Certificat B

NAVIGATION

Tidal levels

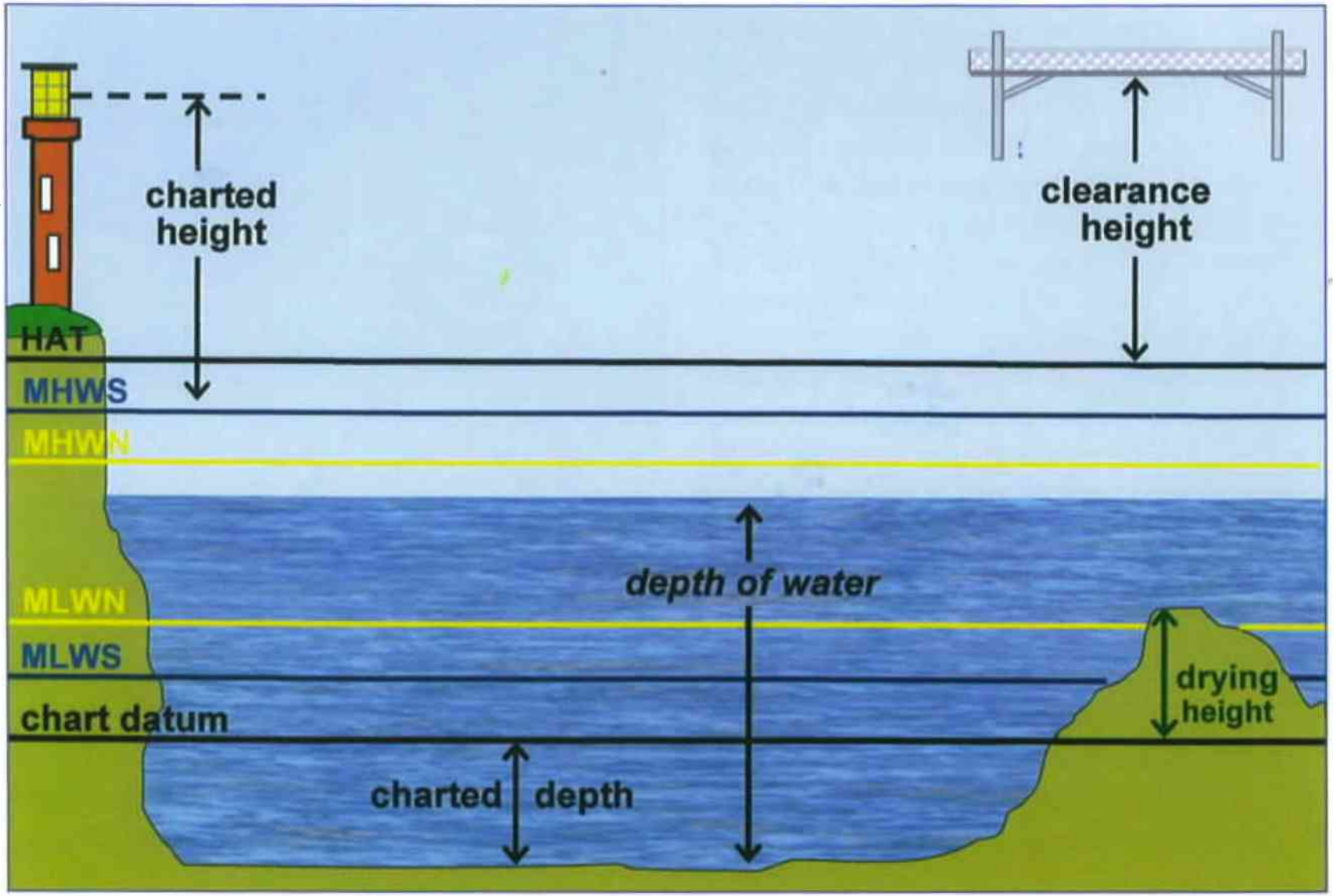


Fig 5.3 Tidal levels.

tidal height needed

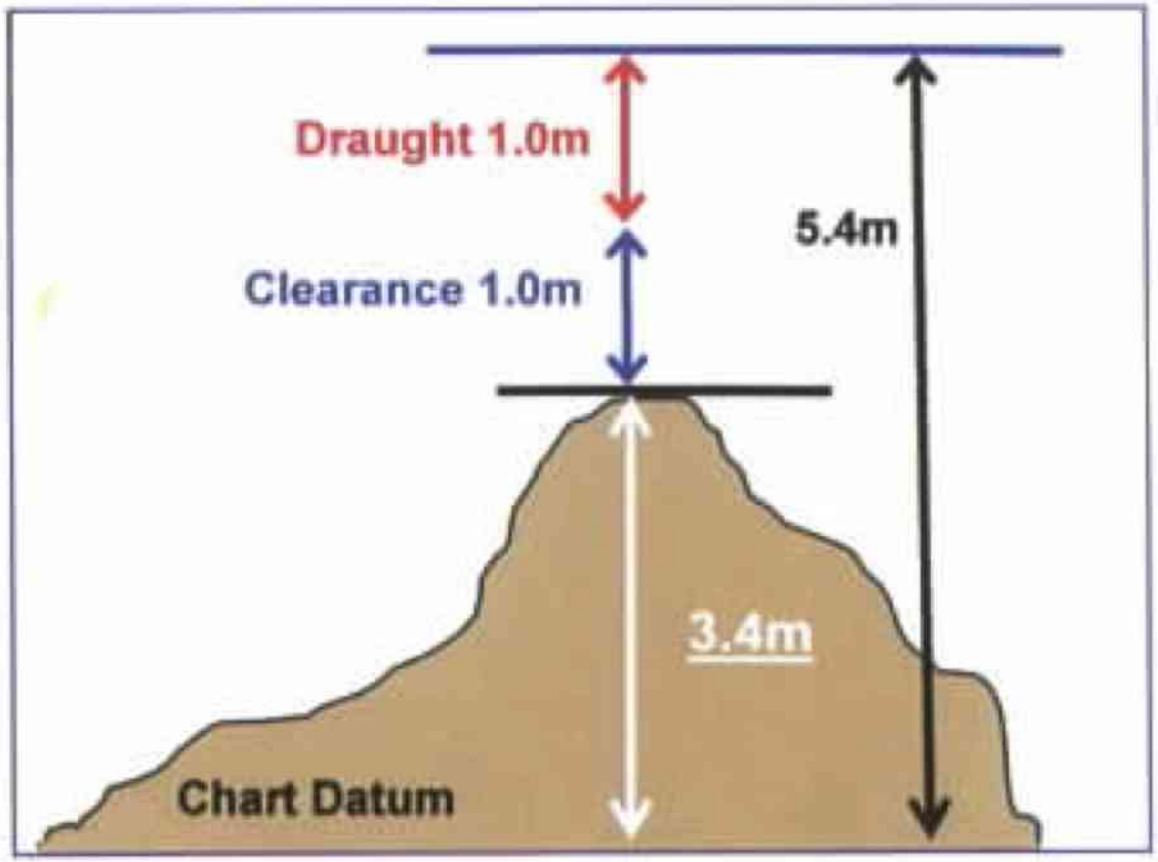


Fig 5.9 *The height of tide required is 5.4m.*

Standard Port

46°24'.90N 006°00'.69W
Northern Territories CHARTS RYA 3, 4.

Standard Port PORT FRASER (→)

DESCRIPTION. Port Fraser is a large ferry port as well as a commercial and military dockyard. There are 3 major marinas within the harbour and numerous moorings. All vessels come under the authority of the Military Harbour Master (MHM) and vessels > 20m must obtain permission before entering the harbour or slipping. There is very good shelter within the harbour.

APPROACH WAYPOINT. 46°23'.61N 006°00'.00W.

PILOTAGE NOTES. From the E. Small Craft (<20m) should stay out of the main shipping channel. The recommended route from the Outer Fraser SCM [Q(6)+LFl.15s] is to leave all PHMs to stbd before joining the Small Boat Channel at the Q.R buoy prior to entering the harbour.

From the W. With sufficient height of tide, vessels may use the Swashway between Ronald and Southcott banks. The radio mast and Ch spire at Southlake in transit (048°) lead through the Swashway with a least depth of 2.4m. On nearing the main channel a/c to port to join the Small Boat Channel. Given sufficient height of tide and calm conditions the Inner Swashway (least depth 0.7m) may be used by vessels <20m.

A Small Boat Channel for craft <20m is established from 0.5M outside the entrance until 0.25M inside the harbour. The Small Boat Channel runs parallel to the main channel and extends 50m from the western entrance wall. All Small Craft fitted with engines must use them to propel the vessel whilst in the Small Boat Channel.

Speed limit is 10kn within the harbour and within 1000m of the shore. Speed = speed through the water.

Exclusion area of 50m is present around any naval vessel. No vessel is to enter this exclusion area. Escort vessels are armed and will assume that you have hostile intentions if your vessel fails to respond to a challenge.

TIDAL STREAMS AND HEIGHTS. Tidal streams in the harbour entrance can reach rates of up to 5kn on the ebb. A deep-water harbour, see marinas for access.

LIGHTS AND MARKS. Main approach lts situated on Old Harry Point [Dir.WRG11m13-5M] + [Iso.WR.3s8m8/5M] and, to the W, Gull Point [Oc.G.10s20m7M]. Port Fraser has three sets of sectored lts for use by large vessels in the main shipping channel. Small Craft can utilise the lights as follows when entering the harbour: Old Harry Castle sec lts, stay in red sector. W Entrance sec lt, stay in Al. WR sector. Coombsbury sec lt, stay in Al. WR sector.

VHF RADIO. Port Fraser MHM VHF Ch **11**, 12, 16. All marinas VHF Ch 80.

FACILITIES.
Marinas:

Dolphin Marina. Access H24. FW, Gas, Gaz, ME, El, CH, Bar, R, Slip.

Coombesbury Marina. Access H24, max draught 2m. FW, D, P, Gas, Gaz, ME, El, CH, BH (40 tonnes), C (20 tonnes), Slip.

Seahorse Marina. Access H24 via chan (dredged 1.5m) to lock, enter on 3 G (vert) lts or on loudspeaker instructions. Call Seahorse Marina Ch 80 on entering Redlands Lake. FW, D, P, Gas, Gaz, ME, El, CH, BH (30 tonnes).

PORT FRASER – Standard Port

TIME ZONE **UT**
For Summer Time add ONE hour in **non-shaded areas**

SPRING & NEAP TIDES
Dates in red are SPRINGS
Dates in blue are NEAPS

TIMES AND HEIGHTS OF HIGH AND LOW WATERS

JANUARY

	Time	m		Time	m
1	0031	4.1	**16**	0107	3.9
	0642	0.5		0728	0.6
TU	1254	4.2	W	1333	3.9
	1856	0.7		1920	0.9
2	0114	4.1	**17**	0138	3.9
	0730	0.4		0801	0.6
W	1341	4.2	TH	1406	3.8
	1938	0.8		1951	0.9
3	0158	4.0	**18**	0209	3.8
	0818	0.4		0832	0.6
TH	1429	4.2	F	1439	3.8
	2022	0.8		2023	0.9
4	0244	4.0	**19**	0243	3.8
	0909	0.4		0904	0.7
F	1519	4.1	SA	1515	3.7
	2110	0.9		2100	0.9
5	0334	3.9	**20**	0322	3.7
	1002	0.4		0942	0.7
SA	1613	3.9	SU	1555	3.6
	2202	1.0		2142	1.0
6	0428	3.8	**21**	0406	3.6
	1102	0.5		1028	0.8
SU	1712	3.7	M	1641	3.5
	2301	1.1		2232	1.1
7	0530	3.7	**22**	0457	3.5
	1208	0.6		1123	0.9
M	1816	3.6	TU	1736	3.4
				2333	1.2

