

## THE DAM BUSTERS RAID

On the night of 16-17 May 1943, Wing Commander Guy Gibson led 617 Squadron of the Royal Air Force on an audacious bombing raid to destroy three dams in the Ruhr valley, the industrial heartland of Germany. The mission was codenamed Operation 'Chastise'.

The dams were fiercely protected. Torpedo nets in the water stopped underwater attacks and anti-aircraft guns defended them against enemy bombers.

### The targets



The Möhne dam in Germany's Ruhr valley secured the water supply for much of the surrounding area. Water from its reservoir was also used to generate electricity.

It was thought that destruction of this dam and others in the region would cause massive disruption to German war production. Plans for an attack on the dams had first been considered in 1937, but it took until 1942 to develop a weapon capable of destroying the dams - and the aircraft to deliver it. But 617 Squadron had a secret weapon: the 'bouncing bomb'.

### A breakthrough in the back garden

In 1942 British engineer Barnes Wallis began working on plans for a bomb that could skip across water. He developed the idea by experimenting with bouncing marbles across a water tub in his back garden. Wallis thought the new weapon could be used to attack moored battleships, but research soon focused on using it against the dams that were vital to German industry.



### Perfecting the technique

The Admiralty and the RAF carried out extensive tests at sites around the country. These revealed that the drum-shaped bomb (codenamed 'Upkeep') needed to be dropped from a height of 60 feet (18m), and at a ground speed of 232mph.



The bomb would spin backwards across the surface of the water before reaching the dam. Its residual spin would then drive the bomb down the wall of the dam before exploding at its base.

All that was needed now was men to fly specially modified Lancaster bombers which would carry the 'Upkeep'.

### The squadron comes together



In late March 1943, a new squadron was formed to carry out the raid on the dams. Initially codenamed Squadron X, 617 Squadron was led by 24-year old Wing Commander Guy Gibson (pictured in door of aircraft) and was made up of aircrew from Britain, Canada, Australia, New Zealand and the USA.

With one month to go before the raid, and with only Gibson knowing the full details of the operation, the squadron began intensive training in low-level night flying and navigation. They were ready for Operation 'Chastise'.

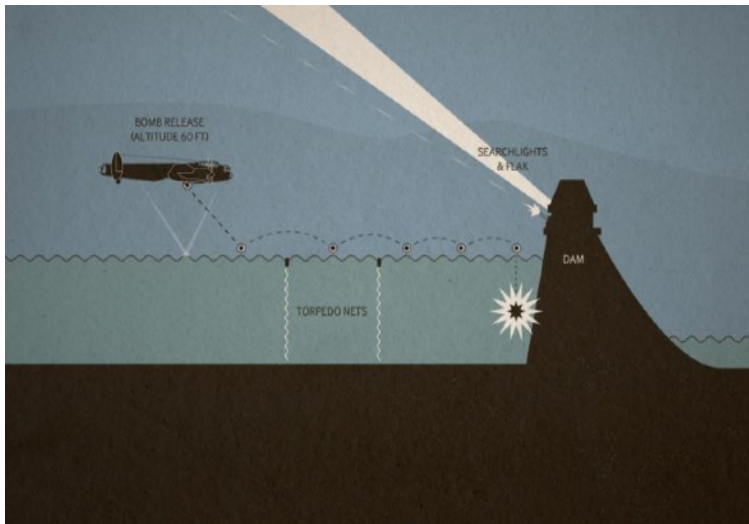
### The plan

The three main targets were the Möhne, Eder and Sorpe dams. The Möhne dam was a curved 'gravity' dam and was 40m high and 650m long. There were tree-covered hills around the reservoir, but any attacking aircraft would be exposed on the immediate approach. The Eder dam was of similar construction but was an even more challenging target. Its winding reservoir was bordered by steep hills. The only way to approach would be from the north. The Sorpe was a different type of dam and had a watertight concrete core 10m wide. At each end of its reservoir the land rose steeply, and there was also a church spire in the path of the attacking aircraft.

### The night of the raid

From 9.28pm on 16 May, 133 aircrew in 19 Lancasters took off in three waves to bomb the dams. Gibson was flying in the first wave and his aircraft was first to attack the Möhne (pictured here) at 12.28am, but five aircraft had to drop their bombs before it was breached.

The remaining aircraft still to drop their bombs then attacked the Eder, which finally collapsed at 1.52am. Meanwhile, aircraft from the two other waves bombed the Sorpe but it remained intact.



133 men took part in Operation Chastise (the

Dams Raid); 19 crews each of 7 men.

