

PLANNING PROPOSAL REPORT

ALIRO CARINGBAH

13 ENDEAVOUR ROAD, CARINGBAH

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Document Control

Revision	Date	Description	Prepared	Reviewed	Approved
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Prepared by	Benjamin Barrett	Revision	3
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1. EXECUTIVE SUMMARY

Sparks & Partners have been engaged by Aliro to provide civil and hydraulic engineering services to support the Planning Proposal submission for the proposed redevelopment of 13 Endeavour Road, Caringbah.

The Planning Proposal seeks to amend the Sutherland Shire Local Environmental Plan 2015 (LEP) as follows:

- An addition to Schedule 1 Additional Permitted Uses to facilitate the permissibility of 'tourist and visitor accommodation', 'pub' and 'shops' (up to 4,310m²) on the site.
- A maximum height of buildings control of between 40m and 50m.

The Planning Proposal does not seek any change to the B7 Business Park zoning of the site or the maximum 1.5:1 Floor Space Ratio development standard.

This report will demonstrate from a civil engineering perspective that the proposed amendments to the LEP will not adversely affect the proposed development achieving compliance with council policy in regard to flooding, foreshore development and stormwater management.

2. INTRODUCTION

2.1 Existing Site

The site has been developed by car manufacturer Toyota for warehouse storage and distribution, offices, mechanic workshops and a technical training centre. The site is approximately 123, 891m² and consists of a large warehouse, various offices and training buildings, workshop building, hardstand, carparking and landscaping. The site is bounded by Endeavour Road on the north-west boundary, Captain Cook Drive on the south-west boundary, Solander Fields on the south-east boundary and Woolooware Bay on the north-east boundary. The Woolooware Bay boundary is a foreshore zone with an interface to mangroves bordering the bay. The existing site is burdened by an easement for overhead power lines, and easements for existing substations.

2.2 Proposed Development

The proposed development will be constructed over several years and is a mix of retaining existing buildings and constructing new buildings. The large warehouse is to remain, with the office and workshop buildings retained in the short term, and reconstructed in the future. New carparking, hardstand and internal access roads will be constructed. The landscaped area adjacent to Woolooware Bay is to remain as landscaping. Flood and stormwater management will need to cater for existing buildings within the site as the site is redeveloped in stages.

3. PLANNING CONTROLS AND PROPOSAL

The site is situated within the Sutherland Shire Council (SSC) local government area (LGA) and is therefore subject to the relevant planning legislation set by this Council. Current planning controls are:

- Sutherland Shire Local Environmental Plan 2015 (LEP);
- Sutherland Shire Development Control Plan 2015 (DCP);

The site is currently zoned Business Park (B7) as per the current Council LEP map. The planning proposal proposes amendments to the LEP for the site. The following sections demonstrate that additional uses do not negatively impact on the site flooding, foreshore zone and stormwater management.

4. FLOOD PLANNING CONTROLS

4.1 Flood Information

The site is identified as being a flood prone land lot in Council Flood Map, with portions of the site identified as a “known risk”. A Flood Certificate for the site has also been obtained, dated 6th February 2020, and located in Appendix A. The certificate identifies the following site flood information:

- Flooding identified in the Woollooware Bay Catchment Flood Study prepared by WMAwater dated 2014.
- The impact of climate change and predicted sea level rise by 2070 needs to be considered in setting habitable flood levels.
- Floodplain risk management controls set out in DCP Chapter 40: Environmental Risk, apply to the site.

The flood certificate mapping indicates areas of the site which are flood affected. For this report these areas are labelled as the Endeavour Road Frontage, Gannons Road Intersection and North-East Corner. All areas contain low hazard 1%AEP floodwaters, and portions of floodway, flood storage and flood fringe hydraulic categories.

4.2 Planning Proposal Flood Assessment

The following will form the basis of the flooding analysis and assessment to demonstrate compliance with council requirements and support the planning proposal:

- WMAwater have been engaged to provide site specific flood analysis for the existing site and the proposed development. Detailed analysis results will be provided in DA submissions for the site.
- Several existing buildings are to be retained and occupied as the site is redeveloped in stages.
- Climate change and predicted sea level rises have been incorporated into the flood modelling, in accordance with Council Sea Level Rise Policy November 2016.
- DCP Chapter 40 defines the Commercial and Industrial Land Use Category to include the following uses: office, retail and bulky goods premises, entertainment facilities, function centres, hotel and motel accommodation, industries, warehouse and distribution centres.

