



19 Sept. 2010

Hi Everyone.

It's becoming all too common to mention limiting weather. Why break the trend?

Barring a miracle, it's plain to see that the rain and gale force winds will stop even the keenest of the flock for a bit.

So this newsletter is being knocked out with no flying to report on and scant chance of any happening for the next few days. Jan and I head to Dunedin this Thursday (at least I'm going up in an aircraft ☺) and we'll be there for the next two weekends on Grandparent duty. So, no RC fun for me for a bit except I may be able to visit the Dunedin MAC in Mosgiel. Managed to drop by earlier this year and was very impressed with their setup. For those that aren't familiar, they have a really smooth grassed strip about 140m long (ours is about 85m) and heaps wide within a fenced off area leased from a private farmer. They have a container on site and also a long-drop toilet – bliss – plus 4 bench seats and also 'plane tables! What's more, the pit is immediately inside the road fence, so planes are off-loaded with no walking. To make us even greener, their strip runs more or less East-West and the pit is on the Southern side, so pilots have their backs to the sun. BUT – and there's always one of those – Mosgiel occasionally floods quite badly and when it does, large areas can be affected, including the strip. DMAC has an amazing website, which has only just been upgraded and is well worth a detailed visit. There are even photos of the site flooded to fence height – ouch! Just the weather to check them out on www.dunedinmac.ning.com I guess, in my absence, there may not be a newsletter for 3 or 4 weeks.



QUIZ ANSWER

There's been a great interest in the quiz and several people came up with the right answer. Yes, she's a Royal Aircraft Factory BE 2f and the location was Hood Aerodrome in Masterton. Well done guys!

RESULTS:- 1st BE2f & Masterton – Graham Beagley; 2nd Rob Waardenburg;

Identified BE2: 1st David Blanden; 2nd John Berry; 3rd John Laker - **CONGRATS to all ☺**

Thanks to all others who joined in the exercise and thanks everyone for enduring my clues – 'twas fun!

This is such a delightful looking aircraft. Shame it didn't earn a better record for performance. I stumbled upon the Masterton WW1 airshow in April on the way back from Warbirds over Wanaka and some South Island camping. What a treat! This was my absolute favourite looking plane at the show, so the camera ran hot.



Received the following bit of extra info about this plane from Gene DeMarco of The Vintage Aviator in Masterton just recently:

'The original BE.2f that The Vintage Aviator Ltd has just restored is serial number A1325 built by Napier and Miller Lt of old Kirkpatrick Glasgow in batch A1311-1360. These aircraft were recorded as being BE.2c and BE.2E types hence the slight confusion in this aircraft's description over the years. A1325 has a BE.2c fuselage, does not have dual controls and uses BE.2e type wings and empennage making this aircraft a BE.2f.'

The following is from The Vintage Aviator site:

"One of our principal projects is the restoration, to flying condition, of an original BE.2f - serial number A1325."

This project had previously been worked on by several different organisations both in the UK and in New Zealand. Initially this project was thought to be a BE2e and prior to arriving in our workshop quite a lot of work had been carried out under this **misconception**. From our library of drawings and photographs we deduced that it was in fact a **BE2f**, which is outwardly very similar to a **BE2e** but with the major difference that the fuselage is from a **BE2c**. The main indicators of this, which can be backed up with drawings are- the rear decking of the fuselage is ply covered; this was replaced with wire bracing in the **BE2d** and **BE2e** and even in some later **BE2c**'s, the main vertical strut in the fuselage just in front of the pilots seat is made from Ash- this was a steel tube in the **BE2e**. The lower main longitudinal members are shaped differently in the two models- the original ones that came with the project are of the **BE2c** variety. And, finally, there are a myriad of minor differences in the bracketry, that, while individually may not be to persuasive, when they are grouped together confirm that this was indeed definitely a **BE2c** fuselage.



