

AIR GUNNER

Based around the WWII service of Fred Weston DFC RAFVR





Ft Lt Fred Weston DFC
Rear Gunner, Bomber Command

AIR GUNNER

Introduction

My interests in history and in certain types of aircraft coincided on hearing from my mother-in-law about her cousin's hazardous (to say the least) wartime experiences in the RAF during WWII in Europe. On meeting Fred I was further stimulated to investigate the material now presented in this document.

Gathered from third party sources, largely via the internet, this document is an assembly of information on WWII RAF operations, squadrons, airfields, aircraft and accounts of personal wartime experiences, centred on Fred's wartime career. Though Fred's service is the thread around which this information has been collected, it extends beyond his direct involvement so that the context is apparent. However, I have included specific pieces of more-detailed information where I believe Fred was directly involved. Inevitably, the significance and poignancy of events at that time is evident and I wish to emphasise that all due respect and admiration is intended to all individuals concerned.

This document was not originally intended for public reading, mitigating therefore, the incomplete references to sources and authors. A later version may seek to redress that deficiency if I can locate the sources again. As this was meant for Fred only to read, a lot of text is cut and pasted from online material and as such some of the material may be copyright protected.

I apologise in advance for anything that is misplaced, misspelled, incorrect or inaccurate and will welcome corrective comment.

*Roger Millington, Huntingdon, Cambridgeshire,
January 2005, revised November 2016*

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A brief description of the DFC and the Caterpillar Club

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This section is arranged in chronological order and includes operations, mostly about 101 Sqdn, 101 conversion flight (Wellington to Stirling), 1657 heavy conversion unit (conglomeration of flights on Stirlings) and two phases of 620 Sqdn in 3 Group and 38 Group (Stirling bombing ops to special ops and troop delivery). Detail has been added in places where records seem to relate to Fred and his immediate colleagues.

AIRCRAFT ...page 25

The aircraft detailed here are those which Fred was involved with: Blenheim; Wellington; Stirling; Lysander. For the sake of completeness and technical interest, however, all the variants are shown.

AIRFIELDS ...page 47

This is a collection of available information, extensive or scant, past and present, about the airfields which hosted Fred and/or the squadrons and aircraft of interest: Penrhos; Church Fenton; West Raynham; Oakington; Bourn; Stradishall; Chedburgh; Leicester East; Fairford; Tilstock. Some accounts have been found which describe the entire wartime experience of the airfield, such as that for Bourn.

PEOPLE ...page 63

These relate to only a few individuals who were associated, as it turns out, only with 1657HCU and 620 Sqdn. Further research is likely to reveal more. The final section is about Lt.Gen Frederick Browning, who Fred met during service around the time of Arnhem.

HONOURS & AWARDS



DISTINGUISHED FLYING CROSS

The D.F.C was established on 3 June 1918 for officers and warrant officers of the Air Forces for "an act of valour, courage, or devotion to duty performed whilst flying in active operations against the enemy". The DFC was open to those officers who had scored eight or more aerial victories. It was introduced to replace the Military Cross (MC) for RAF officers after the formation of the RAF in 1918. From 1993 all ranks have been eligible to receive this award.

TERMS The cross is awarded to officers and Warrant Officers for an act or acts of valour, courage or devotion to duty performed whilst flying in active operations against the enemy. The slip-on bar has an eagle in the centre. The year of the award is engraved on the reverse

BAR A straight silver bar is awarded for a further act or acts of valour, courage or devotion to duty whilst flying in active operations against the enemy. The slip-on bar has an eagle in the centre. The year of the award is engraved on the reverse.

DESCRIPTION A cross flory, 2.125 inches wide, with the horizontal and base bars terminated with bumps, the upper bar with a rose.

OBVERSE Aeroplane propellers are superimposed upon the vertical arms of the cross. Within a central winged roundel which is encircled by a wreath of laurels and surmounted by an Imperial Crown, appear the letters RAF. The wings of the roundel fall upon the horizontal arms of the cross.

REVERSE In the central circle the Royal Cypher (GV, GVI, EIIR) appears above the date . The year of issue is engraved on the lower arm.

MOUNTING The straight bar has two sprigs of laurel at the bottom which form a slot for a king ring to attach it to the small ring at the top of the medal

RIBBON The ribbon is 1.25 inches wide, and consists of alternating violet and white stripes (0.125 wide) leaning to the left at 45 degrees from the vertical. The violet colour is to appear in the bottom left and upper right corners when viewed on the wearer's chest. Until 1919, the stripes were horizontal.

NAMING The DFC is issued unnamed

DATES The award was established on 03 June 1918, the birthday of King George V.

Pilot Officer Frederick Weston (126909) Royal Air Force Volunteer Reserve.

This Officer has displayed the utmost devotion to duty and determination during many operational flights against heavily defended targets in France, Germany and Italy. These have included Cologne, Berlin, Bremen and Turin.

He has invariably exhibited a great enthusiasm for operational duties and his tenacity and courage have been highly praiseworthy.



THE CATERPILLAR CLUB (of which Fred Weston became a member following a mid-air collision with a Wellington on 28 July 1942 as they left Cambridgeshire en route to Hamburg. Landing by parachute violently in a tree at Cherry Hinton, near Cambridge.

The Caterpillar Pin - Most of the members of the Royal Air Forces Escaping Society wear with pride the tiny gold Caterpillar Pin which is awarded by the Irvin Air Chute Company to anyone who saves his life by parachuting from a disabled or flaming aircraft. Each recipient of the Caterpillar Pin is living testimony to the life saving ability of the Irvin Type Air Chute. The Caterpillar is symbolic of the silk worm, which lets itself descend gently to earth from heights by spinning a silky thread upon which to hang. Parachutes in the early days were made from pure silk.



About 1920, Leslie Irvin, a 24 years old stunt man from California, demonstrated the first "free drop" parachute. He had made the chute himself on a borrowed sewing machine. Flying safety experts were so impressed that the American Air Force and British R.A.F. promptly adopted the parachute as standard equipment. Irvin then opened factories in the USA and in England.

The Irvin Company started the Caterpillar Club and the practice of awarding the gold Caterpillar Pin in 1922 because each life saved was the result of Leslie Irvin's invention, symbolizing Irvin's dedication to safety in the air. [Author's note: Leonardo da Vinci is credited with the invention of the principle of the parachute]

It is estimated that at least 100,000 persons have saved their lives by Irvin parachutes.

Some of this text came from the home page of the Royal Air Force Escaping Society, now disappeared from the internet. (22nd April 2004)

The caterpillar club pins were issued by Irvin Aerospace in recent times. The UK address cited on the internet is:

Judy Adams
Caterpillar Club
Irvin Aerospace Limited
Icknield Way
Letchworth, Hertfordshire
England SG6 1EU
Telephone: 01462 482000
Fax: 01462 482007
Email: judya@irvin.co.uk

However, this may already be out of date as Irvin-GQ, as it is called now (part of Hunting plc), has a website with contact details:

Sales and Marketing Department
Irvin-GQ
Llangeinor
CF32 8PL
United Kingdom

Tel: +44 (0) 1656 727000
Fax: +44 (0) 1656 721100
E-mail: sales@irvingq.co.uk

SYMBOL OF SAFETY

The name "IRVIN" on the harness means the chute is produced in an Irvin Factory with over 20 years' experience and skill in chute-making.

Literature can be had by school or training executives for the asking. Address Main Office, Buffalo, N. Y.

IRVING AIR CHUTE CO., Inc. 1670 Jefferson Ave., Buffalo 8, N. Y.
Factories at other points in the United States, Canada and England

The CATERPILLAR CLUB

Founded in 1928, there is only one qualification for a life membership: in an emergency men and women who have saved their lives with Irvin Air Chutes.

Many of the personnel of the Flying services engaged in all phases of war have successfully used their Irvin Air Chutes in extreme emergency.

The word CATERPILLAR and the representation of a caterpillar are registered trade-mark features of Irvin Air Chute Co., Inc. We are anxious that the records of the Club be kept as complete as possible in the Club Register and members, upon enrollment, will receive a caterpillar token with the name inscribed thereon. Communicate with Main Office.

IRVIN
Air Chutes
SERVING THE UNITED NATIONS' AIR FORCES

276 AERO DIGEST

SQUADRONS

In following Fred's passage through WWII, he appears to be associated at some time or other with the following squadrons, flights, conversion units and training units though I'm not clear on his exact transitions from one to the next - the dates are the arrival or changeover dates of the squadron or unit where appropriate. Fred has mentioned being at Penrhos and at Church Fenton, the latter bringing 64 Sqdn into the list.

Fred Weston – associated with the following squadrons, flights and units

Gp	Sqdn	Base	County	Arrived	Comments
25	No.9 ATU	Penrhos	Caern.		Armament practice
13	64	Church Fenton	Yorks.	03/09/1939	Blenheim IF. Spitfire I, 04/40.
2	101	West Raynham	Norfolk	03/09/1939	79 Wing. Blenheim IV, 04/39. To 3 Group 05/41.
3	101	West Raynham	Norfolk	01/05/1941	Day of month arbitrary. Ex-2 Group. Wellington Ic, 05/41.
3	101	Oakington	Cambs.	01/07/1941	Wellington III, 02/42.
3	101	Bourn	Cambs.	11/02/1942	satellite to Oakington
3	101	Stradishall	Suffolk	11/08/1942	To 1 Group, 29/09/42
	101CF	Oakington	Cambs.	05/05/1942	Formed. Stirling I
1	1657CU	Stradishall	Suffolk	07/10/1942	101CF and others
3	620	Chedburgh	Suffolk	17/06/1943	Formed. Stirling I, 06/43. Stirling III, 06/43.
3	620	Leicester East	Leics.	23/11/1943	To Fighter Command 38 Group
38	620	Leicester East	Leics.	22/11/1943	Ex-Bomber Command 3 Group. Stirling III.
38	620	Fairford	Gloucs.	18/03/1944	
	1665HCU	Tilstock	Shrops.	01/01/1944	Stirling, Halifax

The history of each of the aforementioned squadrons throughout WWII is summarized in the following tables:

64 Sqn Code SH

Group	Sqdn	Base	County	Arrived	Comments
13	64	Church Fenton	Yorkshire	03/09/1939	Blenheim If. Spitfire I, 04/40.
13	64	Usworth	Durham	01/05/1940	
11	64	Kenley	Surrey	16/05/1940	
13	64	Leconfield	Yorkshire	19/08/1940	
11	64	Biggin Hill	Kent	13/10/1940	
12	64	Coltishall	Norfolk	15/10/1940	
11	64	Hornchurch	Essex	11/11/1940	Spitfire IIa, 01/42.
11	64	Rochford	Essex	27/01/1941	
11	64	Hornchurch	Essex	31/03/1941	
13	64	Turnhouse	Midlothian	16/05/1941	
13	64	Drem	East Lothian	17/05/1941	
13	64	Turnhouse	Midlothian	06/08/1941	
13	64	Drem	East Lothian	04/10/1941	Spitfire Vb, 11/41.
11	64	Hornchurch	Essex	16/11/1941	
11	64	Rochford	Essex	31/03/1942	
11	64	Hornchurch	Essex	01/05/1942	Spitfire IX, 06/42.
11	64	Fairlop	Essex	08/09/1942	
11	64	Hornchurch	Essex	14/11/1942	
10	64	Predannack	Cornwall	09/12/1942	
11	64	Fairlop	Essex	02/01/1943	
11	64	Hornchurch	Essex	15/03/1943	
13	64	Ayr	Ayrshire	28/03/1943	
11	64	Friston	Sussex	06/08/1943	
11	64	Gravesend	Kent	19/08/1943	
11	64	West Malling	Kent	06/09/1943	Spitfire LFVb, 09/43.
12	64	Coltishall	Norfolk	25/09/1943	
13	64	Ayr	Ayrshire	21/01/1944	
12	64	Coltishall	Norfolk	02/02/1944	
11	64	Deanland	Sussex	29/04/1944	
10	64	Harrowbeer	Devon	26/06/1944	
11	64	Bradwell Bay	Essex	30/08/1944	Mustang III, 11/44..
11	64	Bentwaters	Suffolk	29/12/1944	Moved 15/08/45.

101 Sqn Code SR

Group	Sqdn	Base	County	Arrived	Comments
2	101	West Raynham	Norfolk	03/09/1939	79 Wing. Blenheim IV, 04/39. To 3 Group 05/41.
3	101	West Raynham	Norfolk	01/05/1941	Day of month arbitrary. Ex-2 Group. Wellington Ic, 05/41.
3	101	Oakington	Cambs	01/07/1941	Wellington III, 02/42.
3	101	Stradishall	Suffolk	11/08/1942	To 1 Group, 29/09/42.
1	101	Holme-on-Spalding Moor	Yorkshire	29/09/1942	Ex-3 Group. Lancaster I, 10/42. Lancaster III, 10/42.
1	101	Ludford Magna	Lincolnshire	15/06/1943	ABC, 10/43.

101 Conversion Flight Code SR

Group	Sqdn	Base	County	Arrived	Comments
	101CF	Oakington	Cambs	05/05/1942	Formed. Stirling I.
					To 1657CU , 07/10/42

1657 Heavy Conversion Unit Codes AK, XT

Group	Sqdn	Base	County	Arrived	Comments
1	1657CU	Stradishall	Suffolk	07/10/1942	From
					No.7 CF
					No.101 CF
					No.149 CF
					No.218 CF
					Stirling I.
3	1657CU	Shepherds Grove	Suffolk	14/05/1944	Stirling III.
3	1657CU	Stradishall	Suffolk	05/10/1944	Lancaster.Disbanded, 15/12/44.

620 Sqn, Bomber Command Codes QS, D4

Group	Sqdn	Base	County	Arrived	Comments
3	620	Chedburgh	Suffolk	17/06/1943	Formed. Stirling I, 06/43. Stirling III, 06/43.
3	620	Leicester East	Leics	23/11/1943	To Fighter Command 38 Group

620 Sqn, Codes QS, D4

Group	Sqdn	Base	County	Arrived	Comments
38	620	Leicester East	Leics	22/11/1943	Ex-Bomber Command 3 Group . Stirling III.
38	620	Fairford	Gloucs	18/03/1944	
38	620	Great Dunmow	Essex	18/10/1944	Stirling IV. Halifax VII.

64 SQUADRON RAF

No. 64 squadron was formed at Sedgeford on 1 August 1916 as a training unit with FE.2bs and Farmans but in June 1917 received fighter types in preparation for operations in France. In October 1917, the squadron moved to the Western Front for fighter patrol and ground attack duties for the rest of the war. In February 1919, it returned to the UK and disbanded on 31 December 1919.

On 1 March 1936, No. 64 reformed at Heliopolis, although for political reasons it was announced as having formed at Henlow. Its Demons had already been sent out to Egypt where they formed D Flights in 6 and 208 squadrons which were transferred during March to 64 squadron. With the Abyssinian crisis still on, the squadron's duties were to carry out attacks on enemy airfields and act as cover for bombers being refueled at advance landing grounds. In August 1936, the squadron embarked for the UK to form part of the fighter defences of London. In February 1938, Demons with turrets were received and by the end of the year these had been replaced by Blenheim fighters at Church Fenton. On the outbreak of war, the squadron was engaged in patrols off the East Coast and in December 1939 provided fighter defence for the Home Fleet from Evanton for a month. In April 1940, conversion to Spitfires took place in time for the squadron to help cover the evacuation from Dunkirk and later to take part in the Battle of Britain. In May 1941, No. 64 Squadron moved up to Scotland for air defence duties but moved back south in November to take part in sweeps over northern France, until March 1943 when it moved back up to Scotland again. Then in August 1943 it moved back south again to resume offensive operations and in June 1944, moved to Cornwall for 2 months before beginning long-range escort missions from East Anglia. In November 1944 the Squadron received Mustangs and flew these for the rest of the war in support of Bomber Command's daylight raids on Germany. In March 1946 No. 64 received Hornet twin-engined fighters and moved to Linton - On - Ouse in August. In March 1951 it converted to Meteors but in August 1956 it began to replace its single-seater fighters with the night-fighter version of the Meteor. In August 1951 the Squadron had moved to Duxford where it remained for 10 years and in September 1958 it became a Javelin Squadron. No. 64 then moved to Singapore in 1964 until it was disbanded on 16 June 1967.

101 SQUADRON RAF

No 101 Squadron was at an Armament Practice Camp at Penrhos in August 1939 when the RAF received its mobilisation order for war. A programme to fit long-range tanks to the Blenheim IV had not then reached No 101 Squadron, so after a month of tedious "standing-by" for possible raids on the German Fleet, the Squadron became No 2 Group's Reserve Squadron and was stood down from operations. The Squadron's task now consisted of converting crews from the Blenheim Mk I to the Mk IV, practising operational flying and weapons delivery and keeping the Group's other six Blenheim squadrons 'topped up' with fresh crews. Unglamorous perhaps, but still nonetheless a most important wartime role.

The Battle of France in May 1940 brought an end to the so-called "Phoney War". All the reserve squadrons were made operational again and 101 finally went to war. The Squadron's first raid, on oil targets in northern Germany on 5 July 1940, was a disaster, for although one aircraft successfully bombed an oil storage depot at Ostermoor; the aircraft flown by the commanding officer, Wing Commander Hargroves, failed to return. Barely had the Squadron recovered from this tragedy, when it lost two more crews in attacks against Cherbourg. The Blenheim's vulnerability during daylight operations was quickly recognised and from 14 August the Squadron switched almost entirely to night operations. Targets throughout the rest of 1940 consisted primarily 'of coastal installations and aerodromes in France and' the Low Countries. The Squadron even played a part in the Battle of Britain by bombing enemy airfields such as Eindhoven from where the Luftwaffe mounted its raids on England. Many of the ports holding invasion barges for Hitler's projected Operation Sea Lion were also attacked. Losses in action by the end of the year after six months of operations amounted to 32 men killed and three taken prisoner.

The winter weather of 1940/41 proved almost as hazardous to air operations as the enemy's efforts. Attacks continued against shipping and other coastal targets including the ports of Brest, Boulogne, Calais, Dunkirk and Wilhelmshaven. In March 1941 two more crews were lost and on 3 April the Squadron lost its newly-appointed commanding officer Wing Commander D Addenbrooke, who was shot down during a raid on the German warships, the 'Scharnhorst' and 'Gneisenau' at Brest. On 17 April the Squadron flew its first 'Circus' operation. These were daylight raids on Channel targets with a force of medium bombers escorted by Spitfires or Hurricanes. The main aim was to bring the Luftwaffe to battle but the bombing often yielded good results as well. Later in April a flight of Blenheims was sent to Manston on a month's detachment to work with Fighter Command in closing the Straits of Dover to enemy

shipping in daylight. Unfortunately one crew was lost near Calais on the first of these 'Channel Stop' sweeps although several vessels were hit and sunk.

The last raid made by the Squadron with the outdated Blenheim took place on the night of 8 May and by the end of that month 101 had received almost its full complement of Vickers Wellingtons, a type which it would fly for the next 18 months. The Wellington was a large aircraft compared to the Blenheim, carrying a crew of six and capable of lifting 4,500 lb of bombs compared to the Blenheim's 1,000 lbs. Originally, the Squadron was equipped with the Pegasus-engined Wellington Mk IC.

