

The Free Flighter
Journal of the NSWFFS Inc
November 2016



Adrian reciting the poem
“Retired”
At West Wyalong

Minutes of General Meeting

9th September 2016

Meeting opened: 7.34pm President Terry Bond in the chair.

Present

Barry Lee, Terry Bond, , Ed Mahoney , Jim Mc Fall, Roy Summersby, Gary Pope, Walter Bolliger, George Atkinson, Matt Hannaford, Gary Goodwin, Phil Warren, Goran Milosavijenc, John Dodd's, Carlo De Filippis, B East

Apologies

Michel Towell, Donna Gray, Jim Christie, Geoff Potter, John Pennells, Tahn Stowe, Reg & Lyn Towell

Visitors

John Dodd's

Minutes of previous meeting:

Minutes accepted as a true record: moved Ed Mahoney, sec Jim Mc Fall

Business arising:

None

Correspondence In:

Fly Paper, MAAA Presidents meeting in November, Tele conference re land purchase in Victoria and South Aust.

Correspondence Out:

The Free Flighter November,

N S W F F S Inc

Treasurers Report - 1 July - 31 Aug 2016

OPENING BALANCE - 1 July 2015	
C B A	\$ 9,596.74
ST George	\$ 3,230.18
St George Term Deposit	\$ 10,045.66
	\$ 22,872.58
Add : DEPOSITS	\$ 23,560.40
Less : PAYMENTS	\$ 17,122.60
C B A	\$ 12,821.05
ST George	\$ 6,443.67
St George Deposit Account	\$ 10,045.66
Closing Balance 31 August 2016	\$ 29,310.38

General Business

Discussion on updating the web site. Terry gave a brief outline on the 2018 Nationals, RAAF notification is working well. More information needed from MAAA re leaks some months back. Moved Gary Goodwin sec E Mahoney that we buy 50 badges from MAAA/ Royal Flying Doctor Service these will be on sale at West Wyalong. Roy gave an update on West Wyalong; obstructions on the North West boundary have been removed. This was a substantial amount of work which we contracted out. Some tidying up still to be done, this work is in hand. Roof maintenance is required on the house Gary Goodwin and Roy Summersby to investigate. Road in front of amenities block needs building up after the heavy rains.

Meeting closed 8.37pm NOTE these minutes are for members only.

NSWFFS SHOP GOODS

AT THIS TIME WE HAVE THE FOLLOWING

Contact Roy if you need any of these items.

He will bring to the flying field or to the meeting

Tissue many good colours	\$1.00	Rock Maple bearers 3 sizes / 300long	\$4.50
P30 props	\$6.00	Clear Mylar 10 meters	\$10.00
3/64 prop shafts	.65	Aluminised Mylar / meter	\$1.00
3/64 Nylon bearings	.65	Rubber Lube 100ml Out of stock	\$4.00
Teflon washers 1/8 X 0.032" hole	.45	Methanol	\$1 per litre
Brass washers 1/8 X 0.050" hole	.45	Ether 1 litre (you supply container)	\$24.00
Dyna Grip Contact glue 50ml	\$2.00	Nitro Out of stock	\$22.50
F1J Timers, suit most power models	\$90.00	Castor Oil 1 Litre (out of stock)	\$10.00
These timers have been checked and modified with many mods by Jon Fletcher		Some carbon spars (round & square)	
Texas Timers	\$70.00	Diesel fuel tube 2.0m (bike valve)	\$7.50
Texas fuel cut offs (glo or diesel)	\$20.00	3/32 Rubber 500grams	\$30.00
Pilots very lite	\$5.00	Dremel chucks	\$7.00
Wheels very lite	\$5.00	Cutting tools (Diamond wheels)	
Wire small sizes priced to suit		10 different sizes	\$20.00
		Cutting tools (circler saw blades)	
		6 different sizes	\$15.00
		Tygon fuel tubing 1 meter	\$3.00

Editorial Nov 2016

Hi Team; a lot has happened this month and as such it is a bit late to put together this epistle. The October competitions turned out to be a bit of a fizzle due to the windy weather. Despite that the attendance was good and the competition tough. The retrieves were something special in the canola. I managed two rounds but missed the rest of the comp due to a late return with the model. Vin Morgan took 2 ½ hour to put one flight in then pulled the pin. The Queensland comp was cancelled due to very strong winds.

