

Flood Analysis 2017, 2022

Presentation of Results

The Fingal Head Community Association investigated recent historical flooding events that have occurred in our Fingal Head Community in northern Rivers New South Wales as part of our Community Resilience Initiative.

The river flood data required was provided by the Bureau of Meteorology, in accordance with the FOI Act relating the historical River Height data for the:

1. Tweed River at Chinderah (mAHD) - Station number 558010
2. Tweed River at Tumbulgum (mAHD) - Station Number 558014

For the periods:

1. Cyclone Debbie from the period 10am March 30, 2017 to 10am April 2, 2017
2. Major rain bomb event in northern rivers from the period 10am Saturday February 26, 2022 to 10am Friday March 4, 2022

Additional river flood data has been provided by the Tweed Shire Council using data sourced from Manly Hydraulics P/L

River flood data was sourced from the Bureau of Meteorology and can be viewed online at the following links.

Tweed R at Tumbulgam

<https://reg.bom.gov.au/fwo/IDN60231/IDN60231.558014.plt.shtml>

Tweed R at Chinderah (mAHD)

<https://reg.bom.gov.au/fwo/IDN60231/IDN60231.558010.plt.shtml>

Latest River Heights for Tweed R at Tumbulgam

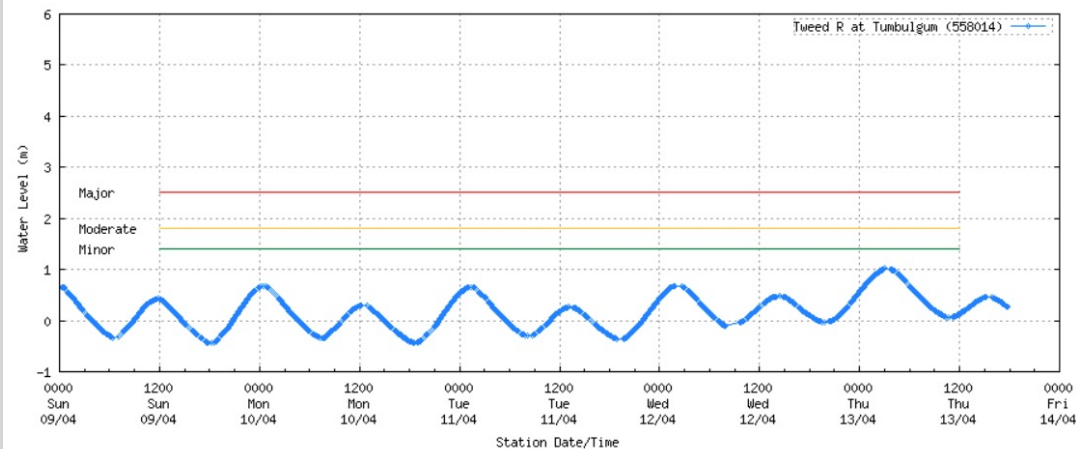
Issued at 5:45 pm EST Thursday 13 April 2023

[About river height plots](#) | [About this Plot](#)

Station details: Station Number: 558014 Name: Tweed R at Tumbulgam

Flood levels: Minor: 1.40 Moderate: 1.80 Major: 2.50

Data from the previous 4 days.



Australian Government Bureau of Meteorology

(Generated: 13/04/2023 17:45:48)

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Latest River Heights for Tweed R at Chinderah (mAHD)

