

AN EFFORT OF BIBLICAL PROPORTIONS - THE BERLIN AIRLIFT 1948-1949

By Mr Sebastian Cox

Biography: Sebastian Cox has been the Head of the Air Historical Branch (AHB) since 1996. Having previously worked at the RAF Museum, he has been a member of the AHB staff since 1984. He holds degrees from Warwick University and King's College London, is a Fellow of the Royal Historical Society, and was awarded an OBE for services to RAF history in 2017.

Abstract: In the early months of 1948, Britain, the United States and France became frustrated at Soviet obstructionism over economic reform in Germany, which theoretically required all four powers' agreement. The Western Allies determined to introduce reforms, including currency reform, in the Western Zones with or without Soviet agreement. The Soviets, recognising an economic and political threat to their position in Germany, instituted a blockade of land routes into Berlin. The Allies used air power to airlift supplies to a city of 2.5 million people isolated in the middle of the Soviet Zone. Short of an act of war, or the airlift failing (as the Soviets expected it would) the Soviets could not prevent the aerial relief operation and were eventually forced to concede defeat in the first serious clash of the Cold War.

Disclaimer: The views expressed are those of the authors concerned, not necessarily the MOD.

In the beginning, God created Heaven and Earth. Then he created the Berlin Airlift to cure keen pilots of their sinful desire to fly aeroplanes.

Wing Commander “Mick” Ensor DSO* DFC* AFC RNZAF & RAF

Wartime veteran of Coastal Command, after flying 200 airlift sorties with 206 Squadron on the Avro York.

INTRODUCTION

Relations between the victorious Allied powers, Britain, the USA and the USSR during the Second World War were not always entirely harmonious. However, they did, through summit meetings at Yalta and Potsdam and via a joint European Advisory Council (EAC), settle the outlines of their post-war intentions and policies towards a defeated Germany. Amongst the many issues they agreed in outline were the boundaries of the three occupation zones, soon extended to four with the addition of a French zone. Berlin had been the capital of Germany since German unification in 1871, and the boundaries agreed placed the city deep inside the Soviet Zone but it too was to be sub-divided zonally between the four occupying powers. The EAC proposed that each occupation zone should have a military governor with wide powers and that they would act collectively through an Allied Control Council (ACC) to reach agreement on matters of common or wider interest such as German disarmament, de-Nazification, and the post-war German economy and government including elections. Some western officials wanted to include formal agreement on access corridors to Berlin through the Soviet Zone but, partly because the US military regarded that as solely a matter for them, and partly because others were anxious to maintain good relations with the Soviets and believed any problems would be solved with patience and goodwill, no such agreement was included.¹ The only question of access on which the occupying powers reached agreement was in respect of the air. There was a general recognition that the immediate post-war situation whereby pilots did more or less as they pleased in the airspace around Berlin (and which had led to a number of near misses) needed to be addressed. Consequently, on 30 November 1945 the ACC approved a paper which created three air corridors into Berlin from the Western zones, each twenty miles wide and extending from the ground to 10,000 feet and meeting a circular zone above Berlin twenty miles in diameter. Traffic was directed by a quadripartite Berlin Air Safety Centre.² The deeper significance of this agreement was not recognised at the time, but it was to provide the firm legal basis for what followed and was to prove the key element in ensuring the Western Allies’ continued position and presence in the city beyond 1948.

It was soon to become apparent that goodwill was notably absent from Soviet political discourse. Worse still, the EAC proposed that the ACC must reach unanimous conclusions, which effectively granted the Soviets the power of veto and significant scope for obstruction and delay should they be so minded, which, as it turned out, they frequently were. The requirement for unanimity was, as Ann and John Tusa point out,

‘a destructive weapon whose use could prevent the formulation of common policies and bring fatal discord into four-Power government’.³ The EAC also proposed that Berlin, though subdivided, would be governed by the three (later four) powers on the same principle, through a Kommandatura consisting of the three military governors. Here too, the Western allies had stored up trouble for themselves.

The ‘Big Three’ – Churchill, Roosevelt and Stalin – accepted the EAC proposals at Yalta. Once victory was secure, the leaders met again at Potsdam for a summit lasting just over two weeks, but now Roosevelt was dead and Churchill departed after just three days, defeated in the general election and replaced by Clement Attlee and his foreign secretary Ernest Bevin. Attlee was shrewd and had few illusions about Stalin, and Bevin was a socialist who had spent his life fighting against communists in the trades union movement. Neither harboured many illusions about the Soviet leader and Potsdam was where early signs of the Soviet attitude were first manifest, with Stalin unilaterally announcing his redrawing of Germany’s eastern borders. If the western military harboured any expectations that some ‘brotherhood of arms’ from the wartime alliance would be evident in their relations with the Soviets, they were rapidly disillusioned. Colonel Howley of the US Army led the first convoy of military vehicles to cross into the Soviet Zone on 17 June 1945 expecting to form the advanced guard of the US Garrison in Berlin. As soon as they crossed the bridge from the American zone they were stopped by Soviet troops who demanded that the size of the convoy be reduced by half. When they reached Berlin they were again stopped and redirected to the suburb of Babelsberg outside the city where they remained for a week before being allowed to proceed to their barracks in the city, which the Soviet Army then handed over with much parade-ground pomp and ceremony, only for the Americans to discover once inside that they had stripped the barracks of everything right down to the light fittings, toilets and hand basins. Had they but known it, the Americans had just received an early lesson in the Soviets’ approach to “reparations,” which included removing everything down to literally the kitchen sink. Howley’s men camped out for a week in the woods. The first British column did not fare much better, being told that all the Elbe bridges had necessarily been closed for “repairs”. A swift reconnaissance soon located an unguarded crossing and the column proceeded only to meet further bridge problems in Berlin where the Soviets had “accidentally” destroyed a bridge over the Havel. The British too camped out – on the site of the 1936 Olympics.⁴ The RAF party sent to occupy Gatow airfield met with an even more frosty reception, being promptly detained in a hangar for twenty-four hours and the commander of the initial unit, Wing Commander Ellis of 19 Staging Post, was kept under lock and key for a further twenty-four, ostensibly on the grounds that he had arrived “too early”!⁵ These were the early manifestations of a deliberate obstructionism from the Soviet authorities, petty or serious, physical or bureaucratic or both, and the rationale, as with the bridges, was often transparently false: it was an attitude, indeed a policy, with which the western allies were to become all too familiar.

When the British and American troops reached Berlin they found it was a city in name only. Devastated by Bomber Command's and the Eighth Air Force's bombers it had also been pounded by Soviet artillery during the fierce and bloody battle inside the city which characterised the last days of the Third Reich. The urban landscape in large parts of the city consisted not of streets between buildings, but roads bulldozed between two piles of rubble, beneath which many of the inhabitants lived a troglodytic existence in the cellars below the ruins. Life for the inhabitants was especially grim, not merely because of their living conditions and the lack of basic amenities (for example, none of the city's eighty-seven sewage systems was functioning), but also because of the behaviour of the occupying Soviet Army. The Soviets engaged in both official and unofficial looting on a gargantuan scale. As "reparations", they stripped Eastern Germany bare of industrial plant, moving 3,500 factories and more than a million pieces of industrial plant to the Soviet Union. This left two million workers without jobs, but they may have been the lucky ones as thousands of individuals with technical or managerial skills the Soviets lacked were themselves forcibly removed to the Soviet Union.⁶ The Soviets also utilised former concentration camps such as Buchenwald for "re-education" of those who dissented, branding them as Nazis. It has been estimated that some 200,000 people were sent to these camps between 1945 and 1950 and that a third of them died.⁷ These were the actions of Soviet officialdom: the behaviour of the Soviet troops was equally problematic for Berliners. The barbaric behaviour of the German invaders in Russia and the brutality of life in the Soviet Army bred a contempt and desire for revenge which the Soviet authorities had little inclination to curb.

There were undoubtedly instances of western occupiers engaging in such practices as looting and rape, though they also tended to use "economic" muscle to obtain what they wanted from German women rather than physical muscle. Western armies, however, made at least some attempts to curb and punish such activities. The attitude of the Soviets was exemplified by Stalin himself, who when challenged on the behaviour of his troops became tearful and told his interlocutor he could not understand the problem 'if a soldier has crossed thousands of kilometres through blood and fire and earth and has a little fun with a woman or takes some trifles.'⁸ Soviet soldiers had little to offer economically in any case but were temperamentally disinclined to offer anything to a German in exchange for something that they could take by force. Rape was therefore a horrific fact of life for German women in any area controlled by the Soviets. Looting was equally condoned with anything valuable - watch, bicycle, jewellery etcetera - simply appropriated at the point of a gun or bayonet. Items were not merely looted but often gratuitously smashed before their owners' eyes. This activity continued long after the trauma of combat had subsided. It bred in the German population, including the Berliners, feelings of utter contempt and hatred for the Soviets which were to prove of immense political importance as our story unfolds. One Soviet commissar did apparently comment: 'This will cost us a million roubles a day - political roubles.'⁹ He was an insightful

exception, as Soviet troops effectively undermined the efforts of the cohort of German communists imported from Moscow to organise the political takeover of Berlin.

