

Banbury GC's Roger Coombs tells the story of the club's EuroFOX, from the initial research for a tug alternative, through the build process and certification, to its aerotowing debut, offering members extremely attractive launch fees



**T**HE steadily rising cost of launching gliders has been a concern in the gliding movement in recent years and has now approached uncomfortable levels for many people. To look into this problem, the BGA set up a small committee to investigate the possible alternatives to the normal tugs used by most clubs, many of which were designed during the 1950s when running costs were very different from today's levels. Peter Fincham, our Aircraft Member, was one of the members of this group.

The EuroFOX came out as a definite alternative as it has a history of towing operations in eastern Europe, which is not the case with any of the other aircraft looked at in the study.

As a result of this, we decided to visit the NEC for The Flying Show in late November 2011, to look at the EuroFOX UK demonstrator on show there. The quality of the aircraft was of

a very high order and with the approval of the membership, gained at the AGM that same evening, we arranged a demonstration at Hinton airfield on 17 December with a view to placing an order if proved suitable for our operation. This was a success, as I was able to carry out four aerotows with our heaviest glider (K-21) with two of the heaviest pilots we could find. This was done whilst carrying a logger in the tug. This was followed with a couple of tows by our 180hp Super Cub of the same glider/pilot combination, for comparison. The result showed a small increase in the ground run with the EuroFOX (possibly due to inexperience with the type) but, once airborne, the performance of the two tugs was very closely matched. Due to the water-cooled system, the engine could be reduced in power much more quickly than is possible with the air-cooled engine in the Cub, and as a consequence, the return to the

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Rod Watson in Banbury GC's EuroFOX. Feedback has been positive from both ends of the rope (Robert Cronk)



# E FUTURE?

## **THESE RATES ARE ALREADY INCREASING THE UTILISATION OF THE FLEET, WITH MEMBERS TAKING EXTRA, AND HIGHER, LAUNCHES**

(Below) The EuroFOX on the hard at Hinton, before its first flight and (bottom of facing page) descending near Hinton airfield (Robert Cronk)

✂ airfield for the next tow could be very smartly carried out.

On the strength of these findings, we decided to place an order that very day, for delivery at the end of May 2012. We decided to go for the nose wheel option, as we felt that the undercarriage is more substantial and more suited to the rigours of aerotowing.

Shortly after this, we registered the project with the LAA.

Two significant aspects required further investigation; the aircraft's full endorsement by the LAA as a "self build" and the aircraft's clearance by the CAA to tow on a Permit within the BGA. Whilst the BGA were in discussion with the LAA and the CAA regarding the clearance to aerotow with Permit aircraft, the CAA had still to rationalise a way forward within the EASA framework. Concerns remained over these topics for a period, but they were eventually fully resolved late in the delivery schedule after consideration by the CAA who noted in agreeing the use of Permit tugs in BGA club operations that the towing operations carried out by those aircraft may not be profit making, but charges may be made to recover operating costs.

The next milestone was a one-week trip to the factory in Slovakia, arranged by the UK Agent, Roger Cornwell, and was a very interesting experience, doing work on our own airframe under the supervision of the staff, and which brought the airframe to the

point where it could go into their paint shop. They rightly feel that their reputation is in part dependent on the quality of the finish on the airframe, and are therefore insistent on doing the paint job in-house in whatever colour scheme the customer requires.

Whilst at the factory, adjacent to the airfield at Nitra, it was reassuring to see other used EuroFOX aircraft, including one that was around seven years old and had completed 6,000 aerotows, still looking in very fine fettle.

The kit was delivered on time and came with the fuselage and wings temporarily attached and folded, for ease of transportation, and two large boxes of parts. We asked Adrian Lloyd to be our Inspector, which he readily agreed to do, and set to work on 1 June in the club's workshop (a former construction site Portacabin office, with a large 'goods' door made in one end).