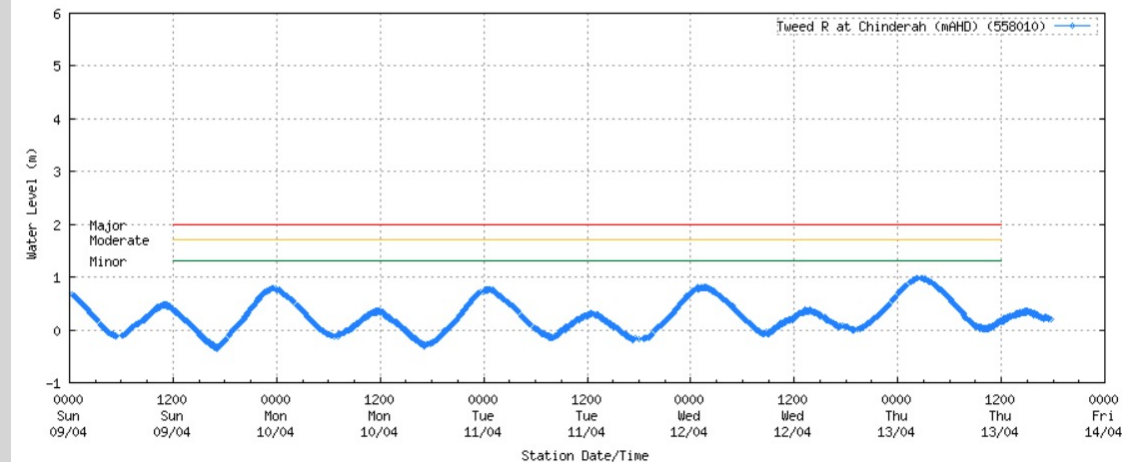
Issued at 5:45 pm EST Thursday 13 April 2023

[About river height plots](#) | [About this Plot](#)

Station details: Station Number: 558010 Name: Tweed R at Chinderah (mAHD)

Flood levels: Minor: 1.30 Moderate: 1.70 Major: 2.00

Data from the previous 4 days.



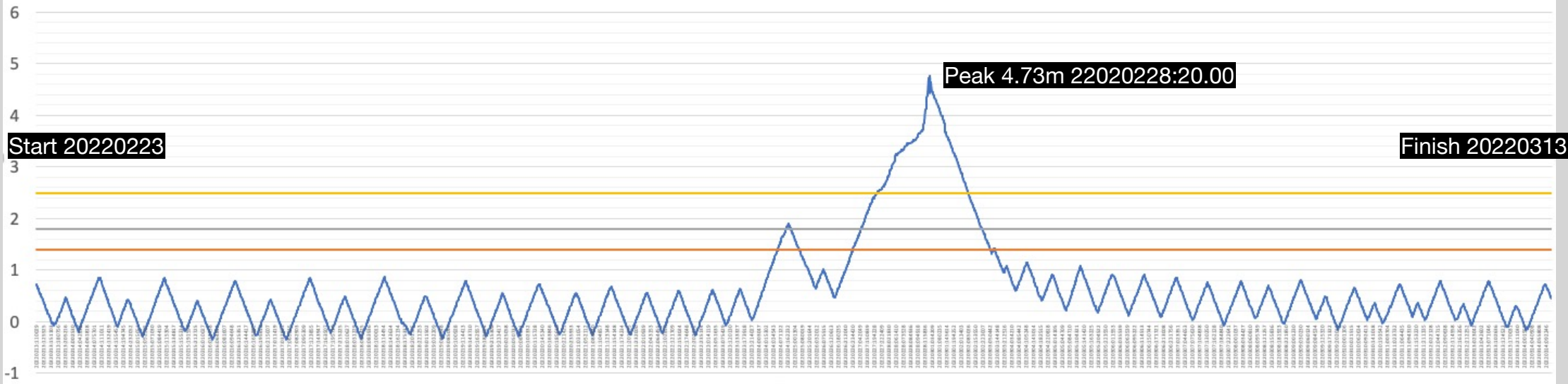
Australian Government Bureau of Meteorology

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2022 Tumbulgum Flood Station #1

