# RAF TRANSPORT COMMAND REVIEW

NUMBER THREE NOVEMBER 1945

VICKERS VIKING-A FUTURE TYPE IN TRANSPORT COMMAND



# TRANSPORT COMMAND REVIEW

#### ISSUED BY HEADQUARTERS TRANSPORT COMMAND, ROYAL AIR FORCE

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### MESSAGE FROM THE CHIEF OF THE AIR STAFF

The Chief of the Air Staff has sent the following letter to the Air Officer Commanding-in-Chief :

I AM writing to tell you how great is the importance which the Government, the Chiefs of Staff and the Air Ministry attach to the successful execution of the Air Trooping Programme.

One of the most urgent, if not the most urgent, of this country's needs to-day is to increase as quickly as possible the flow of men and women from the Services into industry and commerce. This is vital if the peacetime economy of the country is to be quickly restored and if our export trade is to expand on the scale which is necessary for our national revival. The principal burden of repatriation must of course fall on our shipping, but during the critical period of the next six months the shipping available cannot possibly meet the requirements of all the claimants upon it. There is not only the problem of bringing men home from overseas commands to the UK for demobilisation; released prisoners of war of many nationalities must be transported, and there are immense numbers of men to be moved back to the Dominions, to India, to the Colonies and to many allied lands.

Since shipping cannot do all this at once, most important assistance is to be given by the RAF, and we have set ourselves the objective of carrying at least 10,000 men a month to and from India, beginning in October. This is a tremendous task on a route which has had to be developed under the difficult conditions created first by war, followed by redeployment and then the beginning of demobilisation, but it is also a challenge which the RAF has accepted and in which it must not fail.

I should like you to bring this home to all members of Transport Command. In whatever capacity they serve, whether as air crews, flying controllers, maintenance and domestic staff, or in the host of other employments on the trunk routes, I should like them all to know that they are engaged on work of truly national importance which will have consequences far beyond the immediate fact of transporting men between India and this country. Not only do they bring men home for release, but in many cases by doing so they also release men at home who have been retained with the colours until all men of their release group are back from overseas. The arrival of one man home may result in the release of as many as five other men stationed at home. Moreover, speed is the essence of the matter. Air transport can restore men to civil life with a rapidity possible with no other means of transport, and the next six months are crucial. "He gives twice who gives quickly." The air trooping programme will thus make a real contribution to the economic revival of this country.

It is no exaggeration to say that the task which now confronts Transport Command is, with the similar but less ambitious trooping programmes of other Commands, the supreme task of the RAF to-day. Nothing must stand in the way of its fulfilment, and everything must be done to achieve and if possible surpass the target that has been set. I hope that everyone in Transport Command will put their backs into it and make this undertaking an outstanding success.

1 Sel

Marshal of the Royal Air Force.



# **ICELAND LANDSCAPE**

#### SQUADRON LEADER R. C. RIVAZ, D.F.C.

How to see Iceland in a brief period of thirty-six hours? —to learn and understand and appreciate something of the spirit, customs and traditions of the island with the smallest population, 130,000, of any country in the world.

An Icelandic artist friend, who loves and knows much about this most northern European country would provide the answer.

Town life is the same the world over, and is only varied by dictates of climate and trade, but in the country the customs and tradition reveal the spirit of the people.

"We will go," Barbara said, "to the oldest farm in Iceland, where I am staying. It is nearly a hundred miles away, and we drive eighty miles in a car and then go fifteen miles on a horse."

It was raining, though even so we could see a surprisingly long way. The road, very narrow and winding, was rough, pitted with crater-like potholes, and with a very loose black grit and sand surface looking like a cinder path.

We climbed away from the town, with its red-roofed, white-walled houses, over a range of rocky, nearly black hills strewn with lumps of lava and seared with volcanic craters—"Like a cross between the Highlands of Scotland and the moon," Barbara remarked. The whole of the island is volcanic. It was decidedly a barren landscape, with hard, jagged, dark mountains. There were no trees and very little green; what there was caught the eye by its unexpectedness. The biggest tree was no more than three feet high.

As we wound down a mountain-side we could see the road below us snaking to the bottom, where the desert-like plain, as flat as a lake, was dark brown and lava-strewn. There was a village by some hot springs: we could see the steam rising amongst the houses, and it looked as though in every garden there must be a bonfire belching white smoke. Around the village there were glasshouses for growing fruit and flowers, and all heated by this natural steam. The whole of Reykjavik is also centrally heated from the springs, the water being carried by underground pipe lines, and in the winter the location of these pipes can be seen by a line of melted snow along the roads and pavements.

It began to get dark, and was still pouring with rain, with clouds of spray streaming over the windscreen every time we ploughed through a flood. We drove over several narrow iron bridges spanning glacier-fed rivers, rich grey-green in colour, rushing in torrents between steep banks. The fishing in Iceland is some of the best in the world. Deep sea fishing is the chief industry of the island and practically their only export trade. Iceland lives from the sea, as she possesses no raw materials and they all have to be imported and paid for by fish.

The weather is Iceland's worst enemy: there are no snakes or wild animals to harm you, or wasps or mosquitoes—midges, yes—but the weather can kill you. January, February and March are the worst months, with furious gales and blizzards, when it is possible to die within a yard of your own doorstep. Many farmers and shepherds have been killed struggling in a blizzard between their barns and their houses.

When it got dark Barbara told me of how she and her husband lived in the summer: of their long rides, seeking out strange places to see; how they could paint a sunset and then turn round and sketch the dawn; of camping at the foot of glaciers, and storms and gales, of fording flooded rivers, with their horses fighting the raging torrents, and how you had to look at the opposite bank or else you got too giddy from the swirl of the water.

She told me of the native customs and habits, and that I must shake hands with everyone I met. This practice is common throughout Scandinavia, and is more than just a greeting but rather an acceptance of friendship. She told me a little of the history of Iceland, and how the first settlers had arrived with their families and cattle in the year 874.

The farm to which we were going was built by one of those first settlers. I heard of the present prosperity of the island, very different from the earlier part of the century, when they were desperately poor and there was no coastal shipping, and when it was quicker if you wanted to send a letter to the northern part of the island to post it to Denmark, where it would go by another ship to Akureyri in the north.

At last we reached our destination, a farm on the edge of a black sand desert, where Barbara's husband was waiting with the horses.

The rain had eased off a lot and there was only a light drizzle: it had helped to show up the trail, as the pools



Hot springs near Reykjavik provide a public laundry

of water in the ruts reflected what little light there was in the sky.

