



Hope & Glory : The Dambusters

There was a time when Sundays were about War and Westerns. When TV entertainment was limited to just a few channels and boys were still being raised by tough talking cowboys and well spoken pilots. The silver screen was brimming with heroes, real heroes.

“The Dambusters”, released in 1955 was an epic real life hero journey based on the book “Enemy Coast Ahead” by Guy Gibson, one of the mission’s surviving pilots. The film dug deep into the hearts of a generation that had found strength against the prospect of destruction and had passed it on to those that followed. It showcased heroism set to an epic soundtrack and the honest and tragic backdrop of global conflict.

Bulldogz presents: Hope & Glory - The Dambusters. Written and presented by Benjamin Ansell & Merrick Wells. With thanks to “The History of Manston airfield” and Elaine Harris. Original Music by The Lost Clauses

Before the World was plunged into the darkness of war, European neighbours had finally begun preparing for the malevolence brooding on the horizon. Fissures appeared across the map of Europe as targets were made of towns and cities unknowingly living out the last moments of peace.

The Ruhr Valley, is a prime example of German efficiency. A poly-centric urban area in North-Rhine, Westphalia, it is the largest urban area in Germany and the third largest in the European Union. The valley itself is a picture postcard example of German landscape, scattered with urban conurbations and industrial complexes, giving way to farmland, copses, undulating hillsides and the river Eder, swollen where several dams straddle its neck. It is a place of contradiction, where industry and the modern world has spilled out of cities into the surrounding beauty of nature.

The development of the region into an urbanised industrial area started in the late 18th century. By around 1820, hundreds of water-powered mills were producing textiles, lumber, shingles and iron while workshops in the hills manufactured knives, tools, weapons and harnesses, using water, coal and charcoal. History has no established name for this phase of the industrial revolution, but one could call it the early water-powered industrial revolution. As has become characteristically clear, the Germans were at the efficient cutting edge of this technological advancement.

And so, as the gears of war started to grind, maps were spread on tables and the Ruhr valley found itself under the scrutiny of the British Air Ministry strategists. It was identified that the industrialised Ruhr Valley which contained the Möhne, Edersee and Sorpe Dams providing hydro-electric power and water for the canal transport system was a key target in the dissolution of German power.

However, the nature of any such attack was so ambitious it sounded like the storyline to an epic film. It was calculated that an attack with large bombs against the Dams, would cause enormous damage to the surrounding area, not just from the destruction of the hydro-electric stations, but through the flooding of the valley housing a va-

riety of factories that would be fuelling the nations war effort. Still, there was a question mark floating ominously over the 'large bombs' part of this pre-war plan, that would finally be dealt with when it was called into action several years later.

The bombs didn't exist, not only did they not exist, but if they were to exist they would require a bomber that also didn't exist, one with a degree of accuracy which RAF Bomber Command had been unable to attain when attacking well defended targets. A one-off surprise attack might succeed but the RAF lacked a weapon and craft suitable to the task.

1942 was a turning point in the tides of the Second World War. The Battle of Stalingrad, the biggest confrontation of the entire War effort took place from 23rd August 1942 ending with surrender 2nd February 1943. Elsewhere in the world the war raged, the North African Campaign was coming to a bloody end, concluding on 13 May 1943. Amidst the furious clashing of forces, the Ruhr Valley presented itself as an ultimate target capable of weakening the German supply chain, already stretched across a huge geographical area. This was to be the beginning of the Ruhr Bombing offensive, a campaign to bomb 26 major Combined Bomber Offensive targets.

But how to Bomb without bombs let alone a bomber to carry them?

The question was posited in a research paper titled "A Note on a Method of Attacking the Axis Powers." In reference to the enemies power supplies it stated "if their destruction or paralysis can be accomplished they offer a means of rendering the enemy utterly incapable of continuing to prosecute the war."

