



FLOOD ASSESSMENT

at

LOT 1 DP 997701 No 68 PHOENIX PARK ROAD, PHOENIX PARK

for

Cindy Modderman c/- PERCEPTION PLANNING

Project No. 190298.Rev B

2nd October 2020



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1. INTRODUCTION

DRB Consulting Engineers (DRB) were engaged by Perception Planning to undertake a Flood Assessment for the proposed shed at No. 68 Phoenix Park Road, Phoenix Park.

The purpose of the investigation was to review the available flood documentation and provide commentary on the proposed shed with respect to flooding.

This report has been prepared to support a Development Application submission for the shed.

2. EXISTING SITE DESCRIPTION

The site is located on the southeastern side of Phoenix Park Road, Phoenix Park.

At the time of the site investigation, the site supported an existing dwelling located in the southwestern portion of the site, adjacent to Phoenix Park Road. A shed was located immediately to the south of the dwelling. Both the shed and the existing building were located on an existing fill pad.

The survey undertaken by Delfs Lascelles (Ref 19717) showed that the existing fill pad had levels between 5.00m AHD and 5.50m AHD.

3. PROPOSED DEVELOPMENT

The proposed development consists of the construction of a new flood mound and farm building to the east of the existing dwelling and shed.

The flood mound will have a finished RL of 7.18m AHD with an area of approximately 906m² (24.5m x 37m). The mound will batter to existing at maximum batter slopes of 1H : 3V, resulting in a base surface area of approximately 2,115m².

The total volume of the proposed flood mound is 3,920m³ with 3,450m³ located below the 1% AEP flood level.

Drawing 190298.FLD1 shows the proposed flood mound.

4. COUNCIL CORRESPONDANCE AND FLOOD PARAMETERS

Council's duty officer was contacted to discuss the flood parameters for the site and the proposed development. The duty officer confirmed the following:

- The 1% Annual Exceedance Probability (AEP) storm event has flood level of approximately 6.68 with a Flood Planning Level of 7.18m AHD.

Furthermore, Maitland City Council's Senior Town Planner Greg Clayden was consulted to discuss the proposed development. Mr Clayden provided information in an email dated 07.04.2020. In the email it was summarised that:

For the area identified on your plan, and the immediate surrounds, the estimated velocities of the 1% flood vary as follows:

-
- *Eastern end of the existing mound – approximately .31m/sec;*
- *Southern edge of existing mound/boundary – approximately .37m/sec;*
- *Western edge of property – approximately .5m/sec;*
- *Site of existing shed shown in the photo – approximately .37m/sec;*
- *Aqua coloured area south-west of the shed – approximately .75m/sec.*