It was a weird journey that, in the night and the drizzle and strange unseen country, but with good friends. Dark mountains just showed against the skyline, and for the rest it was guesswork. The clopping of the horses' hoofs told us whether we were on hard or soft ground, that was all. Sometimes they were crisp, over rock or gravel; sometimes muffled on turf, or practically soundless over sand.

It was difficult to see if we were rising or descending or on the flat, unless a hill became particularly steep. We crossed a river, and then a light showed ahead—our farm—and in twenty more minutes we were there.

An enormous meal was waiting for us: soup, eggs, freshly killed lamb—the first of the season—rye bread brought straight from the oven and looking like a dark brown cylinder, milk and coffee. I was a stranger to the farm, but was welcomed as one of the family.

The Icelanders are a very cultured race and there is an exceptionally high standard of education in the schools, which are free. There are no dialects, and Icelandic, the purest of the Scandinavian languages, is spoken by everyone throughout the island in practically the same form as was used in the beginning of her history. Most people are very well read and have a very fine literature of their own: in Reykjavik it is noticeable the number of bookshops there are, and the arts are appreciated and encouraged. The painter is helped financially by the State according to his merit: he, or she, is recognised as being of value to the community. Every year a week is dedicated to artists, with authors and poets reading their poems and passages of their books to their public, painters exhibiting their pictures, and music heard and enjoyed.

The following morning the sun was shining, for the first time for forty days, as though in apology and to make up for the wet greeting the visitor had received. I looked out on to what I had come to see.

We were in an oasis of green, closely mown grass, amongst the black, grey and brown lava—molten rock that had flooded and bubbled and hardened into great rough slabs and blistered boulders scattered about the bleak but wildly wonderful countryside. Outside the farm precincts there was very little vegetation and only coarse grass, on which the sheep and ponies seemed to thrive.

In the distance, Hekla, which means a hood, stood out clear and strong, a deep blue-black shape against the light sky. She was wearing her hood of cloud, which she nearly always does, this time a wispy affair only hiding her top. Sometimes it comes right down and shields her altogether. Hekla last erupted in 1895, and there is a strong feeling amongst the country folk that she is preparing to do so again. This volcano stood twenty miles away, and the lumps and streams of lava came right to the edge of our farm.

All around the horizon Iceland's mountains spiked up in the sky. Some had glaciers on them, great lumps, nearly white, clinging to the tops and sides. Right by the farm a river sprang out of the lava rock: like many others it flowed underground from Hekla.

All round about, streams of hardened lava swirled and twisted and looked like swift rivers struck dead. There was every possible change of grey, from black to nearly white, and every sort of brown from red to almost grey.

Hekla, from which all this lava had flowed, dominated the whole landscape: she seemed a lot nearer than twenty miles away and was continually changing colour

Amongst these greys and browns and blacks, the green of the farm was homely and comfortable. Very little of the buildings could be seen from the outside, as their side walls and roofs were turfed over, with cows and sheep grazing on top of them.

In the late autumn the cattle and sheep that are not slaughtered for food, are rounded up and housed in the shelter of these cave-like dwellings.

Inside, the walls were of stone and hard-pressed mud, with heavy beams, black with age. The rooms were lit by electricity generated by a small windmill—the strength of light depended on the force of the wind.

After lunch we started on the journey back. A large flock of golden plover were gathering together for their long flight south. Back at the aerodrome—another tour, this time a local one.

As Malta is a stepping-stone to the East, so Iceland is a halting-place for the West. Much has been heard, and a great deal dreaded, about this northerly stagingpost on the route to Canada.

The main concern has been to make the camp habitable and comfortable during the long winter months, with the short hours of daylight and fearsome gales and blizzards. Men on their twelve months' tour, with no chance of home leave, are dependent on comforts, relaxation and entertainment in the camp, particularly in winter.

We visited a dispersed signals section. Here the men had dug themselves in really comfortably; most of the furniture was home made, and the walls of the sergeants' mess were decorated with paintings. The huts had



A lava-field in Iceland

been designed so that there was no need to go outside more than was absolutely necessary during the winter, and the sleeping quarters, messes and cinema were all connected by passages. Each section had its own cinemas, many of them equipped with armchairs and a bar. We visited messes, sleeping quarters, cinemas, ablutions, kitchens, and my escort said that when there are two cooks there are two things required of them —they must be able to cook, and they must be friends.

Outside, even though the evening sky was clear, one was reminded of the need for comfort. Lava, rock, the sea, the distant mountains, the stiff breeze—merely hinting at what it could and would do, when Blighty must seem a long way out across the North Atlantic.

At dawn the following morning I left in a Sunderland. Flying south-east across this moon-like country, with jets of steam from the hot springs, great lava craters and upheavals, rocks casting long shadows. Along the horizon dark blue-black mountains with grey, lavadust-filled clouds sweeping round them, the sun fighting with more clouds and streaking through the gaps. Out across the sea, flecked with white horses. Good-bye to Iceland. Good-bye, Hekla.



# **CHARACTERISTICS of Air Transport**

**F**ROM the military point of view the outstanding characteristic of Military Air Transport is its ability to fly anywhere over the earth's surface. It can take in its stride oceans, deserts, mountains and inhospitable coasts. It has the same flexibility over the whole of the world as navies possess over oceans.

Next to its power to roam at will over the world, the most marked advantage is its ability to cover long ranges at very high speeds compared with those obtained by other means of transport. It achieves this power to carry troops or supplies rapidly, over long distances and in any direction without the need for facilities on the ground such as roads or rails. It can navigate accurately by means of equipment carried in the aircraft and ground facilities at home bases. For airborne assault, that is to say operations involving units and formations being dropped by parachute or landed in gliders, it does not even require an airfield at its point of destination. For the landing of supplies all it requires are those few landing-grounds which will enable it to land its cargoes in the vicinity of the forces it serves. No resources must be grudged to make these efficient and productive. If they are referred to as few, it is to emphasise the small requirements of air transport as compared with road and rail.

The ability of air transport to strike suddenly at almost any point in a theatre of war gives it power of surprise in a very high degree. This tends to alter the dispositions of the enemy who is forced to disperse his defences widely throughout the theatre at the expense of his front line and striking force.

Flexibility between the various roles of air transport is attainable in a high degree. Air transport forces can at one moment participate in airborne assault operations, and at the next be switched to the role of supply by air, and a week later be employed in a strategic movement of forces between theatres or in the maintenance of scheduled air services on local or trunk air routes. This is not a mere statement of principle, but an illustration of what has been happening in our transport forces throughout the world.

