



What the Dambusters Did Next

The story of 617 Squadron after the
Dams Raid, May 1943

In the beginning...

617 Squadron was formed in great secrecy on 21 March 1943, with the single purpose of carrying out "Operation Chastise", the raid on the German dams. This was a very low-level, dangerous mission, to deliver the 'Bouncing Bomb', invented by Barnes Wallis.

The mission was broadly successful, certainly in propaganda terms, and has passed into the folklore of World War II.

However, the RAF was then left with a highly experienced and specialist low-level operation squadron with no future plans. The crews suffered much teasing at the hands of the regular squadron crews for having done nothing since dams raid. They were known as 'The One Op Squad!'





By the way...

From the earliest days of the war, Churchill was very concerned about the German battle fleet and the damage it could cause to British merchant shipping and particularly the Atlantic convoys. However, the Germans too were concerned for their fleet and were reluctant to put to sea in the knowledge that the British battle fleet was more numerous and more powerful.

Engagements such as those with the Graf Spee and the Bismark had been won by the British so Hitler kept his battle ships moored and well protected. Churchill was desperate to immobilise ships such as the Tirpitz and much time and energy was expended seeking ways of sinking warships. This was very difficult. The ships were very well protected from the sea and air and eventually a 'bouncing bomb' named Highball was designed which would skip over torpedo nets.

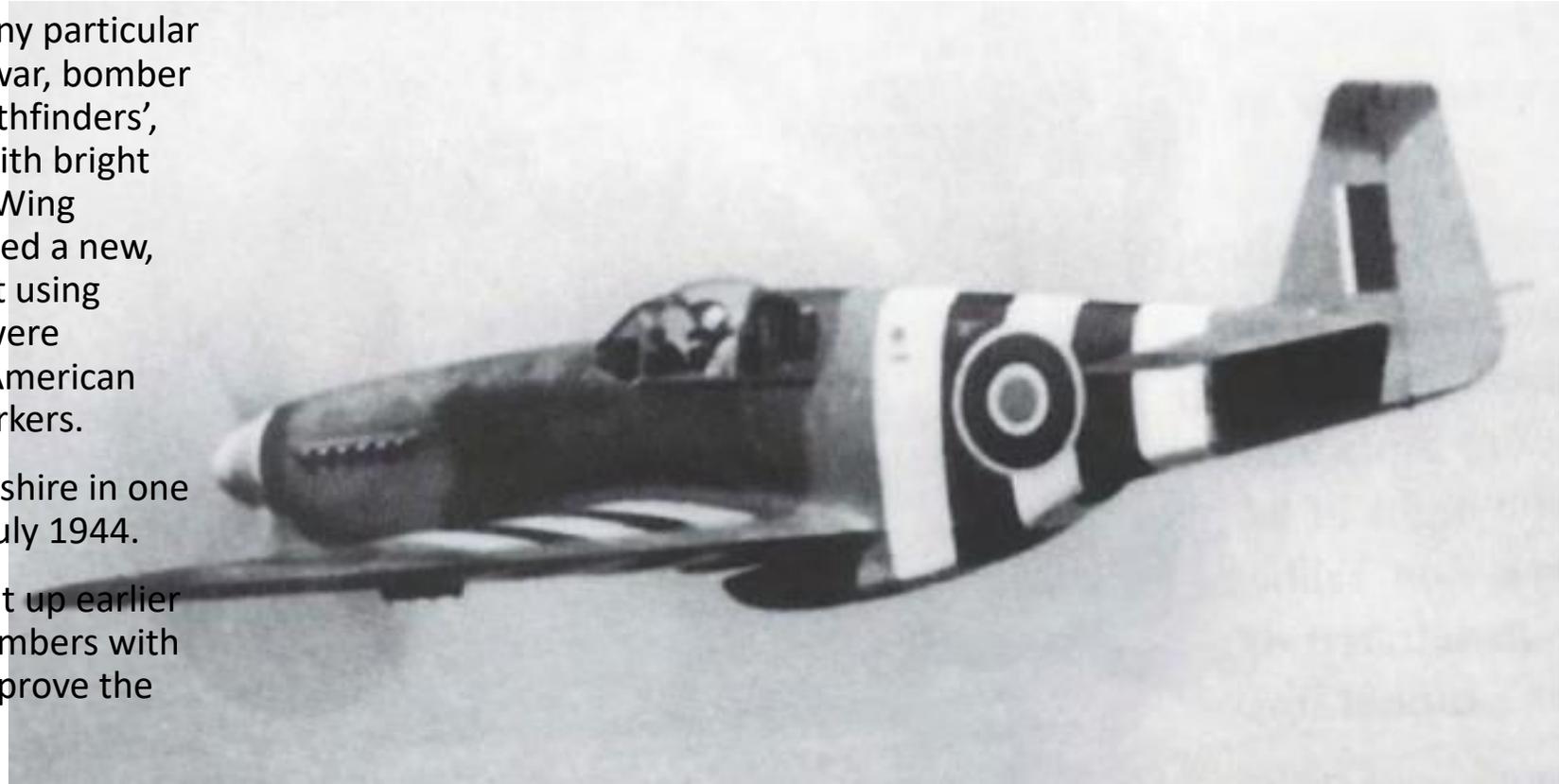
After it was determined that this might be a way of destroying German dams, it was not used against ships in case the technology fell into German hands.

