

# QUEENSLAND ULTRALIGHT ASSOCIATION MARCH 2011 NEWSLETTER

Watts Bridge Memorial Airfield, Silverleaves Road via Toogoolawah, Qld

*Keith Hinchliffe's AcroSport*  
*Twelve years in the making.*



Sometimes, the fastest route from drawing board to holding point is to take your time.

Although not a member of the QUA (Keith is a QVAG pilot) Keith Hinchliffe's plane is featured this month as an example of how perseverance eventually pays off. Keith took twelve long years (between 1986 and 1998) to turn his plans into a plane, and the result is absolutely perfect. These photos were taken at Archerfield where the Acro Sport 2 is hangared. If anyone is interested in making a similar aircraft, Keith has a full set of jigs for sale at a very reasonable price.



## QUA aircraft project nearing completion

And now for an aircraft project closer to home. Our very own El Presidenté, Peter Ratcliffe, son David and brother Ian, (much esteemed QUA Treasurer), have been working on this beautiful Zenair CH601B for the past three years. However, it's not a completely standard 601. For instance, it has the new style, larger 650 canopy with roll bar and the new type rudder. It's been truly a family team effort over those three years with Ian building the wings, rudder and horizontal stabilizer at his house and Peter and David building the fuselage at their house. At the moment, the plane is at Ian's place where the wiring and the motor installation are being completed. Speaking of the motor, it is a Corvair 6 cylinder, horizontally opposed, air cooled unit capable of a hundred horse-power, plus perhaps a bit more.



**WATTS  
BRIDGE  
MEMORIAL AIRFIELD INC.**



# All-In Fly-In Airfield Open Day

All pilots and aviation enthusiasts are invited to the Watts Bridge Airfield Open Day, celebrating the diversity of recreational aviation.

The All-In Fly-In is an all day event with on-field catering and coffee available. Entry is free with no landing fees. Aviation fuel is available on the airfield.



**21<sup>st</sup> May 2011**

**9:00am ~ 4:00pm**

**Catering by  
Brisbane Valley  
Christian Church**

**Vintage Aircraft  
Aerobatic Aircraft  
Recreational Aircraft  
War Birds  
Gyroplanes  
Homebuilts**



## **CONTACT**

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**If it flies ~ It's welcome at Watts Bridge !!  
[www.wattsbridge.com.au](http://www.wattsbridge.com.au)**

## New release of land at Gatton Air Park

It was my first visit to Gatton Air Park a couple of weeks ago when I called in on Marty Hone and his delightful companion, Chris, to fix him up a can of Poly Fibre reducer that he had left over from the building of his Space Walker. Jim Gallagher had put me on to Marty and had also been good enough to deliver the reducer on his way home the week before.

While there, I met Keith, the Gatton Air Park developer, who told me about the latest release of home/hangar sites along the eastern side of the airstrip. Nearly all of the western side allotments have been built upon, but, as yet, there are no buildings on the eastern side. The new release is apparently selling well with the cost of the 2500 sq metre blocks ranging from \$150,000 to \$200,000. Actually, Marty and Chris plan to build again on the eastern side, this time with enough room for Chris' horses. This means that their present home and hangar is currently for sale. For a house of this quality, the surprising thing is that it costs no more than a place here in Brisbane. Marty says that his aircraft is only 20 seconds from the breakfast table. Last Sunday, they didn't even stop for breaky. They had that at Dunwich on North Stradbroke Island.

Marty and Chris have two very friendly dogs



Gatton Park Airstrip is a smooth as a baby's b--m



## Gatton Air Park Fly-in, 29 MAY 2011

Come and inspect our unique hill top residential aviation community. Everyone is welcome. There will be a hot breakfast courtesy of the Gatton Lions Club from 0730 Sunday. Saturday night camping will be available underwing or in hangars with shower & toilet facilities. There will be a BBQ on Saturday night and the use of a courtesy vehicle. There will also be a \$200 award for the longest flight. The airfield details in the ERSA. For more information, phone Martin on 0419 368 696.