Eight crews were lost; 53 men were killed, 3 were taken prisoner.

Eighty men survived the raid.

Of these, 22 were killed serving in 617 Squadron later in the war and 10 more were killed while serving with other squadrons.

**Only 48 men who took part in the raid survived the war.**

**The Mohne Dam after the raid.**



### The result

In this photograph, Air Marshal Sir Arthur Harris (left) observes as Wing Commander Guy Gibson's crew is debriefed after the raid. Of the 133 aircrew that took part, 53 men were killed and three became prisoners of war. On the ground, almost 1,300 people were killed in the resulting flooding. Although the impact on industrial production was limited, the raid gave a significant morale boost to the people of Britain.



### Celebrity status

The surviving aircrew of 617 Squadron were lauded as heroes, and Guy Gibson was awarded the Victoria Cross for his actions during the raid. The raid also established 617 Squadron as a specialist precision bombing unit, experimenting with new bomb sights, target marking techniques and colossal new 'earthquake' bombs developed by Barnes Wallis.

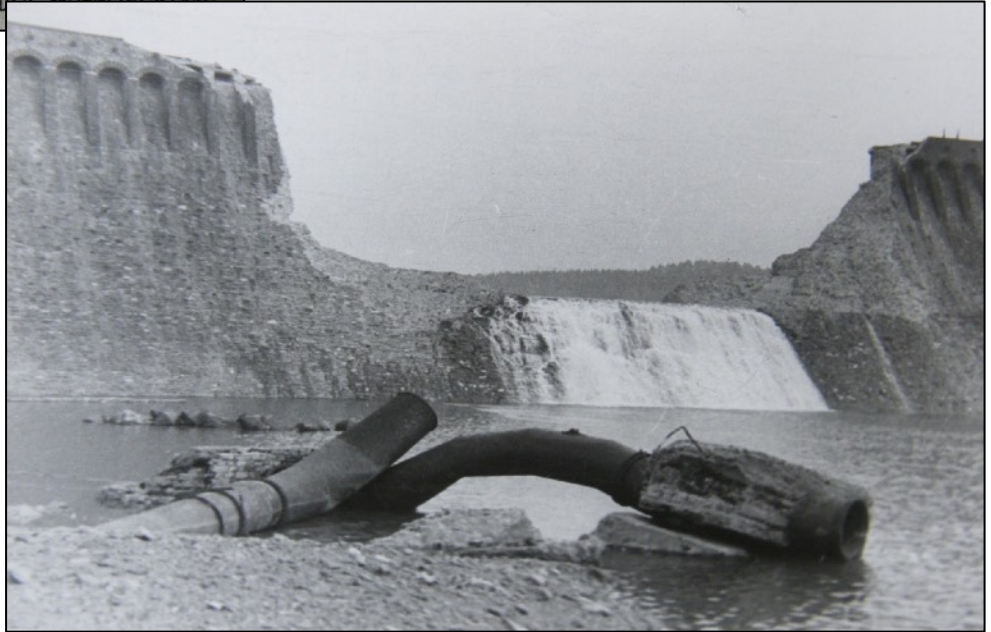


Wing Commander Guy Gibson with members of his crew. Left to right: Wing Commander Guy Gibson, VC, DSO and Bar, DFC and Bar; Pilot Officer P M Spafford, bomb aimer; Flight Lieutenant R E G Hutchinson, wireless operator; Pilot Officer G A Deering and Flying Officer H T Taerum, gunners.

The Nazi German pictures taken after the raid and the later restoration works.



From the work of the task force Ruhr. The restoration of the Mohnetalsperre.



**The destroyed one.**  
The Dam barrier wall from the air (ground) side.

Where the Power Station once stood, a huge lake as formed.



