roads—the helicopter Observers spotted the car from the description given (there were no special markings) and was able to remain in station wherever the car went By direct radio contact with Police cars sent into the area the helicopter was able to arrange an interception and two patrol cars finally converged on the stolen vehicle forcing it to a standstill and capturing the occupants

Only thirty minutes elapsed between the reporting of the stolen vehicle and its capture, and the Police stated that the direction and disposition of police cars was greatly helped by the helicopter's reports Patrol cars were consequently directed with maximum effectiveness and were not required to enter the search

The Police Officers who formed the crew of the supposedly stolen car reported afterwards that the psychological effect of being trailed by helicopter was most demoralising as it could not be shaken off

Students at the Police College were able to follow the radio conversations and plotted the car movements an a projected road map The helicopter loaned for the exercise was a Bristol Sycamore on loan from The Bristol Aeroplane Co and it was piloted by Mr PETER WILSON

That the Police College and the Warwickshire County Police were sufficiently interested in the possibilities of helicopters to undertake the comparatively elaborate organisation of this kind should be of considerable encouragement to all those who have the future of helicopters at heart, and the resulting success which attended the exercise, the speed with which the operation was carried out, and the time saved in apprehending criminals should augur well for the ultimate utilisation of helicopters by the Police Forces of Great Britain and the British Empire

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An Open Exchange of Letters

Between

C M BELINN (*President of Los Angeles Airways*)

and

PETER G MASEFIELD (*Chief Executive of B E A*)

March 1953

My dear Mr MASEFIELD

I have read with a great deal of interest your recent lecture before the Helicopter Association of Great Britain, and believe me, my entire staff is presently studying it page by page and word by word I am sure that their opinions will be as enthusiastic as mine

Generally, my impression of most of the experting done about helicopters is that it has not been down to earth, and in most instances the reasons have been quite obvious To state it frankly, the experts have either reflected fixed-wing thinking or a complete lack of understanding Your departure is indeed refreshing

https://doi.org/10.1017/S2753447200001888 Published online by Cambridge University Press

If I am permitted a basic observation, it would perhaps be that your thinking is inspired by a fundamentally different set of requirements as compared with those which presently influence the helicopter program in the United States Stating it differently, as I understand it the B E A operating requirements, which have consistently been an interesting source for facts and figures, would be based upon the immediate employment of helicopters in full-scale local airline operation, tailored to the needs of the British Isles and Europe This, then, could be expected to engender your thesis for what in our opinion would be extremely large machines at this time

As you know, the pattern in the United States consists of substantially three classes of fixed-wing operations , namely, trunk, regional, and local service, the combination of which purports to provide our essential air transport service Our local airlines are not really responsive to a fourth type of service requirement , namely, that of truly feeding the central airport systems within the confines of our many large metropolitan areas The reason for this, of course, is obvious, because these lines operate a lineal route structure, while millions of people live in a radial pattern in dozens of communities located radially about our metropolitan centers, such as Los Angeles, New York City, Chicago, and approximately twenty-five other similar but not quite as large areas The concept which I have tried to propagate in this country would be to pick up where the others leave off, and serve these huge areas with a comparatively short-haul local service of extremely high frequency, which brings me to the point of distinction between our philosophies as to equipment

Based upon this approach, our requirements, insofar as the capacity of the machines is concerned, would look quite modest compared with the 40-passenger machines which you advocate, and it is quite likely that our economics of operation will be compromised However, there appears to be certain offsetting advantages, most of which are too lengthy and debatable to detail here In essence, however, aside from the obvious advantages of smaller machines from a service viewpoint, I would not overlook the fact that if our aircraft develop into sizes beyond roughly 16,000 pounds gross, we may be approaching the area of diminishing returns with respect to our ability to acquire the extraordinary high number of landing sites required for 100% traffic penetration This, of course, takes into account also the nuisance element and other undesirable operating characteristics of very large aircraft within the extreme confines of highly populated residential areas, even to the extent of utilizing roof-tops and similar types of operating facilities

By all means, I don't mean to imply that the helicopter is restricted insofar as lineal routes are concerned, particularly as it applies to, for example, the eastern seaboard of the United States and perhaps Continental Europe and the British Isles But I feel that it will take a little time before both the engineering and the economics of the situation can be licked, particularly because in that type of operation the helicopter begins to be competitive with the fixed-wing aircraft and other forms of transportation, which, as you have stated, will not place it in its best light at this time from the standpoint of cost of operation

Actually, it is history repeating itself, as I see it, because at the outset, fixed-wing aircraft were justified economically only between very large terminal points where they could rely upon high load factors despite a high tariff structure As the airplane became more efficient, it penetrated more sparse territories to the point where it is now competitive with virtually any mode of transportation The same thing, in my humble opinion, will be true of the helicopter, only, perhaps, to a different degree

In closing, I hope you will permit a light comment on the discussion you had in relation to the naming of your landing sites For the price of one Dry Martini we will let you use our connotation " heliport," which has become *universally* adopted *here* despite numerous other suggested names

I am planning on attending the I A T A Conference next month and hope at that time our paths may cross

Sincerely yours,

Los Angeles Airways, Inc ,

C M BELINN, *President*

P S I am taking the liberty of distributing copies of this letter to persons in the industry who are interested in our viewpoint

https://doi.org/10.1017/S2753447200001888 Published online by Cambridge University Press

27th May, 1953

Dear Mr BELINN,

Thank you very much for your letter of 4th March with its kind remarks about my lecture to the Helicopter Association of Great Britain last November I was most interested to have your comments on our thinking about the future of the transport helicopter and to hear something of your own basic philosophy on this subject

