

Newsletter No. 308 – February/March 2020

The Atherton Aero Club is an organization of aviation enthusiasts who promote the sport of aircraft building and flying.

The organization is associated with *Recreation Aviation Australia Inc.* The Club meets at Atherton Airport every third Sunday of the month. Food and drinks are available and visitors are most welcome.



Wet Season Green, Einasleigh, February 2020

Photo: LaurenCam NQAC

Atherton Aero Club - Committee Contacts

| President | Vice-President | Secretary | Treasurer |
|--|--|---|--|
| Simon Perkins PO Box 227 ATHERTON Q 4883 simon@spaconsulting.com.au | Dave Camp PO Box 227 ATHERTON Q 4883 admin@gorex.com.au | Tracey Hayes PO Box 227 ATHERTON Q 4883 athertonaeroclub@gmail.com | Connie Graham PO Box 227 ATHERTON Q 4883 connieg@fnoc.com.au |

Web Page <http://www.athertonaeroclub.org/>

Facebook <https://www.facebook.com/AthertonAeroClub?ref=hl>

EDITOR'S NOTE - by Bill Gronbeck

Hi All,

Welcome to edition No 308. In this issue - Photos of recent flying activities. Unfortunately many of our scheduled flying events and social activities are now in doubt as the fallout from the Covid-19 pandemic continues. Time for some Flight Sim at home or socially isolated solo in your own aircraft.

A thank you also to all the others who (knowingly or un-knowingly) contributed photos and articles for this edition. Please contact me with your newsletter contributions on any of the following: (07) 4036 2868 or 0408 073 142 or by email at -

williamgronbeck2@gmail.com

Watch the AAC, NQAC and Innisfail Facebook Pages for details of calendar changes and other short notice events. Check out the AAC Website for the YATN weather-cam and older AAC Newsletters.



**REMINDER—AAC 2020
MEMBERSHIP RENEWAL
IS NOW DUE**

Due to the Corona Virus epidemic all **AAC Club Meetings & Functions** are cancelled until further notice. **The AAC AGM has been postponed until June** when the situation will be reviewed. **Please monitor the AAC Facebook Page for updates.**



Around and About—As Limited by the Corona Virus.



Cannabullen Falls, 1st March 2020

Photo: Dave Graham

Around and About—As Limited by the Corona Virus.



Deeral March 2020. Frank Arri practises responsible Social Distancing in his Drifter



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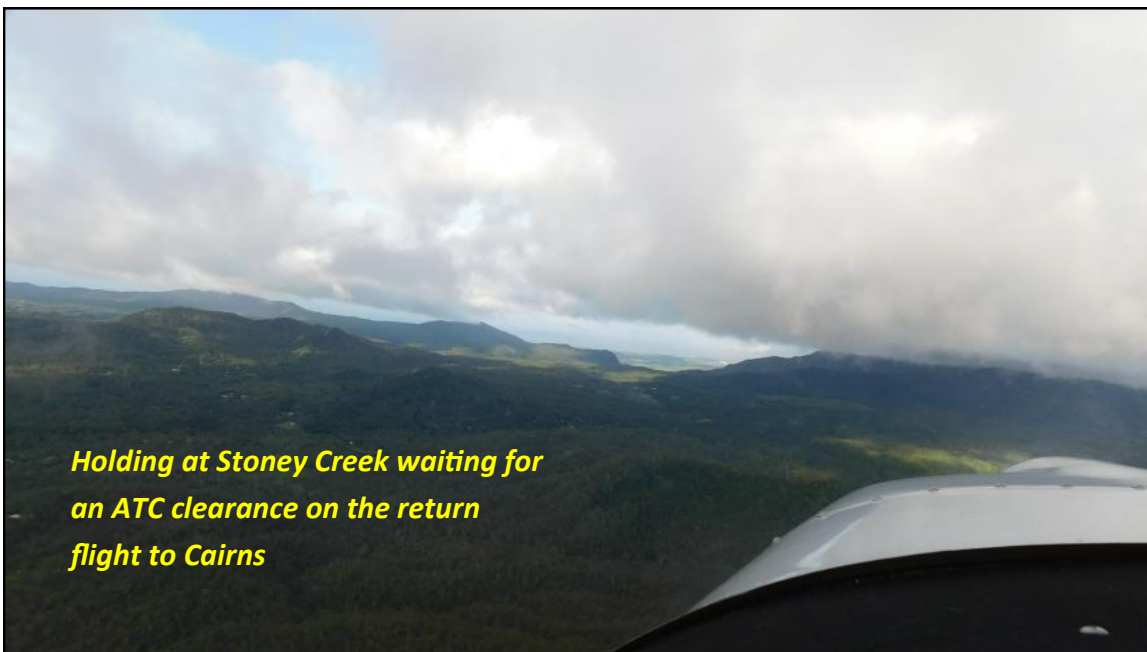
Around and About—A quick trip to Longreach and back



