Battle of Berlin



ON NOVEMBER 18, 1943, Air Marshal Sir Arthur "Bomber" Harris, C-in-C of RAF Bomber Command, dispatched more than 400 heavy four-engine bombers to Berlin, thus kick-starting the Allied bombing campaign in earnest and heralding the coming Battle of Berlin.

Royal Air Force had bombed Berlin several times before, but the early raids had been relatively small in scale, navigation had been problematic and all in all little damage had been inflicted. The type of twin-engine aircraft available at the early stages of the war lacked both in range and in payload capacity and simply wasn't up to the job.¹

A game changer entered the scene in 1942; the Avro Lancaster. It was a versatile, four-engine heavy bomber that would become the backbone of Britain's Bomber Command and enable it to strike in force against Nazi Germany. For the most part of 1942, however, priority was laid on bombing U-boat bases as a crucial element the Battle of the Atlantic.²

In 1943, Harris again turned his attention inland, attacking first Germany's industrial heartland, the Ruhr, with its coke plants, steel mills and synthetic fuel facilities and followed up with the annihilation of Hamburg during July and August, where raging firestorms killed up to some 40.000 people and

laid large areas to waste. In November that year, Arthur Harris and the RAF was ready to return to their prize target, the 'lair of the fascist beast'; Berlin.

Albeit damage done by the November 18 raid was somewhat modest – hampered in efficiency by low clouds and hitting predominantly the suburbs – the damage to the self-assuredness of Berliners was considerable. Lulled into a feeling of being secure from any real danger, by the magnitude of the city's impressive air defense³ and the boastings of Luftwaffe C-in-C Hermann Göring that no enemy plane would ever reach the capital, the sudden realization of vulnerability came as a shock to many.



A FOLLOW UP RAID just a few days later, on November 22, was of a whole other magnitude and still count as one of the most devastating by the RAF during the war. It caused extensive damage to the residential areas west of the city centre; in the Tiergarten, Schöneberg and Spandau districts, and in Charlottenburg. Dry weather conditions ignited many local firestorms⁴ and an overstretched fire brigade fought in vain in many places.

The Kaiser Wilhelm Memorial Church was destroyed; burning "*like a torch*" as one diarist recorded,⁵ and several other important buildings were either damaged or destroyed, including the British; French; Italian and Japanese embassies, the Charlottenburg Castle and the Berlin Zoo, killing numerous animals. The Army Ordinance Office; the Office of Munitions; the barracks of the Imperial Guard at Spandau and several armaments factories also fell victim to the raid.

Devastation was widespread and casualties horrific. The raid killed 2000 Berliners and rendered 175.000 homeless. The following night, a thousand more were killed and another 100.000 lost their homes. Minister of Armaments and War Production, Albert Speer, watching the spectacle from the top of the Zoo flak tower, wrote that the cloud hanging over Berlin the next morning made day look like night.

And Harris' campaign was not over yet; many more raids would follow.

"It will cost us between 400 and 500 aircraft. It will cost Germany the war"⁶

As the tide of war turned against Germany, Berlin would become the most bombed city in the European theater of war, sustaining almost as many raids as there are days in a year.⁷ In addition to infrastructure such as rail stations and marshalling yards, Harris, a rigid advocate of 'carpet bombing' tactics, frequently targeted residential areas leading to massive civilian losses and de-housing. Almost 70.000 tons of bombs was dropped by the British and Americans alone, and to this figure should be added the tonnage of shells and bombs that would later be delivered by the Red Army.

An unprecedented amount of explosives of which a large proportion lingers in the marshy Berlin soil to this day...

Anatomy of a Raid

How did a typical raid play out for the young men whose mission it was to carry it through? A young Canadian flight lieutenant serving with the 214th Squadron,⁸ No. 3 Group of Bomber Command, flying out of RAF Chedburgh, later wrote a book about his wartime service and provides us with an itinerary of a typical raid over Germany:

07:00 hrs: Day is beginning for the 2000 ground staff at the airfield. Target information for the next night has been received in code from Bomber Command.

08:00 hrs: Armourers roll out the huge 4000 pound bombs and smaller 500 pounders mounting them on trolleys to be towed out to the aircraft and pack the cases of incendiaries that will surround the high explosive bombs when they are winched into the bomb bay. Other armament crews feed tens of thousands of cartridges into the ammunition boxes which will service the gun turrets. At the fuel dump, oil and petrol tankers are filled. Mechanics rigorously check every bomber: engines, instruments, and hydraulic systems and maintenance crews are often at work until minutes before takeoff.



11:00 hrs: The Commanding Officer and his staff check weather forecasts and plan the night's operation, working against time for the afternoon briefing. Members of the Women's Auxiliary Air Force pack parachutes and check the many items of equipment and clothing required by each of the 210 airmen, while other WAAF's prepare rations and filling thermos flasks.

13:00 hrs: The aircrews gather in the briefing room, facing a stage where a map with the target hidden behind a curtain. All seated, the c/o reveal the target and distribute information including precise courses; known defences; tactics to be employed; timing; operating altitudes; permissible radio frequencies; weather forecasts, and issue maps to navigators and bomb aimers.



