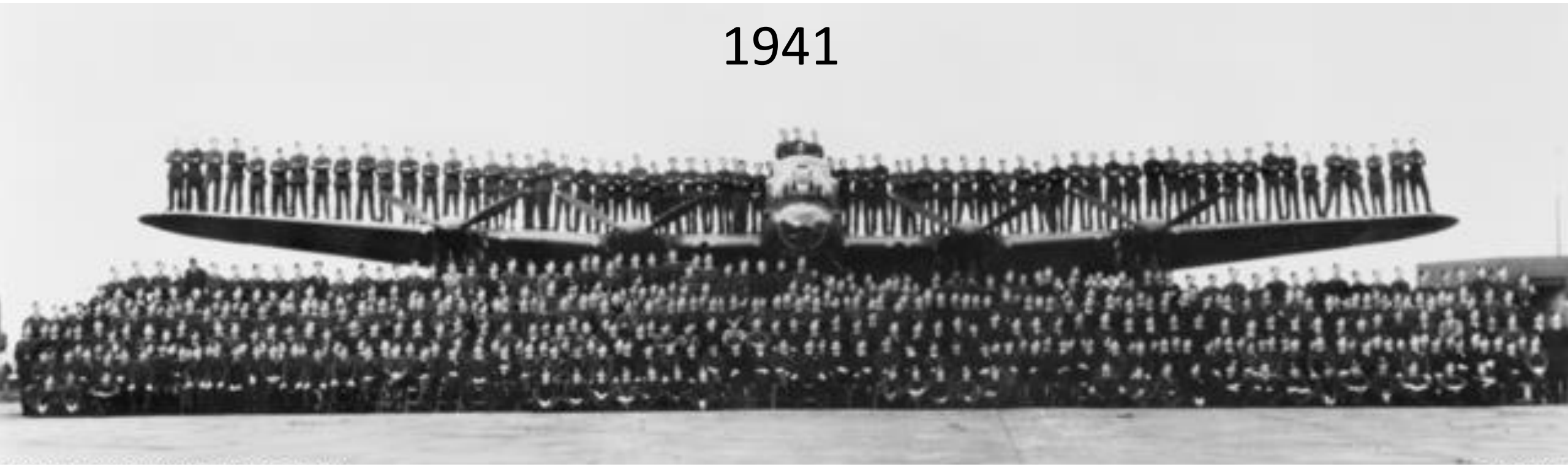


Empire Air Training Scheme & Bomber Command's Strategic Bombing Campaign

1941



AUSTRALIAN WAR MEMORIAL

044167

9 January 1941

- The first flight of the Avro Lancaster prototype was made on 9 January 1941 at RAF Ringway, Cheshire.
- The Manchester was underpowered and its Vulture engines proved to be unreliable.
- Avro's chief design engineer, Roy Chadwick, had started working on an improved Manchester by mid-1940. He selected four of the more reliable but less powerful Rolls-Royce Merlin engines, specifically adopting the "Power-egg" installation developed for the Beaufighter II, and installed them on a wing of increased span.
- Initially, the improved aircraft was designated as the Type 683 Manchester III but was subsequently renamed the Lancaster.
- The prototype, serial number BT308, was assembled by the Avro experimental flight department at Ringway Airport, Manchester modified from a production Manchester airframe, combined with the new wing to accommodate the additional engines.
- Flight testing of the new aircraft quickly proved it to be a substantial improvement over the Manchester.



15 January 41

- Oil targets were again put forward as the "sole primary aim" in a directive of 15th January 1941 when seventeen specific plants were listed and cities such as Hanover, Magdeburg, Bremen and Oppau, all connected with the oil industry, were stipulated for the secondary offensive.

4 February 1941

- 407110 Leading Aircraftman (LAC) Colin Tolhurst Arthur of Mount Gambier, SA.
- A business manager before enlisting in the RAAF in June 1940, LAC Arthur trained as a pilot in Australia and Canada under the Empire Air Training Scheme (EATS).
- He was killed at the No 1 Service Flying Training School at Camp Borden, Canada on 4 February 1941, aged 24.



AUSTRALIAN WAR MEMORIAL

P07430.001

16 February 41

- At Uxbridge, after completing documents for record purposes and receiving kit to full scale, including such necessary evils in war-time Britain as steel helmet, respirator and identity card, Australians were sent on short leave preparatory to posting to operational training units.
- The early drafts were all of pilots only, and no difficulty was encountered in finding immediate vacancies for them, chiefly at No. 56 Operational Training Unit for fighter pilots, and Nos. 11 (Bassingbourn) and 30 (Lossiemouth) for bomber pilots.
- Men destined for Coastal Command had first to complete a course at a school of general reconnaissance, and accordingly, on 16th February, six sergeants were sent to No. 3 School of General Reconnaissance at Blackpool.

	R.A.A.F. arrivals (Pilots)	Posted	On strength at end of month.
December 1940	35	—	35
January 1941	—	35	—
February 1941	74	74	—

RAAF pilots arrived, posted and on strength at No. 3 Personnel Reception Centre, RAF Uxbridge.

February 1941

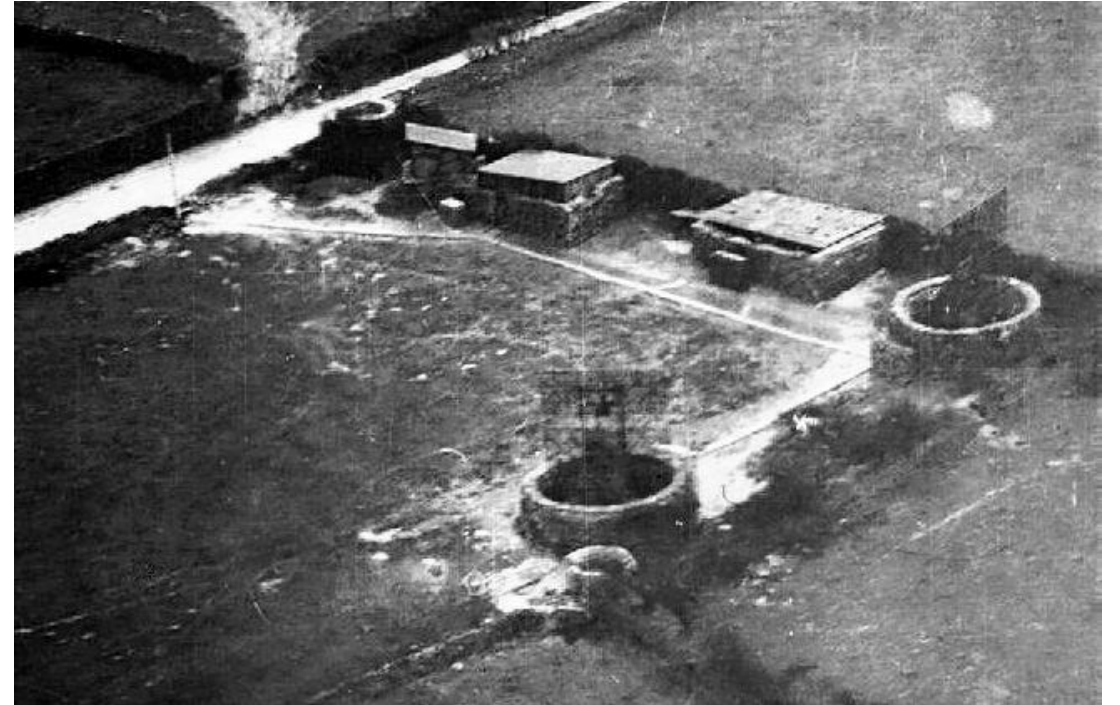
- The first of the Australian trained aircrew arrived in Egypt early in 1941 and went to the general aircrew pool at Geneifa and thence to training units, or directly to fighter and light-bomber squadrons, which completed their preparation for battle within their own resources.
- There was from the outset continual difficulty concerning pay arrangements and equipment for Australians arriving in the Middle East.
- This situation was aggravated by the supplementary agreement to send additional Australian pilots to complete their training in Rhodesia. These men sometimes arrived in convoys at Suez to find that local administrative officers were unwilling to take responsibility for their pay and onward journey.



JENNYFER. SOME OF THE 800 RECENTLY ARRIVED PILOTS AND AIR-CREW IN THE MIDDLE EAST. THESE MEN, FROM AUSTRALIA, WERE TRAINED UNDER THE EMPIRE AIR SCHEME WHICH WILL ENABLE THE EMPIRE TO MAINTAIN A STEADY FLOW OF FLYING PERSONNEL ON ALL FRONTS. (D. PARER).

24 February 1941

- RAF scientific intelligence had been aware of the Freya radars since mid 1940 but it was not until the 24th of February 1941 when photographic reconnaissance first found a Freya set that the RAF command accepted the fact that the German defence system was based on radar.
- At about the same time scientific intelligence began to see references to a new kind of radar called Wurzburg.



Low-level aerial reconnaissance photograph of the Freya radar installations at Auderville, France, taken using an F.24 side-facing oblique aerial camera.

Early 1941

- Later versions of the Himmelbett system in the Kammhuber line added two Würzburg radars, with a range of about 30 km. Unlike the early-warning Freya, Würzburgs were accurate (and complex) tracking radars.
- One was locked onto the night fighter as soon as it entered the cell and as soon as the Freya picked up a target the second Würzburg locked onto it.
- All position reports were sent to the Himmelbett control centre allowing controllers to get continual readings of the positions of both planes and direct the German night-fighter to a visual interception with the RAF bomber by radio.



Würzburg D in use. The quirl conical scanning antenna is prominent.

Early 1941

- Radio control center for night fighters, Jägerleitoffiziere and assistants plotting courses and directing the airborne fighters.



Early February 1941 – North West Europe.

- Many Australians and New Zealanders were regular officers in the RAF and the stream of aircrew from the EATS scheme was just beginning.
- With the end of the Battle of Britain and the decline of the German Blitz the principle campaign of the RAF was the bomber offensive. The vast majority of Australians and New Zealanders in the RAF would be committed to this campaign.
- Night attacks had now become the rule in the assault on Germany.
- Bitter experience during the early months of the war had taught the necessity of relying on night bombing if losses were to be kept within reasonable bounds.
- Unescorted bombers had proved no match for the German day fighters and, as yet, the Royal Air Force had no machines suitable for escort duties over Germany since the British aircraft industry had, of necessity, concentrated on the production of fast short-range fighters for home defence.
- But this resort to night operations had brought problems of navigation and identification, and soon recognition of the virtual hopelessness of precision bombing at night led to the introduction of 'area bombing', in which the force available on any one night was given as its objective an industrial town or district rather than a number of widely scattered targets of one or two special types.
- Yet, although a list of priority targets was laid down at the beginning of the year, the restricting influence of the weather ruled out bombing to any set programme. 'I have the greatest difficulty,' wrote Air Marshal Sir Richard Peirse, Air Officer Commanding-in-Chief at this time, 'not only in forecasting the weather in the target area—or rather in trying to find a suitable target in the only area offered by the weather—but also in being assured of reasonable conditions at base airfields in England for homing purposes.'
- One night early in February 1941, 17 of almost a hundred bombers despatched crashed on return to England when fog developed over airfields earlier than had been expected.

