

LEGEND

- 13.5 COUNCIL LIDAR DATA CONTOURS (FLOOD 1%AEP)
- 15.0 SURVEY CONTOURS (LAND)
- PROBABLE MAXIMUM FLOOD EXTENT (PMF)
- MODELLED FLOOD SECTIONS (20130284_R02)
- LEFT / RIGHT OVER BANK (20130284_R02)
- PMF HIGH HAZARD (COUNCIL ASCII DATA PROVIDED ON 03.06.20)
- 1% AEP HIGH HAZARD (COUNCIL ASCII DATA PROVIDED ON 03.06.20)

PROBABLE MAXIMUM FLOOD EXTENT (PMF)

VELOCITY AT MODELLED FLOOD SECTIONS RGH_20130284_R02)

SECTION	VEL. LOB m/s	VEL. CHANNEL m/s	VEL. ROB m/s
FLOOD 01	0.92	2.3	0.93
FLOOD 02	0.76	1.87	0.63
FLOOD 03	0.70	1.69	0.44
FLOOD 04	0.43	1.74	0.71
FLOOD 05	-	2.19	0.64

REFER TO SHEET MP03

PROBABLE MAXIMUM FLOOD EXTENT (PMF)

REFER TO SHEET MP02

HATCH AREA OUTSIDE OF 200m RADIUS EVACUATION DISTANCE

PROBABLE MAXIMUM FLOOD EXTENT (PMF)

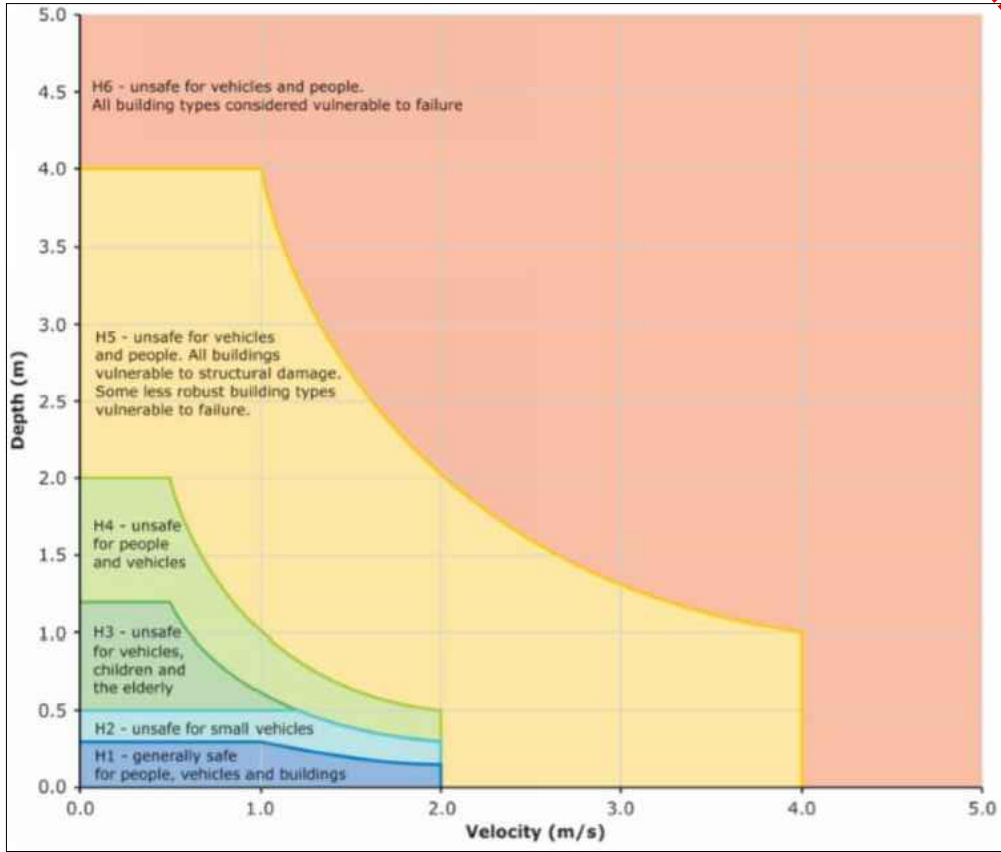
200m RADIUS EVACUATION DISTANCE (PMF)

PROBABLE MAXIMUM FLOOD EXTENT (PMF)

1% AEP FLOW DEPTH RELATIONSHIP (RGH 20130284_R02)

100YR _{y=1.0}	Lower_value	Upper_value	Colour
0	to	0.35 m	
0.35	to	0.5 m	
0.5	to	0.6 m	
0.6	to	1.0 m	
1.0	to	4 m	
4	to	5 m	

1% AEP : VEL 1.0m/s MAX.



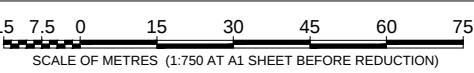
AR&R - COMBINED FLOOD HAZARD CURVES (FIG. 4, APR 2019)

DO NOT SCALE DRAWINGS. VERIFY ALL DIMENSIONS ON SITE.

REVISION	DESCRIPTION	DATE
A	DRAFT ISSUE FOR INFORMATION	31.07.20
B	ISSUE FOR INFORMATION	11.08.20

VERSION

SCALE



Postal Address: PO Box 3197,
Tuggerah NSW 2259
Central Coast Office: Unit 1, 3 Teamster Close,
Tuggerah NSW 2259
Ph 02 4351 9022
Newcastle Office: Unit 5, 166 Hannel Street,
Maryville NSW 2203
Ph 02 4058 2137

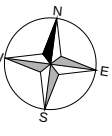
SURVEY BY	CLARKE DOWDLE & ASSOCIATES
REFERENCE	13018
DATED	16/05/16
DATUM	AHD

CLIENT	BAYSIDE GARDENS VILLAGE
ADDRESS	7 POMONA ROAD EMPIRE BAY
PROJECT	PROPOSED PLANNING PROPOSAL

DRAWING TITLE
**OVERALL INTEGRATED FLOOD
HAZARD PLAN
[RGH VELOCITY DEPTH MODEL
DATA PLOT]**

SCALE	1:750	INT.	
DRAWN	CW		
DESIGNED	NL		
CHECKED	CF		
DATE	OCTOBER 2019		
JOB NUMBER	20130284		

SHEET	MP01
REV	B



1% AEP FLOW DEPTH RELATIONSHIP
(RGH 20130284_R02)

100YR_v=1.0	Lower_value	Upper_value	Colour
0	to	0.35	m
0.35	to	0.5	m
0.5	to	0.6	m
0.6	to	1.0	m
1.0	to	4	m
4	to	5	m

1% AEP : VEL 1.0m/s MAX.

