

Boskalis Australia

Port Kembla Berth 103 Dredging and Spoil Disposal

Fortnightly Turbidity Report 15 June to 28 June 2015

Narrative

- 5 x Turbidity Buoys installed for the project
- Buoys provide readings every 10 minutes to an online reporting program monitored by Boskalis Project Management Team
- High readings automatically send an alarm to Boskalis Project Management Team

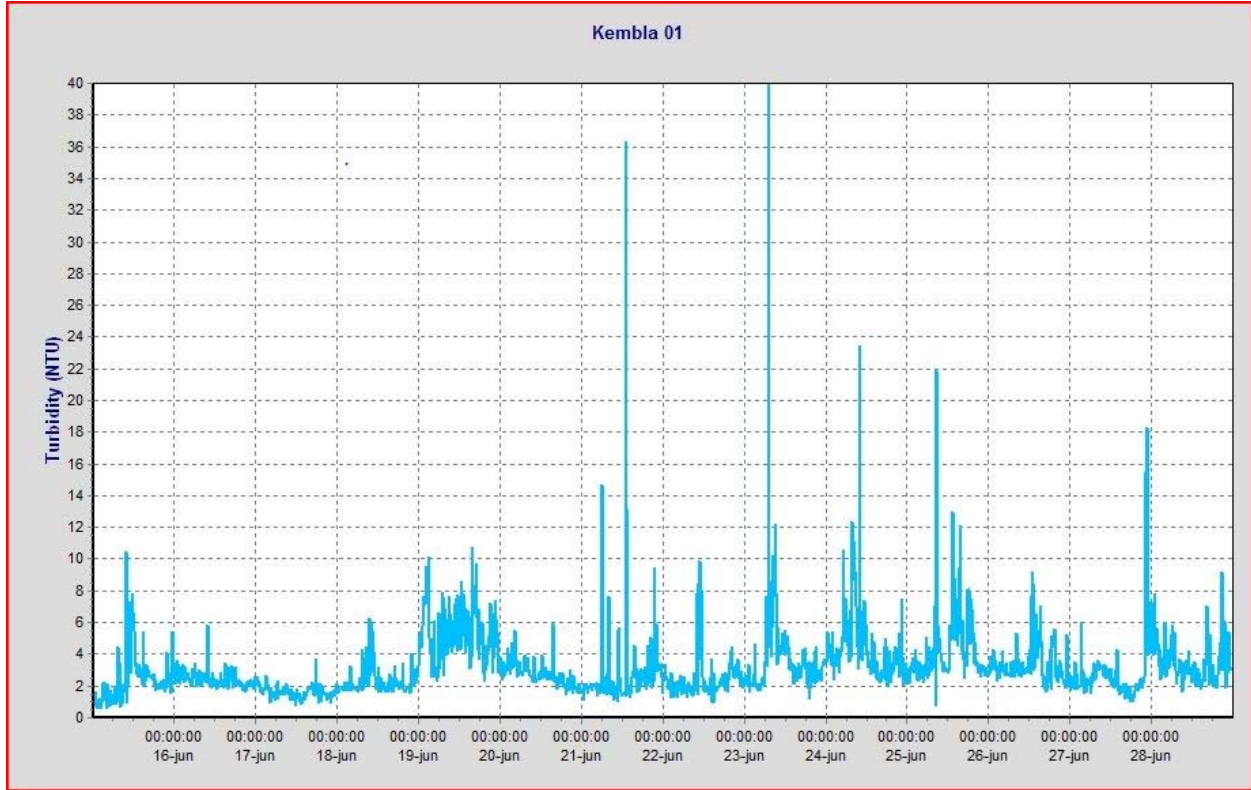
- Dredging commenced on 22 June 2015 at Berth 103
- All Buoys were removed from the water, cleaned and serviced on 25 June 2015 following high readings due to Marine growth on the sensors
- Buoys will be removed from the water, cleaned and serviced each fortnight to maintain accuracy of the data.
- Elevated readings identified correspond with shipping movements within the port. The high readings rapidly drop at the completion of the shipping movement
- Daily testing conducted using a hand held probe
- Water samples taken for testing by an external laboratory at the commencement of the dredging program