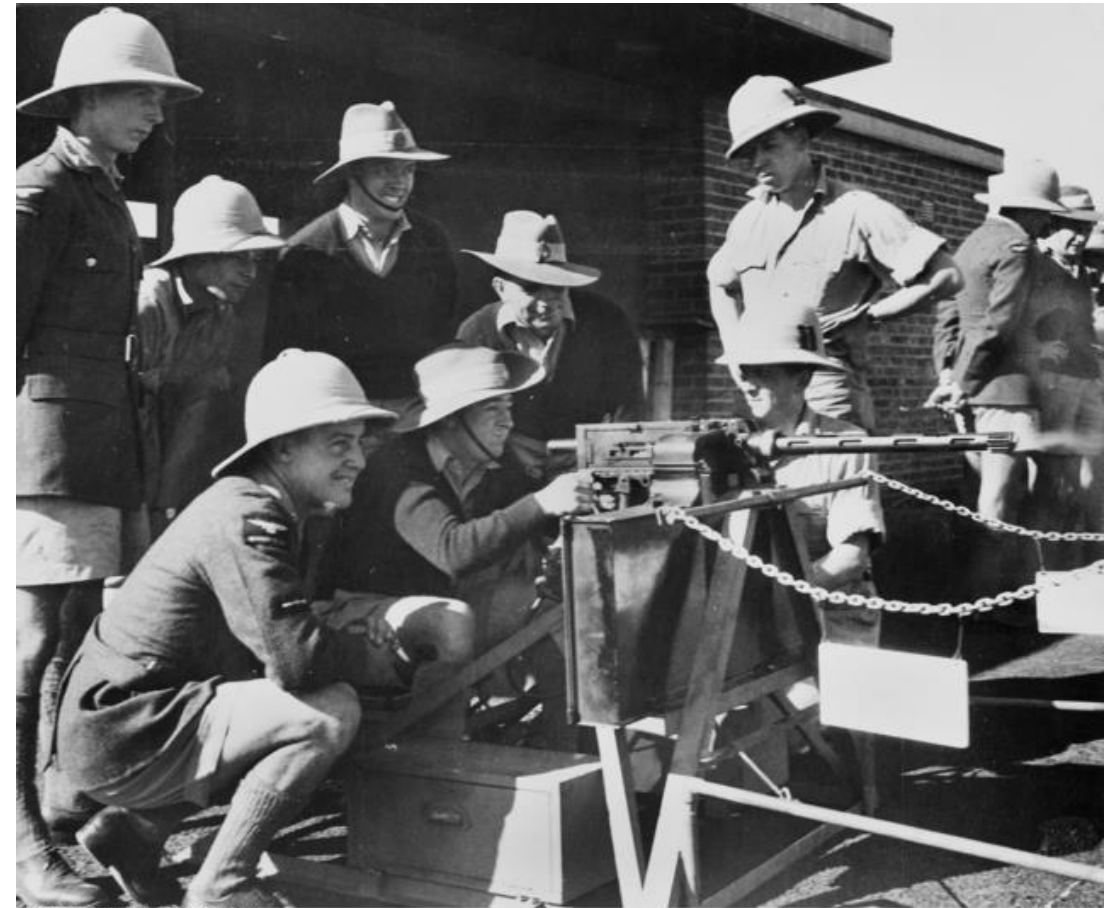
6 March 41

- The Oil Targets directive had been in force for only eight weeks, however, when on 6th March Mr Churchill issued the famous "Battle of the Atlantic directive" ordering that, until further notice, absolute priority in all directions was to be given to overcoming the U-boat and the FW-200.
- This change was officially recorded in a new directive to Bomber Command on the 9th.



c. March 1941

- Rhodesia. c. 1940. Rhodesian, RAAF and UK boys training to be pilots on the ranges with their guns during the early stages of training.
- Eight men are grouped around a British .303 inch Browning gun.



AUSTRALIAN WAR MEMORIAL

MED0010

21 March 1941

- RAAF aircrew trainees of the 8th RAAF Contingent to leave for Canada, embarking on the troop transport which will take them to Canada, for advanced flying training as part of the Empire Air Training Scheme (EATS).



AUSTRALIAN WAR MEMORIAL

006464

21 March 1941

- Sister Paterson, RAAF Nursing Service and Flight Lieutenant J A Bond, RAAF Medical Officer, who accompanied the 8th Contingent of RAAF aircrew trainees to travel by troop transport to Canada to undergo advanced flying training as part of the Empire Air Training Scheme (EATS).



AUSTRALIAN WAR MEMORIAL

006437

March 1941

- The requirement for flight engineers for flying-boats and four-engined aircraft had been forecast in October 1940, and in March 1941 the duties of flight engineer were defined and a suitable training sequence instituted for technical ground staff wishing to qualify for such employment.
- The Australian Air Board failed to recognise this reality which deprived EATS and RAAF ground crew of the opportunity to retrain as flight engineers until the flight engineer positions in the EATS squadrons had been filled by non Australians.
- The flight engineer controlled the aircraft's mechanical, hydraulic, electrical and fuel systems. He also assisted the pilot with take-off and landing. In an emergency, the flight engineer would also be needed to give accurate fuel calculations. He was also the reserve bomb-aimer and helped to look out for enemy fighters. On the ground, he also liaised with the ground crew, who were responsible for servicing and maintaining the aircraft.



April 1941

- In April 1941 it had been agreed that ultimately the light bomber squadrons should be reduced to a minimum. This was not immediately possible because a forthcoming supply of American aircraft and crews graduating from training units could only be absorbed by forming light-bomber squadrons.
- The light bombers of No. 2 Group were committed to daylight operations against Germany and the occupied countries, both independently and in conjunction with Fighter Command during the summer of 1941.
- Enemy shipping north of the Strait of Dover, power stations, shipbuilding yards, locomotives, steel works and railway marshalling yards were nominated as targets for these attacks.
- At that stage of the war the Group's Blenheims were near obsolete and sustaining heavy operational casualties. Nevertheless, operations continued unabated under Air Vice-Marshal D F Stevenson, a man who was infamous throughout the RAF at the time for his ruthless aggressiveness, his ambition and his lack of concern for the high loss rates suffered by his crews. Even Churchill was greatly disturbed by the loss rates on the attacks Stevenson was ordering his crews to fly.



Air Vice-Marshal D F Stevenson
later in the war in Burmah.

c April 1941

- N.Z. AIRMEN TRAINING IN CANADA. LAC F. MOORE OF TARANAKI. (NEGATIVE BY B.M.I.).



AUSTRALIAN WAR MEMORIAL

006756

C April 1941

- N.Z. AIRMEN TRAINING IN CANADA. THE ARRIVAL OF THE MAILS BRINGS A RUSH TO READ THE HOME TOWN PAPER. HERE ARE SOME OF THE BOYS GETTING THE LATEST CRICKET RESULTS FROM THE N.Z. HERALD. (NEGATIVE BY B.M.I.).



AUSTRALIAN WAR MEMORIAL

006751

16 April 1941 – Robert Menzies' diary

- Later. I was wrong. They were not passing. 460 of them were attacking London, and a dozen large bombs fell within 100 yards of the Dorchester.
- It was a terrible experience. Invited up to the second floor for a drink with two elderly ladies, we had scarcely sat down when a great explosion and blast shattered the windows of the room, blew the curtains in, split the door, and filled the room with acrid fumes.
- Twice the whole building seemed to bounce with the force of the concussion. Twice I visited the ground floor and found it full of white-faced people.
- The sky beyond the Palace was red with fire and smoke, the sky was flashing like lightning. It is a horrible sound to hear the whistle of a descending stick of bombs, any one of them capable of destroying a couple of five-storey houses, and to wonder for a split second if it is going to land on your windows!
- Just before dawn, at about 5 a.m., Tritton, Landau and I went for a walk to see the damage. There were buildings down and great craters within 100 yards of the hotel on the side away from the park. In Brook Street buildings were blazing. A great plume of red smoke rose from Selfridge's. Gas mains blazed in Piccadilly. The houses fronting the Green Park were red and roaring. There were craters and fallen masonry in the streets, and the fear of an unexploded bomb lurking around every corner. Wherever we walked, we crunched over acres of broken glass. This is the "new order". How can it go on for years?



Menzies films the ruins after a bombing raid in Coventry. On his right is Air Commodore F H McNamara VC RAAF.

Sergeant John Murray OPIE

Service No: 402534

Born: Minlaton SA, 10 March 1921

Enlisted in the RAAF: 16 September 1940 (at Sydney NSW)

Unit: No. 20 Service Flying Training School (RAF)

Died: Aircraft Accident (No. 20 Service Flying Training School Harvard aircraft P5918), near Harare, 26 May 1941, Aged 20 Years

Buried: Harare (Pioneer) Cemetery, Zimbabwe

CWGC Additional Information: Son of Errol John and Lillias Mary Opie, of Sydney, New South Wales, Australia

Roll of Honour: Sydney NSW

Remembered: Panel 134, Commemorative Area, Australian War Memorial, Canberra ACT

Remembered: St Peter's Anglican Church World War 2 Honour Roll, Cremorne NSW

On 26 May 1941, Harvard P5918 crashed at 1030 hours at Banket, and Sergeant Opie, a pilot under training flying solo, was killed.

North American T6 Harvard (or Texan)



May June 41

- No. 10 EFTS was formed May 41 at Temora, NSW
- No. 11 EFTS was formed June 41 at Benalla, Vic.
- No. 7 SFTS was formed at Deniliquin, NSW operating single engine aircraft in June 41.



AUSTRALIAN WAR MEMORIAL

010753/12

LAC Gordon Kevin Johnson in full flying kit before a training flight. Johnson is an Empire Air Training Scheme (EATS) trainee undergoing pilot training in Wackett trainer aircraft, shown in the background, at No 11 Elementary Flying Training School, RAAF, Benalla, VIC.

30 June 41

- The first Australian EATS medium bomber squadron (No. 455 Squadron R.A.A.F.) was to form in No. 5 Group, Bomber Command at Swinderby, Lincolnshire in June.
- The Australian Air Board had intended to supply almost – complete ground staff backing for this and other squadrons, and in fact on 23rd May 1941 ground staff in numbers and musterings approximately commensurate with the needs of a Wellington squadron had been assembled at Williamtown, New South Wales, and styled No. 455 Squadron.
- In June, however, these men were still in Australia awaiting transport, so eventually on 30th June a skeleton R.A.F. ground staff was provided at Swinderby.



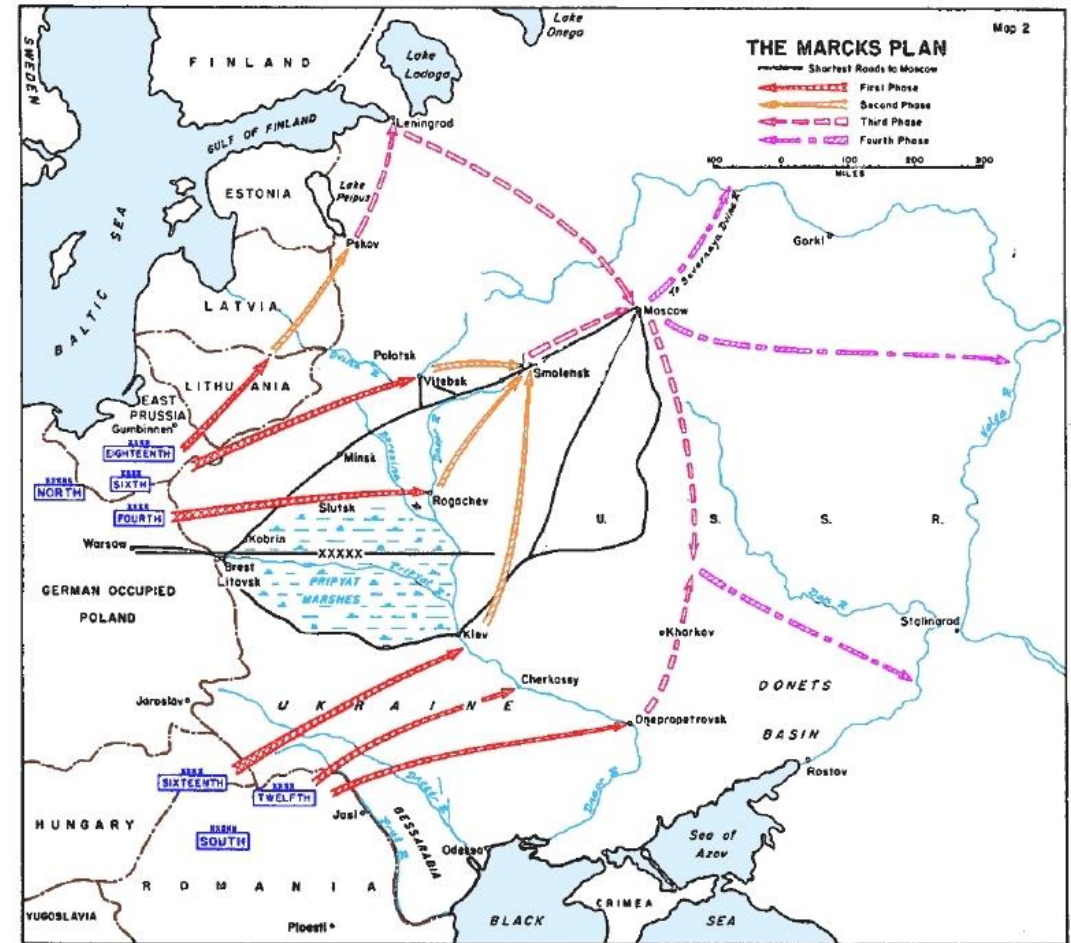
A Handley Page Hampden Mark I, AT137 'UB-T', of No. 455 Squadron RAAF based at Leuchars, Fife, Scotland (UK), in flight above clouds, May 1942. Max speed: 215 kn at 13,800 ft Cruise speed: 179 kn at 15,000 ft Range: 1,490 nmi with max fuel and 2,000 lb bombs. Service ceiling: 19,000 ft.

June 41

- The apparent impossibility of bringing decisive pressure to bear on Germany in any other way led in June 1941 to a plan for the expansion of the bomber force to 4,000 by the spring of 1943.
- This was a paper plan only but its acceptance by the War Cabinet endorsed the existing Air Ministry view that "the war can only be won by developing an overwhelming air offensive".