14:00 hrs: The bomb loads are now in place. Armourers feed in the ammunition belts for the Browning .303's. Mechanics make their final checks. Following the traditional pre operational meal of bacon and eggs, the crews are issued their flying gear, escape kits, and parachutes.

15:00 hrs: Smoking a last cigarette, crews are driven out to their aircraft. Once on board the men grope their way along a dark, narrow fuselage, stow their kit, and then settle down to the long pre flight checklists. If all is well, the flight engineer gives the traditional thumbs up to the ground crew.



16:00 hrs: As daylight fades the four Merlin engines sputter to life one by one. The aircraft taxis to the end of the runway and the take off run starts. It is a nerve wracking affair for the crew as the aircraft strains to lift its tremendous bomb and fuel loads.

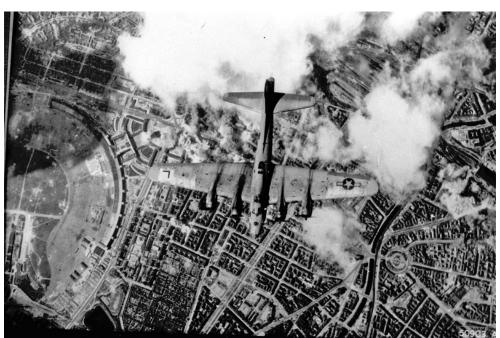
Dusk is gathering as the bomber flies inland and circles for an hour striving for altitude. Then, at a set moment, the bomber stream turns eastward toward enemy territory. In the hope of overwhelming the defences the bombers travel in a 'stream' of numerous aircraft, very close together and travelling the same course, accepting the danger of mid-air collision.

The German defences are on alert, warned of the bombers' approach by their 'Freya' early warning radar. Awaiting the aircraft of Bomber Command are batteries of ground based searchlights and radar controlled anti-aircraft guns.

Special units of 'illuminators' (Junkers 88s) fly above the bomber stream dropping strings of parachute flares to assist those German fighters, not equipped with onboard radar. The aircraft may be attacked by enemy fighters on the way to the target and at any time during their return to base.

The bombers employ 'Window'; strips of aluminum foil released by the bombers to produce false echoes on enemy radar.

Diversionary raids are sometimes staged, with the hope of drawing the Luftwaffe's attention away from the main target. The bombers' best defence, however, is cloud and darkness; their .303 calibre guns are no match for the 20mm cannon and specialized armaments of the Luftwaffe night fighters. The crew of a badly hit bomber had a one in five chance of escaping alive. The G forces of a diving or spiraling aircraft were often overwhelming as the aircrew attempted to reach their stowed parachutes, clip them on, and make their way to an escape hatch.



The photo shows an 8th Air Force B17 and must thus have been taken after they joined the battle in 1944. I chose it because it provides a good understanding of just how difficult 'precision bombing' must have been under the circumstances. Hitting a specific area, let alone a building, at maybe 500+ km/hour while hampered by clouds, smoke from burning buildings, intensive Flak and/or attacking, enemy fighters must have been virtually impossible. To the left (south, actually), Tempelhof Airport is clearly visible and in the right hand side you can make out Belle Alliance Platz [Mehringplatz] and the Landwehr Canal.

20:00 hrs: The climax of every trip was the 'run' over the target, often through searchlights and flak. The bomb aimers, spotting the red, green, or yellow target indicators dropped by the Pathfinder Force to mark their targets, give instructions for the bomb bay doors to be opened and guides the pilot for the final few minutes of the bomb run.

The aircraft lift 100 feet as their loads are released; then the doors are closed and, the weaving to avoid fighters begins again as the aircraft turn on to a westerly course for home, and the crew must remain vigilant for the entire flight.



Not all planes made it safely home. If you dodged enemy Flak over the target, escaped enemy fighters, avoided Flak again at the coast and made it safely to your base, you might still crash at landing due to bad weather or a crippled airframe; the fate of some 10% of any sortie.

24:00 hrs: The English coast, often treacherous to airmen with its low lying fog, is sighted. Ground staff cheer as their 'own'

aircraft approaches; others anxiously await crews who will be lucky to complete ten trips in these grim days. Longer routes, adverse weather, and the success of the Luftwaffe defences have all contributed to increased casualties.

Stiff and weary, the airmen climb into the waiting truck and head for the debriefing hut. There, fortified with coffee and rum, they go through the necessary questioning about the night's events. Another operation has been successfully completed; one more day of war is over.

[Excerpt from 'A Thousand Should Fall' by Murray Peden]

"The bomber will always get through"

The words, spoken by British interwar PM Stanley Baldwin already in 1932 and uttered in resignation⁹ over the development in aerial warfare since the Great War, stood the test of time as the great nations of Europe once again clashed in conflict. His somber view was seconded by Winston Churchill, then just MP for the Conservative Party, in his radio address of October 16, 1938, to the American people, pleading for greater involvement by the USA in Europe in the wake of the Munich conference. Churchill was worried by the massive rearmament and the political development in Hitler's Germany, especially the mighty Luftwaffe, stating: *"The flying peril is not a peril from which one can fly. It is necessary to face it where we stand. We cannot possibly retreat. We cannot move London."*

Unable to move their cities, nor retreat out of reach from this new menace, both sides strived to develop effective countermeasures against aerial onslaught. These concerns spurred three main areas of action; early **warning** (detecting the enemy, giving the population time to seek shelter and the air force time to scramble fighter planes), **thwarting** the onslaught (by means of blackout, camouflage, anti-aircraft fire and fighters) and **damage control** on the ground (firefighting, rescue and damage repairs).