The proposed LEP amendments for the development will not change how flooding is managed on site or assessed for the future DA submission.

5. FORESHORE DEVELOPMENT

The north-east boundary of the site borders Woollooware Bay and contains a coastal wetland buffer zone. This area of the site is low-lying and consists of landscaping. Flooding analysis results of the existing site indicate that a mix of floodwaters and water from Woollooware Bay inundate the north-eastern boundary of the site in large storm events. The foreshore buffer will still accommodate floodwaters within the site, similar to the existing site conditions. The proposed LEP amendments for the development will not have a detrimental effect on the development maintaining the foreshore buffer.

6. STORMWATER MANAGEMENT

The proposed development will require a mix of utilising existing and constructing new stormwater infrastructure. The existing site stormwater currently discharges at multiple points to Captain Cook Drive, Endeavour Road and the drainage channel on the north-western boundary. The stormwater management system will divide the site into separate sub-catchments for each discharge point. A conceptual approach for stormwater management will be developed with reference to Sutherland Shire Specification Stormwater Management 2009. Detailed design drawings will accompany the site DA submission. The proposed LEP amendments for the development will not alter how the site stormwater is managed.

CONCLUSION

Based on this report and our assessment of the existing site and proposed redevelopment, it is demonstrated that the proposed LEP amendments for the site will not adversely affect the future site redevelopment compliance with Council policies in regards to flooding, foreshore development and stormwater management.

APPENDIX A. FLOOD CERTIFICATE



Inam Ahmed
p: 9710 0486
File Ref: FC20/0006

06 February 2020

Shenouda Wael
Suite 2, Level 1, 33 Herbert Street
ST LEONARDS NSW 2065

Dear Sir/Madam,

FLOOD INFORMATION

Property Address: 13 Endeavour Road, Caringbah
Property Description: Lot 2 DP 714965
Issue Date: 07 December 2020
References: Woolooware Bay Catchment Flood Study
Application No: FC20/0006

This flood information sheet provides information in regards to the above property. This property is identified as flood prone land in the Woolooware Bay Catchment Flood Study.

Floodplain risk management controls as set out in SSDCP2015 (*Chapter 40: Environmental Risk*) apply to the development of this property. The nature of the development and level of risk (low, medium and high) will determine which controls apply under the following headings:

1. Floor Level
2. Building Components & Method
3. Structural Soundness
4. Flood Effects
5. Car Parking and Driveway Access
6. Evacuation

This information was made available to Council from the "Woolloomare Bay Catchment Flood Study" prepared by WMAwater dated 2014.

FLOOD RISK (SSDCP 2015):	Not available
5% AEP:	1.38m AHD to 2.90m AHD
1% AEP*:	1.45m AHD to 3.00m AHD
PMF:	1.5m AHD to 3.43m AHD
Minimum habitable floor level*:	1% AEP + 500mm freeboard
Minimum finished floor level (garage and driveway access)*:	1% AEP + 200mm freeboard
Existing Floor Level:	Not available

DISCLAIMER: This information is provided by Council in good faith in accordance with s733 of the *Local Government Act 1993* and has been produced with the most current data available to Council as supplied by various sources. Council is not responsible for any inaccuracies in the data provided.

* These levels take into consideration the impact of Climate Change and predicted sea level rise by the year 2070.

If you are undertaking a development application, this information should be submitted to Council.

Yours Faithfully,



Inam Ahmed
Stormwater & Waterways Engineer
Sutherland Shire Council

GLOSSARY:

Annual Exceedance Probability (AEP): The chance of a flood of a given size occurring in any one year, expressed as a percentage. For example, there is a 1% (1 in 100) chance of a 1% AEP storm event occurring in any given year.

Australian Height Datum (AHD): The Australian surface level datum is a convention for consistently measuring the height of land above sea level.