***Work Continues on the QANTAS
Founders Museum Longreach***



Michelle's RV6A and Hew's RV7 at Longreach



***Holding at Stoney Creek waiting for
an ATC clearance on the return
flight to Cairns***

SubSonex Project: First Flights and More

Paul Dye 30 March 2020



This story, as part of a series on building the SubSonex, originally appeared in KITPLANES.

There comes a day in every airplane build where there is nothing left to do but fill it with fuel, get in and take it aloft. But between the time when you have turned the last bolt and applied the last placard and that first flight day, there are still a few things you need to get done—and most of them involve paperwork. That paperwork leads to the final licensing inspection and (hopefully) a Special Airworthiness Certificate.....

To continue reading, follow this link:

<https://www.avweb.com/features/subsonex-project-first-flights-and-more/>



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THE AVIATION ARCHIVES BN-2 Islander

An old story, penned back in the 70's, reproduced here for those who weren't around then.

SPECIAL FEATURE – ENGLANDS ANSWER TO THE AEROPLANE

Exploring acoustic lift technology in the PBN-2 XL Islander

Undaunted by aerodynamic realities, the design team at Pilatus/Britten-Norman has announced plans for the BN-2 XL, promising more noise, reduced payload, a lower cruise speed and increased pilot workload.

We spoke to Mr Fred Gribble, former British Rail boilermaker and now Chief Project Engineer. Fred was responsible for developing many original and creative design flaws in the service of his former employer and will be incorporating these in the new BN-2 XL technology under a licensing agreement.

Fred reassured BN-2 pilots however that all fundamental design flaws of the original model had been retained. Further good news is that the XL version is available as a retrofit.

Among the new measures is that of locking the ailerons in the central position, following airborne and simulator tests which showed that whilst pilots of average strength were able to achieve up to 30 degrees of control wheel deflection, this produced no appreciable variation in the nett flight path of the aircraft. Thus the removal of costly and unnecessary linkages has been possible, and the rudder has been nominated as the primary directional control. In keeping with this new philosophy, but to retain commonality for crews transitioning to the XL, additional resistance to foot pressure has been built into the rudder pedals to prevent over-controlling in gusty conditions (defined as those in which wind velocity exceeds 3 knots).

An outstanding feature of the Islander technology has always been the adaption of the O-540 engine, which when mounted in any other aircraft in the free world (except the Trislander) is known for its low vibration levels, so as to cause it to shake and batter the airframe, gradually crystallise the main spar, desynchronise the accompanying engine, and simulate the sound of fifty skeletons fornicating in an aluminium dustbin.

Britten-Norman will not disclose the technology they applied in preserving this effect in the XL, but Mr Gribble assures it will be perpetuated in later models and sees it as a strong selling point; "After all, the Concord makes a lot of noise," he said, "And look how fast it goes".

