BNAPS News July 2022

BNAPS News Vol 12 Iss 4 – July 2022

Could Islander c/n 7 be repatriated? A Flight of Fancy?

This issue of BNAPS News includes another fascinating account from our anonymous BNAPS Supporter of a recent quest to track down Islanders, this time in the remote Yukon region of Canada. One aim of the trip was to seek out the remains of Islander c/n 4, now owned by Yukon based Islander operator Great River Air. However, the main aim was to try and get a flight in the world's oldest Islander still flying, c/n 7, now registered as C-GSAD and operated by Alair in Manitoba. As it turned out , thanks to the generosity of the owner of Islander C-GSAD, our intrepid reporter did get his flight - for the full story see the feature article on page 24.

Shortly after the flight a report came in that Islander c/n 7 was now offered for sale. This led to some conjecture about the future destiny of this historic Islander, including the possibility of its repatriation to the UK. Although well used with over 22,000 hours on the airframe, it still has a good number of hours left on the engines, propellers and landing gear - could someone or an appropriate organisation in the UK find a way of acquiring the Islander and get it back home? Whilst BNAPS would positively and wholeheartedly support such an initiative, it is not set up for acquiring a flying aircraft. Perhaps Islander c/n 7 could earn its keep, along with other duties, to provide "Islander experience" flights, much like the Classic Wings flights at Duxford?

Islander c/n 7, G-AVRB, at Bembridge in October 1967 prior to delivery to the USA distributor Jonas Aircraft & Arms in New York (Reg Hobbs).

In this issue of BNAPS News
Islander G-AVCN – Airframe Restoration
Islander Tracking in Canada and USA
Project Fresson Update
Plus more news of Islanders around the World

BNAPS Chairman's Update – July 2022

Dear BNAPS Supporter,

Steady progress has been made towards completion of all the restoration work on the aircraft. Other activities have involved preparation of the museum space. Thanks go to the trustees and management of the Wight Military & Heritage Museum for going ahead with the work to lay down a tarmac surface layer around the aircraft. At this stage about 30% of the area could not be accessed due to racking and work benches and support equipment used during the restoration work. In the next few weeks the area will be cleared to allow the work to tarmac this area to proceed. Progress with preparation and fitting out the museum space will be reported in more detail in the next and subsequent issues of BNAPS News.

Since the last issue of BNAPS News further thought has been given to the arrangements for an "Official Unveiling" of Islander G-AVCN. The principal concern was that the timing was too tight for this event to be held at the end of September and it was proposed to set up for a date in mid-November. Taking a step back, and recognising the significance of our restored Islander "officially" going on public display, the decision has been made to move the event to April 2023. Also, it is now planned to hold an "Autumn Viewing Day" on Saturday 24 September 2022, along the lines of the "Spring Viewing Day, held last April.

Regarding the "Official Unveiling" the event will be re-titled as "Islander G-AVCN Launch Day" and will take place on Saturday 22 April 2023. For practical reasons attendees will be requested to confirm their intention in advance to ensure that all necessary arrangements can be organised and attendees accommodated within the limitations of on-site facilities. A briefing document for the April 2023 event and attendance notification response form will be circulated in September.

Meanwhile action is under way to raise funding to cover the cost of fully supporting Islander G-AVCN as a museum exhibit with information panels, display cases, video display facility and other necessary provisions.

BNAPS Trustees have agreed to go ahead with the installation of two large banners, typically as illustrated on the right, as an initial step in setting up the museum space. It is planned that the banners will be in place in good time for the "Autumn Viewing Day".

As always thanks go out to all who have supported the restoration project such that the objective set over 10 years ago to have Islander G-AVCN on public display on the Isle of Wight is now within sight of being achieved

For more information regarding the above please contact BNAPS by email bob@bnaps.org.uk or telephone 01329 315561.

Yours sincerely,
Bob Wealthy,
Britten-Norman Aircraft Preservation Society Chairman

G-AVCN Restoration: May 2022 – July 2022

Summary of activities during the period:

1. General: Area around the museum side of the aircraft has been cleared to allow access for tarmac floor covering to be installed. The area is being cleared of unwanted materials and handling gear, work stands and other items will be stored elsewhere at the museum

2. Fuselage: Internal trim fabrication and installation is progressing. Ceiling panel sections have been made and are in the process of installation.

3 Engines: Work to install detail engine dressing items has continued.

4. Fin, Rudder and Rudder Tab: Work on these items is now complete

5. Landing Gear: Wheel trims have been made and will be fitted at a later stage.

6. Engine cowlings: Interior of port engine cowlings has been degreased and painted.

7. VQ-SAC Fuselage section: Work on this item has continued at a low level

8. Missing Items List: Teleflex engine control cable conduits together with fuel pump heat shield and magneto blast tubes have been acquired from Saywell International for installation on the port engine. The search goes on for the few remaining items on the missing parts list.

View of museum area after being cleared to provide access for laying tarmac floor covering.

View of museum area after tarmac floor covering had been laid. Thanks go to the Wight Military & Heritage Museum Manager and Trustees for going ahead with this significant improvement to the museum space.

G-AVCN Restoration May 2022 – July 2022

The following captioned photographs show the results of some of the work undertaken in the last period:

Bryan Groves made the supporting bracket for throttle and mixture Teleflex cable connecting fittings. The assembly is seen here ready to be installed on the port engine

Throttle and mixture control cable support bracket, actuating rod and end fittings after installation on port engine.

General view of port engine now that engine dressing work is near completion

View of baggage bay area showing starboard side wall trim and ceiling panel installed

View of baggage bay area showing port side wall trim and ceiling panel installed

Aft section ceiling panels made and installed by Paul Thomasson with help from Mark Porter.

Teleflex cable conduits, fuel pump heat shield and magneto blast tubes were inspected and made ready for installation on the port engine.

Paul Brook masked up the port engine cowling lower section prior to painting the interior surface matt black

Port engine cowling lower section after painting.

Work planned through to completion Q3 2022

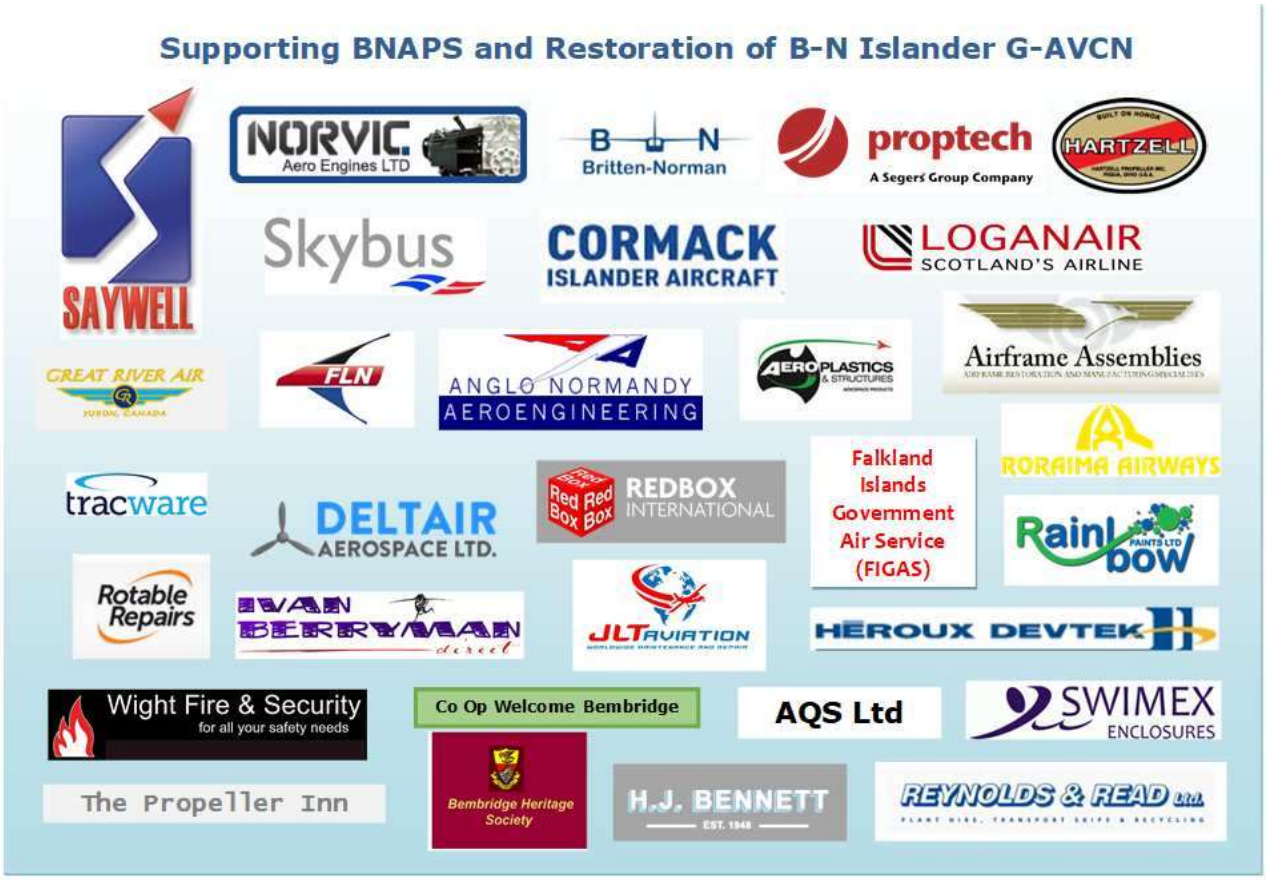
1 General:
1.1 Complete work on the fairing between the wing droop leading edge and the inboard side of the upper engine cowling.
1.2 Devise scheme for supporting aircraft on blocks sufficient to keep weight off the tyres

2 Wing and Engines:
2.1 Completion of detail port engine "dressings".

3 Fuselage:
3.1 Internal trimming work, fitting floor carpet and roof lining.
3.2 Installation of seats

4 Islander VQ-SAC Fuselage Section Work Items:
4.1 Fabricate door hinges and door catches.
4.2 Paint external surfaces, nosecone and doors and apply fuselage lining.
4.3 Install doors, windows and trim.
4.4 Install carpet, tread plate and seats.
4.5 Install electrical earthing connection for fuselage structure.
4.6 Install and commission Stage 1 flight simulator equipment.