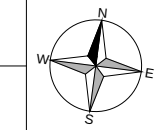
LEGEND

- 13.5 COUNCIL LIDAR DATA CONTOURS (FLOOD 1%AEP)
- 15.0 SURVEY CONTOURS (LAND)
- PROBABLE MAXIMUM FLOOD EXTENT (PMF)
- MODELLED FLOOD SECTIONS (20130284_R02)
- LEFT / RIGHT OVER BANK (20130284_R02)
- PMF HIGH HAZARD (COUNCIL ASCII DATA PROVIDED)
- PMF HIGH HAZARD LINE (COUNCIL ASCII DATA PROVIDED)
- 1% AEP HIGH HAZARD (COUNCIL ASCII DATA PROVIDED)
- 1% AEP HIGH HAZARD LINE (COUNCIL ASCII DATA PROVIDED)

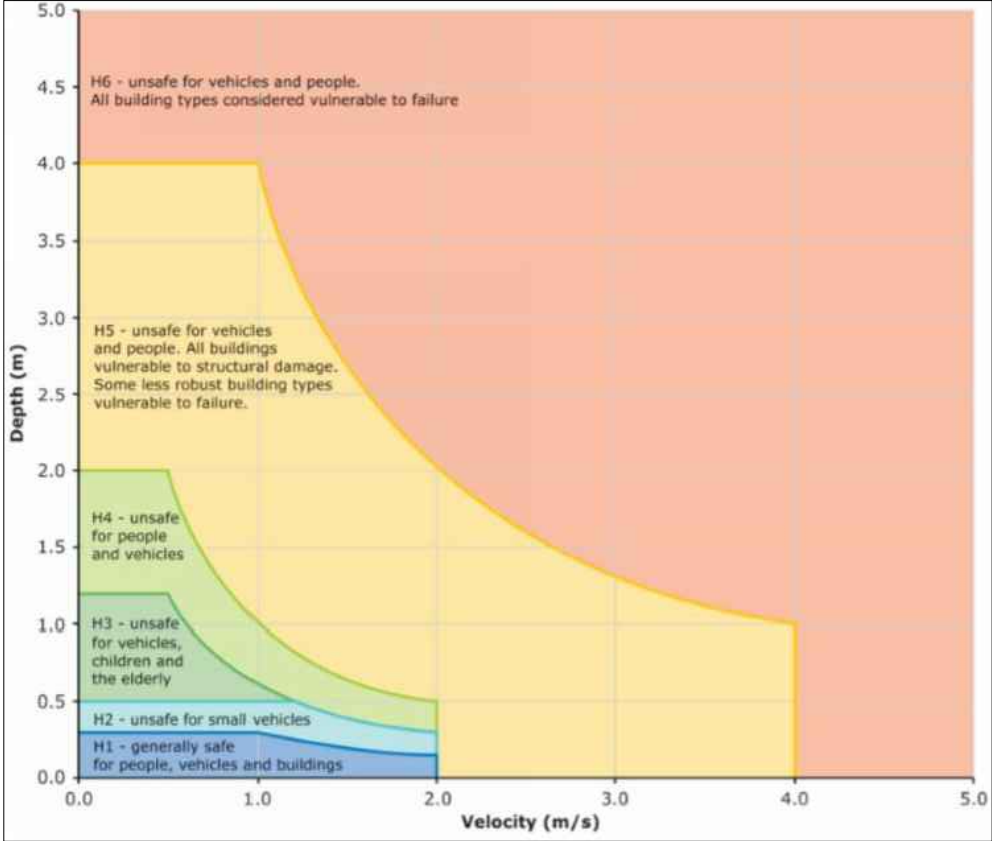
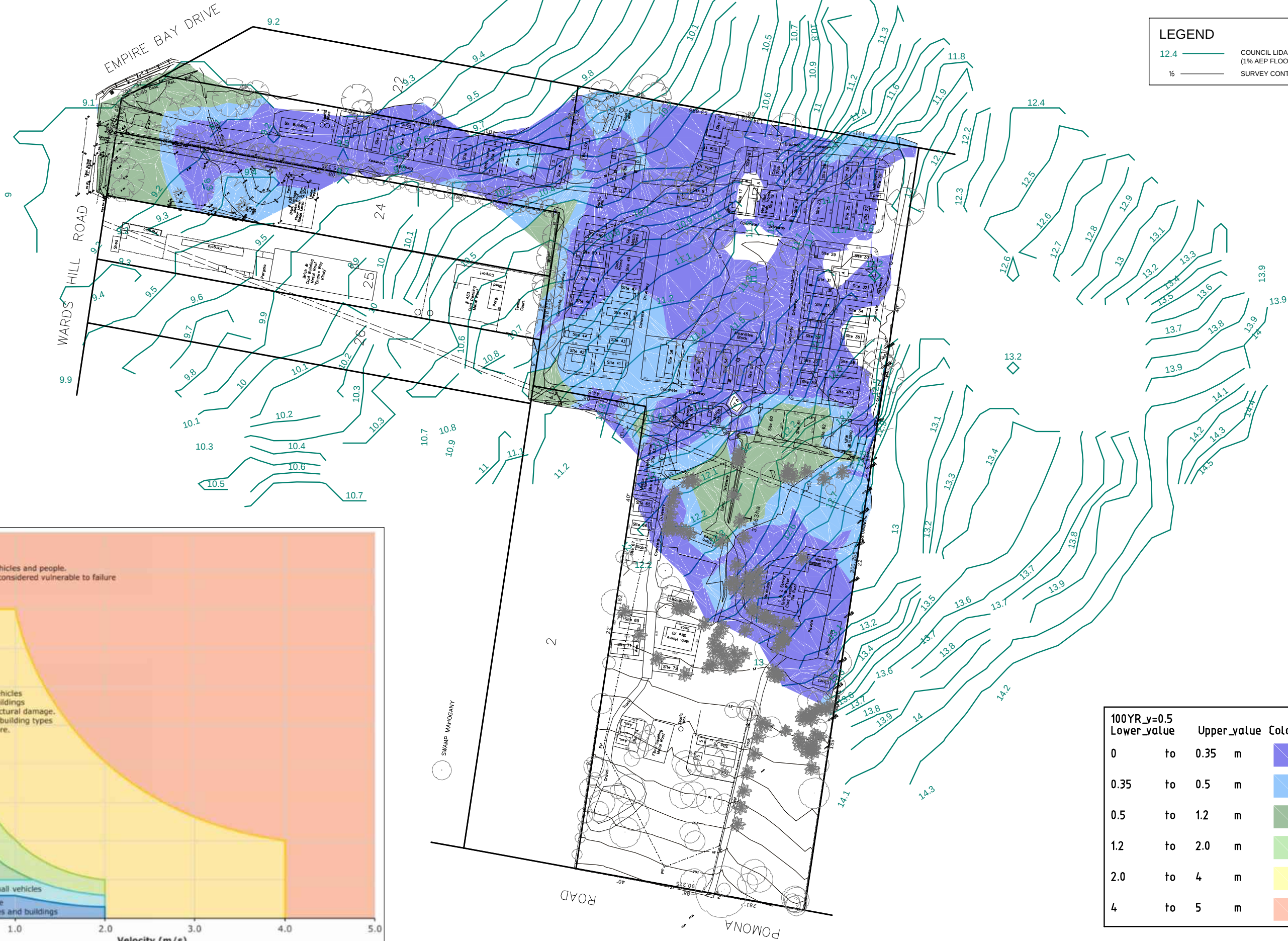
VELOCITY AT MODELLED FLOOD SECTIONS (RGH_20130284_R02)

SECTION	VEL. LOB m/s	VEL. CHANNEL m/s	VEL. ROB m/s
FLOOD 01	0.92	2.3	0.93
FLOOD 02	0.76	1.87	0.63
FLOOD 03	0.70	1.69	0.44
FLOOD 04	0.43	1.74	0.71
FLOOD 05	-	2.19	0.64

DO NOT SCALE DRAWINGS. VERIFY ALL DIMENSIONS ON SITE.



