

**REPORT AND PROPOSITION REGARDING THE PROVISION
OF A PASSENGER PIER AND THE EXTENSION OF THE
CONCRETE APRON AT THE AIRPORT**

*Lodged au Greffe on 11th May, 1976 by the Harbours and
Airport Committee.*



STATES OF JERSEY

STATES GREFFE

1976.

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REPORT

1. PRESENT SITUATION

The Harbours and Airport Committee has, for some time, been concerned about the problem of arriving and departing passengers walking across the airside aircraft parking Apron, in areas where aircraft have to manoeuvre.

The main aircraft parking apron at Jersey Airport, is presently operated on what is known as an "open-apron" system, which necessitates passengers being kept together in groups and conducted on foot by airline or ground handling agencies' employees, between the aircraft and the Terminal Building. The present "open-apron" layout at Jersey Airport is shown on Appendix 1 - Jersey Airport Apron Parking Plan.

It will be seen from Appendix 1 that with the exception of six parking stands, that is stands 1 to 5 inclusive and also stand -16, all the other twelve stands involve passengers walking across routes along which aircraft taxi when arriving and departing. The present layout is designed to obtain the maximum utilisation of the available concrete apron area.

The basic disadvantages of this system are:-

- (a) danger from propellor "backwash" and with the more recent use of pure jet aircraft, from "wake velocity" or jet blast;
- (b) danger from aircraft and vehicular traffic, manoeuvring in an area where passengers are embarking and disembarking;
- (c) the need to keep passengers for, or from, a particular aircraft in groups, with the consequent need to employ airline personnel as escort staff;
- (d) lack of protection for the passenger against adverse weather conditions.

These basic disadvantages have become more real in recent years owing to the increase in aircraft movements and passengers despite, and because of, necessary large extensions which have been made to the apron on two occasions in recent years. Appendix 2 - Airport Statistics.

In 1975 there was, at peak periods, an aircraft movement approximately every two minutes.

Experience in aerodromes throughout the world has shown that there are two solutions to the present system which could perhaps be practicable at Jersey Airport:-

- (a) the use of coaches to convey passengers to and from aircraft;

- (b) the construction of a "pier" or "finger" system to provide individual, non-conducted boarding facilities.

The Committee believes that a situation has now been reached when, having regard to the changing patterns of air traffic, the present unsatisfactory and potentially dangerous situation must be remedied at the earliest date.

The Committee has therefore examined in great detail the advantages, disadvantages and initial and recurring annual costs of the two alternate solutions:—

- (a) Coaches;
- (b) Pier.

2. COACHES

Advantages

The passenger is protected against weather, propellor "backwash", jet blast and aircraft and vehicular traffic.

Disadvantages

- (a) Coaches would significantly worsen the existing apron traffic congestion and constitute a further potential hazard to manoeuvring and parked aircraft and other vehicles, such as fuel bowsers, on an already congested apron;
- (b) the problem of grouping passengers together in the Departure Hall area would remain.

Cost

The Committee has examined in detail the initial and recurring annual costs of a Coach System under the following headings:—

- Number of coaches required.
- Cost of provision of coaches with allowances for maintenance and depreciation.
- Direct labour costs.
- Garaging of coaches.
- Communications.
- Provision of additional parking stands.

Number of Coaches required

Theoretically no coaches would be required between November and March, when aircraft would use the stands adjacent to the Terminal Building.

The number of coaches required in practice, however, would be that number needed for peak times and it has been estimated that allowing for maintenance and non-serviceability, there would be a requirement for an initial purchase of a minimum of 10 coaches.

Cost of Coaches

The initial cost would be at least £80,000 and the economic life is considered to be 5 years. Allowance has been made for increased cost of purchase after 5 years of 25%.

Maintenance, including fuel, tyres and spares would be about £4,000 in the first year, increasing over 5 years to £12,000 per annum and this figure would increase, it has been estimated, by approximately 25% in ensuing years in every five year period.

Direct Labour Costs

It would not be possible to provide drivers for these coaches from current staff, so recruitment would be necessary.

The maximum number of drivers would only be needed at peak periods so that it has been assumed that it would be possible to use seasonal drivers. Nevertheless, there would be a need for a nucleus of permanent drivers, together with supervision and control staff and a vehicle mechanic.

The initial annual labour cost would be approximately £36,000.

Garaging of Coaches

The current workshop area is considered too small to deal with the number of additional vehicles that a coach service would require and there would be a need for new accommodation to provide maintenance facilities and some undercover parking for the vehicles, to avoid excessive depreciation of value. This building would cost approximately £30,000.