Other advantages of air transport are related to its speed of movement. By saving time in movement it reduces vulnerability and ties up fewer highly trained personnel and less specialist equipment in transit. It also enables new weapons or other equipment to be introduced more quickly in theatres remote from centres of production; and makes possible closer and more frequent consultation between Commanders, staff and units. It can carry casualties, urgent medical supplies, mail and welfare items more quickly and directly than surface transport. In doing so it saves life and assists morale.

It is inevitable that at this early stage in the development of air transport the striking advantages which have been enumerated should be partly offset by certain limitations. Pessimists regard these limitations as ones which will always apply to air transport. Enthusiasts are confident that future research and development will reduce or banish existing disadvantages.

Air transport suffers from two main limitations. In the first place transport aircraft are unable to lift very heavy or very bulky items. The second main limitation is weather. The effects of weather on flying differ largely in various parts of the world and at different seasons of the year. On the whole we are learning to overcome the problem of weather as it affects operations throughout a period, but it can still absolutely prevent us executing a required operation at a precise time. The same applies to seaborne invasion, but not to road and railway traffic, except insofar as bad roads can be made impassable by heavy rains.

There is another apparent limitation which is more imaginary than real, but which is often allowed to weight the scales against air transport. This limitation is the fact that air transport is more costly than surface movement in direct manpower employed for each ton lifted. This is, however, often outweighed by the military or economic value obtained by the rapid movement of the cargo.

A word of warning is necessary in explanation of the present inability of air transport to lift heavy loads. While we must freely admit present limitations in weight of single loads, we must nevertheless bear in mind the fact that the aircraft can shuttle between its supply base and its destination at a speed which leaves other forms of transport far behind. For instance, a York freighter aircraft can to-day fly to Colombo and back four times in a month. No doubt under normal peace conditions this could be increased to between five and six return flights a month. Probably a tramp steamer would in peace time make some four return trips in the year. In a given period therefore the aircraft will make about fifteen trips for each one performed by the cargo steamer. A recent flight by one of our freighters to Karachi and back-a journey of some 10,500 miles—was carried out in under  $48\frac{1}{2}$  hours' flying time and only  $65\frac{1}{2}$  hours' elapsed time.

The strategic employment to-day of military air transport is still limited by the size and capacity of our aircraft, and the size of our transport fleets. It is clear that fifty years from now, and probably much sooner, both these limitations will largely disappear. By then the civil air fleets of the world will bear the same relation to strategic movement by air as our merchant marine to-day bears to strategic movement by sea. Even to-day, however, air transport is able to assume important responsibilities in the strategic role.

In the first place, under wise administration and in collaboration with the merchant marine, it can provide the three fighting services with the means of rapid redeployment in overseas theatres. This redeployment must necessarily assume the form of redeployment between bases already stocked by sea transport, or from local resources with such heavy stores, equipment and repair facilities as cannot economically be carried by air.

In the case of the Royal Air Force one must expect to find fuel, bombs and vehicles together with other heavy equipment, ready and available in the new theatre. Personnel and machine tools for major repair must also be available either from civil or service resources. Given properly organised bases, squadrons and the personnel required for their immediate servicing and operation can be made flexible at high speed and short notice throughout the world. We reckon that a Lancaster squadron could be moved between the Middle East and N.E. India by about 110 York aircraft in two days. If, however, one reduced the air party to the minimum essential to work the squadron for the period of, say, two months, by which time the remainder, despatched by sea, could catch up their squadron, the number of York aircraft required would be only 33. If each transport aircraft did two trips, the total time of the movement would be six days and the number of aircraft halved. Approximately 1,500 York sorties are required to transport a Light Division of the Army. The Light Division is an Army formation specially constituted with a light scale of equipment and weapons so as to be entirely capable of carriage by air. If this number of York aircraft were available it would be possible to transport a division from the Middle East to India in 48 hours. If only half the number of aircraft were available, the move would take five or six days. It is important to remember that the force could be lifted from its existing location in Egypt and taken direct to the area in which it is required.

The extent to which air transport can assist the strategical redeployment of the Navy is less than its aid to the Air Force and the Army, but it would be wrong to assume that the Navy does not need the help of strategic air transport. There will always be key personnel and vital items of equipment, the rapid movement of which will be essential to enable fleets to redeploy rapidly in new theatres.

Another main strategic responsibility which inevitably devolves on the military air transport organisation is the despatch and control of reinforcement aircraft to theatres overseas. Wastage of reinforcement aircraft and crews in passage to the new theatres may assume alarming proportions if careful attention is not given to preparation and organisation. The preparation of crews and aircraft for long ferry flights overseas is not as simple as at first sight appears. In the first place, the aircrews will probably have been trained in this country or Canada and will have no knowledge of conditions and climate in other parts of the world. Equally their experience will of necessity be limited to the training given to aircrews destined for Bomber, Coastal or Fighter Squadrons, and they will have no special experience in the control of their engines to obtain the maximum endurance often required for long flights over the sea. Further, there is the point that the aircrew, leaving his Operational Training Unit for a home squadron, is under the direct supervision of his Flight, Squadron and Station Commanders. On the other hand, aircrews despatched on reinforcement flights fly from Staging Post to Staging Post where they are not personally known and where much more is necessarily left to their own initiative than would be the case in a squadron. The aircraft require scrupulous inspection and air tests before being despatched on long trans-ocean flights. Engine consumptions require to be tested under conditions of long-range flights. Measures such as those described together with adequate briefing of crews for their long delivery flights will reduce wastage to a minimum. Unless this problem is treated as one requiring careful organisation, wastage and delays accrue in an alarming manner.

In support of our forces in the various theatres, air transport provides regular services for the carriage of key personnel, equipment, despatches, troops' mail and other essential welfare items. On their return journey these aircraft carry key personnel including large numbers of return ferry aircrews, mails and casualties due to sickness or action. The number of services required to fulfil this role is growing from day to day and is a tribute to the fact that Service and other departments realise increasingly the value of time and the advantages gained by quick passage.

In war, when the efficient use of resources is the arbiter governing their movement, the advantages of air transport become strikingly apparent. In peace, when money considerations are more likely to prevail, the initial cost of the air passage provides a deterrent to many business firms and private individuals. In due course, however, in peace as in war, the many advantages of air transport will become apparent and the value of the time saved more clearly recognised so that air movement will be valued on its true merits.

# AIRBORNE UP TO 30 HOURS

FLIGHT LIEUTENANT ROBERT RUSSELL

UNDER American Lend Lease many types of landaircraft have been ferried to the U.K. via the North Atlantic and its staging posts, but little has been heard about the flow of Flying Boats which were emerging from the Consolidated factories in San Diego, California.