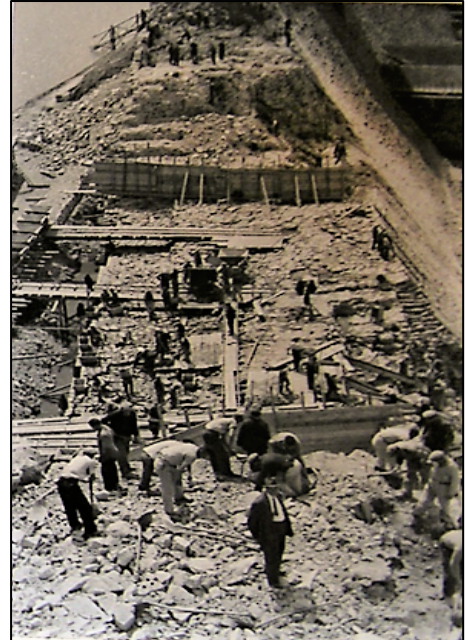
The main breach of the Mohne Dam



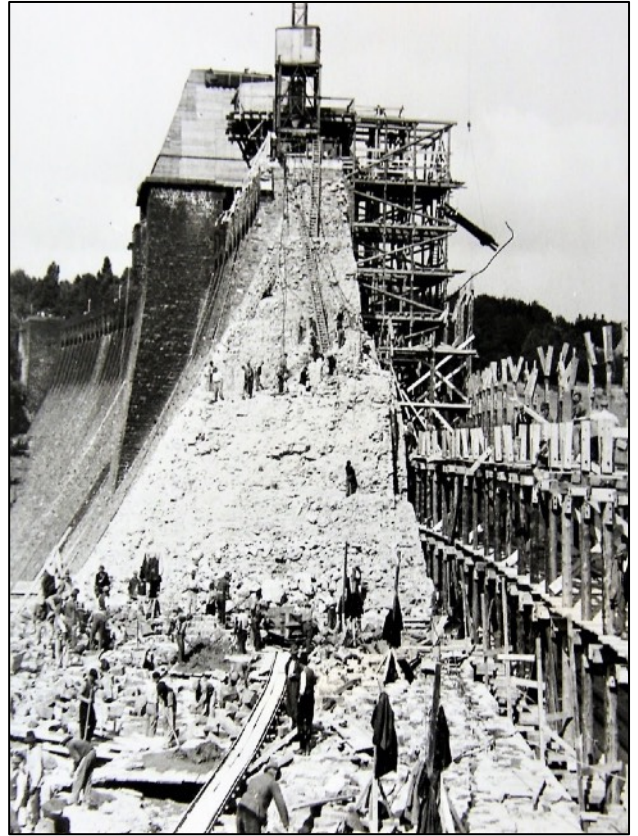
This was once the compensation pond.



The dam reconstruction will start on 9<sup>th</sup> July. Board Walls on both sides of the construction site protect the OT men from falling rocks. The demolition dust has to be accepted.

