

The Dambusters

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Nicholas O'Dell

<http://vimeo.com/65465752>

Video animation by Steve Karp. Music: Crusade, by Kevin MacLeod (incompetech.com)

As a red flare curved into the Lincolnshire sky, the engines on 19 Avro Lancasters clattered to life and the black bombers began to move slowly out of their dispersals. The muffled roar that evening, May 16, 1943, was familiar to nearby residents. Operations were on again. RAF Scampton's aircraft would likely be joining hundreds of others in another "maximum effort." Where are our boys going tonight: Berlin? Hamburg? Some would offer a silent prayer for their safe return.

The new squadron was in fact setting out, by itself, on one of the most remarkable missions of the war, using a unique new weapon. The operation was so secret that not even the ground crews, who had loaded the huge cylindrical objects under the fuselages that earned the planes the nickname "Scampton Steamrollers," knew where they were going.

At 9:28, Bob Barlow, one of many Australians serving with Bomber Command, pushed the throttle levers fully forward, then moved his hand aside for flight engineer Sam Whillis to hold them in position. With such a heavy fuel and bomb load, any loss of power on takeoff would be disastrous. As the Lancaster gained altitude and the airfield disappeared behind his turret, rear gunner Jack Liddell would have breathed a sigh of relief. Just 18, he had falsified his age two years earlier to join the Royal Air Force, and was already a veteran of 30 missions when few bomber crews survived half that number.

At the RAF's No. 5 Group headquarters, Barnes Neville Wallis faced the longest night of his life. As assistant chief designer for the armament firm Vickers Armstrongs, he had conceived the mission plan. His research had shown that to produce each ton of steel, the Germans required thousands of gallons of water from several great Ruhr valley dams, the largest being the Möhne, Eder and Sorpe. Coal and armament production, hydroelectric power and cities also depended on these sources. The largest conventional bombs would barely chip the concrete dams, assuming they could hit them from 20,000 feet. But, Wallis theorized, detonate enough high explosive in contact with the dam wall and the water would magnify the force, in the same way a torpedo with a relatively small explosive charge could sink a battleship.

The paper he sent to leading scientific, government and military personnel, complete with formulas and calculations, produced either ridicule or indifference. It also resulted in a visit from a Secret Intelligence Service agent, who wanted to know why Wallis was sharing "vital

and very secret" information. "Is it?" he replied. "When I showed it to the authorized people they said I was mad. I'm supposed to be a crackpot."