



Airborne

Newsletter

March 2021

From our President

Bruce Govenlock



Greetings all,

Congratulations to our New PPLs

The Club is ticking along nicely... in March we graduated our 7th & 8th new Private Pilots in the last 6 months. That is continuing a record smashing run by our instructing team. Plus in February the Club flew 215 hours for the month. Another record that had us looking back decades to check the last time we achieved that.

The team is humming.

We have 3 significant ongoing projects that we hope to complete in the next 2-3 months.

Better view on approach to 01

If you have noticed Joe Faram looking like a lumberjack and Gerald Grocott pointing at trees around the airfield don't worry they are not planning a forestry plantation they are continuing on with the latest stage of what has been a very long and involved process to ensure the approach and departure fans for our 01-19 seal runways continue to remain in compliance with Airways IFR requirements.

This has seen various hedges trimmed on the approach to

IN THIS ISSUE

[From the President](#)

[From the CFI](#)

[Reuben's Quiz](#)

[Circuit Workshop](#)

[PPL Theory Lecture Timetable](#)

[From the Club Captain](#)

[New Members & Achievements](#)

[Wright Bros first to Fly on Mars](#)

[The Ultimate Modder](#)

[Pics](#)

[Short Bytes](#)

[Love the Club](#)

[Just Browsing](#)

[What's Up](#)

[Duty Piloto Roster](#)

[Club Contacts](#)

From our President - Bruce Govenlock

01 and then a number of tall trees will be removed in April/May and the affected area along the Karewarewa stream will be replanted with natives by HBRC and maintained by HBRC for 5 years to get them established. This should ensure the problem with those particular tall trees does not recur and the stream gets a restoration makeover by HBRC as well.

North east paddock earthworks

We are aiming for completion and resowing of grass this autumn. The race is on and here is hoping for rain. I think we will all be pleased to see the end of the trucks and dust. It will still be a no taxi zone due to softness so will continue to be a non operational movement area.

Accommodation renovations

Maintenance and upkeep on the 3rd unit is under way and the goal is completion by the end of April, after which we will be back to having these 3 units fully occupied.

Hangar Leases

We have finally received the updated hangar lease document from the Club solicitors. This just modernises the lease document to the current age and Govt Acts. We will be catching up with the last 12 months scheduled hangar lease renewals over the next couple of months and using the new document format.

New grounds equipment shed

The Committee is looking at options for a new shed building to house all the tractors, mowing and grounds equipment. This will move it out of the current home behind the twin in the eastern hangar bay and scattered around the other hangar bays and free up more space for aircraft hangarage. We will be doing some work to make the eastern hangar bays more bird proof at the same time. Expect this will happen mid year. There will be a rearrangement of the aircraft in the hangars prior to this.

Looking ahead...

Working bees..

Coming up in winter there will be some general work required around the airfield. Including Applying more lime to the runway strip and threshold markings for the seal and grass runways... and possibly install new fencing around the northeast paddock earthworks area once that is completed..

And cleaning out the hangars.

Details to come..

Air BP scholarships

We usually run this in April but you will recall Covid saw us delay it last year to August so we will be running it later this year too. Details to come. Most likely this will follow the new format we introduced last year which tapped our existing student pool and which has been very successful.

AGM for 2021

Similarly Covid saw this delayed last year. The Committee has yet to set the AGM date for 2021 but it is likely to be a little later than usual just to give the Committee time to see out a few projects to completion. The accounts are on schedule for auditor completion in late April/early May.