The first mission flown with the Wellington took place on 11 June 1941 when two aircraft successfully bombed the docks at Rotterdam. The first visit to Germany followed 10 days later when the Squadron formed part of a 68-aircraft raid on Cologne. As was often the case at this stage of the night offensive, the bombing was largely inaccurate. Courage and determination were not always enough, what was needed were reliable navigation and bomb-aiming aids, and these were not yet available.

As No 101 Squadron was the only No 2 Group unit equipped with Wellingtons, the Squadron was transferred to No 3 Group in July and moved down to Oakington where it resided alongside the Short Stirlings of No 7 Squadron. On 24 July the Squadron lost its first Wellington during another daylight raid on the German warships at Brest. The defences at Brest were waiting for the Wellingtons and ten of them were shot down including a No 101 Squadron, aircraft flown by Flight Lieutenant Craig which was shot down into the sea by German fighters. As with the Blenheim, the Wellington had proved to be too vulnerable for daylight raids and was thereafter relegated to night operations.

On 2 August the Squadron made its first visit to Hamburg, losing one aircraft but starting large fires on the city's outskirts.

Battle Order for 7 September 1941

No. 101 Squadron.		BATTLE ORDER.		7th September 1941.	
SECRET.		Serial No. 52.			
Flight.	Aircraft.	Letter.	Captain or A/O.	2nd Pilot.	Crew.
B.	Z.8842	T.	F/O. Robertson.	Sgt. Dil.	Sgts. Mason, Tracee, Dennis, Little.
B.	T.2846	S.	P/O. Polmore.	Sgt. C. Lindar.	Sgts. Pearson, Johnson, Williams, Edwort.
B.	R.1219	R.	F/O. Ineson.	Sgt. Dunning	Sgts. Fowler, Parkington, Loudon, H. Duffield.
A.	R.1781	E.	F/L. Todd.	Sgt. MacKenzie.	P/O. Carroll, Sgts. Pidgeon, Hogg, Weston.
A.	R.1699	* D.	F/O. Allen.	Sgt. Christensen.	Sgts. Saxton, Campbell, Spooner, Hickton.
A.	R.1780	* B.	F/O. Millson.	Sgt. Page.	Sgts. Morrison, Redford, Appleby, MacLay.
A.	R.1778	* G.	Sgt. Fooks.	Sgt. Dowling.	Sgts. Ryan, Davies, Pollock, Behmer.
A.	X.9828	* K.	P/O. Hardie.	Sgt. Moran.	P/O. Miller, Sgts. Eubank, Jensen, Derry.
A.	X.9920	* F.	Sgt. Iain.	Sgt. Wilson.	Sgts. Fenwick, Bro. D., Goldsberry, Parry.
* FILLED WITH GUMMETS.					
LOADING. Aircraft B.D.C. 1 x 1000lbs, 2 x 500lbs, 1 x 250lbs G.P. Fused .025.					
" K.G.I.S. 3 S.L.C of 50lbs Incendiaries; 2 x 500lbs, 1 x 250lbs G.P. Fused N.H.T.					
" R. 1 x 1000lbs, 4 x 500lbs G.P. Fused .025.					
" F. 3 S.L.C of 50lb Incendiaries, 3 x 500lbs, 1 x 250lbs G.P. Fused N.H.T.					
All aircraft fitted with Max. Flares.					
BRIEFING 1820		BRIEFING FOR CREW MAKE D / 1800 HOURS.			
TRAINING.					
B.	L.7889	P.	Sgt. Hous.	Sgt. Newton.	P/O. Pilkington, Sgts. Sullivan, Milligan, Sykes, 2 Landing's First then 7 & 8
B.	R.9819	V.	Sgt. Raybould.	Sgt. Watts.	Sgts. Spencer, Lott, W/S. Woodgate, Northampton, Harvold, Hogg, Thompson, Leese.
A.	X.9807	A.	Sgt. Williams.	Sgt. Diemer.	Sgt. Kennea, Hopper, Hanwell, Grichton.
TAKE OFF. 1955					
APPROX TIME OF RETURN. 2030					
BRIEFING 1830 HOURS.					
Office: 3/8 Night Flying w/c. B.S. BRG S. (Signed) W. J. 22028, w/c. 12					

On 7 September the Squadron took part in a successful raid on Berlin. In the battle order above, Sgt Weston is in Ft. Lt Todd's aircraft Wellington 1C, R1781 of A flight, the crew members being:

Todd	FL
Mackenzie	Sgt
Carroll	PO
Pidgeon	Sgt
Hogg	Sgt
Weston	Sgt

All the aircraft in the operation part of this battle order appear to have survived this particular raid, although R1219 and X9828 are recorded as lost at a later date. R1699 was lost on the 10th when the squadron visited Turin, bombing the Fiat steelworks in a raid lasting over 10 hours. While returning from this latter raid, Pilot Officer Allen's aircraft, R1699, suffered engine failure forcing him to crash-land in France. Fortunately, with the help of French partisans Allen and his crew evaded capture and eventually returned home via Spain. That crew was:

Allen	PO
Christensen	Sgt
Saxton	Sgt
Campbell	Sgt
Spooner	Sgt
Hickton	Sgt

Cologne, Dusseldorf and Frankfurt were all bombed in October. The raid on Dusseldorf on the 13th consisted of 53 Wellingtons and 7 Stirlings from No 3 Group and was marred by ground haze. Only one aircraft was lost, a Wellington flown by Sergeant Betts of No 101 Squadron. The difficulties of finding a target at night under blackout conditions was frequently made worse by bad weather. During a raid on Frankfurt in poor weather by 70 aircraft on 24 October for example, only eight crews reported finding the target area. Weather was also a factor in the disastrous raid on 7 November when Berlin, Cologne and Mannheim were bombed with the loss of 37 of our 392 aircraft, giving a loss rate of 9.4%.

Again, 101 contributed an aircraft and crew to the night's toll. Another visit to Hamburg on 30 November resulted in the loss of a further two aircraft which were forced to ditch near the enemy coast on the return journey.

In February 1942 Mk I's were replaced by Wellington Mk IIIs fitted with the 1,500 hp Bristol Hercules engines and which had four, as opposed to two, 0.303 inch guns in the tail turret.

The first few months of 1942 saw the Squadron continuing raids on the Ruhr industrial district punctuated only by a move to Bourn in February to make way for another Stirling squadron at Oakington. Occasionally there were other diversions from the main task. On 16 February the Squadron sent several aircraft on a "Nickel" raid to Lisle which involved dropping nothing more lethal than a few thousand propaganda leaflets. New crews were usually given this sort of task to give them confidence and experience before they progressed to "hotter" targets. The Squadron also flew a small number of minelaying sorties at this time and lost an aircraft, captained by Sergeant Weaver, from such a Sortie to Quiberon Bay on the west coast of France on 2 April.

Bombing aids and revised procedures were at last beginning to show some success. On 3 March the Squadron took part in a very successful raid on the Renault lorry factory at Billancourt near Paris where flares were used as markers and the aircraft bombed from low level to increase accuracy and reduce the risk to French civilians. Around this time the Squadron's Wellingtons were fitted with Gee, a device which enabled a navigator in an aircraft over Germany to plot his position relative to ground station transmitters in England. Although not accurate enough for precision blind-bombing, Gee was certainly a step in the right direction.

Fred had moved to Stirlings at some time after 5 May 1942, to 101 conversion flight. 101CF is quoted in one reference as flying with 7 Squadron (code MG).

On 30 May 1942 the Squadron participated in Bomber Command's first "1,000-bomber" raid. The target was Cologne and 12 Wellingtons took off from Bourn for the raid although two returned early with technical problems. Eight aircraft dropped their loads of incendiaries on Cologne and returned safely, the remaining two being lost. The second "1,000-bomber" raid followed on 1 June against Essen and this time 10 aircraft from 101 took part and all returned safely. Smaller-scale raids continued throughout the summer months with July being a particularly bad month for the Squadron losing seven complete crews, one of which was killed in a mid-air collision, at 5000 ft, with a Stirling just north of Oakington on 28 July 1942. Fred recalled being in his rear turret position and felt a judder. He couldn't raise the crew on the intercom. When he noticed that part of the tailplane was damaged and felt the plane being a slow descent, he realized he was alone. He then rotated his turret and attempted to bale out backwards but his foot was trapped under a metal bar. When a bright explosion on the ground illuminated his turret, he could see how to free his foot and he baled out. He came to earth in a fruit orchard in Cherry Hinton where a farmworker threatened him with a pitchfork until Fred could convince him that he wasn't German. (The Stirling Project based at RAF Wyton is fully-aware of this event and knows all the details of Fred's crew, who all baled out safely. They may even have located the crash site). An account in "Stirling Bomber" relates to this event: Wellington X3668:SR-G of 101 Sqdn collided with Stirling N6075:SR-W of 101CF, operating under 7 Sqdn, carrying 4x2000lb H.C and 1x1000lb G.P bombs. The account tells of the tail plane being ripped off and "outstanding airmanship on the part of Fl.Lt Butterfield and crew". [Author's note: aircraft number N6075 is inconsistent with other reports – N6121 is thought to be correct]

Fred's Stirling I, N6121, 101CF, is recorded as lost when it collided near Oakington with Wellington III, X3668, SR-G, from the satellite airfield at Bourn. Also listed are the many other aircraft which were lost during the Hamburg raid of that night:

Stirling losses, Hamburg 28/07/1942, W7533 W7565 W7588 **N6121** N6129 W7464 BF309 N3655 N6069 N6102 W7509

Wellington losses, Hamburg, 28/07/1942, L7894 R1450 X3201 X9696 X3456 X3475 X3606 Z1650 X3452 X3558 X3664 Z1570 BJ559 **X3668** Z1605 Z1624 X3710 BJ592 BJ840 X3488

The crew of the Wellington X3668 was

Teall PG	Sgt
Webster E	Sgt
Stubbings RJ	PO
Bridge E	Sgt
Comber NS	Sgt

A move to Stradishall in August 1942 was followed by a further period of heavy losses with another seven aircraft destroyed before the end of the month although some of the crews survived including a navigator and two gunners who were rescued by a trawler after their aircraft had ditched in the North Sea.

1657 heavy conversion unit was formed from several conversion flights, including 101CF, under Wing.Co. B.R.Kerr on 7 October 1942. 1657HCU trained 37 crews with 1309 hours and 2017 landings up until April 1943.



32. W7463 of 1657 Conversion Unit. After serving with 149 then XV Squadron and XV Squadron Conversion Flight, joined 1657 Conversion Unit 8 February 1943. Written off after belly landing at Woodbridge 5 July 1944.

620 SQUADRON RAF

No. 620 Squadron formed in No. 3 Group of Bomber Command at Chedburgh, Suffolk, on 17 June 1943, with 10 Stirlings I's from each of Nos 149 and 214 Squadrons. Two days later, on 19/20 June, it began operations with an attack by eight Stirlings on the Schneider armament works at Le Creusot in France, under W.Cdr. D.H.Lee. During the next four months it bombed several industrial centres in Germany and also carried out many minelaying operations.

Gunnery Leader, 620 Sqdn, front centre



(Excerpts are from "Stirling Bomber") "The first operation, against the Schneider works at Le Creusot, was flown on 19 June 1943. Eight crews attacked in good visibility, although smoke spoilt aim. Attacking at between 6000 and 1000 ft, 620's Stirlings dropped 36 H.E bombs and 1944 incendiaries. The squadron next operated against Krefeld on 21 June. Sgt. P. O'Connell, flying BK274, met a Bf109 over the target and Sgt. C. Doig fired a 30 second burst, driving off the fighter." Stirling losses were reported as, R9266 R9272 EF366 EF387 BK815 EE887 BK799 BK712 BK722.

"O'Connell's adventures for the month were not over. On the 24th his aircraft was hit by flak, forcing it so low that **Flt. Lt. Weston** poured fire into searchlights from 700 ft. Two of the crew had superficial wounds and O'Connell crashed at Chedburgh." Fred remembered being coned by searchlights at 10,000ft and bombing at 2,500ft. After they crashed, Fred exited the aircraft through a hole in the fuselage. Stirling losses on that Wuppertal op were, R9281 EF392 EH890 EH902 BK628 BK813 BF501 EE883 EH982 BK720 BK800.

On 3 July, Stirling BK573, B flight, with Fred as Air Gunner, flew against Cologne. Reported Stirlings losses that night were BF579 BK648 BF504 BK718 EF400 BF530 BK717.

After a final bombing mission, against Leverkusen, in Germany, on 19/20 November 1943, the squadron's role was changed to that of airborne support. It was transferred to No. 38 Group, Allied Expeditionary Air Force and moved to Leicester East where an intensive training programme began. The chief features were day and night cross country navigation exercises and glider-towing practice, and by February 1944 the squadron was ready to undertake the first of the special operations for which it had been earmarked-supply-dropping to the Resistance movement in France. In March 1944 the squadron moved to Fairford, Gloucestershire, where more glider-towing and parachute-dropping was practised.

D-Day

620, together with 190 Squadron, were detailed to take-off at 23:30 on the 5th June, and transport 887 paratroopers of the 5th Parachute Brigade, 6th Airborne Division's to a drop zone near Caen. 620 Squadron provided 23 aircraft for this operation "Tonga", during which 3 were brought down by moderate anti-aircraft fire and a further 4 received damage. Upon their return to Fairford, no fewer than 27 Stirlings of 190 and 620 Squadrons were found to be in an unserviceable state, however by morning the ground crews had repaired all but two of these.

On the evening of the 6th June, the two squadrons each provided 18 aircraft in operation "Mallard" to transport the main glider element of the 6th Airborne Division to the same area. Between them, the Horsas that they towed carried 254 men, 33 Jeeps, 29 trailers, 11 motorcycles, and 8 75mm Pack Howitzers. 620 Squadron managed to deliver all but one of the Horsas to their landing zone, at the cost of 1 aircraft shot down and 6 damaged by small arms fire. The lost aircraft was piloted by Flight Lieutenant Thring, who made a successful crash-landing in a field and, with his crew, was able to contact friendly forces and return to base.

620 Squadron, with its role in support of the airborne invasion complete, returned to SOE and SAS resupply flights which continued, amidst frequent training exercises with airborne troops, until August.

Arnhem

620 and 190 Squadrons played a key role in the opening salvo of Market Garden, with each of them providing 6 Stirlings to deploy the pathfinders of the 21st Independent Parachute Company, whose job it was to mark the drop zones for the First Lift which began to arrive half an hour later. A further 19 aircraft of 620 Squadron were involved in this lift, each towing a Horsa glider, however 3 of these were forced to cast off prematurely. 22 Stirlings were similarly employed on the Second Lift, but again one of their gliders failed to reach the landing zone. This glider was successfully brought in by a Stirling with the Third Lift, accompanied by a further 17 aircraft which flew in supplies.



**Stirling IV, 620 Sqdn, Fairford
17 September 1944**

Glider-towing





Stirling towplane viewed from the glider



En-route to Arnhem

17 Stirlings took part in the resupply flight on Wednesday 20th, with 620 and 190 Squadrons delivering 696 canisters and 116 panniers between them. The Squadrons first losses of Market Garden were suffered on this day when two aircraft were shot down. The first of these resulted in the deaths of 2 RASC despatchers and 4 aircrew, one of which had successfully bailed out but drowned in the Rhine, a further 2 aircrew bailed out but were captured on the ground. 3 aircrew and 2 despatchers were killed onboard the second aircraft, brought down by flak, but 3 men survived.

Stirling IV, 620 Sqdn, 20 September 1944



11 Stirlings contributed to the resupply effort on Thursday 21st, and in spite of extreme ground fire and interception by enemy fighters, the Fairford Squadrons succeeded in releasing 240 canisters and 34 supply panniers. 2 aircraft were lost, however, one of which made a crash-landing near Renkum after being hit by flak, and although 5 aircrew survived, 1 of the crew and 2 despatchers did not. Fred recalled the moment, as he looked down from his turret, that a RAAF pilot he knew, Bluey Scanlon, was hit by flak, destroying the interior of the cockpit. This was at 1000ft in close formation, sending the aircraft into a long sideslide to starboard, passing very close to Fred's turret, towards the ground.

The following are specific losses from 620 squadron aircraft on 20/21 September:

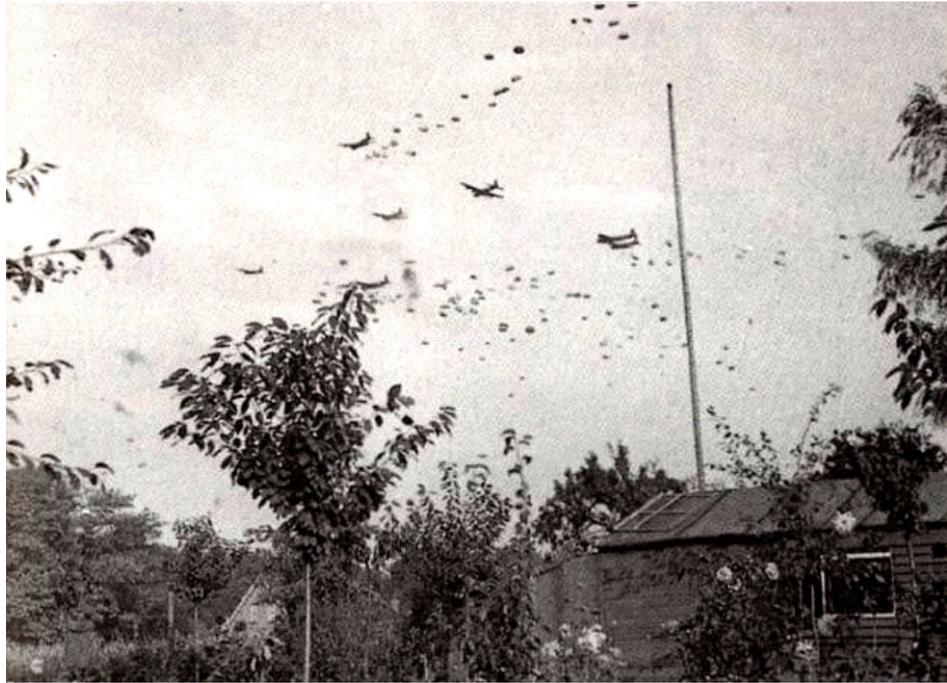
NKG = No Known Grave

RAAF = Royal Australian Air Force

RASC = Royal Army Service Corps

RCAF = Royal Canadian Air Force

<u>Date</u>	<u>Name</u>	<u>Rank</u>	<u>Age</u>	<u>Remarks</u>
20/09/1944	FOWLER, George A.	Cpl	29	253 Coy, RASC
20/09/1944	HADLEY, John T.	Dvr	25	253 Coy, RASC, NKG
20/09/1944	LAMONT, Raymond J.	F/Sgt	-	RCAF, NKG
20/09/1944	McGILVRAY, Edward J.	Wt.Offr	31	RAAF
20/09/1944	MARSHALL, John W.	Sgt	22	-
20/09/1944	SCANLON, Athol R.	F/O	29	RAAF
20/09/1944	BRADSHAW, Eric A.	F/Sgt	21	-
20/09/1944	HECKFORD, Ernest V.	Dvr	19	RASC, NKG
20/09/1944	McHUGH, Maurice	P/O	21	RAAF
20/09/1944	VICKERS, Thomas	Sgt	19	-
20/09/1944	WARING, John	L/Cpl	35	398 Coy, RASC
21/09/1944	CHURCHYARD, Sydney L.	Dvr	22	253 Coy, RASC
21/09/1944	THOMAS, John R.	F/O	-	RCAF
21/09/1944	THOMPSON, William G.	Pte	25	253 Coy, RASC



Fred flew several ops as AG for Wing Commander Lee from August 1943 until 20 September 1944. On Saturday 23rd, Wing Commander Lee's aircraft, leading the other 10 Stirlings that set out for Arnhem, was shot down. Fortunately, all the crew survived. This burning aircraft, QS-H, on the ground near Oss in Holland on that date, is from 620 Squadron and is possibly that of Wing Commander D.H. Lee.



