

Bristol Aviation Services' general manager F. C. Higginson (right), with secretary-accountant B. Langtry. F. C. Higginson has been active in Australian aviation since he began flying in 1927. He served five years in the RAAF, 1940-45.



## Bristol Plans

# for Australian Expansion Take Shape

**This month Airflite (Training) Pty. Ltd. becomes Bristol Aviation Services Pty. Ltd. Here are the plans for the new organisation.**

**T**HE Bristol Aeroplane Co. Ltd., one of England's oldest and most prominent aircraft manufacturers, has formed in Australia a wholly-owned subsidiary company known as the Bristol Aeroplane Co. of Australia Pty. Ltd. This Australian company is now planning to expand Airflite (Training) Pty. Ltd. at Bankstown, Sydney, into a company offering the most modern aircraft engine overhaul facilities in the Southern Hemisphere.

As reported in earlier issues of AIRCRAFT, Bristol's joint managing director, Mr W. R. Verdon Smith, negotiated the purchase from Overseas Corporation (Australia) Ltd., who owned the Bankstown company, during his recent visit to Australia. Fuller details of the project, however, have only just been released.

A new organisation, Bristol Aviation Services Pty. Ltd., has been formed with a proposed nominal capital of £300,000 to take over Airflite, as from July 1. Two of the four directors on the board will represent the Bristol Aeroplane Co. of Australia. They will be Messrs W. R. Verdon Smith and C. A. Tucker. Representing Overseas Corporation (Australia) Ltd., who retain a 50 per cent. interest in the new concern, will be Sir John Storey and Mr G. A. Davis.

Bristol Aviation Services will take over Airflite's present premises at Bankstown Aerodrome. But in addition, they intend to build a 36,000 square feet engine overhaul shop on a 12-acre plot of land adjoining. This building is the first of others envisaged at this stage. Land clearance has already started on the new premises.

Superintendent of engine overhaul shop A. Houselander (right) joined Bristol in England 18 years ago, came to Australia in 1948 and joined Airflite the following year; the new set-up brings him back to the Bristol fold. He is shown below discussing a Hercules cylinder problem with assistant superintendent engine overhaul Basil Dougherty.



Supply officer F. Butler, with Airflite since 1948, checks requisition papers with stores record clerk Joan Fahey.

Within 12 months, Bristol expects to be humming in the new plant, and special machinery for it has already started to arrive.

Mr F. C. Higginson, well-known Queensland aviation personality, who has been managing director of Airflite since 1949, will be general manager of the new concern. Before the war, he founded F. C. Higginson & Co. Pty. Ltd., of Archerfield, Brisbane, until the RAAF put both his concern and himself into uniform.

The entry of the Bristol company into Australian aviation is part of Bristol's policy of having Bristol-  
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In charge of the airframe overhaul shop is E. Wootton; he is shown supervising a DC-3 mainplane reskinning.

## SA RAILWAYS PREPARE FOR CANBERRA ROLE

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during the war years to aircraft production. The Department of Aircraft Production, which administered the wartime Beaufort and Beaufighter schemes, employed planning techniques in their part of the factory. Islington now uses planning methods for all of its production. Mr Donaldson's office handles planning for the whole works. Programmes in hand, apart from the Canberra project, include orders for railway coaches, freight vehicles and locomotives.

Planners Bob Barnes and Vin Jennings, both with wide aircraft experience, have had charge of the Canberra. Bob Barnes was in charge of the aircraft machine shop for the five years of the Bristol programme. He helped plan for production of the Lincoln. And Vin Jennings, a RAF veteran of the First World War, has been on the planning staff for all of Islington's aircraft work.

A new 200-ton Mills "Oilaulic" vertical press is being installed for the special job of bending the Canberra lower spar boom. For the present these booms of aluminium alloy extrusions will be supplied by English Electric.

Other new equipment on the way includes four milling machines — a Morey profile miller, a Cincinnati horizontal miller, and two Cincinnati vertical millers.

Once the planners have finished, the entire project will be shepherded through the works by A. McLennan, the production control officer assigned to the Canberra.

## BRISTOL PLANS FOR AUSTRALIAN EXPANSION TAKES SHAPE

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backed service organisations throughout the world. But as emphasised by Mr Higginson, the services of the new company will provide also unique facilities for airline operators, flying clubs and private owners. The company's shops and specialised workmen will, of course, be at the disposal of the RAAF and RAN for maintenance work.

Airflite is at present engaged on a contract overhauling Dakota wings for the Department of Aircraft Production, and are doing a number of Auster overhauls for the RAAF. Most of their present work is engine overhauls. In addition to aircraft work of all types, the company is tooled up for Pratt & Whitney 1830 series, Gipsy Major and Bristol Hercules, Pegasus and Centaurus complete overhauls. Recently a Catalina PB5A was completely overhauled for a company in Hong Kong. Airflite undertake major engine overhauls for Trans-Oceanic Airways' Solent fleet.

