

*East of Scotland Strut of the Light Aircraft Association
July 2021 Newsletter*



Photo Keith Griggs

Chairman's bit

Our meeting that Keith Griggs kindly hosted at his hangar at East Fortune was a success with a dozen or so participants.

The subject of the Fly-in was discussed and since then a visit to Balado airfield was made. Jamie the owner is now investing in making Balado into a full blown airfield after his previous experiment with 'T in the Park'.

There are now three runways and he has built a new club house and three new hangars. A lot of hard standing has been created along with picnic and camping areas.

We were very impressed and he hopes to have a large part of it done for a Fly-in date of August 28th/29th.

Given the weather of course, we are looking for a big turnout for his debut event. More planes the better. We have negotiated free landings for all attending the Fly-in so do support this event.

It will be interesting to see how Sywell fares this year. I intend to go.

Lets hope the normality they promised us materialises. In the meantime fly safe.

Justin

Co-ordinator's bit

Things seem to be shaping up nicely with regards to our fly in. An update appears on the next page.

Thanks to Keith Griggs' hospitality we had our first Strut meeting at East Fortune a few weeks ago, which was much appreciated. Hopefully we will be able to re-commence meetings in the autumn.

The recent spell of good weather has encouraged people to take to the air, with the Perth Fly In being well supported. Hopefully this bodes well for this summer so enjoy your aviation.

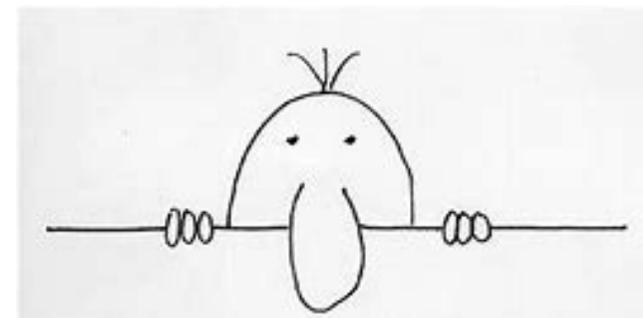
Iain

Cover photo

Keith Griggs' newly refreshed Emeraude. More on page 6.



The next meeting is on...



Oh dear. back to no meetings



About the Light Aircraft Association:
www.laa.uk.com

With a history extending over 70 years, the UK Light Aircraft Association promotes safe and economical operation of sports and recreational aircraft. Representing the aviation interests of around 8,000 recreational pilots, amateur-builders and enthusiast members, the LAA oversees the operation of more than 2,500 light aircraft and the build of another 1,700, whilst providing sector-leading consultation and advocacy in aviation-related regulatory matters both in UK and Europe.

**This newsletter can also be viewed on
the Strut website:**
eos-strut.org

The Strut Fly-in

Here is where we are up to. The sample poster alongside is reproduced full size at the back of this Newsletter and you can print that off and put it up on your notice board.

Iain Gibson has the following information and requests;

Plans are well under way for us to have our Fly In at Balado over the 28/29th August.

At present there is a temporary page on our website which will be replaced at the end of July.

When the new page is up please go to the fly in web page and complete the boxes at the bottom so that we can see how many people intend to attend.

We are also looking for the loan of a couple of (empty) Jerrycans to allow us to take anyone requiring MOGAS to collect from a local garage.

We are also looking for the loan of two fire extinguishers to position in the aircraft parking area. I have had a couple off verbal offers so could they confirm what is available.

Offers of help with equipment to me at inrgibson001@btinternet.com
Thank you. *Iain*

While we're at it, Subs are due

Please send £25.00 to Duncan Robertson, the Membership Secretary.

Either post a cheque, made out to East of Scotland Strut, for £25.00 to him at 17 Cramond Avenue, Edinburgh EH4 6PP, with a note of your email address so he can send your receipt, or email him at and ask for the sort codes to make a transfer by online banking. duncanrobertson807@gmail.com

LIGHT AIRCRAFT FLY-IN Saturday and Sunday August 28th/29th

The East of Scotland Strut of the Light Aircraft Association
Annual Fly-in.

Lots of Light Aircraft old and new. Spectators welcome

Balado is to the West of Kinross and Loch Leven just North of Edinburgh.

The airfield has been extensively redeveloped. It now has three grass runways, catering facilities, a campsite, outdoor viewing area with picnic tables, a comfortable clubhouse with onsite WiFi and plenty of space for car and aircraft parking.

Given the weather this will be a great day out with many light aircraft old and new. Antique aircraft will include a Tiger Moth and a Bucker Jungmann.