—ht —MINOR —MODERATE —MAJOR



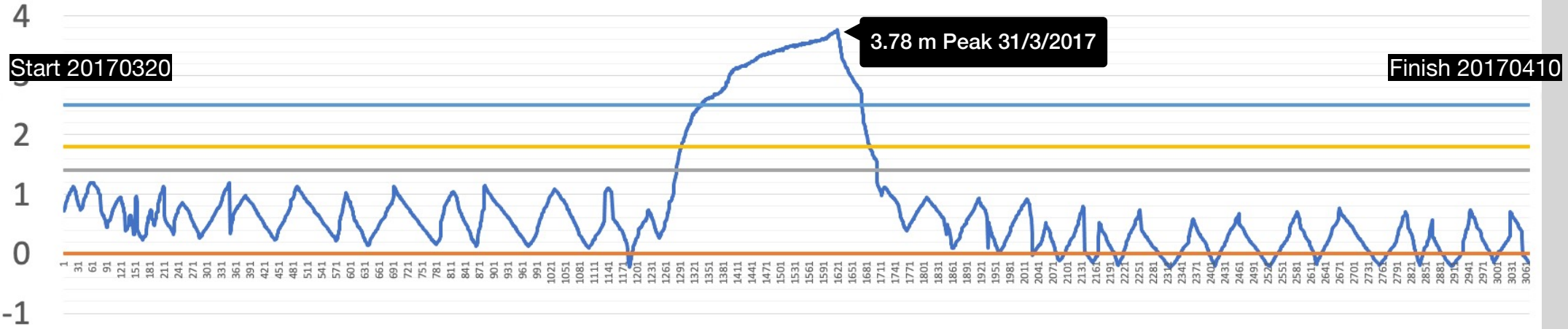
1	sensor_num	name	obs_time_loc	ht	MINOR	MODERAT	MAJOR
3666	1.01	TUMBULGUM (TWEED RIVER)	20220223:214733	0.02	1.4	1.8	2.5
3798	1.02	TUMBULGUM (TWEED RIVER)	20220224:053624	1.4	1.4	1.8	2.5
3842	1.03	TUMBULGUM (TWEED RIVER)	20220224:150045	1.8	1.4	1.8	2.5
3853	1.04	TUMBULGUM (TWEED RIVER)	20220224:173455	1.9	1.4	1.8	2.5
3865	1.05	TUMBULGUM (TWEED RIVER)	20220224:211252	1.8	1.4	1.8	2.5
3908	1.06	TUMBULGUM (TWEED RIVER)	20220225:031756	1.4	1.4	1.8	2.5
3993	1.07	TUMBULGUM (TWEED RIVER)	20220226:014530	0.64	1.4	1.8	2.5
4032	1.08	TUMBULGUM (TWEED RIVER)	20220226:063355	1.02	1.4	1.8	2.5
4089	1.09	TUMBULGUM (TWEED RIVER)	20220226:150416	0.46	1.4	1.8	2.5
4184	1.1	TUMBULGUM (TWEED RIVER)	20220226:234545	1.4	1.4	1.8	2.5
4226	1.11	TUMBULGUM (TWEED RIVER)	20220227:050713	1.8	1.4	1.8	2.5
4307	1.12	TUMBULGUM (TWEED RIVER)	20220227:210230	2.5	1.4	1.8	2.5
4574	1.13	TUMBULGUM (TWEED RIVER)	20220228:200000	4.73	1.4	1.8	2.5
4774	1.14	TUMBULGUM (TWEED RIVER)	20220302:081207	2.5	1.4	1.8	2.5
4845	1.15	TUMBULGUM (TWEED RIVER)	20220302:212557	1.8	1.4	1.8	2.5
4887	1.16	TUMBULGUM (TWEED RIVER)	20220303:051525	1.4	1.4	1.8	2.5
4906	1.17	TUMBULGUM (TWEED RIVER)	20220303:104051	1.42	1.4	1.8	2.5
5018	1.18	TUMBULGUM (TWEED RIVER)	20220304:065758	0.59	1.4	1.8	2.5

1st Flood Peak
 Minor - Thursday 24/2/22 5.30 am / Friday 25/2/22 3.17 am = + 22 hrs
 Medium - Thursday 24/2/22 3.00 pm / Thursday 24/2/22 7.12 pm = + 4 hrs