Flood Risk: A combination of the chance of a flood occurring and the consequences of the flood for people, property and infrastructure. The Sutherland Shire Council classifies these risks into **Low, Medium** and **High** categories.

Floodways: Those areas where a significant volume of water flows during floods and are often aligned with obvious natural channels. They are areas that, even if only partially blocked, would cause a significant increase in flood levels and/or a significant redistribution of flood flow, which may in turn adversely affect other areas. They are often, but not necessarily areas with deeper flow or areas where higher velocities occur.

Flood Storage: Those areas where parts of the floodplain that are important for the temporary storage of floodwaters during the passage of a flood. If the capacity of flood storage areas is substantially reduced by, for example, the construction of levees or by landfill, flood levels in nearby areas may rise and the peak discharge downstream may be increased. Substantial reduction of the capacity of a flood storage area can also cause a significant redistribution of flood flows.

Flood Fringe: It is the remaining area of land affected by flooding, after floodway and flood storage areas have been defined. Development in flood fringe areas would not have any significant effect on the pattern of flood flows and/or flood levels.

Floodplain: Area of land which is subject to inundation by floods upto and including the probable maximum flood even, that is, flood prone land.

Freeboard: it provides reasonable certainty that the risk exposures selected in deciding on a particular flood chosen as the basis for the flood planning level is actually provided. It is factor of safety typically used in relation to the setting of floor levels.

Habitable Room: In a residential situation; a living or working area such as a lounge room, dining room, rumpus room, kitchen, bedroom or workroom.

In an industrial or commercial situation: an area used for offices or to store valuable possessions susceptible to flood damage in the event of a flood.

High Flood Risk: The area of land below the Flood Planning Level (FPL) that has been identified by Council as being either subject to a high hydraulic hazard or where there are significant evacuation difficulties. The high flood risk precinct is where high flood damages,

potential risk to life and evacuation problems are anticipated, or development would significantly and adversely affect flood behaviour. Most development should be restricted in this precinct. In this precinct, there is significant risk of flood damages without compliance with flood related building and planning controls.

High Hazard: The area of the land within the floodplain where possible danger to personal safety, difficulty in evacuation by trucks, able bodied adults would have difficulty in wading to safety and potential for significant structural damage to buildings.

Low Flood Risk: All other land within the floodplain, i.e. within the extent of the Probable Maximum Flood (PMF) that has not been identified as having High or Medium flood risk. The low flood risk precinct is where the risk of damages is low for most land uses.

Low Hazard: The area of the land within the floodplain where truck could evacuate people & their possessions and able bodied adults would have little difficulty in wading to safety.

Mainstream Flooding: Refers to the inundation of normally dry land occurring when water overflows the natural or artificial banks of a stream, river, estuary, lake or dam. Mainstream flooding can affect large areas and is driven by widespread prolonged rainfall.

Medium Flood Risk: The area of land below the Flood Planning Level (FPL) that has been identified by Council as being not subject to high hydraulic hazard and where there are no significant evacuation difficulties. In the medium risk flood precinct there is significant risk of flood damage, but these damages can be minimized by the application of appropriate development controls.

Overland Flooding: Water that runs across the land after rain, either before it enters a creek or stream, or after rising to the surface naturally from underground. Overland flooding tends to affect localised areas and is driven by intense slow moving storms.

Probable Maximum Flood (PMF): Is the largest flood that could conceivably occur within a catchment, and is a very rare and unlikely event. However, when undertaking a Floodplain Risk Management Study, Council looks at all storm events up to and including the PMF.

Sutherland Shire Draft Development Control Plan 2015 (SSDCP 2015): The SSDCP provides the fine grain detail of the planning framework and applies in conjunction with LEP (Sutherland Shire Local Environment Plan 2015). It assists in the preparation of development applications and ensures development takes place in a quality and orderly manner.