Improved target marking...

From 25,000 feet, it is difficult to see any particular targets and therefore throughout the war, bomber command raids were always led by 'pathfinders', whose task it was to mark the target with bright coloured lights. 617 Squadron, led by Wing Commander Leonard Cheshire pioneered a new, low level method of marking the target using smaller, faster aircraft. Initially these were Mosquitos but then he used a pair of American Mustangs, modified to carry target markers.

This photo is said to be of Leonard Cheshire in one of the Mustangs, on his last raid on 6 July 1944.

A separate group of Pathfinders was set up earlier in the war, using some of the heavy bombers with particularly skilful crews. These did improve the overall accuracy to some extent.



A specialist squadron...

It was suggested that the crews special skills in navigation and low-flying suited them to specialist operations. The first of these was to be an attack on the Dortmund-Ems canal in September 1943.

It is obvious that targets such as this are extremely difficult to hit, but if destroyed would cause huge problems of movement and supply to the enemy. The largest bomb available to the RAF at the time was 12,000 but they were aerodynamically very poor and to have any chance of hitting a narrow target like a canal would have to be dropped from low level. At the time 617 Squadron were the acknowledged low – level experts and hence were given the mission.

The raid (Operation Garlic) had been proposed and cancelled several times but took place initially on the 14th September 1943. After the aircraft were over the North Sea a recall was sent as the weather over the target had been reported foggy. Upon turning for home the aircraft of S/Ldr Maltby (ex Dams raid) was seen to hit the sea.

On the 15th September 1943 the aircraft took off again for the same target with 8 Lancasters and 6 Mosquitos (418 and 605 Sqds). The attack point was to be close to Munster at a place called Greven near Ladbergen where the canal divided into two branches. Amongst cargos carried by barges on the canal was iron ore from Sweden. The force was split into two with three Mosquitos for each four Lancasters plus two reserve Lancasters. The Mosquitos were escorting to deal with searchlights, flak and German fighters etc.

The raid was a failure, the canal remained undamaged and five of the eight aircraft were lost, including that of Squadron Leader Holden who had taken over leadership after Guy Gibson was retired from active service.

Following this failure, no further low-level raids were planned and 617 focussed on high-level precision bombing, using new methods of target marking, developing new bomb sights and, above all, using Barnes Wallis's new huge capacity bombs, Tallboy and Grand Slam.

