

RAF COLLEGE CRANWELL

“The Cranwellian Many”



A Tribute to Bomber Command Cranwellians (1st Revise)

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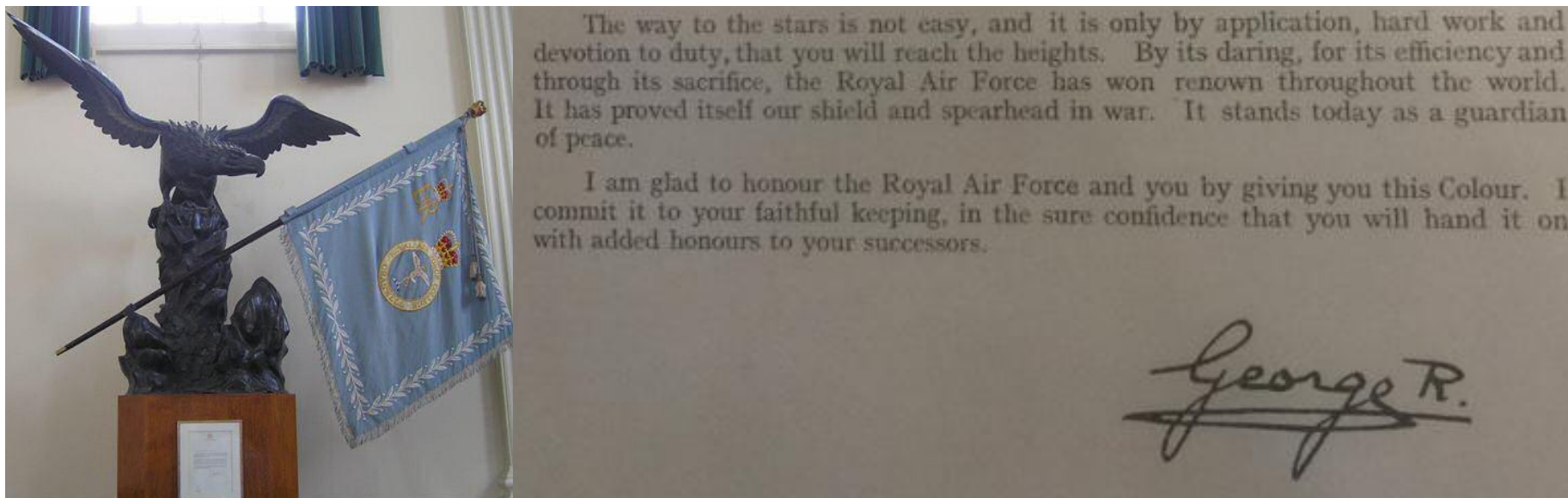
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Bomber Command - the Cranwellian Contribution

RAF Bomber Command was formed in 1936 when the RAF was restructured into four Commands, the other three being Fighter, Coastal and Training Commands. At that time, it was a commonly held view that the *“bomber will always get through”* and without the assistance of radar, yet to be developed, fighters would have insufficient time to assemble a counter attack against bomber raids. In certain quarters, it was postulated that strategic bombing could determine the outcome of a war. The reality was to prove different as reflected by Air Chief Marshal Sir Arthur Harris - [interviewed here by Air Vice-Marshal Professor Tony Mason](#) - at a tremendous cost to Bomber Command aircrew.

Bomber Command suffered nearly 57,000 losses during World War II. Of those, our original research suggested that 400 Cranwellians (63 flight cadets and 337 SFTS aircrew) were ***killed in action*** on Bomber Command ops; their squadron badges are depicted on the last page of this tribute. The totals are based on two thorough analyses (in 2020 and 2021) of a Roll of Honour issued in the RAF College Journal of 2006, archived flight cadet and SFTS trainee records, the definitive International Bomber Command Centre (IBCC) database and inputs from IBCC historian Dr Robert Owen in *“Our Story, Your History”*, and the data contained in WR Chorley’s *“Bomber Command Losses of the Second World War, Volume 9”*. Any errors and omissions are regretted. A full Cranwellian Roll of Honour is in two volumes: [Vol 1 Flight cadets](#); [Vol 2 SFTS Airmen](#). Our latest estimates are offered at the anti-penultimate slide of this album; our research continues.

The Queen’s colour is held by a large bronze eagle, donated by Sir Philip Sassoon - Secretary of State for Air 1933 - at the west end of the RAF College Dining Room.



As His Majesty King George VI declared in 1948, "...by its d a r i n g ... efficiency... and s a c r i f i c e ... the RAF.... has proved itself our shield and spearhead in war... a guardian of peace."

The Colour is a symbol of our devotion and our personal relationship with the monarch.

This story of Cranwellian Bomber Command pilots of World War II follows, and was prompted by an earlier analysis of the unstinting dedication from Cranwellian fighter pilots - *“The Cranwellian Few”* - throughout the Battle of Britain, in readiness to commemorate its 80th anniversary. Analysing a six year campaign as distinct to a 3½ month battle presents its own challenges; the objective remains the same, to record the outstanding contribution of Cranwellian crews, lest we forget the price they paid through “their prowess and their devotion” {WSC}.

To access the [underlined](#), embedded internet links, press Alt+Click (Windows) or Command+ Click (Apple Mac)

A College Perspective

Autumn 1961 College Journal Extract
Regrettably Author Unknown

Summarising:

“History of the Second World War: The Strategic Air Offensive against Germany 1939-1945” (4 Volumes)

By Sir Charles Webster and Dr Noble Frankland (HMSO)

THE BOMBER IN PERSPECTIVE



*“History of the Second World War: The Strategic Air Offensive against Germany 1939-1945” (4 Volumes)
by Sir Charles Webster and Dr Noble Frankland (HMSO) 8 gns.*

The strategic air offensive against Germany has been the subject of argument since the day it was launched. There was ceaseless debate in the War Cabinet, in the Air Ministry and in the Ministry of Economic Warfare. When the U.S.A. entered the war, yet another dissident voice was added.

After the war the controversy continued, and today there is still considerable interest in the story of the bomber offensive, particularly among students of war. The official history by the late Sir Charles Webster and Dr Noble Frankland will not completely satisfy the protagonists, but it will provide them with enough material to continue the debate — almost indefinitely.

The official history is four volumes long. Its length is, in part, due to the controversial nature of the subject. Every twist and turn of the great debate is fully documented; every contention is ably argued. Much of the evidence is familiar; but much of it is new.

In a short, but important, first section the authors, after defining the terms used in describing the concept of a strategic air

offensive, outline the doctrines which influenced that concept as it was built up during the inter-war years. This section contains the framework on which the whole of the study is based. The second world war was the first in which air power played a decisive part. The principles of war at sea and on land were already fully established and generally accepted. The task of the navy was to achieve and maintain supremacy over the seas to facilitate the movement of men and materials. The task of the army was to engage the enemy on the land, and, in so doing, defeat him. Thus the navy fought the enemy's navy and the army fought the enemy's army. But the task of the air force was less clear. This was not only because of its novelty but also because of its flexibility.

The maxim that ‘the bomber will always get through,’ which was first formulated in the 1930's, was really as old as the R.A.F. itself. Indeed, it and the R.A.F. had both grown out of the Zeppelin and the Gotha raids on London in 1917. If there were no defence against the bomber, the R.A.F. ought to include a large and powerful

bombing force in order to deter a possible enemy. That was clear enough. But what that force should bomb was another matter. Should it, like the other two services, attack its opposite number? Or should it attack the enemy's navy and army? Or would it be better employed in attacking the enemy's war industries and in this way weakening his armed forces? Or was it possible by bombing the enemy's homeland to weaken not only his power to resist but also his will to resist? There were those who believed that the war could be won solely by an air offensive against the enemy's homeland. This would be an offensive against the economy and morale of a nation, an offensive in which the navy and army played no part except to contain the enemy whilst the aerial onslaught was launched.

In 1939, there were those in high places who remembered the first world war with its Gothas and U-boats and who believed that Germany would be brought to her knees solely by an air offensive and a sea blockade. By 1945, they had been proved wrong on both counts. The air offensive and, to a lesser degree, the blockade were important and decisive factors but they were not the only factors. Germany had to be attacked and occupied by the army. The failure of Bomber Command was its failure to defeat Germany singlehanded; its success was to make Germany's defeat by the Allied armies possible and assured.

The authors trace this failure and success in detail. They divide the war years into four phases — the opening of the offensive and the transition to area bombing (Sep. 39 to Oct. 41), the mounting offensive (Nov. 41 to Dec. 42), the combined bomber offensive (Jan. 43 to Feb. 44), and the culmination of the offensive (Mar. 44 to May 45).

In such a complex story it is difficult to decide on the turning points. During the first phase, the most important turning point was the realisation that precision bombing by day was impossible without adequate fighter cover. The Spitfire and Hurricane, which had won the first great victory of the R.A.F., had insufficient range. There were two alternatives — to build fighters with a greater range or to bomb at night. When the Americans were faced with a similar dilemma in 1943 they chose to develop a long range fighter. In this way they were able to establish and keep the

day initiative which was so important during the last phase of the war. But in 1940 the British Air Staff chose to bomb at night, as did the Luftwaffe faced with the same problem in the same year. It was a choice of doubtful virtue. Air Commodore Coningham said in 1939 with remarkable foresight that there would be ‘a never ending struggle to circumvent the law that one cannot see in the dark.’

Precision bombing at night was a failure. The crews could not navigate with any certainty in the dark and, if they reached the target, they could not bomb it accurately. It took some time for the Air Staff to realize how little damage was being done. This was the second turning point. Precision bombing was abandoned in favour of area bombing. This was a negative rather than a positive decision, but as Kitchener said, ‘In war you must do what you can do, not what you would like.’

Navigational and bombing aids were essential; and so was a bomber with a greater range and bomb load. The new aids and the new bomber went into action in 1942, under Bomber Command's new C-in-C, Air Marshal Sir Arthur Harris. This was the third turning point. Under Harris the Command was to grow in authority and size. The bomber offensive was much criticised in 1942; Harris determined to assert the Command's authority by a demonstration of its growing power. This he did by the Thousand Bomber raid on Cologne. At that time the Command had 29 Lancasters; in 1945 it had 1087 — sufficient for a Thousand Bomber raid by Lancasters alone!

Harris was persuaded by personal conviction and by the situation in which he found himself that area bombing was the only strategy open to him. In his battle for the aids and the resources he so desperately needed, he overstated his case. ‘Victory, speedy and complete,’ he said ‘awaits the side which first employs air power as it should be employed.’ It was true, as his critics have conceded, that strategic bombing was the best, and, in fact the only, contribution that could be made at that time towards winning the war. But the claim that bombing alone could win the war was never tested by events. Harris was never given a free hand or the resources which he deemed necessary.

But the evidence contained in ‘The Strategic Air Offensive against Germany’ points to the conclusion that he would have been proved wrong. There are three reasons for believing this. First, although the Battles of the Ruhr and Hamburg in 1943 went to Bomber Command, the Battle of Berlin undoubtedly went to the Luftwaffe. The absence of a long range fighter to protect the night bomber force was the determining factor. In March 1944, Harris conceded the Battle of Berlin to the Germans. Whether the growth of the German night fighter force from 665 aircraft in 1943 to 1047 aircraft in 1944 could have been prevented by precision bombing or more intensive area bombing is a difficult question — and the crux of the problem which faced the Air Staff and Harris. The Air Staff were moving more and more towards precision bombing whilst Harris stoutly defended area bombing.

Second, the German war economy, as can be seen from the figures above, was far from exhausted by the continuous onslaught during 1943 and 1944. The production of armaments continued to rise until the last quarter of 1944. This increase took place in spite of, and almost as a result of, the attacks on the Ruhr and Hamburg. The British Ministry of Economic Warfare failed to appreciate the resilience of the German economy. The truth was that it was never fully extended; there was a great deal of slack which could be taken up to offset the effects of bombing and even to increase production. The idea that the German economy was under such strain that it would fall apart by the slightest pressure at any point was incorrect.

Third, there was a grave misconception that German morale would be affected by bombing. The citizens of Solingen and Berlin were just as heroic as those of Sheffield and London. Morale was not seriously affected until the spring of 1945 when, with Germany

caught between the advancing Allied armies, defeat and occupation faced the German population.

The final turning point came when Harris was persuaded, one might say forced, to switch his attention to precision bombing, first in preparation for the invasion of Europe and then in support of the Allied armies. To his surprise, he found that precision bombing at night was now possible and effective. Oil and communications, which had always been on his list of targets but which had always been studiously ignored in favour of the area bombing of city centres, proved sensitive target systems. Whether an earlier attack on these systems would have shortened the war is open to debate. The earlier attacks on the ball-bearing industry at Schweinfurt had proved difficult and ineffective; it was those failures which had encouraged Harris in his suspicion of ‘panacea’ targets.

Professor Medlicott has said in his book ‘The Economic Blockade,’ ‘Thus in the last phase of the war the full range of economic weapons was at last being used with the deadly effect that the early economic planners had postulated; and the German fuel disaster had proved that there was after all an Achilles heel. But it had been struck by the bomber and not by the blockade.’

The authors conclude their history with a brilliant survey in which they say strategic bombing ‘made a contribution to victory which was decisive. Those who claim that the Bomber Command contribution under different circumstances might have been yet more effective disagree with one another and often overlook basic facts.’ In spite of this warning, the argument will doubtless continue. As Sir Charles Webster and Dr Noble Frankland say in their final paragraph, ‘Hind-sight contributes powerfully to wisdom.’

THE JOURNAL

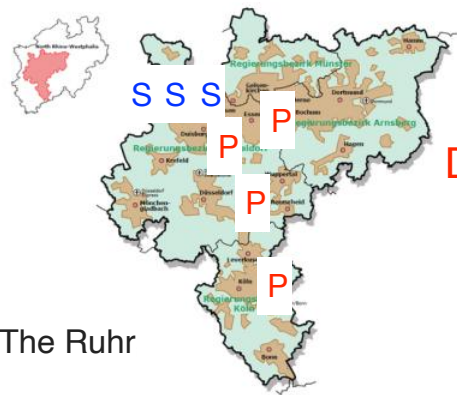
The Royal Air Force College Journal is published three times a year, at the end of the Spring, Summer and Autumn terms. Contributions are invited of articles, poems, photographs and drawings. These need not be confined to Royal Air Force and flying topics, but should be of general rather than technical interest. They should be addressed to ‘The Managing Editor of *The Journal*, Royal Air Force College, Cranwell, Sleaford, Lincolnshire.’ Unsuitable material will be returned. The Managing Editor, Editor and staff will be glad to advise intending contributors.

The Strategic Bomber Offensive - Timeline

PHASE ONE - The Opening Offensive (September 1939 - October 1941)

Turning Point - Night Ops (Absence of long range fighter cover for daytime raids)

The RAF realised that precision bombing by day was impossible without adequate fighter cover. Neither the Spitfire nor the Hurricane, who would be the victors of the Battle of Britain, possessed sufficient range. The two alternatives were to build fighters with greater range or to bomb at night. In 1943, the Americans chose the former option, but in 1940 both the RAF and the Luftwaffe were forced to adopt night operations.



Primary Targets

Duisburg Dusseldorf Essen Koln

Secondary Targets

Bremen Emden Wilhelmshaven

PHASE TWO - The Mounting Offensive (November 1941 - December 1942)

Turning Point - Area Bombing (Precision bombing at night ineffective)

Precision bombing at night was a failure. The crews could not navigate with any certainty in the dark and, if they reached the target, they could not bomb it accurately. It took some time for the Air Staff to appreciate how little damage was actually being achieved. The Butt Report of 18 August 1941 revealed the widespread failure. The second turning point, therefore, was the abandonment of precision bombing for area bombing.

PHASE THREE - Combined Bomber Offensive (January 1943 - February 1944)

Turning Point - C-in-C Harris; Lancaster bomber; GEE/OBOE/H2S aids

Navigational and bombing aids were essential; so was a new platform with a greater range and a much increased payload. The new aids and bomber went into operation in 1942, under Bomber Command's new AOC-in-C, Air Marshal Sir Arthur Harris. Harris determined to assert Bomber Command's authority, initially with 1,000 bomber raids on Koln using all available aircraft; by 1945, he could launch 1,000 Lancasters alone.



Operation HURRICANE 1944

PHASE FOUR - The Culmination (March 1944 - May 1945)

Turning Point - Precision Bombing (Harris persuaded; prep for D-Day)

In 1944, when preparations for D-day and tactical allied air operations were well under way, Harris was persuaded to switch his attention to precision bombing. With the evolution of his air power, precision bombing at night was now both achievable and effective. Area bombing gave away to precise attacks on Oil and Communications which had always been on the target priority list. The air war was being won; peace in sight.