However design documents clandestinely recovered from the Britten-Norman shredder have solved a question that has puzzled aerodynamicists and pilots for many years, disclosing that it is actually noise that causes the BN-2 to fly. The vibration set up by the engines and amplified in the airframe, in turn causes the air molecules above the wing to oscillate at atomic frequency, reducing their density and causing lift.

Continued

THE AVIATION ARCHIVES—BN-2 Islander Continued

This can be demonstrated by sudden closure of the throttles, which causes the aircraft to fall from the sky. As a result, lift is proportional to noise rather than speed, explaining amongst other things the aircraft's remarkable take-off performance.

In the drivers cab, (as Gribble describes it), ergonomic measures will ensure that long-term PBN pilots' deafness does not cause in-flight dozing. Orthopaedic surgeons have designed a cockpit layout and seat to maximize backache, en-route insomnia, chronic irritability and terminal (post-flight) lethargy. Redesigned "bull worker" elastic aileron cables, now disconnected from the control surfaces, increase pilot workload and fitness.

Special noise retention cabin lining is an innovation of the XL and it is hoped in later models to develop cabin noise to a level which will enable pilots to relate ear pain directly to engine power, eliminating the need for engine instruments altogether.

We were offered an opportunity to fly the XL at Britten-Norman's developmental facility, adjacent to the Brit-Rail tea rooms at Little Chortling. (The flight was originally to be conducted at the Pilatus plant, but aircraft of Britten-Norman design are now prohibited from operating in Swiss airspace during the avalanche season).

For our mission profile, the aircraft was loaded with coal for a standard 100nm with Brit-Rail reserves, carrying one pilot and nine passengers to maximize discomfort.

Passenger loading is unchanged, the normal under-wing protrusions inflicting lacerations on 71% of boarding passengers, and there was the usual confusion in selecting a door appropriate to the allocated seat. The facility for the clothing of embarking passengers to remove oil slicks from engine cowls during loading had also been thoughtfully retained.

Start up is standard and taxiing, as in the BN-2, is accomplished by brute force. Take-off calculations called for a 250 decibel power setting. The rotation force for the (neutral) C of G was calculated as 180 ft/lbs of back pressure.

Initial warning of an engine failure during take-off is provided by a reduction in vibration of the flight instrument panel. Complete seizure of one engine is indicated by the momentary illusion that the engines have suddenly and inexplicably become synchronized. Otherwise, identification of the failed engine is achieved by comparing the vibration levels of the windows on either side of the cabin. (Relative passenger pallor has been found to be an unreliable guide on many BN-2 routes because of ethnic considerations).

Continued

THE AVIATION ARCHIVES—BN-2 Islander Continued

Shortly after take-off the XL's chief test pilot, Capt. "Muscles" Mulligan, demonstrated the extent to which modern aeronautical design has left the BN-2 untouched; he simulated pilot incapacitation by slumping forward onto the control column, simultaneously applying full right rudder and bleeding from the ears. The XL, like its predecessor, demonstrated total control rigidity and continued undisturbed.

Power was then reduced to 240 decibels for cruise and we carried out some comparisons of actual flight performance with graph predictions. At 5000 feet and ISA, we achieved a vibration amplitude of 500 CPS and 240 decibels for a fuel flow of 210 lb/hr, making the BN-2 XL the most efficient converter of fuel to noise after the Titan rocket.

Exploring the constant speed/variable noise concepts, we found that in a VNE dive, vibration reached its design maximum at 1000 CPS, at which point the limiting factor is the emulsification of human tissue. The catatonic condition of long term BN-2 pilots is attributed to this syndrome, which commences in the cerebral cortex and spreads outwards.

We asked Capt. Mulligan what he considered the most outstanding feature of the XL. He cupped his hand behind his ear and shouted; "Whazzat?"

We returned to Britten-Norman field convinced that the XL model retains the marque's most memorable features, while showing some significant and worthwhile regressions.

Pilatus/Britten-Norman however are not resting on their laurels. Plans are already advanced for the Trislander XL and noise tunnel testing has commenced. The basis of preliminary design and performance specifications is that lift increases as the square of the noise and as the principle of acoustic lift is further developed, a later five-engined vertical take-off model is also a possibility.



