



'UPWIND'

June 2008

THE HOME OF UNMODIFIED RADIO YACHTS.
KYOSHO SEAWINDS - TAMIYA YAMAHAS - FAIRWINDS -
WHITEBREAD 60's - ONE CLASS DESIGNS

From the President

The Korean Garden is no longer an issue for Onepoto, the proposal has been declined by the Community Board. We are still working on the council to dredge the pond and get started with the fountains. Meanwhile there are machinations to have the Soccer Clubrooms removed and a new toilet block to replace the existing ones which are in rather poor condition.

Turnout on Sunday afternoons has been excellent and the makes the racing more enjoyable. The winds have been rather light over the last few weeks, to the point that the course has been reduced to a single lap to get through the six races. This has favoured those who do best in these conditions. Hopefully there will be a bit more wind, but not too much, for the last couple of days of the current series to even out for those who do better when it is stronger.

The committee is looking at changes to the divisional series for next year and one suggestion is that there be an award for each seasonal series for the three divisions. This would be in addition to the annual divisional accumulated trophies and to the current 1st, 2nd and 3rd. Proposals will be decided by the membership at the next AGM but discuss with the racing committee or send in your ideas to the newsletter editor for publication.

News of the Pond

Carol prepared a submission to the Council that was heard during the Annual Plan Hearings on May 22nd. This asked the council to confirm they have funding to dredge the pond and restore it to the conditions required by the Reserve Management Plan.

The submission, number 1002, can be found on the NSCC website under:

'Agendas and Minutes', 'May', 'Documentation: Annual Plan Hearings', 'May 12 - May 28', ['Submissions 1001 - 1089'](#).

The fountain will be going ahead but it was supposed to be 'in a couple of weeks time', but so far (early June) there has been no activity at all. They will need to build a new pump house, lay the pipes along the pond bed and install the floating fountain heads. This seems to me to be a few weeks work. A few days may be needed with the pond drained, but it shouldn't be a problem to ensure that it is filled each weekend.

Onepoto Resident's Association

Carol and I attended the meeting of the Onepoto Resident's Association on May 5 at the Soccer Clubrooms in Onepoto. The Residents' Association had been reformed and this meeting called to coordinate their objections to proposed changes in

the Domain: the Korean Garden and changes to the lease of the Soccer Rooms.

There were about 30 at the meeting including representatives of the Electron Owners and the local MP Jonathan Coleman.

Soccer Clubrooms

The building is owned by the Soccer Club and the land it is on is leased from the NSCC for \$1 per year. There are restrictions on the use of the building including the times that it may be used.

As the Soccer Club is now defunct and the AFL want to use the grounds to play Aussie Rules using both soccer pitches, they proposed to buy the building and amend the lease. They want the hours to be extended and also a liquor licence so they can make money to pay for the maintenance.

The residents want the park to be free of the hooligans that race their cars and litter the place with food packaging and bottles. They lobbied to have the gates locked at night. Naturally they feel that liquor and extended hours of use will return to the previous environment of vandalism and mess.

Not only are they going to be opposing the extending of the lease but they will ask the Community Board to refuse transfer of the lease and that the building be removed.

There are funds allocated by council to replace the toilet block, and have been for some years. The Association will put forward a plan to have some open shelters built to replace the clubrooms and that the toilet block is rebuilt. Many sports groups use the domain, as do schools with fieldtrips, and there are occasionally concerts. The clubrooms are usually not available to these groups and the only substantial shelter from sun or rain in the park is the veranda.

Community Board Meeting

Carol attended the meeting on May 6 of the Birkenhead-Northcote Community Board Services and Parks Committee and reported:

"It took only 35 minutes from start to finish - for the Community Board to decline the Korean Garden application.

"The Chair, Lyndsay Waugh, tabled her own report, this was discussed and only Adrian Tyler tried to pursue first the Koreans amending their proposal and second going through public consultation to gauge public response. But he was a lone voice, the Community Board are only too aware of what the public response would be. The general voice of the Board was: to support the concept of the Korean Garden which would be an asset to the City but not at Onepoto."

