

The Short Scion

The Short Scion was a compact and capable aircraft — twin-engined, high-winged, and built to carry up to six passengers, whether on land or water. Designed in the 1930s by Short Brothers at Rochester, it combined simple construction with innovative thinking and even played a part in the development of Britain's wartime bombers.

A total of 22 Scions were built between 1933 and 1937 at Short Brothers' Seaplane Works. The final six were constructed under licence by Pobjoy Aircraft & Airmotors. The production run included one prototype, four Scion I's, and 17 Scion II's – of which only one of each type was built as a floatplane. While broadly similar in appearance, there were several detailed differences between the models.

The Scion had a range of around 400 miles, cruising at about 110 knots/126mph, with a service ceiling of 10,000 feet. Powered by two 90-horsepower Pobjoy Niagara 7-cylinder radial engines, it was designed for short take-off and landing at around 55 knots/63mph. The aircraft weighed roughly one ton empty and had a flyaway cost of £2,500 in 1934.

Scions were operated in the UK, Palestine and Australia. One aircraft was retained by Shorts as a testbed for the innovative Gouge Flap — later fitted to the Short Sunderland. A larger version, the Scion Senior, featured four engines and could carry up to 12 passengers; five were floatplanes and one was a landplane. The wing of the half-scale prototype for the Short Stirling bomber was based on the Scion Senior's design.

Today, only three Scions are known to survive. One, fitted with Gipsy Minor engines, is being restored in Australia; another is in storage in Belfast. The third is the aircraft you see before you, which has been restored by MAPS at Rochester Airport.

The Scion was a straightforward aircraft by design, using the standard materials and techniques of the 1930s. The fuselage was made from a brazed tubular steel frame, with duralumin cross members and steel bracing wires. Plywood and strip wood fairings were added, and the rear fuselage was covered in doped Irish linen fabric.

The cabin was constructed from strip wood and plywood, with Perspex glazing and interior furnishings made to order. The cockpit was framed in wood with a plywood skin, and the nosecone - originally wood – was later produced from composite material on the Scion II.

Flight controls included a central stick for pitch and roll, rudder pedals for yaw, and a trim wheel for pitch adjustment. Engine management was handled using throttles, fuel cocks and magneto switches. The cockpit panel included instruments for altitude, airspeed, turn-and-bank, wings-level indication, and brake pressure, along with a magnetic compass and clock. Engine instruments – RPM, oil pressure, and temperature – were mounted directly on the engine cowlings.

With the exception of the prototype, the wings were built around four extruded aluminium cruciform spars, braced with duralumin tubes. The leading and trailing edges and tips were formed from thin duralumin, with the entire structure fabric-covered in Irish linen. Engines were mounted to the front of each wing, and fuel tanks – holding about 38 gallons in total – were located in the inboard leading edges. Behind each engine sat an oil tank and radiator.

Tail surfaces – rudder, fin, elevators, ailerons, and tailplanes – were all made from duralumin tube and plate, and again fabric-covered. Landplane versions featured a fixed undercarriage with spring-strut main wheels and a castoring tail wheel. Steering was by differential braking via the rudder pedals.

On floatplanes, the floats were built from riveted duralumin at the Shorts factory in Strood. They were supported by streamlined welded stainless-steel struts.