De Havilland Hornet build, part 7

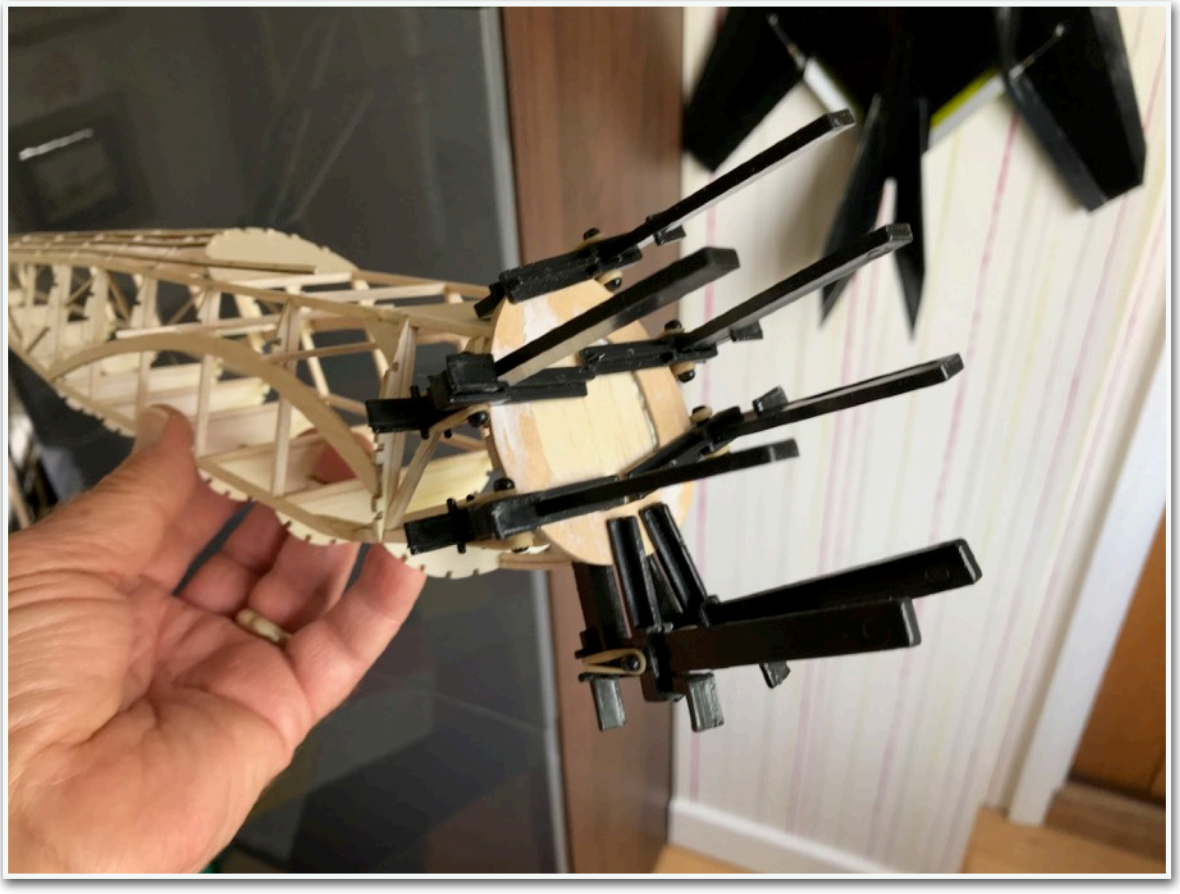
I finished the last write-up with the nose former fitted and awaiting cutting for future battery access.

This raised build sequence issues which led to a need for resolving wing fitment.

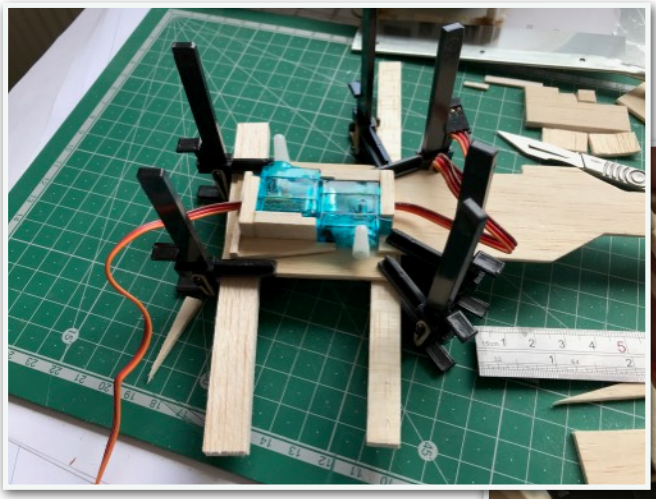
My appeal for guidance was kindly met once more by Ron Gray who stepped forward to calm my furrowed brow. Basically I will stick with the original idea of top sheeting across the centre section, creating a bay in front of the main spar for a battery tray. The gap will be reinforced with vertical webs to maintain integrity, and the tray will fit within this bay but not be integral to its strength. The wing will be attached for and aft with modest fillets.

