

CRC

**COSTIN ROE
CONSULTING**

**CIVIL &
STRUCTURAL
ENGINEERS**



DESKTOP REVIEW OF OVERLAND FLOW AND FLOODING REQUIREMENT

DEVELOPMENT SITE

WEST WILTON ESTATE BERWICK PARK RD & WILTON PARK RD, WILTON, NSW

Prepared for:

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DOCUMENT VERIFICATION	
Project Title	Wilton Planning Application
Document Title	Desktop Review of Overland Flow and Flooding Requirement
Project No.	Co14503.01
Description	Desktop Flood Assessment for proposed industrial subdivision development
Client Contact	Altis Property – Mr Hugo Hannah
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File Name	14503.01-04.rpt	

Document History

Date	Revision	Issued to	No. Copies
19 APR. 2023	DRAFT A	Mr Hugo Hannah	PDF

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1 SCOPE & INTRODUCTION

1.1 Scope

Costin Roe Consulting Pty Ltd (CRC) has been commissioned by Altis Property Partners to prepare this *Civil Engineering Report & WSUD Strategy* to accompany a Planning Application to Wollondilly Shire Council to rezone the land as E4 General Industrial. Together with this report, CRC have prepared a desktop flood study as set out below.

1.2 Introduction

A desktop review of overland flow and flooding requirement in relation to the proposed development, including confirmation of that the requirements of Wollondilly Shire Council, has been completed.

Our review and assessment have been based various adopted flood studies and flood impact assessments completed as part of previous assessments on the site.

We have included the following items as part of our review:

- Wollondilly Shire Flood Study Broadscale Assessment (Advisian October 2021);
- Wollondilly Shire Interactive Mapping Tool;
- Councils Floodplain Management Policy in relation to the development including review of potential impacts of the development on existing flooding, and potential impacts on the development from flooding;

2 FLOODING AND OVERLAND FLOW

2.1 Flood Behaviour

Flood level and flood risk mapping, as included in **Figure 1.1 and 1.2**, have been reviewed.

As discussed in earlier sections of the *Civil Engineering Report & WSUD Strategy*, the site is located north of the Nepean River. Three minor overland flow paths influence the site.

Review of the available information shows the site has overland flow attributable to the noted overland flow paths as described in Section 2.3 of the *Civil Engineering Report & WSUD Strategy* during a 1% AEP flood event.