The Soviets and German communists did their very best simultaneously to appear true democrats, appointing members of other parties to administrative posts and publishing a manifesto devoid of Marx or even socialism. But theirs was a deliberate waiting game – they also gradually sought to intimidate opponents and tried hard to engineer a merger of the Communist Party of Germany with the Social Democratic Party of Germany as part of their long term strategy to undermine and take over government by stealth. The Social Democrats would have none of it and engineered their own referendum amongst their members on the proposed merger which was roundly rejected – except in the Soviet Zone where the result, defeat for the proposal, was declared “irrelevant” and a forced merger instigated to form a new party, the Social Unity Party. In the 1946 elections to the City Assembly on 20 October 1946, the Social Democrats got 48 per cent of the vote and 63 seats, with the Social Unity Party getting only 19.8 per cent overall and just 21 per cent in the Soviet Zone despite rigging and intimidation, giving them just 26 seats. The Christian Democrats had 29 seats and the Liberals 12.¹⁰ The attempt to manipulate elections to allow the Communists a “democratic” takeover of the city had clearly failed. The Soviets attempted to circumvent the vote by stating that a phrase in the agreements requiring the Kommandatura to give permission for appointments to the City Government also applied to elected individuals. The Allies demurred, but eventually after six weeks allowed three Social Unity Party members to serve on the eighteen-man city executive and agreed to exclude three men that the Soviets vetoed.

The fate of Berlin was, however, not simply tied to local politics. Equally, if not more, important was the fate of Germany itself. At Potsdam it had been agreed that Germany would be governed as one economic entity. The Soviets had used this to demand, and continue to demand, that some production and resources from the western zones be transferred to them, but steadfastly refused to operate in a similar fashion in respect to food, at least until reparations had been settled. As eastern Germany had been the source of much of Germany’s food supply this caused serious problems for the western allies. The British, for example, had to import a million tons of food into Germany in the ten months after the War at a time when rationing in Britain was still in place and was actually set lower than the wartime level. The Chancellor of the Exchequer characterised the annual cost of £80 million as ‘paying reparations to the Germans.’¹¹ Germany was on the verge of starvation and, as the American Military Governor remarked, ‘There is no choice between becoming a Communist on 1,500 calories and a believer in democracy on 1,000 calories.’¹² The increasingly frustrated western Allies were realising that the prospects for German recovery in the face of Soviet intransigence were slim and that economic reform with or without the Russians was essential, not just for German recovery, but for Europe. In July 1946 the British and Americans announced that they would combine their zones to create a single economic entity – the so-called BiZone.

A more far-reaching and fundamental reassessment of American policy soon followed the appointment of a new US Secretary of State, General George C Marshall, after whom a new regenerative policy to aid Europe was to be named. The Marshall Plan, announced in June 1947, offered economic assistance to all who desired it, including the Soviets.

Stalin predictably rejected it. His plan was, and always had been, to achieve a communist Soviet-dominated Germany, which in turn could be utilised to undermine liberal democratic government in Europe, particularly France and Italy. It was politically impossible for him to accept Marshall aid and the Soviets also prevented any satellite nation from accepting. In October 1947 the Soviet foreign office concluded that Britain and the US were moving towards dividing Germany and preventing Soviet access (which they were still demanding) to the resources of western Germany, notably the Ruhr.¹³ Soviet attitudes hardened still further, as did those of the West. The US, the UK and France, together with the Benelux countries, held a conference in London in early 1948 which agreed to the economic merger of all three western zones and the establishment of a federal government – in other words, agreed to lay the foundations of the future Federal Republic of Germany. Division of Germany was now very close to reality. The Conference met during one of the coldest UK winters on record but, as it convened, the real chill came with the news of a communist coup carried out against the democratically-elected government of Czechoslovakia, with a Soviet Deputy Foreign Minister in Prague and Red Army units on the border. The result in Prague may have pleased Stalin in the short term, but its long-term effects were less positive for him; after the agreements in London, several European powers signed a mutual defence agreement in Brussels in March and during the same month Western European and North American states began preliminary discussions on a possible Atlantic pact.

In addition, the British and Americans moved to introduce currency reform. The official currency in Germany, including Berlin, was the “Occupation Mark”, but the Soviets had insisted on being given a set of printing plates which they then used quite literally to print money which they paid to their troops, often including large amounts of backpay. At the same time, the official exchange rate for O Marks to the dollar was \$1 to 10 O Marks, but the black market rate was \$1 to 1,500. A US soldier could change \$10 on the black market for 1,500 O Marks and then change those black market Marks back officially for \$100 making a swift and profitable killing of \$90 on his \$10 investment.¹⁴ The predictable result was rampant inflation, a nightmare for any German normally, but especially so for those with memories of the Weimar Republic.¹⁵ The establishment of a Central Bank for the western zones presaged the currency reform that the British and Americans were planning.

In Berlin, the Soviets had started counter-moves following the London conference. They determined on a policy to harass and to restrict and “regulate” western access to the city. Marshal Sokolovsky, the Soviet Military Governor, was summoned to Moscow on

9 March 1948. On his return, he attended a meeting of the Allied Control Council on 20 March looking, according to the British Governor, General Robertson, 'tired and grim', as well he might. He circulated a paper demanding details of the London conference and the British and Soviets each accused the other of taking unilateral actions. Receiving no satisfaction on the London conference, Sokolovsky walked out of the meeting declaring it closed.¹⁶ Though the western Allies did not know it, the ACC was never to meet again. The previous day Stalin had remarked to German communist leaders 'perhaps we can kick them [i.e. the Western Allies] out'.¹⁷ Late on 31 March, General Dratvin, Sokolovsky's deputy, delivered a letter telling the western powers of 'certain supplementary regulations' governing traffic between the Western Zones and Berlin'. It gave twenty-four hours' notice that goods and persons passing through the Soviet Zone were to be subject to inspection and approval by the Soviet authorities.¹⁸ The harassment actually began much earlier. Two British military trains from opposite ends of the corridor were stopped that night, and when inspections were refused they were shunted into sidings. A British woman climbed down and, helped by soldiers, built a bonfire, and true to national form made food and, more importantly, tea. On the other train, the Britons made friends with the Americans on the next door train who had been similarly side-tracked, and also made bonfires and learnt how to eat US steak-and-kidney pudding using toothbrushes and nail files.¹⁹ Eventually the trains returned whence they came and the British and Americans cancelled all further rail moves. Further harassment followed, and on 9 April the Soviets closed the autobahn. None of these measures yet added up to a full blockade and later in the month the military trains resumed. However, the Americans in particular, and the British to a limited degree, reacted by flying people and material in and out of the city. The British had only two Dakotas and an Anson available, whereas the Americans utilised thirty C-47s. In what was subsequently known as the "Little Lift", the USAF flew in over a thousand tons of goods, including food, in April.²⁰ The British did not at this stage deploy more aircraft though the British Army of the Rhine did request that the HQ of the British Air Forces of Occupation* on 4 April investigate whether the garrison could in future be supplied by air. An Operation Order was drawn up allowing for a lift of 65 tons per day for a month and requiring the deployment of two Dakota squadrons from RAF Waterbeach to Wunstorf under the codename Operation KNICKER.²¹ These measures were designed to support the military garrisons, not the city's population. The Soviets read the wrong lesson, concluding on 17 April that '[US] attempts to create 'an airlift' connecting Berlin with the Western zones have proved futile. The Americans have admitted the idea would be too expensive.'²²

On 5 April there was a significant incident in the air when a Soviet Yak fighter performing aerobatics close to Berlin collided with a British European Airways civil Viking airliner which was making its approach to land at Gatow. Both aircraft plummeted to the ground and all those on board perished. General Robertson immediately ordered fighter escorts for all British transport aircraft and visited Sokolovsky to protest. The Marshal implausibly suggested that the Viking had struck the Yak whereas the former had been

* British Air Forces of Occupation subsequently changed its title to the more familiar Royal Air Force Germany, though it remained BAFO throughout the Airlift.

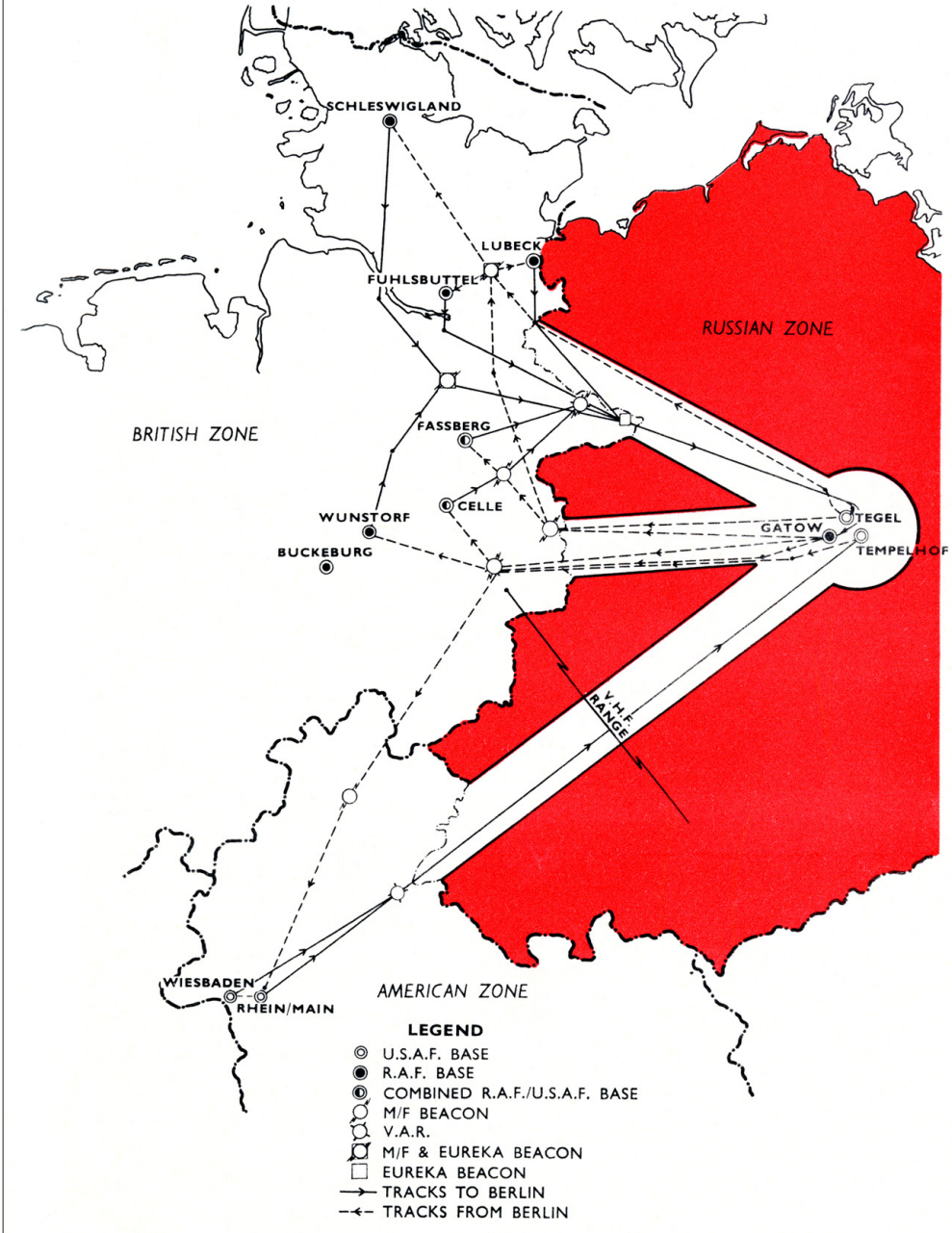
struck from below and behind, severing its right wing. Though firmly sticking to their narrative of blame, the Soviets were also perceived to be anxious to have the incident seen as accidental. Whilst harassment of aircraft in the corridors was to continue or even intensify during the later airlift, it was generally conducted with greater care and competence and no further collisions were to occur. The resolute Allied response, with US General Clay following Robertson in ordering fighter escorts, was thought by some to be crucial in persuading the Soviets that, whilst they might harass, bringing an aircraft down would potentially be a *casus belli*.²³

