

FALKLAND ISLANDS GOVERNMENT AIR SERVICE

Report to the Falkland Dependencies Board of Captain A.D. Alsop, dated 15th November 1979, to the Falkland Islands.

1.1 INTRODUCTION

At the request of the Falkland Dependencies Commissioner I visited the Falkland Islands for the month of September, October and November 1979.

As stated in **MANAGER, "PORT SAN CARLOS,"**

"To plan and supervise the operation of the Falkland Islands Air Service, including the conduct of an operational survey, to advise on operational requirements at aerodromes for Islander aircraft, and where necessary to develop operational procedures and handling restrictions appropriate to particular aerodromes; to advise on operational schedules, taking account of aerodrome limitations in view of the future staffing and organization of FIAS."

1.2 BACKGROUND

I visited the Islands in accordance with the instructions given by Mr. Dick Allen, Chief Dependencies Staff, via Mr. Director of Civil Aviation, Mr. "Dad" Wilson, former of the C.I. Board, and the Falkland Islands Air Service. This is the "Dad" arrangements and the main aim of the visit was to advise on operational requirements and to advise on operational schedules and handling restrictions.

REPORT ON
FALKLAND ISLANDS GOVERNMENT AIR SERVICE

BY

CAPTAIN A.D. ALSOP

NOVEMBER 1979

MANAGER, "PORT SAN CARLOS."

FALKLAND ISLANDS GOVERNMENT AIR SERVICE

Report on the Technical Co-operation visit of Captain A.D. Alsop, of Loganair Ltd., to the Falkland Islands.

(1) INTRODUCTION

At the request of the Overseas Development Administration I visited the Falkland Islands for the months of September, October and November 1979.

My terms of reference were:

"To plan and to supervise the introduction into FIGAS service of the Islander aircraft, including the production of an Operations Manual; to advise on operational requirements at aerodromes for Islander movements, and where necessary to develop operational procedure and handling techniques appropriate to particular aerodromes; to advise on operational schedules, taking account of aerodrome limitations; to advise on the future staffing and organisation of FIGAS."

(2) ACKNOWLEDGEMENTS

I would like to express my appreciation of the assistance given by Mr. Dick Baker, Chief Secretary; Capt. Jim Kerr, Director of Civil Aviation; Mr. "Nut" Goodwin, Master of the M.V. FORREST, and his crew; and particularly to all those in the "Camp" settlements who helped make my inspection of some 40 airstrip sites so instructive and enjoyable.

(3) EVALUATION OF ISLANDER VI-FAY

In general terms it is clear to me, having had twelve years operating experience with Islander aircraft and now a three-month introduction to the Falklands, that the Islander is a type ideally suited to the Falkland environment. It is the land based equivalent of the Beaver floatplane, which has served the Colony so well for so many years. Being unaffected by sea state and relatively little affected by icing conditions, it is capable of providing an appreciably more reliable and regular service than has hitherto been given by the floatplanes. Because it is twin-engined the level of safety should also rise. (I believe that many of the alleged safety aspects of flying a floatplane over water are considerably overstated. - If a Beaver ever force-landed at sea away from one of its normal sheltered landing areas, the survival of its occupants until rescue could be effected, after many hours, would be a far from routine affair.)

It became obvious to me, on inspecting the Islander after its arrival in the Falklands, that little forethought had been given to the ordering of specific customer options for the aircraft. Many of these seem to have been ordered "from the catalogue" without reference to commercial operators of this type in the field.

Many thousands of pounds sterling could have been saved by not ordering equipment which was not only useless in the Falklands but which was actually detrimental to the efficient operation of the aircraft. (For example, the inward opening baggage door. - At a cost of several thousand pounds all external access to the baggage hold has been prevented!)

Had a staff member of the FIGAS shown as much enthusiasm as a lay member of the Future of FIGAS Committee did in going to Orkney during his leave period to witness Loganair's operation there, small but useful items of equipment could have been included in the specification in place of the superfluties.

Specific items, apart from the baggage door (which I feel must be replaced by the standard item at the earliest opportunity), include the following:

Windscreen deicing panel: At my suggestion this has already been removed to prevent damage to the fuselage caused by the panel "flapping" in the frequent gale force winds. With 99% of all flights within the islands being conducted under "visual flight rules" the normal hot air deicing of the windscreen is more than adequate for the task.

Wheelbrakes: I believe that it is probable that the Goodyear ring brake system would be preferable to the disc brakes as fitted to VP-FAY in terms of life of brake pads. This system is more suited to the "natural surface" airfields which exist everywhere other than at Stanley Airport. Further investigation should be carried out here to determine the cost effectiveness of such a change.

Fuel gauges: These at present read in U.S. gallons. Fuel is delivered by the supplier, Y.P.F., to the FIGAS in litres, metered by the FIGAS bowser in IMP. gallons, measured in the aircraft in U.S. gallons, and features on the aircraft load sheet in Kilograms! I believe that the aircraft gauges should read in kilograms or, perhaps, litres, and that the possibility of trading in the spare U.S. gallon fuel gauges for ones calibrated in kilograms should be investigated. This would avoid some of the confusion.

Additionally, I recommend that a dipstick be manufactured and calibrated locally to enable an independent check to be made on fuel contents when required.

