



## A QUICK REFERENCE GUIDE TO WOODEN SAILPLANES BUILT BY SLINGSBYS, KIRBYMOORSIDE (Version 2)

**INTRODUCTION** : The primary purpose of this document is educational and meant to assist the Gliding Heritage Centre at Lasham – [www.glidingheritage.org.uk](http://www.glidingheritage.org.uk) – in achieving its goals . The GHC is a charity and one of its obligations is to provide education on the history of the British gliding movement. The author has set out on a project to provide details of all the sport orientated wooden gliders built in Britain, and decided to bite the bullet by tackling first those designed and built by Slingsbys, Kirbymoorside, by far the biggest slice of the cake! – my estimate is Slingsby gliders account for ~82% of the total of wooden gliders ever made in this country, wartime military gliders such as the Hotspur, Horsa, etc, excepted.

Other than putting in a great deal of graft I don't claim any particular credit for this document, which has been written as an intended Quick Reference Guide - no pictorial content in the initial 1.0 version. I've started remedying the lack of pictorial content with version 2.0 and it will be a continuing task. The great majority of the work has been a compilation from a limited number of sources, and it is here that the real heroes lie! Those sources are:

- By far my most important source Martin Simon's truly wonderful book "Slingsby Sailplanes" - ISBN 1-85310-732-8. A veritable encyclopaedia of technical information and drawings + history of the design and the aircraft built illustrated with a host of photos.
- The gliding magazines made available by the Lakes Gliding Club via their website – <http://www.lakesgc.co.uk/> - <Archive><Old Gliding Mags>. A staggering effort in making hundreds of gliding magazines available in electronic form.
- The list of gliders by manufacturer and type showing their last known whereabouts else eventual fate if known produced by Richard Cawsey - <http://www.rcawsey.co.uk/>
- A series of superb articles published by Scale Soaring – <http://www.scalesoaring.co.uk/>
- Countless hours using "Google" and the internet, every now and then you stumble across a real gem that fills a gap in knowledge!
- Advice from a number of very notable VGC members – Richard Cawsey, Dave Goldsmith, Ted Hull, Geoff Moore, Alan Patching, Peter Redshaw, Graham Saw, Colin Simpson, Howard Torode, Peter and David Underwood, David Williams.

Note this QRG is a "living document". I will add and edit accordingly as new information becomes available, and this may well include correcting mistakes. If you have new information or you think you've found a mistake please contact the author via [FGBradney@outlook.com](mailto:FGBradney@outlook.com)

# GLIDING HERITAGE CENTRE



In version 3, a.) Some further attributed pictures have been directly inserted b.) Stylised sketches of several of the Slingsby types that were never built/completed scanned in. c.) A few amendments to the text to incorporate new information received.

Glyn Bradney, 9th March 2013

**FRED SLINGSBY** : Frederick Nicholas Slingsby was born in Cambridge on the 6<sup>th</sup> November 1894, “Slingsby” being a very long established Yorkshire family name. He served in the Royal Flying Corp (to become the RAF) from March 1914 to February 1920, during this time being awarded the Military Medal for bravery whilst flying as a gunner/observer on a photo reconnaissance mission, taking over the machine and successfully landing it after the pilot had been killed. After leaving the RAF he bought into a wood working / furniture manufacturing company in Scarborough as a partner in 1920.

The BGA (British Gliding Association) was formed in December 1929 and in parallel with this gliding clubs and groups were starting up all over the country. One of the earliest of these was the Scarborough Gliding Club in February 1930, Fred Slingsby because of his wood working skills being appointed the ground engineer. The club bought a Primary Dagling from RFD Co of Guildford which started flying hops in June, very quickly it was broken and was taken to Fred Slingsby’s workshop in Scarborough for repair – and so this was the beginning of Fred Slingsby’s huge involvement in the history of British gliding.

As an aside the pioneering English aviator, Amy Johnson, left Croydon airport in a DH 60 Gypsy Moth on the 5<sup>th</sup> May and landed at Darwin, Northern Territory, on the 24th May. She thus became the first woman pilot to fly from London to Australia and the flight made her world famous. With a touch of marketing genius the Scarborough club cabled her asking her if she’d accept the offer of being their Vice President, to which she cabled back “Honoured to accept”. This was quite a publicity coup for both the gliding club and the town of Scarborough, and thoughts switched to organising a big soaring event that would give yet more national publicity. So on the 11th July two already well-known glider pilots, Robert Kronfeld and Carli Magersuppe, arrived with their sailplanes to give gliding demonstrations from Castle Hill, Scarborough. The high wind made flying very inadvisable, but no doubt influenced by the large crowd, Magersuppe launched in his Professor sailplane only to crash into the sea close to the beach. Kronfeld also crashed in his Wien so Scarborough certainly got their publicity!

Fred Slingsby aspired to more than flying (and repairing!) a Primary glider and a visiting German pilot, Gunther Groenhoff, in the winter of 1930 advised him to get a German Falke. Slingsby acquired the plans and what came to be known as the “British Falcon” was the first glider he ever built. The aircraft proved to be very successful, so successful he found himself getting orders for more including a 2-seater version. The growing gliding work meant the workshops in Scarborough were getting too small, and in the summer of 1934 Slingsby managed to obtain the temporary usage of the Scarborough tram sheds which were empty

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at the time. Martin Simon's book has a wonderful photo of a Type 3 Primary being built in the tram works that would give any health and safety inspector in today's world a heart attack!

After a strong start the Scarborough GC started to experience difficulties and it was agreed it should merge with the Bradford and District club, and so was born the Yorkshire Gliding Club. In 1933 Fred Slingsby had found an excellent soaring site near Thirsk known as Sutton Bank, a few demonstration flights were made from there and a successful meeting held in October 1933. This in 1934 was to become the home of the Yorkshire Gliding Club, and in May 1934 whilst discussing the building of a hangar for the Yorkshire GC with Philip Wills of the BGA at the club they met Major J.E.D. Shaw, a wealthy landowner and benefactor to local causes. Major Shaw lived near the village of Kirbymoorside and had his own private airstrip, he also ran an agricultural engineering business locally. On hearing of Slingsby's space difficulties in Scarborough Shaw immediately offered the use of some workshops next to his engineering premises. And so began Fred Slingsby's decades long involvement with Kirbymoorside, abandoning furniture making and concentrating solely on the manufacture/repair of gliders in the autumn of 1934, the new company being called Slingsby Sailplanes Kirbymoorside. Note the very first advert ever posted by Slingsby was in the November 1933 edition of the "Sailplane and Glider" magazine where under the banner of "Slingsby Sailplanes Scarborough" he advertised "Primary Trainers of Approved Design, Complete with C of A" for £45.

In the spring of 1935 Major Shaw suggested to Fred Slingsby that he amalgamate his company with the engineering firm, and so the gliding business became the aviation department of Slingsby, Russell, and Brown Ltd, Major Shaw being chairman, this helping Fred Slingsby's stretched finances considerably. Making and repairing gliders slowly prospered such that not having sufficient work space started to be a problem once more in 1938. Shaw again proved the benefactor by building a completely new factory at Ings Lane, south of Kirbymoorside. It was in fact primarily built from 2 sections of the carriage washing sheds at Neasden Junction, London! - the company becoming Slingsby Sailplanes Ltd.

The new factory opened on Monday 4<sup>th</sup> September 1939, one day after the outbreak of war! This was initially a disaster as by Easter 1940 all civilian gliding was banned. Work continued on completing the gliders already under construction, and a contract to build Anson rudders helped keep the business going. Things then started to improve with an initial order for the Hengist troop carrying glider, a long production run of Cadets (Type 7) for the ATC, and constructing a small number of Hotspurs under licence. So Slingsby Sailplanes Ltd was in fairly good shape when the European war ended in the spring of 1945 ushering in the start of a new era of civilian sporting gliding in the UK.

It certainly wasn't "boom time" for gliding in the latter part of the 1940s, Great Britain was hit by post war austerity. However, things did gradually improve such that by the middle 1950s Slingsby's business was prospering. Then on the 21<sup>st</sup> April 1955 Major Shaw died and this caused a crisis as his shares in Slingsby Sailplanes Ltd had to be sold to settle death duties. For a while it looked like a hostile takeover could happen which would result in the closure of the Kirbymoorside factory. However, the Shaw-Slingsby Trust was formed chaired by Philip

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Wills and the risk was averted. Following the disastrous factory fire on the 18<sup>th</sup> November 1968 Slingsbys hit major financial problems and were forced into receivership in 1969. The company was bought by Vickers on the 3<sup>rd</sup> Nov 1969, primarily because of the expertise Slingsbys had with GRP structures, going on to produce the successful Type 59 Kestrel glass gliders, 105 of the various marks being built. Glider production finally ceased at Slingsby Sailplanes, as the company had been renamed, in 1982. Long before this Fred Slingsby's health had started to deteriorate in 1962, and 2 years later he retired at the age of 70. He died in May 1973 at Ryedale, Yorkshire, and so passed a gliding legend.

**TYPE 1 – FALCON** : This was a single seater completed by Fred Slingsby in the spring of 1931.



(Original Falcon 1 at Ireleth 1932, [www.scalesoaring.co.uk](http://www.scalesoaring.co.uk))

It was built from plans he'd obtained of the German Falke designed by Alexander Lippisch in 1929. The aircraft, span 42 feet, was successful and saw a good deal of flying before being written off in a gliding accident before the start of WW2, likely at Dunstable as this original Falcon 1 was sold to the London Gliding Club.

A replica Falcon T1 was built at Southdown Aero Services, Lasham, by the late and great Ken Fripp – BGA 3166. Ken used the original Slingsby drawings to construct it, so it was a very accurate replica indeed! First flown by Derek Piggott in 1986, the glider is confirmed by Geoff Moore, Ted Hull, and Graham Saw as being at RAF Halton, owned by Don Knight.

A further 8 Falcons 1s at least were built, uncertainty as to the exact number as I've found an article written by Fred Slingsby himself where he says "a total of 12". Only one has

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(partially) survived the end of WW2. This was the one (BGA 266) modified by G.H.Pattinson for the ATC in 1943 to be a “flying boat glider” that was launched from Lake Windermere behind a speed boat. For a long time it was on display at the Windermere Steamboat Museum though the wings were not original, it’s understood they are Tutor wings (Type 8). I’ve confirmed with the museum (Feb 2014) that they still have the glider. It’s in storage whilst the museum is redeveloped. Once the new museum building is finished the Falcon will have pride of place being suspended above the main exhibition space.

**TYPE 2 - FALCON 2** : This was the second Falcon, built by Slingsby for Espin Hardwick, the founder of the Midland Gliding Club, Long Mynd. It first flew in October 1933 and was the Type 1 with rounded wingtips and modified tail surfaces - it was only later that it was classified as the Type 2. The aircraft was sadly burnt ceremoniously at the Long Mynd in November, Bonfire Night, 1955 following the death of Espin Hardwick.

**TYPE 3 – PRIMARY** : This was essentially a copy of the RFD “Dagling” Primary glider which in itself was a modified Zogling – the Zogling (which means “pupil”) was a Primary glider designed by Alexander Lippisch in the late 1920’s. Slingsbys started building T3’s, span 34 feet, in 1933 and it’s said that 67 were built before the start of WW2. Some of them had detachable nacelles. None are known to have survived, which isn’t that surprising given that they were used for training from the “ab initio” stage starting with ground slides and progressing to “hops” if the pupil advanced that far! Repairing T3’s and providing components for them was a profitable business for Slingsbys in the run up to WW2.



**(Slingsby T3 launching at Dunstable, courtesy of David Underwood)**

**TYPE 4 – FALCON 3** : Believed to be the first “side-by-side” 2 seater glider ever built, span 58 feet. Constructed for Espin Hardwick who was so impressed with his single seat Falcon 2, the Falcon 3 first flown 21<sup>st</sup> April 1935.

This was a successful glider, Martin Simons records 9 as being built. Richard Cawsey tells me a further one was built from a kit by the Cape Gliding Club in South Africa, making 10 in all. Note Fred Slingsby in an article he wrote for the 1965 “The Gliding Book” said “about 20” of the Falcon 3 had been built. However, pretty certainly there’s confusion here with the total number of Falcon 1/2/3s. Those remaining at the start of WW2 were “impressed” into service and ended up with the ATC, many being written off in ATC service. Previously thought that the last flight of a Falcon 3 was at Bramcote in 1947 where it was destroyed in a crash. However, Richard Cawsey advises that the RAFGSA had 2 Falcon 3s in service until 1958. None known to survive.



(Courtesy of Peter Redshaw)

**TYPE 5 – GRUNAU BABY 2** : Built under licence from the Schneider factory in Germany, the first Slingsby T5, span 44 ½ feet, BGA 216, very rapidly met tragedy. It was bought by

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Alan Cobham of “Cobham’s Flying Circus” fame, and at a display at Upwood on 30<sup>th</sup> July 1935 Eric Collins, the first British “Silver C”, was killed attempting an outside loop.



**(The ill fated original T5 Grunau Baby, courtesy of David Underwood)**

The second built, BGA 218, bought by the London Gliding Club, first flew at Dunstable in the late summer of 1935. Estimated that Slingsbys built 15, though an unknown number of kits are also believed to have been sold, and others home built from plans. The low number of T5’s produced by Slingsbys is explained by the production of his next glider the T6 (Kite), and subsequently the T7 (Kadet) and T8 (Tutor), both the T7 and T8 had a little lower performance than the Grunau but were significantly cheaper to build. Uncertain whether any Slingsby Type 5s still exist. One is thought to have still been flying in the mid 1990s, whether it survives needs to be researched.

**HJORDIS** : A “one-off” built by Slingsbys but never assigned a type number. It was designed by Mungo Buxton with a 51 feet wingspan and ordered by himself and Philip Wills in 1934, first flying in 1935.



