

## HALE HALL MODEL CLUB NEWSLETTER

AUGUST 2021



Club website link - <https://hhmac.bmfa.org/>

Welcome to the August Newsletter. This month we have an exhaustive teach in by Roger Milne, an update on our site facilities and a report on the return of the show season.

## Track and trace

I'm sure you will all be disappointed to learn that, with immediate effect, there is no longer a requirement to report your arrival and departure details at the flying site. Let's hope that we don't have to reintroduce the requirement!!

## Going green

The roller mechanisms of our gang mower have been refurbished and are now resplendent in John Deere green thanks to Chairman Jack. A quick test run behind Neil Skinner's Defender confirmed that everything was operating as expected. Next job will be to set the cutting height so that the mower can be used to cut the outfield. The ride on mower will then only need to cut the runway and pits, so it should have an easier life. Good job Jack.







## Flying site update

As I reported last month we are working on a plan to improve our site facilities over the coming months. Those of you who have been to the field recently will have noticed that the majority of road chippings have been spread over the car park, significantly improving the surface. This was thanks to a small band of members with shovels and a wheel barrow. Apparently some industrial injuries were sustained (blisters!), but they were fortified with some sustenance from the main street grill off higham side road.





One worker and three supervisors!!

We have not managed to discuss our plans with the farm owner, Laura, but we will at the earliest opportunity.

Although our immediate focus is to complete the car park and get secure storage for the mower we are still making plans to replace the club hut. The cost is currently more than we can afford so our esteemed site co-ordinator Andrew O'Neill has come up with a plan to apply for a National Lottery community grant. Several model clubs have received awards for similar projects under the headline of 'improving the places and spaces that matter to the community' where we the members are the 'community'. Apparently 50 – 60 % of applications are successful, so we are using the 'if you don't ask you don't get' approach and giving it a go.

Assuming that we will have updated the car park and provided secure storage for the mower, wheelchair etc the next focus on improving 'the places and spaces that matter' is the club hut.

So we need to decide what facilities are required and how we want to use the hut. This is an important part of meeting the criteria for the Lottery application.

We have formed a steering group (another part of the lottery 'tick list') comprising of myself, Andrew O'Neill, Jon Wiggall and Roger Milne to oversee the project.

For a successful application we also need to show that we have involved the 'community' in defining the scope of the project. So this is **YOUR** chance to have your say!!

We have with the following initial ideas:

#### **Specification:**

Size – Approximately 20 \* 10 ft. (current hut 18\*10) this is achievable within the lottery community funding limit. Size and position will obviously have to be agreed with our Landlord, Laura.



As we will have a secure container for the mower and storage for valuable items, the plan for the hut is a 'Portacabin' style. From our initial investigations the hut would be insulated and lined, vinyl flooring, UPVC windows and door, wired for lighting, power sockets including a heater. This gives us the option of acquiring a generator (stored securely in the mower container). Wheel chair access would be provided.

We hope that the new hut will provide a warm, dry space that can be used year round as a social meeting place.

If you have any comments on the proposal, have any suggestions on how you would like to use the hut or facilities we could include please get in touch. Send me an e-mail, contact any of the committee or Roger Milne.

## Roger is baffled!

Being a responsible, up standing club member Roger Milne has been trying to improve our environment by keeping his newly acquired petrol motor quiet. Over to Roger:

*With HH MAC's noise limit of 82db my recent purchase of an NGH 9 petrol engine installed into my Wots Wot brought me into conflict with the noise regulation. The actual measured noise level was 83db but its raucous note was something else. It soon became clear there was a problem when I noticed most of the club members rolling around on the floor, hands covering their ears in sheer agony when I was flying! Something had to be done.*

*A quick survey of other members operating with NGH 9's showed that they had replaced the supplied "dustbin" silencer with one of the standard type normally supplied with nitro engines (OS / ASP) so it made sense to follow the herd and fit similar - the result, a significant loss of power but yes, much quieter. Not really a good solution.*

*The OS / ASP type silencers incorporate a single baffle see pic, with a number of holes "pressed out" to form a ridge around half the circumference of each. I can only assume the ridges were formed in an attempt to produce a vortex to improve exhaust gas flow through the silencer.*

*Perhaps for efficient operation of the NGH 9, the holes, about 2mm in diameter, are too small, restricting gas flow. And what about its effect on back pressure and how does back pressure affect the efficient running of the engine?*

