

# PRINCESS IS FOLLOWED BY ISLANDER

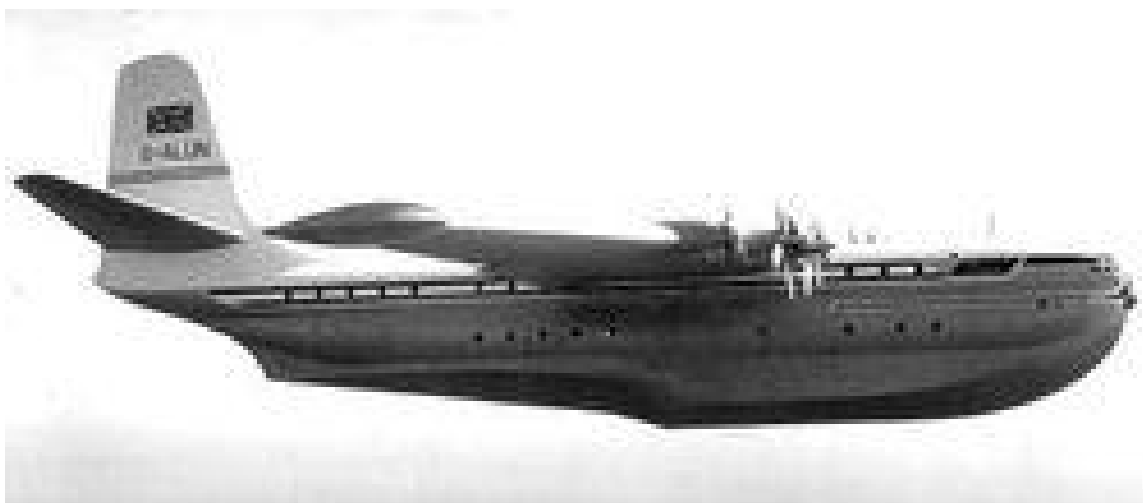
## The story of just two of the Island's many aircraft

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As the line between invention, design and development is a difficult one to draw, there is no apology for including in this collection a brief account of two outstanding aircraft that have become an integral part of the industrial heritage of the Isle of Wight. The first, the Princess flying boat, was enormous, extremely expensive, prestigious and at the cutting edge of then technologies. Only one was to fly with a further two being built. The second, the Islander, is at the other extreme. It is small, built to a very tight budget with tried and tested technology. To date hundreds, of it and its variants, have been built in several countries and sold worldwide.

From within a few years of the start of powered flight the Island has had a continued fascination with the design, development and building Of aircraft. Early into the field, using his experience of high speed launches and a patent on 'consuta' (a marine plywood), was Sam Saunders founder of the Saunders-Roe Company. As early as 1909 an aircraft department was formed at his Cowes works. The war years, from 1914 to 1918, brought others, especially John Samuel White Company, into producing flying machines. In the period between the two world wars, and for a considerable time after, the design, development and production of aircraft on the Island was continued by a number of firms but especially by Saunders-Roe. Many of their advanced planes got no further at the very most than prototypes before they were axed in what became regular government defence reviews and cuts. Of all their successes the best remembered by the public has to be the Princess.

## THE PRINCESS



Following the Second World War there had been the desire to build large aircraft. The American Howard Hughes had built the 'Spruce Goose' flying boat with a loaded weight of 480,000lbs which first flew in November 1947. By September 1949 a mammoth conventional British aircraft, the Bristol Brabazon, had taken to the skies. It was soon to be followed in August 1952 by the Saunders-Roe SR45 better known as the Princess flying boat. Sadly the aviation industry was not ready for these monsters and none went into service.

The British Overseas Airways Corporation (BOAC), established at the end of the Second World War in 1945 initially considered that large flying boats would be the answer to the expected growth in transatlantic traffic. This predicted demand in the market provided a stimulus for the project. However by 1951, with the development of large international airports both in the States and Europe, most of which were inland and destined to become important transport hubs in their own right, there was a change in BOAC policy to using in the future only conventional land based aircraft. Large seaplanes would be restricted to a very limited number of viable routes and no other airline seriously considered their use.