5 General Activities/Preparation of Exhibition Space:
5.1 Complete tidying up, dispose of unwanted items and generally sort out the area around the aircraft ready for public display.
5.2 Prepare scheme for aircraft accessibility and display to take account of visitor access and safety.
5.3 Develop and implement schemes for surrounding exhibition space content and layout.



Islander G-AVCN Recovery and Restoration

As a follow on from the report in the May 2022 issue of BNAPS News on the work involved in restoration of aircraft systems, the following report on the restoration of the airframe components has been prepared by Guy Palmer, in consultation with Bob Wilson. The work of de-corroding, repair and fabrication of parts and application of primer has involved all of the restoration team at one time or another. Spray painting was undertaken by local car refinishing specialist, Bill Mason, and some replacement sheet metal parts were formed by Airframe Assemblies Ltd., based at Sandown Airport, Isle of Wight.

The airframe restoration report is in two parts, Part 1 is in this issue of BNAPS News and covers what was done to restore the fuselage and doors and glazing installation.

Part 2 will be included in the September 2022 issue of BNAPS News and covers the wing fin and tail plane, ailerons, flaps, elevator and rudder together with engine cowlings, various fairings and the main landing gear leg fairings and painting up to the point where all was ready for the first trial assembly.

The November 2022 issue of BNAPS News will conclude the series with a report on the restoration work covering trim, furnishings and seating together with the final assembly sequence and application of the Aurigny Air Services livery.

Islander G-AVCN Airframe Restoration - Part 1 Fuselage, Doors and Glazing

Compiled by Guy Palmer

General Considerations

Brief history

The basic airframe was recovered from Puerto Rico in 2000 in a substantially complete condition, but in need of a total overhaul. There were no engines, some cowling parts were missing and there were very few instruments. The aircraft was dismantled and packed into a 40 ft. freight container for its journey back from the Caribbean. The wing tips were removed and a full chord section of the outer port wing, approximately five feet in length, was de-riveted and removed in accordance with an approved procedure, to allow the wing to fit into the container.

Islander G-AVCN in the process of being dismantled at Isla Grande Airport, Puerto Rico in January 2000 (BN Historians).

The overhaul was commenced upon arrival of the airframe back at Britten-Norman's factory at Bembridge with the intention of returning the aircraft to an airworthy condition. The external belly skin and three side skins on the starboard rear fuselage were removed and then skin clipped back in position pending repair or replacement. The interior cabin floor skin was removed and a partial temporary floor installed to allow work to proceed inside the aircraft. At this point further work ceased.

Management changes and other priorities at B-N resulted in work being suspended on the airframe and to it being stored outside. Unfortunately, this resulted in inevitable deterioration and corrosion. It also suffered some damage during this move.

Dismantled Islander G-AVCN fuselage in open storage at Bembridge March 2010.

Peter Ward (left) and Bob Ward examine the rear fuselage during the March 2010 survey.

Fuselage in Harbour Farm workshop after recovery from Bembridge Airport in July 2010.

The dismantled airframe was moved to a secure and dry location, away from the factory, in a barn at Harbour Farm in Bembridge in July 2010 and a new start was made on a major restoration programme. This was to occupy the following twelve years, and two more moves, culminating in it being finally assembled as a complete aircraft again at the Wight Military and Heritage Museum at Northwood, near Cowes.

Objectives of the rebuild

The primary decision which had to be addressed following the withdrawal of oversight by B-N was whether it was feasible to undertake a restoration to a flying aircraft. After an enormous amount of deliberation by the Trustees, including discussions with the CAA, it was reluctantly decided that because of deterioration of the airframe due to mechanical damage and corrosion during its outdoor storage, and because of the enormous expense that would be incurred in order to comply with airworthiness requirements, that this was not realistically achievable by the BNAPS.

Another consideration was that the importance of the aircraft lay in its provenance. It is the oldest existing Islander and the first production aircraft. If the aircraft were to be made airworthy, large primary structural assemblies, such as the complete wing, a number of fuselage frames, longerons and skins, the fin, tail plane and most of the flying control surfaces would have had to be replaced in their entirety, leaving little of the original aircraft structure intact. However, upon close inspection it was determined that with suitable de-corrosion and repair, the majority of the airframe could be rebuilt as a high quality static museum exhibit, thus preserving the structure of the original aircraft.

Once this decision had been made it was possible to start assessing what needed to be done and to begin producing suitable repair schemes. These would be unapproved schemes from an airworthiness perspective, but completely adequate to produce a high quality exhibit.

It was further decided that where necessary, due to cost and availability considerations, material which did not have approved release paperwork, or was not of the design specification or gauge, could be incorporated. It was also decided that to facilitate the reassembly of the structure, aluminium pop rivets would be used in most areas. These deviations from correct airworthiness practices and procedures do not diminish the overall impression of the completed aircraft, which looks just as it should.

Fuselage Restoration

General

The fuselage, as received at the Harbour Farm workshop in 2010, was in poor condition. There was extensive surface damage and scoring with abundant evidence of both external and internal corrosion. The entire external bottom skin from the front of the pilot's door to the fuselage kink line, Frame Station (FS) 71.5 to FS 219.25 had been de-riveted and removed from the aircraft at Bembridge when if first arrived. It had then been reattached with skin clips. Over the years of being outside, these had corroded and it was not possible to release them.

Similarly, three starboard rear fuselage side skins from FS 255.25 to FS 408.45 had been removed and reattached with skin clips which were now corroded in place.

The entire internal cabin floor, from the rear of the pilot seating position to the baggage bay step had been removed at Bembridge and a temporary partial floor panel skin clipped in place.

The following account of the fuselage restoration has been divided into several sections for clarity. The descriptions do not necessarily follow the actual sequence of the rebuild which was dictated by factors such as the acquisition of missing parts and volunteers' availability. However, all essential aspects of the rebuild are covered.

Main Structure and Flying Controls

In the new workshop, the fuselage was located on long lengths of timber and form boards cut to the lower cross-section profile of the fuselage and covered with carpet. With the fuselage securely supported a start was made removing the rusted in skin clips on the starboard side rear fuselage. An angle grinder was required to cut off the clips, and care was taken not to damage the skins, which would be reused.

Fuselage aft roof skin slit fore and aft showing damaged starboard side removed. Also showing replacement upper corner skin in place.

New starboard rear roof skin fitted to fuselage ready for riveting.

With the skins removed, damage to the starboard rear top chine member and several of the rear section main fuselage frames was observed. Also the starboard top rear curved corner skin was found to be damaged beyond repair as was the starboard rear top skin aft of the wing. A repair scheme involved sourcing a replacement used top corner skin. The port side of the main rear roof skin was useable and so the skin was slit from front to back in situ along its length just to the right of the

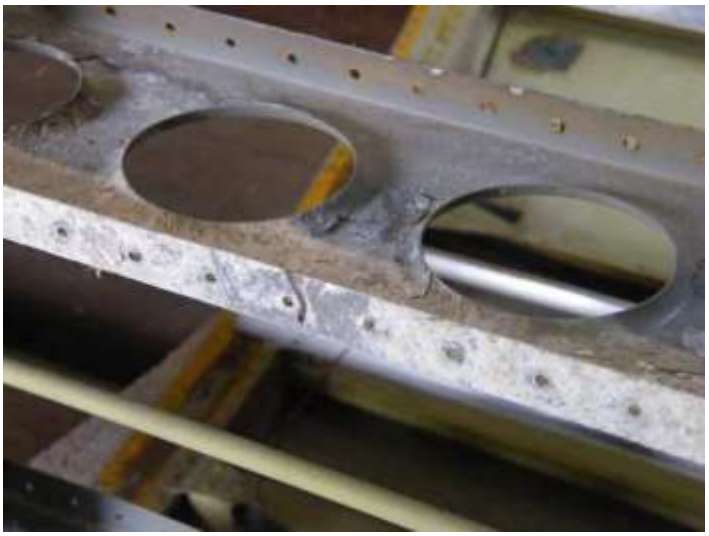
centreline rivets and a new starboard roof skin manufactured from sheet aluminium and assembled with a longitudinal lap joint.

The damaged rear fuselage frames were removed and taken to Airframe Assemblies Ltd. for repair. This is a highly skilled aircraft sheet metal fabrication company, based at Sandown Airport, that has provided invaluable help throughout the rebuild process.

The use of second hand components and local repair schemes meant that fuselage structural members had to be re-drilled to accept the replacement skins and therefore they lost their structural integrity. While the sides skins were removed the elevator control tubes in the rear fuselage and their operating mechanism were installed. A replacement elevator bell-crank was installed as the original could not be found.

Elevator rods in place in rear fuselage and replacement elevator bell-crank installed.

The three rear side skins were de-corroded, repaired, etch primed, treated with Duralac jointing compound and then reassembled to the fuselage. With the rear fuselage structurally sound, with the exception of the rear bottom skin, attention turned to the cabin underfloor structure and to the external bottom skin below the cabin, FS 71.5 to FS 219.25. The temporary internal cabin floor skin was removed to expose water collected below the floor. A thorough inspection of the underfloor structure revealed some damaged frames and damaged and corroded fuselage longerons, in particular the longerons incorporating the pilot and passenger seat keys which were corroded and had a number of cracks. It was decided to incorporate local repairs which would be adequate for static display.



Corrosion and damage to frames and longerons in underfloor structure.

At the same time the underfloor structure was thoroughly cleaned as was the internal roof structure using an electric drill and circular wire brushes. The internal roof structure had suffered damage when

the flying control surfaces had been pushed inside the fuselage during storage. Damaged stringers and missing rivets were repaired in the fuselage side behind the starboard rear window.