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

“Hjordis” was the Nordic heroine who slew the dragon “Fafnir” – a famous German sailplane itself from the early 1930s (designed by Lippisch). A completely revolutionary design for its time, Philip Will set many British records pre WW2 with this glider. He also flew it in the 1937 Wasserkuppe competition, the first truly “international” gliding competition – he came 14<sup>th</sup> about half way down the list of competitors. After flying it for about 100 hours Philip Wills sold the aircraft in July 1938 to new owners (A.J.Brink and H.G. Horrell) in Johannesburg, South Africa. The new owners flew it for a further 75 hours including setting a new South African height record in late 1939. Its last flight was on the 2<sup>nd</sup> June 1940 before civilian gliding was banned by the government and the glider requisitioned by the military. Sad to say it was badly stored and neglected, such that when it was handed back to its owners in 1945 it had to be scrapped. Thanks indeed to Geoff Moore for these details of the Hjordis in South Africa. Note Mungo Buxton commanded the Special Development Flight at Christchurch which carried out the radar trials in June/July 1940. Subsequently he commanded the technical and tactical development unit at Ringway, Manchester, being one of the three units that comprised the Central Landing Establishment (CLE) – the gliding unit was separate and commanded by Tim Hervey, the third parachute school unit being commanded by Louis Strange.

**TYPE 6 – KIRBY KITE** : Design work on this was underway even before the first T5 (Grunau Baby) had been completed. Fred Slingsby recognised that many improvements could be made to the T5 whilst still using several of its parts. So a gull winged glider (very fashionable at that time) evolved with a much streamlined fuselage compared with the T5.





**(Imperial College Kite 1 (BGA 284) at Dunstable April 1937. ICGC Archive - [www.icgcarchive.co.uk](http://www.icgcarchive.co.uk) This glider was written off at Haddenham sometime in 1940/41)**

The prototype was built with maximum urgency so that it could fly at the Sutton Bank competition in August 1935. Frank Neilan flew it and did well, making the longest flight of the whole competition. From this followed an increasing number of orders for the Kite (25 constructed by Slingsbys), the later aircraft having modifications introduced compared with the prototype. A further Kite was built from plans by Herman Kursawe (early 1940s) in the USA, NC28800, Richard Cawsey advises this crashed at Harris Hill, Elmira, New York on the 11<sup>th</sup> July 1948.

Without question the Kite was a very successful glider, and now seen as “Iconic” within British gliding history. This is because of its association with the early development of military gliding in Great Britain during WW2, especially with respect to the training of the first military gliding pilots that took place at RAF Thame (Haddenham) in 1941 with No 1 Glider Training Squadron. Some doubts as to exactly how many Kites were impressed into service at 1 GTS, 14 – 16 is the range you’ll find quoted from different sources, Michael Maufe records 16 in his extensive research into wartime Kites very kindly made available to me by Ted Hull. Note the Kites that did see military service with No 1 GTS, and subsequently the ATC, weren’t accorded any respect at all re how they were treated, not that surprising perhaps given it was wartime. In particular bits got swapped around from one glider to another as crashes took their toll. This “mixing” of Kites certainly occurred at Thame and quite likely began before that at the Central Landing Establishment, Ringway, Manchester.

Today 8 Kites are known to definitely exist, 6 in Great Britain, though not all complete aircraft, and 2 in the USA. The list of these is below and those that were recorded as being at RAF Thame in 1941 are marked with an asterisk.

- BGA 222/236\*. This is the prototype Kite and was stored at or near Dunstable for many years though not flying. Initially the prototype was BGA 222 but this was only temporary as it quickly switched to being BGA 236, the “Why” of this I haven’t been able to discover. Unfortunately the storage conditions were not always good, such that when Peter and David Underwood eventually acquired the glider it was in very poor condition indeed. A huge restoration effort has been going on for over 3 years now by Peter and David. As of late October 2013 David advises me that the wings are not far from being finished and control runs plus metal fittings are being fitted to the fuselage. David also advises they will give it the BGA 222 identity. It will be a wonderful day when this truly historic glider takes to the skies again.
- BGA 251\*. Owned by Bob Boyd since 1983 and recently sold (2010) to a syndicate at Portmoak. Flyable.
- BGA 285. On display at the Museum of Army Flying, Middle Wallop in 1 GTS camouflage colours. [www.armyflying.com/](http://www.armyflying.com/) Not airworthy. This was sold by Phil Collins to the museum in the winter of 1989 where it was given its camouflage colours, he himself had bought it in 1988 from Antique Aviation (John Eagles). Initially when at the museum the Kite was flown regularly being aerotowed behind a



camouflaged Tiger Moth. Note BGA 285 was never at Thame and is NOT the “Radar Kite” as is sometimes claimed. It spent the wartime years stored in its trailer in a quarry in Northern Ireland and is therefore very likely the only “all original” Kite 1.

- BGA 310. Rebuilt in 1982 By Michael and Tony Maufe and flown by them for very many years. The fuselage, port wing, and elevator of BGA 327 were used in the restoration. Now part of the Shuttleworth collection, Old Warden.  
[www.shuttleworth.org/](http://www.shuttleworth.org/) Believed to be kept as airworthy.
- BGA 316\*. Whilst definitely recorded as being a 1 GTS Kite the aircraft was sold to a Canadian owner and shipped to Canada most likely in early 1941. It's therefore probable it did very limited flying at Thame, perhaps none at all. The Kite was soon sold on to an American owner in July 1941 where it was registered as N37190, it's remained in the USA ever since. This particular Kite has special provenance as it was owned and flown by Amy Johnson at Dunstable in the UK pre war. Today the ownership is with Dale Busque a vintage enthusiast in the USA, not currently flyable but believed to be in good condition.
- BGA 327\*? The fuselage plus other parts of BGA 310, though not the wings, are in the possession of Peter and David Underwood. David advises that they hope eventually to undertake a restoration. Note Michael Maufe's records have BGA 327 at the CLE, Ringway, and No 1 GTS at RAF Thame in 1940/1941. However, this is not confirmed by Captain Cross's Middle Wallop records.
- BGA 394. Owned by Ted Hull, Dunstable, since 1969 and sold to Bob Gaines, USA, arriving there May 2000. Restored by Bob Gaines to the original varnish finish it would have had when it left the Slingsby factory in March 1939. Following Bob Gaines' death in April 2011, this glider is now on display at the Western Antique Aeroplane and Automobile Museum in Oregon -  
<http://www.waaamuseum.org/default.html> - this information from Ted Hull who advises it may be being kept as airworthy as the policy of the museum is to fly their exhibits where possible.
- BGA 400\*. Restored by Peter and David Underwood to the 1 GTS camouflage colour scheme it would have had in 1941. Flyable and has flown at the Upward Bound Trust at Thame, [www.ubt.org.uk/](http://www.ubt.org.uk/) so a return to its 1941 wartime base! Advised by David Underwood as based at Haddenham. BGA 400 is often referred to as the “Radar Kite”. This is because the wings are definitely those of the one Kite that took part in the radar trials in June/July 1940 flying from Christchurch and being tracked by the Worth Matravers Chain Home radar station near Swanage, this was the key establishment for radar research and development from May 1940 to May 1942. Peter Underwood says the fuselage is from a different Kite. The original “Radar Kite” was the last Kite 1 to be built by Slingsbys – construction number 355A, it was not given a BGA number.

## FURTHER INFO AND PICTURES:

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[http://www.scalesoaring.co.uk/VINTAGE/BuildingReviews/KirbyKite/Kite\\_Documentation.html](http://www.scalesoaring.co.uk/VINTAGE/BuildingReviews/KirbyKite/Kite_Documentation.html)

For a video clip of Amy Johnson flying her Kite 1 (BGA 316) go via the link:

<http://www.icgcarchive.co.uk/index.php?decade=1930&action=overview>

and scroll to “April 1937” for the link to the “Movietone” movie.

**TYPE 7 – KADET** : Designed by John Sproule and first flown by him 11th January 1936 at Sutton Bank (though he had previously “hopped” it at Sutton Bank on 22<sup>nd</sup> Dec 1935), 38 feet 6 inches wingspan. The concept was a “secondary” glider that was cheap to build/repair and relatively easy to fly and soar. The initial order came from the Midland Gliding Club who wanted to replace their nacelled Primary. Far more Kadets were built than any other Slingsby glider, this primarily because of ATC demand in WW2. The exact numbers are unknown. If you research the internet you’ll see estimates are in the range of 431 – 435. Slingsbys are recorded by Martin Simons as having built 254, but many, many more were built from sold plans, else under licence by companies such as Ottley Motors. In the ATC the glider was badged the Cadet Mk 1 rather than the “Kadet”. Confusion reigns to this day as to whether the T7 is a “Kadet” or a “Cadet”, the ATC renaming explains the difference.



(Courtesy of Paul Haliday)

The T7 was never more than a low performance glider, and as post WW2 new aircraft had increasingly better performance those Kadets still flying were just left behind. Not that surprising therefore that very few are still left in existence. If they hadn’t been written-off they were likely burnt long before the concept of “historic gliders” took hold. A 1943 Cadet owned by Richard Moyse is still flying at Lasham.

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## FURTHER INFO AND PICTURES:

<http://www.scalesoaring.co.uk/VINTAGE/Documentation/SlingsbyCadet/Slingsby%20Cadet.htm>

[http://www.glidingheritage.org.uk/collection/T7\\_AWZ.pdf](http://www.glidingheritage.org.uk/collection/T7_AWZ.pdf)

**TYPE 8 – TUTOR** : Improved wings fitted to a Kadet fuselage. The wings, 43 ½ feet span, were adapted from a BAC 7 by John Sproule.



(Courtesy of Paul Haliday)

Flying in Jan 1938, maybe the first flight was late 1937. Total built is unknown but certainly in excess of a 100, Slingsbys built 62 for the ATC where it was known as the Cadet Mk2. 25 built under licence by Martin Hearn Ltd, and Slingsbys sold several in kit form. Many gliders that were originally built as Kadets became Tutors when the improved wings were fitted. A few Tutors remain but the majority of them are no longer airworthy.

**TYPE 9 – KING KITE** : Mungo Buxton is credited as being the King Kite designer though he certainly had assistance from Slingsby staff such as John Sproule. 3 King Kites were built to compete in the July 1937 international competition at the Wasserkuppe. The prototype first flew on the 17<sup>th</sup> April 1937 and was quickly found to have very bad spinning characteristics. Willy Watt spun in on the very first day of the Wasserkuppe competition and, whilst himself unhurt, the aircraft was written off. Fred Slingsby himself later discovered that the King Kite

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wings had been wrongly constructed with “wash in “ at the tips rather than “wash out”, hence the propensity to spin like a top if provoked. A mystifying construction error and a considerable shame, as if the wings had been built as designed the King Kite could well have become a top class competition glider. The 2 remaining King Kites were “impressed” into the armed forces during WW2 and became ATC gliders occasionally flown by instructors. One broke up flying in a cumulo-nimbus at the Mynd in 1946 killing the pilot. The final King Kite passed into the ownership of the RAFGSA and was scrapped at Detling in 1950 (another source says 1953) following the discovery of glue failure.



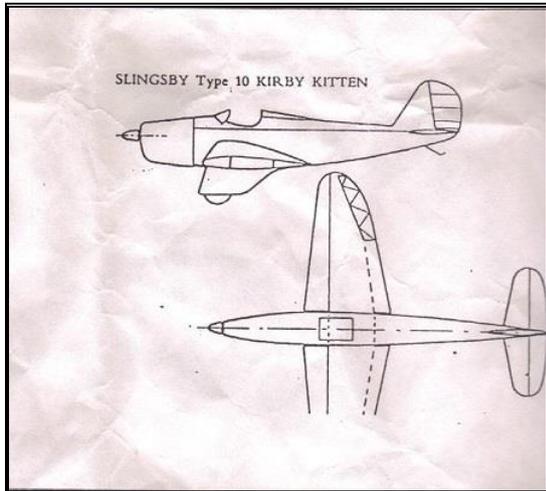
[www.scalesoaring.co.uk](http://www.scalesoaring.co.uk)

David Jones built a replica (BGA 2769) using the original Slingsby drawings (but the wings were completely redesigned!) that first flew in 1983, this aircraft subsequently attending many VGC rallies. The author so far has not been able to discover its exact eventual fate but notes it reported in the spring 2003 edition of the VGC News that sadly the King Kite replica was no more.

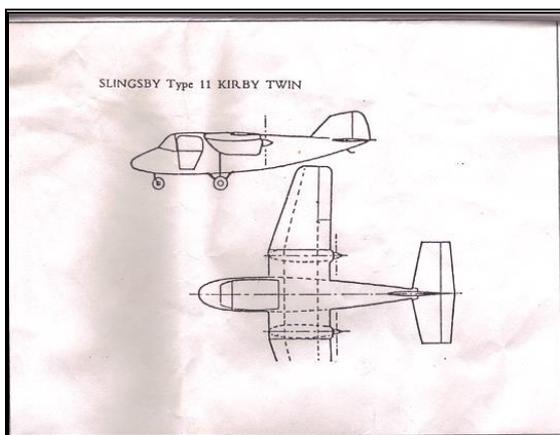
## **FURTHER INFO AND PICTURES:**

[http://www.scalesoaring.co.uk/VINTAGE/Documentation/KingKite/KingKite\\_Docs.html](http://www.scalesoaring.co.uk/VINTAGE/Documentation/KingKite/KingKite_Docs.html)

**(TYPE 10 – KIRBY KITTEN)** : A low winged single-seat monoplane designed by Fred Slingsby, Mungo Buxton, and John Sproule (1938). Designed to use the Scott Squirrel engine which never proved itself, the project was consequently abandoned and the Type 10 never flew.



**(TYPE 11 – KIRBY TWIN)** : This was designed as a twin “pusher” engined 2 seater cabin light aircraft. The engines were meant to be from “Weir”, but these were never delivered, hence whilst some construction of the prototype Type 11 went ahead at Slingsbys it never flew.