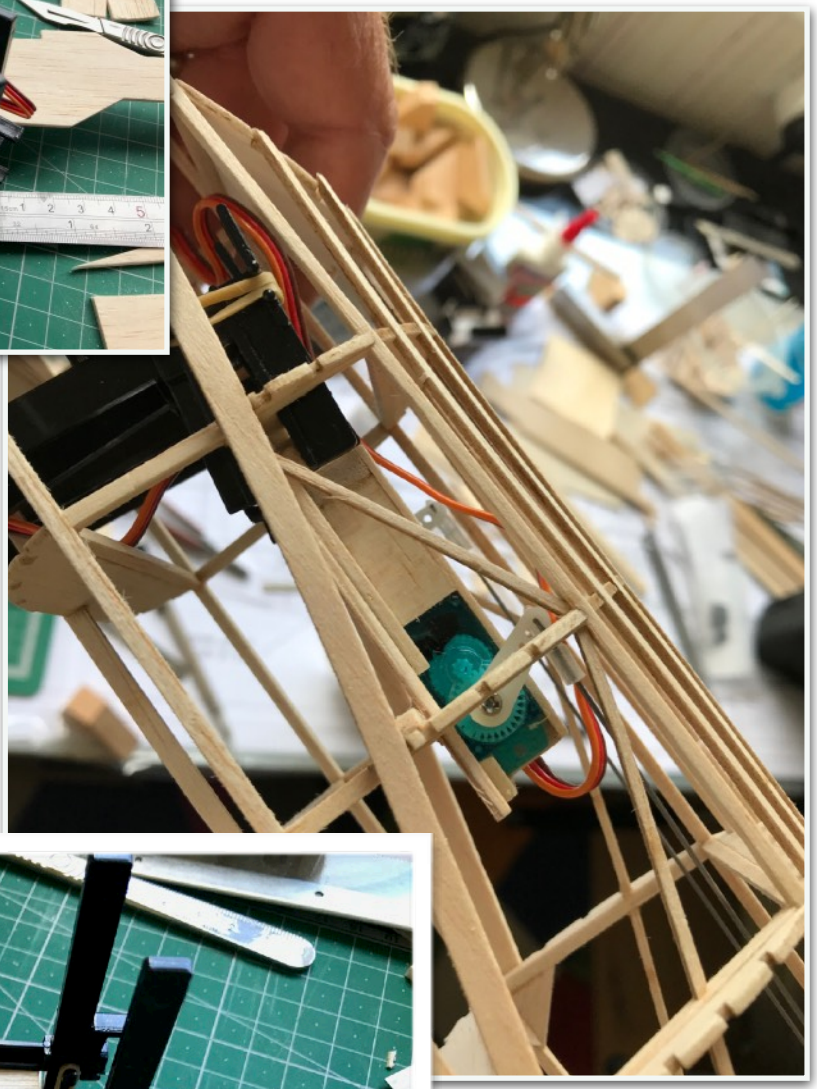
Unfortunately this pushes the tail group servos well behind the CofG and inaccessible once stringers are added. To allow battery access the Rx must also be behind the CofG. However, its a way forward.