Why the Pond Overflows

Onepoto is a volcanic crater formed around 30,000 years ago and filled with silt from the estuary. It was a mangrove swamp at the estuary end, like Tuff crater is, and wetlands at the other. The high tide would cover most of the surface.

When the Harbour Bridge was being built in the 1950s a dyke was made across the mouth of the crater that is Tarahangai Street and this stopped the tide coming into the crater. An outlet with flap valves allowed outflow of rainwater at low tide.

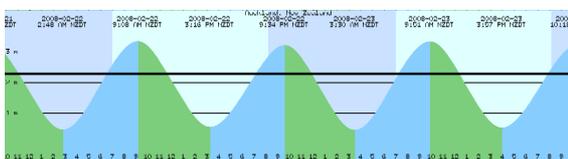
Some additional fill, silt from dredgings and foundation work on the bridge, was added to the floor of the crater but it remains below high tide level. The ponds are the storm water control for the domain, the normal level of these is 2.2 metres relative to tide reference where the high tide in Auckland may go as high as 3.6 metres.



This means that a high tide can be up to 1.4 metres above the pond level. The flap valves stop the tide from flowing into the pond and the domain, but this closure also stops rainfall from flowing out when the tide is above the 2.2 metre level. Importantly this can close the flap valves for 5 hours each tide.

The catchment area of the crater is around 40 hectares. All the rainfall, after the ground has soaked up all it can take, within the rim, roughly marked by old Lake Road, Exmouth Road and Sylvan Avenue, flows into the domain and eventually into the pond. As the ponds are less than 2 hectares in total every 10 millimetre of rainfall could result in the rising of the pond level by 200 millimetres.

This additional water will flow out over the weir gates and into the estuary whenever the tide level is lower than the 2.2 metre pond level. But for the several hours that the tide is higher the rain will accumulate. With just 50 mm of rain during this time the pond could flood with an additional one metre of water. The one metre mark is approximately the top of the picnic table that we use for the course board.



Auckland tides showing pond level at 2.2 metres above reference.

Back to Basics

A Radio Control Transmitter emits a signal with maximum power at the frequency of the crystal that is plugged in to it. The Receiver "listens" for this signal and controls the servos based on how this signal changes.

There are several types of RC set. The main two "low cost" sets are either AM or FM types.

The AM set varies the size of the carrier wave to tell the receiver to move the servo(s) so much and in which direction. The FM sets change the frequency a small amount to similarly tell the receiver to move the servo position.

More expensive sets transmit the carrier frequency but encode digital messages on the signal so that the receiver has to get exact messages to move the servos and therefore these do not "twitch" when receiving interference from other radio signals.

There are now available sets that work in the 2.4GHz band. Some of these sets do not use a set frequency but scan up and down the band for unused channels. This allows many hundreds of users to simultaneously use RC gear without interference. The added advantage of these is that the aerials are in the order of a few centimeters only.

In Detail

There are several frequency bands that are designated for use by radio control sets. The main bands in New Zealand are the 27, 29, 40, 72,75 MHz and 2.4GHz bands. There are several bands such as the 35MHz bands that are available overseas but are NOT legal in New Zealand.

Within each band there are set "channels" that the sets can operate at. These channels are separated in frequency so that one channel should not interfere with another. The channels should be separated by 20KHz but in practice crystals are available that are separated by 10KHz and with modern sets this is usually fine.

At 20KHz separation you will find crystals in the 29MHz band of say 29.725, 29.745, 29.765MHz .

At 10KHz separation there are other crystals available for example 29.735, 29.755, 29.775MHz.

It would pay to check that your set does not interfere with someone else on an adjacent channel, for instance 29.735 interfering with a set on 29.725MHz.

In theory the sets should transmit their signal with most power at the crystal frequency. In practice the signals transmitted also put out power at other frequencies too, although at much less power, so that if you turn off your transmitter, you will see your servos "twitch" as the receiver receives signals from other transmitters, but at the lower power. Switch your transmitter on and the vastly stronger signal will dominate and control your receiver as intended.