The Wings over West Wyalong was a great success. Somewhere between 40 and 50 people turned up and flew whatever they wanted. Early starts and last finishes were the order of the day. The machinery shed was packed with a number of very sensitive gentlemen who had swags, cots, cooking gear and the ever present esky. It was never planned as an intense flying weekend but more as a social weekend for the brave and curious. Nothing was spared; supplied were toilets (more next year) a camp kitchen we even supplied a couple of showers. Better to have the whiff of diesel or glow fuel deodorant than smelly BO.

The big 'Bush Tucker' feast prepared by Chris Bush with camp oven veges was as usual a great success. It was mostly washed down by a freebie rough red, supplemented by byo.

The real organiser and arranger for WoWW was as usual our own big Roy Summersby. He has planned this event for a long time and his enthusiasm seems unbounded. He deserves special thanks. Thanks also go to those who attended the inaugural WoWW.

Our contest calendar is now complete and hopefully published in this issue. We have two new events and they include visits to Hinton a bit north of Gosford, Gary Goodwin our VP is in charge of these two events.

'Big' Kev Davis was recently absorbed by a huge thermal at Macquarie Park Crematorium and a number of modellers saw him off in fine style. His four daughters gave a great eulogy at the service and his wife Jan met all who attended the wake in the adjacent restaurant. Kev left many kits in his collection and they are now available at a small or reasonable cost to those interested. Many modellers had the opportunity to purchase some of his gear at WoWW.

We have courtesy of Dawson Transport WW three rolls of matting available for the runway for the RC field or a control line circle. The matting was obtained from Norske Skog paper mills just north of Albury. Graham the Manager of Dawson Transport agreed to move the matting from Albury to WW free of charge. We now have significant synthetic grass and matting to improve the use of the field.

Keep your eyes on the magic box. We still hope to celebrate Brian Alcock on 11 Dec and if all goes well we will also have a glass of special for Kev. He also wanted to fertilise the field at Richmond. Perhaps he and Brian could finally end up on a golf course, yard or playing field on the north shore. Or even secretly buzzing earth bound creatures.

That's all folks; just remember free flighters keep them up longer!

Terry Bond
President NSWFFS

Next Meeting. 18th November Please Note.

Due to the Air League hall being sold we along with CLAS and the Air League are now looking for new venues. This next meeting will be held at the Merrylands Bowling club. We will meet near the bar down stairs and hopefully find a quite spot. They do have meeting rooms and we are investigating them.

Friday Xmas Party 2nd December

This is the day we say thanks to Pauline & Charlie

Sunday Xmas Party 11th December

BYO Food and chair, BBQ and some shade will be there for you to cook on.

New Year 30/12/16 to 2/1/17

See the New Year in with a McCoy 60.

Bookings are filling fast for the house at West Wyalong. For this fly very early then sit around gas bagging till its beer time in the afternoon. Some have booked motels. We do have plenty of camping space still available under the trees.

Scale Kits for Sale from NSWFFS.

Full list will be sent out soon, what is not sold quickly will be on E Bay. All Monies going to the new model & aviation library in West Wyalong.

Wings over West Wyalong 28th & 29th October 2016

This weekend, due to the postponement of the NSW state champs turned out to be a long weekend for some of us. The state champs were run on the Thursday and Friday just before the Wings over West Wyalong and are reported elsewhere.

“WINGS over WEST WYALONG. This was our first multi discipline weekend that we have had, and was run along the lines of, have a good time, fly what ever you want, and where ever you want on our 700 acres, just fly safely was all we asked. We had no idea how many starters we would get, as it clashed with other big events in NSW. To say the least I was a little worried. How much food (lambs in this case) do you prepare for an unknown number? No worries, flyers started rolling in on Friday, some staying in motels, others looking for the best camping site, by nightfall we had 25 happy campers making use of our felicitities, along with those 5 staying in the house. Our total numbers were 47 registered to fly made up of 22 Radio 18 Free Flight and 7 Control Line. Flyers came from Vic, SA, Qld as well as NSW. Saturday night saw 56 sitting down to the spit roast dinner in the backyard of the farm house. It was a big social evening with Adrian Bryant entertaining us with a poem named “Retired”; this went over very well, thank you Adrian.