*So, do we need back pressure? Well, according to Wikipedia, yes. Back pressure, or more precisely a reflected pressure wave is created when the pulse of exhaust gasses are ported toward and through the silencer. The silencer creates a pulse of negative pressure which is reflected back to the engine's exhaust port. In a piston ported two stroke engine, during the exhaust phase (when the piston is being driven down the cylinder), the exhaust port is opened. As the cycle continues and fuel / air is drawn into the cylinder for the next compression / ignition, the exhaust port remains open for a short time until the piston moves up the cylinder effectively covering the exhaust port. During that short period, back pressure prevents fuel / air mixture from porting across the top of the piston into the exhaust pipe. Timing of the back pressure wave is critical if the engine is to run efficiently, ideally "plugging" the exhaust port as the next charge of fuel / air is being carried toward compression and ignition by the piston. Timing for this back pressure wave is determined by the geometry of the exhaust system and since the geometry is fixed, two stroke engines will only run efficiently over a small part of their operating speed / range.*

*It's all about compromise then; baffles suppress noise but also cause loss of engine power; they also affect the back pressure which prevents the fuel / air mixture porting across the top of the piston prior to compression - when the exhaust port is still partially open.*

*As an experimental first step, a new baffle, see pic, was constructed which replaced the OS /ASP version within the silencer. Success, full power was similar to the NGH "dustbin" version as was engine "pick-up"; noise levels were at an acceptable level. However, as always there's a however, fuel / oil residue on the silencer seemed excessive.*

*Could this unburnt fuel residue be a result of insufficient back pressure allowing the fuel /air mixture to port across the top of the piston to the exhaust port? On that assumption the redesigned baffle was replaced with one with less holes drilled through which theoretically would provide some additional back pressure and so reduce the fuel / air mixture porting through the exhaust port.*

*In this configuration, output power was good, noise at full throttle was measured at 79db and fuel / oil residue was significantly reduced.*



**Before**



**After**

Thanks Roger, I feel suitably educated. That is more than a halving in sound level good job!

## **Elvington.**

For those of us who enjoy going to model shows the last 18 months or so have been purgatory.

- No trade stands to scour for those essential items and the occasional impulse buy.
- No impressive aircraft displays to amaze and inspire us.
- No delicious (but unhealthy) show food, mmm the smell of bacon and donuts!

So when the LMA announced that their show at Elvington was to go ahead on the 7 – 8<sup>th</sup> of August it was a definite date for our diaries. Dave Sewell, Jack Lumley, Andrew O'Neill and myself started to plan our trip and assess our stocks of modelling goods, writing the all-important shopping lists.

The weather forecast for the day was awful, heavy rain and thunderstorms. After 18 months with withdrawal symptoms I think we had all decided that we would go whatever the weather gods were going to throw at us. We were determined to enjoy ourselves! We all packed our wet weather gear and met up at Dave Sewell's for an early 8am start to beat the traffic.

The journey started, as predicted, with rain showers. The MET office had now decided to be less pessimistic about the predicted deluge and as we progressed East a small hint of brighter skies ahead was evident. The mood in the car lightened and the usual discussion about our shopping lists resumed. By the time we arrived at Elvington it was blue sky and fluffy white clouds, maybe the sun does shine on the righteous after all!



All kitted out for a typical English summer!

The flying display was about to start so we made our way from the relatively quiet parking area over to the show area. As suspected the trade presence was limited, probably only about fifteen stands. The usual stalwarts had turned up, SLEC, Southern modelcraft, Als Hobbies etc. Over to the pits area revealed a similar story, definitely less aircraft than at a usual LMA display. In particular many of the regular monster models were missing. After a stroll along the trade stands and having purchased a large part of Southern Modelcraft's stock of glow fuel for Mr Ringland we had a stop for the first round of coffee and donuts. Suitably satisfied it was back to the car for our chairs so that we could watch the flying display in comfort. A flyby by the Battle of Britain Dakota was cancelled due to bad weather at RAF Coningsby, the weather at Elvington remained good although we were surrounded by heavy showers. The rest of the day quickly passed by; watching the flying, eating lunch and more coffee and donuts. One small shower almost caused an evacuation but by the time our chairs were folded it had stopped. It was nearly five o'clock when we eventually loaded up the car and headed back to Lancashire.







Recovering after the first round of coffee and donuts











One of the standout models on display was Keith Mitchel's huge Lockheed Super Constellation. Keith is well known in the LMA, having built many large models over the years. Previous models include a Bristol Beaufighter and a Hawker Hunter. The Constellation is built to 1/6 scale and took 5 years to design and build. Apparently the model was initially designed by Tony Nijhuis and part-built, Keith then acquired it and it was finished by himself and Peter Johnson. There was a tricky crosswind for most of the day, so Keith only flew it once.

Specifications.

