THE OVERSEAS DEVELOPMENT ADMINISTRATION

FALKLAND ISLANDS AIRPORT

FEASIBILITY STUDY

SUPPLEMENTARY REPORT

1972

R/1171 (K.E.A.)

REYNOLDS, PALMER & TRITTON
Consulting Engineers
Southwark Bridge House
61 Southwark Street
London SE1 1SA

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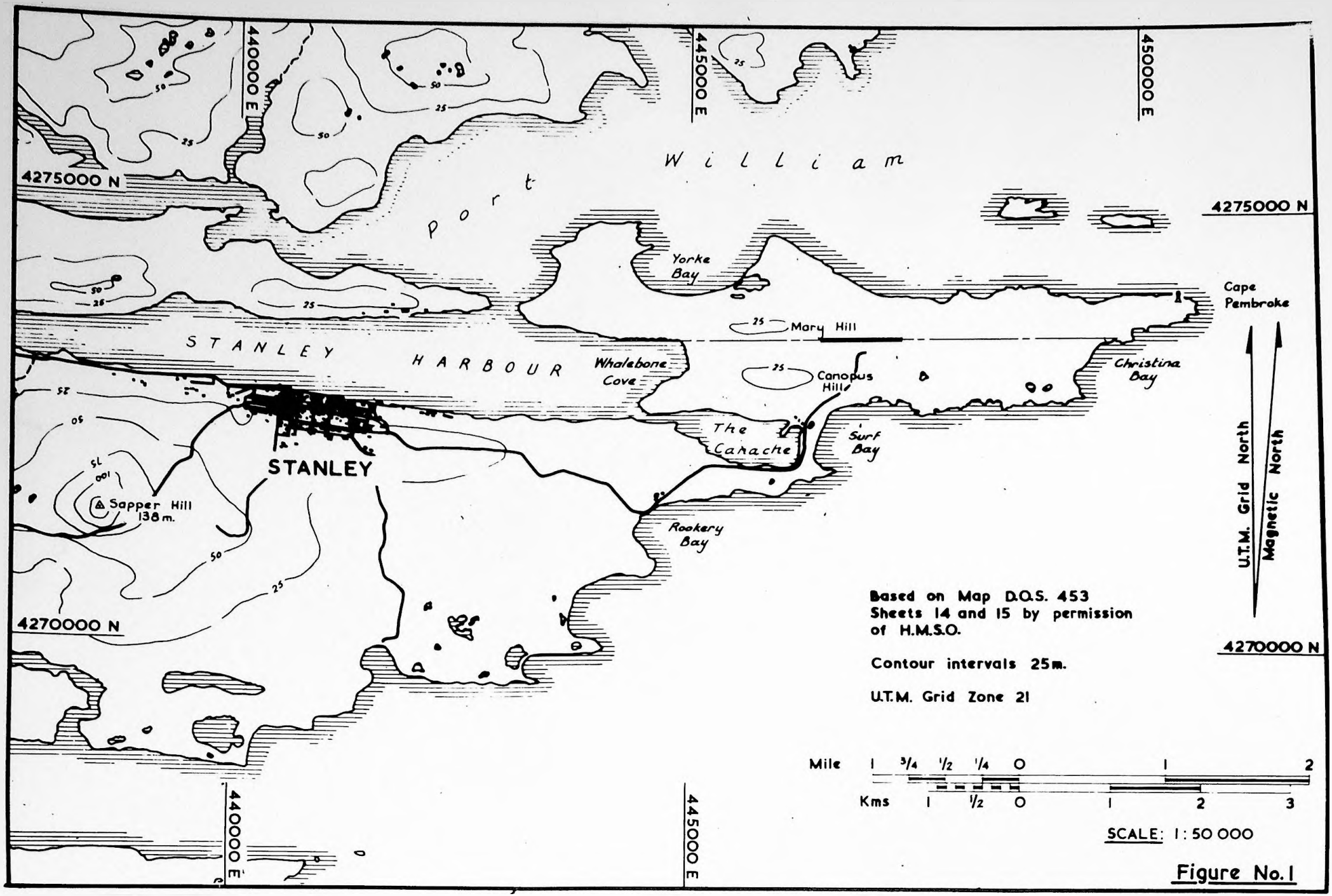