**TYPE 12 – GULL (1)** : A strutted gull winged 50 feet 4 inches span sailplane that had significantly higher performance than the T6 Kite, the prototype flew in March 1938. Slingsbys built 9 Gulls before the start of WW2, a further one was built from plans in 1942 by Herman Kursawe in the USA (N41829). This is now an exhibit at the National Soaring Museum, Elmira, New York <http://www.soaringmuseum.org>



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

3 Slingsby built Gulls exist today, but only one is still flying. Dudley Hiscox, founder of the London Gliding Club, bought the prototype in 1938 (BGA 334). This was then sold to the Sydney Soaring Club (Australia – arriving in April 1939) where it made many fine flights before the outbreak of war in the Pacific saw the cessation of civilian gliding in Australia. Further epic flights followed after the end of WW2, the aircraft is now an exhibition piece at the RAAFA Aviation Heritage Museum, Bull Creek, Western Australia –

<http://www.raafawa.org.au/museum>

Note the most famous Gull is the so called “Blue Gull” (after the colour of its fuselage – BGA 380, the last Gull 1 built by Slingsbys) which Geoffrey Stephenson flew across the Channel on 22 April 1939 having started with a winch launch from Dunstable. This glider was written off having spun in at Feltwell on the 10<sup>th</sup> August 1965.

A Gull 1 has for very many years been an exhibition piece at the East Fortune aircraft museum in Scotland. This is BGA 379 which is believed to now be constructed from the parts of at least two Gulls rather than being solely the original BGA 379 – you’ll find references on the internet that the tail and struts are from the “Blue Gull”, which as far as I know hasn’t been confirmed. Glider is now in storage at the East Fortune museum awaiting



restoration. The curator advises me that the museum are intending to have it back on display in 2016.

The third Slingsby Gull 1 still in existence is BGA 378 (1<sup>st</sup> CofA September 1938). This for many years was very successfully flown by Tony Smallwood, especially at Competition Enterprise events. The Winter 2010 edition of VGC News reports it as having been sold to Dennis Barton, a well known vintage enthusiast, in the USA. The Summer 2013 VGC News confirms the Gull is happily flying at VSA rallies in the States.

## **FURTHER INFO AND PICTURES:**

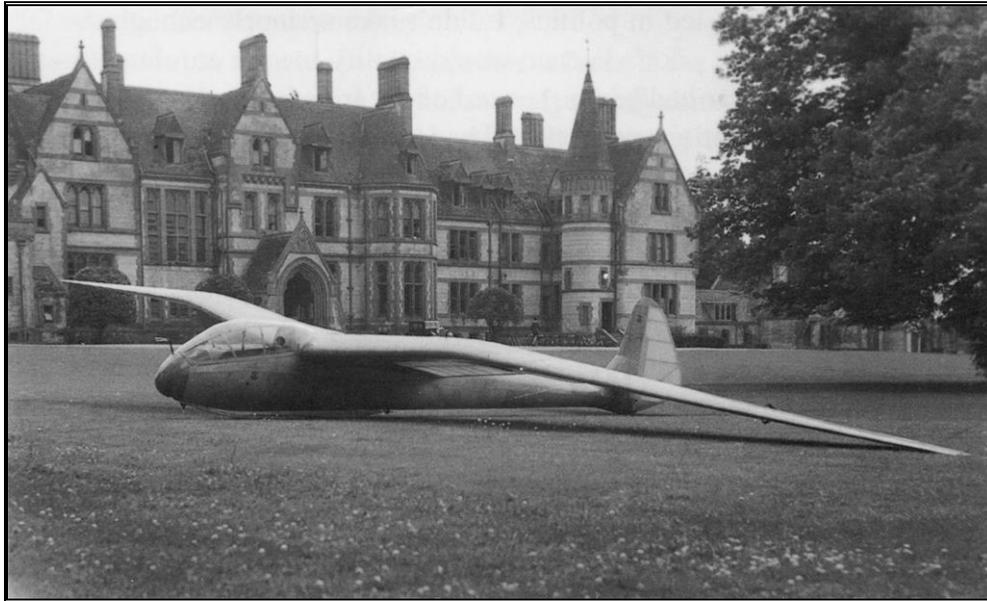
[http://www.scalesoaring.co.uk/VINTAGE/Documentation/Gull/Type12\\_Gull.htm](http://www.scalesoaring.co.uk/VINTAGE/Documentation/Gull/Type12_Gull.htm)

**TYPE 13 – PETREL** : Frank Charles, who was well known as a motor cyclist, flew the prototype Gull 1 in 1938. He didn't, however, place an order for one (He'd bought the prototype Kite) but instead it's believed he persuaded Fred Slingsby to manufacture a new sailplane to his vision – effectively a German Rhonadler but with gull wings. And so the Petrel was born. Slingsbys built 3 Petrels (56ft 11 inches span {17.3m}), the prototype first flew in December 1938. Tragically Frank Charles was killed in this machine after a winch launching accident at Camphill in July 1939 at the National Championships, the glider was written off.

Amazingly the two remaining Petrels still exist, one of which still flies.

BGA 418, sometimes referred to as the “White Petrel”. The first civilian owner was John Simpson, father of Colin Simpson a very active member of the Lasham VGC group. The aircraft was bought in 2001 by Bob Gaines of the USA from Ron Davidson, who had owned it for almost 30 years in the UK, and for a while was flown in its imported state. Bob set about a complete restoration in 2006 including taking it back to the clear varnish finish it would have had when it left the Slingsby factory in 1939. Whilst very advanced the restoration had not been fully completed when sadly Bob Gaines died in April 2011. Today BGA 418 is stored awaiting the completion of its restoration at the Western Antique Aeroplane and Automobile Museum in Oregon - <http://www.waaamuseum.org/default.html>

# GLIDING HERITAGE CENTRE



(Courtesy of Colin Simpson. BGA 418, likely taken shortly after purchase by John Simpson in July 1941, lawns of Claysmore House, Iwerne Minster)

BGA 651, the last built, has been wonderfully restored by its owner Graham Saw. It flies regularly in the United Kingdom and graces many vintage gliding rallies / meetings. The aircraft was at the 41<sup>st</sup> International VGC rally held at Lasham, August 2013.

## FURTHER INFO AND PICTURES:

<http://www.scalesoaring.co.uk/VINTAGE/Documentation/Slingsby%20Petrel/Petrel.html>

[http://www.scalesoaring.co.uk/VINTAGE/Documentation/Slingsby%20Petrel/BGA418/BGA418\\_History.html](http://www.scalesoaring.co.uk/VINTAGE/Documentation/Slingsby%20Petrel/BGA418/BGA418_History.html)

**TYPE 14 – GULL 2**: This was a high performance, side-by-side, cantilever gull winged 2 seater where design work began in 1938. The choice for this new type was somewhat surprising as it was by far the most complex aircraft built by Slingsbys up to that time, and Fred Slingsby could hardly have expected it to sell to civilian clubs. Only one example was ever built. Its construction got delayed as the Type 13 Petrel prototype took precedence – Frank Charles who had ordered the first Petrel put up money for it in advance. The wings of the Type 14, span 56 ½ feet, were built in 3 sections – a centre section + 2 outer panels. First flights eventually occurred in April 1940, an official permit to fly having been granted.



## **(Gull 2 at Lasham. Courtesy of Colin Simpson)**

Few if any flights were authorised after this until the aircraft was requisitioned by the ATC, where it was used for occasional demonstration flights and never for training. Given certain of its flying characteristics the fact that it survived during its lengthy time with the ATC is surprising.

Martin Simons states the glider as remaining in ATC hands until 1951 when it was finally released and returned to Slingsbys. This was followed by test flying at Sutton Bank in 1952 as a result of which a number of modifications were made, principally to the ailerons. With these changes the Gull 2 received its certification and became BGA 664.

The major problem with the Gull 2 was getting aileron control during the initial ground run of the launch, especially so for aerotows. Even with 2 pilots aboard the glider still sat on its tail and there was an absolute necessity to get the nose down/tail up as soon as possible. Failure to do this would leave the wing stalled, and if a tip dropped every possibility of a very nasty ground loop being the result unless the pilot speedily released the launch rope. This is exactly how the Gull 2 met its end at Lasham on the 27<sup>th</sup> May 1958. It's been reported that it was the first flight on type for a new syndicate member, the aero tow going disastrously wrong ending up with a violent ground loop which wrote off the glider. In fact the pilot was extremely experienced, in good flying practice, and current on type, though it certainly wrote off the glider! – the pilot's logbook states "Cartwheeled on take-off – aircraft damaged". A shame, as during the previous summer the Gull 2 had put on a creditable performance by

# GLIDING HERITAGE CENTRE



coming 14<sup>th</sup> out of 28<sup>th</sup> at the League 1 National Championships held at Lasham, competing against modern sailplanes, which on paper had much better performance.

The author has seen a report that the wreckage is still to be found at White Waltham airfield. However, 56 years after the launching accident at Lasham this seems highly unlikely. Any additional information on the fate of the Gull 2 then please e-mail me and I will update this document.

**Below a link to a short video showing Fred Slingsby and the Gull 2 at the Kirbymoorside factory:**

<https://www.facebook.com/photo.php?v=770721116275814&set=vb.100000137974729&type=2&theater>

**TYPE 15 – GULL 3**: Undoubtedly the highest performance glider that Slingsbys produced pre WW2. It was in fact still under construction when war broke out in September 1939. The cantilever gull winged Type 15 had the same 50 feet 4 inches span as the Gull 1 but the wings were strengthened so that struts were no longer required.



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

# GLIDING HERITAGE CENTRE



The first flight occurred sometime in 1940 and it received its CofA in January 1941. This suggests Slingsbys must have got official permits for limited test flying as civilian gliding was banned from Easter 1940. Likely further occasional flying took place, 24<sup>th</sup> May 1942 is one of the dates mentioned, otherwise the aircraft was in storage up until May 1944 when it was loaned by Slingsbys to the Aeroplane and Armament Establishment as TJ711 at Boscombe Down.

On the 17<sup>th</sup> October 1944 the aircraft was sold to Prince Bira of Siam, he was able to legally fly the Gull 3 at ATC sites where he was an instructor, though it's now well known he did some illegal flying as well. Prince Bira was very much a celebrity on account of his success in motor racing. For those of you who remember the "King and I" musical, and the Yul Brynner and Deborah Kerr 1956 film, Bira was a grandson of the king. He had the glider painted in his Bira motor racing blue colours. There's another very unusual story associated with this glider. Bira had a small white West Highland Terrier called "Titch" to which he was very much attached. So attached that he used to take the dog flying with him, perched on his shoulders! By all accounts the dog loved it, and couldn't wait to leap into the cockpit, a small clear vision panel was introduced just aft of the canopy so Titch could better see out! The dog endured (enjoyed?) a number of epic flights including a cloud climb to 12,000 feet.

In early 1946 Bira bought Philip Will's Minimoa and sold the Gull 3. This is where the history of this unique glider gets hazy. You will find reports that Bira badly broke the Gull following a forced landing on Dartmoor and that Hawkrige Aircraft Ltd of Dunstable subsequently obtained the wreckage and repaired it in 1949, renaming it the Hawkrige Kittiwake. Firstly, Bira had already named the glider Kittiwake himself (this is substantiated by photographs taken during his ownership), though it's believed it was Fred Slingsby's intention to name it "Kittiwake" when it went into production. Secondly the late Chris Wills told me that all Hawkrige did was to give the glider a CofA and at the same time fit a new canopy and instruments. Perhaps the documentation which is kept by the Brooklands Museum may resolve this question of the "Gull 3 crash". Latest information (Feb 2014) received from Richard Cawsey is that the "Bira Dartmoor crash" was actually with a Weihe he owned – so hopefully Brooklands documentation, once accessed, will confirm and finally resolve this issue.

Post it being at Hawkrige the glider found its way to the Oxford Gliding Club at Weston-on-the-Green where it passed through a number of syndicates with which it flew regularly until 1966. A major overhaul then took place such that the Gull 3 didn't fly again until 1973. That winter it was stored outside in a trailer (supposedly a Hamilcar fuselage!) at a farm near Deddington. Oxfordshire. The trailer leaked and at least one of the wings got badly damaged, bad news indeed as the glue was casein.

The aircraft was subsequently acquired by Mike Beach, likely sometime in the second half of 1984. He'd advertised for a "fine vintage glider needing restoration" in the Spring 1984 edition of the VGC News, and the Spring 1985 edition records restoration of the Gull 3 as being well underway. Mike carried out a superb restoration and got it flying again in its "Bira blue" colours. The first flight after restoration was at the Camphill national rally in May 1987. The Gull 3 continued flying for a few more years, its last CofA expiring in September 1994. In

# GLIDING HERITAGE CENTRE



1998 it was acquired by the Brooklands Museum, who in July 2013 very kindly loaned it to the Gliding Heritage Centre at Lasham so it could be regularly exhibited in their hangar.

So the TYPE 15 Gull 3 became a “one off”. No question that Fred Slingsby had high hopes for it as a production aircraft if war hadn’t intervened. Clearly he had this in mind in late 1944 as the European war was reaching the final months of conflict. Below an extract from a “News from Kirkbymoorside” article in the December 1944 edition of Sailplane and Glider:

*“The single-seater “Gull” will be produced with a full cantilever wing, landing wheel, tail trimmer, adjustable rudder pedals of our own design. The prototype version has shown remarkable results which are well ahead of any other machine of the 50-foot span class. The performance of the strutted “Gull” is well known to all leading pilots; and increased performance is assured.”*

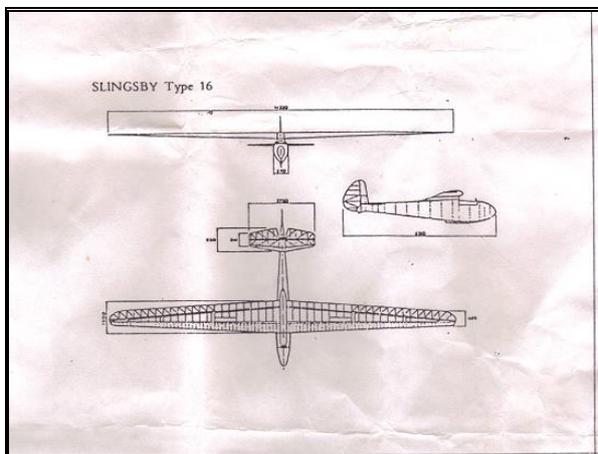
However, second thoughts as to the high cost of manufacturing Gull 3s and trying to sell them in the immediate post WW2 era of austerity meant the glider never did go into production. Instead Slingsbys designed and built the lower cost, and lower performance, TYPE 25 Gull 4.