2nd Flood Peak
 Minor - Saturday 26/2/22 23.45 pm / Thursday 3/3/22 05.15 am = + 101.5 hrs
 Medium - Sunday 27/2/23 5.07 pm / Wednesday 2/3/22 21.25 pm = + 89 hrs
 Major - Sunday 27/2/22 21.02 pm / Wednesday 2/3/22 8.12 am = + 59 hrs

2017 Tumbulgum Flood Station #1

—ht —obs_time —MINOR —MODERATE —MAJOR



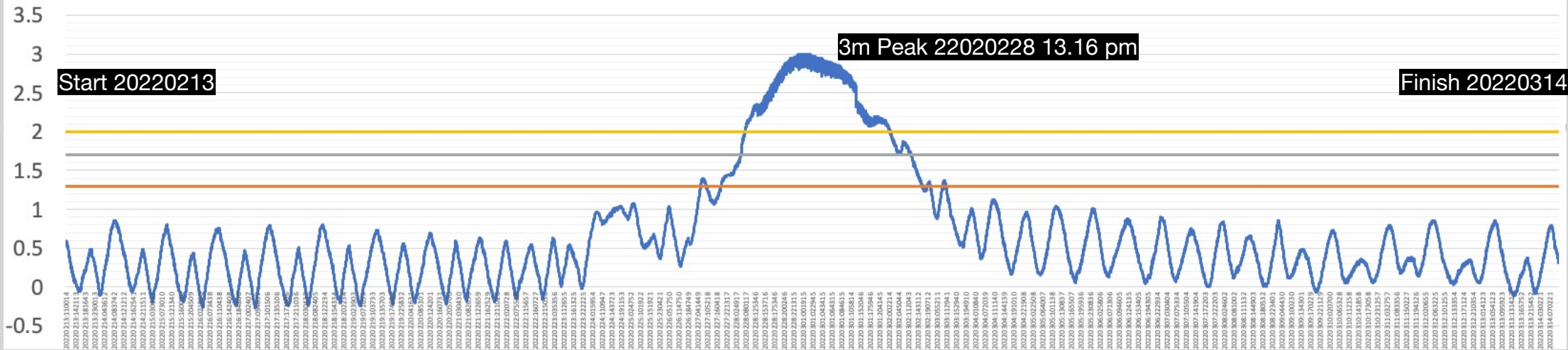
1185	1.01	TUMBULGUM (TWEED RIVER)	-0.28	29-03-2017 18:39:00	1.4	1.8	2.5
1250	1.02	TUMBULGUM (TWEED RIVER)	0.26	30-03-2017 04:29:12	1.4	1.8	2.5
1287	1.03	TUMBULGUM (TWEED RIVER)	1.41	30-03-2017 09:59:11	1.4	1.8	2.5
1298	1.04	TUMBULGUM (TWEED RIVER)	1.8	30-03-2017 11:26:14	1.4	1.8	2.5
1342	1.05	TUMBULGUM (TWEED RIVER)	2.51	30-03-2017 16:16:33	1.4	1.8	2.5
1627	1.06	TUMBULGUM (TWEED RIVER)	3.78	31-03-2017 07:39:38	1.4	1.8	2.5
1678	1.07	TUMBULGUM (TWEED RIVER)	2.5	01-04-2017 12:55:46	1.4	1.8	2.5
1696	1.08	TUMBULGUM (TWEED RIVER)	1.8	02-04-2017 03:24:38	1.4	1.8	2.5
1712	1.09	TUMBULGUM (TWEED RIVER)	1.54	02-04-2017 07:21:14	1.4	1.8	2.5
1776	1.1	TUMBULGUM (TWEED RIVER)	0.38	03-04-2017 21:49:00	1.4	1.8	2.5

Flood Peak

Minor - Thursday 30/3/17 09.59 am / Sunday 2/4/17 07.21 am = + 68 hrs
 Medium - Thursday 30/3/17 11.26 pm / Sunday 2/4/17 03.24 am = + 52 hrs
 Major - Thursday 30/3/17 16.16 pm / Saturday 1/4/17 12.55 pm = + 43 hrs