The final sorties took place on the following day with just 5 aircraft being despatched with supplies, though only 1 of these was able to locate the dropping point.

So ended 620 Squadron's participation in the Battle of Arnhem. During this period they had flown a total of 104 sorties at the loss of 5 aircraft, 8 aircrew and 7 RASC despatchers, on top of which 7 men had been captured, but a further 15 who had come down over Arnhem were evacuated to the Allied lines when the 1st Airborne Division withdrew.

In the next few months the need for airborne supply operations diminished and No. 620 resumed bombing on a considerable scale, although this was interspersed with a variety of roles. On the 28th September they participated in a supply drop to units in Eastern France, and following a move to Great Dunmow on the 17th October, they carried out a series of SOE supply drops to the resistance forces in Holland and Norway. During January and February 1945, they were engaged in several tactical bombing raids, carrying 500lb bombs, against significant targets behind the German front.

Stirling IV LK304, foreground, 620 Sqdn, D4-S background, late 1944



Varsity

On 24 March 1945, Operation 'Varsity', the final great airborne operation of the war took place when the Allied armies reached the Rhine. No. 620 Squadron towed 30 Horsa Gliders (138 troops plus many vehicles) from Great Dunmow, Essex, to the Wesel on the Rhine with loads consisting mainly of anti-tank and artillery units. This was done without loss and only one glider failed to reach the target, owing to a broken tow rope.

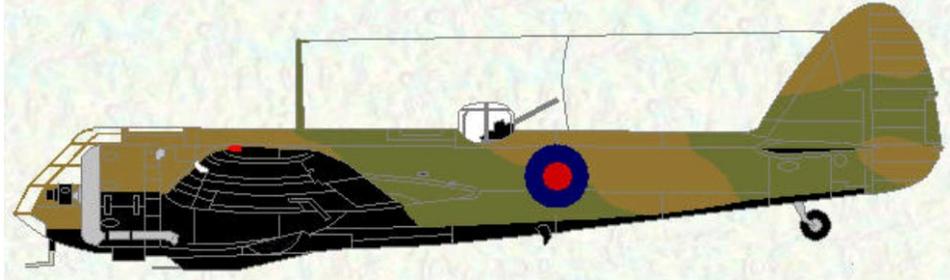
A few more supply drops were made over Holland and Scandinavia in April. When the war ended in May 1945, the Squadron flew elements of the 1st Airborne Division to Norway to oversee the German surrender and to carry supplies. In the weeks immediately following VE Day the squadron operated a troop-carrying service between the UK and Brussels.

Shortly after, they replaced their Stirlings in favour of the more powerful Halifax aircraft. In January 1946, they moved to the Middle East, and in June, the Halifaxes were traded for Dakotas. The deeds of 620 Squadron came to an abrupt end on the 1st September 1946, when it was renamed 113 Squadron at Aqir, in Palestine, where it had been based for several months.

AIRCRAFT

BLENHEIM

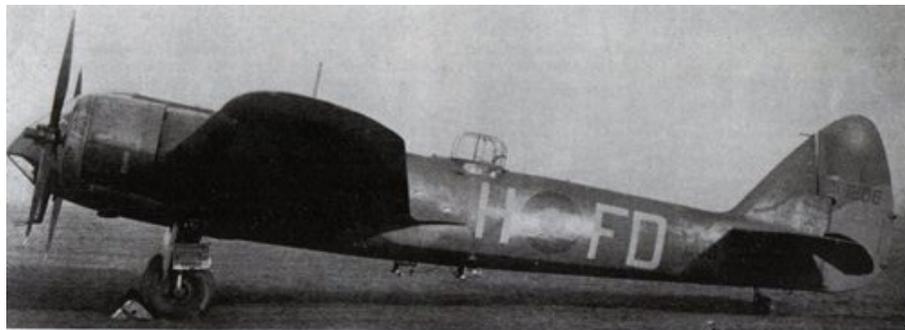
Blenheim 1F, 64 Sqn



Blenheim IV, 101 Sqn



Blenheim 1F



Blenheim IV



Blenheim Specification

Powerplants:	2 x Bristol Mercury XV, air cooled 9 cylinder radial engines
Wingspan:	56 feet 4 in (17.19m)
Length:	42 feet 9 in (13.03m)
Height:	12 feet 9 in (3.88m)
Unladen Weight:	9,700lbs (4,398.9kg)
Laden Weight:	13,500lbs (6,122.25)
Speed:	266mph (428.07kmh) at 11,000 feet (3,352.8m)
Cruising Speed:	225mph (362.1kmh)
Ceiling:	22,500 feet (6,858m)
Range:	1,450 miles (2,333.5km)
Armament:	1 x .303 in port wing 2 x .303 undernose 2 x .303 in dorsal turret
Bombload	1,000lbs (453.5kg)+ 350lbs (158.7kg) on wing racks



Blenheim IV (unknown location)

VICKERS WELLINGTON (Bomber variants) - Twin-engined day bomber to meet Operational Requirement OR.5 and conforming to Specification B.9/32, designed under Rex Pierson and Barnes Wallis. Initial studies (as Vickers Type 249) with R-R Goshawk or Bristol Perseus engines, but definitive prototype (Type 271) as ordered in September 1933 powered by 980 hp Bristol Pegasus X engines. Geodetic construction, gross weight of 21,000 lb (9,526 kg) and defensive armament of single 0.303-in (7.7-mm) guns in nose, tail and dorsal positions. Unarmed, prototype K4049 first flown at Weybridge on June 15, 1936; provisionally known as Crecy until name Vickers Wellington confirmed in September. Lost on April 19, 1937, during A&AE trials at Martlesham Heath, by which time first production contract placed.

Wellington I: Initial production version, as defined by Specification 29/36, to be armed with pairs of Browning 0.303-in (7.7-mm) guns in Vickers nose and tail, and Frazer-Nash ventral (in place of dorsal) gun positions. Gross weight, 21,000 lb (9,527 kg) with up to nine 500-lb (227-kg) or two 2,000-lb (907-kg) bombs. First production aircraft flown with Pegasus X engines (as Vickers Type 285) on December 23, 1937, and with definitive 815 hp Pegasus XVIIIIs (Type 290) on April 12, 1938. Total of 175 built at Weybridge (of which 61 with dual controls and two completed as Mk II and III prototypes) and three at Vickers-operated shadow factory at Broughton, Chester. RNZAF order for 30 Vickers Wellingtons (Type 403) placed in 1937 to be met by diversions from RAF contracts. First six (NZ300-NZ305) at RAF Marham for conversion training of New Zealand Flight handed back to RAF in September 1939 and re-acquired original RAF serials. Most or all Mk Is flown without planned FN9 ventral turret because of CG difficulties. Initial deliveries October 1938, to No 99 Sqn at Mildenhall; eight more squadrons equipped by September 1939. First operations September 4, 1939, by Nos 9 and 149 Sqs.

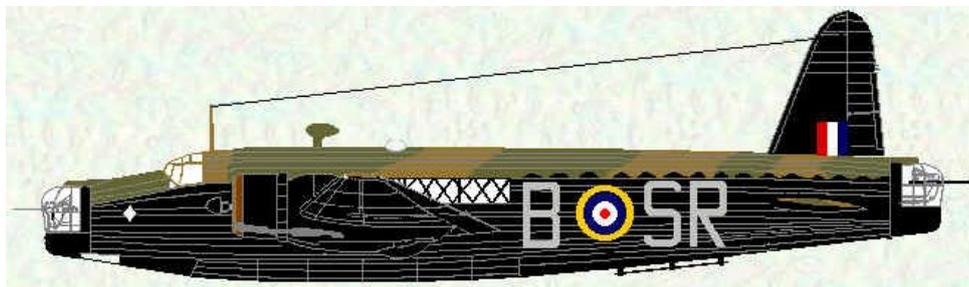
Wellington IA: Similar to Mk I, but with Frazer-Nash two-gun turrets - FN5 nose, FN10 tail and FN9 ventral - plus general airframe improvements designed for Mk II and III. Gross weight 28,000 lb (12,700 kg) and strengthened u/c. Deliveries began August 1939, and production (Vickers Type 408) totalled 170 from Weybridge and 17 from Chester. Replaced Vickers Wellington Is in initial squadrons and in service by December 1939. Balance of RNZAF order (see Vickers Wellington I) for 24 Mk IAs (Type 412) absorbed into RAF production, and No 75 (NZ) Sqn, with No 3 Group of Bomber Command, issued with Vickers Wellington IAs and ICs from RAF stocks.

Wellington IB reserved for Mk I with armament improvements; not built.

Wellington 1C: Similar to Mk IA, but FN9 ventral turret deleted. Two belt-fed 0.303-in (7.7-mm) Brownings in beam mountings, one each side. Electrical system changed from 12 to 24-volt, and hydraulic system revised. Production (Vickers Type 405) totalled 1,056 at Weybridge (of which four completed as later marks), 1,583 at Chester and 50 at Vickers-operated shadow factory at Squires Gate, Blackpool. Bomb-load could include one 4,000-lb (1,814-kg) bomb on 33 Mk ICs with Vickers Type 453 modification. Deliveries from April 1940, and formed backbone of Bomber Command through 1941, primarily in squadrons of 3 Group. Operational in Middle East from September 1940, initially with No 70 Sqn, RAF, and in the Far East (India) from April 1942, initially with No 214 Sqn. One to CLE in March 1942, with parachute exit in place of ventral turret.

Max speed, 234 mph (377 km/h) at 15,200ft (4,633 m). Economical cruising speed, 165 mph (266 km/h) at 10,000ft (3,050 m). Time to 10,000ft (3,050 m), 25 min. Service ceiling, 16,000 ft (4,877 m). Range with max bombs, 1,0-55 mis (1,698 km). Empty weight, 18,800 lb (8,528 kg). Gross weight, 30,000 lb (13,608 kg). Span, 86ft 2 in (26.26 m). Length, 64 ft 7 in (19.69 m). Wing area, 830 sq ft (77. Urn2).

Wellington 1C, 101 Sqn

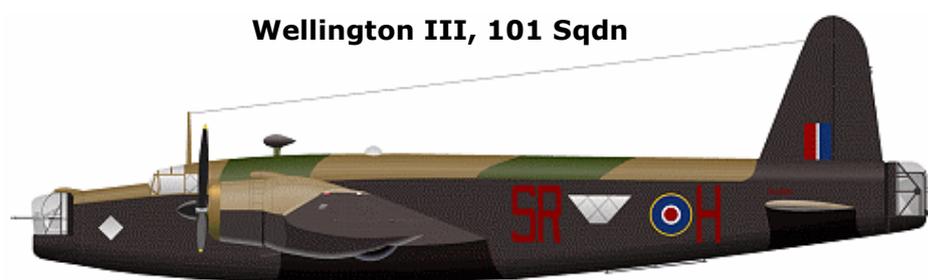


Wellington II: Developed during 1938 as first major Vickers Wellington upgrade, in parallel with Mk III, to take advantage of uprated engines. Based on Mk I airframe with 1,145 hp R-R Merlin X engines; Frazer-Nash FN5 (nose) and FN10 (tail) turrets plus beam guns; 28,000 lb (12,700 kg) gross weight with strengthened u/c and - after early testing - wider-chord tailplane. One Mk I completed as Mk II prototype (Vickers Type 298), flown on March 3, 1939. Deliveries began October 1940 and 400 built (Type 406) at Weybridge. Gross weight increased to 33,000 lb (14,990 kg) and 22 with the Type 423 mod for 4,000-lb (1,814-kg) bomb, first used by Nos 9 and 149 Sqns on night of March 31/April 1, 1941. Also served in Middle East, with earlier marks.

Wellington III: Developed in parallel with Vickers Wellington II, with same new features but powered by Bristol Hercules engines. One Mk I completed as Mk III prototype (Vickers Type 299), flown on March 19, 1939, with two-stage supercharged Hercules HE-ISM engines. Production Mk III (Type 417) powered by 1,400 hp Hercules II engines, as tested on second prototype (Mk 1C conversion) early 1941, or 1,590 hp Hercules XIs. Four-gun FN20A tail turret in place of two-gun FN10, and gross weight increased to 34,500 lb (15,650 kg).

Production total 780 at Chester and 737 at Blackpool, delivered 1942-43. Succeeded or supplemented Mk ICs in 3 Group in the UK, 205 Group in the Middle East and 221 Group in Far East. Also used by six Canadian-manned squadrons of 6 Group in UK during 1943, and for Special Duties units of 100 Group in 1943/44.

Max speed, 261 mph (420 km/h) at 12,500ft (3,810 m). Economical cruising speed, 211 mph (340 km/h). Time to 15,000 ft (4,572 m), 25 min. Service ceiling, 22,750 ft (6,934 m). Range with max bombs, 1,200 mi (1,931 km). Empty weight, 25,100 lb (11,385 kg). Gross weight, 34,500 lb (15,650 kg). Dimensions as Mk 1C.



Wellington IV: Similar to Mk III with 1,050 hp Pratt & Whitney R-1830-S3C4-G Twin Wasp engines. Prototype (Mk 1C conversion) completed at Chester, December 1940, followed by 219 production examples (Vickers Type 410) delivered from June 1941, First operational use October 16, 1941.

Wellington V and VI: High-altitude bomber variants using pressurised crew accommodation. See separate entry below.

Wellington VII: Designation reserved for Mk II derivative with 1,390 hp Merlin XX powerplants. Not built.

Wellington B Mk X: Final variant for Bomber Command, based on definitive Mk III but powered by 1,615 hp Bristol Hercules VI or XVI engines. Improved DTD646 aluminium alloy used throughout, with better strength-weight ratio, allowing gross weight to increase to 36,500 lb (16,556 kg). Two Mk IIIs with Hercules VI engines flown as prototypes (Type 440) at Blackpool. Production (Type 448) totalled 1,369 at Blackpool and 2,434 at Chester. Served in the Bomber Command Vickers Wellington squadrons that remained operational until October 1943; and in others on special duties and in Middle and Far East through 1944. Vickers Wellington production ended with delivery of a B Mk X at Blackpool on October 25, 1945, bringing overall total built to 11,461 - the most multi-engine aircraft of any single type ever built in Britain.

WELLINGTON MkS SUMMARY

Type	Number Built	Remarks
Prototype	1	A prototype twin-engine bomber with four-man crew built to specification B.9/32 using aluminium geodetic construction with fabric covering throughout. Powered by two 915 hp (683 kW) Pegasus X engines with variable pitch propellers giving a top speed of 250 mph (402 km/h). Provision for single handheld .303 in (7.7 mm) machine guns in front, rear and dorsal positions as well as 4,500 lb (2,041 kg) of bombs.
Mk.I	181	A total redesign of the prototype featuring a new longer, deeper profile fuselage with raised tailplane position, five or six-man crew and retractable tail wheel. Pegasus XVIII engines of 1,050 hp (783 kW) each with constant speed propellers gave a slightly improved top speed. Vickers hydraulically powered turrets were fitted front and rear with one or two Browning .303 in (7.7 mm) guns in the front and two in the rear.
Mk.Ia	183	Nash and Thompson FN5 turrets replaced the Vickers turrets front and rear. A retractable FN25 lower "dustbin" turret was also fitted, but it was later removed after operational experience had proven it to be useless. Each of these turrets was armed with two Browning .303 in (7.7 mm) guns. The airframe and undercarriage were strengthened to cope with increased weight.
Mk.Ic	2,685	The definitive Mk.I incorporated improved electrical and hydraulic systems to cure numerous problems, notably with the turrets. The dustbin turret was deleted and replaced with single beam Browning .303 in (7.7 mm) guns either side of the rear fuselage. Bomb bay modifications on 138 aircraft allowed two 1,610 lb (730 kg) torpedoes to be carried. Others were modified to carry the 4,000 lb (1,814 kg) "block-buster" bomb introduced on the Mk.II.
DWI	4 (*+11)	This highly unusual minesweeping variant featured a 48 ft (14.63 m) coil suspended from the nose, tail and wings of a Mk.I Wellington. A 120 hp (90kW) generator driven from a fuselage-mounted engine energized the ring creating a powerful magnetic field. As the aircraft passed low over the sea, this field would simulate that of a large ship and trigger any magnetic mines lurking below the surface.
Mk.II	401	Rolls Royce Merlin Xs of 1,145 hp (854 kW) replaced the Pegasus engines of the Mk.Ic. This change required a larger tailplane, which only partially cured some instability. Mk.IIs were the first Wellingtons modified to carry the 4,000 lb (1,814 kg) "block-buster" bomb.
Mk.III	1,519	Bristol Hercules III or XI engines of 1,370 hp (1,022 kW) gave a useful performance boost to this version. Other changes included the Mk.II's tailplane, extra armour, larger and bullet proofed fuel tanks as well as barrage-balloon wire cutters on the wing leading edges. An FN20 four-gun rear turret was standard on all but the first few Mk.IIIs. Some aircraft were modified to carry two 1,610 lb (730 kg) torpedoes.
Mk.IV	220	Similar to the Mk.Ic except for the engines, which were Pratt and Whitney Twin Wasp R-1830s of 1,200 hp (895 kW) each. Not a success due to overheating and oil leaking problems.
Mk.V	3	A high altitude bomber featuring turbocharged Bristol Hercules HE8MS engines. Numerous problems with the engines led to it soon being dropped in favour of the Merlin powered Mk.VI. Other details similar to the Mk.VI.