In order to put out the maximum signal at your crystal frequency the transmitter has other filter components that are "tuned" to the band you operate in. Therefore

you cannot put a 29MHz band crystal in a 27MHz set, as the resulting signal will be mostly filtered out. You can get the set "re-tuned" to the new band but this is expensive and not recommended.

There are two crystals required, A Tx (transmitter) and Rx (receiver) crystal. These often have slightly different characteristics and must NOT be swapped over. They may appear to work but may result in signal being transmitted on adjacent channels.

Please note that dirty crystal contacts can affect the frequency of the transmitted signal. Periodically remove your crystals and clean the legs with a piece of fine emery paper or similar.

There are only a few channels on the 27MHz and 29MHz bands and once these are allocated then you must move to the other bands for your slice of the airwaves. There are far more channels available on the 40MHz band and these sets are very similar in cost to the 27 and 29MHz sets. You tend to pay more for the 72 and 75MHz sets as these are normally the digital sets and not the basic AM or FM sets.

If someone else is using say the 27.095MHz channel, sailing along nicely and you switch on your transmitter that is also on the 27.095MHz channel, you will confuse the receiver in yacht and depending on the strongest signal (distance from the transmitter to the yacht and /or battery state) one will tend to override the other or worst case the signals will be about the same in strength and the yacht will twitch all over the place, probably ending up on the far shoreline.

Keep the Water out

Water in the receiver (and Transmitter) affect the tuning of the set. Water entering the receiver, or even condensation, change the characteristics of the tuned circuit and lead to loss of control. Many a rainy day has caused loss of control by getting water into the transmitter.

If water is suspected then first try to blow it out and then apply for IPA (Isopropyl Alcohol – available at many hardware stores) and wait for it to dry out.

Protect the receiver from water intrusion by containing the receiver in a rubber balloon and/or sealing the wire entry grommet with silicon sealer (must be neutral cure – if it smells like vinegar then don't use it!) or similar.

Note that servos often get water in the electronics, mainly through the wire grommet and this must be sealed too.

RC Etiquette

Know what frequency your RC set is using. Be able to tell anyone that asks, what is frequency is, and whether it is an AM or FM set.

If arriving with a new RC set, find out if anyone else is using this frequency BEFORE switching on.

If your set is clearly interfering with another set, talk to the other user to ascertain whether the problem can be fixed by cleaning a crystal or changing to a free channel.

Look around you before switching on, there may be other users nearby that may be affected (in the sky for 72MHz band sets) or RC cars in the 27/29/40 MHz bands.

Find out what channels/frequencies are unallocated BEFORE purchasing a new set. It will save money not having to purchase a new set of crystals.

Carbon Fibre Seawind a first look by Richard Plinston

David Harley invited me to look over his newly purchased kit of a Carbon Fibre Seawind. The kit is identical to the standard kit except that the ABS hull and deck is replaced by a single piece composite component and there is an additional single page instruction sheet.

Hull

The hull is black carbon fibre with a clear gel coat over most of the area allowing the carbon fibre weave to be clearly visible.

Where the deck join and keel box are reinforced the gel coat is sprayed black, this merges well with the overall appearance and is necessary to hide the edges.

The hull is surprisingly light, it is said to be 200gram less than the ABS moulding but I didn't have a bare hull available to compare with.

It is intended that the hull not be painted, keeping the material visible and the weight down.



Deck



The deck and transom is Fibreglass with a blue gel coat. Again it seems that it does not require to be painted. It seems well bonded to the hull and the joining at the edge is well finished and clean.

All the required mounting holes in the deck are drilled

but they have no blind sockets to take the screws. On an ABS hull the screw holes are 'blind'. On this deck all the holes are drilled and will need blanking if the winches aren't fitted, or are lost.

There is an extra layer of glass under the mast support position and this requires part C3, the

mast support bracket, to be modified to fit. More on this later.

