AUSTRALIAN CLASS BASED HANDICAP (CBH) RATING SYSTEM

FOR TRAILABLE YACHTS AND SPORTS BOATS

Date: July 2022
Version: 1.2
To be reviewed: July 2023

In 2019, Australian Sailing undertook a review of the National Trailable Yacht & Sports Boat Committee and its Terms of Reference. The outcome of this survey led to a review of the handicapping procedure and the creation of a more inclusive and timely method of producing a Class Based Handicap. The Trailable Yacht & Sports Boat Rule has now become the Australian Trailable Yacht & Sports Boat Rating System and will be administered by the Australian Sailing Rating Office.

This Rating System is intended to:

- Support Australian Sailing in its work to promote Trailable Yacht and Sports Boat racing activities within the states and territories and at national level.
- Allow Trailable Yacht and Sports Boat owners the ability to gain a new CBH at any time of the year.
- Ensure transparency across the rating system

1.0 OBJECTIVE:

1.01 The objective of the Australian CBH Rating System hereinafter called "the Rating System", is to provide a national system for even and fair racing on handicap in a mixed fleet of Trailable Yachts and/or Sports Boats, resulting in racing success being primarily determined by the skills of the crew.

1.02 The CBHs published on the Australian Sailing Website are regarded as the National CBH of any Class or One of a Kind (OAK), Trailable Yacht or Sports Boat. These CBHs shall be used for the Australian Sailing Trailable Yacht and Sport Boat National Championships, and are recommended for club racing, State Championships and other events.

2.0 DEFINITIONS:

2.01 **Class Based Handicap:**
The Class Based Handicap (CBH) is a calculated rating applicable to an individual Trailable Yacht or Sports Boat, or a class of Trailable Yachts or Sports Boats, to achieve the objective at Section 1 when sailing in a mixed fleet.

2.02 **Trailable Yacht or Sports Boat:**
For this Rating System, a **Trailable Yacht** or **Sports Boat** is a monohull, ballasted yacht with a retractable keel and rudder, being of 9.40 metres LOA or less. which can be transported on the road on the same trailer used to launch and retrieve it without the assistance of external equipment or detachment from the towing vehicle and without requiring a special road permit.
A **Trailable Yacht** has a displacement type hull which displaces a body of water equal to the weight of the boat. As a guide, the maximum speed of any displacement hull is governed by a simple formula, Hull speed in knots equals 1.34 times the square root of the waterline length in feet; (HS = 1.34 x √LWL).

A **Sports Boat** has a planing type hull which initially displaces an amount of water equal to the weight of the boat. At a suitable wind speed, the sails will provide sufficient power to increase the displacement hull speed to a value which enables the hull to produce hydrodynamic lift, and the hull will transition to the planing mode.

2.03 **Standard Trailable Yacht:**
A Standard Trailable Yacht is a displacement type boat having a cabin of solid construction enclosing at least two functional berths. The cabin shall have minimum headroom measured vertically and continuously over the total area of one square metre of the cabin sole with hatches, pop tops etc., closed off.

- For craft less than 6.00 m LOA - 0.90 m
- For craft of 6.00 m LOA or longer - 1.05 m

Standard Sports Boat:
A Standard Sports Boat is a type of boat capable of planing, having a cabin of solid construction enclosing at least two functional berths. The cabin shall have minimum headroom measured vertically and continuously over the total area of one square metre of the cabin sole with hatches, pop tops etc closed off.

- For craft less than 6.00 m LOA - 0.90 m
- For craft of 6.00 m LOA or longer - 1.05 m

An **Open Trailable Yacht** is a displacement type boat that does not necessarily conform to the requirements for a Standard Trailable Yacht or Standard Sports Boat. There shall be a cockpit and provision for stowage of sails, equipment and crew effects below deck, except that Berths are not required.

An **Open Sports Boat** is a type of boat capable of planing that does not necessarily conform to the requirements for a Standard Trailable Yacht or Standard Sports Boat. There shall be a cockpit and provision for stowage of sails, equipment and crew effects below deck, except that Berths are not required.

3.0 GENERAL:

3.01 The Rating System shall be used in conjunction with the Racing Rules of Sailing and the rules of individual class associations. In the event of a conflict, interpretation of the Rating System and the RRS is the responsibility of Australian Sailing to ensure the intention of fair and even racing is upheld.

3.02 It is not the purpose of this Rating System to restrict any individual Yacht Class from development within their own Class Rules.

3.03 In this Rating System the word `shall` is mandatory and the word `may` permissive.

4.0 VARIATIONS:

4.01 This Rating System shall be reviewed once a year by the Australian Sailing Ratings Office, and CBHs may be updated continuously throughout the year as new data is provided to Australian Sailing.
The ATYSBRS review will take place in June of every year. The changes will be published on the Australian Sailing Website on the 1st of July with the new CBH rating list.

