

Axe Yacht Club

YM Shorebased Course

CTS Examples

Use RYA 3 and the Training Almanac. Take Magnetic Variation to be 6°W.

Question 1

At 0950 on Saturday 10 August, a yacht is alongside the Namley Bar beacon (Fl(2)R 10s). The skipper has placed a waypoint at $46^{\circ} 21.0'N / 005^{\circ} 55.2'W$.

- a. What will be the compass course to steer for this waypoint if the anticipated boat speed is 6 knots and the skipper expects to make 10° leeway in the NNW wind?
- b. What will be the ETA at the waypoint?

Question 2

A powerboat leaves Namley Harbour after the yacht and is at the Bar beacon at 1020. The skipper is making for the same way point. The powerboat expects to make 9 knots through the water and 5° leeway.

- a. What will be the compass CTS for the powerboat?
- b. What is the ETA for the powerboat at the waypoint?

Answers

Question 1

a. Approx distance to run is 6nm => draw a one hour triangle.

Tidal stream:

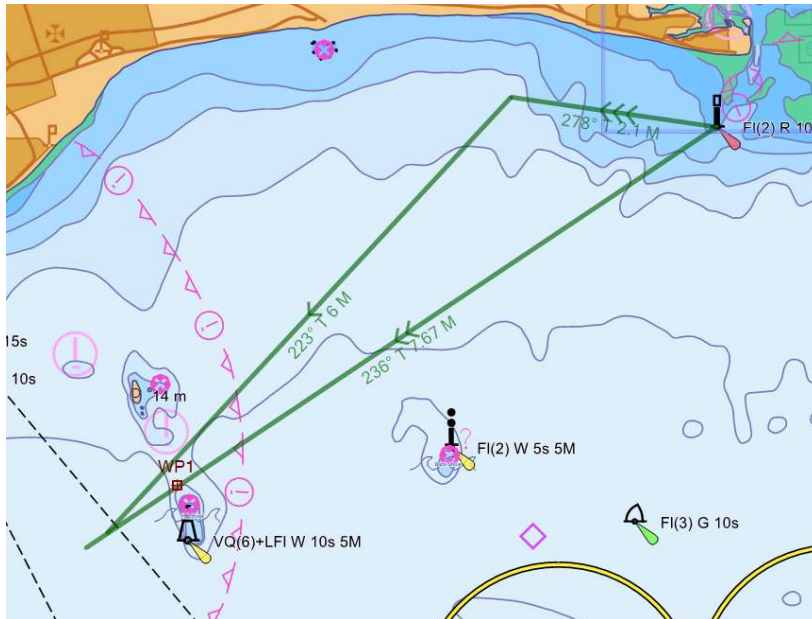
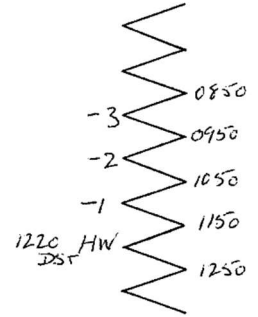
Sat 10 August – Victoria

HW 1120UT / 1220 DST 5.6m
=> Range = 5.1m

LW 0509UT / 0609DST 0.5m

0950 – 1050 DST = HW-2

<>A HW-2 = 278° 2.0 Sp / 1.1 Np. Extrapolated for the range of 5.1m = 2.1kn



From the plot:

CTS = 223T

T	V	M	D	C
223	+6W	229		
L/W	+10	239	+1W	230

Applying L/Way need to turn into the NNW wind.

CTS to helm = 230C

b. SOG = 7.67kn

Time = (Distance to Run ÷ Speed over the ground) x 60 minutes

$$= (6.5 \div 7.7) \times 60 = 51 \text{ mins}$$

ETA = 0950 + 0051 = 1041 DST

Question 2

Approximate time = 6.5 / 9 = 43 mins

Drawing a one-hour triangle, we need 30mins of tide from HW-2 and 30mins of tide for HW-1.

HW-2 from previous working 30 mins = 278° 1.05nm

HW-1 (<>A) = 274° 1.7Sp / 0.8Np =>
extrapolated for 5.1m range = 1.8kn
=> 0.9nm for 30 mins.

From the plot:

CTS = 229T

V +6W

M 235

L/W +5

Hdg(M) 240

D +2W

C 242C

Allowing for 5° L/W, course to the helm is 242C.

SOG = 10.4kn

Time = $(6.5 \div 10.4) \times 60 = 37.5$ mins

ETA = 1020 + 0038 = 1058 DST