440000 E
445000 E
450000 E
4275000 N
4270000 N
William
Port
STANLEY HARBOUR
Yorke Bay
Cape Pembroke
Mary Hill
Whalebone Cove
Canopus Hill
Christina Bay
The Canache
Surf Bay
STANLEY
Sapper Hill 138 m.
Rookery Bay
U.T.M. Grid North
Magnetic North
Based on Map D.O.S. 453 Sheets 14 and 15 by permission of H.M.S.O.
Contour intervals 25m.
U.T.M. Grid Zone 21
Mile 1 3/4 1/2 1/4 0 1 2
Kms 1 1/2 0 1 2 3
SCALE: 1:50 000

Figure No. 1

1. INTRODUCTION

Included in the Terms of Reference for a Feasibility Study for an airport in the Falkland Islands given under cover of a letter dated 19th November, 1971, addressed to Rendel, Palmer and Tritton by the Overseas Development Administration of the Foreign and Commonwealth Office was a requirement for the provision of an estimate of the cost of the minimum work necessary for the provision of suitable aircraft movement areas for the operation of light passenger aircraft.

This Supplementary Report provides preliminary cost estimates in accordance with the above requirement and in consideration of the provision of minimal facilities for the operation of light aircraft. The Supplementary Report should be read in conjunction with the Feasibility Study Report.

The site considered was the amended Site A as described in the Feasibility Study Report and shown in Figure No.1.

2. MINIMUM FACILITIES REQUIRED

2.1 Aircraft Movement Area and Airfield Strip

In assessing runway length requirements consideration was given to aircraft types of less than 12,500 lb gross weight known to be operating in the South American area.

The cost estimate is based upon the following provisions for the movement areas and strip:

- runway length of 900 metres (2950 ft);
- runway width of 25 metres;
- overall strip width of 80 metres;
- link taxiway width of 12 metres;
- apron of 25 metres by 40 metres giving a stand capacity for three light aircraft;
- 3 metre wide shoulders adjacent to movement areas.

A possible airport layout is shown on Drawing No.1.

For the aircraft under consideration a minimum pavement thickness of 195 millimetres would be required. The cost estimate has been based upon a sub-base of 75 millimetres thickness, a 100 millimetre thick crushed stone base and a 20 millimetre thick asphalt surfacing to all aircraft movement areas.

The usability of the single runway, assuming the F.A.A. criterion of an 11 knot cross-wind, would be 52%, which figure would be increased to 76% by the provision of a cross-runway. If the maximum permissible cross-wind components allowed under British Civil Airworthiness regulations (20 knots) are assumed, however, the usabilities become 83% for a single runway and 93% with a cross-runway. The cost estimate has been based upon a single runway.

2.2 Road Access

In order to reduce the road costs to an absolute minimum the existing track would not be realigned but would be utilized over its full length. Soft spots in the track would be excavated and backfilled and a regulating course of 150 millimetres average thickness would be laid over the full length. From the isthmus at the east end of the Canache a new length of road, approximately 1 kilometre long, would be constructed to the terminal area as shown on Drawing No.2. No provision has been made in the cost estimate for bitumen sealing and surface dressing.

2.3 Buildings

The cost estimate allows for the provision of a single two-storey combined terminal/control building. A sub-station as described in the Feasibility Study Report is also provided for. The floor areas allocated to individual purposes in the buildings are shown in Table 1.