From our President - Bruce Govenlock

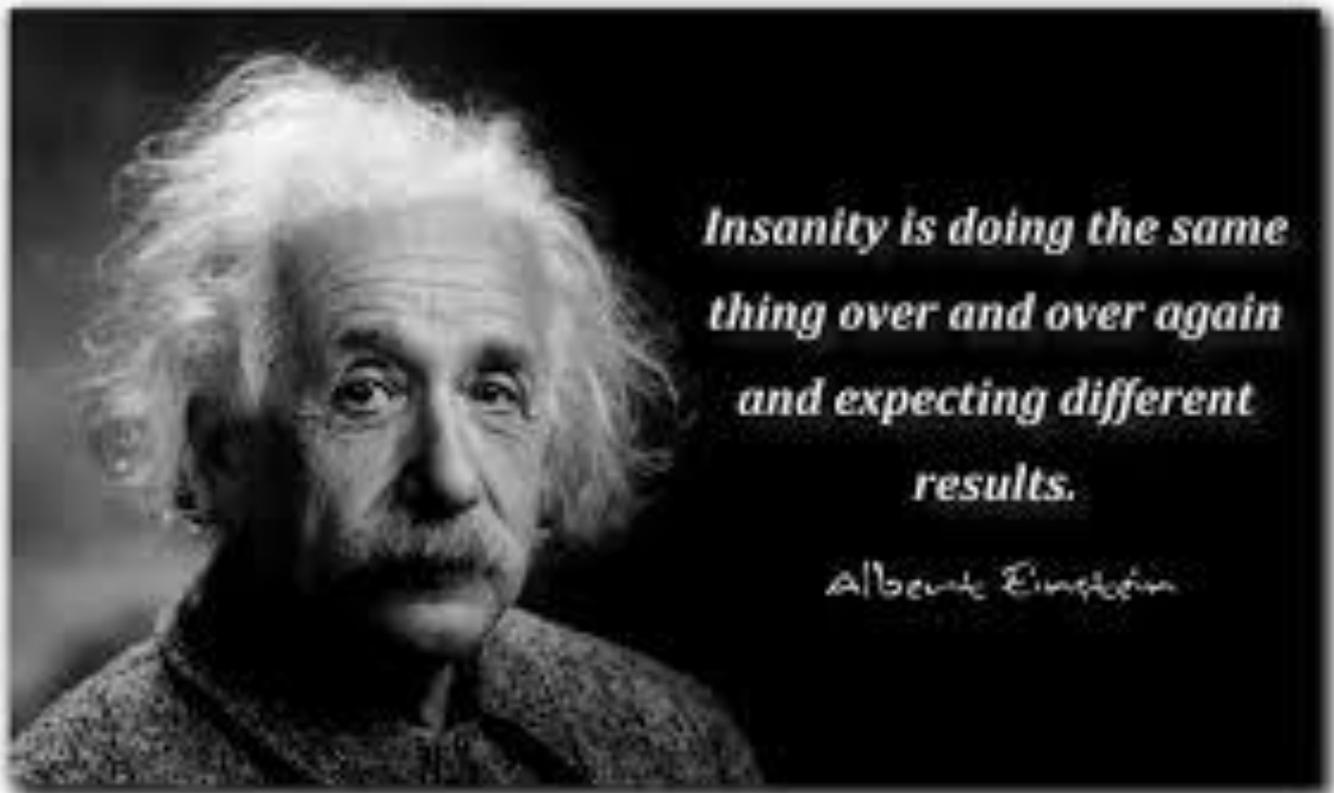
Astro thought for the month....

100 years ago - 1921 and Albert Einstein is awarded the Nobel prize for services to aviation

Following his incredible run of breakthrough discoveries in physics in 1905 several of which would have won anyone else the Nobel prize, in 1915 Einstein published his super blockbuster the General Theory of Relativity (or theory of gravity). Astronomers finally found proof corroborating Einsteins theory during photographs of the 1919 solar eclipse when they showed the sun had altered the position of light from stars. So in 1921 the Nobel prize committee did catch up and awarded him the Nobel prize for ALL his work in the field of theoretical physics. They should have included aviation.

Today's modern GPS system that drives airborne navigation (incl ADS-B) only works thanks to mathematical adjustments (based on Einsteins theory) to the GPS time to allow for relativistic time dilation. The weaker gravity at the altitude (20,000km) the GPS satellites prowl and the velocity they are traveling at (14,000km/hr) mean there are huge accumulating differences in the time the satellite clocks are reporting vs the time for a GPS unit on earth. This leads to position errors accumulating at greater than 10km per day!!

