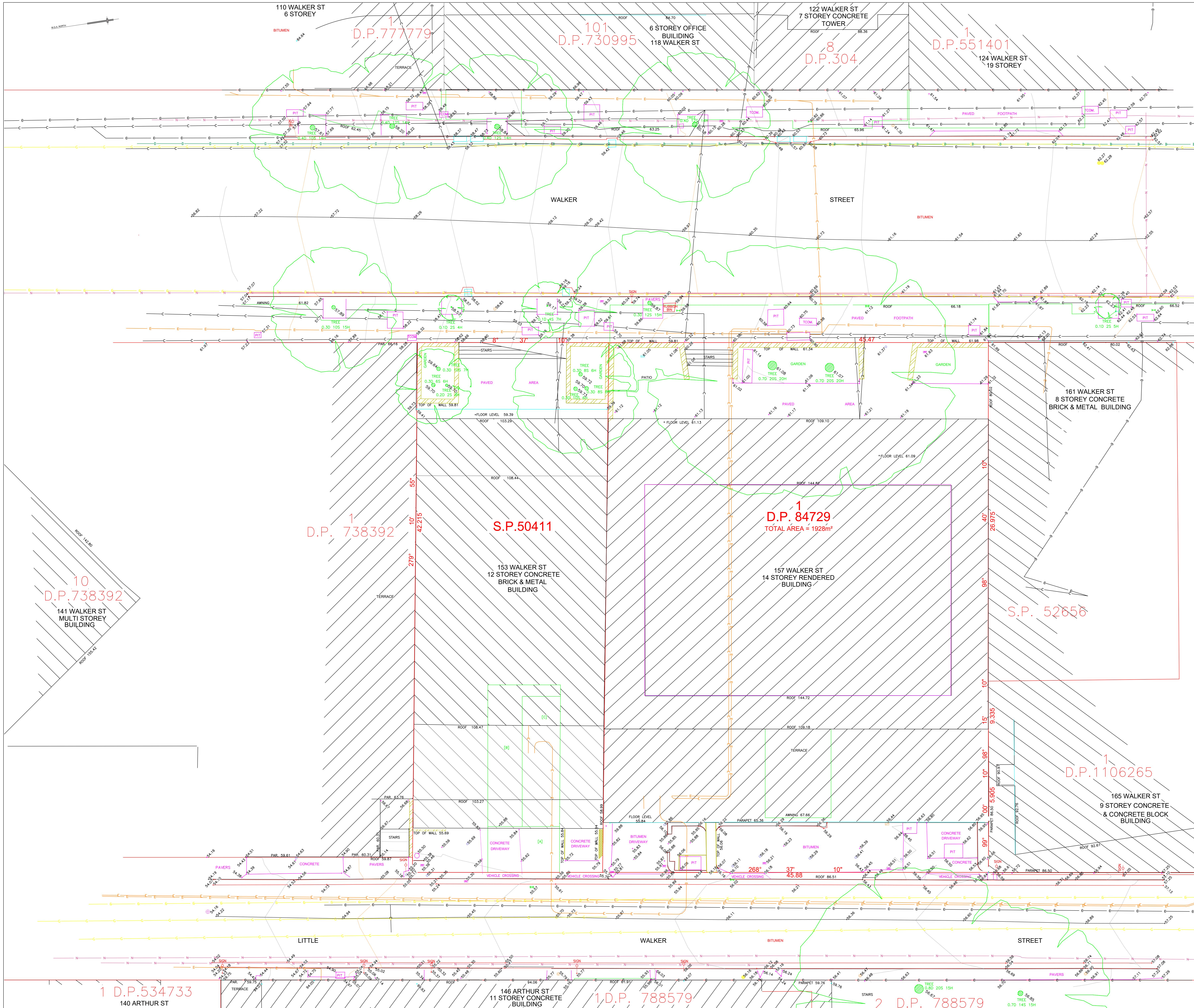
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# Appendix C Survey

153-157 Walker St, North Sydney



- LEGEND - Q-L-D**
- C U/G COMMUNICATIONS
  - D U/G DRAINAGE
  - E U/G STORMWATER
  - F U/G ELECTRICITY
  - G OVERHEAD POWER LINES
  - H U/G FIRE
  - I U/G GAS
  - J U/G NOT SPECIFIED
  - K U/G PETROLEUM PRODUCTS
  - L U/G RECYCLED WATER
  - M U/G SEWER
  - N U/G WATER (POTABLE)

**UTILITY POSITIONING CLASSIFICATION (AS5488)**

Q-L-A - VALIDATED, MEASURED DIRECTLY TO UTILITY  
 Q-L-B - TRACKED, ELECTRONIC DETECTION OF UTILITY  
 Q-L-C - ALIGNED, TO UTILITY SURFACE FEATURES  
 Q-L-D - INDICATIVE, AS PER DWD DIAGRAMS

**CERTAINTY**

- A HIGH
- B MEDIUM
- C LOW
- D VERY LOW

IF ACCURATE LOCATION IS REQUIRED SERVICE TRACE IS RECOMMENDED.

INFORMATION SHOWN ON PLAN AND ELEVATIONS OF ADJOINING PROPERTIES HAS BEEN OBTAINED BY REMOTE SURVEY METHODS FROM WITHIN SUBJECT LAND AND STREET.

SYMBOLS REPRESENTING SERVICE PITS, POLES AND STREET FURNITURE ARE NOT TO SCALE.

CONSTRUCTION WORKS MUST BE RELATED TO THE SITE BENCH MARK AND NOT LEVELS OF STRUCTURES SHOWN ON THE PLAN.

