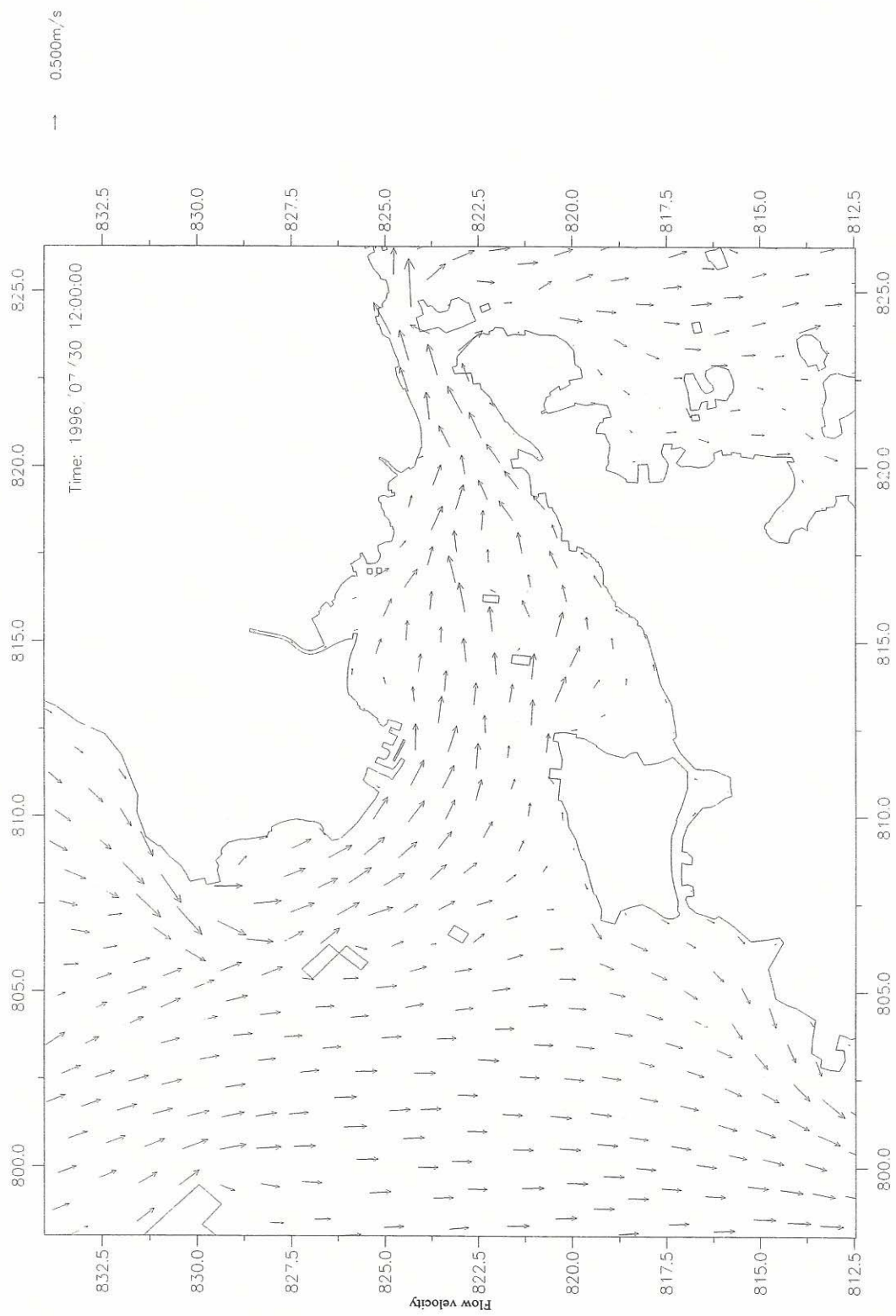


Flow Velocity at Mid-Flood in Dry Season

Surface — m/s

Mouchel Asia Ltd

Fig. E.V.1