## Other Fly-ins and aviation events

Feb 25-27 Deniliquin Aero Club, NSW, Comanche Soc ilot Proficiency Programme

Feb 25-Mar 1 Tyabb Aerodrome, VIC, ABS BPPP & Ground School

Feb 25-Mar 1 Torquay, VIC, ABS BPPP + Ground School

Feb 26-27 Watts Bridge Airfield, QLD, AACQLD Aerobatic Practice Weekend

Feb 27 Illawarra Regional Airport, NSW, Wings Over Illawarra 2011

Feb 27 Toogoolawah, QLD, Breakfast Fly-In QVAG/AFM Inc.

Mar 3-7 Avalon, VIC, QRAA Victoria and South Australian Tour

Mar 3-8 Avalon, VIC, VIC - SA - Murray River Tour

Mar 6 Wagga Wagga, NSW, Wagga City Aero Club monthly BBQ Lunch

Mar 12-13 Port Augusta, SA, Port Augusta Aero Club Fly In

Mar 16 Yarrowonga, VIC, YFT Skills Maintenance Night

Mar 18-20 Shepparton, VIC, Short Wing Piper Fly-in

Mar 18-20 Corryong, VIC, Airtourer Association Annual Convention

Mar 19 Temora, NSW, Aircraft Showcase - Bomber/Attack

Mar 19 Yarrowonga, VIC, Lightweight Aircraft Association Annual Fly-in

Mar 19-20 Deniliquin, NSW, Disabled Pilot's Fly-In

Mar 19-20 Shepparton, VIC, AAAA Shortwing Piper Fly-in

Mar 19-30 Miami, Florida USA, Oth, CARIBBEAN AIR CHALLENGE

Mar 21-22 Maitland, NSW, RFACA Flying Training Conference

## Jimbo's Karatoo

The latest from Jim Gollagher is that the Karatoo project is "chugging" along. He's currently working on the cowl, the wing tip plugs and mouldings. Remember that Jim is no stranger to building engines, having graduated to aircraft from racing cars. He went to the trouble of building a complete test engine to maximize the durability and performance of the engine that will actually go into the aircraft. The news now is that he has this second (actual) aero engine ¾ finished. So far in all, he's logged 950 building hours on the project and estimates that he has at least 500 hours to go. He has a big year ahead of him. We'll see how he goes. It will be really wonderful to see Jim's Karatoo sitting on the tarmac, ready to take wing.

## Peter Freeman's new hangar.

Of course, that other great place to have a house and a hangar is at Watts Bridge Memorial Airfield via Toogoolawah, our very own home base. Peter Freeman is one of the residents. In fact, he's our representative on the Watts Bridge Board and is always keeping us up to date with what's on at Watts. Here are some recent photos showing the construction of his brand new hangar, courtesy of Mal McKenzie.



## Other club news

Mal still wants to retire from his position as club secretary. So we need someone equally as good looking to step forward and take over. So, don't be shy. Mal will teach you all you'll need to know.

Speaking of Mal, the Himax has definitely been sold. The new owner, whom I believe is called Jason, flew it to Goulburn recently. The trip took 15 hours over three days via Narromine. The little plane went well and he loves it. Mal is now in the market for a new two seater. The criteria is for a better cruise speed and range, plus a Rotax 912 up front. Mal believes that there are quite a few aircraft out there to consider. He will let us all know when he makes the choice.

Sandy is chasing some Gaming Grants for improvements to the clubhouse. Letters have been sent to the local politicians for support. Some positive response has been received so far.

Work continues on the clubhouse thanks particularly to Peter & David. Last weekend the kitchen area was painted and tiles were fitted. Deb Follett donated and planted some trees & shrubs beside the clubhouse. These will need watering occasionally in between the showers. Mowing around the buildings was done too. Thanks to Peter Freeman for using the ride-on mower. The clubhouse continues to be used by members and visitors most weekends. Often the BBQ is used at lunch time by the folk present.

Planning by the Watts groups continues for the All In Fly In preparation.