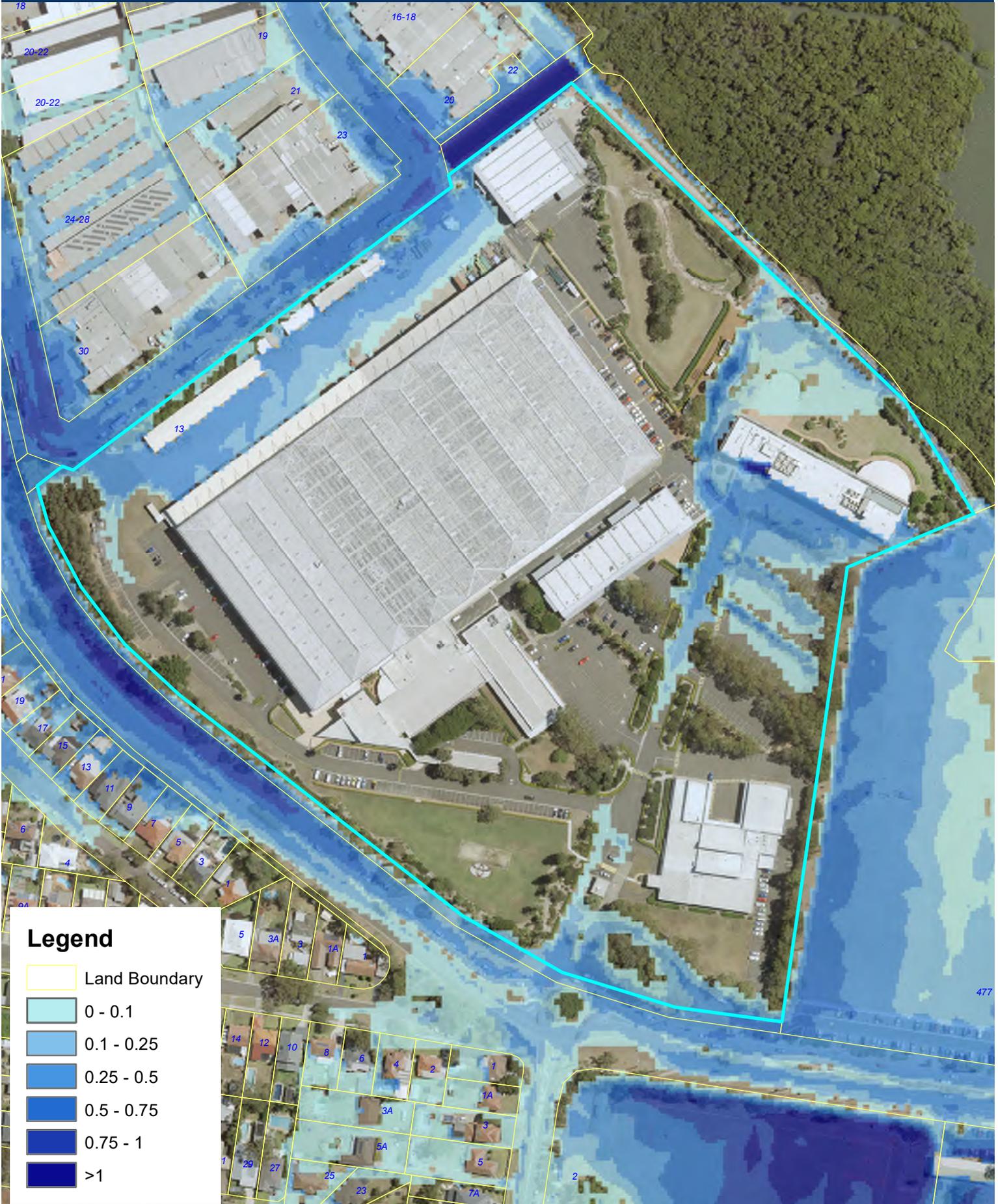


SUTHERLANDSHIRE

1:2,500



Woollooware Bay Catchment Flood Study 1% AEP Flood Depth 13 Endeavour Road CARINGBAH