Bomber Commanders-in-Chief

On 30 January 1933, Hitler became Chancellor of Germany. In 1938, he annexed Austria and Sudetenland, events that heralded the threat to peace and, to many, the likelihood of a second world war.

Monitoring these developments in Europe, Prime Minister Stanley Baldwin announced in July 1934 his intentions to increase the strength of the RAF by 41 bomber squadrons. On 14 July 1936, the Home Defence Force, previously known as Air Defence of Great Britain, was reorganised into Bomber, Fighter, Coastal and Training Commands. On 3 September 1939, Britain was once again at war with Germany.

Bomber Command evolved under a succession of six AOC-in-Cs. Steel and Ludlow-Hewitt met the initial challenge of growing the Command from 20 squadrons in 1936 to four bomber groups of 96 bombers by 1938. Starting in 1936 with Hart and Hind light bombers (1 Group), Heyford and Virginia medium bombers and a single Overstrand (3 Group), the Command was later to receive Hendon, Harrow, Blenheim and Whitley aircraft to form a viable bomber force. In 1938, under Ludlow-Hewitt, the Command received the first Hampdens and Wellingtons which were to play a large part in the strategic bomber offensive.



ACM

Sir John Steel

GCB, KBE, CMG

AOC-in-C

14/7/36-12/9/37



ACM

Sir Edgar Ludlow-Hewitt

GCB, GBE, CMG, DSO, MC

AOC-in-C

12/9/37-4/4/40



ACM

Sir Charles Portal

KG, GCB, OM, DSO, MC

AOC-in-C

4/4/40-25/10/40



AM

Sir Richard Peirse

KCB, DSO, AFC

AOC-in-C

25/10/40-1/42



AM

Sir John Baldwin

KBE, CB, DSO, DL

AOC-in-C

25/10/40-1/42



ACM

Sir Arthur Harris

GCB, OBE, AFC

AOC-in-C

2/42-25/10/45

Of these six AOC-in-Cs, Air Marshal Sir John Baldwin was a 'Cranwellian' by virtue of his having been the seventh Commandant of the RAF College, taking command on 21 December 1936. Just two weeks after his retirement in August 1939, Baldwin was recalled to serve in the Second World War as Air Officer Commanding 3 Group at RAF Bomber Command. Between 9 January and 21 February 1942, he was acting Commander-in-Chief of Bomber Command, pending the arrival of 'Bomber' Harris.

Phase 1 - The Opening Offensive (1)

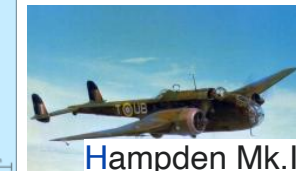
(September 1939 - October 1941)

FIRST SORTIES - Attack On German Fleet - Wilhelmshaven

Within an hour of war being declared, Bomber Command launched the first of its sorties. A Blenheim of 139 Squadron took off from Wyton at 1200, to reconnoitre elements of the German fleet moored at Wilhelmshaven. This represented the first British incursion of the war across the German frontier. Acting on information from the Blenheim, Hampdens and Wellingtons were launched in the evening to attack the fleet, but were thwarted by poor weather conditions.



Blenheim IV, L8756/XD-E of 139 Sqn



Hampden Mk.I



Wellington B IA

Name	Entry	Circumstances of Loss	Date
Bradford RL	J31	KIA 37 Sqn; Wellington IA P9213 LF-?; Feltwell-Stavangar; shot down off Norwegian coast.	1/5/40
Burke WIH	S27	KIA 15 Sqn; Blenheim IV R3746 LS-?; Wyton-Amiens & Poix; shot down Guerville.	8/6/40
Butler PS	J36	KIA 49 Sqn; Hampden I P1318 EA-?; Scampton-Aachen/Krefeld; crashed Belgium coast.	25/5/40
Cameron JS	J38	KIA 37 Sqn; Wellington IC L7793 LF-?; Feltwell-Courtrai/Brussels; forced landed Oostende.	26/5/40
Cunningham JC	S24	KIA 144 Sqn; Hampden I L4134; one of five shot down; by Me109; Hemswell-Raid EH3; Helogoland	29/9/39
de Montmorency RH	S35	*KIA 139 Sqn; Blenheim IV L9179 XD-?; Plivot-Ardenne; shot down in target area by fighters.	14/5/40
Field DBD	S28	KIA 83 Sqn; Hampden I P1348 OL-?; Scampton-Hamburg; night; flak at Barnkrug.	6/6/40
Geach TJ	J36	KIA 77 Sqn; Whitley V N1432 KN-?; Driffild-Avesnes/Hirson; crashed in Pas-de-Calais.	28/5/40
Glencross AR	J30	KIA 37 Sqn; Wellington IC L7793 LF-?; Feltwell; night comms; rescue ship sunk; drowned.	26/5/40
Gulley AR	J37	*KIA 150 Sqn AASF; Fairey Battle I L5224 JN-?; Houssay-Vernon-Poix; shot down by Me 109 at Aigleville.	13/6/40
Guthrie JR	J36	KIA 61 Sqn; Hampden I P4336 QR-?; Hemswell-Comms targets; night flak; crashed Krefeld-Uerdingen.	10/6/40
Harding GF	S37	KIA 18 Sqn BEF; Blenheim I L1405 WV-?; Meharicourt-Recce River Maase/Venlo; shot down Dusseldorf.	11/5/40



Fairey Battle



BATTLE OF FRANCE - Advanced Air Striking Force

The AASF was formed on 24 August 1939 from the ten squadrons of Fairey Battle light bombers in 1 Group under the command of Air Vice-Marshal Patrick Playfair and was dispatched to airfields in the Rheims area on 2 September 1939. For unity of command, the AASF and the Air Component of the BEF came under the command of British Air Forces in France (Air Vice-Marshal Arthur Barratt) on 15 January 1940. By May 1940, 75% of AASF Bombers had been lost. On 14 June, the remaining Battles returned to Britain; the AASF was dissolved on 26 June, the remaining Battles returning to 1 Gp. *Cranwellian losses were encountered in 139 & 150 Sqn AASF ops.

Phase 1 - The Opening Offensive (2)

(September 1939 - October 1941)

OPERATION NICKEL - Leaflet Drops of the Phoney War

The first Nickel raid was flown on 3/4 September by Whitley aircraft of 51 and 58 Squadrons, which dropped 5.4 million leaflets over targets including Hamburg, Bremen and the Ruhr, urging the civilian population to abandon the war. By 27 September, RAF squadrons had dropped 18 million leaflets over Germany. On 12/13 January 1940, Whitley aircraft of 77 Squadron, operating from Villeneuve in France, dropped leaflets over Prague and Vienna for the first time. Such raids were made at the express demand of the British government, which feared that the dropping of bombs on German soil would bring retribution.



Whitley Mk V



Hampden Mk.I



Wellington B IA

Hornum sea-plane base, Sylt, 1940



HMS Norfolk: Four of her officers were killed



Scapa Flow

THE GLOVES ARE OFF - Retaliatory Strike

In March 1940, the rules of engagement changed. A Luftwaffe attack on the RN at Scapa Flow caused accidental civilian casualties, prompting a retaliatory strike on 19/20 March, against a seaplane base on the island of Salt, Bomber Command's first against a land target. Despite 41 crews claiming a successful raid, most bombs missed their target and few into the sea.

Casualty	Entry	Description	Date
Barnwell JS	S37	KIA Blenheim I L6631 failed to return from ops; missing presumed dead.	19/6/40
Boak AS	SFTS8	KIA 50 Sqn; Hampden I P4417; aircraft believed to have force landed at sea.	5/10/40
Body J	SFTS5	KIA 149 Sqn; Wellington IC P9244 collided radio mast at Back Row returning from night ops.	12/8/40
Buften JR	SFTS7	KIA 49 Sqn; Hampden BI X3027 EA-A; Scampton-Hamburg; shot down by intruder off Skegness.	28/10/40
Charles DES	SFTS5	KIA 149 Sqn; Wellington IC R3174 OJ-A; Mildenhall-Kolleda; night; flak and flew into hillside.	17/8/40
Cunningham JC	S24	KIA 144 Sqn; Hampden I L4134; one of five shot down; by Me109; Hemswell-Raid EH3; Helogoland	29/9/39
Ducker FER	SFTS6	KIA 101 Sqn; Blenheim IV P6924 SR-?; West Raynham-Belgium and Holland; lost without trace.	19/7/40
Furness RG	SFTS7	KIA 149 Sqn; Wellington IC P9273 OJ-V; Mildenhall-Herringen; lost without trace.	10/10/40

Casualty	Entry	Description	Date
Gardner EC	SFTS8	KIA 61 Sqn; Hampden BI X2979; QR-?; Hemswell-Merseburg; rashed Sporle, Norfolk.	17/10/40
Grannum CW	S25	KIA 10 Sqn; Blenheim IV T1891 GB-?; Watton-Homberg; night; lost without trace.	28/10/40
Hastings M	J31	KIA 77 Sqn; Whitley V P4948 KN-?; Driffild-Hochst explosives factory; flak; crashed Bonn-Lengsdorf.	29/6/40
Jolliffe PS	S34	KIA 254 Sqn; Blenheim IV L9409; failed to return from an operational flight over Trondheim.	24/6/40
Parker RC	SFTS8	KIA 49 Sqn; Hampden BI P2143 EA-; Scampton-Bordeaux; crashed near Andover (fuel). See Pitmen CD.	17/10/40
Pitcairn Hill JA	S35	KIA 83 Sqn; Hampden BI P1183 OL-K; Scampton-Le Havre; shot down Seine boatyard.	18/9/40
Pitman CD	SFTS8	KIA 49 Sqn; Hampden BI P2143 EA-; Scampton-Bordeaux; crashed near Andover (fuel). See Parker RC.	17/10/40
Watson PGA	SFTS6	KIA 107 Sqn; Blenheim IV L9414 OM-Z; Wattisham-airfield close to Creil; lost over the Channel.	23/7/40
Wingate DL	J38	KIA 144 Sqn; Hampden BI P4360 PL-L; Hemswell-Mittelland; night; crashed in the canal.	22/8/40

“BATTLE OF THE BARGES” - Counter Ops to Opn Sea Lion

A possible German invasion - Operation Sea Lion - was uppermost in many people's minds during the latter part of 1940, the destruction of the growing invasion fleet being of keen interest. The 'Battle of the Barges' - as described by Guy Gibson, the Dambusters' leader, and others - therefore attracted considerable media attention that ran in parallel with Fighter Command achievements in the more famous *Battle of Britain*. The invasion barges were a prime target for Bomber Command during the Battle of Britain and the damage they inflicted on them was a critical factor in Hitler's decision to postpone the invasion of Britain on 17 September 1940.



* Cranwellian
Sqn Ldr Pitcairn - Hill
DSO DFC



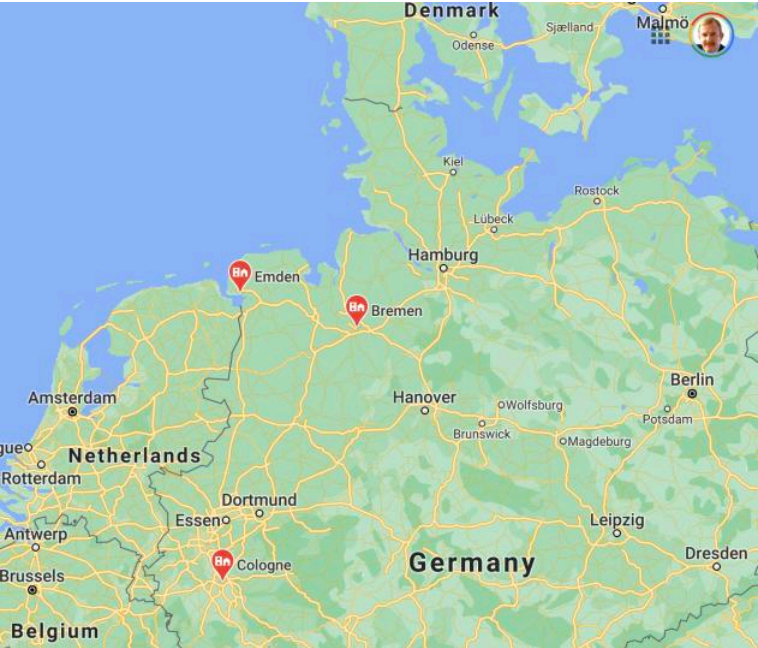
* Pitcairn-Hill's aircraft
Hampden I (P1183 OL-K)
on his fateful mission to Le Havre
on 18 September 1940

Phase 1 - The Opening Offensive (3)

(September 1939 - October 1941)

HARD TIMES - Bremen, Emden, Koln & ‘Circus’ Ops

By October 1940, the Battle of Britain was won and a German invasion postponed. Air Marshal Peirse had taken over Bomber Command now headquartered at High Wycombe from Air Marshal Portal. Under Peirse, the Command began to obtain photographic evidence of bombing raids; the results were not good. With constantly changing Ministerial instructions, Peirse focused on Emden, Bremen and Koln with the emerging four-engined heavy bombers, the Stirling and Halifax. Wellingtons were beginning to drop heavier ordnance such as the 4000lb ‘Cookie’. Peirse also instigated the shallow penetration ‘Circus’ raids - some light bombers, on occasions with heavies, with a significantly larger fighter escort - in an attempt to engage and deplete the Luftwaffe in air combat. In July 1941, Peirse received another instruction, this time to direct his main effort on German transportation, principally the rail yards in the Ruhr, and destroying the morale of the civilian population and in particular the industrial workers. In August 1941, the Butt Report challenged the effectiveness of Bomber Command and, in effect, was the death knell for Peirse as AOC-in-C.



Short Stirling



Handley Page Halifax



‘Cookie’

Casualty	Entry	Description	Date
Adams HWS	SFTS7	KIA 38 Sqn; Wellington CR 1033; over Libya.	14/4/41
Addenbrooke D	S29	KIA 101 Sqn; Blenheim IV N3552 SR-?; West Raynham-Brest; night; lost without trace.	3/4/41
Anderson PG	SFTS14	KIA 144 Sqn; Hampden AE225 PL-?; Shot down; near Brest; died whilst PoW.	21/7/41
Ash RG	SFTS9	KIA 50 Sqn; Hampden I X3117 VN-?; Lindholme-Mannheim; night; hit by flak Eifel.	12/12/40
Baker VE	SFTS10	KIA 61 Sqn; Hampden I AE263 QR-?; North Luffenham-Kiel; night ops; lost without trace.	9/8/41
Barber ALH	J36	ex-BoB; KIA 57 Sqn; Wellington IC X3162 DX-?; Feltwell-Ostende; crashed into sea Oostende.	22/3/41
Bird GOL	J36	KIA 97 Sqn; Manchester I L7324 OF-?; Coningsby-Berlin night; lost at sea.	15/5/41
Blackden VQ	J25	KIA 77 Sqn; Wellington II W5375 PH-D; Binbrook-Emden shot down.	10/4/41
Blunden KO	SFTS13	KIA 7 Sqn; Stirling I N6020 MG-B; Oakington-Karlsruhe; night ops; crashed at Trier.	25/8/41
Bolton DM	SFTS18	KIA 53 Sqn; Blenheim Mk IV V5647; failed to return from Ops.	23/6/41
Bond JCA	SFTS12	KIA 12 Sqn; Wellington II W5375 PH-D; Binbrook-Emden; shot down by night-fighter; IJsselmee.	10/4/41
Boswell RG	SFTS21	KA 218 Sqn; Wellington IC N2844 HA-M; Marham-Duisburg; shot down by night fighter, IJsselmeer.	19/8/41
Bowden DR	SFTS23	KIA 106 Sqn; Hampden I AD785; Coningsby-Hamburg; night; exploded/crashed Whitby-Scarborough Rd.	27/10/41
Brown PRD	SFTS15	KIA 50 Sqn; Hampden I AD797; aircraft shot down at Linde, Belgium.	3/6/41
Bulmer A	SFTS7	KIA 49 Sqn; Hampden BI X2985 ?; Scampton-Danzig; crashed at night in sea off Norfolk.	11/11/40
Burr-Thomas WK	SFTS8	KIA 106 Sqn; Hampden AD750 brought down over Nantes.	4/2/41
Chamberlain PB	S34	KIA 75 Sqn; Wellington IC X9981 AA-?; Firmwell-Nuremburg; night; crashed near Dinant.	12/10/41

