



FALKLAND ISLANDS GOVERNMENT

Report by C. W. Guillebaud, C.B.E.

on an

Economic Survey of the Falkland Islands

1967

F O R E W O R D

An Economic Survey of the Falkland Islands

by C.W. Guillebaud, C.B.E.

The publication by the Government of the Falkland Islands of Mr. Guillebaud's report to the Governor is not to be taken to imply agreement or acceptance by the Government of all or any part of the report or of any of the recommendations made therein. The views expressed are Mr. Guillebaud's own.

Pending detailed consideration of the report by the Government, it is commended for study by interested persons.

W. H. Thompson

W. H. THOMPSON
COLONIAL SECRETARY

The Secretariat,
STANLEY.

17th October, 1967.

Errata and Corrigenda

Chapter 1.	Paragraph 3	Line 7	A comma should be inserted after 'areas'.
Chapter 3.	Paragraph 34	Line 11	for 'agressiveness' read 'aggressiveness'
Chapter 4.	Paragraph 77	Line 6	for 'household,' read 'household's'
Chapter 8.	Paragraph 108	2nd line on page 36	for 'Stephen' read 'Stephens'
Chapter 8.	Paragraph 109	Line 5	for 'as' read 'a'
Chapter 8.	Paragraph 111	Footnote (1)	for 'Tierro' read 'Tierra'
Chapter 8.	Paragraph 113	Footnote (2)	for 'farms' read 'fares'

Appendix 1.

Dean Brothers Ltd. Second group should read. 'Grand, Steeple Jason Islands'.

Appendix 1.

Under 'Farms not registered as Companies'

Fifth group should read Estate H. J. Pitaluga.

Ninth group should read Mr. R. Napier.

R E P O R T
ON
AN ECONOMIC SURVEY OF THE FALKLAND ISLANDS
by C. W. Guillebaud, C.B.E.

St. John's College,
Cambridge.

30 June 1967.

Your Excellency

I have the honour to submit herewith my Report.

You appointed me in January 1967 with the following terms of reference: "To conduct an Economic Survey of the Falkland Islands." At the same time you expressed the wish that I should make any recommendations which in my view would be in the interests of the economy of the Falkland Islands and of its inhabitants. Accordingly I have included in my Report a number of recommendations for your consideration.

I arrived in Stanley on 4 March 1967 and left on 9 April. During that period I visited and stayed on ten Farms in different parts of the Islands.

My task has been made much easier than it would otherwise have been, owing to the willing co-operation which I have enjoyed from all quarters during my stay in the Colony, and since my return to England. I am most grateful to the Managers, and their wives, of the Farms on which I stayed in the course of my visit to the Colony; and for the time which they and many others devoted to providing me with the information of which I was in need.

It is my sincere hope that my Report may prove to be of service to the Falkland Islands.

I have the honour to be

Sir,

Your obedient servant,

H.E. The Governor of the Falkland Islands

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Chapter I

Introduction

1. The Falkland Islands lie in the South Atlantic Ocean between latitudes 51° and 53° South and longitudes 57° and 62° West, and consist of the East and West Falkland Islands and some 200 smaller islands. The latitude of the capital (Stanley) 51° and 41' South is about the same as that of London, 51° and 31' North. Each of the two main islands is about 60 to 70 miles long. The Islands are a little over 300 miles to the east of the nearest point on the South American Continent, and about 400 miles from the eastern entrance to the Straits of Magellan. Montevideo in Uruguay, which is now the normal port of entry for the Falkland Islands, lies 1,010 miles to the north of Stanley. There is at present no air service to the Colony, and United Kingdom passengers have to travel by boat to and from Montevideo and the Islands. The distance between the Falkland Islands and the United Kingdom via Montevideo is about 7,000 miles. The total land area is approximately 4,700 square miles (roughly 3,000,000 acres), comparable in size with Northern Ireland, but spread over a larger extent - the distance from Stanley to New Island, the most westerly settlement, is somewhat greater than that from London to Cardiff.
2. The estimated population at 31st December 1965 was 2,079, of whom 1,137 were males and 942 females. About half the inhabitants live in the capital and only town, Stanley, while the remainder are more or less equally divided between the sheep farms (the Camp) on the East and West Falklands, with a very small number on the lesser islands. The over-all density of population is about one person to every two square miles; but perhaps a more realistic figure (applicable to the Camp) would be one person to every four square miles, when the inhabitants of Stanley are excluded. The population is almost wholly of British origin.
3. The Islands have no mineral wealth, because none of the paleozoic and mesozoic sedimentary rocks of which they are composed contain minerals which are of economic value. There is no coal and the only local fuel is peat. The impermeable nature of the quartzites and sandstones, combined with a clay sub-soil and low average temperatures, has favoured the formation of layers of peat of varying thickness and a good deal of the land, especially in the more hilly areas is often waterlogged. Limestone is absent and soils are acid in reaction. The prospects of finding oil appear to be extremely remote.
4. During the second half of the 19th century, apart from sealing, the Falkland Islands were regarded chiefly as a naval base in the South Atlantic, and as such had an important strategic value.
5. There were also ship repairing facilities in Stanley on a small scale for reconditioning sailing ships damaged in rounding Cape Horn; and it became a port of call for supplies of food and fresh water. But the coming of the steamship and the development of Punta Arenas as a port in the Straits of Magellan, diminished greatly the number of sailing ships calling at Stanley; and this was further accentuated by the opening of the Panama Canal.
6. Although in the popular mind the Falkland Islands are often associated with whaling, this has been of relatively minor importance for the economy of the Colony, as distinct from its Dependency of South Georgia and its former Dependencies of the South Shetlands and the South Orkneys. Over the years 1904 to 1916, which latter date was when whaling in the Falklands

came to an end, only approximately 1,400 whales were slaughtered; while the total value of whale oil produced during the last four seasons (1911-12 to 1915-16) did not amount to more than £86,000, as compared with £729,000 for the value of the wool exported during the same period.

7. At one time there were two types of seals in Falkland Islands' waters which had commercial value - the small fur seal, for its skin; and the elephant seal, for its oil. In the first half of the 19th century, however, both were killed off so ruthlessly that large scale sealing subsequently became unprofitable. In 1921 an Ordinance was passed giving absolute protection to the fur seal; and since then there has been a considerable increase in numbers, which, if it continues, might make possible a resumption of fur sealing on a strictly controlled basis, within the next few years. Several unsuccessful attempts have been made in the present century to develop sea-lion sealing for oil - the latest venture being as recently as 1949, under the auspices of the Colonial Development Corporation. But this survived for only three seasons, and was closed down in 1952 owing to operational difficulties and a shortage of seals.