A1

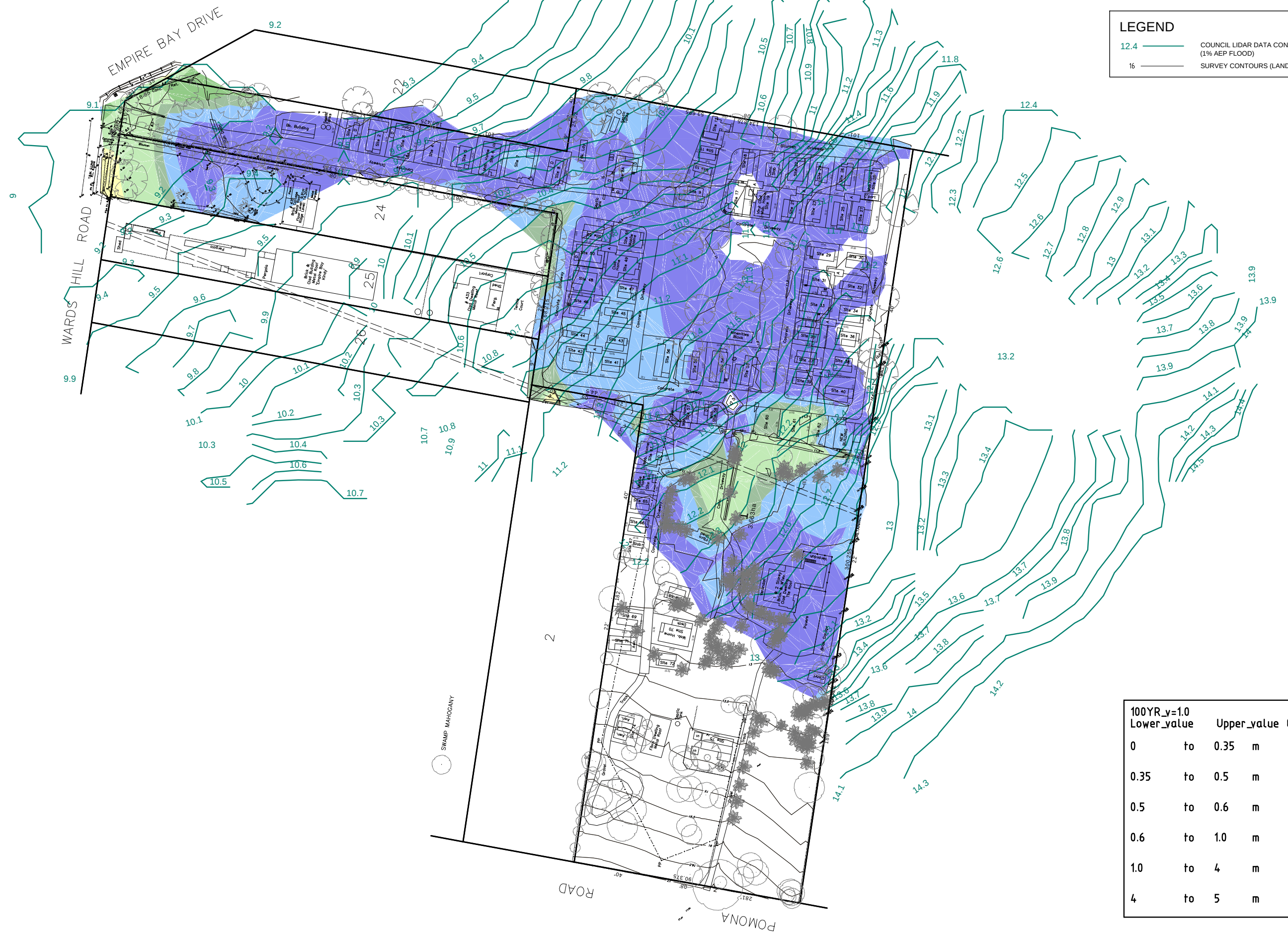


AR&R - COMBINED FLOOD HAZARD CURVES (FIG. 4, APR 2019)

DO NOT SCALE DRAWINGS. VERIFY ALL DIMENSIONS ON SITE.

A1

REVISION	DESCRIPTION	DATE	VERSION	 RGH CONSULTING GROUP Multi-discipline Engineering Postal Address: PO Box 3197, Tuggerah NSW 2259 Central Coast Office: Unit 1, 3 Teamster Close, Tuggerah NSW 2259 Ph 02 4351 9022 Newcastle Office: Unit 5, 166 Hannell Street, Maryville NSW 2203 Ph 02 4058 2137	SURVEY BY	CLARKE DOWDLE & ASSOCIATES	CLIENT	BAYSIDE GARDENS VILLAGE	DRAWING TITLE FLOOD HAZARD PLAN 1% AEP, V=0.5 m/s FLOW-DEPTH RELATIONSHIP [RGH MODEL_20130284_R02]	SCALE	1:750	INT.	SHEET MP04	
A	DRAFT ISSUE FOR INFORMATION	31.07.20			REFERENCE	13018	ADDRESS 7 POMONA ROAD EMPIRE BAY	PROJECT PROPOSED PLANNING PROPOSAL		DRAWN	CW			
B	ISSUE FOR INFORMATION	11.08.20			DATED	16/05/16				DESIGNED	NL		REV B	
					DATUM	AHD				CHECKED	CF			
										DATE	OCTOBER 2019			
										JOB NUMBER	20130284			



LEGEND

12.4 — COUNCIL LIDAR DATA CONTOURS
(1% AEP FLOOD)

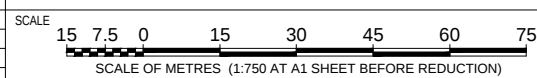
16 — SURVEY CONTOURS (LAND)

100YR_y=1.0		Upper_value		Colour
Lower_value				
0	to	0.35	m	
0.35	to	0.5	m	
0.5	to	0.6	m	
0.6	to	1.0	m	
1.0	to	4	m	
4	to	5	m	

DO NOT SCALE DRAWINGS. VERIFY ALL DIMENSIONS ON SITE.