A replica Gull3 (BGA 3825 - HBZ) exists. This was built by a team led by Mike Garnett at the Blackpool and Fylde gliding club, the work taking many years. Mike sadly died before it was completed and the Gull3 replica was first flown by Peter Philpot on the 12<sup>th</sup> September 1992. Not currently flyable, but It’s hoped to see this glider flying again in 2014 after a recover and restoration to its original clear dope condition, plus fitting an original style canopy.

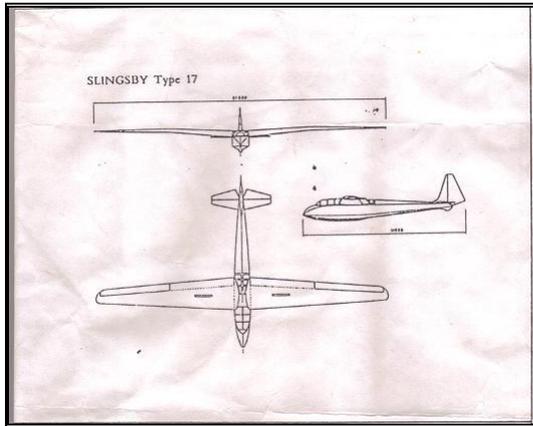
## FURTHER INFO AND PICTURES:

[http://www.glidingheritage.org.uk/collection/Gull%203%20\(Brooklands\).pdf](http://www.glidingheritage.org.uk/collection/Gull%203%20(Brooklands).pdf)

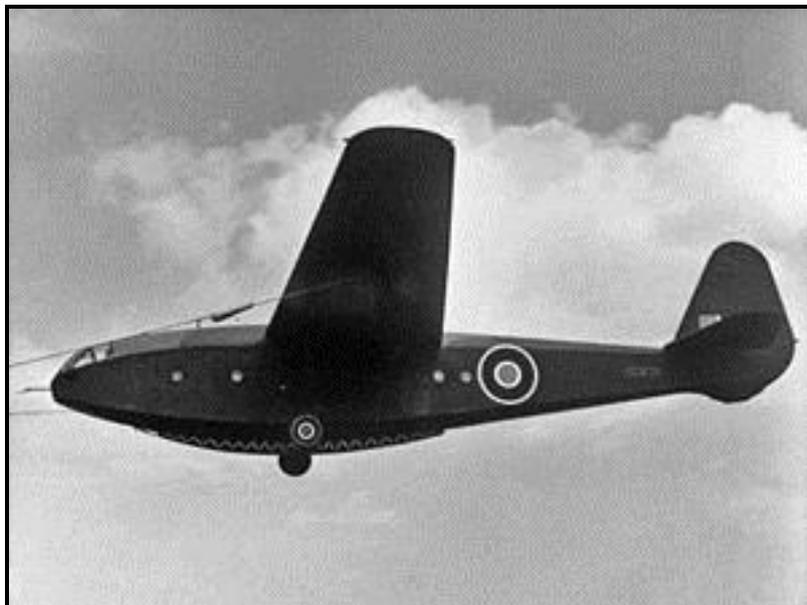
**(TYPE 16)** : Never progressed beyond the design stage. Intended to be the outer wing panels of the Gull 2 married to a Kite fuselage with the tailplane of the Gull 1!



**(TYPE 17)** : This never got beyond Slingsbys design submission to the first Air Ministry specification for a 8 seat troop carrying glider. If built it would have been gull winged with a 70 ft span. The contract was won by the General Aircraft Hotspur, Slingsbys subsequently building 13 Hotspurs under sub contract.



**TYPE 18 – HENGIST** : The Air Ministry issued a new specification, this time for a glider that could carry 15 fully armed paratroops. The idea was that the paratroopers would jump out and the glider was then towed back to base to make further runs and drops. Slingsbys resulting Hengist had a span of 80 ft and it's believed the prototype first flew in January 1942 at Dishforth. The second prototype suffered an accident and was written off at Dishforth.

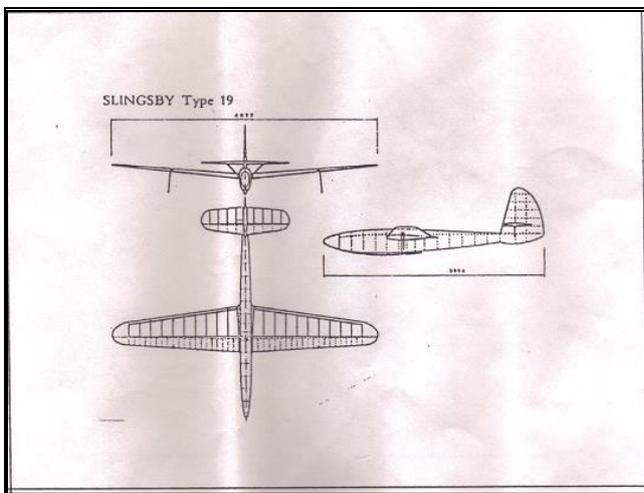


[\(Wikipedia – public domain\)](#)

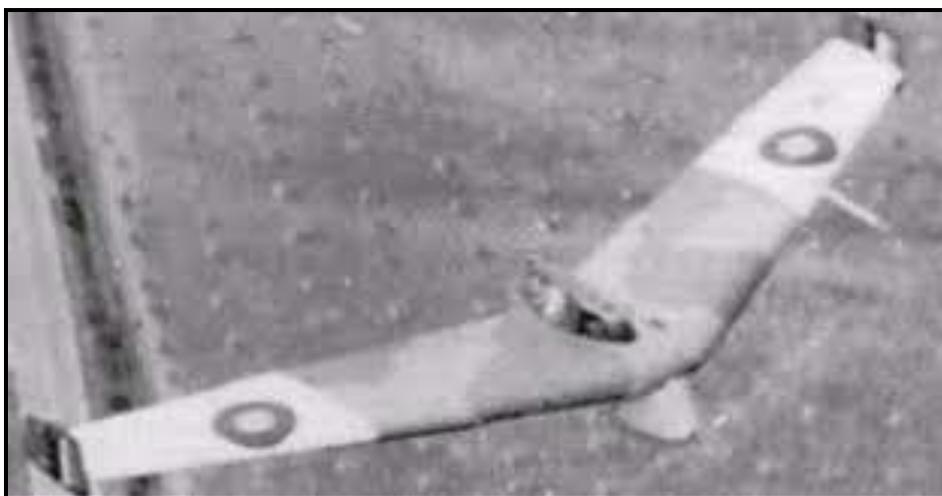
In the light of the test flying modifications were made, and this resulted in the Hengist 3, the records say that 15 of these were built – overall 18 Hengists are said to have been made. By

the time that the Hengist was ready for production official policy had changed. Paratroopers would be dropped from powered planes, pure gliders now needed to be able to carry bulky equipment as well, rather than just troops – and the Hengist wasn't big enough for this purpose. So the Hengist never did see production or indeed action, Martin Simons says all had been scrapped by 1946.

**TYPE 19** : This was a 16 ft span target glider that Slingsbys built under contract for IMAC (International Model Aircraft Company). 6 of these are recorded as having been built for naval experiments, no information as to what happened to them.



**BAYNES BAT** : A “one-off” built by Slingsby in 1943 that was never given a Slingsby Type number, no doubt because it was designed by L.E.Baynes – who was also responsible for the Scud series of gliders built in the 1930s.



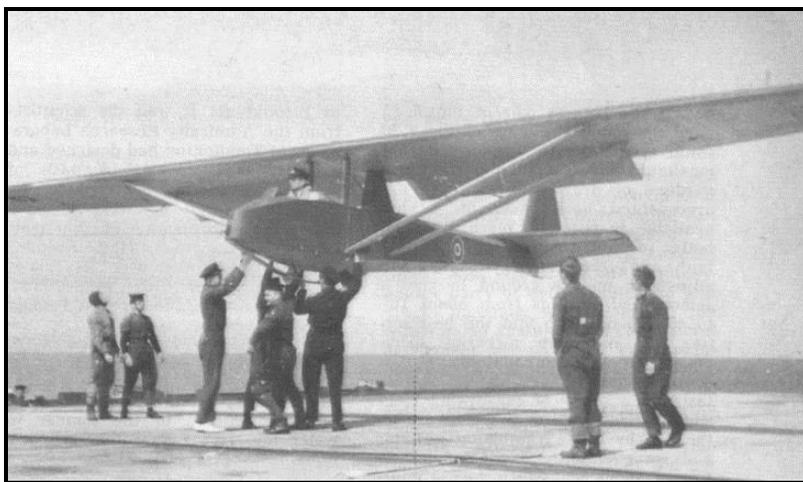
(Wikipedia – public domain)

# GLIDING HERITAGE CENTRE



This was an experimental tailless glider meant to help testing a rather astonishing concept! Namely that wings would be fitted to a tank which would be towed to a battleground destination where the pilot released the tow and glided down to land. After quickly discarding the wings the tank would then roar off into battle with its crew including the pilot! Phew! The Bat with a 33 1/3<sup>rd</sup> feet span was built to be a 1/3<sup>rd</sup> scale of that of the intended production aircraft. The first flight took place in July 1943 at the Airborne Forces Experimental Establishment at RAF Sherburn-in-Elmet. A number of other successful test flights were made, most of them by the very famous pre war glider pilot, Robert Kronfeld, then a RAF flight lieutenant. The full scale version of the Baynes Bat never did get built, the concept got discarded with the appearance of the General Aircraft Hamilcar which could carry a 7 ton tank internally. The Bat went on to be intensively used by the Royal Aircraft Establishment for testing the flying characteristics of tailless aircraft. Wikipedia records its last known location as being in a hangar at Croydon airport in 1958. One has to wonder how it got there, and indeed what was its eventual fate – Croydon airport was shut down completely in September 1959.

**TYPE 20** : Most vintage gliding enthusiasts are unaware of the existence of the Slingsby Type 20, and end up being very surprised when they hear its story! Fred Slingsby was very much aware that post the end of WW2 there was going to be a need for a robust and durable two seater training glider, not least for the ATC who were still using the old solo slides and hops training methods. As a private venture 2 different types were built, the tandem Type 20 and the side-by-side Type 21. The T20 having a 54 feet 6 inches span first flew in March 1944. The wings were from a Tutor with extended span, the fuselage had a lot of similarity with the much earlier Falcons. The aircraft was flown and tested by the ATC and Martin Simons records it as “liked” by the ATC. However, it was not liked by the RAF Training Command who preferred the T21. The outcome of this was that Slingsbys didn’t receive a production order for either. Despite the official “no gliding” ban still in force the T20 did see some limited illegal flying, otherwise it was kept in storage. There must have been hopes that when WW2 ended and civilian gliding resumed the aircraft might meet with approval from civilian clubs. However, events were to take a different turn.



(Aeroplane Monthly 1977-02 / J.Sroule – Carrier-borne glider, HMS Pretoria Castle)

# GLIDING HERITAGE CENTRE



During the war many military aircraft had suffered crashes / failed landings in the final “round out” stage of the approach on to aircraft carrier flight decks. Turbulence to the stern of the carrier was suspected, and it was decided this needed urgent investigation via systematic testing – and someone came up with the idea of using a glider. John Sproule (JS), a serving RN officer with a huge amount of gliding experience including CLE and GTS 1 at Thame, was appointed to lead the tests. So JS requisitioned the T20 from Slingsbys for the carrier trials. Initial tests were carried out at Wombleton airfield and then moved “in anger” to HMS Pretoria Castle where JS made the initial test flights on the 29<sup>th</sup> May 1945 off the Isle of Man. These flights did not prove successful so testing was switched to HMS Illustrious, this after more tests at Wombleton where the recording instruments were much changed and refined. We don’t have recorded the date when the Illustrious trials started in the English Channel, but it was a few months after the initial ones on the Pretoria Castle. The first flights piloted by JS went well, but then disaster struck with the first flight by his deputy, Lt Curry RN, the result being the glider crashing into the sea after the winch cable got entangled with a radio mast, the pilot being rescued. A truly spectacular photo of the last moments of the T20 on Illustrious can be found in Martin Simon’s book “Slingsby Sailplanes”. In the distance can be seen an escorting destroyer. It was this destroyer that subsequently rammed the T20 to make sure it was destroyed, the bits littered around the bottom of the English Channel to this day. And so the only Type 20 ever produced by Slingsbys had a short and ultimately very spectacular history, culminating in a violent end!

**TYPE 21 – SEDBERGH** : This was a side-by-side (prototype was 50 feet span) 2 seater completed by Slingsbys and first flown in 1944.



[www.rcawsey.co.uk](http://www.rcawsey.co.uk) – Al Stacey)

# GLIDING HERITAGE CENTRE



Like the T20 it was hoped by Fred Slingsby that it would be taken up by the ATC as their standard training aircraft, it being in direct competition with his own T20. Like the T20 it failed, as whilst it was the preferred choice of the RAF Training Command the ATC wanted the tandem Type 20 instead – so neither got ordered at that time. Note an extract from the “News from Kirkbymoorside” (Where did that second “k” appear from!?) in the December 1944 edition of Sailplane and Glider.

*“Two trainer type 2-seater sailplanes have appeared from nowhere in particular. These are known as the Type 20 and Type 21. (Shown Below) Prototypes of both machines have logged many flying hours and promise to be valuable additions to post-war training equipment.”*

Prospects for the prototype T21 (which became BGA 675) did not look good after rejection by the ATC, and the aircraft was put into storage at Sutton Bank. Dudley Hiscox, the founder of the London Gliding Club, became aware of it and when gliding started again at Dunstable post WW2 asked Fred Slingsby if they could use it to get them started again, this would have been about April 1946. To the considerable surprise of Fred Slingsby the London Gliding Club thought it was a marvellous trainer and bought it. The purchase by the LGC started the T21 off on its success story. Slingsbys produced a second T21 (T21A – BGA 683, 54 feet span) and this started to be used for demonstrations in the summer of 1947. Further modifications were made and this resulted in the T21B (originally referred to as the Type 28) which first flew in December 1947. The T21B became the standard production model and by the first quarter of 1948 after an order for one from the ATC orders from civilian clubs were starting to come in.