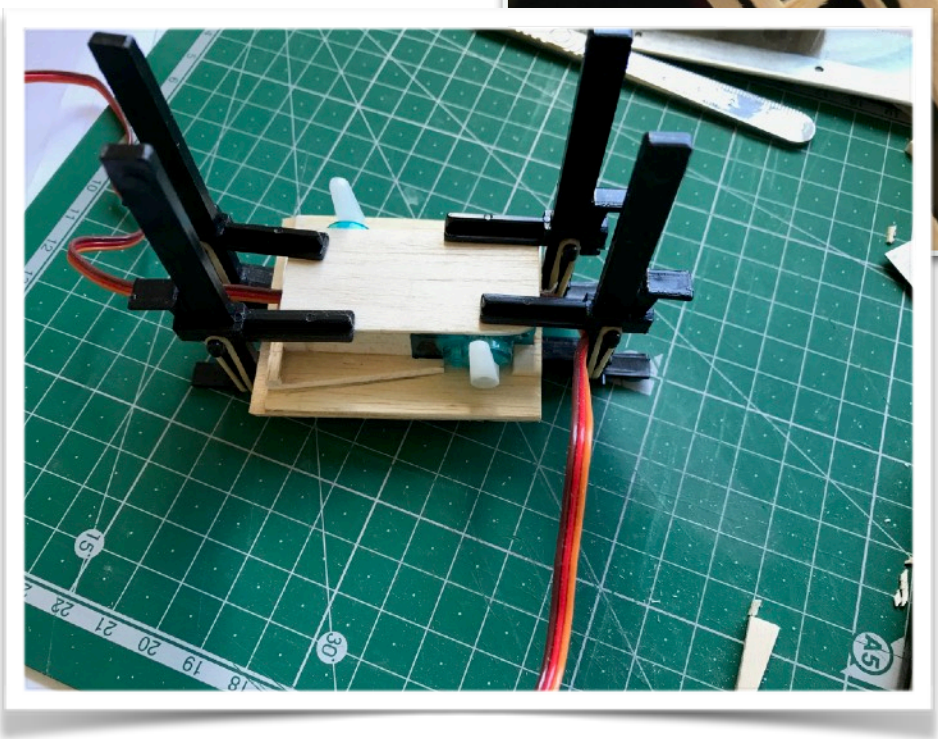
Simple issues first - sooner or later I will have to remove the temporary ‘former’ uprights in the wing slots. Inevitably I can’t strengthen the body first by fitting the stringers and still gain access to attach the wing when ready, so one of the thin ply nose pieces has been attached to strengthen the only former in the body! It was first prepared with a hole that may take an appropriate battery (at a squeeze).



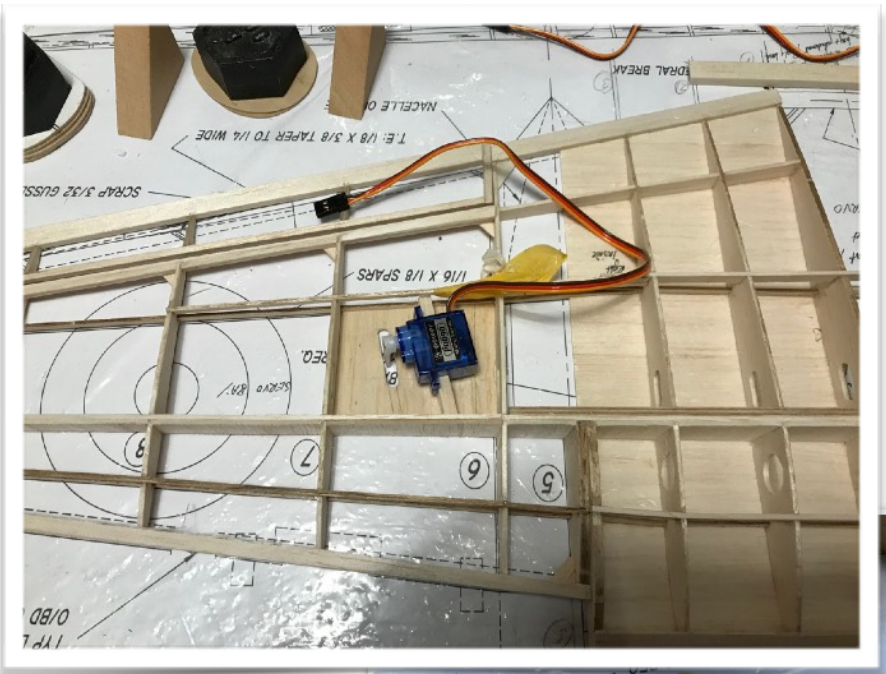
Next up tail group servos. There was just enough height for a 6g (but relatively strong) servo behind the cockpit and above the rear of the wing, and leave room for a micro Lemon Rx between there and the pilot seat. With a lot of trial and error I constructed a tray plus sheet and block retainers that gave both servos a firm housing and just enough room to do their job:







Then aileron servo trays, intended to be retained by the final Solite lower wing covering:

