

**Day
Skipper
Questions
and
Answers
New Charts**

Charts

1. What are the latitude and longitude of the dots at the centre of the two most northern compass roses on Chart 3?

Find the following positions on Chart 4. At each point place a cross with the number of the question (we will use these points again later). You will find a feature at each point, look it up in 5011, and identify each symbol. Features that are of navigational importance, such as buoys, have a very small circle marking the spot where they are positioned.

2. $46^{\circ} 14.70'N$ $005^{\circ} 52.25'W$
3. $46^{\circ} 15.47'N$ $005^{\circ} 52.08'W$
4. $46^{\circ} 16.08'N$ $005^{\circ} 49.51'W$
5. $46^{\circ} 15.11'N$ $005^{\circ} 48.83'W$

Go back to the points you marked on the chart for questions 2 to 5 and measure the bearings and distances between the following points. Make sure that you are measuring in the correct direction!

7. 2 to 3.
8. 3 to 4.
9. 4 to 5.
10. 5 to 2.

On Chart 3, what are the meanings of the symbol at the following positions? Some of them are on the land!

- | | | |
|-----|----------------|-------------------------------------------|
| 11. | $026^{\circ}T$ | 3.73M from Christopher Point Light House. |
| 12. | $155^{\circ}T$ | 3.06M from Christopher Point Light House. |
| 13. | $207^{\circ}T$ | 5.49M from Christopher Point Light House. |
| 14. | $308^{\circ}T$ | 7.26M from Christopher Point Light House. |

What is the latitude and longitude of the following points? The bearings and distances given are towards the dot at the centre of the compass rose ($45^{\circ} 53.9'N$ $005^{\circ} 55.3'W$).

15. $181^{\circ}T$ 6.13M What is the symbol?
16. $110^{\circ}T$ 5.17M What is the symbol?

Variation and deviation

1. What is the variation in the south-west part of chart 3?

Convert these true bearings to magnetic bearings.

2. 060°T Variation 10°W.
3. 040°T Variation 10°E.
4. 345°T Variation 8°E.
5. 352°T Variation 12°W.
6. 003 °T Variation 6°E.

Convert these magnetic bearings to true bearings.

7. 009°M Variation 19°E.
8. 000°M Variation 5°W.
9. 000°M Variation 10°E.
10. 345°M Variation 25°E.
11. 009°M Variation 11°W.

12. On Chart 4. If a vessel sees the leading beacons for Endal marina (46° 13.83'N 005° 46.78'W) in transit, dead ahead when there is no tide. What is the deviation on this heading if the compass reads 150°C?

Position lines and fixes

Chart 3. Variation = 7°W. Plot the following fixes. Give your answer as a latitude and longitude.

1.

Radio Mast (46° 19.53'N 006° 12.87'W)	039°M
End of Cape Woodward (46° 08.73'N 006° 03.48'W)	121°M
St Anthony Head Lt Ho (46° 13.88'N 006° 10.11'W)	091°M

2.

Back Shoal beacon (46° 21.38'N 005° 51.18'W)	157°M
Hill Shoal Beacon (46° 20.45'N 005° 55.06'W)	210°M
Flagstaff (46° 24.42'N 005° 57.08'W)	289°M

3.

Radio Mast (45° 44.75'N 005° 45.11'W)	211°M
Beauty Point Lt (45° 47.04' 005° 46.61'W)	270°M
Pentire Island Lt (45° 44.96'N 005° 40.73'W)	147°M

4.

Church Spire (46° 25.79'N 005° 58.45'W)	320°M
East side of Kay Island (46° 21.86'N 005° 55.75'W)	202°M
Light on Southlake Pt (46° 23.58'N 005° 59.27'W)	276°M

5.

A yacht observes the two leading lights (Oc&Q) at the port Victoria (46° 26.55'N 006° 10.81'W) in transit. If the depth is 55m and the height of the tide is 5m. What is the yacht's position?

6.

What factors affect the choice of targets for a three point fix?

7.

Which source of position lines will give the most accurate result?

8.

What two pieces of information must be recorded at the time of taking the bearings for a fix?

9.

Why should you use three position lines instead of two when plotting a fix?