Sadly the weather turned against us very late on Saturday night, which meant very little flying was done on the Sunday, so the time was spent talking and the running of noisy engines, all good fun.

I must thank Geoff Potter and Peter Scott for their work trying to get the ride on mower going, (it decided it had had enough). Geoff ended up mowing the RC strip by hand. Gary Goodwin was the gofer into town for a number of items, Matt Hannaford who always puts in 110% and some, cooking, collecting fire wood for the pit ovens as well as tidying up some bushes that were getting out of hand. Also, many thanks to Bruce Hao for making the new sign for the front gate. This along with the council signs certainly makes it clear what is happening there.

One improvement might be to have a set time for the swap, buy & sell session. Peter Jackson stole this show on Saturday morning, selling some of the late Kevin Davies goods at very low prices. Peter emptied a lot of modeller's pockets, sending them back into town for more dollars to pay for their Saturday night dinner. Peter needed escort back to Sydney to pass on the funds to Kevin's widow. Peter made a lot of modellers happy; it was certainly the talking point of the weekend. Did you get a bargain, if you missed out there is always next year? Feed back from the modellers was that they want it on again next year, this is good. It also showed us that we have to improve in some areas, like mowers that don't break down, especially if we are granted the 2018 Nationals.

Roy Summersby

NSW State Champs A, B, C & Vintage

These had been postponed due to flooding rains over most of the western plains of NSW. They were finally held at West Wyalong on the 26th & 27th October.

Conditions were not good for F1B as the wind shifted taking some models into the canola on big flights. Once you went into the canola to retrieve your model you did not feel like flying again, this resulted in some flyers only having one or two flights.

The weather for F1A & C on the Friday was to be much better and predicted to be even better in the afternoon, so it was decided to start flying at 1.00pm. This proved to be a good decision as models were going to all points of the compass. The team places were finally settled for the next world champs.

Results

F1C

Roy Summersby	180	180	180	180	240	960	201
Gary Pope	180	180	180	180	240	960	90
Terry Bond	180	129	180	180	240	909	
Shayne McDonald	78	180	180	180	240	858	
Shannon Tolmie	180	180	180	105	144	789	
Mike Pettigrew	180	180	140			500	

OR

Leigh Morgan	180	180	180			540	341
Jim Christie	180	180	180			540	200
Gary Goodwin	47	180	180			407	
Adrian Bryant	145					145	

F1A

Vin Morgan	180	180	173	180	240	953	
Albert Fathers	180	180	88	180	229	857	
Malcolm Campbell	180	180	180	180	117	837	
Tahn Stowe	163	180	180	180	129	832	

F1B

Gary Goodwin	240	180	180	167	118	885	
Terry Bond	240	180				420	
Vin Morgan	240					240	
Leigh Morgan	152					152	
Adrian Bryant	25		50	23		98	

Vintage

Roy Summersby	Swiss Miss		180	180		360	
Jim Christie	Bilgri	1955	180			180	
Adrian Bryant	Thermalizer		145			145	













“If you can’t fly this you shouldn’t have a bloody licence!”

2016 marks the 50th anniversary of the first flight of the Corby CJ1 Starlet. This story could easily be titled “The Little Plane that could;” it’s the story of how one man with a vision created one of the most fantastic and underrated achievements in Australian aviation history.

Post World War II sparked a new era of aviation. War surplus Austers, Tiger Moths and the like ushered in the idea of affordable flying. Flight clubs were established, war trained pilots turned to the civilian market and general aviation became a booming industry, something that would continue for another 40 years.



As is the want of mankind, any career can become a passion. Like cars, motorcycles and a variety of other vehicles before them, the aeroplane attracted a special type of enthusiast; the sort of enthusiast who didn’t just want to operate or maintain the vehicle but also wanted to design and build his own. The French led the way with the British and Americans following closely behind and in the immediate post-war years such amateur designed and built aeroplanes as the Turbulent, Jodel, Emeraude and a whole host of Formula One Air-Racing planes hit the skies around the world.

