



## THE RATCLIFFE SPITFIRE P9503

Supported by The Leonard Stillwell Bursary and The Spitfire Society

Bulletin 4 May 2013  
Dominic JH Berry

# 4

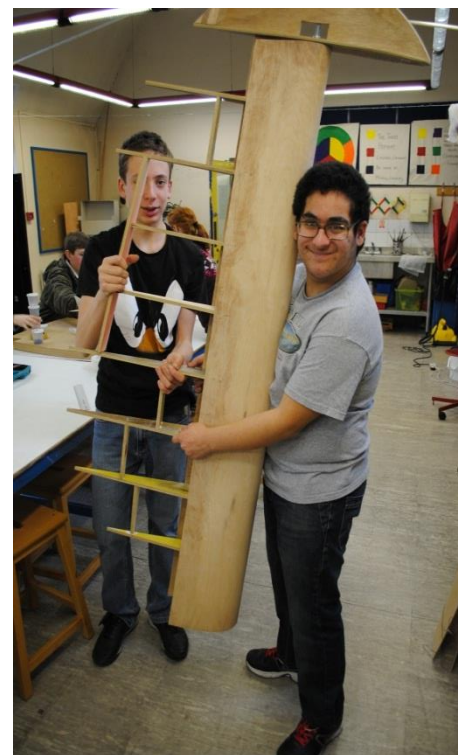
Welcome to this fourth instalment of The Ratcliffe Spitfire Bulletin. A great deal has happened since Bulletin 3 so this will be a bumper issue. The project continues to inspire beyond the walls of the College, and we have recently been approached with



offers of help from some exciting quarters; more on that a little later.

We have continued to make progress on the construction of the rudder; in fact, it

has been the part of the project that has absorbed most of our time recently. Currently the ribs are all cut and fitted onto an M12 threaded rod and held in place with nylon nuts on either side. This method has meant that we have been able to locate their



positions to perfect accuracy by minute adjustments of the nuts for each rib. The ribs have been braced with plywood supports towards the trailing edge to keep them in place and the rudder horn has been added, again, using our trusty 18mm plywood.

### Spade Grip

Our biggest purchase to date has been a complete new aluminium casting of the spade grip, or control grip. This has come as a rough cast kit so has meant the students have had to get to grips with metal filing and sand paper to clean the various parts up and then finish them off with wet-and-dry paper before we can paint them. As a rough cast there have been some things missing as well; like holes that need to be correctly located and drilled out and others that need to be tapped (have a thread cut into them). Despite trawling through all the blueprints we have, and speaking with lots of our contacts, it



appears there is little information out there to help us with this. Unless we can get hold of correct drawings, it seems we may have to try and borrow an original early spade grip and take our own measurements from it. Some good news has been that I was contacted by a parent, Roland Dorman, who runs Dorman Engineering Services Ltd, an engineering firm who manufacture custom machined parts. Roland has been very helpful and is currently helping us with these parts as we have no machining capabilities here at all.

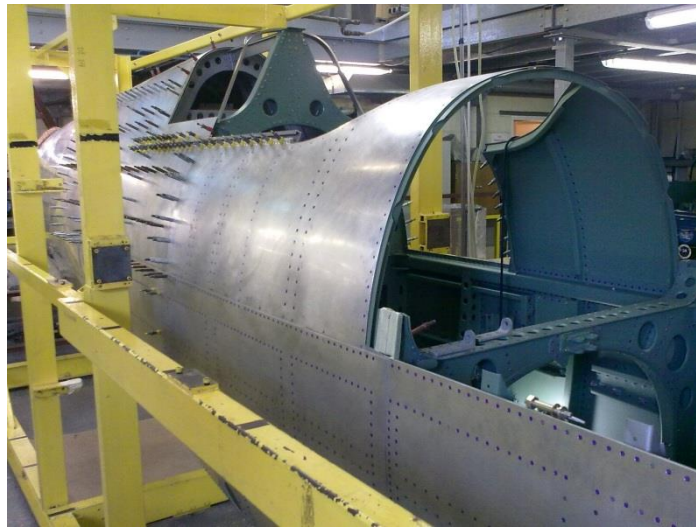
### BBC Radio Leicester

On Thursday 15<sup>th</sup> April I, along with Ollie Foulds (Year 7) and Sasha Farzin-Nia (Year 11), were interviewed by BBC Radio Leicester presenter Ben Jackson for a program all about our project that will be broadcast on his show. At the time of writing this the date of broadcast has not been finalised, but it will also be available on iPlayer for seven days following broadcast and I hope that this bulletin will be with you during that time. Ben was very enthusiastic about the project and very supportive of what we are doing; it was lovely to have the opportunity to promote the project to a wider audience.



