

# 2 Eastbourne Rd, Homebush

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## Flood Planning Report

**STRATHFIELD COUNCIL  
RECEIVED**

**ADDITIONAL INFORMATION**

**DA2020/080  
7 September 2020**

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**Disclaimer**

The advice and information contained within this report relies on the quality of the records and other data provided by the Client and obtained from local authority along with the time and budgetary constraints imposed.

**Project Number: 20-2478****Address: 2 Eastbourne Rd, Homebush****Issue: B****Date of issue: 27/08/2020**

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## 1. Introduction

A development application will be being lodged at Strathfield Council for the proposed residential flat building with basement parking at No.2 Eastbourne Rd, Homebush. Council has indicated that the site is within a flood fringe and provided us with flood information for the site. We have prepared this Flood Planning Report to set the ground floor level, driveway crest level and any additional treatments necessary to ensure the proposal is proficiently flood proofed.

The subject site is within the 1 in 100 year overland flood extent as stated in the email from Strathfield Council dated 21/07/2020 as per the revised Powells Creek and Salesyard Creek Flood Study by WMA Water (2016). *Zait Engineering Solutions* have been commissioned to assess the flood characteristics of the site and to provide a Flood Planning Report demonstrating compliance with Strathfield Council's policies and the NSW Government Department of Planning's 'Floodplain Development Manual'.

## 2. Site Analysis

The site is located within the municipality of Strathfield Council. The site is located on the eastern side of Eastbourne Rd and has a total site area of approximately 1565.1m<sup>2</sup> in total. The site is bound by The Crescent to the North, Exeter Rd to the South and Hornsey Rd to the West (See Figure 1 – Site location).

The proposed development consists of the demolition of existing two storey block of units and the construction of five (5) storey residential flat building with two (2) levels of basement parking. See Figures 2 and 3 the pre-developed and post-developed site plans. Proposed architectural plans are by *Bechara Chan & Associates Pty Ltd Project No.191217 Rev.B dated 27/08/2020*.

## 3. Flood Assessment and Recommendations

The flood information extracted from Strathfield Council's revised Powells Creek and Salesyard Creek Flood Study by WMA Water (2016) demonstrates that the subject site is partially within the 1 in 100 year overland flow extent.

As per the flood information, the 100YR ARI Flood level in the vicinity of the site is approximately 22.9mAHD at the southern boundary and 21.66m AHD at the northern boundary. With this said, Council's Flood information also indicates that the site is partially within a flood fringe hence not all flood controls apply.

The 100 Year ARI Flood extent has been plotted as per the information provided and a current survey on site and are shown in Figure 4. The flood maps extracted from council's flood Study can be seen on Figure 5.

It can be seen that the rear of the site is inundated with flood water during the 100YR ARI. The 100YR Flood Depths vary across the site, ranging from approximately 0-0.38m. The rear of the site is classified as a low Risk, while the front of the site where the proposal is located is classified as not impacted by the 100YR flood.

### 3.1 Finished Floor Level (FFL)

The proposed finished floor level of the ground floor of **FFL22.66mAHD** is compliant.

### 3.2 Driveway Crest

As per Council's requirements, the proposed driveway crest is to have minimum 300mm freeboard in order to protect the basement from the overland flow in Eastbourne St. The flood level at the driveway entry was found to be 22.8m ADH, subsequently **the driveway crest is to be at 23.1m AHD minimum.**

### 3.3 Natural Ground Level (NGL) & Filling

Natural Ground Levels (NGLs) at all boundaries are to be maintained so as too not cause obstruction to the flows within the street. Additionally no excessive amount of filling in the front/back of the site is allowed.

### 3.4 Building Components and Structural Soundness

All materials proposed in the construction of the proposal are to be of flood compatible materials such as bricks and concrete.

This form of construction will ensure structural soundness and the ability to withstand all forces of flowing waters, including debris and buoyancy. Additionally all power points are to be at a minimum level of 500mm above Natural Ground Level (NGL).

### 3.5 Boundary fencing

Any new boundary fences are to be flood fences so as to allow water to pass and not cause a blockage. Boundary fences should have a minimum gap of 100mm from NGL in order to allow flood waters to pass (See Figure 7 – Flood Fence Detail). These details are to be reflected on the stormwater plans.

### 3.6 Volume

The proposed residential flat building with basement parking is located primarily out of the flood extent therefore, the post-developed flood storage volume for the site has been calculated to be similar to that of the pre-developed state. This is due to fact that there are similar site setbacks in the pre and post developed scenarios with the biggest change to the site occurs in the middle where the bulk of the new building is and there is no flooding in that area.