## Rotax two stroke fuel pumps

The aircraft fuel pump is a vital piece of equipment, especially for low winged aircraft. The Mikuni pulse type fuel pump as fitted to Rotax two strokes is a very simple and reliable design. This type of pump is driven by pressure pulses direct from the crankcase via a pulse tube. If using fuel line for this tube, use only fuel lines with reasonably rigid walls because the pulse is both positive and negative relative to ambient. Mikuni pumps should not be mounted on the motor, but close to it, keeping the pulse line as short as possible. The pump should be higher than the pulse port on the motor, or, if not possible, there should be a low point in the line to trap any fluids. The reason for not mounting the pump on the motor is to minimise vibration. It is a good idea for low winged aircraft to have an auxiliary pump. On this point, California Power Systems have found that duplicate installations can be done in serial or parallel configurations with equal reliability. Parallel systems would only be less reliable if pump failure were caused by a malfunctioning non-return valve.

CPS recommend overhauling Mikuni fuel pumps every twelve months, but I doubt that most people do this. Overhauls kits are very cheap - \$14.95 plus postage. A new pump costs between \$24.95 and \$59.95 depending on the number of carbies to feed. Actually, a twin carby pump with straight outlets is only \$34.95. So it's not an expensive item to overhaul every year. The pump pictured has one 90° outlet and the inlet is also 90°. This pump is the expensive one (\$59.95).

Whatever aircraft you fly, don't ignore your fuel pump. You may feel that overhauling it every twelve months is a bit excessive, but don't go too long between services. And, of course, use only genuine parts.



Professor Sweetapple has been good enough to pass on this advice from Shell Technical Services:

Dear Richard, petrol, regardless of type, has always had a shelf life and this is usually around three months when put into intermediate storage cans or equipment fuel tanks. This is due to two factors. Firstly, there is evaporation of the volatile light ends from the fuel resulting in hard starting. Secondly, exposure to the atmosphere means that the fuel will start to oxidize over an extended period of time. We do not have any specific data on the storage compound you mention but it's likely to be of the type that would combat the gradual oxidation of the fuel over time. It would not counteract evaporation. In large well sealed drums, fuel will easily store for 12 months. This is due to the volume of fuel in relation to its exposure to the atmosphere. Small containers store fuel for less time, i.e., 3 months. Therefore you are unlikely to see any benefit from using a stabilizer. Also, gums and varnishes can accumulate in fuel systems over time and most will be from compounds created due to the degradation of fuel lines, fuel pump diaphragms, etc. It may be that you need to service the fuel systems on your equipment rather than treat the fuel. This may eliminate the issues that you are seeing.



### CX4 Specifications

Length-----18'3"  
 Wing span-----24'  
 Height-----4'8"  
 Width-----23"  
 Wing area-----84.4 sq ft  
 Fuel---10.5 gals ---92 oct Auto  
 Gross weight-----850 lbs  
 Useful load about-----330 lbs  
 Empty weight about ----520 lbs

Electrical system, Starter, Alternator  
 Engines---1700CC to 2180--Volkswagen  
 Construction--all metal--6061-T6-except cowl  
 Brakes--Hydraulic disc--toe brakes

- Heater and vent for all seasons flying
- Design load 3.8 Gs, Ultimate load 5.7Gs
- Optional 3 gal aux fuel tank

### Performance at 750 lbs with 1700CC engine:

Cruise speed-----125 mph at 3000rpm  
 Stall Vso-----40 mph  
 Max ceiling-----10,000 ft  
 Rate of climb Vy-----825 ft per min at 75mph  
 Best angle of climb Vx-----63 mph  
 Never exceed speed-----155 mph  
 Take off roll-----700 feet  
 Best descent speed-----63 mph

-Construction time-----about 850 hours

-Cost of materials----- Airframe---- about \$8150  
 you assemble the engine----- about 5750  
 Total \$ 13,900

**- With assembled and run engine and airframe parts--  
about, \$15,000**

- Aircraft may be flown with canopy off
- Wings come off in about 20 minutes for transport



## The Poly Fiber aircraft fabric system.

With only two stabilators to my credit, I am far from an expert, but I've read the manual cover to cover, and have done everything except the paint, so I can certainly point anyone who needs general advice in the right direction. And if anybody needs to temperature regulate their electric iron, I have a Chaney Instruments surface thermometer, a very effective and easy to use way of doing this.

