

This splendid in flight photograph of the Saro SR.A1 jet fighter flying boat prototype, TG263, shows all the main features of this unique aircraft. Note that the retractable under-wing floats are in the alighting position. □ Derek N James

Last days at Felixstowe

by Bill Mortimer

From 1924 until the early 1950s the Marine Aircraft Experimental Establishment was the major resident at Royal Air Force Station, Felixstowe.

During its existence, and especially between the wars when flying boats and seaplanes formed a substantial portion of RAF and Fleet Air Arm equipment, Felixstowe, in Suffolk, was in the top echelon of RAF stations.

However, the advance of technology and world-wide proliferation of hard runways during World War 2 sounded the death knell for marine aircraft and by 1948 Felixstowe's position had declined. In the unkind words of one rather senior officer it had become a "backwater of the Service". He, of course, had never been a member of the 'flying boat union'!

A unit of the Ministry of Supply, the Marine Aircraft Experimental

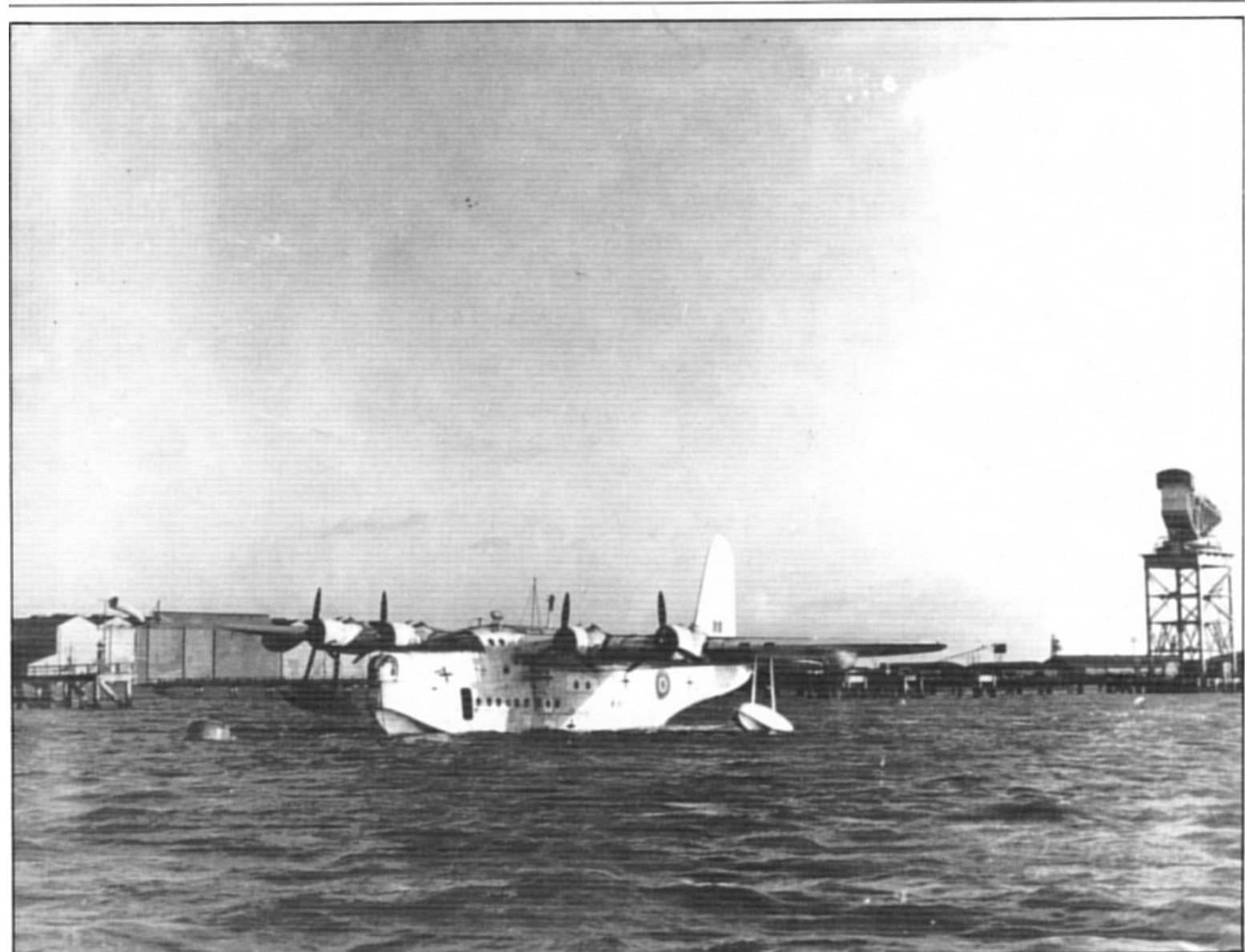
Establishment (MAEE) was staffed almost equally by civilian and RAF personnel. The 'boffins' of the civilian staff ruled the roost in the matter of all scientific and experimental work, whilst the RAF, backed up by a highly skilled ex-service civilian workforce, flew and maintained the unit's varied collection of aircraft. Perhaps surprisingly in view of the mix, the whole worked remarkably well. But Felixstowe had always bred a unique camaraderie.