DRs and EPs

1. Starting at the Safe Water Buoy ($45^{\circ} 40.70'N$ $006^{\circ} 13.83'W$), a yacht sails for 5.0M on a heading of $304^{\circ}M$. What is its dead reckoning position?
2. Starting from the Safe Water Buoy ($45^{\circ} 40.70'N$ $006^{\circ} 13.83'W$), a vessel motors on a heading of $253^{\circ}M$ for 8.0M. What is its DR position?
3. A vessel leaves the West Point Buoy ($46^{\circ} 21.42'N$ $006^{\circ} 17.25'W$) on a course of $240^{\circ}M$. 1 hour later the log shows that she had travelled 5.2M. If the tide was $180^{\circ}T$ at 2.0Kn, what is the E.P?

4.

Time	Comments	Course Log	Wind
0900	Colville E. Entrance OcR. Light to Stbd. A/C to $020^{\circ}M$	Pilotage 0.5	N3
1000	Estimated position	$020^{\circ}M$ 7.0	N3

- A. If the tide was $106^{\circ}T$ 3.5Kn. What is the EP at 1000?
- B. What was the ground track in degrees true?
- C. What was the distance made good?

5.

Time	Comments	Course Log	Wind
1430	Bearing from LCW Buoy ($46^{\circ} 02.8'N$ $005^{\circ} 57.6'W$) $000^{\circ}T$ 2.5M. A/C to $050^{\circ}M$	$000^{\circ}M$ 10.6	SE4
1530	Estimated position	$050^{\circ}M$ 15.8	SE4

If the tide was $319^{\circ}T$ at 1.6Kn. What is the EP at 1530?

6.
Chart 4.
The dot at the centre of the compass rose has been plotted as a waypoint. The bearing to the waypoint is $070^{\circ}T$ 1.3M.
- A. Plot the vessel's position.
 - B. In the next hour the vessel sails 1.6M in $034^{\circ}M$, if the tide is $266^{\circ}T$ at 0.5Kn, what is the vessel's EP?

7.

Time	Comments	Course	Log	Wind	Leeway
0900	Stbd. hand buoy (45° 37.70'N 006° 13.04'W)	307°M	12.3	WSW5	5°
1000	Estimated Position	307°M	19.3	WSW5	5°

If the tide was 230°T 2.5Kn, plot the E.P. at 1000.

Leeway when beating

8.

Time	Comments	Course	Log	Wind	Leeway
0900	Stbd. hand buoy (45° 37.70'N 006° 13.04'W)	307°M	12.3	WSW5	5°
0930	A/C to 205°M	307°M	19.3	WSW5	5°
1000	Estimated position	205°M	16.6	WSW5	5°

What were the true water tracks on each leg?

Predicted EPs

9.

Chart 3. Variation = 7°W

If at 07.00 the bearing and distance to a waypoint at the centre of the compass rose to the west of Slade Island is 190°T 4.1M. Plot the vessel's position.

From this position plot the following predicted EP at 08.00.

The course is 070°M and speed is 5.8Kn.

Tide is 292°T at 2.5Kn.

A) What is the latitude and longitude of the point where the vessel reached the traffic separation scheme?

B) How far will the vessel have travelled by the log when it reaches the TSS?

Tidal streams

1. Is May 28 a spring or a neap tide?

On chart 3, at diamond B, what is the tidal stream at the following times?

2. At HW on a spring tide?
3. 3 hours before HW on a neap tide?

Using chart 3, what is the tidal stream at the following times?

4. Cape Woodward at 0337 summer time on July 14th?
5. South of Slade Island at 2028 UT on January 23rd?

Using chart 3, what is the tidal stream at the following times?

6. East of South Douglas Island on 26th April, between 0044 and 0144 summer time?
7. Just north of Cape Donne, on 7th April, between 0323 and 0423 summer time?
8. Between which times would you experience a favourable tide on May 27th, on a passage from Victoria to Dunbarton ($46^{\circ}11.0'N$ $6^{\circ}00.0'W$)?
9. How many miles would the tide carry you in the previous question? Assume a boat speed of 3kn.
10. Chart 3. What will be the direction and rate of the tide at Diamond A, at HW+5 hours, if the range of the tide was 3.6m?
11. What is the rate of the tide on September 11th at 0541 summer time at diamond B?

EPs with tides

Chart 3. Variation = 7°W
Plot the following Estimated Positions.

