

## Handley Page O/400 Bomber Pilot – 2/Lieutenant A.C.G. (Garrie) Fowler, RAF - “A Brave Aviator and a Gentleman”



Figure 1: Handley Page O/400 Landing at RAF Andover, 1918 (Public Domain - Prior Jan 1, 1923)

*Between 19.43 and 21.00 on the evening of 20 September 1918, four Handley Page O/400 aircraft launched from their Xaffevillers aerodrome base as the night's first bombing wave with the mission to attack the Frescaty aerodrome, a German fighter facility and sometime operating base of the Richthofen Jagdstaffel 11. The staged take-off of the four 215 Squadron aircraft was planned to de-conflict their individual arrival times over the Frescaty aerodrome target and thereby, to stretch enemy air defences; additionally, separation was standard operational practice for the night bombing squadrons to lessen the danger of take-off or in flight collisions. The third O/400 to taxi was C9732 and it left the ground at 20.08 manned by three-aircrew and carrying fourteen 112 lb bombs. Following a period of poor wet weather, the night was clear with visibility reported to be excellent over the target; below ~7,000 feet, 1/10 altostratus cloud cover. Handley Page squadrons of the Independent Force preferred to operate during the week-long periods of full moons, and in September 1918, the moon waxed on 16/17 September, with 50 percent full-moon brightness and above through to 23/24 September. On 20 September, there was a full moon shining and good visibility but a strong wind was freshening from the west.*

No. 215 Squadron Royal Air Force (RAF) was formed in France on 1 April 1918 by renumbering No. 15 squadron of the Royal Naval Air Service (RNAS) which, less than a month earlier on 10 March, 1918, had been established at Coudekerque, near Dunkirk. The squadron operated the Handley Page O/100 in the role of night bomber to attack strategic targets in Germany. Night operations were more demanding and dangerous to fly than in daylight, as was captured in the prevailing wisdom of the day which observed with no little irony, "Flying at night is no different from flying in the daytime, except you can't see."<sup>1</sup> Almost immediately after forming as 215, the squadron returned to England to re-equip with the improved Handley Page O/400 (figure 1) before again, deploying to France on 4 July. It was based in Alquines and was designated as part of the Independent Air Force. The Independent Force was established under the leadership of Major General Hugh Trenchard and comprised four day (55(DH-4), 99 and 104(DH-9) and 110(DH-9A)) and four Handley Page O/400 night squadrons (97, 115, 215 and 216). Additionally 100 Squadron was included as a fifth night squadron flying F.E.2Bs and would re-equip with HP-O/400 in August. The Independent Force goal was to prove the value of strategic, heavy bombing – namely the destruction of war making capability such as materials manufacturing capability, blast furnaces, coal and iron mining and chemical production. Trenchard, apparently on his own volition, expanded the Independent Force mission to include tactical targets of rail junctions and enemy airfields.

<sup>1</sup> From *Biplanes and Bombsights British Bombing in World War I* by George K. Williams (1999) quoting Ralph R. Williams, "Navigation: From Dead Reckoning to Navstar GPS," *AirForce Magazine* 67, no. 12 (December 1984)

The intensity of operations increased with the beginning of the Allied ground offensive on 8 August with the Battle of Amiens. 215 Squadron, under the command of Major John Fleming Jones<sup>2</sup>, began offensive night operations in July 1918 from Alquines but moved to a new base of operations, Xaffevillers, on 19 August. Xaffevillers aerodrome was sited around 12 miles east of the front lines and was shared with 100 Squadron who by now had converted to HP-O/400s.

*The Handley Page O/400 C9732 was crewed by pilot 2/Lieutenant Alfred Charles Garrett ("ACG" in the squadron and "Garrie" to family) Fowler, observer 2/Lieutenant Clement Clough Eaves and gun-layer 2/Lieutenant John Shannon Ferguson. This crew had not previously flown together operationally; however, any unfamiliarity involved was not unusual. Although crews endeavored to build some operational continuity by staying together over a number of missions, attrition and the need to familiarize new arrivals to the battlespace resulted in necessary changes to crew composition. For example, newly arrived pilots or observers would often fly qualifying missions as a gun-layer to build familiarity with theater procedures. Both Eaves and Ferguson were newly qualified observers and had joined Independent Force, 215 Squadron, together, barely two weeks earlier on 8 September 1918.*

Comparatively, the Handley Page O series (figure 2) was a flying behemoth in the skies of WW I - it was the largest aircraft that had been built by Britain<sup>3</sup>. Conceived by the aircraft company Handley Page

under a proposal submitted in December 1914, a prototype aircraft first flew at Hendon on 17 December 1915. It was configured as a bi-plane with 100-foot wingspan and overhanging upper wing surfaces, braced struts, and a biplane empennage with balanced rudders between the horizontal surfaces. The rectangular fuselage was 62.7 feet long and it accommodated three separate aircrew positions and an internal bomb-bay. It was fitted with two engines driving four-bladed propellers between the horizontal wing surfaces. Built in two principal variants, the Handley Page O/100 and the later more powerful Handley Page O/400; the power-plants were respectively two 260 horsepower Rolls-Royce Eagle II



Figure 2: Handley Page O/400 No. 1 Squadron, Australian Flying Corps at Haifa, North Palestine, Ottoman Empire, in 1918 the (Public Domain – 25-year term of copyright has expired. According to the Australian Copyright Council)

engines and two 360 horsepower Eagle VIII engines. Its maximum speed was 97.5 mph, cruise speed ~65 mph and stall speed, ~53 mph - maximum range was ~700 miles, service ceiling 8,500 feet and rate of climb, 23 minutes to 5,000 ft. The O/400 empty weight was 8,502 lb, maximum take-off weight 13,360 lb and this enabled a bomb load up to 2,000 lbs and five 0.303 in (7.7 mm) Lewis Guns; nose (2), dorsal (2) and ventral hatch (1) positions. Able to carry a maximum of sixteen 112 lb bombs mounted vertically in a sort of upside down milk bottle crate, the observer had one lever to remove safety pins to allow air priming of the bombs and a second lever to turn a drum attached to wires that released the bombs either singly or in groups. If a bomb failed to release, the gun-layer in the rear cockpit would be expected to kick

<sup>2</sup> Jones was one of the earliest Handley Page pilots and had crewed the first O/100 that flew in France in November 1916. Although squadron Commanding Officers were not approved to fly operationally, Jones did fly and by November 1918, he had flown on forty operations over enemy lines.

<sup>3</sup> The Handley Page 'O' series design was initiated under an Admiralty requirement issued in December 1914 with the Director of the Air Department (Royal Navy), Captain Murray Sueter stating his need to Frederick Handley Page for a long range bomber and possibly coining the descriptive phrase that it should be "a bloody paralysing of an aircraft." The prototype aircraft flew one year later on 7 December 1915.

it free. The Handley Page was a heavy aircraft to fly and was described notably by Cecil Lewis, the WW I fighter pilot and author of *Sagittarius Rising*, as “it was like a lorry in the air. When you decided to turn left, you pushed over the controls, went and had a cup of tea and came back to find the turn just starting.” Nevertheless, O/400 crews had confidence in their aircraft believing them to be capable of absorbing heavy punishment under fire and structurally ‘sturdy’. Heavy landings at night on return from raids were relatively common due to landing difficulty caused by a policy requiring severest airfield illumination ‘blackout’ - so a sturdy aircraft design was considered a blessing. It was in July 1918 at Netheravon, when 215 Squadron re-equipped with the HP O/400 aircraft that new pilot A.C.G. Fowler, who had just turned nineteen years of age on the 19 June, joined.

*As pilot of Handley Page C9732 on 20 September, Garrie Fowler was embarking on his thirteenth bombing mission as aircraft captain since qualifying operational in early August - he had also flown as gun-layer on an additional five missions to familiarize with the terrain at night in the area of squadron operations and to accustom with the effects of searchlights and various enemy anti-aircraft fires. As a general rule, newly joined pilots might be required to fly up to seven missions as a gun-layer to accrue qualifying experience. Fowler flew four of these missions as gun-layer for the veteran 215 Squadron pilot, Captain G.S. Buck MC, DFC, who, sadly, was killed landing his Handley Page on the night 2 September, crashing into a fuel store on the airfield after an operation – Buck was 21-years old at the time and had previously served with the British Expeditionary Force in 1914 for 16-months before transferring to the RFC and flying scout fighter aircraft where he won his MC; he transferred to fly Handley Pages in April 1918. By 20 September, Fowler was considered to be an experienced and capable pilot and had earned peer respect within the squadron for his daring low level bombing in pursuit of night targeting accuracy. All told, he had flown twenty-one missions including raids on four aerodromes, namely, Folsperwiller, Boulay, Buhl and Morhange. He had not, however, raided Frescaty aerodrome previously.*