Boskalis Australia

Port Kembla Berth 103 Dredging and Spoil Disposal

Turbidity Buoy Graphs

Kembla 01 located opposite Berth 102



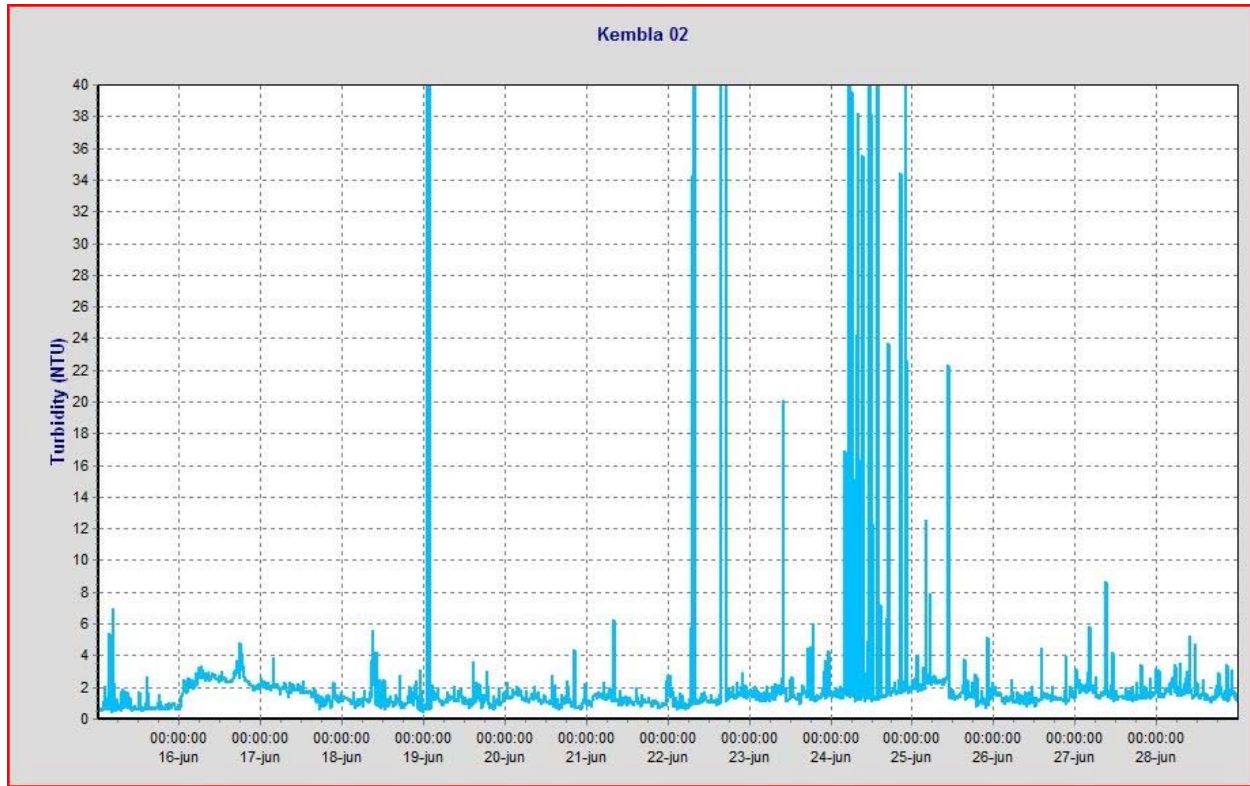
Peaks Explanations

Date	Time	NTU Level	Reason
19/6/15	0310	10.11	Unknown
19/6/15	1600	10.70	Outward vessel 424504
21/6/15	0610	14.69	Inward vessel 424583
21/6/15	1310	36.31	Outward vessel 424568
23/6/15	0710	43.21	Outward vessel 424456
23/6/15	0840	10.21	Inward vessel 424525
24/6/15	0520	10.56	Outward vessel 424525
24/6/15	0750	12.39	Inward vessel 424459
24/6/15	1010	23.46	Unknown
25/6/15	0850	21.92	Buoy serviced and cleaned
25/6/15	1330	12.97	Outwards vessel 424459
25/6/15	1550	12.14	Inwards vessel 424512
27/6/15	2250	18.28	Outwards vessel 424572