The rapidly expanding era of “sport aviation” meant that advocacy needs of this intrepid bunch of enthusiasts had to be met and in quick succession the Popular Flying Association (in the UK) & the Experimental Aviation Association (in the USA) were formed.

The first amateur-built “sport” aircraft to fly in Australia was Peter Hodgens’ Druine Turbulent, a single seat French design. As the local movement grew in Australia, a similar advocacy association was formed in 1956. Meetings were held in Sydney and Melbourne, which led to the formation of the Ultra Light Aircraft Association of Australia.

One of the first motions passed by the fledgling association stated that efforts should be made to encourage not just the building but also the design of sport aircraft in Australia. As a result an informal design competition was held to encourage development of easy to build Australian designs.

One of those entrants was John Corby (Member No.17), a Qantas airframe engineer and keen aero-modeller with a passion for aviation. Alongside his friend Eric Morris, Corby designed his first (unnamed) aeroplane. Somewhat resembling the erstwhile Volksplane, it was an extremely simple to build design with somewhat square surfaces.

Further designs followed in the coming years including a promising design by a group of Qantas engineers including the aforementioned Morris that lead to the 'Star Baby.' Alas like its forebears it too was destined to never fly.

Design

As with most amateur built aircraft, design influences were wide and varied. Corby set out with several ideas, goals and desires:

- To learn
 - To produce a good looking aeroplane
 - To design an Australian plane.
 - To produce a finished aeroplane, not be a "paperwork aeroplane."
 - Single seat
 - Minimum size and a simplistic build ("If it's not there it doesn't weigh anything and takes no time to build.")
 - Use minimum parts for undercarriage
 - Fuselage small but had to be stable; large tailplane & fin used to achieve goal.
 - Large control surfaces with small deflection to reduce drag
 - No flaps for simplicity
 - Short coupled to allow large slipstream
- Designed to 4.5g as a safety margin, second effect was aerobatic prowess!

To achieve this he took inspiration from a whole gamut of early sport aviation designs including the Jodel D9, Druine Turbulent, Topsy Nipper and (for looks) the LeVier Cosmic Wind.

The only major changes throughout the planning stage were:

Fuel tank

Redesigned tailwheel/skid

Differential aileron deleted from plans

Seat simplified

Variants:

Canadian built version on skis

Metal version, the "Kestrel"

By 1958 Corby was ready to go again and started his development of another easy to build type. A simple wooden low-wing monoplane with a single seat and a traditional undercarriage arrangement, Corby set out to make a strong, dependable plane that importantly was pretty to look at! In 1959 the first design report was written and Corby commenced building the first prototype by building two fuselage sides on the floor of his children's bedrooms.

In 1960, Corby was assigned (with several of his Qantas colleagues) to Singapore and over the next two years the project drew to an inevitable halt. Most of the fuselage was already built up, as was the tailplane, but in 1962 Corby returned and the project was back on track.

Whilst in Singapore, fellow Qantas engineer and good friend Barrie Bishton was asked to check out a fuselage mock-up to determine if his taller frame would fit the cockpit. Having tested the mock-up and after discussing the project, Bishton volunteered to join the venture. Officially he became Corby's engine partner and the two set to work to finish the design and build of the prototype upon returning to Sydney.

In early 1966 the design, christened Starlet in tribute to the Star Baby team, was ready to fly. Naturally the old maxim "when the weight of the paperwork matches the weight of the aeroplane" came into play and the DCA was presented with a 250 page design manual in preparation for a permit to fly. All told it took the government about 5 months but finally Corby & Bishton were issued with the permit to fly.

Initial flight testing was conducted by the experienced sport pilot Peter Hodgens. Taxi trials showed the aircraft, freshly registered as VH-CBS, was skittish at speed so the decision was made to switch to a tail skid which resolved many of the issues.

The 1500cc horizontally opposed twin cylinder Agusta GA.40 engine initially fitted to the Starlet prototype proved difficult as vibrations left the instruments unable to be read! With some further fiddling the vibrations were dampened sufficiently to allow the instruments to be read and the aeroplane safe to fly. The engine also demonstrated unpredictable starting behaviour. Sometimes it would start first time, sometimes it would take 30 minutes of hand swinging to no avail!