Nosewheel castoring: My only experience of this Islander option has been on VP-FAY, and my inexperience with it may therefore colour my judgement of it. I cannot believe, however, that it has any advantage over the standard nosewheel steering system when operating on natural surface airfields. (To turn more tightly than the standard system permits will tend to "cut up" the airfield surface and cause some additional brake wear.) At none of the 37 airfields visited was space so restricted as to make castoring necessary.

I believe that it is relatively simple to revert the system to "standard", and that once the aircrews are experienced with the handling of the castoring nosewheel a three-month period using the "fixed" system should be tried to compare the findings. After this trial a decision could be made which system to adopt.

Wing Tip Fuel Tanks: I accept that the reason for specifying these was to allow for possible emergency evacuation to the South American mainland. The price paid (in terms of reduced payload) is, however, very high, as these tanks are not required for flights within the islands (particularly as fuel can be made available for occasional use out at one or more of the more distant "camp" settlements). I wonder if it was realised when ordering this option that the payload of the aircraft would be reduced by approximately one half of a person (which more often than not translates as one whole person!)? Should a second aircraft of the type be ordered in the future I recommend that the tip tanks should not be fitted. (Should it still be considered necessary to hold the option of flight to the mainland I'm sure that some system, such as the ferry tanks with which VP-FAY was delivered, could be devised for quick fitting into the aircraft cabin without reducing its payload for that range.)

Minor additional items:

Provision of a second press to transmit button. There is little point in having duplicated radios and headsets if other items in the system are not duplicated. Press to transmit buttons do occasionally fail, and I recommend the fitting of a second button on the starboard instrument panel (not on the starboard control column as I'm sure that it will frequently be found desirable

to fly without that. - It is a job of a few minutes to remove the control column.). In this way a supervising pilot in the right hand seat could communicate with the outside world.

Provision of a "headset" jack plug socket at each pilot position in addition to the individual microphone and earphone sockets. This would allow use of the more normal types of pilot headsets. This point is relatively minor but would be well worth having on a second aircraft.

Provision of a "headset" socket at the rear of the aircraft to allow communication between the stretcher patient's attendant and the pilot (and to allow for communication with a photographer or "mail dropper" in the baggage bay. - Even with the "standard" baggage door these two functions are relatively straightforward as the door is detachable in about half a minute on the ground by removing two split pins. Aircraft performance is not noticeably affected by total removal of the door.).

Provision of lifejackets: I believe that the normal airline practice of providing a lifejacket for every person on the aircraft when flown over water makes good sense and recommend that life-jackets be ordered for the Islander. (Although slightly outside my brief I feel bound to comment on the laxity of some of the FIGAS attitudes to safety and survival matters. Specifically, that lifejackets are still not worn by occupants of Beaver aircraft despite a recommendation to that effect by a recent accident investigation team. Similarly with access to the liferaft and with the provision of jettisonable doors. History shows that floatplanes in the Falklands do occasionally overturn on the water. Passengers should be equipped to survive this. I believe that passenger resistance to the idea of wearing a lifejacket would be quickly overcome. (Thousands of North Sea oil workers are flown to and from their work every day wearing full exposure suits despite the fact that the helicopter firms flying them have much better safety records than does the FIGAS.)

(4) OPERATIONS MANUAL

On arrival in the Falklands I discovered that in fact an operations manual had just been produced. Most of the content was general, but from time to time specific references to Beaver aircraft occurred. I have recommended that the specific Beaver references be removed from the text of the manual and placed together in an appendix.

I have produced a second appendix, in draft form, specific to the Islander, and based on information in Loganair's Operations Manual. I did not "burst into print" with it as it will be necessary to make several changes to it if any of my recommendations concerning the final specification of the aircraft (see page 2) are accepted.

When many months of experience have been gained in the operation of the Islander in the Falkland environment, a "route guide" should be produced listing specific points about the operation of the Islander into particular airstrips under varying conditions. This should then be updated, as necessary, over the next several years in the light of experience. This route guide should include diagrams of each airfield showing runway length, heading, surface, etc., and the position of relevant hazards. I have left a copy of a Loganair route guide with the FIGAS as a model.

(5) AIRFIELDS

In applying the rules concerning the suitability, or otherwise, of sites for airstrips, I was mindful of the fact that in some cases strict application might exclude a particular island or settlement from the benefits of an air service. On paper this would only

improve the cause of air safety, but could result in hazardous journeys being made by small boats across open seas. Commonsense tells me that this is illogical, and I have in several instances recommended relaxation of the relevant airstrip requirements without, I believe, lowering safety standards. (The Islander is essentially a bush aircraft, and is well suited to "unimproved" airstrips of a much lower standard than the regulations, drafted for aircraft in general, recommend.)

Speaking generally, I was pleasantly surprised by the load-bearing qualities of the airstrip, and proposed airstrip, surfaces and by the nature of the terrain surrounding them.

It quickly became apparent to me that one mistake in the preparation of the airstrips had been to "deep rotovate" the ground prior to seeding with grass. The grass sward itself, although used for many airstrips throughout the world, has no intrinsic value. Its main use is that its roots bind the soil together to provide a firmer platform for the aircraft's wheels. It seems to me probable that the natural vegetation (diddle-dee in most instances) is superior in this respect. Provided that the runway surface was originally fairly level, an excellent surface could be achieved by rotovating the ground at surface level leaving roots and subsoil undisturbed. This would, presumably, need to be repeated every few years. Where natural vegetation is sparse shallow rotovation and seeding with grass should be tried. Where the ground has been deeply rotovated it seems likely that the surface will not "harden up" for several years.