22 June 1941

- Nazi Germany and its Axis allies invaded the Soviet Union on Sunday, 22 June 1941.
- It was the largest land offensive in human history, with over 10 million combatants taking part.
- The transfer of German land and air forces to the east ended the immediate threat of invasion and major air attack against the UK.
- The UK Government had very little expectations of the Russian forces and no love for the Soviet Government but was very strongly motivated to do whatever they could to keep the Soviets in action against the Germans.



Operation Otto Preliminary Plan for Operation Barbarossa -- August 5th, 1940

1 July 41

- While the tardy arrival of Australian personnel did impede somewhat the formation of No. 455, it was the airfield and aircraft position, especially the latter, which was the real governing factor within No. 5 Group.
- The Manchester aircraft with which the group was to re-equip had begun operations in February but had given considerable trouble.
- On 1st July it was decided to ground all Manchesters and this entailed the temporary re-equipment of Manchester squadrons with Hampdens, the production of which was at the same time tapering off in favour of the heavy-bomber program.
- The infant No. 455, therefore had to remain idle because there were not sufficient aircraft to equip established and competent squadrons which had greater priority.



A Manchester Mark I showing the RR Vulture engine, which was the main cause of the design's failure. September 1941. The Vulture was an X24 42litre engine based on 2 V12 Peregrines joined by a new crank case and crankshaft.

1 July 41

1941	Arrivals					Posted					Not Posted				
	P ¹	O ²	WAG	AG	Total	P	O	WAG	AG	Total	P	O	WAG	AG	Total
Apr	64	12		7	83	43	7		6	56	21	5		1	27
May	73	14	18		105	37	19		1	57	57		18		75
Jun	108	26	40	10	184	22	25	58	10	115	143	1			144

- On 1st July, No. 3 Personnel Reception Centre moved from its restricted quarters at Uxbridge to Bournemouth, a south-coast coastal resort where many large hotels could be requisitioned.
- Although every effort was made to post men away as quickly as possible, the delay in some cases amounted to three months.
- The actual progression of Australian aircrew through No. 3 Personnel Reception Centre is set out in the accompanying table.

4 July 1941 - Germany

- Hughie Edwards joined the RAAF in 1935, and a year later was granted a short service commission with the RAF.
- In August 1938, Edwards was piloting a Blenheim when he flew into a storm at 7,500 ft. When the ailerons froze, the aircraft was forced down to 5,200 ft and Edwards ordered the navigator and rear gunner to bail out of the aircraft.
- Down to 750 ft, he made an effort to jump clear, but his parachute became entangled with the aircraft. He sustained head injuries and a badly broken leg, which after extensive surgery was left shorter than the other. He was declared unfit for flying duties.
- In April 1940 he was posted to No. 139 Squadron for active service due to the pressing need for more aircrew.



A Blenheim Mk I in formation with a Spitfire.

4 July 1941 - Germany

- In May 1941, Edwards became CO of No. 105 Squadron after the previous incumbent had been killed in an anti-shipping raid on Stavanger.
- The Squadron was engaged in a series of daylight operations against Germany and the occupied countries, with its principal targets being shipping, power installations, shipbuilding yards, locomotives, steelworks and marshalling yards.
- On 4 July 1941, Edwards led a daylight attack against the port of Bremen, one of the most heavily defended towns in Germany.
- Edwards' force of twelve Blenheims attacked at a height of about 50 feet through telephone wires and high voltage power lines. The bombers successfully penetrated fierce anti-aircraft fire and a dense balloon barrage, but further fire over the port itself resulted in the loss of four of the attacking force.
- Waterside objectives were effectively bombed and Edwards brought his remaining aircraft safely back, although all had been hit and his own Blenheim had been hit over 20 times.
- His leadership in the raid earned him a Victoria Cross.



AUSTRALIAN WAR MEMORIAL

SUK12246

In May 1944 John Curtin, met with Edwards during a visit to No. 460 Squadron RAAF at Binbrook, where Edwards was the Station Commander.

9 July 41

- When bombing policy was reviewed in June 1941, many of the main issues appeared to be clarified.
- Russia was now an ally and, because of enemy deployment in the East, Britain now seemed safe from enemy invasion and freed from the main weight of air attack against her own industries.
- German U-boat and FW-200 attacks in the Atlantic had waned so the Air Ministry was able to claim that the pressing need for its own involvement in this battle no longer existed.
- The requirements of defensive strategy thus being at least temporarily met, the way was clear for a single offensive policy.
- The only snag was that during the four months of the Battle of the Atlantic directive, German military and political successes in south-eastern Europe had vastly improved her petrol and oil situation.
- Oil targets in Germany were consequently no longer a profitable means of depressing enemy military potential and a new target system had to be sought.
- A "Future Strategy Paper " produced in June at the request of the Prime Minister advocated that the short-term targets of our bombing should be: (i) The German transportation system, chiefly the focal points of railways and canals. (ii) German morale.
- On 9th July 1941 a formal directive to Bomber Command defined its main aim as "dislocating the German transportation system and destroying the morale of the civilian population as a whole and of the industrial workers in particular"



12 August 1941

- On 12th August deep penetration of Germany in daylight was attempted, fifty-six Blenheims bombing power stations at Cologne. Twelve Blenheims were lost (a 21% loss rate) and this experiment was not repeated.
- Even in France penetration was not attempted farther than the Lille region, the offensive being almost purely tactical and against fringe targets.



Bristol Blenheim Mark IV

18 August 1941 - London

- When Churchill became Prime Minister, he appointed his friend Professor Lindemann, professor of experimental philosophy (physics) at Oxford University and director of the Clarendon Laboratory, as the British government's leading scientific adviser. Lindemann attended meetings of the War Cabinet, accompanied the prime minister on conferences abroad, and sent him an average of one missive a day. He saw Churchill almost daily for the duration of the war and wielded more influence than any other civilian adviser.
- Lindeman initiated a report into the accuracy of British bombing. David Bensusan-Butt, a civil servant in the War Cabinet Secretariat and an assistant of Lindeman's, was given the task of assessing 633 target photos and comparing them with crews' claims.
- Photo: Professor F A Lindemann (later Lord Cherwell), with Winston Churchill and Dr D A Crow (Chief Superintendent Projectile Development, Ministry of Supply), with Vice Admiral Tom Phillips VCNS in the background, watching a demonstration of a secret anti-aircraft device at an experimental establishment at Holt, Norfolk.



18 August 1941 - London

- The results in the Butt report, first circulated on 18 August 1941, were a shock to many.
- “Any examination of night photographs taken during night bombing in June and July points to the following conclusions:
 - Of those aircraft recorded as attacking their target, only one in three got within 5 miles.
 - Over the French ports, the proportion was two in three; over Germany as a whole, the proportion was one in four; over the Ruhr it was only one in ten.
 - In the full moon, the proportion was two in five; in the new moon it was only one in fifteen. ...
 - All these figures relate only to aircraft recorded as attacking the target; the proportion of the total sorties which reached within 5 miles is less than one-third. ...”
- A significant percentage of bombers were prevented from reaching the target by mechanical or navigation failure or weather or enemy action so the proportion of sorties dispatched bombing within 5 miles was significantly less than Butt’s numbers.
- Butt’s review covered two months when weather in Europe is better than average. Bombing results would be expected to be worse in worse weather.
- Those two months have few hours of darkness which limits bombing to relatively close targets. In winter more distant targets can be attacked. Navigation errors can be expected to increase with distance flown, further reducing winter bombing performance.
- Even the biggest industrial target would take up only a small fraction of a 5 mile radius circle, which further reduces the percentage of bombs actually hitting the target.
- One counter-measure which was attempted at this time was to expedite the supply of night cameras so that the area of bomb release might be identified and bombing accuracy checked.

18 August 1941

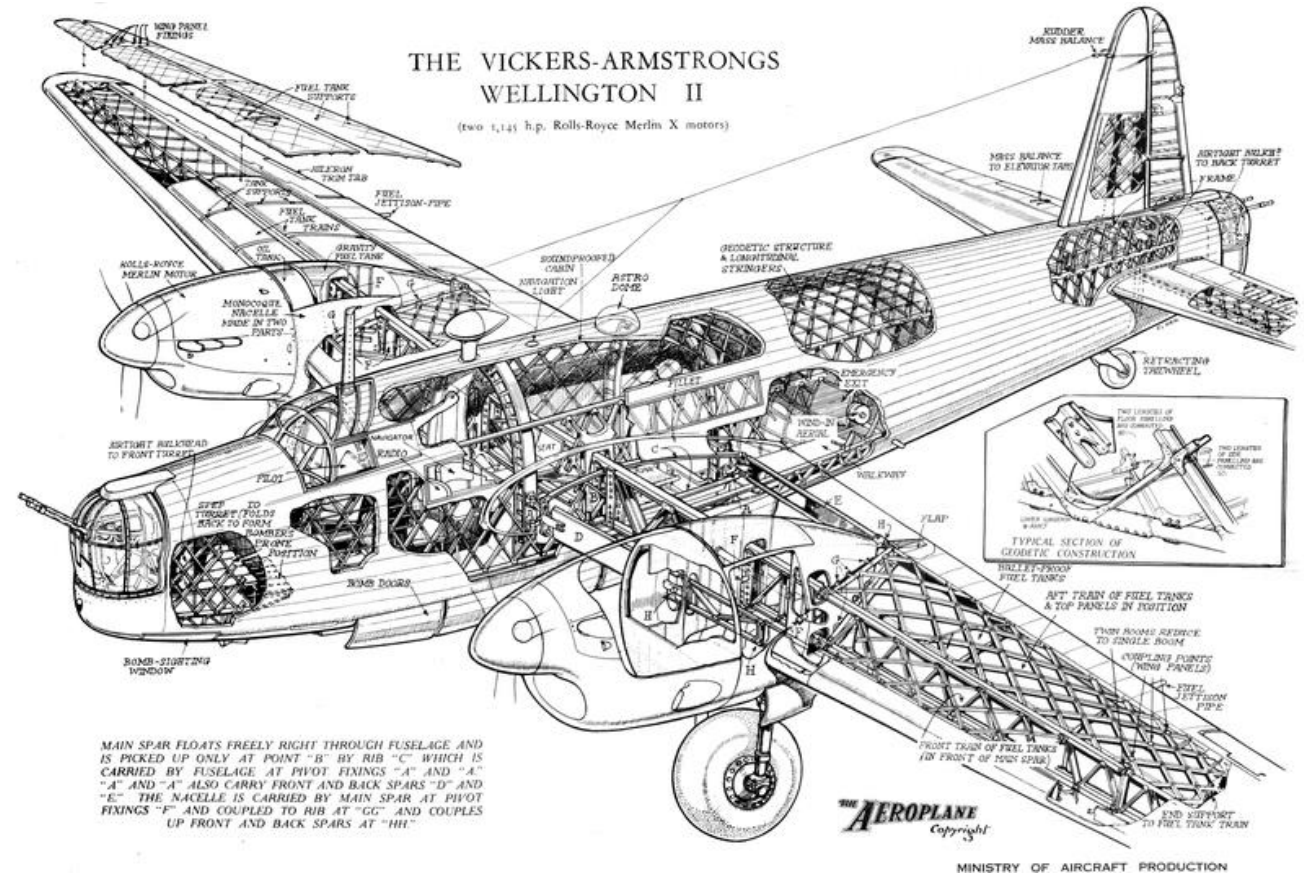
- The primary role of the Navigator was “to know the aircraft position at all times and to provide the pilot with courses to steer to achieve the sortie objective”
- At this time the Navigator relied on map reading, dead reckoning, astro navigation and visual aids to enable him to plot the position of the aircraft and the subsequent course.
- Map reading depends on visibility, at night over a blacked out country it is difficult, in or above clouds it is impossible.
- Dead reckoning depends on wind speed and direction, which vary with altitude and over the course. Wind forecasts for areas where no measurements are available must be very uncertain. It also depends on the pilot's ability to hold a steady course and speed. Dead reckoning errors accumulate with distance. Evading flak or fighters will introduce wild errors.



The navigator of a Wellington bomber at his chart table.

18 August 1941

- Astro navigation in the vibration, noise, cold and dark in a bomber at night defies imagination.
- No light could be allowed to escape through the astrodome.
- Moving from the navigator's station where light was required to the astrodome where blackout was required must have played havoc with night vision.
- Star sights are subject to measurement and calculation errors in combat conditions and would not be possible in or below cloud.



Note the Astro dome for taking star sights.

18 August 1941

- In an excerpt from a paper written for the Air Navigation Committee in early 1943, Group Captains Kelly Barnes and David Waghorn stated that,
- ‘At the beginning of the war the standard of navigation in the Service was infinitely lower than it should have been.’ The only officers with anything like an adequate knowledge of the subject were those who had taken the Long Navigation course. They had been trained in very small numbers, were classified as specialists and were commonly regarded as ‘cranks’. As a matter of interest the total number of RAF officers who had graduated as Spec Ns between 1920 and 1939 was only just over 100.”
- It is not surprising that bombing at this period was so inaccurate that the Germans could frequently not even tell what the intended target was.