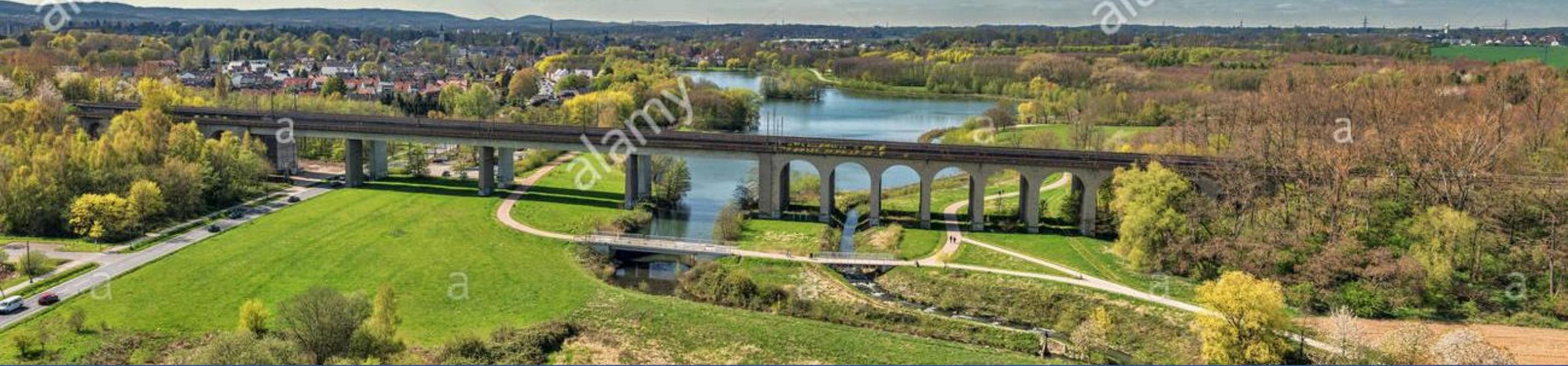


Have to have a
bigger bomb...

The Tallboy and Grand Slam had special steel alloy casings, cast in a single piece, with a special body and offset fins which spun the bomb, increasing speed and accuracy. Because of their casings these bombs would not explode on contact with the ground or an object but would penetrate before exploding. The fuse systems were very complicated and allowed the explosion to be delayed by anywhere between 30 seconds and 30 minutes.

Tallboy and Grand Slam functioned on a different principal from earlier bombs: it was not necessary for the bomb to hit the target. Landing alongside, it would penetrate the ground and form a camouflet, a cavern underground, into which the target would fall.

The aircraft in this photo is releasing a Grand Slam bomb over the Arnsberg viaduct, not far from the Mohne Dam.



Bielefeld Viaduct today

Sublime to
ridiculous: 60
feet to 25,000

The dams raid was carried out at ultra low level, indeed crews were lost when the flew into high tension power cables, and the actual bombs were dropped from just 60'.

But the Dortmund-Ems raid proved that this was not a sustainable method of operation. Barnes Wallis's new bombs also required considerable height to reach their operational speed and direction. So the crews started training for high level operations, accompanied by target marking from very low level.

From late 1943 onwards, the Dambusters concentrated on high accuracy raids from height.

One raid which proved the point was that on the Bielefeld Viaduct.



Bielefeld 1943

Hitting any 'long thin thing', like a railway line or a ship, from an altitude is very difficult; there are so many factors to take into account – this is before GPS remember. This photo shows the results of three years raids on the viaduct.

Barnes Wallis's new bombs obviated the need for a direct hit to do the ultimate damage. In this photo you can see the resulting craters from three years of bombing which failed to destroy the viaduct. In the foreground, just in front of the viaduct is the large crater caused by one Grand Slam bomb which brought down 250 feet of the viaduct. This bomb was a 'near miss', doing exactly what it was designed for – to create a huge void under ground into which the target would fall.

Tirpitz: 1944 Operation Catechism

The picture shows Tirpitz, capsized in Tromsø Fjord after the final raid by Lancasters of 617 & 9 squadrons.

The mere existence of Tirpitz caused the British and especially Churchill, endless sleepless nights because of the damage she could have caused if free on the high seas. Tirpitz was attacked many times during the war, without success until September 1944 when hit by a Tallboy, she suffered irreparable damage. To be sure, she was raided again in November and sunk this time with great loss of life.

From the RAF point of view these were very complex and dangerous raids, involving the crews in the longest flights of the war.

Again, the Barnes Wallis bombs created a successful outcome.





D-Day for 617 Squadron: a Lancaster dropping 'chaff'.

The crews of 617 squadron were initially disappointed by their part on D-Day. They spent weeks training to fly very precisely in the patterns described below. It was only at the last minute that they learned that their task did not involve bombs at all but was a very complicated deception to make the Germans think an invasion force was moving towards the Pas de Calais.