Mk.VI	64	A high altitude bomber with Rolls Royce Merlin 60 series two-stage supercharged engines of 1,600 hp (1,194 kW) each. As it was intended to operate at 34,000 ft (10,363 m), a pressure cabin was provided for the four-man crew. Its only defensive armament was a modified four-gun rear turret, which could be sighted from a periscope in the pressure cabin and remotely controlled. A very troubled development was finally ended before it could see service by the introduction of better performing high altitude De Havilland Mosquitoes.
Mk.VIII	394	This maritime patrol version of the Mk.Ic featured Mk.I ASV radar with dipole aerials mounted above and each side of the fuselage and below the wings. Offensive armament was usually two or four 420 lb (190 kg) depth charges, although up to 4,500 lb (2,041 kg) of ordnance could be carried. Mines or two 1,610 lb (730 kg) torpedoes were also employed.
		In those aircraft operating at night, a powerful Leigh Light searchlight was installed in the old "dustbin" retractable lower gun turret. This light was driven from the fuselage-mounted generator developed for the DWI minesweeper. A glazed nose for the Leigh Light operator replaced the front turret.
Mk.IX	*?	An unknown number of old Mk.I-IV Wellingtons were converted into transport aircraft at various places and designated as Mk.IXs. (See Mk.XV).
Mk.X	3,803	A development of the Mk.III bomber with more powerful Bristol Hercules VI or XVI engines of 1,675 hp (1,250 kW). An improved high-strength alloy used on the geodetic structure allowed heavier loads to be carried. A number were built as T Mk.X dual control trainers.
Mk.XI	180	A daytime maritime patrol aircraft similar to a Mk.VIII but based on the Mk.X rather than Mk.Ic airframe and engines. More sensitive centimetric Mk.III ASV radar was fitted, with a chin-mounted radome housing the scanner. The front turret was deleted and an observation dome fitted in its place, this was sometimes fitted with two handheld .303 in (7.7 mm) Browning guns. Offensive armament was depth charges or two 1,610 lb (730 kg) torpedoes. No Leigh Light was carried.
Mk.XII	58	This was a nighttime maritime patrol version of the Mk.XI. Similar to the Mk.XI except for the addition of the retractable Leigh Light and the lack of torpedo carrying equipment.
Mk.XIII	844	Similar to the Mk.XI except for the fitting of older Mk.II ASV radar. This radar used the Mk.I ASV's drag inducing dipole masts and had similar performance, but was much more reliable. The front turret was reintroduced but no Leigh Light was fitted.
Mk.XIV	841	Similar to the Mk.XII, but was fitted with blast plates and rails under the wings to allow it to carry eight rockets with either 25 lb (11 kg) AP or 60 lb (27 kg) HE warheads.
Mk.XV	*20	A transport conversion of the Mk.Ia airframe, similar to the Mk.IX but modified by Vickers themselves. Unnecessary equipment was removed, including the front and rear turrets, which were faired over. It was able to carry sixteen troops up to 2,200 miles.
Mk.XVI	*51	Similar to the Mk.XV but based on the Mk.Ic airframe.
Mk.XVII	*9	A Mk.XI converted into a Mosquito nightfighter crew trainer. Armament was deleted and AI radar fitted into the nose.
Mk.XVIII	80	Similar to Mk.XVII, but with seating for four pupils and an instructor.
Mk.XIX	*?	A number of T Mk.X trainers were fitted with improved equipment and designated as Mk.XIXs.

SHORT STIRLING - The Short S.29 Stirling was designed under the direction of Arthur Gouge as Short's response to Specification B.I2/36, which defined a heavy bomber to meet Operational Requirement OR. 40 drawn up by the Air Staff in 1936. Two prototypes ordered 1937, for competitive evaluation with Supermarine Type 316. Powered by four 1,150 hp Bristol Hercules Is, the first Short Stirling, L7600, flew at Rochester on May 14, 1939, but was damaged beyond repair when u/c collapsed on landing. Second prototype, L7605, flew on December 3, 1939, by which time Shorts had flown a 1/2-scale Short Stirling and first Short Stirling production order had been placed.



Stirling I: Initial production version, with orders eventually totalling 267 by Shorts at Rochester, 266 by Short & Harland at Belfast and 191 by Austin Motors at Longbridge. First production Short Stirling flown on May 7, 1940, at Rochester, and first at Belfast on October 28, 1940. Initial aircraft were Series 1 (320 built) with 1,375 hp Hercules II engines and armament of eight 0.303-in (7.62-mm) m/gs in FN5A nose, FN4A tail and FN25A retractable ventral turrets. Bomb-load was up to 14,000 lb (6,350 kg), and crew of seven carried. Found operationally unfit, first ten Srs 1s classified as Short Stirling Trainers.

Short Stirling I Srs 2 (117 built) introduced 1,590 hp Hercules XI engines with two-speed superchargers in Short-designed powerplants, and had two beam m/gs in FN55A mounts to replace ventral turret. The Srs 3 (307) had Hercules XIs in Bristol-designed powerplants and FN7A or FN50A two-gun dorsal turret in place of beam guns; some aircraft (perhaps Srs 4) later had provision for a remotely-controlled FN64A ventral turret, and an FN20A rear turret. Short Stirling Is also used 1,400 hp Hercules III and 1,420 hp Hercules X engines. Deliveries began late 1940 to No 7 Sqn, which flew first operation on night of February 10/11, 1941. No 7 later became only Short Stirling unit in Pathfinder Force; all other Short Stirling bomber squadrons, comprising four by end-1941, three more in 1942 and further four in 1943, served in No 3 Group, Bomber Command; seven of these squadrons flew Short Stirling Is.

Stirling I Specification

Wingspan:	99' 1" (30.2m)
Length:	87' 3" (26.59m) MkV - 90' 7" (27.61m)
Height:	22' 9" (6.93m)
Empty Weight:	46,900 Pounds
Maximum Weight:	70,000 Pounds
Powerplants:	Four 1,500 hp Bristol Hercules XI air cooled radial engines
Guns:	Eight .303 Browning machine guns, nose turret (2) dorsal turret (2), tail turret (4)
Bombs:	17,000 Pounds of bombs
Maximum Speed:	255 mph
Service Ceiling:	16,500 feet (maximum load)
Range:	2,330 miles
Crew:	Eight

Stirling I, 149 Sqdn



Stirling II: Proposed Canadian production version to be built at St Hubert, PQ, by Canadian Associated Aircraft, with 1,600 hp Wright R-2600-A5B Cyclone engines. Three Mk I airframes completed as Mk II prototypes in UK, with first flight at Rochester August 1941. Planned production of 140 in Canada cancelled, as also was proposed Mk II production at new shadow factory operated by Shorts at South Marston, near Swindon. One Mk II later converted to Mk III prototype.

Stirling III: Improved Mk I Srs 3 with 1,615 hp Hercules VI (and, later, Hercules XVI) engines in powerplants with under-slung oil coolers. Two Mk Is converted to Mk III prototypes (one having previously served as third Mk II), the first flying at Rochester in June 1942. Production switched from Mk'I to Mk III late 1942 and 1,037 built (266 by Shorts at Rochester/ South Marston, 342 at Belfast and 429 by Austin). A few Mk Is also converted to Mk Ills. Standard armament comprised FN5A nose, FN50A dorsal and FN20A tail turrets; provision for FN64A ventral turret, seldom fitted. Installation of H2S with distinctive ventral radome soon became standard on Mk Ills, and in early 1944 aircraft in at least five squadrons fitted with additional 0.50-in (12.7-mm) gun in aft escape hatch for rear defence. Mk III operations began in February 1943 and this variant used by nine squadrons.

Max speed, 200 mph (322 km/h) at 15,000ft (4,572 m). Time to 15,000 ft (4,572 m), 30min. Ceiling, 20,000 ft (6,096 m). Range, 590 mi (949 km) with 14,000 lb (6,350 kg) bomb-load. Empty weight, 44,000 lb (19,504 kg). Gross weight, 70,000 lb (31,751 kg). Span, 99 ft 1 in (30.2 m). Length, 87 ft 3 in (26.59 m). Wing area, 1,322 sq ft (122.81 m²).

Stirling III Specification

Wingspan:	99' 1" (30.2m)
Length:	87' 3" (26.59m)
Height:	22' 9" (6.93m)
Empty Weight:	46,900 Pounds
Maximum Weight:	70,000 Pounds
Powerplants:	Four 1,635 hp Bristol Hercules VI or XVI air cooled radial engines
Armament:	Nine .303 Browning machine guns, nose turret (2), dorsal turret (2), tail turret (4) underfuselage hand held mount (1) later removed
Bombs:	17,000 Pounds of bombs
Maximum Speed:	270 mph
Service Ceiling:	16,500 feet (maximum load)
Range:	2,330 miles
Crew:	Seven

Stirling III, 90 Sqdn



Stirling III, 620 Sqdn



Stirling IV: Adaptation of Mk III as glider tug and/or paratroop transport. Nose and dorsal turrets removed. For glider-towing, fitted with coupling on stirrup mount round tail turret (which sometimes removed). As paratrooper carrying 20, had glazed cupola in place of tail turret, and no coupling; exit hatch in rear fuselage aft of bomb cells. One prototype of each version converted from Mk IIIs, flown in August 1943. Production of Mk IIIs thereafter switched to Mk IVs and delivery commenced in last quarter of 1943.

Production totals were ten by Short and 450 by Short & Harland, with at least a further 130 Mk IIIs converted. Deliveries began early 1944 and operational use, on SOE sorties, started by March; two squadrons in UK and one in North Africa flew Mk IVs (and some Mk IIIs) for this purpose. Eleven other squadrons eventually flew Short Stirling IVs in troop-transport and GT role; as a tug, could tow one Hamilcar, two Horsas or up to five Hotspurs.

Stirling IV Specification

Wingspan:	99' 1" (30.2m)
Length:	87' 3" (26.59m)
Height:	22' 9" (6.93m)
Empty Weight:	43,200 Pounds
Maximum Weight:	77,000 Pounds
Powerplants:	Four 1,635 hp Bristol Hercules XVI air cooled radial engines
Armament:	Four .303 Browning machine guns in tail turret
Bombs:	17,000 Pounds of bombs
Maximum Speed:	270 mph
Service Ceiling:	19,000 feet (maximum load)
Range:	2,360 miles
Crew:	Five

Stirling IV, 620 Sqdn



Stirling IV



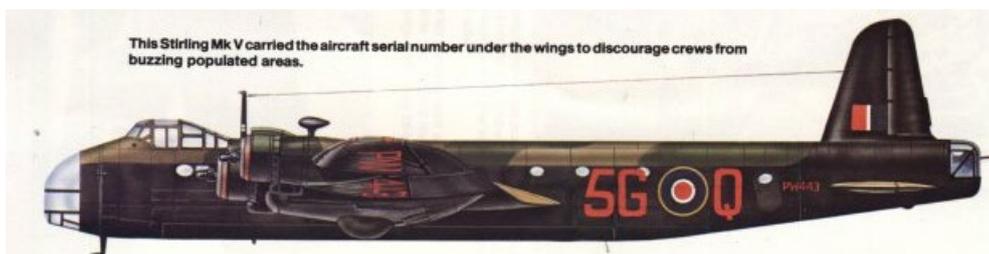
Stirling V: Unarmed personnel, cargo and vehicle transport derivative of Mk III, to carry 20 paratroops, 40 troops, two jeeps with trailers or 12 stretchers and 14 sitting wounded. Lengthened nose fairing, hinged to give access to cargo compartment, and large loading door in starboard side. One prototype conversion of Mk III, first flown at Rochester August 1944, and 160 built at Belfast (ending November 1945) principally to be used by Tiger Force in Far East. Deliveries began September 1944, and five squadrons flying Mk Vs when war with Japan ended.

Max speed, 280 mph (451 kmlh) at 6,000 ft (1,829 m). Gross weight, 72,000 Ib (32,659 kg). Span, 99 ft 1 in (30.2 m). Length, 90 ft 7 in (27.61 m).

Stirling V Specification

Wingspan:	99' 1" (30.2m)
Length:	90' 7" (27.61m)
Height:	22' 9" (6.93m)
Empty Weight:	43,500 Pounds
Maximum Weight:	70,000 Pounds
Powerplants:	Four 1,635 hp Bristol Hercules XVI air cooled radial engines
Armament:	None
Maximum Speed:	280 mph
Service Ceiling:	18,000 feet (maximum load)
Range:	3,000 miles
Crew:	Five

Stirling V, 299 Sqn



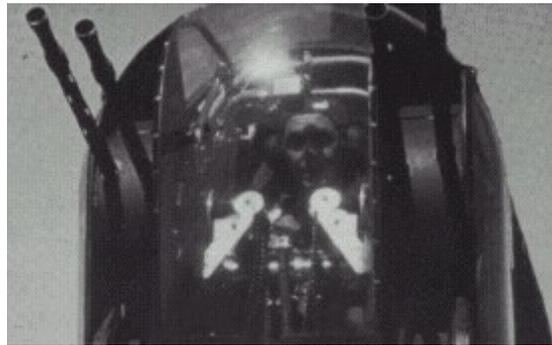
GUN TURRETS

Stirling - Tail Turrets

Nash and Thompson FN4 fitted to Stirling I (King Peter of Yugoslavia inspecting)



Frazer Nash FN20A fitted to later Stirlings



Stirling - Nose Turrets

The Stirling I's and III's were equipped with the Frazer Nash FN5A nose turret. This is a rare FN5 turret undergoing restoration at RAF Wyton, as part of The Stirling Project, during 2004.



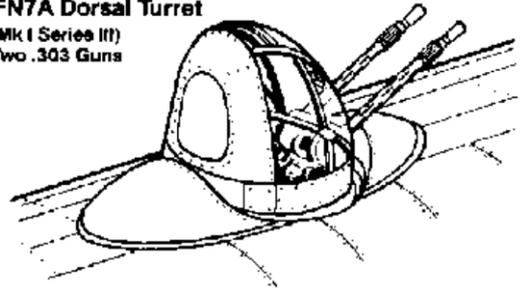
In Stirling IV's and V's, the turret was replaced by a Perspex nose cone.

Stirling – Mid-Upper Turrets

The FN7A turret was fitted to Stirling I's.



FN7A Dorsal Turret
(Mk I Series II)
Two .303 Guns

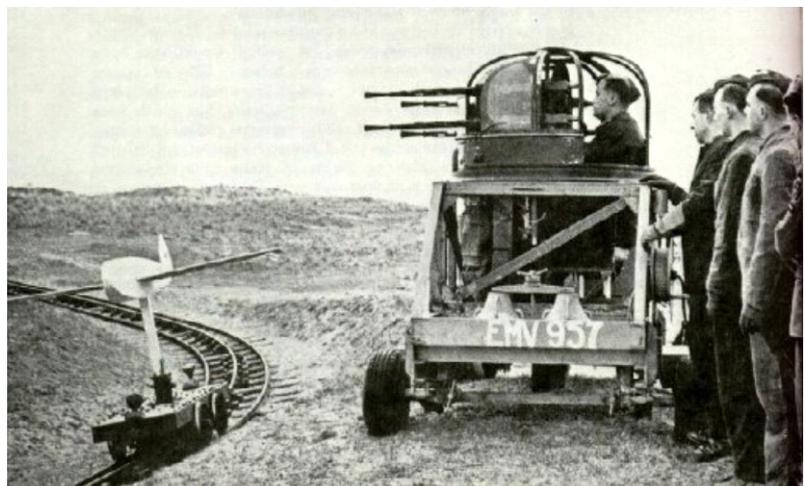


The FN50 turret was fitted to late Stirling I's and Stirling III's and was less cramped than the earlier turret. (This restored example is for a Lancaster but the small picture is on a Stirling III)



Gunnery Training

from a Gunnery Course Manual used at No. 2 Bombing and Gunnery School - Mossbank, Saskatchewan



WESTLAND LYSANDER – (This account by Steve "Pips" Travell) The Lysander was one of the first British aircraft to be designed expressly for the army co-operation role. Army co-operation had become an important part of RAF operations during the 1920's and 30's. During the early 1930's, the army co-operation role was being carried out by variants of Hawker's ubiquitous Hart light bomber biplanes – the Hawker Hector, and also the Hawker Audax and Hardy. In 1934, the Air Ministry issued Specification A39/34 for a replacement for the Hawker Hector biplane. Three companies, Hawker, Bristol, and Avro, were on the short list. Bristol submitted the Type 148 low wing monoplane; Hawker yet another Hart variant, and Alliott Roe showed his Avro 670. Westland was eventually included after some argument at the Air Ministry and submitted a high-wing monoplane design from "Teddy" Petter. The Bristol and Westland designs were selected as the most promising, and each company was given an order for two prototypes.

The Bristol Type 148 was a low wing monoplane based loosely on their Type 146 single-seat fighter design. It was similar in layout to the later North American Texan / Harvard trainer, but with higher performance, and proved to be an outstanding design. The Westland P.8 was Petter's second design (his first was reportedly rejected because the Air Ministry considered him to be too inexperienced), and he had spent much time and effort finding out from the squadrons themselves what their main requirements were. His findings led him to believe that good forward view, easy flying characteristics, good low speed control, and ability to operate from small spaces would be the desired characteristics of the new aircraft. The high wing with full slots and flaps was a direct result of this study. In October, 1936, the Air Ministry selected the Westland aircraft, and allocated the name Lysander (all RAF army co-operation aircraft used classical names).

The first prototype (K6127) made its maiden flight on June 15, 1936 at Boscombe Down. After further handling trials at Martlesham Heath (where its short take-off and landing capabilities became obvious), it returned to Westland's Yeovil airfield where much effort was spent on sorting out excessive trim changes during acceleration and deceleration.

In June, 1938, the Lysander Mk.I entered service with No 16 Squadron at Old Sarum, where it was used for message dropping and artillery spotting exercises. It was a very pleasant aircraft to fly and was well liked by the crews. During 1938 and 1939, seven RAF squadrons received Lysanders (mostly replacing Hawker Hectors), and by the time that WWII broke out, the new Mk.II (with Bristol Perseus engines) had

replaced most of the older Mk.I's. Many of the older Lizzies were sent to the Middle East.

When the Second World War began, four Lysander squadrons were sent to France as part of the British Expeditionary Force (BEF). There they waited through the Phoney War until the hammer of the Blitzkrieg fell upon France and the Low Countries in May 1940. Lysanders were quickly in action performing spotting and bombing tasks, and suffered serious losses against the well-organised Luftwaffe forces. The crews fought bravely, but the Lysander squadrons were decimated. Despite the odds, some crews pulled off astounding successes. In one sortie, Flying Officer Doidge shot down a Henschel Hs 126 while his rear-gunner settled a Stuka on May 22. Pilot Officer Dexter and his gunner, AC Webb, each scored against Messerschmitt Bf 109's on May 21 in a half hour running battle over Arras. More typical were the supply dropping missions to the defenders of Calais. In one particular mission, 16 Lysanders and Hectors sortied. Only two returned. On another, the Lysanders were attacked by over-eager Spitfire pilots.

The survivors carried out a massive amount of bombing sorties against German motor columns, losing many of their number to the murderous German Flak. Many Lysanders were lost on the ground to Luftwaffe strikes - damaged ones were set alight by their own crews as they retreated towards the coast. About 174 Lysanders went to France in seven squadrons. Eighty-eight were destroyed in air combat, about 30 were destroyed on the ground, and around 120 crew members were lost.

After the Armistice, Lysanders were assigned more pedestrian duties to perform, such as anti-aircraft calibration, balloon spotting, and more importantly, air-sea rescue, a task that they performed well. Curtiss Tomahawks began to replace Lysanders in the army co-operation role from early 1941.

One year after leaving France, tail between legs, the Lysander returned with menace. A clandestine organisation, Special Operations Executive (SOE) had a requirement to transport "packages" and passengers into and out of occupied France. In August 1941, No. 138 (and later 161) (SD) Squadron was formed to fly night time missions into France. Leaving from Newmarket or the secret Tempsford Aerodrome in the late afternoon, the matt black Lysanders would refuel at Tangmere, Lympne, or Hawkinge, and leave for the Continent as night fell. When it became apparent that the Lizzie needed to fly longer missions into France, the Mk.III (SD) and Mk.IIIa (SD) were modified from the Mk.III and Mk.IIIa by adding an under-fuselage fuel tank. A

ladder was also fitted for easy access to the rear cockpit for the SOE operatives. It is simply astounding how the pilots navigated to small fields marked by three torches held by the fighting men and women of la résistance. At least one pilot found that the torches were held by Germans. Wounded in the neck, Sqdn Ldr Conroy made a hurried takeoff under machinegun fire, and flew back to Tempsford.

Around 400 sorties were carried out up until the end of 1944. 293 "passengers" were delivered, and around 500 brought back.