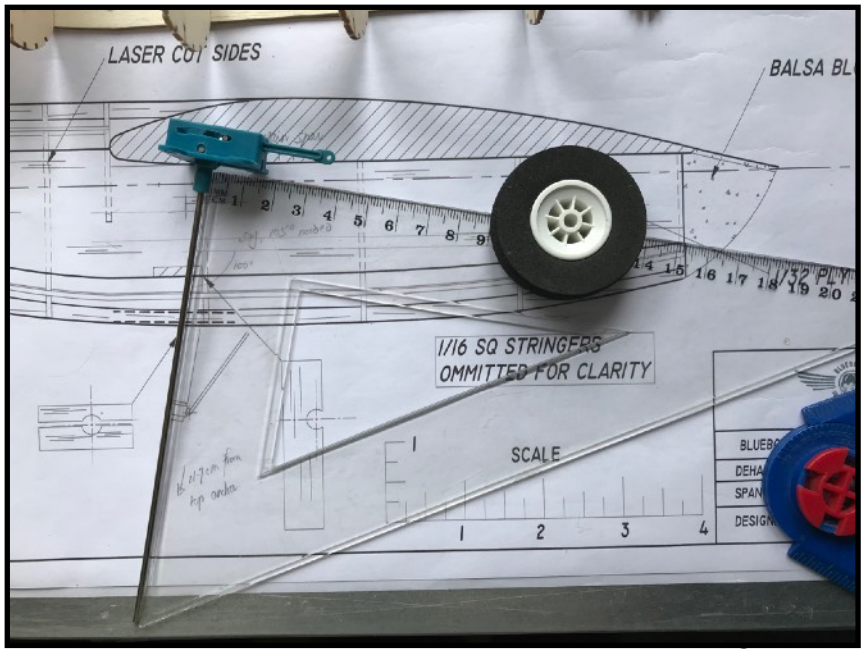


Should be easy, but it's the first kit I have fitted wing servos to that wasn't designed with parts for them.

Then a tough one - deciding on how to fit retracts; sourcing the pieces, adjusting the nacelles appropriately and building something that fits and works. All essential before adding the wing skins.

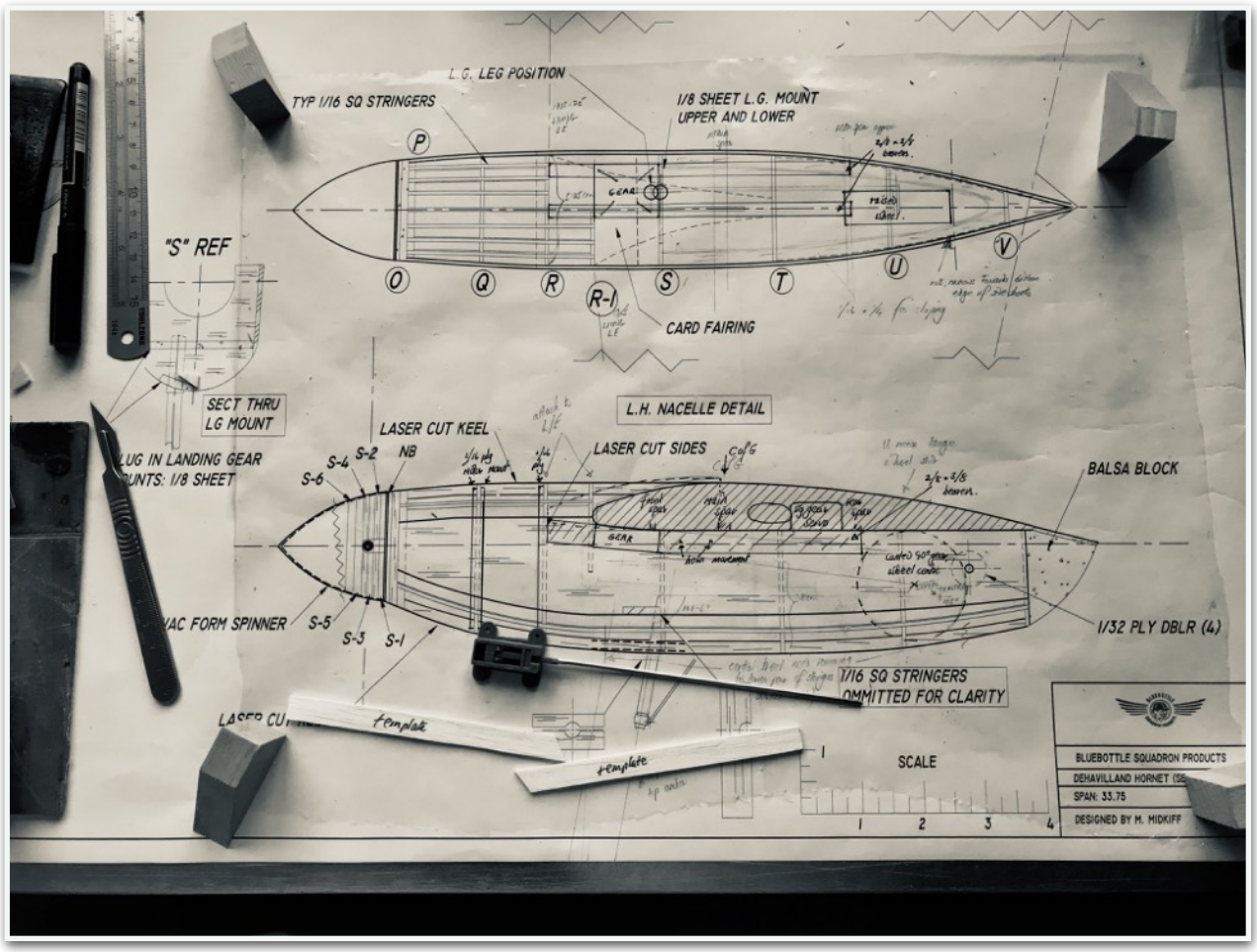
I originally rejected the mechanical solution.

