

# FALMOUTH AREA YARDSTICK

## PoFSA HANDICAPPING POLICY 2017

### GENERAL

1. The aim of this policy is to assist the achievement of fair racing as required by the Racing Rules of Sailing Rule 2, by setting a boat's handicap in a fair, open and transparent manner.
2. Boats competing in PoFSA racing will be allocated a FAY handicap number using the process shown in paragraphs 5 to 9 below.
3. A boat's FAY handicap number may be used by individual clubs at their discretion.

### DOCUMENTATION

4. All entrants must complete & submit a PoFSA Handicap Form or similar club form before their first race of the season. If there is a significant change to that data during the season a new form should be submitted.

### PROCESS

5. A boat's raw number will be generated using the formulae in paragraphs 10 to 12 below, except that light displacement boats (those with a high SA/D ratio) or boats whose LOA is significantly greater than their LWL will be allocated a FAY handicap number using the formula and other pertinent data. This raw number will then be adjusted to reflect the boats engine and propeller configuration, boat shape and rig, using the tables in paragraphs 13 and 14. Reference may also be made to other commonly used handicap systems. The number so calculated shall be the boat's FAY handicap number for PoFSA events & as the basic number for club events.
6. Failure to complete the Handicap Form may result in a temporary handicap number being issued until the necessary boat data has been obtained and checked, and the necessary calculations have been completed. Late entries may also be allocated a temporary handicap number, until the appropriate calculations can be completed.
7. A temporary handicap number shall not be altered; any results using this number will stand and will not be altered retrospectively.
8. Queries concerning individual handicaps shall be made in writing to the PoFSA Handicap Committee.
9. At the discretion of the relevant Organising Committee the boats FAY handicap number may be used at other events in the area

### FORMULAE

10. Fin-keeled boats will be issued a handicap number using the following formula:-

$$W_{fin} = k_f(2091 - 407d + 86d^2 - 30.5 * LWL - 59.6 (SA/LWL^2) - 810 SA^{1/3} / D^{1/4})$$

where, for flat single keels  $k_f = 1$ , and for long keels  $k_f = 0.98$ ;  
for non-flat keels (bulbs, winged, etc),  $k_f = 1 - 0.003 * k_g$  and  $k_g$  ranges from 1

for a slight flare or bulb to 5 for a winged keel.

11. Bilge-keeled boats will be issued a handicap number using the following formula:-

$$W_{\text{bilge}} = k_f (2211 - 1389d + 431d^2 - 137 \cdot B/LWL - 54.9 \cdot LWL^{1/2} + 455 \cdot SA/D^{2/3})$$

where for twin bilge keels,  $k_f = 1$ ; and for triple bilge keels,  $k_f = 1.01$ .

12. In both formulae,  $d$  = draft,  $B$  = beam,  $LWL$  = waterline length,  $SA$  = total sail area (upwind sails only, largest sail area possible),  $D$  = displacement empty.

### **ADJUSTMENTS RELATED TO RIG, ENGINE AND BOAT SHAPE**

13. The formula assumes a boat has a two-blade fixed propeller and a conventional spinnaker.

14. Raw numbers will be adjusted to reflect declared engine, prop and sail configurations, using the table below:

#### **Engine related**

2 blade fixed propeller; 0%

3 blade fixed propeller; plus 2%

Folding propeller; minus 1%

Outboard (able to be lifted clear of water); minus 2%

#### **Rig related**

No use of conventional spinnaker or other downwind sail; plus 4%

Use of asymmetric spinnaker; plus 2%

Twin mast ketch; plus 3%

In mast reefing; plus 2%

15. The handicapping committee may make an adjustment for boats with significant overhangs. In general, for such boats  $LWL$  in the formulae in paragraphs 10 and 11 above will be replaced by  $LWL + (LOA - LWL) / 2$ , where  $LOA$  = length overall and  $LWL$  = waterline length.

16. Lightweight boats. The  $FAY$  number as calculated may be adjusted by reference to historic and other data as appropriate.

### **OTHER HANDICAPPING SYSTEMS**

17. Reference may be made to other handicapping systems, in order to ensure that this  $FAY$  handicapping system remains normalised and the resulting handicaps are fair to all boats.

**PoFSA thanks Professor Linda Wolstenholme (Cass Business School and Emsworth Slipper SC) for her kind permission to use her handicap models.**