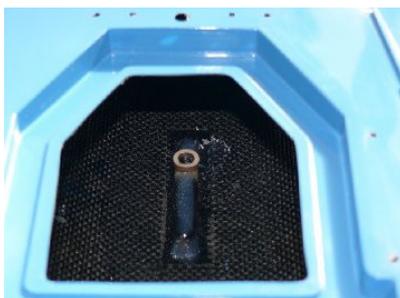
Overall the hull and deck are quite flexible. An ABS hull cannot be pushed in, the carbon fibre one can easily be flexed in along its sides by half an inch. Of course the carbon fibre is strong enough, far stronger per unit weight than ABS, and it won't be distorted by the water pressure evenly along its sides, but it doesn't give the solid feel that the ABS one has.

The deck is also more flexible, especially where the weight of the mast and the rig tension will sit.

Keel Box

The keel box is fixed in place and reinforced inside.

The keel strut is tapped into the top of the box and this is an improvement



over the ABS arrangement where it has to self tap. The distance between the underside of the deck and the keel box is slightly less and this requires the aluminum tube to be cut down by a millimetre or two.

Part C3 - Mast Bracket

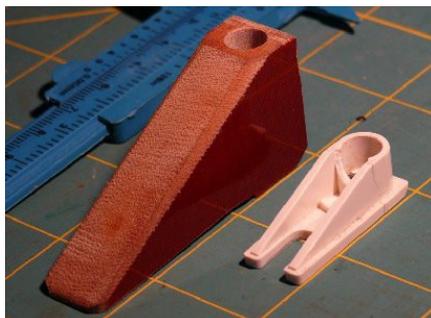
On my boat the mast support bracket failed. The design is poor with two webs, one to each side, as this puts all the load on the front edge at the keel tube. The part is also inadequate in length and depth, it only reaches the back of the mast step and is far too shallow for adequate support.

The picture shows the front around the tube broken away and the sides cracked giving no support at all.

This also shows a prototype blank of a replacement

part of adequate size.

This prototype is larger than the replacement that I made previously for my boat. On an ABS hull the front of the



bracket needs to be forked to go either side of the screw posts. For a carbon fibre hull there needs to be a rebate to fit the reinforcing patch under the deck and it needs to be long enough to take the forward mast step screw.

Rudder Alignment

On some early hulls the rudder hole was apparently drilled slightly too far forward which made the rudder sit with less rake. It did not seem to affect David's hull.

Conclusion

As it is likely that for series racing a minimum weight could be imposed on all Seawinds then the advantages of having a carbon fibre boat may be reduced.

I would be nervous about racing one where it may be involved in collisions with ABS boats.

NZL 32 - Black Magic

A memorial to Peter Blake is to be created at the Maritime Museum with the original NZL 32 as the centerpiece.



Another NZL 32 with connections to Team New Zealand was recently at the pond where I talked to its current owner, Nick Oliver and he sent me this note about its origins:

"I built a large R/C powerboat that I found too big and too noisy to use in most places, so I put it on Trade Me and said I was interested in a swap for a R/C sailboat as thats where my interests lie. I was contacted by Derek Robinson (AKA Derek the Chef from the



fishing show) who said he had a old Seawind under his house and that his son had no interest in it, but he would like the powerboat. To cut a long story short I did the swap. When I was at his house I asked how long he had owned it, and he said he had been the team cook for the Team NZ America's Cup team back in 92 when they won the cup. As he was a team member he was given the boat, which I

was led to believe is a limited edition just for team members.

(I have no way of confirming this) It has all the graphics of the full size NZL 32 and also supported figures of the team members in action on grinders, pulling ropes and one up the mast. (with names on them) I'm assuming most have been lost over the years, but 3 still remain on the deck.

The boat appears to have survived well otherwise, but needed some new electronics to get it working. It will also need new sails if I was ever to race it. "



Collisions

When boats collide they can become locked together. This can be by one boat putting its masthead through the stays of another.

The boats then can twist around in alarming ways and threaten to break the mast or sink one of them.