FEBRUARY

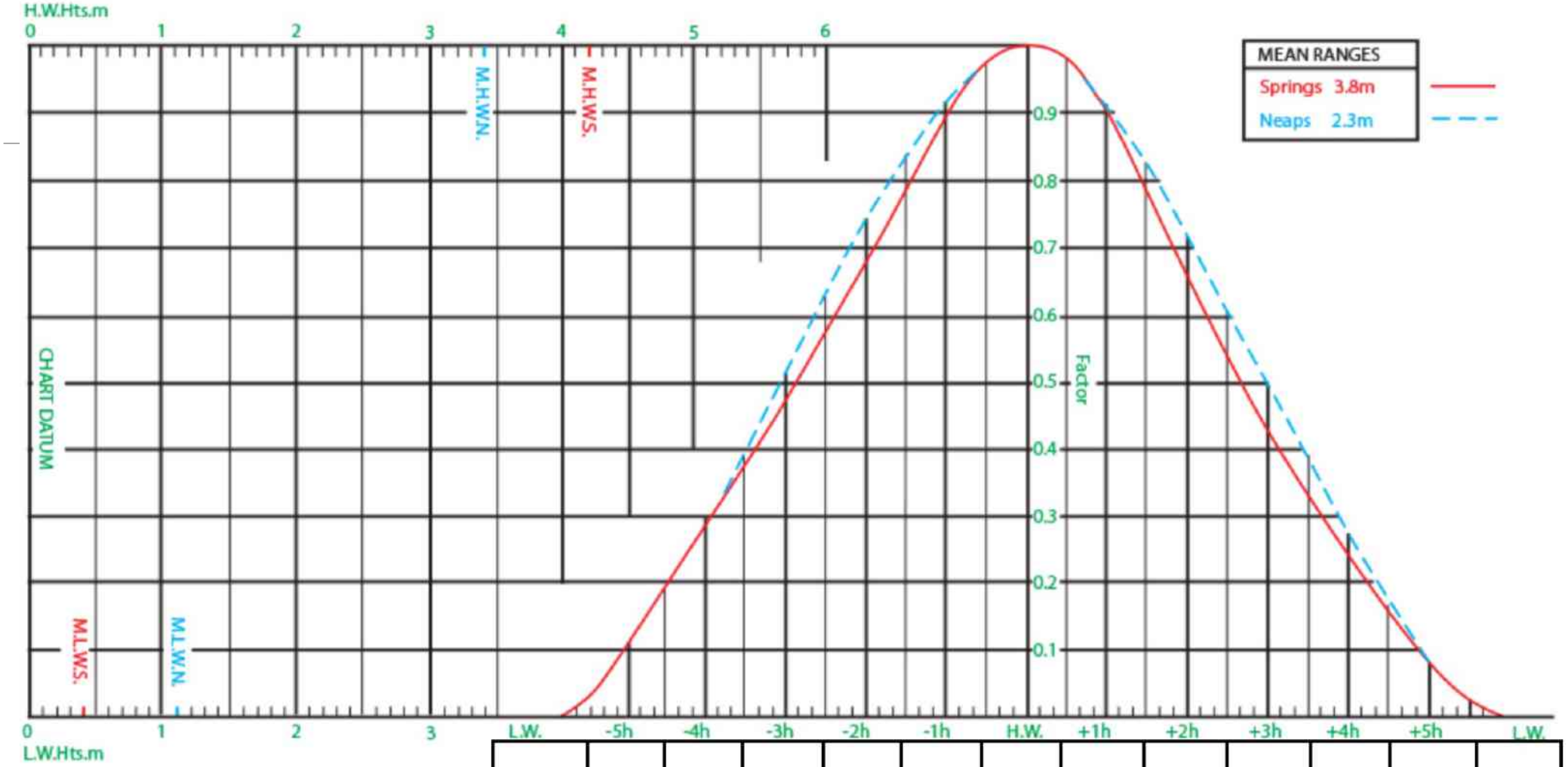
	Time	m		Time	m
1	0147	4.2	**16**	0147	3.9
	0806	0.1		0800	0.6
F	1416	4.3	SA	1411	3.8
	2008	0.6		1957	0.7
2	0230	4.2	**17**	0217	3.9
	0852	0.2		0829	0.6
SA	1502	4.2	SU	1442	3.8
	2051	0.7		2031	0.7
3	0315	4.2	**18**	0251	3.9
	0939	0.3		0903	0.6
SU	1550	4.0	M	1519	3.8
	2138	0.8		2108	0.8
4	0403	4.0	**19**	0329	3.8
	1029	0.4		0941	0.7
M	1641	3.8	TU	1601	3.7
	2229	0.9		2151	0.9
5	0457	3.8	**20**	0413	3.6
	1127	0.7		1027	0.9
TU	1738	3.6	W	1650	3.5
	2331	1.1		2244	1.1
6	0603	3.6	**21**	0507	3.5
	1235	0.9		1129	1.0
W	1845	3.4	TH	1750	3.3
				2352	1.2
7	0049	1.1	**22**	0617	3.3
	0718	3.5		1249	1.1
TH	1348	1.0	F	1901	3.2
	1958	3.3			

MARCH

	Time	m		Time	m
1	0047	4.3	**16**	0056	3.9
	0703	0.0		0703	0.5
F	1314	4.5	SA	1316	3.9
	1908	0.4		1902	0.7
2	0129	4.4	**17**	0123	3.9
	0746	0.0		0729	0.5
SA	1357	4.4	SU	1342	3.9
	1949	0.4		1932	0.6
3	0211	4.4	**18**	0151	3.9
	0828	0.1		0757	0.5
SU	1440	4.3	M	1412	3.9
	2031	0.5		2005	0.6
4	0253	4.3	**19**	0224	3.9
	0911	0.2		0828	0.6
M	1524	4.1	TU	1448	3.9
	2114	0.6		2041	0.6
5	0338	4.1	**20**	0300	3.9
	0956	0.5		0902	0.7
TU	1609	3.8	W	1528	3.7
	2201	0.8		2121	0.8
6	0428	3.9	**21**	0342	3.7
	1048	0.8		0944	0.9
W	1700	3.5	TH	1614	3.5
	2258	1.0		2210	0.9
7	0532	3.6	**22**	0434	3.5
	1153	1.0		1041	1.1
TH	1805	3.2	F	1712	3.3
				2318	1.1

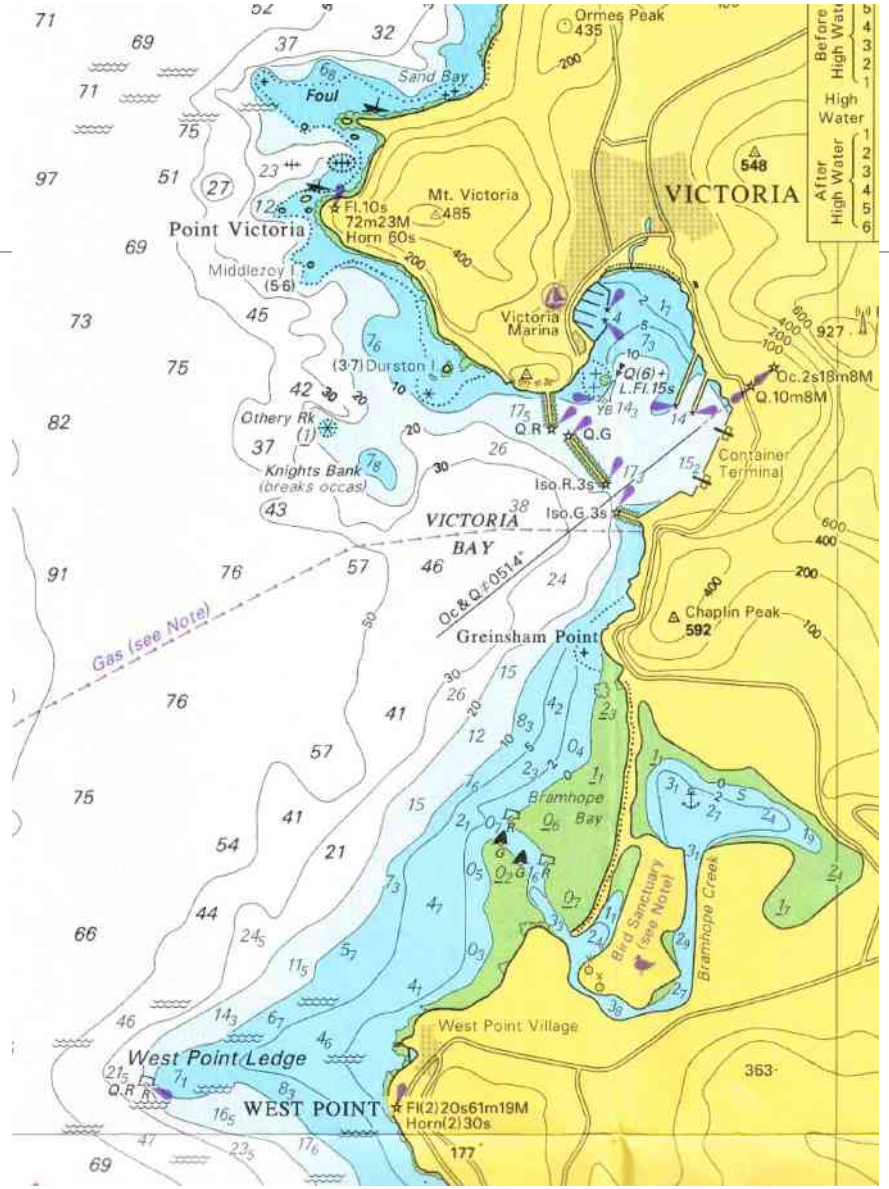
APRIL

	Time	m		Time	m
1	0149	4.4	**16**	0128	3.9
	0802	0.1		0729	0.6
M	1417	4.2	TU	1347	3.9
	2011	0.4		1944	0.6
2	0232	4.3	**17**	0202	3.9
	0843	0.3		0801	0.6
TU	1458	4.0	W	1422	3.8
	2054	0.5		2021	0.6
3	0316	4.1	**18**	0240	3.9
	0926	0.6		0835	0.7
W	1540	3.8	TH	1503	3.7
	2140	0.7		2102	0.7
4	0405	3.8	**19**	0324	3.7
	1015	0.9		0918	0.9
TH	1627	3.5	F	1550	3.5
	2236	0.9		2154	0.8
5	0507	3.5	**20**	0418	3.5
	1117	1.2		1016	1.1
F	1727	3.2	SA	1647	3.3
	2353	1.0		2303	0.9
6	0630	3.3	**21**	0527	3.4
	1235	1.4		1144	1.3
SA	1852	3.1	SU	1801	3.2
7	0130	1.1	**22**	0030	0.9
	0752	3.3		0652	3.3
SU	1358	1.4	M	1315	1.3
	2011	3.2		1924	3.2


H.W.Hts.m
0
1
2
3
4
5
6
M.H.W.N.
M.H.W.S.
MEAN RANGES
Springs 3.8m
Neaps 2.3m
0.9
0.8
0.7
0.6
0.5
0.4
0.3
0.2
0.1
Factor
CHART DATUM
M.L.W.S.
M.L.W.N.
0
1
2
3
L.W.Hts.m
L.W.
-5h
-4h
-3h
-2h
-1h
H.W.
+1h
+2h
+3h
+4h
+5h
L.W.