In an ideal scenario, actions one and two should be able to keep the enemy at bay, not reaching the target at all. The illusion of that probably being the basis for Göring's boasting that no enemy plane would ever reach Berlin. As history demonstrated, it was but an illusion; the bomber always got through.

The call of Meyer's trumpet

The first British air raid on Berlin on August 25, 1940, mainly hitting the suburbs, caused little damage and no casualties, but already on the next night bombs fell in denser populated areas and at the end of that year some 200 Berliners had been killed and sixteen-hundred homes destroyed. More importantly, the raids made a mockery of the Luftwaffe's ability to protect the metropolis in spite of Göring's boasting assurances.

The realization spurred frantic efforts to protect Berlins civilian population and the workforce in pivotal branches of the armament industry located in the capital. Berlin was at that time seat of Germany's key players in radio, radar, telecommunications, and other essential electronics;¹⁰ an increasingly important part of modern warfare.

On October 10, 1940, six weeks after the first British raid, Hitler initiated the '**Führer-Sofort-Programm**' demanding the building of air-raid shelters

in Berlin and 60 other German cities with more than a hundred thousand residents. In August 1943, some 400+ of these were reportedly ready for use in Berlin, albeit in various stages of completion. Competing projects, i.e. the construction of the Atlantic Wall and the many Führer HQ's around Europe had resulted in a shortage of concrete and steel and in manpower.

To make up for these shortcomings, all suitable cellars in apartment buildings in were turned into improvised shelters, reinforced with heavy wooden beams, bricks, concrete and sandbags and equipped with sand pails for extinguishing of phosphor bombs, hurricane lanterns for lightning and tools for breaking through firewalls. Adjacent cellars had their walls penetrated and then rebuilt with a weaker wall that could easily be broken down if the residents of one cellar were trapped by a collapsing house.



When the alarm sounded, which the Berliner Schnauze mockingly had dubbed 'Meyer's Trumpet',¹¹ most Berliners thus went for their local 'Schutzkeller'; makeshift air raid shelter, usually in their own cellar, or alternatively to one of the public shelters.¹² The 'Hochbunkers' at the train stations¹³ and the six Flak towers, each housing thousands of people and considered bomb-proof, were popular places and likewise were some of the deeper U-Bahn stations.

Wittenau resident Gerda Drews: The warning system was very well-defined. We listened to the radio, and it would say: "Bombers coming from Hanover-Braunschweig!" Then we knew that Berlin was the target. We didn't have electricity, but we had an old-fashioned radio with a battery and a crystal, and we had to move the crystal to tune into the station. [2018 interview with 91 year old Gerda Drews, Elinor Florence blog]

Prudent Berliners each night packed a small suitcase with money, ration cards, precious belongings, a change of clothes and some food and water. It was impossible to predict whether your house was still standing when you emerged from the shelter after the raid.

A special initiative was the 'Mother & Child Program', requesting mothers with infant children to spend the nights in decommissioned gasometers, rebuilt as Hochbunkers. Two such facilities in Wedding and in Kreuzberg could cater for 6000 people.

Reaping the whirlwind

Ordinary Berliners, hitherto comparatively untouched by war in the air, with Harris' November campaign got a taste of what lay in store for them the next seventeen months. In the spring of 1944 the American 8th Air Force would commence massive daylight attacks, while the RAF continued nightly bombing; a scenario that would repeat itself until the Red Army stood in Berlin's suburbs.

ONE OF THE MOST GRIPPING accounts on what it was like to await your fate in the doubtful safety of the 'Schutzkeller' comes from an anonymous young Berlin schoolgirl. It dates from March 1945, but there is little reason to think that conditions were better during the horrendous November 1943 attacks:



"The room is filled with small talk and laughter. But behind this one can feel the nervous tension. There, an impact! The flak begins to fire. The tremors get stronger and stronger. There is less talk and the laughter ceases. Suddenly there is a deafening explosion! The light flickers and the room sways back and forth. We huddle together in fear. The old woman across from me begins to pray. Each of us feels the approach of death; maybe three more minutes, maybe two, maybe just one!

The young woman next to me stares blankly in front of her. She has already said goodbye to her life, like all of us. There! Smoke penetrates through a small crack in the door! It's just a small thread, and yet the stuffy cellar air is full of smoke in an instant. A woman begins to scream 'We are lost!', reaches for her bag and rushes to the door that leads deeper into the vaulted cellar. Many follow her. And as the room becomes black with smoke, the remaining can no longer stand it. The ground is still roaring and trembling from the impacts ...

Then someone shouts that the exit is blocked by rubble. Shortly afterwards a man yells: 'There is a fire above us, we have to get out of here!' Children screech and women howl; we are paralyzed and bewildered. What will happen now? Smoke now penetrates into the furthest room. The air is moist and warm, and the burning smoke bites the eyes; we stand close together! Death is with us now.