By early 1917 the Royal Naval Air Service and the Royal Flying Corps efforts to conduct strategic bombing campaigns had led the Government to conclude that there was value in the creation of an independent Royal Air Force and an independent strike force. The last became known as the ‘Independent Force’ and comprised day and night bomber units, whose sole purpose was to attack strategic<sup>4</sup> targets in Germany and thereby, to damage the German materiel war effort. The campaigns to be conducted by the Independent Force involved no requirement to report to or to coordinate efforts with either the Army or Navy. The Royal Air Force was established on 1 April 1918, and the Independent Force under the command of Major General Hugh Trenchard<sup>5</sup>, on 6 June of the same year. Trenchard’s appointment solved the problem of what to do with him after his contentious April 1918 resignation but it also appears to have involved a number of interpersonal tensions not only with the existing service Chiefs but also within the Royal Air Force (RAF) command. His Independent Force command was freed of interference by the RAF Chief of the Air Staff, Frederick Sykes, by the simple bypass measure that required him to report solely and directly to the British Air Minister, Sir William Weir. Weir did not appear to exercise any effective oversight or scrutiny over Independent Force operations and apparently, neither did Trenchard feel burdened by a personal obligation to be thoroughly candid with him. He reported strategic

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<sup>4</sup> Strategic targets were agreed between the British and French Governments and transmitted through the Supreme War Council to the American and Italian Governments under the Heads of Agreement as to the Constitution of the Inter-Allied Independent Air Force, 3 October 1918, and were summed up as with the objective, “To carry war into Germany by attacking her industry, commerce and population”

<sup>5</sup> Trenchard was appointed Chief of the Air Staff on 18 January 1918 after being recruited to the post by the newspaper proprietor Lord Rothermere who was himself a recent appointment as Air Minister to the newly established department established in November 1917. He clashed quickly with Rothermere over issues including the Air Minister’s inexperience, matters of military management and future air-power policy. Matters came to a head and Trenchard resigned on 19 March triggered by a spat between the two men over allocation of air assets to the Western Front. However, at Rothermere’s request, he agreed to defer the date of his departure until after 1 April when the Royal Air Force would officially stand up. In the convulsive row that followed, King George and the Cabinet became involved with the result that sympathy for Trenchard tilted Rothermere himself to resign on 25 April. New Air Minister, Sir William Weir, was immediately under pressure to accommodate Trenchard in a new position. Trenchard played coy believing that the jobs that Weir offered to him were artificial having neither responsibility nor authority commensurate with his standing. Eventually, Trenchard relented and was appointed General Officer Commanding the Independent Air Force on 15 June 1918 and was headquartered in Nancy, France.

operations to the Air Minister but in his operational orders to squadrons, he included various tactical targets such as railways and aerodromes. Essentially, he was free to develop the Independent Force mission subject only to his own predispositions. Trenchard drove his Independent Force squadron commanders relentlessly in a ruthless attritional method of air-war fighting. With night bombing expertise still in its infancy, it was abundantly clear that achieving target destruction or worthwhile material damage was very difficult. This was because of the short-comings of 1918 aircraft technology which included for example, marginal aircraft flying qualities, inclement weather limitations, night-navigation difficulty, target accuracy challenges and very limited airborne situational awareness at night. Overall, it might be said that the weather was the final arbiter of whether launching an operation was practicable. There was a clear need to balance the heavy losses of Independent Force aircraft and trained aircrew, which accumulated during the summer of 1918 at a startling rate, against the value of destruction caused to enemy facilities and material. In short, balanced against losses, were the results worthwhile? If his aircrews were sensitive to this balance in warfare, Trenchard himself took a less nuanced view and he admonished the 216 squadron commander to “get them (216 aircrew) out of the ideas” which included not flying in unsuitable weather. Launching in conditions that denied any reasonable possibility of reaching a target, let alone bombing accurately, seems to have been what Trenchard demanded in order to generate dubiously favorable raiding statistics based on large number of missions conducted rather than enemy materiel destruction. Independent Force losses due to enemy action were particularly high for the day squadrons. While no one should question Trenchard’s own history of personal courage and fortitude, his seemingly unscientific resolution to bomb at any cost appears to have led to a level of wastage of aircrew and machines that simply appeared materially profligate; made bitter by the pain associated with individual loss of life. Furthermore, the scale of losses eventually led to a need to suspend some operations because squadrons simply ran out of aircraft and aircrew. A more judicious exercise of these resources would likely have achieved much the same destructive effect on enemy facilities but with lower attrition of Independent Force capability. The reporting “bubble” that Trenchard established around himself (i.e. accountable to the Air Minister alone), relieved him of detailed scrutiny by ranking peers. Some will argue that the Independent Force losses were worthwhile no matter whether wasteful of air materiel because they were collateral to sustaining the case to establish the value of strategic bombing and this led directly to the strike forces of today. However, “attritional” warfare as a philosophy has long been discredited because, left unchecked, losses eventually undermine all ability to continue military engagement with opposing forces. All else aside, the crews of the Independent Force, likely skeptical of the wit and aero-operational understanding of their “rear-echelon” generals, committed to battle irrespectively, as young men of action most often do. When the weather resulted in low visibility over the target, they might descend to extremely low altitude; bombing at night from a height of 75 feet. Flying two missions in one evening, subjected to enemy fires a second time, undoubtedly drew heavily on their visceral fortitude. And in some cases, being forced to return prematurely with engine trouble, they opted to land in a risky heavy state in order to conserve their ordnance for later try despite being in near pitch black darkness. The sustained commitment by the Independent Force aircrews from June to November 1918, in the face of horrific losses (e.g. 55 Squadron (day) July-September losses: 125%; 215 Squadron (night) June-November: 120%), was quite remarkable. If Trenchard brooked no ‘namby-pamby’ reluctance by his squadron commanders to launch attacks even under the most unfavorable circumstances, despite morale sapping losses, his aircrew remained up for the fight so long as there were sufficient to fly. Drawing on Tennyson’s great poem written sixty four years earlier, the aircrew of the Independent Force could rightly claim “honour the charge they made!”

*Five days earlier on evening of 15 September, piloting his own Handley Page D4568, Garrie Fowler flew two sorties from Xaffevillers to raid the enemy aerodrome at Buhl. His observer was 2/Lieutenant Thomas Victor Preedy who was twenty-three years of age and had flown with him several times during September and they had likely developed some operational rapport. Acting as gunlayer that evening was 2/Lieutenant Hugh Reginald Dodd, a pilot newly arrived at 215 and flying this evening to acquire ground and operational theater familiarization. First take-off was at 19:34 and arriving over Buhl aerodrome*

around 25 minutes later, they made a W to E run across the aerodrome and released their bombs. They followed this making a strafing run at 200 feet, targeting the hangar and aircraft on the ground. They reported facing 'flaming green onions' (FGO) on the approach and intense machine gun (MG) fire and searchlights. Recovering safely to Xaffevillers at 21:10, D4568 was refueled and re-armed and took off again to raid Buhl a second time at 21:53. Approaching from the W, although there was some ground mist building up, visibility at 100 feet height was good. Fowler descended to 70 feet height and made a successful very low bombing run. Circling and running W to E, the aircraft made a follow-on strafing run at 100 feet high and took intense ground fires from anti-aircraft (AA), MG and FGO. D4568 was badly damaged. The after action report noted that it was "riddled" by tracer and "ball ammunition" with the main fuel line shot away, one elevator badly smashed...lateral (ailerons) controls hit and port bottom main-plane very badly riddled. Control of the aircraft on the return flight was accomplished only with great difficulty and the pilot evidently demonstrated exceptional airmanship to recover to Xaffevillers and land safely. The aircraft was reported to be so badly damaged that it was written-off. Somewhat surprisingly, in view of the fire taken by D4568, the three-aircrew were not reported wounded and all were to fly again within a few days. It is hard not to conclude that after the euphoria of a safe return against some very short-odds had subsided, they were not a little shaken by the events of these two raids. Dodd was to fly again on the following evening; 16 September piloting his own Handley Page C9658 which was to be one of four aircraft of five launched that that failed to return in a disastrous night for 215 Squadron. Regrettably, although Dodd's crew survived the attack, were captured and made prisoners of war, he himself was killed in the crash landing; he was aged nineteen. Back to Lieutenant Fowler - likely in consideration of his efforts on the evening 15 September, his next-of-kin were later informed that he was recommended for a decoration, however, his death in action a few days later necessarily but sadly resulted in the award process being discontinued.

Following the Franco-Prussian war of 1870, France ceded parts of Lorraine to Germany under the Treaty of Frankfurt which was signed on 10 May 1871. The garrison city of Metz and nearby Frescaty in Lorraine became part of the Imperial German territory of Alsace-Lorraine. Lying close to the new frontier and strategically significant, Metz was of commercial importance, possessed a rail complex as well as the nearby navigable River Moselle/canal.

With suitable local geography, a Zeppelin airship base was established in 1909 in the grounds adjacent to the Chateau de Frescaty; a grand house built between 1710 and 1714 (later to be destroyed during Second World War by American bombing). A large hangar capable of housing a 150-meter LZ3 Zeppelin was constructed at the site and a year later, in 1910, it became an airfield and training base for future pilots of the Imperial German Army Air Service (Luftstreitkräfte). From August 1914, Frescaty aerodrome conducted Zeppelin operations and observation balloon training. By mid-1916, Frescaty aerodrome was operating AEG.GI-IV bombers, Rumpler CI-III two-seater reconnaissance biplanes and Halberstadt D-type fighters.