REVISION	DESCRIPTION	DATE
A	DRAFT ISSUE FOR INFORMATION	31.07.20
B	ISSUE FOR INFORMATION	11.08.20

VERSION	
SCALE	1



Postal Address: PO Box 3197,
Tuggerah NSW 2259

Central Coast Office: Unit 1, 3 Teamster Close,
Tuggerah NSW 2259
Ph 02 4351 9022

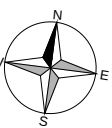
Newcastle Office: Unit 5, 166 Hannell Street,
Maryville NSW 2293
Ph 02 4058 2137

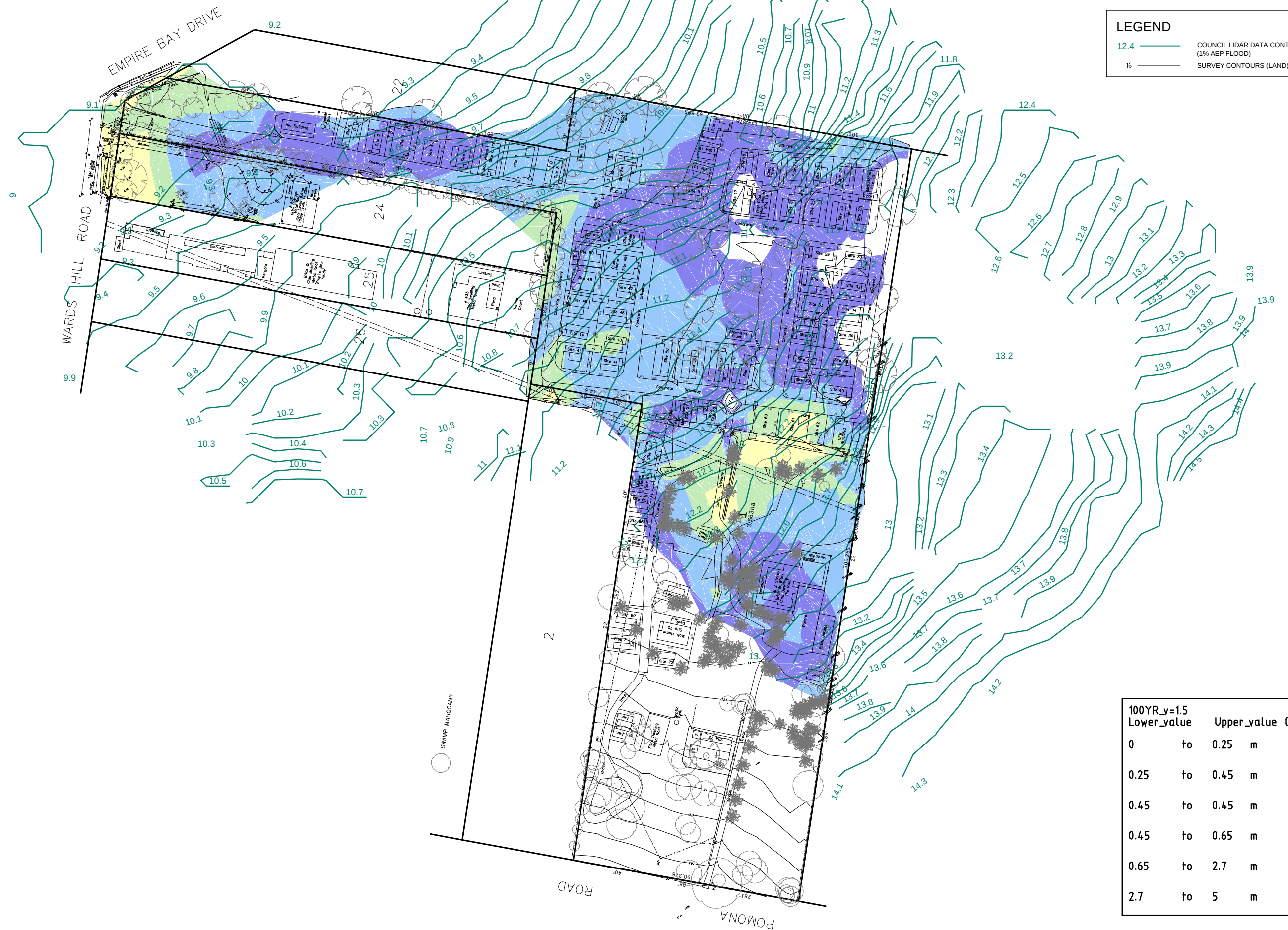
SURVEY BY	CLARKE DOWDLE & ASSOCIATES
REFERENCE	13018
DATED	16/05/16
DATUM	AHD

CLIENT	BAYSIDE GARDENS VILLAGE
ADDRESS	7 POMONA ROAD EMPIRE BAY
PROJECT	PROPOSED PLANNING PROPOSAL

DRAWING TITLE
FLOOD HAZARD PLAN
1% AEP, V=1.0 m/s
FLOW-DEPTH RELATIONSHIP
[RGH_MODEL_20130284_R02]

SCALE	1:750	INIT.
DRAWN	CW	
DESIGNED	NL	
CHECKED	CF	
DATE	OCTOBER 2019	
JOB NUMBER	20130284	





DO NOT SCALE DRAWINGS. VERIFY ALL DIMENSIONS ON SITE.

REVISION	DESCRIPTION	DATE
A	DRAFT ISSUE FOR INFORMATION	31.07.20
B	ISSUE FOR INFORMATION	11.08.20

VERSION

SCALE

15 7.5 0 15 30 45 60 75

SCALE OF METRES (1:750 AT A1 SHEET BEFORE REDUCTION)



Postal Address: PO Box 3197,
Tuggerah NSW 2259

Central Coast Office: Unit 1, 3 Teamster Close,
Tuggerah NSW 2259
Ph 02 4351 9022

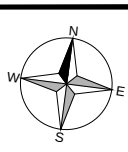
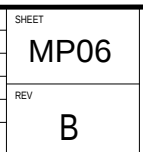
Newcastle Office: Unit 5, 166 Hannell Street,
Maryville NSW 2293
Ph 02 4058 2137

SURVEY BY	CLARKE DOWDLE & ASSOCIATES
REFERENCE	13018
DATED	16/05/16
DATUM	AHD

CLIENT	BAYSIDE GARDENS VILLAGE
ADDRESS	7 POMONA ROAD EMPIRE BAY
PROJECT	PROPOSED PLANNING PROPOSAL

	DRAWING TITLE FLOOD HAZARD PLAN 1% AEP, V=1.5 m/s FLOW-DEPTH RELATIONSHIP [RGH MODEL_20130284_R02]
--	--

SCALE	1:750	INIT.
DRAWN	CW	
DESIGNED	NL	
CHECKED	CF	
DATE	OCTOBER 2019	
JOB NUMBER	20130284	



7/31/20

U:\working\Projects\2013\20130284 - 7 Pomona Road, Empire Bay\DESIGN\DRAWINGS\CURRENT\DWG\FLOOD_NEW_MP_SERIES\20130284_MP04-08.dwg

LEGEND

12.4

COUNCIL LIDAR DATA CONTOURS
(1% AEP FLOOD)

16

SURVEY CONTOURS (LAND)

PMF_v=1.5				
Lower_value		Upper_value		Colour
0	to	0.25	m	
0.25	to	0.45	m	
0.45	to	0.45	m	
0.45	to	0.65	m	
0.65	to	2.7	m	
2.7	to	5	m	

DO NOT SCALE DRAWINGS. VERIFY ALL DIMENSIONS ON SITE.

