



**ROYAL
AERONAUTICAL
SOCIETY**
PRESTWICK BRANCH

Christmas 2025

Editorial

The end of 2025 is fast approaching, and your editor has taken the opportunity to make up for previous omissions in reporting Branch events and stories from the more distant past. The first of these recalls our dear friend Janet McIntyre who left us earlier in the year.

The Editor thanks his fans for reading this far and hopes sincerely that you all will enjoy a wonderful Christmas period and come back refreshed for our future happenings.

Janet Mary McIntyre 1935 – 2025 Recollections

Janet was the daughter-in-law of David Fowler McIntyre, through her marriage to his son Dougal McIntyre in 1962. Although born a Londoner, with no aviation history in her background, she immediately embraced the aviation heritage she had married into. She fully appreciated and understood the depth of the family connection and enthusiastically took part in the many occasions, events and activities that she had newly become associated with. She sat stoically through many RAeS lectures, on subjects she had no knowledge of, always engaging with warmth and humour all those she came into contact with.



There were visits to Hendon to view the Wallace fuselage in connection to the 1933 Everest flight; a flight from Coventry to Wellsbourne in a Twin Pioneer for a filming event related to the Twin Pioneer's history, and another flight from PIK in a Twin Pioneer on the occasion of the type's 50th

anniversary. Janet was asked to give away the prizes at a national model aircraft competition - one of many which she attended in support of her husband's hobby.

Her skill in needlework and embroidery produced aviation related artworks as well as the more conventional designs. One of her treasured keepsakes is a tartan clad table ornament which she kept from the inaugural luncheon of the new dining room when the Prestwick Airport terminal building was opened in 1964.

She greatly enjoyed the many relationships with the Scottish Aviation family and associates that she encountered through the 63 years of her married life and contributed in many ways to furthering the interests and enterprises nurtured by her late father-in-law.

Royal Aeronautical Society Heritage Award - Prestwick

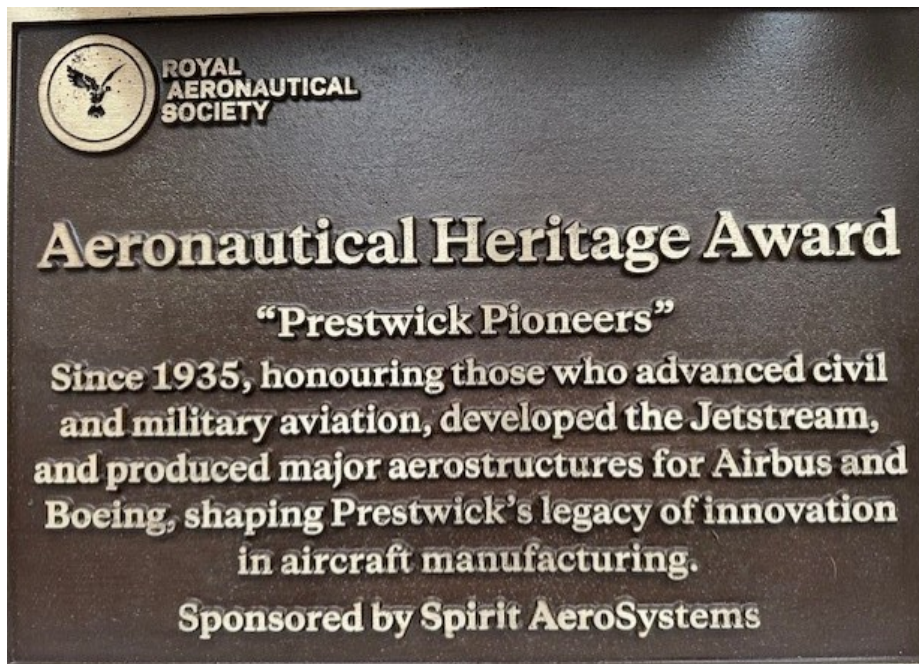
At a ceremony on 19th November 2025, the people who have made 90 years of history in aircraft manufacturing, innovation and dedication, at the Prestwick airport site, were recognised by the presentation of a Heritage Award plaque to Spirit AeroSystems.