The Catalina, referred to more generally in the Service as the "Cat" or the "PBY," was produced in large numbers and was being flown in a continuous stream over the longest trans-oceanic route that was covered by any aircraft at that time. These planes were flown by U.S. Naval crews from their Californian factories to the British reception unit at a small town in North Carolina called Elizabeth City.

From this base senior civilian pilots of Transport Command were allotted their individual planes for onward delivery to Scotland. The crews were made up of seven, two pilots, two engineers, two radio operators and one navigator. The co-pilot was usually a freshly trained RAF pilot from one of the British Training Schools in the United States.

The route followed was from Elizabeth City on the eastern seaboard to Bermuda, and from Bermuda direct to Scotland. Study of the map will show that the distance from Bermuda to the Scottish coast is approximately 3,300 statute miles, a far greater distance than over the more common North Atlantic route from Newfoundland to Scotland, which is under 2,000 miles. Why did these planes fly the longer route? The answer is that they were unable to use the North Atlantic bases in the winter because the landing areas became frozen over. The service started in the winter as the planes were then urgently needed in Europe, and ferrying them over was the only way of getting them there quickly.

The Catalina, with its two 1250 h.p. Pratt and Whitney radial engines, was a flying-boat of stout construction, with the slow Economical Cruising Speed of 110 knots. It was fitted with additional long-range petrol tanks, giving it an airborne duration of thirtythree hours, and full de-icing equipment. This latter was very necessary, for the ceiling of the Catalina was about 10,000 ft. and sometimes icing conditions were encountered almost continuously for fifteen hours on end.

The first part of the crossing—from Elizabeth City to Bermuda—was as unexciting as a trip in the tube from one end of London to the other. Usually it was carried out a day or two after the crew had arrived in the States from the Canadian Headquarters in Montreal. The flight, lasting about five or six hours, was used as a check flight for the testing of all equipment and for determining the fuel consumption of each engine.

It was not until Bermuda was reached that the sense of urgency, the possible dangers of weather conditions, and worry over the reliability of the aircraft became the predominant factors in the minds of the crews. At Bermuda the planes were given immediate pre-Atlantic inspections, trial flights and very detailed checks. Then they were loaded, re-fuelled, and buoyed up in the sheltered waters of the coral islands of Bermuda.

The only problem left was the difficult one of choosing the right day for departure. The kind of forecast required had to combine good flying conditions over the route, tail winds, and good terminal and base conditions. As a matter of interest the trip of 3,300 miles could not be completed within the safe fuel limit unless there were following winds averaging about fifteen to twenty knots throughout the journey.

This vast stretch of ocean was a riddle to the most experienced meterologist, for the span of water to be crossed lay in zones that were seldom used by ships, and weather reports just didn't exist. The entire map forecast was done by complete co-operation between the Met. stations situated round the Atlantic ocean. The resultant forecast map was the only information the captain had for his guidance. And, of course, the forecast had to be made out 36 hours in advance, for the flight plan was usually in the neighbourhood of 24 to 27 hours.

By first light on departure day all crews were up,

Inspection and maintenance at Bermuda. A CORONADO can be seen in the hangar.



flight plans were completed and, across the water the engineers could be heard testing the engines. Even when the planes were all but ready for the take-off the Met. department were working feverishly on the latest amendments, and more than once flights were cancelled while planes were actually taking off. The early departure was unavoidable if the planes were to arrive at a suitable time the following day, but this meant they had to take off before the latest weather report had been received. Throughout their long trip constant alterations in the forecast would be radioed to the individual planes. No flight was ever sure of completing its mission until the point of no return had been reached. Then onward flight was the only choice. Weather fair or foul had to be encountered and dealt with entirely at the discretion of the captain.

Fuel was a vital factor on these long flights, and had to be conserved to the last drop; in particular, changes in altitude had to be avoided because of the enormous consumption of fuel involved in climbing in a heavily overloaded flying-boat.

So these pioneers in long-range all-weather flying ploughed on over the stormy Atlantic waters, often diverting their course by one or two hundred miles to outflank some extreme turbulence which would have proved too much for the airframe.

Hours passed slowly on those flights. Time seemed unending from the hour the sun rose until it began to set and night closed in. Once again the sun rose, and was beginning to sink again as the weary crew munched frozen sandwiches and began at last to see the welcome sight of the Irish coast. It had been a long, long trip but it was a job well done. The roar of engines fades out and the splashing boats come to rest in the Firth of Clyde. Twenty-seven, maybe thirty, hours in the air. Another Catalina delivered.



TRANSPORT COMMAND REVIEW has achieved its third number, but still needs contributions, particularly from Units overseas. All in the Command who can produce

#### ARTICLES DRAWINGS PHOTOGRAPHS

which concern the life and work of the Command, are urged to send them to: The Editor, TRANSPORT COMMAND REVIEW, Bushy Park, Teddington, Middlesex.

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Extract from a speech in the House of Commons on October 12, 1945, by the Under-Secretary of State for Air, MR. JOHN STRACHEY, M.P.

### RELEASE IN THE RAF

In order to observe the principle of the age and service group as between the men at home and the men overseas, an immense and urgent transportation task arises. That is the task of getting the men home from the Far East, Italy, and all over the world; and in that task the Royal Air Force is imperatively needed. I wonder if the House quite realises-I did not realise it until I got the figures put before me and added them up-the immense magnitude of the transportation task which faces Transport Command, and not only that Command-it is wider than that-in the next nine months ? It turns out that between now and 30th June next we have to meet a task of moving almost exactly 1,000,000 men and women over various journeys. That is a transportation and trooping task of a magnitude which, I suppose (with the exception of the repatriation task faced by the USAAF last summer over the Atlantic with much greater resources), no Air Force in history has ever dreamt of facing before. The over-all release scheme, the indispensable leave schemes from the Far East, the return of men after their tour of duty in all three Services-none of those can be looked at unless the RAF can move those million bodies in the next nine months.

That is a task which bears most heavily on the RAF, and, in addition to the very big rôle which, as I have just said, it is called upon to play in meeting our world-wide commitments, it means that we need a larger proportion of the Force, 58 per cent as compared with 52 per cent of the Navy, to be retained within the RAF next summer. It means that between 600,000 and 700,000 men—add the figures up yourselves—are needed in the Royal Air Force next midsummer. Those two reasons will account in the New Year for the smaller rate of release from the Royal Air Force as compared with the other two Forces.

Think what would happen, for example, if we, facing that transportation task, released a rapidly increased number of men. That transportation task cannot just be done by anyone. It cannot be done by new recruits. Hon. Members have mentioned the question of intake. It is a valuable suggestion and will be taken up, but I am afraid we should delude ourselves if we thought it would help very much in the short run. You cannot put on to this enormous trooping job any but experienced men. I do not mean merely experienced pilots and navigators. Those are very important, but I mean also men experienced in maintenance tasks both here and at the staging posts which have to be made from here to Singapore.

