

### Course Setting Guidelines

#### 1. Aim of these Guidelines

1. These guidelines are provided to assist those duty crews who are unsure of how to set a course when they are on duty each season.
2. The guidelines are suggestions on how to sequence the buoy / mark setting to obtain a satisfactory course of the required length / duration.

#### 2. Course Requirements

1. Please discuss the location of the course and marks with the club captain prior to leaving shore.
2. The desired duration of the course is basically one that will take approximately 90~100 minutes.
3. The finish line is between the flagpole on the shoreline in front of the club house and a red cherry buoy placed approximately 150 metres off shore.
4. Buoy X should be located between Gooseberry Island and the shoreline, and laid approximately 400 metres from the finish line. (Note ensure there is sufficient depth around this mark (approximately 2 metres – use the oar to check).
5. The nominal length of the course is based on a windward leg of 2 km.
6. The course configuration is based on:
  - i. For monohulls and small catamarans on a traditional Olympic style layout – (start → triangle – >double to windward / return ( sausage) – >triangle –> work to top mark – >to mark X –> to finish line) or a variation for smaller monohulls / juniors
  - ii. For large catamarans the course is several windward / leeward legs → top mark → to mark X – >to finish line.
7. The preferred course hand is for port hand rounding of marks as this reduces the potential for collisions and / or protests. If a starboard hand course is going to be set please discuss with the club captain.
8. To facilitate good reaching legs, the wing marks for :
  - i. Monohulls should be set at approximately 45 degrees to the working leg i.e. course is a right angled triangle
  - ii. Catamarans should be set at 60 degrees to the working leg i.e. course is an isosceles triangle
  - iii. The catamaran wing mark should be approximately 250 metres further out than the monohull wing mark (based on a 2 km working leg).
9. There are several taped lines on the top of the console of the duty boat. These are set at 90 degrees, 60 degrees, 45 degrees and 0 degrees (Red for port hand and green for starboard hand courses) to provide assistance in determining the right angles. (– yet to be fitted to boat console).
10. A compass is also a valuable aid (– yet to be fitted to boat).

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### 3. Course Setting

1. The course position is restricted by
  - i. The shallows on the eastern shoreline as defined by the navigation markers / poles- ensure that there is approximately 50 metres between the mark and the shallows.
  - ii. The shallows on the western shoreline as defined by the navigation markers / poles - ensure that there is approximately 50 metres between the mark and the shallows. Do not lay marks west of the transit line through western water reservoirs on Berkeley Hill and the eastern tip of Gooseberry Island. Again check the depth around the mark and 50 metres to the west, is at least 2 metres (use oar to check depth).
  - iii. The northern shoreline.
  - iv. Gooseberry Island
  - v. Reef off Dixies.
2. The finish line should be set first.
3. Mark X should be set next, making sure that the anchor is holding and depth is at least 2 metres.
4. For courses which have a wind ward / leeward leg direction from the:
  - i. W – NW – N – NE – E it is best to lay the top / windward mark first
  - ii. SE – S – SW it is best to lay the bottom / leeward mark first
  - iii. This allows you to determine the best position for the course and to maximise the opportunity of a full sized course.
  - iv. Lay the first mark making sure that the anchor is holding.
5. The windward and leeward marks should be set before the wing marks.
6. To determine the wind direction, use a dry numeral pennant held above you head. This will indicate the direction from your position to the next mark to be laid. Pick out a landmark on the shoreline for this transit line. After determining the windward leg direction make an assessment of where the monohull wing mark should be positioned for a 45 degrees reaching leg. Pick out a land mark on the shoreline for this transit line.
7. Travel along the windward / leeward transit line until you are approximately 2 km from the previous laid mark. (Majority of the course directions will mean that you are close to the shallow water / shorelines for the 2 km length). Check the wind direction again using the numeral pennant and adjust your position in relation to the previous laid mark and the wind position. If the wind is swinging / oscillating set the mark in the mid oscillation position. Set the second mark making sure that the anchor is holding.
8. Check the wind direction again and the position of the laid buoys, adjust if necessary. Whilst checking wind direction, make an assessment of where the monohull wing mark should be positioned for the second 45 degrees reaching leg. Pick out a land mark on the shoreline for this transit line.

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9. Travel along the working leg until you are half way along the leg (by eye), turn 90 degrees to the working leg in the required direction (port or starboard course). Continue in this direction until you cross one of the reaching leg transits by checking previously laid marks and the selected landmark on the shore.
10. Check your position in relation to the second reaching leg transit, and adjust your position by travelling along the first reaching leg transit line until you are on the second reaching leg transit line (i.e. the intersection of both the reaching leg transit line). Check that the angle between the two reaching transit lines is approximately 90 degrees. Adjust if necessary and set the monohull wing mark making sure that the anchor is holding.
11. To set the catamaran mark check the wind direction using the numeral pennant and select a landmark on the shore line at 90 degrees to the wind and the monohull wing mark. Then continue to travel along the transit line away from & outside of the monohull wing mark by approximately 250 metres. Check the transit lines to windward and leeward marks and that the angles between the two reaching legs is approximately 60 degrees, and adjust as necessary, then set the catamaran mark making sure that the anchor is holding.
12. Return to the start area, recheck wind direction and adjust leeward mark as necessary. Determine a transit line perpendicular to the wind direction through the leeward mark and a land mark on the shoreline, travel along this transit line for approximately 100 metres, then turn to port and travel upwind approximately 20 metres and drop the boat anchor letting out approximately 15 metres of anchor rope, and secure anchor rope. (If the wind is greater than 10 ~12 knots & large chop it may be better to let out more anchor rope). Allow 5 minutes for the anchor to take hold and then adjust the boats position by letting out /retrieving the anchor rope until you are on the desired start transit line. Maintain a continual check of the start transit line to ensure that you are not drifting – note the boat swings on the anchor line, so make assessment at mid oscillation. (Do not be too hasty on changing start line only if there is a significant drift evident!).
13. The start line should be set with a port hand bias Of 80~85 degrees. This will give you better view of the start line for premature starters and also decrease the chance of port hand starters leading to collisions and / or protests.
14. You should now be in a position to enter the start sequence – good luck!

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### Course Configuration Diagram