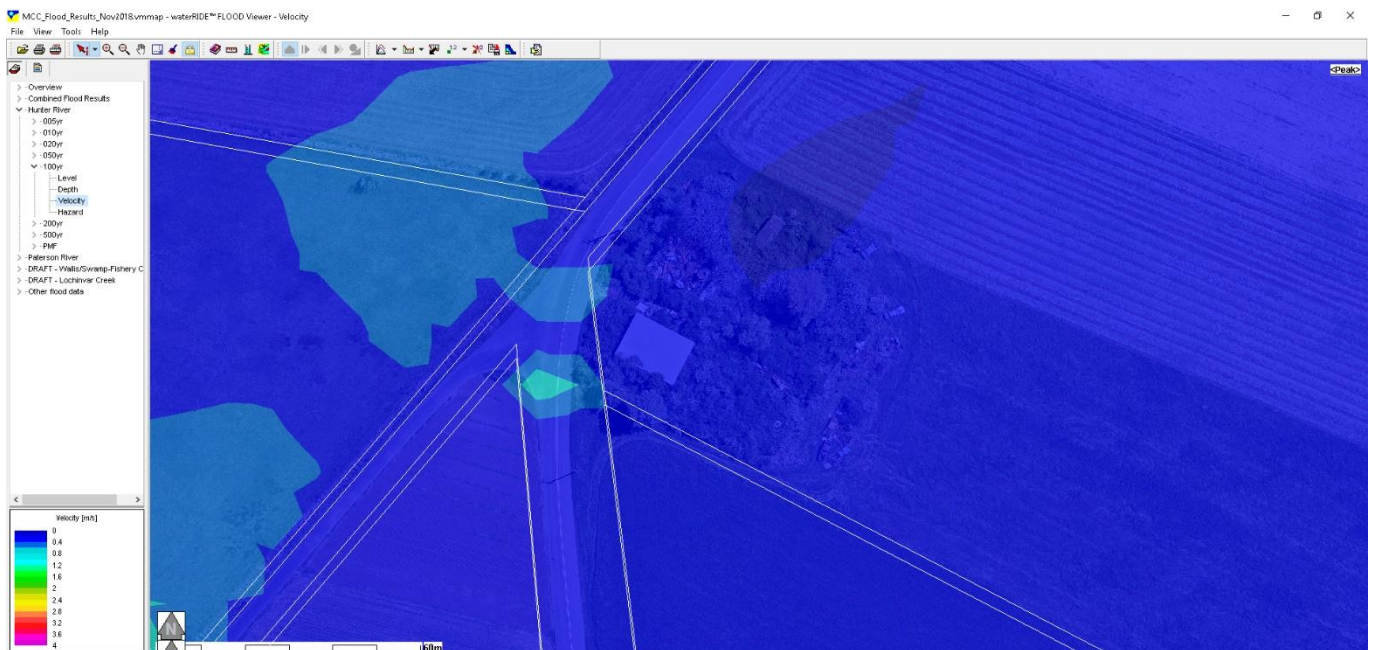


Figure 1 – Flood Velocity Image supplied by Greg Clayden

A review of Maitland City Council's Development Control Plan 2011 and its Hydraulic Categories Mapping showed that the site was located within a Flood Storage area – See Figure 2 below).

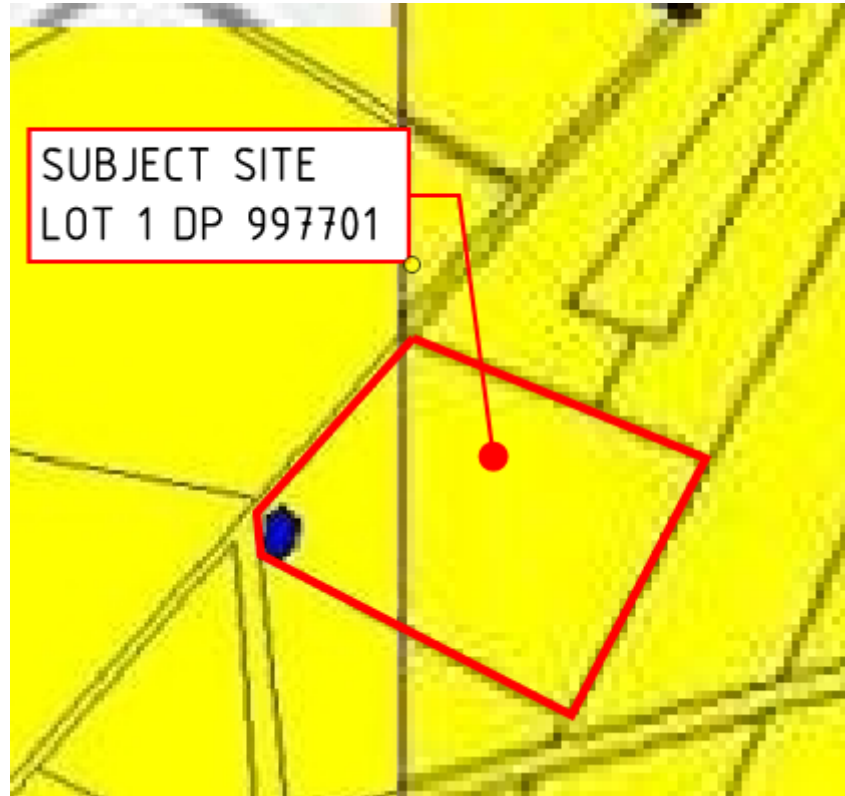


Figure 2 – Maitland DCP 2011 – Overlay

5. MAITLAND CITY COUNCIL DCP 2011

3.2 Filling of Flood Storage and Flood Fringe Areas

Objectives

1. Significant adverse impacts on flood behaviour and the environment are avoided.
2. Filling does not increase flood affectation elsewhere on the floodplain.
3. Minimise the flood risk to life and property associated with the use of land.
4. Development on land that is compatible with the land's flood hazard, taking into account projected changes as a result of climate change is permitted.

Development controls

1. An application for filling within the flood storage or flood fringe areas must be supported by a fully dynamic computer flood model unless:
 - There is no net importation of fill within the 1:100 ARI flood extent; or
 - Filling up to 7,000m³ or 20% of the total 1:100 ARI flood storage/flood fringe volume of the lot (whichever fill volume is lower) that;
 - is associated with construction of a dwelling in rural zones, and
 - where construction of a dwelling is permitted; and
 - all of other flood requirements (such as evacuation) is achieved; and/or
 - Filling up to 3,500m³ or 10% of the total 1:100 ARI flood storage/flood fringe volume of the lot (whichever fill volume is lower) associated with construction of a mound to provide refuge for stock during floods.

Section 3.2 of the Maitland City Council DCP 2011 (DCP) states that flood modelling is not required for filling of Flood Storage and Flood Fringe Areas, provided the volume of filling displaces less than 3,500m³ of flood water.

Calculations show that the proposed flood mound has a fill volume of approximately 3,450m³ below the 1% AEP Flood Level.

As such, a separate flood study is not required.

6. CONCLUSION

The proposed development is consistent with the requirements of the Maitland City Council DCP 2011 for a flood-mound.

The proposed mound and farm building is located within a Flood Storage area, and therefore, does not require any additional flood modelling to support the development.