TABLE 1. FLOOR AREA ALLOCATION FOR BUILDINGS

Terminal/Operations Building		Area in sq.m.
Passenger Waiting Area		41.0
Baggage Handling Area		8.5
Airline Office and Check-in		4.0
Immigration		2.0
Health		2.0
Surgery/Office		15.0
Corridors		14.0
Toilets		16.0
Communications Equipment		18.0
Signals Officer-Office & Workshop		22.5
Stairway		9.0
Store under Stairs		4.5
Control Room		17.5
Briefing Area		12.5
A.T.C./Airport Manager's Office		17.5
	TOTAL	204.0
Sub-station		
Standby Generator		25.0
Switchgear		15.0
Transformer		10.0
Store		30.0
	TOTAL	80.0

2.4 Water Supply

The cost estimate includes for the provision of a water main and storage tanks as described in the Feasibility Study Report.

2.5 Airfield Lighting

The provisions for airfield lighting would be as detailed in the Feasibility Study Report.

2.6 Navigational Aids and Telecommunications

By the reduction of the capacity of the telephone link between the airport and Stanley the costs have been reduced by £10,000. All other navigational aids and telecommunications would be as detailed in the Feasibility Study Report.

2.7 Power Supply

The omission of the overhead line connection from the power station in the town and the provision of main and standby generating plant at the airport would reduce the cost of the Works by £15,000, as shown in the cost estimate. Such a system, however, would be less reliable and would cost more to operate and maintain.

2.8 Fire and Rescue Service

The minimum aircraft fire fighting facilities required for the aircraft under consideration would be in accordance with the recommendations of the Board of Trade publication CAP 168 for a category II airport. This would require the provision of the following equipment:-

1 No. set of equipment for conversion of an existing firefly Land Rover to foam production capability.

1 No. trailer complete with dry powder and rescue equipment.

1 No. hand trolley for fighting engine fires.

The provisions of rescue equipment and of water storage for domestic fire protection would be as detailed in the Feasibility Study Report.

2.9 Miscellaneous

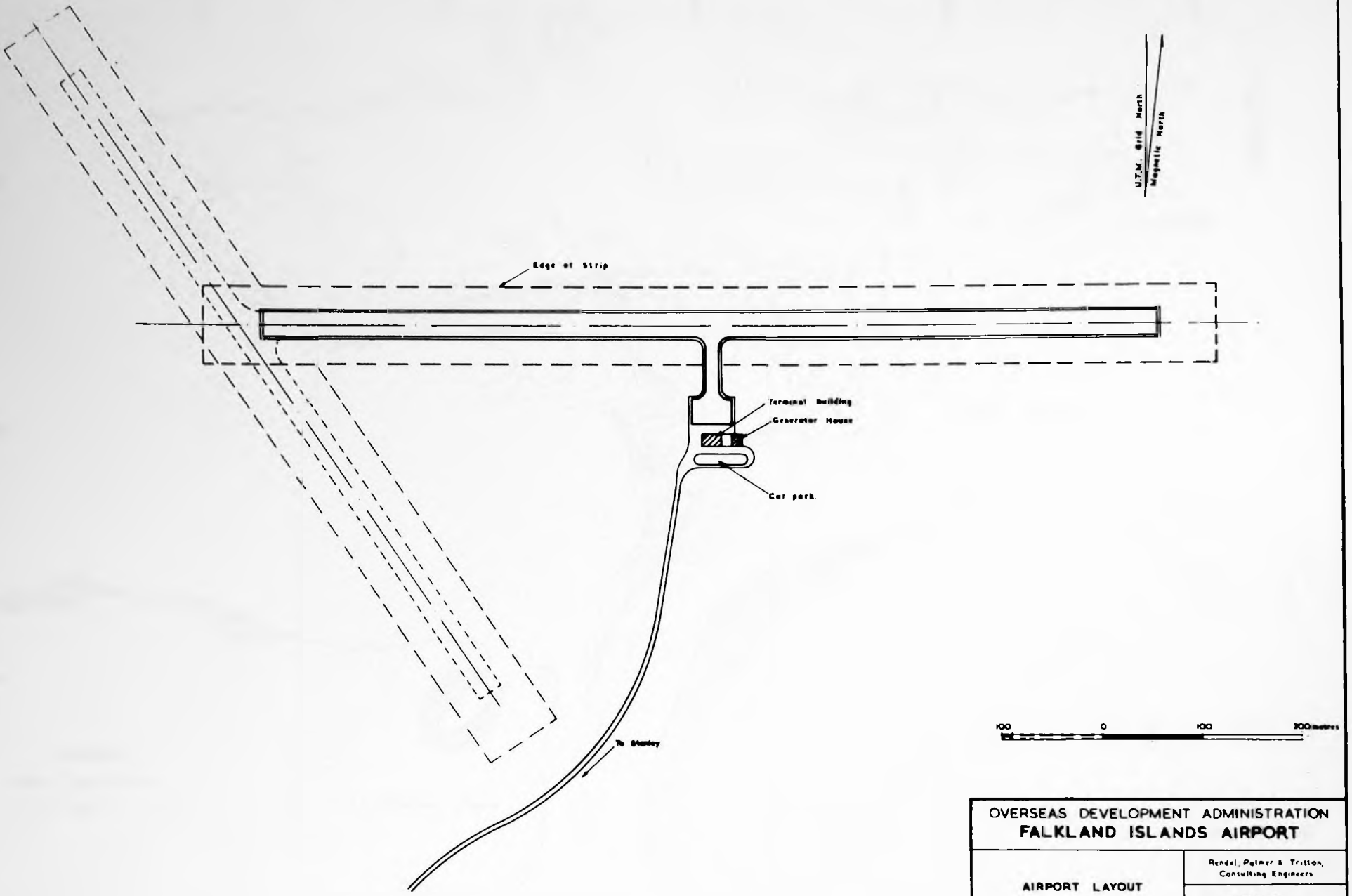
Provision has been made in the cost estimate for airport drainage, for fuelling and for maintenance equipment as described in the Feasibility Study Report. No provision has been made for fencing.

