

## 2020 Intermediate Navigation Course

### Session 2 Exercise

#### **Scenario**

You own a yacht, a Moorea 45 you built yourself called “Rod’s revenge” (15m LOA, 2.5m draft, 22m air draft). It is currently berthed at Manly Harbour in Brisbane (27 27.4s 153 11.4e). It is a nice yacht, it will sail comfortably at 7 knots in moderate wind and will also motor at 7 knots (consuming 4lt/hr) thanks to it’s two speed propeller.

Your ultimate destination is Urangan Harbour in Hervey Bay (25 17.6s 152 54.7e), via Mooloolaba (26 40.9s 153 07.7e) and Garry’s anchorage inside Fraser Island (25 37.7s 152 58.4e).

For now, you just want to plan the first leg, a route to Mooloolaba where you will stay at least one night. You will be doing the trip with your partner and a couple of friends, there are no time pressures. They are all capable sailors but would rather enjoy the trip than sail in heavy weather. If need be you are all happy to motor.

You competed in last year’s Brisbane to Keppel yacht race on a friend’s boat and still have the course in your GPS. The Sailing Instructions which contain the course can be found at [https://www.rqys.com.au/wp-content/uploads/2020/07/B2K2020\\_SI\\_amended-28.07.20.pdf](https://www.rqys.com.au/wp-content/uploads/2020/07/B2K2020_SI_amended-28.07.20.pdf). Those marks provide safe passage, at least to the NW Fairway Mark.

Consider the weather forecast but ignore tidal flows, assume it is an average 2knt Southerly current.

You plan to leave on Saturday morning, if possible.

#### **Questions to answer**

1. Set up in your chosen navigation software the waypoints and route. Ensure it is a safe journey. Provide a screen shot/image of this route and a summary of bearings and distances.
  - a. If you want to, create the rest of the route too but that isn’t necessary for this exercise. Consider currents and tide in behind Fraser Island if you do.
2. What is the course to steer from NW4 channel beacon to the NW Fairway Mark
3. What is the distance to Mooloolaba and how much fuel will you likely use ? How much fuel should you take ?
4. What is your ETA at Mooloolaba ? What is the estimated tide height at the bar entrance ? Will this affect your planned river entry ?

#### **Resources**

- For details of navigating Moreton bay and Fraser Island see <https://www.msq.qld.gov.au/Boating-maps>
- For Sunrise and Sunset times see <https://sunrisesunset.willyweather.com.au/qld/sunshine-coast/mooloolaba.html>
- For tides see <http://www.bom.gov.au/australia/tides/#!/qld-mooloolaba>
- River entrance Notice to Mariners <http://www.mysailing.com.au/cruising/mooloolah-river-bar-update-be-aware>