As to exactly how many T21s were built is a matter for debate, many were exported and an estimated 5 built from kits or spares – 226 to 228 is a best guess, Richard Cawsey’s records list 222. 95 were built for the ATC according to Wikipedia (Martin Simons states 92). What Wikipedia and Martin Simons both agree on is that 19 of the 95/92 were built for the ATC by Martin Heard Ltd.

Effectively the T21 was a “blown up” 2 seater Grunau Baby, and it found its time and niche in the emerging UK gliding market post the end of WW2. A whole generation of ATC initially trained glider pilots, including the author, readily remember and identify with this glider. The one great deficiency was the “look out” visibility above and behind because of the wing overhanging the cockpit. A number of collisions have occurred because of this, including sadly one that involved a fatality at Lasham with the famous “Daisy” (BGA 631) on the 23<sup>rd</sup> May 1970.

The dominance of the T21 as a club trainer, outside of the ATC, didn’t last for long after we were into the middle 1960s and gliders such as the German K7, and not to forget the T49 Capstan, came onto the market. It became a glider for “flying with your friends” on a nice warm relatively windless day. This was boosted in the mid 1980s when the ATC sold off their remaining T21s to civilian buyers. Today there’s still many T21s flying, we have BGA 3148 (WB 990 with the ATC) at Lasham, which is MH 017 on the Martin Hearn production list.



The T21C (also known as the Type 46, BGA 1030) first flew in October 1957. This was extensively modified, the wing positioning was lowered so that the pylon of the T21 was eliminated and the span increased to 56 and a 1/2 feet, the tail was completely redesigned, and the glider had an enclosed canopy. Overall this was found to deliver very little improvement in performance relative to the T21B, and only one T21C was ever built. This aircraft went to Holland in 1991 where it was very badly damaged when crashed in 1995. The wreckage lay in a trailer for many years until obtained by a group of Dutch vintage enthusiasts. Starting in 2003 the rebuilding and restoration took them 6 years, the T21C taking to the air again on the 12<sup>th</sup> December 2009.

## FURTHER INFO AND PICTURES:

[http://www.glidingheritage.org.uk/collection/T21\\_993.pdf](http://www.glidingheritage.org.uk/collection/T21_993.pdf)

**(OLYMPIA)** : Starting with the January 1945 edition of Sailplane and Glider Slingsbys ran a large advert titled "Our Post War Policy". In this they advised the gliders they were intending to sell once production began again post war. These were Kite 2, Gull 3, Type 21, Petrel 2, **AND** the Olympia. The same advert continued with every edition until May 1945 when the title changed to "Revised Order of Production" where the opening paragraph was:

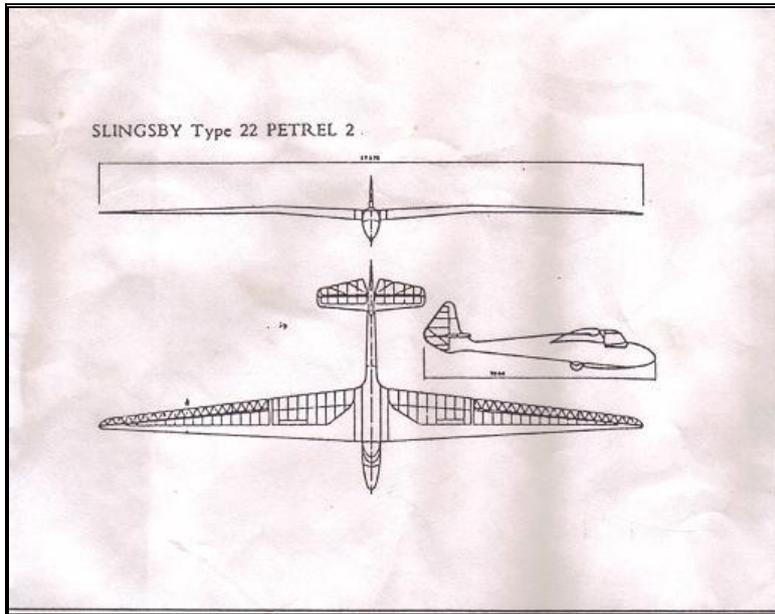
***"In view of the unexpected demand for the "Kirby Kite" and the "Olympia 2" we have decided to plan the quantity production of these machines forthwith, with priority over the higher performance types"***

Note that starting with the January edition of Sailplane and Glider Chilton Aircraft Hungerford, were also advertising monthly "The Olympia Sailplane". Both the Chilton and Slingsby adverts continued to be repeated until the December edition when the Slingsby advert changed and no longer mentioned specific glider types.

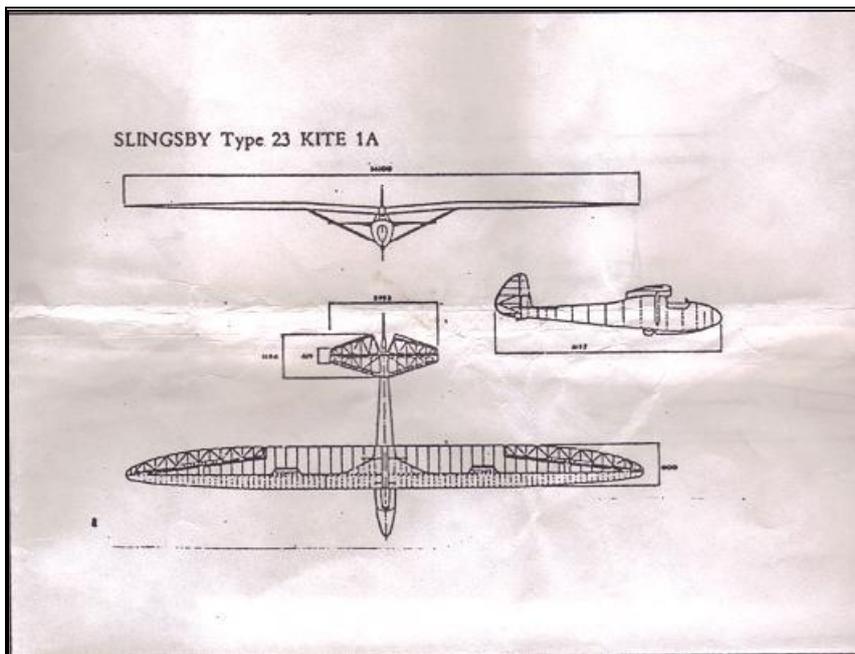
All rather mysterious, but in fact Slingsbys never did build any Olympias, though they certainly repaired many and supplied spares when Elliotts of Newbury ceased their gliding business following the death of the managing director, Horace Buckingham, in the summer of 1965.

**(TYPE 22)** : This would have been the "Petrel 2", an improved Petrel. However, after the end of WW2 with the Olympia starting to be sold in Great Britain it became clear to Fred Slingsby that something a great deal better was needed if it was to be competitive and sell. Accordingly the Type 22 never progressed beyond the design stage. Slingsbys did in fact advertise it in the December 1944 edition of Sailplane and Glider:

***"The post-war version of the "Petrel" high performance sailplane has additional features such as landing wheel, adjustable rudder pedals, tail trimmer, and a choice of two cockpit covers. "***



**TYPE 23 – Kite 1A** : Same wings as the pre war Kite T6 (though spoilers were fitted) with a redesigned fuselage which incorporated a landing wheel. This aircraft first flew in December 1945 but it was clear that its performance was little better than the T6, and something much better was needed for the British glider market post WW2 if it was going to sell successfully. So the Type 23 never went into production and only one was built.



Martin Simons records it as being sold to the Cambridge Gliding Club in 1946 and shortly after that it went to the USA. However, Richard Cawsey thinks it more likely remained at the Yorkshire GC and was the Kite written off on the 7<sup>th</sup> Sept 1947.

**TYPE 24 – FALCON 4**: In April 1945 the Ministry of Aircraft Production issued specification TX.8/45. This was to supply the ATC with a tandem 2 seat training glider that would handle very much like a Kirby Cadet. Somewhat mystifying why the T20 wasn't taken into consideration, as the ATC had already test flown it and were said to have liked it. However, Slingsbys duly designed the Type 24 to meet TX.8/45. Three prototypes were ordered and the first flight took place in April 1946. The wings had a span of 54ft 4 inches and were braced by struts. Note the aircraft were actually built under sub-contract by Martin Hearn Ltd. The second Type 24 produced was written off in December 1946, the remaining two went to Beaulieu for testing and evaluation by the Airborne Forces Experimental Establishment. The T24s did not find favour and no production order was issued by the Ministry for the ATC. In an attempt to get a production run going Martin Hearn advertised the Falcon 4 to civilian clubs, but again no orders were received. As to their eventual fate, the third prototype was written off during winch launching trials in August 1948. The first prototype ended up in January 1949 where it had always intended to be, namely with the ATC (Detling)! It subsequently moved around various ATC units, its last known base being Cosford in March 1953. No further information has been unearthed as to its final fate.



# GLIDING HERITAGE CENTRE



(Wikipedia – public domain)

As a tail note the author first soloed in a T31 at 633 Gliding School Cosford on the 31<sup>st</sup> March 1963. The ATC was run on a “sausage factory” basis in those days, the author having been selected on the 31<sup>st</sup> as one of “the next for solo cadets” made 18 flights on that final day!

## FURTHER INFO AND PICTURES:

<http://www.scalesoaring.co.uk/VINTAGE/Documentation/Slingsby%20T24%20Falcon/T%2024%20-%20SLINGSBY%20%20SAILPLANES.pdf>

**TYPE 25 – GULL 4** : Really this should have been named the Type 26 as the Kite 2 (the actual Type 26) was designed and built several months before it. The highest performance glider built by Slingsbys before the end of WW2 was unquestionably the Type 15 Gull 3. Natural therefore to think that with the war ended Slingsbys would have made modifications (eg adding a wheel) and put this into production, and indeed that was initially the intention. However, with the British gliding movement struggling to re-establish itself in times of considerable austerity, Fred Slingsby took the decision that the Gull 3 was just too complex in its construction, and consequently too expensive to be built and sold at a profit. Therefore the Type 25 Gull 4 was designed with a 15m span to be comparatively cheap to construct, the prototype first flying in late 1947.



(Gull 4 at Dunstable. Courtesy of Dave Goldsmith)

# GLIDING HERITAGE CENTRE



It was reckoned to be a little better performance-wise than the (Chilton) Elliotts-of-Newbury Olympia with which it competed directly, but not by much (and significantly worse than the Gull 3). Unfortunately the EoN Olympia, a truly excellent glider for its time, was in full scale production and the Gull 4 simply missed its market. Four were built and two of these were entered in the July 1948 world championships held at Samedan, Switzerland, piloted by Philip Wills and Christopher Nicholson. Tragically Chris Nicholson was killed when he became enveloped in cloud and the aircraft crashed into a mountain being written off. The Gull 4 flown by Philip Wills took the same route as the prototype Gull 1 going to the Sydney Soaring Club and arriving in May 1949. Here it saw a great deal of flying and met with 3 very serious accidents along the way. Following the last, which was a spin in off a winch launch, you'll see "Wikipedia" says the wreckage is still at the Tocumwal Gliding Club in New South Wales, though the information has likely been sourced from Martin Simons 1996 book. Subsequent enquiries and Dave Goldsmith, President of the Australian Gliding Museum, Bacchus Marsh, Melbourne, [www.australianglidingmuseum.org.au](http://www.australianglidingmuseum.org.au), and Alan Patching confirm this aircraft still exists, though in pieces at Bacchus Marsh. Seemingly some restoration work has been done but a lot remains to return it to exhibition status.

The prototype Gull 4 (Slingsby c/n 505) was bought by the London Gliding Club in 1948 and was flown by club members for many years. It suffered a very serious accident whilst hill soaring at Dunstable which wrote off the fuselage and tail. The wings were repaired and fitted to a Kite 2 fuselage (MHL 210). The author remembers this aircraft, BGA 565, at Lasham when it was being looked after by Ray Whittaker in 1998. Feb 2014, just established that this glider still exists and is privately owned at the Peterborough and Spalding GC, likely is now airworthy.

The final Gull 4 (c/n 547, BGA 612) went to the RAFGSA and like the prototype saw a great deal of flying before being written off in an accident in 1967.

**TYPE 26 – KITE 2** : Definitely not one of Slingsbys most successful designs! Strange that the factory efforts weren't concentrated much more on the Type 25 Gull 4. The Kite 2 was designed as a successor to the original Kite, an intermediate sailplane intended for club use rather than competition flying, though still well capable of decent cross country flights. The wings had a span of 49 ft 10 ½ inches and were strutted, unusual for new gliders at that time, but seen as OK for what was meant to be a club operated machine. There is considerable confusion over how many Kite 2s were actually built. Martin Simons states 11 and Slingsby certainly built the prototype which first flew on the 11<sup>th</sup> April 1946 and was transferred to Martin Hearne on the 3<sup>rd</sup> October 1946 (Thanks to Richard Cawsey for this information). Martin Hearne Ltd built further Kite 2s under sub-contract, but how many is where the mystery lies. Norman Ellison lists 15 Kite 2s overall. After a good deal of research the author best guess is that a.) 13 Kite 2s were built in total b.) Slingsbys only built the prototype, the rest were all initially constructed by Martin Hearne, though not all completed. c.) More research needed though, not least on the origin of BGA 689 and 751.

# GLIDING HERITAGE CENTRE



**(Kite 2b at Lasham. Courtesy of Paul Haliday)**

The prototype (BGA 564) went “on the road” in the spring of 1947 to be demonstrated at various gliding clubs around the country. Comment was already surfacing about the very unusual profile of the outer section of the wings. It appeared that because of the lack of “wash out” the wings would be very prone to early tip stalling and consequently spinning, and so it proved. Disaster struck on the 10<sup>th</sup> April when the prototype spun into the trees at Camphill and was written off. Fortunately the pilot was unhurt, but the damage was done and news of the accident spread like wildfire around the British clubs. Doubly unfortunate in that at that same time the EoN Olympia was receiving considerable publicity and acclaim. Further demonstration flying went ahead but no orders were received. So back at his Kirbymoorside factory Martin Simons states Fred Slingsby as ending up with 10 Kite 2s + the wreckage of the prototype (which was never repaired). This was somewhat of a disaster and somehow these aircraft had to be sold. Accordingly the outer panels of one Kite (which is BGA 663 today) were extensively modified. This aircraft then went to Redhill where in June 1951 it was tested by the BGA Test Group, most of the flying done by Lorne Welch and Frank Irving - first flight by Lorne Welch on the 9<sup>th</sup> June. This was successful and the Kite 2 received its BGA certification. In turn this allowed Slingsbys to modify the other Kite 2s and eventually all were sold, though almost certainly at a significant loss to the factory. The modified aircraft are known as the Kite 2a. Even after modification the Kite 2s would still spin readily and fully if provoked – as the author found out to his surprise when he was trying to see how slowly he could thermal BGA 663 at Lasham one day! Not surprisingly therefore that a number have been written off with a high proportion of the accidents being spinning ones. There are 5 Kite 2s confirmed as definitely still existing, 2 of them flying.