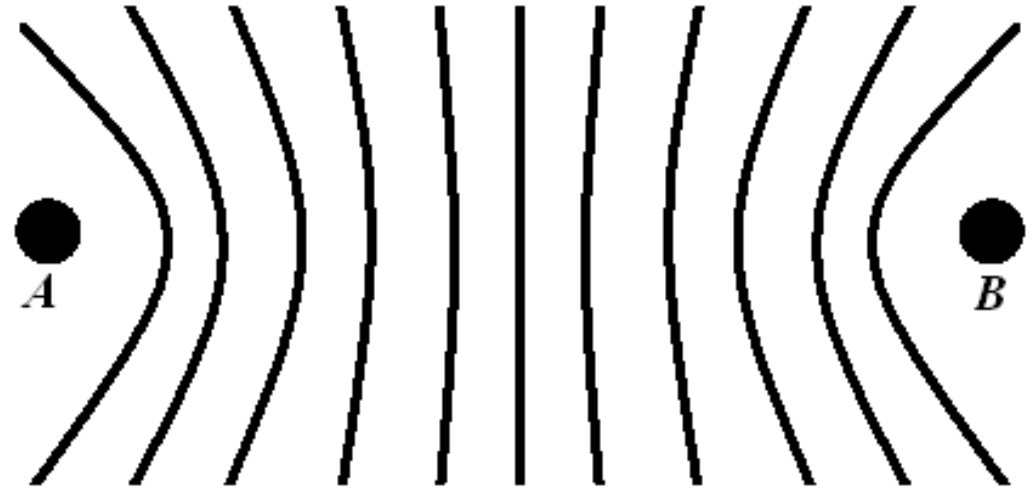
18 August 1941

- In October 1937, Robert (Bob) J. Dippy, working at Robert Watson-Watt's (photo) radar laboratory at RAF Bawdsey in Suffolk, had proposed using two synchronized transmitters as the basis for a blind landing system.
- Watt liked the idea, but at the time, a pressing need for the system was not apparent. At the time, the RAF relied on daylight bombing by tight formations of heavily defended bombers as its primary attack force, so night landings were not a major concern. Landing aids would be useful, but radar work was the more urgent need.
- The RAF's bombing campaign plans quickly went awry, especially after the Air Battle of the Heligoland Bight in 1939.
- Contrary to prewar thinking, the bombers proved extremely vulnerable to both ground fire and attacking fighters. Bomber Command was compelled to turn to night bombing.



18 August 1941

- This raised the need for better landing aids, and for night navigation aids in general. Dippy refined his system for this purpose, and formally presented a new proposal on 24 June 1940.
- The original design used two transmitters to define a single line in space, down the runway centerline. In his new concept, charts would be produced illustrating not only the line of zero-difference, where the blips were superimposed like the landing system, but also a line where the pulses were received $1\text{ }\mu\text{s}$ apart, and another for $2\text{ }\mu\text{s}$, etc. The result would be a series of lines arranged at right angles to the line between the two stations.
- Experimental systems, of what became Gee, were being set up in June 1940. By July, to everyone's delight, the system clearly was usable to at least 300 miles (480 km) at altitudes of 10,000 feet (3.0 km). On 19 October, a fix was made at 110 miles (180 km) at 5,000 feet.



A single leg of a Gee chain lies along the "baseline" from stations A to B. At any point between these stations, a receiver will measure a difference in timing of the two pulses. This same delay will occur in many other locations along a hyperbolic curve. A navigational chart showing a sample of these curves produces a graph like this image. A single pair of such transmitters would allow the aircraft to determine on which line they were, but not their location along it. For this purpose, a second set of lines from a separate station would be required.

18 August 1941

- Eager to test the Gee system, prototype sets were used on target indicator aircraft well before the production sets were available in the number required for large raids.
- On 15 May 1941, such a set provided an accurate fix at a range of 400 miles (640 km) at an altitude of 10,000 feet (3,000 m).
- The first full transmitter chain was completed in July 1941, but in testing over the North Sea, the sets proved to be unreliable. This was traced to the power supplies and tubes, and corrections were designed and proved that summer.
- On the night of 11/12 August, two Gee-equipped aircraft bombed using Gee coordinates only and delivered "uncanny accuracy".
- However, on the next night on a raid over Hanover, a Gee-equipped Vickers Wellington was lost. The Gee set did not contain self-destruct systems, and it might have fallen into German hands. Operational testing was immediately suspended.
- On 18 August 1941, Bomber Command ordered Gee into production, with the first mass-produced sets expected to arrive in May 1942. In the meantime, a separate order for 300 hand-made sets was placed for delivery on 1 January 1942, which was later pushed back to February.



GEE airborne equipment, with the R1355 receiver on the left and the Indicator Unit Type 62A on the right. The 'scope shows a simulated display, including the "ghost" A1 signal.

27 August 1941

- Group portrait of graduates from No 18 Pilots Course who have completed their initial training at No 1 Initial Training School RAAF (Squadron 3, Flight 17). These airmen will now commence elementary flying training.
- Left to right, back row – 409368 Aircraftman 2 (later Flight Lieutenant) Mervyn Neville Austin;
- 412899 AC2 (later Warrant Officer) Claude Edgar Caldwell-Wearne;
- 410698 AC2 (later Flying Officer) Hugh John McCulloch (died in a flying battle in Germany, on 28 August 1943);
- 409098 AC2 (later FO) Edward Thomas Dunn;
- 412887 AC2 (later Flight Lieutenant) Alfred Barrie Blackstone;
- 413054 AC2 (later Flight Sergeant [Flt Sgt]) Jeffry Weeden;
- AC2 Jones.



AUSTRALIAN WAR MEMORIAL

P01839.002

27 August 1941

- Second row:
- AC2 C.W. or P.K. Harrison;
- 409432 AC2 (later Flt Lt) Bruce Alexander Niven;
- 413070 AC2 (later Flt Lt) Leslie Charles Andrews;
- 413065 AC2 (later Sergeant) George Bisgood Wootten;
- 413029 AC2 (later FO) Kenneth John Paynter;
- 413064 AC2 (later WO) Lionel Clarence Wood;
- 413034 AC2 (later WO) James Anthony Sharkey;
- 413080 AC2 (later FO) Kelvin Martin Hayes;
- AC2 J.S. Morrison;
- AC2 ? Noble;
- AC2 Johnstone.



AUSTRALIAN WAR MEMORIAL

P01839.002

27 August 1941

- Third row:
- 412874 AC2 (later Flt Lt) Maurice James Carse;
- AC2 Cooper;
- 413018 AC2 (later Sgt) Mervyn John Nichols (killed in an accident at Service Flying Training School in Monteith, South Australia on 4 August 1942);
- 412972 AC2 (later Pilot Officer) Kenneth Herbert William Kirkland (lost on operations over the Netherlands on 30 January 1944);
- 413043 AC2 (later Flt Lt) Sidney Donald Thistleton;
- 413011 AC2 (later FO) Leonard Brian McDermott (killed in an accident in Malta on 24 January 1944);
- 413093 AC2 (later WO) John Oxley Waugh Olsson;
- 413101 AC2 (later Flt Lt) Richard Norman Walker;
- 412472 AC2 (later Flt Lt) Walter Bagley;
- AC2 M.J. Wilcox.



AUSTRALIAN WAR MEMORIAL

P01839.002

27 August 1941

- Front row:
- 412989 AC2 (later Flt Sgt) Thomas Henry Anthony Mallick (died in a flying battle in Italy, 31 May 1944);
- 409067 AC2 (later FO) John Murray Aitken;
- AC2 W.H. or N.W. Reid, probably 409410 AC2 (later Sgt) Neil Wedgewood Reid (killed in an accident in Rhodesia on 5 November 1942);
- AC2 D.W. Moffatt;
- 413057 AC2 (later Flt Lt) Terence Dudley Thompson;
- Sergeant Sullivan;
- 403040 AC2 (later Warrant Officer) Robert Hawkins Strachan (killed in an accident in India on 16 January 1945);
- 412939 AC2 (later PO) Allan Thompson Field (lost on operations over Italy on 4 July 1944);
- AC2 May;
- 413039 AC2 (later FO) Malcolm Essington Stevenson;
- 412931 AC2 (later Sgt) James Ernest Eason (killed in an accident in Kenya on 29 January 1943);
- AC2 Biggs.
- (Donor K. Hayes)



AUSTRALIAN WAR MEMORIAL

P01839.002

10% known to be killed in action, 10% known to be killed in accidents, 25% identity and therefore fate uncertain.

**RAAF FATALITIES IN SECOND WORLD WAR AMONG
RAAF PERSONNEL SERVING ON ATTACHMENT
IN ROYAL AIR FORCE SQUADRONS AND SUPPORT UNITS**

14938 Aircraftman Class 1 BUCKLE, Douglas John

Source:

AWM 237 (65) NAA : A9301 Barcode 4560971 Commonwealth War Graves records

Aircraft Type:	
Serial number:	
Radio call sign:	
Unit:	RAAF Overseas Hq ATT RAF

Summary:

On the 27th August 1941, AC1 Buckle died of an illness when in Iceland. He is buried in the Reykjavik (Fossvogur) Cemetery, Iceland.

29 August

- It was only on the 29th August that French started the operational life of No. 455 when he flew the only available aircraft to bomb Frankfurt-on-Main.
- Map

29 August 1941

- Prime Minister to C.A.S.
- The loss of seven Blenheims out of 17 in the daylight attack on merchant shipping and docks at Rotterdam is most severe. Such losses might be accepted in attacking Scharnhorst, Gneisenau, Tirpitz or a southbound Tripoli convoy, because apart from the damage done, a first class strategic object is served. But they seem disproportionate to an attack on merchant shipping not engaged in vital supply work. The losses in our bombers have been very heavy this month and Bomber Command is not expanding as was hoped. While I greatly admire the bravery of the pilots, I do not want them pressed too hard. Easier targets giving a high damage return compared with casualties may more often be selected.
- Let me have a return showing all bombers written off in August for any cause including crashes on landing and also the number of bombers received from M.A.P. and the number manufactured and imported.



30 August 41

- Doubts as to bombing accuracy also partly inspired a new directive on 30th August adding a further twenty-one towns on the main east-west German railways to the original list.
- The intention was
 - to increase the chances of dislocation by attacks on several towns on the same route in one night,
 - to spread the offensive and thus affect morale, and
 - to cause dispersal of enemy defences which in turn would give more incentive for bomber crews to identify their target.

August 1941 - Britain

EATS aircrew at
Bournemouth

1941	Arrivals					Posted					Not Posted				
	P ¹	O ²	WAG	AG	Total	P	O	WAG	AG	Total	P	O	WAG	AG	Total
Apr	64	12		7	83	43	7		6	56	21	5		1	27
May	73	14	18		105	37	19		1	57	57		18		75
Jun	108	26	40	10	184	22	25	58	10	115	143	1			144
Jul	176	97	158	49	480	209	35	87	3	334	110	63	71	46	290
Aug	224	54	33	21	332	199	72	103	26	400	123	42	16	41	222

After the German attack on Russia the outstanding requirement became a rapidly-expanding bomber force to attack Germany. There was now a large surplus of basically-trained pilots and a shortage of navigators, wireless operators and air gunners. Bomber Command also expressed strong dissatisfaction with the quality of crews arriving on squadrons. There was a progressively - mounting accident rate, the incidence increasing sharply as pilots flew more complex types of aircraft.

August 1941 - Britain

- It was tardily realised that pilots and other aircrew trained overseas needed some form of acclimatisation and refresher training when they arrived in the United Kingdom.
- This was especially true of Australians, for, although many went directly across the Pacific by ship, crossed Canada by train and joined the first available convoy from Nova Scotia to the United Kingdom, others travelled in small parties by any available cargo ship destined for England.
- Some indeed went in convoy to the Middle East, and after delay, sometimes of months, went to Durban, crossed the Atlantic to the West Indies, sailed north to Halifax in Canada and then recrossed the Atlantic.
- These long voyages inevitably meant loss of skills and knowledge, especially those hastily acquired during the early truncated Air Scheme courses.
- Flying experience over the plains and easily-identified landmarks of Australia and Canada also gave little preparation for European topography or weather.