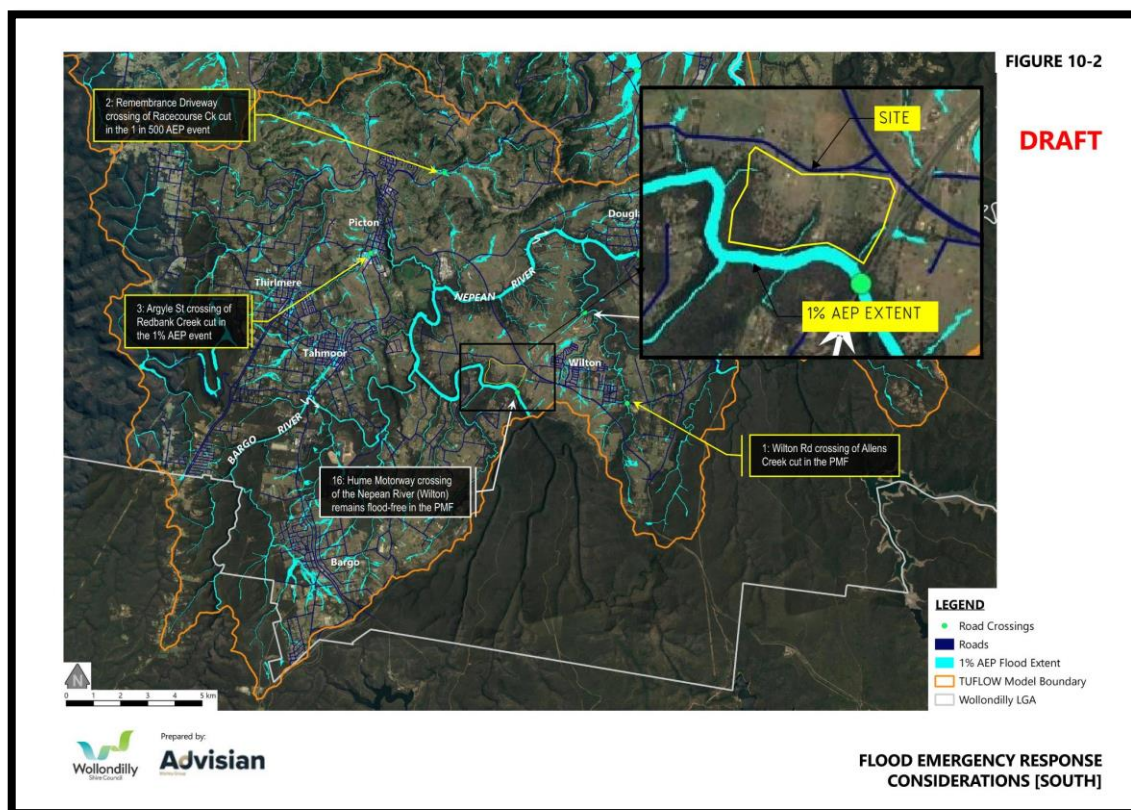


Figure 2.1. Wollondilly Shire Council 1% AEP Flood Planning Area Map

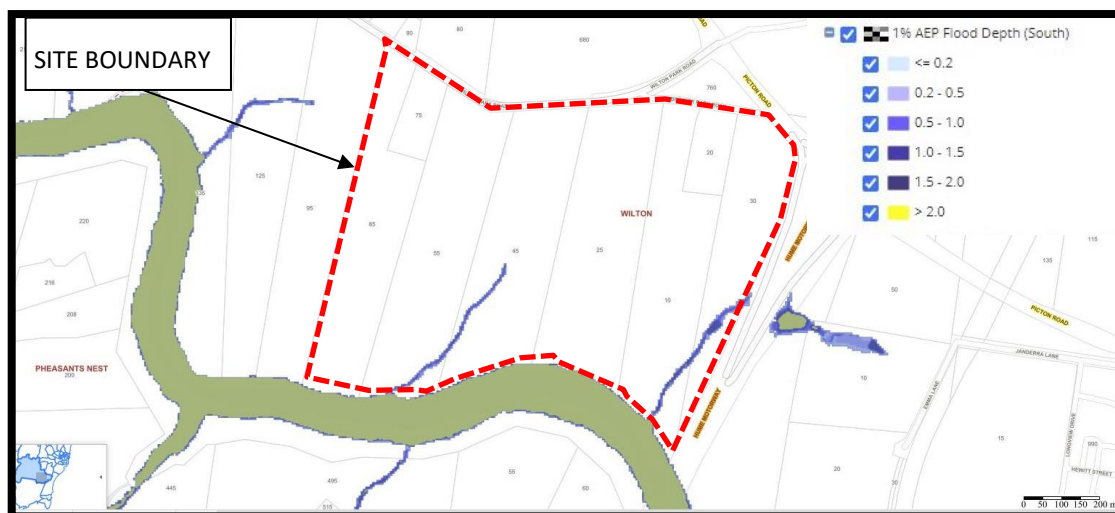


Figure 2.2. 1% AEP Flood Extent and Depth (Interactive Mapping Tool)

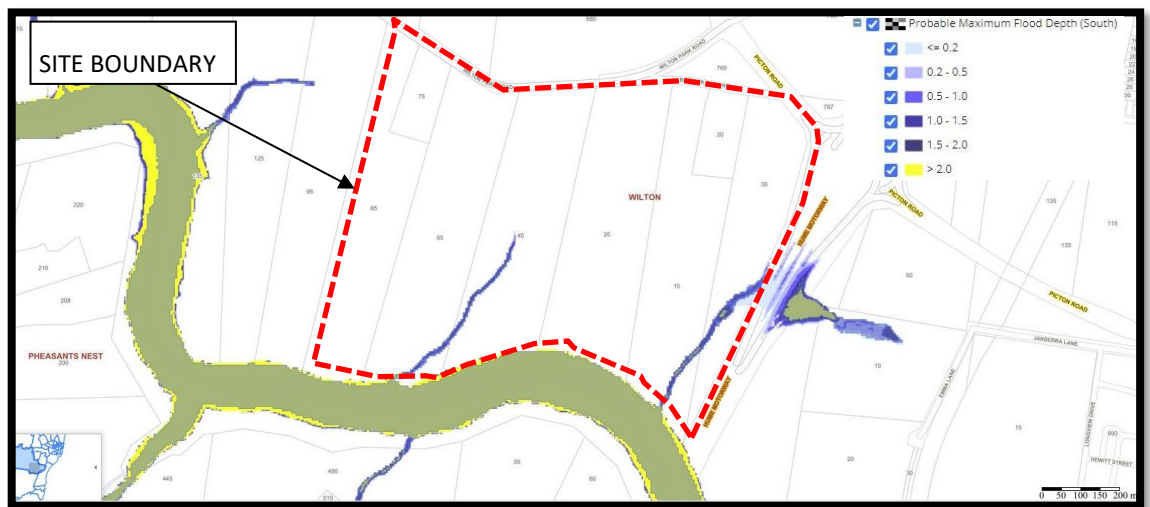


Figure 2.3. PMF Flood Extent and Depth (Interactive Mapping Tool)

Figures 2.2 and 2.3 show the 1% AEP and PMF flood level and extent per Councils Interactive Mapping tool. The 1% AEP flood extent shown in **Figure 2.1** is noted to be consistent with that in **Figure 2.2**.

The flood extent shown in **Figure 2.3** for the PMF event is similar to that of the 1% AEP. The site is generally free of PMF and 1% AEP flooding.

2.2 Councils Floodplain Management Requirements & NSW Floodplain Management Manual Requirements

Councils *Floodplain Management Policy* provides relevant policy requirements relating to development in and around identified flood affected development sites.

The intent of the document is to ensure that new developments do not experience undue flood risk and that existing development is not adversely flood affected through increased damage or hazard as a result of new development.

The *Floodplain Management Manual* recommends the flood planning level for habitable buildings to be at or above the 1% AEP (1 in 100-year ARI) flood level. As discussed in earlier sections of this report, there is minor flooding on the north-east of the site in the 1% AEP event. Refer drawings in **Appendix A** of the **Civil Engineering Report and WSUD Strategy for Planning Application**.

The PMF or extreme event provides an upper limit of flooding and associated consequences for the problem being investigated. It is used for emergency response planning purposes to address the safety of people.

Overall flood risk for the development, and from the development is considered low to negligible, and the development meets current council flood policy.

3 CONCLUSION

A review of available flood studies has been made to determine flood behaviour in relation to the proposal.

Review of the available information, including Councils adopted flood study, shows the site is subject to minor overland flow in the 1% AEP event however free from regional flooding. As the site is subject to minor flooding, no detailed modelling or new flood impact assessments are necessary for the planning application. Further detailed assessments pertaining to overland flow would be required as part of future design or development application phases of the development.

Due consideration to flood safety and evacuation is noted in the above commentary, noting furthermore detailed plans would be expected in post approval phase of the estate.