Compete in our landing competition or a short navigation exercise. A prize for the best photograph of the day and other activities for pilots to test their skills.

PPR required from Balado Airfield. Check nearer the time at our website eos-strut.org

It would help the organisation if you emailed Iain Gibson Strut coordinator at inrgibson001@btinternet.com We will not hold you to it but let us know if you are likely to attend.

Access by road. The safest way (to avoid stopping in the middle of a busy road to turn off) is to drive into Kinross and take the A91 to the west (signposted Stirling?) for ¾ mile. Balado Airfield is signposted on the left hand side.

If overnighting in a local B&B or hotel, some car transport may be available, otherwise there will be a list of local taxis.

Balado Radio on 118.605 Mhz.

Runway 07/25 550 metres grass
Runway 11/29 550 metres grass
Elevation 420Ft

SAMPLE ONLY, NOT TO PRINT

There is no fuel on the airfield but we will help with containers and transport to a nearby garage.

The June Strut meeting

Sunday 6th June and the weather Gods looked after us when the Strut held its first meeting since the Covid pandemic started. Keith Griggs made us welcome at East Fortune East and it was great to be able to sit in the sun and have a chat again.

Keith Boardman took this video of his trip from Perth to East Fortune which included a low pass along Edinburgh Airport's main runway. <https://youtu.be/3uzVSnUOIKo>



Guinness World Record breakers at East Fortune East



Mike Roberts and Nick Rogers hold the world record for the most countries visited in a day by aircraft, set in 2019 when they landed at 16 European destinations. On Tuesday 8th June this year they attempted to set a different record by visiting approximately 50 airfields in different counties throughout the UK in a day. The flight was a success and they set a new World Record (subject to official confirmation) for the most UK counties visited in 24 hours.

Nick (photo alongside) is a commercial pilot and did most of the planning and Mike modestly claims he 'just showed up for the fun bit'. Their aircraft was a Cessna 172 Skyhawk operated by Take Flight Aviation at Enstone.

The photo shows their second landing of the day after departing Perth at 3.55am (sunrise minus 30 minutes) via Kingsmuir, landing at East Fortune East at 04:38 and departing 04:42 for Edinburgh. From there they weaved their way south eventually landing in Newquay, Cornwall some 18 hours later at 9.50pm, making a total of 50 full stop landings at 50 different UK counties. Poor weather and low cloud in Southern Scotland and Northern England meant they were forced to drop two airfields and another in Wales was missed due to time constraints. The plane landed with only minutes to spare as the airfield at Newquay had to be clear for 10.00pm. It was closing the following day for visitors arriving for the G7 Summit.

Many of the airfields waived their normal landing fees and the pair are donating the equivalent amount to various air ambulance charities across the UK, hoping to raise around £1000. David Pate, the owner of East Fortune East waived his landing fee as it is for charity and all donations given in Scotland will be sent to The Scottish Air Ambulance at Perth.



Photos Keith Griggs

Keith's Emeraude

Words and photos, Duncan Robertson

A few weeks ago a small party of Strut members gathered to assist Keith Griggs with the task of re-attaching the one piece wood and fabric wing to the fuselage of G-BDKH at East Fortune East, after some refurbishment and a new coat of paint. The one piece wing was craned across from a flatbed truck onto two well positioned trestles before being put up on its leading edge so that the undercarriage oleos and wheels could be bolted back in place.



(Now where did this bit go again?)



The wing sitting on its chocked undercarriage was then held steady by hand whilst the main fuselage was lifted and edged carefully forward over the centre box section using the same crane and strops, and lowered into place.

The awkward task of inserting the main wing bolts ensued; all hands jiggling the wing whilst lining up the fuselage sides and trying to get the threads to catch and seat properly. With the help of Tim Rayner our LAA Inspector, Keith Griggs and his ex-colleague, and Duncan Robertson, the task was achieved without too much difficulty.

Hopefully, Keith can get the aircraft airworthy in time for our intended fly-in at Balado in August. The attached photographs show a time lapse sequence from the initial arrival of the flat bed truck to the aircraft sitting on its on undercarriage again.

Duncan Robertson, June 2021



New look Fife

Keith Griggs dropped in. 'Had lunch in newly opened cafe at Fife Airport. Currently a limited menu although you can take your food outside. It may be a good idea to book if you want to sit inside.'