The paper was written by Barnes Wallis, an engineer and scientist from Derbyshire. He proposed the use of 'huge bombs' that could concentrate their force and destroy targets which were otherwise unlikely to be affected. A 'modest proposition' is what his superiors thought. So he built one. His first super-large bomb design came out at a slightly ambitious ten tonnes and was aptly named 'the Earthquake Bomb.' The response was an appropriate arching of eyebrows and twisting of many a fly boy moustache. They knew it was far too large for any craft in existence, Wallis was not perturbed by the lack of enthusiasm and the constraints of reality. His next suggestion was a plane that could accommodate his enormous bombs, the Victory Bomber, a purpose built plane designed to perform what he referred to as 'Anti-civil engineering' bombing missions.

The Victory Bomber, much like most of Wallis' projects, was considered to be extremely ambitious, the Royal Air Force had not yet introduced four-engine heavy bombers, to perform its task the Victory Bomber would need six.

However, war breeds creativity and Wallis' creative fervour was infectious, the Air Ministry allowed him to continue with his project. The bomber proceeded to wind tunnel testing while the earthquake bomb was tested on representative models. In the end, Wallis was a little ahead of his time and the Air Ministry was forced to pull the plug on his endeavour since the technology simply did not exist. The project was terminated in May 1941.

Slightly defeated, but by no means beaten Wallis was left with no option but to head to his shed for some serious reflection. It was in his garden, while wrestling with the frustrations of his creativity that he picked up a handful of his daughters marbles and started skimming them across the house water tank. This simple action acted as a conduit for an extraordinary idea. In April 1942 he presented a new paper titled "Spherical Bomb — Surface Torpedo". He had struck upon a literally groundbreaking approach to ballistic impact using surface propulsion.

There was a political drama that seemed destined to prevent the plan even getting approval but film footage of successful testing from Chesil beach in Dorset in late 1942 won the go ahead and suddenly Barnes Wallis found himself in a race against time to deliver the working armament within a matter of weeks.

Two concepts were under development, "Upkeep", a 7,500lbs bomb to be carried by Lancasters and used against the dams and "Highball" a 600lb explosive bomb to be delivered by De Havilland Mosquitos against shipping. It was the idea of a bomb that could bounce among the surface and therefore overcome torpedo nets that first attracted the Navy to the project, but now the RAF were not only committed to the idea, but already had a date in mind.

The mission was to take place May 16 to 17th, utilising the full moon, less than a month after Wallis had presented his paper. The operation was given to No. 5 Group RAF, which formed a new squadron to undertake the mission. It was initially called Squadron X.

The mission was to be lead by 24-year-old Wing Commander Guy Gibson, a veteran of more than 170 bombing and night-fighter missions and twenty-one bomber crews were selected from 5 Group squadrons. The crews were hugely representative of the allied forces, a diverse cast including RAF personnel of several nationalities, members of the Royal Australian Air Force (RAAF), Royal Canadian Air Force (RCAF) and Royal New Zealand Air Force (RNZAF), who were frequently attached to RAF squadrons under the British Commonwealth Air Training Plan. The squadron was based at RAF Scampton, using the modified Avro Lancaster Mk IIIs, known as the Type 464 "provisioning"..

Squadron 617 was assembled with astonishing speed and crews started training without even knowing the nature of the mission they were to be assigned. The astonishingly low altitude flying and navigation required would test most accomplished pilots even today, but the weapon itself was still to be perfected.

Testing had been moved from Dorset to Reculver on the north coast of Kent, work was furiously underway to convert the Lancasters. Removing their upper turrets to reduce drag and also taking off the bomb bay doors and installing the mechanism that would deliver the back spin to the bomb on release, that was so key to the bouncing effect. Upkeep was a cylindrical steel mine encased in wooden staves held in place by metal strips that gave the bomb spherical shape. On the afternoon of April 11th the first testing of the spinning mechanism was successful and the next day Guy Gibson and his Bomber Leader, Bob Hay were despatched to Manston airfield in the far eastern reaches of Kent to commence testing on what was now forma-

lly named "Operation Chastise". The bombs were still not ready so they drove into the seaside resort of Margate. The town was devoid of entertainment and the pair sat in the sunshine eating fish and chips and waited.