The Society made the award, in front of a gathering of employees and members of Prestwick Branch of the Royal Aeronautical Society (RAeS), in recognition of the people and companies who made Prestwick a world significant aviation site. The first powered flight in Scotland was recorded in July 1909 when a biplane flew all of 80 yards before crashing in a Stirling field. Since that historic flight, Prestwick is only the 5th Scottish site to have been recognised by the RAeS.

Spirit AeroSystems Senior Vice President Scott McLarty and General Manager, John Gillbanks, received the award from the President of the Prestwick Branch of the Royal Aeronautical Society, Gordon McConnell. In his remarks, Gordon thanked Spirit AeroSystems for sponsoring the plaque (pictured below) and hosting the recognition event. He went on to talk about the Prestwick site, where he himself had started work in the stress office as a young man, before having a very productive career in aviation. Gordon looked forward to the future and said, "I hope this plaque will inspire future Prestwick pioneers to continue to innovate and develop new technologies for future aircraft programmes here at Prestwick."

For Spirit, General Manager John Gillbanks welcomed the invited guests "to a very special moment in our site's history - the official handover of the Royal Aeronautical Society Heritage plaque."

He continued by saying "receiving this plaque is a tremendous honour for everybody who works here at Prestwick and for the generations of employees who contributed to the site's success over the last 90 years. I'm delighted to welcome Royal Aeronautical Society representatives, including Gordon McConnell, the president of the Royal Aeronautical Society Prestwick Branch, who joins us not only to celebrate the occasion, but to formally hand over the plaque. It symbolises far more than just heritage. It recognises the people. It honours the apprentices, the fitters, the engineers, the support functions and the leaders who've worked and helped shape this site and helped it enjoy the decades of change, innovation and progress."



John continued with “Since 1935, Prestwick has evolved through Scottish Aviation Limited, British Aerospace, BAE Systems and now Spirit AeroSystems” He noted that the names will soon change but the work will continue and that he was looking forward to what would be done over the next 90 years at the Prestwick site.

He continued in his address “Through every transition, one thing remains constant - the pride, the professionalism, the skill of the people who work here. It acknowledges the legacy of craftsmanship, of the apprenticeship and innovation, from the Bulldog to the Jetstream and the days of our modern, aerostructures for Airbus and Boeing. It also marks our continued commitment to excellence as we prepare for the next chapter.”

Scott McLarty looked back to 1935 when Lord Douglas Hamilton and David McIntyre founded the Scottish Aviation College at Prestwick. “From that point, it's been a journey of pushing boundaries and adapting to the times and making technological breakthroughs, supporting the war effort and doing many other challenging things. And what's made that possible has been the people who have come through the doors and been employees, apprentices and managers and everyone who's contributed to a very long historical success story.”

He reminded everyone of some of the major projects which formed the history of manufacturing on the site. “In 1946 we built our first aircraft - the Pioneer. In 1955, the Twin Pioneer followed, which saw global use across multiple continents. In 1972, we took a leap into commercial aviation with the Jetstream programme and by 1989 we were rolling out the Jetstream 41. Looking at the skills of the audience he said “Also we can't forget, given the flight instructors in the room, that we also built the Bulldog. The Bulldog was a very important iconic aircraft that trained a lot of the RAF and flew around the world and trained many other air forces.”

Bringing focus on more modern times Scott said “In the 1990s, we began a collaboration with Airbus and Boeing, working on key programmes like the A320 and A380. Many people don't know that we actually had the Boeing 747 here and the Boeing 767 and the 777 - the 777 still being here today.”

“In 2020 we redesigned A320 spoilers, developed a technology called resin infusion technology and built a brand-new spoiler factory which is a world class facility. I'm sure those who have been around it will have been very impressed.”

Also present at the event was John Stevens who, as Secretary of the Royal Aeronautical Society Prestwick Branch, ably coordinated arrangements for the very impressive plaque to be crafted.