Subsequently, with the emergence of new Albatros and Fokker fighter-scout aircraft, a number of Jagdstaffel (fighter/hunter staffel (squadron)) operated from Frescaty aerodrome until war's end. Recognizing its military importance, as part of the Metz sector, Frescaty became the target of

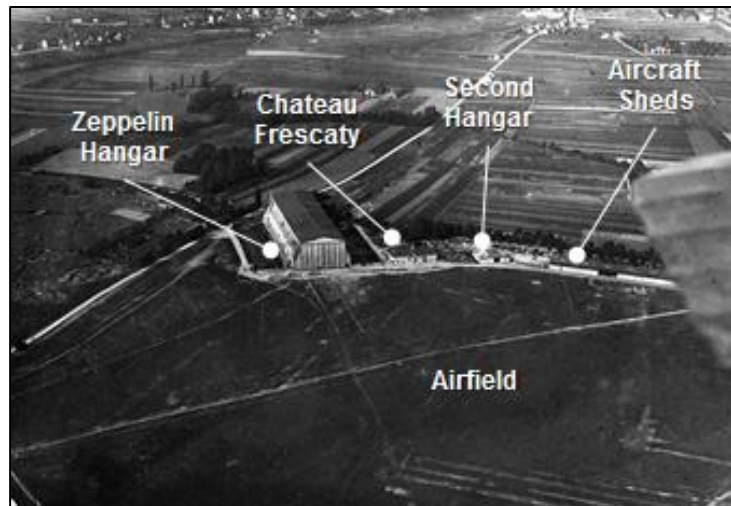


Figure 3: Frescaty aerodrome around April 1919 - In the center, the Zeppelin hangar followed by the Chateau de Frescaty, second hangar and two sets of aircraft sheds. (Photograph by Maurice Lepleux, 1919, courtesy of his grandson Philippe Lepleux)

repeated French air attacks. Additionally, the nearby Metz-Sablon rail junction triangle grew in importance during the ongoing hostilities because the whole of the Verdun front was resupplied by the railways passing through it. By later 1918, 215 Squadron considered Metz anti-aircraft defences to be the 'hottest' spot along the front with perhaps as many as 80 anti-aircraft guns and 30 searchlights. From the air, the Frescaty aerodrome was dominated by the Zeppelin hangar to the north. In a contiguous line to the south east from this hangar lay the Chateau, a second significant hangar and two files of fighter-scout aircraft sheds (figure 3). To the south of the airfield were additional aircraft facilities and anti-aircraft (AA) dispositions. Trenchard, as noted earlier made a number of aerodromes priority targets for his squadrons and by the end of hostilities, Frescaty alone was bombed six times in daylight raids and fourteen times by night by the Independent Force. Overall, 215 Squadron played a significant part in mounting aerodrome night bombing and strafing attacks including a number on Frescaty from late August until the end of hostilities in November 1918.

*As noted earlier, Fowler's crew members on the evening of 20 September were Eaves and Ferguson. His aircraft, C9732, was a new machine that had been taken on charge by the squadron only a few days earlier, on 17 September. On the night of 20 September, following operations on 15 September, Preedy, Fowler's usual observer, was allocated fly with another pilot, 2/Lieutenant Buckle in Handley Page D9680. However, D9680 encountered engine trouble and aborted the night's operation. Preedy was only to fly one more time and this was on 21 September in Handley Page C9714. Sadly, after the series of squadron losses, his nerves were probably shot through and he was hospitalized and declared indefinitely unfit for flying; a victim of operational flying fatigue. Clement Clough Eaves was 24-years old and hailed from Stockport, Cheshire. Trained as an aero-engineer and working at the Mirrlees engine company, he joined the Royal Flying Corps on 3 April 1917 but was placed on a reserve list known as Class W (Army) Reserve, since his services were deemed to be more valuable to the country in his engineering employment rather than serving in uniform. With mounting war losses, he was called on to "Rejoin the Colors" on 25 March 1918, transferred to Royal Air Force service on 1 April and underwent aircrew selection being assessed unsuitable for pilot training on 9 April. However, found fit for observer, Eaves underwent observer training at Blackdown, Surrey, through August 1918 with night training completed by 10 August and award of 'operationally qualified observer' on 23 August. He joined 215 Squadron in France on the 8 September and it is quite likely that he had a week's leave before this. Although he will have had a familiarization and check out flights after joining 215, when he took off at 20:08 on 20 September as observer for C9732, it was his first operational mission. John Shannon Ferguson was also an observer and joined the Independent Force, 215 Squadron on the same day as Eaves. Ferguson was Scots-American and his parents lived in Pittsfield, Massachusetts, USA. Twenty-four years old, he had most recently lived in Hawick, Scotland and was employed in the rubber industry. He was gazetted, confirmed as 2/Lieutenant on 7 September 1918. Although flying as gun-layer and not observer, his circumstances on the evening of 20 September mirrored those of Eaves. The gun-layer crew position was isolated in the Handley Page O/400 with no voice communication with the pilot and observer. A wire line between front and rear cockpits could pull messages from back to front but fur lined gauntlets made handling somewhat impracticable.*

The Handley Page O/400 had no on-board navigation equipment other than a compass and clock to assist aircrew in finding their way to a target in darkness during the night hours. Other than the occasional glimpse of a river or rail line that might be weakly illuminated by moonshine and 'dead reckoning' dependent on map-reading skills, there was not much else. In the cockpit, the pilot flew the aircraft from the right-hand seat and the observer would sit in the left seat except when required to man the front cockpit Lewis gun for air defence or ground strafing. Accessing the front cockpit required a tortuous crawl forward (figure 4). The pilot's cockpit instrumentation included an altimeter, compass, air speed indicator, clock, radiator thermometers and a curved spirit-level bank indicator – to the right on the fuselage was the differential engine throttle and just above the throttle lever, an altitude control adjuster for the engine carburation. The Elliott engine revolutions counter and temperature indicator were mounted on the inside of the engine nacelles and the observer assisted in monitoring them along with adjustment of

the radiator shutter opening in order to maintain temperatures of between 60 to 70<sup>0</sup> C. If the Handley Page offered some flying challenges because of limited flight aids, there was a common wisdom, observed by one wag, that "flying at night is no different from flying in the daytime, except you can't see." The Handley Page O/400 were not equipped to fly in poor weather and were particularly vulnerable to deteriorating meteorological conditions (e.g. a freshening return head wind) during an operation. This could increase the risk of making a safe return to base, if not make it completely impossible. Independent Force Handley Page night flying aircrew were twice as likely as day operators to be casualties of flying accidents although they were four to five times less likely to be casualties of hostile fire engagements.

The return flight from bombing raids was to some extent assisted by the provision of Allied navigation aids which were known colloquially as the 'lighthouses'. Lighthouses were high-powered electric light-emitting beacons located at between 15 to 25 kilometers behind the front lines and spaced 30 kilometers apart. They flashed a recognizable sequence of Morse code letters that could provide a general directional sense for aircrews at night. The light emitted by these beacons might be visible for up to as much as 100 kilometers under favorable visual atmospheric conditions.

From 1915, the need for more acute target accuracy when bombing was well recognized by the RFC command. It was determined that with the limited size of the bombs that could be carried by aircraft of the time, ordnance needed to be placed within a radius of 50 feet of the target to cause sufficient critical damage. If on-target accuracy could not be achieved from the somewhat safer operating heights of around 6000 feet (less vulnerable to anti-aircraft fire), targets needed to be attacked at low-levels down to 500 feet. Although high-level bombing provided less exposure to enemy anti-aircraft defences and was therefore eminently desirable, it was not enabled by the existing bomb-sight technology, which even by later 1918 was still basic and not easy to use in the air and consequently not effective. The result was that target accuracy was generally poor. Indeed, in the inclement weather conditions encountered and at safer high altitudes, aircrews experienced difficulties in hitting targets smaller than a large town! The Mk I High Altitude Drift Sight used on the O/400 was mounted on the fuselage nose and was awkward for the bomb aimer observer to use. Although the Drift Sight was a significant improvement over earlier designs, it still required the aircraft to fly directly into wind with the observer inputting altitude and forward speed. Aircrews found that low-level bombing by 'eyeball' achieved better bombing accuracy. With that old maxim, "no good deed ever goes unpunished" and perhaps unsurprisingly, Handley Page Independent Force aircrews came under intense pressure from Command to bomb at low level in order to improve bombing results irrespective of increased risk to men and machines.

As has been noted, Trenchard pursued a very aggressive offensive policy for the Independent Force despite extremely high losses of aircraft and aircrew. Maj W. R. Read, who was preparing to take over 216 Squadron recorded that Trenchard had said to him, "I have got you out here to take over 216 Squadron. They have got 'Naval' ideas. They think they cannot fly at night if there is a cloud in the sky and they think they cannot do more than one raid in a night. You have got to get them out of those ideas."