Chapter II

The Sheep Farming Industry of the Falkland Islands

8. When the British established their permanent settlement in the Falkland Islands in 1833, the livestock population of the Colony consisted mainly of large herds of wild cattle, the descendants of a small number of South American cattle landed there in 1764 by a Frenchman, A. L. de Bougainville, when he made the first settlement in the Islands. By the middle of the 19th century there were well over 50,000 of these "magnificent beasts," as they were described by an early visitor. But the sealers and whalers, and the settlers themselves, hunted them down and gradually exterminated them. The place of the cattle was taken by sheep, whose main product, wool, was much more readily transportable; and which, unlike beef before the days of refrigeration, was not subject to deterioration in passing through the tropics.
9. From the 1860s onwards till the end of the century, the number of sheep increased rapidly. In 1870 there were some 65,000; in 1880, 411,000 and in 1898, 807,000 - the maximum that they reached. Thereafter there was an appreciable decline, to 725,000 in 1910, 641,000 in 1920, and 607,000 in 1930. Since 1930 the numbers have been fairly stable at rather over 600,000; in 1965 they were 627,000.
10. The economy of the Falkland Islands in the present century has been, and still is, based almost entirely upon wool. A small quantity of sheep skins and hides is exported, but the annual value is not more than 2 to 3 per cent of the value of wool exported. Before the 1939-45 war there was also a very small export of tallow; but since then it has ceased to be profitable - the last recorded figure for tallow exports was in 1961, when they were entered at a nominal value of £1. Except for a small amount of mutton consumed in the Colony (about 20,000 sheep are slaughtered annually for mutton) there is no production or export of meat; hence wool is the sole product which has any appreciable commercial value.
11. The land system in the Falklands is peculiar and is unique to this Colony inasmuch as no proper survey of the land was ever made. In its early days attention was concentrated on its strategic value and its position as a port of call for ships, and the land aspect, and in general the economic development of the natural resources of the Colony were neglected by the Government. All the land was originally Crown land; but it was gradually sold to the settlers at low prices, and often acquired by payments on the instalment system. As a consequence of this policy, virtually the whole of the land of the Falkland Islands is now owned freehold by a very small number of companies and individuals. Excluding three small farms still in Government ownership but leased to individuals, the whole of the farming land has been alienated; and there are only 29 farms in all, which are owned by not more than 22 companies, partnerships or families. Some of the farms on the surrounding islands are quite small (2,000 to 5,000 acres), but on the mainland (East and West Falkland) they range from 26,000 acres for the smallest to about 400,000 acres for the largest single farm. So far as ownership is concerned, one single concern (the Falkland Islands Company) owns and administers six farms, comprising 1,330,000 acres, or 46 per cent of the total area of land under sheep.⁽¹⁾

(1) I deal with some general aspects of the land question in the Colony in Chapter VIII of this Report (paras. 106 and 115).

12. Most of the larger farms are administered by salaried Managers, appointed by owners who live outside the Islands, usually in the United Kingdom. But in the case of the smaller farms the reverse is true; and a majority of the owners farm their own land. The distribution of ownership is set out in Appendix 1 of this Report.
13. The following table shows for quinquennial periods during the past fifty years, the average number of sheep shorn; the average annual export of wool; and the average clip per sheep shorn:

	(1) <u>Average Number of Sheep Shorn</u>	<u>Average Annual Export of Wool</u> lbs.	<u>Average Annual Wool Clip per Sheep Shorn</u> lbs.
1909 - 13	712,000	4,762,000	6.69
1914 - 18	683,000	4,655,000	6.81
1919 - 23	659,000	4,598,000	6.98
1924 - 28	621,000	4,144,000	6.67
1929 - 33	611,000	3,934,000	6.44
1934 - 38	607,000	4,018,000	6.61
1939 - 43	620,000	4,147,000	6.69
1944 - 48	616,000	4,555,000	7.39
1949 - 53	598,000	4,134,000	7.00
1954 - 58	536,000	4,466,000	8.07
1959 - 63	553,000	4,740,000	8.57

14. What emerges clearly from this table is first, that in the last fifty years there has been no expansion in the total amount of wool produced in the Falkland Islands; in 1959-63 the amount of wool exported, 4,740,000 lbs was virtually the same as in 1909-13, when it was 4,762,000 lbs. Secondly, there has been a considerable rise in the average yield of wool per sheep, which has increased in the last twenty years by some 22 per cent, i.e. from 6.69 lbs in 1939-43 to 8.57 lbs in 1959-1963.
15. The first of these two results points to the absence of improvement and in fact gradual deterioration of the pastures under the largely prevailing system of uncontrolled grazing, with a consequential decline in their carrying capacity in terms of the total number of sheep on the farms. This is a problem which I shall be discussing in the next Chapter of my Report.
16. The increase in the yield of wool per sheep is undoubtedly due to the improved methods of breeding. During the earlier period of sheep farming in the Falkland Islands many different breeds of sheep were introduced -

(1) In 1959-63 the average total number of sheep on the farms in the Autumn was 622,000; hence the number of sheep shorn in the following Summer for the average of these five years (553,000) was 90 per cent of the total Autumn number recorded.

English Leicester, Cheviot, Lincoln, Romney Marsh, Merino and others. By 1924, according to a report by a New Zealand Sheep Inspector, Mr. Hugh Munro, Romney blood predominated in the Falkland Island flocks; but about that time some farms were introducing Corriedale sheep, a breed developed in New Zealand by crossing Lincoln and Merino. This sheep produces a finer grade of wool than the Romney, and has become increasingly popular in recent times, with the result that today most Falkland Island sheep are either Romneys or Corriedales, or a cross between the two.⁽¹⁾ A disadvantage of the Corriedale is however that it is subject to wool-blindness which leads to losses from sheep blundering into ditches which they cannot see, and also at lambing time when the ewe may be unable to see her newborn lamb and wander away from it. To some extent this can be overcome by "wiggling" i.e. removing the wool from the face of the sheep at dipping time and at intervals between then and the following shearing; whilst one large farm has contrived by selective breeding to go a long way towards producing clean-faced Corriedale sheep which are free from wool-blindness. There can be no doubt that breeding methods have greatly improved in recent years, and that the increase in the average wool clip per sheep shorn, is largely attributable to the progress that has been made in this direction.

17. In general the sheep are remarkably free from disease, the only troublesome one at the present time being Keds (locally known as ticks), against which the sheep have by law to be dipped, unless they can be certified to be completely free from the tick, which is the case with two farms - one on West Falkland and one group of smaller islands.
18. Nearly every farm has its own settlement on the sea, necessarily so, because all the wool and the farming requisites have to be carried by sea, in view of the absence of roads in the Camp. The population of the settlements ranges from less than 10 for the smallest farms to about 90 for the largest - the main settlement of the Falkland Islands Company at Goose Green in East Falkland. A settlement comprises a number of houses for married people, and a cook-house for the unmarried men who are employed on the farm. In addition there are a few isolated houses, for shepherds who live outside the settlement, and which may be from 7 miles or less to as much as 20 miles or more distant from it. Each settlement has a shearing shed, and provision for sheep dipping. The houses for the most part are of a high standard, with electric lighting, hot water and indoor sanitation.
19. For a large portion of the year the sheep live scattered over the Camp under the immediate control of the shepherds; though the extent of the control and movement of the sheep varies very greatly from farm to farm; a major concern of the shepherds is with the flocks of breeding ewes on which the lambing so much depends.
20. The stock year starts when the sheep leave the dip in March-April; i.e. autumn in the Falklands. About May 1st rams are put to the breeding ewes and left with them for about six weeks. Lambing starts in the spring,

(1)

On two farms there are flourishing flocks of Polworth sheep, an Australian breed based on Merino and Lincoln, but with a larger Merino element than is the case with the Corriedale.

