

# The Pathfinder Museum



## 🎯 The Path Finder Force



*Air Chief Marshal Sir Arthur Harris*



*Air Vice-Marshal Donald Clifford Tyndall Bennett*

## Formation

On the night of 18/19 August 1942, 118 Bomber Command aircraft attacked Flensburg, in northern Germany. In the lead were 31 bombers - Stirlings, Halifaxes, Lancasters and Wellingtons - from No.7, 35, 83 and 156 Squadrons of the Path Finder Force (PFF). For the first time the target was to be marked by Pathfinders, for these were then just four Squadrons to operate with the newly formed force. The airfields from which they had come were Wyton, Oakington, Gravelly and Warboys.

The target marking was a dismal failure that night - to the delight the new force's many, and influential, enemies in high places in Bomber Command.

Undaunted, its redoubtable young Australian commander, Group Captain (Later Air Vice Marshal) Donald Bennett, was to mould the PFF into a force that led the way in bringing Bomber Command into the electronic age, and in developing target-marking techniques that enabled the PFF to literally light the way for Bomber Command to achieve the accuracy and concentration that had previously eluded it.

The Pathfinder Squadrons of the Royal Air Force were elite Squadrons of RAF Bomber Command during World War II.

The creation of the PFF was a source of one of the bitterest arguments of the Second World War. Initially the brainchild of Group Captain S O Bufton (A staff officer for whom Bomber Command's chief Arthur "Bomber" Harris had special contempt), Harris thought an elite Squadron would breed rivalry and jealousy, and have an adverse effect on morale. Sir Henry Tizard, advisor and one of the chief scientists supporting the war effort, said, however,

*"I do not think the formation of a first XV at rugby makes little boys play any less enthusiastically."*

Harris, however was forced to accept the idea. In order to minimise any adverse effects, Harris decided that every Group would have its own pathfinder, but again a bitter argument ensued, and eventually Harris lost and a separate group was formed: 8 Group, commanded by Donald Bennett, a talented and pioneering young aviator born in Australia. At 33, Bennett was the youngest officer promoted to Air Vice Marshal (In 1943). His awards include Commander of the British Empire, CBE, and Distinguished Service Order, DSO. However, Bennett was not the first choice - Harris opposed the primary choice of the Air Ministry, Basil Embry, the dashing young leader of 2 Group.

## Recruitment & Training

The PFF crews thereafter found their way in the Force via varied routes; crews or individuals could volunteer at any time while serving with Main Force Squadrons, while aircrew who showed promise in their training could also find themselves seconded into the force. Some crews in mid-tour could also be transferred into PFF when numbers were needed to be made up to establishment where required.

Recruits were given a two week course in marking techniques at Warboys before posting to a Squadron. Bennett addressed

each intake personally and the crews came to have an intense sense of loyalty, pride and professionalism in their membership of 8 Group.

The PFF crews were also granted a step up in rank and an increase in pay, but had to do a 45 mission tour rather than the usual 30 missions, for as long as they were serving in PFF. In the end, Harris was proved wrong about the PFF's effect on morale - the PFF badge, allowed to be worn on their uniforms was genuinely a sought-after achievement.

## Tactics

PFF crews found themselves given ever increasingly sophisticated and complex jobs and tasks that were constantly modified and developed tactically during the bombing campaign from 1943 until the end of the war. Some of the more usual tasks were as: "**Finders**"; these were 8 Group aircraft tasked with dropping sticks of illuminating flares, firstly at critical points along the bombing route to aid navigation and keep the bomber stream compact, and then across the approximate target area. If conditions were cloudy then these were dropped using H2S navigational radar.

"**Illuminators**"; were PFF aircraft flying in front of the main force who would drop markers or Target Indicators (TIs) onto the designated 'aiming point' already illuminated by the "**Finders**". Again, if conditions were cloudy H2S navigational radar was used. These TIs were designed to burn with various colours to prevent the German defenses lighting decoy fires. Various TIs were dubbed 'Pink Pansies', 'Red Spots', and 'Smoke Puffs'. "**Illuminators**" could include Mosquitoes equipped with 'Oboe' if the target was within the range of the highly accurate Oboe bombing aid. "**Markers**"; would then drop incendiaries onto the TIs just prior to the Main Force arrival. Further "**Markers**" called "**Backers-Up**" or "**Supporters**" would be distributed at points within the main bomber stream to remark the original TIs as required. As the war wore on, the highly dangerous role of "**Master Bomber**" was introduced as a sort of master of ceremonies, the appointed Pathfinder (Usually a highly experienced Senior Officer) circling the target and broadcasting instructions to both Pathfinders and Main Force aircraft, correcting aiming points and generally coordinating the attack.

The proportion of Pathfinder aircraft to Main Force bombers varied enormously according to the difficulty and location of the assigned target; 1 to 15 was common, though it could be as low as 1 to 3. By the start of 1944 the bulk of Bomber Command was now bombing within 3 miles of the PFF indicators; a huge improvement in accuracy. The success or failure of a raid now depended overwhelmingly on the Pathfinder's marker placement and how successfully further marking was corrected.

## Rivalry in Bomber Command

There certainly was some rivalry, but this was mainly between 8 Group and 5 Group, and was driven by the personal rivalry between Bennett and the leader of 5 Group, Sir Ralph Cochrane. Cochrane was an advocate of precision low level marking, and lobbied heavily to be allowed to prove himself, and that 5 Group could attempt targets and techniques that 8 Group would not.

Cochrane's specialists, 617 Squadron, proved his point when they attacked the Ruhr dams (Operation Chastise) requiring

bombing from a height of 60 feet (20 m), and later, at high altitude using the new Stabilised Automatic Bomb Sight, achieved an incredible and very necessary accuracy of only 94 yards (86 m) at the V Weapon launch site at Abbeville (16/17 December 1943). 5 Group invented various techniques, such as the '5 Group corkscrew' to evade enemy fighters, and the '5 Group quick landing system'.

The PFF flew a total of 50,490 individual sorties against some 3,440 targets. The cost in human lives was grievous. At least 3,727 members were killed on operations.