Armed with this information we set about undoing some of the painstaking and delicate work that the earlier organisations had carried out in the belief that they were working on a **BE2e** fuselage. It was believed to be part of a batch of **BE.2**'s delivered to Norway by the RFC in 1917. It was eventually donated to the Mosquito Museum in the UK (the **BE.2** being an early DeHavilland design), and after several years it found its way into private ownership - and put up for sale in WW1 Aero magazine. It was acquired by the NZ based 1914-18 Aviation Heritage Trust over 10 years ago. The fuselage was in great condition, with a lot of original timber in airworthy standard. A set of reproduction wings had been made for it in the UK (not entirely accurately as it turned out), and it arrived with an original RAF 1a engine in very poor condition.

The engine problem slowed the project down for a while, but during that time full advantage has been taken of the uncovered original airframe. The Vintage Aviator has made several reproductions, with appropriate modifications to reproduce a range of different **BE.2** models. With reproduction RAF 1a engines now well underway, work began in earnest to return A1325 to the air.

We replaced the lower longitudinal members with the original ones that had previously been removed. And then we removed the **BE2e** fuel tanks, front seat frames, cowl and carlin arrangement, front wing spar carry-through tube and engine bearer braces. We then fitted new engine bearer braces, carry-through tube (with fuel tank mounting brackets attached), carlins and cowl and a **BE2c** main tank- all of which have been made to the original drawings. The passenger's seat is now bolted directly onto the top of the main fuel tank. Most of the work on this plane has been carried out in conjunction with the reproduction **BE2f** and the early type and late type **BE2c**'s that we are building. Throughout these projects it has been easy to see where the confusion lay when these planes were being manufactured originally and why they re-designated the **BE2c** and **BE2d** fuselage fitted with **BE2e** wings as the **BE2f** and **BE2g** respectively.

At the time of writing the cowling with windscreens, windows and cockpit combings are being fitted and the controls are being rigged up. The top wings are getting their king posts and bracing wires fitted ready for a trial fit prior to covering. The service tank and engine cowls are also under construction, as is the RAF1a engine. The task of restoring and manufacturing these planes is very time consuming and labour intensive but the prospect of seeing these planes once again take to the air is terrific motivation and will be a great reward for the effort put in by ourselves and many others involved. **For complete article go to:-** <http://thevintageaviator.co.nz/projects/be-2/be2f-restoration>

Further info from Wikipedia:-

The [Royal Aircraft Factory B.E.2](#) (*Blériot Experimental*) was a British single-engine two-seat [biplane](#) in service with the [Royal Flying Corps](#) (RFC) during [World War I](#). About 3,500 were built, used as fighters, interceptors, light bombers, trainers and reconnaissance aircraft.

A **B.E.2a** of [No.2 Squadron RFC](#) was the first aircraft of the Royal Flying Corps to arrive in [France](#) after the start of the First World War, on 26 August 1914.

Development



A B.E.2c at the [Imperial War Museum in London](#).

The B.E.2 was designed by [Geoffrey de Havilland](#) as a development of the [B.E.1](#), and first flew in February 1912 with de Havilland as the test pilot. On 12 August 1912 it set a British altitude record of 10,560 ft (3,219 m).^[1] It started production as a [reconnaissance](#) machine, and two years later formed part of the equipment of three squadrons - squadrons equipped with a single type of aeroplane were still to come. These were all sent to [France](#) shortly after the outbreak of war. The early **B.E.2a** and **b** aircraft were replaced during 1915 by the **B.E.2c**, so extensively modified as to be virtually a new type, based on research by [Edward Teshmaker Busk](#) to develop an

inherently stable aeroplane. The *c* began to be superseded by the final version, the **B.E.2e**, nicknamed the "Quirk", in 1916.

Well into 1917 the last front-line B.E.2e was withdrawn, long after the type was obsolete. It continued in service throughout the war as a home defence fighter, in which role it was for a time a surprising success, and as a trainer.