3. COST ESTIMATE FOR MINIMUM FACILITIES

For the purposes of comparison the cost estimate shown in Table 2 includes a 15% incentive loading as described in the Feasibility Study Report. It is to be expected, however, that a major reduction in the scope of the Works would necessitate the application of an additional 'loading factor' to allow for the increase in individual rates concomitant with a substantial reduction in the size of the project.

TABLE 2. COST ESTIMATE FOR MINIMUM FACILITIES

Section No.	Description		Cost in £
1	Airfield Earthworks		91,000
2	Airfield Paving		46,000
3	Road Earthworks		17,000
4	Road Paving		41,000
5	Drainage Works		38,000
6	Water Supply and Distribution		50,000
7	Power Supply		35,000
8	Airfield Lighting		30,000
9	Navigational Aids and Telecommunications		60,000
10	Terminal/Operations Building		13,000
11	Sub-station		6,000
12	Sewage Disposal		10,000
13	Airfield Markings		6,000
		Sub-Total	443,000
	Add for incentive loading (see Feasibility Report) 15%		66,000
14	Supply Fire & Rescue Equipment		3,000
15	Supply Maintenance Equipment		10,000
	Add for Labour Camp		40,000
	Imported Labour		50,000
	Shipping		100,000
		Sub-Total	712,000
	Add for Contingencies 10%		71,000
		GRAND TOTAL	783,000



