

Scoring at LCSC for 2019-2020 club racing

All races for LCSC club racing are scored using two different handicaps:

- Yardstick (YS), a handicap given by Australian Sailing so that different boats can sail against each other more equally. It is only based on the type of boat. It usually is determined using boats with a high standard of equipment (new sails, good hull etc.) and sailed by sailors with above average skills. YS stays the same throughout the series.
- Performance Based Handicap (PBH), a handicap given by LCSC to include older boats and boats with for example older sails and/or boats sailed by beginners or sailors with lesser skills. LCSC adjusts the YS number with a PBH number to allow for more equal sailing within our very diverse fleet so that every boat has a similar chance of winning. PBH is adjusted after every race.

1. YS result tables

Example YS summary table:

Place	Sail No	Div.	Class	YS	Skipper	Crew	Points	R1	R2	R3	R4
								2019-09-08	2019-09-08	2019-10-13	2019-10-13
								11:15	13:48	11:15	13:45
1	6		Sailboard 7.8	97	Tony Matta		1.5	0.0 DUT1	0.5 DUT	(20.0 DNC)	1.0
2	960		A class classic	66	Neil Caldwell		2.7	1.0	(4.0)	0.0 DUT1	1.7 DUT
3	1131		Weta sq.	87	Andres Gabarrin		5.0	(3.0)	1.0	1.0	3.0
4	1182		Weta sq.	87	Hamish Urquhart		13.0	5.0	3.0	5.0	(17.0 DNS)
5	307		MG	106	Jane Langley	Jenny Hart	13.0	4.0	5.0	4.0	(7.0)

Points in brackets indicate dropped races. 4 races can be dropped when 14 races have been sailed.

Sum of all points from each race excluding drops (the ones in brackets).
For Hamish: $5 + 3 + 5 = 13$

Ties are broken according to Racing Rules of Sailing [A 8.1 and 8.2](#).

A summary of all scoring codes used can be found at the end of each published results file.

Example YS individual race table:

- YS: yardstick number as allocated for this type of boat by Australian Sailing. The lower the YS number the faster the boat has to sail.
- Elapsed time: the time a boat took to sail the course from start to finish.
- Corrected time: calculated by multiplying the "elapsed time" by the YS number and dividing it by 100. The result is adjusted for the laps sailed.
- BCE: Back Calculated Elapsed time, the time a boat needed to sail faster in their elapsed time to be as fast as the winning boat.
- BCR: Back Calculated Rating, the yardstick a boat would have needed to be as fast as the winning boat.

Place	Sail No	Div.	Class	YS	Skipper	Crew	Points	Elapsed	Laps	Corrected	BCE	BCR
1	964		Weta sq.	87	Jeff Smith		0.0	DUT1				
2	307		MG	106	Jane Langley	Jenny Hart	1.0	00:47:24	3	1:14:32	0:00:00	106
3	960		A class classic	66	Neil Caldwell		2.0	00:51:23	5	1:17:51	0:02:12	68.945
4	!		14' skiff modified	101	Peter Gillbank		3.0	00:47:48	3	1:18:53	0:02:38	106.895
5	1732		Arrow	89	Dave English		4.0	00:56:35	4	1:19:28	0:03:31	94.902

Jane and Jenny won this race with an elapsed time of 47:24 = 47.4 min.

Corrected time for 5 average laps
 $= 47.4 \text{ min} \times 100/106 \times 5 \text{ laps} / 3 \text{ laps}$
 $= 74.528 \text{ min}$
 $= 1:14:32.$

Neil in second position would have needed to sail the course 2 min and 12 seconds faster to be as fast as Jane and Jenny, or his YS would have to be 68.945.

2. PBH result tables

Example PBH summary table:

Place	Sail No	Div.	Class	PBH	Latest PBH	Skipper	Crew	Points	R1	R2	R3	R4	R5	R6	R7	R8
									2019-09-01	2019-09-01	2019-09-15	2019-09-15	2019-09-22	2019-09-22	2019-09-29	2019-09-29
									11:48	13:54	11:00	13:30	12:30	13:48	11:00	13:30
1	6Ari		Sailboard 7.8	134	134.7	Ari Matta		39.0	2.0	2.0	1.0	(12.0)	(16.0)	(16.0 RET)	3.0	7.0
2	960		A class classic	61	60.9	Neil Caldwell		43.5	5.0	3.0	(13.0)	2.5	2.0	2.0	8.0	1.0
3	307		MG	98	98.7	Jane Langley	Jenny Hart	44.0	(20.0 DNC)	(20.0 DNC)	3.0	5.0	(14.0)	7.0	1.0	3.0

PBH:
handicap allocated by LCSC
scorer for the first race the
boat sails in this series.

Latest PBH:
handicap calculated by
the program after all races
sailed so far in the series.

Example PBH individual race table:

BCE: Back Calculated Elapsed time, the time a boat needed to sail faster in their elapsed time to be as fast as the winning boat.

BCR: Back Calculated Rating, the PBH a boat would have needed to be as fast as the winning boat.

Place	Sail No	Div.	Class	PBH	Latest PBH	Skipper	Crew	Points	Elapsed	Laps	Corrected	BCE	BCR
1	1746		Arrow	85.1	85.3	Ian Wayth		1.0	0:38:32	4	0:56:36	0:00:00	85.1
2	6Ari		Sailboard 7.8	133.3	134.7	Ari Matta		2.0	0:31:14	2	0:58:35	0:01:03	137.956
3	960		A class classic	61.6	60.9	Neil Caldwell		3.0	0:36:13	5	0:56:48	0:01:21	63.987
4	603		14' skiff	78.6	78.8	Peter Gillbank	Nick Major	4.0	0:37:34	4	0:59:45	0:01:59	82.965

PBH as adjusted
by the program in
the previous race.

Latest PBH calculated
by the program after
all races sailed so far
in the series.

Ian won this race with
an elapsed time of
38:32 = 38.533 min.

Corrected time for 5 average laps
= 38.533 min x 100/85.1 x 5/4
= 56.6 min
= 00:56:36.

For boats in the better places the next race PBH will be lower to encourage improvement. For boats in the worse places the PBH will increase to allow a better chance of winning next time.

The principal algorithms the program is using for finding the next race PBH are similar to the methods used for National Handicap for Cruisers (NHC) calculations as stated by RYA in the UK. A more detailed description of this approach and which formulas are used can be found at this link: [NHC calculations](#).