A1

REVISION	DESCRIPTION	DATE
A	DRAFT ISSUE FOR INFORMATION	31.07.20
B	ISSUE FOR INFORMATION	11.08.20

VERSION

SCALE

15

7.5

0

15

30

45

60

75

SCALE OF METRES (1:750 AT A1 SHEET BEFORE REDUCTION)



RGH
CONSULTING
GROUP
Multi-discipline Engineering

Postal Address: PO Box 3197,
Tuggerah NSW 2259

Central Coast Office: Unit 1, 3 Teamster Close,
Tuggerah NSW 2259
PH:02 4351 9022

Newcastle Office: Unit 5, 166 Hannel Street,
Maryville NSW 2293
PH:02 4058 2137

SURVEY BY	CLARKE DOWDLE & ASSOCIATES
REFERENCE	13018
DATED	16/05/16
DATUM	AHD

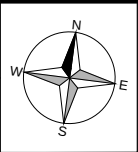
CLIENT	BAYSIDE GARDENS VILLAGE
ADDRESS	7 POMONA ROAD EMPIRE BAY
PROJECT	PROPOSED PLANNING PROPOSAL

DRAWING TITLE

FLOOD HAZARD PLAN
PMF V=1.5 m/s
FLOW-DEPTH RELATIONSHIP
[RGH_MODEL_20130284_R02]

SCALE	1:750	INT.	SHEET
DRAWN	CW		MP08
DESIGNED	NL		
CHECKED	CF		
DATE	OCTOBER 2019		
JOB NUMBER	20130284		

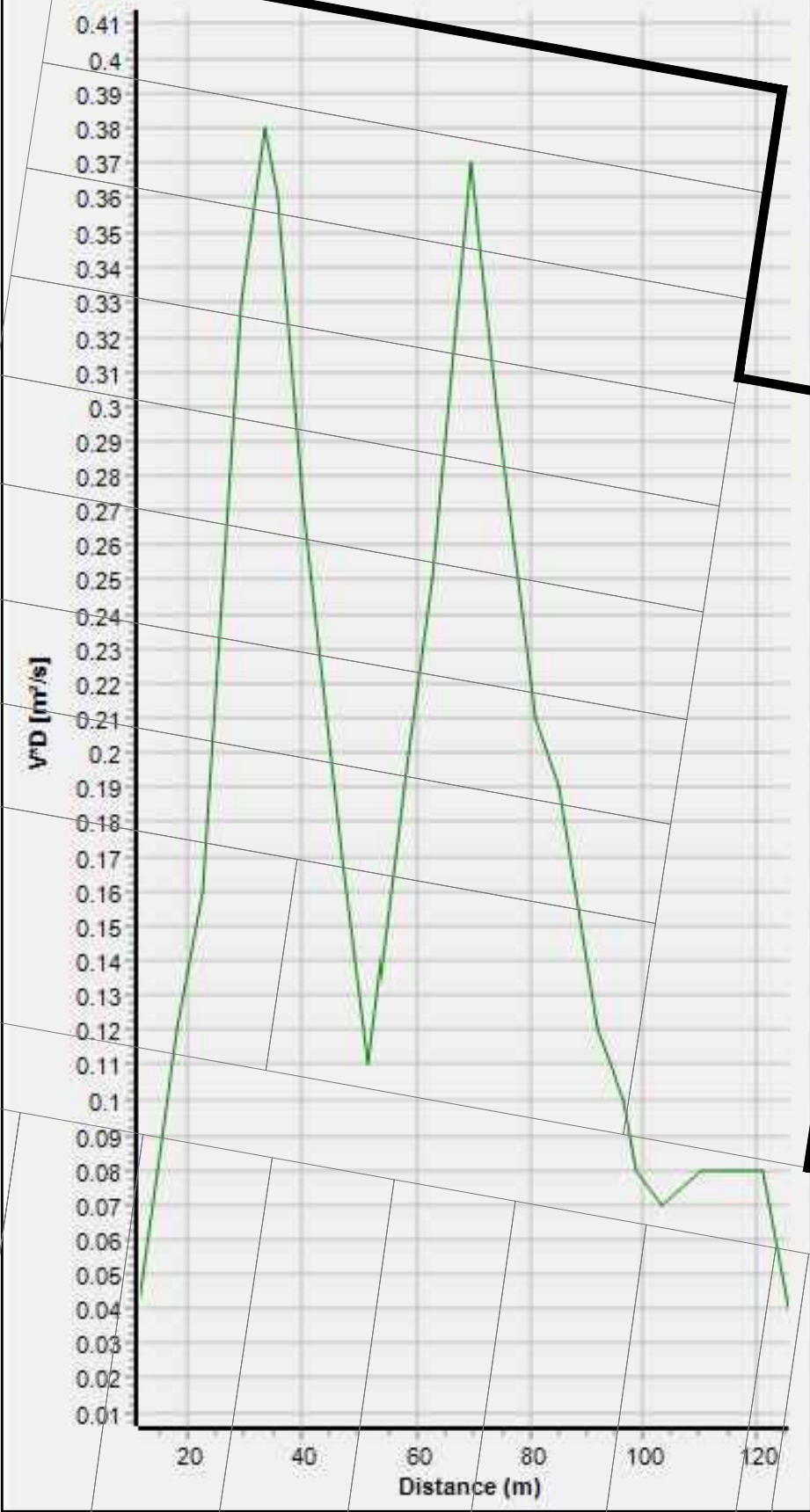
REV	B
-----	---



U:\synergy\Projects\2013\20130284_7_Pomona_Road_Empire_Bay\DESIGN\DRAWINGS\CURRENT_DWG\1000_FLOOD_NEW_MP_SERIES\20130284_MP09-11.dwg
8/12/20

Links x,y=128.92, -0.01

wrProfile.prf



LEGEND

1% AEP HIGH HAZARD ZONE

1% AEP EXTENTS

DO NOT SCALE DRAWINGS. VERIFY ALL DIMENSIONS ON SITE.