The **Britten-Norman BN-2 Islander** is a British light utility aircraft and regional airliner designed and originally manufactured by Britten-Norman of the United Kingdom.

Still in production, the Islander is one of the best-selling commercial aircraft types produced in Europe. Although designed in the 1960s, over 750 are still in service with commercial operators around the world.

AAC AIRCRAFT PERFORMANCE WORKSHOP

As a follow up to the AAC Workshop held on Sunday the 16th February, your editor decided to evaluate Google Earth as a means for obtaining runway length and width when that data is not available from sources such as ERSA, e.g. Atherton.

The Tools feature in Google Earth contains an easy to use Ruler for measuring the dimensions of flight strips and runways in metric or imperial units.

The runway Elevation Above Mean Sea Level can also be obtained, and Runway Slope estimated, by running the mouse cursor along the runway/strip and reading the AMSL height (in metres) at the bottom of the screen. Convert that figure to feet (height in Metres divided by .3048 = Feet). Obstacles off the Approach and Departure ends of the runway can be assessed in the same way.

The elevations AMSL found using this method appear to be reasonably accurate but do not take man made structures or large trees into account. Also be aware that the images shown on Google Earth could be old photographs that do not reflect recent changes to the dimensions of the ALA being considered.

CONCLUSION: *Google Earth is a useful tool for evaluating a proposed destination but data obtained in this way is only approximate and should be used with Caution..*



Journalist's Guide to Aircraft Identification



737 MAX 800



737 MAX 800



Cessna



737 MAX 800



737 MAX 800



DC-3



737 MAX 800



737 MAX 800



Cessna



737 MAX 800



737 MAX 800



Piper



737 MAX 800



737 MAX 800



Cessna



737 MAX 800 with props



Cessna



NOT A BOEING 737 MAX 800

Max and Lauren at Mt Surprise—2nd March 2020

WANTED

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FOR FURTHER LOCAL INFORMATION CONTACT:

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www.iffr.org.au



International Fellowship of Flying Rotarians

NORTH QUEENSLAND AERO CLUB NEWS & EVENTS

Dear Members,

Covid-19 Update.

At this stage the NQAC is operating as usual with additional health & safety measures in place. Members and Students will be informed of any changes to this.

Our additional Health Initiatives include:

- Disposal Headset Covers to be used for each headset use.
- Headset Sanitiser to clean headsets after each use.
- Plenty of hand soap and paper towel for regular hand washing.
- Use of the large classroom and hangar for briefings to maintain social distancing.
- Regular disinfecting of all common use surfaces.

Staff are continuing to monitor the situation and will make changes as appropriate. Our staff are all healthy and will not be coming to work if this changes. We ask all members and students to please exercise the same precautions.

We are also offering the opportunity for students to take part in online briefings and tutoring if this suits your requirements.

For any questions or to organise online tutoring please contact our office on 4092 2043 or email admin@nqaeroclub.com.au.

NOTE that the **Dunk Island Fly-In** scheduled for April has been **Postponed** to a later date. Please monitor the NQAC Facebook page for possible further changes to the 2020 Events Calendar.

<https://www.facebook.com/nqaeroclub/>

North Queensland Aero Club – Events Calendar 2020

| Date | Event |
|---|---|
| 13 th and 14 th June | Bloomfield and Mount Louis FLY IN (Day trip to Cockatoo Gallery and optional overnight stay at Mount Louis Station) |
| 11 th July (Sat) | Guest speaker and breakfast BBQ |
| 12 th and 13 th September | Georgetown FLY IN and Tom McDonald Spot landing comp (at YGTN airport). |
| 3 rd October Saturday night | Wings night under the stars at Mareeba Aerodrome |
| 31 st October Saturday | Annual General Meeting |
| 27 th November | NQAC Christmas Party BBQ/Spit Roast |
| Dates to be advised | Mareeba airport BIG BASH Cricket COMP – Details soon |
| Dates to be advised | Student FLY Ins (destinations TBA) |

NORTH QUEENSLAND AERO CLUB NEWS & EVENTS



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- Located Mareeba Airport, Far North Queensland

CONTACT SECRETARY

Brendan Kent
0422 379 984
admin@fnqam.com.au
www.fnqam.com.au



FNQ AVIATION MUSEUM—Photos



AUSTRALIAN WAR MEMORIAL

067958

Mareeba Aerodrome, North Queensland, AUSTRALIA. 21st July 1944.