Damage to internal roof structure and top skin.

The fuselage was then rolled onto its port side and suitable wooden supports were made to locate it securely. It was now possible to remove the bottom skin below the cabin, between FS 71.5 to FS 219.5, by carefully cutting off the corroded in skin clips, again using an angle grinder. This made the entire underfloor structure accessible.

An angle grinder was used by Paul Thomasson to remove the rusted in skin clips in the fuselage bottom skin.

Fuselage bottom skin finally removed.

Damage was found to underfloor frame at FS 191.5 and centreline longitudinal intercostals between FS 165.0 and FS 219.25. These were removed and taken to Airframe Assemblies Ltd. for repair. On their return they were etch primed and re-installed.

Damaged underfloor intercostals were removed for repair.

Repaired intercostals back in place and sprayed with etch-prime.

Minor damage and corrosion to other underfloor frames, longerons and associated structure was repaired in place. The fuselage rear bottom skin aft of FS 377 was found to be badly damaged and

unrepairable. It was removed and a replacement skin made and installed. This was complex as it incorporated three inspection panels and a number of attachment brackets for the tail bumper.

The main fuselage belly skin required extensive de-corrosion and repair. There were many dents and score marks which required filling. Inspection panels were removed and the doublers and anchor nuts made good. The floor was then sprayed with several coats of etch prime. With the internal structure below the cabin floor, and the bottom skin, in acceptable condition a start was made on refitting the bottom skin. It was treated with Duralac jointing compound prior to riveting in place. A total of over 1,700 rivets were required. Some rivet holes had to be opened out from 1/8" to 5/32". All rivets used were aluminium pop rivets. Missing inspection panels were remanufactured and installed. Reinforcement plates and doublers were renovated and refitted.

Refitting the repaired fuselage bottom skin.

Fuselage bottom skin secured in place and being painted with undercoat by Keith Winter (left) and Paul Thomasson.

The fuselage rear bottom skin aft of FS 377 was found to be badly damaged and unrepairable. It was removed and a replacement skin made and installed. This was complex as it incorporated three inspection panels and a number of attachment brackets for the tail bumper.

Paul Thomasson with the re-manufactured fuselage aft bottom skin ready for etch-prime.

New fuselage aft bottom skin riveted in place, complete with inspection and access panels.

While the aircraft was positioned on its port side repairs were made as required to the cabin roof and other external surfaces. The area above the flight deck was in particularly poor condition as was the skin below the cockpit floor. These were paint stripped, repaired and etch primed. Redundant apertures in the fuselage roof were patched leaving only the attachment panel for the ADF Sense aerial on the forward roof panel and for the VHF Communication aerials.

The underside and the roof of the fuselage were painted, by roller, with white polyurethane paint. The fuselage was again rotated and suitably supported to stand upright. Prior to fitting the internal floors in the cabin the underfloor structure was sprayed with etch prime and then coated with Waxoyl to afford long term protection.

The complete suite of elevator control rods was installed. Also, the underfloor rudder cables and pulleys and the underfloor elevator trim cables and pulleys were fitted. Some of the pulleys were missing and replacements had to be sourced. In the rear fuselage the elevator trim jack and push rod were trial fitted and the routing of the elevator trim cables was finalised.

The aileron cables had not been removed and ran from the cockpit floor to the location of the wing box. A simple tensioning device was temporarily fitted to ensure that the cables remained in place during ongoing work.

Both the fore and aft rudder trim chains, position indicator and the trim control wheel in the cockpit roof were missing and replacements sourced. The rudder trim chains and cables were fitted to the sprockets in the cabin roof. The tension rods and the right and left hand threaded adjustment nuts installed in the cables.

The rudder trim chains and cables were fitted to the sprockets in the cabin roof. The tension rods and the right and left hand threaded adjustment nuts installed in the cables. Both the fore and aft chains, position indicator and the trim control wheel were missing and replacements sourced.

The original cabin floor skins, which had been removed at Bembridge, were found but were in unusable condition because of cracks and corrosion. They were employed to act as templates for a remanufactured floor. Due to the lack of suitable lengths of sheet aluminium the new cabin floor was configured differently from the original. Instead of three full length twelve feet long strips, two narrow side strips and one wider central strip riveted to the longerons carrying the seat keys, the new floor was made up of four sections. Two half cabin width, 8 ft long front sections, with a one inch overlap running down the centre of the floor, and two shorter rear half cabin width strips, again overlapped and joined along the fuselage centre line. The old skins were used as templates to cut the new skins to fit around the vertical fuselage frames and the doors and to establish rivet hole patterns. Fortunately, the two long doublers which run the full length of the floor and carry the seat key plates, were available, although one was broken in half. Positioning and riveting the new floor skins in place and then attaching the long doublers and seat key plates into exactly the right place to line up with the underfloor structure was a challenging task.

Left – Keith Winter starting to fit the new cabin floor onto the refurbished underfloor structure - aft port section.

Right - Refurbished cabin floor doublers ready for installation and for fitting of seat key plates.

Complete new cabin floor installed with long doublers and seat key plates.

All the door apertures were in need of repair and attention. The window apertures were in acceptable condition. A long time was needed to straighten and fill dents and gashes in the door apertures. Some fuselage mounted door hinges were missing and replacements had to be sourced. The fuselage lower door corner assemblies were removed, repaired and re-assembled as required. To complete the door apertures, wooden tread strips were manufactured from hardwood for all three main door sills and the baggage bay door, to replicate the missing items.

Cockpit Area
The underfloor space below the cockpit was extremely dirty. Over the years hydraulic fluid from the brakes had leaked and collected dirt and dust. Many hours were spent in cleaning and then painting the area. Also, the cockpit side of Frame 46 was cleaned and painted matt black.

View of cockpit area prior to starting restoration.

The original cockpit floor skin had been removed from the aircraft, but it was found to be in good condition and only needed cleaning and painting prior to installation. The refurbished floor skin was loosely installed but not riveted down.

Cockpit floor decorroded and repaired ready for fitting.

The control yoke bottom mounting structure had been removed but was found to be complete. It was cleaned, repaired, painted with etch-prime and reinstalled in the cockpit floor.

Control yoke lower mounting structure prior to restoration and reassembling in the cockpit floor.

The main instrument panel had been removed but the lower circuit breaker and switch panels were still in place, as was the eyebrow instrument panel. Much of the support structure for the main instrument panel and its coaming was missing. Some of it was eventually located but some parts had to be made.

Instrument panel awaiting restoration.

Instrument panel repaired and painted in primer awaiting satin black topcoat.

The central control yoke was installed and connected to the elevator control rods. The rebuilt and renovated elevator bias mechanism was installed with some difficulty due to lack of space and visibility. Only four of the six attachment nuts were fitted, but the mechanism works perfectly.

The aileron control chain was assembled to the control column sprocket wheel and then assembled to the aileron cables which had not been removed from the aircraft. The elevator trim cable pulleys were tried in the cockpit floor below the throttle box and the trim wheel chain was installed. Rudder cable pulleys were finally refitted.

Trial installation of elevator trim mechanism showing operating chain in cockpit central console.

The two rudder pedal assemblies had been removed at Bembridge, but were mostly complete. They were stripped, cleaned, serviced and then painted and installed and connected to the underfloor rudder cables. The rudder pedal connecting rod, to link the two sets of pedals, was eventually found and fitted.

Work commenced on installing all six levers into the throttle box quadrant. This was a difficult and lengthy operation. It was decided not to fit the engine control cables, but the friction control knobs were made operational to achieve the correct feel to the levers.

Bob Ward working on installing the six engine control levers into the cockpit throttle box.

With all six levers eventually fitted a problem was found with fitting the Engine Control Console Cover which was fouling the Elevator Trim Position Indicator. It was determined that the throttle box assembly was to a different Modification Standard than its cover. The problem was resolved by a modification to the position of the attachment screws.

The front panel of the console housing the carburettor heat levers and the parking brake control was cleaned up and fitted. The front panel of the console housing the carburettor heat levers and the parking brake control was cleaned up and fitted. The cockpit floor skin was finally riveted in place.

The instrument panel and the blind flying panel were refurbished, and then primed and painted satin black. They were installed prior to populating with instruments and wiring.

The pilot and co-pilot's control column tubes were attached to the yoke and the control wheels attached to the tubes. The tubes were drilled using a Control Wheel Positioning Jig made for the purpose. The yoke, tubes and control wheels were assembled using JC5A jointing compound.

The pilots control wheels with rigging bar in place for drilling control tubes for attachment bolts.

The control wheels that came with the aircraft were later style plastic coated cast alloy wheels. Following a long search a pair of very original welded metal control wheels, NB-45-0-43, with which the aircraft would have originally been delivered, were located, one in the UK and one in New Zealand!

Cockpit complete, less instruments, showing control yoke and aileron chain, rudder pedals, elevator trim control and indicator, flap controls and indicator and engine control levers.

Frame Station 19, Avionics Bay and Baggage Bay Door Surround

The nose wheel support structure on FS 19 had been removed and could not be found. Fortunately a spare FS 19 was located and the nose wheel structure transferred to G-AVCN. The frame was sprayed with etch prime and then painted grey.

Frame 19 with nose wheel mounting structure missing.

Frame 19 with nosewheel mounting structure re-instated.

The avionics bay and its surround were in need of cleaning and renovation. The surround was repaired and new Camlock fasteners fitted as required. The interior of the avionics bay was cleaned and painted matt black. The avionics bay cover was in poor condition and required extensive work to return it and its fasteners to an acceptable standard. It was painted with etch prime on the outside and matt black on the inside.

The baggage bay door surround was in poor condition. It was removed and significant corrosion was found underneath. The corrosion was removed and the panel was repaired and etch primed. The surround itself was made good and re-attached in place. The lower fuselage mounted door hinge was missing and a replacement was manufactured and installed at the workshop.