Lysanders served with distinction in other theatres of battle. The first Lysander squadron in the Mediterranean theatre (No. 208 (AC) Squadron) arrived in mid-1939. They spent much of 1939 and 1940 flying artillery spotting and reconnaissance missions over the North African desert. When the Italians, and then the Germans, attacked Greece, nine Lysanders were hurriedly dispatched via Crete. They were unable to do much more than withdraw in the face of the Axis advance. Three were lost to Bf 109's before they escaped from Greece. No. 6 Squadron used its Lizzies for policing duties in Palestine, before moving to the Western Desert for somewhat more difficult action over Cyrenaica, providing support for the besieged fortress of Tobruk. Both squadrons gave up their Lizzies for Hurricanes - No. 208 in June '41, and "Shiny Six" in early '42.

Lysanders of two squadrons (No. 28 Sqdn (AC) and No. 20 Sqdn (AC)) served in the China-Burma-India (CBI) theatre. They were involved in the retreat through Burma, and carried out close-support missions. Several were lost due to losing their own bombs during takeoffs on the very rough landing strips. No. 20 were the last Lysander squadron to use their aircraft in anger, and only changed to Hurricane IID

“tankbusters” in mid-1943. They were part of the relief of Imphal where the Japanese advance on India was finally halted.

Lysanders served with some foreign air forces. The Canadians were the keenest adopters of the type, and after taking delivery of R2047 as a pattern aircraft in January 1940, built 75 Mk.II's and 150 Mk.III's. The Canadian Lysanders had improved cockpit heating systems due to the colder weather in Canada. Most served in Canada as target tugs and as communications aircraft. Some were sent to the UK for use by the Royal Canadian Air Force squadrons. A single Lysander was purchased by France (according to anecdotal reports as some recompense for a French test pilot breaking one of the undercarriage legs on a prototype). In 1939, 36 Lysanders went to the Türk Hava Kuvvetleri (Turkish Air Force), and six more to the Aer Chór na hÉireann (Irish Air Corps). The Royal Egyptian Air Force took 20; 18 new Mk.II's, an ex-RAF Mk.I, and a Mk.III for their No. 1 (AC) Squadron.

Finland's Ilmavoimat ordered seventeen Lysanders, but only twelve were delivered (during 1940). One was lost during the ferry flight. They were used during the Continuation War for reconnaissance, photographic survey, pamphlet and message drops, and ground attack. Most of them served in Lentolaivue 16. The Aviação Militar Portuguesa (Portuguese Air Corps) received eight Lysanders by ship in September 1943. Some were reportedly supplied to the South African Air Force, but this is almost certainly incorrect. The author has found no evidence that supports this claim. Lastly, three went to the United States Army Air Force, probably for evaluation.

The last of the breed was delivered from Westlands in January 1942 and production ceased in Canada in late 1942. By the end of the war, Lysanders were only in large-scale use in Canada, and were fairly rare birds elsewhere. All RAF Lysanders were assembled for scrapping in January, 1946. Some examples operated as crop sprayers post-war. The last operational use of Lysanders was by No. 3 Squadron Royal Egyptian Air Force against the Israeli Air Force in the 1948 war with Israel.

LYSANDER VARIANTS SUMMARY

Type	Number Built	Remarks
P.8 (prototype)	2	A two-seat high-wing monoplane of metal construction mainly covered in fabric. Powered by Bristol Mercury XII air-cooled radial engine of 890 hp (655 kW). Wing optimized for low-speed flight, and short takeoff and landing (STOL); braced with two pairs of struts; equipped with trailing edge flaps and leading edge slats (both automatically operated). Large fixed landing gear with spats (fairings). Each fairing contained a landing light, a Browning .303 (7.7 mm) machine gun and fittings for a stub wing. Stub wings could be fitted with bombs, supply containers, or other stores. Rear cockpit had flexible mounting with a 0.303 (7.7 mm) Lewis machinegun.
Mk 1	187	Similar to prototype.
Mk II	517 plus one converted Mk.I	Similar to Mk.I, but powered by Bristol Perseus XII air-cooled sleeve-valve radial of 905 hp (666 kW).
Mk.III	517 plus 25 converted from Mk.II	Similar to Mk.II, but powered by Bristol Mercury XX or 30 air-cooled radial of 870 hp (640 kW).
Mk.IIIa	347	Similar to Mk.III, but twin Colt-Browning 0.303 (7.7 mm) on flexible mounting in rear cockpit, armoured floor and sides in rear cockpit, and strengthened rear fuselage.
Mk.III (SD) & Mk.IIIa (SD)	At least 25 (modified from Mk.III and Mk.IIIa)	Special Duties modification of Mk.III and Mk.IIIa. Fitted with 150 gallon (682 l) fuel tank under fuselage, ladder on port side of rear cockpit, improved radio equipment, and rear armament removed. Accommodation for two passengers.
Mk.IIIa.TT (later TT.MkIIIa)	100	Similar to Mk.IIIa, but no armament. Fitted with target towing equipment (drogue attachments and winch).

Specifications

Model	Mk.I	Mk.II	Mk.III
First Flight	Aug. 8, 1935	20-May-38	Unknown
Into Service	Jun-38	Late 1938	Aug-40
Crew	Two: pilot, and rear-gunner	Two: pilot, and rear-gunner	Two: pilot, and rear-gunner. Note: SD Lysanders usually had no rear-gunner.
Dimensions			
Span	50 ft (15.2 m)	50 ft (15.2 m)	50 ft (15.2 m)
Length	30 ft 6 in (9.29 m)	30 ft 6 in (9.29 m)	30 ft 6 in (9.29 m)
Height	14 ft 6 in (4.42 m)	14 ft 6 in (4.42 m)	14 ft 6 in (4.42 m)
Wing Area	260 sq ft (24.2 sq m)	260 sq ft (24.2 sq m)	260 sq ft (24.2 sq m)
Powerplant			
Type	Bristol Mercury XII air-cooled radial	Bristol Perseus XII air-cooled sleeve-valve radial	Bristol Mercury XX or 30 air-cooled radial
Cylinders	9-cylinder	9-cylinder	9-cylinder
Cubic Capacity	1519	??	1519
Horsepower	890 hp (655 kW)	905 hp (666 kW)	870 hp (640 kW)
Weights and Loads			
Weight (empty)	4,065 lb (1,840 kg)	4,160 lb (1,890 kg)	4,365 lb (1,980 kg)
Weight (loaded)	5,920 lbs (2,690 kg)	6,015 lbs (2,730 kg)	6,318 lbs (2,870 kg)
Performance			
Maximum speed at altitude	219 mph at 10,000 ft (352 km/h at 3,050 m)	230 mph at 10,000 ft (370 km/h at 3,050 m)	212 mph at 5,000 ft (341 km/h at 1,525 m)
Stalling speed	54 mph (86.9 km/h)	55 mph (88.5 km/h)	56 mph (90.1 km/h)
Climb to 10,000 ft	6.9 min	6.9 min	8 min
Service ceiling	26,000 ft (7,920 m)	26,000 ft (7,920 m)	21,500 ft (6,550 m)
Range	600 miles (966 km)	600 miles (966 km)	600 miles (966 km)
Take off run to 50 ft altitude	250 yd (229 m)	245 yd (224 m)	305 yd (279 m)
Landing run from 50 ft altitude	310 yd (283 m)	330 yd (302 m)	340 yd (311 m)
Armament and Equipment			
Radio Set	TR.9D or TR.1133	TR.9D or TR.1133	TR.9D and R.3060; or TR.1133; or TR.1091; or R.1082 and T.1083. Plus R.3002
Gun Sight	Pilot: Mk.II reflector gun sight plus ring and bead gun sight. Rear gunner: Mk.I reflex gunsight.		As for Mk.I and Mk.II, except: Rear gunner: Mk.IIIA reflex gunsight.
Bomb Sight	Unknown, mounted below rear cockpit, on port side.		Unknown, mounted below rear cockpit, on port side.
Offensive Armament	2x Colt-Browning 0.303 (7.7 mm) machineguns in wheel spats (500 rpg each). On removable stub wings fixed to wheel spats, and fuselage carrier:		
	16x 20 lb (9 kg) Mk.I bombs *, or 16x 11.5 lb (kg) Mk.I or Mk.II practice smoke bombs*, or 16x Mk.I aircraft reconnaissance flares*; or		
	4x 112 lb (50.8 kg) Mk.VII bombs (plus four smoke markers on fuselage carrier), or 4x 120 lb (54.4 kg) Mk.I bombs; or		
	2x 250 lb (113 kg) bombs (plus four smoke markers on fuselage carrier), or 2x dinghy containers (plus four smoke markers on fuselage carrier), or 2x SCI smoke generators, or 2x Mk.VB supply dropper. or 2x LC 17/30 lb small bomb canisters.		
Defensive Armament	1x 0.303 (7.7 mm) Lewis Mk.IIIG or Lewis Mk.IIIE or Vickers K machinegun on flexible mounting in rear cockpit (eight 97-round drums for Lewis).	2x Colt-Browning 0.303 (7.7 mm) on flexible mounting in rear cockpit. Note: SD Lysanders usually had no armament in rear cockpit.	

AIRFIELDS

Church Fenton, Yorkshire concrete runways ad 2 hangars

64 Squadron, 3 September 1939 – 1 May 1940

RAF Church Fenton was opened on 1st April 1937, while it was still being constructed. It was built as a result of the RAF's massive pre-war expansion programme, in response to Hitler's move to increase the strength of the German armed forces. The base was designed as a fighter base from the outset, with the task of protecting the industrial regions of Leeds, Bradford, Sheffield and Humberside. It had decoy fields at Hambleton and Kelfield, both of which have long since vanished. It also had a scatter field at Sherburn-in-Elmet. The runway is still there, but its' use has now changed to a brake pad test-track. Sherburn Aero Club is on a grass strip next to the old wartime runway.

Initially, there was a grass strip runway, and only two shortened 'C' type hangars (the two main hangars which remain). The first residents of the airfield were 72 and 213 Squadrons, flying Gloster Gauntlets and Gladiators. An early "claim to fame" for Church Fenton is that the Gladiators that moved in shortly after opening were the first to be delivered to the RAF. These were the front line fighters of the RAF at the time, yet they were still biplanes (albeit fast and reasonably advanced) - the RAF was only just beginning to move into the monoplane era

During the period of WWII, the airfield was home to many squadrons and aircraft types, such as Spitfires, Hurricanes, Mosquitoes, Blenheims, Beaufighters, Typhoons and Mustangs.

From the start of the war, until August 1940, Church Fenton was a sector station in 13 Group, being home to both defensive and offensive squadrons. Because of Church Fenton's remoteness from southern England, it had a limited part to play in the Battle of Britain, being used as a base for battle-scarred fighter squadrons to rest and work back up to operational status. Its main job was being part of the defensive network of fighter airfields that protected the industrial cities of northern England from attack by German bombers. Concrete runways had been laid by the end of 1939.

With the development of primitive airborne radar allowing night intercepts to be made more successfully, a need for specially trained aircrew was identified. On 10

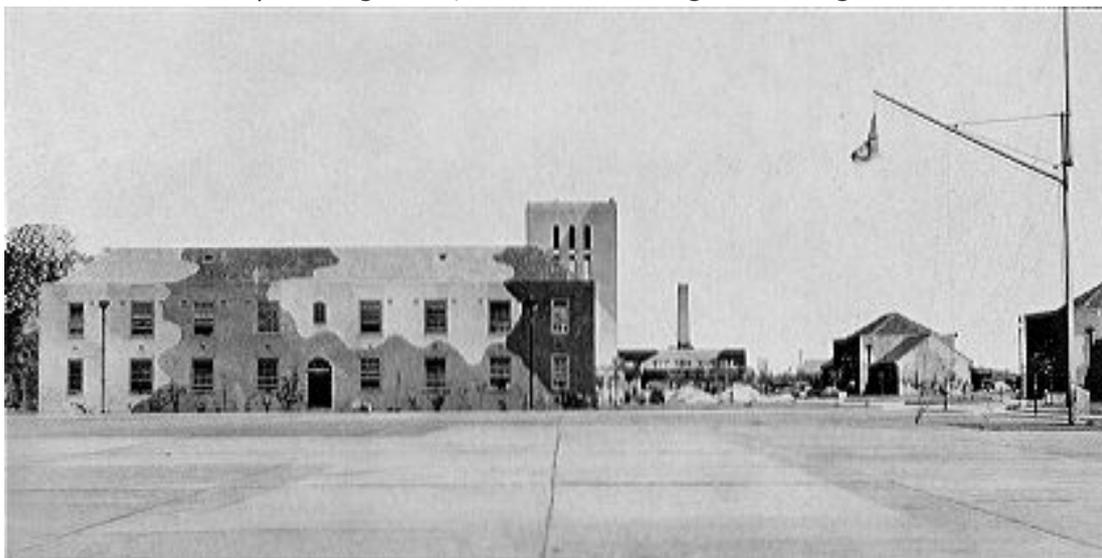
August 1940 Church Fenton was transferred to 12 Group, and with this its' role changed to the training of night-fighter aircrew. The first night-fighter Operational Training Unit (54 OTU) was then formed at Church Fenton. 54 stayed at Church Fenton until May 1942, when it moved to RAF Charter Hall.

Between May 1942 and the end of the war in Europe in May 1945, the station was a sector station in 12 group, employed in an offensive/defensive role - offensive sorties being carried out on targets in northern Europe, and defensive sorties aiming to stop local cities being bombed by German intruders.

Control tower (modified since WWII)



The Church Fenton parade ground, with a camouflaged building and the water tower



West Raynham, Norfolk 2 concrete/tarmac runways, 4 hangars

101 squadron 9 September 1939 - 6 July 1941

This aerodrome was an expansion scheme airfield located five miles south-west of Fakerham and two miles west of West Raynham village. The camp was situated to the northwest of the landing ground with the standard Type C hangars arranged in an arc fronting the bombing circle. Permanent buildings backed up against the Coxford to Kipton Ash road, which was eventually closed to public use. Built 1938-39, No. 2 Group moved in No. 101 Squadron and its Blenheims from Bicester in May 1939. No. 101 had the station all to itself as the reserve squadron of No. 2 Group until a target-towing flight was formed in February 1940. In April No. 76 Squadron was reformed with the prospect of becoming a second operational Blenheim unit but the crisis in France brought about a hasty disbandment after only three weeks. A victim of the Blitzkrieg, No. 139 Squadron came to recuperate for eleven days and, after its departure for Horsham St Faith, No. 18 Squadron, which had similarly suffered, arrived on June 13.

No. 101's Blenheims went into action for the first time on July 4, 1940, single aircraft attempting to attack oil storage tanks in German ports. It continued to fly sorties from West Raynham for a year during, which time it lost 15 Blenheims in some 610 sorties. The attrition in Blenheim squadrons was said to be behind Bomber Command's decision to move one of No. 2 Group's squadrons to No. 3 Group and convert it to Wellingtons, No. 101 being selected for this transfer, which entailed saying goodbye to West Raynham and moving to Oakington. No. 2 Group was then able to retrieve No. 114 Squadron from Leuchars where it had been on loan to Coastal Command. The squadron moved its Blenheims into West Raynham, where they remained for over a year before being sent to North Africa following the 'Torch' invasion. While based at West Raynham, No. 114, like all other No. 2 Group Blenheim squadrons, was often detached to other stations for bombing or shipping strike activities. The squadron ceased operations in August 1942 to convert to the Blenheim V, which it was to use in North Africa. No. 18 Squadron returned to West Raynham during that month to be similarly re-equipped for the North African venture.

While the Blenheim squadrons were thus engaged with new aircraft, No. 180 Squadron was formed to fly Mitchells, which were flown from the larger airfield at Great Massingham, Raynham's satellite. No. 342 Squadron French-manned to fly

Bostons, was also formed at West Raynham in the spring of 1943 before moving on to Sculthorpe for operations.

Hard runways were then put down but, in contrast to most bomber airfields, there were only two and to build these it was necessary to extend the boundaries of the station, notably to the west where a country road was closed. The runways, built from May-November 1943, were 04-22 at 2,000 yards and 10-28 at 1,400 yards. During 1940-41, 36 pan-type standings had been put down although only 23 of these remained useable after the runways and perimeter track were built. Fourteen loop-type standings were added during the refurbishment programme, Allnott Ltd being involved in this construction programme. The bomb stores were off the southeast corner of the airfield. Additional accommodation raised the station's facilities to 2,456 for males and 658 for females.

No. 100 Group took over the station in December 1943 bringing in two Mosquito equipped night fighter squadrons to pursue bomber support operations in enemy air space. These were Nos. 141 and 239, which flew Serrate patrols and Ranger sorties until the end of hostilities. No. 141 then transferred to Little Snoring in July 1945 while No. 239 was disbanded at West Raynham the same month. Bomber Command operations carried out from this station during the war claimed 86 aircraft: 56 Blenheims, 29 Mosquitos and a Beaufighter.

After the war, West Raynham was first home to the Central Fighter Establishment, concerned with tactics and trials involving several small units, which flourished at the station until 1962. (In January 1950 the land which had been taken for hardstandings, across the eastern side of the public road had been relinquished and sold.) From August 1960 the station also hosted fighter squadrons, Javelins and then Hunters, the later under No. 38 Group. After the Hunters left in the summer of 1969, Canberras appeared and remained until the end of 1975 when West Raynham was finally closed for flying. Bloodhound missiles for air-to air defence were then sited on the station to defend East Anglian military installations. These were removed in 1991 and West Raynham went the way of so many surplus RAF installations being closed in July 1994.

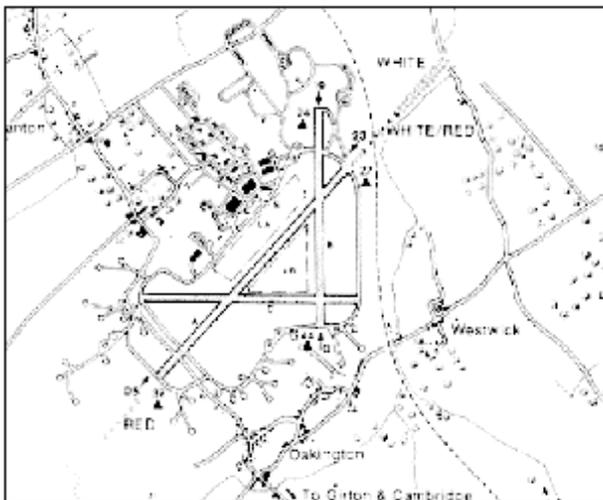


West Raynham watch tower

Oakington, Cambridgeshire 3 concrete/tarmac runways and 5 hangars.

Opened in the early days of the Second World War, Oakington served as a bomber Station until being transferred to Transport Command after the end of hostilities. Squadrons based there took part in the Berlin airlift, but soon afterwards the airfield became home to a Flying Training School. In 1974 the Army Air Corps took over, and helicopters used the airfield for several years until the army vacated the site in 1999.

Runway plan



Control tower (date unknown)



Bourn, Cambridgeshire 3 concrete runways and 3 hangars.

Bourn Airfield 'the aerodrome', as it was then, was constructed for Bomber Command in 1940 as a satellite airfield for nearby Oakington. From 23rd July 1941 it was used by 101 Sqn Wellingtons for training purposes and in October of that year both 101 Sqn and 7 Sqn used the airfield when Oakington became unavailable.