If they existed, as one must suppose that they did, the MAEE's terms of reference were broad. In the main the scientific evaluation of new aircraft types took precedence followed by academic, but

nevertheless practical, work on the more esoteric aspects of hydrodynamics and other related mysteries. Flying proceeded at a somewhat more leisurely pace than at the average operational station but was, on occasion, somewhat hair-raising. The unit's aircraft were frequently subjected to gross abuse in the interests of science — much to the interest and excitement of those who found themselves sea- and airborne in the rugged products of the brothers Short.

During 1948 to 1953, the last five years of MAEE's existence, despite the world-wide decline in interest in the flying boat as a viable commercial or military proposition,

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A Short Sunderland V, PP162, rides the ebb off RAF Felixstowe. The black crosses on the hull were used for photo-analysis of take-off and alighting attitudes at various c.g. positions. □ Bill Mortimer



The German FGP-227, pictured in Prague during WW2. This quarter-scale model of the six-engined Blohm und Voss BV238 flying boat was 'liberated' by the Allies in 1945 and transported to the MAEE for examination. □ Fred Gutshow



Short Sealand G-AKLN in classic MAEE pose. Every aircraft taken on charge by MAEE was photographed at the head of the slipway, usually with an airman to give scale. MAEE pilots criticised G-AKLN's handling on the water and at take-off while assessing the Sealand in the air-sea rescue role during the autumn of 1950. □ Bill Mortimer

Last days at Felixstowe ... Continued

a wide variety of types were in evidence at Felixstowe. A couple of Sunderland Mk Vs, PP162 and SZ599, headed the list, with another, RN297, on permanent loan to Saunders-Roe at Cowes for powered flying control trials. The Sunderland derivatives were represented by Seaford MZ271, the second prototype, and by the hybrid Seaford/Solent NJ201, the latter elegantly gracing the moorings wearing a translucent pale-green coat of lanolin compound over her bare skin. In late 1951, following termination of BOAC's flying boat services, Solent G-AKNS *City of Liverpool*, which had started life as NJ205, joined the fleet and was allocated serial WM759.

Hidden, more often than not, in Felixstowe's cavernous World War I hangars were interesting examples of experimental art. Following 1945, when MAEE returned to Felixstowe from wartime evacuation in Scotland, a number of ex-Luftwaffe aircraft were evaluated. Although most had been broken up in 1946 and '47 the last, FGP-227, escaped the axe until 1949. A wooden quarter-scale model of the six-engined Blohm und Voss BV238, it was not, as far as can be ascertained, flown at Felixstowe but it made a fascinating exhibit when suspended from a hangar crane on Battle of Britain open days.