Figure 4: The observer and pilot in a Handley Page O/400: Observer in the nose cockpit, manning a single Lewis gun mounted on a Scarff ring near Cressy, 25 September 1918: Photograph by 2/Lieutenant David McLellan (Public Domain - United Kingdom Government and taken prior to 1 June 1957)

The type of heavily attritional offensive campaign that Trenchard conducted could only be supported by a massive input of replacement aircrew and aircraft. By 1917, the quality of British aircraft had improved (noting that between March and May 1917, the RFC lost 1270 aeroplanes and what turned the tide for the RFC during the remainder of the war was the introduction of more capable new aircraft such as the S.E.5a scout, the Bristol F.2B "Brisfit" fighter and the DH-4 – the latter being the series flown by the Independent Force day bomber squadrons). However, pilot and observer training were still inadequate for the demands made upon them. There seems to be little doubt that Trenchard was content to accept a high attrition so long as he could continue to launch Independent Force mandated strategic bombing and his own penchant, tactical aircraft raids. Although evidently a leader able to drive his squadrons into action (until squadron aircrew and aircraft numbers fell so precipitously that squadrons were robbed of warfighting cohesion), there seems to have been little scientific or technical assessment or the need to balance gain with loss in his war-fighting reasoning. It is hard not to escape the conclusion that Trenchard was demanding that his Independent Force aircrews bridge the gap in operational and equipment shortcomings with their personal courage and sense of duty.

In early September 1918, Trenchard further diverted his Independent Force attention from the mandate of strategic missions to the tactical support of the United States led attack on the long-entrenched German St. Mihiel Salient. Between 12 and 15 September he launched multiple bombing raids on aerodromes and the Metz-Sablon railway triangle. The weather on the eleventh was poor with driving rain and wind and no flying by 215 aircraft was possible. By Thursday twelfth, it was still raining for much of the day and although the wind was down to 10 to 15 mph at the ground and gusting, at operating altitude it was reaching 50 mph. Nevertheless, Trenchard was becoming increasingly anxious that night attacks be launched to make an allied contribution to the American effort. Between 13 and 15 September, 215 launched a number of attacks despite visibility remaining exceedingly poor with thick cloud banks and dense darkness. Very low flight was required to distinguish targets. 2/Lieutenant Fowler flew missions on each of these evenings and, as noted above, on 15 September, his Handley Page aircraft D4568 was damaged beyond repair by enemy fire while conducting very low-level bombing runs. After this evening, he was apparently rested for four nights and was not operational again until 20 September and thereby, he missed being part of the disastrous loss of four 215 Squadron aircraft on 16 September.

*At 16:30 on 20 September, 83<sup>rd</sup> Wing Royal Air Force operational Order No. 73 had been issued to the five Handley Page Independent Force night bomber squadrons to allocate targets for that night. The order was classified 'Secret' and as a controlled document, 215 Squadron received copy number four. The order was simple and required "All available Handley Pages to attack the Hostile Aerodrome at Frescaty. Time of start 7.15 p.m." It is also noteworthy that under the same order, sister 216 Squadron was required to send two Handley Pages to attack the Lanz Works at Mannheim and all other remaining squadron aircraft to join in the raid on Frescaty with the same 7.15 pm launch time. There is no mention of a requirement to conduct a second wave of operations with a hot refuel and re-arm on return after a first mission but it is likely that this was understood to be the case if assessed operationally favorable at the time. All available aircraft for 215 Squadron proved to be just four Handley Pages, namely D9680 (19:43), C9724 (19:50), C9732 (20:08) and C9434 (21:00) and their pilots were, respectively, Buckle, Darnton, Fowler and Kestell. After take-off, D9680 encountered engine problems and returned to Xaffevillers, landing at 20:23. After rectification work was carried out on the Handley Page engine on the ground, it relaunched at 21:25 only to suffer a recurrence of the problem and landed at 21:35 aborting any further attempts that night. Darnton (C9724) and Kestell (C9434) returned safely from the first operation at 21:40 and 21:50 respectively having mission flight times of around 1:50 hours. Both aircraft were refueled and re-armed and relaunched at 23:20 and 23:47; they conducted successful second raids on Frescaty recovering to Xaffevillers at 00:55 and 02:15 on the morning of 21 September.*

After every raid on enemy territory, 215 Squadron returning aircrews were debriefed by the squadron intelligence officer (SIO). A debriefing form was prepared prior to take-off with header details that comprised pilot and aircrew details, aircraft number and date but otherwise, it was left blank. The form



was usually filled out in advance by a squadron NCO and presented to the SIO for him to make a written record during the aircrew mission debrief. The SIO for 215 usually wrote in pencil and recorded details of the raid – times, weather, bombs dropped, results and the resistance met et cetera. Catching aircrew fresh, immediately on return from their mission, was essential so as to avoid forgetting important details. However, sensitivity was probably required with the potential for a full range of emotions on display ranging from elation to fright. When an aircraft did not return, the SIO would write on the form nothing more than “Not Returned” – the fate of the aircraft to await definitive confirmation as and when that might be received.

*The shared fate of Handley Page O/400 C9732 and its crew on the night of 20 September 1918 is known insofar as all were lost somewhere over the Frescaty aerodrome on a mission to bomb and to conduct follow-up aerodrome strafing. 215 Squadron knew little of what happened to C9732 from post raid debriefs by other aircraft crews. Indeed, neither of the two aircrews who returned safely from raiding the same airfield reported either seeing C9732 go down or fire or wreckage on the ground. A squadron officer and observer, 2/Lieutenant J. P. Armitage, who had previously flown with Fowler and considered him a “greatest pal” was able to write in a letter of condolence to next of kin only that ‘ACG’ had gone missing on the evening of 20 September. Armitage was actually a member of one of the two 215 squadron aircrews to raid Frescaty successfully (twice) on the same evening of 20 September; flying over the target in Handley Page C9434<sup>6</sup> and an expert witness, reporting at first hand, he saw nothing that might suggest the fate of C9732. The November 1918 issue of the Hertfordshire Express reported that the Prisoner of War Agency in Switzerland had received notification from Germany that “Lieut. Fowler was brought down and killed on 21 September on the aerodrome of Fresksty (Frescaty), near Metz.” The anomaly with the German date is simply explained by the raid having taken place during the dark hours comprising the evening of 20 September through the small hours of 21 September.*

There were two important post scripts to Lieutenant Armitage’s letter of condolence and the formal Swiss reporting of Lieutenant Fowler’s shooting down. Both involve other witness to events. In the first, it should be noted that in 1916 after leaving .... School, Fowler had become a student at the Regent Street Polytechnic, London, to study Electrical Engineering. Joining the Royal Naval Volunteer Reserve (RNVR) in June 1917, he began training as a wireless operator in the following month. This was followed by basic naval training and in December, he began basic flying training progressing to operational qualification in series of RNAS aircraft - Farman, AVRO and RAF B.E.2c (figure 5). After the war, around 5 February 1919, a postal packet was received by Major Mitchell, Director of Education at the Regent Street Polytechnic. Apparently, the packet had been sent by a humanitarian German (identity lost) who explained that its contents, comprising a pocket book, some letters, a photograph, a Flying Corps Pilot’s Certificate and a Certificate of Polytechnic Classes in Engineering, had been removed from Fowler’s person after the aircraft came down. The Polytechnic Certificate provided addressing details that allowed the German to forward Fowler’s personal effects, in the hope of their being subsequently redirected to his relations. The German wrote that he had received Fowler’s personal effects from a German soldier who had been at Frescaty aerodrome on the evening of 20 September. He recounted that the soldier explained, “Lieutenant Fowler had been sent to bombard Metz (Frescaty). I was at my post when I saw him landing (come down). At the same moment I heard a fearful explosion and when I was able to get near, I found him dead under his aeroplane.”

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<sup>6</sup> 2/Lieutenant Armitage was the observer in C9434 and the pilot was 2<sup>nd</sup> Lieutenant R.E. Kestell. Their raid on Frescaty, particularly the second on the evening of 20/21 September 1918 verged on the heroic. In the face of “very accurate and active” searchlights and “very intense and accurate” anti-aircraft barrage, machine gun fire and ‘green onions’, due to strong winds, they needed to make four passes, likely all at 1,000 feet altitude, to achieve an accurate bombing run; which they did. After successfully dropping their bombs, they descended to 500 feet and strafed ‘green onion’ batteries. Circling at this low altitude for a half hour, they continued strafing the Frescaty. At some point, the starboard propeller was ‘shot through’ but C9434 was still able to recover safely to Xaffevillers. The take-off time for the second mission by C9434 was 23.47 and the crew would have known that Fowler’s C 9732 was missing, posted ‘not returned’, before their departure, however, it must remain conjecture as to whether this affected how they executed their mission.

The second involves information that was assembled after the war. Trenchard developed a number of reports in support of the value of the Royal Air Force independent bombing capability. It appears that in respect of various bombing raids, after the end of hostilities, civilians at the some target sites were interviewed to establish a clearer understanding of bombing effectiveness. Copies of these reports were found among the Trenchard papers held in the Joint Services Command and Staff College Library at Shrivenham. One of these, a Department Of Intelligence Report ‘On The Effects and Results of the Bombing of Germany by 8th Brigade and Independent Force, Royal Air Force: (D) Aerodromes Strategic-Tactical’, records that on September 20/21 1918, “A British aeroplane was shot down by A.A. fire over Frescaty and its bombs exploded on contact with the ground.” The German soldier’s recollection and the corroborating Trenchard intelligence report, confirm that C9732 was brought down by enemy fire and that its remaining bombs exploded on impact. It seems likely that this was during a low level bombing run but whether a first or second can only be guessed at. The explosive effects of the 112 lb bombs carried that night may have had surprisingly limited destructive effect above ground. Some German reports revealed that these bombs almost exclusively directed blast vertically, creating a deep crater, rather than horizontal blast damage. So, "near-misses" may have had little effect in some circumstances. This could have allowed parts of Fowler’s aircraft, say the cockpit area, to remain relatively intact after bomb detonation and while the crash still proved fatal to the occupants, it would have left some personal effects relatively undamaged and available for collection by the German soldier.