2022 Chinderah Flood Station #1

—ht —MINOR —MOD —Major



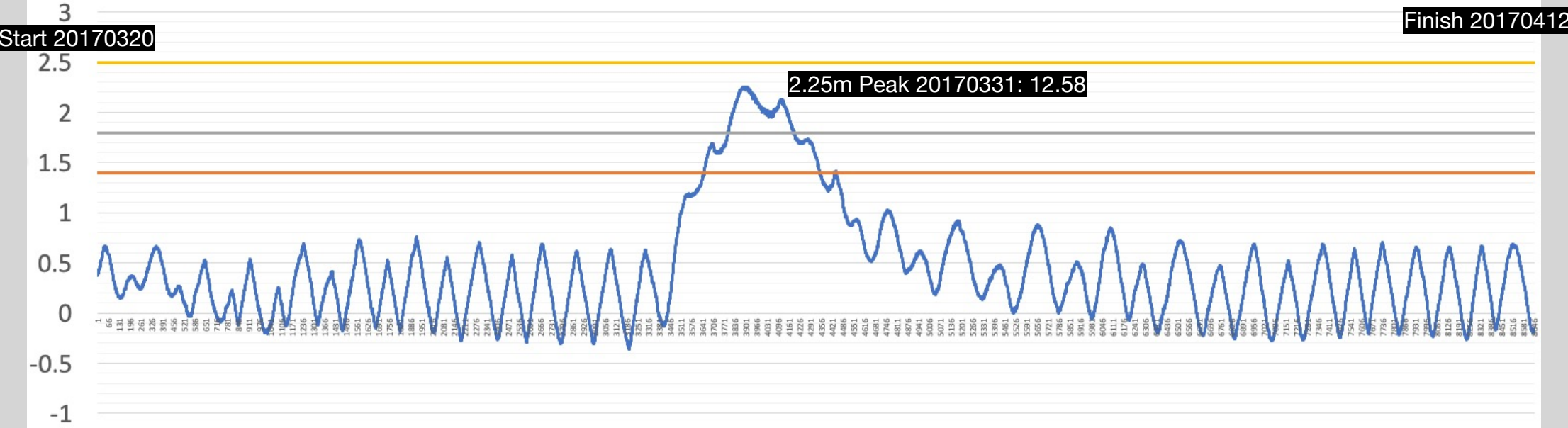
4153	558010	1.01	CHINDERAH (TWEED RIVER)	20220223:103555	-0.02	1.3	1.7	2
4282	558010	1.02	CHINDERAH (TWEED RIVER)	20220223:201624	0.97	1.3	1.7	2
4560	558010	1.03	CHINDERAH (TWEED RIVER)	20220224:171622	1.08	1.3	1.7	2
4785	558010	1.04	CHINDERAH (TWEED RIVER)	20220225:131751	0.36	1.3	1.7	2
4855	558010	1.05	CHINDERAH (TWEED RIVER)	20220225:184620	1.05	1.3	1.7	2
4946	558010	1.06	CHINDERAH (TWEED RIVER)	20220226:023550	0.26	1.3	1.7	2
5108	558010	1.07	CHINDERAH (TWEED RIVER)	20220226:190119	1.3	1.3	1.7	2
5126	558010	1.08	CHINDERAH (TWEED RIVER)	20220226:204018	1.4	1.3	1.7	2
5151	558010	1.09	CHINDERAH (TWEED RIVER)	20220226:225948	1.3	1.3	1.7	2
5272	558010	1.1	CHINDERAH (TWEED RIVER)	20220227:072348	1.3	1.3	1.7	2
5429	558010	1.11	CHINDERAH (TWEED RIVER)	20220227:174917	1.7	1.3	1.7	2
5466	558010	1.12	CHINDERAH (TWEED RIVER)	20220227:203717	2	1.3	1.7	2
5929	558010	1.13	CHINDERAH (TWEED RIVER)	20220228:131615	3	1.3	1.7	2
6630	558010	1.14	CHINDERAH (TWEED RIVER)	20220301:134314	1.99	1.3	1.7	2
6803	558010	1.15	CHINDERAH (TWEED RIVER)	20220302:011613	1.7	1.3	1.7	2
6890	558010	1.16	CHINDERAH (TWEED RIVER)	20220302:050242	1.3	1.3	1.7	2
7002	558010	1.17	CHINDERAH (TWEED RIVER)	20220302:174911	0.88	1.3	1.7	2
7073	558010	1.18	CHINDERAH (TWEED RIVER)	20220302:233711	1.37	1.3	1.7	2
7219	558010	1.19	CHINDERAH (TWEED RIVER)	20220303:073410	0.51	1.3	1.7	2