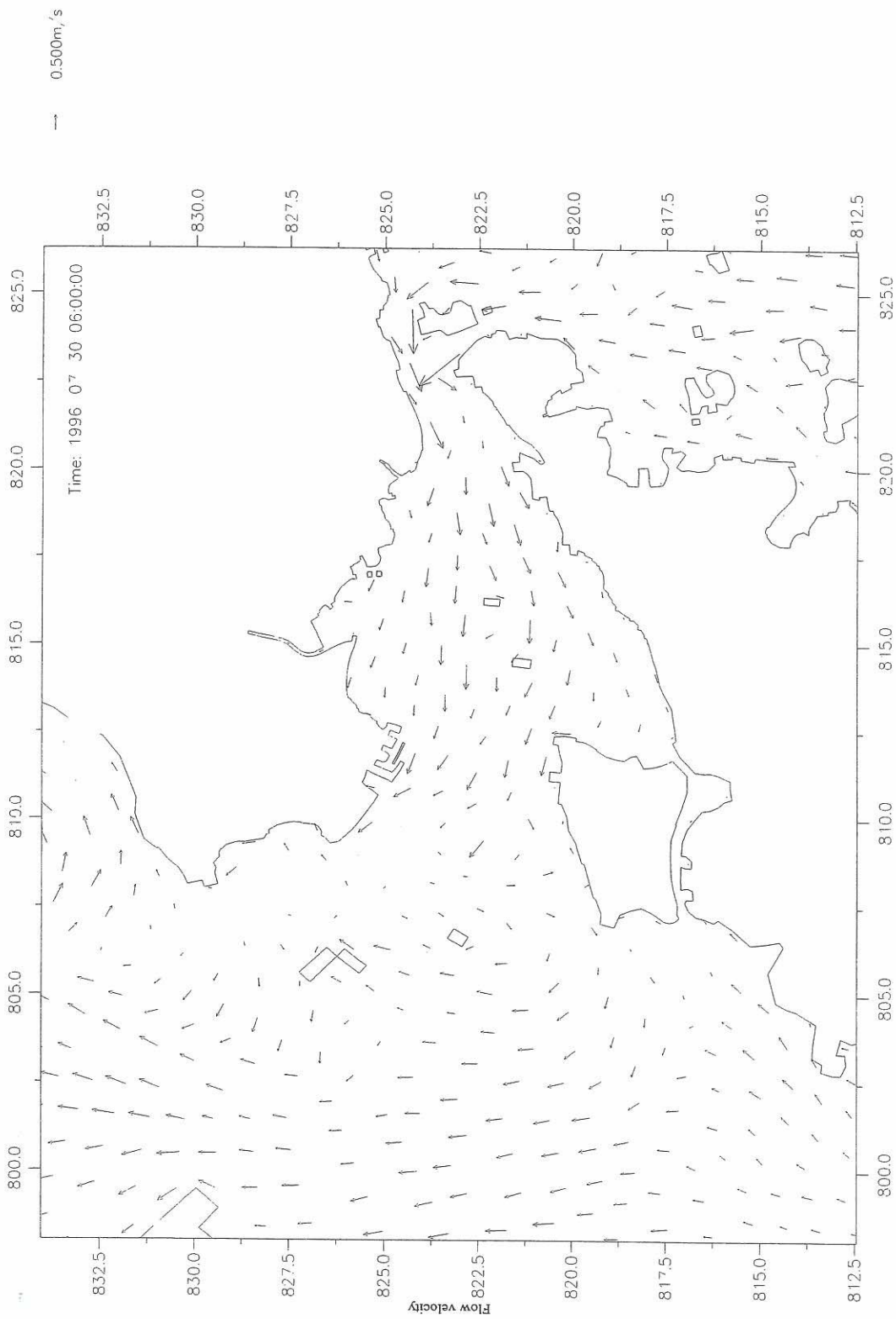


Flow Velocity at Mid-Ebb in Dry Season

Surface - m/s

Mouchel Asia Ltd

Fig [14]