REVISION	DESCRIPTION	DATE
A	DRAFT ISSUE FOR INFORMATION	31.07.20
B	ISSUE FOR INFORMATION	11.08.20

VERSION

SCALE

SCALE OF METRES (1:750 AT A1 SHEET BEFORE REDUCTION)

RGH CONSULTING GROUP
Multi-discipline Engineering

Postal Address: PO Box 3197,
Tuggerah NSW 2259

Central Coast Office: Unit 1, 3 Teamster Close,
Tuggerah NSW 2259
Ph:02 4351 9022

Newcastle Office: Unit 5, 166 Hannell Street,
Maryville NSW 2203
Ph:02 4058 2137

SURVEY BY	CLARKE DOWDLE & ASSOCIATES
REFERENCE	13018
DATED	16/05/16
DATUM	AHD

CLIENT	BAYSIDE GARDENS VILLAGE
ADDRESS	7 POMONA ROAD EMPIRE BAY
PROJECT	PROPOSED PLANNING PROPOSAL

DRAWING TITLE

1% AEP DEPTH 0.4m
(COUNCIL DATA)

SCALE	1:750	INT.
DRAWN	CW	
DESIGNED	NL	
CHECKED	CF	
DATE	OCTOBER 2019	
JOB NUMBER	20130284	

SHEET

MP09

REV

B

A1

U:\synergy\Projects\2013\20130284_7_Pomona_Road_Empire_Bay\DESIGN\DRAWINGS\CURRENT_DWG\1009-11.dwg
8/12/20

DO NOT SCALE DRAWINGS. VERIFY ALL DIMENSIONS ON SITE.

REVISION	DESCRIPTION	DATE
A	DRAFT ISSUE FOR INFORMATION	31.07.20
B	ISSUE FOR INFORMATION	11.08.20

VERSION

SCALE

15 7.5 0 15 30 45 60 75

SCALE OF METRES (1:750 AT A1 SHEET BEFORE REDUCTION)



RGH
CONSULTING
GROUP
Multi-discipline Engineering

Postal Address: PO Box 3197,
Tuggerah NSW 2259

Central Coast Office: Unit 1, 3 Teamster Close,
Tuggerah NSW 2259
Ph:02 4351 9022

Newcastle Office: Unit 5, 166 Hannell Street,
Maryville NSW 2203
Ph:02 4058 2137

SURVEY BY	CLARKE DOWDLE & ASSOCIATES
REFERENCE	13018
DATED	16/05/16
DATUM	AHD

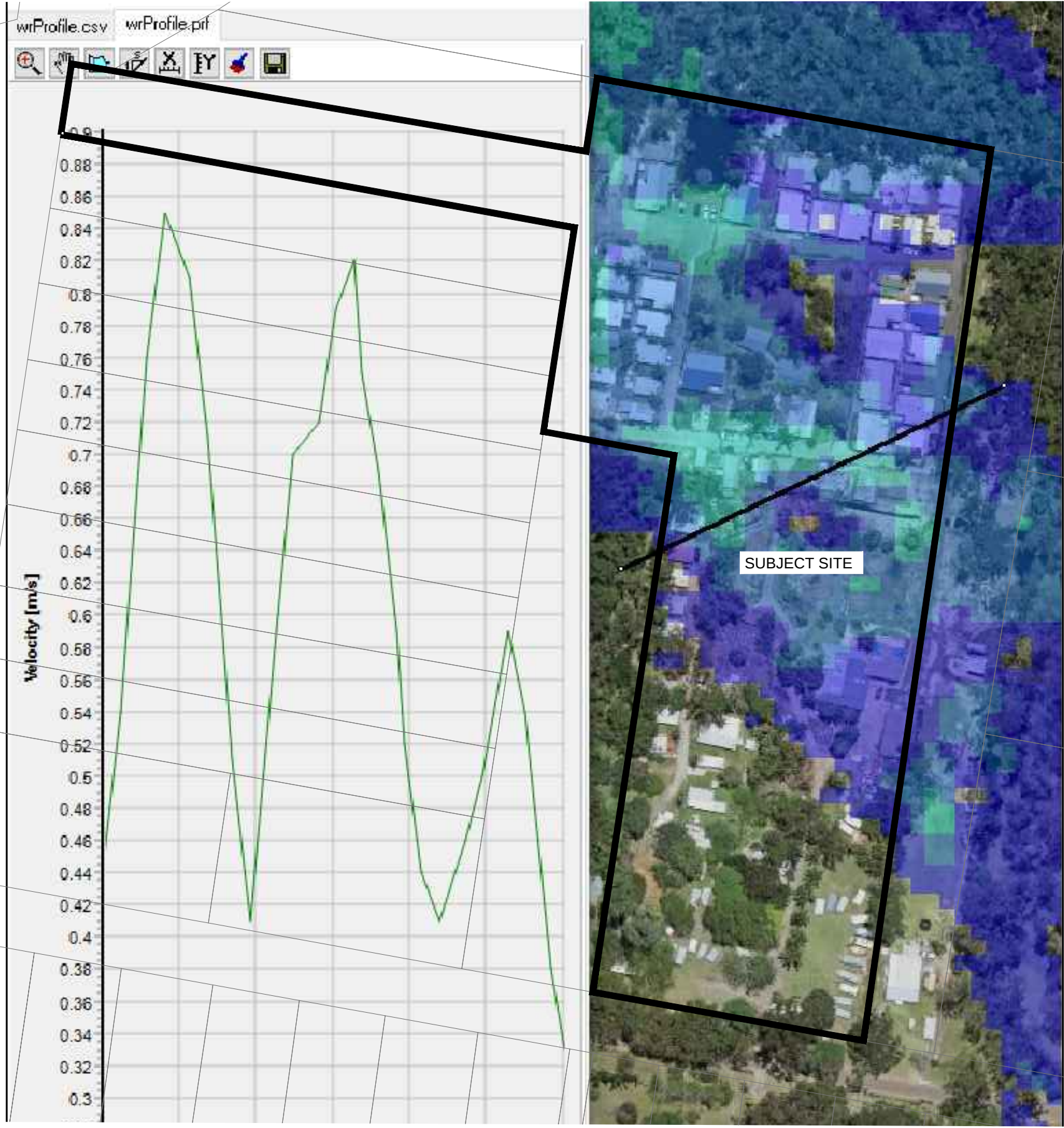
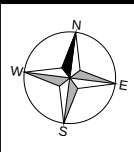
CLIENT	BAYSIDE GARDENS VILLAGE
ADDRESS	7 POMONA ROAD EMPIRE BAY
PROJECT	PROPOSED PLANNING PROPOSAL

DRAWING TITLE

1% AEP VELOCITY MAX 0.84m/s
(COUNCIL DATA)

SCALE	1:750	INT.
DRAWN	CW	
DESIGNED	NL	
CHECKED	CF	
DATE	OCTOBER 2019	
JOB NUMBER	20130284	

SHEET	MP10
REV	B



LEGEND



1% AEP HIGH HAZARD ZONE



1% AEP EXTENTS

U:\synergy\Projects\2013\20130284_7_Pomona_Road_Empire_Bay\DESIGN\DRAWINGS\CURRENT\DRG\1 FLOOD_NEW\MP1 SERIES\20130284_MP09-11.dwg
8/12/20

DO NOT SCALE DRAWINGS. VERIFY ALL DIMENSIONS ON SITE.