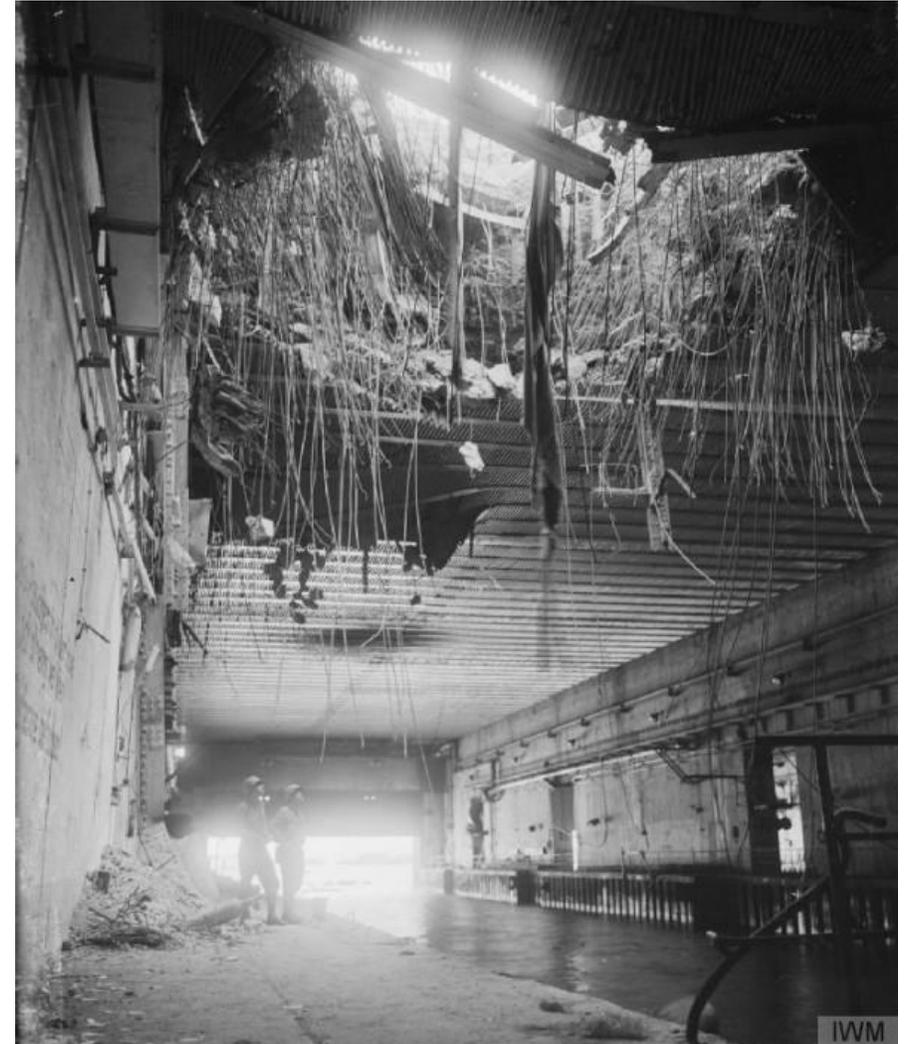
By dropping chaff in progressive patterns, bombers were able to create the illusion of a large fleet on coastal radar screens. Beneath the chaff, small boats towed radar reflector balloons and simulated the radio traffic expected of a large fleet.

The operations required precise flying in elongated circuits with replacement aircraft having to merge in seamlessly to avoid tell-tale gaps. The bombers were staged at 2-mile intervals parallel to the French coast. Once in position they would spend two and a half minutes flying toward the coast, dropping chaff at fifteen-second intervals. Then the aircraft would turn and head away from the coast for two minutes and ten seconds. By repeating this circuit, the wide cloud of chaff edged toward the coast just like a real sea-borne fleet.

The closing year: 1944 – 1945

As the Allies air superiority increased, 617 began to operate in daylight as well as at night, increasing their effectiveness. They continued attacks on transport links and key targets but also began to seek out the new targets, or rather be directed to new targets, that were appropriate to their super-bombs, tallboy and Grand Slam.

The Germans had used millions of tons of concrete to create protection for their submarines and their V2 rocket facilities. These were sought out by 617 squadron who could put a bomb through 30' of reinforced concrete. The bombs cut through the roofs of the buildings then exploded inside bringing thousands of tons of masonry down on the submarines and rockets inside.





Peace at last: 8 May
1945 Lancaster gate
guardian at
Scampton with
tallboy & Grand Slam

617 squadron continued to carry out their pinpoint attacks until the end of the war. They destroyed all the useful railway bridges and then returned to the submarine pens, both in France and in Norway.

It was reported that the German high command concluded that the Tallboys and Grand Slams were the final straw: had the Allies had these earlier the war would have been considerably shorter.

After VE Day, 617 and one other squadron were detailed to leave for Asia to participate in the final attacks on Japan. After the two nuclear bombs on Hiroshima and Nagasaki, the British contribution was not required.

617 retained its title of 'The Dambusters' and holds it to this day, although as I prepare this there are very few of the crews still alive, and none who had contributed to the first raid in May 1943.