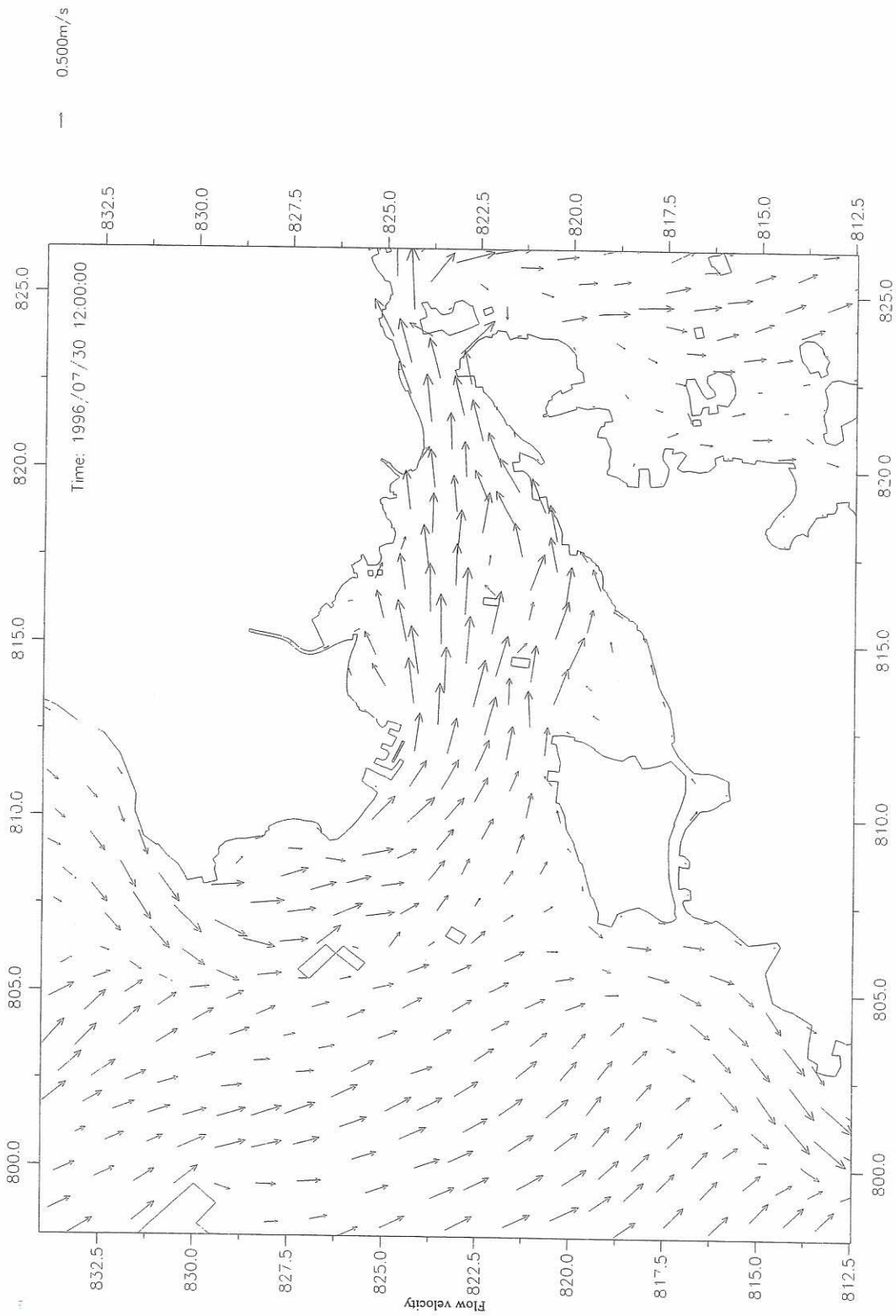


Flow Velocity at Mid-Flood in Wet Season

Surface - m/s

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Fig Wv



Flow Velocity at Mid-Ebb in Wet Season

Surface - m/s

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Fig. WV†



Appendix J1 – Summary of Modelling Runs

Table 1. Scenario 1 - 5600 tonnes of Fuel Loss 500m from the Offloading Jetty

Case Number	Season	Tidal Phase	Time of Tracer Release (Tidal Cycle)*	Figure Numbers (Appendix J1)
<u>1</u>	Dry	Spring Tide	High High Water (HHW)	1-1 to 1-16
<u>2</u>	Dry	Spring Tide	High Low Water (HLW)	2-1 to 2-17
<u>3</u>	Dry	Spring Tide	High Mid-Flood (HF)	3-1 to 3-17
<u>4</u>	Dry	Spring Tide	High Mid-Ebb (HE)	4-1 to 4-16
<u>5</u>	Dry	Neap Tide	Low High Water (LHW)	5-1 to 5-15
<u>6</u>	Dry	Neap Tide	Low Low Water (LLW)	6-1 to 6-18
<u>7</u>	Dry	Neap Tide	Low Mid-Flood (LF)	7-1 to 7-18
<u>8</u>	Dry	Neap Tide	Low Mid-Ebb (LE)	8-1 to 8-21
<u>9</u>	Wet	Spring Tide	High High Water (HHW)	9-1 to 9-22
<u>10</u>	Wet	Spring Tide	High Low Water (HLW)	10-1 to 10-27
<u>11</u>	Wet	Spring Tide	High Mid-Flood (HF)	11-1 to 11-19
<u>12</u>	Wet	Spring Tide	High Mid-Ebb (HE)	12-1 to 12-20
<u>13</u>	Wet	Neap Tide	Low High Water (LHW)	13-1 to 13-23
<u>14</u>	Wet	Neap Tide	Low Low Water (LLW)	14-1 to 14-23
<u>15</u>	Wet	Neap Tide	Low Mid-Flood (LF)	15-1 to 15-19
<u>16</u>	Wet	Neap Tide	Low Mid-Ebb (LE)	16-1 to 16-24

* Please refer to Table 7 for revised terminology of tidal cycle.