The comprehensive build manual relies heavily on pictures, and as we found out it is very important to read all the written instructions before starting, as important information can be missed by just following these pictures. That said, the build was very straightforward, and the quality of the components supplied was of a very high standard. The people at the factory had gone to considerable trouble to make sure that all the nuts, bolts, washers, etc, had been correctly supplied with the components. Three other members of the Club, Phil Dolling, Peter Nicholson and Richard Collings, also assisted Peter Fincham and myself at various points during the build, which was completed in approximately three months.

We called in Adrian to inspect the work to date when we had completed the fuselage and engine/nose wheel installation, and satisfied him as to the quality of our work. With his approval, we then proceeded to complete the aircraft, including initial engine runs, checks of fuel flow rates, carb balancing, etc, before calling him in for the final inspection.

This being satisfactorily completed, we then applied to the LAA for the "Permit to Test" and at the same time Peter Fincham and myself applied for permission to carry out the required flight programme. This was granted, and we were then able to move forward at our own pace. Due to the care we took to make sure the aircraft was correctly rigged, the flight tests were uneventful with the aircraft matching performance parameters in the flight





The EuroFOX starts to take shape, pictured about a week after delivery, in Banbury GC's workshop (Robert Cronk)



Builders Roger Coombs (left) and Peter Fincham, looking pleased with their work, as indeed they should (Robert Cronk)

manual accurately. Adrian was then called in to conduct the final test flight, to verify our figures, at which point we then applied for the full Permit to Fly.

During the test flying, no aerotowing is permitted and so we still had to wait for the issue of the full Permit before we could demonstrate to the membership that we had done the right thing.

The wait was not too long – about three and a half weeks.

The first weekend of towing was 6-7 October, making it just over four months since we received the kit. We completed some 35 aerotows with, apart from Peter and myself, four other tug pilots converting to the new aircraft. Universally the reaction was very positive from both ends of the rope.

To date we have now had 20 days of towing and just over 200 tows have been carried out, including many in less than ideal conditions (either crosswinds or no wind at all, and wet soft ground, and also in stronger winds which would have kept

the Cub in the hangar), and the aircraft has proved more than adequate to the task. Our fuel consumption per tow is averaging just 2.6L, or 1.2L per 1,000ft, or 13.25L per tacho hour. Due to our intention to carry out most of our maintenance in-house, our costings have resulted in us being able to offer a tow to 2,000ft for £13.50 and a tow to 1,000ft for just £7.00 – a similar price to a winch launch at many clubs.

These rates are already increasing the utilisation of the fleet, with members taking extra, and higher, launches, *ab initio*s taking several low tows to practise circuits, and members simply taking a launch for a ride around where before there was some reluctance amongst the more experienced members to spend a more significant sum on a launch other than when soarable.

As to durability, the evidence from eastern Europe is positive and we shall be surprised if, given proper care and attention, the aircraft does not give good service for many years to come.

**BASIC INFORMATION ON KIT FOR AEROTOWING GLIDERS:**

■ 560kg MAUW for SEP/SSEA version

■ 472.5kg MAUW microlight

■ 450kg MAUW microlight

■ Advanced kit equipped for towing operations ranges from about £40,000 plus VAT.

■ Kit contains everything to finish the aircraft to a flying condition and contains airframe, engine, basic instruments and paint.

■ A number of options are available, including strobe lights, back-up electric fuel pump, parachute recovery system and extra large tyres

■ The flying numbers vary depending on the variant. This is the 560kg, 100hp version, which would be appropriate to glider towing:

**Empty weight:** 285-299kg

**Fuel capacity:** 86 ltrs

**Stall speed:** 43mph

**Cruise speed:** 110mph

**VNE:** 143mph

**ROC at MUAW:** 900fpm

**Baggage weight:** 20kg

**Max wind:** 28mph

**Crosswind limit:** 17mph

**Max flap extension:** 93mph

**Glide ratio:** 9:1

**Range:** over 600 miles

(statute)

**Wingspan:** 29ft 10in

**Cockpit width:** 44.1 in

**Max width, wings folded:** 7ft 10.5in

**Length:** 21ft

**Main gear width:** 7ft 2in

[www.eurofoxuk.co.uk/](http://www.eurofoxuk.co.uk/)