One incidental disadvantage of an oasis of grass surrounded by diddle-dee is that it acts as a magnet for Upland Geese - which then become a hazard to aircraft taking off and landing. Already there has been a goose "bird strike", with minor damage to the aircraft, on take-off from a grass airstrip, although a contributory cause of this incident must have been the pilot's lack of familiarity with the Islander.

As far as selection of airstrip sites is concerned, I feel that unnecessary effort was expended to find areas considerably more level than was required. Unfortunately, little effort was made to find the hardest ground in a given area. As a practical Islander pilot I would rate the latter of far greater importance than minor surface undulations, irregularities and slopes. Similarly, I think that the target of 520 yards runway length was too short. 600 yards at least would have been a better aim, accepting the fact that this would not always be achievable.

I was surprised that sand beaches had apparently not been considered as possible landing strips, and I have recommended the use of several of these in very sparsely populated regions.

Individual airstrips, in the order first landed at by Islander VP-FAY, are listed below, with appropriate comments:

OCTOBER 11th

(i) DARWIN/GOOSE GREEN

An excellent grass airfield, well laid out. I recommend that the markers at the threshold of runway 14 be moved to the north west so as not to obstruct the edge of runway 26/08.

(ii) CHARTRES

A good, dry, main runway facing West North West. It may well be that in strong south-westerly winds the "private" settlement airstrip, although short, would be suitable for an Islander. Wind limits (for reasons of turbulence off high ground to the south) will need to be established.

(iii) DUNNOSE HEAD

A lot of work has gone into the airstrip, with excellent

results. The main runway does have a "soft spot", but this should not present a practical problem as there is a considerable length of hard runway at the western end.

(iv) JOHNSONS HARBOUR

At the time of my first (and subsequent) landing there no work had been done to "construct" an airstrip. A landing in a paddock at one end of the proposed runway site was only possible because the Islander was at a light weight. There would seem to be little problem in producing a good runway on this site if manpower can be made available.

(v) FORT LOUIS

As for Johnsons Harbour. - At the time of the first Islander landing no work had been done to produce an airstrip at this site. Landings were made in a paddock with a good, hard, surface at the east end of the proposed strip. This would be suitable for emergency (medical) use even now at light weights.

(vi) GREEN PATCH

A considerable amount of effort was being put into producing a good runway at this settlement during my visit. By the time these words are being read I imagine that work will be nearing completion. To enable a really regular service to be provided a second, shorter, runway will need to be constructed to cater for strong crosswinds.

(vii) TEAL INLET

A good main runway has been constructed here by rotovating at surface level. Minor depressions have been filled in with shingle which will soon be "bound in" by the growth of vegetation. - In the meantime, however, there is the possibility of propellor damage from sucked up stones. I have given instruction, to those FIGAS pilots who would listen, in aircraft handling techniques which will avoid damage. A second runway, at right angles to the main one, is under construction.

(viii) DOUGLAS STATION

At the time of the first Islander landing work had only just started on removing a fence to lengthen the landing paddock. When the two runways are completed at this settlement there will be a first class airfield, the ground being very firm and level.

(ix) PORT SAN CARLOS

An excellent airfield has been constructed on this site. I taxied the Islander on the newly rotovated area at the threshold of runway 30 to check its load-bearing qualities and found these to be satisfactory. I would recommend, however, when wind strength and aircraft load permit, that this area be allowed to "rest" until the grass has become established - there is ample hard grass runway surface to the north-west of this area.

(x) SAN CARLOS

My two Islander flights to this settlement were only possible because of strong winds and the fact that the aircraft was nearly empty. I recommended that two runways be prepared, at right angles to each other, on the site of the old "Auster" airstrip. When this work is completed I'm sure that the settlement will have a first class airfield.

OCTOBER 12th

(xi) PEBBLE ISLAND

The main runway, 31/13, has an excellent grass surface and should present no problems. The recently built secondary runway, 05/23, still has soft patches (I "bogged" the Islander

there on my first visit!), but once the grass is established I anticipate that it will be up to the standard of the main runway.

(xii) GOLDING ISLAND

The area known as Green Rincon at the north-western extremity of this island is an excellent natural airfield. Although at present the site is half an hour's tractor drive from the "settlement", the island's owner intends to move his house much nearer to the airstrip at some future date. I have recommended to the owner that initially he marks out just one runway, heading East/West, and that the precise alignment of a necessary second runway be decided later. I imagine that by the time these words appear in print the airfield will be ready for use.

(xiii) KEPPLE ISLAND

Because of shortage of manpower and mechanical equipment the owner has not been able to construct a runway on the previously recommended site (which remains the most convenient one). I did, however, several times land the Islander on the excellent beach to the west of Reef Point. This beach, although some distance from the settlement, has the big advantage that it is available now without any work being required, and will be useable at all but extreme high tides.

(xiv) SEDGE ISLAND

The airstrip site on Sedge is one of the best in the islands. At the moment the owner has just levelled (with a spade!) some 350 yards of runway, but in time he will achieve a full 600 yards. Despite its limited length I recommend that this airstrip be used as of now, for the following reasons: (a) This island is one of the most difficult to serve by floatplanes. (b) The runway points directly into the prevailing wind. (c) Sedge is one of the most distant islands from Stanley, therefore passenger loads at that point will always be light. (d) The runway has a good hard surface which supported VF-FAY well on each of my three flights to the island (i.e. no "rolling drag" on take-off).