Dorsal Fin and Tail Bumper

The forward strake of the dorsal fin had heavy damage. The internal channel section was de-riveted and removed to allow a repair to be made on the distorted skin. When this was completed the channel was re-riveted in place and the assembly paint stripped, rubbed down and painted with etch prime. It was then re-attached to the top of the fuselage.

The tail bumper was missing, with only the attachment angles remaining. These were badly distorted and were removed and used as patterns to manufacture new angles. Anchor nuts were attached to the angles to pick up the tail bumper assembly. The angles were then riveted in place.

A replacement tail bumper was found. A one inch diameter hole was trepanned through it to allow a steel tube of the correct length to be installed as a picket tie down point. The space around the tube was packed with a fibreglass compound for additional strength and the bumper assembly was then assembled to the attachment angles.

Missing tail bumper on the bottom of the aft fuselage.

Refurbished rear tail bumper in place (Post final painting).

Nosecone and Tailcone

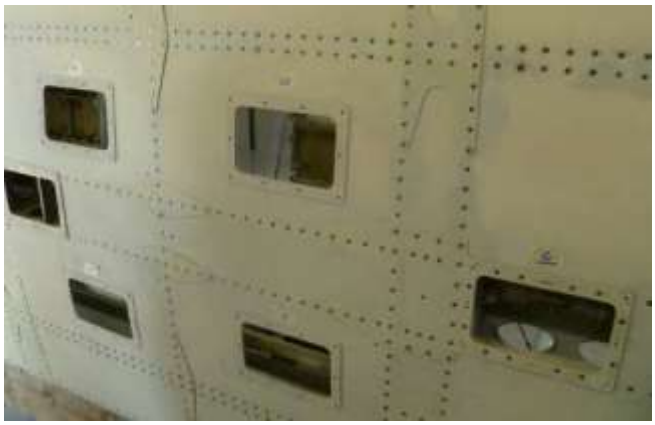
The nosecone was generally in good condition requiring some maintenance to its fasteners and a complete strip and painting with primer.

Refurbished nosecone undercoated ready for top coat painting.

The original tailcone was extensively damaged and a replacement was found. Unfortunately some of the attachment holes did not line up so matching holes had to be drilled in the tailcone and the original holes filled. It was then stripped and painted in primer.

Fuselage Inspection Panels
All of the inspection and access panels were removed from the fuselage during the rebuild. Some of the panels were missing and replacements had to be manufactured.

In the locations where the panels may need to be removed in the future the fuselage mounted doublers and their anchor nuts were inspected and repaired as required. In other locations, where new skins had been fitted and it was unlikely that the panels would ever need be removed again, the panels were riveted in place.



Repaired fuselage bottom skin showing inspection and access panel mounting doublers repaired and ready for fitting panels after final painting.

Cabin Doors
The three main cabin doors were in superficially poor condition, but structurally they were found to be sound.

Pilot's Door - required minor detail work to ensure a good fit. All the old paint was removed, minor dents and scratches were repaired with filler and the door was then painted inside and out with etch-prime followed by undercoat on the outer surfaces.

Port Rear Passenger Door - the door was paint stripped and the skin showed significant corrosion which was removed. Damage to the skin was repaired with filler and all surfaces were etch-primed and the outer skin painted with undercoat.

Jeni Gallagher paint stripping and repairing Port Rear Passenger Door.

Starboard Passenger Door - this door had significant damage with gashes on both the outer skin and the internal structure. The door was paint stripped, the corrosion was removed and the damaged areas repaired initially with GRP and then with filler. All surfaces were etch-primed and the outer skin painted with undercoat.

Damage to inner and outer skins of Starboard Passenger Door.

Bob Wealthy working on repairing the Starboard Passenger Door.

Baggage Bay Door - this fibreglass door was in poor condition. When the paint had been removed damage was found on both the inner and outer surfaces. Both surfaces were covered with a coating of body filler and carefully rubbed down to restore their original profiles and then painted with etch prime. Repairs were required to the door latch.

Roger Young working on surface preparation of the Baggage Bay Door.

All three main doors were trial fitted to the fuselage. It was found that bushes were missing in some of the hinges. Flanged bushes were made for the lower hinges on both the Port Rear Passenger Door and the Starboard Passenger Door. A satisfactory fit was eventually achieved and the doors removed in preparation for painting.

Painting Fuselage and Doors

The fuselage was masked in preparation for final painting. All door and window apertures were masked from inside the fuselage and all inspection and access panels were removed and their apertures masked from the inside. The bulkhead panel at FS 19 and the nose wheel support structure was masked as was the avionics bay. Main wing pick-ups and tail plane pick-ups were masked. The fuselage was then rolled onto its port side in preparation for painting the top and bottom surfaces. These were sprayed with a beige primer and several coats of yellow topcoat.

Left – Charles Shiveral removing masking after the fuselage bottom surface had been sprayed.

Right – Fuselage masked up and top surface sprayed.

The fuselage was then rolled upright again and the painted top and bottom surfaces were masked. The sides were painted with beige undercoat and several coats of yellow topcoat.

Fuselage masked and starboard side sprayed.

Fuselage masked and port side sprayed.

Views of the fuselage painted with most of masking removed.

The doors were painted separately, as was the avionics bay cover, the nosecone and tailcone and the baggage bay door.

Windscreen and Side Window Glazings

The windscreen mouldings were polished. Some of the surround strips and sealing strips were missing and replacements had to be sourced and others made.

Paul Brook working on installation of the windscreen glazing.

View of windscreen after installation.

New windows were purchased for the port Row 2 position and for the Port Rear Door. The remaining glazing were found to be serviceable.

The side window glazings were loosely trial fitted using sealing strips cut from correct window seal moulding which had been purchased. The sealing strips were placed in situ for the trial fit, removed and later glued in after the fuselage and doors had been finally painted.

Pilot's door and port side passenger window glazing installed.

Starboard side window glazing installed.

View of the fuselage ready to be moved from the Harbour Farm workshop in March 2016. At this stage all work to refurbish the fuselage structure was complete, window glazing and doors had been installed. The nosecone and tailcone were not fitted to avoid risk of damage during transport to the Brickfields workshop.

Wing Pick Up Point Tie Bars

When assembling the wing to the fuselage it is essential that the four wing pick-up points on the top of the fuselage frames align very closely with the pick-up points in the main wing structure. It was anticipated that during the restoration of the fuselage that frames, stringers and longerons may need to be removed for repair, and that large skin sections may need to be de-riveted in order to remove corrosion or even to replace them. It was foreseen that the fuselage would need to be rolled onto its side to allow work on the bottom skin and for painting.

There was concern that any, or all, of these actions may allow the fuselage to relax and warp even a small amount which would cause major problems when lining up the pick-ups for the refitting the wing.

It was decided to ensure that the pick-up points were prevented from distorting in any way by tying them together, before work started, with two substantial tie-rods.

This technique worked well and when the time came to assemble the wing to the fuselage all the pick-up points aligned correctly and the attachment bolts were inserted with no problems.

Wing pick up point tie bars were made and installed by Tim Barton at an early stage of the fuselage restoration work.

Thanks go to our much travelled BNAPS Supporter, who wishes to remain anonymous, for providing BNAPS News with an exclusive report of his most recent trip to track down Islanders and Trislanders in remote parts of the World. This time his quest took him to Canada's remote Yukon region together with a visit to Fort Lauderdale in the USA on his way back home.

Islander Tracking in Canada and USA

On the move again post pandemic, first destination being Dawson City, located in the Yukon region of Canada. Dawson still has a genuine frontier town personality with an active gold mining community. The 715km Yukon Highway is the main north-south travel route in Yukon and links the Alaskan coastal town of Skagway to Yukon's Dawson City. The main Klondike Highway is tarmac surfaced. However, all side streets consist of compacted earth with boardwalk footpaths. The adjacent mighty Yukon River is an ever present miracle of nature.

Dawson City Monday 9 May 2022

On arrival at Dawson City Airport I was met by Craig Unterschute, owner of Great River Air, a company specialising in all aspects of outback charter services, ranging from mining exploration and outfitting charters, environmental surveying and scenic air tours.

Great River Air Islander C-GHRK, c/n 333, on the ramp at Dawson City Airport

Great River Air currently operate two Islanders. Islander c/n 333, C-GHRK, a 1973 airframe (first flight Bembridge 12 June 1973 as G-BAZW) delivered to the Ghana Air Force as G350 in July 1973 and operated by No. 3 Transport Squadron coded "A".

The airframe eventually lapsed into dereliction and was subsequently struck off charge, sold and shipped to the USA by Welsh Dragon Aviation in a dismantled state. It was registered as N158A in March 1996, but noted still dismantled at DeLand Florida, in February 1997 as G350.

Islander c/n 333 G-BAZW/G350 at Bembridge pre-delivery to Ghana Air Force July 1973 (Norman Hobbs).

Subsequently removed to Kelowna BC for rebuild by BN Aircraft Leasing Ltd. It was re-registered as C-GHRK in August 2010 and operated by several Canadian companies, including Gillam Air Services, until it was purchased by Great River Air on 18 April 2019.

Islander c/n 2010, C-GRNZ, a 1977 airframe, (first flight Gosselies 12 August 1977 as G-BESW) was delivered to Fairoaks Aviation Services, Blackbushe, in September 1977 and for 3 years was based in the Channel Islands with Alderney Air Ferries. In March 1983 it was ferried Hurn, Glasgow, Reykjavik to LAB Flying Service Haines, Alaska and then re-registered N3835Z. Great River Air took delivery of c/n 2010 in February 2012 and took up registration C-GRNZ.

Great River Air Islander C-GRNZ, c/n 2010, on the ramp at Dawson City Airport

Considering the harsh and demanding environment these airframes operate in, both were painted in smart company liveries, well maintained and ready for work at a moment's notice!