It was on the 13th that the first tests got underway. On each approach the bomb casing smashed on impact, in one instance debris had inflicted damage to the Lancaster releasing the payload and it landed back at Manston with great difficulty. Barnes Wallis was said to be encouraged by the results of the tests as the cylindrical core still bounced along the surface after the casing had smashed, but it was clear that something was not working.

News of the first tests were greeted with vindicated contempt by RAF bomber command who had felt the weapon would never be viable and were aggrieved at having been overruled on the plan. Meanwhile, under tight security and utmost secrecy the Upkeep bombs were strengthened with tighter metal hoops. The next round of trials were scheduled for Saturday 18th April, but poor visibility postponed them to the Sunday. Three runs were made, the first bounced once and sunk without a trace, the second smashed on impact, the third saw the cylinder bounce along a sufficient distance as to confirm the concept was actually viable. It was discussing these results with a colleague, that Barnes Wallis, almost certainly with a degree of begrudging disappointment, agreed to give up on the wooden casing. He had to get his device to work and give the crews enough time to train with it within a month, and still he had not even tested a live bomb, let alone got a test to fulfil his design expectations.

The adapted cylindrical bombs were tested on 21st and 22nd of April, once again shattering on impact. The weight bearing down on Barnes Wallis's shoulders must have been unimaginable. The absurd, eccentric plan was beginning to look like exactly what Bomber Command had dismissed it as, a waste of valuable resources.

It was these further failures that prompted Barnes Wallis to ask Gibson if he could fly the Lancaster at the even lower height of 60 feet believing that coming below the current 100 feet height would prevent the bomb from shattering. This height was horrendously dangerous in daytime conditions let alone night flying, but Gibson said it was possible, they adjusted their spotlight targeting system and carried out further test runs. On the 29th and 30th April the concept was tested with success, but in both cases the bomb did not hold trajectory and veered to one side. With an agonising two weeks prior to mission day, this was the final challenge left to overcome. The bombs were rebalanced and finally started to stay on course and by May 11th the crews selected for the mission were finally sent to Manston as well to start practising with the weapon.

It was on 13th May that a live bomb was finally tested, slightly further down the coast, near Broadstairs. The Upkeep was dropped, bounced along the water seven times and sank before exploding shortly afterwards. The weapon and the men were ready, just in the nick of time.

At 1800 on 15 May, Gibson and Wallis briefed four officers: the squadron's two flight commanders, Squadron Leader Henry Maudslay and Squadron Leader H. M. "Dinghy" Young named for his surviving being shot down over enemy water and res-

cued from a floating position in his onboard dinghy; Gibson's deputy for the Möhne attack, Flt Lt John V. Hoppood; and the squadron bombing leader, Flight Lieutenant Bob Hay.

The squadron was divided into three formations.

Formation 1 was composed of nine aircraft in three groups (listed by pilot): Gibson, Hoppood and Flt Lt H. B. "Micky" Martin (an Australian serving in the RAF); Young, Flt Lt David Maltby and Flt Lt Dave Shannon (RAAF); and Maudslay, Flt Lt Bill Astell and Pilot Officer Les Knight (RAAF). Its mission was to attack the Möhne; any aircraft with bombs remaining would then attack the Eder.

Formation 2, numbering five aircraft, piloted by Flt Lt Joe McCarthy (an American serving in the RCAF), P/O Vernon Byers, Flt Lt Norman Barlow (RAAF), P/O Geoff Rice and Flt Lt Les Munro (RNZAF), was to attack the Sorpe.

Formation 3 was a mobile reserve consisting of aircraft piloted by Flight Sergeant Cyril Anderson, Flt Sgt Bill Townsend, Flt Sgt Ken Brown (RCAF), P/O Warner Ottley and P/O Lewis Burpee (RCAF), taking off two hours later on 17 May, either to bomb the main dams or to attack three smaller secondary target dams: the Lister, the Ennepe and the Diemel.