1st Flood Peak
 Minor - Saturday 26/2/22 19.01 pm / Saturday 26/2/22 22.59 pm = + 4 hrs

2nd Flood Peak
 Minor - Sunday 27/2/22 07.23 am / Thursday 3/3/22 05.02 am = + 93 hrs
 Medium - Sunday 27/2/23 17.49 pm / Wednesday 2/3/22 01.16 am = + 55 hrs
 Major - Sunday 27/2/22 20.37 pm / Tuesday 1/3/22 13.43 pm = + 41.5 hrs

2017 Chinderah Flood Station #1

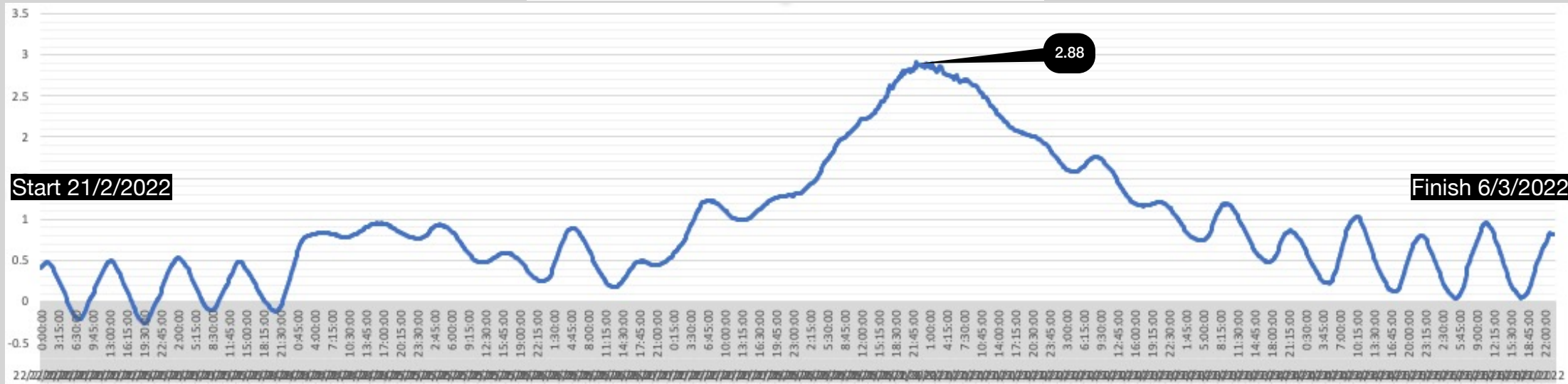
—ht —MINOR —MODERATE —MAJOR



3402	1.01	CHINDERAH -BARNEYS PT (TWEE	-0.12	30/3/2017 5:04	N	1.4	1.8	2.5
3531	1.02	CHINDERAH -BARNEYS PT (TWEE	1.1	30/3/2017 11:48	N	1.4	1.8	2.5
3655	1.03	CHINDERAH -BARNEYS PT (TWEE	1.41	30/3/2017 21:04	N	1.4	1.8	2.5
3727	1.04	CHINDERAH -BARNEYS PT (TWEE	1.59	31/3/2017 3:31	N	1.4	1.8	2.5
3800	1.05	CHINDERAH -BARNEYS PT (TWEE	1.8	31/3/2017 7:54	N	1.4	1.8	2.5
3884	1.06	CHINDERAH -BARNEYS PT (TWEE	2.25	31/3/2017 12:58	N	1.4	1.8	2.5
4114	1.07	CHINDERAH -BARNEYS PT (TWEE	2.13	1/4/2017 0:31	N	1.4	1.8	2.5
4192	1.08	CHINDERAH -BARNEYS PT (TWEE	1.8	1/4/2017 6:25	N	1.4	1.8	2.5
4349	1.09	CHINDERAH -BARNEYS PT (TWEE	1.39	1/4/2017 17:45	N	1.4	1.8	2.5
