

# Fundamental Navigation Exercises

## Major Exercise

### Synopsis

It's the long weekend

- On Saturday morning we're sailing from our home port of Royal Brighton Yacht Club (RBYC) o Blairgowrie Yacht Squadron (BYS) – where we intend to stay the night
- On Sunday we're going to sail over to Queenscliff Cruising Yacht Club (QCYC) and spend the night
- On Monday we're sailing back to our home port
- Your yacht is 13.8m long, 3.0m draft, 22.5m air draft

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- Create a route for each day
  - Describe any potential dangers (red zones) for each leg
  - Are there any time constraints – ie tide gates
  - What are the tidal details for the Sunday morning at The beginning of the Sorrento Channel?

## Exercises

### Exercise 1

- Plot the following three positions, what is located there?
- 37 56.9S      144 55.6E
- 38 06.4S      144 44.2E
- 38 11.6S      144 45.4E
- Take turns to pretend to radio your position in an ORCV race sked, pick one of the above.
- What is the distance between points b and c?
- What is the Lat/Long of Point Lonsdale lighthouse?

### Exercise 2

- Your vessel draws 3.0m. At 4pm Friday, is it safe to travel from Blairgowrie to Portsea by the Sorrento channel?
- Navionics says to steer 315 degrees True, what is that Magnetic?
- You have measured an angle from you to Fawcner beacon as 40 degrees magnetic, what is that True?
- It is night, you are up the northern end of the bay, you see a light near you. Where is it on the chart?
  - Flashing Yellow once every 4 seconds
  - Flashing Yellow 3 times every 10 seconds

### Exercise 3

- What is the bearing to steer by, from SYC to West Channel Pile?
- Using a hand compass you have taken the following bearings. Where are you?
- Fawcner Beacon 2 degrees Magnetic
- Prince George Light 263 degrees Magnetic
- Arthurs Seat 153 degrees Magnetic

#### Exercise 4

- You passed Fawkner Beacon at 10am when your GPS stopped working. You keep sailing on a reach when after 2hrs fog sets in. You weren't really keeping track
- The course you have steered, based on the magnetic compass was 168 Deg Magnetic
- The wind is strong, from the West (270 Deg True)
- You expect around 5 degrees leeway
- Your boat has been doing 8 knots
- Where are you?
- (Hint for those who struggle remembering high school maths  $8 \tan 5 = 0.7$ )