REVISION	DESCRIPTION	DATE
A	DRAFT ISSUE FOR INFORMATION	31.07.20
B	ISSUE FOR INFORMATION	11.08.20

VERSION

SCALE

157.5001530456075

SCALE OF METRES (1:750 AT A1 SHEET BEFORE REDUCTION)



RGH
CONSULTING
GROUP
Multi-discipline Engineering

Postal Address: PO Box 3197,
Tuggerah NSW 2259

Central Coast Office: Unit 1, 3 Teamster Close,
Tuggerah NSW 2259
Ph:02 4351 9022

Newcastle Office: Unit 5, 166 Hannel Street,
Maryville NSW 2203
Ph:02 4058 2137

SURVEY BY	CLARKE DOWDLE & ASSOCIATES
REFERENCE	13018
DATED	16/05/16
DATUM	AHD

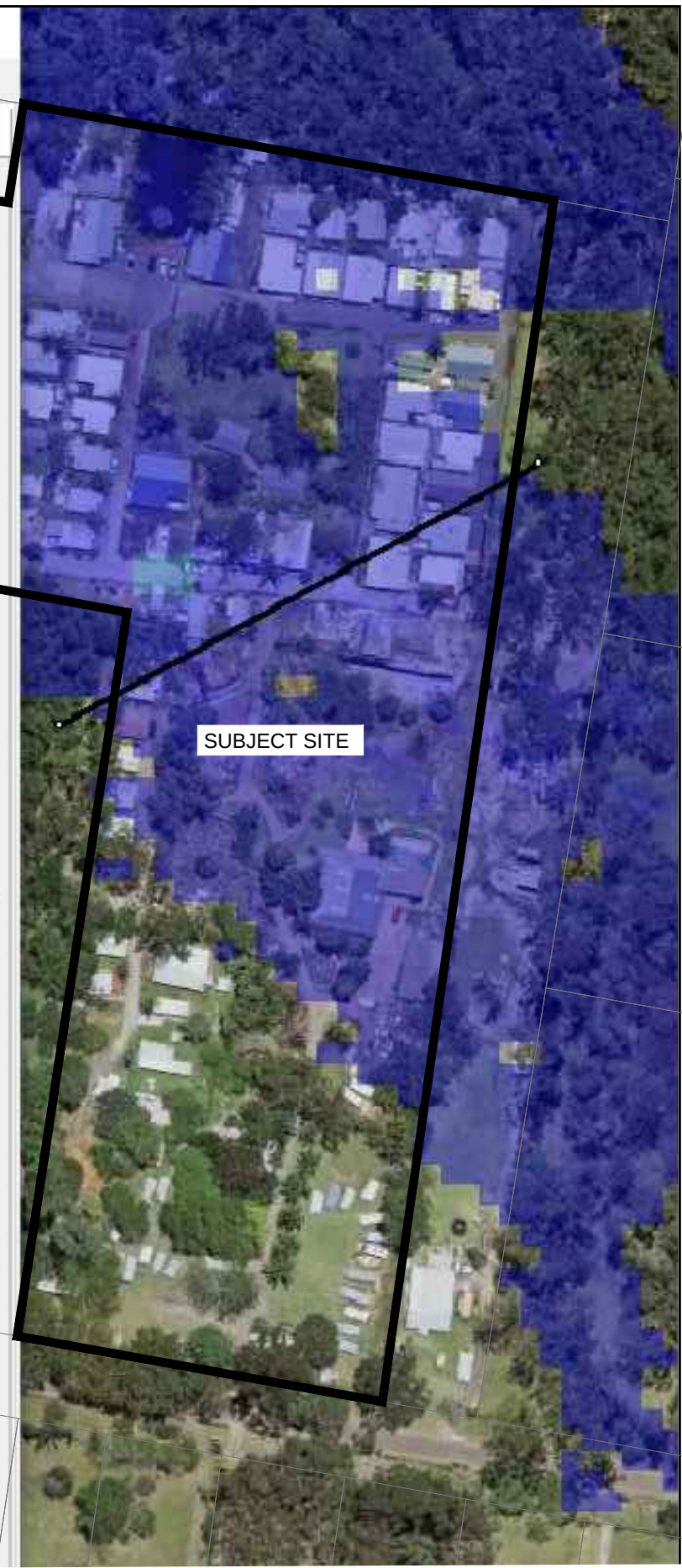
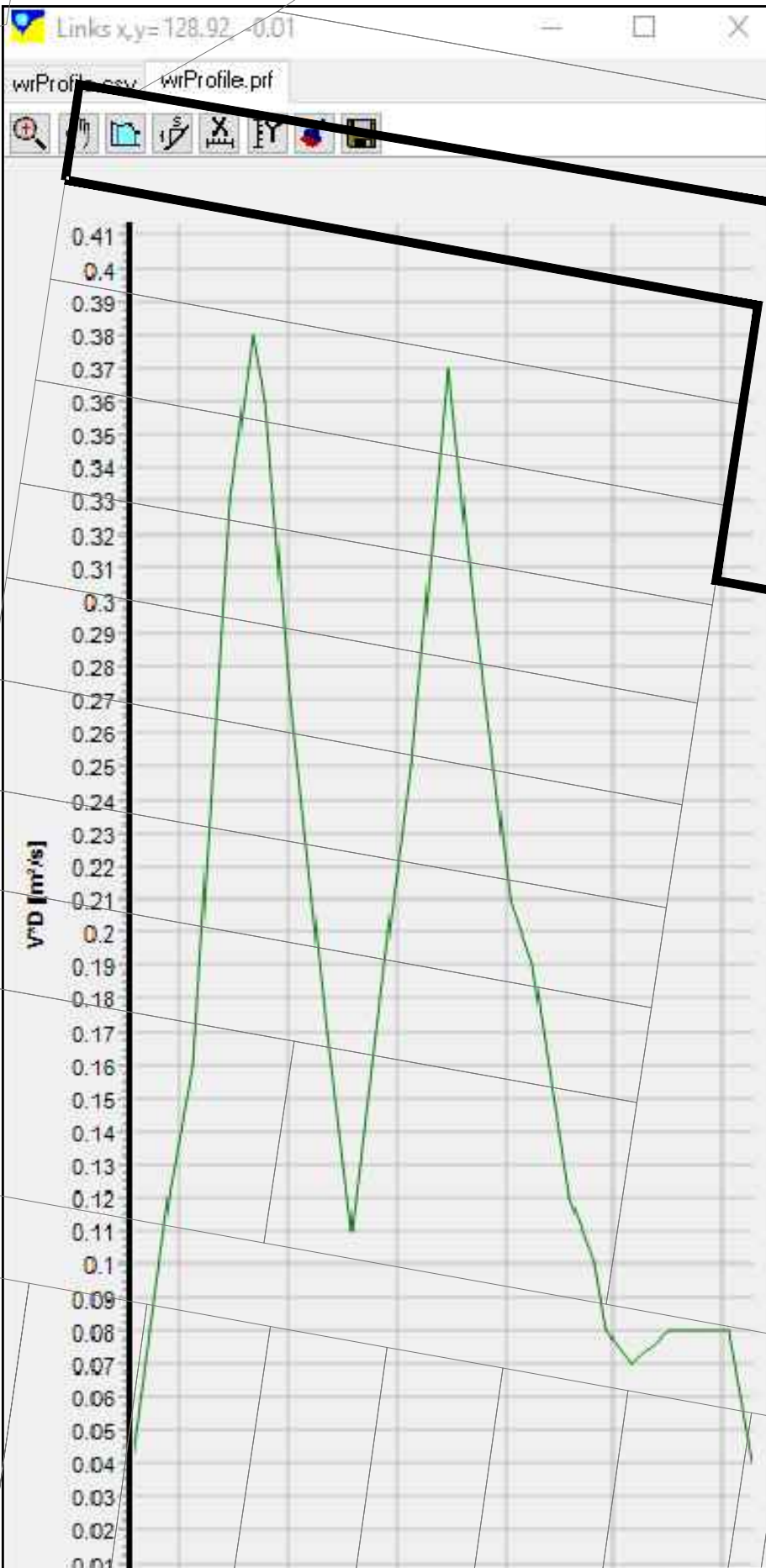
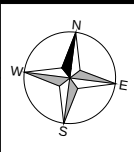
CLIENT	BAYSIDE GARDENS VILLAGE
ADDRESS	7 POMONA ROAD EMPIRE BAY
PROJECT	PROPOSED PLANNING PROPOSAL