Figure 5: Farman (Public Domain – UK Gov. Created before 1 June 1957); AVRO (Public Domain – Iceland - Author demise (1937) plus 75 years; B.E.2C (Public Domain – Canadian Forces Image created 50 years ago).

*Two air mechanics climbed onto the port lower wing of Handley Page C9732 and positioned themselves either side of the engine nacelle. In the cockpit, at the controls, Lieutenant Fowler signaled for the mechanics to rotate the two starting handles and the big four-bladed propeller began to turn slowly. The engine gave a dissenting kick and the Rolls Royce Eagle VIII engine fired into life with a puff of black smoke and established rumbling idling speed. The process was repeated with the starboard engine. With both engines now idling evenly, Fowler closed off the radiator shutters and cracked the throttle open to accelerate warming up the engines. With the aircraft wheels chocked, engine operating temperatures reached and oil pressures normal, he ran-up each engine in turn to maximum revolutions on the separate magnetos to test for steady running. Satisfied with engine serviceability, he signaled for the ground crew to remove the wheel chocks. Head down, he ran his eye over the cockpit instruments for a final check; he moved his feet, left-right, on the rudder pedals and pushed the wheel control column control backwards and forwards before rotating it left to right to ensure full range and freedom of movement of the control surfaces. C9732 was a new aircraft, just arrived and taken on squadron charge and while he had satisfied himself of its airworthiness earlier in the day with a half-hour test flight to check it out, these final pre-flight serviceability checks would decide whether the aircraft was fit for the mission. Everything appeared sound.*

*The Handley Page O/400 was heavy at the controls and not agile but Fowler was comfortable with it in the air and found that he could bring the aircraft in at extremely low altitude for bombing and strafing runs. He could fly it at one hundred feet above the ground, and he found it to be a stable, steady and safe weapon platform. His two crewmen were almost as new as Handley Page C9732 having been with the squadron for only around two-weeks. Both were observers, fresh out of training and were now being thrust straight into operations; such had become the norm across the Flying Corps because of the need to*

replace aircrew due to the extremely high loss rates of the Independent Force. Nevertheless, the losses were deemed to be attritionally acceptable by the Independent Force command. How would John Ferguson and Clem Eaves behave over the target? Well, he would soon find out but they seemed to be solid enough types. There was a full moon, that night, so even if the course navigation was not best, with the cloud cover not too heavy, the River Moselle landmark should ensure that they would find the target. Fowler taxied C9732 carefully steering to miss any soft patches that might have resulted from the five days of driving rain earlier in September. Being heavy, carrying over 1,500 lbs of bombing ordnance, he did not want the undercarriage to sink into a soft patch and the aircraft stick-in. Approaching the take-off "L", his observer, Lieutenant Eaves, flashed their aircraft number to the 'bandstand' control to request permission to take-off – 'all clear', and the bandstand flashed the same letter back in green. Turning the aircraft with a burst of port engine throttle to position into the wind from 270, ready to go, he looked left for Lieutenant Eaves alongside him (he could not see Lieutenant Ferguson in the rear cockpit who would have to be "ready or not"). In the dimness, he saw the gauntleted thumbs up, head nodding and flash of a big smile below fur-edged goggles, which cut the darkness. Excitement rose along with the roar of the engines as the throttles were opened to full power – remaining apprehension diminishing now, swallowed by the demanding business in the cockpit and the darkness of the night. Fowler had confided to them in the operational briefing, his commitment to extreme low-level bombing and strafing runs as the only way at night to assure target accuracy but his squadron reputation had preceded this because both knew that his average bombing height over his last eight operational missions in 215 was an extraordinary 380 feet.

Gathering speed over the grass, forward pressure on the wheel column brought the tail up; bumping now...at sustained full power, Fowler eased the control wheel back... one bump, two bumps; C9732, came unstuck, climbing sluggishly out of the airfield shadows and into the moonlight, the propeller torque (O/400 engines did not counter rotate) rolling the aircraft to starboard and requiring control wheel adjustment. Airborne and passing out of the near-ground blackness, air speed indicator showing 65 knots, climbing at a rate of 210 feet per minute, Fowler turned to starboard and out of the west onto a course three-one-five which would take them to the east of Nancy. Steadying on the course to fly, he set about synchronizing the engine speeds to remove any inclination of the aircraft to yaw. In the dark, the engine exhaust manifolds were glowing cherry red, cylindrical blue flames spit from the pipe ends and like big organ pipes, they emitted a clamoring din. He listened for the beats made by the interference between the two engine noise sources and adjusted the starboard engine to run a few RPM slower; the interval between the beats steadily increased in length as the engine speeds were equalized until the beat was completely gone. Stable and climbing, he found the Handley Page with its few vices, undemanding if sluggish to fly, thereby leaving him with plenty of spare faculty; freeing him now to rehearse in his mind the attack on Frescaty aerodrome. It was already feeling bone cold in the open cockpit even though he was ahead of the tearing propeller slipstream. Alongside him on his left, he was pleased to see that Eaves was engaged and working with the map on his lap; it was flapping a little as the odd eddy caught an edge as he strained to see it, illuminated with his red-filtered trench torch. Wagging his hand, towards the engines, thumb up and down in a quick turning motion, he prompted the observer to run another check on the engine mounted temperature gauges. Yes, all well. He wondered about Ferguson, alone in the rear. Twenty minutes to crossing the lines. Toes feeling the chills but still, thank heavens for the ol' thigh-length sheepskin boots! Eaves had removed a gauntlet and rummaging in a paper bag, pulled out a boiled sweet, offering it to him – a little awkwardly with his gloved hand, he took it and popped it in his mouth; it was a humbug, good for moral - there would be no time for this when they crossed over the line since Frescaty was close to the front.

The mission plan called for a climb to a target altitude of 6,000 feet and to cross over enemy lines south of the recently occupied St. Mihiel Salient<sup>7</sup> turning east to run in over Frescaty aerodrome with the bend in the Moselle and the rail line to Metz, staying on their left wing and 10 o'clock position. Fowler had not

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<sup>7</sup> The St. Mihiel Salient inside the French lines had hitherto threatened communications between Nancy and the Verdun redoubt until the offensive by the American Expeditionary Force (AEF) and 100,000 French troops under the command of General John J. Pershing freed the area of German occupation in an action 12-15 September 1918

flown against Frescaty aerodrome before but the mission briefing included good overhead reconnaissance photographs, intelligence on air defenses and collateral information from other squadron aircrew that had previously made the trip. Encouragingly, the anticipated illuminating moonlight on the 20 September would provide sufficient visibility of visual cues to allow execution of a gentle, quiet, engine-off turning descent at 60-65 mph and then, a powered E-W pass over the aerodrome allowing a bomb lay-down along the near contiguous line of Frescaty aircraft sheds, buildings and hangars. The Handley Page squadrons did not fly formation at night because of the danger of collision. Aircraft mission flight times were phased to ensure airspace de-confliction although occasionally, over the target, coordination of attacks was employed as a means of decoying or confusing enemy air defenses. Since Lieutenants Buckle (D9680) and Darnton (C9724) took off from Xaffevillers before his Handley Page (C9732), Fowler would have expected them to arrive ahead of him. Additionally, he would anticipate that Buckle and Darnton's night attack would have exercised the alertness of the German aerodrome defenses. Coming in as number three, he would hope that the quiet turning dive attack and low first pass at 100-200 feet would give him some small element of surprise as the German Anti-Aircraft (AA) fire elevation would be momentarily slow to respond, although the machine gun fire would quickly find them. The return bombing and strafing runs would take their turn.

By 1918, German anti-aircraft defences had grown to be formidable. Search lights would be deployed to surround a defended area and would waft singly, lazily to and fro across the sky like a 'white stick' tapping on clouds as if they sought to find by touch, intruding night raiders. Acoustic listening devices might be used to detect incoming aircraft engine noise and help direct the beam to make initial contact. Sometimes, to counter giving away their in-coming presence, raiding Handley Pages would throttle back and quietly glide down from ~6,000 feet, to arrive over the target at 1,000 – 2,000 feet, release bombs and open up the engines and power away; power-on being determined by when the element of surprise was lost. If one search light found an aircraft, others would snap to follow and quickly try to lock on to it too. The light was dazzling making the aircraft shimmer, every edge clear cut with every feature flood-lit from below; illuminated such that upper surfaces were shadowed in deepest black contrasting relief. Aircrew might be disorientated and blinded and, still worse, anti-aircraft artillery batteries within a wide radius of the target would be drawn to moth-like illuminated targets, opening fire, cued now to bring them down. An aircraft caught in a beam would take immediate evasive action to break the search light director's lock; any hesitation might allow additional beams to follow and compound the problem and make escape more difficult. A technique to break beam lock was to begin by making a steep turn to dive down the beam and thereby present the smallest cross section to the search light director. Gathering speed, the aircraft might then be side-slipped to port or starboard or pulled up into a stall turn to slide out from the beam now coming from astern. In the normal course, aerobatics were forbidden as unsafe in the ponderous Handley Page O/400 but the search light evasion technique was reported effective even though the aircraft air speed might exceed 100 mph.