Casualty	Entry	Description	Date
Cochrane WE	SFTS14	KIA 14 OTU; Hampden I P2092; shot down by intruder.	8/4/41
Cole FC	S27	KIA 102 Sqn; Whitley V Z6468 DY-?; Topcliffe-Kiel; night; lost without trace.	8/4/41
Cooper KT	SFTS18	KIA 50 Sqn; Hampden I AE256 VN-D; Swinderby-Kiel shipyards; night flak over target.	23/10/41
Cousins HL	SFTS15	KIA 144 Sqn; Hampden I AE238 PL-?; North Luffenham; flak shrapnel attacking Brest harbour.	24/7/41
Cruikshank RA	S36	KIA 7 Sqn; Stirling I N6012 MG-?; Oakington-Hamburg; night; shot down waiting to land.	3/5/41
Dacey F	SFTS11	KIA 83 Sqn; Hampden I AD859 OL-O; Scampton-Koln; succumbed to night fighter activity, Genk.	31/8/41
Dale HR	S26	KIA XV Sqn; Stirling I N3654 LS-B; Wyton-Berlin; shot down by a night-fighter over Opmeer, Holland.	11/5/41
David MJ	SFTS15	KIA 78 Sqn; Whitley V N1525 EY-E; Dishforth-Cologne; lost after successful attack.	1/3/41
Dunn DJ	SFTS6	KIA 51 Sqn; Whitley V P5112 MH-E; Dishforth-Dusseldorf yards; lost contact after 2045.	7/12/40
Elsmie GRA	J28	KIA 114 Sqn; Blenheim IV R3837 RT-T; Thornaby; anti-shipping strike; hit by Me 110s.	18/4/41
Fairhurst T	SFTS12	KIA 99 Sqn; Wellington IC R1440 LN-?; Waterbeach-Vegesack; crashed into the IJsselmeer.	9/4/41
Glaves AL	SFTS15	KIA 106 Sqn; Hampden I AD863 ZN-?; Coningsby-Koln; night ops; lost without trace.	15/6/41
Glennie DG	SFTS10	KIA 61 Sqn; Hampden Mk 1 AD827 QR-?; Hemswell-Kiel, shot down by flak over Holstein.	8/4/41
Gould JD	SFTS13	KIA 83 Sqn; Hampden I AE319 OL-J; Scampton-Kiel; baled out near the target.	20/8/41
Groom SR	J26	KIA 102 Sqn; Whitley V P5072 DY-P; Topcliffe-Duisburg; night; crashed North Sea.	21/11/40
Halsall ESC	SFTS15	KIA 51 Sqn; Whitley V N1481 MH-?; Dishforth-Cologne; lost without trace.	2/3/41

Phase 1 - The Opening Offensive (4)

(September 1939 - October 1941)

Casualty	Entry	Description	Date
Harris WA	J35	KIA 214 Sqn; Wellington IC R3209 BU-?; Stratishall-Dusseldorf; night; presumed lost at sea.	7/12/40
Harvey G	SFTS11	KIA 144 Sqn; Hampden I AE252 PL-?; North Luffenham-Koln; crashed Cambrai.	31/7/41
Hewitson FL	SFTS13	KIA 99 Sqn; Wellington IC T2721 LN-?; Waterbeach-Mannheim; failed to return from ops over Germany.	30/4/41
Irving D	SFTS15	KIA 83 Sqn; Hampden I AD916 OL-Z; Scampton-Dusseldorf; flak Duren.	1/7/41
Jeff JEP	SFTS14	KIA 44 Sqn; Hampden I AD864 KM-; Waddington-Hamburg; crashed, River Elbe.	3/5/41
Jenkins JC	SFTS20	KIA 214 Sqn; Wellington IC R1613 R1613; Stradishall-Bremen; shot down by night-fighter Quakenbruck.	15/7/41
Jones BWM	SFTS15	KIA 104 Sqn; Wellington II W5485 EP-J; Driffield-Karlsruhe; flak over target area.	6/8/41
Jones RW	SFTS7	KIA 99 Sqn; Wellington IC R3289 LN-; Newmarket-Ruhr; ditched Felixstowe.	6/11/40
Kelly DDA	S35	KIA 103 Sqn; Wellington IC N2849 PM-?; Newton-Duisburg; night; shot down over Belgium.	17/6/41
Kendall CF	SFTS8	KIA 83 Sqn; Hampden BI L4095 OL-R; Scampton-Danzig; crashed off Dutch coast.	11/11/40
Kerr RE	SFTS9	KIA 51 Sqn; Whitley V Z6741 MH-; Dishforth-Brest; crashed near Brest.	5/7/41
Laidlaw W	SFTS15	KIA 50 Sqn; Hampden I AE383 VN-; Swinderby-Bremen; lost without trace.	20/10/41
Landale PWF	SFTS6	KIA 10 Sqn; Whitley V Z6624 ZA-O; Leeming-Hanover; crashed into the North Sea.	25/7/41
Langley RR	S38	KIA 139 Sqn; Blenheim IV T1832 XD-?; Horsham St Faith; maritime patrol; attacked by Me109s.	16/6/41
Lings GO	S36	KIA 110 Sqn; Blenheim IV V6063 VE-?; Watton Anti-shipping patrol; shot down N of Texel.	26/4/41
Littler CE	S28	KIA 103 Sqn; Wellington IC R1043 PM-?; Newton-Brest; night; emergency landing Mudford.	30/3/41
Long FH	SFTS17	Entered in error during original research; wrong connection verified on first revision	
Macrossan HM	SFTS9	KIA 50 Sqn; Hampden I AD753 VN-; Lindholme-Brest; exploded S of Scilly.	5/4/41
Matheson CV	SFTS23	KIA 78 Sqn; Whitley V Z6881 EY-; Middleton St. George-Huls; shot down; Friesland.	7/9/41
Matthews HV	J37	KIA 207 Sqn; Manchester I L7313 EM-C; Waddington-Hamburg; Ju88 attack on take-off.	13/3/41
McMillan P	SFTS15	KIA 59 Sqn; Blenheim IV V5648; missing believed killed; aircraft failed to return from ops.	26/3/41
Mead IA	S35	KIA 18 Sqn; Blenheim IV L9192 WV-Q; Oulton-Kiel Canal; shot down 160km W of Texel.	2/6/41
Mercer DW	SFTS20	KIA 77 Sqn; Whitley V Z6668 KN-; Leeming-Huls; crashed at Quackenburck.	7/9/41
Millar KL	SFTS7	KIA 44 Sqn; Waddington, injured after crash on take off, died of wounds.	14/11/40
Namias MHR	SFTS20	KIA 226 Sqn; Blenheim IV Z7310 MQ-V; Wattisham-ASW; flak hits starboard engine during attack.	20/9/41
Napier DM	SFTS15	Entered in error during original research; wrong connection verified on first revision	
Nottidge JJ	SFTS11	KIA 207 Sqn; Manchester I L7377 EM-G; Waddington-Berlin; flak, Teltow.	13/8/41
Ogilvie JFT	SFTS13	KIA 21 Sqn; Blenheim IV V6372 YH-H; Watton-ASW; shot down by Me109s off Heligoland.	15/5/41
Owens HM	SFTS14	KIA 50 Sqn; Hampden I AD844 VN-; Lindholme-Hamburg; lost without trace, North Sea.	17/7/41
Page AJ	SFTS10	KIA 101 Sqn; Wellington IC X9828 SR- ; night ops Oakington to Frankfurt, crashed into the North Sea.	24/10/41

Casualty	Entry	Description	Date
Potts RJ	SFTS14	KIA 83 Sqn; Hampden I AD907 OL-K; Scampton-Kiel; crashed off Bridlington coast.	19/8/41
Preece MJ	SFTS9	KIA 50 Sqn; Hampden I X3004 VN-; Lindholme-Dusseldorf; missing believed killed; lost without trace.	8/12/40
Pritchard PHH	A40	KIA 61 Sqn; Hampden I AD727 QR-?; Hemswell-Minelaying in Kiel Bay; KriegMarine flak in Maglehoj Strand.	11/6/41
Ralston JKC	S38	KIA 103 Sqn; Wellington IC T2621 PM-?; Netwon-Dusseldorf; night; exploded mid-air.	25/2/41
Richmond H	SFTS22	KIA 61 Sqn; Hampden I AE247 QR-; North Luffenham-Frankfurt; lost without trace. Since Verified	29/8/41
Rogers DA	SFTS14	KIA 21 Sqn; Blenheim IV R3900 YH-; Watton-ASW; hot down by naval flak off Texel.	31/3/41
Rollinson J	SFTS25	KIA 88 Sqn; Blenheim IV V6421 RH-Y; Attlebridge-ASW; flak in port engine; crashed off Dutch coast.	26/10/41
Sanders ATD	J32	KIA 85 Sqn; Boston II AH520; enemy action near Deal, Kent.	31/10/41
Sargent PD	SFTS12	KIA 40 Sqn; Wellington IC R1438 BL-U; Alconbury-Dusseldorf night ops; stalled and crashed on RTB. Since Verified	3/6/41
Scott EA	SFTS14	KIA 78 Sqn; Whitley V T4209 EY-W; Middleton St. George-Hamm; flak inbound, ditched off east coast.	9/7/41
Shuttleworth RA	J39	KIA 21 Sqn; Blenheim IV Z7447 YH-A; Watton-Rotterdam; crashed off Dutch coast.	28/8/41
Simpson GA	SFTS11	Entered in error during original research; wrong connection verified on first revision	
Smith EG	SFTS12	KIA 77 Sqn; Whitley V Z9150 KN-; Leeming-Stettin; shot down Felm Moor, Germany.	30/9/41
Smith IOM	SFTS13	KIA 99 Sqn; Wellington II W5400 LN-; Waterbeach-Berlin; night ops; last heard at 0520 calling for help. Since Verified	9/5/41
Smith RC	SFTS12	Likely KIA 15 Sqn; Stirling I N6016 LS-G; Wyton-Hamburg; shot down by night-fighter, Ellerbeck. Since Verified	30/6/41
Smith TH	SFTS21	Entered in error during original research; wrong connection verified on first revision	
Stainthorpe WW	S29	KIA 83 Sqn; Hampden I X3124; crashed on return from operational flight.	27/2/41
Standfast PH	SFTS16	KIA 105 Sqn; Blenheim DZ9604; aircraft blew up mid air, over north African coast.	15/8/41
Stanley DG	J36	KIA 9 Sqn; Wellington IC R3220 WS-K; Honington-Dusseldorf; flak Ostend.	7/12/40
Steel AK	SFTS11	KIA 53 Sqn; Blenheim IV T2395 PZ-N; recce Holland; hit barrage balloon cable, west of Ramsgate. Since Verified	7/12/40
Stevens AOL	SFTS7	KIA 99 Sqn; Wellington IC R3289 LN- ; Newmarket-Ruhr; night ops; fell into sea close to Felixstowe.	7/11/40
Thompson RPC	SFTS7	KIA 83 Sqn; Hampden I AD748 OL-M; Scampton-mine laying la Rochelle; crashed high gnd Dartmoor. Since Verified	4/4/41
Tindall A	SFTS9	KIA 115 Sqn; Wellington IC T2520 KO-A; Marham-Bordeaux; off-course RTB, flew into high ground Tredegar.	9/12/40
Waldron VE	SFTS23	KIA 99 Sqn; Wellington II W5436 LN-X; Waterbeach-Frankfurt; crashed near Bury St. Edmunds on RTB.	29/9/41
Walkden MTK	SFTS17	KIA 18 Sqn; Blenheim IV V6437 WV-C; Horsham St. Faith-Cologne; crashed off the Dutch coast.	12/8/41
Ward WC	F22	KIA 305 Sqn; Wellington II W5526 SM-J; Lindholme-Le Havre; shot down near target.	15/9/41
Watson A	SFTS13	Entered in error during original research; wrong connection verified on first revision	
Watson ML	J36	KIA 82 Sqn; Blenheim K6426(Air81); failed to return from operations.	11/6/41
Watts GG	SFTS14	KIA 106 Sqn; Hampden I AD756 ZN-; Coningsby-Dusseldorf; night fighter, Gerabloux.	17/8/41
Wheeler RH	SFTS11	KIA 37 Sqn; Wellington Ic T2512; crashed into the sea off Tobruk.	5/9/41

Phase 2 - The Mounting Offensive (1)

(November 1941 - December 1942)

BUTT, BUTT, BUTT - Restricted Operations

Scathing of over 600 night missions conducted by Bomber Command, the Butt report was to have serious implications. The Air Staff challenged the conclusions and tabled a counter-proposal that 4,000 bombers with improved nav aids attacking 43 German towns could end the war in six months. A sceptical Churchill rejected the proposal but continued to support Bomber Command. For the next three months, the Command's operations were confined to attacking French and German ports, occasional targets in the Ruhr and a first Combined Operation on Vaagso.



Casualty	Entry	Description	Date
Ellis GT	SFTS27	KIA 51 Sqn; Whitley V Z9301 MH-N; Dishforth-Emden; lost without trace.	17/1/42
Jacobs TF	SFTS22	KIA 49 Sqn; Hampden I AD909 EA-; Scampton-mine laying; lost without trace.	9/1/42
Priest TF	SFTS14	KIA 408 Sqn; Hampden I AE286 EQ-T; Balderton-Wilhelmshaven; night ops; lost without trace.	10/1/42
Selfe RV	SFTS24	KIA CL 117; KIA 106 Sqn; Hampden I AT122 ZN-; Coningsby-Munster; crashed at Besselinkschans.	28/1/42
Wright JF	SFTS26	KIA 51 Sqn; Whitley V Z9423 MH-S; Dishforth-Emden; night ops; lost without trace.	26/1/42
Beaney VD	SFTS16	KIA 49 Sqn; Hampden I AE224; shot down by Flak off the Friesian Islands.	1/11/41
D'Arcy JM	SFTS23	KIA 49 Sqn; Hampden I P1206 EA-K; Scampton-Bocholt; shot down, night fighter, IJsselmeer.	8/11/41
Dickenson PGS	J34	KIA 51 Sqn; Whitley V Z9130 MH-?; Dishforth-Berlin; night; ditched in the North Sea.	8/11/41
Hardie WDC	SFTS20	KIA 101 Sqn; Wellington IC R1701 SR-K; Oakington-Berlin; ditched Dutch coast.	7/11/41

Casualty	Entry	Description	Date
Jenkins MA	SFTS22	KIA 455 Sqn; Hampden I AE243 UB-B; Swinderby-Koln; lost on Rover Patrol.	7/11/41
Kidd FL	SFTS14	KIA 144 Sqn; Hampden I AE253 ; North Luffenham-anti-shipping ops; flak Terschelling.	6/11/41
McCombe GM	SFTS25	KIA 78 Sqn; Whitley V Z6948 EY-F; Croft-Berlin; night-fighter twixt Oudmirdum & Mijemirdum.	8/11/41
McKillop A	SFTS25	KIA 57 Sqn; Wellington IC Z8985 DX-; Feltwell-Rover patrol-Munster; crashed near Haastrecht.	8/11/41
Nutt JA	SFTS24	KIA 51 Sqn; Whitley V Z6567 MH-Z; Dishforth-Essen; night-fighter, Barsingerhorn.	8/11/41
Scott A	SFTS26	KIA 58 Sqn; Whitley V Z6972 GE-P; Linton-on-Ouse-Berlin; crashed into the sea on RTB.	8/11/41
Grigg GL	SFTS20	KIA 35 Sqn; Halifax I L9600 TL-U; Linton-on-Ouse-Cologne; lost over Belgian coast.	11/12/41
Kaby N	SFTS26	KIA 110 Sqn; Blenheim IV Z7442 VE-; Lossiemouth-commando support Vaagso; shot down, Norway.	27/12/41
Macleod JB	SFTS24	KIA 110 Sqn; Blenheim IV V6429 VE-; Lossiemouth-commando ops; shot down Norway coast.	27/12/41
Stokes NG	SFTS23	KIA 97 Sqn; Manchester I R5795 OF-W; Coningsby-Brest; attack Gneisenau; shot down by Me 109s.	18/12/41
Webber HD	SFTS14	KA 106 Sqn; Hampden I AE391 ZN-; Coningsby-Gelsenkirchen; crashed Oberhausen & Osterfeld area.	12/12/41



A CRANWELLIAN IN COMMAND - A Sea Change

January 1942, as historian Dr Robert Owen recounts in the IBCC's *Our Story, Your History*, marked a sea change for Bomber Command in respect of leadership, strategy and equipment. Former RAFC College Commandant, Air Marshal Jack Baldwin, temporarily replaced Air Marshal Peirse and was given the directive to focus operations on the morale of the enemy civilian population and the industrial workers. His tenure was also marked by the arrival of the iconic Lancaster four-engine bomber to replace the unreliable Manchester, and a new radio navigation aid, GEE. Baldwin's new strategy focused on the German industrial heartland - the primary targets of Essen, Duisburg, Dusseldorf and Koln; secondary targets of Bremen, Emden and Wilelmshaven. Berlin beyond the range of GEE would be attempted in suitable weather conditions

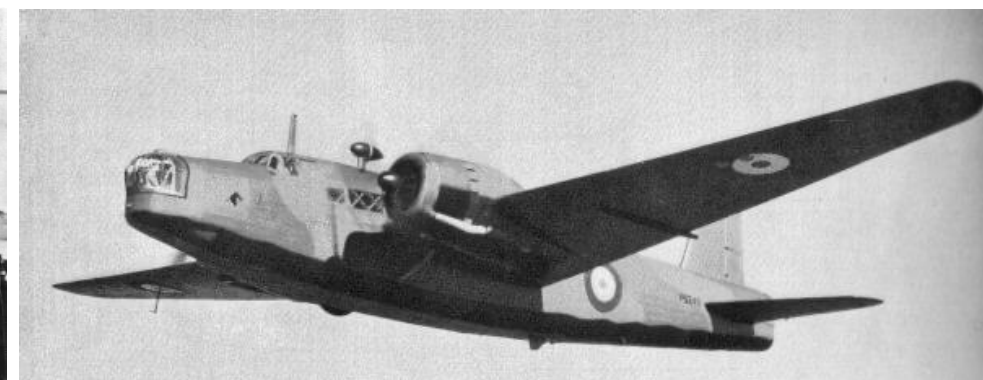


Phase 2 - The Mounting Offensive (2)

(November 1941 - December 1942)

HARRIS - Cometh The Hour, Cometh The Man

Disquiet in political circles was still evident and it was clear that Portal would have to bring in a forthright, resolute champion of ‘area bombing’ aimed at undermining the ability of the enemy to continue fighting. That man was Air Marshal Arthur Harris who lost no time when appointed in February 1942 to assert his authority and the Command’s power on the strategic bomber offensive. However, with only 466 medium and heavier bombers at his disposal, the enforced transfers of aircraft and men to Coastal and Middle East Commands, and the ongoing support to Coastal Command mine laying ops and ASW in the Bay of Biscay, Harris was limited to launching 200+, low altitude, bomber raids on specific targets with some success, initially against Billancourt, Essen and Lubeck.