'The emergency exits are blocked,' the air raid warden says to us, 'We have to wait until they are cleared.' 'Wait, wait, until we suffocate', moans a young woman, anxiously hugging her child. Then; a fresh whiff of air! One exit is free. How can you describe the happiness when you have escaped death once again? Everyone pushes forward. The house might collapse! None of us know if the bombardment is over because the sirens are out of order. We're going up. Everything above and around us is on fire ..." [Capelle & Bovenkamp, p. 193]



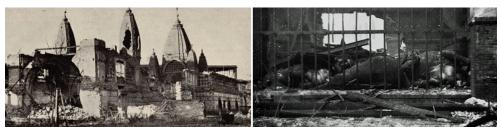
BUT BACK TO 1943 where renowned fighter ace Rudolf Galland had good reason to lament over the weather conditions which favored the attacking Britons who, through the introduction of the H2S ground radar was able to navigate and bomb with reasonable precision, while at the same time hampered the night fighter defense:

"During November, 1943, there was not one day of good flying weather. Germany was nearly always covered by a thick blanket of cloud. For a long time there had been no protection against area bombing. On the contrary, the more the sky was covered and the darker the nights, the more certain one could be that the British bombers would be over. They were able to bomb their target areas with accuracy through thick clouds with the radar methods they had developed." [Galland, p. 207]

"If you see a white plane, it's American; if it's black it's RAF. If you see no planes at all, that's the Luftwaffe."

Several Berlin civilians penned eye-witness accounts of how the November attacks were experienced by those in the receiving end. On the 18th, the attitude is relatively optimistic, but that changed just a few days hence.

Missie Vassiltchikov, 18 Nov.; "In the middle of supper at home [Woyrschstrasse]14 with Maria and Heinz Gersdorff there was suddenly a lot of violent shooting. As there is no cellar, we took refuge in the kitchen, which is half underground, its windows overlooking a small garden, and sat there for two hours. There were several fires in our neighborhood and it became quite noisy. We later heard that several hundred planes reached the outskirts of Berlin, but only fifty got through the flak barrage".



Numerous animals were killed at the November 22 air raid and many more later on in bombardments and in the final Battle for Berlin. Here it's the Elephant House in 1943.

Ursula von Kardoff, 22 Nov.; "We proceeded to Kurfürstendamm. The Gedächtniskirche was a bright, burning torch. For the first time, it looked like a romantic building ... all of the plaza seemed to be burning ... Romanisches Café, long time a soulless shell after the Nazi's had robbed it of its bohemian atmosphere, was also on fire. Also the Zoo was seriously hit, a lot of the animals had perished, others escaped. Eerie thought that a tiger may suddenly appear here ..." Marianne Feuersenger; "It was horrible! It thought that now it would be the end of us. But once again we escaped by the skin of our teeth. The attic, the third floor apartments, even the second floor apartments were burning. In the street, a tram was ablaze. In our house we were successful in extinguishing the firebombs. Close to us aerial mines detonated. Our apartment only had minor water damages and need new window panes. In my room, the blackout curtain is reasonably intact and thus I can write this by candlelight: We are again without electricity, gas and water. I urgently need candles. Mama can be happy that she need not be here. After [the raid] I had fire watch duty in the attic, now I will rest a bit and then to my workplace to see, if the building is still standing"

ALBERT SPEER, MINISTER OF ARMAMENT AND MUNITIONS, was in Berlin on November 22. Not seeking shelter but following the raid from the top of the Zoo Flak Tower, he has left one of the most vivid accounts, report style, of an air raid seen from the ground:



[Hopefully it is clear to all, but just in case; the illustration of the flak tower is - as is the case with the title page – an illustration, not an actual wartime photo, rather artist's impression, snatched from computer games. I doubt any real-life contemporary photos of this magnitude exist, but I find these recreations rather convincing as to how it would have actually looked.]

"I was having a conference in my private office on November 22, 1943, when the air-raid alarm sounded. It was about 7:30 P.M. A large fleet of bombers was reported heading toward Berlin. When the bombers reached Potsdam, I called off the meeting to drive to a nearby flak tower, intending to watch the attack from its platform, as was my wont. But I scarcely reached the top of the tower when I had to take shelter inside it; in spite of the tower's stout concrete walls, heavy hits nearby were shaking it: Injured antiaircraft gunners crowded down the stairs behind me; the air pressure form exploding bombs had hurled the into the walls."

"From the flak tower the air raids on Berlin were an unforgettable sight, and I had constantly to remind myself of the cruel reality in order not to be completely entranced by the scene: the illumination of the parachute flares, which the Berliners called 'Christmas trees', followed by flashes of explosions which were caught by the clouds of smoke, the innumerable probing searchlights, the excitement when a plane was caught and tried to escape the cone of light, the brief flaming torch when it was hit. No doubt about it, this Apocalypse provided a magnificent spectacle."

"For twenty minutes explosion followed explosion. From above I looked down into the well of the tower, where a closely packed crowd stood in the thickening haze formed by cement dust falling from the walls. When the rain of bombs ceased, I ventured out on the platform again. My nearby Ministry was one gigantic conflagration. I drove over there at once. A few secretaries, looking like Amazons in their steel helmets, were trying to save files even while isolated bombs went off in the vicinity. In place of my private office I found nothing but a huge bomb crater."