*The photograph (thanks to Wikipedia) on the left shows the hangar at East Cowes in which the Princess flying boats were assembled. The Union flag which is thought to be the largest in the world was painted on the shutters to mark the Queens Silver Jubilee. Originally painted in emulsion paint just for the celebrations it has become a popular feature with residents and visitors alike of the Harbour landscape.*

Nevertheless work on the Saunders-Roe project continued and resulted in three Princess aircraft being designed and built at East Cowes. But only the prototype G-ALUM was to fly. It made nearly fifty test flights and was in the air for a total of about a hundred hours. The public had a chance to see it in the air at the 1953 Farnborough Air Show. The two other plans built were moth-balled at Calshot Spit, ironically the Solent home of the flying boat before the War in the heyday of Imperial Airways. Finally finding no buyer they were broken up for scrap in 1967.

The Princess was designed to give spacious comfort for its 105 passengers on two decks within its double bubble fuselage. The plane had 10 Bristol Proteus turboprop engines driving 6 propellers. The 4 inner ones were double contra-rotating and the 2 outer single propellers. For its day the aircraft was enormous with a length of 148ft and a wingspan 219ft 6ins. Empty it had a mass of some 190 000 lbs and fully loaded for takeoff a maximum of nearly 350,000lbs. The power developed was some 3,200hp per engine or a total of nearly 24 MW. The Princess was designed to fly at a ceiling of just under 40,000ft at 360mph with a range of over 5,700 miles or 9,200km

## **THE ISLANDER**



In contrast the Islander on the other hand has become a very popular and commercially successful plane. At the time of writing it is still in production having been modified and updated over the years. Well over a thousand have been built and are flying around the world.

John Britten and Desmond Norman, based on the Island, first at Ryde and later at Bembridge, were already providing a crop spraying service in the 1950's. They manufactured their own spraying equipment in the fort way up on Bembridge Down under the name of 'Micronair Atomisers' to be used with modifying aircraft built by other companies. This was not an ideal situation. The solution came in the decision to design and build their own aircraft more suitable for their requirements and as a result both the company Britten-Norman and the Islander were born.



*On the left is a view of the outer wall of the fort on Bembridge Down inside which for many years Britten Norman manufactured their crop spraying equipment under the name of Micronair. The right hand photograph shows Bembridge Airport looking from the down. The large building is the Island home of the Britten Norman Company.*

The concept of the aircraft was that it should be as simple as possible, practical and multifunctional. Above all it had to be economic both to build and maintain as well as to fly. Design started in 1963, the prototype flying in June 1965 with the first production model in April 1967.

It is described as a light utility aircraft having a crew of 1 or 2 and capable of carrying up to 9 passengers. The length was nearly 36ft with a wingspan of about 50ft. Unloaded it weight was just about one and a half tones and it had a takeoff maximum of nearly double that. The design was for a speed of just 170mph at about 13,00ft with a maximum range of well over 850miles. This was originally achieved by using 2 Lycoming engines which developed 260hp each.

The Britten-Norman (B-N) Company still based at Bembridge has been controlled by several companies over the years. By 1967 the original company was struggling to produce the numbers of aircraft required and in the four years from 1968 Saunders-Roe, now called British Hovercraft Corporation and part of the Westland Group, constructed some 363 shells for B-N leaving them to complete each to its customer specification. There were another 29 kits ready at Cowes when Britten-Norman hit financial problems in 1972 and was acquired by Fairey SA of Belgium. Major production was then taken to Romania and Belgium, with some planes even being assembled as far away as the Philippines.

With further designs such as the BN-2B Islander II in 1976, the Trilander, the military version called the Defender and other variations development the Island has help service for many years a vital need of the aviation industry across the world for simple inexpensive

aircraft. In all around 1300 Islanders were built satisfying the want for a simple, two engine plane which could fly anywhere from a rough and short runway.

Desmond Norman met F. A. John Britten during their engineering apprenticeship at the de Havilland technical School. The former was born in London on 13<sup>th</sup> August 1929 and died suddenly from a heart attack at Basingstoke on 13<sup>th</sup> November 2002. John Britten came from an Isle of Wight family and entered the Royal Navy's college at Dartmouth but quickly decided that aeronautical engineering was for him. Hence his move to Hatfield and de Havilland where he was to established a life-long friendship and working partnership. He outlived Desmond Norman by some twenty-three years, dying 7<sup>th</sup> July 1977.

More information on the both of Saunders-Roe and Britten-Norman companies can be found on websites. References to their history and other relevant reading matter is also listed in the bibliography accompanying these essays.

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