Should you require any further advice or clarification of any of the above, please do not hesitate to contact us.

Yours faithfully

DRB CONSULTING ENGINEERS PTY LIMITED

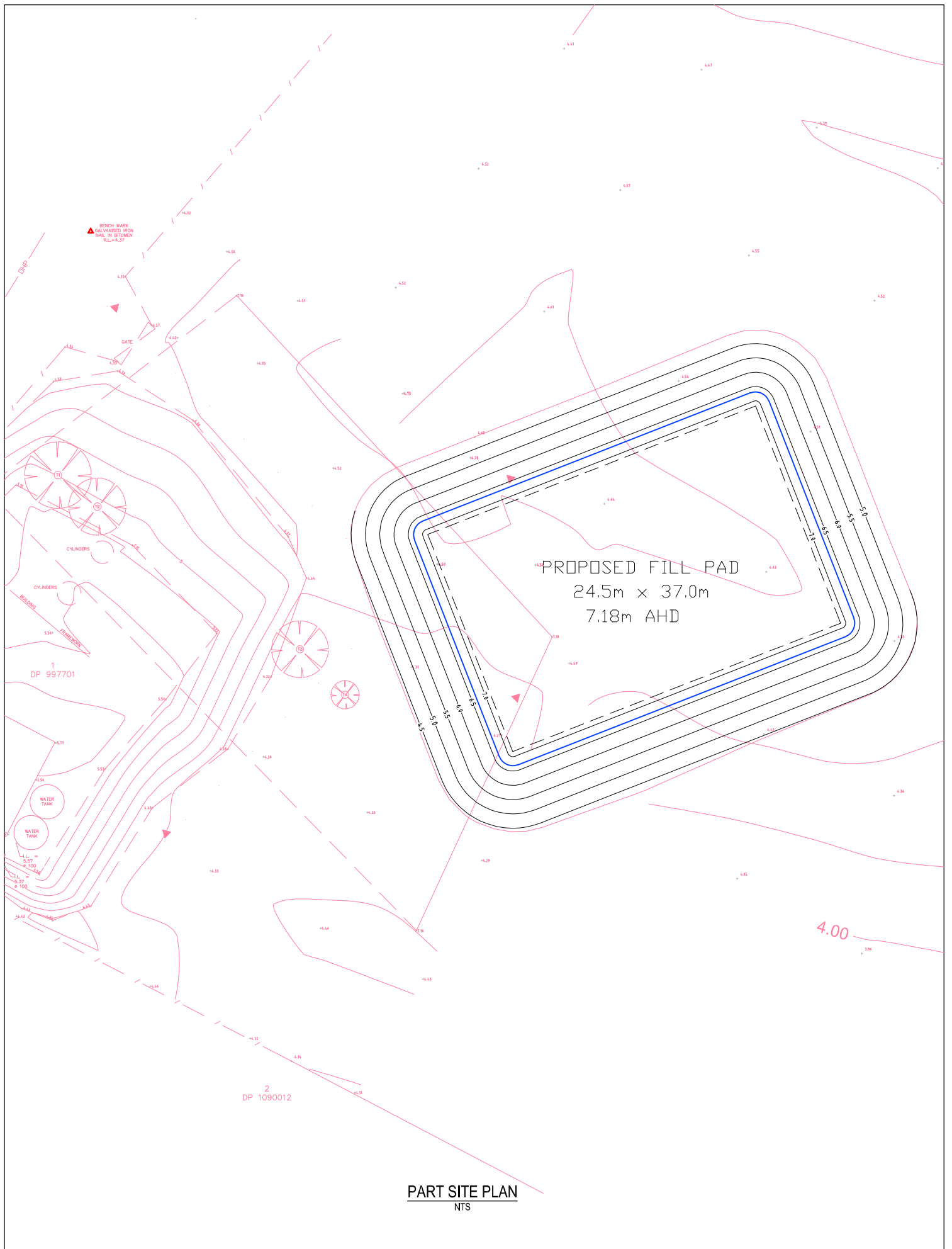
A handwritten signature in blue ink, appearing to read 'Mathew McNamara', with a long horizontal flourish extending to the right.

Mathew McNamara

BEng (Civil) Hons MIE Aust

Attachment

Drawing 190298.FLD1



PART SITE PLAN
NTS

REV	DATE	DRN	CHK	APP	DRAWING STATUS
B	02.10.20	M.M.	M.M.	M.M.	AMENDED MOUND LOCATION
A	17.04.20	M.M.	M.M.	M.M.	ISSUED FOR DA

PO BOX 4105 Kotara East 2305
 0402 915 549
 ABN 64 625 755 482

CLIENT NAME:	Perception Planning	SHEET SIZE	A4
SITE ADDRESS:	68 Phoenix Park Road, Phoenix Park	SCALE:	NTS
DRB PROJECT No.	190298.FLD1	REVISION:	B
<small>This drawing is <u>not</u> approved for construction unless signed.</small> <small>Mathew McLennan BEng (Civil) Home ME (Aust)</small>			