1. 24th May

Time	Comments	Course	Log	Wind	Leeway
1246	Quaker buoy (45°40.70'N06°13.81'W)	256°M	14.3	SE3	0°
1346	Plot EP Diamond R.	256°M	19.3	SE5	0°

2. 12th December

Time	Comments	Course	Log	Wind	Leeway
1407	Starboard hand buoy (45°37.7'N06°13.04'W)	320°M	21.5	E4	0°
1507	Plot the EP Diamond R.	320°M	28.8	E3	0°

3. 3rd May

Time	Comments	Course	Log	Wind	Leeway
1058	000°T 1M from Steven's Rock (46°03.4'N06°18.8'W)	026°M	32.4	N5	0°
1158	Plot the EP Diamond E.	026°M	43.6	N4	0°

4. 10th August

Time	Comments	Course	Log	Wind	Leeway
1450	Fix (46°16.5'N06°20.0'W)	100°M	20.3	SW4	5°
1550	Plot the EP Diamond E.	145°M	29.6	SW4	5°

5. 2nd August

Time	Comments	Course	Log	Wind	Leeway
0323	Fix (45°50.0'N 06°00.0'W)	055°M	23.4	NNE5	5°
0350	A/C to 337°M	081°M	26.4	NNE5	5°
0423	Plot the EP Diamond L.	337°M	29.9	NNE4	5°

6. 24th May

Time	Comments	Course	Log	Wind	Leeway
1246	Synka Buoy (46°10.56'N05°53.35'W)	180°M	34.4	E3	0°
1316	Plot the EP Diamond D.	223°M	40.6	E3	0°

7. 31st January

At 1629 the bearing and distance to a waypoint at the centre of the compass rose west of Slade Island is 150°T 4.2M.

If the vessel's speed is 6.3kn and course is 067°M.

A) What is the Latitude and Longitude of the point where the vessel reaches the TSS?

B) How far will the vessel travel through the water to reach the TSS?

Plot the following Estimated Position.

8. 22nd April

Time	Comments	Course	Log	Wind	Leeway
0816	Fix (46°24.63'N06°12.12'W)	238°M	23.4	S5	5°
0842	A/C to 139°M	238°M	28.7	S5	5°
0916	Plot the EP Use Diamond B.	139°M	33.8	S4	5°

Tidal heights

1. What is the height of the tide at Victoria on 3rd December at 1137 Standard Time?
2. What is the height of the tide at Port Fraser on 20th May at 0930 Summer Time?
3. What is the height of the tide at Namley Harbour on 6th September at 0941 Summer Time?
4. What is the height of the tide at Colville on the 7th October at 0329 in Summer Time?
5. What is the height of the tide at Port Fitzroy on the 15th June at 1246 in Summer Time?
6. When will the height of the tide fall to 3.0m at Hamilton Sound on the afternoon of 9th August?
7. When will the height of the tide rise to 2.0m at Port Fraser on the afternoon of 14th October?
8. What is the earliest, on a rising tide, that a boat with a draught of 1.3m can cross a bank with a drying height of 0.8m with a clearance of 1.0m, at Colville on the afternoon of 14th October?
9. A boat with a draught of 1.4m is in a creek in Namley Harbour which dries 0.9m above chart datum. What is the earliest on a rising tide that she can depart with a clearance of 0.5m on a rising tide the 25th May?
10. A boat with a draught of 1.5m wishes to use a channel at Port Fitzroy with a charted depth of 0.4m, on the morning of 28th December. What is the earliest on a rising tide that there will be a clearance of 1.0m?
11. A boat with a draught of 2.0m anchors. The Echo sounder shows the depth is 4.0m, and the current height of the tide is 2.6m. If low water will be 0.8m. What will be the clearance under the keel at low water?

12. A motor yacht anchors in Victoria Harbour at 1423 Summer Time on 11th August. The depth is 5.0m and the draught is 1.0m.
- What is the clearance under the keel at 1423 Summer Time?
 - What is the height of tide at 1423 Summer Time?
 - How much will the tide fall between 1423 and LW?
 - What will be the clearance under the keel at LW?
13. On 13th August, if a boat which draws 1.3m anchors at Port Fraser at the time of HW(1553 Summer Time). What will be the clearance under the keel at LW if the depth when she anchors is 5.5m?
14. A yacht anchors in Namley Harbour at 1310 UT on 3rd November.
- What is the height of the tide when she anchors?
 - How much will the tide fall between 1310 and LW?
 - If the boat draws 1.6m. What is the minimum depth in which to anchor at 1310, if the skipper requires a clearance of 1.0m under the keel at LW?
15. What are the times in Summer Time and heights of HW and LW at Itchenham (page 52) on 10th June?
16. What are the times in Summer Time, and heights of HW and LW at Walton Bay (page 62) on 17th August?

Using the information from the previous 2 questions, work out the following.