For close-in defence, the German 3.7 cm Maschinenkanone Flak<sup>8</sup> (3.7 cm M-Flak) was a capable machine gun. It could be mounted on a rotating pedestal with a gunner's seat and a large box or drum which held a hundred round cloth belt. It fired around 250 rounds per minute. The effective ceiling was probably a little in excess of 1,000 meters although the flat range was 4,000 meters. Although it was without a fire control system, it had proved to be effective when positioned behind the lines to provide defence against low-flying trench-strafting British and French aircraft. It could fire Hotchkiss ball and tracer shells that traced bright green at night and enabled the gunner to "hose" rounds at an enemy aircraft.

The 8.8 cm Flak 16 was a German 88 mm anti-aircraft (AA) artillery gun and was introduced in 1917, superseding the less capable 7.7 cm Flak gun. Mounted on a lorry, it was mobile and it was designed to be bespoke to anti-aircraft defence having a high muzzle velocity. It was well able to engage Handley Page O/400 aircraft up to their operational altitude ceiling. Most AA shells produced fragments to maximize

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<sup>8</sup> Flak is a contraction of the German 'Flugzeugabwehrkanone' meaning "aircraft-defense cannon"

dispersion, but high-explosive and incendiary shells were also used. By 1917, mechanical fuses had entered service that enabled round detonation after a preset flight time, set to equate to the estimated altitude of aircraft operation. AA guns might be located on a defensive perimeter, a mile or more from a defended point and provide a wide area air defensive screen through which an attacking aircraft would have to pass. For British airmen, anti-aircraft fires were sometimes referred to by the slang terms of “Archie or “Ack-Ack fire.”<sup>9</sup> At night, AA high-explosive rounds bursting in the sky about an aircraft would be seen as bright red flashes resembling shooting stars or if closer, as bursts of ‘red sparks’ that lived momentarily and then quickly faded-out but left behind, unseen, an expanding ‘bubble’ of black shrapnel, whizzing inaudibly, drowned by engine noise. Colloquially, the accuracy of AA might be attributed three levels of concern by aircrew under fire: a red flash – near enough to demand your attention; over the din of the engines and wind noise, a dull ‘woof’ – near enough to take evasive action; a sharp crack - lucky if you were still there to take action!

Lastly, anti-aircraft fires known by the sobriquet ‘flaming green onions’ (FGO) caused aircrews some alarm early on in the air war. To the aircrews, flying at night, FGOs appeared to be like a string of green glowing balls which followed each other, in line, initially languid, curving in their upward flight like joined living things that then seemed to chase an aircraft, accelerating in an arc towards it. Actually, the flaming onion was a low velocity flare that was fired by a 37 mm Gruson-Hotchkiss Revolverkanone, revolving-barrel anti-aircraft gun, designed to fire multiple projectiles in rapid order over a defensive area. The gun (figure 6) was a ‘Gatling’ type, smooth bore, revolving short barreled automatic that the Germans nicknamed, ‘lichtspucker’ (light-spitter). Each of the gun’s five barrels could launch a 37 mm artillery shell to around five thousand feet and, to maximize the chance of hitting an aircraft, all five rounds were discharged as rapidly as possible, giving the ‘string of flaming onions’ effect – the green flame color resulted from the use of barium salts in the shell charges. Most other anti-aircraft artillery at the time fired relatively slowly but the 37 mm gun, with either five or



Figure 6: 37 mm Gruson-Hotchkiss Revolverkanone revolving-barrel anti-aircraft gun that fired the strings of ‘flaming green onions’ reported by the night bomber Handley Page O type crews (courtesy of the Brett Butterworth collection)

ten-round feed trays put several shells in the air simultaneously leaving British aircrew with the impression that the rounds were attached to a flailing string which they feared might slice through the aircraft. Ironically, the weapon was not designed as an anti-aircraft weapon being without an explosive charge fitted although as a flare, a direct hit on a fabric-covered aircraft might have ignited a fire. Adapted for anti-aircraft defence, it appears that its principal effectiveness was to cause an attacking aircraft to maneuver evasively and thereby to disrupt an attack run. As part of a defensive strategy this value should not be underestimated since facing the unknown usually denies the employment of good countermeasures. The FGO artillery remained a mystery to allied aircrews because they were located at defensive positions behind the lines and none were captured until late in the war. As a result, FGO remained a somewhat

<sup>9</sup> Archie was the collective term for anti-aircraft guns and fires. It is reputed that the term came from a British pilot who responded to whether he had been hit by enemy anti-aircraft fire by recounting the line from a music hall song ‘Archibald certainly not’. Additionally, in the British phonetic alphabet, developed with the use of radio-telephones, ‘A’ was articulated as ‘Ack’ and so, ‘anti-aircraft’ would be referred to as ‘Ack-Ack.’

disconcerting 'secret weapon', "putting the wind up" for some aircrews until the end of hostilities on the Western Front. Their 'green balls' epithet became the stuff of legend for British aircrews and the title of one book on WW1 Handley Page bombers, in particular<sup>10</sup>.

*Now passing over the industrial center of Nancy to their west and further to the north the former German occupied St. Mihiel Salient, that days before was captured by 'Black Jack' Pershing and his American-French ground and allied air forces, Handley Page O/400 C9732 was challenged "friend or foe" by a pencil thin light that flashed '— · —'... 'K' in Morse code. Eaves quickly fired the loaded Very pistol through the cockpit floor steel tube receptacle and the red-white flare fell away to secure safe passage through the airspace from allied anti-air artillery fire. All quiet now with the enemy lines ahead. Lieutenant Fowler, 'Garrie' to his family and known as 'ACG' in the squadron, was nineteen years old and was flying the largest British warplane of that time. Captain of the aircraft and flying into action, he carried a level of responsibility that was thoroughly awesome for a young man of nineteen years; there must have been moments when he felt extreme pride. Undoubtedly living on frayed nerves, perhaps he doubted high command's appreciation of his work in the air. Repeated exposure to combat and the corrosive effect of extreme losses would have caused inevitable doubts. Nevertheless, this evening, piloting C9732, he evidentially understood his duty and his responsibility to his companions and 215 Squadron. To achieve best military effectiveness, he knew very clearly that he had to run in low over the target to achieve definitive identification and bombing accuracy. This called for extreme daring – he had demonstrated this not once but many times during his period of operations, from late August through to this evening of 20th September. Anti-aircraft fires - the crack of a nearby exploding shell would be heard over the scream of the engines and the air percussion snapped taut the canvas on the fuselage sides, in and out like a drum skin. Machine gun tracer would search serpent-like for the aircraft and flaming green onions would rise and bend towards the aircraft as though attracted to a mythological Siren. And the air would reek with the swirling odorous wafts of burnt Amatol<sup>11</sup> high explosive whose smell was sharply acrid and similar to burned hair or wool. Eaves, his observer, was operationally inexperienced but had that quality of resilience that comes with excitement and being fresh to the fight; it was so different with his usual left-hander, Preedy, who was absent this evening having sought respite to repair his frayed nerves. Still climbing at a rate of around 220 feet per minute and with the lines around 45 miles from Xaffevillers, Handley Page O/400 C9732 probably crossed over the German lines at a little under 4,500 feet, almost certainly, without incident.*

From this point onwards, Lieutenant Fowler's final flight becomes more uncertain. Lieutenant Darnton's C9724 had launched eighteen minutes before Fowler's C9732 and most likely attacked Frescaty before C9732's arrival and thereby alerted anti-aircraft air defences over the aerodrome and also the AA batteries at Metz, around five miles to the north. There is little doubt that the Frescaty-Metz Sablon area was well defended with anti-aircraft defences (including Jagdstaffel aircraft) at this time, witness 99 Squadron's 26 September loss of five aircraft constituting fifty percent of the attacking aircraft. On the night of 20/21 September, later raid intelligence debriefs reported that searchlights were on target and that anti-aircraft activity was intense and heavy in a wide radius of the Frescaty target. Leaving Xaffevillers, Eaves would probably have set a course of around three-one-five taking into account a westerly wind that was to freshen significantly after 23.00. It likely gave him a relative flight course of three-four-zero (figure 7). Dead-reckoning would have allowed him to anticipate time of crossing the lines, which on a clear night would have been distinct and a good navigation cueing or way point. Staying on his course bearing for around a further five to eight minutes would bring the aircraft a little to the west of Frescaty, well positioned to begin a descending turn to the right to attack in a W-E run. If C9732 overshot making the turn to starboard, the River Moselle and railway line to its north would have provided obvious landmarks to highlight missing the turn. Although night visibility was good with the full moon, ground

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<sup>10</sup> "Green Balls, the Adventures of a Night Bomber" by Paul Bewsher, William Blackwood and Sons, Edinburgh and London, 1919

<sup>11</sup> Amatol/Füllpulver (German), is a highly explosive material made from a mixture of trinitrotoluene (TNT) (C<sub>6</sub>H<sub>2</sub>-CH<sub>3</sub>-(NO<sub>2</sub>)<sub>3</sub>) and ammonium nitrate (NH<sub>4</sub>NO<sub>3</sub>), the German Army during WW1, used it in the mixture composed by 60% T.N.T., and 40% ammonium nitrate as Füllpulver 60/40. It was used extensively in military weapons as the bursting charge for shells, bombs and depth charges.

geography from 4000 feet altitude, made less distinct by a number of shadowed forest copses, would have made identification of 'blacked-out' Frescaty aerodrome somewhat ambiguous initially. However, once determined, the contiguous line of aircraft hangars, chateau and aircraft sheds on the north side of the aerodrome would have provided actionable points of reference.