However the only small 105 degree gear I could trace would fit, but weighed in at 48g.



Hornet Build, part 7

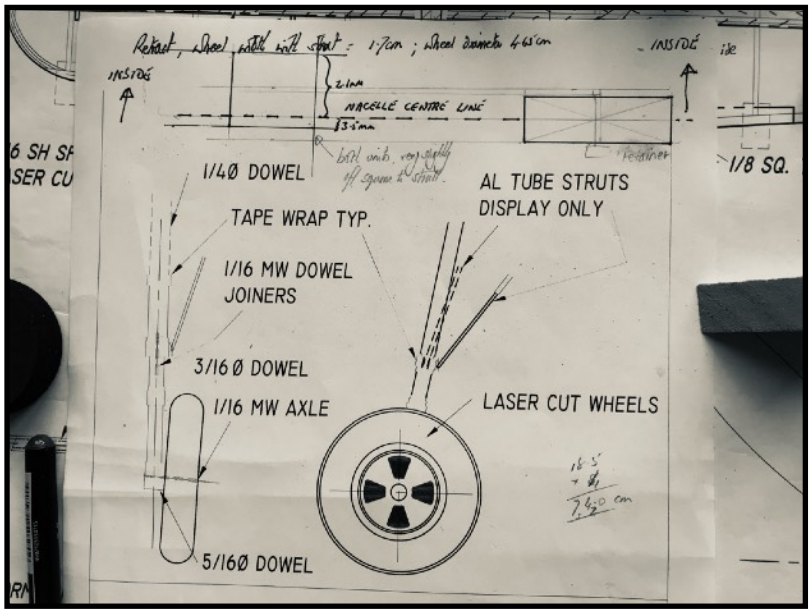
As so often in the past, I settled on plan A - a set of mechanical ‘Dubro like’ modules sourced a while ago to fit in an Aries Mustang. It became obvious that these would have to be angled against the lower leading edge of the outer wing (within the nacelle) which looks distinctly practical.



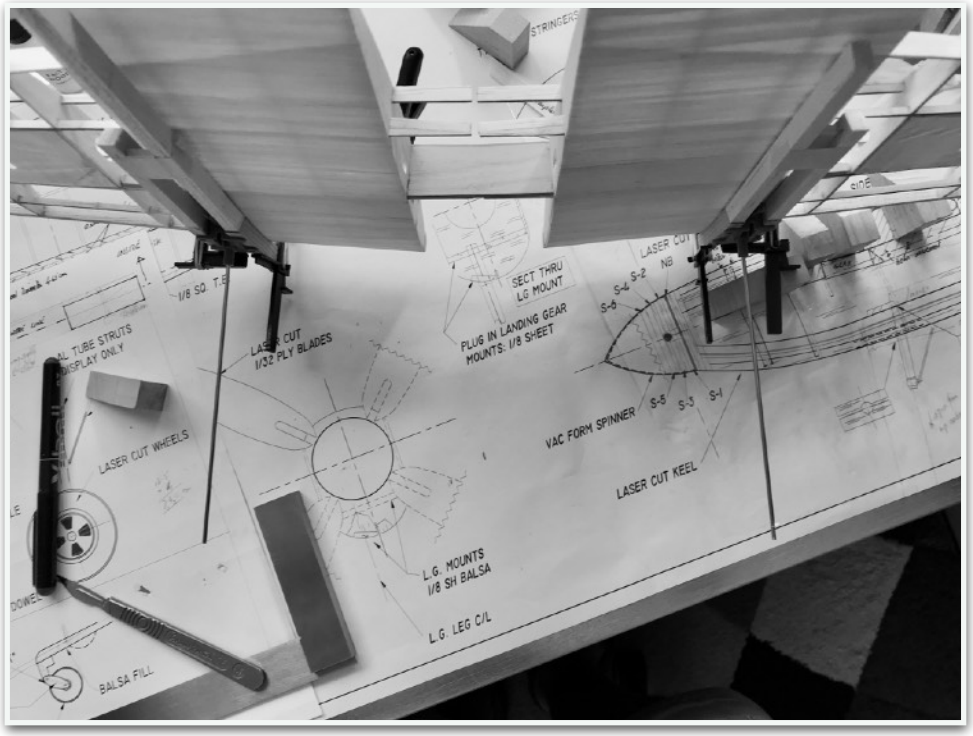
The photo above shows the plan adaptations with templates for the required beams which combine 3/8 x 1/4 spruce and balsa blocks to spread the load across the spars.