(2)

There is truth in a local dictum that "malnutrition is the only major disease from which Falkland Islands sheep suffer."

about the last week in September. ⁽¹⁾ About the second week in November 'lamb-marking' takes place. The various ewe flocks are rounded up by men on horseback into pens, where lambs are counted, have their tails cut off and are earmarked for age and sex, male lambs being castrated, except those kept as rams, and bred in special flocks for the purpose. A typical breeding flock numbers about 2,000 ewes grazing in a 'camp' (large paddock) of about 10,000 acres. Lamb-marking is followed by shearing, as soon as preliminary movements of stock permit. This most important and also arduous operation (even though mechanical shearing is now virtually universal) keeps everyone on the farm, including outside shepherds, fully occupied from 1st November into February - in fact the whole of the summer months. All sheep are gathered into the settlement flock by flock from the wide expanses of each farm, which can be as much as 40 miles across. The dry sheep (all other than breeding ewes) are shorn first, followed by the breeding ewes from mid-January, the lambs being weaned as the ewe flocks are gathered. The lambs and shorn sheep are then dipped from about March 1st onwards, divided into flocks and driven to the 'camps' where they will winter.

21. Sheep farming is to a considerable extent a seasonal occupation with the maximum need for labour in the short summer months when the sheep are collected and shorn; with the result that the labour requirements all the year round are largely governed by the number who will be needed in the shearing shed. In many countries this difficulty is met by the existence of shearing gangs who go round the farms and do much of the shearing on contract. But so far it has not proved feasible to make use of this system in the Falklands.
22. According to the latest (1962) Census figures out of a total population in East and West Falkland and the adjacent islands of 1057, there were 637 males and 420 females; and there were 144 persons classified as shepherds, representing roughly one shepherd to every 4,300 sheep.
23. In general, Falkland Islands wools are of the cross-bred type, the bulk being 54s in quality, with a few finer up to 58/60s. The whole clip is sold in London by the wool merchanting firm of Jacombe Hoare & Co., at public auction; and partly because of its exceptional colour and freedom from vegetable faults it can normally command a rather higher price than similar quality wool from New Zealand and South America. The main market for Falkland Islands wool is the high-class woollen trade in the United Kingdom, and it seems specially adapted for making hand-knitted garments.
24. Taking the average of the three years 1963-65, the Colony exported annually 4,917,000 lbs of wool, with an annual gross selling value in

(1)

On some farms it has been found possible, a few weeks before lambing is due to begin, to move the breeding ewes to a paddock which has been 'spelled' (i.e. kept free of sheep) for a good many months past, so that they may be on a rising level of nutrition at the time they most need it.

London of £1,100,000, and an average annual net value to the farmer (of £957,000, after deduction of freight, commission and other charges. (1))

25. A very special role is played in the sheep farming industry by the Falkland Islands Company. This Company, which was founded by Charter in 1851, has gradually acquired and owns the freehold of nearly half (46 per cent) of all the land under sheep in the Colony. But over and above this it has almost a monopoly of the trade of the Islands. With four exceptions all the farms sell their produce through the Company, which acts as their agent for this purpose; and they buy through it the greater part of their farm requisites and other stores. The Company, through a subsidiary, owns and runs (with the aid of a mail subsidy, and a guarantee, from the Falkland Islands Government) the Royal Mail Steamer Darwin, which supplies an indispensable service for passengers and a certain amount of cargo, by monthly sailings between Montevideo and Stanley. It also charters a Danish vessel which sails four times a year between the Islands and the United Kingdom, transporting wool on the homeward journey, and on the outward journey most of the equipment, etc., needed by the farms. The Company owns the only large retail store in Stanley; and, in the absence of a commercial bank, provides some of the financial facilities associated with the operation of such a bank.

(1)

It is customary in all published figures of the value of Falkland Islands wool exports, to take the London price. But this shows the c.i.f. values, and not the f.o.b. values which are what farmers receive for their wool. The above calculation of net values is based on an average deduction of 7d. per lb from the gross selling price to cover freight, commission and other charges. After having inspected a considerable number of actual invoices, I consider that a deduction of 7d. per lb would be a reasonable figure to take in order to arrive at an estimate of net value. I have put in Appendix II a table showing the difference between the gross and net values of wool exports for the years 1959 to 1965.

Chapter III

The Fertility of the Soil

26. The natural pastures of the Falkland Islands, which are acid in composition and peat-forming, have now been grazed by sheep for a century; and they appear to have undergone a considerable deterioration during that period. One result of this is that the predominant vegetation over most of the Camp consists of White Grass (*Cortaderia pilosa*) and Diddle Dee (*Empetrum rubrum*). The former makes very poor grazing, except when it is quite young; while the latter, which may be regarded as the ecological equivalent of the British heather, is inedible by sheep: there is also a large quantity of Christmas Bush (*Baccharis magellanica*). According to William Davies⁽¹⁾ about 55 per cent of the pastures consist of hard camp, where there is usually a fair depth of soil with natural drainage; and 45 per cent of soft camp, where a relatively thin crust of soil lies on a layer of peat of varying thickness, under which is often impermeable quartzite or other rock. However, it does not follow from this that the carrying capacity of soft camp, in terms of acres per sheep, is necessarily lower than in the case of hard camp, as can be seen from the stock returns for the Darwin Farm, the greater part of which is soft camp covered with White Grass.
27. Over-grazing, combined with the former practice of burning hard camp when the soil was dry, with a view to getting rid of dead White Grass or Diddle Dee, has led to a considerable reduction in the number of sheep on the pastures from their peak of 807,000 in 1898 to about 607,000 in 1930, around which latter figures the numbers have fluctuated ever since.
28. The question then arises: What can be done to improve the fertility of the soil, and so enable a larger number of sheep to be carried successfully?
29. Writing as an economist with no special knowledge of the technical problems of sheep farming, I must rely mainly on the opinion of experts who have made detailed studies of the system of sheep husbandry as practised in the Falkland Islands. I have thought it well, therefore, to compile a short summary of some of the more salient features of their reports.
30. The first general account of sheep farming in the Falkland Islands was contained in a "Memorandum on the Sheep Farming Industry in the Falkland Islands", published in 1924, by the Governor of the time, Sir John Middleton. In this document he included in an Appendix a Report, dated 29th December 1895, by the then Chief Inspector of Stock (an office which was subsequently allowed to lapse) from which the following statements are extracts: "Sheep farming in the Falkland Islands has not progressed with the times, possibly owing to its isolated position and the smallness of the area. The sheep farmers are not, in most cases, alive to their own interests - the rams are not good - there are too many different breeds Sufficient attention has not been paid to culling and selecting ewes, and there seems to have been an idea that the more sheep there are on the ground the more wool will be clipped; such an idea is a fallacy. Sheep farmers have suffered from general unpractical management, that is, speaking in comparison with the system in vogue in the Australian Colonies. I consider that the great want here is more sub-dividing fences, which would at once increase the sheep carrying capacity of the Islands. Much might be done in many places towards improving the feed by grass sowing, especially on the Islands."

(1) William Davies: *The Grasslands of the Falkland Islands* (1939) p. 60.