It seems quite likely that Fowler made a straight-in attack, despite not having bombed Frescaty before. He may have made an engine-off descent to mask C9732's arrival at the aerodrome and this probably began at four to five miles out; the Handley

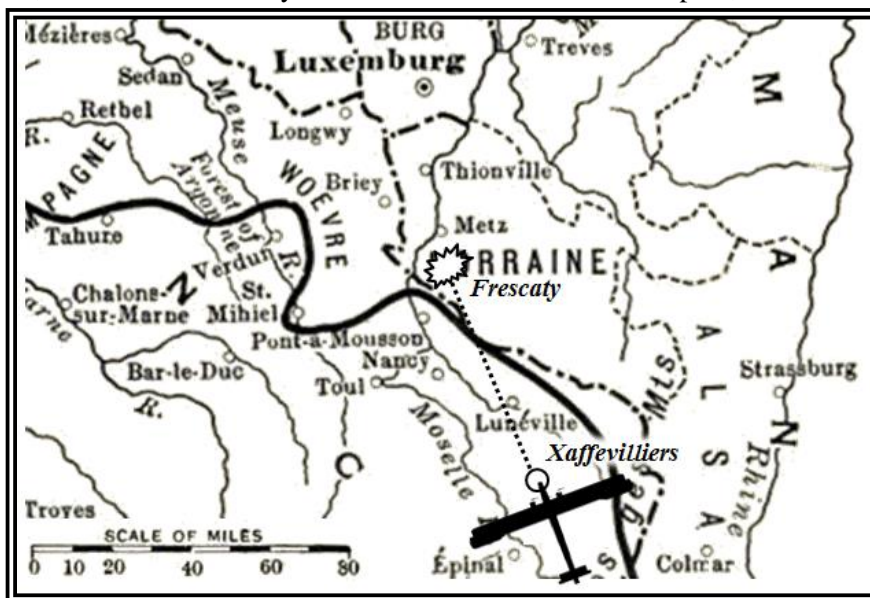


Figure 7: Western Front August 1918 (black line and showing St Mihiel salient) – Xaffevillers/ Frescaty Aerodrome (Public Domain - Prior 1 Jan 1923)

Page rate of descent, engines off, was around 1,000 feet per ground mile covered. As soon as he was caught in the Frescaty searchlights, banking on the engines not having cooled down too much, to miss a beat, Fowler would have opened the throttles and run up the Rolls-Royce Eagle Vllls. The German soldier who witnessed C9732 brought down indicated that there had been a “fearful” explosion when the aircraft impacted with the ground; he also indicated that he had been close to the event, suggesting that the aircraft was making a very low-level pass. While rupturing fuel tanks and subsequent fuel atomization alone would have certainly have provided the constituents of an explosive effect, there is the strongest suggestion that some aircraft bombs on board the aircraft, also exploded. The German was apparently also quickly on the scene of the wreck but wrote that he was delayed in approaching, most likely because there was fire or further danger of other ordnance detonating. That he was subsequently able to find Fowler’s body below the aircraft with note-books and personal effects intact, suggests that the aircraft nose was blown forward in the melee of the crash. The eye-witnessed explosion supports an understanding that Lieutenant Fowler was engaged in a bombing and not a strafing run when he was hit and brought down by enemy fire. Whether he was brought down on a first or second or even later run over the target must be left to conjecture (unless a later written witness to the action emerges with finer recollection). Certainly, the freshening westerly wind after midnight caused aiming problems for Lieutenant R. E. Kestell’s C9434, when making S to N bombing runs, and he reported that he was obliged to fly “over the target four times...in order to get good shooting” (a euphemism for bombs on target). As noted earlier, the Mk. I High Altitude Drift Sight effectiveness was markedly degraded if used in anything but headwind conditions. Kestell’s bombing runs were flown at 1,000 feet altitude and he attacked facilities to the south and to the north east of the aerodrome. The best existing photographs of the time (aerial and otherwise) show little distinct evidence of hangars on the southern perimeter but certainly, there were various AA emplacements and searchlights. Kestell took credit for direct bombing hits on the permanent hangars and chateau (fort) lying on the contiguous NW to SE line along the aerodrome northern margin. Based on his previous bombing raids and consistent with his reputation for daring low-level bombing that had been established within the squadron,<sup>12</sup> it is likely that Fowler bombed Frescaty

<sup>12</sup> No. 215 Handley Page Night Bombing Squadron, Royal Air Force History makes special mention of Fowler, as follows: “2/LIEUT. A.C.G FOWLER. Born: June 1889. Was commissioned in the R.N.A.S. 28<sup>th</sup> Oct. 1917. Joined this Squadron July 1918 and was responsible for many excellent low bombing raids; his average height from which he bombed upon eight consecutive occasions was 360’. While carrying out a raid on

aerodrome on the evening of 20 September from very low altitude. He probably attacked from W to E because the line of northern permanent facilities was most visually detectable at night and he cued his attack to begin by bombing the imposing Zeppelin hangar that book-ended the target-line to the west. Numerous searchlights were very active criss-crossing the darkness of the sky. They were reported by other crews that night, to be accurately directed whether prompted by following engine noise detection or director's intuition, it is not known. FGO batteries, AA barrage and machine guns too, were accurately directed that night and Kestell notes that in his second raid, his propeller was "shot through" - probably by machine gun fire.

*Six minutes flying time after crossing the lines to the south of the St. Mihiel Salient and responding to observer Eaves' direction, Fowler turned Handley Page C9732 for a new course one-one-zero. He applied right rudder first and as the aircraft began to slowly yaw to starboard, he turned the column wheel clockwise to roll the heavy aircraft and to enter a gentle, if delayed, turn; as the compass head came round, taking off control inputs, he centered up on the new course without overshoot. Before the turn, Eaves had sighted the River Moselle to the NE and believed that the target, Frescaty aerodrome, should lie seven miles ahead along the new bearing. Peering into the dark shadows and reflected moonshine from clear ground that sheened off sharp edged reflectors like roadways and buildings, Fowler and Eaves strained to locate the aerodrome. Fowler cut the engines and they were descending now through 4,000 feet and four miles out by eye. The quiet was still disturbed by the wind ripping around the cockpit combing and some bracing wires were singing quietly; nevertheless, the general silence was eerie with the moonlight giving the upper aircraft surfaces a spectral gleam but with the lower surfaces remaining caught in deep and cloying black shadow. Eaves slipped forward to the bomb aiming Drift Sight and thumbs up that he was ready to go. Fowler worried that he had cut the engines too soon since altitude was important when discriminating grass strip airfields from open farmland. Three miles... altitude 2,300 feet....he and Eaves, the second pointing vigorously, saw the big Zeppelin hangar simultaneously. Concurrently, multiple searchlights from ahead and to the right lit up and began to sweep across the sky. How long before the aircraft was caught in a beam? – He needed power to side-slip. The engines were still warm and to his relief, ran up quickly, roaring in unison. Caught in the stroke of a beam, he instinctively closed his eyes momentarily and quickly side-slipped C9732 right and diving, he lost the beam but he had little altitude to spare and was flying fast. The anti-aircraft barrage had opened up but the red bursts were astern of the aircraft. Green onion strings appeared to their left but were two or three miles abeam. Of greater concern was the machine gun fire that formed a curtain of green in a wide radius of the hangar and that now evidently extended along the line of the other buildings. They would bomb by eye. At three hundred feet, skimming the Zeppelin hangar, Fowler released ten 112 lb bombs, sequentially along the line of the permanent structures, including the Frescaty chateau and aircraft sheds. Pulling up and to the right, first one, and then a second searchlight picked the aircraft out of the night. AA fires and tracer from the aerodrome southern barrage raked the aircraft, it staggered in the air...it came wings-level, descending flatly onto the airfield, breaking up and then at least one of the four remaining bombs exploded<sup>13</sup>.*

It is quite possible that Lieutenant Fowler was hit by machine gun fire or AA shrapnel and that, wounded, he exerted control over the aircraft in a desperate attempt to level it and crash land. This appears to be consistent with the German soldier's enigmatic description of how the aircraft was brought down, saying, "standing at my post, I saw him landing." The use of the word 'landing' in English implies a controlled

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FRESCATY AERODROME, he was shot down; buried at METZ GARRISON CEMETARY." While Fowler was not awarded a decoration in recognition of his daring low level raids, which were quite extraordinary, the letter of condolence to next-of-kin by his squadron friend Lieutenant J.P. Armitage notes that he had been recommended for a gallantry award but, the action would have been terminated with his death because other than the Victoria Cross, recognitions were not usually made posthumously. However, Armitage writes that he was mentioned in dispatches twice. Further, Armitage wrote that, Fowler, "as a pilot he was superb and was among the best that I ever had the pleasure to fly with as an observer." Finally, Armitage sums up his friend who he and the squadron called "ACG", as "a brave aviator and a gentleman."