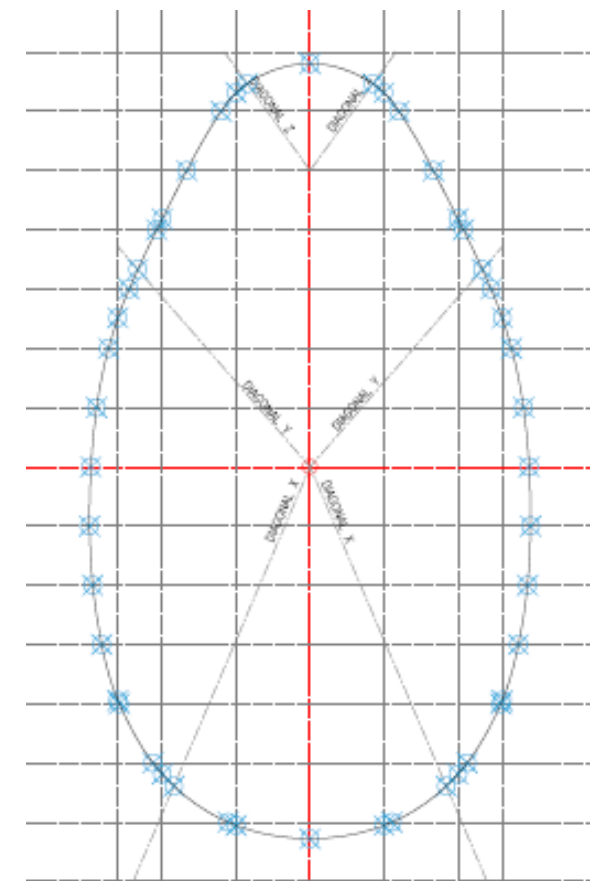
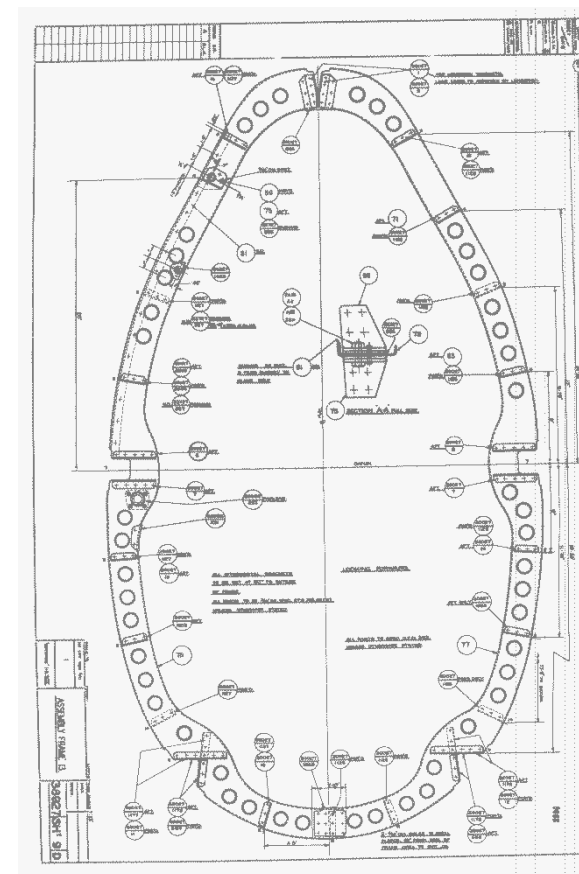
## Airframe Assemblies