17. What is the height of the tide at 1502 Summer time at Itchenham on 10th June?
18. When will the tide rise to 3.2m at Walton Bay on the afternoon of August 17th?

You will need to work the next question out from the beginning.

19. If a boat with a draught of 1.5m anchors outside Endal Marina(page 64) at 1422 Summer Time on 21st September.
- What will be the height of the tide at 1422?
 - What will be the fall of the tide between 1422 and LW?

- C) What will be the minimum depth in which to anchor at 1422 if a clearance of 1.5m is required at LW?
20. What are the times in Summer Time and heights of HW and LW at Port Rampton (page 60) on September 26th?
21. What is the height of the tide at 1837UT at Dunbarton (page 40) on 28th January?
22. What is the height of the tide at 0828 Summer Time at Suzy Bay Marina (page 44) on 3rd June?

Air Draught

On page 12 of the Training Almanac there is a table of tidal levels at the standard ports and also for secondary ports. This table includes the data from the tidal levels table on the chart but also for many other places on the charts.

23.

Use this table to answer the next question.

Chart 4C. What is the clearance under the bridge at leading to Blackmill Marina at MHWN? (Use Blackmill)

Working out the course to steer

Chart 3. Variation 7°W .

1. The position of the yacht by GPS is $45^{\circ}42.8'\text{N}06^{\circ}18.37'\text{W}$
What is the course to steer to reach the Quaker Safe Water buoy ($45^{\circ}40.7'\text{N}06^{\circ}13.81'\text{W}$), if the boat's speed is 3.9Kn and the tide is 180°T at 1.5Kn?
2. Starting from $45^{\circ}54.0'\text{N}06^{\circ}00.0'\text{W}$, what is the course to steer to reach the leading line at $45^{\circ}51.8'\text{N}05^{\circ}49.1'\text{W}$, if the boat's speed is 8.1Kn and the tide is 350°T at 1.9Kn?
3. In the previous two questions, calculate how long the passage will take.
4. The bearing and distance to the waypoint at the centre of the compass rose west of Slade Island is 170°T 12.4M.
 - A) From this position what is the course to steer to reach the Synka Buoy ($46^{\circ}10.57'\text{N}05^{\circ}53.37'\text{W}$) if the vessel's speed is 3.6kn and the tide is 016°T at 2.0kn?
 - B) What is the vessel's speed over the ground (SOG)?
 - C) How long will the passage take?
5. On 4th October, at 2213 Summer Time and starting from $45^{\circ}43.0'\text{N}05^{\circ}40.0'\text{W}$.
 - A) What is the course to steer to reach the Safe Water Buoy ($45^{\circ}40.8'\text{N}05^{\circ}48.4'\text{W}$), if the boat's speed is expected to be 6.9Kn?
 - B) What will be the ETA? Diamond Q.
6. On 24th May a vessel is in position $45^{\circ}57.7'\text{N}05^{\circ}40.00'\text{W}$ at 1346 Summer Time making 9.0kn. Diamond K.
 - A) What is the course to steer for a point 1.2M north of the Christopher Point Light House?
 - B) What will be the ETA?

7. On 25th April, at 2244 Summer Time a vessel is in position $45^{\circ}43.0'N$ $06^{\circ}20.0'W$. Use Diamond M.

A) What is the course to steer to $45^{\circ}52.0'N$ $06^{\circ}20.0'W$ if the predicted boat speed is 4.5Kn?

B) What is the ETA?

Chart 4. Variation = 7°W

8. On 22nd March, in thick fog, a vessel is in position $46^{\circ}17.2'N$ $05^{\circ}57.30'W$ at 1326UT.

A) What is the course to steer to reach the N Potta Buoy ($46^{\circ}16.2'N$ $05^{\circ}59.03'W$) if the boat speed is 4.6Kn and the leeway in a northerly wind of 10° ?

B) What is the ETA?

Answers to Charts

1. 46° 21.03' N 005° 44.21' W
46° 07.21' N 006° 15.02' W

2. Tidal diamond "E".
3. South Cardinal buoy, "Range Head" VQ(6)+LFI 10s.
4. Major light, Fl(3)10s 50m 10M.
5. Wreck swept by wire drag, clear to 14.5m below chart datum.

7. 009°T 0.8M.
8. 071°T 1.9M
9. 154°T 1.08M
10. 260°T 2.42M

11. International Maritime Boundary.
12. Spot height 230m above MHWS, Mount Slade.
13. 20m contour line, depth below chart datum.
14. Quality of the bottom, Sand and Shell.

