



# The Cutlass

Lowry Bay Yacht Club Quarterly Newsletter



September 2021

## From the Commodore

Geoff Thorn

Covid-19 has once again disrupted our sailing activities which had returned to normal. I was personally planning to participate in regattas, thinking about cruising over summer and preparing Am Meer to do the Two-Handed Central Triangle Race early next year. It is unlikely we will be able to do the Regatta, and we might struggle to get everything completed in time for the Central Triangle Race, simply because we are relying on services provided by others – in Auckland.

The rest of the world is now learning to live with the virus and, as vaccines become ubiquitous, borders are starting to reopen. But there are changes to the way travel is managed, and attendance at public events in some countries has changed. These changes suggest we will likewise be required to adapt to a new normal in the future.

I am assuming our sailing will not change too much, but there will be an impact on the way we manage the Club. The greatest impact will be financial, and this means that filling the vacant Treasurer role on the Executive Committee will be a priority. Keith has done a fantastic job as the financial steward over the last few years. However, although he had indicated he wished to stand down at the last AGM he has graciously stayed on in the short term to assist the new Executive as we get through this latest lockdown. If any member is willing to take on the role of Treasurer and work with the new Executive, I would love to hear from you.

And just on the topic of finances; 2021/22 membership fees are now due. Please pay them on time.

I am gradually getting to grips with the governance requirements for the Club. I appreciate the hard work the previous Executive did to manage the Club in a very challenging and uncertain environment. There was a lot of hard work involved and the Club remained sustainable. Many hours were put in by the members of the Executive Committee to ensure we could continue to enjoy all the sailing, social and cruising activities which were provided. We are also very fortunate to have Jamie, Lynn and Guenter continue in their respective roles providing the activities we enjoy.

I am looking forward to getting back down to the boat again, with a fair wind and the good company of other members.

Geoff

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## From the Executive Committee

The new LBYC Executive Committee consists of the following people:

Geoff Thorn	Commodore
Jamie Reid	Vice-Commodore
Lynn Porter	Rear Commodore - House
Guenter Wabnitz	Rear Commodore - Cruising
Barbie Mavor	Executive Secretary
Vacant	Treasurer
Ingrid Harder	
Philip Orchard	

### Changes to membership

*New members:*

Eugene King  
Sarah Ambler-Byatt  
John Hung  
Mike Gaskin  
Aleesha Waistell  
Peter Fromow

A very warm welcome to you all.

Here is a brief update from the Executive committee meetings in the last quarter:

### May meeting

- Five new membership applications were accepted.
- Theo Muller was again appointed as Race Director of the 24-Hour Race in 2022, a draft budget was approved, and Theo was given a mandate to appoint the Race Officer (Bob Rowell) and Operations Coordinator (Brent Porter).
- Wayne Holdt from YNZ presented the results of the 2020 Voice of Participants Survey.
- Approval was given to increase Lynn Porter's remuneration. A bonus payment in recognition of the work Lynn does over and above expectations of the club was also approved.
- Finances showed a surplus for the ten months to 30 April of \$21,000 compared to the budget of \$8,646.
- Guenter undertook to prepare a proposal for the repair and maintenance of moorings.
- Updates were received from Flag officers (Sailing, Cruising and House).
- Ingrid updated the meeting on the progress of the planning group.
- Club hire rates were reviewed and increased by 10% with license applications \$150 and a cleaning fee of \$50.
- Preparations were commenced for next year's Almanac.

## June meeting

- One new membership application was accepted.
- One resignation was received, and one member was struck off for non-payment of subs.
- Financial results for the eleven months to end of May showed a surplus of \$23,000 compared to a budget of \$8,600 and last year's result of \$7,100.
- A draft rule regarding long-term planning was accepted for submission to members at the AGM.
- Updates from Flag officers (Sailing, Cruising and House) were received.
- The purchase of a new fryer for the kitchen was approved to comply with insurance requirements.
- The YNZ survey results relating to LBYC concluded that main areas identified for improvement are management, development and training, and disabled facilities.
- Ingrid updated the meeting on planning progress.
- Work commenced on maintaining the moorings. Approval was given to an estimate of \$4000 for maintenance of seven moorings with costs to be reimbursed by our moorings' partners.
- A note of thanks was sent to Ann Dormer for the great work she does each week in getting out What's On.