It may interest the House to know that Transport Command makes a rule that two full journeys to the Far East and back have to be made by each crew which goes out, carrying freight only, before they carry passengers. Yet even with the very great efforts which we make in the interests of safety there probably will be crashes and accidents in an immense task of that sort. If we relaxed in the very slightest, or allowed our experienced men to go, I am afraid that the accident rate might become one which this House could not possibly allow to continue. In all, we calculate that, during the six months of next year (and not merely in Transport Command, because half at least of Bomber Command will be engaged in the task, and counting the share of Maintenance Command and the training and auxiliary services which are backing up the transport services) some 40 per cent of the entire man-power of the RAF will be engaged in this transportation task. The switch-over of man-power from the war-time tasks of the Royal Air Force to this new task having to be carried out at the same time as hundreds of thousands of men are going out of the Service, is a problem of remustering such as no Service has ever had to face before. Because, then, the RAF is the most economical way of meeting our commitments and because of this huge transportation task, the rate of release which we thought it safe to forecast for the first six months of next year is an appreciably slower one than is possible for the Army and the Royal Navy,



PHOTOS BY L.A.C. D. A. VINTON

# WHERE DO WE GO FROM HERE?

A COLD grey dawn—or a crisp, bright morning ; it's just another busy day for the WAAF at the Croydon reception centre. Soon the passengers from London will be arriving. They will be of all sorts and tempers —men and women in uniform, Government officials, and civilians—experienced or excited, anxious or frustrated—aliens, refugees, business men, mothers—yes, and their children. As soon as the bus arrives, travellers besiege the counters, buttonhole anyone in RAF or WAAF uniform.

The questions and the problems pour out in a confused, unending stream. Quickly this varied crowd is marshalled into an orderly line, passing from counter to counter, through Security, Customs, Currency. "Your ticket, please, sir?" "Have you your passport?" (Always some are mislaid.) Somebody's baggage is unaccountably missing. It is still in the bus, or may be left at the booking centre. "May I take this with me?" "Can you tell me how to get to the — Hotel in Paris?" "What time

do we start?" "At what hour is it that we arrive?"

It sounds like a page from an elementary language guide. If the questions are many, the answers are quick. Experience has taught the WAAF officers and clerks the answers to almost every question that arises and they handle the busy scene with quiet efficiency. They must be receptionists, guides, comforters, even









When the WAAF officer sees the first plane off, the day has only just begun. BELOW: Soon, arrivals from the Continent increase the flow of traffic.

nursemaids, for someone must hold the baby while the tickets are found.

When all formalities are over, passengers are gathered in the waiting-room overlooking the tarmac. If their wait is long, the WAAF officer must employ all her tact and patience. As soon as take-off is assured, she takes the passengers out to the aircraft, checks them off on her passenger register as they climb the gangway, and follows them in to distribute lunches and help to fix safety belts. This done, and having wished the passengers a good voyage, the WAAF officer closes the door and watches the aircraft away. And almost at once the arrivals from the Continent come in to land. More people, more babies, more questions—"Where do we go from here?" A busy day for the WAAF.



## Meteorological Conditions in the Stratosphere

This article by WING COMMANDER D. A. DAVIES, M.Sc., F.Inst.P., Command Meteorological Officer, is necessarily a brief and simple summary of the information available, mainly gathered from Air Ministry and American publications and manuscripts. Most of the figures relating to heights, winds, etc., should be regarded more as a general guide than as statements of fact.

DURING the war which has just ended great advances were made in aircraft design, one of the most outstanding results being the development of high altitude flying. As a legacy to transport aviation the war has left much accumulated knowledge of the technique of high altitude flying, and one of the major factors to be considered is the weather conditions encountered at great heights.

The atmosphere is the name given to the air and water vapour which surrounds the earth. In the lower atmosphere there is a general decrease of temperature with height. This part of the atmosphere is known as the troposphere. Above the troposphere there is no further decrease of temperature with height and there may even be a slight increase. This upper part of the atmosphere is known as the stratosphere. Between the stratosphere and troposphere is a transitional zone called the tropopause.

The height of the tropopause varies very considerably with latitude. The average height near the Equator is about 57,000 ft.; in the latitude of Cairo it is about 48,000 ft.; in the latitude of London it is about 35,000 ft.; near the Poles it is about 30,000 ft., but owing to paucity of observations the precise vertical structure of the atmosphere near the Poles is uncertain. There is also a marked seasonal variation in the height of the tropopause especially in middle latitudes, the tropopause being higher in summer than winter. In latitude of London the average summer height is 36,000 ft. and in winter 34,000 ft.

As is to be expected, very low temperatures are experienced in the stratosphere and there is a marked change of temperature with latitude. This stratospheric temperature change is the opposite to the surface temperature variation. The average temperatures of the stratosphere in the tropics is about  $-75^{\circ}$  C.; in the middle latitudes it is about  $-55^{\circ}$  C.; and in polar regions it is about  $-50^{\circ}$  C.

#### Weather in the Stratosphere

The fact that there is no decrease of temperature with height in the stratosphere has a very important bearing upon the weather experienced at such heights. In the troposphere a moving air mass normally has a vertical motion in addition to the horizontal motion which is familiar to us as the wind. It is the cooling caused by the vertical ascent of such an air mass which is responsible for the formation of clouds and precipitation. Vertical currents in the atmosphere cannot persist in a layer of air in which there is no vertical decrease of temperature, so that whereas in the troposphere movements of air masses may take place in



horizontal and vertical directions, in the stratosphere there is only horizontal motion. The meteorologist describes this state of the stratosphere as one of stability. Since it is vertical currents which cause bumpiness to an aircraft in flight, it follows that flight in the stratosphere will be characterised by smooth flying. In the region of the tropopause, however, there may be turbulent conditions accompanied by bumpiness.

The atmosphere is at all times a mixture of dry air and water vapour, and a measure of the amount of water vapour present is the humidity of the atmosphere. The amount of water vapour which the air can hold without condensation taking place decreases with temperature. It is for this reason that clouds and precipitation are formed when air is cooled by rising. At such very low temperatures as are experienced in the stratosphere the amount of water vapour in the air is very small and, as explained above, any incursion of moister air from the troposphere by vertical currents is prevented by the stability of the stratosphere. Clouds are therefore of rare occurrence and any which do occur are very thin and diffuse. It also follows that there is no precipitation and, most important of all, no icing-either of the airframe or carburettor.