Secondary Port

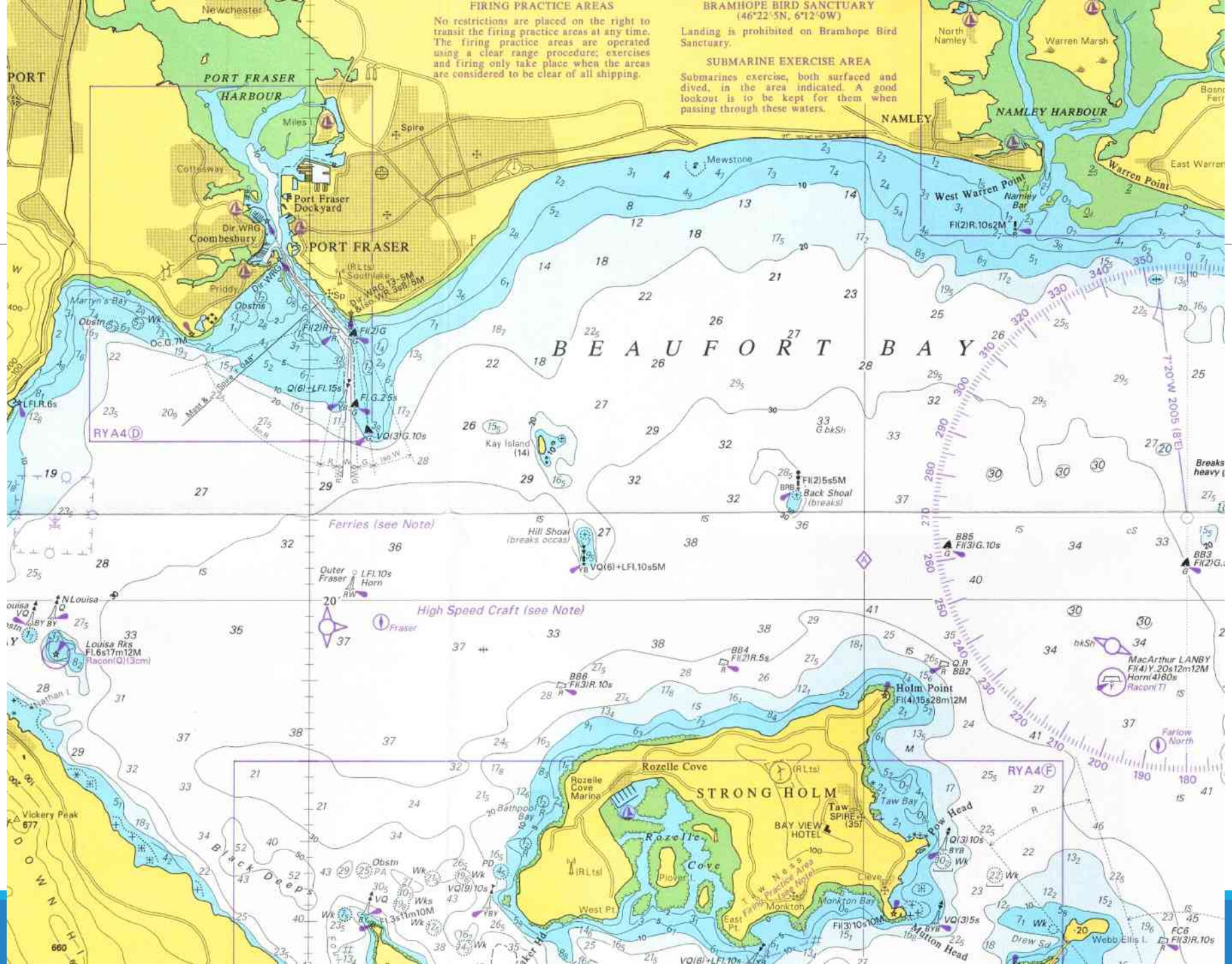
Secondary Port



Secondary Ports

linked to a standard port

- height of tide calculations
- tidal curve


FIRING PRACTICE AREAS
No restrictions are placed on the right to transit the firing practice areas at any time. The firing practice areas are operated using a clear range procedure; exercises and firing only take place when the areas are considered to be clear of all shipping.
BRAMHOPE BIRD SANCTUARY
(46°22'.5N, 6°12'.0W)
Landing is prohibited on Bramhope Bird Sanctuary.
SUBMARINE EXERCISE AREA
Submarines exercise, both surfaced and dived, in the area indicated. A good lookout is to be kept for them when passing through these waters.
PORT FRASER HARBOUR
PORT FRASER
Port Fraser Dockyard
Newchester
Coombesbury
Martyn's Bay
NAMLEY
NAMLEY HARBOUR
North Namley
Warren Marsh
West Warren Point
Warren Point
Namley Bar
Mewstone
Kay Island
Hill Shoal
Back Shoal
BEAUFORT BAY
Ferries (see Note)
High Speed Craft (see Note)
Outer Fraser
Louisa Rks
Vickery Peak
Black Deeps
Rozelle Cove
Rozelle Cove Marina
STRONG HOLM
Taw SPIRE
BAY VIEW HOTEL
Taw Bay
Pow Head
Holm Point
Monkton Bay
Milton Head
Drew Sd
Webb Ellis I.
MacArthur LANBY
RY A4 (D)
RY A4 (F)

46°17'.60N 005°54'.08W
Northern Territories CHARTS RYA 3, 4.

Standard Port PORT FRASER (←)

Times				Height (metres)			
High Water		Low Water		MHWS	MHWN	MLWN	MLWS
0000	0600	0500	1100	4.2	3.4	1.1	0.4
1200	1800	1700	2300				
Differences ROZELLE COVE							
-0038	-0018	-0036	-0014	+0.2	-0.2	+0.5	+0.2

DESCRIPTION. With a regular fast-ferry connection from Dunbarton (35min), Rozelle Cove Marina provides a less-expensive alternative to mainland berthing. Excellent shelter within the marina (3m) and within the anchorages of the reaches. During sustained S'lies, the approach to the reaches can be rough and alternative destinations should be sought if conditions dictate. Landing is prohibited on any of the islands within the cove.

APPROACH WAYPOINT. 46°15'.72N 005°54'.32W.

PILOTAGE NOTES. Approaching from the W, the observation tower (19m) on West Point is a useful conspic daymark. From the E, Range Head SCM [VQ(6)+LFl.10s] indicates the SW corner of the Tawness firing range (see Note). Beware of the two unlit yellow range buoys off Tawness. Rozelle Cove SWM [Iso.10s] is 2ca S of the entrance to West Reach. West Reach is marked by piles, most of which are lit. Keep towards the middle of the marked channel; some rocky ledges protrude the line between piles. The unlit Y bns (X topmark) on Tern Island may assist pilotage to the N of Plover Island. The unlit E Reach should only be attempted during daylight and with sufficient rise of tide. On the final approach to the marina from the SW, before the final 180° turn to port, the 2F.G (vert) & 2F.R (vert) marking the marina entrance may appear confusing. Leave the 2F.R (vert) to port.

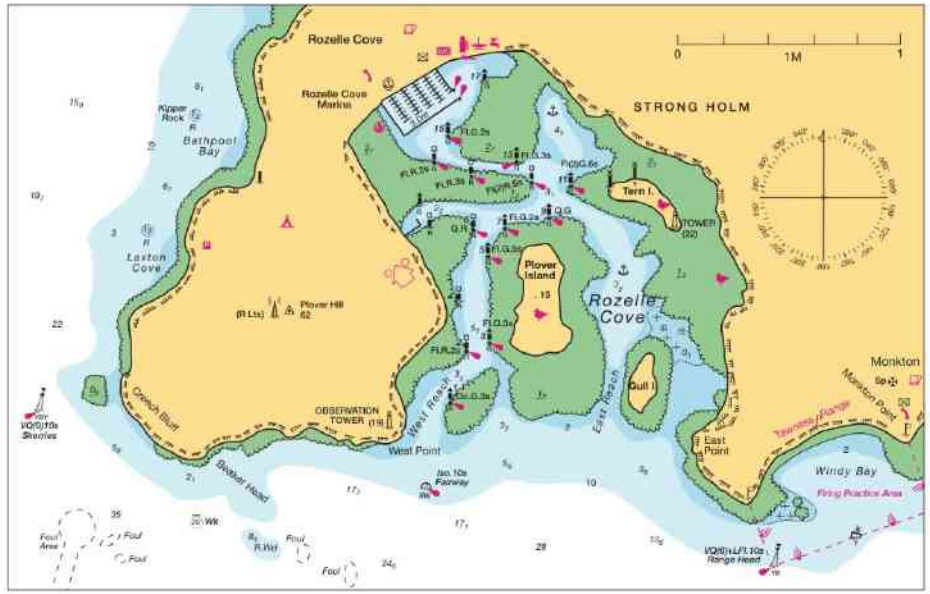
TIDAL STREAMS AND HEIGHTS. The tidal streams within the cove are generally weak and variable; however, some sideways drift may be experienced as the tidal stream funnels through the rocks and gullies.

LIGHTS AND MARKS. To the W of the entrance is a conspic tower (19m). The radio mast on Plover Hill is marked with four (vert) R lights. Rozelle Fairway SWM (RW) [Iso.10s] is 2ca S of West Reach entrance.

VHF RADIO. Rozelle Cove Marina Ch 80.

FACILITIES. D, P, FW, Gas, Gaz, CH, BH (12 tonnes), ME, El, Bar, R.

Tawness Range. No restrictions are placed on the right to transit the firing practice area at any time. The Firing Practice Area is operated using a clear range procedure; exercises and firing only take place when the area is considered clear of shipping. Red flags are flown from the FS when the range is open. Vessels transiting the range are requested not to loiter in the area.



Rozelle Cove

46°17'.60N 005°54'.08W

Northern Territories CHARTS RYA 3, 4.

Standard Port PORT FRASER (←)

Times				Height (metres)			
High Water		Low Water		MHWS	MHWN	MLWN	MLWS
0000	0600	0500	1100	4.2	3.4	1.1	0.4
1200	1800	1700	2300				
Differences ROZELLE COVE							
-0038	-0018	-0036	-0014	+0.2	-0.2	+0.5	+0.2