English Heritage has already erected Blue Plaques to commemorate some British aeronautical pioneers, such as [Sir George Cayley](#) and R.J. Mitchell. The American Institute of Aeronautics and Astronautics (AIAA) established a similar scheme in 1999. Its scheme focuses on North America but in 2003 the AIAA presented one of its plaques to Farnborough. The Society scheme will not seek to duplicate these and will work in co-operation with English Heritage and other heritage organisations as necessary.

The first RAeS Heritage Plaque was unveiled by Capt David Rowland FRAeS, FRIN (RAeS Past President), at the Society Garden Party on 6 June 2008, recognising the importance of the Shuttleworth Collection at Old Warden. Since then, several other plaques have been awarded and placed at important sites in the history of British Aviation. These include Dundee University, RAF Leuchars, Bombardier Belfast, Cosford, Filton, Warton, Salmesbury, Cranfield, RAE Bedford.

The plaque is located in Building B90 within the Prestwick site, so is not accessible to the public.

This report includes a contribution by Doug Maclean, Aviation Editor of Ayrshire Daily News, to whom are due grateful thanks.

How to avoid abandoning an aircraft in flight – Ian Adams

After the excitement of the J41 project, I was asked to help out on the Nimrod MRA4 project, I already knew that this was a dreadful project, it was running very late and seemed to be leaderless. However, like the rest of people at Prestwick, I did what I was asked to do even though some of the design specification seemed very wrong. I was asked to look at an in-flight escape system and so I read up on any history that I could find. I was given a lot of help by a para-trooping expert at Boscombe Down including information on the escape systems on the three “V” bombers. He gave me some information on the aerodynamic effect of a bail-out at high speeds and from that it appeared that 250kt EAS would probably be highest possible airspeed for a survivable exit but only with some kind of blast shield. The escapee would have to make a determined jump from the door to get as far from the aircraft as possible otherwise risk being entrained in the airflow and being carried along close to the aircraft. I was told that when the Valiant, Britain's first “V” bomber, started into its bomb dropping trials, the bomb did not leave the bomb bay - it preferred to fly along loose in the bay and not enter the external airflow to be able to drop clear.

The Nimrod was fitted with plug doors so the critical first action would be to dump the cabin differential pressure to allow the door to be opened. I suggested using shaped explosive charges to blow the doors off, cue Michael Caine, but Warton said it would be too dangerous to have explosives on the aircraft. I said that staying on an "out of control" aircraft seemed a bit worse to me and anyway, if the aircraft ever got into service, it would be normally carrying enough explosives in its bomb bay to reduce it to scrap instantly. We were only given six months to produce a design to allow six crew members to exit the aircraft. I asked why the Ministry were putting the lives of six crew at risk on hazardous flights and I was told that there were six parachutes so it would be OK. I was quickly going off the idea.

We started into the design but the specification was continually up-graded by Warton. Despite this, my small design team at Prestwick, and a sub-contract design agency in the Isle of Man, managed to complete the design before the stated deadline. We sent all the drawings to Woodford, and heard no more about it. It was a full year later when we heard that Woodford were now ready to instal the system and had looked at the drawings for the first time and now realised that the system was too complicated to be manufactured in the time remaining. We were asked to simplify the design despite the original specification. We were told that flight test observers would now not fly on hazardous flights, only two pilots would be on board, someone had seen sense. We had to field a lot of questions from "experts". One medical expert told me that we could not drop the cabin pressure rapidly or the crew would be deafened. I said that the crew had to choose, deaf or dead, and I pointed out that many passengers had suffered explosive decompressions on airliners without long term hearing loss. An aerodynamicist said that the crew could not approach an open door or they would be sucked out of the aircraft. I asked if he had ever wondered why ejection seats were used on high speed aircraft, he hadn't.