(xv) CARCASS ISLAND

With two alternative runways at this site, one of which (11/29) is now complete, the high ground immediately east of the strips should not present a problem. The threshold of runway 11 is soft, and care should be taken when manoeuvring or parking in that area. The other end of the runway, however, is very hard, which is why I recommended extending the runway in that direction, towards the hill, rather than in the "obvious" opposite direction on the flat ground.

(xvi) SAUNDERS ISLAND

An excellent airfield with three runways has been produced on this island. At the moment the runway surfaces are bare rolled earth whilst awaiting the delivery of grass seed. The airfield is, however, completely useable in its present state.

(xvii) HILL COVE

The main runway 18/36 is now completely useable. Its limiting factor will be strong winds from the South creating turbulence. I was pleasantly surprised on my last visit to the settlement, however, with the wind from the South South West at some 25 knots, that the turbulence was negligible. When experience has been gained limits for wind velocity will need to be set. By the end of the summer the East/West runway should be useable (when turf at the position of a former gorse hedge has become established). This runway should have no, practical, maximum wind limits.

(xviii) ROY COVE

This settlement has constructed an excellent single-runway airfield. At present it is of bare rolled earth, whilst waiting for the grass to grow. I foresee no problems at this site other than those associated with only having one runway. If at all possible a second runway should be built to cater for crosswinds.

OCTOBER 31st

(xix) FITZROY

Both of the runways at this settlement have been "deep rotovated". At the time of the first Islander landing one strip had a season's growth of grass on it and the other was awaiting delivery of grass seed. I think, however, that the ground at this airfield may be very soft (particularly at the threshold of runway 28) for several years. Although Fitzroy has a relatively small population it is close to Stanley, which means that the Islander would be operating through there, inbound and outbound, at near maximum weights. This is just not feasible with the present condition of the ground, and I recommend that this settlement not be included in the initial Islander schedule. The possibility of placing drains in the eastern end of runway 28/10 where there is a considerable depth of peat should be investigated.

(xx) BLEAKER ISLAND

An excellent natural airfield exists on this island. Two runways, at right angles, have been pegged out and preliminary ground levelling has been carried out. Once the runway end markers have been placed in position and painted the island will have the benefits of an Islander service capable of carrying full loads to and from Stanley. When convenient, after this time, some further filling of small depressions, etc., could be carried out to good effect.

(xxi) SEA LION ISLAND

A good runway has been constructed on this island, and the possibility exists to build runways heading in other directions on the same site. The airstrip site is about half an hour's drive from the settlement, and I suspect that it may have been chosen because it is near to the pond on which the Beaver lands. At the time of my first visit to the island by Beaver, and the subsequent one by Islander, time did not permit me to investigate other, more convenient, sites. I suspect, however, that the beach at the eastern end of the island, adjacent to the settlement, would have satisfactory load-bearing qualities. Although limited by tides, I believe that the one family living on the island would actually find that site much more convenient. I recommend that an inspection of the beach (on foot) be carried out by a member of the FIGAS as soon as is convenient.

NOVEMBER 1st

(xxii) NORTH ARM

A good airfield here, and I do not anticipate any real problems. On the day of the first Islander landing, after a night of torrential rain, the threshold of runway 04 was under water. However, the ground was well able to support the aircraft's weight. I'm told that the water quickly subsided.

(xxiii) SWAN ISLAND

I landed at the extreme north of the island near Fortuna Point. A brief investigation on foot and a general investigation from the air showed that it would be a relatively simple task, using minimal mechanical equipment, to construct a

good airstrip at any of several places on this flat island. This could be particularly useful as this island is one of those which seems to give the Beaver trouble.

(xxiv) WEST POINT ISLAND

Not an ideal runway here! Of all the settlements and islands in the Falklands West Point is about the only one on which it will not be practicable to build a good 1800' runway. It seems to me to be likely that the Beaver aircraft will only continue in service for a few more years, and then the Colony will be faced with the problem of air transport services to West Point Island. I cannot believe that a new floatplane will be bought just for that island, and I was therefore particularly keen to establish a limited airstrip there for the Islander. Over a period of some 2 1/2 weeks I landed several times on this short (350 yards) but hard runway, in each direction, and found no real problems at light weights or with a reasonable headwind component. When this strip has been extended to its maximum practicable 430 yards it will be possible to carry a "useful" load to and from the island. (It may well be that if a full Islander load was required to be carried from Stanley to West Point then the aircraft would first have to land at, say, Carcass Island, and ferry the passengers in two loads the short distance to their destination.) It is fortunate that West Point Island is one of the most distant from Stanley, therefore loads at that point will tend to be minimal. (The island itself only has a population of 6.) The island's owner is now extending the runway and it should be "fully" useable by the end of the summer.

(xxv) PORT HOWARD

A firm, but undulating, runway has been constructed here on the point immediately east of the settlement. Because of the undulations I have recommended that runway centreline markings be used here instead of the end markers advised for almost all other strips. The main problem at this site will be with turbulence with strong winds from the West. With experience limits will need to be set (perhaps 25 knots between NW and SW?) above which speeds the alternative runway, facing West North West, now being constructed at the racecourse paddock (some quarter of an hour's drive from the settlement) will need to be used.

NOVEMBER 2nd

(xxvi) RINCON GRANDE

The first landing was made at the airstrip near to the settlement used by the private aircraft. Under the appropriate conditions of wind and weight this could well be a useful Islander airstrip, having an excellent surface. Work is nearing completion on the main airstrips. Runway 05/23, several miles to the south of the settlement, has a particularly hard surface.