So next time you look at your GPS screen remember to thank Einstein!



From our CFI - Reuben Hansen

This time one year ago we were forced into compulsory non-flying activities, the world was flipped on it's head in so many aspects and it was uncertain how long we would have "our shoes glued to the ground". 58 days later we were flying again, 58 days none of us would like to repeat. A year on, the aero club is as busy as it has ever been (in recent years). Since covid, HBECAC has produced 8 PPLs, several first solos and success at competitions at regional and national levels. Aren't we so fortunate that we are able to continue like this after what were so uncertain times.

Congratulations to Caleb Staines and Matt McPhee on passing their PPLs mid March with our examiner from Massey Ritchie de Montalk. As the old adage states, "A license to learn" and I have no doubt that this will be the case.

With the mention of the 8 new PPLs, and the acknowledgement of many more in our club, I'd like to share some ideas on what a PPL can do after they complete their license.

- Get a new type rating – Citabria, Cherokee, 172, 152, Tecnam RV12 (soon) all on line with the club
- Night rating
- Try out strip landings with an instructor, I have a number of entry-level strips available to use.
- Learn some new maneuvers – stalling in turns, maximum rate turns
- Find a flying NZ competition that takes your fancy, practice and compete
- Aerobatics
- And many more, just come and see me and we can work out something for you!

From time to time we have issues crop up with circuit joining procedures. I'll do a refresher below and suggest some ways to join the circuit at HS.

Background and Refresher on Joining at HS

The area around the NZHS circuit is restricted by the Napier Control Zone (CTR) boundary. (See below). This makes it difficult to join for runway 01 from the north/north west. The AIPNZ Vol.1 states that "when entering or flying within the circuit, all turns are made in the direction appropriate to the runway-in-use." This means to join from the north or west, we suggest that you join either a) Using the standard overhead re-join procedure or b) By joining base for 01/19. Joining mid downwind is strongly discouraged.



A standard overhead rejoin is usually the best option, as it leaves time for decisions to be made on sequencing as well as determining aerodrome weather conditions. Although it is not always ideal if there is gliding in progress or there are other aircraft already joining overhead.

Above all, it is important to take the time to build up your situational awareness before trying to join the circuit. There should never be any need to rush and join the circuit before your map of what the traffic is doing is fully developed.

As this is a reasonably large topic, and it is very important, I will be holding a workshop on circuit joining of which all are welcome to join. **This will be held on Wednesday 7th April at 1730 upstairs at the aero club.**



See you at the club

Reuben

Reuben's Quiz

1) How much does 1litre of 100LL fuel weigh?

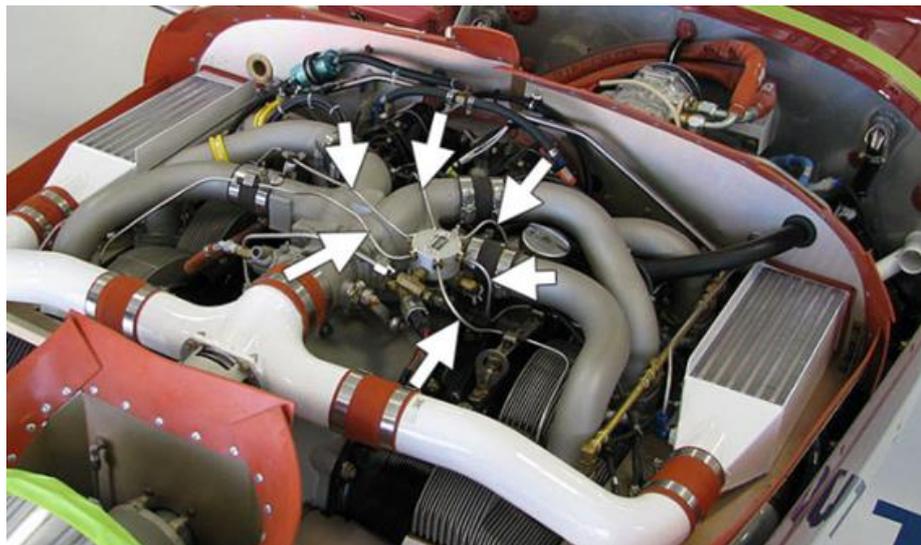
- a) 0.72kg
- b) 1kg
- c) 0.8kg
- d) 2.2kg