Islander C-GHRK was operated in passenger configuration, whilst C-GRNZ was devoid of passenger seating and configured for hauling diesel, stores and mining equipment to remote gold placer mining airstrips in the locality. Both airframes have larger modified cargo doors to accept a greater variance of load sizes required by customers.

Great River Air's first Islander c/n 90, C-GVCJ, (delivered in May 2010), was absent from the ramp. Craig explained that this much treasured airframe was sadly destroyed in a hangar fire in January 2018, being written off as a total loss.

Great River Air also operated Islander c/n 876, C-FZXG, for five years from May 2011. This aircraft is currently based in the Caribbean with SXM Airways, registered as PJ-SXM.

Great River Air owner Craig Unterschute with his Islanders at Dawson City Airport

Craig's Retirement Projects.

Craig explained that he has two aviation projects to keep him busy in retirement, These are ex Mexican Government Islanders, c/n 286, a 1971 airframe registered XC-UPK, and c/n 774, a 1976 airframe registered XC-JDK and are currently stored in shipping containers at Whitehorse Airport. Craig had also acquired the remains of Islander c/n 4 for parts.

Islander c/n 4 Remains

A local journey was made to a community estate south of the Klondike Highway, where the sad remains of Islander c/n 4, including its complete damaged wing, were viewed in open storage.

Last registered to Paklook Air as N663SA operating as Servant Air, this airframe survived only 11 months operational service before being damaged beyond repair on 15 March 2010 when it impacted trees at the end of the runway during take-off at Kodiak Airport, Alaska. The nose section of the aircraft was totally destroyed in the accident, however the fuselage floor survived relatively undamaged. The floor section has been removed and shipped to George Cormack at Cumbernauld.

Remains of Islander c/n 4 N663SA in open storage on an industrial estate near the Klondike Highway.

Lammers Airstrip.

When browsing Ruud Leuww's website "Abandoned plane wrecks of the North", I found a photograph of an anonymous Islander, taken by Neil Murtsell in the mid-1990s, at a placer gold mining airstrip called Lammers situated next to the Sixty Mile River, Yukon. This location is serviced by Great River Air with Islander C-GRNZ to ferry diesel fuel to the site. Further research revealed the wreck to be Islander c/n 39, (first flight at Bembridge 12 December 1969 as G-51-8) registered as C-GPCF to Chilcotin Cariboo Aviation, which had swerved off the runway on landing on 23 May 1985. It was considered uneconomical to salvage or repair on site, stripped of usable spares, and bulldozed into the bushes well clear of the airstrip.

Islander C-GPCF, c/n 39, wreckage at Lammers Airstrip in 1990s (Neil Murtsell).

Islander C-GPCF - the distinctive orange and black livery was a clue to the identity of the Islander wreckage at Lammers Airstrip (Mike Ody Collection).

Craig Unterschute very generously allowed my wife and I to visit Lammers airstrip, putting at our disposal a Great River Air Cessna 185, free of charge, flown by his chief pilot Scott Turner. Within half an hour we landed at this remote outback location and proceeded to search for Islander C-GPCF. An hour later, having negotiated all the scrubland and tree stands to the left and right of the airstrip, a unanimous decision was reached, that the Islander had been bulldozed into the ground some years previously when the strip had been widened and extended.

At least Islander c/n 39 received a decent burial, and is presently laying at rest somewhere on Lammers mining site. The scenery on both legs of this flight was absolutely amazing, as were the legendary piloting skills of Scott Turner, who flew extremely accurate approach and departure patterns to negotiate this difficult and hazardous outback airstrip.

May we take this opportunity to thank Craig and his team for such a friendly and generous outback welcome, the flight to Lammers, two return airport–hotel journeys, and a guided tour of Dawson City.

St. Andrew's Airport Tuesday 17 May 2022

I had observed images of a derelict and dismantled Islander C-GBRB, c/n 893, (first flight Baneasa 27 May 1980 as G-BFUT) photographed at St. Andrew's Airport, so decided to visit and search for the owner. I went to the last known apron location of C-GBRB, but found nothing, so decided to make enquiries in the adjacent hangar. In a fortuitous encounter I met David Shand and Pat Chartier, two persons who I had been unable to trace prior to travelling to Canada, David is responsible for repairing and servicing BN Islander airframes. (Alair MHA Enterprises use his business).

Islander C-GBRB, c/n 893, partially dismantled at St Andrew's Airport c 2008 (Bill Teasdale).

Pat Chartier was the former owner-operator of Gillam Air Services 1985 Ltd, that had at one time operated a fleet of four Islanders - c/n 7, C-GSAD, c/n 333, C-GHRK, c/n 423, C-GPPP, and c/n 893, C-GBRB - on general outback charter work and fuel hauling. All these airframes had endured numerous minor incidents operating in the frozen arctic wastelands of Canada. But they were swiftly salvaged, repaired and returned to service. With a wry smile on his face Pat Chartier described Islander c/n 7, C-GSAD, as leading a "charmed life", we can only presume by this remark, that c/n 7 has had her fair share of good fortune over the years! Sadly Islanders

C-GBRB and C-GPPP eventually ran out of luck, as described in Pat's personal observations of the incidents:

The Demise of Islanders C-GBRB and C-GPPP as recounted by Pat Chartier

Islander C-GBRB hit a snow drift on 15 May 2008 when landing along the Hudson Bay coast on an unprepared esker that was used for years to deliver goose hunters. It bent the nose wheel back and put a small wrinkle in the wing. We did a field repair on 19 May and flew it out to Gillam Manitoba, and then on to St. Andrews Manitoba on the 20 May.

We approached BN for a repair schematic, as it was an easy fix. This particular Islander had an STC approved by Transport Canada which was not recognised by BN so the insurance company decided to bail me out. We robbed all the useable parts off the aircraft over the years. It was then

decided to take the aircraft to a salvage yard for disposal. I believe this was sometime in 2018.

Islander C-GPPP was being used to transport passengers to Atkinson Lake for a day fishing trip. After a very successful day of fishing the passengers were loaded up and as it was taxiing to turn into wind the right tire fell through a soft spot on the ice. It had come to rest on the wingtip with no damage. This was 30 April 2016.

Islander C-GPPP, c/n 423, stranded on the ice covered Atkinson Lake

We went in to jack it up and fly it out. The weather took a turn and the temperature increased to plus 23 with a very strong wind. This weather is unheard of at this time of year. We had it ready to put planks under the tires and roll it forward when the jack broke through.

After a few more attempts we decided to get a helicopter to lift it. Unable to get one that could lift it, a decision was made to abandon the rescue. We then put 45 gallon drums in the fuselage so it would float.

Islander C-GPPP floating on the lake after 45 gallon oil drums were installed in the fuselage.

Once the ice was melted we flew in with a floatplane and pulled the Islander up on shore. We then went in and stripped the aircraft. We slung out the engines and props by helicopter. We then proceeded to cut up the aircraft into manageable pieces so we could snow-mobile it out during the winter.

First attempts to recover Islander C-GPPP were unsuccessful.

Now with engines removed Islander C-GPPP was winched ashore.

View of starboard side of Islander C-GPPP ashore ready to be dismantled.

View of Islander C-GPPP with outer wing sections alongside.

Images of Islander C-GPPP are courtesy of Pat Chartier

St Theresa Point Airport Manitoba Islander c/n 7 C-GSAD Wednesday 18 May 2022

Islander c/n 7 (first flight Bembridge 28 September 1967 as G-AVRB) is currently the world's oldest surviving airworthy airframe. To reach this aircraft you must book a flight to St. Theresa Point Airport, to access the isolated First Nations indigenous community of 3500 souls, located in North Manitoba. No roads, (other than seasonal winter ice roads), connect this settlement to the outside world, it is generally only accessible by air. An hour and a quarter flight from Winnipeg Perimeter Airport saw the Perimeter Airlines DHC Dash 8 scheduled service touch down on the crushed rock metalled runway in a cloud of swirling dust!

Islander C-GSAD, c/n 7, parked on the apron at St. Theresa Airport, North Manitoba.

Islander C-GSAD sat outside on the far left side of the metalled apron, in a position where it permanently resides when not operational; this aircraft lives outside 365 days a year in some of the harshest and extreme outback weather conditions, down to minus eleven degrees Fahrenheit in winter!

Islander c/n 7 manufacturer's ID plate

Alan Hadland, owner of Alair MHA Enterprises Ltd, provides outback air services to the First Nations community, in their traditional pursuits of trapping, hunting and commercial fishing, in addition to tourist flights, exploration for mining and prospectors, expediting, and remote bush medivacs. Alan met us on the apron, and proudly showed us C-GSAD, the aircraft which he regards with ultimate respect and trust, a tough workhorse suited to operations in such a harsh operational environment. Its red and white colour scheme is very similar to C-GPPP, (it is interesting to note that both these airframes were once owned by Gillam Air Services) and is cosmetically serviceable, but with some deterioration of paintwork on the upper surfaces of the wing, due to extended external exposure. Large front and rear tyres are utilised, to cope with rough and undulating outback strips and ice runways.

Interior view of Islander C-GSAD looking forward.

Islander C-GSAD carries an Alair logo on its fin.

As might be expected the passenger seats are showing signs of much use.

Islander C-GSAD instrument panel and controls showing original round dials and early style control yokes.

The cockpit and avionics look original, complete with early control yokes, which Alan states he prefers over the more modern variety!

We had pre-booked a flight in c/n 7, and Alan settled my wife onto the first passenger bench seat, I entered through the cockpit door first, followed by Alan, who settled into the left hand pilot's seat. He worked swiftly and efficiently through the pre-flight checks and proceeded to start the two Lycoming engines. I was amazed at how quickly the engines fired up, both within two blades of the prop, running and set up within one minute. I commented on the reliability of the engines, he informed me that they had last run three weeks ago!! Once the oil and cylinder head temperatures were rising, we taxied out, performed further pre-flight checks and departed St. Theresa Point for a 45 minute local flight over the semi-frozen outback landscape. We climbed up to a cruising height between 2500-3000 feet where the aircraft was re-trimmed for level flight.