These blocks attach to the rear of the reinforced former ‘R’ as well as the wing underside.

The design will allow a limited forward cant of the leg and sets the wheel slightly forward of the original plans.

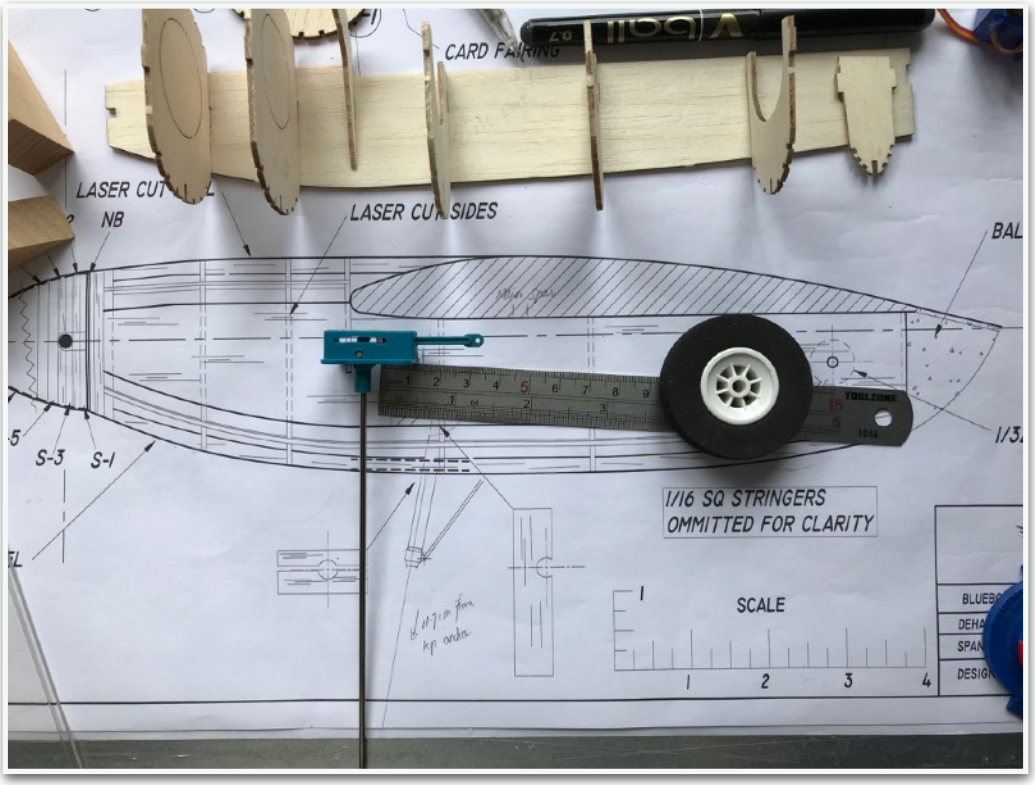


An initial trial of the principal seemed to support the plan. So, this trial fit was followed by some extensive fettling, cutting of existing lower wing skins and the addition of thin sheet angled to let the legs point vertically down.



And on to adapting the nacelle design to be hollow!

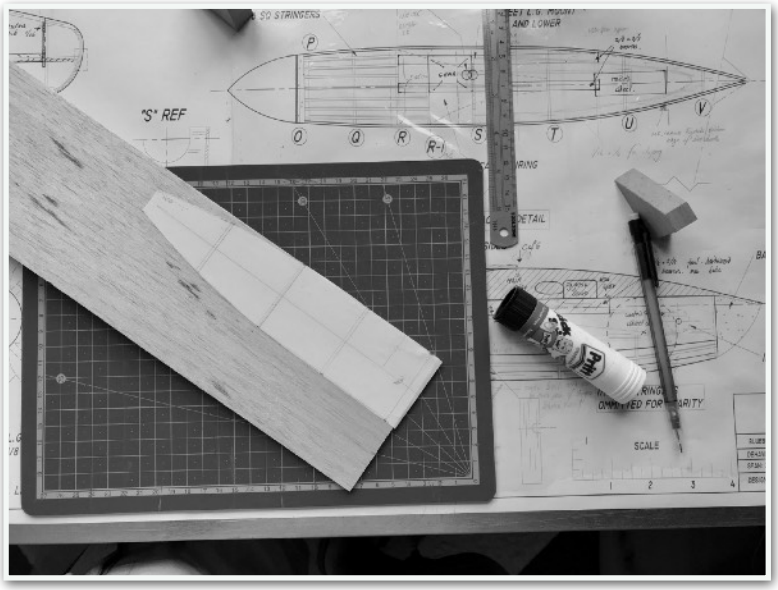
This photo from the earlier head scratching stages illustrates the kit formers and the challenge of building the nacelles without them.