Notes:

The quality of the bottom is important for anchoring, some materials such as rock or weed make anchoring very difficult, and you may prefer to find somewhere with a sand, or mud bottom. Also in the past, you could put something sticky on the lead line and bring up a sample; this may have helped you decide your position!

15. 45° 59.96'N 005° 54.34'W Tidal diamond "J".
16. 45° 55.72'N 006° 02.37'W Light obscured sector.

Answers to Variation and deviation

1. 2005 - 2006 = 1 year 1 X 8'E = 0° 8'E

$$7^{\circ} 15'W$$

$$\underline{-0^{\circ} 08'E}$$

7° 07'W in 2006 (rounded down to 7°W).

2. 070°M.

3. 030°M.

4. 337°M.

5. 004°M.

6. 357°M.

7. 028°T.

8. 355°T.

9. 010°T.

10. 010°T.

11. 358°T.

12. Transit 148°T

Variation 7°W

Magnetic 155°M

Compass 150°C

Deviation 5°E on a course of 150°C.

Answers to fixing

1. $46^{\circ} 13.27'N$ $006^{\circ} 18.43'W$
2. $46^{\circ} 23.83'N$ $005^{\circ} 53.03'W$
3. $45^{\circ} 47.29'N$ $005^{\circ} 43.51'W$
4. $46^{\circ} 23.64'N$ $005^{\circ} 55.09'W$
5. $46^{\circ} 24.15'N$ $006^{\circ} 15.18'W$
6. On the chart.
Identifiable.
Good angle of cut between the bearings.
Not too far away.
7. Transits.
8. The time.
The log reading.
9. If there is an error in one of the bearings you will get a large cocked hat.

DRs and EPs

1. DR = $45^{\circ} 42.95'N$ $006^{\circ} 20.14'W$
2. DR = $45^{\circ} 37.47'N$ $006^{\circ} 24.19'W$
3. EP = $46^{\circ} 16.33'N$ $006^{\circ} 23.23'W$
4. A EP = $46^{\circ} 03.67' N$ $006^{\circ} 02.43'W$
B $042^{\circ}T$
C 7.17M
5. EP = $46^{\circ} 10.21'N$ $005^{\circ} 53.97'W$
Course steered $050^{\circ}M$
Distance travelled 5.2M.
6. $46^{\circ} 15.75'N$ $005^{\circ} 54.34'W$
7. $45^{\circ} 40.06'N$ $006^{\circ} 23.870'W$
8.
1st Course steered $307^{\circ}M + 5^{\circ}$ leeway -7° variation = $305^{\circ}T$
2nd Course steered $205^{\circ}M - 5^{\circ}$ leeway $- 7^{\circ}$ variation = $193^{\circ}T$
9.
A $46^{\circ} 00.57'N$ $005^{\circ} 51.17'W$. Where vessel reaches TSS.
B 4.35M. Distance travelled by the log.

Tidal streams

1. Range = 4.9m, therefore a spring tide.
2. Diamond B tidal stream at HW = 186°T 1.2kn.
3. Diamond B tidal stream at HW-3 = 154°T 2.0kn.

4. July 14
Victoria Summer Time
HW 0137 5.6
LW 0756 0.7
Range is 4.9m therefore a spring tide.
0337 is HW+2 hours.

Diamond F = 282°T 1.7Kn.

5. January 23
Victoria Standard Time
HW 1728 4.5
LW 2349 2.0
Range is 2.5m therefore a neap tide.
2028 is HW+3 hours.

Diamond N = 309°T 1.4Kn.

6. April 26
Victoria summer time
HW 2214 5.5 25 April
LW 0414 0.6 26 April
Range is 4.9m therefore a spring tide.

2144

HW

2244

HW+1

2344

HW+2

0044

HW+3

0144

Diamond C = 185°T 1.9kn.

7. April 7th
 Victoria summer time
 LW 0137 2.3
 HW 0753 4.5
 Range is 2.2m therefore a neap tide.
 0323
 HW-4 Diamond H = 180° T 0.5kn.
 0423
 HW-3
 0523
 HW-2
 0623
 HW-1
 0723
 HW
 0823
8. HW Victoria = 1138 summer time
 Between 0518 Summer Time and 1308 Summer Time.
 This sort of question is open to some interpretation, if you were short of time to make the passage you would leave as early as possible.
9.