2) Most modern swept wing aircraft use some form of winglet. What is a winglet's purpose?

- a) To reduce form drag
- b) To dampen yaw during turbulence
- c) To add stability around the lateral axis
- d) To reduce induced drag from wingtip vortices

3) What flows through these lines?

- a) Fuel
- b) Water
- c) Air
- d) Oil



4) The point where the yellow and green arc meet on the airspeed indicator is, and what does that speed mean?

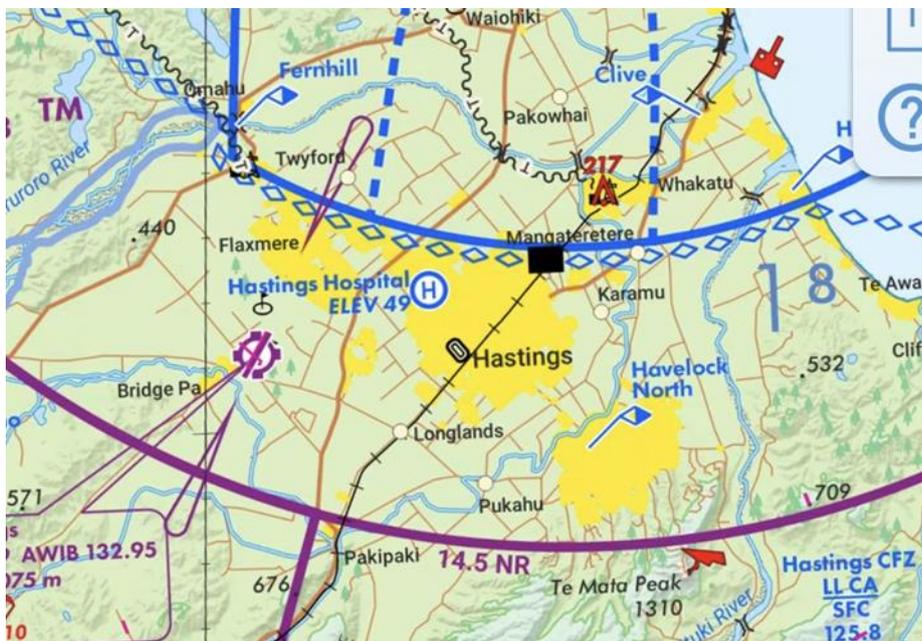
- a) V_a
- b) V_{so}
- c) V_{no}
- d) V_{ne}



a 2) d 3) a 4) b (max structural cruise)

Wednesday 7th Workshop-

NZHS Circuit Joining/Airspace Procedure Workshop



Wednesday 7th April 2021 @ 1730

Upstairs at Hawke's Bay & East Coast Aero Club

Presented by HBECAC CFI Reuben Hansen

Best practice, Etiquette, Courtesy, Rules, Knowhow, Busy circuit considerations

All Welcome

Bar open — might even be snacks.