The accident involving the Viking, whilst serious and having implications for the future, was a distraction from the main political events in April. These were to precipitate a full-blown blockade by the Soviets and turn a difficult situation into a major international crisis. Following from the decisions taken at the London Conference, the British and Americans moved to implement the currency reform, printing the new notes, and notifying the Soviets on 18 June that “west” marks would be introduced in the Western zones of Germany, but **not** Berlin, on 20 June 1948. The Soviets immediately perceived the threat to their own position, hastily modified their own occupation currency with *applied* postage stamps and announced that only this currency would be accepted in Berlin. Meanwhile the blockade measures on rail and autobahn were further tightened with all surface transport from the West into Berlin effectively halted from 24 June. That same day, at the instigation of General Robertson, HQ BAFO ordered the implementation of Operation KNICKER. His message to the RAF was simple, ‘Something must be done and something must be done at once.’ Foreign Secretary Ernest Bevin’s exhortation was even pithier ‘Do your best’.²⁴ As one RAF staff officer present at the time remarked later, ‘...something at once and do your best is hardly the way to start a staff exercise, but that was the direction we had.’²⁵

General Clay had initially favoured attempting to force a military convoy through to Berlin, but Robertson visited him on 24 June and made clear that this action would mean war with the Soviets and that the British would not support such a move. Robertson had an alternative suggestion. Air Commodore Rex Waite was the director of the Air Branch of the British Control Commission for Germany (the *de facto* government in the British Zone) and had done some very rough calculations which suggested that an airlift could support the entire city for a short period of time. Robertson put Waite’s proposal to Clay, who demurred, but the US Governor found the next day he had no support from Washington for his military plan and when he met with Berlin mayor Ernst Reuter later on 25 June, for lack of something better, he told Reuter that he would go with the proposal to feed the city by air, though he thought it a crazy scheme.²⁶ Bevin’s determination not to be ousted from Berlin, Waite’s “back of a fag-packet” calculations, Robertson’s demand for “something to be done”, and Clay’s lack of an alternative acceptable to his superiors therefore coalesced into support for the idea of an airlift that went beyond merely sustaining the garrisons. Nevertheless, it is clear that in essence, at the start, this more

OPERATING ROUTES OF THE AIRLIFT

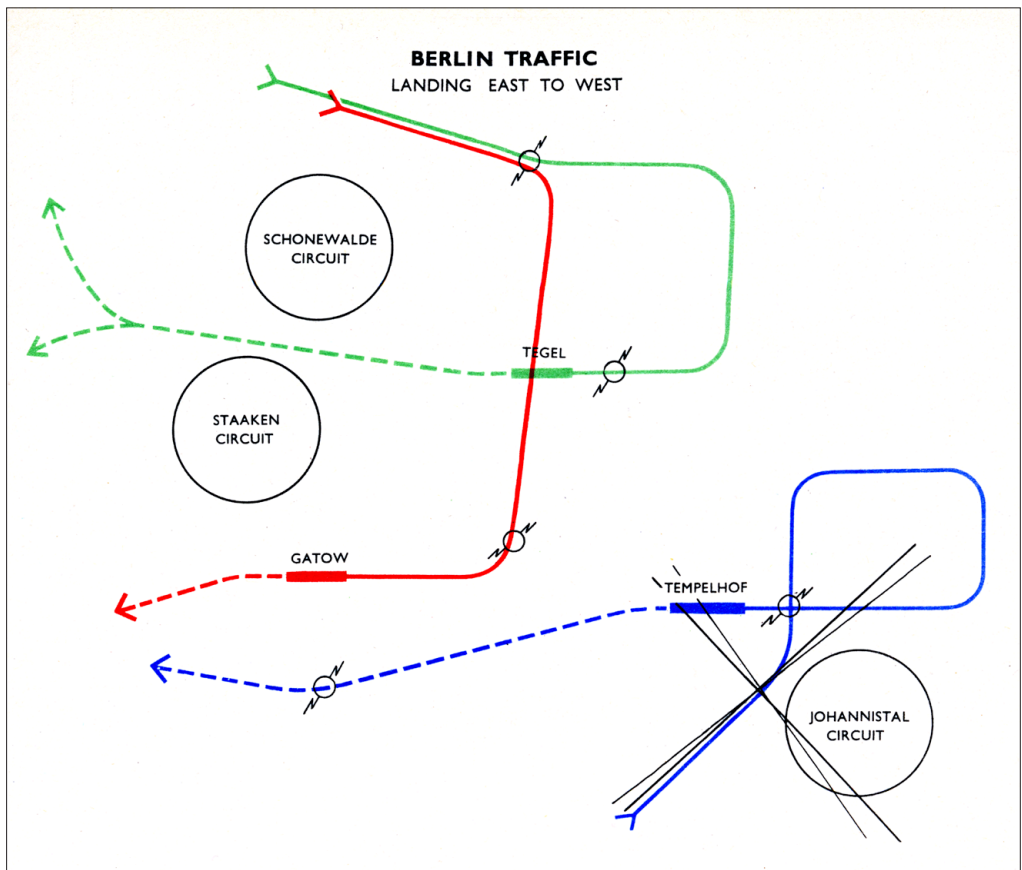
(This chart should be studied in conjunction with the Altitude Separation Chart on page 23.)



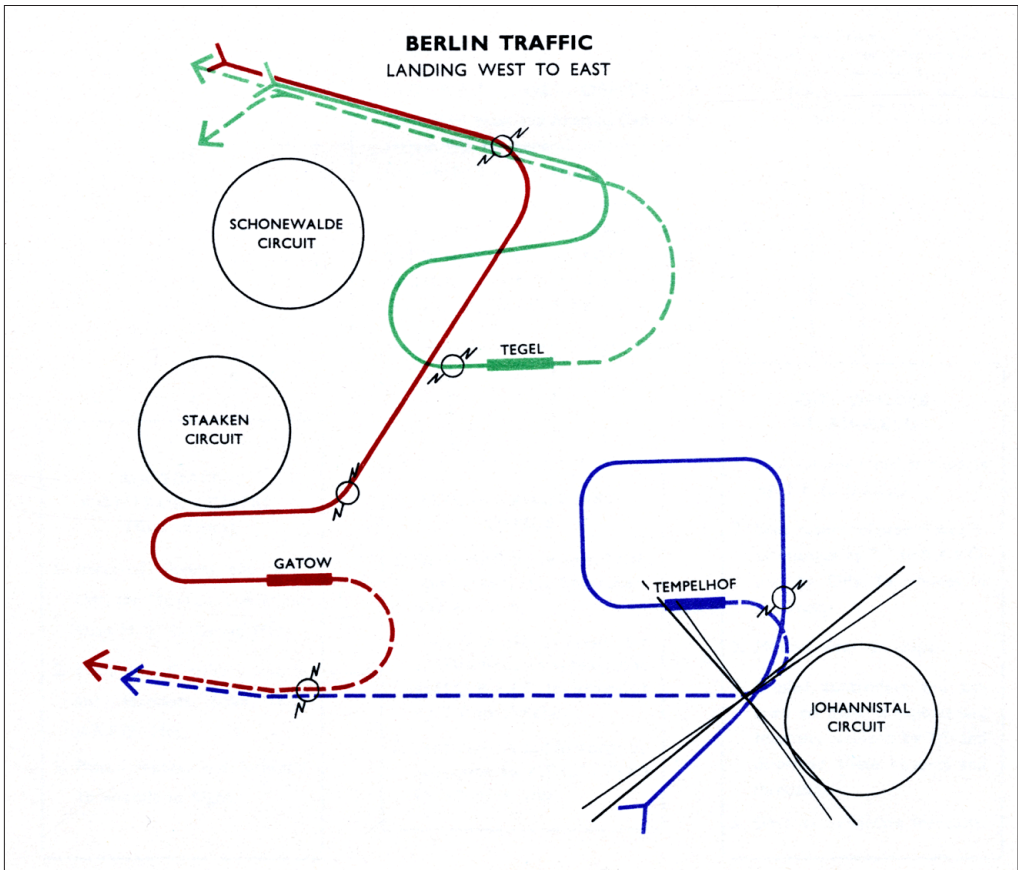
Operation PLAINFARE operating routes.

than somewhat *ad hoc* operation was simply intended to buy time whilst a political solution to the problem was worked out with the Soviets.