On April 9th 1941, the airfield was subjected to its first of four intruder raids when a Junkers Ju88C strafed the airfield buildings and placed its bomb-load accurately on the runway before streaking away east. However, little damage was caused and there were no reported injuries. On 3rd October 1942 Stirling I N6085 of 7 Sqn was shot down by a night fighter as it joined the landing circuit with the loss of four of the crew. Two further intruder raids on the 8th and 23rd May 1944 were made, the latter damaging two parked Mosquitoes.

In February 1942, the airfield, now fully operational, became the home station for 101 Sqn flying Wellingtons. Between then and the end of the war, five squadrons flew from the airfield. In addition, there was an Operational Training Unit detachment (23 OTU) brought in from Pershore for the 1,000 bomber raids, one attached Heavy Conversion Flight and a Bomber Defence Training Flight (BDTF), equipped with Spitfires and Hurricanes. Regular visitors included a three-day stopover of 609 Sqn Typhoons in August 1942 and the frequent Mosquitoes of 1409 Flt, normally based at Wyton for the purpose of meteorological and photographic reconnaissance. Bostons, P-51 Mustangs and USAAF B-17s and B-24s also landed at the field, often in distress.

As the strategic bombing offensive intensified the losses mounted. By 4 April 1945, the last operational sortie, 164 aircraft had been lost, either from the squadrons based at Bourn or from others trying, and failing, to get in on the field. The average age of aircrew was 23 but over a third of these were under 20 years of age. Of the 886 listed names, 648, (72.%), were killed. In addition, many of the 35 injured subsequently died of their wounds. The number killed is probably greater than that for the entire population of the village at the time. It is not known whether or not aircrew Returned to Unit (RTU), following crashes were able to continue their duties.

On 15th April 1944 Bourn became one of the Pathfinder (PFF) airfields within the newly formed 8 Group. This followed a prolonged and heated series of arguments between the Air Ministry and C-in-C Bomber Command, Sir Arthur Harris, who was, at first strongly opposed to the idea.

The background to this initiative was to improve navigational and bombing results which had, up to then, been at best inconsistent. It was proposed that other bomber squadrons transfer their best crews to the Pathfinder Force (PFF) who would identify the target in advance of the Main Force and mark the aiming points with target indicators (TI) as well as conventional bombs. Other navigational and bombing aids such as Oboe, Gee, H2S, H2X and GH were also incorporated as development in radio direction finding (later to be termed radar), became more sophisticated. However, Main Force groups were, for the most part, reluctant to release their most experienced crews and, coupled with equipment difficulties, it was a number of months before the PFF force could live up to its expectations.

Whereas a normal tour of operations for Bomber Command aircrew was 30, followed, in most cases, by a second tour of 20 operations, PFF crews were required to complete a single tour of 45 operations. Statistically not a good prospect.

97 Sqn suffered the worst night in their history on the night of 16th-17th December 1943 when 21 Lancasters set out for Berlin. Only one, (JA963) was hit over the target with the loss of all seven crew. The remaining twenty, turned thankfully for home. Britain, however, was cloaked in thick fog and clear airfields were few and far between. The Lancasters, many damaged and now very low on fuel, circled the village vainly waiting as some companions tried to get in to Bourn using SBA (Side Beam Approach), but time ran out. Very few airfields at this time were equipped with FIDO, the fog dispersal system. Eight of Bourn's 97 Sqn Lancasters came down on fields and woods in the surrounding area. 36 aircrew were killed and a further six seriously injured.

It is believed that the poor visibility that night was a major factor in the fate of at least 40 of the 62 aircraft Bomber Command lost that night.

97 Squadron's Lancasters were replaced by the Mosquito IXs of 105 Sqn in March 1944. These Oboe equipped aircraft were able to identify targets with great precision and then mark them accurately. The bomb-load of this remarkable aircraft was the same as that of an American B-17 four-engined bomber. It was also over 80mph faster.

In December 1944, 162 sqn was formed at Bourn with Canadian-built Mosquito XXs and XXVs these were equipped with H2S and flew almost nightly to Berlin target marking for the Light Night Striking Force. For much of the rest of the war the two squadrons operated together from Bourn.

From 1941 to the end of the war damaged Stirlings were repaired, re-constructed and test-flown from Bourn. These were transported to the airfield from the Sebro factory near Madingley which later continued its work with RAF and USAAF, B-24 Liberators. The Bourn and Madingley units together employed up to 4500 personnel.

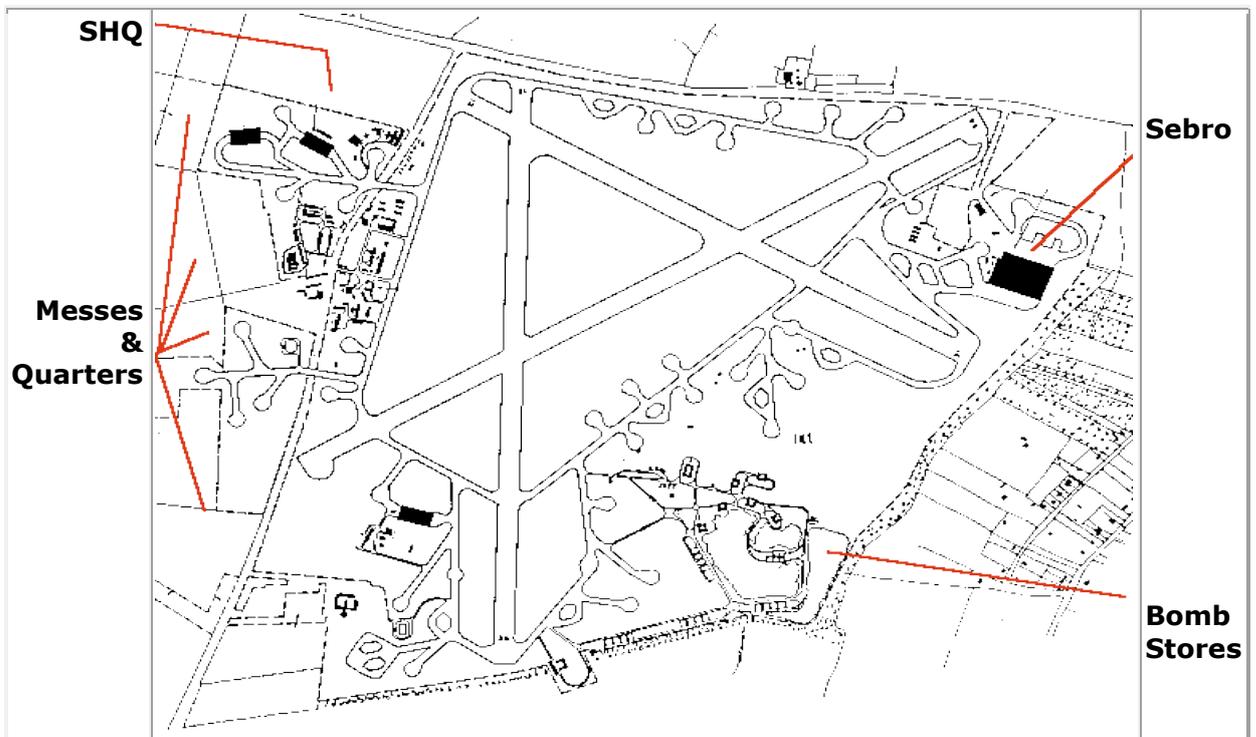
The airfield remained in RAF hands being passed on to Maintenance Command in 1947. By 1948 the station was closed. The last sections were sold off for agricultural use in 1961.

Now the Rural Flying Corps (RFC) uses part of the runway for light aircraft while small industrial developments occupy other areas of the original site. On Bank Holidays Bourn Market uses much of the old runways for stalls.

"Our village sign features the Avro Lancaster JB659 OF-J of 97 (Straits Settlement) Squadron."

Perhaps the greatest irony of all is that Bomber Command's persistent and intensive efforts to penetrate the industrial haze and formidable defences of the Ruhr, and in particular to destroy the Krupps Steel works, was never fully realised. Now, a branch of Krupps Steel is based at the eastern end of the airfield. Ces't la guerre.

Runway plan



Stradishall, Suffolk 3 concrete runways, 8 hangars

The site selected for the expansion scheme bomber airfield at Stradishall was located mainly in the parish of Hundon, south of the A143 road, some 11 miles from Bury St Edmunds. It lay on Suffolk clay - excellent for heavy crops of wheat but not for heavy aeroplanes. Despite the extensive under draining carried out during construction the glue-like mud that appeared after heavy rain quickly led to RAF Stradishall becoming the first airfield in Bomber Command scheduled for hardened runways.

Five Type C hangars, administrative, technical and barrack buildings were built between the bombing circle and the A143 during 1937-38 and Stradishall officially opened on February 3 1938, although still far from complete. Sir Lindsay Parkinson & Co. Ltd carried out the £500,000 contract. Nos. 9 and 148 Squadrons moved in from Scampton the following month where the latter had recently formed from a flight of the former. No. 9 had Heyfords and No. 148 Wellesleys, although it received Heyfords when all Wellesleys were withdrawn and sent to the Middle East and East Africa. There was not long to wait for Wellingtons with which Bomber Command intended to reequip all No. 3 Group squadrons, both units receiving this modern type in February and March 1939. In July No. 9 moved to Honington, changing places with the No. 3 Group pool squadron, No. 75, but a few days after the outbreak of war Stradishall's Wellingtons were sent to Harwell while the airfield was closed for laying the runways.

The runways were 04-22, 07-25 and 14-32, all approximately 1,000 yards long. A total of 24, later increased to 36, hardstandings were placed round the encircling perimeter track, except on the north side. While this work was in hand, two Blenheim fighter squadrons were formed utilising the accommodation and a small area of the airfield. The station re-opened in January 1940 when No. 214 Squadron's Wellingtons moved in from stark Methwold. The Luftwaffe visited Stradishall on a number of occasions, the first being on August 21, 1940, but the most damaging attack occurred on November 3 that year when a hangar was hit.

No. 214 Squadron converted to Stirlings in the spring of 1941, Stradishall remaining its home for the next 2; /a years. No other operational squadrons were based at Stradishall until November 1941 when No. 138, the special duties unit, arrived from Newmarket to continue flights in support of resistance activities in occupied Europe. When this squadron moved to Tempsford in March 1942, its place was taken by another special duties unit, No. 109 Squadron, employing Wellingtons, and later a

few Mosquitos, for radio and wireless detection in enemy airspace and also testing new radar aids.

In August, No. 109 moved to Wyton to join the Pathfinder Force. No. 3 Group had to surrender a number of its stations west of Cambridge to the new force and No. 101 Squadron brought its Wellingtons from Bourn to Stradishall soon after No. 109 had left. However, No. 101 spent only seven weeks at Stradishall before it was moved between groups for the second time, heading north to No. 1 Group in south Yorkshire.

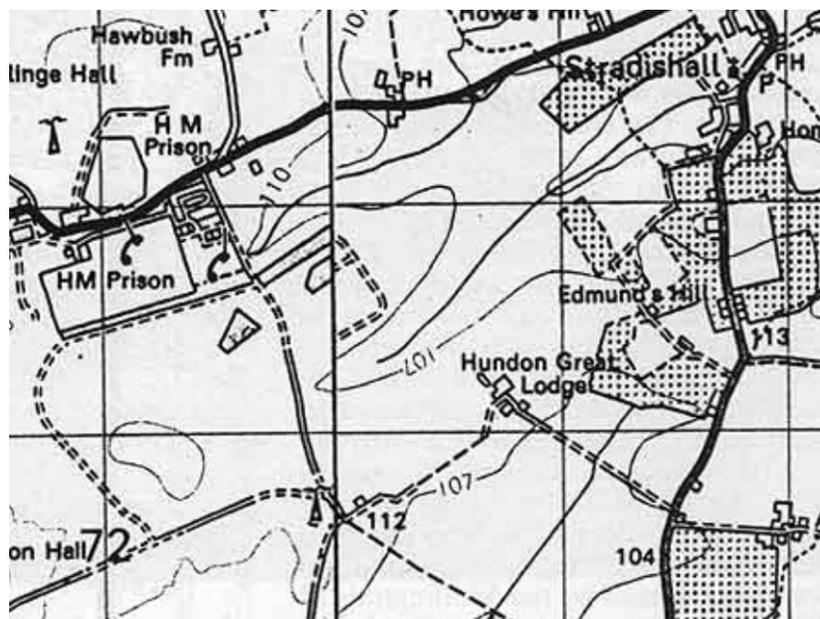
The runways were extended during 1941, 07-25 at the 25 end to 2,000 yards, 14-32 at the 32 end to 1,400 and 04-22 at the 04 end to 1,500 yards. The original hard runways and perimeter track lay within the two public roads running from the A143 to Scotch Corner, but the extensions caused these to be closed. Several parking hardstandings were lost during the restructuring leaving 26 intact. To make up the numbers, 13 loops were added. Three additional hangars were provided for gliders, all T2s, one placed near the end of runway 04 on the 07 side. The other two were in the south-east corner, east of 32. Bomb stores were constructed on farmland to the west of the airfield. Total station accommodation at that time, including a few dispersed sites, was for 2,773 males and 335 females. Stradishall then became No. 3 Group's operational training centre with the formation of No. 1657 Conversion Unit at the beginning of October 1942 to use the formidable Stirling. In 1943 both Stradishall's satellite airfields, Chedburgh and Wratting Common, also carried out Stirling conversion training. The demise of the type as a bomber was followed by a period in which Stradishall finished training crews for transport squadrons. No. 3 Group Lancasters did not reach Stradishall until December 1944 when the recently reformed No. 186 Squadron was moved in from Tuddenham, remaining until disbanded the following July. During hostilities 104 aircraft were lost flying operations from Stradishall. This total was composed of 67 Wellingtons, 25 Stirlings, nine Lancasters, two Whitleys, a Halifax and a Lysander.

Stradishall passed to Transport Command in August 1945 and once again Stirlings were in residence; these being the Stirling V transports of Nos. 51 and 158 Squadrons. The latter disbanded early in 1946 when transport requirements were reduced and No. 51 moved out in August, No. 3 Group reclaiming the station for Lancasters. Nos. 35 and 115 Squadrons were the new tenants being joined late the following year by Nos. 149 and 207. All were in a diminished state and the number of

Lancasters at Stradishall gradually reduced until February 1949 when all four units were transferred to Mildenhall.

From February to July 1949, the station was on care and maintenance thereafter being used for flying training, mainly conversion courses on Meteor jets. The organisation was first designated as No. 203 Advanced Flying School and later as No. 226 Operational Conversion Unit when roles were exchanged with Driffield units. New hardstandings were built by Mowlem in 1954 and blast walls for jets the following year. In 1955 the training units were withdrawn and Stradishall became a night fighter station with Meteors and Venoms. In October 1957 Javelins appeared and in 1960 Hunters. At the end of 1961 the station again reverted to a training establishment as No. 1 Air Navigation School, which used a variety of aircraft but chiefly Dominies and Varsitys for much of the time.

In August 1970, with a further contraction of the RAF, the training organisation was moved to Finningley and once again Stradishall was relegated to care and maintenance status. The accommodation was used to house displaced African nationals in the early 1970s following which the station was selected as the site of a high security jail. Renamed Highpoint Prison, the former administration and technical area surrounded by security fencing opened in July 1977.



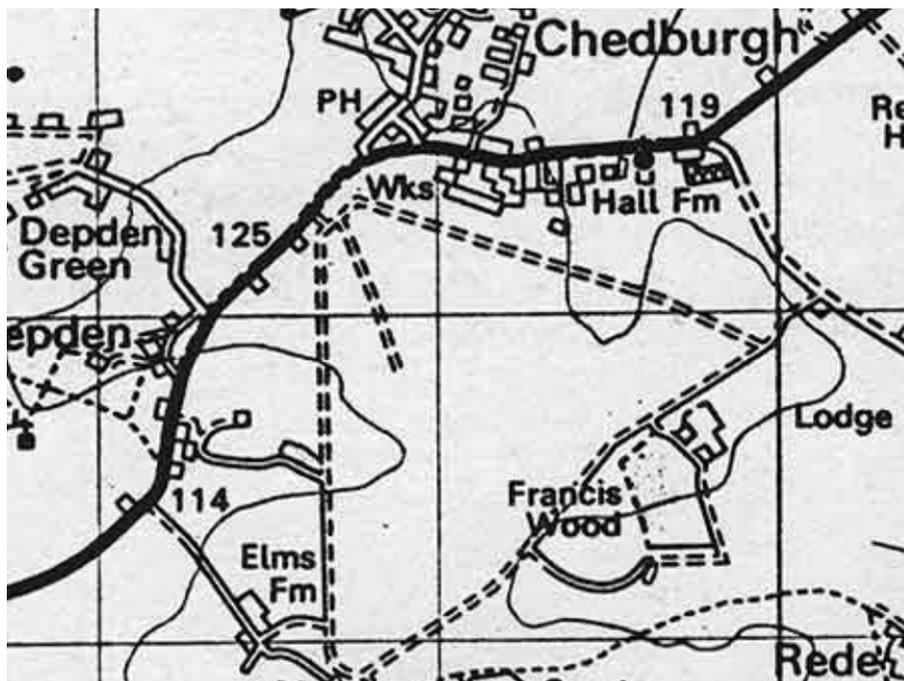
Chedburgh, Suffolk 3 concrete runways and 3 hangars

Planned as a subsidiary station serving Stradishall, Chedburgh was built on farmland directly south of the village of that name, located on the A143 road six miles from Bury St Edmunds. Major construction work was carried out by John Laing & Son Ltd during the first nine months of 1942 with an official opening of the station in No. 3 Group on September 7 that year. Built to Class A standard, the airfield had three concrete runways, OS-23 at 2,000 yards and 12-30 and 17-35 both at 1,400 yards. Around the concrete perimeter track were 34 pan and two loop hardstandings. Two T2 and a B 1 hangar were positioned on the sub-technical site near Rookery Farm, the B1 westernmost. Later two more B1s were erected for glider storage near Brush Wood, east of runway head O5, and a single T2 for the same purpose just south of runway head 30. The technical site was on the north side between runway heads 12 and 23, close to Chedburgh Hall and church. Dispersed domestic sites for 1,862 males and 238 females were also north of the airfield. The bomb stores were located off to the south-east between runway heads 30 and 35, near Rede Hole.

The first operational squadron to be based at Chedburgh, No. 214, moved in October 1942 from Stradishall where it had converted from Wellingtons to Stirlings a few months earlier. During its fourteen months at Chedburgh, the squadron lost more than 50 Stirlings on operations and in crashes. Built up to a strength of 24 aircraft in the spring of 1943, its 'C' Flight, and that from No. 149 Squadron at Lakenheath, became the nucleus of No. 620 Squadron, formed on June 17 and put immediately on operational status. No. 620 added another 25 Stirlings to Chedburgh's crippling losses before the squadron was transferred to Transport Command and moved out to Leicester East on November 27, 1943. By this date No. 3 Group was going over to the Lancaster and the following month No. 214 Squadron moved to Downham Market, preparatory to joining No. 100 Group for bomber support operations flying Fortress IIIs. However, Chedburgh retained Stirlings and No. 1653 Heavy Conversion Unit formed here officially on November 21. Still linked to Stradishall, which under Bomber Command identification of main stations became No. 31 Base in the spring of 1943, Chedburgh provided 'polish' for Stirling crews going to No. 3 Group's squadrons still operating the type. Nevertheless, the days of the Stirling as a bomber were over and in December 1944 No. 1653 HCU moved out to North Luffenham to serve Transport Command requirements. Lancasters of No. 218 Squadron moved in during the first week of December 1944 as No. 31 Base became operational again, eventually building up to a strength of 30 aircraft.