Summer 41

- During the summer of 1941 there was a surplus of trained pilots in existing squadrons, partly because operations and therefore casualties had been relatively light, and partly because the expansion of Bomber Command was much less than had been anticipated.
- Operational training units were instructed not to pass crews on to squadrons until they were truly fit for operations.
- This put the whole planned progression of aircrew out of gear, for with all sixteen O.T.U's crowded with partly-trained crews on ever-lengthening courses, no new aircrews could be accepted from Bournemouth.
- Undue delay there aggravated the factor of lost skill, so that even when eventually sent to O.T.U's, Australians found it difficult speedily to master Wellington and Whitley aircraft.
- As wintry weather began to interfere progressively with all flying, especially night flying, men found themselves at individual O.T.U's for from three to six months, instead of the six weeks normally taken early in 1941.
- With the switch in emphasis from fighter defence to bomber attack, a large proportion of men, who had previously trained on single-engined types, were now expected to transfer direct from Harvards or Wirraways to twin-engined bombers.
- As men were normally posted in rotation from Bournemouth, the pilots with only single engine experience caused further congestion at O.T.U's.
- There was an unexpected set-back in the production of operational aircraft, Bomber Command's balance sheet for Aug 1941 was:

• Aircraft destroyed . .	259
• Aircraft damaged . .	266
• New production . .	200
• Aircraft repaired . .	219
• Net reduction in strength	106

August 1941

- No. 6 SFTS was formed at Mallala, SA operating twin engine aircraft in Aug 41.



AUSTRALIAN WAR MEMORIAL

VIC1039

Mallala, SA. 1944-12-14. On the parade ground one of the graduating pilots receives his wings at the Graduation parade of No. 48 (Pilots) Course at No. 6 Service Flying Training School, RAAF Station Mallala.

1 September 1941 - Britain

- On 1st September a second Australian unit, No. 458 Squadron R.A.A.F., had begun to form at Holme-on-Spalding Moor in Yorkshire. The commanding officer, Wing Commander Mulholland, and one of his flight commanders, Squadron Leader Johnston, were Australians and a number of R.A.A.F. aircrew members were immediately posted in, though R.A.F. personnel predominated for some time.
- It was formed in No. 1 Group which was equipped with Wellingtons, and because this type had been given priority above the other mediums there was no difficulty in procuring either aircraft or crews.



C. 1941. Sketch of Wing Commander N. C. Mulholland DFC, RAAF, by the Air Ministry artist Eric Kennington.

GREATEST DAILY SALES IN QUEENSLAND

Courier-Mail

V

BRISBANE, THURSDAY, SEPTEMBER 4, 1941.

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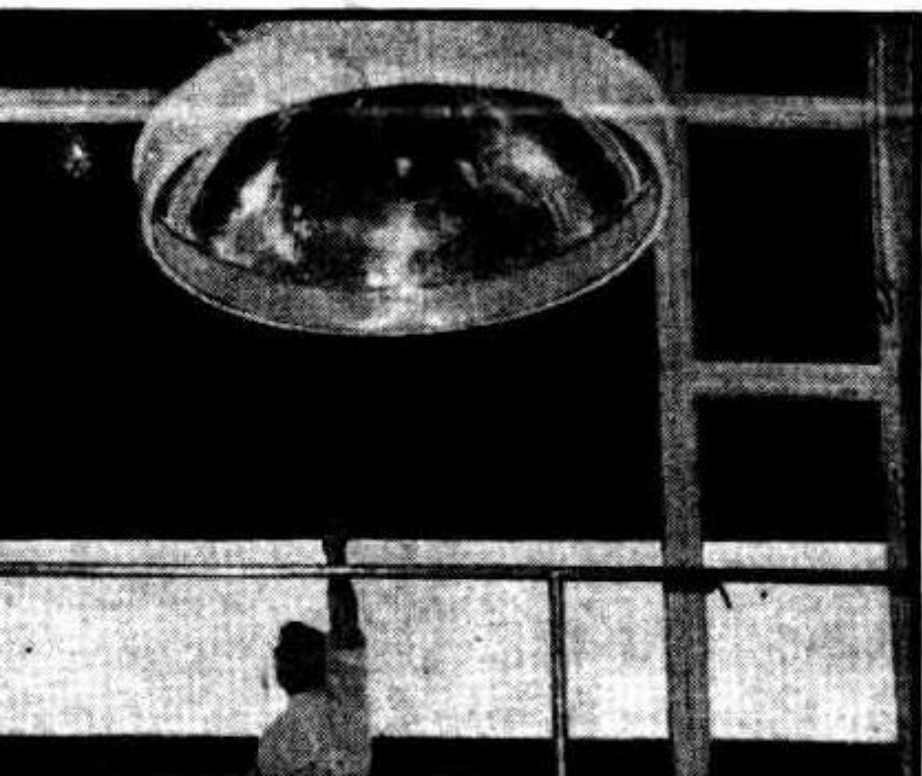
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FACE

Hospital Set For Black-out



BIG BRITISH BOMBERS RAID BERLIN Heavy Attacks on Rhineland

Australian Associated Press

SOME of Britain's biggest bombers raided Berlin on Tuesday night, dropped incendiary and explosive bombs around industrial buildings, and left large fires burning. The raid was described as one of the heaviest of the war.

Even heavier raids were made on Frankfurt, industrial city of South-west Germany; and other attacks were made on Mannheim and the invasion ports of Ostend and Dunkirk.

Big Textile Strike Begins In N.S.W.

SYDNEY, Wednesday.—Against the advice of their officials 4000 members of the Textile Workers' Union decided at a stop-work meeting to-night to declare a general strike in the textile industry, which supplies cloth for the uniforms for the Army, Navy, and Air Force, besides other requirements of the Defence Department.

By a narrow majority those at the meeting agreed not to return to work until their demands for a war loading of 6/ a week for male employees and 4/ for females, was conceded.

The decision to strike applies immediately to the employees in the metropolitan area and it expected that steps will be taken to involve immediately the employees in woollen mills at country centres, including Goulburn.

4 MONTHS' £700,000 AIR

Courier Mail
September 13 1941

A.I.F. MOURNS DEAD MASCOT

From G. E. W. HARRIOTT, The
Courier-Mail's War Correspondent

CAIRO, September 12.—"Bobby
Tobruk," a nine-months-old non-
descript terrier, but the best-known
mascot in the A.I.F., has been
buried with full military honours
in the lines of an Australian bat-
talion in Palestine.

The dog was picked up during
the storming of Tobruk by an Aus-
tralian sergeant, and it saw the rest
of the Libyan campaign from the
packet of a sergeant's greatcoat.

He accompanied the battalion to
Greece and back again. He learned
to take his turn at picket duty—
it was claimed that he always knew
an Australian uniform, but refused
to let anyone else past his post—
and used to line up with his cob-
bers at the wet canteen.

After surviving the heat and
perils in Libya and dive-bombers
in Greece he met his death in
Palestine under an Arab truck.

SCHOOL SCHEME

MELBOURNE, Friday. — The
Commonwealth Government
has committed itself to an ex-
penditure of more than £700,000
on Air Force training establish-
ments formed or about to be
formed in Queensland in the last
four months of 1941.

This was announced to-day by the
Minister for Air (Mr. McEwen).

An elementary flying training school,
originally scheduled to form at Lowood
in October, will be located temporarily
at Bundaberg until work on the Lowood
site has been completed.

Bundaberg will be the site for a new
service flying training school, which is
due to form in December, at a cost of
more than £300,000.

"Formation of this school will not be
affected by the temporary location of
the elementary flying training school
at Bundaberg," said Mr. McEwen. "For
a short period the two schools will
function at the same centre. Lo-
wood will be ready by the end of the
year for the first intake of trainees.
In the meantime, accommodation at
Bundaberg will be adequate for the
two schools."

"Further development in the estab-
lishment of R.A.A.F. training units in
Queensland will be the opening of a
wireless air gunners' school at Mary-
borough in the next few days. Mary-
borough also will be the site for an
air navigation school, which will form
early in 1942. Total expenditure on
constructional work at this centre will
be in excess of £260,000.

"Recently the elementary flying
training school at Archerfield was in-
creased to twice its original size, at a
cost of £60,000. Expansion of the Em-
pire air training schools in Queens-
land has been exceedingly rapid
throughout the last 12 months," added
Mr. McEwen.

"Stark Facts Underlined"

Aircraftman Class II John Creed Douglas HENLEY

Service No: 413378

Born: Sydney NSW, 13 May 1917

Enlisted in the RAAF: 17 August 1941

Unit: No. 2 Initial Training School, Lindfield NSW

Died: Injuries from a Ground Accident, Sydney area, 20 September 1941, Aged 24 Years

Buried: Northern Suburbs General Cemetery, Sydney NSW

CWGC Additional Information: Son of John Creed Henly and Mary Henly, of North Sydney. A.A.A.A.

Roll of Honour: North Sydney NSW

Remembered: Panel 116, Commemorative Area, Australian War Memorial, Canberra ACT

On 20 September 1941, Aircraftman Class II Henly, an Aircrew Trainee, died from injuries received in a motor car accident when on leave.

References:

Australian War Memorial Roll of Honour On-Line Records (RAAF Casualty Information compiled by Alan Storr (409804))

Commonwealth War Graves Commission On-Line Records

Department of Veterans' Affairs On-Line WWII Nominal Roll

National Archives of Australia On-Line Record A705, 163/121/95

22 September 1941

- Senior RAF commanders argued that the Butt report's statistics were faulty and commissioned another report, which was delivered by the Directorate of Bombing Operations on 22 September 1941.
- Working from a damage analysis inflicted on British cities, a bomber force of 4,000 aircraft was calculated to be able to destroy the 43 German towns with a population of more than 100,000.
- The Chief of the Air Staff, Sir Charles Portal (photo) argued that with such a force RAF Bomber Command could win the war in six months.
- Not all were convinced, and when Churchill expressed his doubts, the Air Staff said that even if Germany was not knocked out of the war, it would be weakened sufficiently to allow British armed forces back into Continental Europe.
- With that compromise between the armed services, Bomber Command was allowed to keep its planned allocation of war materiel. That did not stop those outside the Chiefs of Staff from questioning the strategic bombing policy.



13 October 1941 - Germany

- The first three raids by No. 455 Squadron were conducted by the two flight commanders of the Squadron, Squadron Leader Reynolds (R.A.F.) attacking Berlin, and French twice attacking Frankfurt-on-Main.
- On the second trip French's Hampden was hit by flak before reaching the target but he continued on to bomb and return safely. He employed on this occasion a then popular technique of gliding from 19,000 feet to 9,000 feet before dropping his bombs, cutting the engines so that anti-aircraft sound locaters would be unable to direct battery fire against him.
- A month elapsed before the next attack, this time against Huls on 12th-13th October, when one R.A.A.F. Hampden failed to attack, and a second, unable to locate the target, bombed a searchlight position.
- The following night only one of two Hampdens succeeded in bombing Cologne although a number of fires had been started in the target area, and this city was relatively easy to locate by following the Rhine.



A Handley Page Hampden Mark I, AT137 'UB-T', of No. 455 Squadron RAAF based at Leuchars, Fife, Scotland (UK), in flight above clouds, May 1942.

13 October 1941 - Britain

- Within six weeks (by 13th October) it (No. 458) was able to conduct its first operation with ten aircraft as against the single Hampden which No. 455 had sent out after three months; and it continued to operate regularly for the remainder of the year.



AUSTRALIAN WAR MEMORIAL

008313

WELLINGTON HEAVY BOMBER OF R.A.F. IN FLIGHT. C
July 1941

13 October 1941

- On the evening of 15 February 1941, Strüning claimed a Lockheed Hudson 75 km (47 mi) east of Great Yarmouth and a Wellington 65 km (40 mi) east-northeast of Southend-on-Sea.
- He claimed his ninth and last intruder victory on 13 October 1941 over a Boeing B-17 Flying Fortress in the vicinity of Upwood over England.
- From 24 October 1940, the date of I Gruppe's first aerial victory, to 12 October 1941, the intruder Gruppe claimed approximately 100 RAF aircraft destroyed, further aircraft were damaged as well as RAF ground targets attacked. This came at the expense of 26 aircraft lost.
- In October 1941, Hitler ordered the intruder operations stopped as he was skeptical of the results. The unit was then ordered to Catania, Sicily in the Mediterranean theatre of operations.
- Strüning however stayed at Gilze-Rijen and was transferred to the Ergänzungsjagdgruppe, a supplementary unit of NJG 2.

Jerry McBrien 2023



Adolf Hitler lors d'une conférence dans son train spécial.

14/10/41

- When the Second World War erupted Gordon Orchard (left in photo) had already been active in the Geelong Grammar Cadets and soon joined the local 2nd Anti-Aircraft Regiment.
- As the war news became grimmer. Gordon on 12th October 1940 enlisted in the RAAF.
- He was posted to Bradfield Park, Sydney, for ITS and then basic training Course No.5 EFTS Narromine.
- He then embarked for Canada on 22/2/1941, disembarked Vancouver 16/3/41 and crossed Canada by train to 1 SFTS Camp Borden, Ontario.
- After graduating and being awarded his wings, Gordon embarked for UK on 16/7/41. He then joined the many trainees in the RAF Pool until posting to 52 OTU Aston Down 23/8/41 and then 11 OTU Bassingbourn on 14/10/41.