DRAWING TITLE

1% AEP MOMENTUM (VxD) <0.4
(COUNCIL DATA)

SCALE	1:750	INT.
DRAWN	CW	
DESIGNED	NL	
CHECKED	CF	
DATE	OCTOBER 2019	
JOB NUMBER	20130284	

REV	SHEET
	MP11
B	



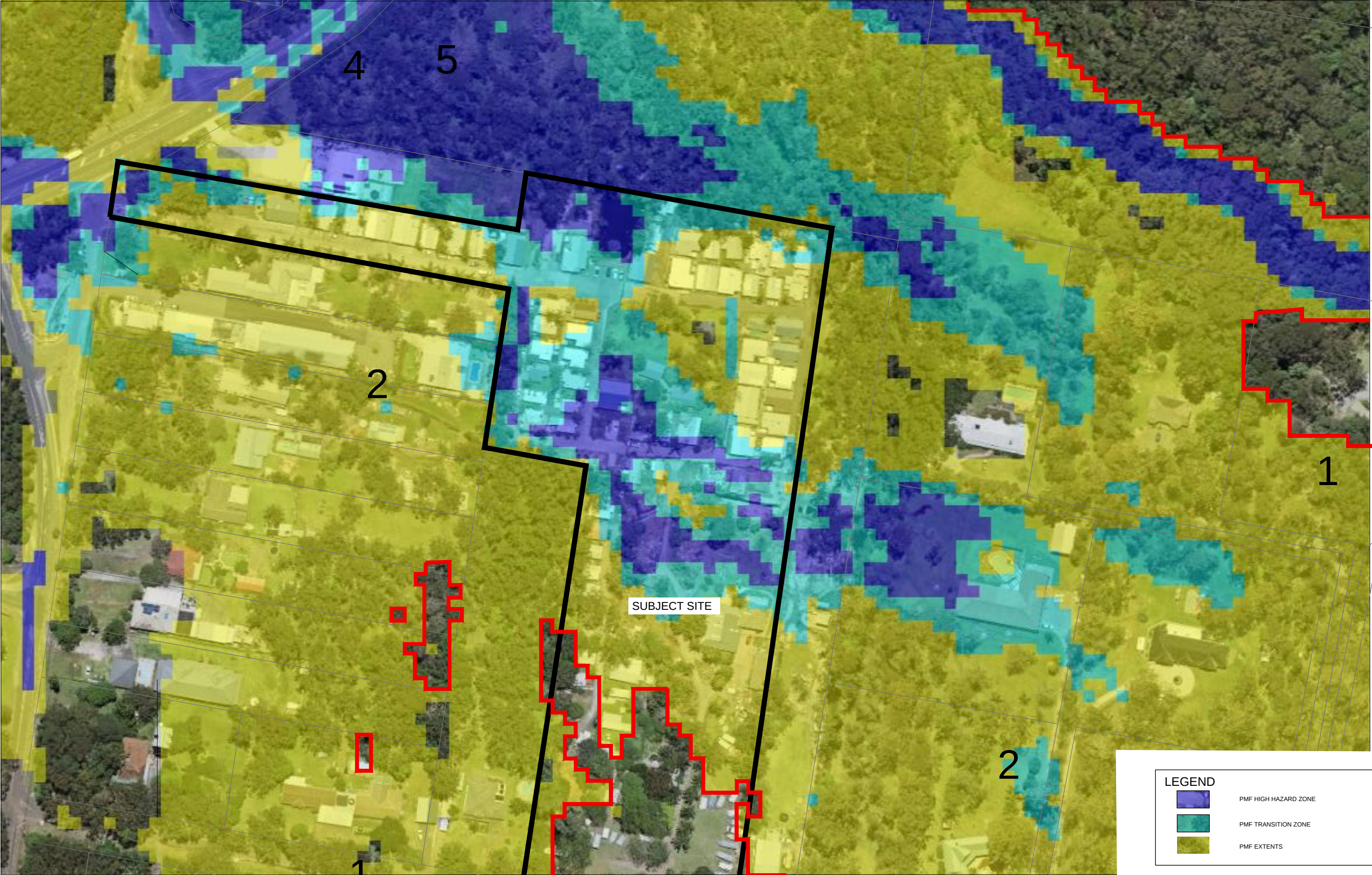
LEGEND



1% AEP HIGH HAZARD ZONE



1% AEP EXTENTS



SUBJECT SITE

LEGEND

PMF HIGH HAZARD ZONE

PMF TRANSITION ZONE

DO NOT SCALE DRAWINGS. VERIFY ALL DIMENSIONS ON SITE.

A1

REVISION	DESCRIPTION	DATE
A	DRAFT ISSUE FOR INFORMATION	31.07.20
B	ISSUE FOR INFORMATION	11.08.20

VERSION
SCALE



RGH
CONSULTING
GROUP
Multi-discipline Engineering

Postal Address: PO Box 3197,
Tuggerah NSW 2259

Central Coast Office: Unit 1, 3 Teamster Close,
Tuggerah NSW 2259
Ph:02 4361 9022

Newcastle Office: Unit 5, 166 Hannell Street,
Maryville NSW 2203
Ph:02 4058 2137

SURVEY BY	CLARKE DOWDLE & ASSOCIATES
REFERENCE	13018
DATED	16/05/16
DATUM	AHD

CLIENT	BAYSIDE GARDENS VILLAGE
ADDRESS	7 POMONA ROAD EMPIRE BAY
PROJECT	PROPOSED PLANNING PROPOSAL

DRAWING TITLE	PMF FROM COUNCIL ASCII DATA
---------------	--------------------------------

SCALE	1:750	INT.	SHEET
DRAWN	CW		MP12
DESIGNED	NL		
CHECKED	CF		
DATE	OCTOBER 2019		
JOB NUMBER	20130284		

REV	B
-----	---