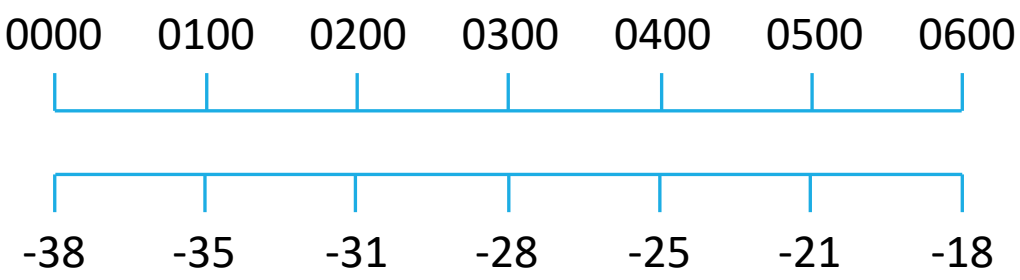
estimation of the differences

mathematically $y = f(x) = ax+b$

graphically

Tim

High Water	
0000	0600
1200	1800
Differences ROZEL	
-0038	-0018



Tim

High Water

0000 0600

1200 1800

Differences ROZEL

-0038 -0018

0000 0100 0200 0300 0400 0500 0600

-38 -35 -31 -28 -25 -21 -18

1200 1100 1000 0900 0800 0700 0600

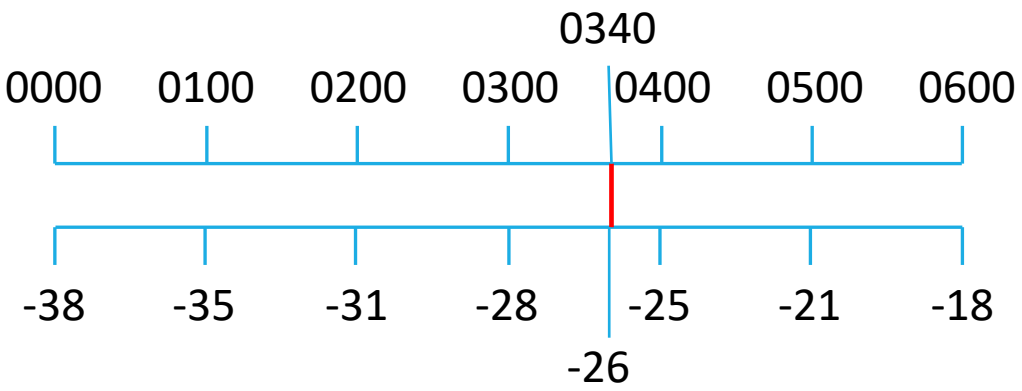
-38 -35 -31 -28 -25 -21 -18

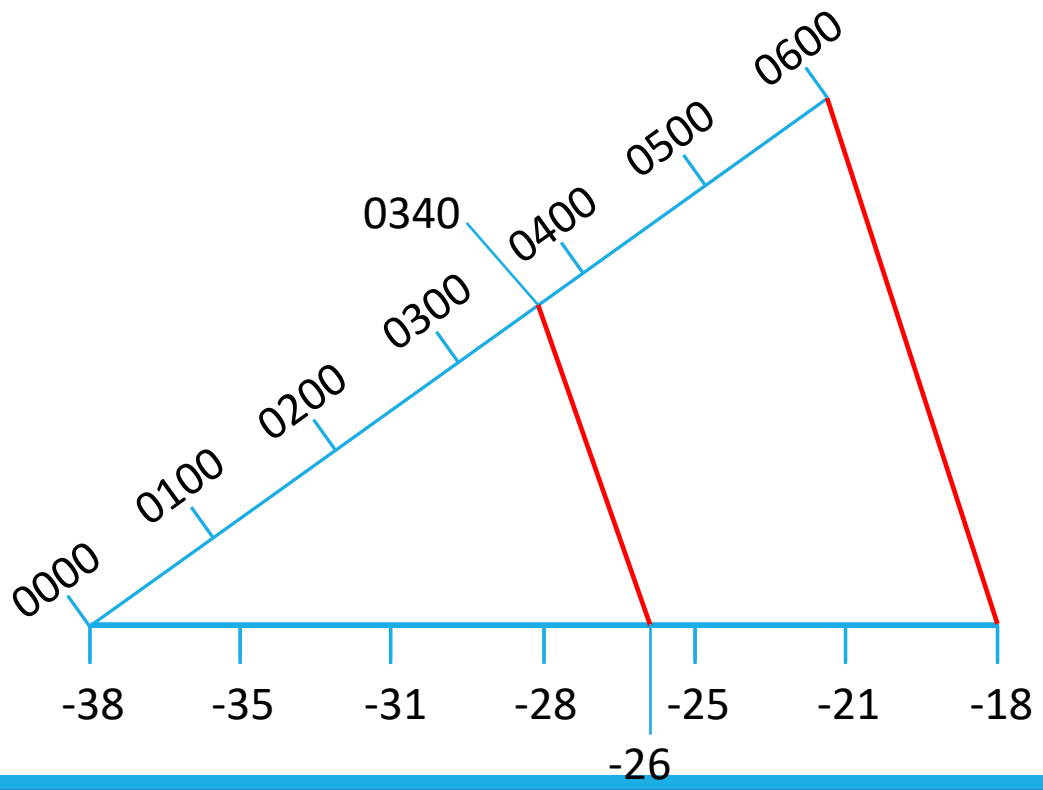
1200 1300 1400 1500 1600 1700 1800

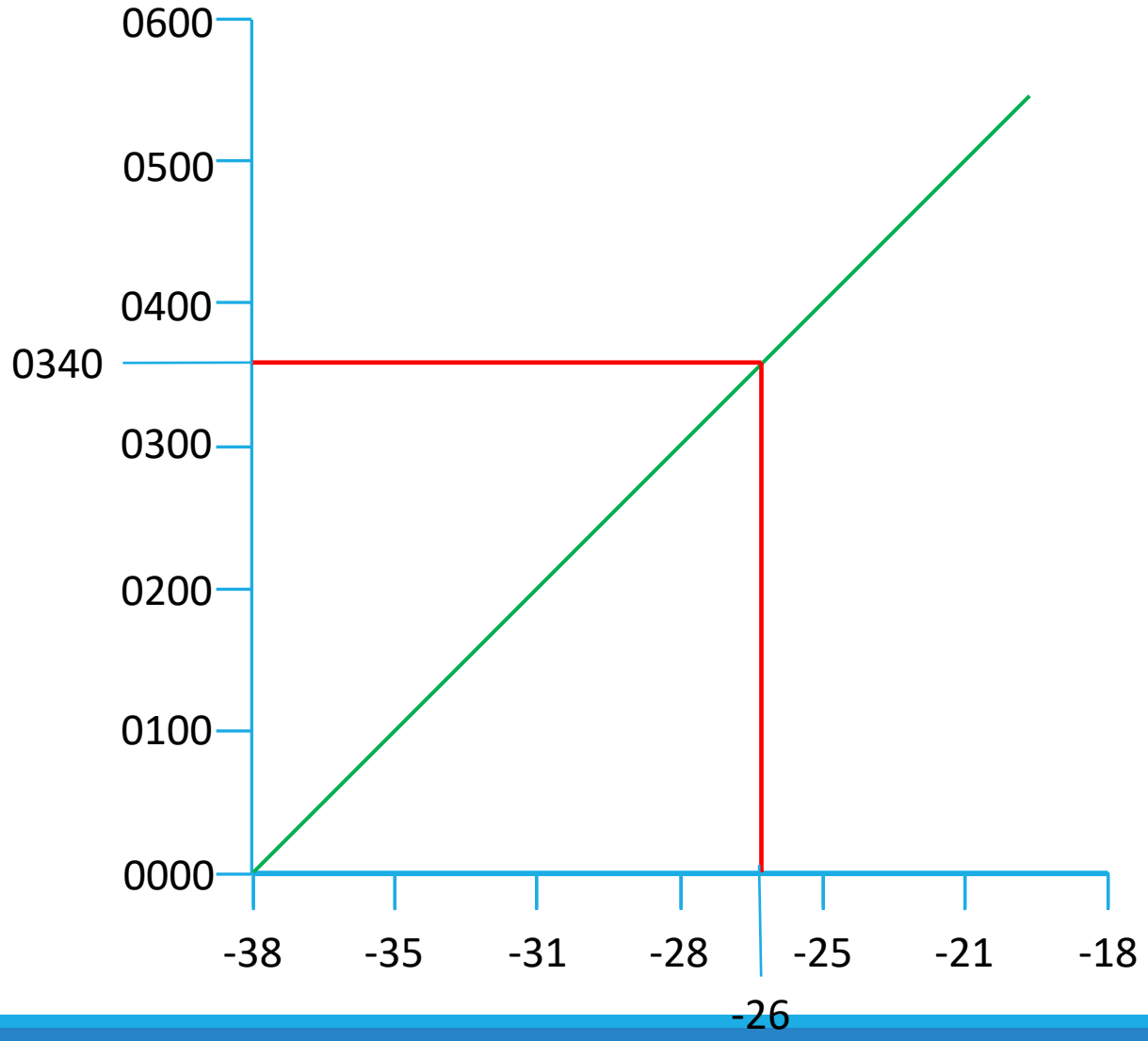
-38 -35 -31 -28 -25 -21 -18

0000 2300 2200 2100 2000 1900 1800

-38 -35 -31 -28 -25 -21 -18


0340
0000
0100
0200
0300
0400
0500
0600
-38
-35
-31
-28
-25
-21
-18
-26


0600
0500
0400
0340
0300
0200
0100
0000
-38
-35
-31
-28
-25
-21
-18
-26


0600
0500
0400
0340
0300
0200
0100
0000
-38
-35
-31
-28
-25
-21
-18
-26

Exercise

Time and Height of HW and LW on Wednesday 24th April

Port Fraser

24	0307	0.5
	0922	3.8
W	1527	0.9
	2137	3.8

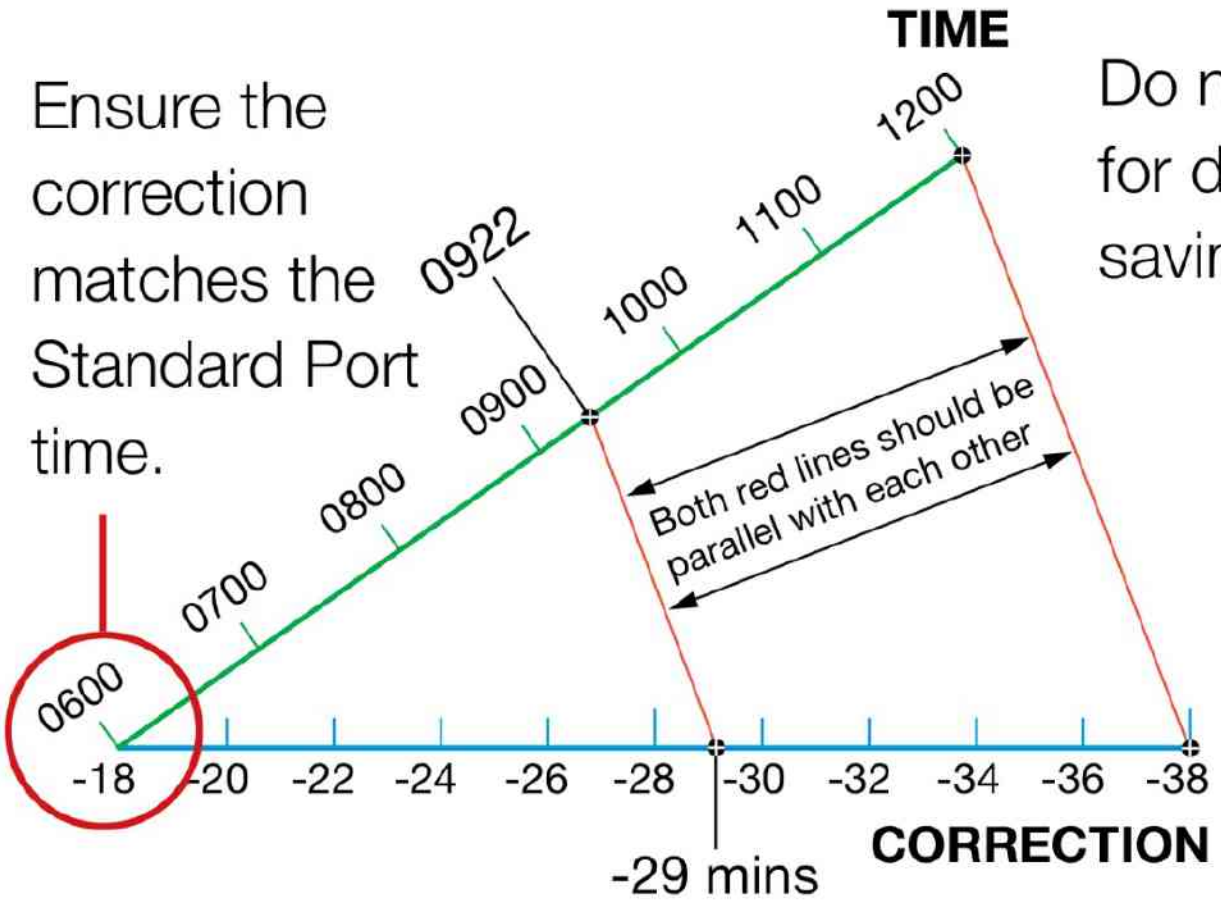
Rozelle Cove

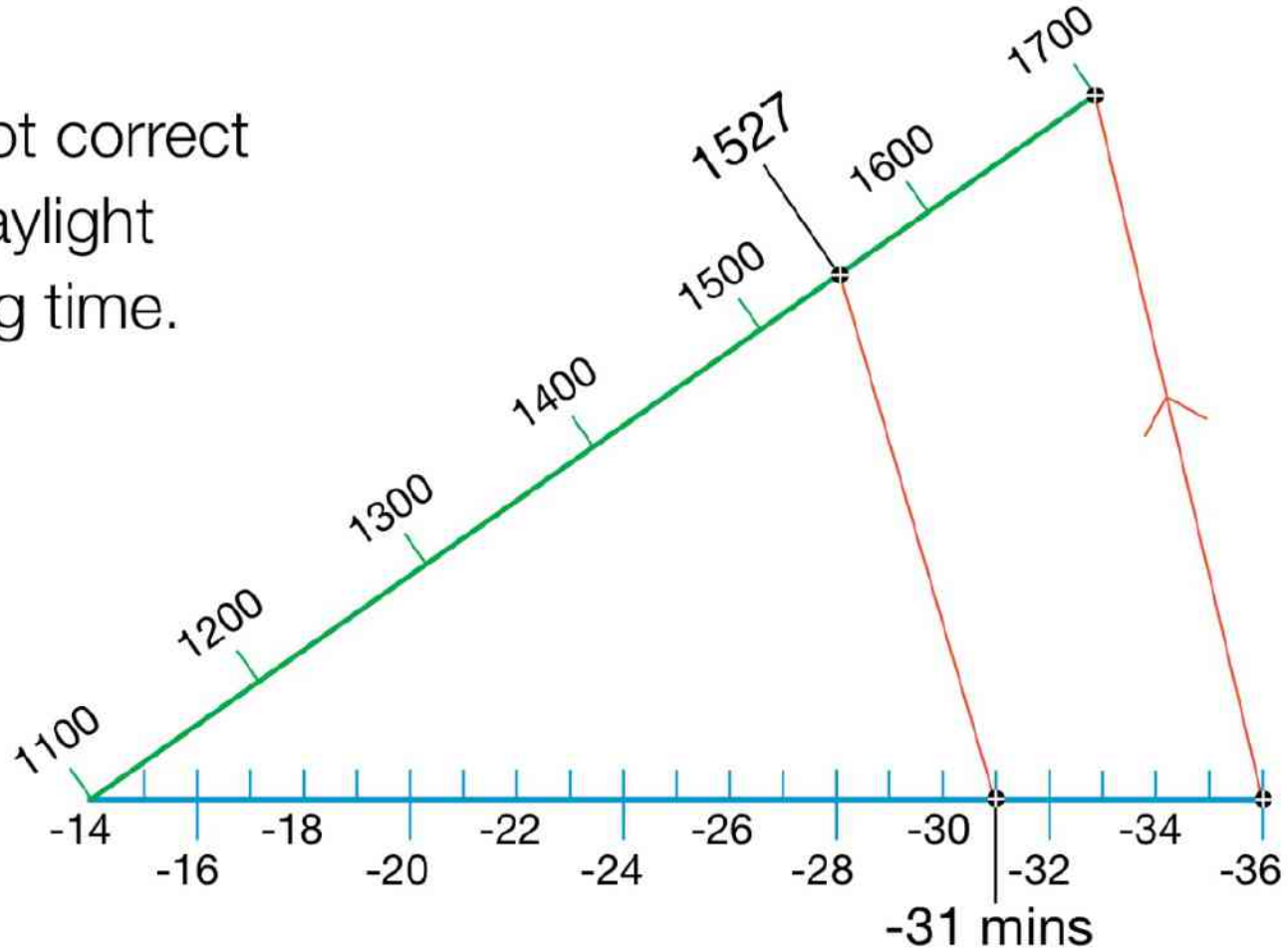
HW	**Time?**	**Height?**
LW	**Time?**	**Height?**

High Water		Low Water	
0000	0600	0500	1100
1200	1800	1700	2300
ifferences ROZELLE COVE			
-0038	-0018	-0036	-0014

Ensure the correction matches the Standard Port time.

Do not correct for daylight saving time.