A more successful aircraft of 'model' proportions was the Saro A37 'Shrimp' TK580. On the strength of MAEE since 1941 it was initially used to determine the characteristics of the ill-fated Short Shetland, and had performed sterling service in experiments leading to the successful improvement of the hydrodynamic and aerodynamic properties of the early Sunderland hull. Finally broken up in 1949, the A37 spent much of its life involved in experiments with hull ventilation — an attempt to

eliminate the drag-producing step in hull underbodies.

Spectacular as it was in flight, the Saro SRA/1 jet fighter flying boat was something of a non-starter when it came to the all-important tasks of re-fuelling and re-arming. Fitting its beaching gear to enable it to be brought up the slipway proved well-nigh impossible, the clearance beneath the mainplane being insufficient to allow a boat and crew access. Similar problems occurred when trying to manoeuvre and secure a re-fuelling barge in position and the handling crews were invariably faced with bringing the aircraft ashore on Felixstowe's 50-ton

In the words of the MAEE motto it was indeed a 'Trial by Air and Sea'

hammerhead crane, not an item of equipment likely to be readily found in a battle situation. In the unlikely event of the type having been brought into service vast sums would have been needed to finance adequate support equipment. A matter apparently overlooked by the specification committee. Following the crash of SRA/1 TG271 in September 1949, with the death of MAEE's Commanding Officer, Squadron Leader K A Major, interest in the design waned and the sole example of this unique aircraft, TG263, is to be found in the Science Museum collection at Duxford.

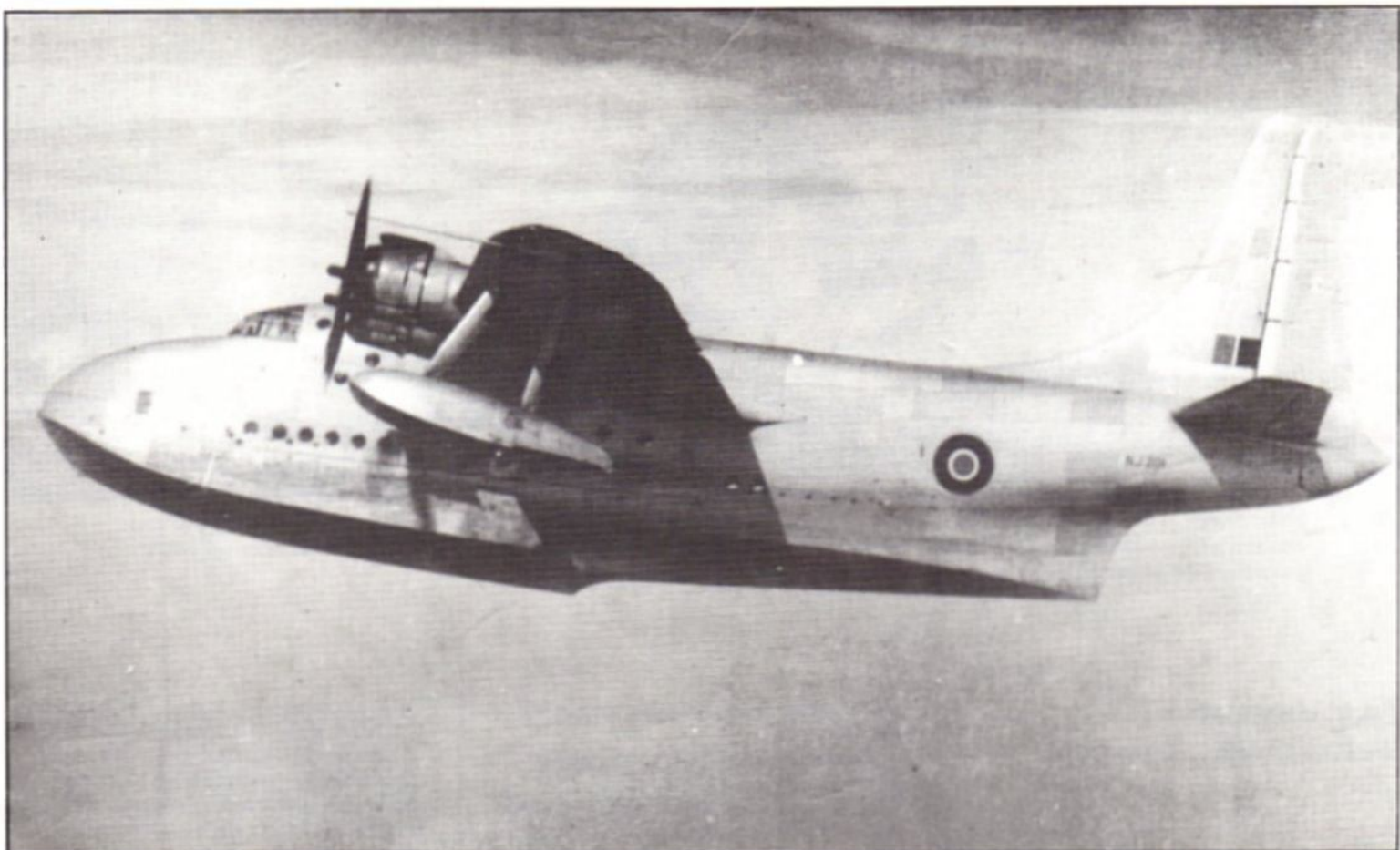
Of more practical aspect, the Vickers-Supermarine Seagull embodied a most advanced and ingenious variable-incidence and full span slotted wing —