In the case here, three boats became entangled (I am sure that I was the innocent party) and it took some minutes before they could be brought ashore to free them and continue in the race.

It is always best to avoid a collision rather than try to save a few seconds risking one while trying to get around a buoy, or crossing tacks.



Another cause of boats locking together is the cleats on the booms for adjusting the sail clews. As designed these are on the side of the booms and towards the aft end of them so that they will swing outboard and can easily hook onto another boat's stays. By relocating these forward on the booms so that they cannot go outside the deck line, or on top of or underneath the booms, they will not be able to catch another boat. This will halve your chances of hooking up. One may need to do a penalty turn, but the saving will be the time taken to get the boat unhooked.

What we nearly had as our grandstand !



Why buy a carbon Seawind ?

- It looks cool
- It weighs less (officially 200grams less)
- Doesn't need painting
- Hopefully doesn't crack around the keel like ABS versions

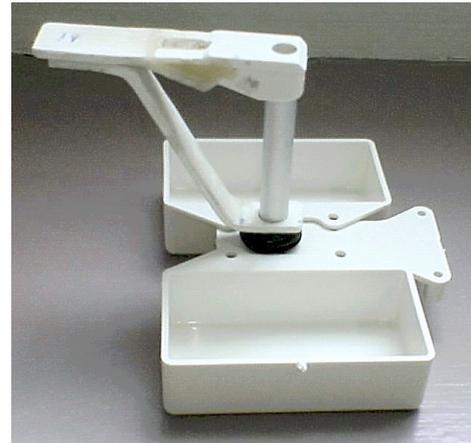


Is it easy to build ?

1. Most of it is the same as the ABS model, so basic answer is 'yes'
2. The hull is factory finished, so no trimming, 'finishing' or painting is required
3. Hull is carbon fibre – looks cool – who would want to paint it ?
4. Hull flexes inwards quite a bit, so be gentle
5. Deck is fibre glass and is factory gel coated blue
6. The holes for the deck decorations (wheels and dummy pulleys) go straight through, so you either have to fit the decorations or fill them and paint the deck !
7. The keel box is pre-moulded into the hull, but considerable time is required to sand and shape the top of the keel fillet so it fits into the keel box
8. I assembled, sanded and painted the keel, bulb and rudder as the bulb to keel attachment needs a little filler to smooth the fit. I didn't use the rubber boot.
9. The Seawind forum website warns that the rudder hole is misaligned on 80% of all carbon boats. Mine was perfect, but check it.
10. As the hull is thinner than the ABS, the blue alloy rudder tube protrudes above the inside support, so the rudder arm swivels directly on it. There would be less friction, but if you want, you could cut the tube down so it fits the same as the ABS model.
11. There is no allen grub screw for the rudder arm – it now comes with a knurled knob to tighten with your fingers – vast improvement !
12. The main modification is to the internal mast support, part number C3.
13. The deck is very thin and flexes downwards quite a bit where the mast step sits. This happens on the ABS models, but not quite as much.
14. C3 only supports the deck under the rear most screw, so it needs extending forwards so it supports the mast and a bit of deck ahead of it. To transfer the downwards pressure from the mast and rigging, I attached a diagonal piece of plastic onto the alloy tube with a rubber grommet at the foot

to act as a shock absorber. The deck now barely moves.

(See Richard's comments on an alternative design for the C3 part)