- BGA 689 (Kite 2a) for long owned and flown by Chris Raines, believed to be based at Haddenham (Thame).
- BGA 521 now owned by Chris Raines, awaiting restoration – formerly owned by the late Rodi Morgan.
- BGA 663 (Kite 2b), owned by the author and flown at Lasham.

# GLIDING HERITAGE CENTRE



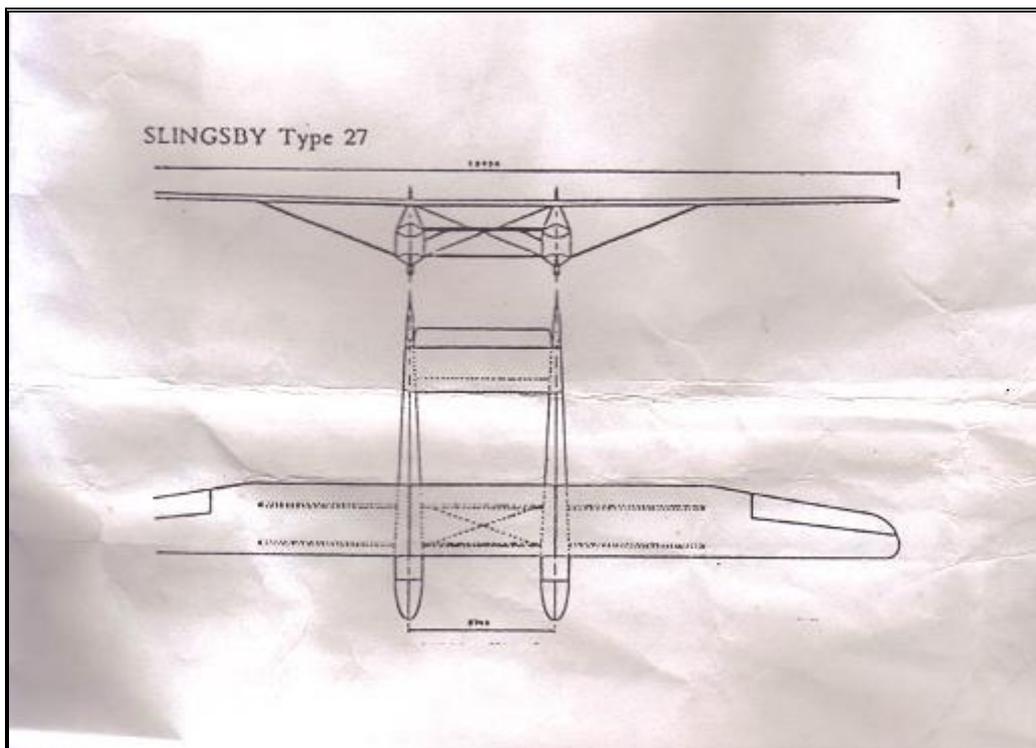
- BGA 751 which was the one that had been modified with a Skylark 2 tail. It has been extensively restored by Robin Wilgloss at Booker, after restoration it was test flown in the spring of 2006. Latest information from Graham Saw is that it is still at Booker owned By Robin Wilgloss, though not currently flying.
- In Nov 2013 I became aware of a Kite 2 stored at the Dublin Gliding Club. It has not flown for very many years but I'm advised is still believed to be in good condition. A good restoration project for someone! Richard Cawsey advises this is EI-102 which was imported unfinished from Slingsbys in 1953 and completed in 1954.

Note BGA 663 is the only Kite 2b, also widely known as the "Red Kite" because of its colour scheme. After the Redhill testing this was bought by a syndicate headed by Frank Irving which included Ralph Hooper subsequently of Hawker jump jet fame. Between November 1951 and May 1952 the aircraft was extensively modified. "Barn door" airbrakes were fitted on the underside of the wings to improve approach control, the tail was modified to cure the tendency to "wag", and a number of other smaller modifications made to clean the aircraft up.

## FURTHER INFO AND PICTURES:

[http://www.glidingheritage.org.uk/collection/KITE%202b%20\(663\).pdf](http://www.glidingheritage.org.uk/collection/KITE%202b%20(663).pdf)

**(TYPE 27 - WIDOW)**: A somewhat exotic concept where the glider structure was built in 1948 but never covered with fabric. Two Kadet fuselages joined by a 8 foot central wing section and having Tutor wings as the outer panels.



# GLIDING HERITAGE CENTRE



The idea was that this would facilitate the training of pupils for when they went solo, the cockpit layout, etc, would be identical to that of the single seat Tutor. The name “Widow” is a strange one for a glider, but it’s how Fred Slingsby himself refers to the Type 27 in an article he wrote in the June 1958 edition of *Sailplane and Gliding*.

**(TYPE 28)** : This was originally going to be the type number of the T21 post the first two T21s built by Slingsbys. However, rather than being called the T28 it became the T21B. See the details under Type 21 – Sedbergh.

**TYPE 29 – MOTOR TUTOR** : Tutor wings and tail fitted to a new fuselage. The pilot was seated beneath the wings, the engine mounted in front.



[Dave Welch/www.abpic.co.uk](http://www.abpic.co.uk)

First flew 1948, usually stated that 2 were built but in fact it’s 3. Note this aircraft needs to be differentiated from the T31M. The first, a T29a, was built by Martin Hearne Ltd with a 25hp Scott Squirrel engine and was exported to the Bahamas, its fate is unknown. The second, T29b (G-AKJD), built by Slingsbys had a 40hp JAP99 engine and was written off at Dunstable in June 1964, parts of this aircraft still exist. A third, T29c (G-AZSD) was acquired from Speedwell Sailplanes in 1968 and still exists, though it’s believed to-date it’s hasn’t flown. Thanks to Richard Boyton for supplying new information on the T29.

# GLIDING HERITAGE CENTRE



**TYPE 30 – PREFECT** : 45 foot span strutted single seater built for club use as a suitable replacement for types such as the Grunau Baby, prototype first flew in June 1948. 46 were built by Slingsbys, 15 of them for the ATC. About 7 were built under licence in Israel. Possibly as many as 11 still airworthy, a few others in museums. At the 41<sup>st</sup> International VGC rally held at Lasham August 2013 four Prefects were entered including the prototype (BGA 599).



([www.rcawsey.co.uk](http://www.rcawsey.co.uk) – Matt Ladley)

## PICTURES AND VIDEO LINK:

[http://www.scalesoaring.co.uk/VINTAGE/Documentation/Slingsby\\_T30\\_Prefect/T30\\_Prefect.html](http://www.scalesoaring.co.uk/VINTAGE/Documentation/Slingsby_T30_Prefect/T30_Prefect.html)

**TYPE 31** : Simply known in the gliding world as the “T31”. A case of third time lucky for Slingsbys. The RAF Training Command /ATC had previously rejected the Types 20 and 24 as 2 seat tandem trainers, but the T31 finally succeeded in winning their approval and became the standard ATC trainer between 1951 and 1986.

The T31 evolved from the T29 Motor Tutor so 43 feet 3 inches span. Interesting that the T29 has come in for quite a lot of derogatory comments. Without it though there wouldn't have been the T31 and therefore the history of the Air Training Corp gliding training post the Second World War would likely have been rather different. A little bit more than just cutting off the engine and replacing it with a front Tutor cockpit, some redesign of the fuselage was required.

# GLIDING HERITAGE CENTRE



The T31 at approximately 60% of the cost of a T21 was comparatively cheap, and therefore Slingsbys hoped it would be attractive to many smaller clubs where finances were tight. First flown in 1949, possibly at Camphill, the prototype (BGA 667) was called the T31A. Most of the certification flying was carried out at Camphill, and once successfully completed the aircraft went into production as the T31B, a few minor modifications compared with the prototype.



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

The T31B proved very successful indeed as a circuit workhorse for the ATC where it was known as the Cadet Mk3. Martin Simons records 131 as being built for the ATC, Wikipedia quotes 126. More were built for the RAFGSA and RNGSA and a considerable number were exported, some were built from kits others from plans. To the disappointment of Slingsbys the glider wasn't that popular with UK civilian clubs. Its soaring performance was quite poor, a lot worse than the T21, and whilst this didn't matter to the ATC it did to civilian clubs. The overall number built is not known with certainty, Wikipedia says approximately 230, Martin Simons "certainly in excess of 200", Robert Cawsey lists 213 with another 42 under a "miscellaneous" heading – undoubtedly a lot of duplication here with his main list.

A number of T31s have reverted to their T29 origin by being converted to motor gliders, the front cockpit being removed and replaced with an engine. These are known as T31Ms, we have 3 of them, all airworthy, at Lasham.

# GLIDING HERITAGE CENTRE



A good number of T31s are still flying today in the UK, we have BGA 3229 (formerly ATC XE800) at Lasham owned by Will Stoney. Not as many flying T31s as T21s though, which is a statement of their relative soaring performance + side-by-side in an open cockpit glider is much better for flying with friends/other gliding club members than tandem.

## FURTHER INFO AND PICTURES:

[http://www.glidingheritage.org.uk/collection/T31B\\_XE799.htm](http://www.glidingheritage.org.uk/collection/T31B_XE799.htm)

**(TYPE 32)** : Designated as the “Gull 4B”, strangely incorporating struts. It never went beyond the design stage.

**(TYPE 33)** : This was meant to be a fully cantilever version of the T21B with an enclosed cockpit. It never progressed beyond the design stage.

**TYPE 34 – SKY** : Effectively the same cockpit and forward fuselage section as the Gull 4 but otherwise a new design, span was 18 metres, the prototype first flying in September 1950.



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

# GLIDING HERITAGE CENTRE



In the British Nationals of 1951 held at Camphill two Skys were entered and beat the Weihs of Philip Wills and Lorne Welch into 3<sup>rd</sup> and 4<sup>th</sup> places. So the reputation of the Sky as being better than the very highly regarded Weihe was established. 8 Skys were entered in the 1952 world championships in Spain out of 42 entrants, all 5 of the British pilots flying them. Philips Wills won the contest, Jock Forbes came third, Lorne Welch 9<sup>th</sup>, and Geoffrey Stephenson 13<sup>th</sup>. The other British pilot, Frank Foster, crashed whilst field landing on the first day of the contest and took no further part – he was flying the prototype Sky. This tremendous result very much helped Slingsbys in being recognised as a manufacturer of top class competition sailplanes. 16 of them were built which could be seen as a low number given the success of this, albeit comparatively expensive for its time, glider. A fair number happily still exist and are flyable. At the 41<sup>st</sup> International VGC Rally held at Lasham 3 were entered. In addition to these the prototype BGA 685 owned by Richard Moyses is airworthy at Lasham, and BGA 2284 is also under restoration there.

## MORE INFO AND PICTURES:

[http://www.scalesoaring.co.uk/VINTAGE/Documentation/Slingsby\\_T34\\_Sky/Slingsby\\_T34\\_Sky.html](http://www.scalesoaring.co.uk/VINTAGE/Documentation/Slingsby_T34_Sky/Slingsby_T34_Sky.html)

[http://www.glidingheritage.org.uk/collection/T34\\_AVB.pdf](http://www.glidingheritage.org.uk/collection/T34_AVB.pdf)

**TYPE 35 – AUSTRAL** : This was a “one-off” built by Slingsbys to fulfil an Australian order.



# GLIDING HERITAGE CENTRE



(Thanks to the Australian Gliding Museum, Melbourne, and Dave Goldsmith for permission to use this splendid photo)

Essentially a T31 with longer wings (51.3 feet versus 43.3 for the T31), the rudder also being enlarged. Whilst Slingsbys built the components it was actually sent to Australia as a kit in 1952 and assembled by the Waikerie Gliding Club. The first flight took place at Waikerie on 5<sup>th</sup> May 1952 (Richard Cawsey). It certainly did a lot of flying around a number of Australian clubs, the last recorded flight was in September 1971. Martin Simons 1996 "Slingsby Sailplanes" book records it as being stored at Tocumwal NSW. However, today it's a non flying exhibit at the Australian Gliding Museum in Melbourne -

<http://www.australianglidingmuseum.org.au>

**(TYPE 36)** : Never went beyond the design stage, was meant to be a two seat version of the T34 Sky.

**TYPE 37 – SKYLARK 1** : In the article Fred Slingsby wrote for the "The Gliding Book" published in 1965 he says they built the Skylark 1 "...for a lark!" Effectively built as an experimental aircraft with the main aim of the experiment to try out new wing designs.



(Courtesy of Jack Sharples, former CFI of the Doncaster GC)

This was the first Slingsby aircraft to use laminar flow wing sections and led directly to the Skylark 2/3/4 series. The 45 foot span wings were built in 3 pieces the aim being to try out different designs for the outer panels. The prototype first flew in March 1953 and apart from the wings was relatively crude – a modified Prefect fuselage and no wheel. Tony Deane Drummond flew it in the 1953 British Nationals, coming 5<sup>th</sup>, and commented comparatively favourably on it, especially so when it was flown in strong conditions. Much less good in

# GLIDING HERITAGE CENTRE



weak scratchy conditions because of the higher than normal thermalling speed required. A second Skylark 1 was built which was flown in the 1954 Camphill world championships by the South African pilot Pat Beatty. This aircraft then went to South Africa and flew for many years before eventually being destroyed in a hangar fire. The prototype was sold by Slingsbys to a UK owner. In his 1996 “Slingsby Sailplanes” book Martin Simons refers to this aircraft as still existing. As of February 2014 the author has established that it does indeed still exist and is kept in good storage conditions, albeit it hasn’t flown for many years.