AUSTRALIAN WAR MEMORIAL

P01019.003

16 October 1941

- No. 12 EFTS was established on 16 October 1941 at Bundaberg Airport.



RAAF Base Bundaberg, Qld. Aerial oblique photograph taken by war photographer William Robinson from an Anson aircraft based at Bundaberg.

October 41

- The total duration of SFTS training varied during the war as demand for aircrew became more or less urgent.
- In October 1941 it was raised to 12 weeks (including 100 hours flying time), and again to 16 weeks two months later (December 1941).



Group portrait of members of 'Z' Flight, No. 15 Course, Advanced Training Squad, No. 4 Service Flying Training School (SFTS), RAAF, in front of an Avro Anson.

October 1941

- No. 5 SFTS, was formed at Uranquinty, NSW operating single engine aircraft in Oct 41.

October 41

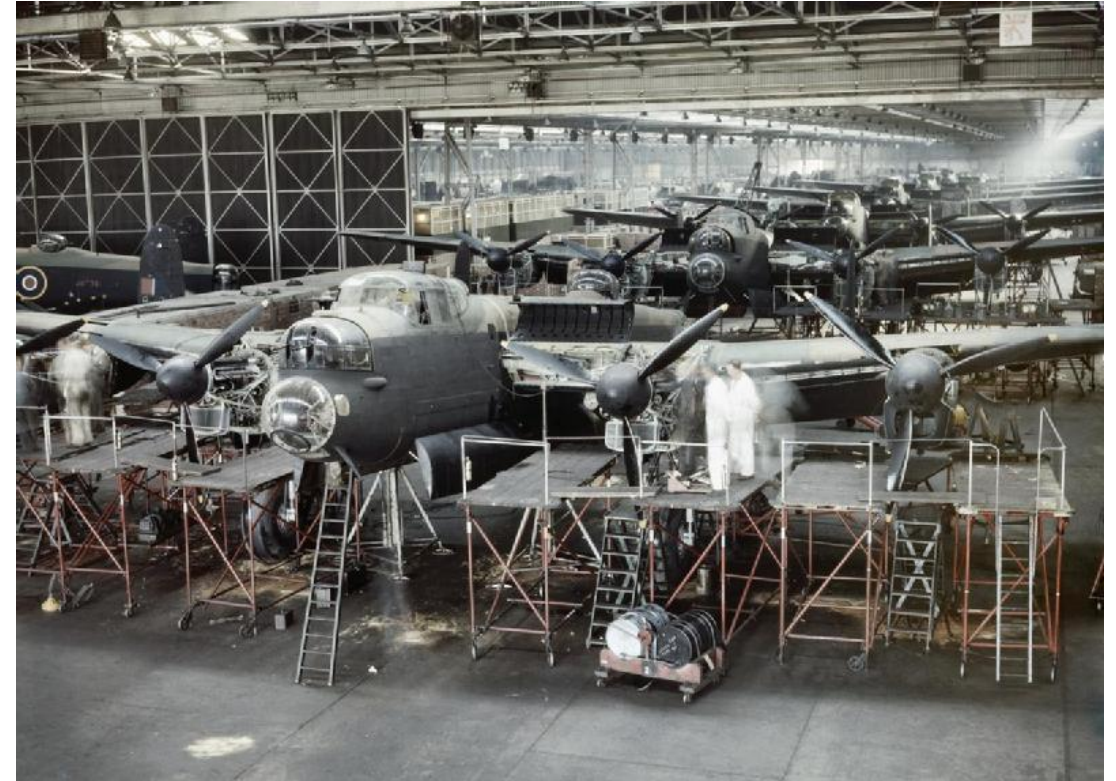
- The Operational Research Section, which was established within Bomber Command during September, made a critical analysis of bombing conducted between August and October.
- It clearly proved that the number and size of bombs required to cause permanent or decisive damage was far greater than had yet been realised.



Hampden being loaded with bombs by ground crew

October 1941

- Avro received an initial contract for 1,070 Lancasters.
- The first production Lancaster made its first flight in October 1941, powered by Merlin XX engines.
- Based upon its performance, a decision was taken early on to reequip twin-engine bomber squadrons with the Lancaster as quickly as possible
- Manchesters still on the production line were converted into Lancaster B.1s



Lancasters on Avro's Woodford assembly line.

7-8 November 1941 - Germany

- On 7th-8th November four RAAF Hampdens attacked Cologne and four Wellingtons of No. 458 were sent to Mannheim.
- At Cologne the defences were very active and two R.A.A.F. Hampdens failed to return, and another, unable to identify the target, dropped its bombs in the centre of anti-aircraft fire.
- Heavy cloud obscured Mannheim and only one Wellington crew actually observed results, one failing to attack and the other two aiming at fires presumed to be in the town area.
- In a light raid on Essen the following night, one of two Hampdens had to return because of intercom failure, and the other reported an uneventful sortie.



AUSTRALIAN WAR MEMORIAL

SUK10370

C. 1942. A HAMPDEN AIRCRAFT OF NO. 455 SQUADRON RAAF AT RAF STATION WIGSLEY STANDING IN FRONT OF A WELLINGTON BOMBER AT A BOMBER COMMAND BASE EARLY IN 1942.

8 November 41

- The bomber force was not expanding as rapidly as had been expected, and indeed there was practically no numerical increase in strength between July and November 1941.
- Nor was much progress being made with the formation of Halifax, Stirling and Manchester squadrons, the heavy bombers upon which the Air Ministry was depending to carry out the bombardment of Germany in sufficient strength to be effective.
- All these types suffered from deficiencies in production and the Manchester proved a relative failure on operations.
- Moreover, increasing enemy defences and the attempt to operate on as many nights as possible during the uniformly bad weather of the autumn and winter of 1941 took a constant toll of existing strength.
- The climax came on 7th-8th November when 37 aircraft were lost from the 400 sent out.

November 7-8 1941			
Target	Cologne	Mannheim	Berlin
Dispatched	105	55	169
Attacked	52	43	73
lost	2	7	21
% attacked	50	78	43
% lost of attacked	4	16	29

Very little damage was done in these raids.



The Courier-Mail

GREATEST DAILY SALES IN QUEENSLAND

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(Registered in Australia for Transmission by Post as a Newspaper.)

BRISBANE, MONDAY, NOVEMBER 10, 1941.

10 PAGES—2d

VOYS TO U.K. & LIKELY

ew Base; te Move

Australian Associated Press

ected to convoy American Britain as a result of two they were:—

J.S. has established a naval

our of armed American lies to Britain and Russia.

Senate vote means that American entering war zones "almost

operating base has been established. believe that the U.S. Navy will continue stopping at or near Iceland

Washington officials say able vote is virtually assured. officials have decided for a vote not later than

zi Reaction

's action has produced a in Germany. newspaper Volkischer declares: "The arming of

New Plane To Bomb Berlin



ONE of Britain's latest giant bombers, the Halifax, which took part in the big raid on Berlin on Friday night. Its huge nose dwarfs a party headed by Mr. Churchill, which inspected these planes recently at an aerodrome of Bomber Command.

GERMANS BOGGED DOWN NEAR MOSCOW; CLAIM SUCCESS IN CRIMEA

Late City: War News

500 Bombers In Record Raid On Europe; New Attack After Big Losses

Courier-Mail Special Service and Australian Associated Press

FIVE hundred bombers were used in the record British air raids over Europe on Friday night.

They took Berlin by surprise; but ran into appalling weather and 37 planes did not return.

This record loss did not deter the R.A.F. from striking another heavy blow at the Ruhr on Saturday night.

Strong bomber forces pounded Essen, site of the Krupp arms works, and other cities, causing big explosions and fires. Ostend and Dunkirk docks were also attacked. Eight bombers were lost.

HITLER SAYS SOVIET WAR IS CRUSADE

[LONDON, November 9. — Hitler marked the anniversary of the 1923 putsch yesterday by delivering a bombastic speech in the beer cellar in Munich.

He repeated his former claim that the war against Russia was a crusade against Bolshevism.

He referred to a peace offer to England after the fall of France, and added: "That mad drunkard, who now for years has directed England, immediately saw in this a new sign of my weakness."

He challenged Britain to invade Europe.

"If you undertake an offensive in

Reports from scattered parts of Europe show what a grim toll Friday night's appalling weather took of the British raiders.

The R.A.F. admits that 37 planes were lost on Friday night. The Germans first claimed that the defences brought down 19 raiders. Later they increased the figure to 27, then to 31.

Weather prospects were good when the raiders left Britain. Over Europe they flew into violent thunderstorms and severe icing conditions.

One plane was forced down in France, another in Sweden. A Berne

report says that fire bombs fell in Switzerland.

London newspapers emphasise the enormous weight of the attack rather than the losses, which involve at least 200 highly-trained officers and sergeants.

The Sunday Dispatch's air correspondent estimates the losses at more than 7 per cent. He says it would be overwhelming if it was the average suffered from German night fighters and anti-aircraft guns.

"Bombing" he says, "is a compromise between weight of petrol and weight of bombs. It is wasteful to carry unnecessary tons of petrol instead of bombs, but this time, in a small percentage of the machines, the margin was too fine."

BIG LOSSES EXPLAINED

An R.A.F. spokesman said that there was no reason to think that the losses were, in any way, the result of an improvement or increase in enemy defences.

"The weather changed after most of

while the sky was comparatively clear. The German News Agency says that three British bombers were brought down when a number of planes flew over Oslo, and that slight damage was caused to the city.

The Air Ministry says that at least 300 fighters, including bomb-carrying

10 November 1941 - Britain

- Throughout 1941 Australian EATS trainees were reaching England in all types of ships with varying degrees of comfort. Some ships were crowded and dirty, so that men arrived dishevelled and discontented, and the arrival of some ships carrying Australians was not notified in time to arrange for adequate reception of the men.
- A few Australians began to arrive as passengers or crew on ferrying aircraft, and other unorthodox arrivals included survivors from ships torpedoed off West Africa, and others forced down in Europe who had managed to escape to Gibraltar.
- One party of Australians refused to embark at Halifax in a ship which had previously carried Italian prisoners of war who had left their quarters in a disgusting condition.
- Men disembarking in Iceland for transhipment complained of poor facilities there, while some troopships using the Cape route late in 1941 earned an unenviable reputation for food and accommodation issued to non-commissioned officers, one of whom reached England claiming that he was suffering from scurvy.
- On 30th August 1941 Air Marshal Williams had been appointed to command an Overseas Headquarters for the RAAF to look after the personal interests of members of Nos. 3 and 10 Squadrons, as well as E.A.T.S. personnel, but his Headquarters didn't open in London until 1 December.
- Meanwhile Wing Commander White, reporting for duty at Bournemouth on 10th November, negotiated for "A Squadron" to become officially the "Australian Section" of No. 3 Personnel Reception Centre. This section was to have general supervision of Australian requirements at Bournemouth, with direct access to Overseas Headquarters to ensure a general improvement in existing reception procedure, and the elimination of discontent among impatient airmen.

10 November 1941 - Britain

- The creation of an Australian Section did much to facilitate reception procedure, for White sent an officer to conduct all drafts from their point of entry to Bournemouth, to ensure that all baggage arrived promptly with the men and to provide proper briefings. These had some success in eliminating the apathetic tone, which had arisen at Bournemouth because of long waits for postings, indifferent amenities and inability of existing resources to satisfy Australian needs.
- White (photo right) had been one of the first airmen trained for the Australian Flying Corps (AFC), and in 1915 he was among the first AFC members to see action when he was deployed to the Middle East with the Mesopotamian Half Flight.
- After carrying out several missions behind Turkish lines, he was captured in November 1915 but escaped in July 1918. White was awarded the Distinguished Flying Cross and twice mentioned in despatches for his war service.
- In 1929 he was elected to the House of Representatives as the Member for Balaclava in Victoria. He served as Minister for Trade and Customs in Joseph Lyons's United Australia Party government from 1933 to 1938.



11 November 1941

- Prime Minister to Secretary of State for Air and CAS
- “... I have several times in Cabinet deprecated forcing the night bombing of Germany without due regard to weather conditions. There is no particular point at this time in bombing Berlin. The losses sustained last week were most grievous. We cannot afford losses on that scale in view of the shortfall of the American bomber programme. Losses which are acceptable in a battle or for some decisive military objective ought not to be incurred as a matter of routine. There is no need to fight the weather and the enemy at the same time.
- It is now the duty of ... Bomber Command to regather their strength for the spring.
- Let me have a full report about the heavy losses of bombers on the night of the last heavy raid on Berlin.



13 November 41

- The War Cabinet intervened in response to the failure to expand Bomber Command and to the losses on 7-8 November and on 13th November 1941 laid down a policy of conserving the bomber force until the following spring.