"The fire spread so quickly that nothing more could be rescued. But nearby was the eight-story building of the Army Ordnance Office and since the fire was spreading to it and we all were nerved up from the raid and feeling to urge to do something, we thronged into the imperiled building in order at least to save the valuable special telephones." [Speer, p. 394]

Missie Vassiltchikov, 23 Nov; "Last night the greater part of central Berlin was destroyed. In the afternoon there was heavy rain ... I got drenched on the way and arrived late at the meeting [at her job] which went on until shortly after 7 p.m. I was rushing down the stairs to go home when the hall porter intercepted me with the ominous words 'Luftgefahr 15' [air-raid danger 15]. This meant that large enemy air formations were on their way."



"The streets were full of people. Many just stood around, for the visibility was so poor on account of the rain that nobody expected the raid to last long or cause much damage."

"At every crash the house shook. The air pressure was dreadful and the noise deafening. For the first time I understood what the expression 'Bombenteppich' [carpet bombing] means – the Allies call it 'saturation bombing'. At one point there was a shower of broken glass and all three doors of the basement flew into the room, torn off their hinges. We pressed them back into place and leant against them to try to keep them shut ... an incendiary flare fell hissing into our entrance and the men crept out to extinguish it ... the planes did not come in waves, as they do usually, but kept on droning ceaselessly overhead for more than an hour"



Hans-Georg von Strudnitz, 22 Nov; "At Pankow-Schönhausen we were all told to alight (from the S-train) ... the air was filled with acrid smoke ... we made our way as best we could on foot ... after an hour, we gave up the attempt to reach the Alexanderplatz. The air was so polluted with the smell of burning and with the fumes of escaping gas, the darkness was so impenetrable and the torrents of rain so fierce that our strength began to fail us."

[Upon finally reaching Rosenthaler Plats U-Bahn]; "The underground train took us to the terminus in the Alexanderplatz, whence we emerged into the burning Hell that was Berlin. Thus broke the grim morning of November 23.

All around the destroyed station in the Alexanderplatz, the great warehouses were burning fiercely ... from one wing gigantic tongues of flame shot skywards. We crossed the Spree into the burning banking quarter. The Zeughaus, the university, the Hedwigskirche and the National Library had all been reduced to ashes."

Then we reached the Handelallee and our own home. Here, too, the park [Tiergarten] had been ploughed up by the bombs, the Kaiser Friedrich church had been reduced to ruins by a direct hit and the four-storeyed buildings to burnt-out shells. Our own house, No. 12, had escaped damage in the attack itself, but had succumbed to the flames consuming its neighbors ... we gazed up at the windows of the second floor, behind which there was a ghastly, flickering glare ... everything was irretrievably lost – our supplies of food, which we had built up over the years, three hundred bottles of wine, our furniture, everything.

Firefighting



Volunteer female air raid wardens and firefighters. Right; in action – probably a drill. Bottom: Hitler Youth boys in a firefighter role; looks like they are some 12-13 years old.

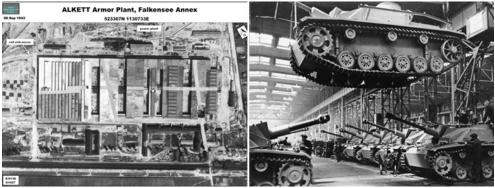
Industry and infrastructure important to the war effort had absolute priority to the service of the Berlin Fire Dept.¹⁵ and in most cases ordinary citizens were left to their own providence fighting fires, rescuing people and clearing rubble in residential areas. They could count on some help from air raid wardens, volunteer corps and boys from the Hitler Jugend.

Wednesday, November 24, 1943: "Another major attack, this time on the center of town. We form a bucket brigade on the Lützowufer, from the Landwehr Canal up to the sixth story. Our hands are so stiff from lugging and passing on that the cigarettes fall from nerveless fingers when we take a break. It's a shame, too; cigarettes have got scarce in Berlin. At twilight we hurry home, on foot, for all transportation is at a standstill." [Andreas-Friedrich, p. 110]

November 26

Hans-Georg von Strudnitz, 23 Nov; What the first attack spared was destroyed by the second during the following night. Those who lived through both say that the latter was the worse, since an even higher proportion of explosive bombs were dropped. The burning city made a clearly visible target for the attackers. [Strudnitz quotes above, p. 137 - 140]

On November 26 Berlin was again attacked by close to 450 Lancaster's preceded by fast Mosquito bombers that laid a pattern of flares to mark the targets. Most of the damage was in the semi-industrial suburb of Reinickendorf, but the city centre and the Siemensstadt (with its many electrical equipment factories), was also hit.



An aerial reconnaissance photo from September that year and a view of an assembly hall. In November fire would rain from the sky and lay the factory to waste.

SPEER RECOUNTS; "On November 26, four days after the destruction of my Ministry, another major raid on Berlin started huge fires in our most important tank factory, Alkett¹⁶ [Breitenbachstraße, Reinickendorf], The Berlin central telephone exchange had been destroyed. My colleague Saur hit on the idea of reaching the Berlin fire brigade by way of our still intact direct line to the Fuehrer's headquarters. In this way Hitler, too, learned of the blaze, and without making any further inquiries ordered all the fire departments in the vicinity of Berlin to report to the burning tank plant."