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Second first solo



That's me above having just gone solo at Strathaven. 28 years ago, in 1993, I had my first stab at this at Edinburgh Flying Club, (see below), but sadly I lost my medical shortly afterwards so that was that. There were a couple of false dawns in between but this time, finally, it seems to be working okay. As a small aside, my father was born in 1901 and won flying lessons in a competition, and soloed in this DH60M (middle) in 1931. That was 90 years ago! I'm just off to celebrate with a beer in his tankard.



Who needs water?



The other (impressive) way of taking off in a floatplane.

<https://www.bing.com/videos/search?q=float+plane+taking+off+from+trailer&&view=detail&mid=4FFABB9DBD306C75FC0A4FFABB9DBD306C75FC0A&&FORM=VDRVSR>

Who needs boats?



Ian Wales found this. The Royal Marines are trying out Jetpacks as a way of getting on board ships at sea in a hurry.

<https://youtu.be/U8NVb1ZH068>

<https://www.businessinsider.com/video-royal-marines-board-ship-at-sea-with-jet-packs-2021-5?r=US&IR=T>

Skateraw Landing Ground

Some sleuthing by Ed Lyon

Some of you may have walked The John Muir Way past Dunbar eastwards towards Cockburnspath.

Just before reaching Torness nuclear power station (below right) there is a small car park at Skateraw beside a rather nice beach and an old lime-kiln.

There has now been erected a stone with a plaque on it by The Airfields of Britain Conservation Trust UK informing you about the presence of a WW1 airfield just inland. This was in operation between 1917 and 1919 by the RFC then RAF with Royal aircraft Factories Be2 and Be12 aircraft, later replaced by Avro 504Ks.

This was a Landing ground used by 77 Home Defence Squadron to defend against Zeppelin raids and was created in case engine failure or bad weather prevented the aircraft reaching their more permanent airfields. Apparently, the farmer would be telephoned when the aircraft were flying to clear any livestock from the field!

The site is now farmland and is situated just to the North of the east coast main line with the eastern boundary being the power station boundary.

The A1 road was re-routed for the cement works and power station construction and the site of the airfield now lies inside Restricted Zone R516/2.1 around the power station.

<https://77squadron.org.uk/history/77-squadron-history-1916-1919/>



Legend

- Skateraw
- 📍 Skateraw

ateraw

Guess where?



Another lovely image from Colin Lourie. 'I've had this photo in the back of my mind for a while - just waiting for a heavy sky and low evening light. Taken from above the Water of Leith at Stockbridge, with Moray Place in the foreground.'

Also from Colin

I got an e-mail from Iain Gibson alerting me to three USAF U-28s Draco (Pilatus PC-12) at EDI and that they looked like they were nightstopping. He said they might be quite difficult to photograph as they were parked on the new apron, a fair distance from the boundary. I had a look from the rail bridge near the old RAF main gate and got the photograph of the three aircraft from there. Then I got to wondering how they looked from the area of the covid testing station which currently occupies the east end of the old 31/13 runway. As that area must surely be a temporary 'public and unrestricted' area (isn't it?), I cycled in. Bingo!



More about the Shuttle

When I ran the piece in the last Newsletter showing the Shuttle on a 747 and with a tailcone for smoothing the airflow while in transit, (see below), I was reminded that Alan Swegle had been involved with its development. Here he tells more of the story behind it.



Your view of a Space Shuttle tied to a 747 by three strut tie downs brought back old memories of our work on the Tail Cone.

I have noted before that George Dishman and I had worked on the Space Shuttle Tail Cone. George did his college studies at Salisbury Hall in Hatfield which was conducted by de Havilland. A couple of his classmates were Jim Prettyman and David Webb, frequent contributors to the 'Strut'. I show a picture in the attachment of the second test flight of the 747 which was without the Tail Cone mounted. On the first test flight the Tail Cone was attached to the Shuttle.

During the proposal George, as the design engineer, came over to me, the stress engineer and said, how do you like this structural arrangement that I came up with for the Tail Cone? It was a close spaced frame arrangement with four main longerons. I was familiar with that arrangement on the B-52 fuselage. I replied that it looked very good. He asked what skin thickness will we need? I knew we had a moderately high noise level at 150 db and looked up the design manual page for structural spacing and noise level and said .050 inch gage should do it. That was

how the structural arrangement was determined for the main structure. The two managers were on vacation and approved it when they returned.

After we won the contract, I set up the finite element model to determine internal Tail Cone structural loads.