Stratosphere flying therefore means smooth flying in clear air with no dangers due to icing, but it must be remembered that such operations will still involve ascent and descent through the troposphere where all the familiar weather hazards are liable to be encountered. An aircraft descending through the troposphere after having flown for several hours in the extremely low temperatures of the stratosphere will be particularly liable to ice accretion, which may prove to be a more serious hazard to an aircraft designed to operate in the stratosphere than it is to the present types of aircraft in general use.

#### Winds in the Stratosphere

Until recently the only accurate method of obtaining upper wind observations was by means of pilotballoons and as these could only be observed to stratospheric heights on clear days when upper winds are comparatively light, earlier records of winds in the stratosphere all referred to days of clear weather and light winds. These records showed a very pronounced decrease in wind speeds above the tropopause.

Upper wind observations are now made by radio and radar methods, and in recent years great advances in the technique of both methods have been made especially in this country. The observations obtained by these means are much more representative of general conditions in the stratosphere since they are made in all types of weather. The results of such observations over the British Isles reveal that, whereas there is normally a decrease in wind speed with height in the stratosphere, it is, during the winter months, only a very slight decrease. Over Salisbury Plain, for example, the mean vector wind in winter changes from 323° 37 m.p.h. at 36,000 ft. to 308° 31 m.p.h. at 56,000 ft. The corresponding means for summer are 285° 29 m.p.h. and 290° 9 m.p.h.

An estimate of mean winds at 35,000 ft. and 50,000 ft. over the N. Atlantic has recently been computed at the Meteorological Office, Air Ministry, using upper air charts published by the US Weather Bureau. These results are interesting since they not only confirm that in the winter months over the whole N. Atlantic the decrease in wind speed from 35,000 ft. to 50,000 ft. is in general small, but also because they reveal that in some parts of the N. Atlantic very strong winds are to be expected at these heights. On the direct route UK to Canada the mean wind speeds at these heights are of the order of 40-50 m.p.h. from a westerly direction. It is important to remember that these wind speeds are estimated mean winds and that the maximum winds will be considerably more-probably twice as great in many places.

According to an American publication, the minimum wind speeds in the stratosphere in middle latitudes are reached at 60,000 ft. (i.e. well up in the stratosphere) when the mean wind speed is of the order of 20 to 30 m.p.h.

It is therefore evident that in planning for stratosphere flights still air calculations will not be acceptable and appreciable head winds must be catered for.

#### Reduced Air Density

A factor of fundamental significance in the design of an aircraft is the density of the air in the regions in which it is intended to operate. At the tropopause, i.e. the base of the stratosphere, the air density in middle latitudes is about 30 per cent of the surface air density. It continues to decrease with height in the stratosphere, and at 60,000 ft. it is about 10 per cent of the surface density. Small variations in the design of aircraft may therefore make substantial differences in the maximum heights to which they can operate.

#### "Black" Sky

Flight in the stratosphere has some remarkable effects on the appearance of the sky and earth. To observers on the earth's surface the atmosphere acts to a certain extent as a protective screen from the sun's rays. At stratospheric heights this screen is very much thinner, so that the sun appears much brighter. The blue of the sky is due to a physical process known as the "scattering" of sunlight by the individual molecules constituting the air. The "scattering" effect is considerably reduced at such heights and the sky appears a darker colour. If ascent in the stratosphere is continued the sky continues to get darker and at 60,000 ft. the zenith sky is said to appear as black as night.

Sunlight is reflected from the upper surface of clouds and an even cloud layer when viewed from above in sunlight appears dazzlingly bright. Similarly the earth's surface tends to become brighter with height, and the increasing brightness makes it difficult to

(Continued on page 16)



**STONEY CROSS** was open to the public on RAF Day in commemoration of the Battle of Britain. More than 12,000 people came on foot, on bicycles, with prams, or in cars (there is no public transport service past the airfield) and £118 was collected for the RAF Benevolent Fund. The aircraft on show received a constant stream of visitors and great interest was shown in all the exhibits.

#### (Continued from previous page)

recognise details of the ground when viewed from stratospheric levels.

#### Ozone and Ultra-Violet Rays

It is generally well known that sunlight can be split up into a number of rays of differing wave-lengths. The rays of very short wave-length are known as ultraviolet rays—they are invisible, being outside the range of the band of visual rays. At surface levels much of ultra-violet radiation is absorbed by the atmosphere, and in their weakened form the effect of the rays on human beings is merely to produce "sunburn". At great heights the intensity of the ultra-violet rays will evidently be stronger, and while it seems that no adverse effect on aircrews operating in the stratosphere has yet been observed, some form of protection may be necessary if still higher flights should be undertaken. One of the effects of ultra-violet rays on the oxygen present in the atmosphere is to produce ozone. Most of the ozone in the atmosphere is found in a layer above 65,000 ft. The extent (if any) to which aircraft flying in this layer may be adversely affected by the high ozone content is uncertain, but it is known that large amounts of ozone affect metals and electrical equipment.

In conclusion it should be stressed that, although much has already been learned about meteorological conditions in the stratosphere, much more remains to be learned, and with the more extensive use of radio and radar equipment and, of course, high-flying aircraft, the present store of meteorological knowledge of the stratosphere will be continuously increased until it will be possible to give more definite answers to the questions which air-planners ask. O N

### CAPTAINCY

A NEWLY-APPOINTED captain of a Liberator in Transport Command remarked that he hoped he would never have to carry any passengers, only freight. Asked why, he said: "Freight can't answer back." In explanation he went on: "I know a captain who carried a VIP. When the VIP asked about the weather ahead, the captain told him it was a bit sticky. After they had landed, the VIP reported him for spreading despondency and despair amongst the passengers. And," he added, "that's why I don't want any passengers."

A deplorable outlook.

The first pilot of an aircraft is the captain and as such a very important person. He carries on his shoulders the full responsibility for his passengers and crew, his aircraft and the success of the trip. Whether he is a good captain or a bad one—and there are both he is still in command and his passengers and crew have to fly with him whether they like it or not.

It is important that passengers should know their captain before they fly with him. There have been occasions when passengers have not had the remotest idea which member of the crew might be in command and their ignorance has lasted throughout a whole trip. Captains should take the opportunity of introducing themselves to their passengers before taking off: not only will it give them an opportunity to see who is to fly them but also the captain can learn a little about the attitude of his passengers towards their trip. Prior to their flight they have been treated with tact, care and consideration. They may be seasoned travellers; it may be their first flight. Whatever their feelings, nervous, excited, apprehensive or merely bored. they should be able to have confidence in their captain and respect his authority. Whatever his rank, and no matter how high ranking his passengers may be, he is still in command.