### 3.7 Velocity

The proposed residential flat building has similar front setbacks to the existing scenario with the proposed driveway remaining in the current position (See attached Figure 3). When interpreting the velocity of flood water traversing across the front of the site, the proposed setbacks have been marginally decreased in comparison to the existing building on site but with the implementation of flood fencing the velocity of water upon flooding is expected to be less than the existing flow rate.

### 3.8 Impact on adjacent lands

As per the Flood Extent shown in Figure 4, it can be seen that only part of the site is affected by the 1 in 100YR Flood. The site will be inundated with approximately 0-0.10m of flood water – mostly at the south-western corner adjacent to Eastbourne Rd. The proposal will not affect the inundation level on the neighbouring properties due to flood storage of the site being maintained and flow rate being lowered.

## 4. Evacuation

It is recommended that evacuation procedures shall be carried out pending instructions from authorities i.e. State Emergency Services.

For storms up to the 1% AEP, all occupants are to remain within the proposed residential flat building due to the proposed elevated level and the short length of time of concentration. However, if previous warning is given, evacuation to Eastbourne Rd is safer. Occupants of the building are to evacuate to the front of site and travel in a South to North direction along Eastbourne Rd. This is the shortest and safest travel distance to evacuate. Evacuation during flooding may be quite dangerous and would NOT be recommended and

should only take place prior to the water level reaching a level of 0.3m above the NGL at the front boundary.

In the event of a probable maximum flood, early evacuation is paramount. All residents to seek refuge on higher grounds and as directed by authorities. A **Flood Emergency Response Plan** has been included at the end of this report.

## 5. Conclusion

We certify that the proposed residential flat building with basement parking as presented in the architectural plans by *Bechara Chan & Associates Pty Ltd Project No.191217 Rev.B dated 27/08/2020* will meet the requirements of Department of Planning's 'Floodplain Development Manual', Strathfield Council's Flood requirements as specified in *Strathfield Council - Overland Flow Flood Study 2016*, provided that all procedures and recommendations presented in this report are implemented.

Should you require any further explanations, please do not hesitate to contact our office.

Yours faithfully,

David Zaiter

(BEng(Hons), MIEAust, CPENG, NER, RPEQ)

*Zait Engineering Solutions PTY LTD*

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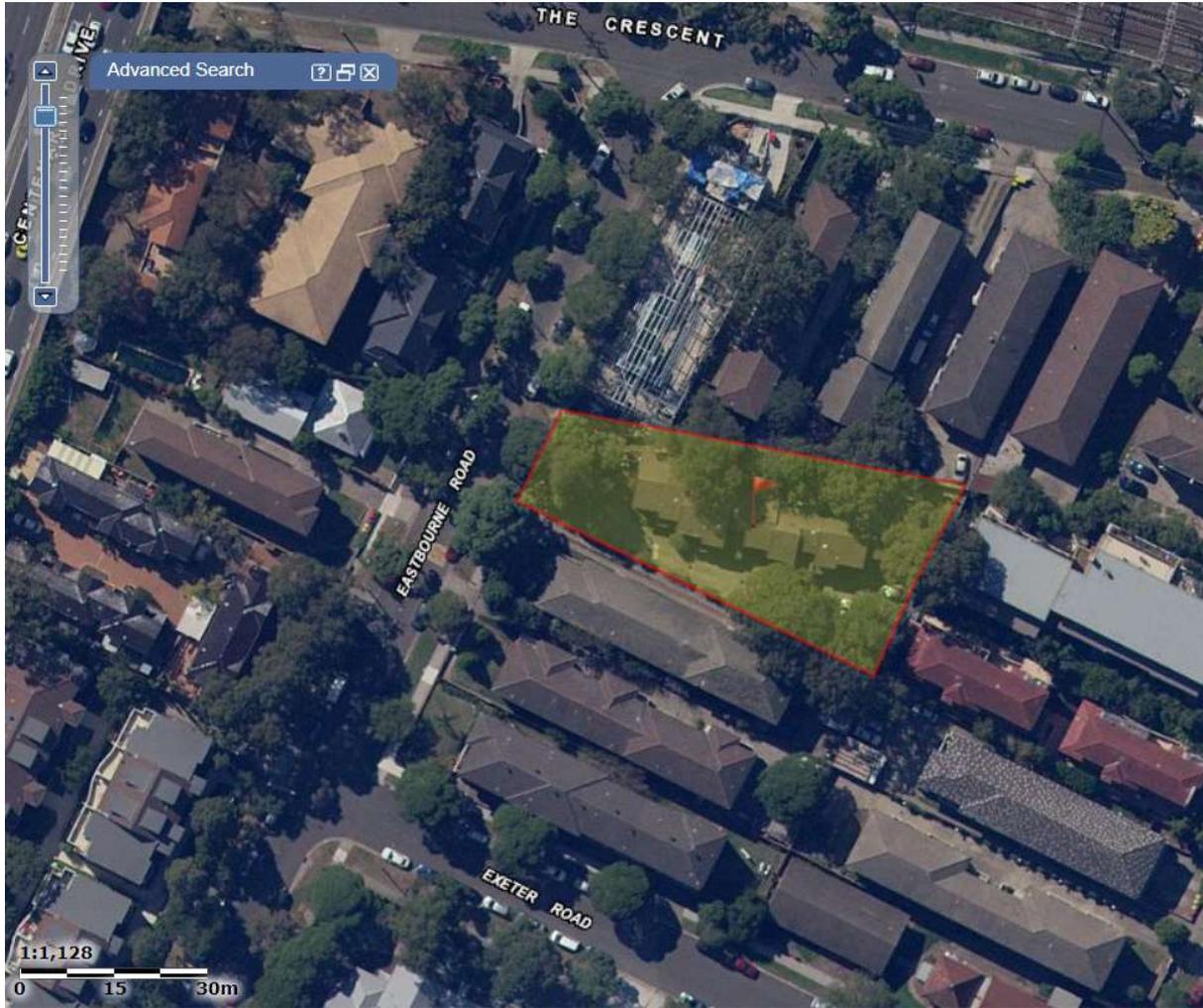