Communications

With the number of vehicles which would be circulating on the airside Apron, there would be a need to provide radio communications between a Control Room and the vehicles. The provision of this equipment would cost £3,000.

Additional Parking Stands

The current number of Aircraft Parking Stands could not be reduced, and as the coaches would have to pick up departing passengers from the existing Departure Gate area and set down arriving passengers near the present Arrivals Hall, an extension of the Aircraft Parking Apron would be necessary.

The minimum effect would be to reduce the number of stands in front of the Terminal Building from four to three and move the remaining stands forward by twenty feet. This would cause four aircraft stands to become unusable and therefore, additional concrete would have to be laid to maintain the current number of parking stands.

The area required would be approximately the same as that required for the additional Apron area needed if the Pier system is introduced and would cost £384,000.

3. PIER

Advantages

A Pier will overcome all the disadvantages of the present system. Passengers, instead of being kept in groups, could be allowed to "trickle" load into aircraft. In addition, extra passenger waiting areas would become available in the Departure Hall by re-siting the Passenger Departure gates in the Pier Development.

Disadvantages

It can be argued that once a Pier has been built it will be there for all time, and might not be suitable to meet changing circumstances, whereas a Coach System is more flexible and can be terminated if found unsuitable. However, the Committee believes that a suitable Pier can be constructed which will meet the demands of aircraft which are likely to use the Airport in the foreseeable future.

Furthermore, in the design and construction of the Pier it will be possible to make provision for a first floor, should that ever become necessary. The initial cost of the Pier is estimated to be £450,000.

Comparison of Costs

(a) Coaches	£
1. Additional concrete apron	384,000
2. Coaches — minimum cost	80,000
<i>(Repayable in equal instalments over 5 years with replacement coaches each 5 years at estimated increased cost of 25%);</i>	
3. Maintenance Garage	30,000
4. Labour, in first year <i>(Increasing each year)</i> .	36,000
5. Communications	3,000
 (b) Pier	 £
1. Additional Concrete Apron	384,000
2. Pier	450,000
3. Labour — Cleaning/ Maintenance Staff in first year	10,000
<i>(Increasing each year).</i>	

Detailed investigation of the costs involved in each system over a 25-year period has shown that the initial cost of a Pier is greater than that for Coaches, but that the costs of a Coach Service would increase very significantly over the period of time, whereas costs for the Pier would not increase. This, of course, is caused by the high labour content involved in the Coach Service, as well as the recurring need to maintain and replace coaches.

It has been estimated that after three years the annual costs for the Pier or Coaches approximate. After that time the annual costs for Coaches escalate rapidly above that for a Pier.

Furthermore, as the Coach has been estimated on a *theoretical absolute minimum*, any error in that estimation could bring the time of approximation of the annual costs of the two Systems even earlier than three years. In addition, the comparative study of the two Systems has shown that the total costs of a Coach Service over the 25-year period, would be approximately twice that of the proposed Pier System.

Recommendation

Having studied the advantages, disadvantages and costs of the two Systems, the Harbours and Airport Committee has no hesitation in recommending the provision of a Pier, firstly for the convenience and safety of passengers and the effective conduct of operation on the Apron and secondly, because of the long term economic advantages. Appendix 3 – Proposed Pier Development and Associated Apron Extension.

5. PLAN

- (a) to extend the present Apron;
- (b) to construct a single storey Pier, 600 feet in length, from the south west corner of the Departure Hall to the western side of the existing Apron.

The Pier will have thirteen associated Passenger Departure "gates", serving fourteen short term Departure Stands. In addition, the revised Apron layout will provide seven long term Parking Stands, making twenty-one Stands in all, compared with the present eighteen Stands;

- (c) to enclose the exposed Passenger Walkway along the airside face of the Terminal Building to link up with the present Arrivals Hall.

This proposed development has been the subject of close consultation with the Airlines concerned, during the planning phase.

6. DEVELOPMENT PHASING

- (a) *Spring 1976* States in principle approval to obtain the Capital in the 1977 Financial Year.
- (b) *January 1977* Commence Concrete Apron Extension to complete by May 1977 before the peak traffic period begins.
- (c) *Summer 1977* Steel for the Pier to be prefabricated "off-site".
- (d) *October 1977* Commence "on-site" construction of Pier.
- (e) *April 1978* Pier and Departure Gates complete.