Hitler's uncalled intervention ultimately led to the assembly and congestion of fire engines around the – now extinguished – tank factory while other parts of the city were burning fiercely. The Alket factory was almost completely destroyed with most of its irreplaceable tools and machinery being out of action.

"The sky over Berlin turns blood red in a dreary beauty; I just can't watch it anymore!"

We will end the November 1943 account with the words Göbbels wrote in his diary. By morning on the 27th, more than 3000 Berliners had been killed and almost tenfold rendered homeless. Even so, it was just a prelude of what was to come in the months and years ahead. Ultimately, Bomber Command would lose more than 500 aircraft over Berlin, with their crews killed or captured, and in the end the raids failed to break the morale of the Berliners as predicted by Harris, let alone subjugate Nazi Germany.

Opposing forces

In 1943, Germany, who had entered the war in 1939 with a top-notch fleet of war machines on land and in the air, seriously outgunning any opponent, was gradually beginning to lag behind. British and American designers had worked tirelessly to create new generations of bomber and fighter planes and were gaining the upper hand in the skies over Germany. Conflicting interests between the military service arms, inflated egos, poor management in the air wing of the armaments industry (that was before Speer stepped in) and a tendency to embrace too many new ideas and projects had hampered the necessary modernization of the Luftwaffe.

Hitler's Luftwaffe adjutant wrote in his diary; "Air raids on 22 and 23 November caused substantial devastation to the heart of Berlin. The Gauleiter of Berlin, Dr. Groeb, reported personally to Hitler and made particular mention of the outstanding morale shown by the people of the city over the two nights. Hitler was again filled with rage and anger against the Luftwaffe, which was never able to stop a raid taking place."

"He repeated these criticisms in bitter terms on 26 November at the impatiently awaited aircraft exhibition at Insterburg airfield. All those in some way responsible for aircraft production were present – Göring, Milch, Speer, Saur, Messerschmitt, Galland, Vorwald and others ... Hitler passed very calmly before the long line of aircraft, which included the newest version of the Me 109, the Me 410, Ar 234, Do 335 and Me 262 ... Hitler was seeing the Me 262 for the first time and was very impressed by the look of it."

[von Below, p. 186]



The sleek Messerschmitt Me 262. With its shark-like appearance, superior speed and four 30 mm cannons it commanded respect and could have been a game changer.

Britain, a victor of the Great War, had hesitated in its rearmament efforts much of the interwar years and entered the war with a good deal of outdated

equipment, especially in the field of heavy bombers. However, as the air war gained momentum a renewal of the air fleet was heavily prioritized and superior new designs in both fighters and bombers rapidly came into service. Alongside, many new inventions i.e. in radar saw the light of day, and Britain slowly gained the upper hand in the air.

One area where the German aviation industry did have an edge was on jet engines where the iconic Messerschmitt two-engine jet fighter temporarily outranked all Allied machines. With its impressive performances, outspeeding the British Spitfire by 300 km/h and the American P51 Mustang by 200, and outgunning both with its four 30 mm cannons, this sleek fighter could have had quite an impact on the Allied air raids over Germany.

Arriving too late and in insufficient numbers; hampered by lack of necessary alloys for the engines, out-bombed production facilities and a chronic shortage of fuel combined with a dwindling number of skilled pilots,¹⁷ not to mention Hitler's demand that it was to be converted into a dive-bomber, the Me 262 never achieved its full potential, and it was up to the victorious Allied to further develop the jet engine technology.

Some technical stuff

THE AVRO LANCASTER was Britain's major heavy bomber during the latter part of World War Two. It entered service in 1942 and enabled the RAF to bomb targets hitherto out of reach. Capable of carrying bomb loads of up to ten tons per airplane, a sortie of Lancasters could wreck havoc on a large production area such as the Ruhr or on any major city.

The Lancaster could carry a versatile mix of ordnance; blockbusters, incendiaries, cluster bombs, high-explosive general-purpose and timedelayed devices. A number of specially designed bombs for specific application, i.e. the 'bouncing bomb' used at the Möhne Damm raid and the very large 'earthquake bombe', Tall Boy & Grand Slam could also be delivered by the Lancaster.

DE HAVILLAND MOSQUITO was a multi-role combat aircraft, used as a bomber, a fighter, a pathfinder and in a photo reconnaissance role. Partly built of wood and powered by two Rolls Royce Merlin engines it was fast and agile and easily outran many of its contemporary opponents. The bomb bay could hold up to 1.800 kg.

THE H2S RADAR was a ground-scanning, airborne radar and the first of its kind. I was capable of identifying larger ground signatures (lakes, rivers, forests and built-up areas) at long range and thus enabled relatively precise area bombing. It could also serve as a general navigation aide.

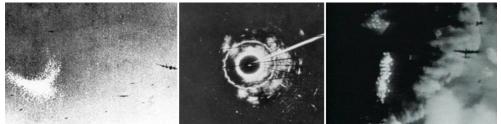


Photo: Left; 'Windows' are being applied (cloud to the left). Middle: H2S radar image over a German city. Right: 'Christmas tree' marks the target.

CHRISTMAS TREES were aerial pyrotechnics or 'flares', dropped or parachuted from a pathfinder aircraft (often a Mosquito) to indicate a target area. Flares were available in different colors to further indicate the use of specific ordnance for an area or designate an area to a specific wave or section of bombers.