## July meeting

- Finances for the year resulted in a surplus of \$21,909 compared to budget of \$7,126 and 2020 actual of \$(1,326).
- The financial statements to the year ended 30 June 2021 were approved for submission to the Accounts Review Officer.
- A draft budget for the year to 30 June 2022 was discussed and approved for submission to members at the AGM.
- Approval was given to Grant McNamara to use the clubrooms for Coastguard courses.
- With the start box no longer able to be used due to the Pt Howard wharf closure, the Sailing committee are to look at options and report back to the Executive.
- Guenter reported that the maintenance of the moorings has been completed and they have been re-certified.
- Updates from Flag officers (Sailing, Cruising and House) were received.

The monthly update is not a comprehensive list but covers the main items aside from the day to day running of the club. If members would like clarification on any of the items covered, please email the Commodore directly on [commodore@lbyc.org.nz](mailto:commodore@lbyc.org.nz)

The Executive Committee meets on the second Thursday each month. Have your say! Send your comments and suggestions to [commodore@lbyc.org.nz](mailto:commodore@lbyc.org.nz) for consideration at the meeting. We are here for you.



## Planning Team Update

### We did it! LBYC Strategic Plan Agreed at AGM

Following a year of discussions among members, our club has agreed a 5-year plan that will help us thrive while making sure we remain financially sustainable.

The current lock-down is a temporary setback which we will manage our way through. As we come out of lock down, the plan below will continue to guide our activities for the coming year and beyond.

### Lowry Bay Yacht Club Strategic Plan 2025



*We are a great little boating club with....*



...a wide range of enjoyable on-the-water activities

...our welcoming and social off-the-water "vibe"

...the best location in the harbour, on and off the water

*Our 5-Year plan will ensure that we are accessible and have fun, while clearly guiding us to a sustainable future*

### We'll do this by:

#### Managing the current business sustainably

2021

##### Focus:

- Manage risk, and financial sustainability
- Work with members and SML to agree the future clubrooms
- Develop on and off-water activities in line with member feedback
- Enhance communications

#### Planning for the future

2023

##### Focus:

- Stakeholder engagement
- Inter-club activities
- Intent to renew lease due June 2024
- Plan transition to future clubrooms

#### Implementing the future vision

2025

##### Focus:

- Implement transition to future clubrooms
- Lease renewal 24 Dec 2024.

The planning team consists of Ingrid Harder, Barbie Mavor, Jennie Darby, Geoff Thorn, Philip Orchard and Dan Benton.

## Obituary – Liz Davis

Liz Davis – she'll be sorely missed.

By: Theo Muller

Wieke and I have known Liz Davis for about 30 years. We first met Liz and Richard through our respective children who were at Hutt Valley High. Our daughter came home one day and told us that Liz was the coolest mum on earth. Her group of friends hung out together at Liz's place after school and in the weekend, which also included several sleepovers. They had a lot of fun and, Liz and Richard were very happy to facilitate this. This period was the beginning of a growing friendship with Liz and Richard, which lasted right up to Liz's untimely passing a few weeks ago.

We have so many wonderful memories stretching all the way back to the early 90s. Our joint holidays, seven years in a row at the Mount (Maunganui) and Papamoa are unforgettable. We used to rent a large property big enough for three families, kids and their friends. We had a whale of a time. Our daily 'Happy Hour' and bbq's were legendary.

In 1998 we bought a small yacht, called *Apollo*. The following year we went to the Sounds and Liz and Richard together with the Rowells chartered a yacht and for about ten days we happily cruised from bay to bay. Bob, being a keen fisherman would rise early to catch lunch. Liz, not wanting to be left out, also grabbed a rod, and was determined to catch more fish than an experienced fisher like Bob. Liz's competitive streak became abundantly clear to us. Winning was important. The following year the Rowells and the Davis's partnered in the purchase of *Impulsive*, a Lotus 9.2, still berthed on A-Pier. Soon they joined Lowry Bay Yacht Club and got totally hooked on racing. Diminutive Liz was on the foredeck setting the kite and shouting instructions back to the cockpit. Sure, things got heated from time to time, particularly if things didn't quite go to plan. Liz's plan, of course. She wanted to win, losing was not an option and the crew in the cockpit better believe it. Liz also sailed several races on *Freedom*. I have never seen anybody winching in the genoa like Liz would. Admittedly, the sail was just too big for her to get the last foot or so in and Liz was quick to summon a couple of bigger biceps to make that happen. Setting the sail as quick as possible was her main drive, no matter how it was done.