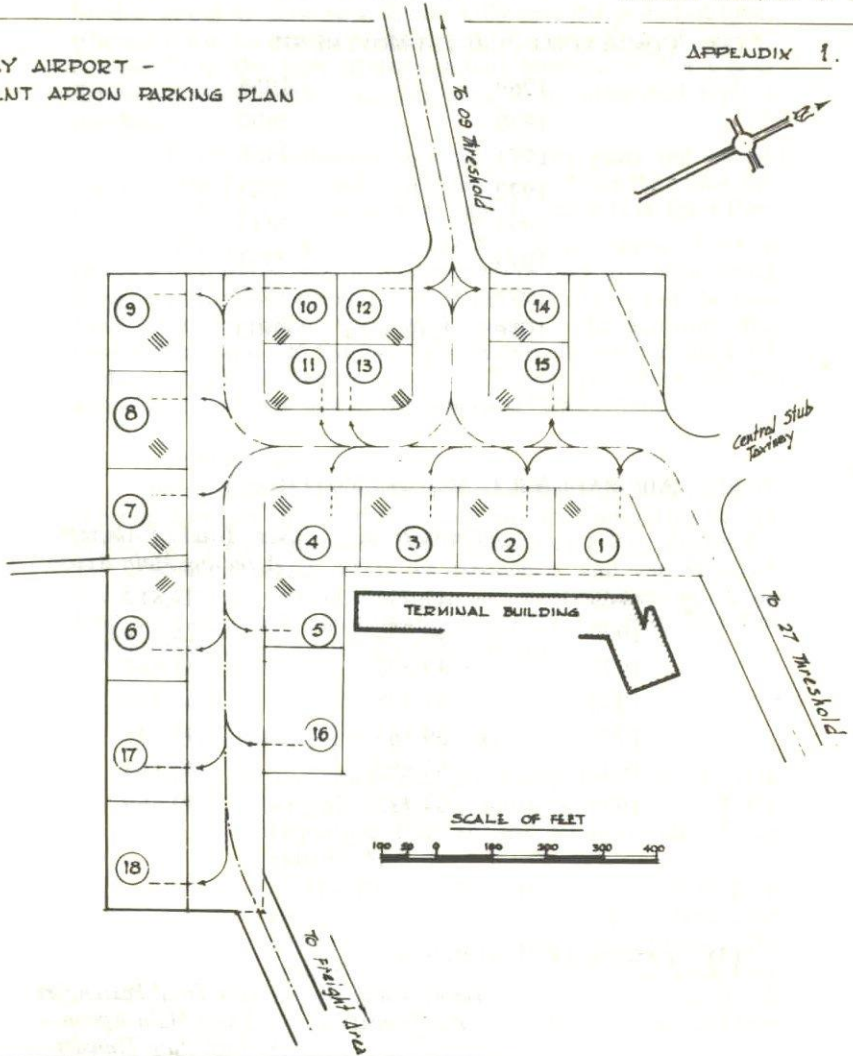
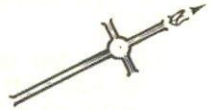
7. CAPITAL REQUIRED

Appendix 4 – Budget Development Costs.

The total Capital Sum required is £834,000.

JERSEY AIRPORT -
PRESENT APRON PARKING PLAN

APPENDIX 1.



TRIM →

APPENDIX 2.
AIRPORT STATISTICS

(1) **COMMERCIAL PURE-JET MOVEMENTS**

1969		1056
1970		2890
1971		2488
1972		2087
1973		2443
1974		2384
1975		3585
1976	Estimated	6500

(2) **AIRCRAFT AIR TRANSPORT MOVEMENTS**

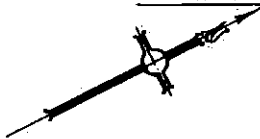
	<i>Gross Total</i>	<i>Nett Total of Aircraft— Affecting Main Apron</i>
1969	42,592	27,812
1970	48,056	28,474
1971	49,808	31,664
1972	51,378	38,245
1973	59,563	45,241
1974	53,882	40,163
1975	54,435	39,469