(xxvii) SALVADOR

The Islander landings were made at the "private" airfield adjacent to the settlement. These runways have excellent surfaces but are not yet long enough for routine Islander operations. Once the 04/22 runway has been extended in a north-easterly direction, as recommended, this will be a first class airfield.

(xxviii) COW BAY BEACH

This is an excellent, wide, hard beach only becoming unuseable at "above average" high tides. This beach has already shown its worth, having been used for a commercial flight to carry tourists intent on seeing the King Penguins, an hour's walk away.

NOVEMBER 3rd

(xxix) FORT STEPHENS

A good, hard, runway, still to be seeded, has been rotated at this settlement. It is already fully operational and a second, cross runway, is being completed some two miles to the north.

(xxx) SPEEDWELL ISLAND

Following an aerial survey and a brief reconnaissance on foot near the spot where I landed the Islander ($1\frac{1}{2}$ miles S.S.E. of Old Settlement Point), I conclude that it would be an easy task to construct an airstrip, with little equipment, on this flat, dry island. I'm sure it will be possible to find a good site much nearer to the settlement than the one which I used.

(xxxi) WALKER CREEK

I must confess to being perplexed by this one! Despite the surface feeling firm under foot it gives a considerable amount of rolling resistance to the Islander's wheels. (In "still air" it would only be practicable to take off empty.) This will need to be investigated to determine whether drainage is necessary or whether the rather unusual type of vegetation is the cause. If, as I suspect may be the case, it is the latter, it may be that burning it off or surface rotovating will be the answer. For the time being, however, I am not able to recommend the start of regular Islander services to this settlement.

NOVEMBER 5th

(xxxii) FOX BAY EAST

No problems here. A good airfield situated near to the settlement.

(xxxiii) LIVELY ISLAND

A good airfield has been marked out on this island just $1\frac{1}{2}$ miles E.S.E. of the settlement. With minimal work an even more convenient airstrip could be constructed "adjacent" to the settlement.

NOVEMBER 7th

(xxxiv) VOLUNTEER BEACH

A good hard beach, but there would be a greater proportion of a tide cycle when it would be unuseable than is the case at Keppel Beach or Cow Bay Beach. Although this beach would obviously be very popular with tourists, I think that it is actually too close to the King Penguin rookery which the tourists wish to visit. (Considerable disturbance might be caused.) It might, therefore, be better for tourists to be landed at Cow Bay Beach (see above). Volunteer Beach should be borne in mind, however, for emergency evacuation.

NOVEMBER 17th

(xxxv) NEW ISLAND

A good, level, site exists $\frac{1}{2}$ mile south east of the old whaling station at the southern end of the island. Despite "forebodings of doom" I found little evidence that burrows dug by penguins, prions or rabbits would be a problem. Certainly no more so than at several other airstrips within the islands. (In any case, should a problem exist it can easily be overcome by laying a type of plastic netting, known as STOMAT and designed to strengthen grass airfields, along the runway. The mesh is too small to allow burrowing.) This runway, being 1800 ft. long and heading NNW/SSW, would be the main one, although in strong South-

westerly winds (30 knots plus) would be unuseable because of turbulence. However, when the wind is above 25 knots from this direction the short secondary runway, on the point due east of the settlement, will be ideal - even for a fully loaded Islander. This, in fact, is the runway I landed on with the Islander with a light wind and at a light weight. With some mechanical equipment (i.e. a tractor) the main runway can be brought up to standard relatively quickly.

(xxxvi) WEDDELL ISLAND

A great deal of effort is being put into building an excellent runway on a good site one mile east of the settlement. I imagine that before the summer is over the hollows will be filled in and the airfield will be useable. (I landed, at a light weight, on a short level piece of ground at the eastern end of the runway.)

(xxxvii) FOX BAY "CENTRAL"

A good runway exists here which may be of limited use until the settlement at Fox Bay West can construct an airfield.

SETTLEMENTS/ISLANDS NOT LANDED AT BY ISLANDER

BEAVER ISLAND

A good and relatively straightforward site exists on this island one mile south-west of the settlement. When labour and equipment become available a good runway can be built in a relatively short time.

BLUFF COVE

Despite (possibly because!) of this settlement being the nearest to Stanley, I did not get the opportunity to visit the airstrip site(s) on foot. An aerial inspection, however, shows the area to be of a wet peaty nature, and I am concerned lest the same problems might exist here as at neighbouring Fitzroy (see above). No work has started on the construction of runway(s), and it may well be that the inhabitants of the settlement are pinning their communication hopes on the construction of the Stanley/Darwin road.

GRAND JASON

I was fortunate enough to be able to visit the island, briefly, during my stay. It would be relatively straightforward to construct a 1800 ft. runway heading East/West south of the wool shed at the boat landing area. The ground is quite firm and relatively level. Subsequent surveillance by air and from the sea shows that a better site may well exist at the north end of the island. Time did not permit an investigation of this area on foot.

STEEPLE JASON

It was suggested to me that a good site existed for an airstrip at the extreme north-west of the island, the ground being reasonably level and very hard. Unfortunately it was not possible for me to "walk" the site, but I did manage to fly over the area in the Islander and it seems to be quite suitable (although birds, specifically black browed albatrosses, may be a problem). If the owner required an air service it would be well worth pursuing further investigations in this area.

