

Planning Proposal – Crescent Head Proposed Residential Rezoning

Flooding – additional information

The following information has been provided to offer additional clarification with regards to flooding and the extent of the zone boundary identified in Council's Planning Proposal to rezone land at Crescent Head for residential use.

The extent of the zone boundary is up to 1m below the identified 1% AEP flood level on some parts of the subject site. With regards to consistency with Section 117 Direction 4.3, Council is proposing that the extent of the inconsistency is of minor significance. The identified flood level overlayed across the proposed rezoning area is identified in **attachment 1**.

1. Crescent Head is affected by flooding from both the Macleay and Hastings River systems of which it forms a part. The 1% AEP flood level adopted by Council at the site of the proposed rezoning previously was 3.75m AHD which has been based on the historical record and which does not incorporate the projected effects from climate change and post 1949 flood mitigation works.
2. The site of the proposed rezoning is located within the Maria River Catchment which feeds directly into the Hasting River and is affected by flooding from both the Macleay and Hastings River systems. During the 1949 and 1950 (between 1% and 2%AEP events) floods flood waters from the Hastings River discharged northwards into the Belmore and Frogmore Swamps for between 1 to 1.5 days prior to the arrival of the Macleay River floodwaters. At its peak the section of Crescent Head Road known as the "corduroy" was inundated by approximately 2.44m of floodwater being approximately RL 3.77m AHD (*Jacka Report 1954*).
3. Council has a number of small flood mitigation drains and associated structures in the locality which drain into Connection Creek and the Maria River. In addition there are three existing large flood mitigation drains and associated structures that direct floodwaters direct to the Pacific Ocean, Ryan's Cut, Killick Creek and Big Hill.
4. The main function of the Flood Mitigation System is to remove floodwaters from rural land as quickly as possible following flooding. The system is not meant to reduce the extent and or flood levels.
5. The current 1% AEP flood level for the site incorporating sea level rise is RL 4.21m AHD.
6. Council adopted in December 2010 an *Interim Policy - Incorporating Sea Level Rise Benchmarks In Flood Risk Assessments*. An amount of 0.46m was added to the highest recorded historical flood level (3.75m AHD) to account for the likely affects from projected climate change including rising sea levels.
7. Council wrote to Jim Clarke NSW Planning 12 April 2012 seeking the Director-Generals support for the position that the provisions of the revised planning proposal as shown at **attachment 2** is now in accordance with S117 Direction 4.3(9)(b) of "minor significance" and the requirement to prepare a *Floodplain Risk Management Plan* is not required in the circumstances.

The following points support Council's case for seeking the Director –Generals support in this matter: -

- a) The modified proposal is now compliant with the *NSW Flood Risk Management Guide 2010* incorporating sea level rise benchmarks in flood risk assessments as the land to be developed will be above 4m AHD and above 1.5 metres of the maximum historic height of the entrance berm and is not located within tidal waters.
 - b) The modified proposal is now compliant with the prime objective of the *NSW Flood Prone Land Policy* and associated *Floodplain Development Manual* which is to reduce the impact of flooding and flood liability on individual owners and occupiers of flood prone property, and to reduce private and public losses resulting from floods.
In this instance the prime objective has been accomplished by moving the zone boundary to higher ground (from RL 1.3m AHD to RL 3.21m AHD) thereby significantly reducing the exposure of any future development on the identified land parcel. The amended proposal will ensure that future development will be located at or above the assessed flood planning level (incorporating sea level rise) for this locality with the option of filling above the residential flood planning level (1 in 100 year flood level) to a point one metre below the residential flood planning level.
 - c) The proposal is now consistent with Council's *Floodplain Management Strategy Policy* in that at least 500m² of each proposed lot will be above the 1 in 100 year and/or highest flood level, the 500m² identified in the subdivision is to be utilised for the erection of buildings on the site, the maximum depth of filling is not to exceed 1 metre and the product of the depth and velocity of flow of waters during a 1 in 100 flood is equal to, or less than, one (1); and
 - d) The access road that links Crescent Head Village with the subject land can be provided to the 1in 100 year flood level in order to maintain access to the existing village infrastructure during a flood event of this magnitude. **Attachment 3** shows a longitudinal section along the alignment of the proposed access road to service this rezoned land.
8. The small portion of the land to be rezoned that is affected by the 1 in 100 flood event is not located in a *Floodway* nor could it be considered *flood storage* as it is not essential for the temporary storage of floodwaters during flooding and will not increase flood levels on this very large floodplain anywhere near 0.1m and would not cause downstream discharge to increase significantly (well below the standard set at 10%). Therefore the land affected by flooding for this rezoning is **flood fringe** and is of minor significance.
 9. There will be no cumulative effects as there is no land of a similar nature near the village of Crescent Head.