5.0 CLASS BASED HANDICAPS:

5.01 A CBH shall be allocated, based on the information relating to the basic dimensions of an individual boat or class of boat provided to Australian Sailing and shall be published on the Australian Sailing website.

5.02 Any change to the details provided for a boat or class at Section 5.01, upon which its CBH was calculated, shall be advised to Australian Sailing, and the Appendix `A published list` shall be amended to include the new or changed CBH.

5.03 Where the specifications of a boat or a class are altered from those upon which its CBH was calculated, the boat's owner, Class Association or Yacht Club shall immediately notify Australian Sailing. It is the responsibility of the boat owner or the Class Association to provide the new measurements.

5.04 A designer, manufacturer, Class Association, owner or Yacht Club shall comply with the spirit and intent of the ATYSBRS and shall not seek means of artificially reducing an allocated CBH or seek to increase performance without a corresponding increase in CBH.

5.05 The CBH is for racing events. The CBH does not give any concessions for additional equipment or fittings that exceed those required by the Category of Event in Australian Sailing Special Regulations Part 1 as specified by the Organising Authority of an event, or for the age of any boat.

5.06 Any alteration referred to in Section 5.03, or breach of that Section that is decided by a Protest Committee, shall be advised to Australian Sailing, which shall then amend the published CBH.

5.07 Types of CBHs.

- One-design Class
- Individually modified one design or one of a kind (OAK).

6.0 USE OF THE CBH RATING:

It is therefore recommended that in club mixed fleet TY & SB racing and at National, State and Class Championships the CBH system is used. The elapsed time (in seconds) for a race is multiplied by CBH to obtain the corrected time.

An Australian Sailing Affiliated Club, intending to conduct a race series or event under the Australian Sailing Class Based Handicap Rating System, should include in the Notice of Race and/or Sailing Instructions, clauses based on the following:

1 The version# of the AS Class Based Handicap that is used in calculating the mixed class/fleet racing results.

2 The AS CBH used for each class, adjusted as per Notice of Race and/or Sailing Instructions.

- or

2 The AS CBH numbers will be those published by the Race Committee 'n' minutes prior to the start of the first*/each* race. (* choose one)

- or

2 AS CBH numbers will be those listed hereunder or published on Club Notice Board etc:

3 Class entries without a AS CBH published in the current listing will be allocated an estimated "tentative" CBH.

- or

3 Class entries without a AS CBH published in the current listing will not be included in adjusted results.

7.0 APPLYING FOR A CBH:

Detailed, accurate measurement data will be required to obtain a CBH. This technical information is usually obtained from the designer/builder.

To obtain a CBH an owner/builder/designer or Class Association must: -

- Apply to the Australian Sailing Ratings Office for a new rating
- Provide the measurements to the Australian Sailing Ratings office

Australian Sailing Ratings Office contact: ratings@sailing.org.au

To ensure the manufacture of Class yachts complies with the original specification as supplied to Australian Sailing, the first boat built after five (5) years of receipt of the CBH certificate, or the first boat built by a new manufacturer shall be measured as if applying for a new CBH.

All the boats measurements will then be published on the Australian Sailing website with the list of ratings.

8.0 APPLYING FOR RE-MEASUREMENT

Any alteration or modification to a Trailable Yacht or Sports Boat, or its equipment that does not accord with Class Rules will require re-measurement and the re-allocation of a suitable Provisional CBH.

Refer to Annexe A for Measurements process

9.0 APPLICATION PROCEDURES

9.01 It is the purpose of the CBH to encourage, where possible, the rating of boats as a Class rather than individually, although this does not preclude the measurement of modified boats within Classes and rating of “one of a kind” (OAK) designs.

Applications for measurement and CBH calculation should come from the Class Association, or the manufacturer or his agent and a set of Class Rules should be lodged with the application for measurement.

9.02 The owners of modified boats or OAK designs should submit their applications in as much detail as possible and provide the same information as that required for Class boats.

9.03 Applications should be made via the online form, and shall be accompanied by the prescribed fee, as determined by Australian Sailing.

9.04 On completion of measurement, the measurer will forward the data to the Australian Sailing Ratings Office, for calculation and preparation of the measurement certificate.

9.05 Part-measurements and checking of alterations must be applied for in the same way as a full measurement and a measurement fee (up to the full amount) paid.

9.06 All new measurements and CBH results will be published on the Australian Sailing website in the CBH rating list. Australian Sailing will not issue any personal rating certificates.