Wellington B IA

Casualty	Entry	Description	Date
Bridge SH	SFTS19	KIA 107 Sqn; Boston III W8319 OM-?; Great Massingham-formation training exercise; crashed Kings Lynn.	19/2/42
Brooke PRS	SFTS25	KIA 9 Sqn; Wellington III X3415 WS-?; Honington-Cologne; crashed 12km NW of Bonn.	6/4/42
Coleman LW	SFTS5	KIA 149 Sqn; Stirling I R9295 OJ-G; Mildenhall-Essen; overshot runway and crashed into trees.	11/3/42
Cook DA	SFTS23	KIA 49 Sqn; Hampden I P1226 EA-I; Scampton, training; poor viz, crashed Seaton, Devon.	17/3/42
Cruze HE	SFTS25	KIA 57 Sqn; Wellington III X3607 DX-?; Feltwell-Hanau railway; crashed into a wood, Worms.	2/4/42
Davidson AG	SFTS17	KIA 50 Sqn; Hampden I AE400 VN-?; Skellingthorpe Mine laying; lost off French coast.	8/3/42
Duff GG	SFTS16	KIA 158 Sqn; Wellington II W5431 NP-W; Driffild-Essen; crashed and in flames on return to base (RTB).	10/3/42
Golding A	J31	KIA 12 Sqn; Wellington II W5372 PH-D; Binbrook-Essen; shot down by night fighter; Enkhuizen.	26/3/42
Jenkins JFG	SFTS5	KIA 114 Sqn; Blenheim IV Z7276 RT-N; West Raynham-Intruder duties, Soesterberg airfield; flak, Utrecht.	27/3/42
Kitchen R	SFTS26	KIA 76 Sqn; Halifax II R9484 MP-G; Middleton St. George-Essen; crashed Recklinghausen.	10/4/42
Livingstone IF	SFTS18	KIA 83 Sqn; Manchester I L7426 OL-D; Scampton-Essen; night-fighter near Enkhuizen.	9/3/42
Lovegrove PA	SFTS19	KIA 83 Sqn; Manchester I L7427 OL-Q; fell from window of POW camp Schubin, after capture on Hamburg raid.	8/4/42
Roblin HP	SFTS21	KIA 50 Sqn; Hampden I AT151 VN-; Skellingthorpe-Essen; night ops; night fighter off the Dutch Vlieland.	25/03/42
Smith PN	SFTS14	Possibly KIA 50 Sqn; Hampden I AE306; failed to return from ops over North Sea.	7/2/42
Spalding J	SFTS26	KIA 77 Sqn; Whitley V Z9293 KN-D; Leeming-Emden; night ops; lost without trace.	12/3/42
Stephens VL	SFTS27	KIA 214 Sqn; Wellington IC Z8842 BU-; Stradishall-Hanau railway; night ops; presumed lost at sea.	1/4/42
Underwood RB	SFTS26	KIA 97 Sqn; Lancaster I L7572 OF-L; Lossiemouth-Tirpitz; flak, Kaldammen-Austvannet area, Norway.	27/4/42
Webb EB	J24	KIA CO Snaith; Wellington IC X9814 JN-O; Snaith-Poissy; night ops; crashed Villacoublay.	2/4/42

Phase 2 - The Mounting Offensive (3)

(November 1941 - December 1942)

1,000 BOMBER RAIDS - Taking It To The Ruhr

With improved lower level bombing enhanced by GEE navigation, flare target marking and incendiaries, Harris was determined to employ similar tactics on the Ruhr despite the threat of heavy flak and the glare of searchlights. He launched with mixed success his famed 1,000 bomber raids on Koln, Essen and Bremen, employing every available bomber from the OTUs and HCUs as well as operational squadrons of Coastal and Bomber commands. Harris had quickly made his point; regardless of casualties, a large concentrated bomber force with the right tactics could have the desired impact, addressing the criticism of the Butt Report. However, he needed to sustain such raids with a much larger bomber force and closer cooperation with US forces who had recently joined the air war.

30–31 May 1942

1,047 aircraft dispatched in "Operation Millennium" against **Koln**. This first use of the "bomber stream" to overwhelm enemy radar and defences by flying in a narrow dense formation. Bomber Command recorded 868 bombers attacking the target with 1,455 tons of bombs. Over three thousand buildings were destroyed and another nine thousand damaged.

1–2 June 1942

Second 1000-bomber raid on **Essen**, 956 aircraft were dispatched, but the target was obscured and bombing was not effective.

25–26 June 1942

Bomber Command assembled 960 aircraft including aircraft from 2 Gp's day bombing force, to which RAF Coastal Command added 102 aircraft. The attack was spread across the Focke-Wulf factory, the A.G. Weser shipyard, the Deschimag shipyard, and an area attack on the town and docks. Just under 700 aircraft bombed **Bremen**.

Casualty	Entry	Description	Date
Bowker RA	SFTS28	KIA 7 Sqn; Stirling I W7520 MG-S; Oakington-Mannheim; collided with an Me110, St. Truiden.	20/5/42
Cheetham AF	SFTS25	KIA 149 Sqn; Stirling I N6124 OJ-R; Lakenheath-Stuttgart; crashed at Aguilcourt.	5/5/42
<i>Davies W</i>	<i>SFTS37</i>	Entered in error during original research; wrong connection verified on first revision	
<i>Evans E</i>	<i>SFTS10</i>	Entered in error during original research; wrong connection verified on first revision	
Gardiner P	SFTS28	KIA 44 Sqn; Lancaster Mk 1 L7533 KM-J; Waddington-Warnemunde; lost without trace.	8/5/42
<i>Gardner AD</i>	<i>SFTS25</i>	<i>KIA 101 Sqn; Wellington III X3670 SR-F; Bourn-Cologne; one of 1047 ac; lost without trace.</i>	31/5/42
Graham RM	SFTS15	Entered in error during original research; wrong connection verified on first revision	
Heap JO	SFTS28	KIA 218 Sqn; Stirling I N6070 HA-A; Marham-Pilsen; night ops; crashed at Frankfurt.	Since Verified 5/5/42
Kennard WD	SFTS24	KIA 105 Sqn; Mosquito IV W6064 GB-; Horsham St. Faith-Koln; flak, crashed 0705 hrs at Bazel.	31/5/42
Moorehouse HB	SFTS24	KIA 76 Sqn; Halifax II R9456 MP-F; Middleton St. George-Warnemunde; crashed near Rostock.	Since Verified 9/5/42
Morrow AS	SFTS17	Entered in error during original research; wrong connection verified on first revision	
Parker RPM	SFTS28	KIA 218 Sqn; Short Stirling I DJ977 HA-F; Marham-Mannheim; one of 197 ac; night ops; lost without trace.	Since Verified 19/5/42
Williams JB	SFTS25	KIA 76 Sqn; Halifax II R9451 EY-; Croft-Hamburg; night ops; shot down and crashed at Ottensen.	3/5/42
Young RJ	1ATU	Entered in error during original research; wrong connection verified on first revision	
Baker LT	SFTS28/SFTS29	KIA 150 Sqn; Wellington III X3279 JN-M; Snaith-Emden; shot down by a night-fighter; Waddenzee.	7/6/42
Bond H	SFTS28	KIA 12 Sqn; Wellington II Z8652 PH-?; Binbrook-Essen; loss not established.	9/6/42
Calvert ED	SFTS28	KIA 7 Sqn; Stirling I W7472 MG-C; Oakington-Emden; shot down night-fighter; Bergen aan Zee.	21/6/42
Cooke FO	SFTS28	KIA 114 Sqn; Blenheim IV L8800 RT-C; West Raynham-Schipol; crashed at Weasenham.	5/6/42
Godfrey O	S34	KIA 103 Sqn; Wellington IC DV818 PM-?; Elsham Wolds-Emden; night; presumed ditched Dutch coast.	23/6/42
Goldring CE	SFTS31	Entered in error during original research; wrong connection verified on first revision	
Jones JR	SFTS27	Entered in error during original research; wrong connection verified on first revision	
Kerr DA	S34	KIA 149 Sqn; Wellington IC P9272; shot down, baled out near Bremerhaven.	22/6/42
Mackay PS	SFTS15	Entered in error during original research; wrong connection verified on first revision	
Mitchell JL	SFTS28	Likely KIA 114 Sqn; Bristol Blenheim IV V6337 RT-D; West Raynham-Venlo; crashed Channel.	2/6/42
Neave DA	SFTS19	KIA 83 Sqn; Lancaster I R5640 OL-D; Scampton-Essen; crashed at Huxne.	Since Verified 9/6/42
Osborne DO	SFTS20	KIA 150 Sqn; Wellington III X3309 JN-N; Snaith-Bremen; lost without trace.	27/6/42
Rowe JL	SFTS18	KIA 83 Sqn 9/6/42; Lancaster I R5659 OL-B; Scampton-Essen; crashed at Vardingholt.	Since Verified 8/6/42
Shackleton WC	SFTS24	KIA 49 Sqn 2/6/42; Manchester I R5794 EA-; Scampton-Essen; shot down by night-fighter, Voorheide.	Since Verified 2/6/42
Skinner TB	SFTS26	KIA 107 Sqn; Boston III OM-; Exeter-intruder duties, Lannion airfield; shot down into the sea by Me 109.	Since Verified 10/6/42
<i>Smith JB</i>	<i>SFTS34</i>	Entered in error during original research; wrong connection verified on first revision	
Wood TRR	SFTS22	KIA 115 Sqn; Wellington III X3635 KO-J; Marham-Bremen; night ops involving 170 aircraft.	3/6/42

Phase 2 - The Mounting Offensive (4)

(November 1941 - December 1942)

THE PATHFINDER FORCE (PFF) - Flares, Pink Panzies, OBOE

Navigation and targeting in the face of fierce opposition remained a serious issue, but there was evidence that experienced crews using GEE could bomb accurately. GEE being in short supply, the Director of Bomber Ops in the Ministry, Gp Capt Sydney Bufton gained Portal's approval for the formation of a dedicated target marking force. Not keen on an elite force and the transfer of his most experienced crew into one or more specialist squadrons, Harris resisted. However, in August 1942, Harris created the PFF under the command of Australian AVM Don Bennett. After an inauspicious start employing 'illuminator' white flares, 'visual marker' coloured flares, the first specialist marker bomb 'Pink Pansy' and, in December, the new OBOE radar fitted Mosquito aircraft, the PFF and Bomber Command as a whole ended the year poised at last to fulfil the strategy planned two years earlier.



Bufton



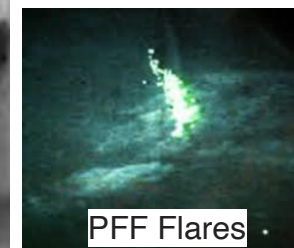
Bennett



OBOE



PFF Badge
Worn above
Wings



PFF Flares

Casualty	Entry	Description	Date
Angel AA	1 ATU	KIA 101 Sqn; Wellington III BJ583 SR-?; Bourn-mining off Heligoland.	12/7/42
Atkinson JC	SFTS13	KIA 50 Sqn; Lancaster W4382 VN-? Skellingthorpe-Soltau; night ops; lost without trace.	18/12/42
<i>Brown JW</i>	<i>SFTS29</i>	<i>Possibly KIA 15 Sqn; Stirling I R9318 LS-J; Bourn-Essen; night ops; lost without trace.</i>	<i>15/9/42</i>
Bunbury JS	SFTS24	KIA 50 Sqn; Lancaster I R5639 VN-?; Swinderby-Osnabruck; night ops; lost without trace.	17/8/42
<i>Cato PC</i>	<i>1 ATU</i>	<i>KIA 102 Sqn; Halifax II W1066 DY-?; Pocklington-Flensburg; one of 12 out of 27 ac lost.</i>	<i>1/10/42</i>
Charlton-Jones C	S32	KIA 149 Sqn; Stirling I N6081 OJ-H; crashed at Airlenbach.	29/8/42
<i>Cooper GA</i>	<i>1 ATU</i>	<i>KIA 9 Sqn; Wellington III X3475 WS-?; Honington-Hamburg; flak in suburbs of Harburg.</i>	<i>28/7/42</i>
Cooper JS	SFTS28	KIA 97 Sqn; Woodhall Spa-Bremen; case not established.	4/9/42
Coulthard PC	SFTS29	KIA 18 Sqn; Blenheim IV V6071 WV-?; Wattisham-Deelan, Holland; shot down near Amstelveen.	14/7/42
Davies AH	SFTS25	Likely KIA 57 Sqn; Wellington III BJ673 DX-?; Feltwell-Duisburg; night ops; naval flak Dutch coast.	24/7/42
Davies MC	SFTS31	KIA 61 Sqn; Lancaster I W4111 QR-Z; Syerston-Dusseldorf; night ops; cause of loss unknown.	10/9/42
Dawson P	SFTS29	KIA 57 Sqn; Wellington III Z1656 DX-?; Feltwell-Mainz; night ops, lost at sea.	11/8/42
Downer DJ	1 ATU	KIA 106 Sqn; Lancaster I W4178 ZN-P; Coningsby-Essen; night ops; crashed North Sea off Netherlands.	17/9/42
Du Toit JCF	SFTS29	KIA 218 Sqn; Stirling I W7613 HA-N; Downham Market-Lubeck; night ops; crashed at Skallingen.	1/10/42
Fry DW	SFTS16	Slim possibility: KIA 207 Sqn; Lancaster I R5760 EM-Y; Bottesford-Mainz; lost without trace.	12/8/42
Game HE	SFTS23	KIA 61 Sqn; Lancaster I W4233 QR-?; Syerston-Kiel; crashed into hillside, Helmsley.	15/10/42
Gill NI	SFTS31	KIA 101 Sqn; Wellington III BJ891 SR-?; Stradishall-Bremen; one of 12 ac lost (out of 251 on raid); lost without trace.	5/9/42
Glover S	SFTS32	KIA 150 Sqn; Wellington III BJ608 JN-?; Snaith-Osnabruck; shot down by a night-fighter, Wierden.	10/8/42
Good WH	SFTS32	KIA 12 Sqn 1/8/42; Wellington II Z8499 PH-?; Binbrook-Dusseldorf; flak and crashed at Heuthe.	1/8/42
Grein BE	SFTS29	KIA 106 Sqn; Lancaster I W4109 ZN-?; Coningsby-Mainz; crashed at Waldesch.	12/8/42
<i>Hebblethwaite G</i>	<i>SFTS31</i>	<i>KIA 156 Sqn; Wellington III X3367 GT-; Warboys-Kassel; one of 31 ac lost (out of 306 on raid); shot down, night-fighter, Epe.</i>	<i>27/8/42</i>