WINDOWS were small strips of aluminum foil dropped in large quantities from bombers to disturb enemy radar by generating 'false' echoes. First used on the July 25, 1943 attack on Hamburg, it made radar operators frantically report the presence of 11.000+ enemy bombers. As a result of the deception, radar-operated searchlights and anti-aircraft guns were literally blinded and fired at random in the air. Night fighters were deprived of ground guidance and criss-crossed the sky aimlessly. Later, new inventions allowed radar to distinguish between strips and airplanes thus minimizing the effect of Windows.

KAMMHUBER-LINIE was a line of German radar stations, stretching from Denmark in the north to the French coast. Besides providing early warning, each radar station controlled a number of (night)fighters for a first rebuff of the intruders. The warning of an incoming enemy made it possible to sound the air-raid alarm timely in cities that lay on the route of the bombers.

THE FLAK TOWERS were mighty concrete fortresses, bristling with various types of radar-guided anti-aircraft guns. With a free line of fire, the largest guns were capable of sending their shells way above the service ceiling of contemporary bombers. Towers were erected in Berlin, Hamburg and Vienna. Read about them here: <u>https://bit.ly/3bMGaUj</u>

On Arthur Harris

Arthur Travers Harris, Marshal of the Royal Air Force, chief of Bomber Command and architect of the British bombing campaigns over Germany, was born in 1892. His father, a civil servant, was based in India and Harris grew up without a man in the house for long periods of his childhood. He frequented a good private school, but had no lust for studying. At the tender age of seventeen, he moved to Rhodesia [Zimbabwe] to be a businessman.



Air Marshal Arthur Harris at his desk sometime during the war. On the right photo, Harris, at the age of 81 appeared in the 1973 Thames TV series 'The World at War' along with other surviving notabilities from the war. Harris passed away in 1984.

As World War One broke out in 1914, he joined the Rhodesian forces fighting the enemy in German South West Africa [Namibia]. In 1915, he returned to Britain and applied for the Royal Flying Corps. A year later, having qualified as a fighter pilot, he served at the front in France. Harris

stayed with the RAF during the inter-war years, serving overseas. When the Second World War broke out in 1939, Harris, now a Major, returned to England and took command of the RAF No. 5 Bomber Group in Lincolnshire. In February 1942 he was appointed head of Bomber Command, a position he retained throughout the war, culminating in his 1946 elevation to Marshal of the Royal Air Force.

A firm believer that large-scale 'area' or 'saturation' bombing alone would eventually destroy the Nazi regimes will to fight, Harris tirelessly propagated this strategy. As the war progressed, the moral justification of the bombing raids - and indeed the usefulness, as the spirits of the German people was not broken as foreseen - was called into question, but Harris stood firm. His unrelenting attitude earned him the nickname 'Bomber Harris', or sometimes even 'Butcher Harris'.¹⁸

A note on photos & translations

The photos in this article are for illustrative purposes and not necessarily directly associated with the text. They are primarily from the Public Domain and often found on facebook Pages relating to Berlin (see list below) Original source is stated if known, but as numerous orphaned photos are floating on the internet without reliable captions, this is not always possible. English quotes appearing here may be abridged but are otherwise unedited. Other languages [German, Danish] are my translation.

Further reading

Arnold, Ditmar & Ingmar: **Dunkle Welten**, © 2010 Chr. Links Verlag Below, Nicolaus von: 'At Hitler's side', © 2001 Greenhill Bodle, Peter & Boulter, Bertie: 'Mosquito to Berlin', © 2007 Pen & Sword Capelle & Bovencamp: Berlin unter Hitler 1933-1945, © 2007 tosa Verlag Donath, Matthias: 'Architecture in Berlin 1933-1945', © 2006, Lukas Feursenger, Marianne: 'Mein Kriegstagebuch', © 1982 Heider Freiburg Florence, Elinor: 'My Favourite Veterans', © 2016, Durndon Press Galland, Adolf: 'The First and the Last', © 1975 Fontana Books Kardorff, Ursula: 'Dagbog fra Berlin', © 1963 Jespersen & Pio Kronika, Jacob: 'Berlin's Undergang', © 2014 Lindhart & Ringhof Middlebrook, Martin: 'The Berlin Raids', © 1988 Cassell & Co Peden, Murray: 'A Thousand Should Fall' © 2003 Dundurn Speer, Albert: 'Inside the Third Reich', © 2009 Phoenix Strudnitz, Hans-Georg von: 'While Berlin burns' © 2011, Frontline Vassiltchikov, Missie , 'The Berlin Diaries 1940-1945' © 1999 Pimlico

Great facebook sources

If you have a facebook profile – and you probably do since you ended up here – there are many valuable resources to be found for the amateur historian and the armchair general. I have listed a few of my favorites here for your convenience

BERLIN 1945. A great place to find lots of photos from bombed-out Berlin and discussions on places, events and technical questions.

BERLIN BATTLE DAMAGE. The ultimate source of what you can find of traces from the war in Berlin today. Lots of photos from locations to visit.

BERLIN LUFTTERROR. The story of air war Berlin told through photos and text with many examples of the horrors of aerial warfare.