Figure 1 – Site Locality Plan (Source: SIX Maps website accessed August 2020)

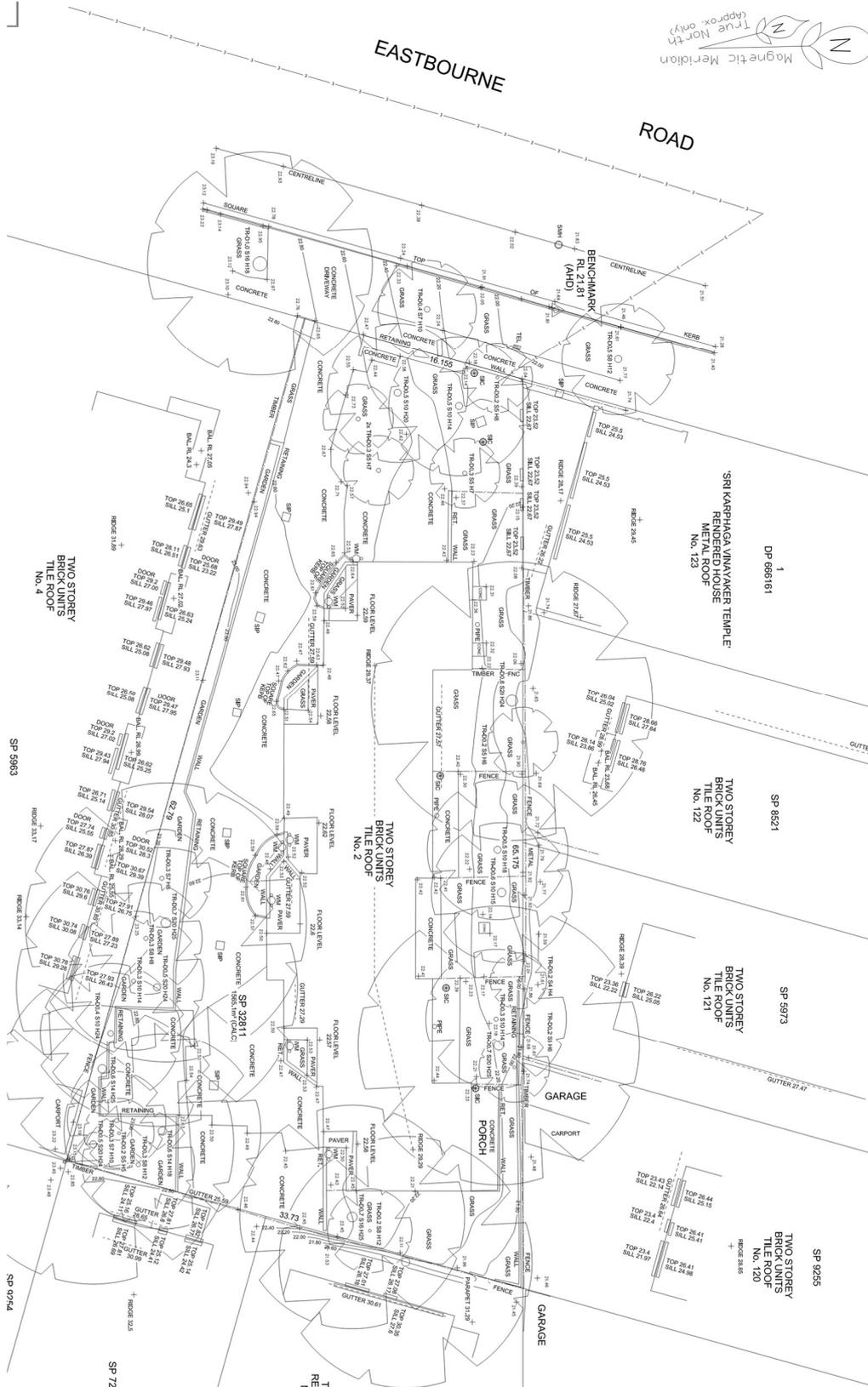


Figure 2 - Pre-Developed Site Plan (Source: Plans by CC Surveying dated 11/12/19)



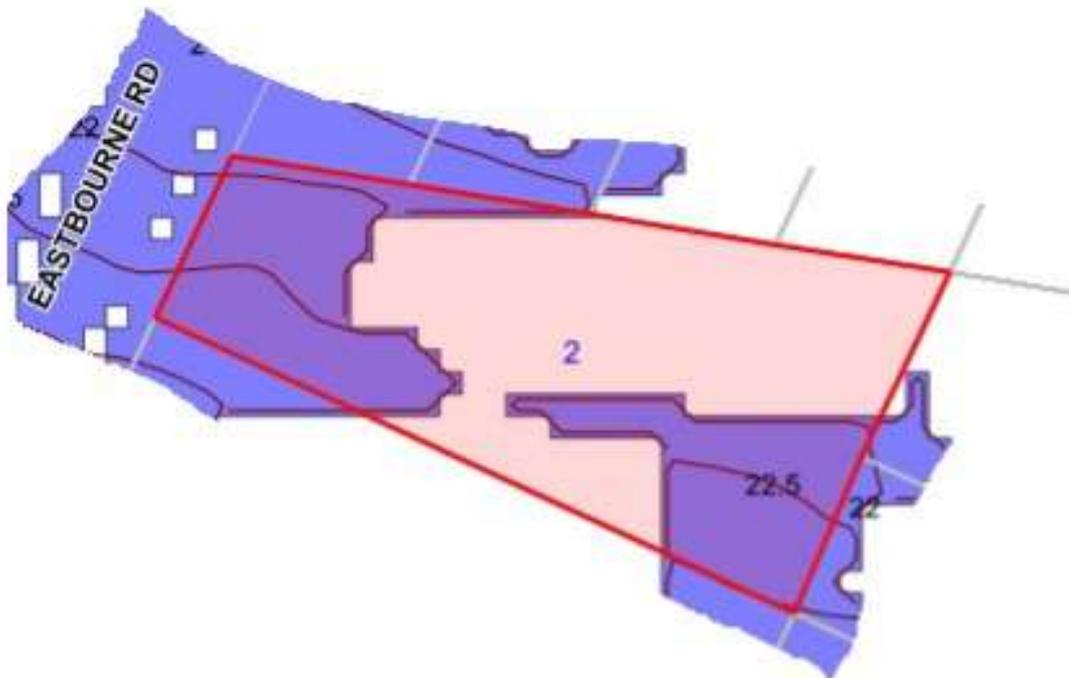


Figure 4 – 1% AEP Overland Flow Path (Source: Strathfield Council)