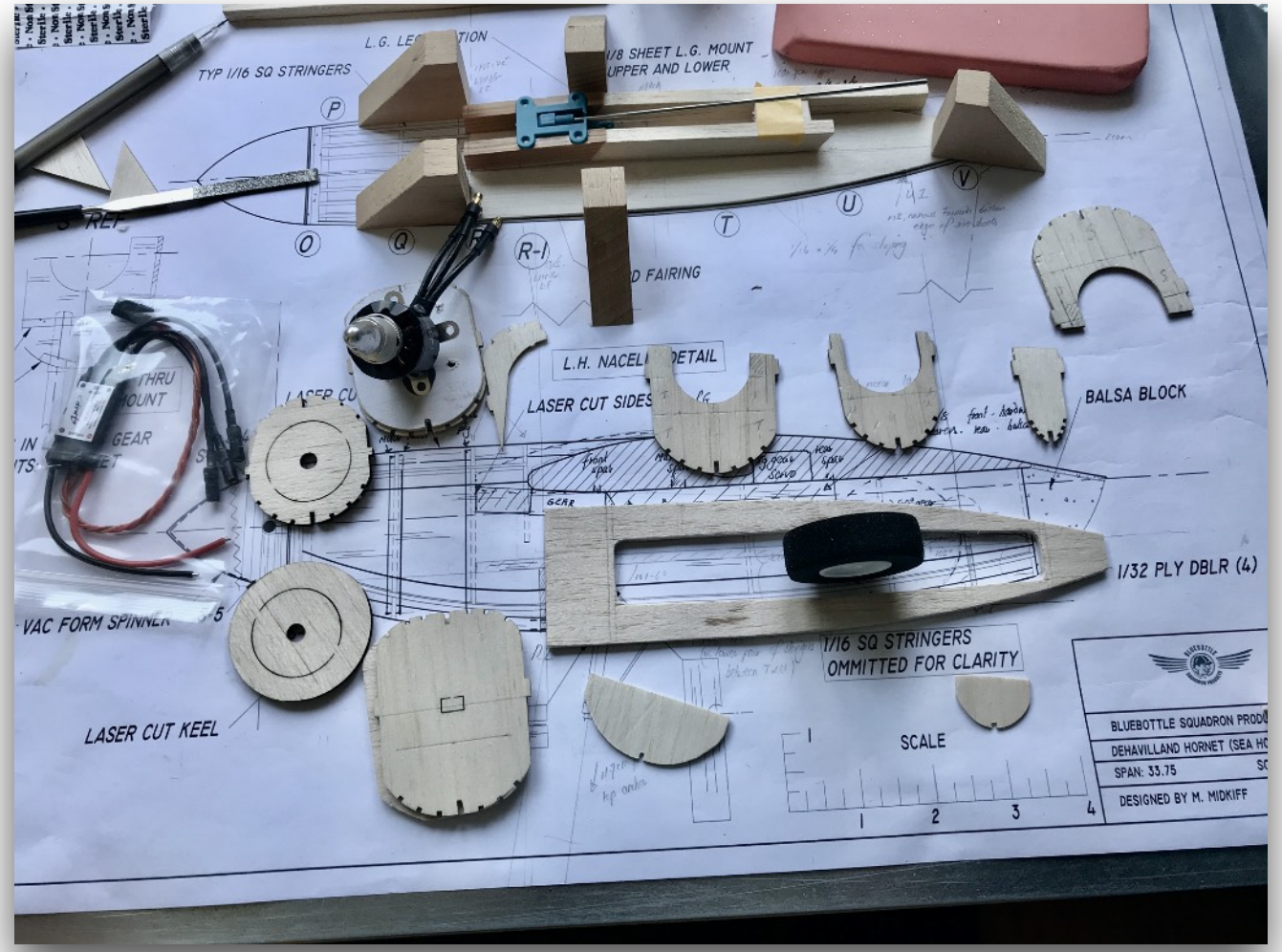


Eventually the design was refined and a kit of parts was prepped for a construction around a substantial (3mm) balsa former set horizontally on the lower sides of the nacelle.