1 st hour	1.0M
2 nd hour	1.7M
3 rd hour	2.8M
4 th hour	3.4M
5 th hour	3.3M
6 th hour	3.1M
7 th hour	2.2M
8 th hour	1.9M
Total	19.4M approximately.
10.
 HW+5 Diamond A = 112° T 2.0Kn or 1.0Kn.
 The tide stream for a range of tide of 3.6m = 112° T 1.5kn.

11.

Victoria summer time

HW 0141 6.0

LW 0756 0.5

Range = 5.5m, greater than average spring tide.

0541 = HW+4 hours

Diamond B = $342^{\circ}T$ 3.9kn or 2.0kn.

Extrapolate for range = 4.4kn.

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EPs with tides

1.
24 May
Victoria Summer Time
HW 0916 5.5
LW 1534 0.6
Range = 4.9m, therefore a spring tide.

EP = 45°40.85'N 06°20.94'W

	0846
HW	0946
HW+1	1046
HW+2	1146
HW+3	1246
HW+4	Diamond R 349°T 2.0kn.
	1346

2.
12 December
Victoria UT
LW 1025 2.4
HW 1637 4.7
Range = 2.3m, therefore a neap tide.

EP = 45°41.20'N 06° 20.62'W.

	1407
HW-2	Diamond A 179°T 1.4kn.
	1507
HW-1	1607
HW	1707

3.
3 May
Victoria Summer Time
HW 1609 4.4
LW 2211 2.1
Range = 2.3, therefore a neap tide.

EP = 45°16.45'N 06°15.56'W.

	1539
HW	1639
HW+1	1739
HW+2	1839
HW+3	1939
HW+4	Diamond E 306°T 1.8kn.
	2039

4.
 10 August
 Victoria Summer Time
 HW 1220 5.6
 LW 1820 0.6
 Range = 5.0m, therefore a spring tide.

Course = 145°M
 Leeway = - 5°
 Variation = - 7°W
 Course = 133°T

EP = 46°11.9'N 06°13.64W.

1150
HW
1250
HW+1
1350
HW+2
1450
HW+3 Diamond E 307°T 2.8kn
1550

5.
 2 August
 Victoria Summer Time
 LW 2239 2.1
 HW 0453 4.5
 Range = 2.4m, therefore a neap tide.

Course = 081°M
 Leeway = + 5°
 Variation = - 7°W
 Course = 079°T

Course = 337°M
 Leeway = - 5°
 Variation = - 7°W
 Course = 325°T

EP = 45°53.86N 05°59.16'W.

0323
HW-1 Diamond L 325°T 0.6kn
0423
HW
0523

6.

24 May

Victoria Summer Time

HW 0916 5.5

LW 1534 0.6

Range = 4.9m, therefore a spring tide.

EP = 46°08.16'N 05° 51.00'W

	0846
HW	0946
HW+1	1046
HW+2	1146
HW+3	1246
HW+4	Diamond D 210° 1.9kn
	1346 0.8M in half hour.

7.

31 January

Victoria UT

HW 1159 6.0

LW 1816 0.3

Range = 5.7m, therefore a greater than spring tide.

A) Vessel reaches the TSS at 46°00.96'N 05° 56.60'W

B) Vessel travels 4.3M by the log.

	1129
HW	1229
HW+1	1329
HW+2	1429
HW+3	1529
HW+4	1629
HW+5	Diamond D 296° 3.6kn
	1729 Extrapolate = 4.2kn.

8.

22 April

Victoria Summer Time

HW 0546 4.5

LW 1312 1.6

Range = 2.9m therefore Not spring or neap.

EP = 46°20.60'N 06° 17.70'W

	0516
HW	0616
HW+1	0716
HW+2	0816
HW+3	Diamond B 338° 3.7kn/1.8kn
	0916
Interpolate = 2.2kn.	

Answers to tidal heights

1. 3 December
Victoria Standard time
HW 0907 5.7
LW 1510 0.8
Range = 4.9m therefore a spring tide.

1137 is HW + 2 hours 30 minutes.
Height of tide at 1137 is = 3.8m.
2. 20 May
Port Fraser Summer time
HW 0620 3.5
LW 1223 1.2
Range = 2.3m therefore a neap tide.

0930 is HW + 3 hours 10 minutes.
Height of tide at 0930 is = 2.3m.
3. 6 September
Namley Harbour Summer time
LW 0529 0.8
HW 1201 3.8
Range = 3.0m therefore a midway tide.