That fighting spirit helped Liz overcome several major setbacks. About 25 years ago Liz was diagnosed with breast cancer. Not being the person feeling sorry for herself she was determined to beat that monster and it was her positive attitude and zest for life that got her through it. She would have chemo on a Thursday, rest on the Friday and invite friends for a party on the Saturday. On the Monday she would be back at work. She did this for six weeks in a row. What a woman!

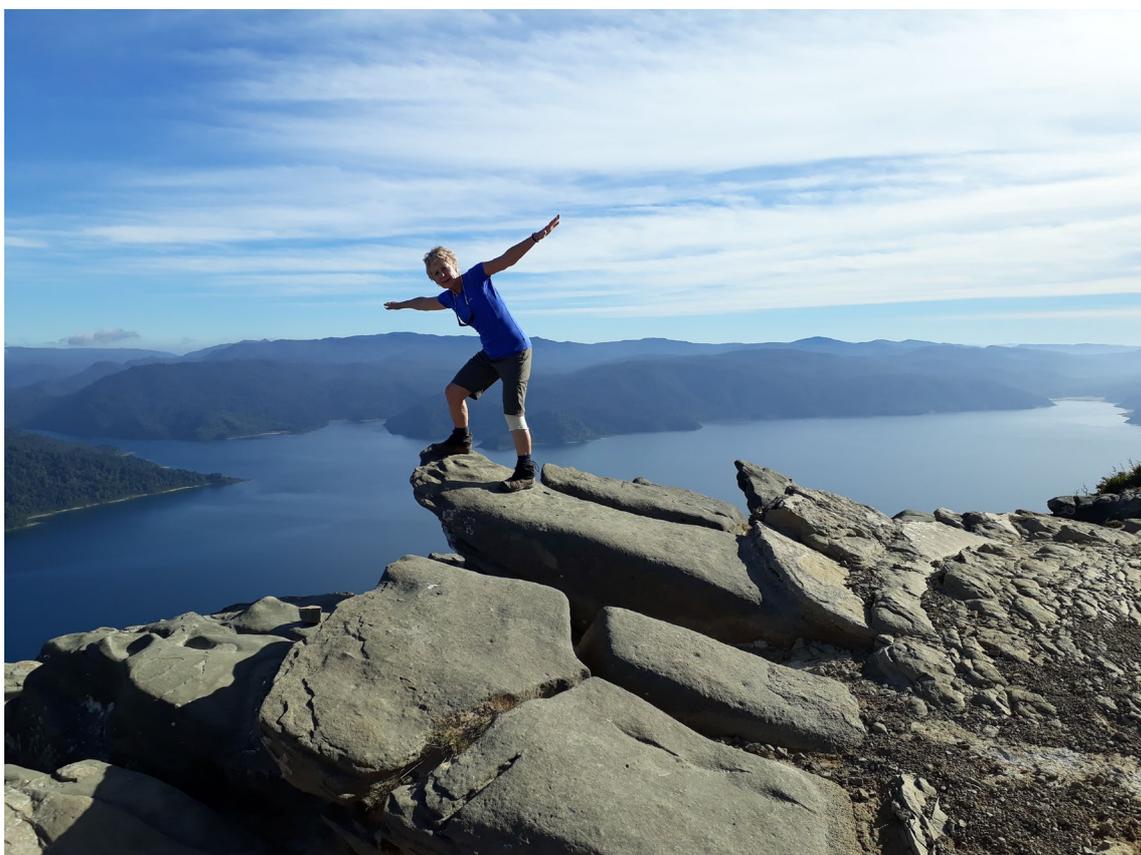
There are so many things for which we remember our wonderful Liz. In particular we remember her sanguine personality traits: lively and bubbly – you knew when Liz was in the room; optimistic – she was a glass-half-full person; fun – we had some great fancy dress parties at her home; spontaneous – this sometimes got the better of her; caring – she loved her family, grandchildren and her many friends; lover of arts and culture – she would go to any show or concert in town, be seen in the cinema sometimes twice a day during the film festival and wouldn't miss any school performance of her grandchildren; giving – volunteering for Sailability and Aged Concern; energetic – trying to get together could take time as her diary was full with a variety of activities and engagements.

Liz was involved with Hutt Theatre. We've seen many musical shows with Liz on stage singing in the choir as a true pro. She was into biking, tramping, and skiing.

Liz loved travel and experiencing new places. She's been to Egypt, many European countries, Thailand, Japan, Australia and just before she got diagnosed again with cancer recently, she had a trip booked to China. That didn't happen. But that didn't stop her. After a couple of hip operations only a few months ago she booked a trip to Norway. That didn't happen either. A much bigger journey awaited her.