Boskalis Australia

Port Kembla Berth 103 Dredging and Spoil Disposal

Kembla 02 located North East of the Spoil Disposal Ground



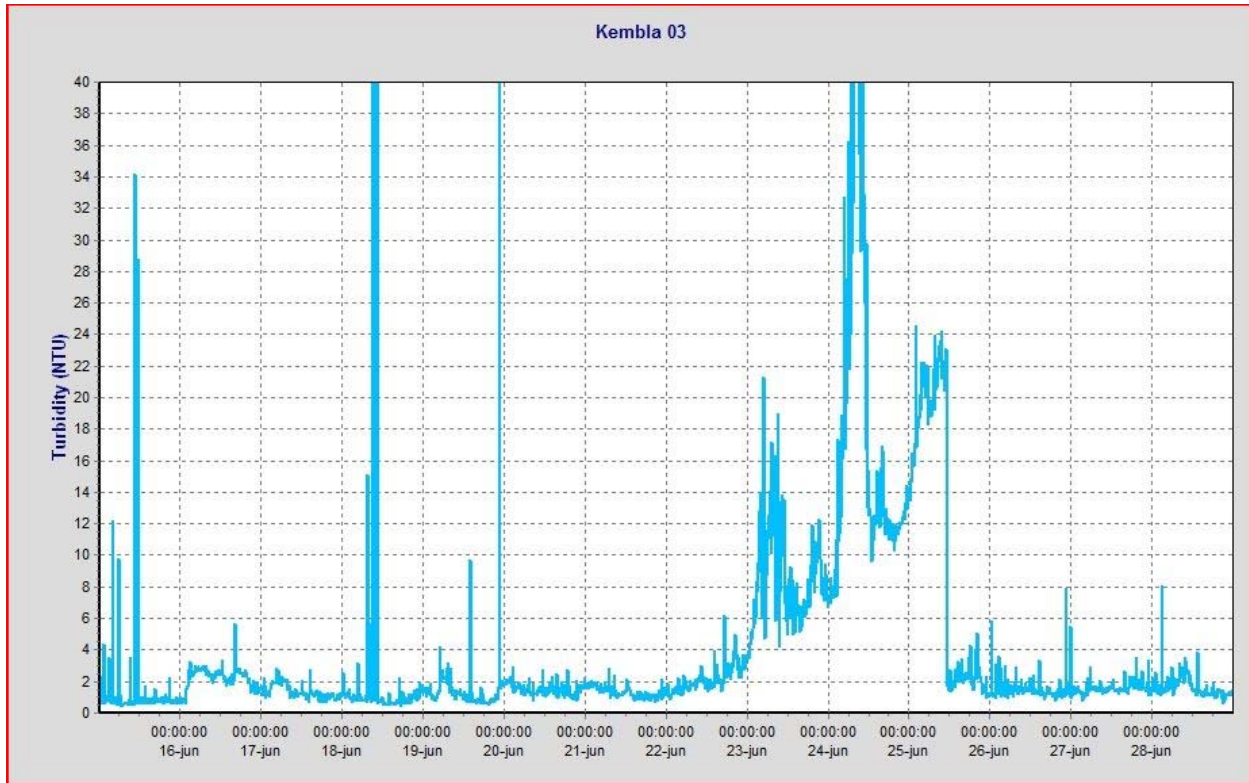
Peaks Explanations

Date	Time	NTU Level	Reason
19/6/15	0120	59.14	Unknown
22/6/15	0720	34.26	Inward vessel 424579
22/6/15	1550	59.14	Diving works on Silt Screen
23/6/15	1010	20.12	Outwards vessel 424579
24/6/15	0410	16.82	Barge operations
24/6/15	0620	39.54	Barge operations
24/6/15	0800	38.19	Outwards vessel 424575
24/6/15	0830	16.33	Inwards vessel 424459
24/6/15	1130	59.14	Diving works on silt screen
24/6/15	1220	12.37	Inwards vessel 424521
24/6/15	1400	40.84	Outwards vessel 424580
24/6/15	1710	23.66	Unknown
24/6/15	2040	34.42	Unknown
24/6/15	2210	50.25	Unkown
25/6/15	1050	22.30	Buoy serviced and cleaned