It has been aptly remarked that a captain should have a good "bedside manner." However much of a commonplace the route may be to him and his crew, it will not be so to all the passengers. A brief survey of the route when the captain briefs his passengers just before take-off will be of interest to them. They might like to know at what height he intends to fly this is nearly always of interest to the novice—as well as a ground speed and ETA.



A captain's job is not an easy one. His flying must be of the highest order. He should be able to have complete control of the aircraft and fly with confidence in the most adverse conditions possible to that particular type of aircraft. He should be capable of making important decisions, particularly as regards weather conditions he intends to fly through, where he has to consider both the safety of his flight and the comfort of his passengers. On him rests the sole responsibility as to whether he takes off, and when,

Throughout the whole trip the captain should keep in touch with his passengers, either personally or through one of his crew. Features of interest on the ground might be pointed out, or an occasional chit giving height, ground speed, or revised ETA, or news bulletins can be handed round. In bad weather a visit from a member of the crew helps a lot to cheer a nervous passenger. The engineer should be told to adjust the heating when necessary.

On long flights such as those to Ceylon it should be remembered that passengers have a tedious and tiring time and must remain in the same aircraft throughout the entire trip, whereas the crew probably slip at least twice, with ample opportunities for rests. Towards the end of a long journey a captain should be particularly solicitous to his passengers.

During the whole time he is away from base the captain is on duty and might be considered a detachment commander with the discipline of his crew and the comfort of his passengers in his care. He should be meticulous as to his behaviour and appearance both in the air and on the ground. Smartness and discipline go together.

Transport Command crews are to be seen all over the world, and by their conduct the reputation and prestige of Transport Command, the Royal Air Force, and of British pilots are judged.



The settee is made from obsolete drogues, scrap sorbo rubber and springs from U.S. vehicles. The picture to the left was painted by an Italian co-operator on balloon fabric. A scrapped acid bottle provides a pot for the plant on the mantelpiece. The Command crest is painted on a piece of a tea chest. The standard lamp is built from odd lengths of timber.



all our work

THE traveller in the Middle East cannot help but notice the attractive furnishing and decoration throughout many of the Staging Posts and Air Booking Centres of 216 Group. These are not the results of lavish expenditure but of the work and ingenuity of a section known as "Passenger Services."

Started in October, 1944, with one officer, a few Italian co-operators of various trades, and one or two skilled airmen craftsmen, and working in a studio-cum-workshop, the section has developed into an organisation whose products are ample evidence of their ingenuity and skill.

Their aim is to supply all sorts of furnishings unobtainable through normal equipment channels and to provide passengers with a measure of comfort and some pleasing surroundings: books to encourage units to build up libraries for passengers' use; magazines (5,500 per week) for use in aircraft and waiting rooms; ticket envelopes complete with hints and instructions to passengers; well laid out aircraft notices; Squadron crests; a small amount of standard furniture; ash trays made from pistons, bomb fins and shell cases; lamp stands and shades; crested notice boards; direction signs; oil paintings and mural decorations; reproductions of posters, which are framed on the units;

Left: A table with dural top made from a bomb-fin. The passenger gangway and the luggage trolley shown below are entirely made from scrap metal and old fighter tailwheels. The chair is built from short lengths of teak, the sea-grass seat and back being woven by natives. The notice-board, although constructed by the Works Directorate, is designed and finished in the section's workshops.





vases; cushions; Transport Command crests and calendars; waste-paper baskets and stools; ink-stands in polished wood.

Craftsmen in Transport Command have been hunted down and employed. Artists, metal workers, cabinet makers, signwriters, French polishers, upholsterers —all apply their skill towards the decoration and improved comfort of transit messes, Passenger and Freight sections, airfield buffets, waiting and dining rooms and Air Booking Centres.

Practically all material used is salvaged from scrap and our photographs illustrate some of the uses to which the material has been put—a sofa made from salvaged wood, old car springs and sorbo rubber, and covered with material from obsolete drogues; a gangway from salvaged metal and unserviceable aircraft tail wheels; a notice board and sign also constructed from salvaged wood. The section has limited funds and the bulk of the articles they provide, such as pot plants, periodicals and books have been obtained, according to one member of the section, as a result of "tactful enquiries."

The section has been divided into two parts-static and mobile. The static or "base workshops" as they call themselves, produce articles, while the mobile Here is part of the workshop. Pictures and calendars, pot plants and magazines are being packed for despatch to various units throughout the ME. On the left an Italian co-operator is finishing a chair made from tubular scrap. Below: A pleasantly designed refectory table made from parts of trestle tables.



"task force" travels round advising on decoration, arranging pictures and furniture, preparing signs, framing posters and maps and generally creating a more cheerful and efficient atmosphere.

### **Ambassadors**

### Abroad

The Reverend (Squadron Leader) GORDON NEWSOM

It is probably true to say that the average service man, prior to being posted overseas, had a very small scale appreciation of his responsibilities as a member of the British Commonwealth. So much of the knowledge learned painfully and laboriously at school fades only too rapidly into the depths of the subconscious mind and one's real world becomes contracted and restricted. Geographically, we in Great Britain tend to become insular and unaware of the world outside until we meet someone who is a Pole, Frenchman or Indian.

It has taken a terrible war on a world-wide scale to awaken many of us to the reality of the fact that we are not " the only pebble on the beach " and that we are part of a vast family of races. It has been said that the task of mankind in the nineteenth century was to discover itself and that the problem of the twentieth is to learn to live together in harmony and peace. If this is true, then those members of Transport Command who are doing their tour overseas have a practical job on their front doorstep. This responsibility can be and is shirked. A man may try to reproduce as much of "Blighty" life as he can and live in a semi-hermetically sealed condition in artificial surroundings, keeping entirely to the society of his fellow countrymen and despising the local inhabitants as "Wogs" who only exist to serve and to make money out of him and his fellows. He makes no attempt to learn the language or to study the people in whose country he is stationed and just drifts into a mental state of "Shaibah Blues." Such a man is not only missing a great opportunity but doing his own country grave harm. British folk are judged by the behaviour of those overseas and the few are, as usual, taken as specimens of the majority.

It is therefore most strongly urged that all those serving on Staging Posts throughout the world make every effort to study the local customs, languages and religion of the native people and, once confidence has been gained, to say something about our own country, our ways and habits. An instance may be quoted. An Englishmen was once conversing with some high caste Hindus and the subject turned upon the lower caste sweepers. The Hindu gentlemen though educated and cultured, regarded those who did menial jobs as "scum." They were really astonished when the Englishman informed them that in Britain the roadsweeper is respected as much as anyone else, and that a poor view would be taken of anyone who referred to him in such derogatory terms.