4759	1.1	CHINDERAH -BARNEYS PT (TWEE	1.03	42828.05966	N	1.4	1.8	2.5

Flood Peak
 Minor - Thursday 30/3/17 21.04 pm / Saturday 1/4/17 17.45 pm = + 44.45 hrs
 Medium - Friday 31/3/17 7.54 am / Saturday 1/4/17 6.25 am = + 23 hrs

2022 Flood Barney's Point



28/2/2022	21:30:00	2.821
28/2/2022	21:45:00	2.816
28/2/2022	22:00:00	2.858
28/2/2022	22:15:00	2.849
28/2/2022	22:30:00	2.906
28/2/2022	22:45:00	2.886
28/2/2022	23:00:00	2.882
28/2/2022	23:15:00	2.878
28/2/2022	23:30:00	2.855
28/2/2022	23:45:00	2.876
1/3/2022	0:00:00	2.85
1/3/2022	0:15:00	2.888
1/3/2022	0:30:00	2.861
1/3/2022	0:45:00	2.88
1/3/2022	1:00:00	2.862
1/3/2022	1:15:00	2.849
1/3/2022	1:30:00	2.897
1/3/2022	1:45:00	2.847
1/3/2022	2:00:00	2.827
1/3/2022	2:15:00	2.798
1/3/2022	2:30:00	2.811
1/3/2022	2:45:00	2.858
1/3/2022	3:00:00	2.854
1/3/2022	3:15:00	2.832
1/3/2022	3:30:00	2.832

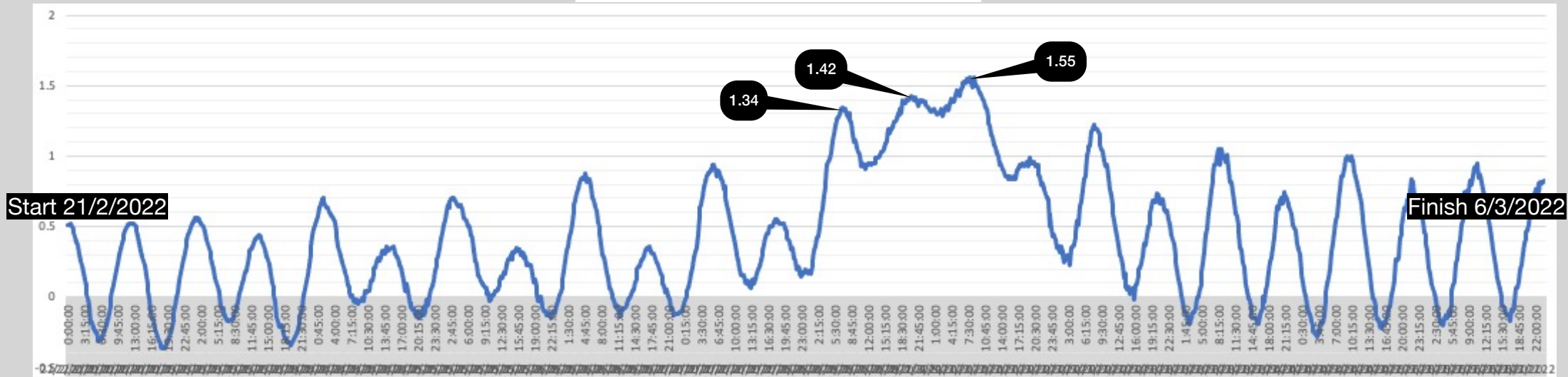
Reference Points
Over 2.8 m

Additional river flood data has been provided by the Tweed Shire Council using data sourced from Manly Hydraulics P/L.