One of their present activities, rather removed from the aviation world and concerned more with the academic, is the assembly of aluminium parts for the prefabricated schools which a Bristol subsidiary makes for education authorities in Australia.

Plans for the new plant give some indication of the extensive and specialised services it will be able to offer. A two-storey administrative block will house office workers and a drawing office. About £40,000 of modern engineering plant will go on the one-floor engine repair shop. Included will be a £15,000 Genevoise jig boring machine which Mr Higginson claims will be one of only two or three in New South Wales. This high precision machine, accurate to .00015 in., will have a specially air conditioned room built around it. This machine alone could save hundreds of pounds to aircraft operators because it would enable crankcases, for instance, to be reconditioned instead of having to be scrapped, Mr Higginson said.

A new Webster and Bennett high power vertical boring and turning mill will also be installed.

"We intend to lay out the new plant for line production of engine overhauls, using the latest methods to save cost in man hours, and be able to overhaul any types of aircraft engines operating in Australia," Mr Higginson stated. He pointed out this facility would be particularly useful because airline operators were rapidly reaching the end of the cannibalisation period of using disposal-bought engines, where possible, for replacements. Universal grinding and plating machinery of the latest type will also be installed.

Airflite have made a speciality of using testing apparatus for checking of the complex equipment of the modern aircraft engine. This equipment, some of which they have built themselves, simulates rigorous flying conditions on pumps, carburettors, magnetos, generators

"Mac" McLennan has spent a great deal of his time back and forth between Islington and GAF, Fishermen's Bend, where regular conferences have been held to keep Canberra information up to date.

Aircraft shop superintendent is J. B. O'Leary, and spar shop foreman is W. Woods. Tooling engineer is Les Catley. Messrs Donaldson, McLennan, O'Leary and Woods were all sent overseas to get aircraft experience when earlier projects were being prepared.

Islington's spar shop began life as a 25-pounder shell annexe, back in 1940. Aircraft plant was transferred there from another part of Islington works in 1946. The shop is specially equipped for machining longerons, and for bending and machining spar booms. Two Wadkin LZ6 horizontal milling machines were installed for work on the Lincolns. Placed side by side, the LZ6s, with their 33 ft. capacity tables, can draw at rates of 10, 20 and 40 inches a minute. Speeds are changed through a rectifier valve principle, changing the power motor supply, and eliminating the need for a gear box. Profiles are traced from a camber on the hydraulic principle.

Also for use on the Canberra is a Holroyd-Wickman horizontal milling machine. This has a 28 ft. table. A Mills 45-ton "Oilaulic" press, with self-contained oil compressing unit, Wadkin span drilling machines with Herbert type heads, and an anodising bath for protective treatment of aluminium parts, come under the shop roof.

Islington has the equipment and the men. Any holdup in the Canberra project is unlikely to be traced to this contractor to the Division of Aircraft Production. **END.**

and starters. Before final OK is put on an engine overhaul, a mobile test bed gives each engine a seven-hour continuous running trial.

Airflite's electrical section, developed over the past three years, has given excellent service to aero clubs and small operators.

When the new plant is completed, the company will retain the present hangars at Bankstown solely for airframe work. This will give a 27,000 sq. ft. plant for this type of work. In full operation, the new Bristol company will employ a further 200 men. A number of technical personnel will come to Australia from the parent company at Filton, England.

Executives of the new company at Sydney will be: W. G. Brown, works manager; A. Houselander, engine shop superintendent, and J. H. Westlake, airframe superintendent.

Of future developments, Mr Higginson said: "Our situation at Sydney will support maintenance for the Bristol 175, Britannia and the Bristol 171 helicopters (one is now used by LRWE and three have been ordered for the RAN), which we hope to see soon in airline service and operation in this area. We may consider also manufacture or sub-contracting for aircraft engines."

With the technical resources of Bristol's behind the new company, and with adequate capitalisation to assist the enthusiastic Australian and English personnel, one gains the impression that we shall hear a lot of Bristol Aviation Services. **END.**

## NEW PROTEUS EXCEEDS ESTIMATES

PERFORMANCE figures of the new Bristol Proteus III (700 series) propeller turbine, which will power the production Britannia airliners, came to hand as we closed for press. They indicate a long "life" for this engine in civil operation, because not only did it give 10 per cent more power with a specific consumption six per cent lower than the estimated sea level ratings previously published, but it achieved this result at a low turbine entry temperature.

During calibration of the engine, both on the dynamometer and with its propeller on the hangar, the following figures were obtained using a 20in. final exhaust nozzle:—

Compressor RPM	BHP	Jet Thrust lb.	Specific Cons. lb/BHP/hr.	Specific Jet Cons. lb/EHP/hr.	Temp. C.
11,000	2630	620	0.67	0.62	430
11,500	3350	770	0.62	0.58	455
12,000	4100	920	0.59	0.55	485

It should be noted that the figures for BHP quoted above are those actually recorded on the dynamometer and that the specific consumption is based on these powers only and takes no account of the additional jet thrust quoted. **END.**