Notes

⁶ In spite of Harris' predictions, Germany did not fold and give up on this occasion. Further, the Royal Air Force lost more than 7,000 aircrew and 1,047 bombers, 5.1 per cent of the sorties flown; 1,682 aircraft were damaged or written off. [Wikipedia]

⁷ Berlin was subject to 363 air raids during WW2, bombed by the RAF Bomber Command 1940 – 1945 and by the USAAF Eighth Air Force from 1943 onwards. Also the French Air Force and the Red Air Force bombed the city. British bombers dropped 45,517 tons of bombs, while American aircraft dropped 23,000 tons. As the bombings continued, more and more people fled the city and by May 1945, 1.7 million people (40% of the population) had fled. [Wikipedia]

⁸ 214 Squadron's real-life WWII bomber operations and crews formed the basis for the 1948 and 1949 BBC Radio drama "I Shan't Be Home To Dinner", written by BBC Radio actress Freda Falconer, widow of 214 Squadron Observer Flt/Lt Keith Falconer D.F.C. The play explored the powerful sense of family and mutual support engendered on the WWII RAF airfields, recording what daily life was like on the ground both for the aircrews and the wives, lovers and families who also served by their very presence and support. Written to pay tribute to the bravery of airmen, the play is very likely unique as war play written by a woman which for the first time also shone a light on the ground support of the "wives who waited" throughout the war, also one of the only dramas written by a woman to be produced in the flagship prime-time BBC Radio Saturday Night Theatre slot. [Wikipedia]

⁹ The phrase stems from a 1932 speech "A Fear for the Future" given to the British Parliament. His speech stated that contemporary bomber aircraft had the performance necessary to conduct a strategic bombing campaign that would destroy a country's cities and there was little that could be done in response. [Wikipedia]

¹ See paragraph 'Some technical stuff'.

² Postwar, Churchill wrote that "... *the only thing that ever really frightened me during the war was the U-boat peril*", thus correctly assessing that Britain was in a struggle for dear life against the German U-boats.

³ Three mighty Flak Tower groups had been erected in Berlin after the first British raid in 1940; in Humboldthain and Friedrichshain parks and in the Berlin Zoo. Several additional rings of anti-aircraft batteries surrounded Berlin.

⁴ Not to be confused with the 'real' firestorms of Hamburg and Dresden, killing people in their thousands. More like local over-ignitions, fuelled by gusts of wind and consuming several buildings.

⁵ The diarist was Ursula von Kardorff. Some of the buildings mentioned were rebuilt after the war, but the church was not, its ruins standing to this day as a memorial over the Battle for Berlin in the air.

¹⁰ Close to sixty percent of all electronics manufacturing was based in Berlin; 95% of all radios; 60-70% of telecommunications and all U-boat electromotors were manufactured here. Further 50% of aircraft engines.

¹¹ Called so because of Hermann Göring's boasting that 'you can call me Mayer if any enemy airplane ever reach Berlin'. Listen to Meyer's Trumpet here: [https://www.youtube.com/watch?v=pFuEystn7SY]

¹² There were many public shelters in Berlin. Best known are probably the Flak towers, each capable of holding up to 15.000 people, the Hochbunkers of Anhalter and Friedrichsstrasse railway stations and close to the Sportspalast, the underground bunkers at Alexanderplatz and Gesundbrunnen, but there were many more.

¹³ The Reichsbahn had erected sturdy bunkers at the Nordbahnhof, the Anhalter, and close to the Friedrichstrasse Stations. The two latter still exists.

¹⁴ Woyrschstrasse [now Genthiner Str.] was only some 1500 meter from the Zoo Flak Tower. When its four double-barreled 128 mm guns went ablaze, a thunderous noise rocked the neighborhood

¹⁵ On April 22, 1945, in preparation for the Soviet arrival, Göbbels ordered the Fire Brigade to retreat to Hamburg, so that they should not fall into the hands of the enemy. When head of the Brigade, Major General Walter Golbach, heard of the order he immediately rescinded it and directed the engines to return to the city. Hearing that he was to be arrested for treachery, Golbach tried to commit suicide and failed. He was subsequently executed by the SS. [Berlin Experiences]

¹⁶ From 1937, ALKETT was a major producer of armored vehicles for the Wehrmacht. In1943 the focus of production was the Sturmgeshutz III (StuG III) assault gun, Germany's most produced armored vehicle. The new facility was located about 20 km west other ALKETT plants in the Borsigwalde, Tegel, and Spandau districts of Berlin. In November 1943, the three main ALKETT plants suffered heavy damage from allied air attacks, virtually halting production, which did not recover until the new annex came on line in June 1944. [WW2 Aerial Reconnaissance Studies]

¹⁷ One outstanding fighter ace, who got to fly the Me 262 and who survived the war, was Adolf Galland. In his memoir he describes how he and his fellow pilots, on May 3, 1945, watch American fighters circle over their Salzburg aerodrome. Only option now was to set their magnificent war machines ablaze before the fell into enemy hands.

¹⁸ Harris apparently never left that view. In an interview in the 1973 blockbuster TV series 'World at War', questioned about the justification of the attack on Dresden, he bluntly stated that if necessary, he would 'do it again'! A short bio: https://bit.ly/3FQuFJg