In one of those peculiar happenstances of history, on 25 June, more or less as Clay spoke with Mayor Reuter, the only RAF air transport squadron in Germany left the country and flew back to England! The Dakotas of 30 Squadron had been involved in an exercise with the Parachute Regiment which had just finished and so, as planned, they ate lunch and departed from their German base at Schleswigland for their base in the UK. Meanwhile, at almost precisely the same time another Dakota squadron took-off from RAF Waterbeach and headed in the opposite direction to Wunstorf. Three of their number made the first lift of a meagre 6.5 tons into RAF Gatow in Berlin that evening.²⁷ At midnight on 27 June, 46 Group ordered a second Dakota squadron to deploy to Germany as soon as possible and the squadron left Waterbeach for Wunstorf on the morning of 28 June.²⁸ Each squadron had eight aircraft. To set that in context, the daily requirement of food alone was 900 tons of potatoes, 641 tons of flour, 106 of meat and



Berlin Air Approaches landing East to West.



Berlin Air Approaches landing West to East.

fish, 51 tons of sugar, 32 of fat, 20 of milk and so on, amounting to around 2,000 tons per day. This did not include other essentials such as the daily requirement for 1,650 tons of coal to power West Berlin's power stations, or the fuel for the vehicles. The capacity of a Dakota flying into Berlin from the West was 2.5 tons.²⁹ The figures simply did not stack up. The Americans had 100 such aircraft in Germany but still the figures did not add up. Shortage of aircraft was only one element of the equation.

In Berlin itself there were only two functioning airfields. RAF Gatow, the former *Luftwaffe* base, had one pierced steel plank (PSP) runway of 1,500 yards. This was designed for use on temporary airfields constructed during the war, and used mostly by single-engined aircraft of at the most Dakotas, and was certainly not intended for high intensity operations solely by heavily laden transport aircraft. A 2,000 yard concrete runway and taxi-track was under construction, but in June 1948 a shortage of materials (it being in the Soviet Zone) meant it was only three-quarters complete: it was put into use anyway and was completed on 16 August. The PSP runway was also renovated and extended to

2,000 yards.³⁰ The airfield in the US Zone was Tempelhof, which had some impressive Nazi-era terminal buildings with seven subterranean levels, but the 5,000 foot runway was also PSP. The approach to Tempelhof was also difficult, with aircraft passing a seven-storey block of flats, and pilots describe breaking cloud to find themselves peering into people's living rooms. Both airfields had new runways added and existing ones improved and extended.³¹ At the other end of the air corridors, the RAF base at Wunstorf had concrete runways and hardstandings, but these proved insufficient when more aircraft arrived. Lübeck likewise had a concrete runway which had to be extended as were the existing hardstandings. The American bases at Wiesbaden and Rhein-Main had runways of 5-6,000 feet originally, but likewise lacked other facilities. All these airfields were subject to massive reconstruction works to extend and improve facilities, especially aircraft hardstandings, and in some cases additional runways. Other airfields at Celle, Fassberg, Fuhlsbüttel and Schleswigsland were also brought into use and improved and developed as the airlift progressed. In Berlin an entirely new airfield, with a runway built of compressed rubble (of which there was an inexhaustible supply) bound with asphalt was constructed at Tegel in the French Zone. Elsewhere new bulk storage, railway sidings and other airfield facilities were also built including six 12,000 gallon storage tanks and pumping facilities at Wunstorf.³² Not the least of the Airlift's many achievements were these remarkable feats of engineering undertaken against an urgent requirement, often with inadequate equipment, and often whilst the airfields continued to operate around them.

As the Allies began to react to the new political and military situation aircraft began to fly into Germany from Britain and around the globe. The decision to expand Operation KNICKER was approved by the Cabinet on 28 June and saw it renamed Operation CARTER PATERSON, the name of a well-known UK removals firm of the era, but proved a gift to Soviet propagandists who quickly implied that the name presaged a British withdrawal from Berlin. It was rapidly changed again to Operation PLAINFARE.³³ The Chief of the Air Staff, briefing senior colleagues on the day the Cabinet met, stated that the RAF was capable of lifting 75 tons per day into Berlin and that extra aircraft due to arrive in Berlin in the next two days would raise the total to 450 tons, and that would rise to 750 tons from 3 July when repairs to Gatow's runway were completed. The initial plan was to deploy 54 of the 112 Dakotas in RAF service to Germany. These would then reduce to 32 aircraft, to be replaced by Avro Yorks with a greater load carrying capacity of 7.5 to 8.25 tons. The aim was to achieve a capability for lifting 840 short tons by 7 July (1 short ton equalled 2,000lbs).^{*} By 30 June the original 16 Dakotas at Wunstorf had been joined by a further 38 aircraft, including the returnees of 30 Squadron.³⁴

Unsurprisingly perhaps, not all went entirely smoothly at first, especially in Germany. Wunstorf was soon crowded with aircraft which overflowed from the relatively restricted hardstandings and aprons onto the grass airfield. Unseasonably poor weather, with persistent heavy rain, meant the constant movements of aircraft and particularly vehicles turned the airfield into a sea of ankle-deep mud. The damp penetrated aircraft

^{*} All tonnage figures given in this article are in short tons.

electric systems causing serious serviceability problems with 22 Dakotas at Wunstorf unserviceable on 3 July. A shortage of bowzers coupled with a single bulk fuelling point, along with a serious lack of ground handling equipment from wheel chocks to trolley-starters, exacerbated the problems.³⁵ There was also initially a shortage of labour to load and unload the aircraft, a problem not helped by the Treasury's refusal to fund the transfer by air of a Royal Army Service Corps company to accompany a deploying Dakota squadron: the soldiers were sent by sea and rail.³⁶ The officer in charge of Wunstorf's transport wing noted in his diary on 3 July that the British Army could not cope with the increased aircraft numbers.³⁷ The first Yorks had arrived at Wunstorf on 1 July with further aircraft scheduled on successive days, but the ground handling issue, and the state of the airfield led to a decision to postpone the deployment of the last twenty Yorks. Feverish work over the next two days saw several ditches filled and some of the parking area covered with PSP and arrangements were then put in place for the remaining aircraft to deploy on 4 and 5 July.³⁸

As with the British, it was the American C-47s in Germany that shouldered the burden initially, but on 27 June Lieutenant General Curtis Le May, commanding United States Air Forces in Europe (USAFE) requested the immediate deployment of a Group of Douglas C-54 Skymasters to Germany. Like the York, the Skymaster had a greater load-carrying capacity than the C-47, being able in theory to lift thirteen tons of cargo, although generally it was restricted to ten tons during the airlift to conserve brakes and tyres during the repeated landings. As there was little in the way of maintenance support for the C-54s in Germany they were to bring groundcrews and spares with them.³⁹ The first C-54 touched down at Rhein-Main airfield on 1 July and by the next day seventeen aircraft had reached the base with more to follow from around the globe. They began to replace the C-47s which returned to their bases, although their crews remained to fly the C-54s.⁴⁰ Le May, who flew a C-47 into Berlin in late June to better see the operation for himself, appointed Brigadier General Joseph Smith as the commander of the US airlift, now codenamed Operation VITTLES. It was Smith and his staff who instigated the "block system" whereby the different aircraft types operating on the air lift were allocated time slots with the bigger C-54s flying first, departing at four-minute intervals. Four minutes after the last C-54 took-off, the first C-47 would follow. In the air the aircraft were stepped up between five and ten thousand feet in steps of 1,000 feet.⁴¹ The Americans too experienced some initial problems. As with Wunstorf, the rain and constant movement churned up the grass surfaces at Rhein-Main, which quickly became known as "Rhein-Mud". At Tempelhof, the constant shuttle of C-54s soon caused the runway surface to begin to disintegrate under the pounding it received, and Smith asked for permission on 9 July to begin building a new runway, which meant using some of the available lift to fly in some of the construction material.⁴²

The southern corridor was also longer than the northern route from the British Zone, so Smith asked Group Captain Kenneth Cross, Group Captain Operations at BAFO, for

permission to relocate some C-54s to the British Zone in Germany.⁴³ A new runway had been built at Fassberg and some of the Dakotas from the overcrowded airfield at Wunstorf had moved there in July, but following Smith's request to Cross these were moved again to Lübeck, and C-54s moved in to take their place and utilise the shorter northern route, allowing them to fly more sorties per day. The first C-54s arrived at Fassberg on 20 August and PSP hardstanding was constructed sufficient to accommodate sixty-five C-54s of the 65th Troop Carrier Wing.⁴⁴

Fassberg thus became an RAF Station under the command of an American officer, an arrangement which was to become familiar in the UK during the Cold War at bases such as RAF Mildenhall. It did not, however, start well. The Americans were appalled by everything from the beds to the food, which was apparently kippers, fried tomatoes and overcooked sprouts and insufficient quantities at that, and the RAF forbade the Americans from drinking or gambling in their RAF quarters, whilst the NAAFI would not sell them whisky as it was bonded and only for sale to British servicemen. The first three USAF commanders rotated in and out at bewildering speed with the last of the three communicating only in writing with Group Captain Biggar, the senior RAF officer. His replacement was Colonel John Coulter, a man possessed of far greater diplomatic skills, and it was he who persuaded the RAF to give him effective control. He was also possessed of a wife with film star good looks, mainly because she was indeed a famous film star, Constance Bennett. Unlike so many of that breed, however, she had the human touch and no "airs and graces". She was cheerful, despite the spartan surroundings, high-spirited and, according to a USAF General, "no mean scrounger". She astounded the RAF wives by using a standard "service issue brown earthenware slops basin as a suddenly chic salad bowl." A PX was opened, supplies of US whisky found, and facilities improved, if only a little, but morale definitely improved.⁴⁵