Crescent Head

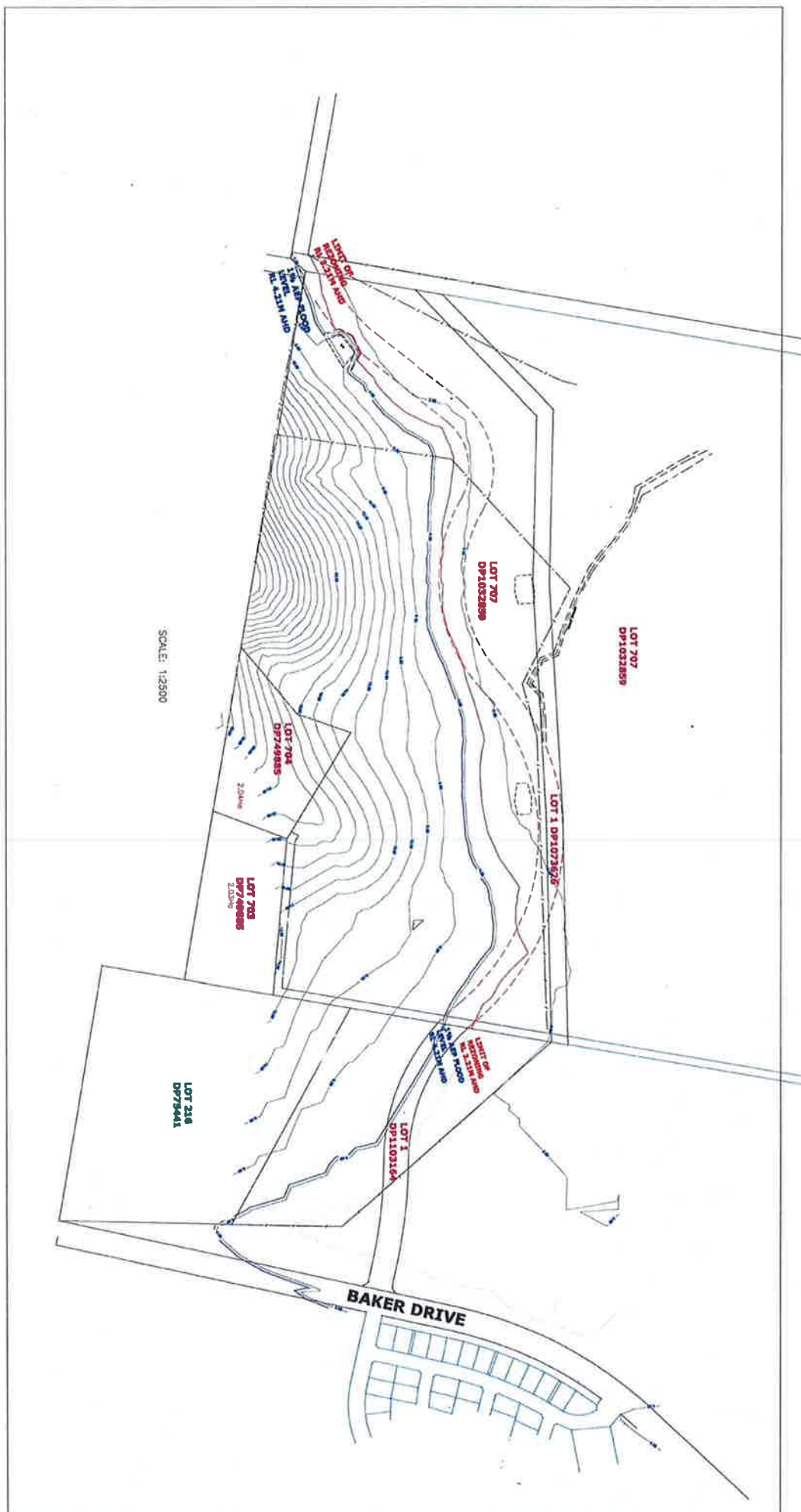
Flood Level Overlay

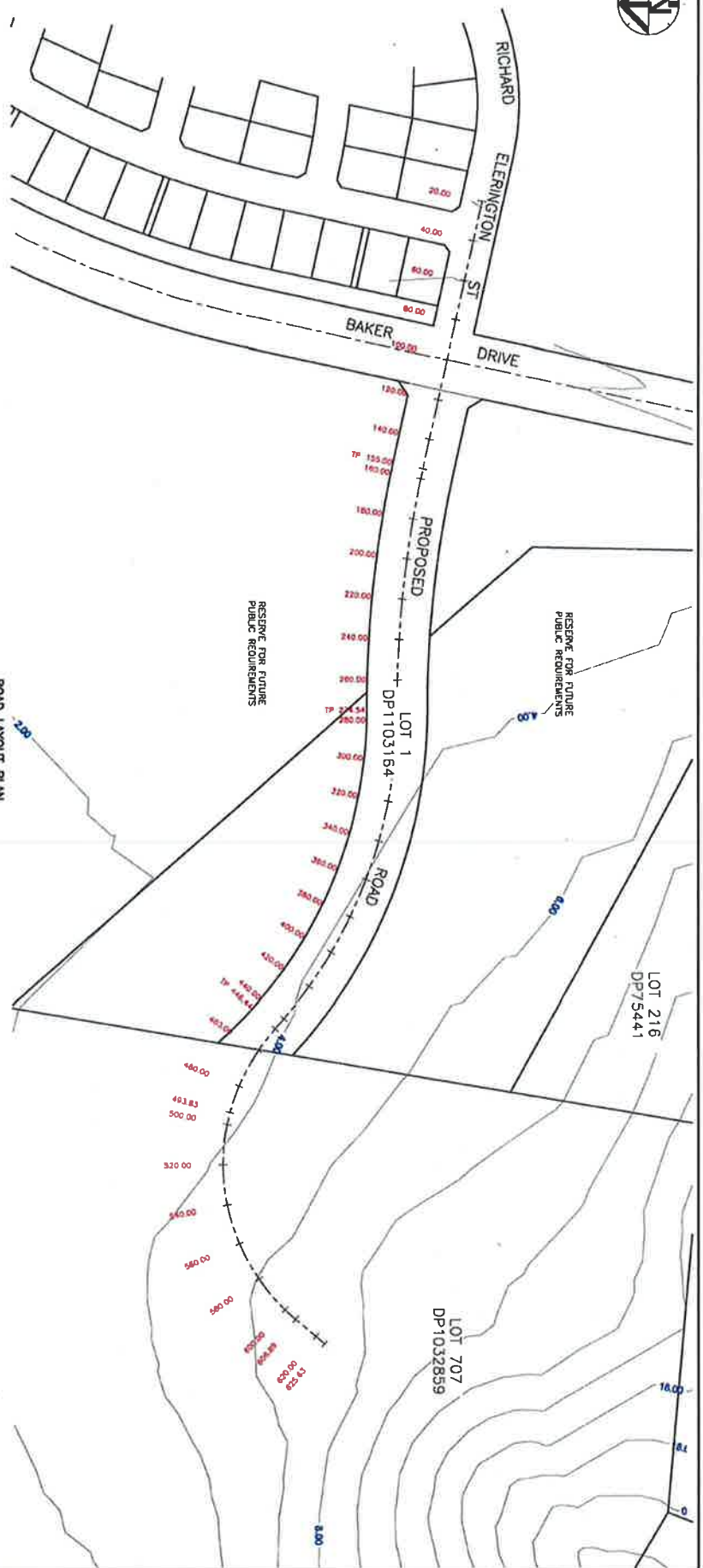
- 3.21m AHD contour
- Proposed rezoning area
- 1% AEP Flood Level
- 4.21m AHD