Phase 2 - The Mounting Offensive (5)

(November 1941 - December 1942)

Casualty	Entry	Description	Date
Heywood P	SFTS25	KIA 7 Sqn; Stirling I N3764 MG-J; Oakington-Hamburg; one of 15 ac lost (out of 213 on raid); crashed Flottbek.	9/11/42
Hughes JA	SFTS30	KIA 150 Sqn; Wellington III Z1593 JN-/; Snaith-Osnabruck; shot down by a night fighter over Holland.	9/8/42
Hulme DK	SFTS31	KIA 88 Sqn; Boston III Z2224 RH-; Oulton-St. Omer airfield; crashed near airfield.	1/11/42
Hulse TMF	SFTS28	<i>KIA 149 Sqn; Stirling I BF320 OJ-H; Lakenheath-Saarbrukem; flak, crashing at Rodenhof.</i>	30/7/42
James RV	SFTS28	KIA 156 Sqn; Wellington III DF667 GT-; Warboys-Kassel; one of 31 ac lost (out of 306 on raid); night fighter Netherlands.	28/8/42
Jones EG	SFTS13	<i>KIA 76 Sqn; Halifax II DT570 MP-R; Linton-on-Ouse-Duisburg; night ops; crashed near Weeze.</i>	20/12/42
Kenyon RFH	SFTS32	KIA 102 Sqn; Halifax II W7913 DY-C; Pocklington-Frankfurt; shot down, night-fighter, Rochefort.	3/12/42
MacDonald FM	1ATU	KIA 161 Sqn; Whitley V Z6940 MA-; Tempsford-SOE; crashed close to Boulogne.	19/9/42
MacNaughton DH	SFTS30	KIA 12 Sqn; Wellington III X3988 PH-X; Binbrook-Kassel; crashed Gladbeck.	27/8/42
Marshall A	SFTS32	<i>KIA 40 Sqn; Willington IC HF834 C; Luqa-Op Bizerta; failed to return from ops.</i>	7/12/42
Marshall CD	SFTS33	<i>KIA 418 (RCAF) Sqn; Boston III; intruder sortie to Namur with leaflets.</i>	4/12/42
McCarthy WRB	SFTS28	KIA 218 Sqn; Stirling I R9160 HA-G; Downham Market-Kassel; night-fighter; North Sea.	27/8/42
McLennan K	SFTS30	KIA 142 Sqn; Wellington IV Z1316 QT-H; Grimsby-Saarbrucken; shot down Olm.	29/7/42
Meredith JL	1ATU	KIA 15 Sqn; Stirling I W7634 LS-G; Bourn-Lubeck; one of 3 ac lost (out of 25 on raid); near Peenemunde.	1/10/42
Northey D	SFTS31	KIA 150 Sqn; Wellington III X3762 JN-; Snaith-Saarbrucken; shot down over France.	20/9/42
Oakeshott AR	S35	KIA 139 Sqn; Mosquito IV DK294 GB-?; Horsham St. Faith-Flensburg U-boat yard; Fw 190s.	2/7/42
Owen J	SFTS23	KIA 138 Sqn; Whitley V Z9282 NF-M; Tempsford on secret unrecorded operation. Crashed Vire, Calvados.	26/7/42
Parsons RJS	J38	KIA 115 Sqn; Wellington III Z1663 KO-J; Mildenhall-Dortmund-Ems canal; shot down FW 190.	28/9/42
Potts DN	1ATU	KIA 75 Sqn; Wellington III X3557 AA-; Feltwell-Wilhelmshaven; one of 5 ac lost (out of 285 on raid); crashed Waddenzee.	9/7/42
Read MFB	S31	KIA 218 Sqn; Stirling I W7613 HA-N; Downham Market-Lubeck; night ops; crashed Skallingen.	1/10/42
Rowlands RG	1ATU	<i>KIA 207 Sqn; Lancaster I R5755 EM-N; Bottesford-Bremen; shot down over the Ijsselmeer.</i>	5/9/42
Sandon AHG	SFTS31	KIA 142 Sqn; Wellington IV Z1480 QT-I; Grimsby-Essen; reported as crashing "near Dusseldorf".	16/9/42
Searby AL	SFTS22	<i>KIA 61 Sqn; Lancaster I R5661 QR-J; St. Eval-Shipping attack North Coast Spain; lost without trace.</i>	19/8/42
Seymour PGdeH	S30	KIA 158 Sqn; Halifax II W7863 NP-V; Rufforth-Nickel night raid France; crashed Consigny.	17/11/42
Skone AR	SFTS23	KIA 214 Sqn; Stirling I R9155 BU-Q; Stradishall-Kassel; one of 31 ac lost (out of 306 on raid); crashed at Issum.	27/8/42
Smith PF	SFTS19	<i>KIA 51 Sqn; Chorley Page 130; nothing in IBCC database.</i>	25/10/42
Smith PH	SFTS30	<i>One of four possibilities: KIA 36 Sqn; Halifax II W7760 TL-B; Linton-on-Ouse-Hamburg; one of 29 ac lost (out of 403 on raid); lost over the sea.</i>	27/7/42
Smith WWG	SFTS25	KIA 161 Sqn; Whitley V BD228 MA-S; Tempsford-SOE; crashed and burnt out on return to base.	22/10/42
Thorne SJ	SFTS27	KIA 37 Sqn; Wellington IC Z8990; Op Naqb Abu Dweis; engine fire over target; parachute failed.	3/7/42
West TA	SFTS31	<i>KIA 149 Sqn; Stirling I W7566 OJ-C; Lakenheath, night mining off French coast crashed Vielle St. Girone.</i>	16/11/42
Wood DJ	SFTS32	KIA 102 Sqn; Halifax II DT517 DY-G; Pocklington-Flensburg ; night ops; one of five ac lost (out of 28 on raid).	24/9/42
Wright CM	S36	KIA 115 Sqn; Wellington III BK312 KO-?; Mildenhall-mining off French coast; missing.	16/10/42

Phase 3 - Combined Bomber Offensive (1)

(January 1943 - February 1944)

BATTLE OF THE RUHR - **OBOE** And **H2S** Blind Marking

Notwithstanding the Allied Combined Chiefs of Staff agreement reached at the Casablanca Conference for Bomber Command to conduct area attacks by night while the Americans conducted precision attacks by day, and the intensification of the Battle of the Atlantic which would divert Bomber Command resources to U-boat pens in the Bay of Biscay - Harris pursued his main bomber objective, The Battle of the Ruhr. In a period of 4 months, he subjected the Ruhr to 24 major raids, 18,506 sorties, some 60% of Bomber Command's missions.



Casualty	Entry	Description	Date
Anderson A	SFTS41	KIA 49 Sqn; Lancaster III ED620 EA-K; Fiskerton-Stettin; flak near RingKobing.	21/4/43
Babington RV	SFTS35	KIA 466 Sqn; Wellington X HE152 HD-L; Leconfield-mining Nectarines; marine flak and crashed Ameland.	14/1/43
Baker FW	SFTS28	Possibly KIA 12 Sqn; Lancaster I W4369 PH-Z; Wickenby-Essen; night ops; flak, crashing in Duisburg.	11/1/43
Black WA	1AFU	Possibly KIA 408 Sqn; Halifax II BT680 EQ-D; Leeming-Hamburg; night ops; lost over Germany.	3/2/43
Bright JA	SFTS11	KIA 83 Sqn; Lancaster I R5743 OL-K; Wyton-Wilhelmshaven; night ops; crashed at sea.	19/2/43
Burns WE	SFTS32	KIA 107 Sqn; Boston III W8302 OM-J; West Raynham-Roosendaal railway yards; flak, crashed NW Etten.	11/2/43
Carfoot NH	SFTS20	KIA 49 Sqn; Lancaster III JB305 EA-E; Fiskerton-Dusseldorf; crashed target area.	3/11/43
Chesterman HWA	S29	KIA 7 Sqn; Stirling I BK760 MG-X; Oakington-Frankfurt; night ops; shot down Tongerlo.	11/4/43
Colhoun WAL	SFTS42	KIA 49 Sqn; Lancaster III JB466 EA-A; Fiskerton-Nürnberg; shot down, night fighter, Schleusingen.	31/3/43
Davies EA	SFTS24	Likely KIA 50 Sqn; Lancaster III ED484 VN-Q; Skellingthorpe-Lorient; night ops; crashed French coast.	13/2/43
De Meillac GMM	SFTS32	KIA 7 Sqn; Stirling I R9199 MG-F; Oakington-Duisburg; one of 19 ac lost (out of 392 on raid); lost no trace.	8/4/43
Evison P	SFTS31	KIA 207 Sqn; Lancaster I ED365 EM-U; Langar-Hamburg; crashed at Wedel.	3/3/43
Grimston B	SFTS17	KIA 156 Sqn; Lancaster I ED615 GT-?; Warboys-Kiel; one of 12 (out of 577 on raid); shot down target area.	4/4/43
Howard ETR	SFTS23	KIA 218 Sqn; Stirling III BK702 HA-O; Downham Market-Berlin; one of 29 ac lost (out of 329 on raid); flak over Bremen.	29/3/43
Jeffreys GS	SFTS24	KIA 49 Sqn; Lancaster III ED444 EA-C; Scampton-Berlin; shot down by night-fighter, Flensburg.	17/1/43
Lea TS	SFTS28	KIA 77 Sqn; Halifax II JB804 KN-Q; Elvington-Stettin; one of 21 ac costs (out of 339 on raid); crashed Pasewalk.	20/4/43
Lonsdale DHS	SFTS18	KIA 9 Sqn; Lancaster I W4840; Waddington-Essen; night-fighter on outskirts of Arnhem.	3/1/43
Lush AL	1ATU	KIA 464 Sqn; Ventura II AJ169 SB-A; Feltwell-Rotterdam; flak over the target; fighters Den Haag.	4/4/43
Mackenzie IF	SFTS35	KIA 90 Sqn; Stirling I BF383 WP-T; Ridgewell-Duisburg; one of 17 ac lost (out of 561 on raid); night-fighter, IJsselmeer.	27/4/43

Phase 3 - Combined Bomber Offensive (2)

(January 1943 - February 1944)

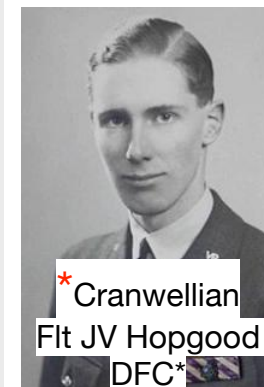
Casualty	Entry	Description	Date
<i>Martin J</i>	SFTS32	<i>Possibly KIA 12 Sqn; Lancaster I W4836 PH-P; Wickenby-Lorient; crashed returning to base, in Newball Woods.</i>	13/2/43
Milton FC	SFTS31	KIA 83 Sqn; Wyton-Pilsen (Skoda); crashed at Dobrany Czechoslovakia.	16/4/43
Shand WP	S34	KIA 139 Sqn; Mosquito IV DZ386 XD-H; Marham-Berlin; shot down; night-fighter IJsselmeer.	20/4/43
Shockley HG	1ATU	KIA 405 Sqn; Halifax II W7803 LQ-B; Topcliffe-Stuttgart; one of 11 ac lost (out of 314 on raid); crashed at la Malmaison.	12/3/43
Wallage SNT	S36	KIA 57 Sqn; Lancaster I W4252 DX-X; Scampton-Kiel; night ops; lost over the North Sea.	5/4/43
Wayman MM	SFTS16	KIA 139 Sqn; Mosquito IV DZ496 XD-; Marham-Malines; flak damage, crashed on landing, Martlesham.	20/3/43
Wilkes RE	SFTS31	KIA 35 Sqn; Halifax II HR678 TL-N; Graveley-Stuttgart; one of 23 ac lost (out of 462 on raid); shot down by a night-fighter.	15/4/43
<i>Windsor RJF</i>	<i>SFTS31</i>	<i>KIA 106 Sqn; Lancaster I W4886 ZN -; Syerston-Nürnberg; crashed near Furth.</i>	25/2/43

SPECIAL DUTIES - 617 Dambusters Squadron

By March 1943, Bomber Command comprised 65 squadrons, three of which were earmarked for 'Special Duties'. Arguably the best known of the three is 617 Squadron, which was formed specially to implement Operation Chastise, the destruction of the Mohne, Eder and Sorpe dams of the heavily industrialised Ruhr Valley. On the night of 16/17 May, Guy Gibson led three waves of 19, specially modified Lancaster bombers armed with the 'Upkeep' bouncing bomb invented by Barnes Wallis. He conducted the first run of the first wave, attacking the Mohne Dam, accompanying others on their runs to deflect attention from heavy German AAA defences; for this he received the VC. His deputy was Cranwellian Flt Lt John Vere "Hoppy" Hopgood, DFC*, who Gibson stated in his autobiography was the finest pilot with whom he had flown.



Hopgood took off in the first group alongside Gibson and Mick Martin. It was on the journey to the Mönhe that Hopgood's aircraft AJ-M (M Mother) was hit by flak while passing the airfield at Dülmen. Hopgood along with gunners George Gregory and Tony Burcher were injured but they continued the attack. There is a possibility that Gregory was killed by flak at this point. The damaged aircraft reached the dam where they attacked at 00:32, ten minutes after Gibson. However, they were struck again by anti-aircraft fire and their bomb was released too late. It bounced over the dam and exploded on a power station on the other side. The aircraft was fatally damaged at this point and Hopgood remained at the controls, gaining height to allow his crew to bail out. Rear gunner, Plt Off Tony Burcher, remembered hearing Hopgood say; "Get out you damn fool. If only I could get another 300 ft. I can't get any more height". John Fraser, John Minchin and Tony Burcher jumped, but the already injured Minchin did not survive. However, Fraser and Burcher survived and were taken prisoners of war. AJ-M crashed in a field near Ostönnen, 6 kilometres (3.72 miles) from the dam. The bodies of Hopgood, Brennan, Navigator Kenneth (Ken) Earnshaw from Bridlington and Gregory were found inside.



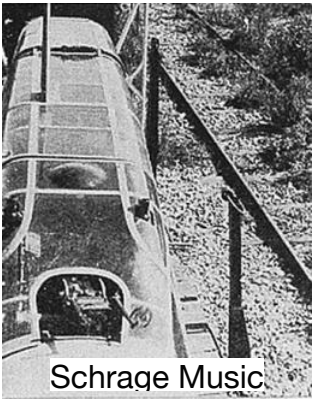
Casualty	Entry	Description	Date
Hopgood JV	SFTS18	*KIA 617 Sqn; Lancaster III ED925 AJ-M; Scampton-Opn Chastise; flak, bomb blast, crashed Mohne Dam parapet.	17/5/43

Phase 3 - Combined Bomber Offensive (3)

(January 1943 - February 1944)

SWITCHING TO THE BIG CITIES - Hamburg And Berlin

During the opening months of 1943, Bomber Command’s 2 Gp contributed to combined ops with the Americans, operating Mitchells, Bostons, Venturas and Mosquitos against precision targets. In February, the Group transferred to 2TAF and another three Wellington squadrons completed a five month detachment to the Middle East. Meantime, Harris switched his attention from the Ruhr to Germany’s big cities following highly successful raids on Hamburg with another campaign against Berlin. But these were soon to run into trouble against Luftwaffe tactics ‘Wild Sau’ - freelance single engined fighters sent up to counter ‘window’ - and ‘Schrage Music’ (or Juke Box) - upward fringe armament into the vulnerable belly of the Lancaster.