Wingspan: 21 Feet

Length: 19 Feet

Weight: 220 Lbs

Engines: 4 x ZDZ 90cc petrol

Props: 4 x 28 x 10 Biela Carbon

Radio: Futaba 14 Channel

Servos: 22 (13 channels for ailerons, elevator, rudder, flaps, throttle x 4, landing gear and lights)

So the return of the model show season was a bit of a bit of a mixed bag, very quiet with a small trade and model presence. Did we enjoy ourselves, of course ! Next stop Weston Park in September.



Keith Mitchel's huge Super Constellation





## Did you know?

### The Constellation (or Connie)

In the early thirties Lockheed Martin were a pretty small player in the aviation business, they were overshadowed by the industry leader Douglas.

In 1939, Howard Hughes, who had recently taken a majority stake in Trans World Airlines (TWA), was looking for a company that could build him an aircraft that would give him an advantage over his competitors. The deals were done in secret, with a caveat that no other airline would be allowed to purchase the Lockheed developed airplane until TWA had 35 of them.

To fulfil Hughes requirements for something really outstanding, Lockheed had to be different. This meant implementing innovations not previously seen on passenger planes, the result was the Constellation. It would have the first hydraulically boosted power controls, would be faster than the majority of WWII fighters and would feature a pressurised cabin to allow the plane to fly above most of the weather disturbances.

Bringing such new technology to pass wasn't always easy, or safe. During the first two years of operation, two people were sucked out of the Connie in flight, and there are numerous tales of people becoming glued to the toilet when pressurisation failed.

The 'Connie' brought with her a series of firsts. As the first commercial aircraft to fly above 12,500 feet. Settling into the jetstream at 20,000 feet plus was not only more comfortable for passengers, but also more fuel efficient, enabling the Constellation to operate the first nonstop coast to coast US commercial flights.

More than 856 aircraft were built in total between 1943 and 1959, with operators including Pan Am, Air France, BOAC, KLM, Qantas, Lufthansa and TAP Portugal.

The Constellation had several upgrades during its service life increasing its passenger capacity and range. The L-1049 Super Constellation was one of the later variants and had a transatlantic capability.

Crew	4
Passengers	47 -106
Length	113 ft
Wingspan	123 ft
MTOW	120,000 lb
Speed	304 mph
Range	5,150 miles

It wasn't until the development of jet airliners such as the de Havilland Comet, the Boeing 707 and the Douglas DC-8 that the Connie began to slip from popularity. Unable to compete with the speed and economics of jet engines, the world's first pressurized aircraft was rendered obsolete. Although Constellations remained in service as freight airliners and military aircraft for many years to come, the last model rolled off the production line in 1959, and by 1980 all but a handful had been retired.

## For Sale

Well I haven't been inundated with For Sale adverts; in fact I have had none! I am still happy to carry on with the experiment, so if you have something you want to sell please get in touch. A reminder of the procedure:

- Send me a Word or PDF document with the details of your For Sale items. The format is up to you, but make sure you include your contact details.
- I will upload the document to the 'For Sale' website tab.
- An e-mail link will be sent out to members and a link included in the next Newsletter.
- The advert will be removed after 3 months.

My e-mail : [andy.holden56@btinternet.com](mailto:andy.holden56@btinternet.com)

Club website link : <https://hhmac.bmfa.org/>

## What's on

### Shows

The Shuttleworth Collection has a number of events planned for this year.

- **Saturday 18 September – Sunday 19 September** – Shuttleworth Modelair festival of flight
- **Saturday 2 & Sunday 3 October** – Shuttleworth Race Weekend
- **September 3<sup>rd</sup> – 5<sup>th</sup>** Weston Park Model Airshow.
- **September 18<sup>th</sup>** Blackpool & Fylde Radio Controlled Model Society Flightfest at the Weeton field.

## Parting shot

So that is the end of another newsletter, I hope you found it interesting. Thanks to all contributors.

For future newsletters I would like to include as many of your projects and especially first flights as possible. So please document the occasion with a few photos or contact me and I will try to come down with my camera. I do have some ideas for future articles, but the success of the newsletter will only continue if you, the members, provide me with some copy. Anything aircraft related will be more than welcome, days out, trips, build logs, full size or something for the Curiosity Corner.

Don't be shy; if you don't fancy writing a full article, just send me a few notes and I will do the rest.

If you have any suggestions on subjects to be included in the Newsletter, drop me a line.

In these days of data protection we need to ask members if they have any objection to be included, either by name or photograph, in the Newsletter. If you do not wish to be in the Newsletter please let me know.

Cheers,

Andy Holden.

You can contact me at [andy.holden56@btinternet.com](mailto:andy.holden56@btinternet.com)