(6) OPERATIONAL SCHEDULES

The task facing anyone trying to draw up scheduled routes in the Falkland Islands is, to say the least, an unusual one. In order to generate enough traffic to make a plane load one must offer more destinations/pick up points than there are seats in the aircraft. This, of course, is because of the sparcity of the

population. For the same reason one must offer far more services to a particular "minor" settlement than will actually be used. (it is pointless analysing past traffic figures and deciding that perhaps a once monthly service is all that should be offered if, in fact, a typical passenger requirement is that a whole family is flown on the outward journey one week, followed by a return journey the following week. This may be the total travel need of the year for that settlement.)

My solution is for the Islander to fly three basic linear routes from Stanley, each to a different distant point, on different days. Airfields along a particular linear route could then be called at, outbound and/or inbound, on a request-stop basis.

Before such a system can be instigated, however, several radical changes need to be made to the FIGAS organisation.

I believe that it is essential for an operations officer and a ticketing/reservations clerk to be based at Stanley Airport on a full-time basis. The operations officer would plan the "flexible" linear schedules and advise the adjacent clerk as to the arrangements for particular flights (bearing in mind load restrictions from particular runways, etc., etc.). The clerk would sell tickets to passengers before embarkation on flights from Stanley (and after disembarkation from inbound flights) - this function being carried out at a check-in desk on the ground floor of the terminal building. At other times the clerk would be on the first floor in the office to the south of the controller's position. From this office telephone reservations would be accepted in the normal airline manner for specific flights on specific days and times.

I consider that the most radical change that the FIGAS must make is that an intending passenger must be able to be advised, at the time of first contact with the airline, whether he or she can have a seat on a specified flight. At this first contact (normally by telephone or radio) the passenger would be advised of the latest check-in time at Stanley Airport, where he could purchase his ticket before taking off. No other contact between passenger and airline would then be necessary or desirable. One should work on the assumption that the aircraft will leave on time, and be surprised if occasionally it doesn't, rather than the opposite which is at present the case.

This, of course, means the complete abandonment of the present priority system. (If the Air Services is to continue to run as an on demand taxi service for a privileged minority there is no need to increase capacity by adding an Islander to the aircraft fleet.) By abandoning that concept, so that the only factor preventing a person from getting a confirmed seat on a particular flight would be whether or not it was already full, I believe that the number of passengers carried per year will double in a very few years. It was clear to me following my extensive tour of the "Camp" that demand is stifled by the present system, which does not give any guarantee of travel even, sometimes, over a period of weeks. Far more "Camp" people would travel if they could be more certain of their return journey.

Tourist travel is actively discouraged by the system. Travel agents in distant parts of the world are as perplexed as I am that it is not possible to make bookings for tourists months, or even years, ahead. From my experience of staying at the Upland Goose Hotel in Stanley with many foreign tourists, I am convinced that a vast unsatisfied demand exists to fly tourists to various parts of the islands. By satisfying this demand more flights will be carried out, giving a better service to the "locals". The tourists pay far more than the islanders and in this way would help to subsidise their fares. Many of the tourist attractions are at the most distant points (Jasons, Carcass, West Point and New Island) and should therefore, with the correct fare structure, be most

beneficial to the air service.

Although rather outside my brief, I believe that one way to diversify the Colony's economy, right now, would be to encourage tourism. The demand is already there, but can only be satisfied by efficient internal communications. (Stanley is rather limited in what it can offer except for "base" facilities.)

The present system of offices with three centres of administration of the various aspects of the FIGAS's work is completely understandable, historically. It would, however, be difficult to imagine a more inefficient system. It has been suggested that the floatplane hangar should be moved to a site near to the Airport to save duplication of maintenance facilities. I suspect, however, that long before such a changeover could be made it will be official policy to phase out floatplanes. For the time being, therefore, I recommend that the two separate servicing bases should be maintained.

Considerable improvement in efficiency could be achieved by closing the pier office and moving the FIGAS administrative headquarters to the Airport to the, at present little-used, office on the south side of the first floor of the terminal building. (It may be found necessary, after experience has been gained, to erect a simple glass partition to isolate the office from the A.T.C.O.'s control position.

A proportion of the work at present carried out in the FIGAS pier office is, in fact, duplicated by the A.T.C.O. at the Airport. Having the two staff under one roof in adjacent offices would improve the flow of information and cut down duplication.

Almost the only function at present carried out in the FIGAS office at the Government Pier which could not be carried out more efficiently at the Airport is the accepting of freight for carriage to the settlements. I recommend that except for freight over 10 kgs per unit (which could be checked in at the Airport in the normal way), all parcels be flown as "air parcel mail". Sticking stamps on parcels at a Post Office would, I believe, be acceptable to the public, would involve minimal extra workload for the Post Office and, most importantly of all, would cut down considerably the vast amount of paperwork involved in recording minute monetary transactions. (At present it is not unusual for a receipt to be issued for a small package on delivery to the FIGAS office; at a later stage an invoice is sent to the shipper; later still the bill is paid, following which a receipt is issued for the money. All this for, often, as little as 50 pence!) If confirmation of receipt or delivery is required, then recorded delivery or registered post facilities should be available at extra cost.

Incoming parcel mail could be similarly dealt with, items being transported to the Post Office for collection by the consignees.

The facility for the invoicing of freight which it is not possible or desirable to ship through Post Office channels should be retained, but with an "invoicing charge" set at a discouragingly high level.