NASA and Rockwell then wanted to do a couple of test flights off of the 747 to obtain landing glide characteristics of the shuttle. They would need a measurement of loads to determine if the Shuttle would lift over the tail of the 747 when explosive bolts released it from the supports holding it to the 747. So I was made Structural Verification Manager and moved from Stress lead on the tail Cone to Stress lead on the load measurement system which George had proposed as spool looking devices, two bigger spools on the aft supports and a smaller one on on the front support. We chose a high strength heat treated steel for the devices and worked with structural test engineers on the placement of strain gages that would provide the drag and lift loads. I got Boeing, NASA and Rockwell to agree to only test the devices to limit load so as not to over strain the material and strain gages. Those loads calibrated the devices so as to be able to know loads vs strains. The load measurement system worked perfectly and predicted very adequate lift loads that would allow the shuttle to fly well over the tail upon release.



After the first test flight to measure loads at Edwards Air Force Base, an engineer noted that the strain gages were measuring strains as the plane, and Shuttle on top, sat on the ground. The Boeing Structural Test Manager heading the strain Gage Group, looked out the window and said, 'Well there is a pretty strong wind blowing out there.'

After the original stress analyses were completed on the Tail Cone, Rockwell came back with increased loads, and I was again made lead stress engineer. They also wondered if a planned Structural Test of the Tail Cone could be eliminated? I proposed that a new finite element analysis that incorporated buckled skin analysis had been developed by a colleague, Andrew Grisham, working in another division. I asked him if he would work with my model and me and incorporate the buckled skin analysis to ultimate loads. He was delighted to work with it on a large structure and give it a good test. With this analysis, the stress analyst did not have to calculate what additional load that was put into stiffeners at the edges of buckled skin. Rockwell, Boeing and NASA agreed if the analysis worked as proposed it would eliminate the need for structural test to ultimate of an additional Tail Cone.

My colleague joined me and we got the first run off to the mainframe computer, with the increased loads, in a couple of hours. The next morning we had 15 boxes of computer printout. We each looked over the right few boxes of data and made the estimated adjustments to close in on the right answers and sent it back to the mainframe after a couple of hours for another run. The third iteration run the next morning was a winner and no adjustments were necessary. My friend went back each day to his own work place. On the third day he was satisfied that his buckled skin analysis worked perfectly. My one remaining stress colleague and I reviewed all analyses and added doubler straps to stiffeners as needed to carry the additional loads.

I took the final 15 boxes of computer analyses on a commercial flight to Los Angeles, packed the boxes into a rented car, drove to Downey and gave the boxes to Rockwell stress people who signed off, no static test needed and big money saved.

Al Swegle

Jim at Milfield

Jim Prettyman had a flight at Borders Gliding Club, a present courtesy of his daughters. He enjoyed doing some of the flying but is glad he didn't have to take to his parachute in a hurry as it was a bit of a tight fit in there!



Hanna Reitsch interview

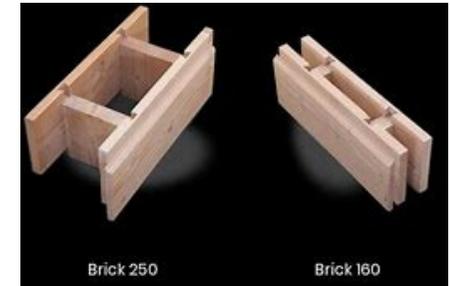
From Tony in London. Interesting aspects of some remarkable aircraft. This was her last interview. <https://youtu.be/23Gw6TyzMBo>



'Brikawood' buildings

Here's another interesting new construction system. No nails and no glue, it just slots together with the help of a rubber mallet as you go along. Insulation is wood or paper fibre based, poured in the gap. Apparently it's all waterproof as long as the slab is on stilts and clear of the ground.

<https://www.homecrux.com/build-house-without-nails-or-screws-thanks-to-brikawood-interlocking-wooden-bricks/65913/>



Home made hoverboard

It claims to be a world's first and I have my doubts about that, but as an exciting way to skin your knees and more, it looks like good old fashioned dangerous fun.

<https://www.bing.com/videos/search?q=world%27s+first+homemade+hoverboard&&view=detail&mid=AD6FAFC0C3198B03C678AD6FAFC0C3198B03C678&&FORM=VRDGAR>



Don't paraglide!

But if you must, don't do it in Australia.

<https://www.bing.com/videos/search?q=paraglider+and+kangaroo&&view=detail&mid=75D95F21D088C9A84F7475D95F21D088C9A84F74&&FORM=VRDGAR>





(Did I ever mention this is a Scottish Strut?)

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