31. In his Memorandum, which was brief and mainly descriptive, Governor Middleton said, inter alia, "Practically no land, which is not too exposed for winter use, is freed from stock for any part of the year. Further subdivision by fencing, it is generally admitted, would facilitate the management of the flocks and would repay the cost. Such a measure, with some modification of existing farm methods, would have the additional advantages of allowing blocks of land to be rested in rotation and the grasses to seed."
32. In the year following the date of this Memorandum (i.e. in 1924) a New Zealand expert (H. Munro, Principal District Inspector of the Department of Agriculture, New Zealand) visited the Colony and issued a "Report of an Investigation into the Conditions and Practice of Sheep Farming in the Falkland Islands". Mr. Munro was critical of most aspects of sheep farming practice as he found it in the Colony, and compared it unfavourably with parallel conditions in New Zealand. In particular he condemned in-and-in-breeding and the use of mongrel sires and ewes. Amongst his chief recommendations were: the limitation of the number of stock to what the pasture would maintain in good condition throughout the year; and the more extensive subdivision of farms by fencing, in order to enable pasture to be rested periodically. He stated categorically that, largely as a result of injudicious burning of hard camp, and over-stocking, a process of exhaustion of pastures had been operating for a long time past; and expressed himself on this in the following terms: "In place of keeping their principal intact and living on the interest, so that something will be left for posterity, the people who have owned the country during the past 60 years have been drawing steadily on their principal as represented by the soil and pastures, and now that it shows pronounced signs of exhaustion it behoves them to get to work and replenish it". He characterised this as "The paramount duty of owners of farms." One recommendation of the Munro Report, to which immediate practical effect was given, was the establishment of a Government experimental farm to carry out experiments in re-grassing and breeding. Stud sheep were imported from New Zealand, and the manager, a New Zealander, arrived at the end of 1926. But alas, two years later the farm was closed down and the stock and equipment sold - "in the interest of public economy", according to the Annual Report for 1928-29.
33. Scant attention seems to have been paid to the other Munro recommendations, to judge by the next investigation undertaken by Mr. William Davies, a Senior Grassland Investigator at the Welsh Plant Breeding Station, Aberystwyth. His Report on "The Grasslands of the Falkland Islands" dated February 1939, was the first scientific survey by a competent ecologist of the natural resources embodied in the Falkland Islands soil; and it still remains the standard work on the subject.
34. Many of Davies' conclusions were similar to those of Munro; but there was at least one major difference. Davies drew an important distinction between overstocking and over-grazing. He denied that the Falkland Islands sheep farms as a whole were overstocked, indeed, he believed that they could with advantage carry more stock; but he was emphatic that they were over-grazed and had been deteriorating in consequence. He pointed out that sheep always concentrated on those grasses which they found most palatable; hence, if they were free to roam at large over a wide area they would "eat out" the more palatable grasses and gradually exhaust them, while at the same time increasing the aggressiveness of inferior grasses or shrubs (e.g. diddle dee) which could the more easily enter into possession of the soil thus vacated.⁽¹⁾ What was needed was controlled grazing with rest periods for part of the land;

(1) Cf. Munro op. cit.: - "Nature insists that soil shall be protected by a covering of vegetation of some kind, and the experience of all countries has been that when man destroys the indigenous vegetation, and fails to replace it immediately with some other, nature will provide one of her own choosing, which is usually very inferior to that which man has destroyed."

and he was insistent that "The present system of grassland farming in the Falkland Islands is nothing short of large scale ranching." His views on the practical issues involved for the Colony may be summarised by the following extracts from the concluding pages of his Report:

35. "The time has arrived when the Falklands must consider very seriously whether the present ranching policy is to continue, or whether a complete change of methods involving a policy of grassland improvement together with a more intensive system of pastoral agriculture is to be put into effect. Continuance of the present ranching system cannot but lead to a still greater lowering of carrying capacity, and to the decreased wealth of the country as a whole"..... "Until a methodical and much extended system of sub-dividing existing paddocks is brought about, the potentialities for land improvement throughout the Colony will remain all but untapped"..... "Subdivision of paddocks, better management of pastures, and the replacement of the present herbage, by better plants, are all essentials in the development scheme."
36. Some twenty years after the Davies Report, in a general work on the Falkland Islands⁽¹⁾ Chapter 15 on Vegetation was contributed by one of the authors, Dr. D. H. Maling, himself a scientist. I have taken the following extracts from this Chapter:
37. "Human activity has altered the ecological balance considerably. The main changes have occurred since extensive methods of sheep farming became the principal economic activity of the Islands. Uncontrolled grazing and neglect of the pastures has led to a definite deterioration of the grassland and a considerable decline in the number of sheep which it can support"..... "The deterioration of the grasslands must be regarded in the light that these represent the sole natural resource of the Colony which has been exploited for more than a year or two, and that virtually the whole of the economy of the Islands is based upon the productivity of its pastures."..... "The hard camp comprises slightly more than half the total area of the islands..... Great changes appear to have occurred, particularly in the spread of heaths at the expense of the better natural grasses. These changes are largely the result of continuous grazing by sheep. Indiscriminate burning has accelerated the process in some places. Where the pastures are unfenced, as in most parts of the Falklands, the sheep naturally congregate most on the better grazing. Where this grazing is continuously stocked the more palatable plants are readily exhausted"..... "Along the coast of the Falkland Islands rather specialised plant communities have developed. The most notable is Tussac (Poa flabellata), a grass which grows to a height of five or six feet..... The importance of this plant to any live stock industry in the Falkland Islands is inestimable. Its greatest value lies in the fact that it is available during the winter and early spring, thus reducing the necessity of hay or silage for winter feeding. The fact that Tussac occurs hardly anywhere on the larger Islands must be blamed upon the bad husbandry of three generations of sheep farmers; that replanting had hitherto proved rather unsuccessful we must probably ascribe to ignorance of the soil requirements of this plant".⁽²⁾

(1) The Falkland Islands by M. B. R. Cawkell, D. H. Maling, and E. M. Cawkell (1960).

(2) Cf. Munro, op cit.: "The extent to which the large Tussac has been destroyed, particularly on the Western Island, and the total absence of any serious effort to replace the old bogs appears to me to be very regrettable. In view of the fact that this can probably be classed as one of the most nutritious grasses in the world, it is quite remarkable to see it so much neglected in a country where nutritious vegetation of any kind is all too scarce. I can assure Falkland Islands farmers that, had we similar tussac points and islands in our country we would value them sufficiently to take very good care of them."

38. Finally, Mr. A. R. Wannop, Director of the Hill Farming Research Organisation in Scotland visited the Islands during 1960-61, and produced a "Report on Visits to Falkland Islands Sheep Stations" (June 1961), extracts from which read as follows:
39. "There are at present no pastures suitable for fat lamb production".....
 "The system of sheep husbandry is extensive grazing, in the main set stocking, though slight modifications of this have been introduced on a few stations in recent years..... The general level of sheep nutrition tends to be low, and is definitely low in winter"..... "The natural pastures over which the sheep graze, usually referred to as camps, are large enclosures. Though a small number may be 1,000 acres or less, the great majority range from 5,000 to 15,000 acres, with a few between 20,000 and 30,000 acres. Under such conditions, with one sheep to five acres, sheep can exercise marked preferences in respect of the plants they eat. Obviously they take the most palatable first and only turn to less palatable ones when compelled. This is natural sheep behaviour on all extensively grazed set stocked pastures"..... "In a normal winter growth is at a standstill and the sheep, having eaten all the palatable herbage, must turn to the White Grass and similar coarser plants which were uneaten during the previous summer and so are overgrown, very fibrous and low in feeding value.".....
 "Falkland Islands natural grazings appear to provide ample evidence that there has been much deterioration."..... "Though the several methods of camp improvement being tried are all deserving of praise, they are unlikely to give their maximum result unless combined with some grazing control. In fact in the existing condition of the camps the greatest return from expenditure on improvement is likely to be obtained from money invested in subdivision. It is well established that wherever it is possible to alternate grazing and rest periods this not only prolongs the effectiveness of a grazing, but can, if well controlled, actually lead to its rejuvenation. Nearly every camp seen was in need of a rest from grazing, but this will only be possible with fencing and subdivision. It would lead to genuine camp improvement if each were divided into at least four. This would enable the sheep to be concentrated in one area with better grazing of all the herbage, especially of the coarse grass; while the other areas would be rested and the finer grass get a chance to recuperate..."..... "As was frequently pointed out, fencing and fence maintenance are costly both in money and in labour. In camp improvement, however, fencing is likely to bring a better return than any other possible expenditure, through better herbage, better utilisation of herbage, fitter ewes in winter, better lamb crops and more wool from more sheep. Five per cent more lambs per year could result in about ten per cent more sheep in five years and twenty-five per cent more in ten years"..... "The future of sheep farming under the conditions of the Falkland Islands deserves most serious consideration. An economy based on wool production only is vulnerable in conditions under which artificial fibres may in the future become highly competitive and force prices down. Methods of reducing the cost of wool production should, therefore, be continually under review, as well as the means of ensuring continued productivity under a system which is a form of extractive farming, since nothing is done at present to replace the materials removed annually in the form of wool and slaughtered sheep. Nitrogen and potash are probably the principle sufferers, since wool is the exported commodity."
40. Three main conclusions seem to stand out from a reading of the Reports from which I have quoted:-