The Department of Civil Aviation required a minimum 15 hours of initial flight testing before they would allow the project to continue further. The initial testing was conducted by Hodgens who then converted both Bishton & Corby on an Em-raude after the Starlet's first 5 hours of flight. Due to the lack of radio equipment, the testing, at Camden Airport, had to be completed before 8AM to be landed before the tower opened. Bishton & Corby would spend their early mornings at Camden before racing off to work at Qantas Engineering in Mascot.

After the initial 15 hours had been conducted the DCA sent their test pilot, ex-RAAF pilot Tom Curlewis, to carry out further testing for the Starlet's 'permit to fly.' It was after the first of these flights that he uttered the immortal words: **"If you can't fly this you shouldn't have a bloody licence."** For the expectant design team this was about the highest praise they could expect. Corby himself described it as "the most no non-sense appraisal of an aeroplane you can get...particularly in this category."

As the testing got under way in earnest in preparation for the type certificate, the Latrobe Valley Aero Club became interested and decided to build themselves an example of the Starlet as a club project. With now two Starlets in existence, flight testing was split between the Traralgon, VIC based example and the prototype in Sydney. The Traralgon example was built with a VW engine and used to conduct the take-off and landing checks whilst Corby used the prototype to conduct the initial spin tests. Extended spin testing was then conducted in Morwell by the Latrobe Valley Aero Club with Starlet No. 2 and proved an important contribution to the overall Certification project.

Fact File

Fuselage

Overall Length 14' 9"
Maximum Height 4' 10"
Maximum Width 21¾"

Wing

Span 18' 6"
Area 68.5 sq. ft.
Section NACA 43012A
MAC. 45"
Incidence +2½° Root - 1° Tip
Aileron Deflection +15° -15°

Tailplane – Horizontal

Span 6' 6"
Area 13.75 sq. ft.
Elevator Deflection +30°, - 20°

Tailplane – Vertical

Area 7.4 sq. ft.
Rudder Deflection ±. 25°

Power Plant (40-80) H.P. (130-160) lb. wt.

Agusta GA-40
Various VW conversions including 'Revmaster,' 'Happy' and Rollason 'Ardem'
Jabiru 2200
Rotax 912UL

Weight Data

Empty Weight 395 lb MV Agusta (60H.P.-415 lb)
Pilot (+Baggage) 175 lb x 40" (55")
Fuel 8 gals. 55 lb x 12"
Oil 5lb
Max. A.U.W. 665 lb (semi-aerobatic)
Utility Category 700 lb
Normal Category 750 lb

C.G. Range (20-25%) M.A.C. (8.7" - 11.4") Aft of Wing L.E.

Confirming the initial impressions of the DCA's Curlewis, Corby found that the aircraft was easily recoverable using normal spin recovery techniques. Further testing of the two examples showed that the aeroplane would spin quickly for a couple of turns before hesitating and then re-entering a spin. It has been suggested that this may occur due to the wing not being fully stalled but as the aircraft was recoverable by the standard technique this was deemed to be not a significant issue. Sure enough the aeroplane was granted permission to do limited aerobatics up to 4.5g although spinning was not approved (despite being proven to be recoverable).

Full approval was given with the issuance of the Type Certificate 74-1 on 30/6/1972. This marked the first (and to date) only time that an Australian amateur designed aircraft was granted a full type certificate.

Some 50 years later, the Starlet success story has continued. More than 150 examples have been built or in the process of being built whilst more than 800 sets of plans have been sold. Various versions have been built with a variety of engines including the Agusta GA.40, various Volkswagen conversions including the "Rollason Ardem," "Hapi" and "Revmaster," & Jabiru 2200. Further, one example was even built on skis!

Most recently, a metal version called the CM2 'Kestrel,' has been designed with a single example flying on both sides of the Tasman with Jabiru motors. The metal structure has allowed the aircraft to be modified for better performance, greater fuel capacity and more space to fit bigger pilots.

50 years on from that first flight the Corby Starlet stands as testament to the dogged determination of one man; a fitting epitaph to a long career in aviation. John Corby we salute you.