Alan Hadland at the controls of Islander C-GSAD

Alan Hadland sets up the GPS during the flight.

View of local terrain soon after leaving St. Theresa Point Airport.

View in clear conditions during the cruise at 2500 – 3000 ft

View of snow covered local terrain.

St Theresa Airport air strip comes into view..

As we turned on the return heading towards St Theresa Point, Alan asked if I could pinpoint the airstrip, he pointed in the general direction, but I didn't have a clue. It was only when we reached around 5 miles out, that I recognised the runway, which being made of a similar brown crushed rock to the landscape, seemed to blend invisibly into the terrain. As there is no accommodation in St Theresa Point, we returned to Winnipeg on the last evening flight.

View of St Theresa Airport airstrip as Islander C-GSAD on final approach to land back at its base.

Alan Hadland with his long serving Alair Islander C-GSAD, c/n 7.

Alan stood for over a quarter of an hour on the apron and witnessed our departure. I enquired about the flight fees, but the subject of payment for the flight was never raised, a typical act of generosity from an outback pilot, who demonstrates a big hearted, press on philosophy in provision of services for the local community.

Sable Aviation 44 60 Inc. Saturday 21 May 2022

We flew into Halifax Stanfield International Airport to meet Debbie Brecklemans who owns Sable Aviation 44 60 Inc, that operates a highly regulated, bespoke and specialised BN Islander flights to Sable Island. I contacted Debbie to arrange a date and time for our meeting, but she explained that flight operations are organised on a last minute basis, with passengers summoned to Sable Aviation's base of operations at the Gateway Facilities Hangar on the morning of the flight. In addition to this complexity Debbie has additional tasks to perform, as flight captain, operations manager, weight and balance calculator, baggage handler and navigator, so her workload is extreme and time is short. Her instructions were fully understood, "ring the night before the flight and we will be able to arrange access for photography, but I will have limited time to share with you". If you thought that the above set of requirements were exacting, the authorities on Sable Island enforce the following set of criteria for air operations. The price of a single seat to Sable Island is priced at $2,080.00 CAD, flights depart on a Saturday morning, with a backup flight on Sunday morning should the Saturday flight not operate.

Aircraft operating area is marked out by traffic cones on Sable Island beach (Sable Aviation).

Sable Island is a non-tidal National Park Reserve, operated by Parks Canada, who enforce strict control on approval and scheduling of visitor flights, between the months of mid-May to October. There is no airstrip on Sable Island, all flights must land on the sandy expanse of the island's South Beach. So as not to interfere with station operations, fixed wing flights are restricted to weekends only. Additional park regulations demand that visitors to the island are not allowed to stay overnight, nor are aircraft allowed to be picketed down overnight on the beach.

The beach landing area is shared with local Sable Island wildlife (Parks Canada)

If the Islander arrives on Sable Island it must depart on the same day, weather conditions can change rapidly, so all passengers must remain in mobile phone contact with Debbie and be prepared to return to the aircraft and fly out at short notice! The condition of the sand is crucial to flight operations, too wet and soft, or dry, powdery sand conditions will cancel a flight at short notice. Debbie employs a representative on the island, whose task is to assess the suitability of the sand, select a suitable airstrip location, preferably into wind, distribute traffic cones to mark the runway boundaries, erect a temporary windsock and ensure the general operations area is free from wildlife.

Islander C-GILS, c/n 416, loading getting ready to fly out from Sable Island beach (Sable Aviation).

View of Sable Island beach landing area (Sable Aviation).

Islander C-GILS, c/n 416, landing on Sable Island beach (Sable Aviation).

I rang Debbie on Friday evening prior to the Saturday departure, but was told that the flight had been cancelled due to a dry powdery blowing sand on Sable, she would collect me from my hotel the next day and we could visit the Islander. Next morning we visited Sable Islands base of operations, Islander C-GILS, c/n 416, (first flight Gosselies 28 November 1974 as G-BCMS) was tucked away in a corner of the Gateway Facilities Hangar, sharing centrally heated luxury with numerous multi- million dollar executive jets.

Sable Aviation's Islander C-GILS, c/n 416, in the Gateway Facilities Hangar at Halifax Stanfield International Airport.

The Sable colour scheme was smart and tidy, no doubt due to hangar storage, the undercarriage and nose wheels were fitted with large section balloon tyres, ideal for negotiating the Sable Island beach surface.

Sable Aviation's Islander C-GILS is equipped with large section tyres to suit operation from the Sable Island beach.

To remove the Islander from the hangar would have been a difficult and time consuming process, so I was content with taking a few indoor photographs.

Islander C-GILS is a 1974 build airframe and was ferried from Bembridge in December 1974 to Jonas Aircraft and Arms, New York, (the USA distributor) and registered as N92JA. Bloomfield Air Service, based in Bloomfield, Iowa, took delivery of c/n 416 in March 1975. It was sold to Abbotsford Air Services as C-GILS in August 1976, and later sold on through three further Canadian operators and registered to Sable Aviation 44 60 Inc on 28 June 2016.

Fort Lauderdale Florida – Islander N983FT Sunday 29 May 2022

A visit to Fort Lauderdale Executive Airport to meet Felipe Torres was postponed at the last minute. He explained that Islander N983FT, c/n 711, had been sold to Tropic Air Charters.

Manufacturer's ID plate for c/n 711.

A visit to the Tropic Air ramp revealed N983FT awaiting re-registration to their personal requirement

Islander N983FT, c/n 711, parked at Fort Lauderdale Executive Airport May 2022.

Islander c/n 711, (first flight Baneasa 17 May 1974 as G-BBZT) was converted at Bembridge from a BN-2A-6 to a BN-2A-9 and flown to Venezuela in August 1974 with registration YV-C-AJG. After delivery to Caracas the new owner, Salta SA, applied registration YV-T-AJG. It was later re-registered to Dr. Renaldo Cervini Visio as YV-145P in 1977, sold to Caleb Antony White Vegas as YV-1641 in November 2007, sold to Calypso Aircraft Inc USA as N405CW in 2021, to Felipo Torres as N983FT in June 2022, sold to Tropic Air Charters, registration N298TA reserved 6 July 2022.

Islander c/n 711 as YV-T-AJG c1974.

The History of Islander c/n 4 – Compiled by Norman Hobbs

The first Islander to come off the production line at the newly built B-N hangar on the north side of Bembridge airport was c/n 4 and the maiden flight, with registration G-AVKC, took place on 21 April 1967. This flight lasted 85 minutes; pilot Jim Birnie accompanied by Andy Coombe. On 8 August 1967 G-AVKC was flown by Jim to Gatwick and then Stapleford to demonstrate the Islander to Eric Thurston, who subsequently bought c/n 9 G-AVUB on behalf of Herts and Essex Aero Club, based at Stapleford. After further test flights and painting, the Certificate of Airworthiness was issued on 10 August 1967 and five days later c/n 4 was flown to Glasgow.

Islander c/n 4, G-AVKC, at Glasgow Airport, believed to be on its delivery flight to Loganair on 15 August 1967 (BNAPS Archive Collection).

Islander c/n 4, G-AVKC, in service with Loganair taking on passengers at Westray (Ken Foster).

Loganair obtained the Air Operators Certificate for the Islander on 24 August 1967 and the next day at 0830 hrs Captain Jim Lee took off from Kirkwall in G-AVKC to commence the first B-N Islander public transport flight on the inter-island service. Loganair named this Islander "Captain E E Fresson OBE" who pioneered the development of air services in the Highlands and Islands of Scotland in the 1930s. Subsequently three more Islanders were named after Ted Fresson as detailed on page 31 of the May 2021 issue of BNAPS News.

In March 1971 G-AVKC returned to Bembridge and was used for experiments for a new agricultural version but this project was shelved before any test flying was undertaken.
In February 1973 c/n 4 was shipped to the Fairey facility at Manchester Ringway airport to be converted to a special survey aircraft. As well as installation of a camera floor, this included sliding pilot and co-pilot seats to allow full movement for camera operation and fitting blister windows in the forward cabin area. As well as a dark room an oxygen system was installed to allow flights up to 20,000 ft.

Islander c/n 4, G-AVKC, in Fairey Survey markings at Bembridge in 1971 (BNAPS Archive Collection).


Islander c/n 4, N43MJ, at Fort Lauderdale, Florida in 1979 (Mick Bajcar).

Before ownership was transferred from Fairey Britten-Norman Air Services to Fairey Surveys, c/n 4 was used as a company hack aircraft and converted to a BN-2A-21, which involved replacing the Lycoming 260 hp engines with Lycoming IO-540 300 hp engines.
In May 1979 G-AVKC was ferried via Hurn, Shannon and Reykjavik to the USA and then re-registered as N43MJ. Ownership transferred from Air Investments, Fort Lauderdale to Falcon Aircraft, San Antonio, Texas in August 1979. The owner of Falcon Aircraft being Morris Jaffe. After being based in San Antonio for over five years with survey companies Aero Geo Energy and AGE Aviation Inc, c/n 4 was flown to Calgary, Alberta.
In December 1987 c/n 4 was registered as C-FAOU to Canagrad Surveys based in Calgary. In July 1989 C-FAOU was flown to Sydney, Nova Scotia and ownership transferred to Eastern Flying Service until January 1991 when bought by Provincial Airlines, based in Halifax, Nova Scotia. This Islander was the oldest one to fly to Sable Island . Air Halifax inaugurated Islander flights from Halifax to Sable Island in 1971 with c/n 241, originally registered CF-QPM but then changed to C-FQPM.

Islander c/n 4, C-FAOU, after arrival in Alaska (BNAPS Archive Collection).

Islander c/n 4, N663SA, Lake Hood strip, Anchorage, Alaska, April 2009 (Michael Carter).