Legend

- Land Boundary
- 0 - 0.1
- 0.1 - 0.25
- 0.25 - 0.5
- 0.5 - 0.75
- 0.75 - 1
- >1



SUTHERLANDSHIRE

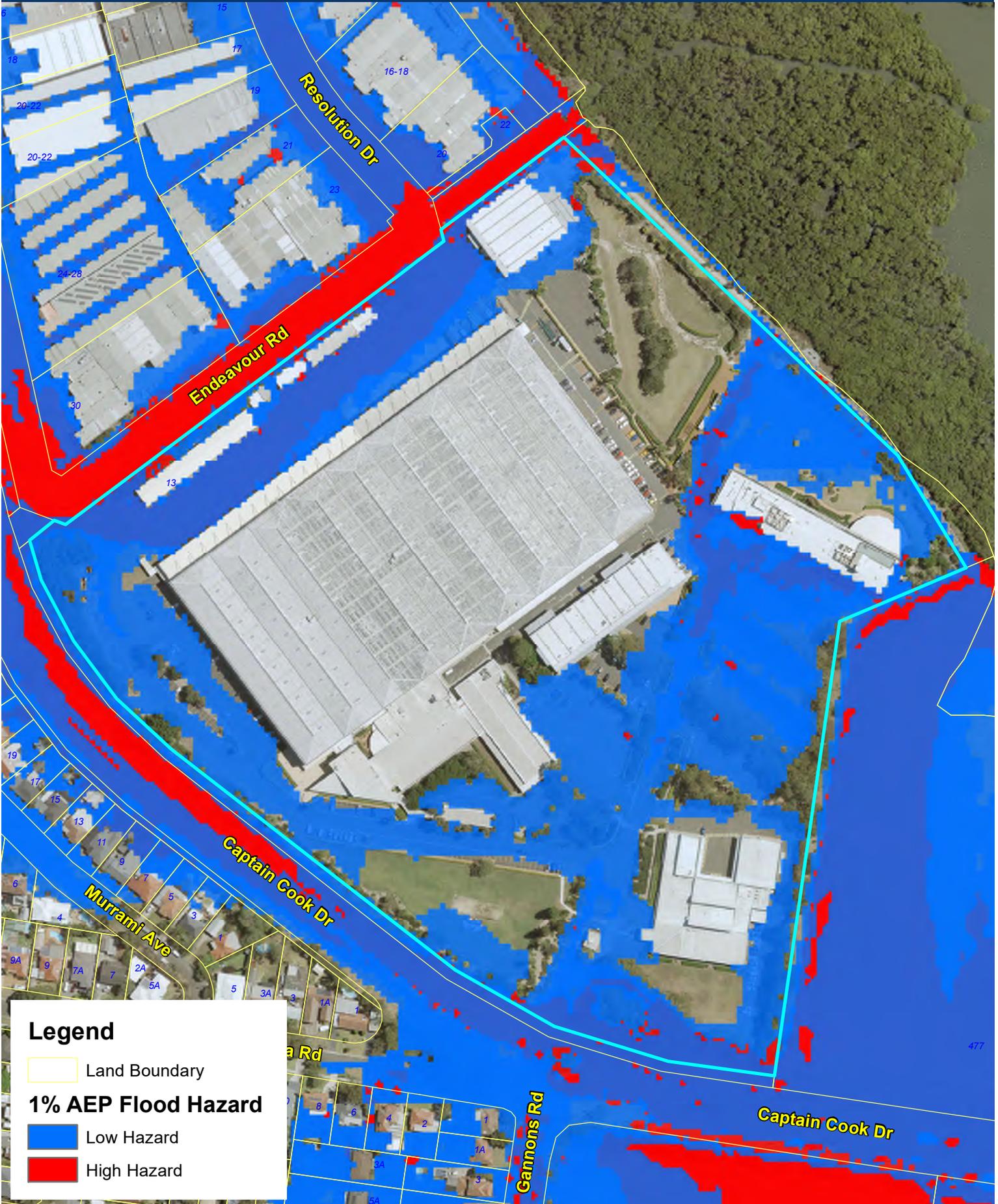
1:2,500



Woollooware Bay Catchment Flood Study

1% AEP Provisional Flood Hazard

13 Endeavour Road
CARINGBAH



Legend

 Land Boundary

1% AEP Flood Hazard

 Low Hazard