Formers S, T and U were cut into parts for supporting the sides and lower stringers, and two new lower former were cut to make the front and rear of the wheel bay.

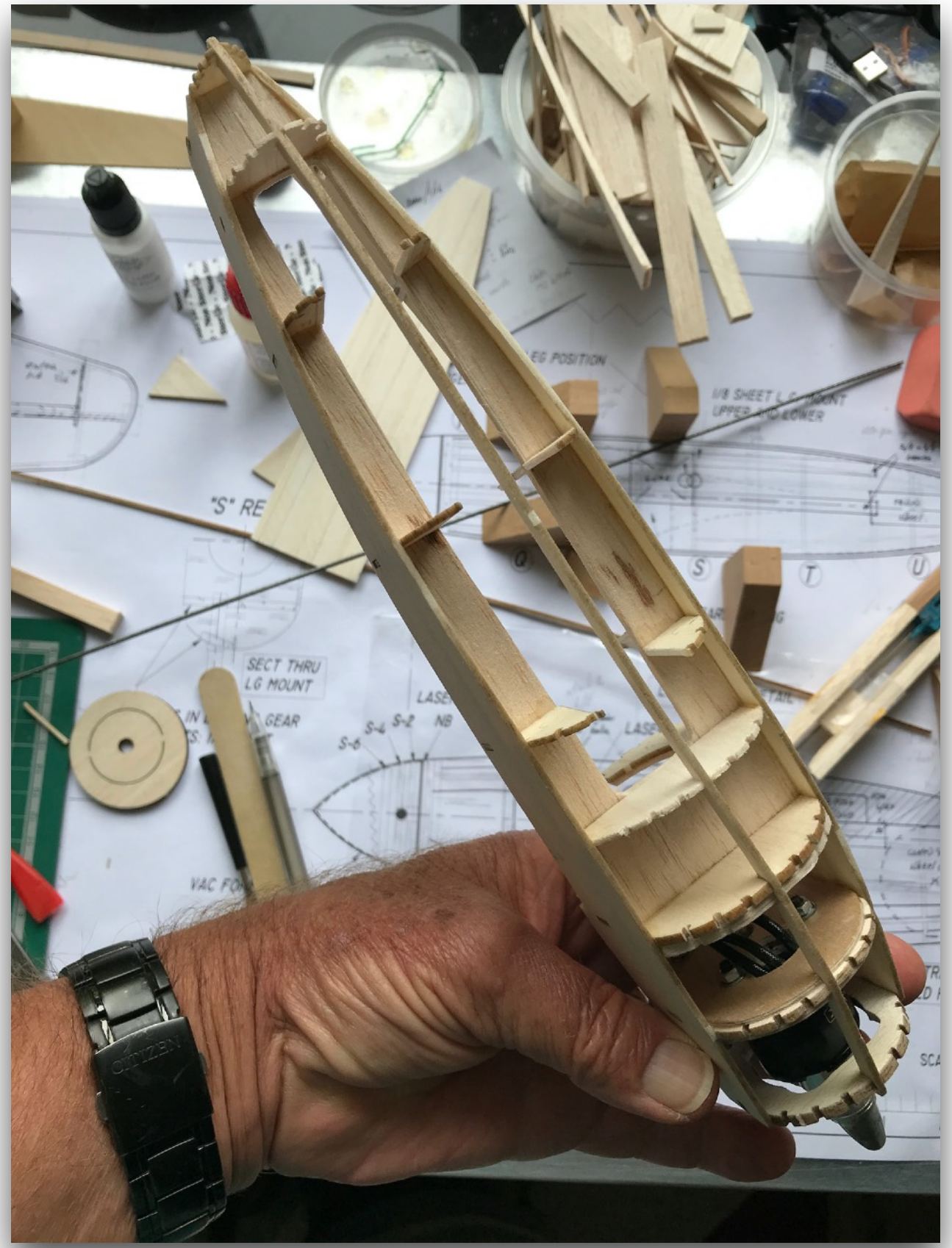
I have also made 1/16 balsa top ‘formers’, just in case…





The result of 10 days head scratching and bodging towards a solution, a largely built

nacelle, trapping a motor!



Next in line, fit the gear mechanism and ensure square and true, check nacelle fit and build the other one, fitting the gear servos in the the wings. A bit of reinforcement to forward spar and top sheet the wing.