The RAF found one novel way of sidestepping the problem of airfield capacity. On 4 July, two squadrons of Sunderland flying boats landed on the waters of the River Elbe at the old Blohm and Voss works at Finkenwerder in Hamburg.⁴⁶ The next day they flew their first sortie into Berlin, carrying three and a half tons of spam, and landing on the River Havel near Gatow.⁴⁷ Although they did not require airfield facilities at either end of the lift, the Sunderlands had their own problems. The Elbe at Finkenwerder was littered with wartime wrecks and obstructions, many of them unmarked, the waters of the river were usually rough and the aircraft had to be loaded from small boats, which was time-consuming. The aim was to fly three missions per day which represented six hours in the air, plus loading and refuelling time which made for a long day. The lack of approach aids and navigation equipment for the flying boats also hampered their operations.⁴⁸ In theory, the Sunderlands could carry up to 10,000lbs of freight. They were used to carry a variety of goods into Berlin including salt, meat, sanitary towels and cigarettes, and then fly passengers and industrial goods in the opposite direction. The goods carried out included boxes of lightbulbs from the Siemens factory which filled the capacious fuselage but

posed no problems of weight or centre of gravity.⁴⁹ The carriage of salt was presumably on the basis that the hulls were anodised as better protected against salt water, but in fact that only applied to the fuselage or exterior not interior, though the control cables did run along the roof of the aircraft and not along or beneath the floor.⁵⁰ Two Short Hythes, the civil version of the Sunderland, joined the lift flown by Aquila airways. The Sunderlands and Hythes were withdrawn from the airlift in December because the rivers were icing up, but in any case, there were problems trying to fit them into the block scheme. In all, the big flying boats lifted 6,709.5 tons of goods into Berlin, 5429.5 by the Sunderlands and the balance by the Hythes.⁵¹ The flying boats did perform one other valuable service, which was considerably to improve the morale of the Berliners, who would flock to the banks of the Havel, especially on Sundays, to watch the big birds alight gracefully on the water.⁵² The Soviets protested that these activities were conducted outside the quadripartite agreement, in which they may well have been correct, but the British simply ignored them.⁵³

There was still a need for more aircraft and crews and the British began to contract civil airlines to assist. At first the focus was on the need to transport liquid fuel. Attempts had been made to carry fuel in 55 gallon drums but each weighed 365lbs and they were bulky and not easily secured in the aircraft, making transporting them hazardous.⁵⁴ The solution was tanker aircraft, but at the time the RAF possessed none. However, one British aviation pioneer had entered the field. Sir Alan Cobham had formed *Flight Refuelling Limited* specifically to investigate the art of refuelling in the air, but his Lancastrian (modified Lancaster) tankers were now required not to refuel others whilst flying, but to carry fuel to be discharged in Berlin. The first Lancastrian flew direct from Tarrant Rushton to Berlin on 27 July 1948. A second Lancastrian arrived and the aircraft initially operated from the airfield at Buckeburg but moved to Wunstorf on 27 July and most “wet” lift subsequently flew from Wunstorf or Schleswigland.⁵⁵ The latter did have a Luftwaffe system for pumping fuel but it was relatively slow and, although a modern facility was built at Wunstorf capable of rapidly fuelling twelve aircraft, it was not completed until April 1949. In Berlin initially the fuel was offloaded at Gatow into underground tanks and then pumped to barges on the Havel and moved to Berlin. Later Tegel was also used. The offload at Gatow was through gravity feed and, depending on the aircraft type, could be slow. Eventually the civil “wet” lift consisted of 14 Lancastrians, seven Tudors, 17 Halifaxes/Haltons and two Liberators capable of lifting 550 tons per day.⁵⁶ Nevertheless, in the winter of 1948 fuel stocks became dangerously depleted. The target had initially been set at 220 tons per day but the average had been only 128 tons and in November the city would have run out of fuel if the Allies had not resorted to the simple expedient of purloining Soviet stocks which happened to be stored in the Western Zone!⁵⁷

It was not only the “wet” lift which employed civil aircraft. A series of contracts were also let to other civil operators, some with just one or two aircraft, and the first of these

arrived at Wunstorf on 4 August. A Handley Page Halton (a converted Halifax bomber) of Bond Air Services flew the first sortie into Berlin at 0300 hours and this aircraft flew five return trips in the next twenty-four hours. There were problems integrating the hotch-potch of civil aircraft types into the lift, exacerbated by the fact that they lacked sophisticated navigation aids and had radios operating on the wrong frequencies. Many of the firms also ran on shoestring budgets and had few groundcrew and lacked spares, so resorted to scrounging both from the RAF whenever they could, though their unserviceability rate remained generally high.⁵⁸ The Number 46 Group Report, having listed all the maintenance facilities and equipment provided to the airlines, commented drily: “It is submitted ... that Civil charter companies cannot be regarded as entirely self-supporting from the engineering point of view...”. Indeed so.⁵⁹

Many, if not most, of the civil aircrew were ex-RAF and some would have flown over the city in military variants of the very same aircraft just four years previously, but with very much more hostile intent. In some respects, however, they may have felt little had changed. Especially during September, the Soviets chose to conduct military exercises along the fringes of the corridors and even above them, as formally under the quadripartite agreement they extended only to 10,000 feet. Amongst other activities, the Soviets conducted live anti-aircraft firing exercises alongside the corridor and fighters “buzzed” or flew in close formation on airlift aircraft. One anti-aircraft exercise continued for three hours but was only announced to the Air Safety Centre one hour after it commenced. At night they also shone searchlights into the eyes of pilots on approach, especially at Gatow. ‘No less than fifty-five airlift aircraft recorded hits by Soviet ground fire’, though none was ever shot down. The RAF did not apparently keep a record of incidents although the USAF did, recording 733 occurrences of harassment of various sorts in the corridors between 10 August 1948 and 15 August 1949. Eleven of the 733 incidents are recorded as “balloons” but precisely what type of balloon or their exact method of use is not recorded in the USAF list; they may have been released as free balloons such as those used by meteorological staffs for recording upper air data.⁶² The Soviets reportedly flew barrage balloons above their airfields at Kothen, Dalgow and Brandenburg at some point, though how sustained this activity was is not clear.⁶³ Allied aircrews were certainly fearful that the Soviets would deploy barrage balloons on the airfield approaches in Berlin but they did not, ‘possibly because it would have been difficult to claim that a collision with a tethered balloon on the approach to an airfield was the fault of the pilot!’⁶⁴

The last of the RAF aircraft deployed on the airlift were the brand new Handley Page Hastings which arrived at Schleswigland on 1 November shortly after the airfield had been reopened as an Operation PLAINFARE base for civil aircraft. The Hastings crews started hauling coal on 11 November, thus quickly coating their shiny new aircraft, and indeed themselves, with a fine layer of coal dust. ‘Coal dust was particularly insidious. It covered not only the occupants with its soot but also worked its way into instruments

and corroded electrical wiring. Both coal and flour dust swirled around the inside of an aircraft during flight and both could be explosive under the right conditions.⁶⁵ Though it could lift some eight tons, and accommodate awkward loads like large girders for Berlin's power station, the Hastings, unlike the nose-wheel configuration of the C-54, was a "tail-dragger" and awkward to handle in any sort of crosswind.⁶⁶ Its configuration also meant pushing loads uphill through the length of the fuselage.

The early days of airlift operations were very much an *ad hoc* affair such that it was not, in truth, planned in detail. In the early days both in the American and British lifts it was often a case of an aircraft was ready and loaded and a crew was found to fly it. Squadron Leader Johnstone of 30 Squadron brought seven Dakotas into Wunstorf from Oakington but no-one marshalled them in, and finding nobody to direct him on what he was to do next, he went to Station HQ seeking answers. "Every corridor and stairway seemed alive with harassed blue-clad pilots vainly seeking instructions, 'like Victoria Station in the rush hour'".⁶⁷ One Australian officer, Wing Commander Norman Lampe, was an experienced transport pilot, but was officially a staff officer at Royal Australian Air Force Headquarters when he was sent to England on temporary duty in July 1948. He somehow contrived, almost certainly without higher authority, to get to Germany and fly five sorties out of Wunstorf in August.⁶⁸ Wunstorf was officially home to 123 Wing, a fighter-bomber Wing equipped with Vampires and Spitfires which were flown out between 22 and 28 June to make room for the airlift. The domestic accommodation normally housed just over 900 personnel but Operation PLAINFARE increased it to over 2,000 without including civilian operators and at its peak there were 3,200 personnel permanently on site and another 1,000 present in the day. Initially crews bedded down where they could, with some sleeping in the Station Church and mattresses on floors or simply under or on desks. Attics in accommodation blocks and all the messes were pressed into use and eventually specifically converted to provide more bed space.⁶⁹ It was a similar picture on the American side. Pressure to fly was intense and normally desk-bound staff officers were pressed into flying missions.⁷⁰ However, this type of frenetic but somewhat unstructured activity inevitably led to increasing fatigue amongst aircrew, particularly when they were getting no proper rest.