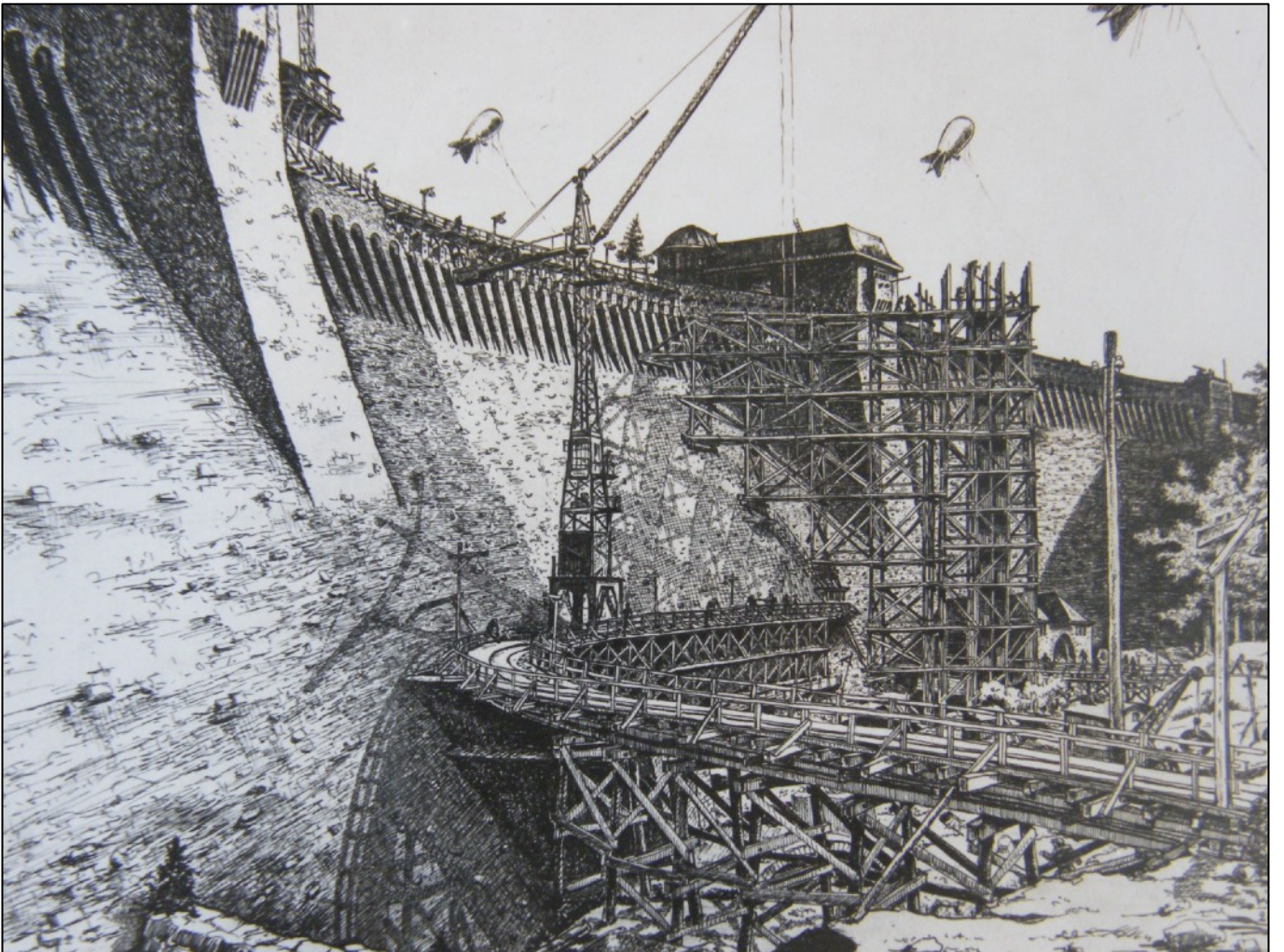


As you can see the bricklaying has begun.