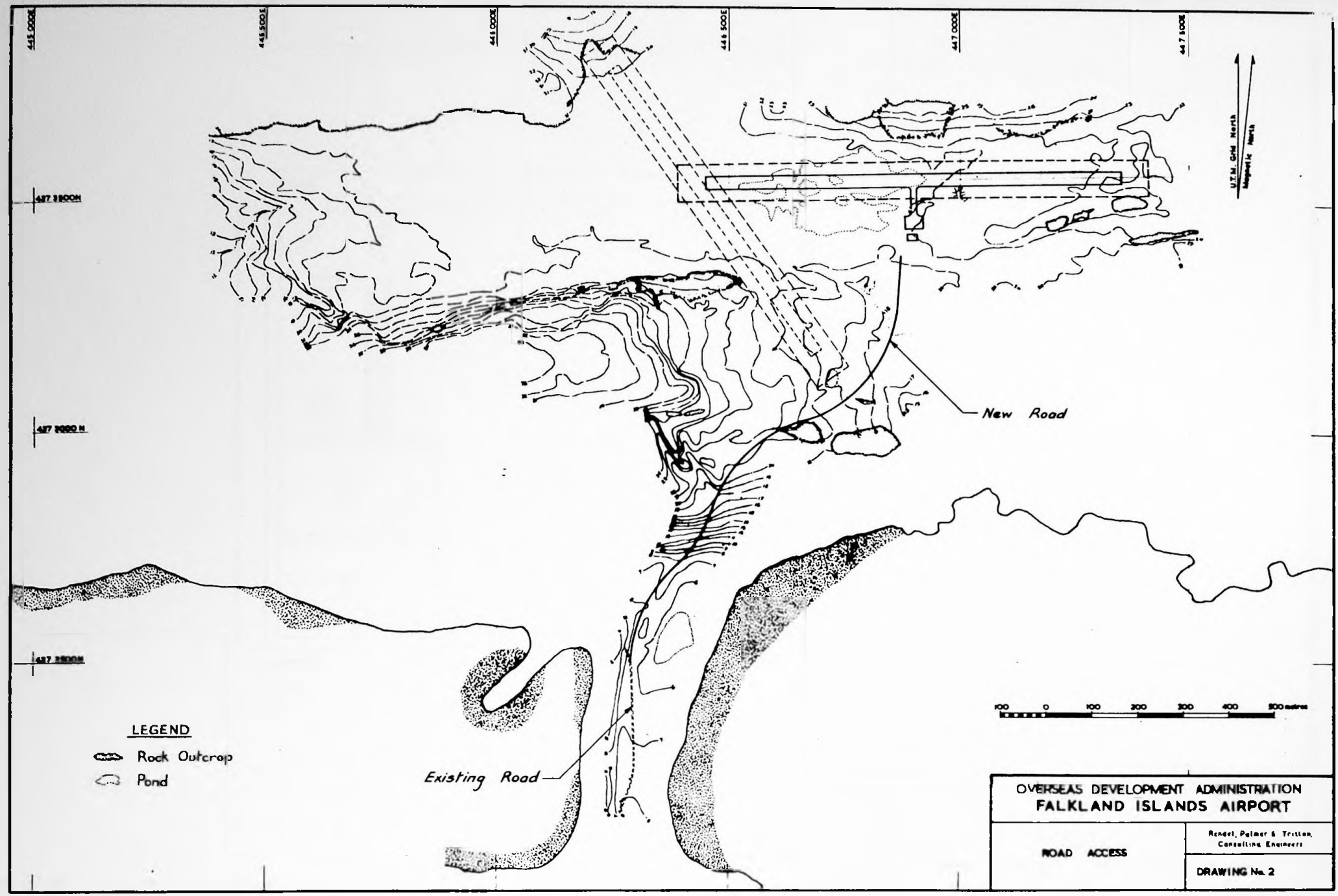
OVERSEAS DEVELOPMENT ADMINISTRATION

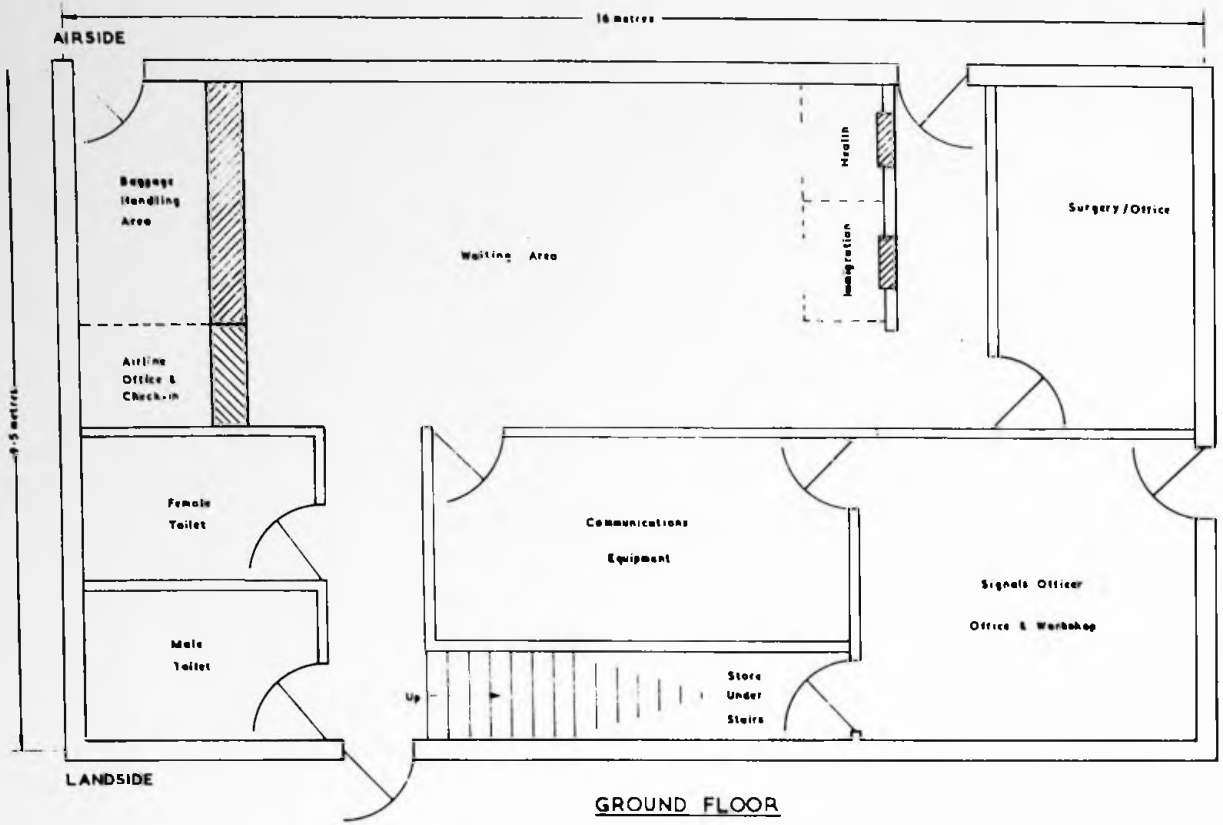
FALKLAND ISLANDS AIRPORT

AIRPORT LAYOUT

Rendel, Palmer & Tritton, Consulting Engineers

DRAWING No 1


445 000E
445 500E
446 000E
446 500E
447 000E
447 500E
U.T.M. Grid North
Magnetic North
New Road
Existing Road
LEGEND
Rock Outcrop
Pond
100 0 100 200 300 400 500 metres
OVERSEAS DEVELOPMENT ADMINISTRATION
FALKLAND ISLANDS AIRPORT
ROAD ACCESS
Rendel, Palmer & Tritton
Consulting Engineers
DRAWING No. 2



GROUND FLOOR

COUNTER

BARRIERS

1 3/4 1/2 1/4 0 1 2 3 4 5 Metres

Note. For first floor layout see Report Drawing No 8

OVERSEAS DEVELOPMENT ADMINISTRATION

FALKLAND ISLANDS AIRPORT

TERMINAL BUILDING GENERAL ARRANGEMENT

Rendel, Palmer & Tritton Consulting Engineers

DRAWING No 3