15. The second battery box was added in case the club required ballast to be added to get the boat up to the same weight as ABS models. By placing ballast in this location, it offsets the biased weight of the 4 x AA batteries.
16. The blue alloy mast tube screws from the deck, through the item above and into the keel box. Be careful not to over tighten as you are only screwing into what feels like fibre glass (plastic on ABS models)
17. The carbon kit comes with extra instructions showing what standard parts need modifying (don't know why the factory doesn't do it when you are paying NZ\$900.00 without radio gear).
18. The instructions say to sand off the top part of C3 to allow for a step under the deck surface. Basically, there is a fibre glass reinforcing pad under the deck and below where the mast sits. This reinforcing pad is to allow for the screws to get a better bite and for the mast not to break through. If you look carefully at the photo, you can see where its been sanded away on the top 2/3rds.
19. C3 would not sit flat on the underside unless you sand a part away.
20. The complete assembly shown in the photo is too tall to fit between the deck and the new keel box, so you have to cut 2mm off the alloy tube (this instruction is also enclosed in the extra Kyosho instructions). I found filing it the best way so there was no danger in cutting too much off. Adjust the length before making the changes to part C3.
21. Where the rigging screws go into the deck, Kyosho have placed reinforcing fibre glass pads under the deck, except for the side stays. The screws are quite difficult to go into the reinforced areas and are in no danger of pulling out. The side stays are easier to screw in (less thickness) but seem quite adequate. If they ever did pull out, it would be easy to add something under the deck to prevent it.

Summary of assembly:

- a) reshape top of keel to fit keel box - just time consuming
- b) check rudder hole alignment – ok, unless it's wrong - see Seawind website for details
- c) shorten inner mast alloy tube by about 2mm - use a file, takes a minute or so
- d) modify part C3 – the challenging and time consuming bit, use our ideas or design your own, but probably the most critical bit of the whole construction – worth doing on the ABS models, see how your ABS hull flexes just in front of the mast.

Is it any faster or handle differently ?

The boat has only been in the water twice.

1st outing – no ballast

- wind conditions were very light
- sailed as assembled, not tuned
- It seems to turn and accelerate quicker
- Alongside another boat in same wind, there didn't appear to be any speed difference

2nd outing – with 200g of ballast

- The boat weighed in at 2.9kg - the same as John's #11 ABS boat.
- Ballast consisted of a 2nd battery carrier, opposite the original, holding a 2nd battery pack, plus a piece of lead placed between the battery boxes aft of the mast tube. CofG therefore not changed
- Wind conditions were again very light – only 1 lap of course was raced
- Seemed slower than previous week, but wind conditions were different

It really needs a bit more wind to see how its performance compares – will keep you posted.

[By the way, have you ever weighed your battery pack ?](#)

[4 x AA Alkaline with holder weigh around 100 grams depending on brand of battery](#)

[4 x AA Rechargeable with holder weigh around 125 grams – an easy way to save 25grams, use alkalines !](#)

The forum on the Seawind website has a few discussions about the carbon boats. From their experience, they found no performance gain.

Some quotes;

1. *However the heaviest boat at a regatta is usually Mike's ABS and he still kicks our tails.*

2. *From the purely racing aspect, when we were pacing each other, carbon v's ABS, and even trading boats, we both agreed that we could detect no noticeable difference in speed.*

3. *First impression of the CE version under sail:*

1) *Did not feel much difference in performance, when*

compared to the ABS version.

2) *The other owner felt the slightly quicker response of CE model in acceleration after tacking under light wind. (but I did not..., so this is purely the slight minuscule personal feeling gain*

4. *RE: Accommodate both the ABS and CF versions in SEAWIND regatta in Japan ?*

The answer is YES, under the KYOSHO Marine Cup. There is no need to add any weights to correct the discrepancy of weights for the SE nor CE models! Sailor's greater skills seems to surpass the difference until now... May or may not change in the near future.

Frequencies and sail numbers of financial members as at May 2008.

Freq'	Boat #	Members name
26.975	33	Bruce Watson
26.995	37	Kevin Whitehead
27.020	1	Richard Plinston
27.045	6	Neil Purcell
27.070	16	Brian Bassett
27.095	5	Antonio Silva
27.120	78	Paul Goddard
27.145	7	Grant Monaghan
27.170	131	Murray Furness
27.220	18	Geoff McGill
27.245	96	Gerald Moss
27.255	89	Gordon Stevenson
27.280	A12	Terry O'Neill
29.725	90	Peter Willcox
29.750	48	Harry Bowles
29.765	2	Tom Clark
29.775	30	Kevin Webb
29.785	11	John Dowler
29.805		Club boat
29.825	42	Bill Monaghan
29.850	75	Harry Bowles *
29.865	38	Peter Andrews
29.885	22	Trevor Watts
29.905	10	David Harley
29.925	82	Simon Adamson
29.945	110	David Harley *
29.955	92	Simon Adamson *
29.965	54	Ian Crooks
29.985	126	Simon Martelli
40.790		Club Tug
40.810	26	Trevor Speight
40.850	84	Ivan Fraser
40.890	33	Bruce Watson *
72.350	40	Geoff Atkinson