The ticketing/reservations clerk at the Airport would, of course, be the present one, Mrs. Sandra Clifton, moved from the Town Office. I propose that the operations officer should be a "part time" occupation of the, at present, very underutilised Air Traffic Controller, Mr. Gerald Cheek. Mr. Cheek has a good grasp of the task ahead and, by being "on the spot", will be able to do a better job than is done at present when operational decisions have to wait until a pilot is next on the ground.

I have selected the following routes on a "suck it and see" basis. Initially it will provide considerable over-capacity.

but I think that this will be a good thing during the early part of the "learning curve" for the crews with a new aircraft. Indeed, for this reason, it may be desirable to limit the aircraft's weight to less than that permitted by the airworthiness authorities during the introductory period.

Settlements in brackets, below, are those which should be included later, when their airstrips are fully operational.

Route ALPHA

Stanley to Port Stephens and return with optional stops at any of the following: Iively, North Arm, Darwin, Fox Bay, Sea Lion, (Fitzroy), (Bleaker), (Bluff Cove), (Speedwell), (Walker Creek).

Route BRAVO

Stanley to Dunnose Head and return with optional stops at any of the following: Darwin, Port Howard, Hill Cove, Chartres, Roy Cove (Weddell), (Beaver), (New Island), (Swan Island).

Route CHARLIE

Stanley to Carcass and return with optional stops at any of the following: Teal Inlet, Port San Carlos, Pebble, Golding, Kepple, Saunders, Sedge, Hill Cove, (West Point), (San Carlos), (Green Patch), (Port Louis), (Johnsons Harbour), (Salvador), (Rincon Grande).

Route DELTA

An inner circle route from Stanley to Stanley calling at any of the following: Teal Inlet, Port San Carlos, Pebble, Chartres, Fox Bay, Port Howard, Darwin, North Arm (Green Patch), (San Carlos), (Walker Creek).

Proposed Schedule

	A.M.	P.M.
MON.	A	D
TUES.	B	
WED.	C	D
THURS.	B	
FRI.	A	

I believe that the A.M. flight should leave Stanley at 0830 (which means that passengers would need to be there at 0815. - The present system of telephoning them first to "round them up" would, of course, not be practicable.) The office would need to open at 0800. Depending on how many stops are actually served on a given flight (and in particular whether the most distant point was served), the flight should return around 1130. On flights with an afternoon schedule, I have suggested that it should depart Stanley at 1400 to keep the morning and afternoon flights within one pilot's working day. (This would mean adopting the recommendations of CAP 371, The avoidance of excessive Fatigue in Aircrews on page 6 [9:2:17, rather than the rather arbitrary limit of 10 sectors used by the FIGAS at the moment.)

At the moment there is no clear indication of demand for a day return service, but I think that an "experimental" schedule D would soon generate such a demand. - Day return tourists from Stanley may well be attracted to this.

Outside these "normal" working hours the aircraft should be available for charter flights during daylight as the demand dictates. Many tourists arriving by I.A.D.E. flights from the South American mainland will want to get to their ultimate destinations on the same day, and will be prepared to pay for this. This demand should be satisfied.

Should weather or technical problems delay or cancel a flight on a particular day, then the flight should be rescheduled for the first available opportunity (e.g. that evening or at first light the next day), so that the following day's schedules are not affected. Passengers' confidence in the reliability of the air service must not be broken by allowing medical authorities to "bump" a booked passenger off a flight in favour of a patient. If a patient's condition is that serious it must merit a special medical flight paid for by the medical authorities. Very occasionally it may be necessary, because of the condition of the patient, to carry out the medical flight first, and to delay the scheduled flight, but I cannot believe, with just 800 people in the Camp, that this would happen more than once per year. It should also be remembered that the stretcher fit in VP-FAY permits the carriage of five passengers in addition to a stretcher patient and nurse. Seven persons will be a full load for the Islander on most routes in any event.

I believe that serious consideration should be given to offering a scheduled service on a Saturday if it can be shown that demand exists (as I believe it does). If not, though, Saturdays (and indeed Sundays) should be available as days to catch up on weather-disrupted schedules. Charter flights (e.g. day trips to Carcass or Bleaker Island) should be actively encouraged on these days.

More than three quarters of the airstrips would present absolutely no problems for Islander medical flights during the hours of darkness. I recommend that settlements should be encouraged to buy themselves a set (say, one dozen) of gooseneck flares to mark out a runway for night emergency use. I obtained a list of suppliers and prices for these items and left it with the FIGAS.

(7) FUTURE STAFFING AND ORGANISATION OF THE F.I.G.A.S.

I recommend that the complement of pilots for the present and immediate future level of FIGAS activity should be four, consisting of a chief pilot plus three others. In recommending this, I have made the following assumptions: (i) That the Islander will be utilised to the maximum. (ii) That the two Heavers will have their flying considerably reduced to preserve their "lifed" items - they thus become "one" aircraft. (iii) That on all seven days of the week there is one aircraft either flying, or available to fly, on scheduled or charter services. (iv) That on three days of the week there is a second aircraft flying. (v) That there is "round the clock" availability for ambulance flights. This complement allows for one pilot to be on leave or sick, etc.

I do not like the present system where the Chief Pilot is also Director of Civil Aviation. Pilots are far too expensive and are in too short supply to be used for anything other than flying. They also tend to have little aptitude for routine bureaucratic processes! It seems only too probable to me that within a decade the FIGAS will not be the only "commercial" operator in the Falklands (with oil in the West Falkland Basin there is bound to be a proliferation of flying to and within the islands), and that the ultimate "regulator" of aviation should not himself be involved in the operation of an airline. (Imagine British Caledonian Airways' attitude if the Chairman of the C.A.A. was also head of British Airways!)