Some 3,500 B.E.2s were built by over 20 different manufacturers: an exact breakdown between the different models has never been produced, although the B.E.2c was almost certainly the most numerous.

The **B.E.9** and the **B.E.12** were variants designed to give the B.E.2 an effective forward-firing armament - the B.E.12 (a single seater) went into production and squadron service, but was not a great success.

Faults of the type



Imperial War Museum example from underneath

The B.E.2 has always had a very bad press, and had become an unpopular aircraft by 1916.

By this time it had at least three serious weaknesses as a warplane. The first was that its small air-cooled inline motor made it seriously underpowered, and was unreliable even by the standards of the time.

When bombs were to be carried or maximum endurance was required, the observer and his gun had to be left behind.^[2] Although the B.E.2 had a reasonable performance for 1914/15 it remained in service long after much more powerful aircraft had become available to the enemy.

The second weakness stemmed from this. As it was often flown as a single-seater, it was necessary to have the observer's cockpit over the centre of gravity, in front of the pilot. In this awkward position, he was hampered by the struts and wires supporting the centre section of the top wing (see illustration), and at best had to shoot back over his pilot's head.

The third weakness is more controversial. In 1912 and following years there was a good deal of controversy about two competing aircraft design philosophies. One, typified by the [Wright Brothers](#), said that an aeroplane should be inherently unstable, and that deviations from straight and level flight should be corrected by the pilot. Aircraft designed on this principle tended to be agile, but required constant vigilance and attention and a fair degree of skill from the pilot. The opposing philosophy strove towards an aircraft that, while it could be steered, largely kept itself steady in the air, and diverged from straight and level flight only when its pilot wanted it to. This tendency naturally worked against desired changes in flight attitude as well as involuntary ones, and reduced manoeuvrability. Since the standard of pilot training was so poor in the RFC a stable aircraft had real advantages, but it did make it difficult to escape a more aerobatic enemy, even if pilot skills had permitted it. There is however a good deal of evidence in contemporary accounts that suggests that the B.E.2 was less stable and more manoeuvrable than it was supposed to have been.

The essential vulnerability of the B.E.2 became plain in late 1915, with the advent of the first German fighters. This led the British press to dub it "[Fokker Fodder](#)", while [German](#) pilots nicknamed it *kalttes Fleisch* ("cold meat"). British [ace Albert Ball](#) summed it up as "a bloody awful aeroplane". Unable to cope with such a primitive fighter as the [Fokker E.I](#), it was virtually helpless against the newer German fighters of 1916-17. The aircraft's poor performance against the [Fokker Eindecker](#) and the failure to improve the aircraft or replace it caused great controversy in England, with [Noel Pemberton Billing](#) attacking the B.E.2 and the Royal Aircraft Factory in the [House of Commons](#) on 21 March 1916, saying that RFC pilots in France were being "rather murdered than killed".^[3] This prompted the setting up of a judicial enquiry, which eventually cleared the factory.^{[3][4]}

In fact, once the threat from the Fokker monoplanes was contained by the availability of allied fighters such as the [Airco D.H.2](#), [Nieuport 11](#) and [Royal Aircraft Factory F.E.2](#), B.E.2c losses over the Western Front

dropped to an acceptable level, with official records indicating that in the second quarter of 1916, the B.E.2 actually had the lowest loss rates of all the major types then in use.^[5] Encouraged by this, the RFC took delivery of large numbers of the BE.2e, which promised improved performance. By the Spring of 1917, however, conditions on the Western Front had changed again, with the German fighter squadrons re-equipped with better fighters such as the [Albatros D.III](#). Although it had been planned to replace the B.E.2 in front-line service by this time with the [Armstrong Whitworth F.K.8](#) and [Royal Aircraft Factory R.E.8](#), deliveries of these types was slower than hoped. This culminated in what became known as "[Bloody April](#)", with the RFC losing 60 B.E.2s during that month.^[6]