"BOOMERANG" and "WIRRAWAY" Aircraft of No. 5 Squadron, ROYAL AUSTRALIAN AIR FORCE lined up on the tarmac during an Army Air Co-Operation Exercise with the 2/4TH Infantry Battalion, 19TH Infantry Brigade.

Photo Courtesy of the AWM.

FAR NORTH  QUEENSLAND
AVIATION MUSEUM
 PRESERVE | INSPIRE | EDUCATE | RESTORE



**EVENTS MAY BE CANCELLED OR POSTPONED
DUE TO GOVERNMENT TRAVEL RESTRICTIONS**

Check Your Club Website or Facebook Page

For Cancellations or Postponements

Atherton Aero Club—2020 EVENTS CALENDAR

May Mon 4th, **Pinnarendi Fly-In** for Breakfast/Morning Tea?

OTHER EVENTS OF INTEREST

July Sat 4th & Sun 5th, **Brisbane Valley Airshow, Watts Bridge?**

July Date TBA. **Uluru Trip.** Call Jon Collins AAC if interested?

Aug Fri 14th—Sun 16th, **QANTAS Centenary Fly-In, Longreach?**

Sept Sat 12th & Sun 13th, **Burdekin Airport Centenary Fly-In?**

Sept Sat 26th, **Innisfail Aero Club Open Day?**



LINKS TO INTERESTING ARTICLES & VIDEOS:

<https://www.avweb.com/features/secondhand-safety-homebuilt-risks-for-non-builder-pilots/>

Second-hand Safety Homebuilt Risks

<https://www.avweb.com/flight-safety/risk-management/homebuilt-accidents-fatal-factors/>

Homebuilt Accidents. Fatal Factors.

<https://www.youtube.com/watch?v=i-rB-JdvVZY>

Early French Woman Pilot Marie Marvingt

<https://www.casa.gov.au/news-article/bristell-stall-and-spin-warning>

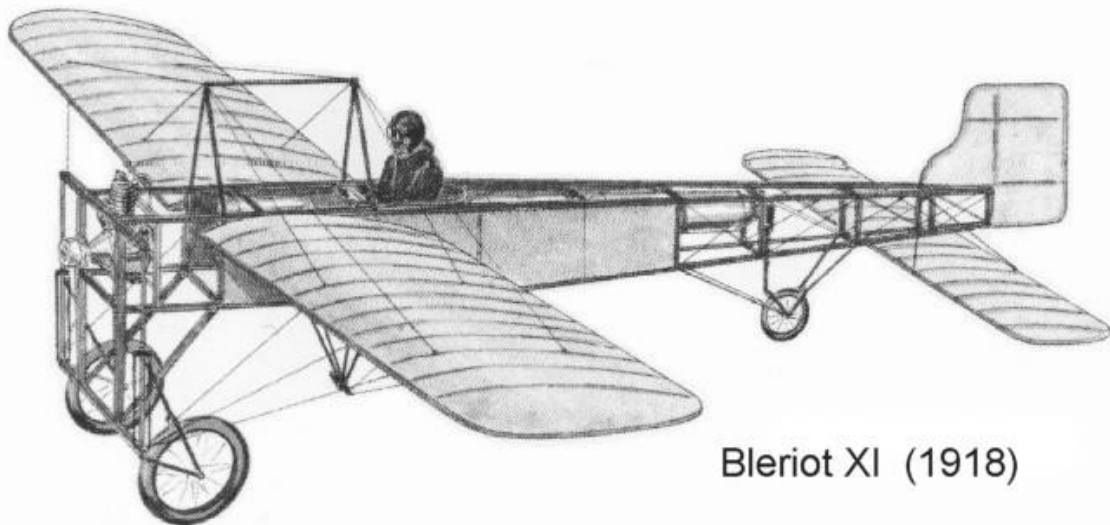
Bristell Stall and Spin Warning from CASA