*=2nd boat

**Life of the Pond
Small stuff**

Here, for a change, are some of the smaller organisms found in and around the Onepoto Lagoon. Red damselflies hover low over the surface and catch small insects in flight.



During mating the male clasps the female by her neck while she bends her body around to his reproductive organs – the shape that this creates is called a mating wheel.



In the pond, any suitable surface has been colonised by black freshwater mussels – including the buoy ropes.



These mussels provide food for the shags and possibly ducks; as you can see by the shell middens around the pond.



The winter series

The Winter Series will run from June 29th through to August 24th with a spare day on the following weekend. Seven race days are scheduled with each member counting their four best days results.

The Winter Series winner will be awarded the Hobby City Cup to be held for a year, this is currently held by Bruce Watson with his boat 33. The winner will also receive an engraved miniature cup to keep, 2nd and 3rd placed contestants will receive engraved trophies.

Racing schedule to year end

Month	Date	Round
June	1st	Queens Birthday
	8th	Match Racing Aggregate
	15th	Autumn Series 6
	22nd	Autumn Series 7
	29th	Winter Series 1
July	6th	Match Racing Aggregate
	13th	Winter Series 2
	20th	Winter Series 3
	27th	Winter Series 4
Aug	3rd	Match Racing Aggregate
	10th	Winter Series 5
	17th	Winter Series 6
	24th	Winter Series 7
	31st	Fun Day
Sept	7th	Fathers day
	14th	Spring Series 1
	21st	Spring Series 2
	28th	Spring Series 3
Oct	5th	Match Racing Aggregate
	12th	Spring Series 4
	19th	Spring Series 5
	26th	Labour Day
Nov	2nd	Spring Series 6
	9th	Spring Series 7
	16th	Special prize fleet
	23rd	Special prize fleet
	30th	AGM
Dec	7th	Match Racing Aggregate
	14th	Special prize fleet
	21st	Special prize fleet
	28th	Summer break

Racing for the Match Racing Cup commences October 19th. See original schedule

Annual Plan Hearing

The submission by the Onepoto Lagoon Co-ordination Committee (OLCC) to the draft North Shore City Council Annual Plan seeking funding to be set aside for the dredging and re-instatement of the Onepoto ponds was heard on 22 May 2008.

The submission presented requested \$300,000 for the work, based on the size of the pond, estimated volume of silt to be removed and costs for similar stormwater pond maintenance costs.



The presentation further recommended that the dredging should be carried out immediately prior to the installation of the aerating fountains which are to be installed as part of the Northcote Centenary this year.

In support of this request, the evidence presented included:

1. The level of use of the ponds by the Electrons, Ancient mariners and the NZ Radio Control Yacht Squadron.



2. A series of photos of the pond problems:



3. A sample of emails describing the pond conditions as they affected racing.

The questions from the Council included asking if the yacht clubs were noted in the Onepoto Domain Reserve Management Plan (which all 3 are), whether the proposal for dredging was discussed with the Community Board (the matter was discussed with the Chair of the Community Board and a member during 2006) and whether the ponds were identified as stormwater ponds (which they are in the management plan).

Councillor Chris Darby expressed interest in whether or not the ponds were 'live or dead' ponds and whether any biological assessment had been carried out. So, I was able to talk about the WaiCare water quality and biological monitoring that the OLCC had carried out over the past year and the results that have been logged on to the website: <http://www.waicare.org.nz/site/groups/onepoto-lagoon-coordination-committee.aspx>

The Council will be deliberating on submissions over the next couple of weeks. So, we hope to hear favourably soon.