An incident illustrating both the poor level of piloting skills with which new RFC pilots were sent to France in 1917 and the level of popularity of the B.E.2e on the [Western Front](#) is recorded by Arthur Gould Lee, then a young RFC novice, in his book *No Parachute*. On 19 May 1917 six pilots newly arrived in France and, still to be allocated to a squadron, were each given a new B.E.2e to ferry between RFC depots at [St Omer](#) and Candas. One crashed in transit, three crashed on landing and one went missing (the pilot was killed). Lee, the pilot of the only aircraft to arrive safely, wrote in a letter to his wife:

I felt rather a cad not crashing too because everyone is glad to see death-traps like Quirks written off, especially new ones.

Fortunately the B.E.2e was by this time already being rapidly replaced on the Western Front by the [R.E.8](#) and [Armstrong Whitworth F.K.8](#), but for far too many young airmen this was more than a year too late.

Other fronts

From 1917 onwards, the B.E.2 was mostly withdrawn from the front line but continued in use for [submarine spotting](#) and as a [trainer](#). Before this it had already been the first effective [night fighter](#).

As early as 1915 the B.E.2c had been used in attempts to intercept and destroy the German "[Zeppelin](#)" [airship](#) raiders. The "interceptor" version of the B.E.2c was flown as a single-seater with an auxiliary fuel tank on the centre of gravity, in the position of the observer's seat in the reconnaissance version. After an initial lack of success while using darts and small incendiary bombs to attack airships from above, a [Lewis gun](#) was mounted to fire incendiary ammunition upwards, at an angle of 45°. The tactic proposed was to attack the airship from below, in a similar manner to that later employed by German night fighters in World War II ([Schräge Musik](#)). This proved very effective.

The first successful attack took place on the night of 3 September 1916, when a B.E.2c flown by [Captain William Leefe Robinson](#) downed the first German airship to be shot down over Britain, winning him a [Victoria Cross](#) and cash prizes totalling £3,500 that had been put up by a number of individuals for the first Zeppelin kill over the British Isles.

This was not an isolated victory: five more German airships were destroyed by Home Defence B.E.2c interceptors between October and December 1916.

The performance of the B.E.2 was inadequate to intercept the aeroplane raiders of 1917/18, and it was replaced by later types of night fighter, using techniques pioneered by the B.E.2c.

Thereafter the surviving B.E.2s (mainly B.E.2es) were used as trainers. In spite of the type's stability it was capable of comprehensive (if somewhat stately) aerobatics, and was by no means as bad a trainer as might have been expected.



Survivors

B.E.2c in the [Canada Aviation and Space Museum](#).

Aircraft and replicas are preserved at several museums, including the [Imperial War Museum, Duxford](#); the [RAF Museum, Hendon](#); the

[Canada Aviation Museum, Ottawa](#); the [Musée de l'Air et de L'Espace, Paris](#); the [Militaire Luchtvaartmuseum, Soesterberg, Netherlands](#); and the [Forsvarets Flysamling museum, Oslo Airport, Gardermoen, Norway](#).

B.E.2f serial A1325 has been restored to airworthiness by The Vintage Aviator Ltd in [New Zealand](#),^[7] with a B.E.2f reproduction and two reproduction B.E.2cs also well underway by the same firm. The B.E.2f restoration utilises an original RAF1A V8 powerplant, and made its debut at the Classic Fighters Omaka airshow in April, 2009.



The tail at the end of the tale -

Hope you found all this as interesting as I did. Have a good week in spite of the weather. We're all looking forward to getting back to the field again. Sorry I won't be around for the next 3 weeks, but if anyone would like to send me photos and some text, I'll be taking my laptop with me and will be happy to oblige from Duffers. Hope you are enjoying receiving these things. Happy flying.

Cheers, Stan

478 3868 – 021 530680