No. 218 Squadron stayed until the end of hostilities, participating in an increasing number of daylight raids, mostly to the Ruhr. Its Lancasters continued to occupy Chedburgh for a several weeks following VE-Day until the unit was disbanded on August 10. During hostilities 83 bombers were lost flying from Chedburgh, 71 being Stirlings and 12 Lancasters. The station was then transferred to Transport Command and in September 1945 two Polish-manned squadrons, Nos. 301 and 304, arrived. Flying a mixture of Wellingtons and Warwicks, replaced by Halifax VIIIs the following year, these units operated long-range transport flights on a diminishing scale until disbandment in December 1946.

Thereafter Chedburgh, like so many former bomber airfields, remained intact but deserted for some time until the flying field was returned to agriculture and the technical site used for various civilian businesses. Eventually, however, most of the runways fell under the crushing machinery of the St Ives Sand and Gravel Company for the production of hardcore.



Penrhos, Caernarfonshire No. 9 (O) Armament Training Unit, 25 Gp. AFU

The area was developed as a location for Polish ex-servicemen who desired to remain in the UK following WWII.

Reported as now being "little to see" (with respect to the RAF base)



Tilstock, Shropshire 3 concrete runways and 4 hangars

Watch Tower in 1962



Watch Tower in 2003



Airfield Today: Agriculture, parachuting centre
Tower Type: Watch Office for All Commands 12779/41, with medium front windows to 343/43
Tower: Derelict
Other Buildings: Few
History: Opened in 93 Group Bomber Command.
9/42 to 10/8/44, 81 OTU with Whitleys and Wellingtons. 1/1/44 Transferred to 38 (Airborne Forces) Group, training aircrews in Special Operations duties and Horsa glider towing. Also based at satellite station Sleaf.
1/1/44 to 3/45, 1665 Heavy Conversion Unit with Stirlings and Halifaxes.
3/45 to 8/45, 42 OTU with Albermarles. Joined with 81 OTU Wellingtons.
10/8/45 to 21/1/46, 81 OTU became No 1380 Transport Support Conversion Unit.
Airfield closed 3/46 and placed on care and maintenance until 1950's.
Airfield: Bomber Operational Training Unit
Opened: 01/08/1942
Closed: Mar-46
Pundit Code: OK
USAAF Station: N/A
Runways: 3 concrete
Hangars: 4- T2
County: Shropshire
Location: 3 miles SE of Whitchurch
OS Ref: SJ562378
Notes: Built by McAlpines

PEOPLE

Sqdn.Leader Henry Kirk Ewing (Kirk), 1657HCU

Dee Bowker is seeking anyone who may have known her Father Squadron Leader Henry Kirk Ewing (Kirk) DFC who was an **air gunner** with 90 Squadron. His log book shows the following joined 103 Squadron, RAF Newton in November, 1940. In 1941 he was stationed at Elsham Wolds and then posted to 18 OTU at Bramcote on 25/8/41 entries then show C.G.S. Chelveston Jan - Feb 1942, then 18 OTU Thurleigh (Detached) 8/3/42 May 1942 156 Squadron at Alconbury. **1657 Conversion Unit Stradishall** - 75 conversion Flight, Wakington in Sept 42. Posted to 90 Squadron, Bottesford on 14/11/42 and Ridgewell in Dec 42. West Wickham in August 43. On 4/12/43 he was posted to 1653 H.C.U.Chedburgh. and 138 Squadron RAF Tempsford on 21/8/44 where he was Squadron Gunnery Leader and on to No 33 Base, Waterbeach, 1945. If you remember Kirk Ewing then Dee would like to hear from you and can be contacted at this email address deeandrob@deerob.plus.com message 8 Jan 2005

Maurice McHugh 620 Sqdn, 20 September 1944

A relative of Maurice McHugh, Peter McHugh, left this message on the internet
"I am looking for some information about my uncle Maurice McHugh. He was a pilot officer with the RAAF in 620 squadron. He flew a short stirling in Arnhem which was shot down and killed on Wednesday 20 September 1944. I would like to make contact with anyone who knew him or flew with him." mchugh@i-o.net.au

Alfred Boynton, 620 Squadron



Alfred BOYNTON, who is Neil BOYNTON's father, served in 620 Squadron.

Alfred stands in the middle in the back row. Alfred has indeed spoken about being involved with repatriation of prisoners in the past, however, he now has difficulty communicating verbally due to suffering a stroke a couple of years ago. Neil would like to know if somebody can help to identify the other airmen on the photo or the place it was taken.

Gerry McMahon, 620 Sqdn, rear-gunner

Obituary (from The Daily Telegraph, 21st September 2001)

WING COMMANDER GERRY McMAHON, who has died aged 81, was serving as a flying officer **rear-gunner** when his four-engine Short Stirling bomber was shot down inland from the Normandy beaches on D-Day; after being taken prisoner McMahon reversed the situation, capturing 62 German soldiers and marching them to the Allied lines.



On the night of June 5 1944, McMahon's Canadian skipper, **Flt Lt Gordon Thring**, was briefed to drop paratroopers near a canal crossing, later famous as Pegasus bridge. He was then to return to RAF Fairford, take a troop-carrying glider in tow and release it in the invasion zone.

Encountering heavy fire after dropping the glider, the Stirling was hit; the plane started to fall upside down, and McMahon's ammunition fell out of the magazines, hitting him in the face. At the last moment Thring managed to right the bomber and make a belly-landing in a ploughed field. McMahon and his five fellow crew members escaped moments before the Stirling burst into flames.

As German troops appeared on the scene, the RAF crew concealed themselves in a wheat field. At nightfall they began to make their way to the Normandy coast but, after hailing two passing German soldiers they mistook for Americans, they were taken prisoner and held in a chateau barn. The chateau was repeatedly attacked by rocket-firing Hawker Typhoons and reduced to rubble. The Germans retreated to slit trenches where McMahon, still carrying his revolver which had not been discovered, soon joined them.

Believing they were surrounded, the Germans began to waver: "In the afternoon," McMahon recalled, "a German captain sent for me, offered me champagne, and said 'I wish to surrender with my 40 men'." The captain had mistaken McMahon for the senior officer because he was the only aircrew member wearing a ribbon, a DFM he had been awarded previously when he was a sergeant.

Exploiting the situation, McMahon and his fellow crew members said they would accept the German troops' surrender only if they marched up formally to the Allied lines and gave themselves up. Four days after his own capture, McMahon marched his prisoners - their numbers had increased to 62 towards the landing areas - and handed them over to the Canadian Army.

When McMahon returned to Britain he encountered his parents on their way to attend his own requiem mass - they had been informed by his squadron commander that he had been killed in action.

Gerrard Frazer McMahon was born on September 2 1920 at Darlington, Co Durham, and educated at St Cuthbert's Grammar School, Newcastle. He worked locally as a warehouseman until 1938 when he enlisted as an armourer. Following a spell at RAF maintenance units, McMahon was accepted for aircrew training and in October 1941 joined No 97 Squadron, flying a twin-engined Avro Manchester bomber.

In December he was raiding the French Atlantic port of Brest when his Manchester was attacked by four Me 109s and the port engine was shot up. Subsequently, as the pilot of a four-engined Avro Lancaster, he took part in Bomber Harris's raids on Cologne, Essen and Bremen. In July 1942, McMahon shot out seven searchlight positions during a daylight raid on Danzig and was awarded the DFM.

Shortly afterwards his badly damaged Lancaster crash-landed on its return to North Luffenham from Genoa. On the runway, the fuselage broke apart and McMahon, as tail-gunner, was marooned at the back end.

McMahon was commissioned as a pilot officer in April 1943 and, following a brief spell with No 513, a Stirling squadron, he was posted in November 1943 to No 620 Squadron. It was while he was with them that his Normandy adventure took place. Later he flew a Stirling in both Arnhem paratroop and glider attacks. During each operation he crashed but managed to walk to safety.

In 1945 he received a permanent commission and spent much of the remainder of his service in senior posts in the Provost (police matters) branch. He was stationed in Palestine before Israel's independence in 1948 and saw service in Aden and Singapore during the Indonesian confrontation of the 1960s.

As commander of Provost and Security Services, Central Region, at Spitalgate, Lancashire, McMahon led the investigation into the activities of Douglas Britten, an RAF chief technician who was subsequently convicted and sentenced to 21 years in prison for spying on behalf of the Soviet Union.

McMahon discovered that Britten had used a James Bond-style cigarette case which, when rolled over documents, produced a perfect image, even in darkness.

McMahon retired early at his own request in 1968. As a civilian he employed his skills in the security field as security and safety chief for Rank Xerox at Welwyn Garden City, being awarded a diploma in safety management. He later worked for Hawker Siddeley at Hatfield, Hertfordshire, and for British Aerospace at Stevenage.

Afterwards he spent nine years as European security manager with CBS Records (Sony Music). He used his teenage children's knowledge of pop music to spot forgeries of popular titles in record stores. He also organised security for visiting recording artists.

On one occasion he threw the Sex Pistols out of the CBS building for being too rowdy; on another he led the singer Sade into his office to take dictation, believing she was his new secretary.

After McMahon finally retired in 1985, he formed a drum majorette troupe at Hitchin, Hertfordshire, and presented baton-twirling exhibitions at fetes and entertainments for the elderly. McMahon married, in 1950, Josephine Newbury; they had three sons and a daughter.

Stan Bond, 620 Sqdn (written by his nephew)

My involvement with aircraft began with sixpenny gliders. It was heightened by growing up with the pictures of two of my Uncles, Stan and Dick, on my Grandmothers' mantle-piece. They looked smart in their RAF uniforms, and to me they looked so grown up. It is only recently that I have come to realise that they were in their early twenties when their lives were abruptly 'snuffed out'. This then is the telling of their stories....Lest We Forget.

Stan Bond was an athletic, good looking chap, the kind of person that anyone would be pleased to have as a big brother. Growing up in London, his life was soon to be overtaken by the advent of the Second World War. Seeing the damage inflicted on his home town by the Luftwaffe, seeing schools bombed and children killed he was keen to do his part in defending his country, like his Father before him who had fought proudly in the Dardenelles and had scars as well as medals to attest to his courage.

The RAF was the place to be. Talented at most subjects, he excelled at Maths and Art and a position as a Navigator was a natural use for his talents. During 1942 he went to Florida to train with Pan American Airways, the fore runners of the modern Airline. Our family has a number of his photographs taken whilst in Florida, and it always gives me a feeling of comfort to know that this young man, who had known what it was like to live in a large family in London during the early war years, had at least known a brief spell of enjoyment in the Florida sun, away from the deprivations of war-torn London.

Much of his Navigational training was carried out in Commodore seaplanes around the Florida Keys, carrying out both day and night-time flying. I have his Navigational Logs, showing courses plotted, tracks flown, star and sun fixes, and comments written by the instructor who remarked that he was "Exceptional in flight and theory". Apparently, theirs was the last group of RAF aircrew to be trained in with Pan American in Florida. When my Uncle John (brother of Dick and Stan) was discussing this with the RAF museum at Hendon they turned to a reference book to see exactly what a Commodore looked like. To their amazement the book showed a photo of the exact aircraft on which Stan did most of his training!

All too soon it was time to return to "Britain-in-the-Blitz", bringing home a lemon with him. This was such a rarity that it made the local newspapers!

At the same time as Stan was growing up, the War Department, conscious of the

gathering clouds of war, was looking for aircraft to update its aged Squadron, many of which were still flying aircraft reminiscent of battles fought in the skies of France and Germany 20 years earlier. Short Brothers were developing their Stirling-the first four-engined bomber that this country had ever seen. At last, the people of England had something with which they could now fight back.

Stan, having carried out his Air Observers and Advanced Navigation Course at Bobbington between 26th Jan 43 and 23rd March 43 was destined to meet F/Sgt J Nicholls, the pilot with whom he would share the remainder of his short life, at No 12 Operational Training Unit at RAF Chipping Warden in April 1943. His log shows they first flew together for a three and a half hour cross country on 24th April in Wellington BK157. By the time they had finished their training at 12 O.T.U. in June 1943 they had flown 34.35 hours daytime and 35.00 hours night-time together.

Their next flight was as part of 1651 Heavy Conversion Unit at Waterbeach on 17th June 1943. It could be said that Waterbeach was the "finishing school" before going onto an operational squadron. It was here that they first flew in the mighty Stirling. Few people realise that this was longer and higher than the Lancaster. The Stirling was renowned for being a handful to land, particularly in a cross-wind due to the extended undercarriage. Like most trainee fliers, the log is pre-occupied with circuits and landings during this early period on a strange aircraft. Within a couple of weeks they were flying further afield, with two long cross-countries, both of five and a half hours each, one in daylight, the other in darkness. It was during both of these final cross countries that they over-flew Harwell, an airfield that was to play a fateful role in Dick's life, a year after his brothers' death. After just three weeks and 35 hours flying at 1651 HCU Waterbeach, it was time to move on to an operational Squadron

620 Squadron was based at **Chedburgh** near Cambridge. At the time of the Squadron's formation in June 1943 the Bomber offensive was at its peak, not only in terms of operational effort, but also as the only really direct and effective threat to the war effort inside Germany.

Most of the aircrew were in their early 20's, many were still in their teens. The new C.O. was aged just 24. The Squadron was formed on the 17th June 1943 and carried out its first operational duty on the 19th/20th June when 8 Stirlings from 620 joined with 282 other aircraft to bomb the Schneider Works at Le Creusot.

They lost their first aircraft just three days later with the loss of all crew. By the time

that Stan and his crew joined on 11th July 1943, less than a month after the formation of the Squadron, a further three aircraft had been lost together with 17 airmen and 5 ground crew, 29 dead already. Two weeks later, on a 705 aircraft raid to Essen, three more Squadron aircraft were to be lost with 21 crew, although 9 airmen were later found to be P.O.W's.

Seven Squadron aircraft lost, 50 men dead or missing, and my Uncle had yet to fly his first mission. I would regard just stepping into an aircraft under these conditions to be an act of bravery that far surpasses the worth of any medal. My Grandmother told me some years ago that Stan and his friends would occasionally come to see her when on leave. "They all had to walk round with their heads tipped back to stop the drink spilling out!" One can understand the need for young men to "let off steam" under conditions such as these!

Their first operational mission was on the 28th July 1943 when they went "Gardening" in the Frisian Islands-a euphemism for laying mines off the coast of the Frisian Islands. Although regarded as a nursery run, it was not without its risks as a number of aircraft were lost to Flak ships. Although not part of the raids on the following night, the 29th/30th was the night of the terrible "Firestorm" on Hamburg when smoke was reported up to 17,000 feet, with the fires being seen 150 miles away. Some 100,000 people are reported to have lost their lives on this raid alone.

Stan's next Operational Mission was on 17th/18th August when a total of 596 aircraft were detailed to attack the Rocket Research Establishment on the Baltic coast. "A maximum effort" was called for on this famous raid on Peenemunde. The target was described as a "Radar Research Establishment" (it made the V1 and V2 rockets) and the C in C's order of the day was to the effect that if the place was not knocked out first time they would have to go back and do it again! Twelve Chedburgh Stirlings took part, aiming at the green markers put down by the Pathfinders. For the first time, a "Master of Ceremonies" was used who, as a skilled member of the Pathfinder Force, stayed in the area as long as necessary to control the bomber stream-an unenviable role. The trip home was made at low level and over the coastal waters the Stirlings were hammered by flak ships. A total of 41 aircraft failed to return, including one from the Squadron, and among the casualties, 131 airmen disappeared without trace into watery graves. It is estimated that the destruction caused by the raid on Peenemunde delayed the introduction of the "Flying Bombs" by 6 months-no doubt saving many British lives in London and the Home Counties.

The entry in Stan's log for 22nd August is something of a mystery-it just states-Flew to Tangmere to collect aircraft "P". At first I thought that perhaps another crew had landed "P" there, maybe with injured on board, or low on fuel and Stan and his crew had been detailed to bring it back. Looking at the Squadron records "P" crashed in Germany three weeks earlier so this must be its replacement, but why was it coming from Tangmere which was renowned as a fighter base? Stirlings certainly weren't built there! A conundrum for another day, but a question that always crosses my mind when I fly past Tangmere. Why was Stan collecting a Stirling from a fighter base?

Prior to operations on 23 August, their sister Squadron, 214, took part in a Group Bombing Competition. When the curtain was later drawn back in the briefing room, the red ribbon stretched across to "Big B"-Berlin. The target was attacked mainly with incendiaries in good weather with the help of the "Master of Ceremonies" but amidst intense fighter and searchlight activity. In his last letter home to his "mum" on the next day Stan reports "Had a night out over Berlin, not a bad little dump - WAS it?" Typical cockney humour without a trace of the frightening experiences they must have had. Four days later on 27 August, Nuremberg was the target. The operations record book shows that Stan and his crew took off in Stirling EE942 (QS-R) at 21.36 as last of the 620 Sqdn. aircraft. Their route took them down to Beachy Head, across much of France before turning East towards Germany. Their next turning point was some 50 miles South of Nuremberg where they then turned on a Northerly course to commence their bombing run, aiming as usual at the green markers laid down by the Pathfinders. Their Northerly course continued for a further 50 miles past the target before turning West towards home. 620 Squadron were tragically unlucky, losing three of their seven aircraft with the surviving crews reporting many enemy aircraft and a starlit night-a deadly combination. A total of 33 aircraft were lost that night. My Uncle and his crew were in one of these aircraft. They are believed to have been shot down by a night fighter, crashing at Halbersdorf 50 miles North of Nuremberg-bombing run completed and on the way home.

The crew of Stirling EE 942 OS-R
Pilot F/Sgt J. Nicholls
Navigator Sgt S.J. Bond
Bomb Aimer PIO N.S. Mitchell
Flight Engineer Sgt M. Meakin
Wireless operator F/Sgt J.P. Donelley (RNZAF)
Mid upper gunner Sgt G.C. Burton
Rear Gunner Sgt S.G. Coyne

Stan's total service life lasted but one year. His Squadron life only 6 weeks. He flew on four Operational Missions and had a total flying time of 116 hours Daylight and 137 hours Night. He was only 20 at the time of his death. The crew were originally buried in the local cemetery by the local Priest, Pastor Endres, being moved to the Durnbach Military cemetery after the war ended.

POSTSCRIPT

In August 1995, 52 years after Stan's death, I visited Germany. After so much loss of life on both sides I found the Germans to be a very friendly people -even the older generation who would have been so affected by the war. The local Burgomaster (Mayor) went out of his way to be helpful. He took my family to the site where the aircraft crashed deep in peaceful pine woods. Even today there are many broken and twisted pieces of metal lying just under the surface. Also, the ground about 6 inches down is clearly blackened by the fire that burned throughout that fateful night of 27/28 August 1943. Exploded ammunition cases bear testimony to the heat of the blaze. Spent cartridge cases show that they went down fighting.

By an amazing piece of luck the Burgomaster knew of a man, Herr Dumler, who had seen the aircraft crashing in flames that fateful night in 1943. He had researched the crash and had published a booklet. I was very moved to learn that despite the crew being his former enemies, he had erected at his own expense, a memorial to the fallen airmen. A brief translation of the booklet is as follows...