First, there is the impressive unanimity of expert opinion that subdivision of the camps by means of fences is an essential prerequisite for any improvement in the condition of the grasslands.

Secondly, all the writers (at least since 1924) are agreed that the fertility, and carrying capacity (in terms of numbers of sheep) of the pastures, had been deteriorating and were continuing to deteriorate.

Thirdly, the evidence afforded by the most recent work - that of Maling and Wannop - shows that with few exceptions remarkably little progress had been made during the preceding forty years towards the subdivision and fencing of pastures, and other practical measures for conserving or improving the fertility of the soil.

41. Some part, but only a part, of the explanation of the apparent failure on the part of most of the sheep farmers to invest money in improving their pastures, above all by fencing and subdivision, is to be found, first in the fact that before the 1939-45 war wool prices were so low that they were not able to afford much capital outlay for this purpose. Secondly, after the war was over, when wool prices were high and money plentiful, they devoted a good deal of their high profits to building up reserves against the likelihood of bad times recurring in future; while, so far as investment in their farms was concerned, they gave first priority to a much needed but expensive improvement in the housing they provided for their employees. But this notwithstanding they both could and should have done more to subdivide their large enclosures, many of which are over 10,000 acres and quite a number in excess of 20,000 acres.
42. It would be incorrect, however, to infer from these comments, and from the extracts I have cited from previous Reports, that none of the farms have made any progress in recent years in the direction of grassland improvement.
43. In the smaller islands, with areas of only 2,000 to 5,000 acres, some measure of subdivision and rotational grazing has been imposed on the farmers by virtue of necessity. Most of these islands also are fortunate in having fairly extensive stretches of tussac grass along their coasts; and this grass affords a very valuable winter feed for sheep, provided the sheep are kept off it in the summer and autumn months. In some cases successful plantings of tussac have also been made in the past and are still continuing.
44. On the mainland, already in the 1940s, Port Howard (J. L. Waldron, Ltd.) on West Falkland was singled out in a report by the then Director⁽¹⁾ of the Agricultural Department of the Falkland Islands Government, as the farm which was doing the most constructive work towards improvement of its pastures, by subdivision and in other ways. But it is chiefly since about 1960, stimulated in some cases by the interest aroused by the publication of the Wannop Report⁽²⁾ that really active measures have been taken by a number of farms.
45. The most spectacular results have been achieved at Roy Cove (Bertrand and Felton, Ltd.) on West Falkland where, beginning in 1959 a systematic policy has been adopted of ploughing up (mainly Diddle Dee) land and re-seeding it with Yorkshire fog. It is true that in England Yorkshire fog is not regarded as a desirable grass to feed to stock; but it is a very much preferable feed when compared with White Grass⁽³⁾. It has the great advantages that it is a perennial grass which spreads once it is fully established; that it can grow well on acid soils; and that it will "take" without necessitating the use of fertilisers - and fertilisers at a cost of £40 or more a ton are out of the question for the vast acreages of Falkland Islands sheep farms.
46. I attach, as Appendix III to this Report, a schedule of results for which I am indebted to Mr. Sydney Miller, the Manager of Roy Cove. This statement shows that after nine seasons of pasture improvement, beginning

(1) Report on the Work of the Department of Agriculture 1937-46 by Dr. J. G. Gibbs.

(2) See above.

(3) The ultimate aim must be to establish legumes, especially clover; but this is very difficult to achieve without fertiliser on the acid and cold soils of the Camp.

in 1958-59, the total cost of ploughing up and re-seeding 5,120 acres was £20,937. From the fourth season (1961-62) onwards it was possible to carry additional stock as a result of the improved pastures; and it is estimated that by the end of the 1966-67 season the total increase of revenue from an extra 4,612 sheep carried will amount to £26,803. Hence by that date the whole of the capital outlay will have been more than recouped, even after allowing for interest on that outlay. The number of sheep on the farm increased from 15,812 to 20,424, i.e. by 29 per cent; and net wool production rose from an average of 127,800 lbs. for the four years prior to 1960-61 to 171,600 lbs. for the average of the two years 1965-66 and 1966-67 - i.e. an increase of 34 per cent. As at present envisaged, the programme is to work to a total figure of 10,000 acres of ploughed and re-seeded land, out of a farm acreage of 74,600. It is, however, an essential feature of the Roy Cove technique to fence off the improved areas of grassland in paddocks of suitable size; and then to control the grazing on them so as to obtain the maximum benefit from the longer period of rest which then becomes possible for the remaining unimproved areas. It is in the control of the movement of the sheep and the rotational grazing of the pastures that the quality of the management tells most. The foregoing figures show clearly that pasture improvement on Falkland Islands soil can be made to pay: though it must be borne in mind that the soil at Roy Cove is fairly good quality hard camp with little White Grass, but a great deal of Diddle Dee. But apart from the overriding need for rotational grazing and the fencing and subdivision of pastures, experience may show that the Roy Cove method will require modification in other areas if soil conditions, etc. are dissimilar.

47. In the adjoining farm of Hill Cove (Holmsted Blake & Co.) where an active policy of pasture improvement (including a certain amount of subdivision⁽¹⁾) has been in progress especially since 1960, a different technique of re-seeding from that at Roy Cove has been practised. In the five seasons 1961-62 to 1965-66, 4,490 acres have been rotavated and sown down to Yorkshire fog; and when the 1966-67 season is included, this figure is brought to a total of nearly 6,000 acres. The employment of rotavators enables a large number of acres to be re-sown over a given period, and at a substantially lower average cost per acre.⁽²⁾ On the other hand the "take" is considerably slower with rotavation than it is with ploughing, and there are also difficulties on the mechanical side. It is too soon as yet to know whether the advantages of rotavation outweigh its disadvantages; and differences in the type of soil to be treated may well have a bearing on this issue.
48. At Port Howard, with its long record of progressive management, pasture improvement has been achieved essentially by subdivision of the big enclosures, where this has proved to be possible, though a certain amount of re-seeding with Yorkshire fog and other grasses has also been done, but without ploughing-up or rotavating the soil. I have put also in Appendix III to this Report a statement for which I am indebted to Mr. D. M. Pole-Evans, the Manager of Port Howard, which shows that an area of 66,924 acres (out of a total acreage of 173,000) has been organised in four main Groups. Taking the four Groups together, they have been fenced off and divided into 21 smaller paddocks, mostly between 2,000 and 3,000 acres each in size. In order to create these paddocks, 62 miles of subdivision fencing had been erected before June 1960; while in the last six and a half years this has been increased by 54½ miles, making 116½ miles in all in respect of this section alone of the Farm. The policy underlying

(1) I understand that at the present time there are 161 miles of subdivision fencing at Hill Cove, in addition to 29 miles of boundary fencing.