Liz passed away on Tuesday 13 July 2021. She was 71 years young. Just three days before she died, I visited her at her home. Whilst physically fragile, that fighting spirit had transformed itself into acceptance. She was at peace. Determined as ever, she went to see her grandson play rugby the next day and have a family lunch. She was content but exhausted thereafter. When Wieke said her goodbyes two days later Liz knew that it was time to go and get ready to embark on that final journey. The following day she left peacefully with her loved ones by her side.

We, like many of you lost a beautiful friend. Whilst it is difficult to accept that, Elizabeth Jean 'Liz' Davis has given us a vast ocean of wonderful memories and taught us how to live life to the fullest, day by day and not waste any time. Au revoir, my friend.



# Battery Selection



## Notes from our BatLab Technician

This article is part 2 of an earlier Part 1 in the previous newsletter

The difference between start battery and the Deep Cyclic (House, Domestic) battery is perhaps obvious but we still see start batteries fitted to take up the duty of the house supply.

The modern battery is designed to produce higher amperage, the main difference is plate design. A start battery has thin, porous plates to optimise surface area producing high current on demand. However, cycling produces heat and the thin start battery plates will buckle and shed material in short order promoting early failure.

The Deep Cycle battery has dense thick plates which also defends against distortion making the battery heavier. Since batteries are priced by lead weight, they will cost more. The weight and density of these plates also determines the AmpHour capacity or run time. It is prudent to compare the weight of batteries to optimise selection.

Since the weight of lead determines capacity, the bigger the battery, the more lead the more capacity. It should be clear that it is possible to have a high CCA from a small battery but not capacity. For instance a battery which may produce 680 amps and only 20AH opens a sensible question - how much power on demand and for how long? Both are important.

### Start batteries are available as a flooded, Maintenance Free or Sealed AGM.

#### Flooded (Wet) batteries

Flooded batteries are being used less frequently these days due to a few disadvantages, The sulphuric acid (39%) is very corrosive destroying many a tee shirt. Further, the electrolyte will gas readily under a heavy charging algorithm. The gassing, due to high internal impedance, high charging voltage or high ambient temperatures, expels the excess energy splitting the water molecule. The resulting Hydrogen gas is flammable, and the accompanying sulphuric mist is carcinogenicity. These batteries are no longer being fitted under bunks or indeed, in any human occupied enclosure.



#### Maintenance Free (Calcium)



To solve many of the wet battery problems, the Calcium Maintenance Free (MF) option was introduced. Recognised by the 'magic eye' on the top indicating state of charge (SoC)

The gassing problem was solved by alloying calcium into the lead plates but unfortunately at the same time, inhibited charging.

Charge voltage was then increased to 14.8 ~ 15.3. This meant that a discharged MF battery may not fully charge using the alternator alone. The alternator will maintain a partially discharged battery after start up only but is considered a poor battery charger.

However, when heavily discharged, the 14.8 ~ 15.3 volt calcium algorithm is necessary. And in fact, since the battery electrolyte is sitting quiet and stratified, 16 volts is then needed to de-stratify the acid water mix after a full charge. If not and left unsupported, the battery may slowly loose charge once more.

### Sealed AGM start battery

Total convenience comes in the form of a sealed battery - most problems solved!

Other than the obvious advantages, the charge voltage requirement generally is

14.2 ~ 14.7. Most alternators can manage these parameters.

A down side for some, the battery may dry out in high ambient temperatures.

Temperatures in the tropics and engine rooms exceeding 30°C. will promote electrolyte lose through the pressure relief valves. We cannot replace it. The battery looses both high current capability and capacity.



Choose the start battery type that suits your environment.

### Deep Cycle batteries.

Deep Cycle batteries are available as flooded, MF, Sealed AGM, Gel and Lithium.

With all types, the maximum capacity of a battery is determined by its ability to dissipate heat through the outer surface area of the box. To increase the required capacity you may need to go down in voltage.

Excluding lithium, the AH capacity of a battery is always qualified by a C rating.

C20 (the standard) meaning the discharge amperage is such as to discharge the battery over 20 hours.