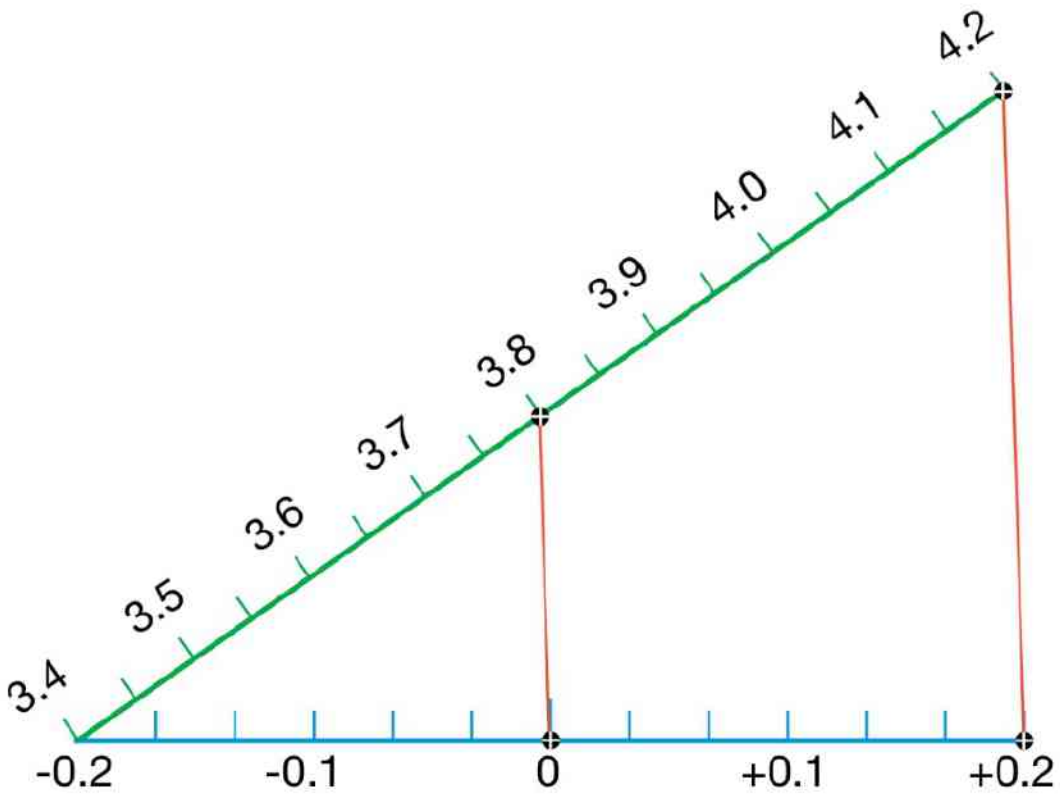


HW Time

LW Time

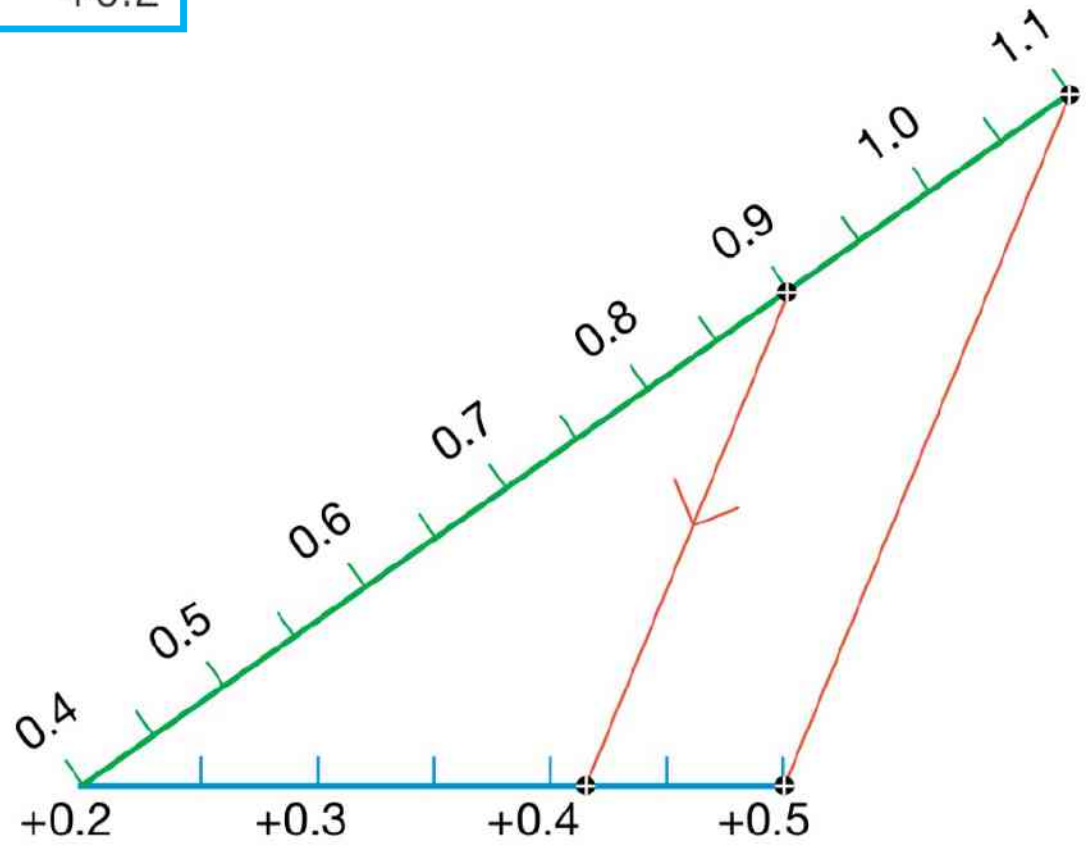
MHWS	MHWN
4.2	3.4
+0.2	-0.2

MLWN	MLWS
1.1	0.4
+0.5	+0.2



No correction needed.

HW Height



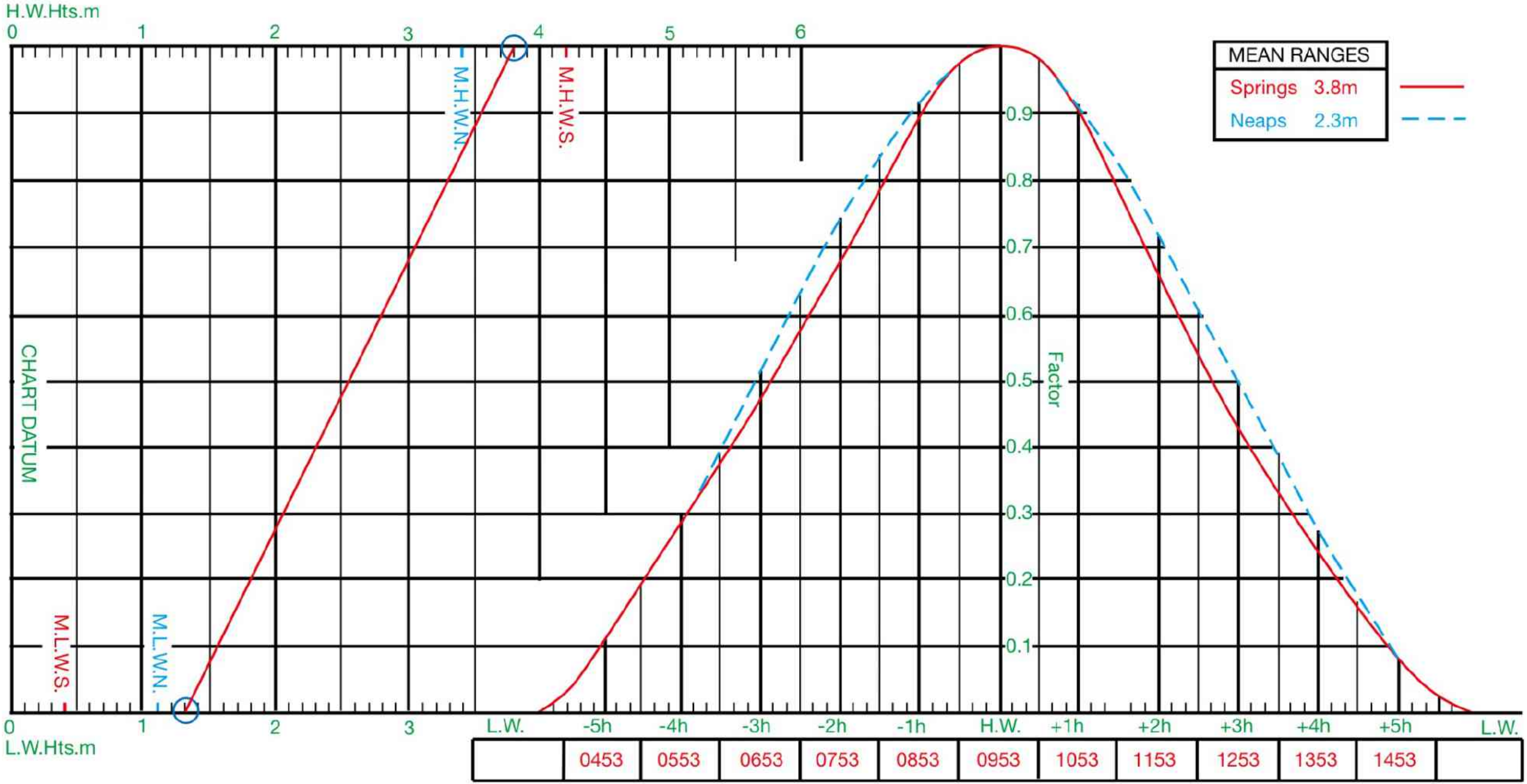
+0.4

LW Height

Rozelle Cove

HW	0853 UT	3.8m
LW	1456 UT	1.3m

HW	0953 DST	3.8m
LW	1556 DST	1.3m


H.W.Hts.m
0
1
2
3
4
5
6
M.H.W.N.
M.H.W.S.
MEAN RANGES
Springs 3.8m
Neaps 2.3m
0.9
0.8
0.7
0.6
0.5
0.4
0.3
0.2
0.1
Factor
CHART DATUM
M.L.W.S.
M.L.W.N.
0
1
2
3
L.W.Hts.m
L.W.
-5h
-4h
-3h
-2h
-1h
H.W.
+1h
+2h
+3h
+4h
+5h
L.W.
0453
0553
0653
0753
0853
0953
1053
1153
1253
1353
1453

Secondary Ports

Standard Port ST MALO

Times				Height (metres)			
High Water		Low Water		MHWS	MHWN	MLWN	MLWS
0100	0800	0300	0800	12·2	9·3	4·2	1·5
1300	2000	1500	2000				
Differences LÉZARDRIEUX							
-0020	-0015	-0055	-0045	-1·7	-1·3	-0·5	-0·2
1		2		3		4	

Fig 5.14 Time and height differences for Lézardrieux.

Secondary Port

Endal Marina

46°13'.99N 005°46'.93W
Northern Territories CHARTS RYA 3, 4.

Standard Port PORT FRASER (←)

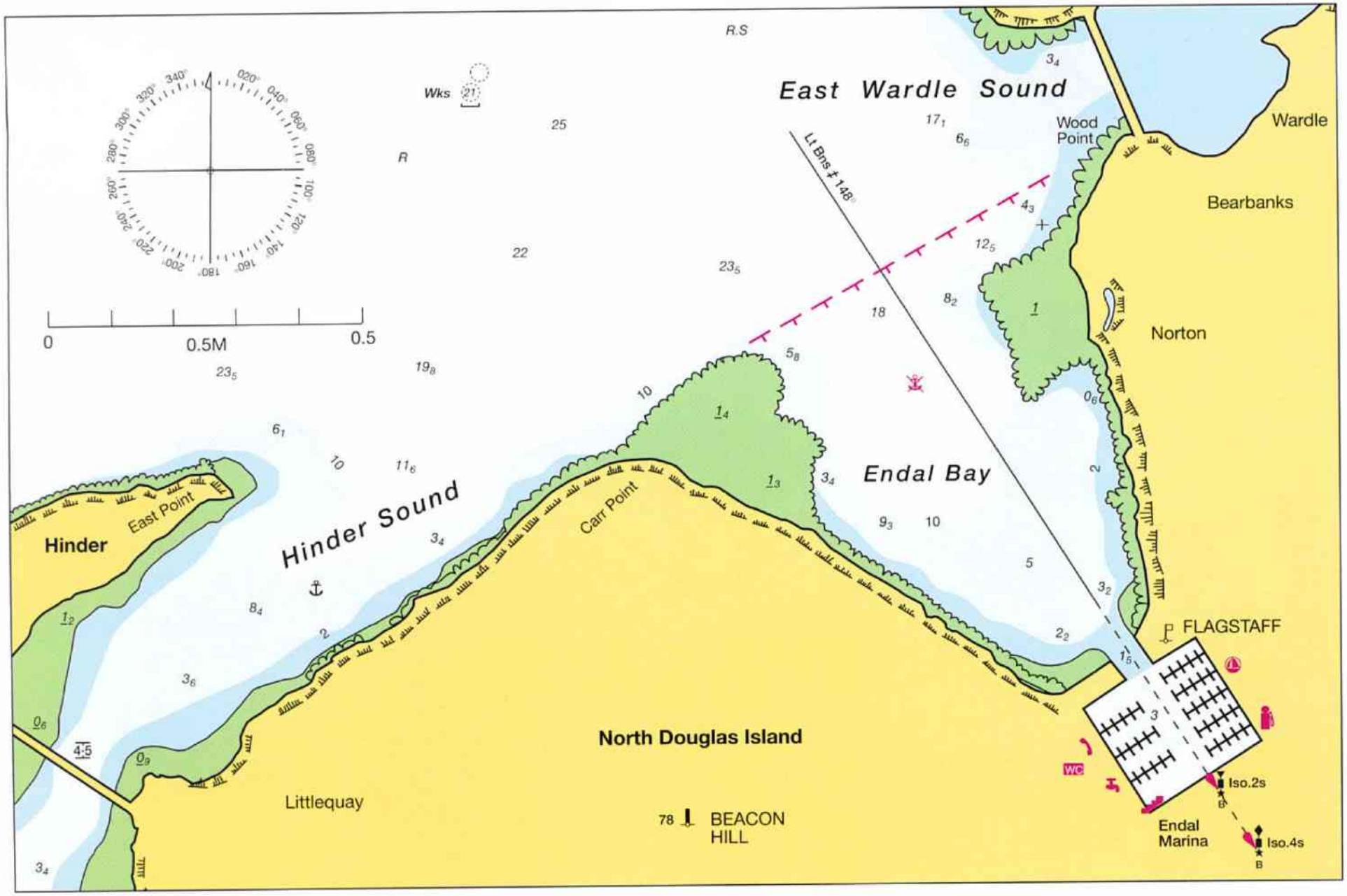
Times				Height (metres)			
High Water		Low Water		MHWS	MHWN	MLWN	MLWS
0000	0600	0500	1100	4.2	3.4	1.1	0.4
1200	1800	1700	2300				
Differences ENDAL MARINA							
-0042	-0017	-0040	-0012	+0.4	+0.1	+0.4	0.0