In large part this was the inevitable result of a largely unplanned operation thrown together at the last minute with increasing resources thrown at it, but little in the way of long-term planning, not least because no-one initially thought it would last more than a few weeks. The command and control arrangements reflected this. On the British side, Group Captain Noel Hyde, Station Commander at RAF Waterbeach, received a formal directive from his Group Commander at 46 Group on 30 June appointing him 'to command the Transport Command Force detached within British Air Forces of Occupation (Germany)'. He was to 'operate under the control and direction' of the AOC-in-C British Air Forces of Occupation (BAFO).⁷¹ When he reached Wunstorf, the Station Commander and Group Captain A J Biggar (an officer on BAFO staff) told him BAFO had made them

“directly responsible for all transport operations”. Group Captain Cross arrived from Air Headquarters (AHQ) BAFO on 1 July and told Hyde he was to be responsible to the Station Commander Wunstorf and the latter was to report to Group Captain Biggar who would be forming a skeleton HQ at Wunstorf and given acting air rank. On the basis of his own directive, Hyde demurred but said he would co-operate in the interests of the operation until a ruling came from Transport Command. Hyde and Cross visited AHQ BAFO where the Senior Air Staff Officer (SASO), Air Vice-Marshal Spackman, told Hyde his directive from 46 Group stood, that he was not to be responsible to the Station Commander, and that Biggar was to be regarded as a forward staff officer attached to the Army Air Transport Organisation at Wunstorf although details of work to be carried out would come through him. This was itself hardly a crystal-clear chain of command, but when Hyde returned to Wunstorf from AHQ, Biggar and the Station Commander stated that Group Captain Cross had telephoned and re-stated that they were in command. Farce followed farce as the AOC-in-C visited Wunstorf on 2 July and reiterated the C2 arrangement outlined by Air Vice-Marshal Spackman, only to issue a contradictory Operation Instruction 14/48 the following day.⁷² This stated that a BAFO Advanced HQ had formed at Wunstorf (though it didn’t say when!) and that the Officer Commanding (Group Captain Biggar) ‘is to exercise operational control of the Transport Forces allotted to him by Air Headquarters BAFO. This he will do through the Officer Commanding, RAF Station Wunstorf, who will in turn exercise control through the Officer Commanding the RAF Transport Wing located at Wunstorf.’ It added that Hyde was to ‘command the transport aircraft under the direction of the Officer Commanding, RAF Station Wunstorf.’⁷³ A more convoluted chain of command would be hard to imagine.

The underlying problem here was that BAFO’s operational element consisted almost entirely of tactical-fighter bomber and reconnaissance squadrons. There was a distinct lack of expertise relating to transport operations which did not normally impinge on their daily life, and this was reflected in the officers serving in senior positions in the AHQ. The C-in-C, Air Marshal Sanders, had spent the early part of the Second World War as Director Ground Defence in the Air Ministry then went to Bomber Command; the SASO, Air Vice-Marshal Spackman, had been in air defence throughout the War; and Group Captain Kenneth Cross had enormous wartime experience in the realm of fighter and tactical air operations but not air transport. BAFO clearly felt that, as the operation was taking place within their area of responsibility, they should control it, which was understandable, but they also appear to have recognised that they did not necessarily possess all the right expertise. In attempting to square that circle, they appear to have acted initially on the premise that they were simply temporarily moving Wunstorf’s tactical wing out and replacing it with a transport wing which would then function through the normal chain of command via the resident station commander with the incoming transport force operating under him. Whether they expected a transport-qualified Group Captain to accompany the Transport Force deployment is a moot

point, but, if they did, they clearly assumed he would be subordinate to their station commander. They then further complicated matters by inserting their own “Advanced HQ” at Wunstorf under Group Captain Biggar, which was to form part of a wider joint organisation set up in conjunction with the British Control Commission for Germany and the British Army of the Rhine to be known as the Combined Army/Air Transport Organisation [CAATO] which was clearly intended to co-ordinate the Army and RAF effort in support of the airlift. As the BAFO Report candidly admitted, ‘Under this organisation the Station Commander Wunstorf was responsible for operations to a Group Captain appointed to the staff of CAATO. In effect, this meant that three Group Captains were located at Wunstorf, each having a responsibility for operations.’⁷⁴ However, it would seem from Hyde’s report of his conversation with Cross that Biggar had arrived at Wunstorf in advance of the creation of CAATO and this added further confusion. The evidence from Hyde, quoting Cross, was that there was initially some intention to give Biggar acting air rank, but this never seems to have happened, perhaps because the head of CAATO was an Army Brigadier! Meanwhile, Transport Command, recognising the size of the force they were deploying, sent a transport force station commander, the unfortunate Group Captain Hyde, with his own directive to exercise command over the deploying squadrons. Again, *per se*, not an unreasonable move when ninety-four Transport Command aircraft from sixteen squadrons and two OCUs were deploying to mount what was an entirely air transport operation.

Thus, thrown into the mix were: a high profile, politically-charged, fast expanding multi-national operation for which there was no precedent; an HQ lacking experience and expertise in mounting transport operations but conscious the operation was in their area with the potential to go “hot” at any moment; a desire by the resident HQ to exercise tight control; and a more distant HQ owning the assets and the operational expertise. All of which led to the plethora of group captains and conflicting directives and instructions, some emanating from the very same headquarters. Add in the normal confusion endemic in fast-moving situations and the muddle is more understandable, although AHQ BAFO did not come out of the early period with its reputation greatly enhanced. Hyde, who must have been immensely frustrated and was clearly under intense pressure to ensure that the operation got under way promptly and effectively, appears to have exercised great tact and forbearance in the circumstances, accepting the unsatisfactory C2 arrangement temporarily in the interests quite literally of getting the operation off the ground. Large numbers of ground crew were also deployed to support the Transport Force and the duplication apparent at the top of the C2 chain was mirrored lower down. At this level, however, the goodwill and flexibility exercised by Group Captain Hyde and his equivalents seems less apparent. Hence, ‘At Wunstorf in the beginning there were, in effect, two Technical Wings [and thus two Wing Commanders]. The local Technical Wing was not familiar with the types of aircraft in use nor the system of servicing. Neither part was prepared to merge with the other, with the consequence that there was no central co-ordination to enable the fullest use to be made of local

manpower resources.⁷⁵ This reluctance probably stemmed initially from the uncertainty over the length of the operation and the view that it would soon come to an end.⁷⁶

As the operation expanded and with it showing every sign of continuing it was recognised that the C2 was unsatisfactory and after discussion between BAFO, Transport Command and the Air Ministry it was finally decided that a new operational HQ should be detached from 46 Group and established at Buckeburg. The AOC 46 Group, Air Commodore J W F Merer, was appointed to command, and his directive charged him with the control and execution of PLAINFARE operations, including co-ordinating with the USAF and ensuring the most effective utilisation of aircrew, aircraft and maintenance personnel.⁷⁷ This HQ formed on 22 September 1948. In the event, as will become clear shortly, 46 Group was not destined to exercise unfettered control of the RAF lift. Many of the same sorts of C2 issues which had plagued the early British effort were replicated on the American side. Like BAFO, the overall USAF HQ in Germany, USAFE, under Lieutenant General Curtis LeMay, was tactically orientated. With the exception of the two C-47 Troop Carrier Groups, which in any case were rapidly withdrawn, USAFE, like BAFO, had no air transport assets. The majority of the C-54s deployed to the airlift belonged to a different command, Military Air Transport Service (MATS), a joint USAF/USN air transport organisation roughly analogous to Transport Command. LeMay was pleased when the USAF sent an experienced air transport expert from MATS, Major General William L Tunner, to take charge of the US airlift replacing USAFE's Brigadier General Smith.

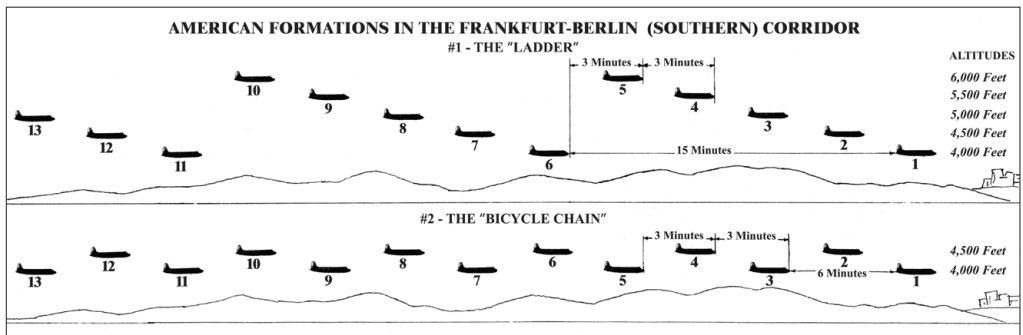
In the Second World War, Tunner had commanded the USAAF airlift over "The Hump", i.e. the Himalayas, from India and Burma in support of Chinese forces fighting the Japanese. He arrived in Germany on 28 July exactly one month into the airlift. His vision for an airlift was ordered efficiency with aircraft either flying, loading or unloading, or being serviced, and crews either flying or resting. Aircraft and crews standing around idle waiting for something or someone was anathema to him. 'Tunner's approach required the careful co-ordination of every aspect of the airlift, including detailed procedures and exact duplication and precise execution'.⁷⁸ Tunner, with LeMay's connivance, established direct communications with MATS and Air Material Command so that he could tap quickly into the resources in personnel, spares, and equipment he required. He and LeMay quickly became convinced that the American and British efforts should be merged under a single operational command, particularly once USAF C-54s began operating from the British base at Fassberg. The British, however, were initially determined to "run their own show" and were conscious that any combined organisation would inevitably have a US commander. LeMay worried away at the British, but got little joy from Air Marshal Sanders so tried going via Washington to London without success.⁷⁹

LeMay was forced at first to accept the British preference for a combined control centre at the Berlin end of the operation and this was established as the Joint Traffic Control Centre at Tempelhof which handled traffic into both Tempelhof and Gatow.⁸⁰

Eventually, with C-54s operating alongside a wide variety of RAF and civil types along the northern corridor and landing at both Tempelhof and Gatow the British were compelled to accept the logic of the US position. Sanders conceded the principle of combined control at a conference on 30 September, but the British then fell into arguing about its location which they wanted to be Buckeburg, arguing that the main effort in future would be from British bases.⁸¹ The Americans wanted Wiesbaden where Tunner's USAF airlift HQ was established, arguing, quite correctly, that there were not enough senior officers for two HQs and that dual-hatting would be best.⁸² The British finally accepted on 7 October and LeMay and Sanders signed a joint directive on 15 October establishing the Combined Airlift Task Force (CALTF) under Tunner with Air Commodore Merer as his Deputy. In fact the Americans were right. Essentially CALTF was Tunner's HQ rebadged. Merer was busy at his own HQ and only made the trip to Wiesbaden every two or three weeks. A handful of RAF officers were posted to CALTF including two or three operations officers, an air traffic controller and a signals officer. One important post, however, was that of Director of Plans and this was filled by Group Captain Noel Hyde who brought the same expertise combined with diplomatic skills he had shown at Wunstorf in the airlift's early days. He was, in Tunner's words 'a particularly welcome adjunct to the staff'.⁸³ Eighty-three USAF operations officers were posted to 46 Group's HQ at Buckeburg and co-ordinated the flights of the C-54s from Fassberg and later Celle. The British could be somewhat dismissive towards CALTF with BAFO concluding that the 'Combined Headquarters did not develop much beyond regulating the traffic flow into the Berlin airfields and co-ordinating their traffic pattern.'⁸⁴ In fact, of course, as Tunner appreciated, this was the very activity which was crucial to making the airlift successful.