0941 is HW - 2 hours 20 minutes.
Height of tide at 0941 is = 2.75m.
4. 7 October
Colville Summer Time
HW 0109 5.0
LW 0708 0.7
Range = 4.3m therefore a spring tide.

0329 is HW + 2 hours 20 minutes.
The height of the tide at 0329 is = 3.3m.

5. 15 June
Port Fitzroy Summer Time
LW 1045 1.0
HW 1701 6.0
Range = 5.0m therefore midway tide.
- 1246 is HW - 4 hours 15 minutes.
The height of the tide at 1246 is = 2.2m.
6. 9 August
Hamilton Sound Summer Time
HW 1357 5.8
LW 2016 0.5
Range = 5.3m therefore a spring tide.
- The tide will fall to 3.0m at HW+ 2 hours 50 minutes 1647
Summer Time.
7. 14 October
Port Fraser Summer Time
LW 1240 1.1
HW 1904 3.4
Range = 2.3m therefore a neap tide.
- The tide will fall to 2.0m at HW- 3 hours 25 minutes 1539
Summer Time.
8. 14 October
Colville Summer Time
LW 1258 1.4
HW 1917 3.9
Range = 2.5 m therefore a neap tide.
- $1.3\text{m} + 1.0\text{m} + 0.8\text{m} = 3.1\text{m}$
The tide will rise to 3.1m at HW- 2 hours 15 minutes 1702
Summer Time.
9. 25 May
Namley Harbour Summer time
LW 0509 0.2
HW 1139 4.0
Range = 3.8m therefore a spring tide.

$$1.4 + 0.9 + 0.5 = 2.8\text{m.}$$

The tide will rise to 2.8m at HW- 2 hours 0939 Summer time.

10. 28 December
 Port Fitzroy Standard time
 LW 0027 1.4
 HW 0657 5.5
 Range = 4.1m therefore a neap tide.

Draught	1.5
Clearance	+1.0
<u>Charted depth</u>	<u>-0.4</u>
Total	2.1m

The tide will rise to 2.1m at HW- 4 hours 35 minutes 0222 Standard time.

11. Current height of the tide 2.6m
Low water 0.8m
 Fall of tide 1.8m

Current depth	4.0m
<u>Draught</u>	<u>2.0m</u>
Current clearance	2.0m
<u>Fall of tide</u>	<u>1.8m</u>
Clearance at low water	0.2m

12. A) Clearance at 1423 UT = 4.0m
 B) 11 August
 Victoria Summer time
 HW 1303 5.6
 LW 1903 0.6
 Range = 5.0m therefore a spring tide.
 Height of tide at 1423 = 5.0m.

- C) Height of the tide at 1423 = 5.0m
LW = 0.6m
 Fall of tide = 4.4m
 D) Clearance at 1423 = 4.0m
Fall of tide = 4.4m
 Clearance at LW = -0.4m!

13.	HW	4.2m
	<u>LW</u>	<u>0.3m</u>
	Fall	3.9m

Depth at HW	5.5m
<u>Draught</u>	<u>1.3m</u>
Clearance at HW	4.2m
<u>Fall of tide</u>	<u>3.9m</u>
Clearance at LW	0.3m

14. 3 November
 Namley Harbour UT
 HW 1000 3.9
 LW 1606 0.3
 Range 3.6m therefore a spring tide.

A) Height of tide at 1310 = 1.75m

B)	Tide at 1310	1.75m
	<u>LW</u>	<u>0.30m</u>
	Fall of tide	1.45m

C)	Fall of tide	1.45m
	Draught	1.60m
	<u>Clearance</u>	<u>1.00m</u>
	Depth in which to anchor at 1310	4.05m

15.	10 June				
	Namley UT	Standard	Itchenham	Summer	
	LW 0443 0.6	+0000	-0.1	0443 0.5	0543
	HW 1122 3.8	+0020	-0.2	1142 3.6	1242
	LW 1704 0.6	+0000	-0.1	1704 0.5	1804
	HW 2336 3.7	+0020	-0.2	2356 3.5	0056

Range = 3.2m therefore nearly a spring tide.

16.	17 August				
	Port Fraser UT	Standard	Walton Bay	Summer	
	HW 0614 3.5	-0020	+0.1	0554 3.6	0653
	LW 1217 1.2	-0024	+0.8	1153 2.0	1253
	HW 1842 3.6	-0020	+0.1	1822 3.7	1922

Range = 2.3m therefore a neap tide.