 High Hazard



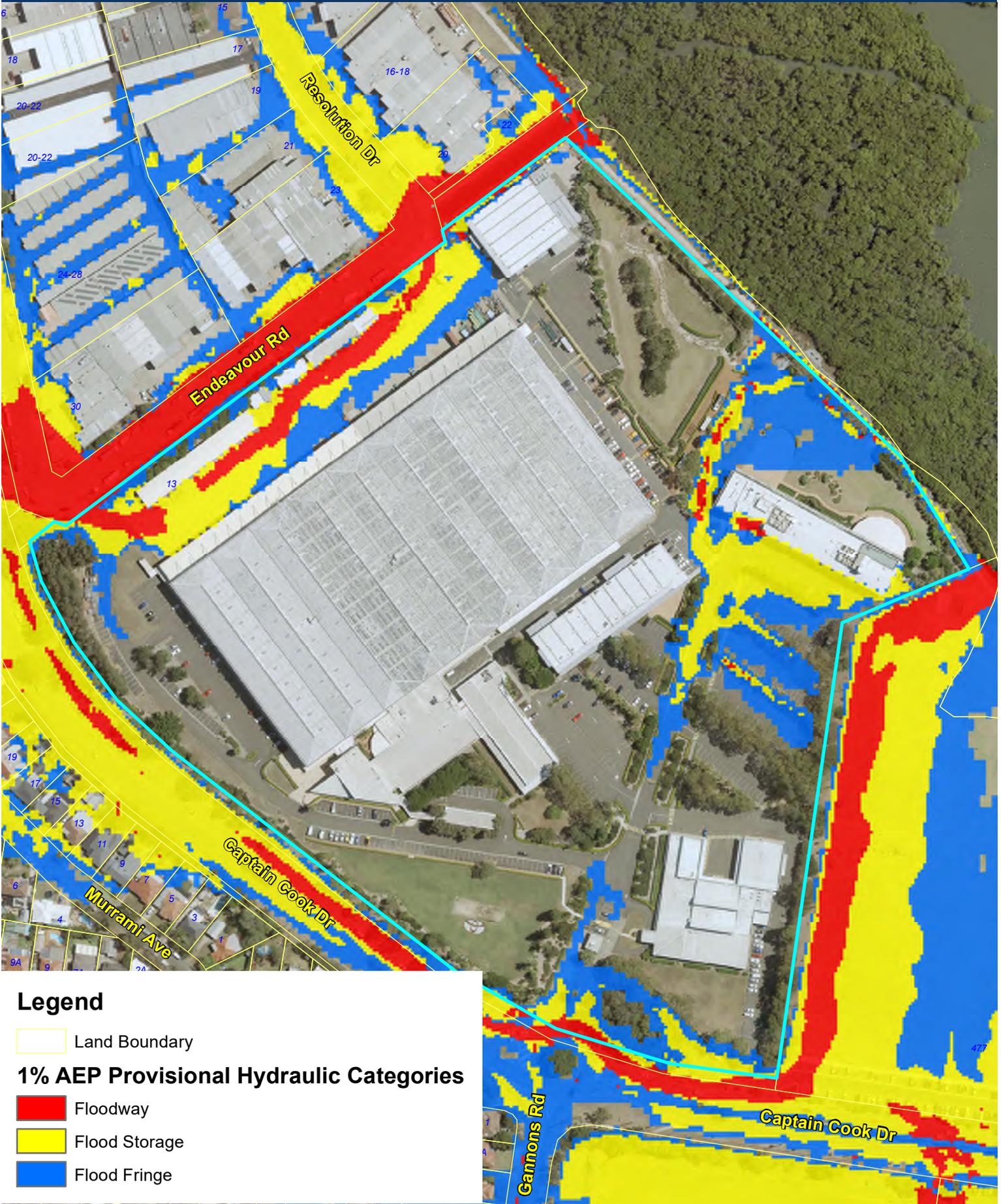
SUTHERLANDSHIRE

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Woolloore Bay Catchment Flood Study

Provisional Hydraulic Categories
13 Endeavour Road
CARINGBAH



Legend

 Land Boundary

1% AEP Provisional Hydraulic Categories

-  Floodway
-  Flood Storage
-  Flood Fringe