Schrage Music

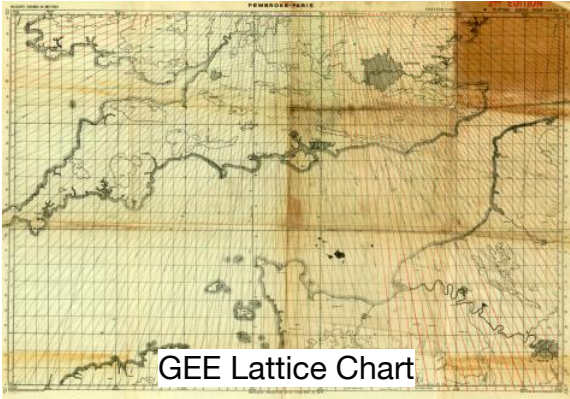


Bf109 captured after ‘Wild Sau’ sortie

Casualty	Entry	Description	Date	Casualty	Entry	Description	Date
Batterbee R	SFTS33	KIA 166 Sqn; Wellington X HE235 AS-H; Kirmington-Dusseldorf; night ops; lost without trace.	26/5/43	Paterson LF	SFTS32	KIA 180 Sqn; Mitchell II FL211 EV-; Foulsham-Abbeville; flak, Pendé.	25/5/43
Cobb NA	1 AFU	KIA 35 Sqn; Halifax II HR850 TL-A; Graveley-Cologne; flak south of the target area.	28/6/43	Spendlove WVL	S27	KIA 21 Sqn; Ventura II AE910; crashed France.	22/6/43
Coventry HR	J33	KIA 102 Sqn; Halifax II JD297 DY-Q; Pocklington-Aachen; night; crashed near Maubeuge.	14/7/43	Stone PJ	SFTS21	KIA 50 Sqn; Lancaster III ED828 VN-S; Skellingthorpe-Bochum; shot down by night-fighter Almelo.	13/6/43
Hughes WE	1 ATU	KIA 77 Sqn; Halifax II DT700 KN-U; Elvington-Mülheim; one of 35 ac lost (out of 557 on raid); crashed off Dutch coast.	22/6/43	Wakeford JA	SFTS24	KIA 9 Sqn; Lancaster III ED689 WS-K; Bardney-Koln; crashed on the Rhine at Koln-Poll.	4/7/43
Owen JJ	S26	KIA 466 Sqn; Wellington HF601 HD-?; Leconfield-le Conquet; crashed French coastline.	6/7/43	Wilkinson S	SFTS18	Likely KIA 139 Sqn; Mosquito IV DK302 XD-S; Marham-Bochum; one of 24 ac lost (of 442); lost without trace.	13/5/43



GEE-H Equipment



GEE Lattice Chart

SWITCHING TO OTHER CITIES - Mannheim, Hannover, Kassel, Frankfurt et al

As a result of heavy losses from ‘Wild Sau’ and ‘Schrage Music’ tactics, Harris decided to stretch the German defences by widening his attack to a more diverse range of cities, including Mannheim, Hannover, Kassel, Frankfurt, Stuttgart, Munich and Leipzig, together with occasional visits to the Ruhr. This Summer and Autumn of 1943 also saw the replacement of the faithful Wellington, Stirling and early Halifax bombers with more Lancasters and a much improved mark of Halifax. OBOE was being replaced by the smaller GEE-H radio navigation aid, using GEE technology but a new ‘H, twin range principle’ for determining aircraft location. Though less accurate, GEE-H could guide up to 80 aircraft concurrently.

Casualty	Entry	Description	Date	Casualty	Entry	Description	Date
Anderson JT	SFTS19	KIA 115 Sqn; Lancaster II DS725 KO-F; Little Snoring-Leipzig; night; crashed at Engersen.	20/10/43	Drayton VA	SFTS42	KIA 199 Sqn; Stirling III BK806 EX-S; Lakenheath-Nuremberg; one of 33 ac lost (of 674) crashed at Ansbach.	28/8/43
Anderton JH	SFTS42	KIA 15 Sqn; Stirling III EH941 LS-V; Mildenhall-Mannheim; crashed at Hassloch.	23/9/43	Ferguson AE	SFTS42	KIA 78 Sqn; Halifax II LW229 EY-Y; Brighton-Mannheim; one of 34 (of 604) ac lost; shot down by night-fighter.	6/9/43
Broadbent AB	SFTS43	KIA 50 Sqn; Lancaster III ED483 VN-R; Skellingthorpe-Kassel; night ops; crashed near Ovenhausen.	22/10/43	Green H	SFTS35	Likely KIA 434 Sqn; Halifax V LK909 IP-G; Tholthorpe-Hanover; one of 26 ac lost (of 711 on raid); no details.	22/9/43
Brown K	SFTS23	KIA 97 Sqn; Lancaster III JA923 OF-H; Bourn-Frankfurt; night ops; downed at Dauborn, Belgium.	4/10/43	Grundy JA	SFTS27	KIA 51 Sqn; Halifax II HR728 LK-D; Snaith-Kassel; one of 24 ac lost (of 547 on raid); crashed at Wietersheim.	3/10/43
Clarke GH	SFTS42	KIA 620 Sqn; Stirling III BK713 QS-E; Chedburgh-Turin; crashed at Mittainvilliers, France.	12/8/43	Hayter JER	J37	KIA 83 Sqn; Lancaster III JA972 OL-D; Wyton-Kassel; night; crashed in the sea off the Dutch coast.	4/10/43
Davey AJ	SFTS24	KIA 199 Sqn; Stirling III EE946 EX-P; Lakenheath-Berlin; one of 47 ac lost (out of 662 on ops) crashed Schlalch.	31/8/43	Huntly-Wood IM	SFTS19	KIA 207 Sqn; Lancaster III ED832 EM-X; Langar-Berlin; night ops; lost without trace.	3/9/43
Dobson TR	SFTS27	Likely KIA 51 Sqn; Halifax II HR869 MH-Z; Snaith-Nuremberg; one of 33 ac lost (of 674 on ops); Hellmitzheim.	27/8/43	Jones KW	SFTS41	Likely KIA 428 Sqn; Halifax V LK914 NA-K; Middleton St. George-Hanover; lost over the target area.	22/9/43
				Little JF	SFTS 21	KIA 139 Sqn; Mosquito IV DZ374 XD-; Wyton-Duisburg; lost without trace.	29/8/43

Phase 3 - Combined Bomber Offensive (4)

(January 1943 - February 1944)

Casualty	Entry	Description	Date
Ord RC	SFTS42	KIA 9 Sqn; Lancaster III JA852 WS-L; Bardney-Mannheim; crashed at Gerolsheim.	23/9/43
Shepherd-Smith P	SFTS36	KIA 239 Sqn; Mustang I AG557; Rhubarb; crashed off Kent in heavy cloud.	10/8/43
Smith BC	SFTS42	KIA 44 Sqn; Lancaster III JB136 KM-T; Dunholme Lodge-Munchen; crashed at Otterfing.	2/10/43
Smith WB	SFTS32	KIA 78 Sqn; Halifax II LW230 EY-G; Brighton-Hanover; one of 39 ac lost (of 678); reason for loss unknown.	27/9/43

Casualty	Entry	Description	Date
Watson RG	S31	KIA 44 Sqn; Lancaster I W4961 KM-S; Dunholme Lodge-Berlin; night; crashed Wunstorf.	3/9/43
Willcock AJ	SFTS34	KIA 169 Sqn; Mustang I AG417; Rhubarb to Evereux; flak.	6/8/43
Wright RB	S36	KIA 156 Sqn; Lancaster III ED829 GT-?; Warboys-Berlin; night; crashed Tegeler See.	24/8/43
Young JM	SFTS30	KIA 622 Sqn; Stirling III MZ264 GI-A; Mildenhall-Berlin; one of 47 ac lost (of 622); night-fighter, Schäpe.	1/9/43

[BACK TO BERLIN](#) - Evolving Tactics - ‘Cat And Mouse’ ECM

‘Window’ - now known as Chaff - might have concealed Bomber Command aircraft, but also highlighted the stream itself on enemy radar., enabling the waiting twin-engined night fighters to be vectored to their target. This was the technique known as ‘Tame Sau’ and other aircraft dropped flares to emphasise the stream’s position for the night-fighters to identify more easily. The counter by Bomber Command was to split the stream and to attack two or three different targets on effectively the same raid, thus scattering the fighter response. Radio Countermeasures, and later the ‘Mandrel’ Radar Countermeasures, were also used to confuse the deployment of night-fighters.



Casualty	Entry	Description	Date	Casualty	Entry	Description	Date
Alcock SH	SFTS15	KIA 83 Sqn; Lancaster III JB724 OL-V; Wyton-Berlin; shot down by night fighter; Belgium.	27/1/44	Kularatne A	SFTS41	KIA 102 Sqn; Halifax II HX155 DY-Q; Pocklington-Berlin; one of 43 ac lost (out of 891 on raid); lost over target.	16/2/44
Beaumont GA	SFTS41	KIA 7 Sqn; Lancaster III JB303 MG-F; Oakington-Berlin; shot down night-fighter Mengerskirchen-Winkels.	26/11/43	Macdonald D	SFTS36	KIA 9 Sqn; Lancaster III DV284 WS-G; Bardney-Berlin; hit by flak and crashed near Leipzig.	18/11/43
Brill DJ	SFTS27	KIA 97 Sqn: Lancaster III JA963 OF-Q; Bourn-Berlin; night ops; lost over the target.	16/12/43	Matthews LRB	SFTS42	KIA 576 Sqn; Lancaster III JB550 UL-T2; Elsham Wolds-Leipzig; crashed at Mochern.	3/12/43
Brown JW	SFTS44	KIA 158 Sqn; Halifax II HR977 NP-A; Lissett-Berlin; night ops; crashed near Klein Berssen.	22/11/43	Nixon FJ	SFTS30	KIA 61 Sqn; Lancaster I DV294 QR-K; Coningsby-Augsburg; crashed at Menil-Annelles.	24/2/44
Butler N	SFTS43	KIA 622 Sqn; Lancaster I R5915 GP-P; Mildenhall-Berlin; night ops; flak over Hamburg-Lüneburg.	20/01/44	Porter EF	J30	KIA 156 Sqn; Lancaster III JB479 GT-K; Warboys-Schweinfurt; night; shot down at target.	25/2/44
Collins AV	SFTS44	KIA 149 Sqn; Stirling III EF307 OJ-E; Lakenheath-Kiel Bay, mining; night ops; lost without trace.	24/2/44	Richards JL	SFTS45	Likely KIA 630 Sqn; Lancaster III JB665 LE-B; East Kirkby-Berlin; shot down near Güstrow.	15/2/44
Cooper WR	SFTS44	KIA 550 Sqn; Lancaster III ND327 HW-?; Grimsby-Berlin; mid-air collision on take-off.	24/12/43	Robertson WA	SFTS37	KIA 157 Sqn; Mosquito HJ656; Instep patrol, Biscay; engaged Ju88s of ZG1; hit by return fire.	1/12/43
Corser EGM	1 AFU	KIA 460 Sqn; Binbrook-Berlin; crashed near Doberitz.	2/12/43	Ruddick J	SFTS17	KIA 44 Sqn; Lancaster III DV263 KM-M; Dunholme Lodge-Magdeburg; night-fighter, Waddenkathe.	21/1/44
Dalton JP	SFTS45	KIA 57 Sqn; Lancaster III JB529 DX-P; East Kirkby-Berlin; shot down by night fighter.	3/12/43	Scales J	SFTS33	KIA 466 Sqn; Halifax III HX236 HD-J; Leconfield-Frankfurt; one of 41 ac lost (of 650); crashed Wiesbaden.	20/12/43
Goule HW	SFTS25	KIA 12 Sqn; Lancaster III JB283 PH-W; Wickenby-Berlin; shot up by night fighter, Lower Saxony.	27/1/44	Shard RN	SFTS22	KIA 78 Sqn; Halifax III LV798 EY-A; Brighton-Berlin; one of 43 ac lost (of 891); fuel shortage RTB; drowned.	16/2/44
Hall T	SFTS43	KIA 10 Sqn; Halifax II JD367 ZA-Z; Melbourne-Berlin; one of 26 ac lost (out of 764 on raid); crashed at Achmer.	22/11/43	Smith WR	SFTS49	KIA 408 Sqn; Lancaster II DS791 EQ-F; Linton-on-Ouse-Augsburg; one of 24 ac lost (out of 594 on raid).	26/2/44
Hopps FT	SFTS40	KIA 103 Sqn; Lancaster III JB401 PM-P; Elsham Wolds-Berlin; suddenly exploded Kreis Beeskow.	2/12/43	Thomas W	SFTS30	KIA 692 Sqn; Mosquito IV Mosquito IV P3-N; Graveley-Leipzig; one of 78 ac lost (of 823); lost over France.	20/2/44
Howard L	SFTS42	KIA 77 Sqn; Halifax V LL121 KN-G; Elvington-Frankfurt; one of 41 ac lost (out of 650 on raid); night ops.	20/12/43	Turner HA	SFTS22	KIA 432 Sqn; Lancaster II DS831 QO-N; East Moor-Berlin; one of 25 ac lost (of 498); night-fighter, Leeuwarden.	16/12/43
Hughes RL	SFTS45	KIA 576 Sqn; Lancaster III ED713 UL-W2; Elsham Wolds-Berlin; shot down near Hanover.	23/12/43	Whitmarsh AW	SFTS41	KIA 10 Sqn; Halifax II HX164 ZA-K; Melbourne-Frankfurt; one of 45 ac lost (of 650); crashed near Dahlen.	20/12/43
Jackson AD	J35	KIA 207 Sqn; Lancaster I ED586 EM-F; Spilsby-Stettin; night ops; crashed in the target area.	6/1/44	Williams RC	SFTS35	KIA 35 Sqn; Halifax II HR986 TL-G; Graveley-Berlin; one of 20 ac lost (of 712 on raid); crashed near Döberitz.	29/12/43
Johnston JD	SFTS41	Possibly KIA 103 Sqn; Lancaster III JB528 PM-Q; Elsham Wolds-Berlin; crashed near Grebs.	23/11/43	Woodcock-Stevens GA	SFTS47	KIA 166 Sqn; Lancaster I ME636 AS-E; Kirmington-Berlin; night-fighter near Waren.	15/2/44
				Wright CLY	S32	KIA 51 Sqn; Halifax II HR726 MH-B; Snaith-Berlin; night; crashed at Grunewald.	23/11/43

Phase 4 - The Culmination (1)

(March 1944 - May 1945)

IMPACT OF OVERLORD - Strategic Force Assigned To Tactical Operations

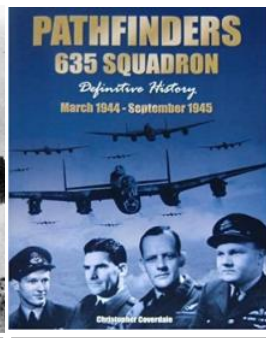
Operation Overlord carried the hopes of allied victory in Europe, but with it came internal tensions within the RAF. Having spent three years developing Bomber into a potent strategic air power, Harris was resistant to calls championed by Tedder, Eisenhower's RAF Deputy, to switch from area bombing to smaller precision attacks against tactical targets, thus paving the way for Overlord and subsequent operations as allied ground forces advanced through France and later Germany. Harris still believed that strategic bombing would win the war.