**TYPE 38 – GRASSHOPPER** : Seemingly a strange reversion to the T3 Primary produced by Slingsbys in the 1930s. However, there was logic behind it with two main driving forces. Firstly as a consequence of upgrading Cadets to Tutors the ATC had a mass of Cadet wings in storage – and so did Slingsbys at Kirbymoorside. Secondly ATC squadrons and Combined Cadet Force (RAF sections) could make use of them for ground slides and low hops, else “flown” static from a pendelbock – note the T38 was never intended to be certificated and be properly flyable, and consequently was cheap to produce, a lot cheaper than the fully airworthy EoN Eton Primary then available. The fuselage was an almost 100% copy of the SG38 German Primary, the wings as said being those of the Type 7 Kadet.



# GLIDING HERITAGE CENTRE



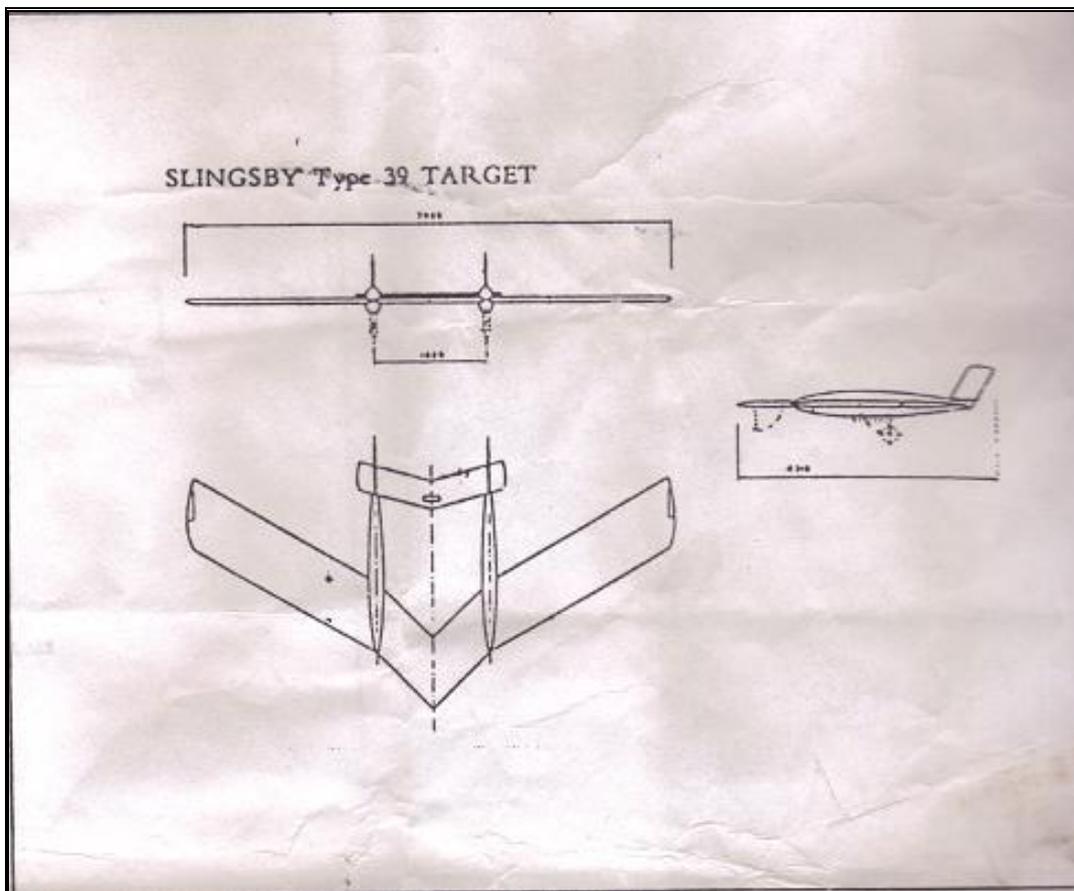
[www.rcawsey.co.uk](http://www.rcawsey.co.uk) – Al Stacey)

65 Grasshoppers were delivered to the ATC/CCF in 1952/1953, a final order of 50 being completed by 1963, so 115 in all. The T38 continued to be used by the ATC/CCF into the 1980s when those few remaining were sold off. At least 9 are known to still exist, 4 of them in UK aviation museums. 2 of the remaining, BGA 3488 and 4372, are fully airworthy after restoration. BGA 4372 is based at Lasham, owned by Gary Pullen, and suspended as an exhibit from the Gliding Heritage Centre hangar roof, but it is still flyable. Two “You Tube” videos of it being flown by Gary Pullen, at the Mynd and Lasham, can be found via the “Collection” tab of the GHC website - <http://www.glidingheritage.org.uk/collection.htm> . Click on “Grasshopper” and the “You Tube” links are found at the bottom of the glider information sheet. Very much worth a watch!

## FURTHER INFO AND PICTURES:

<http://www.glidingheritage.org.uk/collection/Grasshopper.pdf>

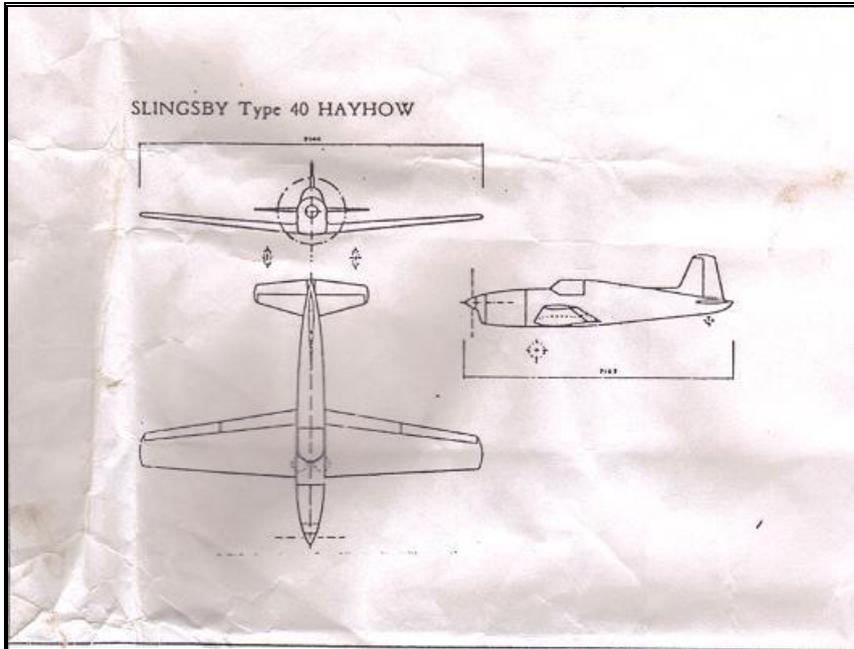
**(TYPE 39)** : A remotely controlled twin boom target glider that never progressed beyond the design stage.



# GLIDING HERITAGE CENTRE



**(TYPE 40)** : A powered aeroplane that also never went beyond the design stage.



**TYPE 41 – SKYLARK 2** : Design work began in 1953 and several of the lessons being learnt from the Skylark 1 were applied. Like the Type 37 the Type 41 had a 3 piece wing built for laminar flow but with a 48 foot span and a broader chord.



(Courtesy of Paul Haliday)



For the first time Slingsbys used GRP (Glass Reinforced Plastics) in the construction. Much of the fuselage in front of the wing was GRP, and the rear fuselage whilst wood was a much smoother design than the Type 37. The prototype first flew in November 1953 and the test programme carried out by the BGA No 1 Test Group at Lasham progressed satisfactorily, and so the aircraft went into production. Martin Simons has 63 as the number built, and this agrees with the records of Richard Cawsey. 49 were Skylark 2s and 14 the slightly improved (better canopy, other small modifications) Skylark 2b. One Skylark 2 (BGA 778, Comp No 33) was extensively modified by Dennis Corrick and his partners at Nympsfield, and is now called the Skylark 2c. BGA 724.

Click on the link below to access the marvellous ScaleSoaring article on the Skylark 2c.

<http://www.scalesoaring.co.uk/VINTAGE/Documentation/Merlin/Merlin.html>

The glider that Derek Piggott climbed to 25,000 feet in a cumulo nimbus in July 1955, was also extensively modified and now known as the Skylark 2s. Likely no more than 20 still flying. At least another 20 are recorded as being written off, with others either in storage else under restoration. The author owns and flies BGA 759 at Lasham (a 1956 Skylark 2, works number 1048), and earlier in 2013 saw that the prototype was for sale, though not in flyable condition. No question that the Skylark 2 was a success story for Slingsbys, and you could argue it ushered in a “Golden Age” for Slingsby Sailplanes. However, as a competition glider it never achieved the success that undoubtedly had initially been expected of it. Partly this is down to it competing with the outstanding German K6cr, which I think is now accepted as being just that little bit better than the Skylark 2.

**TYPE 42 – EAGLE** : The intention was to design and build an advanced 2 seater that could be used for cross country instruction. The prototype, which had a span of 58 feet 5 inches, was constructed very much in the same fashion as the Skylark 2, and first flew on the 12th June 1954. It was entered in the 1954 world championships at Camphill and flown by Lorne and Anne Welch. The result was disappointing, 7<sup>th</sup> out of 9. This led to Fred Slingsby making changes to the wing design which resulted in the second prototype being referred to as the T42A (Eagle 2) – first flown May 1956. It was the T42A that was flown by Nick Goodhart and Frank Foster in the two seater class at the 1956 world championships held at St Yan, France. To everybody’s surprise the Eagle won, and won what’s more by a considerable margin. This led to the aircraft being put into production in 1957, the T42B (Eagle 3) had additional minor changes, for example a lengthened nose. One T42B was further modified in 1966 to have a 20 metre (65 feet 6 inches) span wing and is referred to as the Type 55 (Eagle 4) “Regal Eagle”.



## Peter Scott's old Eagle ([www.rcawsey.co.uk](http://www.rcawsey.co.uk))

15 T42Bs were built making 17 Eagles in all. 8 including the prototype BGA 722 (mid air collision with a Sky at Lasham 14<sup>th</sup> June 1958) have been written off. 8 of the remaining 9 are accounted for:

- BGA 740 is the second prototype, the St Yan world championship winner, and is sited at Pocklington where it is flyable. This aircraft, Comp No 11, was at Lasham for many years and was known as the "Beagle", which translates as "Blue Eagle" because of its colour scheme at the time. The author was part of the syndicate for a few years and never knew the provenance of what he was flying!
- BGA 780 is at Hinton-on-the-Hedges and needs restoration. This glider was originally owned by Peter Scott.
- BGA 787 (ZK-GBG) stored in New Zealand (Said by David Williams of the Odiham Kestrel Club, **THE** expert on Eagles, to be not far from flyable).
- BGA 825 has been restored by David Williams and is flyable at Odiham. This aircraft used to be owned by Wally Kahn and at the time had competition number 4.
- BGA 828 (BBB), flying at North Hill.
- BGA 830, stored at Keevil. This is owned by Dave Williams and is awaiting restoration.
- BGA 841 (BBQ), flying at Millfield though (Feb 2014) believed now sold.
- BGA 849 (ZS-GDP). This is the "mystery" Eagle, likely no longer in existence.
- BGA 880, owned by Gordon McDonald at Lasham and is airworthy. This was the original Imperial College No 96 which was the IC training machine for so many years. The author as a former IC Gliding member has great affection for this glider, my first solo at Lasham was in "96".

# GLIDING HERITAGE CENTRE



Note the Type 55 “Regal Eagle”, BGA 821, was destroyed in a workshop fire at Doncaster March 1975. However, David Williams says the wingtips (not the centre section) have survived as they were in the trailer at the time.

**TYPE 43 – SKYLARK 3** : This was a very logical development from the Skylark 2. Extend the span out to 18 metres (18.2 metres the actual span) and you had an Open Class glider. The fuselage was virtually the same as the Skylark 2 though the rudder and tailplane were modified. Many of the components were the same, which helped the manufacture and also resulted in it being cheaper to build as against all components being entirely new. The prototype first flew in July 1955.



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

A number of different models were built, the main production ones being the 3B and 3F:

- 3A First off the production line, 7 built, a number of these subsequently being modified to the 3B standard.
- 3B, nose lengthened + modification to the elevator mass balance, 25 built.
- 3C, strengthened wings, built for export to Holland, 2 built.
- 3D, again strengthened wings to satisfy export requirements, 2 built.
- 3E, used different experimental tips that didn't prove a success, subsequently replaced by normal production tips. 1 built (BGA 840) which has been written off.
- 3F, principally changes to the tips and tail to improve the handling performance, also an enlarged canopy. 26 built plus 7 from kits.
- 3G, changes to the ailerons, 2 built.

# GLIDING HERITAGE CENTRE



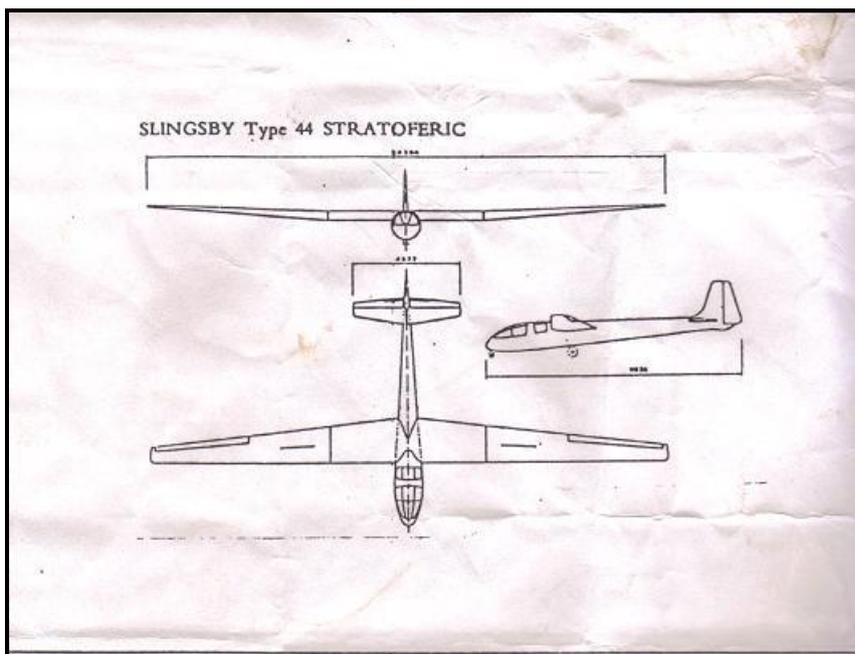
In total 72. Note these numbers have been sourced from Richard Cawsey's records, and for once they don't tally with those of Martin Simons. Martin lists the number of Skylark 3s built as "65 including 7 from kits". Maybe there's confusion over the number built from kits.