Endal Marina

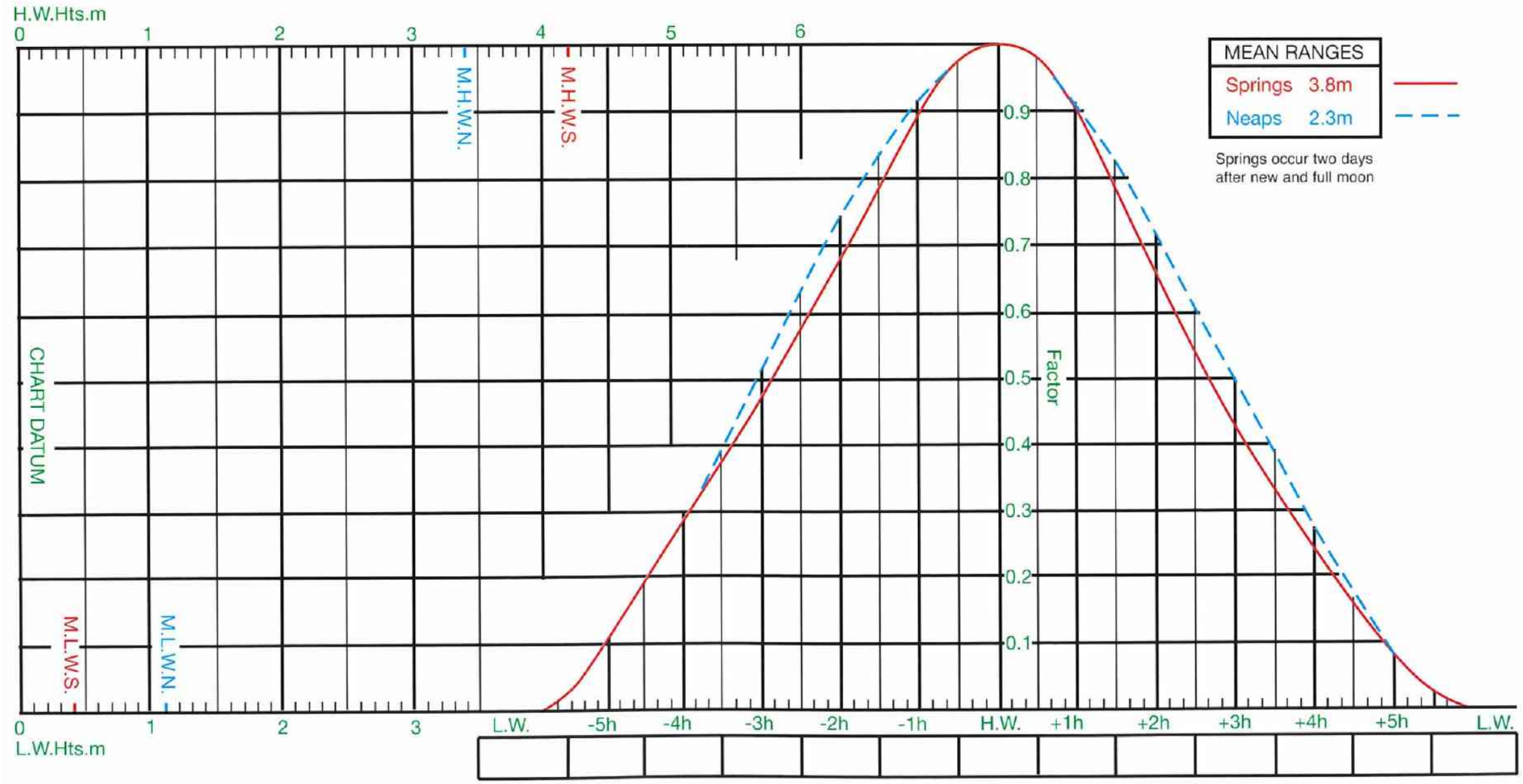
12. September, late afternoon

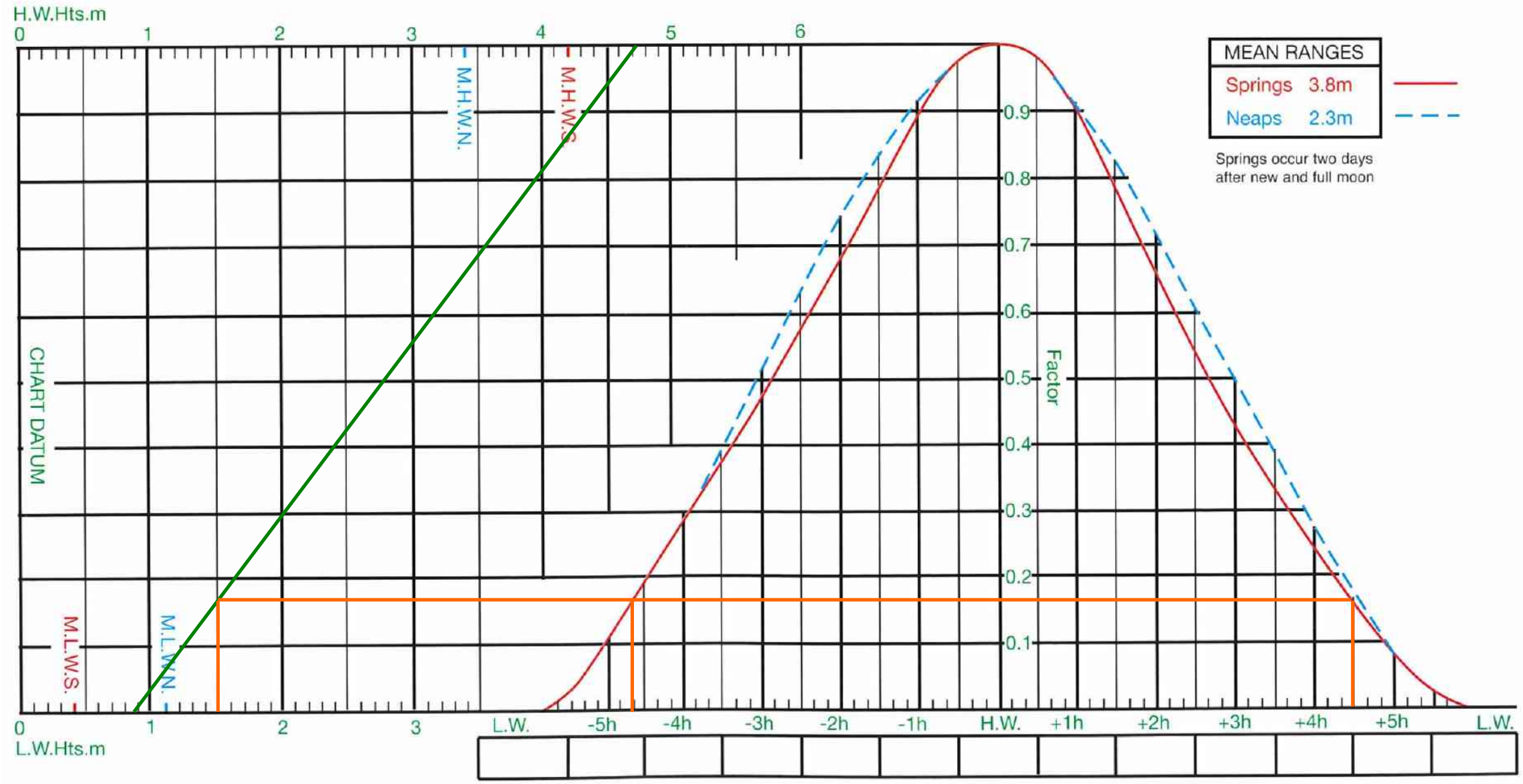
Draught of 2.20m + safety of 80 cm.

Until when can we access the marina?



12	0300	4.2
	0853	0.7
TH	1514	4.3
	2126	0.5


H.W.Hts.m
0
1
2
3
4
5
6
M.H.W.N.
M.H.W.S.
CHART DATUM
M.L.W.S.
M.L.W.N.
0
1
2
3
L.W.Hts.m
0.9
0.8
0.7
0.6
0.5
0.4
0.3
0.2
0.1
Factor
L.W.
-5h
-4h
-3h
-2h
-1h
H.W.
+1h
+2h
+3h
+4h
+5h
L.W.
MEAN RANGES
Springs 3.8m
Neaps 2.3m
Springs occur two days after new and full moon


H.W.Hts.m
0
1
2
3
4
5
6
M.H.W.N.
M.H.W.S.
MEAN RANGES
Springs 3.8m
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0.9
0.8
0.7
0.6
0.5
0.4
0.3
0.2
0.1
Factor
CHART DATUM
M.L.W.S.
M.L.W.N.
0
1
2
3
L.W.Hts.m
L.W.
-5h
-4h
-3h
-2h
-1h
H.W.
+1h
+2h
+3h
+4h
+5h
L.W.

Trockenfallen

Namley Harbour - Itchenham

27. April

Late morning HW

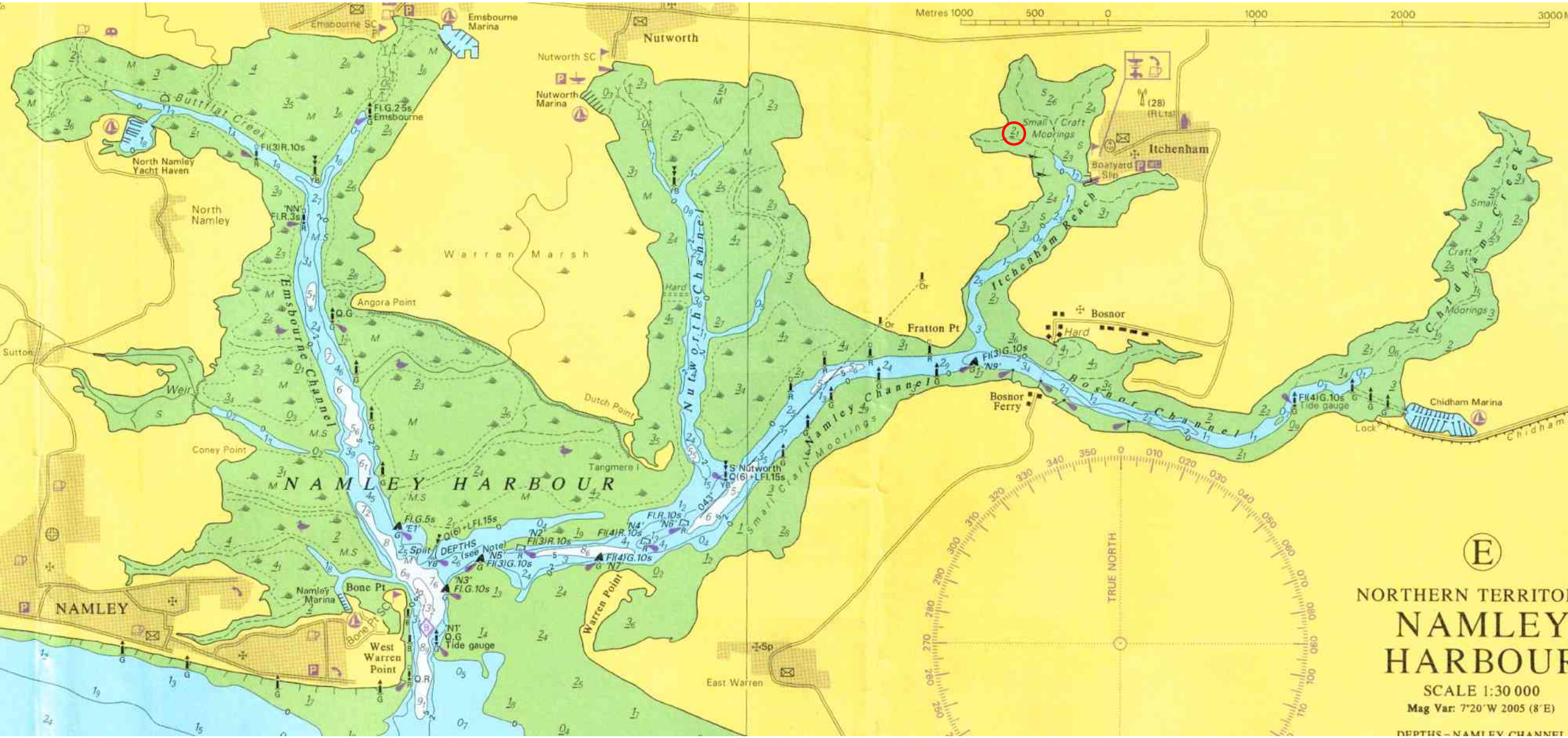
Itchenham, W part of the small craft moorings

Catamaran, 1.20m draught, additional safety of 0.20m

Time of arrival?