V1 'Buzz Bomb'



V2 Rocket



Casualty	Entry	Description	Date
Andrewes PL	SFTS42	KIA 16 Sqn; Lancaster III ND399 AS-R; Kirmingto-Gelsenkirchen; night fighter Ugchelen.	13/6/44
Armstrong RG	AFU1	KIA 49 Sqn; Lancaster III ND687 EA-P; Fiskerton-Schweinfurt; night fighter Igelsloch.	26/4/44
Bazalgette IW (VC, DFC)	SFTS30	KIA 635 Sqn PFF; Lancaster III ND811 F2-T; Downham Market-Trossy St. Maxim; Flak, crash landed.	4/8/44
Bell BE	SFTS33	KIA 49 Sqn; Lancaster III ND533 EA-N; Fiskerton-Etampes; shot down by night fighter Rosay-sur-Lieure.	9/6/44
Burley PK	SFTS28	KIA 692 Sqn; Mosquito XVI MM147 P3-M; Gransden Lodge-Berlin; night ops; crashed Granzow.	7/7/44
Campbell KAJ	SFTS44	KIA 35 Sqn; Halifax II HX160 TL-O; Graveley-Stettin; night fighter damage, exploded over target.	6/1/44
Chant WM	SFTS45	KIA 158 Sqn; Halifax III LV921 NP-B; Lissett-Trappes yards; shot down by a night-fighter, Rambouillet.	3/6/44
Clark GJR	SFTS44	KIA 166 Sqn; Kirmington-Hasselt; shot down by a Ju88, crashed at Elkerzee.	11/5/44
Cox MI	A40	KIA 103 Sqn; Lancaster I ME738 PM-S; Elsham Wolds-Friedrichshafen; shot down Langenschiltach.	28/4/44
Crew GC	SFTS37	KIA 7 Sqn; Lancaster III JB313 MG-H; Oakington-Aachen one of 25 ac lost, crashed Schophoven.	24/5/44
Deas WI	SFTS13	KIA 630 Sqn; Lancaster III ND688 LE-R; East Kirkby-St. Leu; crashed 01:30 Villers-en-Arthies.	7/7/44
Filleul PRS	J37	KIA 214 Sqn; Boeing Fortress III HB702 BU-A; Oulton; crashed Channel near Calais.	12/9/44
Finch J	SFTS20	KIA 57 Sqn; Lancaster III JB725 DX-M; East Kirkby-mine laying, Baltic; night fighter, Tellingstedt.	10/4/44
Fletcher W	SFTS26	Likely: KIA 640 Sqn; Halifax III MZ579 C8-T; Leconfield-Aachen; one of 25 ac lost (of 442); crashed Süsterseel.	24/5/44
Goodman HR	S34	KIA 103 Sqn; Lancaster III ND700 PM-X; Elsham Wolds-Hasselt rly; hit by night fighter over Halaa.	12/5/44
Granger PC	SFTS31	KIA 35 Sqn; Lancaster III ND691 TL-M; Graveley-Wanne-Eickel oil plant; crashed Gladbeck-Zweckel.	12/9/44
Hadley N	SFTS30	KIA 10 Sqn; Halifax III LV912 ZA-A; Melbourne-Bottrop; crashed west of Schöppingen.	20/7/44
Jackson DS	SFTS22	KIA 626 Sqn; Lancaster I LL753 UM-E2; Wickenby-Mailly-le-Camp; exploded, Breuvery-sur-Cooles.	4/5/44
Jameson A	SFTS44	KIA 622 Sqn; Lancaster I ME693 GI-F; Mildenhall-Karlsruhe; victim to Bf110 night fighter, Gersbach.	25/4/44

Casualty	Entry	Description	Date
Kinchin EW	SFTS17	KIA 239 Sqn; Mosquito II HJ644 HB-; West Raynham-Bomber Support- Sarrate Patrol; crashed Nijkerk.	20/4/44
Lawson WC	SFTS34	KIA 51 Sqn; Halifax III LK885 MH-Z; Snaith-Aachen; one of 25 ac lost (out of 442 on raid); crashed at Acht.	24/5/44
Leatherland D	SFTS12	KIA 97 Sqn; Lancaster III ND748 OF-M; Coningsby-La Chapelle railway yards; night-fighter; Piscop.	20/4/44
Loos EA	SFTS29	KIA 161 Sqn; Halifax V LL248 MA-U; Tempsford-SOE; crashed at Huiron.	4/8/44
Lovell VC	SFTS11	KIA 141 Sqn; Mosquito II DZ656 TW-J; West Raynham; Serrate (AI radar) patrol for Friedrichshafen raid.	27/4/44
Maw MT	SFTS6	KIA 640 Sqn; Halifax III MZ345 C8-G; Leconfield-Russelsheim; one of 20 ac lost (out of 297 on raid).	12/8/44
Millar D	SFTS49	KIA 514 Sqn; Lancaster I ME858 JI-J; Waterbeach-Homberg; crashed SW of Hunsel.	20/7/44
Myers WME	SFTS44	KIA 166 Sqn; Lancaster I ME643 AS-E; Kirmington-Mailly-le-Camp; shot down St Memmie.	4/5/44
Raw AW	SFTS22	KIA 156 Sqn; Lancaster III ND534 GT-O; Upwood-Gelsenkirchen; crashed slightly west of the target.	11/9/44
Reed RR	SFTS46	KIA 576 Sqn; Lancaster I ME687 UL-S2; Elsham Wolds-Dortmund; shot down homebound, Hiddingsel.	23/5/44
Russell WM	SFTS8	KIA 138 Sqn; Halifax V LL280 NF-O; Tempsford-SOE; night-fighter, St Denis d'Orques.	8/5/44
Scott AG	SFTS48	KIA 625 Sqn; Lancaster III ED938 CF-C; Kelstern -Gelsenkirchen; crashed at Spanbroek.	13/6/44
Shinn AW	SFTS45	KIA 49 Sqn; Lancaster III ND683 EA-K; Fiskerton-Wesseling; crashed in sea off coast of Holland.	21/6/44
Smith H	SFTS54	KIA 157 Sqn; Mosquito XIX MM646 R; intruder sortie to Handorf.	28/9/44
Sutherland HA	SFTS42	KIA 106 Sqn; Lancaster III ND511 ZN-E; Metherringham-Gennevilliers; crashed in the target area.	10/5/44
Sykes PD	SFTS32	KIA 77 Sqn; Halifax II LW270 KN-P; Elvington-mining over Baltic; one of five ac lost (of 114); Me110 Denmark.	23/4/44
Symons JG	SFTS19	KIA 207 Sqn; Lancaster III ND871 EM-G; Spilsby-Braunschweig; night fighter, Nortrup.	23/5/44
Wigg PM	S35	KIA 57 Sqn; Lancaster I LL893 DX-J; E Kirkby-La Chapelle railway yards; found hit St. Omer.	21/4/44
Wilson WD	SFTS14/ SFTS43	KIA 626 Sqn; Lancaster I LM136 UM-D2; Wickenby-Courtrai; crashed off Belgian coast.	21/7/44

Phase 4 - The Culmination (2)

(March 1944 - May 1945)

AIR SUPERIORITY - Operations Hurricane And Thunderclap

Assuaging the frustrations of Harris, he was issued a new directive in October 1944 intended to demonstrate the Allies' air superiority over the retreating German forces. Two principle types of Operation were pursued over the next six months. The short-lived Operation Hurricane focused on the Ruhr and Rhineland targets of Koln, Duisburg, Essen and Brunswick. Later, Operation Thunderclap saw Bomber Command and the USAAF attack East German cities to support the Russian advance on the Eastern Front.



Operation Hurricane over Duisburg



Thunderclap demolished Dresden

Casualty	Entry	Description	Date
Baker MWLLaV	J29	KIA OC 196 Sqn; Stirling IV LJ894; Operation Market Garden; crashed near Rips, Holland.	21/2/45
Barker R	SFTS50	KIA 100 Sqn; Lancaster III JB603 HW-E; Grimsby-Hannover; night ops; shot down Haarbroek.	5/1/45
Cass RF	SFTS28	KIA 266 Sqn; Lancaster I LL803 GI-S; Mildenhall-Homburg- Meerbeck oil plan; lost without trace.	2/11/44
Cumming RS	SFTS49	KIA 78 Sqn; Halifax III MZ799 EY-X; Brighton-Kadet Channel, gardening; lost without trace.	15/2/45
Elliot A	SFTS20	KIA 158 Sqn; Halifax III NR251 NP-B; Lissett-Hannover; one of 31 ac lost (of 664) shot up by night fighter, Almelo.	5/1/45
Grant MC	SFTS35	KIA 424 Sqn; Halifax III LV998 QB-Y; Skipton on Swale-gardening off Flensburg; one of four ac lost (of 32 Halifax).	12/1/45
Green RJG	SFTS28	KIA 139 Sqn; Mosquito XVI MM132 XD-?; Upwood-Berlin; crashed Little Staughton Airfield.	15/1/45

Casualty	Entry	Description	Date
Hirons AW	SFTS10	KIA 515 Sqn; Mosquito VII NS957 3P-?; Little Snoring-bomber sppt; collided Halifax MZ482, Belgium.	19/3/45
Hooper TD	SFTS49	KIA 227 Sqn; Lancaster I PB643 9J-S; Balderton-Harburg; crashed at Nieder Ochtenhausen.	11/11/44
Jarand AH	S31	KIA 102 (Ceylon) Sqn; Halifax III LW179 DY-Y; Pocklington-Magdeburg; crashed Langelsheim.	16/1/45
Keele BR	SFTS29	KIA 85 Sqn; Mosquito NF.30 MV525 VY-; Swannington-Al ex; engine failed on returning to base.	12/11/44
Mills AAF	SFTS30	KIA 115 Sqn; Lancaster I NG332 IL-D; Witchford-Vohwinkel; US flak homebound; Emines.	1/1/45
Murphy AM	S36	KIA 23 Sqn; Mosquito VI PZ456 YP-?; Little Snoring-bomber sppt ops; flak Wezep, Holland.	2/12/44
Payn GA	SFTS15	KIA 207 Sqn; Lancaster I ME667 EM-X; Spilsby-Bremen; crashed at Lehesterdeich.	6/10/44



Tirpitz



Tallboy Bomb



Tait

TIRPITZ - Special Operation By 9 And 617 Squadrons Using Tallboy

One of the specialist precision bombing tasks of this period was to neutralise the *Bizmark*-class battleship *Tirpitz* and thereby reduce the threat to the Allied arctic convoys; the task given to 9 and 617 Squadrons, the latter being led by Cranwellian Wg Cdr 'Willie' Tait, DSO***, DFC*. The campaign had started in September and was completed by a third successful attack on the alleged "unsinkable" Tirpitz that had been hiding in the Norwegian fiords, employing another Barnes Wallis invention, the 12,000lb Tallboy earthquake bombs. Ironically, it was a hole caused by one such bomb that sank the Tirpitz.

(March 1944 - May 1945)

THE DENOUEMENT - Final Raids And Mercy Missions

In April 1945 with the war in Europe nearly won, Churchill ordered a review of the area offensive, resulting in Bomber Command ops being focused on precision attacks on German oil installations and concrete, U-Boat pens in Norway. The Command's last large attack on an urban target was Potsdam and the last "heavies" raid was on Hitler's southern redoubt, Berchtesgarden. Thereafter, Bomber Command launched two large 'mercy missions: Operation Manna, food drops to Holland; Operation Exodus, the repatriation of allied prisoners of war.



Berchtesgarden



Op Manna



Liberated PoWs

Casualty	Entry	Description	Date
Catterall R	SFTS43	KIA 169 Sqn; Mosquito XIX MM680 VI-?; Great Massingham; night flak.	2/5/45

V2.0 ADDENDUM - VERIFIED ADDITIONS (1)

These additions resolve animals revealed in our first analysis of 2021 and the assumption that the College SFTS trained pilots only

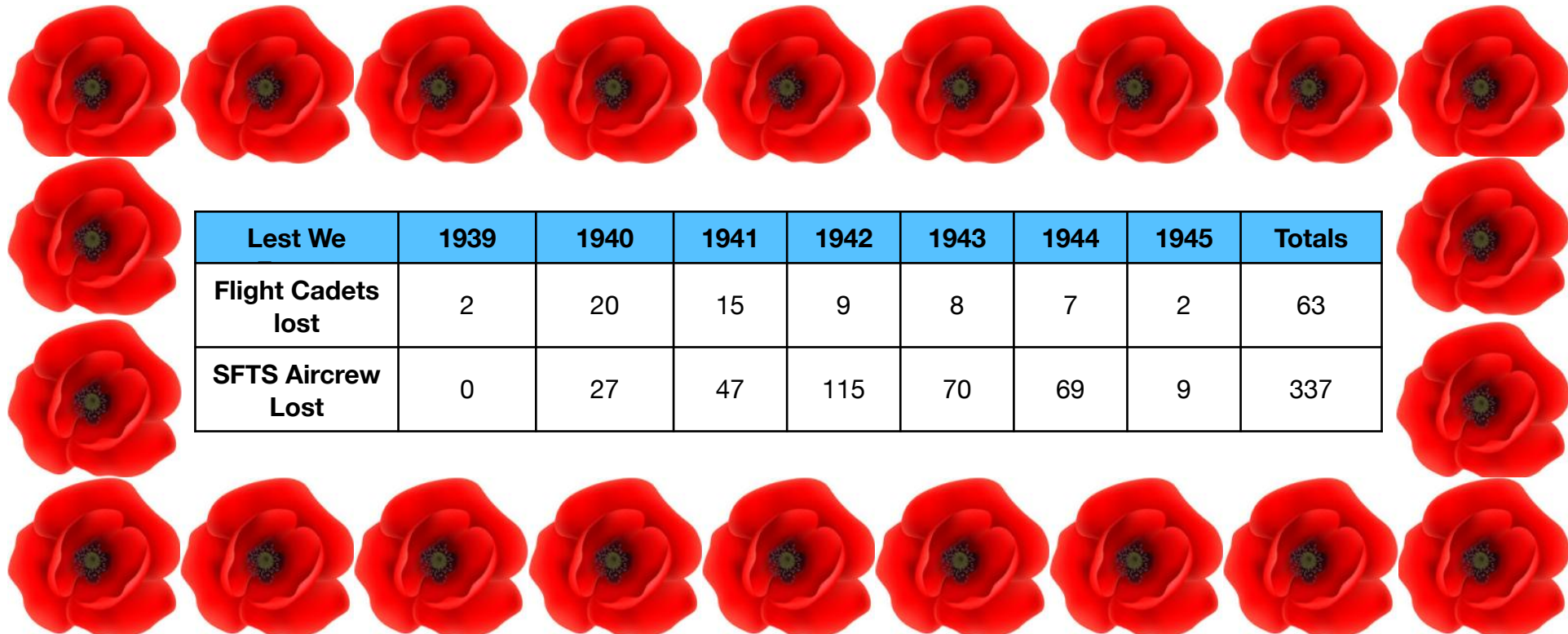
Casualty	Entry	Description	Date
Ashby PB	SFTS19	KIA 21 Sqn; Blenheim IV V6035 YH-O; Manston-Maritime Patrol; Flak off Ostend;	23/7/41
Adlam OPER	SFTS35	KIA Wellington III BJ778 427 Sqn. Crashed onto Black Intake Moor NNW of Helmsley Yorkshire.	12/2/43
<i>Brown NSH</i>	<i>SFTS5</i>	<i>KIA Wellington II BK299 AS-Q 166 Sqn Kirmington-Mine laying- Artichokes region (Lorient)</i>	<i>6/4/43</i>
Bailey JOD	SFTS8	College SFTS record “Missing CL No 49”; NOT FOUND IN OTHER DATABASES	-
Butler HC	SFTS14	KIA 239 Sqn; Mosquito II HJ709 HB-?; West Raynham-night ops Ruhr; lost without trace.	23/344
Bayley GR	SFTS14	KIA 207 Sqn; Manchester I L7322 EM-Q; Bottesford-Brest; crashed in the sea off Finistaise.	9/1/42
Baker LT	SFTS28	KIA 150 Sqn; Wellington III X3279 JN-M; Snaith-Emden; shot down by a night-fighter; Waddensee	7/6/42
Bond H	SFTS28	KIA 12 Sqn; Wellington II Z8652 PH-?; Binbrook-Essen; loss not established	9/6/42
Bowker RA	SFTS28	KIA 7 Sqn; Stirling I W7520 MG-S; Oakington-Mannheim; collided with an Me110, St. Truiden	20/5/42
Butterworth ER	SFTS28	KIA 106 Sqn; Lancaster I W4768 ZN-?; Syerston-Krefeld; flak near Bochum, after bombing target.	2/10/42
Brown GH	SFTS30	Three possibilities George Henry/George Henson/Gordon Harry, all pilots, in IBCC database	-
Bell JM	SFTS31	KIA Wellington III X3870 199 Sqn crashed in France over target area.	13/2/43
Bell BE	SFTS33	KIA 49 Sqn; Lancaster III ND533 EA-N; Fiskerton-Etampes; shot down night fighter N of Rosay-sur-Lieure	9/6/44
Cazalet ABT	SFTS7	KIA CL 68 107 Sqn; Blenheim IV T1851 OM-?; Wattisham-Ostend; night ops; lost without trace.	9/9/40
Campbell P	SFTS18	KIA 61 Sqn; Lancaster I W4244 QR-F; Syerston; mine laying Gironde estuary; crashed Honiton in poor viz.	11/11/42
Cotton Minchin CH	SFTS19	KIA 12 Sqn; Lancaster III ND562 PH-Z; Wickenby-Nürnberg; shot down by Ju88 Bonn.	31/3/44
Charlton WFD	SFTS25	KIA 408 Sqn; Hampden I AT191 EQ-A; Balderton-Essen; shot down by night fighter; IJsselmeer.	21/1/42
Calvert ED	SFTS28	KIA 7 Sqn; Stirling I W7472 MG-C; Oakington-Emden; shot down by a night-fighter; Bergen aan Zee.	21/6/42
Cooke FO	SFTS28	KIA 114 Sqn; Blenheim IV L8800 RT-C; West Raynham-Schipol; crashed at Weasenham.	5/6/42
Coshall S	SFTS2	KIA 487 Sqn; Ventura I AE684 EG-B; Methwold-Amsterdam; shot down by fighters and crashed at Benneboroeek near Haarlem.	3/5/43
Cox JK	SFTS30	KIA Lancaster III LM423 619 Sqn shot down by a night- fighter and abandoned from 21000 feet nr Kieve	2/1/44
Cole JS	SFTS31	KIA Was the Pilot KIA Halifax II HR934 51 Sqn North Sea.	26/7/44
Clark F	SFTS44	KIA Lancaster III ND537 EA-S Night Ops Fisken-Munich exploded in the air, as a result of an attack from a night fighter flown by Oblt. Heinz Rökker, this was his 23rd confirmed claim of the war	25/4/44
Cass RM	SFTS48	KIA Halifax III NA560 640 Sqn from Leconfield to attack the V-1 facility at les Landes.	9/8/44
Dale SH	SFTS14	KIA aircraft failed to return from operational flight, Hudson AE612 , 206 Squadron.	13/6/41
Ebsworth EWJ	SFTS44	KIA Lancaster III – ME593 – Op Berlin.	27/1/44
Fothergill JM	SFTS13	KIA 53 Sqn; Blenheim IV V5865 missing over French coast.	27/3/41
Foster WFW	SFTS15	KIA 59 Sqn; Blenheim; IV R3631; Failed to return from Recce over Le Havre; BoB Clasp revoked in 1960	21/8/41
Finch RJ	1 ATU	KIA Whitley AD706, 10 Operational Training Unit, aircraft accident, Abingdon aerodrome, Oxfordshire	17/6/42
Ford DM	SFTS45	KIA 192 Sqn; Wellington X LN716 DT-H; Foulsham-ECM support, N France; lost without trace.	18/3/44
<i>Gordon J</i>	<i>SFTS13</i>	<i>KIA Mosquito IV DZ587 GB- Marham-Leverkusen crashed into a field at Hempnall, south of Norwich</i>	<i>6/11/43</i>
Glover J	SFTS23	KIA 102 Sqn; Whitley V Z6749 DY-?; Topcliffe-Kiel; shot down by a night-fighter off Dutch coast.	1/11/41
Gardner AD	SFTS25	KIA 101 Sqn; Wellington III X3670 SR-F; Bourn-Cologne; 1/1047 LWT.. First 1000 bomber raid - Slide 12	31/5/42
<i>Gardiner P</i>	<i>SFTS28</i>	<i>Possibly KIA 44 Sqn; Lancaster Mk 1 L7533 KM-J; Waddington-Warnemunde; LWT.</i>	<i>8/5/42</i>
Gray R	SFTS39	KIA Halifax V DG285 MA-X 161 Sq; Tempsford_SOE - Operation Ker/Crab;came down near Rennes.	16/1/43
Green LF	SFTS55	KIA Mitchell II FW129 98 Sqn France.	13/6/44
Hill JJ	SFTS5	KIA 106 Sqn; Hampden I L4180 ZN-?; Finningley-gardening in Baltic Sound; crashed E of Spurn Head.	30/10/40