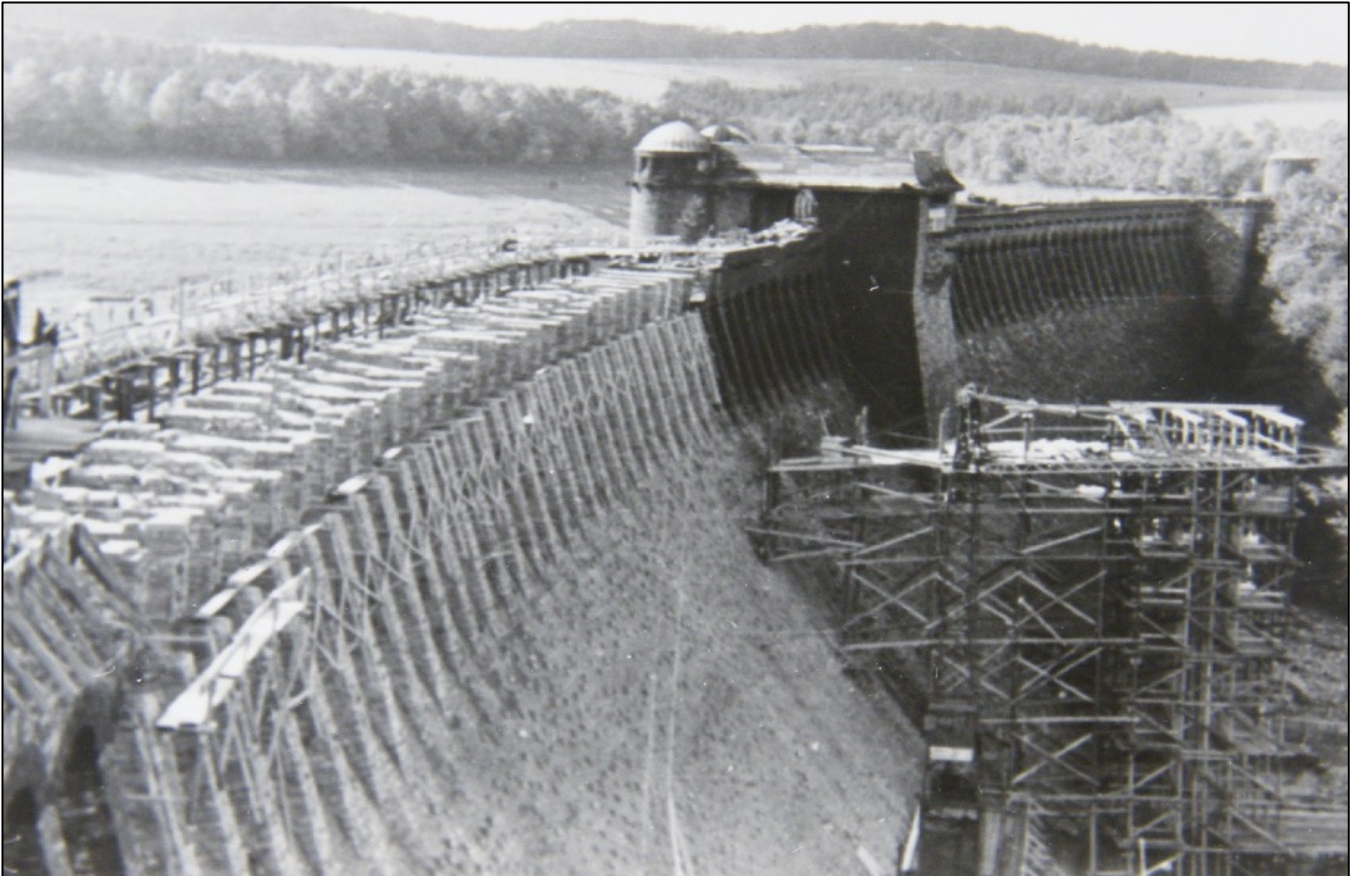










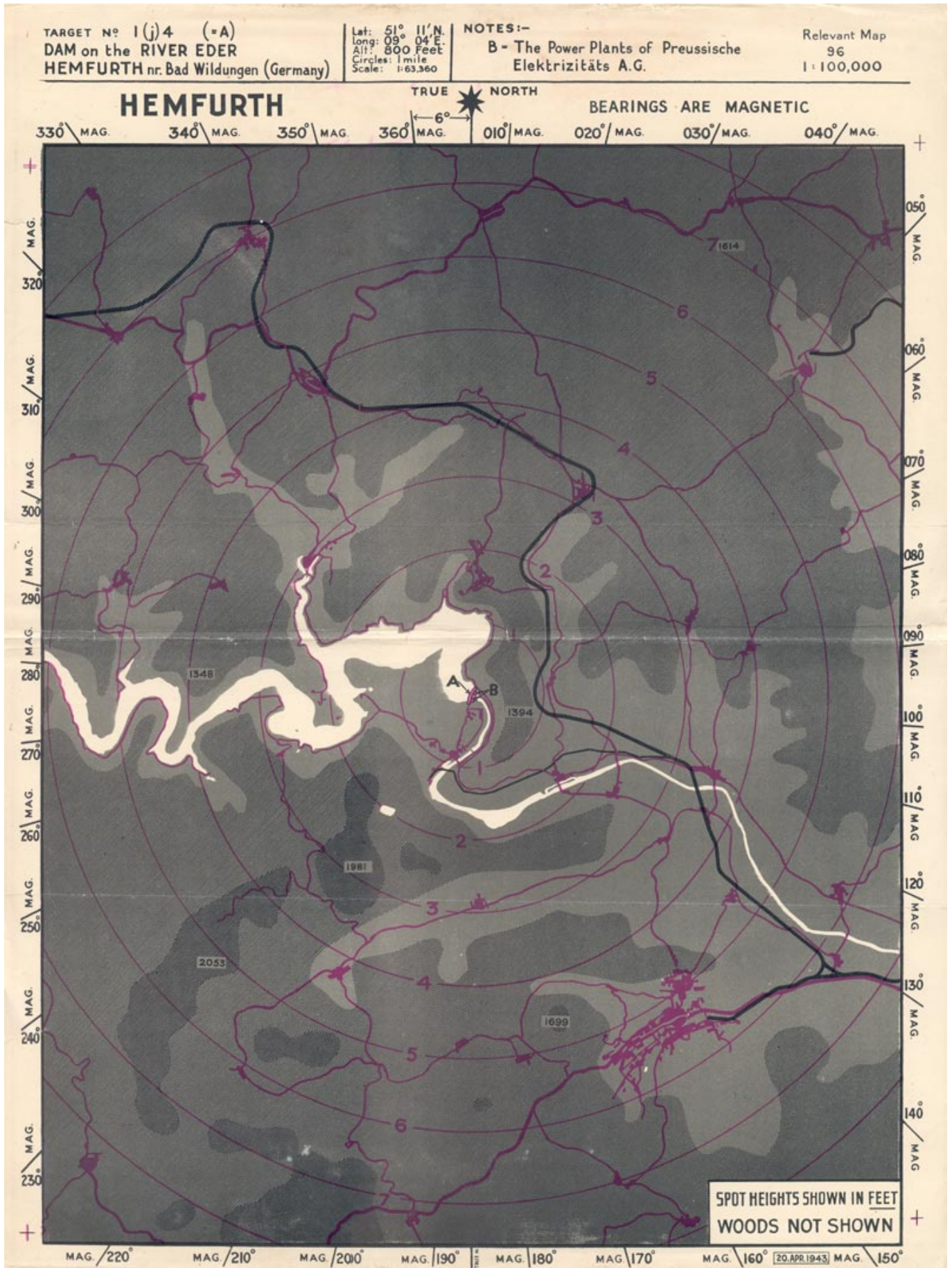


Inspection by Albert Speer Minister of Armaments and War Production

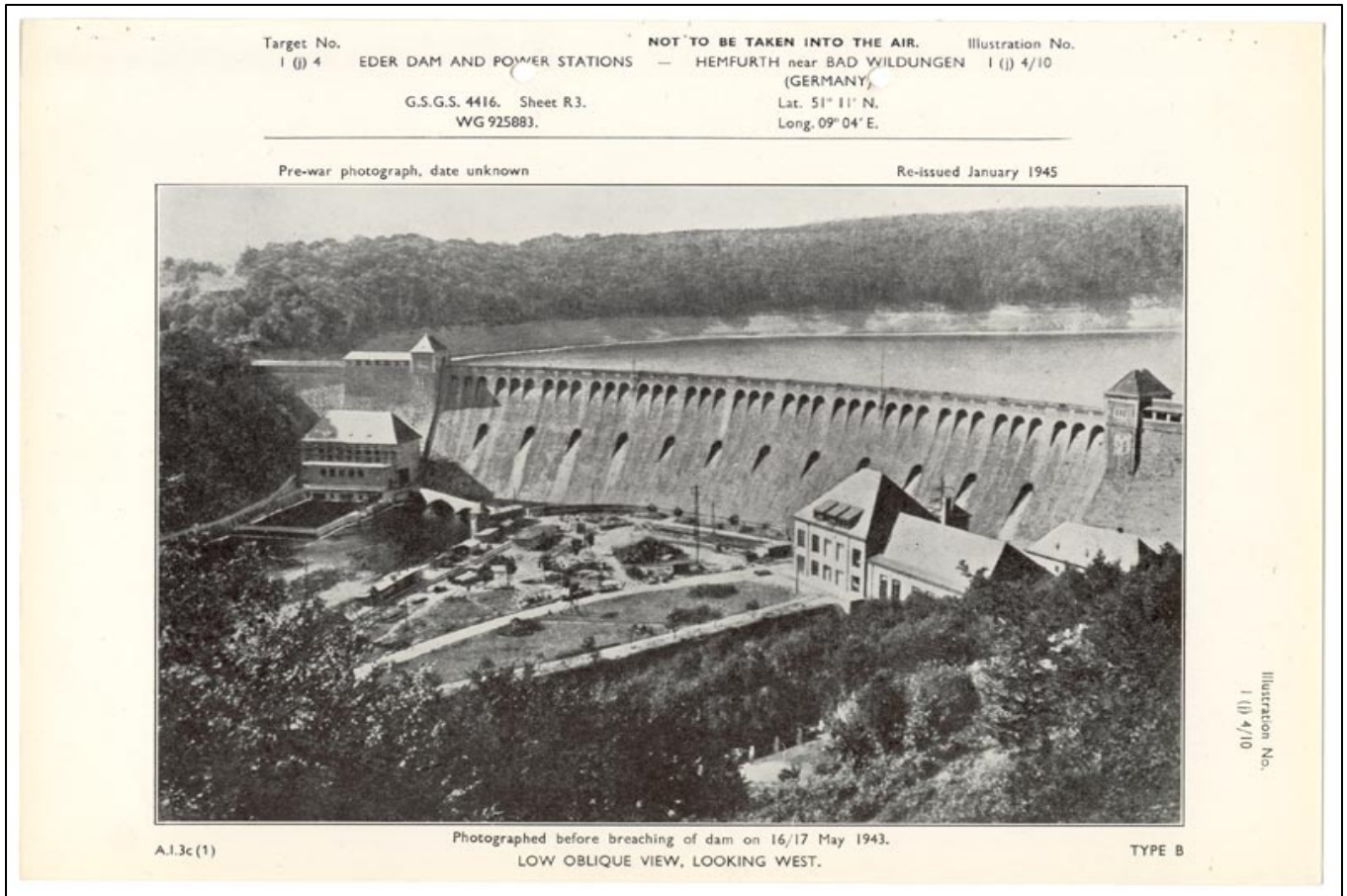




# The Eder Dam







### Photograph before breaching of the Dam on 16/17<sup>th</sup> May 1943

With the primary target of the Möhne dam now breached successfully, five Lancasters departed for the next target the Eder dam. Having dropped their Upkeep mines, Gibson and Young in AJ-G and AJ-A respectively led Lancasters of Shannon (AJ-L), Maudslay (AJ-Z) and Knight (AJ-N) to the Eder to make their attacks. It had taken five mines to tackle the Möhne - would three mines be enough to conquer the Eder? Although undefended, the topography of the landscape around the Eder made the task of lining up for an attack extremely difficult. Shannon in AJ-L made several attempts to make a successful bombing run, but could not. Maudslay in AJ-Z then also made a number of failed attempts to manoeuvre into a position to release the mine, before allowing Shannon in AJ-L to try again - this time releasing his bomb. A hit was scored, but the dam did not break.