Replacing anodes from when until when?

Time of departure the following morning?


Metres 1000 500 0 1000 2000 3000
Emsbourne SC
Emsbourne Marina
Nutworth
Nutworth SC
Nutworth Marina
Buttflat Creek
Fl.G.2.5s Emsbourne
Fl(3)R.10s
North Namley Yacht Haven
North Namley
'NN' Fl.R.3s
Warren Marsh
Angora Point
Emsbourne Channel
Sutton
Weir
Coney Point
Dutch Point
Nutworth Channel
Hard
Tangmere I
NAMLEY HARBOUR
Fl.G.5s 'E1'
Q(6)+LFl.15s
Split
DEPTHS (see Note)
'N2' Fl(3)R.10s
'N5' Fl(3)G.10s
'N3' Fl.G.10s
Fl(4)R.10s 'N4'
Fl.R.10s 'N6'
Fl(4)G.10s 'N7'
S Nutworth Q(6)+LFl.15s
Warren Point
Namley Marina
Bone Pt
Bone Pt SC
NAMLEY
West Warren Point
'N1' Q.G Tide gauge
Q.R
East Warren
Sp
Fratton Pt
Or
Small Craft Moorings
Itchenham
Boatyard Slip
(28) (R Lts)
Itchenham Reach
Fl(3)G.10s 'N9'
Bosnor
Bosnor Ferry
Bosnor Channel
Fl(4)G.10s Tide gauge
Chidham Creek
Chidham Marina
Lock
Chidham
Smart Clark Moorings
TRUE NORTH
E
NORTHERN TERRITO
NAMLEY
HARBOUR
SCALE 1:30 000
Mag Var: 7°20'W 2005 (8'E)
DEPTHS – NAMLEY CHANNEL

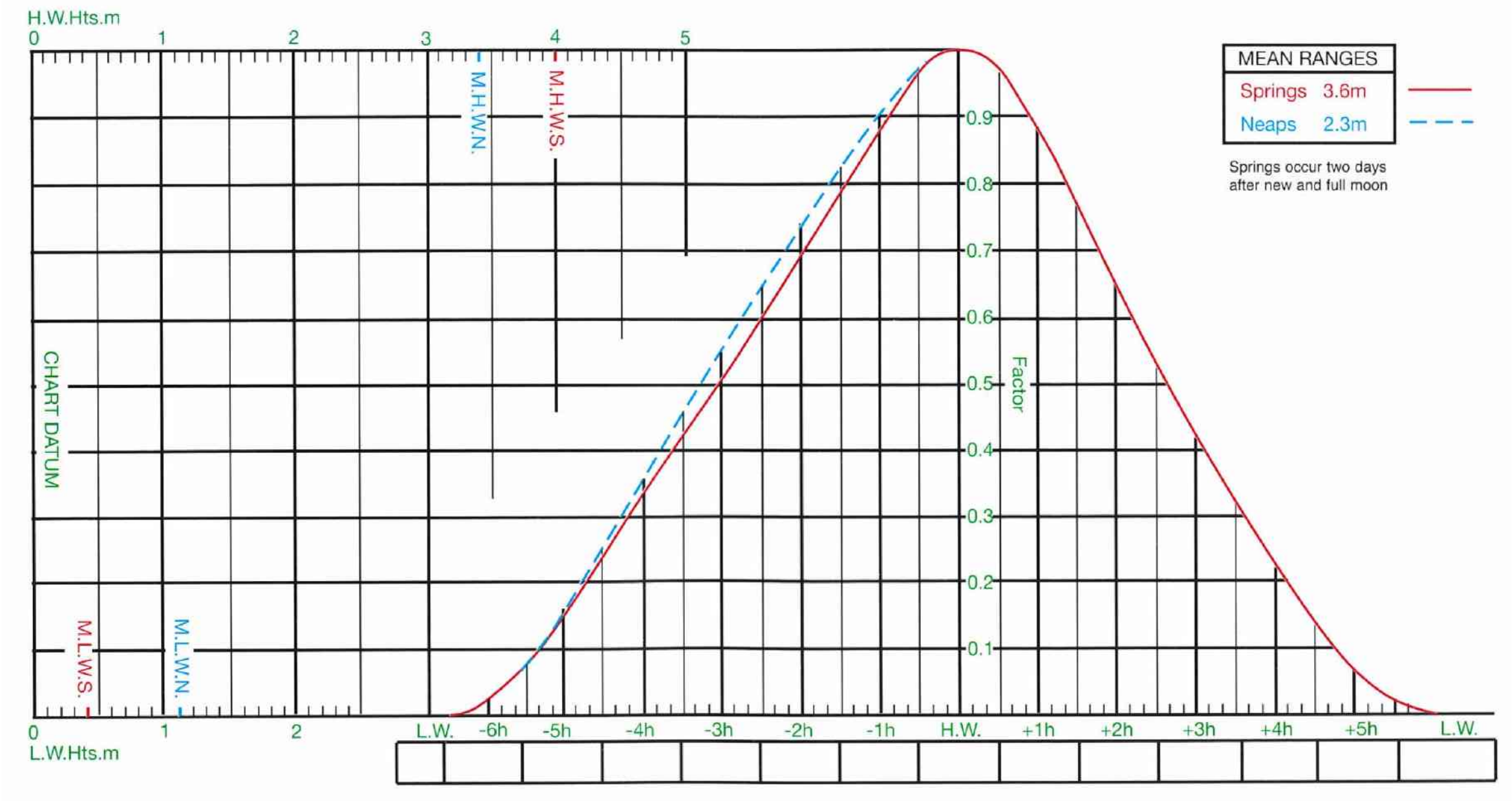
NAMLEY HARBOUR - Standard Port

46°25'.74N 005°46'.70W
Northern Territories CHARTS RYA 3, 4.

Standard Port NAMLEY HARBOUR (→)

Times				Height (metres)			
High Water		Low Water		MHWS	MHWN	MLWN	MLWS
0000	0600	0000	0600	4.0	3.4	1.1	0.4
1200	1800	1200	1800				
Differences ITCHENHAM							
+0020	+0010	-0005	0000	-0.2	-0.1	-0.1	-0.1
Differences EMSBOURNE							
+0010	+0010	-0010	-0005	-0.3	-0.1	0.0	-0.1