Boskalis Australia

Port Kembla Berth 103 Dredging and Spoil Disposal

Kembla 03 located South West of Spoil Disposal Ground



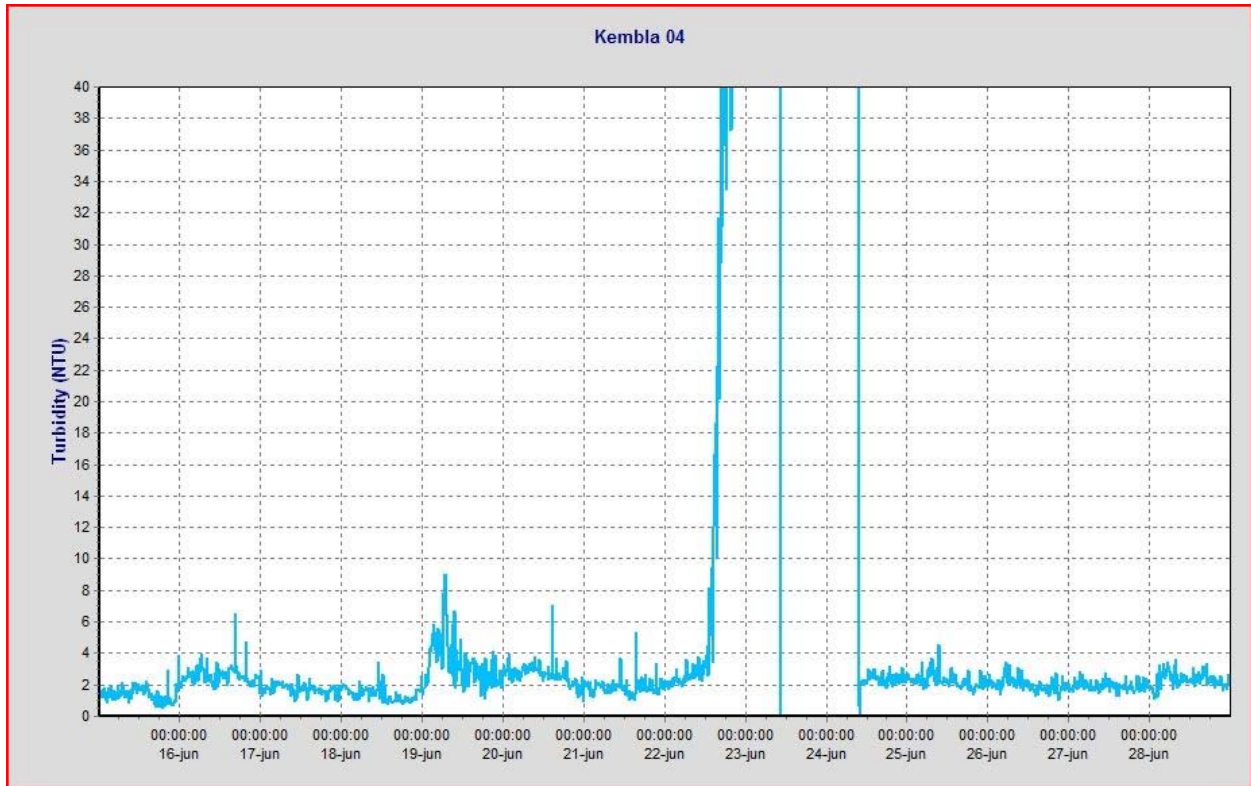
Peaks Explanations

Date	Time	NTU Level	Reason
18/6/15	0740	15.10	Inwards vessel 424573
18/6/15	0900	48.50	Inwards vessel 424544
19/6/15	2240	48.50	Inwards vessel 424481
23/6/15	0340	12.83	Buoy started to malfunction – fixed issue on 25/6/15
25/6/15	1120	23.05	Buoy serviced and cleaned