Note for the 2022 flood peak:

- Chinderah peak = 3m at 28/2/2022 @ 13.16 pm
- Barney's Point peak = 2.888m at 1/3/2022 @ 00.16 am

2022 Flood Letitia2A



28/2/2022	6:45:00	1.334	28/2/2022	18:15:00	1.335	1/3/2022	1:45:00	1.303
28/2/2022	7:00:00	1.344	28/2/2022	18:30:00	1.304	1/3/2022	2:00:00	1.308
28/2/2022	7:15:00	1.324	28/2/2022	18:45:00	1.396	1/3/2022	2:15:00	1.339
28/2/2022	7:30:00	1.336	28/2/2022	19:00:00	1.384	1/3/2022	2:30:00	1.282
			28/2/2022	19:15:00	1.378	1/3/2022	2:45:00	1.318
			28/2/2022	19:30:00	1.41	1/3/2022	3:00:00	1.343
			28/2/2022	19:45:00	1.396	1/3/2022	3:15:00	1.352
			28/2/2022	20:00:00	1.405	1/3/2022	3:30:00	1.32
			28/2/2022	20:15:00	1.424	1/3/2022	3:45:00	1.362
			28/2/2022	20:30:00	1.418	1/3/2022	4:00:00	1.368
			28/2/2022	20:45:00	1.415	1/3/2022	4:15:00	1.404
			28/2/2022	21:00:00	1.396	1/3/2022	4:30:00	1.385
			28/2/2022	21:15:00	1.412	1/3/2022	4:45:00	1.388
			28/2/2022	21:30:00	1.381	1/3/2022	5:00:00	1.43
			28/2/2022	21:45:00	1.353	1/3/2022	5:15:00	1.465
			28/2/2022	22:00:00	1.391	1/3/2022	5:30:00	1.453
			28/2/2022	22:15:00	1.386	1/3/2022	5:45:00	1.424
			28/2/2022	22:30:00	1.398	1/3/2022	6:00:00	1.476
			28/2/2022	22:45:00	1.383	1/3/2022	6:15:00	1.482
			28/2/2022	23:00:00	1.387	1/3/2022	6:30:00	1.514
			28/2/2022	23:15:00	1.362	1/3/2022	6:45:00	1.523
			28/2/2022	23:30:00	1.351	1/3/2022	7:00:00	1.519
			28/2/2022	23:45:00	1.345	1/3/2022	7:15:00	1.551
			1/3/2022	0:00:00	1.322	1/3/2022	7:30:00	1.532
			1/3/2022	0:15:00	1.316	1/3/2022	7:45:00	1.562
			1/3/2022	0:30:00	1.321	1/3/2022	8:00:00	1.52
			1/3/2022	0:45:00	1.336	1/3/2022	8:15:00	1.487
			1/3/2022	1:00:00	1.311	1/3/2022	8:30:00	1.554
						1/3/2022	8:45:00	1.508
						1/3/2022	9:00:00	1.498
						1/3/2022	9:15:00	1.499
						1/3/2022	9:30:00	1.472
						1/3/2022	9:45:00	1.446
						1/3/2022	10:00:00	1.434
						1/3/2022	10:15:00	1.403
						1/3/2022	10:30:00	1.381
						1/3/2022	10:45:00	1.341
						1/3/2022	11:00:00	1.33

Reference Points Over 1.3 m

Additional river flood data using Manly Hydraulics

- Note for the 2022 flood peak:
- Chinderah peak = 3m at 28/2/2022 @ 13.16 pm
 - Barney's Point peak = 2.888m at 1/3/2022 @ 00.16 am
 - Letitia = 1.551 at 1/3/2022 @ 7.15 am.