GUNNING Milton Robert 36276

LEST WE FORGET

Aircraftman Class I Milton Robert GUNNING

Service No: 36276

Born: Parkes NSW, 23 March 1919

Enlisted in the RAAF: 22 April 1941

Unit: No. 2 Service Flying Training School, Forrest Hill NSW

Died: Drowned, Nambucca Heads NSW, 19 November 1941, Aged 22 Years

Buried: Botany Cemetery, Sydney NSW

CWGC Additional Information: No additional information

Roll of Honour: Unknown

Remembered: Panel 116, Commemorative Area, Australian War Memorial, Canberra ACT

On 19 November 1941, Aircraftman Class I Gunning, a Trainee Armourer, drowned in the surf at Nambucca Heads, New South Wales.

References:

Australian War Memorial Roll of Honour On-Line Records (RAAF Casualty Information compiled by Alan Storr (409804))

Commonwealth War Graves Commission On-Line Records

Department of Veterans' Affairs On-Line WWII Nominal Roll

National Archives of Australia On-Line Record A705, 163/119/23

19 November 1941

- During the first two years of war the Chief of the Australian Air Staff (Sir Charles Burnett, an RAF officer) was determined that nothing should stand in the way of a rapid build-up of the training organisation in Australia and persistently declined to permit senior officers to go overseas except in token numbers.



AUSTRALIAN WAR MEMORIAL

001109

Flying Officer Harry Thompson GREEN

Service No: 407118

Born: Adelaide SA, 26 February 1913

Enlisted in the RAAF: 22 June 1940

Unit: No.1 Service Flying Training School, RAAF Station Point Cook VIC

Died: Aircraft Accident (No. 1 Service Flying Training School Wirraway aircraft A20-392), Point Cook, 19 November 1941, Aged 28 Years

Buried: Adelaide (Centennial Park) Cemetery, SA

CWGC Additional Information: Son of David McInnes Green and Mary Agnes Green, of Reade Park.

Roll of Honour: Unknown

Remembered: Panel 116, Commemorative Area, Australian War Memorial, Canberra ACT

Remembered: World War II Honour Roll, National War Memorial of SA, North Terrace, Adelaide

During takeoff at 1100 hours on 19 November 1941, Wirraway A20-392 struck machinery on the airfield and crashed into trees killing both crew members who were:

Flying Officer Harry Thompson Green (407118) Instructor

Leading Aircraftman John Cochrane Smail (412274) Student

References:

Australian War Memorial Roll of Honour On-Line Records

Commonwealth War Graves Commission On-Line Records

Department of Veteran's Affairs On-Line WWII Nominal Roll

National Archives of Australia On-Line Record A705, 163/34/145

Wirraways assigned to No. 5 Service Flying Training School



November 41

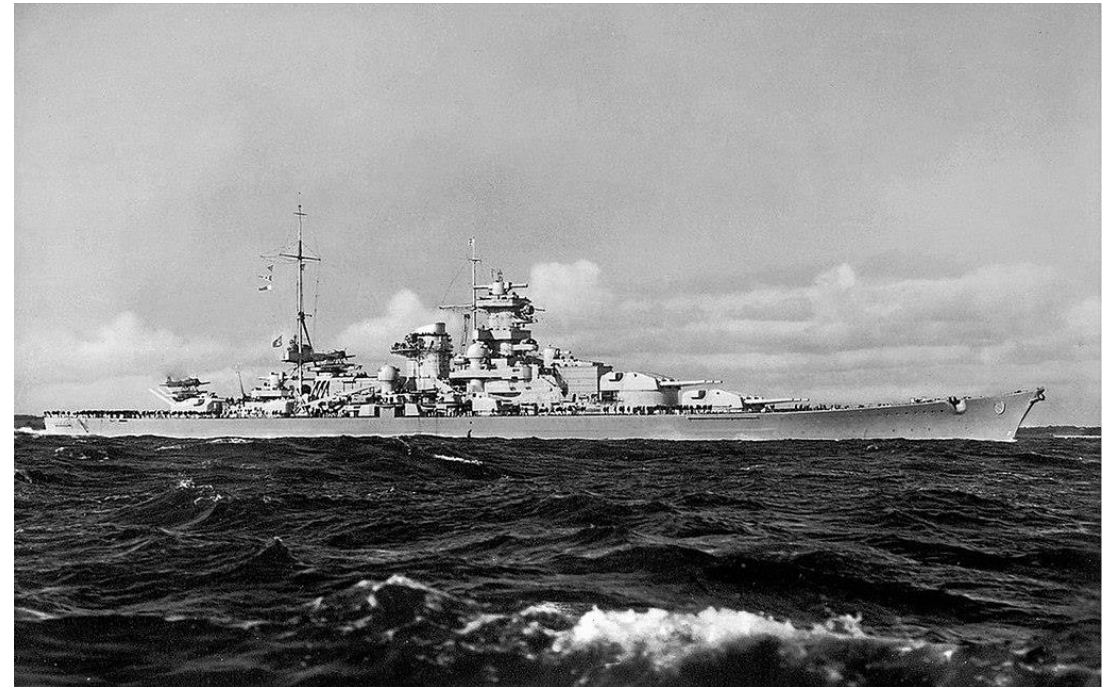
- A second Article XV RAAF Wellington squadron (No. 460) was created during November, partly by transferring a large body of men from No. 458.
- This Wellington squadron was to form part of a new (No. 8) bomber group as part of the general expansion, but plans were changed because as seen above conservation not expansion had become necessary and both No. 8 Group and No. 460 Squadron remained virtually in abeyance.



Merlin-engined Wellington Mark II of No. 104 Sqn. The criss-cross geodetic construction can be seen through the perspex panels in the side of the fuselage.

10 December 41

- General war strategy once more became paramount early in December when Japan attacked both America and Britain.
- Faced with sudden new world dangers at a time when serious naval losses had been suffered in the Mediterranean, the War Cabinet was forced to give support to Admiralty needs.
- The German naval squadron at Brest was now thought to be again ready for action, so on 10th December, the day Prince of Wales and Repulse were sunk, part of the bombing effort was ordered to be directed to ports on the Biscay coast.



Scharnhorst at sea. The battlecruisers Scharnhorst and Gneisenau and the heavy cruiser Prinz Eugen were in Brest after their raid into the Atlantic in February 1941.

13th December 1941

- **UK**
- Following the outbreak of the Japanese war over a hundred Australian EATS aircrew, stuck at No 3 Personnel Reception Centre at Bournemouth without immediate prospects of getting posted to a squadron, petitioned for immediate return to Australia.

End 41

- At this time pilots had considerable freedom in choosing their own route to the target and the manner in which they attacked.
- At a common briefing before the operation they received the latest information about the target itself, the predicted weather, and all enemy defences lying along and to each side of the direct route.
- An elastic period of time was given for the actual bombing, and having reached the target area some crews might spend up to half an hour trying to identify either the aiming point or some prominent landmark nearby from which they could approach on a timed course, the bombs then being released blind at the estimated time over the objective.
- All crews who dropped their bombs were credited with having attacked.



End 41

- Seven Wellingtons flew to Aachen on 7th - 8th December but one failed to locate the city and another was forced to jettison its bombs twenty miles west of the target when attacked by a night fighter.
- On 11th-12th December all four Wellingtons dispatched attacked anti-aircraft positions at the estimated time of their arrival over Cologne.
- Much better results were achieved at Dusseldorf on 27th-28th December when seven Hampdens and nine Wellingtons were sent out. Two Wellingtons did not attack, one being damaged before reaching Dusseldorf, but the others identified the aiming point and reported bomb bursts close to it. One Hampden was damaged by ground fire while over the target but reached Wigsley base safely. Another Wellington returning at low level saw a Heinkel 111 bomber about to land on an airfield, so attacked and blew it off its own runway.
- Good results were again obtained by five Hampdens of No. 455 attacking Huls the following night.

EARLY R.A.A.F. TARGETS

	Target	Total Force		RAAF Force			Tons of Bombs	Total aircraft lost	RAAF aircraft lost
		Dis-patched	Attack-ing	Sqn No.	Disp	Atkg			
1941-42									
Aug 29-30	Frankfurt-on-Main	143	101	455	1	1	91	2	—
Sep 2-3	Berlin	50	33	455	1	1	40	2	—
Sep 12-13	Frankfurt-on-Main	116	111	455	1	1	135	2	—
Oct 12-13	Huls	90	23	455	4	3	26	2	—
Oct 13-14	Cologne	39	29	455	2	1	36	4	—
Nov 7-8	Cologne	105	52	455	4	4	58	2	2
Nov 7-8	Mannheim	55	43	458	4	3	44	7	—
Nov 8-9	Essen	54	35	455	2	1	49	6	—
Dec 7-8	Aachen	132	54	458	7	5	54	—	—
Dec 11-12	Cologne	60	43	458	4	4	58	1	—
Dec 27-28	Dusseldorf	132	96	455 458	7 9	7 7	126	7	— —
Dec 28-29	Huls	81	61	455	7	5	60	4	—

End 41

Date	% of force dispatched attacking	% of Australians attacking who bombed the target	Losses % of force
Aug-29	71	100	1
Sep-02	66	100	4
Sep-12	96	100	2
Oct-12	26	67	2
Oct-13	74	100	10
Nov 7 Cologne	50	75	2
Nov 7 Mannheim	78	33	13
Nov-08	65	100	11
Dec-07	41	100	0
Dec-11	72	0	2
Dec-27	73	100	5
Dec-28	75	100	5
Total	64	81	4

EARLY R.A.A.F. TARGETS

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1941-42									
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Sep 12-13	Frankfurt-on-Main	116	111	455	1	1	135	2	—
Oct 12-13	Huls	90	23	455	4	3	26	2	—
Oct 13-14	Cologne	39	29	455	2	1	36	4	—
Nov 7-8	Cologne	105	52	455	4	4	58	2	2
Nov 7-8	Mannheim	55	43	458	4	3	44	7	—
Nov 8-9	Essen	54	35	455	2	1	49	6	—
Dec 7-8	Aachen	132	54	458	7	5	54	—	—
Dec 11-12	Cologne	60	43	458	4	4	58	1	—
Dec 27-28	Dusseldorf	132	96	455 458	7 9	7 7	126	7	— —
Dec 28-29	Huls	81	61	455	7	5	60	4	—

Numbers despatched are unimpressive, numbers attacking are worse and there are no reasons to believe accuracy is any better than found in the Butt report. Losses were severe in some cases but acceptable overall.

End 41

- During October 1941 Bomber Command was directed to attack Hamburg , Kiel, Bremen, and Wilhelmshaven whenever the weather was favourable.
- The presence of the battle cruisers Scharnhorst and Gneisenau and the cruiser Prinz Eugen at Brest also demanded periodical attack throughout this period.
- In addition to these major targets a large number of smaller ports along the enemy - occupied coast were attacked by light forces as opportunity offered.
- These minor raids, especially those against ports in the occupied countries, were extensively used for giving initial operational experience to "freshmen" crews on squadrons before they were sent against more heavily-defended areas.

R.A.A.F. TARGETS IN THE SEA WAR

	Target	Total Force		RAAF Force			Tons of Bombs	Total aircraft lost	RAAF aircraft lost
		Dis-patched	Attack-ing	Sqn No.	Disp	Atkg			
1941-42									
Sep 15-16	Hamburg	50	34	455	3	3	42	2	1
Sep 20-21	Bremen	2	2	458	2	2	2	—	—
Sep 29-30	Hamburg	95	72	455	1	1	85	2	—
Sep 30-Oct 1	Cherbourg	41	39	455	1	1	44	—	—
Oct 10-11	Dunkirk	23	19	455	1	1	16	1	—
Oct 20-21	Emden	33	31	458	2	2	46	1	—
Oct 20-21	Bremen	154	92	455	3	3	140	4	—
Oct 20-21	Antwerp	35	9	458	7	5	12	3	1
Oct 20-21	Rotterdam	1	1	458	1	1	1	—	—
Oct 22-23	Le Havre	22	20	458	8	8	32	1	—
Oct 23-24	Kiel	71	64	455	4	3	64	1	—
Oct 26-27	Hamburg	115	78	455	3	2	103	5	—
Oct 26-27	Cherbourg	17	9	455	2	2	7	—	—



MAGRATH William Armour 403354

LEST WE FORGET

Sergeant William Armour MAGRATH

Service No: 403354

Born: Emu Plains NSW, 2 September 1915

Enlisted in the RAAF: 6 January 1941

Unit: No. 2 Service Flying Training School, Forrest Hill NSW

Died: Aircraft Accident (No. 2 Service Flying Training School Wirraway aircraft A20-258), near Tumut NSW, 15 December 1941, Aged 26 Years

Buried: Emu Plains (St Paul) Anglican Cemetery, NSW

CWGC Additional Information: Son of James Armour Magrath, and Jane Alice Magrath of Emu Plains; husband of H. Magrath, of Emu Plains

Roll of Honour: Unknown

Remembered: Panel 116, Commemorative Area, Australian War Memorial, Canberra ACT

Remembered: City Memory Park, Penrith NSW

Remembered: Emu Plains Public School Honour Roll, Emu Plains NSW

At 0920 hours on 15 December 1941, Wirraway A20-258 crashed 3 miles west of Tumut, New South Wales, and the crew of two was killed. The aircraft had been doing low aerobatics over Tumut and hit trees on a hillside and crashed.