Boskalis Australia

Port Kembla Berth 103 Dredging and Spoil Disposal

Kembla 04 located at the entrance to the outer harbour



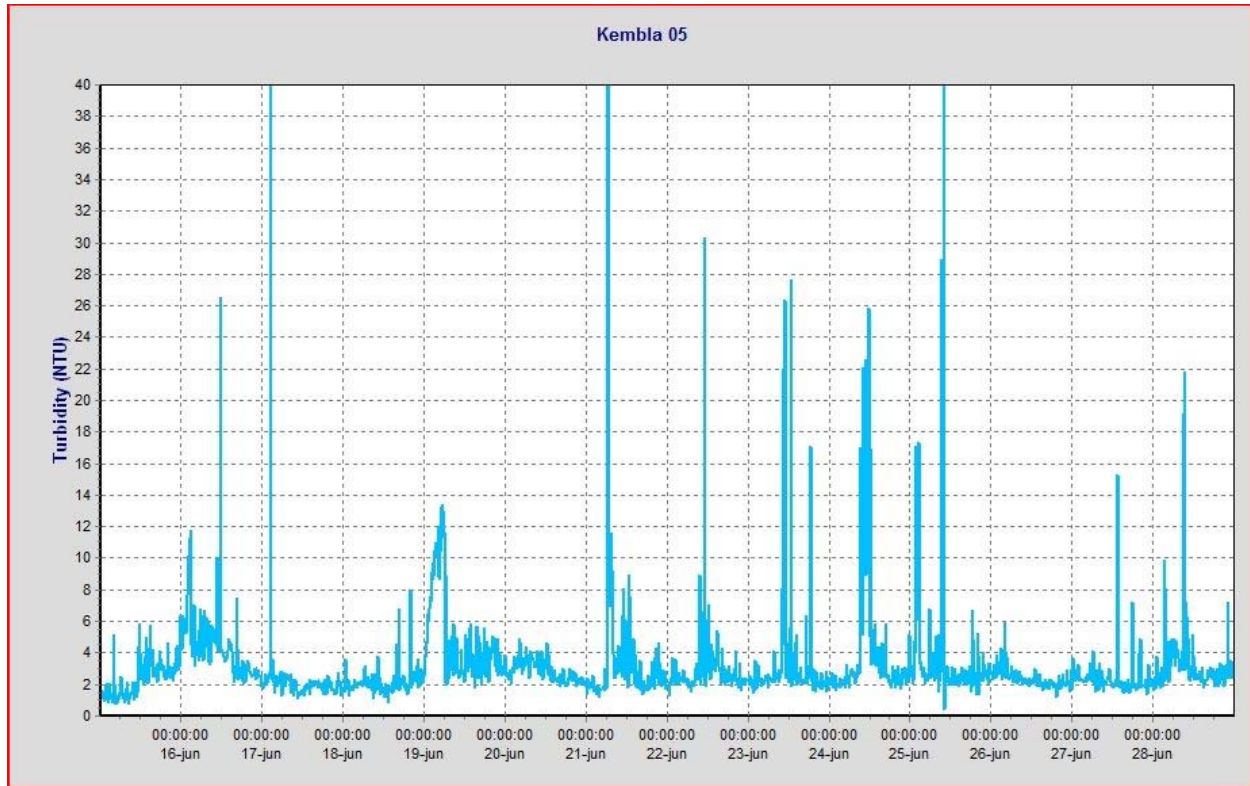
Peaks Explanations

Date	Time	NTU Level	Reason
22/6/15	1440	12.02	Sensor started to malfunction
23/6/15	1030		Sensor cleaned
23/6/15	1040		Sensor malfunctioned
24/6/15	0950		Buoy removed from water and sensor changed

Boskalis Australia

Port Kembla Berth 103 Dredging and Spoil Disposal

Kembla 05 located next to berth 113



Peaks Explanations

Date	Time	NTU Level	Reason
16/6/15	0220	10.16	Inward vessel 424445
16/6/15	1140	26.51	Inward vessel 424528
17/6/15	0240	44.00	Inward vessel 424591
19/6/15	0300	10.22	Unknown
21/6/15	0630	51.75	Inwards vessel 424583
23/6/15	1100	26.35	Outwards vessel 424579
23/6/15	1250	27.68	Inwards vessel 424579
23/6/15	1840	17.10	Outwards vessel 424233
24/6/15	0930	17.03	Inwards vessel 424459
24/6/15	1150	25.83	Inwards vessel 424521
25/6/15	0240	17.35	Unknown
25/6/15	0930		Buoy serviced and cleaned
27/6/15	1340	15.28	Unknown