We eventually heard that all the parts were made and the system was all installed on the aircraft. In its final form it consisted of an Abandon Aircraft switch on the flight deck centre console to dump the cabin pressure. Three of the port cabin windows were replaced with metal blanks and fitted with Airbus motorised pressure-dump valves with manual over-ride that were opened in combination with the aircraft's existing cabin pressure dump valves. The cabin aisle was fitted with a number of vertical poles to assist the crew's passage to the rear door. The forward starboard door was actually also usable for escape, but it was just ahead of the large leading edge engine intakes, so it was deemed to be a bit chancy. The forward and aft starboard cabin doors were fitted with a long vertical handle that not only released the door latches but also jacked the upper edge of the door inwards against any remaining cabin differential pressure. The door was then pulled up into the cabin ceiling by springs and as it slid upwards it triggered the release of an air dam that swung out of the doorway powered by air springs. The air dam was stressed to remain extended in airspeeds of up to 250 kt EAS to shelter the escapee from the direct blast of the airflow. The two pilots would be wearing backpack parachutes equipped with a small supply of oxygen and a barometric parachute release to cater for a free fall from high altitude, or incapacity of the escapee, and give an automatic safe opening at a survivable altitude.

When we got word that all was installed, I was asked to go down to Woodford to inspect the installation. One of my small design team was a young female student who was keen to see the system when it was all installed so I took her to Woodford to help to inspect the installation.

When everything was checked and ready, I suggested that we should do a dummy run to see how long it would take to get from the flight deck to exiting the rear door. The student had just climbed Kilimanjaro so she was game for another challenge and thought it would be great fun to jump out of the door. When we asked for a safety net to be rigged outside the door, the Woodford Health and Safety team found out what we intended and banned the test as too dangerous. So we had to proceed towards the first flight with no test and fingers crossed.

However fate stepped in, the whole Nimrod project was cancelled and all the aircraft were scrapped without delay. What a waste of time and effort, but it certainly avoided the problem of abandoning the aircraft and I never did get the chance to jump out of an aircraft. So, the moral of the story is that if you want to make an aircraft as safe as possible - scrap it before it has a chance to fly!

Visit to Thales – 24 July 2025

13 Branch members gathered at Thales' site in Glasgow on the 24th July and were hosted by Martin Parker, External Stakeholder Engagement Manager (ESEM). The site is in Govan, on the west side of Glasgow and is a part of Thales' Optronics and Missile Electronics UK establishment.

The visit was very interesting and we were given a presentation on the history and background to the products manufactured in Glasgow, followed by a factory tour. To say this was an eye opener is an understatement, given the range of products being produced across land, air and sea, many of which are world-leading technology. It was fascinating to learn that, since the days of Barr and Stroud, the company's periscopes have been used on every RN submarine in service, since 1888, and they now supply highly advanced equipment to UK and foreign armoured defence forces. The group was shown an example of a periscope which could be stabilised against vessel movement, being one of several elements which make up what is known as 'Digital Crew'. More information about this concept can be found online. We were also invited to look into some very capable armoured vehicle sights which Thales is bringing to market.

A sincere 'thank-you' was sent to Martin and the team who hosted an excellent visit, with lunch.



Quick Response (QR) Codes

The Branch website (<https://raesprestwick.org.uk>) contains a wealth of information and reference material, such as the lecture programme, details of the resources held in the Branch library and the huge volume of amazing material which supports the promotion of STEM subjects in schools.

However, we appreciate that it may not always be easy to navigate or locate that material, especially when using handheld devices such as mobile phones.

We are therefore trying to make this information more accessible by the use of QR codes on posters and screen presentations. Codes are presently displayed on posters at the lecture registration desks and appear in a few locations throughout the pre-lecture slide shows.

QR Codes enable quick links to specific information or website locations.

To use a QR code, open the camera on the mobile device (smartphone, tablet etc) and scan the code block. The device will identify it as a QR code and present the associated link.

Select the link and the website or document will open on your device. The poster you may see at the registration desk, on lecture nights, provides codes for the home page of the Branch website, the lecture programme, membership information, the Branch library resources and the wealth of information for STEM support in schools.

As an example, the following code gives direct access to the home page of the Branch website and hopefully this may assist members to test the functionality on their own devices.