Paklook Air, based in Kodiak, Alaska and operating as Servant Air, re-registered c/n 4 as N663SA in March 2006. On 15 March 2010 N663SA clipped some trees on take-off from runway 25 at Kodiak. Fortunately all three occupants survived but the Islander was deemed a write off.
Footnote: Special thanks to Andy Clancey and Allan Wright, of BN Historians and Jim Birnie Jr, for invaluable help with the detailed history of c/n 4.

Postscript – Islander c/n 7 Offered for Sale

A recent BNAPS Facebook post revealed that Islander C-GSAD, c/n 7, is now up for sale with C & S Enterprises Ltd, Hawkesbury, Ontario, Canada
[1967 BRITTEN NORMAN BN-2A-26 For Sale in Hawkesbury, Ontario | Controller.com]

The following description of Islander c/n 7 is given on the C & S Enterprises Ltd website:

General
1967 Britten Norman BN-2A-26, upgraded wheel gears 850 tires, cargo nets, total fuel 130 US gal, bench seating.

Airframe Total Time - 22,719 hrs

Engine 1
Time 706 hrs SMOH
TBO 2,000 hrs
Engine 2
Time 1,006 hrs SMOH
TBO 2,000 hrs

Propellers
Prop 1 Overhaul Time 750 hrs
Prop 2 Overhaul Time 2006 hrs

Avionics/Radios - Garmin 296 GPS, Electronics International oil pressure and oil temp gauges, Aerospace Logic TM202 dual tachometer kit, Bendix King audio panel, Bendix King nav/comm VHF.

Exterior - requires repaint.

Interior - commercial interior.

Price $175,000 (USD) but open to offers.

Images of Islander C-GSAD, c/n 7, from C & S Enterprises Ltd website

The continuing story of Islander c/n 7 is being closely followed. Information about future developments and possible change of ownership and location will be reported in BNAPS News.

Project Fresson Update

A recent Royal Aeronautical Society Hatfield Branch lecture on Project Fresson given by Rob Marsh, Director of Engineering at Cranfield Aerospace Solutions, revealed more about the engineering challenges involved in the design of a hydrogen fuel cell based electric propulsion system for aircraft, the reasons behind adoption of the Islander as the key air platform for the first phase of Project Fresson and the way ahead for the application of the electric propulsion technology involving development of new aircraft designs.

The aim of Project Fresson is to deliver the world's first truly green passenger carrying air transport services using hydrogen fuel cell technology. To achieve this Cranfield Aerospace Solutions has assembled a highly capable team to develop the hydrogen fuel cell to a stage where it can be flight tested and certificated in their Islander development and test aircraft. G-HYUK, c/n 2272, acquired from Isles of Scilly Skybus in September 2021 when registered as G-BUBP.

In May this year Cranfield Aerospace Solutions Islander G-HYUK, c/n 2272, paid a visit to its former base at Land's End Airport. Formerly it was part of the Isles of Scilly Skybus fleet and registered as G-BUBP (Dave Lythgoe).

The Project Fresson team is made up of a number of organisations having key competences and assigned roles as follows:

Cranfield Aerospace Solutions	Project execution and technical authority
Ricardo	Hydrogen fuel cell system
Innovatustec	Hydrogen fuel tanks
Reaction Engines	Hydrogen fuel system cooling/thermal management
Cranfield University	Performance modelling and optimisation
Britten-Norman	Islander original equipment manufacturer support

Project Fresson undertook an analysis of various candidate electric propulsion architectures in terms of their application to the Islander and potential performance benefits or otherwise. For Project Fresson hydrogen fuel cell technology was seen as having the best prospect to offer the lowest energy cost/passenger and no in-flight emission issues of any significance.

For the initial application of hydrogen fuel cell powered electric an early decision was made to use the Islander in terms of its engineering suitability for the project:

Right size aircraft for the initial application of the hydrogen fuel cell powered electric propulsion system;

Right operational application: frequent, short flights (island-hopping) provides best potential for green aviation;

Right engineering strategy: initial modification, rather than new design, to build knowledge, develop propulsion system architecture and design key elements – electric motors, hydrogen fuel cell systems and power management solutions

Ideal air platform for the UK to achieve the first commercial passenger-carrying service using a certified electric aircraft.

Looking ahead Cranfield Aerospace Solutions has developed a phased approach to development of a sustainable aircraft to enable exploitation of the propulsion technology:

Phase 1 Islander Retrofit - targeting the 400+ Islanders in service together with new build Islanders by B-N offering hydrogen fuel cell based electric propulsion as a specific BN-2 variant under STC (Supplemental Type Certificate) arrangements. Manufacture and supply of certified propulsion system and components

Phase 2 Follow-on Retrofit – Scaling up/re-use of propulsion system design from Phase 1. Aircraft certification under STC arrangements as Phase 1.

Phase 3 New 19 seat aircraft type – optimised aircraft design for certified propulsion system with certification focus as new aircraft type not propulsion system

Phase 4 New 50-100 seat aircraft type – approach would be an evolution from Phase 3, certification focus on rules applicable to large aircraft.

Graphic and CGI representation of Islander G-HYUK when equipped with hydrogen fuel cell/electric motors in place of the piston engines, with hydrogen fuel at 700bar pressure carried in under wing fuel tanks (Cranfield Aerospace Solutions).

Phase 1 of the project is now under way. An Islander has been acquired and is at present having its baseline performance calibrated prior to undertaking any modifications. The aim is to design, develop, test and gain certification of the hydrogen fuel cell based electric propulsion system in the 2023/2024 timeframe.

Key Phase 1 requirements applicable to the Islander include:

Maintaining Islander handling and operation characteristics and take-off, landing, climb and cruise performance

Demonstrator will be operated under permit to fly regulations;

Hydrogen fuel cell electric propulsion system product will be incorporated under STC rules as major and significant modification of BN-2 type design.

BNAPS will continue to report the progress of Project Fresson, not only in terms of development of a new propulsion system for aircraft, but also the role played by the Islander, the opportunities offered through Islanders being retro fitted with the new propulsion system and the plan for new build Islanders as an electric propulsion BN-2 type variant.

CAeS has produced a promotional video that gives more information about Project Fresson and the Hydrogen Fuel Cell Electric Propulsion Islander - the video can be viewed here:

https://www.youtube.com/watch?v=Am7S5hZglNA

July 2022 - Cranfield Aerospace signs up first customer for Islander hydrogen conversion

A recent Cranfield Aerospace Solutions news release announced that a German start-up Evia Aero has been secured as a potential launch customer for the hydrogen fuel cell conversion kit it is developing for the Britten-Norman BN-2 Islander. Under a letter of intent, Bremen-based Evia Aero plans to acquire 10 conversion kits for the nine-seat BN2. No details of the contract value have been released as yet

German airline start-up Evia Aero is to partner with UK-based Cranfield Aerospace Solutions (CAeS) to bring hydrogen fuel cell-powered air transport services to Northern Europe. The agreement covers both aircraft operations and the required hydrogen fuelling infrastructure.
"We are very happy to enter into a collaboration with Cranfield Aerospace Solutions. Sustainable aviation can only be implemented through exchange and teamwork," says Florian Kruse, founder and chief executive of Evia Aero, which was set up with a goal of providing zero-emission sub-regional air services.

Paul Hutton, CAeS chief executive, says the company, which earlier this year secured investment from HydrogenOne Capital Growth and Safran Corporate Ventures, is "delighted" by the partnership.

Noting that "sub-regional operations will be where zero-emission flight will first enter service", Hutton says the "technology will help redefine regional connectivity and Evia's planned route networks align perfectly with the hydrogen Islander aircraft and its expected performance."

Evia Aero has yet to disclose its planned network, although it has previously indicated an intention to serve up to 15 European destinations from 2026.

CAeS says the pact commits the two parties to work together "applying time to the all important topic of infrastructure, regulations and hydrogen supply by working with Evia Aero's energy and airport partners. It brings together the aircraft and airline into making zero-emission air services a reality in Northern Europe."

However, the company declines to say if Evia Aero has ordered any converted aircraft. CAeS is working towards a 2023 first flight of the modified Islander (G-HYUK) and is on course to start bench and ground testing this year. "We've recently passed a number of sub-system and system-level significant design reviews that have validated in detail the technical viability of the system, including the thermal management solution, meaning that elements of the system have been signed off for manufacture," says CAeS.

Croatia Islander 9A-SMM Update

Thanks go out to Josip Andračić for giving permission for use of his images of Islander 9A-SMM, c/n 2283. It is based in the eastern part of Croatia at Osijek Airport OSI/LDOS near the city of Osijek. It is owned by Air-Tractor and it is planned to use the Islander's aerial spraying capability plan for agricultural work and to fight the battle against mosquitos. As far as is known Islander 9A-SMM is the only example of the type in Europe with this capability.

The photos above show details of the Islander 9A-SMM's Micronair spraying installation and were taken at a local airfield, Osijek-Cepin airfield OSI/LDOC, where the aircraft was presented in public for the first time at the Osijek Air Show on 25 June 2022 (Josip Andračić).

Islander 9A-SMM demonstrated its aerial spraying capability at the Osijek Air Show

Aer Arann Islands PSO Contract renewed

Aer Arann Islands has been awarded a new four-year contract worth €4.9m to provide air services to the Aran Islands. The public service obligation (PSO) contract will see more than 68,000 seats available each year. The contract with Galway Aviation Services Limited, trading as Aer Arann Islands, will run until 2026. Along with serving Inis Mór, the contract ensures the provision of direct services from the mainland to the smaller islands of Inis Meáin and Inis Oírr.
The contract will also see the introduction of a flexible scheduling scheme to service events and festivals. 'Ad hoc' and 'scheduled non-PSO' flights will also be provided by the operator to meet any demand above the agreed PSO seating allocation. The flights to the three islands will operate from Connemara Airport, which the State purchased in 2019.