You are, I believe, quite right in defining the fundamental difference between the way you have been working in the United States and our thinking in this country as the difference between " feeder "—that is, commuting services within urban areas —and " local service ' —that is, short haul inter-urban operations

We have a high regard over here for the remarkable progress which your company, in particular, has been making in the last few years in developing the feeder type of operation with helicopters It seems to me that starting with mail, you are rapidly building the foundations of an entirely new industry which will transport passengers, mail and freight over very short distances within urban areas

It is clear from numerous American statements and from such studies as the Port of New York Authority's ' Transportation by Helicopter, 1955-75 " that responsible opinion in the United States is convinced that there is a substantial potential business for the helicopter in the " feeder ' role and that this will develop rapidly in the next ten to twenty years You should soon be well on the way to providing practical confirmation of these theoretical forecasts

B E A has, of course, also given most careful thought to the possibilities of the " feeder ' business Unfortunately, our conclusions are not so encouraging as those which have been drawn from American studies As a result, we have become convinced that, while the feeder type of operation will obviously also develop here eventually, it will only do so more slowly and much later than is expected in the United States On the other hand, there are signs that the very short-haul—that is, " local service "—type of operation with helicopters has particular possibilities in the British Isles and in North West Europe Indeed, there are reasons to believe that this type of service may develop initially more rapidly here with helicopters than in North America where the fixed-wing aeroplane is more suitable for the distances involved We must not forget also that the aeroplane has been considerably helped towards economic local service operation in the United States by an enlightened Government policy on the award of mail pay This form of subsidy for fixed-wing operations is not available to us in the United Kingdom

There are a number of other reasons for the differences between transport helicopter prospects here and on your side of the Atlantic These include —

(1) The fact that surface passenger transport within urban areas is relatively more highly developed here in relation to the size of our population centres than it is in the United States

(2) The relatively higher effectiveness of feeder surface transport in the United Kingdom has prevented our Post Office from showing much interest in helicopters for mail carriage within urban areas There have therefore been no mail contracts here as there have been in the United States to start off the new form of transport in a feeder role

(3) Surface fares are significantly lower here than they are in North America This makes the inevitably high initial helicopter fares on very short sectors relatively less competitive than in the United States

(4) The general level of economic prosperity is still much lower in Europe than it is in the United States This means that fewer people have money to spend on an expensive new form of transport

Some of these arguments against the early use of helicopters for commuter business in the British Isles also apply to all short-haul helicopter transport However, their force is less with the longer stage type of operation and they are likely to be largely counterbalanced by the important attractions of the helicopter in this role

Briefly, therefore, the main reason for B E A s interest in helicopters is that stage distances between the major population centres in North West Europe are too short—usually less than 300 miles—for them to be truly economic with fixed-wing

https://doi.org/10.1017/S2753447200001888 Published online by Cambridge University Press

aircraft They are also too short for the aeroplane to show worthwhile journey time savings compared with surface, except where a sea crossing is involved These facts provide the main incentive for us to develop large transport helicopters suitable for our " local service " operations The large helicopter can provide worth-while journey time savings between city centres on such services and, at the same time, it has potential economic characteristics which should make possible competitive fares on stages of between about 50 and 300 miles

To develop helicopters suitable for local service operations, that is with capacities of 40 or more passengers, will obviously take longer than to produce the 15-passenger aircraft asked for by the American feeder operators This is emphasised by the fact that we are planning to start experimental flying in B E A with a twin-engine transport helicopter of roughly the size asked for by the American feeder service operators within the next few months We hope to have 15-passenger aircraft of this type established in scheduled service by 1957 The larger helicopters, on the other hand, can hardly be available for service before the 1960s

In spite of the longer time it will take to develop the larger ' local service " helicopter, we have concluded that this is the type of operation which will first offer reasonable prospects of covering its costs in Europe We are therefore directing our major effort towards this objective Obviously, the 40-passenger helicopter cannot be created over-night Equally obviously, such a large and complicated piece of mechanism cannot be perfect without previous experience with smaller helicopters However, we believe that the essential experience with the interim smaller aircraft can be gained by using such types during the next eight to ten years to develop operating techniques and build up traffic in preparation for the day when the large helicopter is available for service

Attainment of our objective of economic " local service ' helicopter operations is probably further off than the " first flush ' of the widespread feeder operations which are visualised in American cities but this objective is, in my opinion, the only realistic one at which we can aim initially in Europe

I am most grateful to you for raising this important issue—and also for your generous offer of the term ' heliport " which I hasten to reciprocate with a free gift of full rights on the word ' rotorstation '

With best wishes

Sincerely yours,

PETER G MASEFIELD, *Chief Executive*

The Helicopter Association of Great Britian

Provisional Lecture Programme 1953/4

1953	
September 11th	Problems associated with small helicopter development, by Commandant H BORIS
October 3rd	Problems of Helicopter Operations Peculiar to Shipboard Use, by Lt -Comd H R SPEDDING, R N Helicopters and the Whaling Industry, by A H BRISTOW
November 6th	The Non-Scheduled Operator and the Helicopter
December 4th	Ground Resonance, by R HOWARTH
1954	
February 5th	Helicopter Research, by F O HARA
March 5th	Air Traffic Control and Pilotage Problems
April 9th	Navigation of Helicopters

https://doi.org/10.1017/S2753447200001888 Published online by Cambridge University Press