17. 1502 = HW +2 hours 20 minutes.
Height of tide at 1502 = 2.3m.

18. Tide will rise to 3.2m at HW - 2 hours 10 minutes = 1712
Summer Time.

19. 21 September

Port Fraser UT		Endal Marina UT	Summer
HW 1144 4.1 -0042	+0.4	1102 4.5	1202
LW 1757 0.5 -0035	0.0	1722 0.5	1822

Range = 3.6m therefore a spring tide.

A) Height of tide at 1422 = 2.8m

B) Height of tide at 0853 = 2.8m
LW = 0.5m
 Fall of tide = 2.3m

C) Fall of tide = 2.3m
 Draught = 1.5m
Clearance = 1.5m
 Minimum depth to anchor 5.3m

20. 26 September

Namley UT		Port Rampton UT	BST
HW 0159 3.7 -0029	+0.3	0130 4.0	0230
LW 0742 0.7 -0008	+0.5	0734 1.2	0834
HW 1409 3.8 -0028	+0.4	1441 4.2	1541
LW 1958 0.7 -0008	+0.5	1950 1.2	2050

21. 28 January

Dunbarton UT
 LW 1617 0.8
 HW 2300 4.2

Range = 3.4m therefore a spring tide.

Height of tide at 1837UT = 1.9m.

22. 3 June

Dunbarton UT		Suzy Bay Marina UT	Summer
HW 0436 3.4 +0003	-0.1	0439 3.3	0539
LW 1003 1.7 +0005	-0.2	1008 1.5	1108

Range = 1.7m therefore a spring tide.

Height of tide at 0828 Summer time = 2.7m.

23.

HAT Blackmill 6.8m

- MHWN Blackmill 5.2m

Height of tide below HAT 1.6m

+ Clearance under bridge 15.0m

Clearance 16.6m

Answers to course to steer

1.

Course to steer 112°M .

2.

Course to steer 125°M .

3.

(1) Distance = 3.85M
Speed = 4.55kn
 $T=D/S$ = 0.85 hours
X60 = 51 minutes.

(2) Distance = 7.9M
Speed = 7.1kn
 $T=D/S$ = 1.11 hours
X60 = 1 hour 7 minutes.

4.

A) Course to steer = 055°M

B) Speed = 5.38kn

C)

Distance = 5.72M
Speed = 5.38kn
 $T=D/S$ = 1.06 hours
X60 = 1 hour 4 minutes

5.

4th October

Victoria Summer Time

HW 2143 5.6

LW 0359 0.7

Range = 4.9m, therefore a spring tide.

2113

HW

2213

HW+1 Diamond Q = 169°T 2.0kn.

2313

Course to steer = 273°M

Distance = 6.29M
Speed = 6.92kn
 $T=D/S$ = 0.91 hours

X60 = 54 minutes = 2307 Summer Time.

6.

24 May

Victoria Summer Time

HW 0916 5.5

LW 1534 0.6

Range 4.9m,
therefore a spring tide.

Predict half hour for passage.

A) Course to steer = 234°M

Distance made good = 5.21M

Ground speed = 10.42kn.

Distance = 5.5M

Speed = 10.42kn

T=D/S = 0.52 hours

X60 = 32 minutes

B) ETA = 1418 Summer Time.

0846
HW
0946
HW+1
1046
HW+2
1146
HW+3
1246
HW+4
1346
HW+5 Diamond K = 298°T 3.3kn/1.65M
1436

7.

25th April

Victoria Summer Time

HW 2214 5.5

LW 0414 0.6

Range = 4.9m, therefore a spring tide.

Predict 2 hours for passage.

A) Course to steer = 010°M

B) Distance = 9.05M

Speed = 4.25kn

T=D/S = 2.13 hours

= 2 hours 8 minutes

B) ETA = 0052 Summer Time.

2144
HW
2244
HW+1 Diamond M = 186°T 1.2kn.
2344
HW+2 Diamond M = 331°T 0.8kn.
0044

8.
 22 March
 Victoria UT
 LW 0936 2.0
 HW 1556 4.4
 Range = 2.4m therefore a neap tide.

Water track = 212°T
Leeway = +10°
 Course to steer = 222°T
Variation = +7°W
 Course to steer = 229°M

Distance = 1.7M
 Speed = 4.0kn
 T=D/S = 0.42 hours
 = 25 minutes = 1351 UT.

	1326
HW-2	Diamond C = 332°T 1.7kn.
	1426
HW-1	
	1526
HW	
	1626