We have seen how Brigadier General Smith introduced the basic "block" system on the airlift. Soon after his arrival, Tunner was to gain first-hand experience of another problem. He was flying on a C-54 into Berlin in August when the weather deteriorated with very low cloud and driving rain affecting visibility and the radars. A C-54 crashed, another burst its tyres braking to avoid the blazing wreck, and a third landed on an unfinished runway and ground looped. The controllers followed standard procedure and began stacking aircraft which soon saw a mass of aircraft milling around in very restricted airspace and poor visibility from 3,000 to 12,000 feet. Tunner quickly saw a bigger disaster looming (it was, of course, Friday the 13th) and radioed the controller himself and ordered him to send every other aircraft in the stack back to its take-off base.⁸⁵ From then on, any aircraft missing an approach was not slotted back into the circuit but flew back to its departure airfield to start the entire process again. A one-way system also funnelled all aircraft into Berlin airspace along the northern and southern corridors with all aircraft departing Berlin along the central corridor. Gradually much greater discipline was introduced into the airlift where, early on, corners had been cut, literally and figuratively. Crews who had been flying until they nearly dropped and snatching snacks were instructed that they could fly no more than two sorties without

a proper meal.⁸⁶ It became mandatory to follow a Ground Controlled Approach (GCA) and not fly a visual approach even in good weather.⁸⁷ RAF crews carried a navigator and better navigation aids and could fly the corridors to arrive to the minute at the Frohnau beacon, the reporting point at Berlin at which all aircraft reported and were identified and switched to the GCA controller who talked them onto the runway. USAF aircraft had no navigators and fewer aids, so tended to fly from Medium Frequency beacon to beacon using their radio compass and calculating time and distance.⁸⁸ The introduction of CPS 5 radar at Tempelhof with moving target indication made the identification and control of aircraft approaching Berlin much better and improved flying discipline still further.⁸⁹ In the southern corridor, where all aircraft were C-54s, the separation between aircraft in good weather was reduced to 500 feet in height and three minutes in flow rate. This pattern had five aircraft stepped up with the sixth aircraft at the same height as the first and fifteen minutes behind. In March 1949 this was changed to just a simple five hundred foot, three minute separation with only two height bands which made landing at Berlin simpler. With the many different aircraft types in the Northern corridor, all but the C-54s continued to operate the “block” system. There were a number of aircraft accidents during the airlift but only one mid-air collision and that occurred between two USAF C-47s very early on.⁹⁰



To allow as many aircraft as possible to fly into Berlin, the US Air Force developed a system called the “ladder”, which separated aircraft by altitude and distance.

The improvements in the air were mirrored by much greater organisation and efficiency on the ground. The logistics of delivering supplies to the airfields and the packing, loading and unloading of freight was an Army responsibility utilising large numbers of German civilians. The Army/civilian loading teams were always supervised by RAF Air Movements personnel who were responsible for the documentation and the lashing and weight distribution of loads. Backloading from Berlin in British aircraft was the sole responsibility of RAF movers. The Army/civilian loading teams were eventually organised into specific ten or twelve man teams under the same individual and an element of competition was introduced with rewards such as prizes of cigarettes or coffee given to the best teams. By the end of the airlift it took an average of 25 minutes to load a C-54 with a “standard” load of coal or flour.⁹¹ Aircraft marshalling on the ground at both ends of the airlift was

improved and systemised. Aircraft reported their loads as they approached Berlin and the unloading teams were waiting as the aircraft taxied in. Greater use was made of dried goods, for example dried potato and powdered milk which weighed a fraction of the “real” item. Coal, however, which formed a major part of the total lift, could not be reduced, though every scrap of coal dust was swept from the aircraft and aprons and compressed into briquettes. Coal sacks were supposed to be recycled but many just disappeared and others began to disintegrate. Over 1,300,000 sacks from Britain costing £12,500 had been supplied by the end of October.⁹²

The real concern came with the onset of winter. During November the weather worsened and fog at the bases became a particular problem and tonnages began to drop with the British lift falling from 1,000 tons a day in the previous month to just over 850, with the USAF showing a similar drop.⁹³ The Russians confidently believed that “General Winter” would come to their aid and defeat the Allies as he had done with Napoleon and Hitler. General Robertson himself doubted that the airlift could sustain the city through the winter and he was by no means alone, though General Clay was optimistic.⁹⁴ Clay was perhaps pinning his hopes on the US President approving his request for extra C-54s, and in late October President Truman came through and approved the transfer of an additional 66 of these most valuable aircraft.⁹⁵ But there were other positive factors too. The new airfield at Tegel in the French zone received its first aircraft on 18 November, after the French dynamited a Soviet-controlled radio station’s masts located on French territory on the approach!⁹⁶ Tegel formally opened on 1 December. RAF Hastings started operations on 11 November from Schleswigland, and C-54s moved into the newly opened RAF Celle on 15 December.⁹⁷ The C-54s authorised by the President began arriving with the last of them reaching Europe in January.⁹⁸ That month the daily average tonnage began to climb again, with the British lift again climbing above 1,000 short tons and the USAF nearly meeting 4,500.⁹⁹ The crisis passed and tonnages steadily climbed from March onwards. In April, Tunner staged what became known as “the Easter Parade”. His planners at CALTF published the daily quotas for each airfield for 16 April calling for a maximum effort and Tunner visited USAF and RAF bases to cajole and harry. The response exceeded his expectations with the lift delivering 12,849 tons in one day.¹⁰⁰

General Winter had failed. On 12 May 1949 the Soviets lifted the blockade. The Allies continued the airlift until September 1949, in part because they wished to insure against any sudden re-imposition of the blockade by the Soviets once it had wound down, in part to build up stocks in Berlin, and in part to demonstrate that they could maintain the airlift indefinitely if they chose.

The achievements of the airlift in statistical terms are impressive enough. The total tonnage lifted into Berlin by British and American aircraft was 2,325,808.7 tons. Of this, the British lift carried 542,236 tons split of which the RAF carried 394,509 tons. The Yorks carried the largest tonnage, 233,144.6 tons, with the Dakotas hauling just

over 100,000 tons and the Hastings some 55,000 tons, whilst the Sunderland managed some 5,400 tons. The British carried 241,000 tons of food, 165,000 tons of coal and 92,000 tons of wet fuel, all the latter in civil aircraft. They also carried 35,000 tons of freight, including 12,800 tons of economic goods, and 131,436 passengers out of the city. British aircraft flew more than 32 million miles, consumed over 35 million gallons of Avgas and spent over 200,000 hours in the air.¹⁰¹ They helped sustain a city of more than two and a half million inhabitants for many months including through the winter. Just as importantly, however, was that in the first real test of the Cold War they demonstrated immense western resolve in the face of Soviet provocation and intransigence and dealt a significant blow to Soviet prestige and influence with incalculable effects on Western European communist parties, particularly those in France and Italy. The western presence in Berlin was maintained and it remained as a beacon of freedom inside the Communist bloc, not to mention acting as a very useful centre for intelligence gathering. The airlift also demonstrated to a Service dominated by airmen from an offensive bomber and tactical air background that the RAF's air transport capability could be deployed as a strategic asset to considerable effect.

We should also recognise the Royal Australian Air Force, Royal New Zealand Air Force and South African Air Force crews who flew with the RAF on the airlift, as well as the civilian operators, many of them ex-RAF. Eighteen British Commonwealth servicemen died in the course of the airlift; fifteen RAF, one Royal Australian Air Force and one South African Air Force and one British Army sergeant. The civil lift suffered twenty-one fatalities. Thirty American servicemen and one civilian died, and six Berliners died in accidents on the ground and seven died when an RAF Dakota crashed near Lübeck.¹⁰² In comparison with the scale of the airlift and the difficulties involved, not to mention the potential casualties had the dispute turned "hot", these losses were astonishingly small.