They were to follow two routes, carefully avoiding known concentrations of flak, and were to cross the enemy coast simultaneously. The first aircraft, those of Formation 2 and heading for the longer, northern route, took off at 21:28 on 16 May. Formation 1 took off in groups of three at 10-minute intervals beginning at 21:39. The reserve formation did not begin taking off until 00:09 on 17 May.

The night before Gibson's dog was run over and killed. Gibson could now add "distracted" to his litany of complications, exhaustion and gout along with less hours of practise than his subordinates as they prepared to head over to Europe.

The bombers flew low, at about 100 ft (30 m) to avoid radar detection. Later Flight Sergeant George Chalmers recounted that he had looked out through the astrodome and was astonished to see they were buffeted by trees. The pilot was approaching the target inside the break of the treeline designed to prevent forest fires, he shook his head in disbelief, nothing about this mission seemed normal, but the same could be said for the war.

Shortly after, things started going terribly wrong.

As they reached the Dutch coast, Formation 2 started taking hits, in the blackness, invisible explosions rocked the low flying craft, soon Munro's craft lost its radio to the flak and was forced to turn back. Meanwhile, Rice, in an effort to avoid the flak and radar took his craft far too low and skimmed the sea, losing his bomb in the water through the modified bay; he regained control from the collision and was forced to return to base.

Barlow and Byers crossed the coast around the island of Texel. Byers craft took flak in the belly and he went down shortly afterwards, crashing into the Waddenzee. As Barlow watched his flank go down his own craft hit electricity pylons sending him spiralling into a crash landing. The low level of flight and pitch black was throwing up all the challenges the crews had discussed in the mess. The bomb from Barlow's craft was thrown clear of the crash and was later found intact and examined by Heinz Schweizer a bomb disposal operator, for which he would receive the Knight's cross.

It was only McCarthy's bomber that survived to cross the Netherlands.

Meanwhile Formation 1 lost Astell's bomber near the German hamlet of Marbeck when he too struck electrical cables and crashed into a field. The rest of Formation 1 arrived over the Möhne lake and Gibson's aircraft lined up to make the first run, followed by Hopgood. Hopgood's aircraft was peppered with flak as they dropped their payload. They were so damned low that the blast ripped up through the belly of the bomber and they crashed after losing a wing. Three crew members successfully abandoned the aircraft, but only two survived.

Gibson, seeing his crewmates being chewed up by enemy fire flew his aircraft across the dam to draw the flak away from Martin's run, in an impressive act of battlefield bravery, it gave Martin the leeway he needed. Martin lined up for the third run, his aircraft already damaged, but in the first stroke of luck in the mission, he made a successful hit.

Next came Young, he lined up, flak ripping the air apart all around the craft, nevertheless his run was successful. Finally, Maltby lined up with the final payload, it was now or never. So far the dam had been hit, damaged but not breached. If his run was not successful, the loss of his crewmates had been for nothing more than minor disruption. As the bomber approached low above the dark ink of the water, the tension in the cockpit was punctured by the pop of flak peppering the sky around them. It was a hit, the dam was breached and the river raged violently through the devastated rubble.

Yet, the job was far from over. Gibson, with Young accompanying, led Shannon, Maudslay and Knight to the Eder. The Eder Valley was choked with heavy fog, but not defended. The undulating topography of the surrounding hills would have made this a difficult approach with the gift of good weather and the light of day. Shannon's craft made six runs before filling his cockpit with blue language and easing off to let someone else have a run. Maudslay stepped in, it was a good approach but visibility and timing meant the bomb struck the top of the dam, sending the blast upwards and severely damaging the low flying craft. Shannon, wanted another shot, with every ounce of focus he could muster, he zoned in on his barely visible target. It was a hit, he peeled off into the thick fog, utterly relieved.