As a competition glider the Skylark 3 initially had somewhat disappointing results. In the single seater class of the 1956 world championships held at St Yan in France 6 Skylark 3s were entered out of 45 contestants. Stephenson and Wills of Great Britain came 5<sup>th</sup> and 7<sup>th</sup> respectively, the others were 8<sup>th</sup>, 12<sup>th</sup>, 21<sup>st</sup>, and 24<sup>th</sup>. However, Stephenson and Wills were absolutely miles adrift of the winner, Paul MacCready of the USA flying a Breguet 901. Also to rub salt into the wounds the Spanish pilot Juez came second in a Slingsby Sky.

Things improved from there, Skylark 3s setting a number of UK national records and thereby establishing a good reputation. At the 1958 world championships in Leszno, Poland, Nick Goodhart came second out of 37 contestants, the other Skylark 3 flown by the Argentinian pilot Araoz came 13<sup>th</sup>. Things got even better at the 1960 world championships held at Butzweiler, Germany, Rudolf Hossinger of Argentina winning out of 20 contestants - Tony Deane-Drummond coming 13<sup>th</sup> for Great Britain. The 1960 worlds effectively marked a pinnacle for Slingsby Sailplanes, with GRP ("glass") gliders appearing on the horizon and Slingsbys not responding to this design revolution until very late (with the Type 65 Vega), it was downhill, albeit slowly at first, all the way from there.

Like Skylark 2s a number of Skylark 3s continue to fly in the UK.

**(TYPE 44)**: Never went beyond the early design stage. Intended to meet a USAF specification for a 2 seater high altitude research glider with a pressure cabin.



# GLIDING HERITAGE CENTRE



**TYPE 45 – SWALLOW** : The Type 45 was designed as a reasonably cheap, fairly rugged, and easily maintained glider for club use. It effectively was a replacement for Grunau Babys/Kadets/Tutors/Prefects of which there were still a considerable number around, it didn't have any pretensions to be a potent competition machine. Fred Slingsby's judgement was, as usual, astute, the glider enjoyed a very successful production run. The prototype (12 metres span, production machines were 13.2 metres) first flew on the 11<sup>th</sup> October 1957. Unfortunately its designer, John Reussner, shortly afterwards flew it into telegraph wires whilst attempting to land at Sutton Bank. Fred Slingsby himself arrived to see the glider perched/suspended amongst the wires and said "Just like a Swallow". This is how the Type 45 got its name. John Reussner subsequently repaired the prototype extending the span to 15 metres and lengthening the fuselage. This was called the Swift and was written off in an accident at Netheravon on the 24<sup>th</sup> November 1963. The second prototype went to Lasham where the BGA No 1 Test Group evaluated it. After some to-and-fros about the spinning performance, resulting in changes to the wing design, the Type 45 received its certification and moved into production.



[www.rcawsey.co.uk](http://www.rcawsey.co.uk) – Al Stacey)

Martin Simons states the Slingsby Swallow production run as 106, and at least a further 7 were built from kits. The overall estimate of Type 45s built is 115 to 120. Note that 5 are recorded as going to the ATC, and this would have included the 3 "MacRoberts" Swallows. Richard Cawsey lists 119 + the two destroyed in the 18<sup>th</sup> November 1968 fire at the Kirbymoorside factory. At least 50 Swallows were exported and of the order of 20 are



thought to be still flying in the UK. One of these is the Lady MacRoberts Swallow “Sir Iain” at Lasham (BGA 3823). Also at Lasham undergoing restoration is one of the WD&HO Wills Swallows BGA 1365 – expected to fly late spring 2014.

## FURTHER INFO AND PICTURES:

[http://www.scalesoaring.co.uk/VINTAGE/Documentation/Slingsby\\_T45/Slingsby\\_T45.html](http://www.scalesoaring.co.uk/VINTAGE/Documentation/Slingsby_T45/Slingsby_T45.html)

[http://www.glidingheritage.org.uk/collection/Swallow\\_HBX.pdf](http://www.glidingheritage.org.uk/collection/Swallow_HBX.pdf)

**TYPE 46** : This is a much modified T21 that’s normally referred to at the T21c rather than the Type 46. See final paragraph of the Type 21 entry to see details of this glider.

**(TYPE 47)** : Design stage only. Intended as a 20 metre version of the Type 43 Skylark 3.

**(TYPE 48)** : Martin Simons records this as a design study for a delta winged research aircraft. This was transferred to Handley Page Ltd and emerged as the HP 115.

**TYPE 49 – CAPSTAN** : Designed as a side-by-side 2 seater as a replacement for the now ageing T21. The thought was clubs would train their members on Capstans and once solo they would then fly Swallows as the early solo machine.

The prototype (T49A) first flew on the 4<sup>th</sup> December 1961 (Martin Simons says the first flights were in November) and as usual the aircraft went to Lasham for evaluation by the BGA Test Group there. All seemed well until it was found that the stalling behaviour was unpredictable, on a few occasions the aircraft would flick into a spin, which really wasn’t acceptable for a glider that was intended to be a basic trainer. The fact that this behaviour was only occasional made it all the more dangerous. Trying to understand and cure this problem took a while, and further difficulties were encountered later with the spinning behaviour. This resulted in modifications to both the tail and rudder which considerably delayed the granting of certification. The aircraft finally entered production in July 1963 as the T49B (55 feet 5 inches span) but never succeeded in becoming the standard glider trainer in the UK.

The Lasham Gliding Society had three, but Lasham has long runways and used Ford trucks for motor launches. The Capstan was a heavy aircraft and not really suitable for smaller sites that used winch launching, especially so for sites with less powerful winches. Also (as the author remembers well!) the Capstan was an absolute pig to ground handle, we didn’t have retrieve buggies in those days!



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

Slingsbys built 33 Capstans and a further 2 were built from kits by F.M.Dunn in New Zealand. Of the 33 Slingsby built Capstans one never flew as it was destroyed on the production line in the factory fire on the 18<sup>th</sup> November 1968. A further Capstan destroyed that day was the T49C (G-AWDV), originally a T49B. This was self launching with a 45 hp Nelson engine mounted on a pylon, it first flew in February 1968.

Whilst the Capstan never succeeded in becoming a popular training glider, in latter days it's found its niche as a "glider to fly with your friends". I estimate there's about 10 syndicate owned Capstans still flying in the UK, with another 3 either stored or under restoration including the prototype. There were 3 Capstans entered in the 41<sup>st</sup> International VGC rally at Lasham, August 2013, plus BGA 1183 "BRW" which is permanently based at Lasham. The prototype Capstan is based at Bicester owned by Dave Bullock.

## **FURTHER INFO AND PICTURES:**

[http://www.glidingheritage.org.uk/collection/Capstan\\_brw.pdf](http://www.glidingheritage.org.uk/collection/Capstan_brw.pdf)

**TYPE 50 – SKYLARK 4** : The wings of the Skylark 4 (18 metres span) were very similar to those of the Skylark 3G. The fuselage though was radically re-designed to be much lower in height than the Skylark 3, which meant the pilot was seated semi reclined. The result was a very much more elegant looking glider than the Skylark 3, the prototype supposedly first

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flying in February 1961. However, this sounds wrong as works number 1326 (BGA 1019) is recorded as first flying on 24<sup>th</sup> March 1962. Production started in the summer of 1962, 66 being built which includes 3 built from Slingsby supplied kits by F.M.Dunn in New Zealand. A further Skylark 4 BGA 2881 “ERB” was built by Colin Almack, a professional furniture maker, in 1983, this aircraft until very recently was based at Lasham and owned by Barry Smith.



[www.rcawsey.co.uk](http://www.rcawsey.co.uk) – Al Stacey)

The Skylark 4 is a very nice aeroplane to fly and still capable of good cross country flights, the author flew them regularly at Lasham in the late 1960s / early 1970s until he progressed to “glass”! Not surprising therefore that there’s a lot still flying in the UK. The author estimates a bit under 30, with a couple stored and another under restoration.

Competition-wise whilst the Skylark 4 definitely had a better performance than the Skylark 3 it didn’t fare so well competitively, especially in international competitions. Both of course were designed for the weak to moderate soaring conditions that tend to predominate in UK weather, really strong days do come along but not that often. By the time the Skylark 4 appeared heavy “Lead Sledge” gliders with high wing loadings were also starting to make their appearance, some such as the HP 11 able to carry water ballast. In the 1963 world championships in Argentina Skylark 4s were placed 8<sup>th</sup>, 9<sup>th</sup>, 10<sup>th</sup>, and 11<sup>th</sup> in the Open class. The “hot” heavy wing loading ships cleaned up the first 5 places – Polish Zefirs 1<sup>st</sup>, 2<sup>nd</sup>, and 5<sup>th</sup>, US HP11 and Sisu 3<sup>rd</sup> and 4<sup>th</sup>.

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As Martin Simons observes in his “Slingsby Sailplanes” book the Skylark 4 was marking the end of an era, effectively the “wooden” era, the production of foreign sailplanes such as the Zefir and HP 11 the start of a new era.

## FURTHER INFO AND PICTURES:

[http://www.glidingheritage.org.uk/collection/Skylark\\_4%20\(BLZ\).pdf](http://www.glidingheritage.org.uk/collection/Skylark_4%20(BLZ).pdf)

**TYPE 51 – DART** : Apart from the Type 55 modified Eagle (20 meter wings) this was the last wooden glider designed and built by Slingsbys. Most people these days when asked about Darts think of the 17R version (17 metres span, retractable undercarriage). However, the original Dart was designed as 15 metres span with the intention of winning the International Standard Class design prize at the 1965 world championships to be held at South Cerney, Gloucestershire. Considerable effort was put into the design work, including for the first time the use of computers, as a minimum the glider had to be better than the German K6. Construction of the prototype began in May 1963, the spar was spruce and it had a fixed wheel, the first flight was on the 26<sup>th</sup> November 1963 (BGA 1187, works no 1405). The aircraft went into production and 4 were entered for the 1964 national championships. They came 2<sup>nd</sup>, 4<sup>th</sup>, 6<sup>th</sup>, and 8<sup>th</sup>. Not that bad you might think, but the result was galling to Slingsbys as 1<sup>st</sup> and 3<sup>rd</sup> went to K6crs. After further testing changes were made to the wings to reduce the weight of the originally all spruce spar. Work was also started on building a 17 metre version and this first flew in November 1964 (BGA 1160, works no 1424).



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(Dart 17R. [www.rcawsey.co.uk](http://www.rcawsey.co.uk))

At the South Cerney world championships Nick Goodhart came 7<sup>th</sup> out of 41 in the Open class flying the Dart 17. Another Dart 17 flown by Webb of Canada came 28<sup>th</sup>. Not too pleasing for Slingsbys was John Williamson coming 6<sup>th</sup> in an Olympia 419. In the Standard class George Burton came 5<sup>th</sup> out of 45 flying a Dart 15, and it was the Dart 15 which won the OSTIV design prize. So all-in-all, could have been better, but not too bad, and the world championships undoubtedly helped Type 51 Dart sales. Surprising the number that were finally sold, given that it was quite clear at the time that for serious competition flying the era of “wood” had ended and that of “glass” was just beginning.

Post the championships Slingsbys were advertising 5 different models of the Dart – a.) Dart 15 b.) Dart 15R (retractable undercarriage) c.) Dart 17 d.) Dart 17R (retractable undercarriage) e.) Innovatingly a Dart 15/17 variant.

Overall 82 Darts were built, at least 4 of which from kits supplied by Slingsbys. Additionally one “built from parts” at the Long Mynd (BGA 1975). Richard Cawsey’s records break them down as:

- 30 Dart 15
- 3 Dart 15R
- 3 Dart 17
- 44 Dart 17R
- 1 Dart 15/17
- 2 Dart 15W – new wings with Wortmann sections built for the 1968 world championships in Poland, these were later extended to 17 metres and fitted with retractable undercarriages.

19 known to have been written off but a good number are still flying today in the UK. The author has flown many Slingsby types but the Dart 17R was certainly the best handling, my 300k distance and diamond goal were flown in a Surrey and Hants 17R (470) in July 1971.

The Dart marked the end of wooden glider construction by Slingsbys the company abandoning wood rather belatedly to using glass fibre with the Type 59. Before this the company temporarily switched to metal in 1966, the Type 53 (Phoenix) being built as a metal skinned 2 seater which was targeted as a replacement for the T21 and T31 still widely used by the ATC. The T53 evolved from the T52 which was only a design study, the prototype T53 flying in March 1967.

Following the purchase of Slingsbys by Vickers in 1970 a licence agreement was reached with Glasflugel to produce the Kestrel – the Slingsby Type 59. Initially 17 metres span, Slingsbys extended this to 19 metres and incorporated several other modifications. The resultant Kestrel 19 proved successful, 98 being built at Kirbymoorside.

And so to the final chapter of Slingsbys and motorless flight, the Type 65 (Vega). Following the 1976 world championships George Burton, now managing director of Slingsbys,

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proposed a new sailplane design incorporating many innovative features to compete in the new 15 metre racing class. Production machines were expected to be delivered in June 1977 but delays resulted in this being when the prototype first flew. Further delays occurred such that deliveries did not begin until 1978 which was damaging to sales prospects. A cut down version known as the Sport Vega was also produced, first flight in the spring of 1980, this being so different to the original 15 metre Vega it really should have been given a separate Type number. A total of 70 Vegas and Sports Vegas were constructed.

After completing outstanding orders Slingsbys ceased all glider production in 1982.