<https://www.youtube.com/watch?v=2iYQNLSxQns>

The Importance of Checklists. King Air Accident Essendon 2018.

https://www.youtube.com/watch?time_continue=825&v=9RxSkpoGMY&feature=emb_logo

SubSonex Flight Video



Atherton Microlights

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Pinnarendi Station

Stay & Café

<https://www.facebook.com/Pinnarendi/>

Ron Atkinson 0419 201 622



Pinnarendi Station

NQAC Air Race Line-up

NOTICE



The **Atherton Aero Club** is now an ASIC Issuing Agent for **Aviation ID Australia**.

Those seeking the issue or renewal of an Aviation Security Identification Card (ASIC) should apply directly to **Aviation ID Australia** via the following link:

<https://aviationidaustralia.net.au/application.html>

Once the ASIC card has been approved the applicant will be advised and the required "face-to-face" identity check carried out locally by an Atherton Aero Club representative. On the satisfactory completion of the identity check the local agent will hand over the ASIC card to the applicant.

AIRCRAFT FOR SALE AND WANTED

If you have, or know of, an aircraft for sale please contact me directly by telephone or email with full details. The AAC offers free advertising in the club newsletter as a service to local flyers. Direct emailing of your advert to aviators on the club mailing list is available should your advert be received after the publication cut-off date. *Bill Gronbeck, EDITOR.*



INTERESTED IN BUILDING YOUR OWN AIRCRAFT?

The Sport Aircraft Association of Australia (SAAA) is an organization that has mentored and assisted many owner builders, for both VH and Ultralight registered aircraft.

Further information on the SAAA's National and FNQ Chapter 34 websites:

<http://www.saaa.com/>

<http://www.saaafnq.com/>

Local contact is:

Laurie Wincen (Secretary) laurie19@gmail.com

ATHERTON AERO CLUB CORPORATE SPONSORS




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Atherton Aero Club - Membership Application / Renewal

New Member

Returning Member



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| Postal address | | State | Postcode |
| Email address | | Occupation | |
| Telephone | ah | (h) | mobile |

MEMBERSHIP

| | | |
|------------------------------------|------------------|-------------------------------------|
| <input type="checkbox"/> \$ 60.00 | Single Member | Single member with voting rights |
| <input type="checkbox"/> \$ 100.00 | Family Member | Two members with voting rights |
| <input type="checkbox"/> \$ 50.00 | Associate Member | Single member with NO voting rights |
| <input type="checkbox"/> no charge | Student Member | Single member with NO voting rights |

PAYMENT

| | |
|---|--|
| <p>Forms to be sent to: <i>The Treasurer</i> <i>Connie Graham</i> <i>PO Box 227</i> <i>ATHERTON QLD 4883</i></p> | <p>or email to: connleg@ncc.com.au</p> |
| <p>Payments can be made by: EFT, Cheque, cash, or at the Bendigo Bank</p> | |
| <p>EFT Details: Atherton Aero Club BSB 633000 ACC 114331706 (Ref - Your Name)</p> | |

I hereby apply for membership to the Atherton Aero Club and agree to abide by the Constitution and any rules and regulations thereof. I further agree that my contact details may be made available to other members of the association as the Management Committee deems necessary.

Signed _____ Dated _____

Print name: _____ Print name: _____

OFFICE USE ONLY

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| Membership type | | Receipt No | | Fee Paid | \$ |
|-----------------|--|------------|--|----------|----|

THE LAST PAGE

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