The Director of Civil Aviation title should be tacked on to

that of another official of the Falkland Islands' administration, leaving the Chief Pilot to administer his pilots and, above all, to fly.

A large part of the present Director of Civil Aviation's time is at present taken up with the routine (and non-routine) ordering of aircraft spares. The logistics of this task are very complex. It is clear to me that a full time post must be created for someone to be responsible for the ordering and "chasing up" of spares and for keeping aircraft technical records. The FIGAS has managed up to now without such a person only because it has always had a supply of wrecked Beaver aircraft from which to rob urgently needed spare parts. This clearly does not apply in the case of the Islander and, if the aircraft is not to become a white elephant, spares must always be available. The "Spares and Technical Records" man would have to be given his head and allowed direct access to telex and telephone facilities as required. (The cost of a couple of 'phone calls to the U.K. is nothing compared with an Islander being grounded for a few days.) The keeping of technical records for the aircraft dovetails in nicely with the spares requirement, and will free the highly qualified aircraft engineers from the task so that they can be used in the most effective way - maintaining aircraft. Even so, the minimum complement of licensed (or R.A.F.) aircraft engineers should be three.

The present system of using a Cable and Wireless radio engineer to service the aircraft radios and navigational equipment seems sensible, if unorthodox. One must bear in mind that almost all flights are flown under Visual Flight Rules.

Whilst on the subject of aircraft engineers, I would like to recommend that Chief Technician Hughes be sent for, say, two weeks to a commercial Islander operation in the U.K. to observe practical engineering procedures on the type. Now that he has experienced the Islander at first hand for a few weeks he would learn much from such a visit. (Although obviously biased, I would favour a visit to Loganair's Orkney Islander engineering base, which is run by a former colleague and friend of Chief Technician Hughes. Additionally, the Orkney environment, as far as the flying task goes, is as close as one is likely to get to that of the Falklands.)

Allowed the use of existing staff at Stanley Airport for handling baggage, for refuelling and for washing the Islander daily (the atmosphere is very salty and corrosive), then no other additional staff should be required at the moment. A second ticketing/reservations clerk will be required at some stage within the next couple of years as traffic increases (I predict 10,000 passengers will be flown per annum within three years) and when Saturday scheduled flights are established.

The cost, in terms of manpower, of having two widely separated maintenance facilities (for Beaver and Islander) is considerable and is certainly more than "one" (i.e. if the two facilities were coincident one could manage with at least one less engineer/fitter). For other reasons, already referred to, I do not imagine that it will ever be cost-effective to move the Beaver hangar nearer to Stanley Airport. Rather that economics will dictate its closure and subsequent all-Islander operation.

The present policy of replacing expatriate staff (pilots and engineers) with indigenous equivalents, where possible, seems sensible, although it may be that problems could arise because, in isolation, new ideas and techniques will never be experienced. Standards may slip, and it is worth considering sending pilots, at least, for some sort of "poor man's" instrument rating every couple of years or so. (So much of the present British Instrument Rating test is concerned with Airways flying and instrument approaches that it is not relevant to the Falkland Islands environment. - But if the Islander is to be used to the limits of its capabilities

then the pilot must be able to fly and navigate safely on instruments and to carry out "simple" instrument approaches at Stanley Airport.)

At this point it is worth mentioning that the Falkland Islands Government should use every endeavour to persuade the Argentine Air Force to leave their V.O.R. beacon at Stanley turned on all week (by waiving electricity bills?) for the benefit of the internal air service and not, as at present, just for the two I.A.D.E. flights per week from the Mainland. It is pointless specifying V.C.R. equipment in the Islander if one is not allowed to use the existing ground facility.

(8) SUMMARY OF CONCLUSIONS AND RECOMMENDATIONS

(i) The Islander is ideally suited to the task, although when a second one is purchased it should be nearer to the "standard" model. It is quite capable of eventually taking over the entire FIGAS task from the Beavers.

(ii) The FIGAS pier office should be closed and the air service should be administered from the Airport.

(iii) Wasteful invoicing for passenger tickets and freight carriage should be actively discouraged by making it cheaper to pay cash.

(iv) The "operations" task should be taken from the Chief Pilot and given to the A.T.C.O.

(v) The Director of Civil Aviation title should similarly be removed from the Chief Pilot.

(vi) A "Spares and Technical Records" post should be created.

(vii) A flexible "linear" scheduled service should be started immediately to twenty settlements, the others being added over the next year/eighteen months, during which time the amount of Beaver flying should steadily be reduced.

(viii) With experience of routine Islander operation a "route guide" should be produced listing particular operational points and limits at individual airstrips.

(ix) Finally, and most important of all:

As an outsider it was relatively easy for me to see that the FIGAS had fallen into the trap of organising itself for the benefit of its employees rather than for the advantage of its customers. This trap is particularly difficult for a "non-commercial" Government department to avoid. If, however, benefit is to be gained from the generous provision of this aircraft it must be used when the customers want to use it, and not when the crews find it convenient.

Great care should be taken when selecting a new Chief Pilot to take over from the retiring incumbent in mid 1980 to choose someone who really believes in the old adage, "The customer is always right".

The time has come to put the "S" back into FIGA !