Words: Thomas Warren

Photos: Phillip Warren



2nd Starlet built, still airworthy



John with some free flight Starlet models

Gathering at Echuca to celebrate 50 years of the Corby Starlet



Peter Hodgens, Barrie Bishton, Spanish visitor & John Corby



Some of the 14 Starlets at the gathering



NSWFFS Contest & Fixture Calendar 2017

Date	Event	Venue	Time	C/D
Dec 30 Jan 2	New Years Eve BBQ & Fun Fly No Comps Just Fun	W Wyalong	Flying anytime	If you want to go Book in
Jan 15	New Year Recovery Day	Richmond	7.00am – 1.00pm	
Jan 20	General Meeting		7:30pm	
Jan 29	Scramble, Scale Rally, HLG/CG	Richmond	7.00am – 1.00pm	Terry Bond
Feb 12	Combined % + Scale Fun Fly	Richmond	7:00am – 1:00pm	Matt Hannaford
Feb 25-26 ?	Hunter Valley Champs	Muswellbrook		
Mar 12	State Champs P30 + Comb Vintage	Richmond	7.00 – 1.00pm	Gary Pope
Mar 17	General Meeting		7.30pm	
Mar 26	Gary Goodwin's Hinton Day	Hinton	7.00am-- 1.00pm	0414292050
Apr 1-2-3	Vic State Champs F1 A,B,C, G,H, J O/ Rubber O/power, P30, HLG	Marong	For Program See FFDU	Vin Morgan 0393872531
Apr 9	Big Kev's Abomination Day	Richmond	7.00am – 1.00pm	Peter Jackson
May 1-2	Southern Cross Cup F1A, B, C Open Power & Open Rubber	W.Wyalong	For Program See FFDU	Dave Thomas
May 4-10	AFFS Champs	Narrandera	See FFDU	
May 19	General Meeting		7.30 pm	
May 21	State Champs Scramble + Combined % Control Line flying, BBQ Lunch	Richmond BYO Food	7.00am- 1.00pm	Terry Bond
June 3-5	NSW State Champs F1A, B, C, O/Power, O/ Rubber	W Wyalong A B Field	8.00am-1.00pm	Dave Thomas
June 18	Corby Starlet and Scale Practice	Richmond	7.00am-1.00pm	Jim Christie
July 1-2	Scale Rally Weekend. Scale comp Sat 2nd, Sun 3rd ½ Hour scramble, Fun Fly C/L fly- ing & BBQ Lunch	Richmond BYO Food	7.00am till dark Trans Tasman	Tahn Stowe
July 16	State Champs F1G,H,J (Combined)	Richmond	7.00am-1.00pm	Matt Hanaford
July 21	General Meeting		7.30 pm	
Aug 6	Combined %, Multiple Entries.	Richmond	7.00am- 1.00pm	Bruce Hao
Aug 20	Scale Rally, P 30, Combined Vintage	Richmond	7:00am – 1:00pm	Tahn Stowe
Aug 26-27	Cowra Oily Hand Weekend	Cowra		
Sep 10	½ Hour Scramble +Fun Fly B-B-Q Lunch	Richmond BYO Food	7:00am – 1:00pm	John Corby
Sep 15	Annual General Meeting		7:30 pm	
Sep 24	Combined % 5 flights	Richmond	7.00am - 1.00pm	Matt Hannaford
Oct 8	Combined % Multiple Entries	Hinton	7:00am – 1:00pm	Gary Goodwin
Oct 22	Scramble 1 hour + Scale Rally	Richmond	7.00am- 1.00pm	Roy Summersby
Nov 17	General Meeting		7:30 pm	
Nov 21-22	Wings Over West Wyalong All Disciplines FUN FLY	W-Wyalong A.B.Field	7.00am-Till Dark	Plenty of Room for ALL
Nov 26	Brian Alcock Biplane Day	Richmond	7:00am – 1:00pm	Gary Pope
Dec 1	Friday Xmas Party	Richmond	7.00am – 1.00pm	
Dec 10	½ Hour Scramble, Combined Vintage with SAMS & Fun Fly.	Richmond BBQ Xmas	7:00am – 1:00pm Lunch BYO	Terry Bond FOOD
Notes 1. 2. 3.	All scrambles start as close to Sport FF, CL,& RC Flying welcome BYO FOOD, DRINK & CHAIR to	8.00 am as on A.B. Field ALL BBQs at	Possible at W. Wyalong RICHMOND	Plenty of room