HBECAC PPL Lecture Timetable



PPL NIGHT LECTURES

session schedule

- **Flight Radio:** January 18th - February 1st (3 sessions)
- **Air Law:** February 8th - March 1st (4 sessions)
- **Meteorology:** March 8th - April 5th (5 sessions)
- **Human Factors:** April 12th - 3rd May (4 sessions)
- **Navigation:** May 10th - June 7th (5 sessions)
- **Aircraft Tech:** June 14th - July 12th (5 sessions)

**Held on a Monday evening from 1800-2000.
\$10 per session.**

📍 1591 Maraekakaho Road, Bridge Pa, Hastings

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☎ 06 8798466



From the Club Captain—John Managh



On the Saturday before club weekend a number of us flew down to the RANZ annual fly in at Waipukerau. A great line up of planes to look at and a time to catch up with friends from around the country side. Another benefit of attending our Friday night dinners is that flying events are talked about and who is intending to go, etc.

Our club day was an intended fly down to Omaka to visit the museum and come back on the same day. The weather forecasts leading up to the weekend looked “dicey”. Rain was forecast to cross over from the South West making

getting back in the afternoon from the Cook Straight area, problematic. With this in mind on the day it was a no-go. Instead, three aircraft flew over to Fox Pine for their monthly sausage sizzle fly in. This was enjoyed by all.

Shortly we will be having “try it out” spot landings and a glide approach on our club day. The Frogley Cup is only a few months away. This competition allows as many entries from each of the three clubs that each club can muster. (The three best scores from each club on competition day are used to decide the winner).

With this in mind, all of our club members in attendance on the competition day can enter, enjoy the atmosphere and friendly club rivalry. We regained the cup last year after an absence of some 7-8 years. It will be very nice to retain the cup this year.

Fly well and be safe

John Managh
Club Captain



New Members

Welcome to the club

Cambell Stephens

Celeste Allen

Oscar Robinson

Trent Barton

Oliver Jensen

Tony Johnson

Come on up to the bar on Friday night's for dinner and a chat. The bar opens at 5pm with dinner around 6 – 6.30pm. (\$6 covers the meal and a meat raffle) .

Club Day is last Sunday of the month. Come along for an organised flying activity and social time.

Meantime the Club is open 7 days - great place to picnic and hang out between lessons. See you out there!

Member Achievements



**Congratulations
Caleb.**

**Caleb Staines
gained his wings on
the 13th March.**

Member Achievements



And Congratulations Matt

Matt McPhee passed his PPL flight test also on the 13th March .

Wanted

John Managh is looking for a hangar to purchase. If you can help contact the aeroclub office.



Wright Brothers first to fly on Mars

Wright Brothers first to fly on Mars! Repeating their efforts of 1903.



<https://www.nasa.gov/press-release/nasa-ingenuity-mars-helicopter-prepares-for-first-flight>

The rover is currently driving to the airfield to unload Ingenuity. First flight is expected on 8 April or later. Nasa has designated a 10m x 10m section of flat plain as the “airfield” for the test flights. The first Martian airport. I wonder what its ICAO designator will be.

A small section of wing fabric from the Wright brothers original 1903 Wright Flyer is on board. They travelled 36 metres on that first flight in 1903. The wing fabric has now travelled 530 million km in

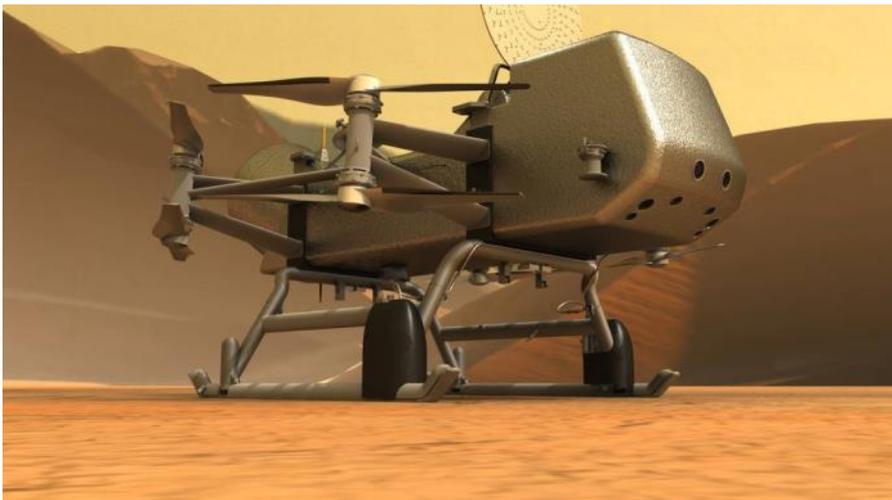
one flight to Mars. The Wright bro’s would be impressed. I bet they never thought a piece of their aircraft would one day fly over the hills and valleys of Mars!