All told, the RAF lifted in about seventeen per cent of the tonnage and the civil lift contributed six per cent, with the rest being carried in USAF aircraft. The reasons for this disparity are varied and are not simply down to the numbers of aircraft deployed. It was recognised that the most efficient aircraft on the airlift was the C-54 and thus these were given priority both in the block system, but more especially when the weather was bad and the rate at which Berlin could accept aircraft dropped, then RAF Dakotas were grounded in favour of flying C-54s from Fassberg or Celle. The British also accepted far greater responsibility for backloading goods and passengers out of Berlin. This meant longer waiting times on the ground in Berlin whilst aircraft were loaded, whereas the C-54's usually turned straight round to fly back empty. The British took the view that flying goods produced in Berlin out was important for the local economy, a view not shared by the Americans. Passengers did not always have a comfortable trip and could be idiosyncratic. One elderly lady was settled on some mailbags in the back of a Dakota and suffered a turbulent trip to Lübeck without complaint, but resolutely refused to board the "dangerous" truck waiting at the other end to take her to Hannover.¹⁰³

On 23 September 1949 at 1830 hours, a Royal Air Force Dakota took off from Lübeck and after making its way along the northern corridor and calling up Berlin overhead the Fronhau beacon it landed at Gatow fifty-two minutes after it took off. Emblazoned on the nose of the Dakota were the words “*Positively the last load from Lübeck, 73,705 tons. Psalm 21, Verse 11*”. If anyone on the apron had a bible to hand and turned to the quote they would have realised that the biblical reference was aimed squarely at the Soviets – *For they intended evil against thee; they imagined a mischievous device, which they were not able to perform.*¹⁰⁴

NOTES

¹ On the EAC’s proposals and policy differences among officials see Ann and John Tusa, *The Berlin Airlift*, (London, 1998) chapter 1 *passim*.

² *Ibid.*, p.48, and Air Historical Branch, AP3257, Headquarters British Air Forces of Occupation Report on Operation Plainfare p.20.

³ *Ibid.*, p.11.

⁴ Helena P Schrader, *The Blockade Breakers – the Berlin Airlift*, (Stroud, 2010), pp.9-10.

⁵ Air Historical Branch. Copy of station history by Squadron Leader R E Miller, A Bridge Yesterday – the story of Royal Air Force Gatow in Berlin, p.17.

⁶ Roger G Miller, *To Save a City – the Berlin Airlift 1948-1949* (College Station, 2000), pp11-12.

⁷ Tusas, p.59.

⁸ Quoted in *Ibid.*, p.24.

⁹ Quoted *Ibid.*

¹⁰ *Ibid.*, p.74.

¹¹ *Ibid.*, p.66.

¹² *Ibid.*

¹³ Miller, p.19.

¹⁴ Schrader, p.27.

¹⁵ The rampant inflation which affected the Weimar Republic inter-war ran into thousands of per cent and destroyed the savings of the German middle class and was in part responsible for the rise of the Nazi party. So searing were the effects that fear of inflation continues to exert a very strong influence on German financial policy to this day.

¹⁶ Diptel 434, Military Governor to Foreign Office, 20 March 1948, in Keith Hamilton (Ed), Documents On British Foreign Policy, Series III Volume VI, Berlin, document 5.

¹⁷ Quoted in Miller, p.19.

¹⁸ Diptel 494, Military Governor to Foreign Office, 31 March 1948, DBPO document 6.

¹⁹ Tusas, pp.107-8.

²⁰ Miller, p.21.

²¹ AP3257, British Air Forces of Occupation, A Report on Operation Plainfare, the Berlin Airlift, 25 June – 6 October 1949, p.5.

²² Miller, p.23.

²³ Tusas, pp. 115-7.

²⁴ Presentation by Air Chief Marshal Sir Kenneth Cross to the RAF Historical Society seminar on the Berlin Airlift. *Proceedings of the Royal Air Force Historical Society, Number 6, September 1989*, pp.53-4. At the start of the Airlift the then Group Captain Cross was Group Captain Operations in BAFO.

²⁵ *Ibid.*, p.54.

²⁶ Miller, pp.43-4.

²⁷ Sebastian Cox, Britain and the Berlin Airlift, *Royal Force Air Power Review*, Vol.7 No.1, Spring 2004, pp.28-9.

²⁸ AP3257, British Air Forces of Occupation, A Report on Operation Plainfare, Appendix B, Report by Group Captain N C Hyde, Officer Commanding Transport Force on First Three Weeks of Operations Knicker, Carter Paterson and Plainfare for period 27 June 1948 to 19 July 1948, p.117.

²⁹ Tusas, p.144.

³⁰ AP3257, British Air Forces of Occupation, A Report on Operation Plainfare, Appendix C, Report by Number 46 Group on Operation Plainfare, pp.148 & 151-152.

³¹ AP3257, British Air Forces of Occupation, A Report on Operation Plainfare, Appendix G, Combined Airlift Task Force [CALTF] Report, pp.324-7 and Schrader p.55.

³² AP3257, CALTF Report pp.323-327.

³³ Tusas, p.150.

³⁴ Cox, p.29.

³⁵ AP3257, Report by Group Captain Hyde, p.120-2

³⁶ Tusas, p.149. The Army were initially responsible for providing the manpower for loading the aircraft.

³⁷ Cox, p.30

³⁸ AP3257, Report by Group Captain Hyde, p.117.

³⁹ Miller p.55.

⁴⁰ *Ibid.*, pp.58-9.

⁴¹ *Ibid.*, p.60.

⁴² *Ibid.*, p.61.

⁴³ *Ibid.*

⁴⁴ AP3257, CALTF Report, p.323.

⁴⁵ Richard Collier, *Bridge Across the Sky*, (London, 1978) p.122 and Tusas, p.253.

⁴⁶ AP3257, BAFO report p.14 and Cox pp.31-2.

⁴⁷ Schrader, p.79.

⁴⁸ AP3257, Appendix C, Report by Number 46 Group on Operation Plainfare, p.140.

⁴⁹ Cox, p.32.

⁵⁰ Miller, p.155.

⁵¹ AP3257, BAFO Report, Appendix R, Statistical Summary, p.520.

⁵² Wolfgang J Huschke, *The Candy Bombers*, (Metropol, Berlin, 1999), p.86.

⁵³ Cox, p.32.

⁵⁴ *Ibid.*

- ⁵⁵ Tusas, p.179, and AP3257, No 46 Group Report, p.140.
- ⁵⁶ AP3257, Number 46 Group Report, pp.199-200.
- ⁵⁷ Cox, p.33.
- ⁵⁸ *Ibid.*, pp.32-3.
- ⁵⁹ AP3257, Number 46 Group Report, p.196.
- ⁶⁰ Cox, p.32-3 and Tusas, pp.248-9.
- ⁶¹ Schrader p.96.
- ⁶² Roger D Launius, *The Berlin Airlift: Constructive Air Power*, Air Power History, Spring 1989, p.18.
- ⁶³ Collier, p.95.
- ⁶⁴ Cox, p.33..
- ⁶⁵ Schrader, p.88.
- ⁶⁶ Tusas, p.254.
- ⁶⁷ Collier, p.146.
- ⁶⁸ Chris Clark, *Operation Pelican: The Royal Australian Air Force in the Berlin Airlift, 1948-1949*.(Tuggeranong, 1978), p.20.
- ⁶⁹ Air Historical Branch, RAF Wunstorf Folder, “RAF Wunstorf Interim Report on Operation Plainfare”, p.9, n.d. circa August 1949, and Collier p.69.
- ⁷⁰ Tusas, p.150.
- ⁷¹ AP3257, Report by Group Captain Hyde, Appendix A, p.129, No 46 Group Directive dated 30 June 1948.
- ⁷² AP3257, Report by Group Captain Hyde, p.118.
- ⁷³ AP3257, Annexure 4 to Appendix A, to BAFO Report, p.110 AHQ/BAFO Operation Instruction 14/48, 3 July 1948.
- ⁷⁴ AP3257, BAFO Report, p.7.
- ⁷⁵ *Ibid.*, p.82.
- ⁷⁶ *Ibid.*,Number 46 Group Report, p.179.
- ⁷⁷ *Ibid.*, BAFO Report, p.8.
- ⁷⁸ Miller, p.91.
- ⁷⁹ *Ibid.*, p.101.
- ⁸⁰ *Ibid.*, pp.101-2.
- ⁸¹ AP3257, Number 46 Group Report, p.146.
- ⁸² Daniel F Harrington, *The Air Force Can Deliver Anything! A history of the Berlin Airlift*, (Ramstein, 1998) p.66.
- ⁸³ William H Tunner, *Over the Hump*, (Washington DC, 1985), p.210.
- ⁸⁴ AP3257, BAFO Report, p.19.
- ⁸⁵ Miller, p.115.
- ⁸⁶ Tusas, p.186,
- ⁸⁷ Miller, p.116.
- ⁸⁸ *Ibid.*, p.182-4.
- ⁸⁹ AP3257, BAFO Report, p.161.
- ⁹⁰ Miller, p.147.

⁹¹ *Ibid.*,

⁹² Tusas, p.243.

⁹³ AP3257, BAFO Report, Appendix R, Statistical Summary, p.519.

⁹⁴ *Ibid.*,p.162.

⁹⁵ Miller, p.161.

⁹⁶ Tusas, p.305.

⁹⁷ AP3257, Number 46 Group Report, p.147.

⁹⁸ Miller, p.163.

⁹⁹ AP3257, BAFO Report, Appendix R, Statistical Summary, p.519.

¹⁰⁰ Miller, pp.174-5.

¹⁰¹ Figures compiled from AP3257, BAFO Report, Appendix R, Statistical Summary.

¹⁰² Miller, p.187.

¹⁰³ Cox, p.37.

¹⁰⁴ *Ibid.*, p.25.

This article has been republished online with Open Access.

Ministry of Defence © Crown Copyright 2023. The full printed text of this article is licensed under the Open Government Licence v3.0. To view this licence, visit <https://www.nationalarchives.gov.uk/doc/open-government-licence/>. Where we have identified any third-party copyright information or otherwise reserved rights, you will need to obtain permission from the copyright holders concerned. For all other imagery and graphics in this article, or for any other enquires regarding this publication, please contact: Director of Defence Studies (RAF), Cormorant Building (Room 119), Shrivenham, Swindon, Wiltshire SN6 8LA.

 **ROYAL
AIR FORCE**
**Centre for Air and
Space Power Studies**

OGL