PLOTO : CORPORAL J. COWIE.

In a more humorous case, one is reminded of the airman at Aden who was explaining to a wondering crowd of Somalis that in Britain there were buses, trams and underground trains and the listeners, openmouthed, were taking it in. However, when he said that there were in the Zoo two-humped camels, they refused to believe him, because this was something they thought they knew all about. Furthermore, they then disbelieved everything which he had told them before.

In spite of these difficulties, airmen overseas remain ambassadors of their country in a special way. The natives are very watchful and quick to size us up. They can tell whether we are just, fair and kind-hearted. They soon take advantage of our weaknesses in the way of wine and women. As Shakespeare wrote, "Some are born great, some achieve greatness, and some have greatness thrust upon them." The average airman is in the last category whether he likes it or not. The greatness of representing all that is best and finest in Britain. He will be wise if he is humble and willing to learn. Let him recall the words spoken by President Truman in his maiden speech in Washington. They are a prayer from the lips of King Solomon.

"Give, therefore, thy servant, an understanding heart."

To love one's neighbour as oneself is indeed difficult, but to understand him is not so hard and half the battle.



VICKERS VIKING prototype on demonstration flight with starboard propeller feathered

### THE VICKERS VIKING

THE Vickers Viking, a photograph of which appears on the front cover of this issue, is now going into production and first deliveries will be made next year to Transport Command and BOAC. Production of the prototype used for flying tests was achieved within seven and a half months of the designs leaving the drawing office.

From its size and general appearance, a comparison with the Dakota is almost inevitable, but the latter is, after all, virtually a pre-war aircraft, and on all points of performance and passenger comfort, the Viking is far ahead of the C-47.

A low-mid-wing monoplane of orthodox form, the Viking seats 27 passengers in the standard model, or 21 passengers in the de luxe model, the only difference between the two models being their passenger accommodation. It is powered with twin Bristol Hercules motors of 1,040 h.p., a development of the 14-cylinder two-row Bristol sleeve valve engine, designed specially for civil aviation. Employment of the Hobson-RAE Injector contributes to fuel economy; fuel is metered according to the weight of air actually consumed by the engine, and a change in boost pressure, mixture temperature, atmospheric pressure or engine speed automatically adjusts the fuel metering. Singlelever control relieves the pilot of all responsibility regarding mixture strength. Magneto timing is automatically adjusted by throttle movements.

A good deal of thought has obviously been given to the provision of accessibility for maintenance and servicing. The hingeing of the engine cowls permits access to cylinders and spark plugs, and hinged panels on the rear cowlings gives access to the rear of the engine accessory gear-box, pipe lines, etc. Quick release toggle fasteners are provided. Similarly, the nose of the aircraft hinges outwards for servicing the back of the pilot's instrument panel.

As a result of flight tests the performance figures and weight estimates of the Viking are given as follows:

Cruising at 10,000 feet:

Max. cruising speed, weak mixture, 252 m.p.h. A.S. Recommended cruising speed, 210 m.p.h. A.S.

Corresponding air miles per gallon, 2.3.

Still air range 435 gals., no allowances, 1,000 miles. Still air range 650 gals., no allowances, 1,500 miles. Loadings for the 21-seater are given as alternatively:

- 21 passengers, baggage and 2,020 lb. freight with 435 gallons (1,000 miles still air).
- 21 passengers, baggage and 410 lb. freight with 650 gallons (1,500 miles still air).

Inside the saloon, which is nearly 30 ft. long, there is an impression of space as a result of 6 ft. 8 in. headroom, and the gangway between the rows of seats is generous. Seats are luxurious, with adjustable headrests, and the large cabin windows give a good view. Heating is provided by thermostatically controlled diffusers in the floor. The problems of noise and vibration have been efficiently countered by vibrationabsorbing wing mountings at the wing roots. On production models the fuselage will be all-metal of stressed-skin construction.

Below the floor of the passenger saloon is a freight hold, divided into three compartments, and loading and unloading is carried out direct from the ground through doors 44 in. by 23 in. The foremost door on the port side also serves as the crew's entrance hatch.

In the course of flight demonstrations of the prototype on September 21st, the Viking was made to climb on one engine at a steady 160 m.p.h. IAS, with 27 passengers on board, and to make climbing turns to starboard with the port engine cut. Take-off and landing to clear 50 feet is accomplished in a total distance of 850 yards, with a touch-down speed of 85 m.p.h.



"FLIGHT " PHOTOGRAPH

P R E S T W I C K

Three loading hatches on either side of the fuselage belly provide access to the freight hold. The forward hatch on the port side is shown closed in this picture.

#### NOT TO BE PUBLISHED

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The circulation of the REVIEW is limited. Please let others see this copy.

"Close to the Ayrshire coast, in the open, green countryside immortalised by Robert Burns, PRESTWICK is jol already an historic spot in the geography of the air."

In 1935, with the approval of the Government, the directors of Scottish Aviation Ltd., selected the PRESTWICK site as one of the most suitable for RAF training and for the probable war and peace-time requirements of air transport. The airport at first covered a total of 200 acres. It quickly became the largest civilian-operated RAF flying training unit in Great Britain, and by the summer of 1941, when the Empire Air Training Scheme took over, PRESTWICK was handling at one time 390 air observer navigators, 90 pilots and 360 wireless operators.

But it was as our principal Transatlantic terminal that PRESTWICK was to provide its greatest service to the country. During the first eight months of the North Atlantic services transatlantic traffic had grown to as many as 64 aircraft a day. At the peak of these operations, during 1944, transatlantic arrivals were at the rate of 72 per hour. Transatlantic Aircraft Control, operating from the drawing-room of the old mansion which has been its headquarters, has done a great job.

In addition to the RAF Transatlantic Ferry Services, PRESTWICK has been handling the BOAC return ferry service, traffic of Trans-Canada Air Lines, the Iceland run, daily shuttle services to the Western Isles, Orkneys and Shetlands, American services and some busy commercial air services. The Terminal Mess is one of the most cosmopolitan and one of the most famous meeting places for flyers in the world.

**PRESTWICK's** greatest asset is its unique flying weather; it remains open almost every day of the year. To-day the airport is one of the most fully equipped in Europe, and covers some 631 acres of concrete runways and parking areas.

The future of PRESTWICK provides at present much "copy" for Scottish newspapers. (Beachcomber' wrote that he supposed PRESTWICK to be a person, and very famous at that.) But whatever may happen to the airport, the service it has rendered to the nation through the years of war, and particularly through the darkest of those years, will surely be remembered gratefully.