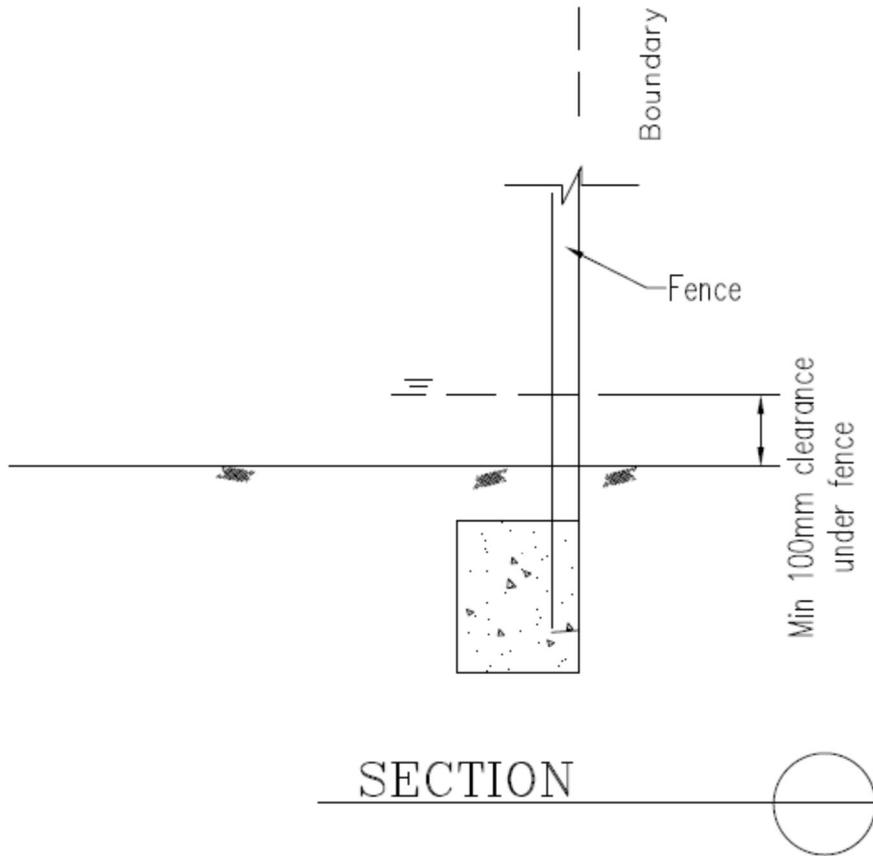


Figure 5 – Flood Fencing Detail

**Re: Flood Emergency Response Plan for the  
Proposed development at No.2 Eastbourne Rd, Homebush**

**A laminated copy of this Flood Emergency Response Plan should be permanently attached (glued) on an internal cupboard door and to the inside of the electrical meter box at No.2 Eastbourne Rd, Homebush.**

Council has advised that this property is subject to flooding in a 1 % AEP (1 in 100year ARI) storm event. The Probable Maximum Flood (PMF) is the highest flood level that is ever likely to occur, however it is extremely rare. Council has no information regarding tsunamis in the area. Staying within the building will provide protection for a wide range of floods.

**Emergency Procedure**

1. Floods in the area are considered as "flash floods" and no warning system is available.

Storms leading to major flooding are typically 2 hours long, however shorter storms as little as a % hour long can produce significant flooding. Once the storm passes floodwaters usually disappear rapidly.

2. During floods many local and major streets and roads will be cut by floodwaters.

Travelling through floodwaters on foot, or in a vehicle can be very dangerous as the water may be polluted, obstructions can be hidden under the floodwaters, or you could be swept away. We recommend staying within the building as much as practical as this is the safest option. If you need to leave the building do so early in the flood event, before the flood level reaches 300mm above NGL at the boundary.

3. Study this response plan and learn the safe travel routes that show the paths that are less likely to be cut by floodwaters. Keep in mind that neighbouring streets may be worse affected by the flooding. Should you wish to evacuate, contact the SES or Police for information such as which streets are flooded and which route to take to your nearest evacuation centre.

4. As the flood level approaches the garage floor level (but only if safe to do so) relocate any items that may be damaged by water, or poisons, or wastes to as high a level as possible.

5. As the flood level approaches the habitable floor level:

i) gather medicines, special requirements for babies or the elderly, mobile phones, first aid kit, special papers and any valuables into one location,

ii) put on strong shoes, raise any items within the building that may be damaged by water (e.g. photo albums) to as high a level as possible, with electrical items on top. Turn off and disconnect any large electrical items such as a TV that cannot be raised.

- iii) place towels across the bottom and lower sides of external doors to slow down the entry of water through the door.
6. In the very rare event that floodwaters may enter the building collect items from 5.i) above and move to an upper level if possible, or if in a single level building provide a chair in the kitchen to enable access to the kitchen bench preferably adjacent to the window. Ensure window is not locked or key readily available. Do not evacuate the building unless instructed to do so by the SES or the Police. Remember floodwaters are much deeper and flow much faster outside.
  7. In the case of a medical emergency ring 000 as normal, but explain about the flooding.
  8. A laminated copy of this flood plan should be permanently attached (glued) on an inside cupboard door in the kitchen and laundry and to the inside of the electrical meter box.
  9. This flood management plan should be reviewed every 5 years, particularly with the potential sea level rise due to Climate Change.

Figure 6 – Flood Emergency Response Plan