Aer Arann Islands Islander fleet – July 2022

Aer Arann Islands currently operate 3 Britten-Norman Islanders:

EI-AYN c/n 704
First flight as G-BBFJ at Banaesa on 31 January 1974 as a BN-2A-6.
After conversion to a BN-2A-8, on 6 March 1974 c/n 704 was flown from Bembridge by pilots Hugh Kendall and Peter Ward on a 65 minute local performance test flight. It was delivered to Aer Arann via Blackbushe based Fairoaks Aviation Services and entered service on 29 April 1974, with registration EI-AYN.

Islander EI-AYN in an early Aer Arann colour scheme (Jacob Struben).

EI-BCE c/n 519
First flight as G-BDUV at Gosselies on 17 May 1976 as a BN-2A-26 and flown to the Isle of Wight on 2 June 1976. On 14 September 1976 it departed Bembridge with registration EI-BCE on a direct flight to Aer Arann at Carnmore, Galway.
In September 1980 it was leased for three months to Shannon Executive Aviation and based at Shannon.

EI-CUW c/n 2293
First flight as G-BWYW at Banaesa on 9 March 1998 as a BN-2B-20 and flown to the Isle of Wight on 21 March 1998. It was converted to a BN-2B-26 and departed Bembridge on 11 November 2000 on a direct flight to Galway.

Aer Arann Island's current fleet of 3 Islanders on the ramp at Connemara Airport

Stamp and postal cover depicting Aer Arann Islander by Norman Hobbs

On 9 September 1999 the Irish postal authorities issued an Irish Commercial Aviation set of stamps including an Aer Arann Islander. The 32p stamp (Stanley Gibbons ref: SG1267) features EI-AYN, c/n 704, which is still in service. The caption on the stamp reads BRITTEN NORMAN ISLANDER.
Also to accompany the stamps a postal cover was published as illustrated below:

Flock of Islanders on Helgoland

Thanks go to Piotr Nitka for posting photos on BNAPS Facebook page of five Islanders lined up at the airport on Helgoland from three operators - FLN, OLT and Air Hamburg - that provide air services from mainland Germany to the Island. Of interest is that the Islanders are equipped with different propeller configurations: FLN - 4 blades, OLT - 3 blades and Air Hamburg - 2 blades.

The identity of all but one of the Islanders can be made out from the photo:

OLT Islanders are D-IOLK, c/n 2306, and D-IOLO, c/n 2305.

Air Hamburg Islander is D-IAEB, c/n 218.

One of the FLN Islanders is D-IEST, c/n 2253, the second FLN Islander in the distance could not be identified.

Jan-Lüppen Brunzema 1952 -2022

Sadly news has just arrived that Jan-Lüppen Brunzema, the founder and driving force behind Islander operator FLN, passed away on 20 June 2022. BNAPS sends sincere condolences to the Brunzema family and friends in respect of their loss.

Jan-Lüppen Brunzema had gained legendary status as an island pilot along the German North Sea coast and had founded Frisia Luftverkehr (LFH) and Baltrum Flug. In 1983 he took over an existing Frisian Islands operation and developed a new base at Harlesiel. The Islander was adopted as the workhorse for the Frisian Island flights. Since that time Jan has overseen the highly successful evolution of Frisian Islands air services from Harlesiel Airport. LFH was merged with FLN in November 2014 when Jan retired.

FLN operations were recently the subject of a feature article, titled "A Gateway to the Islands" by Andreas Rohde, in the March 2022 issue of the Key Publishing magazine Airports of the World. BNAPS is hoping to secure permission to publish the article in a future issue of BNAPS News as a tribute to Jan-Lüppen Brenzuma.

Armed Forces of Malta BN-2T AS-9819 Returns Home

B-N announced on 12 July that Armed Forces of Malta's (AFM) BN-2T Turbine Islander AS-9819, c/n 2156, formerly AS9819, has completed its acceptance programme after an extensive mid-life upgrade. The Islander has a long history in Malta and forms one of AFM's key assets. The aircraft is used for rescue missions and patrolling the coastal waters of Malta, Gozo and Comino.

Technicians at Britten-Norman's hangars at Solent Airport (Daedalus) have performed deep maintenance and a significant upgrade to the flight deck, which is now fitted with a state-of-the-art Garmin glass cockpit. The aircraft has also been completely refinished with a new cabin interior and a complete repaint.

AFM crews took part in a training programme by Britten-Norman's Flight Academy before returning home in their aircraft to their base at Luqa, close to Britten-Norman's Maltese aircraft maintenance facility.

BN-2T AS-9819 being stripped of paint at the painting contractor's facility at Biggin Hill (B-N).

BN-2T AS-9819, now newly painted, on final approach to land at Solent Airport after a test flight (Tony Dann).

Left - Group photo of B-N technicians who worked on the deep overhaul and upgrade of Armed Forces of Malta's BN-2T AS-9819 (Charlo Attard).

Right – B-N's aircraft maintenance manager, Steve Knowles, (left) with Armed Forces of Malta aircrew(centre) and a B-N staff member following acceptance of BN-2T AS-9819 (B-N).

BN-2T AS-9819 departed from Solent Airport on 23 July 2022 at 0805UTC on its way back to Malta, routing via Poitiers, for fuel, to Montpelier for fuel and an overnight stop, The following day it flew the next leg to Caglia (Sardinia), for fuel, and then on to Malta (Luqa Airport), arriving at 1448UTC. Total flying time was 9 hours 31 minutes

Islander Featured in Airliner World Article

The August 2022 issue of Airliner World includes a feature article titled "Small but Mighty" that looks at what Europe can offer in the smaller end of the air transport market. It includes a detailed account of the Islander as a pioneer in this sector of the market and a positive view of the Islander's current and future prospects from B-N's Business Development Director, Lara Harrison. Also referenced in the article are the Tecnam P2012 Traveller, the Pilatus PC12 and Pilatus PC24.

Fareham Council Executive Leader visits Air Alderney's Biggin Hill Base

Fareham Borough Council Executive Leader, Sean Woodward, recently visited Brighton City Airport and Biggin Hill with Air Alderney's owners, Danny Brem-Wilson and Dan Brem-Wilson Jr., to see how their operation works in terms of passenger flights and maintenance.

Air Alderney charter flights are very welcome at Solent Airport and Sean Woodward has indicated that there could well be a prospect of Air Alderney scheduled flights operating in the not too distant future to the Channel Islands, Bristol, Exeter, Cardiff, Swansea, Sandown, etc. An important influence on this is the current proposal to upgrade the facilities at Solent Airport in terms of getting air ground lighting installed and provision of performance-based navigation facilities.

Fareham Borough Council Executive Leader, Sean Woodward (centre) with Danny Brem-Wilson (left) and Dan Brem-Wilson Jr. at Solent Airport with Air Alderney Islander G-BLNI (Sean Woodward)

From the Archive - BN-2 Formation Flight at Islander 40

Thanks go to David Donovan for posting a unique image of a formation flight of three BN-2 variants that took place at the Islander 40 event hosted by B-N at Bembridge Airport in June 2005. Aurigny Air Services had brought their Trislander G-FTSE, c/n 1053, to Bembridge for the event. With David at the controls of the Trislander leading the formation, he was accompanied by BN-2B Islander G-NESU, c/n 2260, and BN-2T Turbine Islander N188AM, c/n 2302.

The closely spaced BN-2 three ship formation over Whitecliff Bay Bembridge at Islander 40, June 2005 (David Donovan)

BNAPS Postcards

BNAPS has an extensive range of postcards depicting Islanders, Defenders and Trislanders.
For further details of postcards and greetings cards available, please email:
norman@bnaps.org.uk

BNAPS Postcard Series – New Releases

Three new B-N Islander postcards have been published recently:
c/n 236 OO-GVS in Sabena livery at Bembridge.
c/n 2156 AS-9819 Armed Forces of Malta at Solent Airport (Daedalus) after deep overhaul, instrumentation and avionics upgrade and re-paint.
c/n 2283 9A-SMM with Micronair rotary atomisers in Croatia.

c/n 236 OO-GVS
(Paul Huxford)

c/n 2156 AS-9819
(Tony Dann)

c/n 2283 9A-SMM
(Josip Andračić)

We are able to publish bespoke aircraft postcards, from your own image if required. Minimum quantity is five with text and logo to suit at no extra charge. For more details, and to order postcards, please email: norman@bnaps.org.uk

BNAPS Sales

Please contact BNAPS at sales@bnaps.org.uk if there are any questions regarding stock items and availability.

BNAPS on the Internet -

information and back issues of BNAPS News go to www.bnaps.org.uk
Also take a look at BNAPS Facebook page.

More BNAPS Supporters Needed

If any BNAPS Supporters Club member knows of someone who would be interested in joining please pass on contact details to our BNAPS Membership Secretary, Rita Edgcumbe at membership@bnaps.org.uk

The principal aims of the BNAPS Supporters Club are:
"*to assist BNAPS to preserve the history and aircraft of Britten-Norman through member donations and to provide assistance with the day-to-day operations of the charity*"
Anyone with an interest in local aviation heritage is welcome.
As a point of clarification, whilst BNAPS has contact with Britten-Norman from time to time, as a charitable trust BNAPS is an independent organisation.

If anyone is planning to visit the Wight Military & Heritage Museum BNAPS people will usually be there every Thursday from 10.00 until 14.00

If anyone needs more information about BNAPS and what is happening please do not hesitate to get in touch.

BNAPS

BNAPS is a Registered Charity, No. 1100735, set up to "preserve the history and aircraft of Britten-Norman with the support of members' subscriptions, sponsorship and donations"

BNAPS registered address is:
7, William Close
FAREHAM,
Hampshire,
PO14 2PQ

Trustees are Peter Graham, Bob Wilson, Guy Palmer and Bob Wealthy.
Bob Wealthy is currently the Trust Chairman.

How to contact BNAPS:

Email:
bob@bnaps.org.uk
Telephone: 01329 315561
Post:
BNAPS (Dept NL)
c/o
7, William Close,
FAREHAM,
Hampshire,
PO14 2PQ.