As well as the challenges of operating in 1% of earths atmospheric pressure and 1/3 gravity the extreme day-night temperature swings pose a problem for materials and electronics. On its first night parked out on its own the light and fragile Ingenuity will have to survive Mars night temperatures of -90 C.

There is a 12min signal delay between Mars and Earth so once airborne it will have to figure it out on its own with its flight computer and the computers on the rover to help run the show.

Ingenuity has two 4ft rotor blades that spin at 2400rpm. All solar powered. 2 onboard cameras.

The rover Perseverance will be hiding 100m away during the test flight and also filming the historic first Martian flight. The Wright Brothers are first again!



This is an important flight test program providing data for NASAs Dragonfly aerial vehicle which is set to launch to Titan in 2027.

Dragonfly will be the first NASA rover mission where the entire rover will be a 500kg autonomous helicopter sent to explore the dense atmosphere on Titan the largest moon of Saturn. Expected to fly IFR through methane rain and explore deserts and seashores.

We are getting closer to that first interplanetary pilot licence. Apply to CAA now...

<https://www.nasa.gov/dragonfly/dragonfly-overview/index.html>

The Ultimate Modder

Who else.... NASA.

Pity the poor FAA technical officer who received these design modification requests....

Aero Spacelines Super Guppy. Modified from a Boeing Stratocruiser in the 1960's for NASA to transport the Saturn rocket 1st stage cross country. Still flying for NASA today. The cargo bay is 29m x 7m.



SOFIA – modified B747SP

You want to do what! A regular visitor to Christchurch airport. SOFIA is strengthened in the aft to accommodate a roller door and house a 2.7m wide telescope. The rear of the aircraft is exposed to sub freezing temperatures at 45 000ft on 10 hour plus night time research missions with a team of astronomers, technicians nestled in the front half – where it is warm!



Boeing 747-100SR

I think the FAA officer fainted when this one came across their desk..

Add brackets on top of fuselage to hold explosive bolts and mounting struts for mounting another 100MT aircraft – check.

Modify tail to add two more vertical stabilisers– check

Add ballast tanks to handle greatly changed C of G - check

Add explosive bolt escape hatch in floor behind cockpit - check

Strengthen entire fuselage – check

Keep first class seats for VIP passengers – check....

The Ultimate Modder

Performance envelope – yeah well that changed a little. Drag and weight reduced the ceiling to 15,000ft and range from 10,200km down to 1,900km.



Don't drop it!



Are you sure that used to be a Tecnam P2006T? At this point the FAA officer gave up and said *you* do it..

Now called an X-57 Maxwell this Tecnam is being continually modified and test flown by NASA to create the certification process that will be used by the FAA for future certification of all battery electric aircraft prototypes.

New high aspect ratio wing.

Cruise motors electrified and moved to wingtips

12 smaller electric motors added for takeoff and landing.

Folding propeller blades

Fuel system changed to battery electric.



PICS—Something different in the Circuit — Jerry Chisum



PICS—RAANZ National FlyIn YP—Jerry Chisum



PICS—RAANZ National FlyIn YP



PICS

Tiger Club March Gathering at Thames



Black Hawk at Airborne Aviation in conjunction with Airtech. In for a 4 yearly inspection.



Olden PICS

Jan Chisum sent in this Whites Aviation photo of the Aerodrome 1947. You can just see the old clubhouse on the left. Plenty of space to land into wind.