(2) Roy Cove costings for ploughing and re-seeding 3,186 acres, during the five seasons 1960-61 to 1965-66, show an average annual cost per acre of £3 14s. 6d.; whereas the Hill Cove costings for rotavation and re-seeding 4,480 acres, during the same five seasons, show an average annual cost of £1 18s. 2d. per acre. But it is not clear to me whether the costs have been calculated on exactly the same basis in these two cases.

this large programme of capital investment (present day fencing costs are over £300 a mile) is based on the view that there still remain valuable indigenous and other grasses in the soil, and that properly controlled rotational grazing will enable these grasses to be maintained and indeed increased in quantity.⁽¹⁾ Moreover some of the native vegetation, such as clumps of old White Grass or Diddle Dee bushes, can provide much-needed shelter for sheep, but especially for lambs - and lack of shelter is one of the big problems of sheep farming in the wind-swept Falklands. The large flat expanses of ploughed land under Yorkshire fog at Roy Cove and elsewhere certainly look dangerously exposed; though to some extent this can be met by leaving at intervals patches of unploughed land. It is mainly for the two reasons just set out that ploughing is not favoured at Port Howard. The policy pursued there of concentrating on rotational grazing has also yielded practical results, for whereas the number of sheep carried on the farm in 1952 was 32,000, this had increased by 1966 to 38,000, though part of this increase is attributable to success in breeding clean-faced Corriedale sheep free from wool blindness.

49. The three farms mentioned so far are all on West Falkland; but there are also farms on East Falkland, for example Douglas Station (Greenshields) and Salvador (R. M. Pitaluga), both of which I have visited, where active work for pasture improvement is in progress, partly through ploughing or rotavating and partly through fencing and subdivision. Thus in Salvador, a farm of not more than 59,000 acres, $14\frac{1}{2}$ miles of fencing have been completed during the past six years.
50. The record of the long-established Falkland Islands Company, which owns six farms comprising 1,330,000 acres, is up to now a disappointing one in respect of pasture improvement: it has failed to take the lead and has lagged behind some of the more progressive farmers. I say this with regret, because in other ways, it has done much for the benefit of the sheep-farming industry in the Falklands; but also be it remembered, for itself as the largest farming body in the Islands. It is true, and the Company deserves credit for this, that it started at the end of 1956 an experiment of sod-seeding on its big farm at Darwin of nearly 400,000 acres on the Lafonia Plain in East Falkland. This consisted of drilling areas of White Grass camp with Yorkshire fog. Sod-seeding in this form went on at intervals over the next few years, until by 1960 some 11,000 acres had been sown with fog. But the immediate results were not encouraging, and the experiment was abandoned as a failure in 1960, and has not been resumed since then. Today, there are remnants of Yorkshire fog to be found in seeded areas; but as the sheep appear to have been allowed to graze over them without their being properly rested, the new grasses can never have had a chance to seed themselves and expand their hold on the soil. The record of the Company with regard to one crucial aspect of pasture improvement - the subdivision of the large enclosures into smaller and more manageable paddocks, with its corollary of rotational grazing - is not at all impressive. In recent years, between 1962 and the end of 1965, it has only carried out, according to its Annual Reports, a total of $44\frac{1}{4}$ miles of subdivision fencing; though it should be added that a small amount of subdivision of this kind was in progress in the 1950s. But this figure of $44\frac{1}{4}$ miles, when related to an area of 1,330,000 acres, does not contrast well with the $54\frac{1}{2}$ miles erected since 1960 at Port Howard for an area of 67,000 acres, or with what has been accomplished in some of the other more progressive farms. Since the Falkland Islands Company alone owns 46 per cent of the land of the Colony, and since there are known to be a number of other

(1) One further big advantage of closer subdivision of pastures is that it gives the shepherd a worth-while job to do - one that is practicable and manageable. For the shepherd is enabled to keep track of his sheep and to know what is happening to them.

farms which as yet have very little to show in the way of pasture improvement, the conclusion would appear to be that there is a majority of sheep-farming land in the Falkland Islands which is still, in effect, being ranched in the old way. (1)

51. I have given much thought as to possible ways in which those farms, which are not actively engaged in improving their pastures, might be induced to undertake this process; and I make a recommendation, with this object in view, in Chapter VII of my Report, which deals with the Public Finances of the Colony (see paragraphs 88-93 below).

52. In 1964, following on a recommendation of the Wannop Report, the Falkland Islands Government appointed a qualified Grasslands Officer, who arrived in the Colony in February 1965, on a three-year contract. He has been active in establishing experimental plots in different parts of the Islands, and a number of farmers have found his assistance and advice of very real value. In July 1966 he organised a successful and well-attended Conference on Grassland Improvement, which served a useful purpose in enabling farmers to describe the progress they themselves were making, and to exchange views with their colleagues on other farms. (2) Much of the experimental work that he has carried out (so far, it is true, largely with negative results) is still in its very early stages, but it could well have an important bearing on the future of this industry; and if the results of his efforts are not to be wasted, it is highly desirable that an expert and trained eye should keep watch over them and draw correct conclusions from them. Moreover, at a time when individual farmers are trying out new methods very much on a trial-and-error basis, and when there is a ferment of fresh ideas, notably among some of the younger Managers, there is a real need for competent outside opinion and for the co-ordination of results. The present Grasslands Officer has been operating under difficult, and at times frustrating conditions; and I am not clear that when his tenure comes to an end in 1968, the wisest solution would be an appointment to fill precisely the same post. I am convinced, however, that research into improvement of the Falkland Islands grasslands should not be allowed to lapse; and I would recommend that the Government of the Falkland Islands should, without delay, approach the Agricultural Research Council (3) with the request that it should send a senior expert to the Colony to give advice as to the best ways, in which effective research on grassland improvement there, should be organised in future.

(1) I understand that the Falkland Islands Company has recently decided to try out three different methods of grassland improvement during the next two or three years: ploughing and re-seeding; rotavating and re-seeding; and direct re-seeding by a new type of machine. It is proposed to re-seed in all from 2,000 to 5,000 acres on different soils on some of its farms. This is the sort of experiment which might produce instructive results; and it shows a very welcome, if belated, change in the policy of the Company.

(2) This is the kind of action which one might have expected to find sponsored by the Sheep Owners Association; and I regard it as a matter for regret that this Association should appear to be content with its existing role of negotiating wages and conditions of employment on the Camp with the Trade Union, and that it should be so little active where the wider interests of the sheep farming industry are concerned.

(3) This could presumably be done through the Ministry of Overseas Development.