0 100.0
meters

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Station	Chainage	NATURAL	DESIGN	CUT/FILL	Station
20.00	0.00	0.00	0.00	0.00	100.00
40.00	1.83	0.00	0.00	0.00	120.00
60.00	3.66	0.00	0.00	0.00	140.00
80.00	5.49	0.00	0.00	0.00	160.00
100.00	7.32	0.00	0.00	0.00	180.00
120.00	9.15	0.00	0.00	0.00	200.00
140.00	10.98	0.00	0.00	0.00	220.00
160.00	12.81	0.00	0.00	0.00	240.00
180.00	14.64	0.00	0.00	0.00	260.00
200.00	16.47	0.00	0.00	0.00	280.00
220.00	18.30	0.00	0.00	0.00	300.00
240.00	20.13	0.00	0.00	0.00	320.00
260.00	21.96	0.00	0.00	0.00	340.00
280.00	23.79	0.00	0.00	0.00	360.00
300.00	25.62	0.00	0.00	0.00	380.00
320.00	27.45	0.00	0.00	0.00	400.00
340.00	29.28	0.00	0.00	0.00	420.00
360.00	31.11	0.00	0.00	0.00	440.00
380.00	32.94	0.00	0.00	0.00	460.00
400.00	34.77	0.00	0.00	0.00	480.00
420.00	36.60	0.00	0.00	0.00	500.00
440.00	38.43	0.00	0.00	0.00	520.00
460.00	40.26	0.00	0.00	0.00	540.00
480.00	42.09	0.00	0.00	0.00	560.00
500.00	43.92	0.00	0.00	0.00	580.00
520.00	45.75	0.00	0.00	0.00	600.00
540.00	47.58	0.00	0.00	0.00	620.00
560.00	49.41	0.00	0.00	0.00	640.00
580.00	51.24	0.00	0.00	0.00	660.00
600.00	53.07	0.00	0.00	0.00	680.00
620.00	54.90	0.00	0.00	0.00	700.00
640.00	56.73	0.00	0.00	0.00	720.00
660.00	58.56	0.00	0.00	0.00	740.00
680.00	60.39	0.00	0.00	0.00	760.00
700.00	62.22	0.00	0.00	0.00	780.00
720.00	64.05	0.00	0.00	0.00	800.00
740.00	65.88	0.00	0.00	0.00	820.00
760.00	67.71	0.00	0.00	0.00	840.00
780.00	69.54	0.00	0.00	0.00	860.00
800.00	71.37	0.00	0.00	0.00	880.00
820.00	73.20	0.00	0.00	0.00	900.00
840.00	75.03	0.00	0.00	0.00	920.00
860.00	76.86	0.00	0.00	0.00	940.00
880.00	78.69	0.00	0.00	0.00	960.00
900.00	80.52	0.00	0.00	0.00	980.00
920.00	82.35	0.00	0.00	0.00	1000.00

LONGITUDINAL SECTION

Scale: Vertical 1:500, Horizontal 1:1000

NO.	REVISION/DESCRIPTION	DATE
01	ISSUED FOR TENDERS	10/10/2017

NOTES:
1. THIS PLAN IS A PRELIMINARY FLOOD MANAGEMENT PLAN.
2. IT IS NOT TO BE USED FOR ANY OTHER PURPOSE.
3. THE DESIGNER ACCEPTS NO LIABILITY FOR ANY DAMAGE OR LOSS ARISING FROM THE USE OF THIS PLAN.
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PROJECT:
PROPOSED REZONING
AT LOT 707 DP1032859
CRESCENT HEAD
PORTOFINO PTY LTD

PLAN:
PROPOSED FLOOD
EVACUATION ROUTE FOR
PRELIMINARY FLOOD MANAGEMENT PLAN

dennis partners
civil structural planning
73 Balfour Street, Hawthorn
VIC 3122
P 03 9593 1611
F 03 9593 1612
WWW.DENNISPARTNERS.COM.AU

PROJECT NO: 101
CLIENT: PORTOFINO PTY LTD
DATE: 10/10/2017
DRAWN BY: [01]
CHECKED BY: [01]