NZ Airforce C-47 Dakota Style



Olden PICS—Avro on Waimarama Beach @ 1921



“By looking at the underwing serial appears to be Avro 504K H5240/G-NZAB of East Coast Air Services. This particular Avro one of the Imperial Gift aircraft, and was issued to the NZ Flying School Ltd., Kohimaramara, in 1920. It flew as a floatplane in their service and became G-NZAB (but never wore that registration).

By December 1921 it was being flown (again on wheels) in Hawkes Bay by NZ Aerial Transport Co. Ltd., Longlands, Hastings. Presumably it was then that these two photographs were taken.

In late 1923 Les Brake was operating it, trading as East Coast Air Services, also based in Hastings. It was eventually terminally storm damaged while picketed out at Waihi 26May1924 “

(Notes by Peter Lewis re photo's online with Hawke's Bay Knowledge Bank). These two pics are from their Dudley Newbiggin Collection .



Short bytes

BASIC FLYING RULES.

"Try to stay in the middle of the air. Do not go near the edges of it. The edges of the air can be recognized by the appearance of ground, buildings, sea, and trees. It is much more difficult to fly there."

- W.W.II Undergraduate

Pilot Training Sign

"If you're faced with a forced landing, fly the thing as far into the crash as possible."

-Bob Hoover, renowned aerobatic & test pilot

"You've never been lost until you've been lost at Mach 3.'" Paul F. Crickmore (SR-71 test pilot)-

"Flashlights are tubular metal containers kept in a flight bag for the purpose of storing dead batteries."

"Airspeed, altitude, and brains. Two of these are always necessary to successfully complete the mission.

The three most useless things in aviation are: Fuel in the bowser; Runway behind you; and Air above you."

- Basic Flight Training Manual

'Never trade luck for skill.'

"As a test pilot climbs out of an experimental plane having crashed tearing off the wings and tail, crash trucks arrive. A rescuer asks bloodied pilot, 'What happened?' The pilot replies, 'I don't know ,I just got here myself!'"

'You know that your landing gear is up and locked when it takes full power to taxi to the terminal.'

DW



A NEW FLYING FASHION.
A novel quick-change flying suit, designed by Mrs. Patrick Ommanney, in dark blue cord, which enables the wearer to perform a quick-change in the cockpit of the airplane while flying, and so be ready to take part in any social function, etc., on landing. Mrs. Ommanney is here seen in her quick-change suit, standing by her airplane ready for a flight.

A NEW FLYING FASHION. A novel quick-change flying suit, designed by Mrs. Patrick Ommanney, in dark blue cord, which enables the wearer to perform a quick-change in the cockpit of the airplane while flying, and so be ready to take part in any social function, etc., on landing. Mrs. Ommanney is here seen in her quick-change suit, standing by her airplane ready for a flight.

EVERING POST, VOLUME CV, ISSUE 29, 4 FEBRUARY 1928, PAGE 15

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Love the Club

Clearing a space in the skies for planes. Notice the many trees felled and hedges trimmed on approach to 01? What a mission. Along with contractors, Gerard Grocott, Joe Faram and Rob Trubshaw enjoyed a challenge.



Gerald up a tree with out a

Joe and Rob providing guidance from a safe distance

Exclusive HBECAC Offer!

As a new member of the Hawke's Bay and East Coast Aeroclub, Sammy of Primary Avionics would like to extend an exclusive offer to other members of the club with one off special pricing on the Appareo ESG ADS-b unit.

We have a limited number of units to offer at the discounted rate of \$2290 USD + shipping and GST*. These great units have inbuilt GPS, come with antenna included and have proven to be a reliable performer in the cockpit. They meet the CAA mandate for ADS-b out and qualify for the \$2500 NZD rebate.

Improve safety for yourself and fellow club members by going ADS-b out today, call Sammy on 022 636 6573.



*In order to qualify for this pricing, installation will be carried out by Primary Avionics Ltd

Love the Club

The Mowing Crew

Only stalks and dust out there at the moment but look later in the year when the grass gets growing the crew gets mowing big time . About 40 Ha to keep trimmed..