<sup>13</sup> The blast effect of a 112lb bomb may have been relatively limited, particularly if buried during the crash. Principally designed to generate fragments with high kinetic energy, cratering may have been limited to a hole 5 feet deep by fifteen feet across and parts of C9432 may have been relatively unscathed by the blast (e.g. tail, nose, outer wings...) with main damage due to impact with the ground and, catching fire.



event and in this case appears out of place for an impact that ended with the aircraft breaking up. The sense may have been corrupted in the translation from German – for example, ‘*Bruchlandung*’ is a German word for the English ‘crash landing’ and in translation, simply, ‘*Landung*’ may have been preserved as the principal descriptive term, resulting in the direct employment of the English word, ‘landing’. That Lieutenants Fowler, Eaves and Ferguson perished in the crash is beyond doubt. The Great War was entering its final phase but the three airmen were given a military funeral and buried in the Metz Garrison graveyard. The German soldier who was on hand at the crash found Fowler’s body under the nose and was able to recover notebook and personal effects that later found their way back to next of kin.

*Back in Xaffevillers, it was 0415 on the morning of 21 September. The 215 Squadron Intelligence Officer had finished debriefing the Kestell C9434 crew after their second mission of the night and after they had recovered safely to Xaffevillers at 0215. Their half-hour strafing of Frescaty Aerodrome had been very, very aggressive and he knew that the observer, Armitage, had been close to Fowler. Perhaps Armitage would write to family if necessary – well, that was getting ahead of things and besides, it was for the boss, Major Jones to suggest, if indeed the worst had happened. Leafing through the After Action debrief report forms, he withdrew the open page headed “Frescaty, 20/21 Sept 1918, C9732” with the names Fowler, Eaves and Ferguson below. In pencil - he invariably wrote the intelligence debriefs in pencil with a rubber (eraser) close by to delete mistakes or immediate reconsiderations - in lower case, he wrote, “not returned”, striking lines above and below as if to reduce how bleak these two words appeared on the blank page. What was the chance that ACG and the two new boys had force landed...well, he’d hope for the best and time would provide the truth of it.*

## Epilogue

The story of the Royal Air Force (RAF) began ~one hundred years ago on 1 April 1918. No. 215 Squadron, Independent Force (IF) was formed at the same time. Leaving behind his Royal Naval Air Service (RNAS) beginnings, 2/Lieutenant A.C.G. Fowler joined 215 in the newly established RAF service on 7 July 1918, just twenty days after his nineteenth birthday. He flew operationally during the months August and September 1918 coinciding with the final stages of World War 1. Along with his two Handley Page O/400 crew companions, he was most likely brought down by enemy fire over Frescaty aerodrome on 20 September. In that short period of operations, he established himself as a distinguished squadron pilot; skillful in the air, daring and committed to the service of his country.

In the final instance, most military men and women do not think of glory, they think of life but society in 1918, changing, but rooted still in the fading nostalgia of the Victorian century was less complicated in the way that it eulogized those sons and daughters who bore the heaviest burden. Most schooled British young men at that time would have been familiar with Lord Macaulay’s poem which has Horatius announcing, “... And how can man die better, than facing fearful odds”. Well, Fowler and his crew, his 215 squadron colleagues and indeed, the whole Independent Force, certainly did face ‘fearful odds’; witness the massive losses that they sustained. As men they would have displayed modesty and would likely have eschewed the grand title of heroes only too aware of their fears under fire that later visited them in quiet, dark moments. But, today, it is we who are their judges not they, and their facing ‘fearful odds’, again and again and returning to the fight is a measure that unequivocally defines them as the best of men. Yet, Macaulay’s other words, “how can a man die better” suggests a second consideration which is exclusive of any courage demanded of the aircrews contesting a metaphorical Pons Sublicius<sup>14</sup>. Given the stakes, the Independent Force impact on enemy capability (military and civil) needed to be worth the cost in lives and lost material and, to assess this; we scrutinize today, the Commander’s decisions and mindset. Major-General Trenchard was the commander of note and it was he who made the raiding policy and it is he who must be judged on the heavy losses and whether his calculus for strategic bombing was *value added* and therefore, justified.

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<sup>14</sup> Pons Sublicius was the bridge over the Tiber that Macaulay’s Horatius and his two companions, Spurius Lartius and Herminius, defended against the invading army of Lars Porsena, King of Clusium in the 6<sup>th</sup> century BC

Trenchard's Independent Force command had aspects of being a private air force. Some of the politics regarding his appointment have been mentioned in the foregoing, as has his evident personal courage, reflected in his military record as a young man during the Boer War. Less complimentary, was his failure to appreciate the nuanced challenges of developing air warfare, the technology limitations of the aircraft and the need to weigh military achievement against losses rather than to drive his squadrons forward in a wasteful attritional manner. While his Independent Force remit was strategic bombing, to which he was personally antipathetic, he channeled the force into tactical bombing. Smarter tactical commanders seek to conserve resources but Trenchard, a man of the old imperium, poured machines and new crews into the fight despite the growing erosion of their warfighting preparedness and the critical dilution of the experience pool. There appear aspects of Trenchard's Independent Force all-out charge into bombing operations that seem to echo another desperate charge - the one that took place at Balaklava in 1855.

His personal approach is illustrated in a recollection by Lieutenant Roy Shillingford of 100 Squadron. 100 Squadron, Independent Force, had given up their FE2Bs for Handley Page O/400s and in one of their first flights, an aircraft took-off complete with an ordnance load, only to stall and crash. Eight squadron personnel ran over to try to rescue the aircrew but the bombs exploded, killing all eight and the aircrew. Shillingford wrote that next day; Lord Trenchard visited the squadron and made a speech to the squadron officers. He recounted that Trenchard sat on his stick and in repose he said, "Gather round...It's very unfortunate, just getting a new machine and this happens" ("...and this, that and the other", Shillingford extemporizes). "But nevertheless, there are plenty more pilots, plenty more observers and plenty more machines in the pool. Get cracking! My targets have got to be bombed!" Shillingford writes, "That's all he said and that was that. I heard him say that myself" - sardonically, Shillingford opines how hugely morale boosting was the General's speech.

The losses of the Independent Force were unsustainable had not the Armistice been signed in early November 1918 and bombing missions ceased. Between June and November 1918, sources<sup>15</sup> report that 109 bombers of the Independent Force were lost over enemy territory and 243 more aircraft crashed ('wastage') for a variety of reasons over allied territory (making a total loss of 352 aircraft). During September 1918, seventy-five percent of the Independent Force material establishment was lost in action. Statistically, it was suggested that it took the loss of around five British aircraft to destroy one German aircraft on the ground and on average; one Independent Force aircraft was lost every three raids and one aircraft for every 1.54 tons of bombs dropped. Undoubtedly, it was Trenchard's offensive policy that resulted in the high losses between June and November 1918 - he alone was architect of the policy. Of the four daytime Independent Force squadrons, only 55 Squadron operated without interruption despite losses of 125 percent of overall squadron strength during the period. 99, 104 and 110 were forced recurrently to suspend operations. Of the night squadrons, as has been noted, 215 Squadron sustained 120 percent losses. There is little sense that Trenchard troubled himself with the science of military cost effectiveness for either material or lives lost. Even though personally the executor, entrusted with the military employment of the Independent Force, Trenchard was to write on 11 November 1918, "The Armistice was signed this morning. Thus the Independent Force comes to an end. A more gigantic waste of effort and personnel there never has been in any war."<sup>16</sup> Whatever his dissatisfactions with the Independent Force, this expression suggests doubts that are thoroughly inconsistent with ordering the men under his command on offensive missions for little material gain. It is hard to escape the sense that Trenchard took a callous view of the losses.

Why "rake over old coals", is it really necessary? After all Lord Trenchard is viewed by some as the father of the Royal Air Force with buildings and institutions named after him and undoubtedly, he did much to preserve the fledgling air force's independence. In the centenary year, questioning him may add some tarnish to celebrating the great Service that Royal Air Force has become. Well, the answer is still, 'yes, very much so; start rummaging those coals with the poker.' The real heroes are the aircrew of

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<sup>15</sup> H.A. Jones, *The War in the Air* (23), 'Statistics of Work of Squadrons of the Independent Force, Including Wastage, June-November 1918'

<sup>16</sup> Trenchard's private diary, 11 November 1918 (unsighted)

Handley Page O/400 C9732 and their comrades of the Independent Force, day and night squadrons. They come out of this story, blemish free. They contended with enemy fire and also the impossibilities that their own command required of them. Simply, men such as Lieutenant A.C.G. Fowler did their duty in the face of 'fearful odds.' Theirs was just one armed rehearsal for the later defining moment of the Royal Air Force when, in those same months August and September but in 1940, the Luftwaffe launched its systematic assault on Fighter Command. Its airmen became legend by winning the sobriquet, "the Few." For this family, for whom Garrie was the great and now great-great uncle who did not return, there has grown a feeling of immense pride for the fine young man revealed in the archived reports, operational orders, post mission intelligence debriefs and a patchwork of other histories. Undoubtedly, he was a young 'Horatius at the Bridge' with his two brave companions and it is the duty that they did in August and September 1918 that brings the truest credit to the RAF today. And for the future, surely, beyond argument, families have a right to expect that the lives of their sons and daughters be shed parsimoniously by their Commanders, flying good missions and for good cause.

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