which miraculously folded. Designed as a carrier-borne Fleet Spotter/ASR aircraft to meet specification S12/40, and powered by a Rolls-Royce Griffon RG14SM with contra-rotating prop, both prototypes PA143 and PA147 were resident at Felixstowe at various times. The design was unfortunate in that it was overtaken by advancing radar and helicopter technology. But it was a marked improvement on the venerable Sea Otter JM952 — MAEE's much-loved but irascible hack, taxi, and general dogsbody. JM952 was probably the last biplane in RAF colours, soldiering on until MAEE flying ceased in early 1953. It achieved stardom in the film *The Sea Shall Not Have Them*, which was filmed on site.

During a period of some 30 years the MAEE evaluated all British and many foreign aircraft types that were capable of operating from water, in all a total approaching one hundred and fifty, the one notable exception being the Saro Princess. The last to appear, and the final British flying boat amphibian designed, was the Short Sealand, represented at Felixstowe by G-AKLN. Although as a civil aircraft the type achieved some 23 orders including several overseas sales, notably 10 to the Indian Navy, its trials at MAEE revealed it to be unsuitable for open water operation in an ASR role. In any case, as with the Seagull, ASR duties were, by 1952 being taken over by the helicopter.

By that time the future of MAEE was bleak. Energetic efforts on the part of the senior MAEE Scientific Staff to convince those in power that there was a future for marine aircraft were to no avail. The failure of the mighty Saro Princess to come up to expectations, largely through inadequate support by engine manufacturers, marked the end of British flying boat development; and with it the need for the MAEE.

Sadly, the end of flying activities coincided with the inundation of RAF Felixstowe by the disastrous East Coast flood of January 1953. In the words of the MAEE motto it was indeed a 'Trial by Air and Sea'.



Short Seaforth/Solent NJ201 climbs away in the hands of Squadron Leader Doug Butler on maximum AUW trials. NJ201 became the flagship of Aquila Airways as G-ANAJ City of Funchal, ending her life ignominiously wrecked on the beach at Santa Margharita, Italy. □ Bill Mortimer



PA143, the first prototype Supermarine Seagull which, with PA147, was evaluated at Felixstowe. In this photograph the third central fin has not yet been fitted. □ Derek N James