Casualty	Entry	Description	Date
Harvey G	SFTS11	KIA 144 Sqn; Hampden I AE252 PL-?; North Luffenham-Koln; crashed Cambrai.	31/7/41
Hill FP	SFTS16	KIA 51 Sqn; Halifax III LV777 MH-F2; Snaith-Nuremberg; 1/95 ac lost (of 795 raid); flak on RTB, Bietigheim.	31/3/44
Harris CW	SFTS21	KIA Whitley Z9522 , 58 Squadron, aircraft failed to return from an operational flight over Germany.	10/7/42
Huggard JBO’C	SFTS23	KIA Halifax II JB795 77 Sqn Germany/Bodensee.	10/3/43
Harrison WG	SFTS24	KIA 103 Sqn; Wellington IC Z8833 failed to return from ops and crashed at sea in the English Channel.	5/5/42
Heap JO	SFTS28	KIA 218 Sqn; Stirling I N6070 HA-A; Marham-Pilsen; night ops; crashed at Frankfurt.	5/5/42
Hetherwick P	SFTS35	KIA Halifax III MZ925 640 Sqn Germany.	6/10/44
High RM	SFTS43	KIA Lancaster III PB409 OF-F Coningsby-Ladbergen shot down on rRTB, crashed West of Burgsteinfurt.	23/9/44
Hentsch FC	SFTS46	KIA 12 Sqn; Lancaster III ND650 PH-Y; Wickenby-Berlin; flak Duisburg; abandoned Geldern-Veert.	24/3/44
Irving D	SFTS15	KIA 83 Sqn; Hampden I AD916 OL-Z; Scampton-Dusseldorf; flak Duren.	1/7/41
Jones RW	SFTS7	KIA 99 Sqn; Wellington IC R3289 LN-; Newmarket-Ruhr; ditched Felixstowe.	6/11/40
Jeff JEP	SFTS14	KIA 44 Sqn; Hampden I AD864 KM-; Waddington-Hamburg; crashed, River Elbe.	3/5/41
Jobes BWM	SFTS15	KIA 104 Sqn; Wellington II W5485 EP-J; Driffild-Karlsruhe; flak over target area.	6/8/41
Jenkins JC	SFTS20	KIA 214 Sqn; Wellington IC R1613 R1613; Stradishall-Bremen; shot down by night-fighter Quakenbruck.	17/7/41
Jones R	SFTS22	KIA Lancaster I LM206 JI-C 514 Sqn Waterbeach-Stuttgart crashed S of Coussey, NNW of Neufchateau,	29/7/44
<i>Jones JR</i>	<i>SFTS27</i>	<i>Possibly KIA Lancaster III LM569 HW-T 100 Sqn Grimsby-Scholven-Buer shot down by flak over target area</i>	<i>19/7/44</i>
Jamieson RDW	SFTS46	KIA 625 Sqn; Lancaster I ED317 CF-W; Kelstern-Berlin; shot down outbound by night-fighter.	24/3/44
<i>Jones J</i>	<i>SFTS50</i>	<i>KIA Lancaster III ND553 460 Sqn UK.</i>	<i>30/4/44</i>
Kendall CF	SFTS8	KIA 83 Sqn; Hampden BI L4095 OL-R; Scampton-Danzig; crashed off Dutch coast.	11/11/40
Kerr RE	SFTS9	KIA 51 Sqn; Whitley V Z6741 MH-; Dishforth-Brest; crashed near Brest.	5/7/41
Kellow SW	SFTS17	KIA Beaufighter TFX LZ435 489 Sqn UK.	5/6/44
Kennard WD	SFTS24	KIA 105 Sqn; Mosquito IV W6064 GB-; Horsham St. Faith-Koln; flak, crashed at Bazel, emergency landing.	31/5/42
Landale PWF	SFTS6	KIA 10 Sqn; Whitley V Z6624 ZA-O; Leeming-Hanover; crashed into the North Sea.	27/7/41
Lothian L	SFTS14	KIA Beaufighter Ic T5220 235 Sqn.	8/9/42
Laidlaw W	SFTS15	KIA 50 Sqn; Hampden I AE383 VN-; Swinderby-Bremen; lost without trace.	20/10/41
<i>McCullach HF</i>	<i>SFTS6</i>	<i>KIA aircraft shot down and crashed at Schagen, Whitley Z6567, 51 Squadron.</i>	<i>8/11/41</i>
Macrossan HM	SFTS9	KIA 50 Sqn; Hampden I AD753 VN-; Lindholme-Brest; exploded S of Scilly.	5/4/41
Mercer DW	SFTS20	KIA 77 Sqn; Whitley V Z6668 KN-; Leeming-Huls; crashed at Quackenburck.	7/9/41
Matheson CV	SFTS23	KIA 78 Sqn; Whitley V Z6881 EY-; Middleton St. George-Huls; shot down by night-fighter Friesland.	7/9/41
Moorehouse HB	SFTS24	KIA 76 Sqn; Halifax II R9456 MP-F; Middleton St. George-Warnemunde; crashed near Rostock.	9/5/42
<i>Martin RF</i>	<i>SFTS26</i>	<i>Possibly KIA Halifax II LW319 78 Sqn damaged by Flak over the target pilot attempted to land at Coltishall.</i>	<i>23/11/43</i>
Mitchell JL	SFTS28	Most likely KIA 114 Sqn; Bristol Blenheim IV V6337 RT-D; West Raynham-Intruder duties Venlo airfield; flak.	2/6/42
Neave DA	SFTS19	KIA 83 Sqn; Lancaster I R5640 OL-D; Scampton-Essen; crashed at Huxne	9/6/42
Namias MHR	SFTS20	KIA 226 Sqn; Blenheim IV Z7310 MQ-V; Wattisham-ASW; flak hits starboard engine during attack.	20/9/41
Ogilvie JFT	SFTS13	KIA 21 Sqn; Blenheim IV V6372 YH-H; Watton-ASW; shot down by Me109s off Heligoland.	15/5/41
Owens HM	SFTS14	KIA 50 Sqn; Hampden I AD844 VN-; Lindholme-Hamburg; lost without trace, North Sea.	17/7/41
Osborne DO	SFTS20	KIA 150 Sqn; Wellington III X3309 JN-N; Snaith-Bremen; lost without trace.	27/6/42

V2.0 ADDENDUM - VERIFIED ADDITIONS (2)

These additions resolve animals revealed in our first analysis of 2021 and the assumption that the College SFTS trained pilots only

Casualty	Entry	Description	Date	Casualty	Entry	Description	Date
Preece MJ	SFTS9	KIA 50 Sqn; Hampden I X3004 VN-; Lindholme-Dusseldorf; missing believed killed; ILWT.	8/12/40	Scott FA	SFTS27	Possibly KIA 37 Sqn; Wellington IC Z1179; El Daba ops; night-fighter. 2/7/42.	2/7/42
Page AJ	SFTS 10	KIA 101 Sqn; Wellington IC X9828 SR- ; night ops Oakington to Frankfurt, crashed into North Sea.	24/10/41	Skinner LJ	SFTS29	KIA Mosquito IV DZ311 105 Sqn LWT, from Marham-rail targets between Oldenburg/Osnabruck.	23/1/43
Potts RJ	SFTS14	KIA 83 Sqn; Hampden I AD907 OL-K; Scampton-Kiel; crashed off Bridlington coast.	19/8/41	Smith RH	SFTS33	Multiple possibilities of which one is KIA Halifax V LK919 IP-R Tholthorpe-Hanover.	27/9/43
Pike DGH	SFTS23	KIA 207 Sqn; Lancaster III ND513 EM-R; Spilsby-Clermont-Ferrand; crashed in target area.	10/3/44	Smith JB	SFTS34	Possibly KIA Lancaster III JB708 OF-J Coningsby-Lillie, attacked by a night fighter and exploded.	10/5/44
Parker RPM	SFTS28	KIA 218 Sqn; Short Stirling I DJ977 HA-F, Marham-Mannheim; one of 197 ac on night ops; LWT.	19/5/42	Scott RM	SFTS56	KIA/KOAS Halifax III RG347 427 Sqn UK	27/2/45
Quinn J	SFTS34	Possibly KIA Spitfire MH437 165 Sqn Belgium.	5/1/45	Tindall A	SFTS 9	KIA 115 Sqn; Wellington IC T2520 KO-A; Marham-Bordeaux; flew into high ground near Tredegar.	9/12/40
Rogers DA	SFTS14	KIA 21 Sqn; Blenheim IV R3900 YH-; Watton-ASW; shot down by naval flak off Texel.	31/3/41	Tilley AFE	SFTS 22	KIA 15 Sqn; Stirling I W7518 LS-G; Bourn-Berlin; 1/17 ac lost (of 302); night-fighter, Thollen.	1/3/41
Rowe JL	SFTS18	KIA 83 Sqn; Lancaster I R5659 OL-B; Scampton-Essen; crashed at Vardingholt.	8/6/42	Thompson RH	SFTS30	Possibly KIA Halifax III LV773 NP-R 158 Sqn Lissett-Berlin crashed at Wentdorf Germany.	20/1/44
Rees KR	SFTS21	KIA Lancaster I W4945 EM-Z from Langar , mine laying, hit by flak and crashed nr Remmerstrand	29/4/43	Taylor W	SFTS35	KIA Mosquito XIX TA392 RS-K 157 Sqn Swannington-Bomber Support - intruder duties.	23/12/44
Richmond H	SFTS22	KIA 61 Sqn; Hampden I AE247 QR-; North Luffenham-Frankfurt; lost without trace.	29/8/41	Vivian ED	SFTS15	KIA 50 Sqn; Hampden I AE226 VN-; Lindholme-Bremen; night-fighter, Veendam.	12/7/41
Stevens AOL	SFTS7	KIA 99 Sqn; Wellington IC R3289 LN- ; Newmarket-Ruhr; night ops; fell into sea nr Felixstowe.	7/11/40	Watts GG	SFTS14	KIA 106 Sqn; Hampden I AD756 ZN-; Coningsby-Dusseldorf; night fighter, Gerabloux.	17/8/41
Simpson GA	SFTS11	KIA Halifax II W1017 MP-T 76 Sqn Middleton St. George-Dunkirk lost control evading flak.	28/4/42	Whiting WRH	SFTS15	KIA 26 OTU; Wellington IC W5704 -S; Graveley-Koln; night-fighter Middelbeers, Holland.	31/5/42
Smith R	SFTS11	Possibly KIA Whitley V P5108 51 Sqn aircraft force landed at sea near Pilsum, East Friesland.	1/3/41	Walkden MTK	SFTS17	KIA 18 Sqn; Blenheim IV V6437 WV-C; Horsham St. Faith-Cologne; crashed off the Dutch coast.	12/8/41
Simpson JG	SFTS12	KIA Harwell.	25/9/40	Whitmill H	SFTS20	KIA 515 Sqn; Mosquito VI NS948 3P-; Little Snoring-Lille raid; crashed near Coulommiers.	10/4/44
Smith EG	SFTS12	KIA 77 Sqn; Whitley V Z9150 KN-; Leeming-Stettin; shot down Felm Moor, Germany.	30/9/41	Wood TRR	SFTS22	KIA Wellington II X3635 KO-J, 115 Squadron, Marham-Bremen shot down near Niederblockland.	3/6/42
Smith RC	SFTS12	KIA 15 Sqn; Stirling I N6016 LS-G; Wyton-Hamburg; shot down by night-fighter, Ellerbeck.	30/6/41	Waldron VE	SFTS23	KIA 99 Sqn; Wellington II W5436 LN-X; Waterbeach-Frankfurt; crashed nr Bury St. Edmunds RTB.	29/9/41
Sargent PD	SFTS12	KIA 40 Sqn; Wellington IC R1438 BL-U; Alconbury-Dusseldorf night ops; stalled and crashed RTB.	3/6/41	Williams JB	SFTS25	KIA 76 Sqn; Halifax II R9451 EY-; Croft-Hamburg; shot down at Ottensen, 6km SW of Buxtehude	3/5/42
Sunderland AG	SFTS12	KIA Wellington III X3558 75 Sqn Feltwell-Hamburg, crashed at Brackeswalde.	29/7/42	Watson RJ	SFTS45	KIA 75 Sqn; Stirling III EF215 AA-M; Mepal-SOE; crashed near Rochforte-Ferrand.	5/3/44
Smith IOM	SFTS13	KIA 99 Sqn; Wellington II W5400 LN-; Waterbeach-Berlin; night ops; last heard calling for help.	9/5/41	Whitehead FA	SFTS47	Possibly KIA Lancaster III JB277 103 Sqn Germany	28/1/44
Shackleton WC	SFTS24	KIA 106 Sqn; Hampden I AT122 ZN-; Coningsby-Munster; crashed at Besselinkschans, Lieveelde,	28/1/42	Yarrow GP	SFTS7	KIA 110 Sqn; Blenheim IV L8787 VE-; St. Eval-Brest; crashed in Cornwall; died from injuries.	30/3/41
Skinner TB	SFTS26	KIA 107 Sqn; Boston III OM-; Exeter-intruder duties, Lannion airfield; shot down by an Me 109.	10/6/42	Young RG	SFTS28	KIA Wellington JA351 150 Sqn 15/5/44 OR KIA Mosquito FBVI RS626 248 Sqn 7/3/45	15/5/44



Lest We	1939	1940	1941	1942	1943	1944	1945	Totals
Flight Cadets lost	2	20	15	9	8	7	2	63
SFTS Aircrew Lost	0	27	47	115	70	69	9	337

Bomber Command - “Cranwellians’ Squadrons”

Our analysis suggests that Cranwellian Bomber Command pilots flew with the following Squadrons



7	9	10	12	15	18	21	23	35	37	38	40	44	46	49	50	51	57	
58	61	75	76	77	78	82	83			85	88	90	97	99	100	101	102	
103	104	105	106	107	108	110	114			115	138	139	141	142	144	149	150	
153	156	157	158	161	162	166				169	170	180	192	196	199	207		
214	218	226	227	239	305	405	408	418	419	420	424	425	427	428	429	432	434	
455	460	464	466	487	514	515	550	576	578	617	620	622	625	626	630	635	640	692