Table 2. Scenario 2 - 80000 tonnes of Fuel Loss 500m from the Offloading Jetty

Season	Tidal Phase	Time of Tracer Release	Plots
Wet	Spring Tide	Around High Water (9:00, 26/7)	1hr after spill High Water, 10:00, 27/7 Low Water, 18:00, 27/7 High Water, 11:00, 28/7 Low Water, 18:00, 28/7 High Water, 11:00, 29/7 Low Water, 19:00, 29/7
Wet	Neap Tide	Around High Water (13:00, 1/8)	1hr after spill High Water, 02:00, 2/8 Low Water, 10:00, 2/8 High Water, 03:00, 3/8 Low Water, 14:00, 3/8 High Water, 04:00, 4/8 Low Water, 14:00, 4/8
Dry	Spring Tide	Around High Water (20:00, 11/2)	1hr after spill High Water, 21:00, 12/2 Low Water, 04:00, 13/2 High Water, 22:00, 13/2 Low Water, 05:00, 14/2 High Water, 22:00, 14/2 Low Water, 05:00, 15/2



Season	Tidal Phase	Time of Tracer Release	Plots
Dry	Neap Tide	Around High Water (12:00, 19/2)	1hr after spill High Water, 12:00, 19/2 Low Water, 19:00, 19/2 High Water, 13:00, 20/2 Low Water, 22:00, 20/2 High Water, 14:00, 21/2 Low Water, 02:00, 22/2

Table 3. Scenario 3 - 60 tonnes of Fuel Loss 1000m from Tuen Mun Coastline (with Emergency Shut Down)

Case Number	Season	Tidal Phase	Time of Tracer Release (Tidal Cycle)*	Figure Numbers
17	Dry	Spring Tide	High High Water (HHW)	17-1 to 17-8
18	Dry	Spring Tide	High Low Water (HLW)	18-1 to 18-8
19	Dry	Spring Tide	High Mid-Flood (HF)	19-1 to 19-8
20	Dry	Spring Tide	High Mid-Ebb (HE)	20-1 to 20-8
21	Dry	Neap Tide	Low High Water (LHW)	21-1 to 21-8
22	Dry	Neap Tide	Low Low Water (LLW)	22-1 to 22-8
23	Dry	Neap Tide	Low Mid-Flood (LF)	23-1 to 23-8
24	Dry	Neap Tide	Low Mid-Ebb (LE)	24-1 to 24-8
25	Wet	Spring Tide	High High Water (HHW)	25-1 to 25-8
26	Wet	Spring Tide	High Low Water (HLW)	26-1 to 26-8
27	Wet	Spring Tide	High Mid-Flood (HF)	27-1 to 27-8
28	Wet	Spring Tide	High Mid-Ebb (HE)	28-1 to 28-8
29	Wet	Neap Tide	Low High Water (LHW)	29-1 to 29-11
30	Wet	Neap Tide	Low Low Water (LLW)	30-1 to 30-8
31	Wet	Neap Tide	Low Mid-Flood (LF)	31-1 to 31-8
32	Wet	Neap Tide	Low Mid-Ebb (LE)	32-1 to 32-8

* Please refer to Table 7 for revised terminology of tidal cycle.

Table 4. Scenario 3a - 1200 tonnes of Fuel Loss 1000m from Tuen Mun Coastline (no Emergency Shut Down)

Season	Tidal Phase	Time of Tracer Release	Plots
Dry	Spring Tide	Around Low Water (12/2)	Low Water, 4:00, 12/2 High Water, 10:30, 12/2 Low Water, 14:30, 12/2 High Water, 20:30, 12/2 Low Water, 04:30, 13/2 High Water, 20:30, 12/2 Low Water, 04:30, 13/2 High Water, 11:30, 13/2 Low Water, 15:30, 13/2 High Water, 21:30, 13/2 Low Water, 03:45, 12/2 High Water, 10:45, 12/2