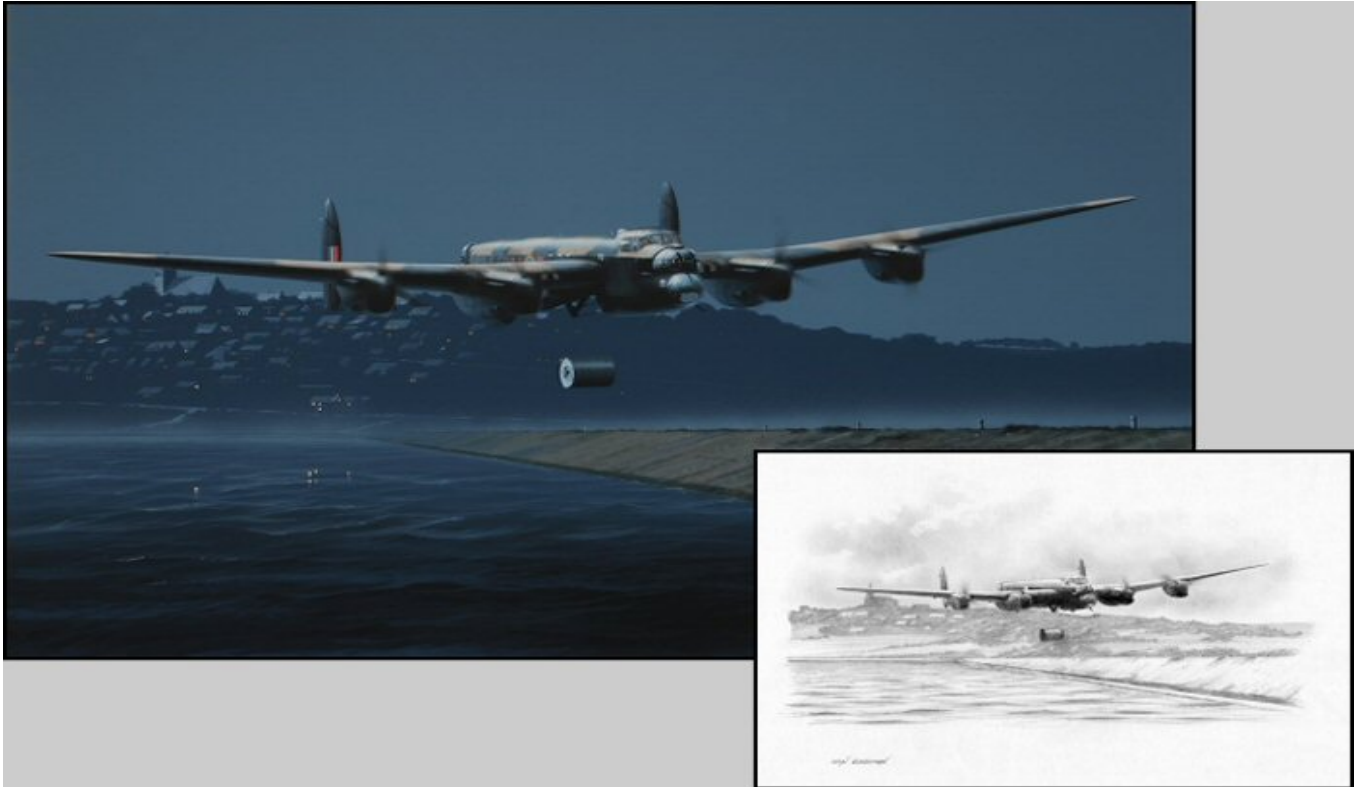


Lancaster AJ-N scores a direct hit on the Eder Dam with its bouncing bomb during the famous Dambusters raid on the night of 16/17 May 1943. Pilot Officer Les Knight and Flight Engineer Ray Grayston fight the controls to clear the dam, combining their physical strength to haul the lumbering Lancaster up and over the dam and clear the high ground that lies ahead. With a tremendous explosion the Eder Dam collapsed before their eyes. Below and behind them, the second of Germany's mighty western dams

lies finally breached.