27	0519	0.0
	1150	4.2
SA	1733	0.3
O		


H.W.Hts.m
0
1
2
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4
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M.H.W.N.
M.H.W.S.
MEAN RANGES
Springs 3.6m
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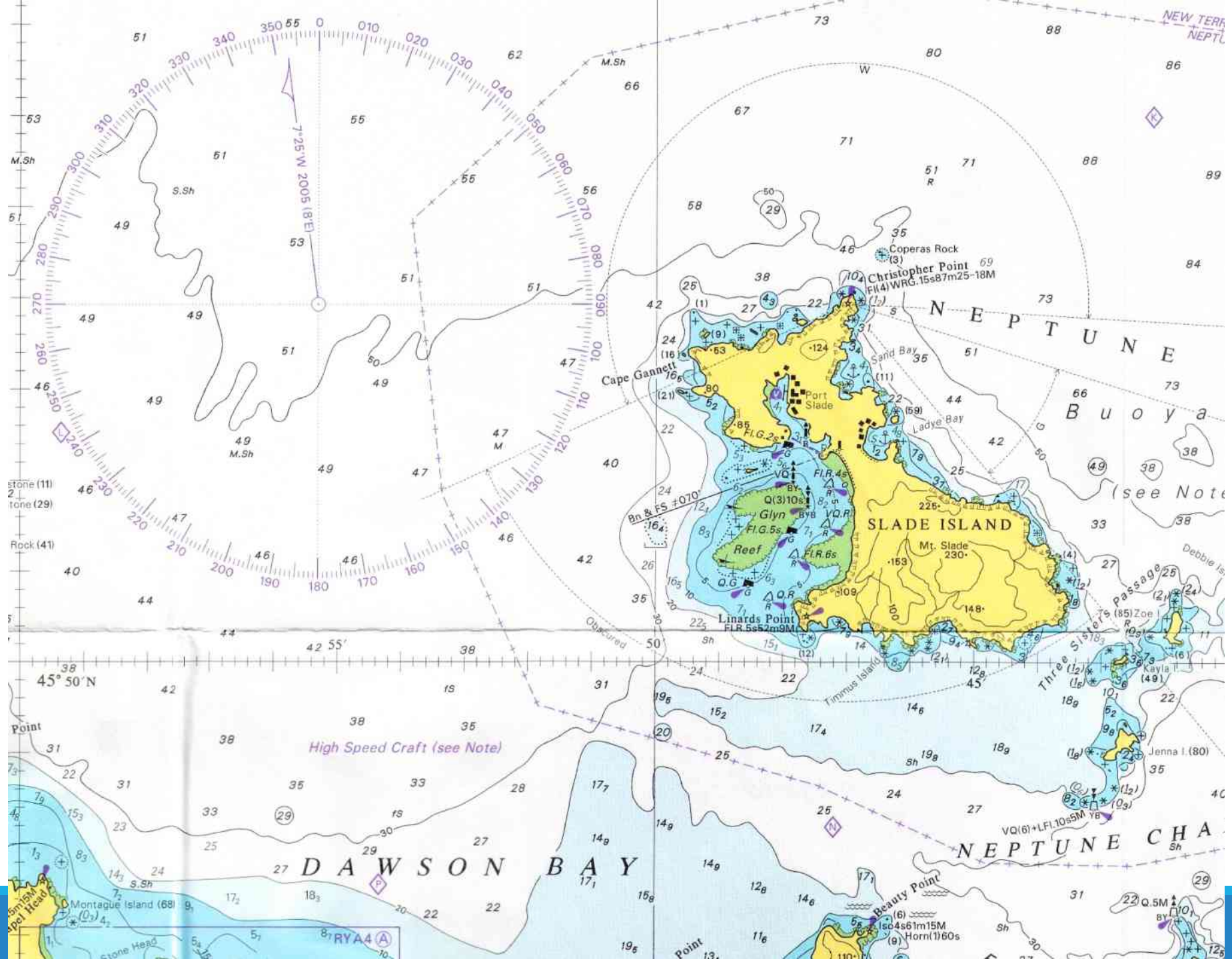
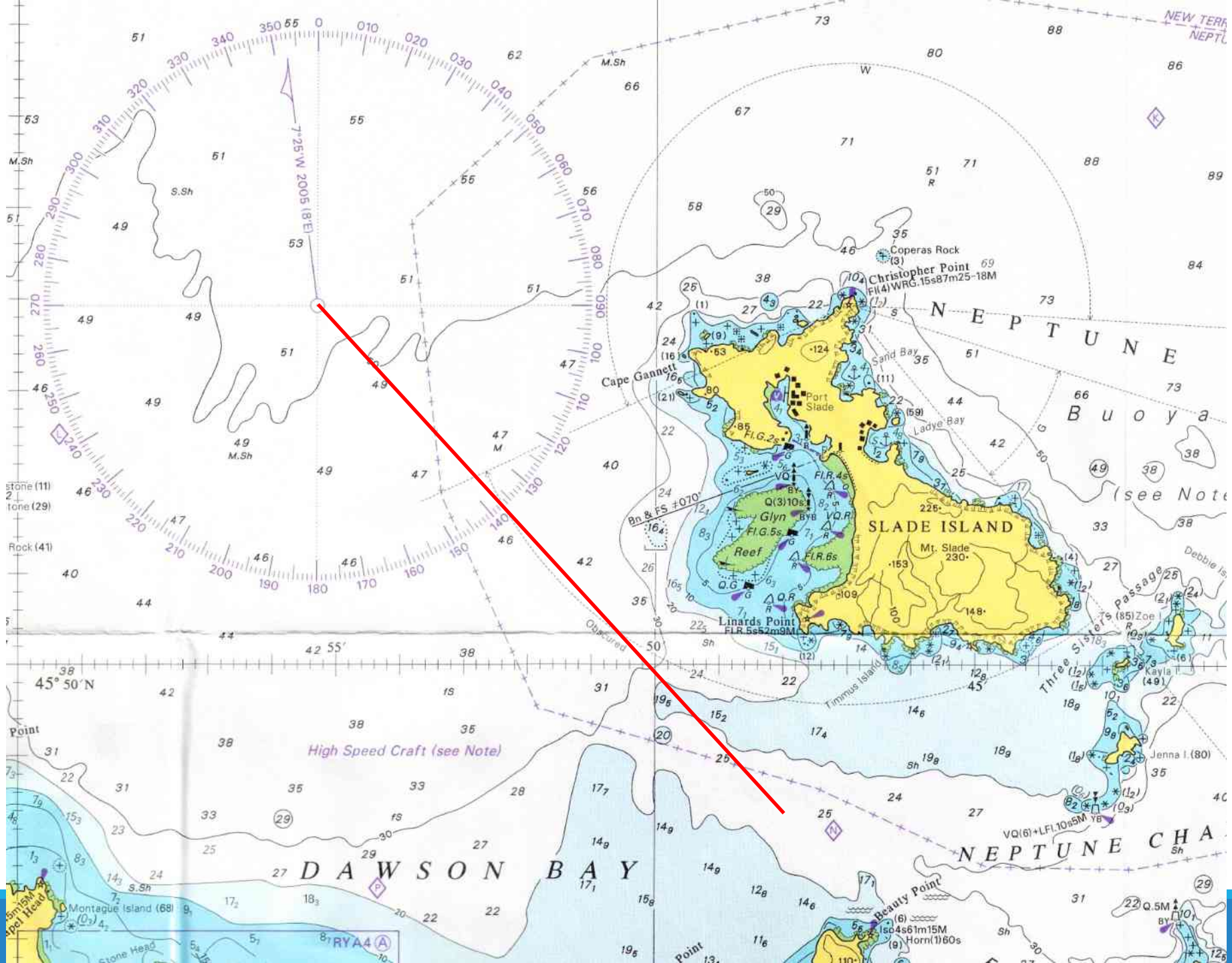
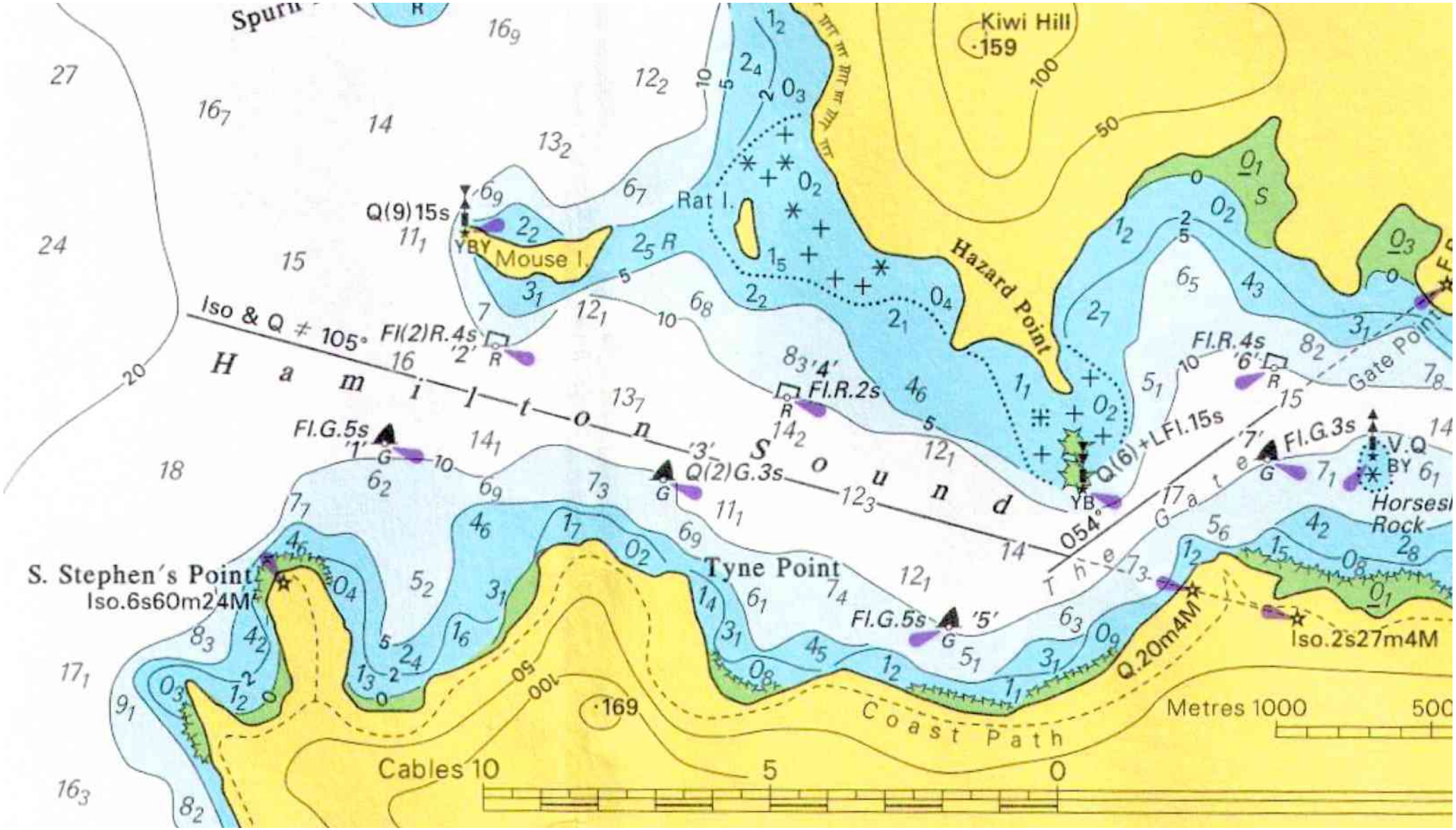
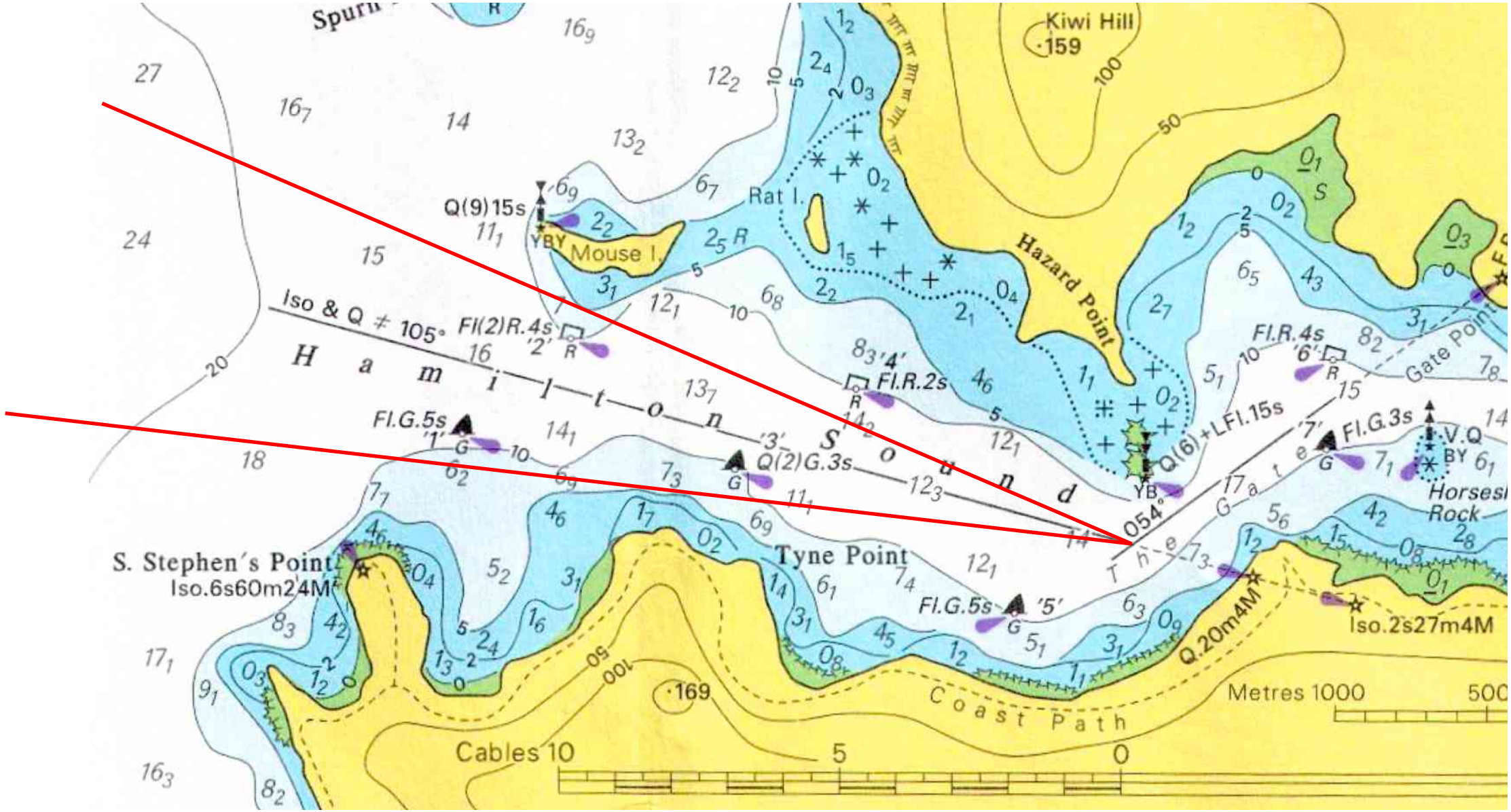
Springs occur two days after new and full moon
0.9
0.8
0.7
0.6
0.5
0.4
0.3
0.2
0.1
Factor
CHART DATUM
M.L.W.S.
M.L.W.N.
0
1
2
L.W.Hts.m
L.W.
-6h
-5h
-4h
-3h
-2h
-1h
H.W.
+1h
+2h
+3h
+4h
+5h
L.W.

GPS and Waypoints


NEPTUNE
Buoya
(see Note
SLADE ISLAND
Mt. Slade
230
Coperas Rock
Christopher Point
Fl(4)WRG.15s87m25-18M
Cape Gannett
Port Slade
Sand Bay
Ladye Bay
Glyn
Reef
Linards Point
Fl.R.5s52m9M
Obscured
Bn & FS
Timmus Island
Three Sisters Passage
Debbie Is
Kayla
Jenna I.(80)
VQ(6)+LFl.10s5M
NEPTUNE CHA
DAWSON BAY
High Speed Craft (see Note)
Beauty Point
Iso4s61m15M
Horn(1)60s
Montague Island (68)
Stone Head
RYA4
45° 50′N
7°25′W 2005 (8′E)


NEPTUNE
Buoya
(see Note
SLADE ISLAND
Mt. Slade
230
Coperas Rock
Christopher Point
Fl(4)WRG.15s87m25-18M
Cape Gannett
Port Slade
Sand Bay
Ladye Bay
Glyn
Reef
Linards Point
Fl.R.5s52m9M
Obscured
Timmus Island
Three Sisters Passage
Debbie Is
Kayla
Jenna I.(80)
Zoe I.
High Speed Craft (see Note)
DAWSON BAY
NEPTUNE CHA
Beauty Point
Iso4s61m15M
Horn(1)60s
Montague Island (68)
Stone Head
RYA4
45° 50′N
7°25′W 2005 (8′E)
Bn & FS ±070°
VQ(6)+LFl.10s5M
Q.5M


Kiwi Hill
·159
Hazard Point
Rat I.
Mouse I.
Q(9)15s
YBY
Iso & Q ≠ 105°
Fl(2)R.4s
'2'
Fl.R.2s
'4'
Fl.R.4s
'6'
Gate Point
Fl.G.5s
'1'
Q(2)G.3s
'3'
Q(6)+LFl.15s
YB
Fl.G.3s
'7'
V.Q
BY
Horses
Rock
Hamilton Sound
054°
The Gate
S. Stephen's Point
Iso.6s60m24M
Tyne Point
Fl.G.5s
'5'
Q.20m4M
Iso.2s27m4M
·169
Coast Path
Metres 1000
500
Cables 10
5
0


Kiwi Hill
·159
Hazard Point
Rat I.
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Q(9)15s
YBY
Iso & Q ≠ 105°
Fl(2)R.4s
'2'
Fl.R.2s
'4'
Fl.R.4s
'6'
Fl.G.5s
'1'
Q(2)G.3s
'3'
Q(6)+LFl.15s
YB
Fl.G.3s
'7'
V.Q
BY
Horses
Rock
Gate Point
Hamiltons Sound
S. Stephen's Point
Iso.6s60m24M
Tyne Point
Fl.G.5s
'5'
Q.20m4M
Iso.2s27m4M
·169
Coast Path
Metres 1000
500
Cables 10
5
0