But still, the job wasn't done. The Dam had received damage with the successful runs, they had not come here to do half a job. Knight lined up the final run, the fog curled around his bomber, somewhere beneath the milky soup was a dam that needed to be busted. He released his payload, the barrel bomb skimmed across the wa-

ter just like Wallis' marbles across the surface of his water tank. The blast penetrated the already weakened dam and it gave way, the water rushing through the chasm as the Lancaster's rumbled away overhead.

The Sorpe dam was the one least likely to be breached. Only three Lancasters reached the Sorpe Dam: Joe McCarthy and later Brown and Anderson, both from the third formation. This attack differed from the previous ones in two ways: the 'Upkeep' bomb was not spun, and due to the topography of the valley the approach was made along the length of the dam, not at right angles over the reservoir.

McCarthy's plane was on its own when it arrived over the Sorpe Dam he soon realised the approach was even more difficult than anticipated: the flight path led over a church steeple in the village of Langscheid. With only seconds to go before the bomber had to pull up, to avoid hitting the hillside at the other end of the dam, the bomb aimer George Johnson had no time to correct the bomb's height and heading.

McCarthy made nine attempted bombing runs before Johnson was satisfied. The 'Upkeep' bomb was dropped on the tenth run. The bomb exploded but when he turned his Lancaster to assess the damage, it turned out that only a section of dam had been damaged, the dam remained functional.

Three of the reserve aircraft had been directed to the Sorpe Dam. Burpee was shot down while skirting the Gilze-Rijen airfield. Brown reached the Sorpe Dam, in the thickening fog, the bomb was dropped hastily and failed to breach. The remaining two bombers were then sent to secondary targets, with Ottley being shot down en route to the Lister Dam. Townsend eventually dropped his bomb at the Ennepe Dam without damaging it.

On the return, more Lancaster's were lost, hit by enemy flak that was aimed so low it was seen to be bouncing off the surface of the sea. Eleven bombers landed at Scampton. The last of the survivors, Townsend's bomber, was the last to land because its engines had been shut down after passing the Dutch coast and it had coasted home on the air alone.

Following the terrible death toll of the aircrews involved in the Dambusters raid, Wallis made a conscious effort never again to endanger the lives of his test pilots. His designs were extensively tested in model form, and consequently he became a pioneer in the remote control of aircraft. He was made a Fellow of the Royal Society in 1945 and knighted in 1968. He was awarded the sum of £10,000 for his war work from the Royal Commission on Awards to Inventors. His grief at the loss of so many airmen in the dams raid was such that Wallis donated the entire sum to Christ's Hospital School in 1951 to allow them to set up the RAF Foundationers' Trust, allowing the children of RAF personnel killed or injured in action to attend the school.

The Dambusters have entered the British psyche as one of the great daring missions that blended engineering ingenuity, rapid planning and astonishing bravery. The losses taken by the Squadron also echoed by the fact that the vast majority of the victims of the raid were Soviet prisoners of war remind us once again, that war is never as noble as the silver screen suggests. The fairy tale has long since overtaken the

truth with the film enforcing a narrative that plays fast and loose with the facts. Although the impact on German industrial production was limited, with the dams repaired and factories at full output by September of the same year perhaps the most curious legacy of the raid and the film that it inspired, is witness in the cultural impact of Star Wars. George Lucas made no secret of the fact that films such as 633 Squadron and Dambusters inspired him, even the dialogue of the battle of Yavin is lifted heavily from the Dambusters film. So much of the imagery and iconography of Star Wars owes a debt to those brave men of 617 Squadron, who flew over occupied Europe no higher than a tall tree and succeeded against appalling odds in the daring pursuit of the impossible.

Soundtrack:

Main theme : Chocks Away

Written by Benjamin Ansell, Pilar Ballester & Merrick Wells

Performed by Merrick Wells

Incidental tracks written and performed by Merrick Wells

Produced by Merrick Wells

Recorded at Man Cave Studios