(3) **PASSENGER MOVEMENTS**

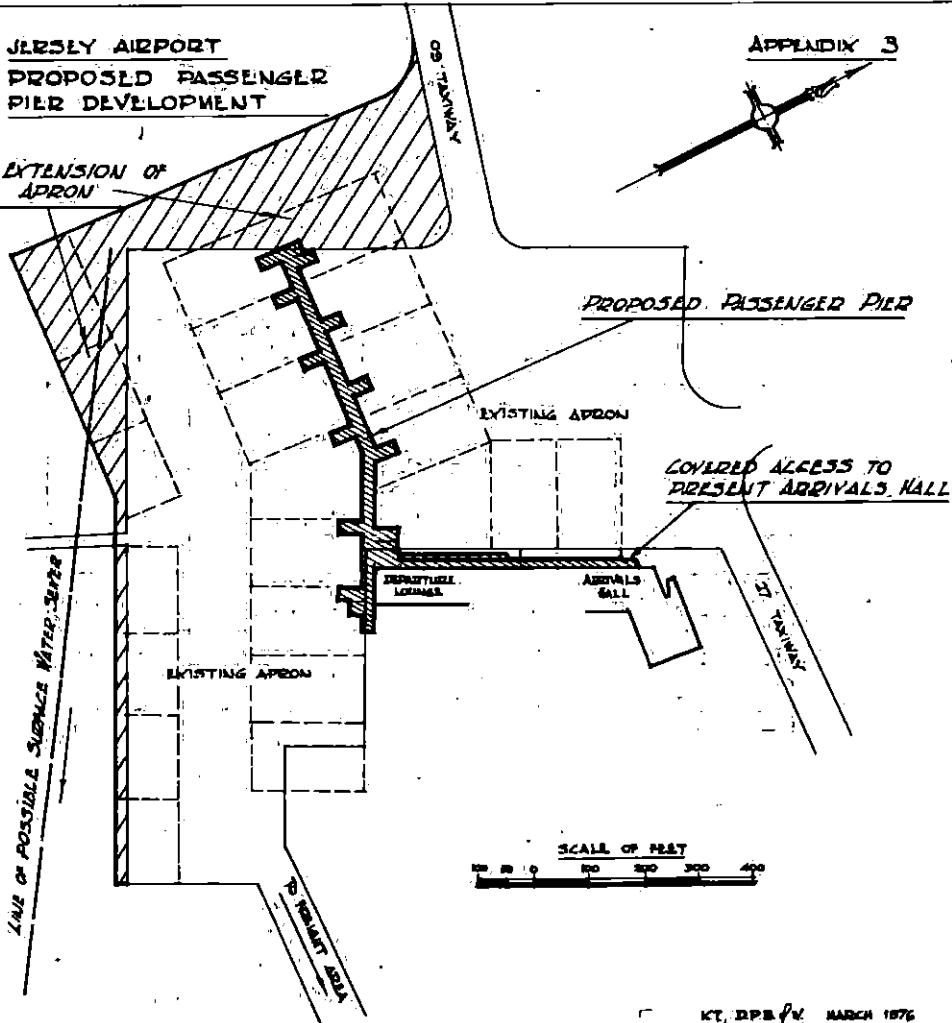
	<i>Gross Total — Inc. Transits.</i>	<i>Nett Total Passengers Using Main Apron — Including Transits.</i>
1969	1,156,371	1,080,290
1970	1,184,698	1,083,197
1971	1,252,589	1,145,148
1972	1,380,167	1,291,836
1973	1,500,390	1,381,003
1974	1,484,341	1,356,609
1975	1,485,979	1,337,696

**JERSEY AIRPORT
PROPOSED PASSENGER
PIER DEVELOPMENT**

APPENDIX 3



**EXTENSION OF
APRON**



PROPOSED PASSENGER PIER

EXISTING APRON

**COVERED ACCESS TO
PRESENT ARRIVALS HALL**

**BAGGAGE
LOUNGE**

**ARRIVALS
HALL**

EXISTING APRON

LINE OF POSSIBLE SURFACE WATER SEWER

TO TRUNK ADA

TAXIWAY

SCALE OF FEET



KT, D.P.E./V MARCH 1976

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APPENDIX 4

**JERSEY AIRPORT – PASSENGER PIER DEVELOPMENT
AND ASSOCIATED APRON EXTENSION – BUDGET**

	<i>Present day cost Estimates</i>	<i>Public Works and Quantity Surveyors' Fees</i>	<i>Allowances for inflation and contingencies</i>	<i>Totals</i>
	£	£	£	£
Concrete Apron extensions	310,000	9,500	64,500	384,000
Passenger Pier	340,000	25,500	84,500	450,000
TOTAL PROJECT BUDGET				834,000

PROPOSITION

THE STATES are asked to decide whether they are of opinion –

- (a) to approve, in principle, the provision of a passenger pier development and associated works at the airport as detailed in the accompanying report of the Harbours and Airport Committee; and
- (b) to approve Drawing No. 1983/361 showing the proposed concrete apron extension at the airport.

- NOTES:**
- (1) The Island Development Committee gave approval to the proposed concrete apron extension on 28th April, 1976 under Permit No. 4/11/10537.
 - (2) The Finance and Economics Committee supports the underlying principle of the proposal subject to agreement with the Harbours and Airport Committee regarding the provision of finance.
 - (3) Drawing referred to in above Proposition is not included in this publication and may be seen at the States' Greffe.

HARBOURS AND AIRPORT COMMITTEE.

States' Greffe Print Section.