Season	Tidal Phase	Time of Tracer Release	Plots
Dry	Neap Tide	Around High Water (18/2)	High Water, 23:45, 18/2 Low Water, 06:45, 19/2 High Water, 12:45, 19/2 Low Water, 19:45, 19/2 High Water, 12:45, 19/2 Low Water, 19:45, 19/2 High Water, 12:45, 19/2 Low Water, 19:45, 19/2 High Water, 23:45, 19/2 Low Water, 05:45, 20/2 Low Water, 05:45, 19/2
Wet	Spring Tide	Around Low Water (26/7)	Low Water, 16:15, 26/7 High Water, 23:30, 26/7 High Water, 10:30, 27/7 Low Water, 17:30, 27/7 Low Water, 17:30, 27/7
Wet	Neap Tide	Around Low Water (1/8)	Low Water, 19:45, 1/8 High Water, 02:00, 2/8 Low Water, 19:00, 1/8

Table 5. Scenario 4 - 60 tonnes of Fuel Loss 400m from Existing AFRF at Sha Chau (with Emergency Shut Down)

Case Number	Season	Tidal Phase	Tidal Phase	Figure Numbers
33	Dry	Spring Tide	High High Water (HHW)	33-1 to 33-8
34	Dry	Spring Tide	High Low Water (HLW)	34-1 to 34-8
35	Dry	Spring Tide	High Mid-Flood (HF)	35-1 to 35-8
36	Dry	Spring Tide	High Mid-Ebb (HE)	36-1 to 36-12
37	Dry	Neap Tide	Low High Water (LHW)	37-1 to 37-8
38	Dry	Neap Tide	Low Low Water (LLW)	38-1 to 38-8
39	Dry	Neap Tide	Low Mid-Flood (LF)	39-1 to 39-8
40	Dry	Neap Tide	Low Mid-Ebb (LE)	40-1 to 40-10
41	Wet	Spring Tide	High High Water (HHW)	41-1 to 41-8
42	Wet	Spring Tide	High Low Water (HLW)	42-1 to 42-11
43	Wet	Spring Tide	High Mid-Flood (HF)	43-1 to 43-8
44	Wet	Spring Tide	High Mid-Ebb (HE)	44-1 to 44-12
45	Wet	Neap Tide	Low High Water (LHW)	45-1 to 45-8
46	Wet	Neap Tide	Low Low Water (LLW)	46-1 to 46-8
47	Wet	Neap Tide	Low Mid-Flood (LF)	47-1 to 47-8
48	Wet	Neap Tide	Low Mid-Ebb (LE)	48-1 to 48-8



Table 6. Scenario 4a - 1200 tonnes of Fuel Loss 400m from Existing AFRE at Sha Chau Coastline (no Emergency Shut Down)

Season	Tidal Phase	Time of Tracer Release	Plots
Dry	Spring Tide	Around Low Water (12/2)	Low Water, 4:00, 12/2 High Water, 10:30, 12/2 Low Water, 14:30, 12/2 High Water, 20:30, 12/2 Low Water, 04:30, 13/2 High Water, 20:30, 12/2 Low Water, 04:30, 13/2 High Water, 11:30, 13/2 Low Water, 15:30, 13/2 Low Water, 03:45, 12/2 High Water, 10:45, 12/2
Dry	Neap Tide	Around High Water (18/2)	High Water, 23:45, 18/2 Low Water, 06:45, 19/2 High Water, 12:45, 19/2 Low Water, 19:45, 19/2 High Water, 23:45, 19/2 High Water, 12:45, 19/2 Low Water, 19:45, 19/2 High Water, 23:45, 19/2 Low Water, 05:45, 19/2 High Water, 12:45, 19/2 Low Water, 19:45, 19/2
Wet	Spring Tide	Around Low Water (26/7)	Low Water, 16:15, 26/7 High Water, 23:30, 26/7 Low Water, 03:30, 27/7 High Water, 10:30, 27/7 High Water, 10:30, 27/7 High Water, 00:30, 28/7 Low Water, 04:30, 28/7
Wet	Neap Tide	Around Low Water (1/8)	Low Water, 19:45, 1/8 High Water, 02:00, 2/8 Low Water, 09:00, 2/8 High Water, 02:30, 2/8 Low Water, 09:30, 2/8 Low Water, 19:00, 1/8 High Water, 02:00, 2/8



Table 7. Tidal Cycle Terminology

Abbreviation	Old Terminology*	Revised Terminology
HHW	High High Water	Higher High Water
LHW	Low High Water	Lower High Water
LLW	Low Low Water	Lower Low Water
HLW	High Low Water	Higher Low Water
HF	High Mid-Flood	Mid-Flood
HE	High Mid-Ebb	Mid-Ebb
LF	Low Mid-Flood	Mid-Flood
LE	Low Mid-Ebb	Mid-Ebb

* Old terminology is used in figures in this appendix, reader should refer to this table for the revised terminology on the release time.