53. Finally, there is a matter in connection with pasture improvement on which I would like to make a brief comment - namely the question of cattle. Most of the sheep farms keep only a small number of cattle, sufficient to provide fresh milk and butter, but not much more. On the other hand, there is a strong body of opinion in most sheep farming countries that cattle, with their wider mouths can be usefully employed as "scavengers," to eat down the coarser grasses after the sheep have finished their feeding and been moved to another paddock. Cattle also contribute to consolidate the soil. There are, however, obstacles in the way of keeping numbers of cattle on the Falkland Islands farms. First, there is the problem of keeping them alive during the winter, given the difficulty of providing winter feed for them. Secondly, most of the fencing on the farms is only a little over three feet in height, and cattle can jump over the fences or break them down. Thirdly, most shepherds are knowledgeable about sheep but have little expertise in the handling of cattle. None of these obstacles is necessarily insurmountable; and it is worthy of note that at Port Howard, where they are used effectively as scavengers, the ratio of cattle to sheep in 1965-66 was approximately 1 : 33 sheep, whereas in the remainder of the farms the ratio was 1 : 60 sheep, on average. As pasture improvement progresses and the supply of feed grows larger, there would seem to be a good deal to be said in favour of increasing the number of cattle, partly because of the contribution they can make to pasture improvement itself; and partly in view of long term possibilities of building up a meat industry in the Falklands. Accordingly I recommend this for the consideration of the sheep owners. It may also be observed in this latter context that there is no shearing bottle-neck as is the case with sheep, and a cattle farm would require less labour round the year than a sheep farm; though cattle rearing for beef could only be regarded as a very long term possibility.

Chapter IVThe Prospects for Diversification of the Economy

54. On numerous occasions in the past, attempts have been made to introduce new industries into the Colony, in the hope of lessening its dependence upon the production and export of the single commodity, wool. One and all of these attempts have ended in failure, and the Falkland Islands remains a classic example of what is sometimes termed "mono-culture".
55. In the late 1880's and first half of the 1890's sheep carcasses were shipped to London in a refrigerating vessel; but the trading proved commercially unprofitable, and no more carcasses were shipped after 1895.
56. Later in 1911 a mutton canning factory was opened at Goose Green in East Falkland, and prospered, especially during the war years when meat was scarce in the United Kingdom and prices high. But when more normal conditions returned, and prices slumped in 1921, the factory had to be closed down, and has not since been re-opened.
57. Many other possible forms of diversification have been canvassed at different times - for example the construction of a soap factory for using tallow from sheep carcasses; or a glass factory based on fine quality sand found on some of the Island shores; or the extraction of alginates from the kelp on the beaches, etc. But on closer investigation (and they have been closely investigated) none of them has appeared sufficiently promising to warrant the investment of either private capital or the funds of the Colony in their promotion. In general, it must be borne in mind, first, that there is no surplus of labour available to man a new industry; indeed, sheep farms themselves are short of labour. Secondly, that the distance of the Falkland Islands from most of its potential markets is such that only a product with relatively high value in relation to its bulk would be able to withstand the cost of freight. Thirdly, that the quantities offered and the regularity of supply would need to be sufficient to warrant the provision of the shipping required to carry the product to its market. As an illustration of the significance of this last consideration, I have been told that a South American firm had recently expressed willingness to send a ship to the Falkland Islands to collect carcasses of sheep and transport them to the mainland for processing. But it finally transpired that the number of carcasses that would be needed to make the project viable was much greater than the farms could possibly supply, so the scheme came to nothing. Fourthly, that the only fuel available is peat and that this would make the processing of raw materials difficult if not impossible.
58. The latest of a succession of disappointments relates to a laudable attempt by the Falkland Islands Company to establish a Mink Farm in the hope that this might provide a new and profitable industry for the Colony. The farm was started in Stanley in 1959 and appeared to prosper at first. But unfortunately it was found that the mink would not breed in sufficient quantity; and the scheme had to be abandoned as a failure in 1966, with a loss to the Company of a large sum of money.
59. There are two other possibilities which are sometimes discussed in connection with diversification, namely, fishing and the tourist trade; but neither of these in my opinion holds out much hope of success on a scale that would make any appreciable difference to the economy of the Falkland Islands. So far as fishing is concerned it is quite likely that there are fish in plenty in the sea; though the waters round the Islands have not been surveyed to ascertain whether this is so. But even if sufficient are there, it does not follow that the exploitation of these natural resources would need to be land-based on the Falklands; and it seems more probable that, as in the case of pelagic whaling, the factory ship would prove to be the most economic method of reaping a harvest from

the sea. I am also not optimistic as to the likelihood that the tourist trade will prove to be of any considerable economic importance for the Colony, in view of its remoteness, the climatic conditions, and the absence of any very spectacular and readily accessible attractions. Doubtless the building of roads, hotels, etc., would remove some of the present deterrents to tourist traffic; but it is difficult to conceive that this could justify the very large capital investment that would be involved in the provision of such amenities.

60. I have left to the end what would seem to be a remaining possibility, and one which would have the big advantage of being based on the already existing industry of the country, the rearing of sheep for wool. I have referred already to two previous attempts to diversify the economy, by the canning of sheep, and by the export of carcasses, both of which ended in failure. But the biggest disaster of all arose out of a well-intentioned but badly executed project for installing a freezing plant to enable the export of frozen mutton.
61. From time to time in the past, proposals had been made (e.g. by Governor Middleton in 1923, and Governor Henniker-Heaton in 1939) for the establishment of a freezing plant in the Islands; and finally in 1947 the Colonial Development Corporation undertook at the request of the Falkland Islands Government to finance and build a freezer. Unfortunately at that time there was friction between Government and the Falkland Islands Company; and an offer by the latter of a site at Goose Green, where the old canning factory still stood, was rejected in favour of a site at Ajax Bay in San Carlos Waters, East Falklands, which appeared to have the advantage of being centrally situated, but which turned out later to have other more important off-setting disadvantages. Work was begun in 1949, and was not completed till 1953, by which time it had cost about £450,000, a sum vastly in excess of the original estimate; and, moreover, the layout of the plant was thoroughly unsatisfactory. The factory was designed to process about 30,000 sheep during the first year of full operation, rising to some 50,000 by the fifth year; and there was also to be a substantial throughput of cattle. As events however were soon to show, the capacity of the factory for economical working, was much greater than the number of sheep which the farmers found themselves able and willing to bring in on the hoof or by boat for slaughter. In the first year of operation not more than 14,000 sheep were forwarded; and these were for the most part of poor quality - 25 per cent had to be rejected outright. In 1954 the number of sheep delivered was only slightly larger at 17,000 and again the quality was indifferent. When the farmers were asked in 1955 to estimate their future deliveries, they were not prepared even to guarantee the maintenance of the 1954 scale of deliveries; nor could they hold out expectations of substantial improvement in quality. Under these conditions the operation of the freezer was hopelessly uneconomic; and after some vain attempts to get the local community to take over responsibility for running the plant, there was no other alternative than to close it down, and to sell off such items of equipment as possessed a market value. It cannot be said that anyone emerged with much credit from what the Colonial Development Corporation, in one of its annual reports itself described as this "sorry story" - neither Government, which was reluctant to accept advice or criticism from within the Islands; nor the farmers whose co-operation left much to be desired; nor the C.D.C., which made many very bad mistakes in the planning, construction and administration of the scheme.
62. Quite apart from the errors which wrecked the Ajax Bay Freezer I am of opinion that the whole scheme was really premature, in the sense that considerations of both quantity and quality demanded that improvement of the pastures should precede the development of a trade in frozen meat. With regard to quantity, the supply of carcasses must be such as to make it worth-while for someone to provide the necessary shipping: while as to quality, the high cost of freight would seem to render dubiously profitable the export of low grade mutton which when marketed will only fetch low prices. But to be able to compete with New Zealand in the trade in frozen or chilled fat lambs for the British market, would involve

considerable changes in the structure of the existing sheep farming industry, including possibly also in the breed of sheep. In any event, much must turn on the future price of wool. So long as it is profitable to export wool, there would seem to be little inducement to go over to meat. It is true that a small freezer (not on the Ajax Bay scale) might enable advantage to be taken of the fact that wool and meat are joint products of the rearing of sheep; and a profitable export of meat, in addition to wool, would increase the revenues of the farmers and of the Colony. But this raises again the question of quantity in relation to shipping services; and there is also the problem of the shortage of labour which is only barely sufficient to enable the industry to be run on its present lines.