*For instance:*

*Sample battery, nominal capacity - 107AH @ C20*

*C20 (5.36A to 10.50 volts) 107.2AH*

*C10 (10.0A to 10.50 volts) 100AH*

*C5 (17.5A to 10.20 volts) 87.5AH*

You can see how the battery changes capacity by the rate of discharged

*Note: Lithium battery capacity is not affected by the discharge rate.*

The deep cyclic battery is often used in 6v or 12v units. The choice may be determined by the system voltage - 12v or 24v and / or the total capacity required. The decision may be influenced by your available foot print and height restrictions. You may be able to achieve the same end result with either 6v or 12v units.

### Flooded Deep Cycle battery

As with the start batteries, the flooded option is often used in high temperature environments such as the tropics. It may also have a price advantage.

The cyclic life is generally approximately 800 at 50% depth of discharge and a shelf life of 5 years. However, the batteries life experience will determine the shelf life.

Look after it, ie keep it fully charged, and it may last longer. Neglect it and it definitely will be shorter.



### Maintenance Free Deep Cycle battery



Just as the MF start battery, this battery requires the correct charging algorithm. It has a cyclic life of 200 ~ 280. This may sound low, but is perfect for the runabout going out every couple of weeks will last some years. It costs less than the flooded accessible and sealed options. Otherwise all other rules above apply. Again, has a 'magic eye' indicating SoC

## Sealed AGM

To seal a battery, the electrolyte must be immobilised and in this case it is achieved by soaking the acid water mix into glass matting between the plates. AGM is considered the preferred method of immobilising the electrolyte. It has low resistance to optimise discharge and charge rates.

To ensure good plate to electrolyte conductivity, the plates are compressed together at assembly. Further, to discourage gassing, the chemistry is held in a positive pressure which raises the gassing point.

*You will be familiar with the pressure cap on your radiator - to raise boiling point.*

Cyclic life generally sits around 850 cycles and a shelf life around 5 years similar to the flooded options providing it does not experience high temperatures - unlike the flooded options.

Some have a CCA rating suitable to start the engine but primarily is a cyclic battery.

**Lead Carbon AGM** batteries have carbon alloyed into the plates to enhance performance. The reduction of lead by percentage reduces the onset of lead sulphate mainly on the negative plate. Sulphation is the main cause of premature failure in lead acid batteries.

Remco says their Lead Carbon battery in contrast to the Std AGM of 800 cycles has a cycle life of 1400 cycles @ 50% DoD



**Lead Silicon AGM** batteries have taken a different approach to solve the sulphation issue.

The Sulphuric electrolyte has been replaced with a silicon based electrolyte sitting in the battery as a damp powder. It must be periodically charged with a current equal to 20~ 30% (model specific) of the battery capacity. If not, the high cyclic life promised will revert to a standard lead acid AGM specification. The Lead Crystal promise is 2800 cycles @ 50% DoD and 2 year shelf life without support. Pricing is similar to Lithium pricing.



## Gel battery

Again, the electrolyte is to be immobilised and in this case, a silica gel is added converting the electrolyte into a jelly substance. Otherwise, there is little difference in construction. Generally, the Gel chemistry has a high cyclic life due to robust deep cycle technology.

Long shelf life and reduced corrosion is achieved by using low sulphuric acid content in the electrolyte mix. Ideal for the off grid home power storage.



The gel battery is often physically larger for the same capacity than the AGM option and is not capable of producing high current on demand for starting.

## Lithium Deep Cycle batteries

Lithium batteries - LiFePO4 (Lithium Ferris Phosphate) have many superior attributes over the lead acid battery. Lack of weight, high cyclic life, fast recharge and constant voltage throughout the majority of discharge process. Capital outlay is reduced when one considers the cost of ownership. Once you calculate the cost per cycle, the savings are obvious.

The lithium battery should not be totally discharged and to guard against it, the BMS (Battery Management System) is designed to cut power at 90% discharged. If you have no warning of this loss of power, it could be dangerous when an auto pilot or navigation display is being relied on.

Even though this may not concern you, it may be an insurance concern.

The regulation can be found at: AUS/NZS 3004.2:2014 stating 'Lithium Batteries Require'

1/ an audible / visual alarm. 2/ Stop charge. 3/ Have a BMS.  
There may be only one or two battery brands that will fully comply.

*Choosing your battery is a matter of considering your environment.*

- ✓ Firstly it must be capable of fulfilling the chosen task be it start or cyclic.
- ✓ It must be able to cope with temperature variations and charging systems you have on board.
- ✓ The Chemistry must be safe for the crew.
- ✓ It must fit your boat and your budget



## Time To Update Your Sails...

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