## The Sorpe Dam

With the Möhne and Eder destroyed, tertiary targets remained for the remaining bombers to strike. ED825 AJ-T was the only remaining aircraft of the second wave, and having taken off around half an hour later than the other four aircraft, was directed to the Sorpe dam. This aircraft was the first to arrive at the Sorpe dam, and found the approach to the bombing run very difficult, with a church spire and the mountainous terrain provides real hazards. In addition, this dam was of an earthen construction. Different from the Möhne and Eder, this was essentially a shaped mound of earth holding the water back, and was therefore a much more solid target. To add further difficulty, the bombs used would not be bounced across the water at the face of the dam, but instead would be dropped along the length of the dam wall, due to the nature of the terrain. Despite this, Lancaster AJ-T took nine runs at the undefended dam before releasing the mine successfully onto the dam. The resulting explosion caused only superficial damage to the dam.



Of the five Lancasters that formed the Second Wave of Operation Chastise, just one aircraft made it to the target, the Sorpe Dam, on the night of 16th/17th May 1943. American pilot Joe McCarthy had been forced to switch to the reserve aircraft due to technical difficulties and subsequently took off slightly later than his less fortunate comrades, all of whom fell either to German flak or to mishaps on their perilous journey. Upon arrival, McCarthy found the view of the dam itself to be unobscured, although mist in the surrounding valleys made it difficult to gauge his approach. As this was not a masonry dam, a different tactic was employed to the Möhne and Eder which involved flying along the length of the dam and dropping the Upkeep bomb, unspun, directly onto it. Their task was made all the more difficult by the fact that their approach necessitated McCarthy bringing AJ-T low over the hilltop village of Langsheid whose Church spire occupied the very point at which the aircraft had to pass to get a good run upon the dam. Undaunted and with great skill, ED825(G) made its run and released the bomb onto the dam, unassisted by the spotlight altimeter device that had proved so useful at the Möhne and Eder as AJ-T had not been fitted with this aid. Nevertheless, the Upkeep struck the dam and exploded as planned, sadly with little effect. McCarthy and his brave crew returned safely to Scampton, their landing made slightly difficult by a tyre that had been damaged by light flak on the return journey. The Sorpe was attacked again in the small hours of the morning when Flight Sergeant Ken Brown's aircraft, AJ-F of the Third Wave arrived, once more striking the dam successfully, but again without breaching it.

McCarthy's aircraft, ED825(G) AJ-T attacking the undefended Sorpe Dam with the village in the background and the church with the steeple that they had to avoid on the hilltop. Such was the difficulty of the approach to this dam - attacked along its length in contrast to the other dams which were attacked perpendicular to the dam - McCarthy needed to make a total of ten runs before the bomb was dropped accurately. Despite such determination, the bomb failed to cause any significant damage to the massive earth dam.

Nearly three hours later, Lancaster ED918 AJ-F of the third wave would arrive over the Sorpe with fog beginning to form over the target. Hurriedly releasing their bomb in the thickening fog, they managed to hit the dam, but once again only superficial damage would be caused. ED924 AJ-Y also reached the area of the Sorpe dam but was unable to attack due to weather and navigational difficulties and began the return flight with its mine still unreleased.

The last remaining Lancaster ED886 AJ-O was to attack the Ennepe dam. The crew certainly attacked a dam, once again with no breach, but whether his was the Ennepe or Bever dam is disputed due to conflicting information. This concerns minutiae such as compass bearing, moon position and location of certain features on the bombing run. What is certain is that the crew of AJ-O played their part in the Dambusters story. After dropping their mine, they also began the difficult journey home.

The targets had now been visited, all (bar one) mines dropped and the remaining Lancasters were battered but on the way home. Once over the English Channel again, they would almost be home free. Sadly, not all would even make it this far, as returning through flak-filled enemy territory would take its toll on the raiders. First, ED937 AJ-Z piloted by Henry Maudslay would succumb to the damage sustained at the Eder dam and from additional flak, crashing with no survivors over Emmerich. Then, ED887 AJ-A, so crucial in the destruction of the Möhne, would become the last casualty of the raid, making it as far as the Dutch coast before being shot down by flak. Once again, there were no survivors.



Bill Townsends Lancaster O for Orange, returns safely on the morning of 17th May 1943 after the success of the daring raids on the dams of the Ruhr Valley.

Wing Commander Guy Penrose Gibson VC, DSO and Bar, DFC and Bar (12 August 1918 – 19 September 1944). Leader of the Dam Busters raid.



Norman Bambridge  
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