TREE SPREADS AND TRUNK DIAMETERS SHOWN ARE DIAGRAMMATIC ONLY AND TREE HEIGHTS ARE ESTIMATED. IF ANY OF THESE ELEMENTS ARE CRITICAL TO DESIGN (IN PARTICULAR DRIP LINES) MORE SPECIFIC DETAILS SHOULD BE REQUESTED FOR ACCURATE LOCATION.

VISIBLE SURFACE PITS ONLY SHOWN. THE EXISTENCE AND POSITION OF UNDERGROUND SERVICES HAS NOT BEEN INVESTIGATED.

POSITION OF UNDERGROUND SERVICES PLOTTED FROM INFORMATION SUPPLIED BY THE RELEVANT AUTHORITIES AND MAY BE APPROXIMATE ONLY. UNDER AS5488 2018 CLASSIFICATION OF SUBSURFACE UTILITY INFORMATION (SUI) THE SERVICES SHOWN AS Q-L-D ARE AN APPROXIMATE LOCATION ONLY, DERIVED FROM DWD DRAWINGS / EXISTING RECORDS. IT DOES NOT ENCOMPASS ANY FIELD VERIFICATION INVOLVING DIRECT MEASUREMENT.

SERVICE LINES SHOWN ARE DIAGRAMMATIC ONLY AND DO NOT REPRESENT THE WIDTH AND NUMBER OF CABLES OR PIPES IN THE GROUND.

PIT SIZE IS SHOWN AT GROUND LEVEL. PITS MAY BE LARGER BELOW THE SURFACE.

IT IS THE RESPONSIBILITY OF EACH CONTRACTOR AND/OR CONSULTANT TO CONTACT THE RELEVANT AUTHORITY AND/OR 'DIAL BEFORE YOU DIG' (From 1100) BEFORE COMMENCING ANY EXCAVATION.

THIS PLAN HAS BEEN CREATED AT A SCALE OF 1:100 AND MAY NOT BE SATISFACTORY FOR OTHER PURPOSES. THE ACCURACY OF ANY ENLARGEMENT OR OTHER REPRODUCTION MAY BE LESS THAN THAT OF THE ORIGINAL.

(A) RIGHT OF WAY BASEMENT FOR PURPOSES 5.715 WIDE (N845529)  
 (B) RIGHT OF WAY 2.745 & 5.715 WIDE (N845529)  
 (C) SUBSTATION PREMISES 10.3251 (N845529)

- LEGEND**
- ⊕ ELECTRICITY PIT
  - ⊕ ELEC POLE WITH LIGHT
  - ⊕ ELECTRICITY POLE
  - ⊕ LIGHT POLE
  - ⊕ TRAFFIC SIGNAL
  - ⊕ GAS METER
  - ⊕ GAS VALVE
  - ⊕ POLE (UNSPECIFIED)
  - ⊕ PIT (UNSPECIFIED)
  - ⊕ MANHOLE (UNSPECIFIED)
  - ⊕ TELECOM PIT
  - ⊕ TELECOM PILLAR
  - ⊕ WATER METER
  - ⊕ WATER VALVE
  - ⊕ STOP VALVE
  - ⊕ HYDRANT
  - ⊕ STORM WATER GRATE
  - ⊕ STORM WATER MANHOLE
  - ⊕ STORM WATER PIT
  - ⊕ SEWER PIT
  - ⊕ MANHOLE SEWER
  - ⊕ MANHOLE SEWER
  - ⊕ BOLLARD
  - ⊕ SIGN

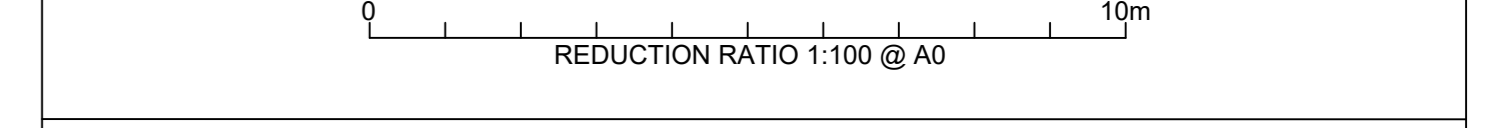
REV.	DATE	AMENDMENTS
C	03/02/2025	ADDITIONAL DETAIL ADDED (80717)
B	18/11/2022	ADDITIONAL DESCRIPTIONS INCLUDED
A	9/11/2022	FOR INFORMATION

**RYGATE SURVEYORS** Rygate & Company Pty Limited  
 P.W. Rygate & West  
 ABN 61 001 204 897  
 SURVEYING SINCE 1893

a Suite 903 Level 9,  
 171 Clarence St, Sydney  
 NSW 2000  
 p +61 2 9262 6800  
 f +61 2 9262 6843  
 e surveyors@rygate.com.au  
 w rygate.com.au

SUBDIVISION | STRATA PLANS | STRATUM SUBDIVISION | LEASE PLANS | TOPOGRAPHIC SURVEYS | GPS SURVEYS | 3D MODELLING | RACECOURSE DESIGN | PROJECT MANAGEMENT | SUN SHADOW DIAGRAMS

SURVEYOR	DRAWN	CHECKED	APPROVED
J.C.	D.S.	J.C.	A.F.



DATUM : AUSTRALIAN HEIGHT DATUM  
 CONTOUR INTERVAL : 0.2m  
 ORIGIN OF LEVELS : S.S.M. 25.302 R.L.55.657

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CLIENT: G.P.T.

LOCALITY: NORTH SYDNEY

L.G.A.: NORTH SYDNEY

**PLAN**  
 SHOWING DETAIL & LEVELS  
 LOT 1 D.P. 84729 & S.P. 50411  
 No. 153-157 WALKER STREET

REFERENCE No.	PLAN No.	DATE	SHEET
80110	80110-C.DWG	3/11/2022	1 OF 1 SHEETS