Basically, the system uses polyester fabric of various thicknesses depending on the size of your plane. Small aircraft like mine use 1.7oz cloth. The surfaces to be covered are cleaned with MEK (Methyl Ethyl Ketone), a liquid with which you must take a lot of care. Firstly, you must use gloves and secondly use it in a well ventilated area, preferably with a fan blowing the fumes away from your face. After cleaning, you cut the piece of fabric to suit the job. Then, working in a way that keeps the fabric flat but only doing small sections at a time, you glue it in place with Poly-Tak. Excess glue can be easily removed with MEK. After the gluing, it is time to stretch the fabric using the iron. The first stretch is done at 250<sup>o</sup> F. Then depending on the strength of the underlying structure, you can take it up to 340<sup>o</sup> F. This removes all the wrinkles and you can also even out lumps of glue with the iron. After stretching, you apply the Poly-Brush sealer. This is a rubbery sealer that fills the cloth weave. As the name suggests, it is best put on with a brush. Then the UV barrier, a suspension of aluminium powder (at least that's what it looks like) is sprayed (or brushed if properly thinned) over the sealed cloth – two coats.

Of course, my job is a small one. Wings and fuselages also require the fabric to be stitched into place. But that's all in the manual as well. The book can be gotten from Aviaquip in Melbourne and so can all the other stuff. But be careful to order everything at once because the cost of dangerous goods freight is a killer, even for small quantities. Arthur.



**The next QUA meeting is on Monday March 7th at 7.30pm  
at the Archerfield Terminal Building followed by supper.**

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## MINUTES OF FEBRUARY 5TH 2011 GENERAL MEETING

MEETING OPENED	10.15 am
APOLOGIES	Jim Bowling, John Innes, Ivor Parsons.
MEMBERS PRESENT	Fourteen.
MINUTES OF DECEMBER	No business arising. Minutes discussed.
PRESIDENT'S REPORT	<p><b>QUA Clubhouse.</b> Not much work was done in January due to the wet weather. Plan is to keep working in the kitchen area to pass the final inspection. Tiling, painting and gyprock installation is planned soon. Scott has donated a weather station to the clubhouse. Thanks Scotty.</p> <p><b>Hangar.</b> Storm water pipe to be fitted in front of the building. Three whirligig ventilators are planned at \$ 410 plus GST each. Motion raised to purchase (Mal McKenzie) and seconded (Richard Faint). Motion passed by members.</p>
TREASURERS REPORT	Current Balance \$8,500.00. Some hangar rent is due.
SECRETARIES REPORT	Some correspondence over the past month. Email from Jim Bowling regarding the ventilators. Invoice from RAAus for QUA Inc membership fee. WBMA sent a copy of Watts Bylaws which are available to members.
WBMA REPORT	Constant wet weather has curtailed the mowing and some airfield activity. Approval of the main gate sign is still pending with SRC. Garbage collection and bin sharing is an ongoing cost. QUA to share the costs with the Queensland Aerobatic Club.
SOCIAL REPORT	All In Fly In scheduled for Saturday 21 <sup>st</sup> May is planned to be a re run of last successful event for pilots and visiting aircraft. The QUA is set to sell cold soft drinks at the clubhouse. A local church is organizing the catering of food. The fly in will be a one day event from 09.00am to 04.00pm. A planning meeting on 19 <sup>th</sup> February is for all home base groups.
GENERAL BUSINESS	<p>The Clifton Fly In is planned again for 12 / 13<sup>th</sup> May. Poker run and Christmas in July Dinner is planned for 16<sup>th</sup> July.</p> <p>Sandy Walker is to investigate fitting of solar power to the clubhouse using a grant from the Gaming Grants Scheme. Applications are to be made as soon as possible for suitable grants.</p>
NEXT QUA Inc MEETING	Monday 7 <sup>th</sup> March, 2011 at Archerfield starting at 08.00pm.
THANKYOU	To David & Peter Ratcliffe for providing the BBQ today.
MEETING CLOSE	11.20 am.