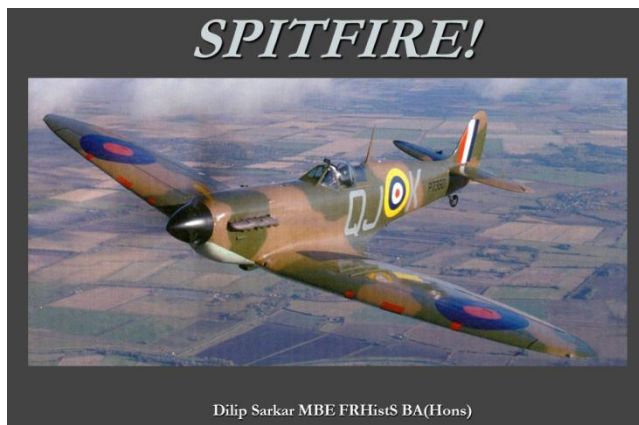
One of the best known companies involved in the restoration of Spitfires is Airframe Assemblies based on the Isle of Wight. The workshop manager, Chris Mitchell has been incredibly supportive of our project since its inception and has offered invaluable advice whenever I have asked. Recently I began researching what would be needed to make the cockpit door, in the original way, using aluminium and rivets. Over the Easter holidays I made it down to the island and popped in to see Chris. We walked around the current five fuselages they are working on, and looked at a newly-made cockpit door. Chris was extremely helpful and explained how it is put together and what tools are used. We have no metalworking tools or machines in school, so this will make the process more difficult for us, but we will give it a go, and Chris has offered to help if we get stuck which is wonderful. Chris had previously sent us a box of hundreds of rivets together with the hand tools needed to actually do the riveting, so the next stage is to get hold of some sheet aluminium and see what we can make of it...exciting!



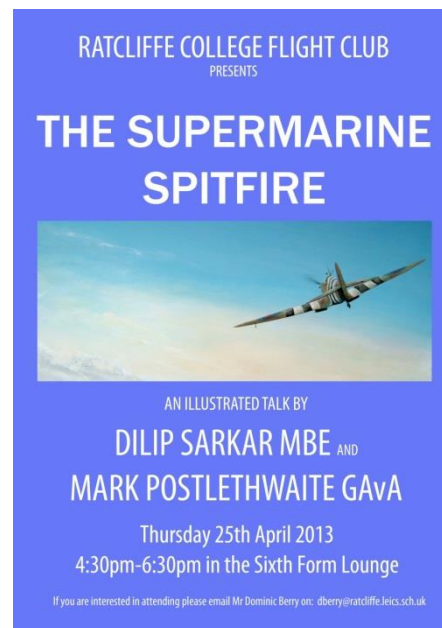
## CAD Works Engineering Ltd

Another great contact we have made has been with Paul McVittie from CAD Works Engineering Ltd based in Carlisle. I invited Paul down earlier in the year to look at the project and talk through ideas. Paul's company use CAD to draw up incredibly complex engineering components and he offered to use his systems to create drawings for us, to full-scale, that would allow us to build each frame to complete accuracy. Previously to this we had had to plot and hand draw every part directly on to the plywood, so Paul's process will probably save at least two hours per frame...and there are about 22 of them! Paul will also be printing the drawings off full size and shipping them down to us so all we will have to do is essentially trace them across. Another thing Paul will manufacture for us is a steel spine and lower longerons, made with brackets to take our 18mm ply frames. When we get all of this from him we should be able to get the entire fuselage coming together quite quickly. This will really bring the project to life for many people and mark an important mile stone for us. Take a look at the two pictures below; the first is the original blueprint, and next to it is Paul's drawing.





On the afternoon of 25<sup>th</sup> April we welcomed two very distinguished guests to the College; Dilip Sarkar MBE FRHistS, an authority on the Spitfire, and an author of over 30 books predominantly on the subject, and Mark Postlethwaite GAvA, one of the world's leading aviation artists. Both guests gave wonderfully engaging and illustrated talks to the assembled audience, and there were some good questions asked afterwards too, although I think that Stuart Bramble's direct question to Mark about how much he earns could have been phrased in a more diplomatic manner! It was a great privilege to listen to such respected experts.



It's funny how things happen sometimes. It was around the Easter half term when the headmaster's secretary came up and saw me to say that she had just had a call from a corporal in The Rifles who was making enquiries about Paul Baillon. He was after a photograph of him for research he was conducting into a crashed Spitfire somewhere on Salisbury Plain. (The image to the right is from an obituary written in the school's magazine at the time). Well this of course sounded like an amazing coincidence, as we too had just started to think about trying to find Baillon's first Spitfire. One thing led to another and before you know it I was talking to Paul (the corporal) on the telephone about our project and his. It transpired he works as part of an amazing organisation who excavate archaeological sites as part of the recovery process of injured servicemen.



Paul's boss, Richard Osgood has been very enthusiastic about our project and understands the close connection both our projects have. He has invited us down to Wiltshire to see the dig, when it happens. This particular Spitfire, serial P9503 had been hit by return fire during an engagement with enemy aircraft above Andover and Baillon bailed out unhurt. The image below is of a 609 Sqn Mk1 Spitfire similar to those that Baillon flew.



As ever, if you would like to help us with our project in any way, please do get I touch with me, by email in the first instance: [dberry@ratcliffe.leics.sch.uk](mailto:dberry@ratcliffe.leics.sch.uk)