"On the summer night of 27th/28th August 1943 there was the largest air raid over Nuremberg. The inhabitants of Prolsdorf were awakened by heavy explosions and the droning of aircraft overhead. No one would find any rest that night. The night sky over Nuremberg was lit up with a red glow of fire. Then suddenly a fire in the sky. An

aircraft was burning and diving out of control, most likely it was hit by one of the German night fighters. The bomber was heading straight towards Prolsdorf. Everyone took cover - Isidor Schunders even crept into a large drain pipe! Seconds later the bomber crashed burning into the nearby wood. Our village was unharmed. The bomber was burning fiercely and the ammunition was exploding in all directions. Nobody dared go near. The following morning everyone made their way to the burnt out bomber. Pine trees for a length of 140 metres and width of 20 metres had been cleanly shaved off. The aircraft was a total wreck. Undercarriage wheels, engines and aircraft parts lay strewn all over the crash site. The crew were all dead. They were placed into coffins and carried to the nearby village of Schonbrunn where Pastor Endres laid them to rest in his Cemetery. After the war the crew were moved to the Military cemetery at Durnbach”.

Pastor Endres died in 1953 and we found his grave in the same cemetery as Stan had originally been buried 10years earlier.

The War Graves cemetery in Durnbach, South of Munich, is in a beautiful setting amidst the mountains of the Black Forest. Many British Fliers have been brought together in this final resting place. Because of the long distance from home we were the first to visit Stan’s grave. We were very touched to lay red roses on the graves of all the crew on behalf of their families and loved ones at home.

Lieutenant-General Sir Frederick Arthur Montague Browning

(December 20, 1896 - March 14, 1965)

Grandson of William ALT (1840-1905), Tea Merchant and entrepreneur from Nagasaki.

Married (1932), novelist Daphne du Maurier

Awards : Knight Commander of the British Empire, Companion of the Bath, Distinguished Service Order, Mentioned in Despatches, Legion of Merit, Croix de Guerre

Soldier; commanded 1st Airborne Division (1941); influential in planning Operation 'Market Garden', the airborne landings, Holland (1944); famously commented to Montgomery

that Arnhem might be 'a bridge too far'; chief of staff to Supreme Allied Commander, South East Asia (1944-6); comptroller of the household of Princess Elizabeth and the Duke of Edinburgh (1946-52)



Frederick "Boy" Browning was very much the father of the airborne movement in Britain, having founded the 1st Airborne Division. The 47 year old Lieutenant-General began his military career in the First World War, where he served with the Grenadier Guards and won the Distinguished Service Order and the Croix de Guerre. In 1916, he also had the honour of meeting Winston Churchill, who visited his dugout.

He held various commands, until 1935, when he was the commanding officer of the 2nd Battalion, Grenadier Guards. He held that position until about the time of the outbreak of World War II, when he became Commandant of the Small Arms School. In 1940, he was given command of the 24th Guards Brigade, until Churchill, who had by then become Prime Minister, appointed him as commander of the 1st Airborne Division. As a protégé of Admiral Lord Louis Mountbatten, Browning was able to make good progress in raising the Division, using his political and administrative skills to manipulate the British military establishment. It was also a difficult time to be in command of such a unit as the airborne movement had only just been born in Britain, and as such it was far from easy to convince people of the benefits of such troops, who were as yet untried in battle. Browning, who was also a qualified glider pilot, did

much to create the image of the British airborne forces, having decided in the summer of 1942 that airborne troops ought to possess their own form of defining headwear, as opposed to the tradition of men wearing the berets of their former units. It has been said that his wife, the author Daphne du Maurier, had chosen the colour of maroon, however this is believed to be false and that the decision was made elsewhere. Browning did, however, assign the artist, Major Edward Seago, to design an emblem for the airborne forces. The result was the famous insignia, taken from Ancient Greek myth, of the warrior Bellerophon riding Pegasus, the winged horse.

The maroon beret was the only indication about Browning's person to confirm that he actually was an airborne officer. He had designed his own uniform, made of baratheia with a false Uhlan-style front, incorporating a zip opening at the neck to reveal regulation shirt and tie, and worn with medal ribbons, collar patches, and rank badges, capped off with grey kid gloves, and a highly polished Guards-style 'Sam Browne' belt and swagger stick. It was a uniform that he wore during Market Garden and, as was his *raison d'etre*, he was always immaculately turned out, regardless of the time or occasion. In 1941, while inspecting the 2nd Battalion's C Company, who had experienced a number of difficulties in obtaining replacements for their battered clothing, Browning took his time and talked with almost every man, but at the end he turned to the then Major John Frost and said "I think you've got a good lot of men but I have never seen such a dirty company in all my life!". Browning had not seen action during the Second World War, and was very keen to do so before it ended. Ever devoted to the care and attention of the men under his command, he was liked and admired by them, though few were allowed to form a close connection.



In April 1943, Browning left the 1st Airborne Division to become Airborne Advisor to Supreme Commander Eisenhower, and it was at this post that he oversaw the planning of the airborne assault on Sicily. In December 1943, Browning was promoted to Lieutenant-General and given the command of Headquarters Airborne Troops, under the wing of Montgomery's 21st Army Group. This was later redesignated the 1st British Airborne Corps, and consisted of the 1st and 6th Airborne Divisions, an SAS unit, and later the Polish Brigade. It also included the 52nd (Lowland) Division, though these airlift-able troops were not officially a part of the Corps.

Shortly after the Normandy invasion it became clear to SHAEF that a centralised control between all airborne forces, be they British or American, might be desirable in future. Eisenhower approved the establishment of the 1st Allied Airborne Army, but there was much disagreement over who should command it. The British favoured Browning, but the mantle was handed to the American Lt-General Brereton who, though older and more experienced than Browning, had a marginally junior commission to his, and he had never before commanded airborne troops. Browning was appointed as Deputy Commander, though he was allowed to retain control of the 1st British Airborne Corps.

Browning was not trusted, and indeed disliked by a number of high ranking American officers who regarded him as a "supercilious English aristocrat". His demeanour was often mistook for arrogance, though he could often rub people up the wrong way by virtue of the fact that his friends were both high and many, and he was not afraid to seek their influence to get his own way. His relationship with Brereton had severely deteriorated shortly before Market Garden. The speed of the Allied advance throughout August 1944 had been so rapid that many airborne operations had been planned and scrapped because ground forces had already reached and passed the intended objectives by the proposed D-Day. The Americans were determined to deploy all three divisions of the 1st Allied Airborne Army in an action, any action, and a bout of political bickering followed. The planned operation was to drop them near Lille and Courtrai on the 2nd September, with the 2nd British Army, who had halted their advance to accommodate this plan, acting as their relieving force. At the last moment the operation was cancelled because the First US Army had deliberately altered their course and taken the area from under their noses. Brereton proposed a new operation to be launched two days later, only to find that Browning, unhappy with the American attitude, had gone behind his back and used his authority as

commander of the 1st British Airborne Corps to commit the 1st Airborne Division and the Polish Brigade to Operation Comet. In order to force Brereton to back down, Browning threatened to resign. The net result of this was that relations between Brereton, and the 2nd British Army and Browning were exceptionally poor.

Browning also had poor relations with the commander of the Polish Brigade, Major-General Sosabowski. The Brigade had been formed earlier in the war with the intention of its men parachuting into Poland to assist with the liberation of their homeland. However as the war drew on, the practicalities of this ever taking place became increasingly unrealistic, and with the Allied invasion of Europe looming, there was a lot of pressure on the Poles to be incorporated into the 1st Allied Airborne Army. Sosabowski did much to resist this pressure and in the process he took offence to Browning's persistent interference with the Brigade, while Browning himself did not take kindly to the Pole's defiance. The two men had originally been on good terms with each other, but by the time of Market Garden, Sosabowski, still loyal to the original purpose of his Brigade, was becoming increasingly difficult to work with.

On the 10th September, Montgomery personally briefed Browning for the part of the Airborne Army in Market Garden, and upon asking how long the 1st Airborne would have to hold Arnhem, Montgomery told him two days, to which Browning said that they could hold it for four but, uneasy about the huge task placed upon his Corps, he famously added that Arnhem might be "**a bridge too far**", though it is believed to be unlikely that he ever used that phrase. It is unclear whether permission came from either Montgomery or Brereton, but it was agreed that Browning would lead the previously untried tactical headquarters into battle, instead of the more experienced American commander, Lt-General Matthew Ridgway, who had commanded an airborne division in Normandy. Due to the great distance between each of the airborne divisions, the purpose of Corps HQ setting foot outside of England is unclear, and had perhaps more to do with Browning's desire to get into the war than of any particular strategic advantage. With his HQ placed in Nijmegen alongside the 82nd Airborne, the consequence of Browning's presence was, as a result of inter-divisional politics, that the 1st Airborne at Arnhem were robbed of no fewer than 38 gliders on the first day of the battle. If he had stayed in England then the 2nd South Staffords would have been able to fly to Arnhem in their entirety on Sunday 17th.

On the 15th September, Major Brian Urquhart, an intelligence officer on Browning's staff, approached the General on several occasions with reports from the Dutch resistance of the sudden presence of the 9th and 10th SS Panzer Divisions in and

around Arnhem. To reinforce this argument, he had also ordered a reconnaissance flight over the area which had returned with photographs of modern tanks, only ten miles from the Bridge. Faced with this information so close to the start of Market Garden Browning was in a most awkward position, and so he chose to pay little heed to this new evidence and brushed the tanks off as likely being barely serviceable. However he was clearly concerned with the possibility of Brian Urquhart stirring up trouble because he ordered his senior medical officer, Colonel Austin Eagger, to force Uruqhart away on sick leave due to "nervous strain and exhaustion". Much criticism has been placed on Browning's shoulders for ignoring the possible presence of tanks at Arnhem, but it should be remembered that he was in a most unenviable situation, and that it was common practice for the British to treat information from the Dutch underground with great suspicion. Nevertheless he made no effort to mention the possibility of this threat to the 1st Airborne Division. If they had known then they would have taken extra anti-tank equipment with them, and also the 1st Para Brigade would have adopted a different mode of advance on the first day of the operation; one more suitable to dealing with heavy opposition.

Browning insisted to Major-General Gavin, of the 82nd Airborne, that his priorities were first, the area of high ground known as the Groesbeek Heights, second the bridge at Grave, then three smaller bridges over the Maas-Waal Canal, and finally the very large bridge at Nijmegen. Browning even told Gavin that he was not to make any attempt to take any bridges until the high ground had been



secured, and Gavin happily followed this order, though later felt that his divisional plan was good enough to spare one battalion to head for the bridge in Nijmegen immediately after landing. Though the Groesbeek Heights overlooked the entire area and if they had not been taken it would have left the right flank of the 2nd British Army exposed when they arrived, the area was without doubt secondary to Nijmegen Bridge. Without that bridge being taken the 1st Airborne would be left stranded 13 miles in hostile territory and on the wrong side of two huge rivers. Browning defended his decision long after the battle, but it was a terrible mistake. If the bridge had been taken in strength and with all speed, then it is quite possible that British tanks would have reached Arnhem Bridge before John Frost's defence at last failed.

As his Horsa was landing on the Groesbeek Heights on Sunday 17th, 100 yards west of the Reichswald Forest, one of the gliders front wheels was torn off by an electric cable, but the craft safely slid to a halt in a cabbage patch. Browning immediately ran over to the woods and returned several minutes later, explained to his Chief of Staff, Brigadier Gordon Walch, that "I wanted to be the first British officer to pee in Germany". Colonel George Chatterton, Browning's pilot and commander of the Glider Pilot Regiment, threw himself into a ditch as a few German shells began to land in the vicinity. Browning calmly stood over him and asked "George, whatever in the world are you doing down there?".

Browning's HQ suffered particularly dire problems with communications. The inexperienced signals section, whom Browning later blamed for this failure, had only been established on the 2nd September, and for the first two days of the battle Browning had no contact with either the 1st Airborne or the 101st at Eindhoven, and as such his ability to command was almost non-existent. Furthermore, as XXX Corps linked up with the airborne forces the divisions were removed from the command of Browning and handed to Lt-General Horrocks, and so he was only ever able to exercise any real authority over the 1st Airborne Division, with whom he had very little contact. The frustration of being in this handicapped position took its toll on Browning, and for once he lost control of his temper and threw a bottle of ink at a picture of a German general, hanging a wall in his HQ. It wasn't until he met Lt-Colonel Mackenzie on Saturday 23rd that he began to appreciate the plight of the 1st Airborne.

On Wednesday 20th, the 52nd (Lowland) Division, who were to reinforce the 1st Airborne by landing at Deelen airfield after Arnhem had been reached by ground forces and secured, offered to fly to Arnhem immediately, however Browning declined this generous and highly risky offer, saying "Thanks for your message, but offer not - repeat not - required as situation better than you think." Due to the lack of communications, Browning did not know how serious a position the 1st Airborne were in at this time, and so it is not surprising that he refused permission. However if the 52nd Division had been flown in, then their presence, either at the bridge or in the Oosterbeek pocket, would have likely made a massive difference to the Allied prospects of victory. On Sunday 24th, Browning was quite keen to see the division employed in this manner, however both Montgomery and Dempsey refused to sanction it.

And on that same day, the principal commanders in the region assembled for the Valburg Conference, at which orders were given by Lt-General Horrocks for an assault on the northern bank of the river that night. The British commanders seemed to be now quite frustrated by the attitude of Major-General Sosabowski, and they proceeded to humiliate him and undermine his authority. Browning said nothing in his defence. Sosabowski attributed the pessimistic attitude on that final day to Browning, who he felt, as deputy commander of the 1st Allied Airborne Army and still very much in overall command of the 1st Airborne, should have used all his power to persuade Montgomery, Dempsey, and Horrocks to have one final and determined attempt to secure the north bank. With victory being so close at this stage, Sosabowski felt it was "incredible" that Browning did not do so. Indeed, it appears that he did everything to encourage a withdrawal.

On September 27th, Browning addressed the survivors of the 1st Airborne at their billets in Nijmegen. He had confessed to a member of his staff that he did not feel that he could face them, but he did, and in his usual manner he told the men what they wanted to hear.

After the battle, there was a deliberate attempt to make the Polish Brigade a scapegoat for the failure to get through to Arnhem. Browning's own part in this took the form of a detailed letter to Lt-General Sir Ronald Weeks, deputy to CIGS. In it he reported on the behaviour of Sosabowski before and during the battle, charging him with being "difficult to work with", "unable to adapt himself to the level of a parachute brigade commander", and "quite incapable of appreciating the urgent nature of the operation and continually showing himself to be both argumentative and loath to play his full part in the operation unless everything was done for him and his brigade". It could be argued that there was some merit in these allegations, with the exception of the final point which was total nonsense. Browning concluded his letter by saying that he was "forced, therefore, to recommend that General Sosabowski be employed elsewhere and that a younger, more flexibly minded and co-operative officer be made available to succeed him". Sosabowski was relieved of his command on the 9th December 1944.

Montgomery did not lose any confidence in the ability of Browning to command, and he wrote to CIGS stating that he would like to have him as a Corps commander if ever there was a vacancy. However Lt-General Browning received no further promotion throughout the duration of his military career. A few months after Arnhem he departed from the airborne scene and became the Chief of Staff at South-East

Asia Command. On the 1st March 1945, he was appointed Colonel of the Indian Parachute Regiment. He was later made Comptroller of the Royal Household. One of the barracks in Aldershot belonging to the Parachute Regiment has been named Browning Barracks.

Browning Barracks

Named after Lieutenant-General Sir Frederick (Boy) Browning, the first appointed Commander Paratroops and Airborne Troops, October 1941. Built in 1964 as part of the new military town of Aldershot, the Browning Barracks were the depot for the Parachute Regiment and Airborne Forces until 1993. Browning Barracks were



selected for a Civic Trust Award in 1968. The Airborne Forces Museum is also based at Browning Barracks and was opened in 1969. Still in use.

Daphne du Maurier

Daphne du Maurier was born in London in 1907, daughter of actor Sir Gerald du Maurier and granddaughter of Punch magazine illustrator and satirist George du Maurier. Her first novel, *The Loving Spirit*, appeared in 1931 when she was still in her early twenties. An instant success, the book brought her not only fame and wealth but also the attentions of a handsome soldier, Major (later Lieutenant-General Sir) Frederick Browning, grandson of William Alt.

Her subsequent novels also became bestsellers, and some - like *Jamaica Inn* and *The Birds* - were adapted for film. Certainly the most famous and influential of these cinematized works is *Rebecca*, an enchanting story about a nameless young woman who marries a wealthy noble but finds herself living in the shadow of his former wife Rebecca. The film version, which appeared in 1940, was produced by David O. Selznick of *Gone With the Wind* fame and directed by Alfred Hitchcock as the latter's first movie in the United States. The movie, named Best Picture at the 1940 Academy Awards, remains today as a cinema classic.

Although now one of the best-known authors in the world, Daphne retreated into a life of quiet seclusion with her husband and children. After the death of Frederick Browning in 1965, she moved to a fourteenth-century mansion named *Kilmarth* which she immortalized in the novel *The House on the Strand* and where she lived in peaceful solitude until her death in 1989. Richard Kelly, professor of English at the University of Tennessee, wrote about an encounter with Daphne du Maurier in an

obituary to the famous author: "In November 1988, I visited Daphne du Maurier in Kilmarth. She appeared quite small, sitting in a chair surrounded by piles of newspapers she had been reading. I had known her face from photographs taken in her youth, a beauty made haunting and foreboding by the deep shadows around the eyes. In her eighties, those eyes retained the same dark mystery of the recluse who had chosen to live amongst her memories and the ghosts that filled the room in photographs, paintings and memorabilia. In the dining room there was a large oil-painting of her as a young woman, many photographs of her father in jaunty poses, numerous medals that had been awarded to her husband during the war and a photograph of Dwight Eisenhower inscribed to him. "Boy" Browning and Gerald du Maurier were the great heroes of her life and her fiction, the two ghosts of her past that embodied all the love, adventure and romance that through her writing she generously and skillfully shared with us all.

Du Maurier's *Rebecca* is built on the second wife's fear that she is inferior to Rebecca. Fear is an essential element in Gothic literature, and in this case the fear is based on an event in du Maurier's own life. Soon after her marriage to Frederick "Boy" Browning in 1932 Daphne discovered a bundle of letters tied together with a blue ribbon. These letters were written to her husband by his former fiancée, a strikingly beautiful woman who served as the model for the character of Rebecca. She was particularly struck by the woman's strong, confident handwriting, a marked contrast when compared to her own spidery hand. Her husband was known to have a roving eye, and du Maurier herself often felt as inadequate and insecure as the nameless heroine in *Rebecca* (Shallcross 64)."

Viscountess Tessa Montgomery of Alamein

Tessa Montgomery's father-in-law is the famous British field marshal Bernard L. Montgomery who was elevated to peerage in 1946 as the First Viscount Montgomery of Alamein in honor of his achievements during World War II. Tessa's father, Frederick "Boy" Browning, was also a British army officer, and her mother was the celebrated novelist Daphne du Maurier.

Hearing from a friend who had visited Nagasaki that the Alt House was still standing, Viscountess Tessa Montgomery of Alamein – great-grand-daughter of William and Elisabeth Alt - came to Nagasaki in the autumn of 1985 to see the house and to donate excerpts from her great-grandmother's unpublished memoirs to Nagasaki City. These memoirs and the family tree accompanying them opened new windows on the Alt family and their activities both in Japan and later in England.