Pete and David

Ian Sowman and David Bentley the Airfield mowing crew ably assisted by Peter Steers.

Rob Trubshaw was AWOL this day but is equally involved in keeping the grass mowed.

The new John Deere gets the job done in less than half the time of the Massey Ferg.

12 hours as apposed to 24+ hours.



Ian and David

The John Deere is heated and air-conditioned so it makes it a pleasure to use.

Just Browsing thanks...



George Campbell talk about the ups and downs of many years of float plane operations in Alaska

<https://youtu.be/XYU-63rtJEI>



Amy Hoover—Mountain and Canyon Flying Tips. Good viewing

<https://youtu.be/AG0dwOCNaE8>



This is really cool. Very few people have the opportunity, desire, time, ability or commitment to take on a project like this. This is amazing.....a real flyable 1/3 scale model bomber.....

About 5 minutes long. Great story! (David Walker)

https://www.youtube.com/embed/E-1_JWIHO-8



Simulator fun AeroflyFS - Deadstick ridge soaring in the Cessna 172SP (uncut gameplay)

<https://youtu.be/pl7g0RdZMV4>



The first female pilot and a lesson in resilience

<https://www.historynet.com/the-baroness-of-flight.htm>



Sikorsky and DARPA Fly OPV Black Hawk With Supervised Autonomy

<https://youtu.be/0uLQcT8V3oE>

What's Up



APRIL

Wednesday April 7th 5.30pm - Circuit and Airspace Open Workshop.

Upstairs at the Club. See you there.

Sunday 25th April ANZAC Day — HBECAC Anzac Day FlyPast Flights

Club Day—TBA

MAY

Sunday 9th May - Central Hawke's Bay Aero Club Dawn Raid

Frogley Cup—sometime somewhere TBA

Sunday 30th Club Day

JUNE

4 June to 07 June : NZ Women in Aviation Annual Rally Motueka contactus@nzawa.org.nz

Duty Pilot Roster

Thank you to all our duty pilots

- extending a warm welcome to our aeroclub visitors and members -

If you can't make it to your slot—can you please arrange to swap with another .

Oscar Bolderson	Saturday 3rd April
Braden Dodd	Sunday 4th April
Brendan Gorringe	Saturday 10th April
Brent McNamara	Sunday 11th April
Brian Mackie	Saturday 17th April
Stephanie Eilers	Sunday 18th April
Bruce Govenlock	Saturday 24th April
Bruce Sutherland	Sunday 25th April
Bruce Tetley	Saturday 1st May
Sophie Blokker	Sunday 2nd May
Cameron Steed	Saturday 8th May



Aero Club Contacts

PATRON John Holland

PRESIDENT	Bruce Govenlock	021769913
VICE PRESIDENT	Peter Steers	0212350260
TREASURER	Steve Shepherd	06 845 3002
SECRETARY	Peter Holley	021417877
CLUB CAPTAIN	John Managh	0274403902
VICE CLUB CAPTAIN	Caroline Goodwin	

COMMITTEE

Peter Holley 021417877
 Gerald Grocott 021346681
 Joe Faram 0274444414
 Steve Shepherd 06 8453002
 Hamish Ross 0276075376
 Clem Powell 0273383462

AEROCLUB OFFICE MANAGER Amanda Nicholson 068798466

INSTRUCTING TEAM

Chief Flying Instructor	Reuben Hansen	0274100457
FLYING INSTRUCTOR	Liam (Saturday, Sunday , Monday am)	
FLYING INSTRUCTOR	Cassandra Jeffries (Monday pm, Tuesday, Friday)	
FLYING INSTRUCTOR (Microlights)	Mads Slivsgaard	0275117317
FLYING INSTRUCTOR (Microlights)	Hamish Ross	0276075376

RV Build / YOUNG EAGLES CO-ORDINATOR

Peter Steers 021 2350260

newsletter contributions: email to newsletter@hbecac.co.nz