ANNEXE A: MEASUREMENT PROCESS

1. GENERAL

- The intent of the CBH rule is to comply with the World Sailing Equipment Rule of Sailing for the measurements processes.
- All the measurements described below are maximum boundaries except the displacement which is a minimum.
- Measurements will not include removable batteries, anchors and chain, and cooking appliances (unless required under the Class Rules). No food, clothing, stores, toolkits life jackets or additional ballast, etc. shall be aboard. Fuel and water tanks shall be empty.
- Spinnaker poles shall be in the normal stowage position.
- Sails are not included in the MASS of the vessel.
- Centreboards, swing keels and drop keels shall be in the fully lowered position.
- If the yacht is powered by an outboard motor, it shall be fitted in the operating position.
- The yacht shall be rigged completely and ready to sail with the mast and boom in place
- Major hull measurements may be taken ashore, with the yacht approximately level.
- The longitudinal trim should be established from freeboard measurements taken from the yacht afloat in measurement trim.
- Where no Class Association exists for a design, the state office may assist the owner, if necessary, to prepare this information.
- In addition to undertaking measurements, which are the basis of the handicap formula, checking the measurements against those contained in the class rules / supplementary measurement information questionnaire shall be required.

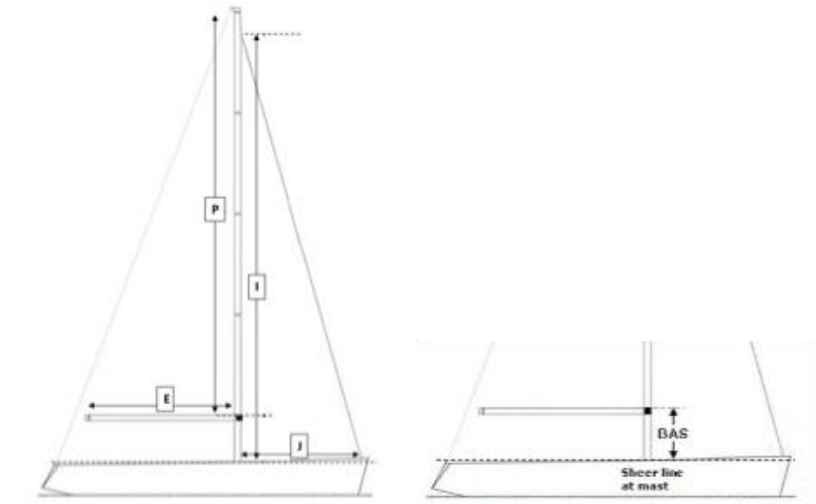
Australian Sailing or any of its members, officers or servants will not accept liability for any damage or injury how so ever incurred during the entire measurement process.

2. HULL

LOA	Length Overall
LWL	Length at water line
B	Maximum Beam
MASS	Displacement of the boat (mass) shall be measured with the boat in racing trim. It will not include the sails, fuel, anchors, chains, and safety equipment (unless required by the Class Rules), food, clothing, stores, tool kits, etc. but shall include the motor.
K MASS	Keel Mass (optional)
CK	Canting Keel (Yes/No?)
HA	Hiking Aides: Trapeze, removable wings, Outrigger with trampoline. (Yes/No?)

3. RIG

- To mark P and E on the mast and the boom sailors should mark the mast and the boom with **a 12mm band of contrasting colour**.
- The **mast datum** point is the intersection between the foreside of the mast and the sheerline.



I	The distance between the mast datum point and the top of the forestay
J	Fore triangle base. Longitudinal distance between the foreside of the mast and the intersection between the forestay and the deck
P	Mainsail luff mast distance measured between the top of the boom and the upper limit mark at the top of the mast (or at the top of the highest sheave if there is no mark)
E	Mainsail foot distance measured between the aft side of the mast and outer limit mark at the aft end of the boom (or to the aft end of the boom if there is no mark)
BAS	Boom above sheer – Sheer to top of bottom black band. The mast datum point is at the sheet point the BAS is used to assist measurement.
SPL	Greatest horizontal distance from the foreside of the mast to any of the following: • The spinnaker tack point on deck • The extremity of the spinnaker pole • The extremity of the bowsprit
PType	Type of pole to choose between: • No pole or bowsprit • Bowsprit only • Spinnaker pole only • Bowsprit and spinnaker pole

4. MAINSAIL

MHB	Mainsail top width
MUW	Mainsail seven-eighths width
MTW	Mainsail three quarter width
MHW	Mainsail half width
MQW	Mainsail quarter width
FBM	Fully Batten Mainsail (Yes/No?)
STM	Square Top Mainsail (Yes/No?)

5. HEADSAIL

The headsail measurements need to be from the largest headsail carried onboard

HLP	Headsail luff perpendicular
HHB	Headsail top width
HUW	Headsail seven-eighths width
HTW	Headsail three-quarter width
HHW	Headsail half width
HQW	Headsail quarter width
HLU	Headsail luff length

6. SPINNAKER

The spinnaker measurement needs to be from the largest spinnaker carried onboard.

SLU	Spinnaker Luff
SLE	Spinnaker Leach
SFL	Spinnaker foot length
SHW	Spinnaker half width