The crew members of A20-258 were:

Sergeant William Armour Magrath (403354) (Pilot)

Leading Aircraftman William Joseph Werner (15281) (Mechanic)

References:

Australian War Memorial Roll of Honour On-Line Records (RAAF Casualty Information compiled by Alan Storr (409804))

Commonwealth War Graves Commission On-Line Records

RAAF Roll of Honour (RAAF Casualty Information compiled by Alan Storr (409804))

End 41

Date	% of force dispatched attacking	% of Australians attacking who bombed the target	Losses % of force
Sept 15 Hamburg	68	100	4
Sept 20 Bremen	100	100	0
Sept 29 Hamburg	76	100	2
Sept 30 Cherburg	95	100	0
Oct 10 Dunkirk	83	100	4
Oct 20 Emden	94	100	3
Oct 20 Bremen	60	100	3
Oct 20 Antwerp	26	100	9
Oct 20 Rotterdam	100	100	0
Oct 22 Le Havre	91	100	5
Oct 23 Kiel	90	100	1
Oct 26 Hamburg	68	100	4
Oct 26 Cherburg	53	100	0
Total	71	100	3

R.A.A.F. TARGETS IN THE SEA WAR

	Target	Total Force		RAAF Force			Tons of Bombs	Total aircraft lost	RAAF aircraft lost
		Dis-patched	Attack-ing	Sqn No.	Disp	Atkg			
1941-42									
Sep 15-16	Hamburg	50	34	455	3	3	42	2	1
Sep 20-21	Bremen	2	2	458	2	2	2	—	—
Sep 29-30	Hamburg	95	72	455	1	1	85	2	—
Sep 30-Oct 1	Cherbourg	41	39	455	1	1	44	—	—
Oct 10-11	Dunkirk	23	19	455	1	1	16	1	—
Oct 20-21	Emden	33	31	458	2	2	46	1	—
Oct 20-21	Bremen	154	92	455	3	3	140	4	—
Oct 20-21	Antwerp	35	9	458	7	5	12	3	1
Oct 20-21	Rotterdam	1	1	458	1	1	1	—	—
Oct 22-23	Le Havre	22	20	458	8	8	32	1	—
Oct 23-24	Kiel	71	64	455	4	3	64	1	—
Oct 26-27	Hamburg	115	78	455	3	2	103	5	—
Oct 26-27	Cherbourg	17	9	455	2	2	7	—	—

%ages attacking are better and losses lower than on inland targets. No information on accuracy.

End 41

- One further duty for No. 455 was the laying of mines in enemy navigation channels and harbours. This task had been given to No. 5 Group of Bomber Command in April 1940, as Hampdens were then the only aircraft available and able to carry the Mark I modified naval mine on its bomb racks.
- Mine-laying spread from the original areas of Denmark and Norway along the whole enemy-occupied coast as far as Lorient.
- Light naval forces laid many minefields but aircraft were extensively used to "freshen up" existing fields with new mines, and to lay in areas where naval ships could not penetrate.
- This work demanded navigation of a high order if the mines were to be sown in the exact positions of probable enemy passage.
- The actual effort expended by No. 455 in this period is set out in the Table.

NO. 455 SQUADRON MINE-LAYING SORTIES

	Total Force		455 Sqn		Total aircraft lost	RAAF aircraft lost
	Dis-patched	Attack-ing	Disp	Atkg		
1941-42						
Sep 2-3	15	9	2	2	—	—
Sep 7-8	8	7	2	1	—	—
Sep 11-12	20	19	2	2	—	—
Sep 12-13	10	8	1	1	—	—
Oct 13-14	13	12	1	1	—	—
Oct 20-21	10	3	1	1	—	—
Oct 26-27	5	5	2	2	—	—
Oct 31-Nov 1	18	17	5	5	—	—
Nov 4-5	28	26	5	3	—	—
Dec 23-24	17	7	6	6	—	—

Surprisingly low % attacking in some cases.
No losses. Query effectiveness.

December 41

1941	Arrivals Bournemouth				
	P ¹	O ²	WAG	AG	Total
Apr	64	12		7	83
May	73	14	18		105
Jun	108	26	40	10	184
Jul	176	97	158	49	480
Aug	224	54	33	21	332
Sep	271	46	177	39	533
Oct	124	55	90	7	276
Nov	152	96	269	43	560
Dec	214	56	85	11	366
	1,406	456	870	187	2,919

- Monthly arrivals are still well short of the 1,100 every four weeks originally planned.
- 100 a month were to go to Middle East direct.
- Some were probably absorbed into RAAF squadrons in Australia and Malaya.
- Many were probably delayed in the war time transport system.
- But the training scheme seems not to be at planned capacity yet.

December 41

Delays at Bournemouth seem to be no more than a month on average.

1941	Arrivals					Posted					Not Posted				
	P ¹	O ²	WAG	AG	Total	P	O	WAG	AG	Total	P	O	WAG	AG	Total
Apr	64	12		7	83	43	7		6	56	21	5		1	27
May	73	14	18		105	37	19		1	57	57		18		75
Jun	108	26	40	10	184	22	25	58	10	115	143	1			144
Jul	176	97	158	49	480	209	35	87	3	334	110	63	71	46	290
Aug	224	54	33	21	332	199	72	103	26	400	123	42	16	41	222
Sep	271	46	177	39	533	230	22	35	37	324	164	66	158	43	431
Oct	124	55	90	7	276	182	101	132	18	433	106	20	116	32	274
Nov	152	96	269	43	560	183	52	226	65	526	75	64	159	10	308
Dec	214	56	85	11	366	103	72	79		254	186	48	175	21	430
	1,406	456	870	187	2,919	1,208	405	720	166	2,499	198	51	150	21	420

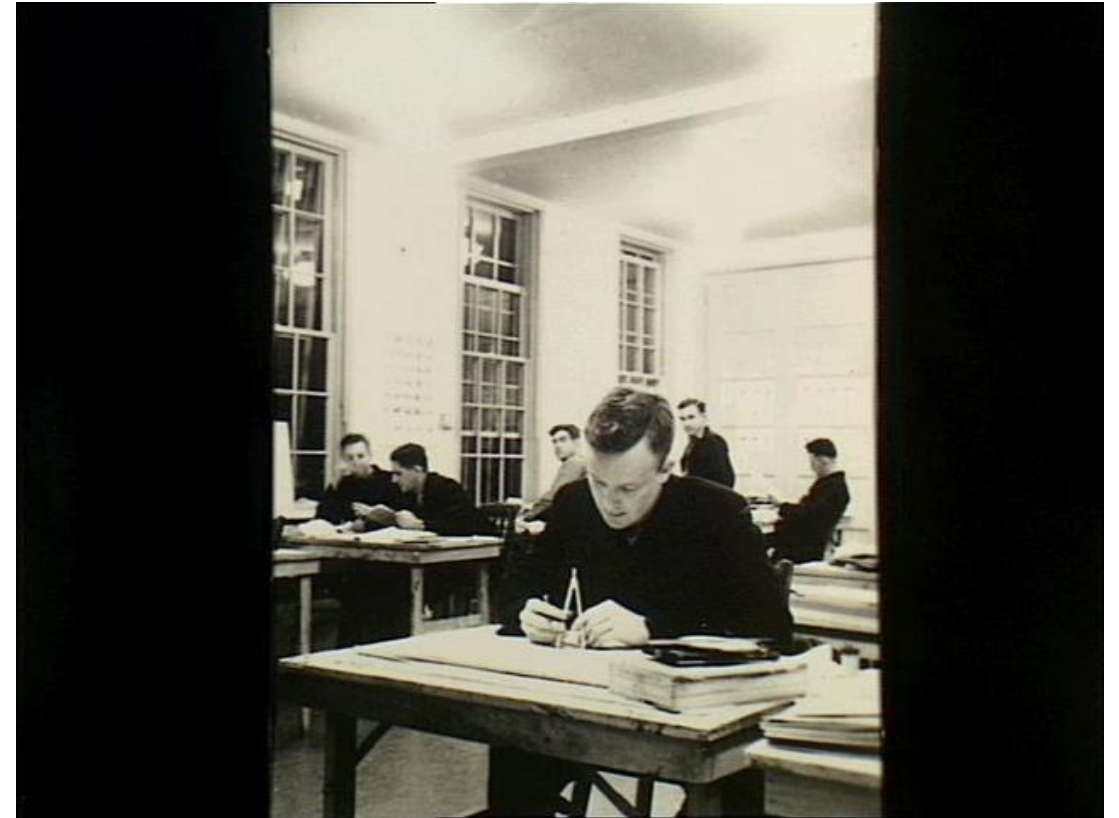
¹ P—Pilot.

² O—Observer.

There is a minor inaccuracy in the official history

December 1941

- Edmonton, Canada. c.1941-12. Students in the Empire Air Training Scheme at work at their desks in a classroom at the training base in Alberta.



AUSTRALIAN WAR MEMORIAL

P01993.019

December 1941

- Edmonton, Canada. c.1941-12. Sign inside a wire perimeter fence at the Empire Air Training Scheme base in Alberta. The sign reads 'Royal Canadian Air Force. No. 2 Air Observer and No. 16 Elementary Flying Training School. British Commonwealth Air Training Plan'.
- Note: to the Canadians it was the "British Commonwealth Air Training Plan" to the Australians it was the "Empire Air Training Scheme"

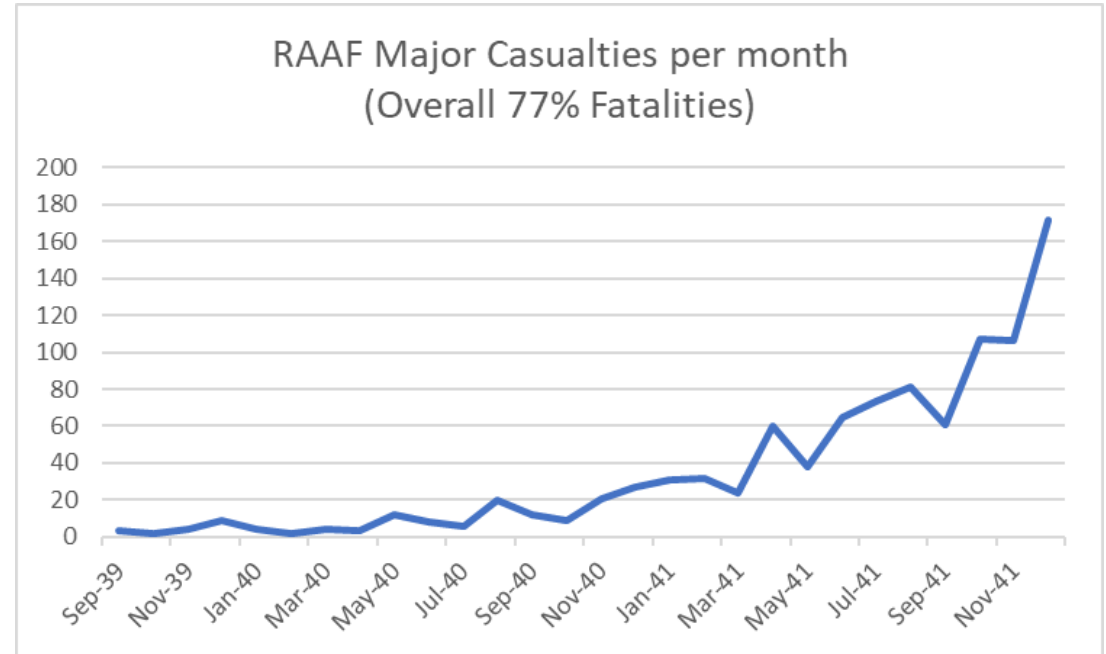


AUSTRALIAN WAR MEMORIAL

P01993.020

End 1941

- By the end of 1941 some 300 Australians (mostly pilots) had been posted in small numbers to no less than forty-six squadrons of Bomber Command.
- Casualties, sickness and withdrawals for training duties kept the active number of Australians in Bomber Command at this time to a low figure, so that including R.A.A.F. squadrons, the number actually engaged in strategic bombing in December 1941 was only about 250, although this figure was increasing rapidly, and large numbers were under training in Bomber Command operational training units.



The Japanese attack on Malaya and Singapore, where four RAAF squadrons were among the defenders, would have been a major contributor to the losses in December.

- Thanks for your attention.