63. My own opinion is that, for the time being, the Sheep Farming Industry in the Falklands would be well-advised to concentrate its efforts on improving the pastures; but that it should keep always in mind the possibility that at some stage the scales may be tipped in favour of meat rather than wool. In this connection it is perhaps relevant to note that, according to what appear to be well-informed reports, some of the big sheep farming enterprises in Australia and New Zealand are in process of moving into cattle rearing, on the ground that beef is not exposed in the same manner as wool to the threat of synthetic substitutes. An appreciable decline in wool exports (at present of the order of 900,000 tons a year) from these two countries, could help to firm the market for Falkland Islands wool, the output of which (about 2,000 tons a year) is negligible in relation to the world trade in wool.

Chapter V

The National Income and the Balance of Payments

64. With the assistance of the Treasurer, I have compiled the following table showing the movement of the National Income of the Falkland Islands for the years covering 1959 to 1965; though it was not possible to provide figures for 1961 and 1962 because the data relating to Personal Incomes and Company Profits in those two years had been destroyed:

	1965	1964	1963	1962	1961	1960	1959
London Average Wool Price	48.05d	57.06d	56.00d	47.05d	48.1d	46.75d	47.94d
Personal Incomes	£ 718,078	£ 634,140	£ 583,825	£ Not available	£ Not available	£ 581,072	£ 532,026
Company Profits	255,075	458,345	464,413	Not available	Not available	272,764	284,999
Dependencies Contribution	10,000	10,000	10,000	10,000	10,000	10,000	10,000
Government Investment Income	31,000	31,000	35,948	31,141	26,842	23,999	24,000
Reimbursement from Savings Bank	2,000	2,000	2,000	1,000	1,000	1,000	1,000
Colonial Development and Welfare, and Overseas Aid Service	23,777	11,928	7,371	7,855	16,419	28,996	4,250
House Rents	2,951	2,168	2,016	2,033	2,052	1,846	1,714
Crown Lands rents	384	291	642	702	771	615	571
Surplus funds Falkland Islands Freezer Company	3,669	-	-	-	-	-	-
Total National Income	£1,046,934	£1,149,872	£1,106,215			£920,292	£858,560
National Income per head	£ 503	£ 547	£ 514			£ 433	£ 400

65. I have placed at the head of the table the London wool price, because of the over-riding significance of this price for the levels of Company Profits, which constitute an important element in the formation of the National Income. Thus in the years 1963 and 1964 when wool prices were respectively 56.00d and 57.06d per lb, the corresponding figures for Company Profits were £464,413 and £458,345; whereas in 1965, when the wool price had fallen to 48.05d, Company Profits declined to £255,075. In the light of this decline in profits, the increase in Personal Incomes from £634,140 in 1964 to £718,078 in 1965 seems surprising, but I have been unable to discover any satisfactory reason to account for this.
66. The national income per head, which was over £500 a year during the three years 1963-1965, is high, and falls only a little short of the per capita income in the United Kingdom.
67. In order to arrive at an estimate of the balance of payments, it was necessary first to calculate total expenditure within the Colony. For this purpose I have added to the values of the different categories of imports⁽¹⁾, such customs duties as are levied on these - i.e. the duties on alcohol and tobacco. A varying range of mark-ups has then to be applied to the different categories of imports so as to arrive at the prices paid by their purchasers. Finally the value of any domestic production that is sold within the Colony has to be included - and here it is only mutton for domestic consumption which comes in question. With the aid of such information and advice as has been available to me, I estimate that the expenditure of the people of the Falkland Islands within the Colony was of the order of £645,000 in 1963; £700,000 in 1964 and £660,000 in 1965. If these figures are deducted from the National Income figures, as shown in the foregoing table, the result is a "favourable" balance of payments of the order in round figures of £460,000 in 1963, £450,000 in 1964 and £390,000 in 1965. I wish, however, to express a warning that my estimates of expenditure are unavoidably based on partial and incomplete data, and must be regarded as subject to a considerable possible margin of error - I am myself inclined to believe that the expenditure estimates I have given may be if anything on the high side, which would make the transfer of funds out of the Colony even greater than I have shown.
68. At first sight it may appear surprising that there should be so large a gap between aggregate income and aggregate expenditure; but the explanation lies in the nature of the Falkland Islands economy. Most of the sheep farms are organised as companies; and irrespective of whether the companies are public (as in the case of the Falkland Islands Company, Holmsted Blake and Company and Packe Brothers and Company) or private as is the case with all the other companies, the great majority of the shareholders live abroad and receive their dividends outside the Islands. There are two other factors which are very relevant in this connection: first, there is the absence of investment opportunities within the Colony, with the result that all private or corporate savings - i.e. all surpluses of income over expenditure, including undistributed profits - are normally remitted abroad. It is true that there exists a Government Savings Bank which has assets of over £1,250,000, but these assets are in fact held in the form of overseas securities, and the same holds good unavoidably for other Government funds. Apart from the sheep farms, in which only the proprietors themselves can invest, and from a small amount of house property in Stanley, there are no openings on any scale for the productive employment of funds in the Falklands. Secondly, the fact that opportunities for expenditure, such as exist in Great Britain, are available in a more limited form in the Falkland Islands, means that the total volume of saving is relatively large in the latter; and, as I have stated earlier, savings out of income, even when realised by those domiciled in the Colony are normally transferred abroad⁽²⁾. These considerations point to the conclusion that even if most of the shareholders in sheep farming companies did live in the Falkland Islands there would still be a large annual outflow of funds.

(1) Imports, which are of the order of £500,000 a year, come as to about 80 per cent from the United Kingdom.

(2) A special cause of foreign remittance is in respect of children being educated abroad. It is estimated that for the average of the three years 1964-66, remittances on this amounted to about £16,700 annually.

Chapter VI

The Standard of Living and Levels of Remuneration

69. As might be expected from the National Income of the Falkland Islands, the standard of living in general is high. One indication of this is to be found in the fact that there are more motor vehicles (apart from farm tractors, etc.) per head of the population than in any other country in the world, including the United States. About one-third of the 930 motor vehicles are Land Rovers or Jeeps, and another third motor cycles - this despite the fact that with the exception of the township of Stanley, there are no roads, and travelling over the Camp is very rough going. In one of the farms I visited, half the farm workers owned either a Land Rover or Jeep or a motor cycle; and it is not uncommon to find a man owning two motor cycles.
70. The farm workers' houses, mostly built of wood with corrugated iron roofs, reveal a high level of comfort, with hot water, indoor sanitation, and usually electric light, though in this latter respect the Falkland Islands Company appears to have lagged somewhat behind the other farms. Wherever I visited homes I found wireless sets, washing machines, and other modern equipment.⁽¹⁾
71. In the Camp, in addition to his basic wage and other earnings in the form of money, the farm worker receives free housing, free meat, free milk, and free fuel, though he has to cut his own peat but is paid for cutting it. As a consequence of these payments in kind, the cost of living is markedly lower than in Stanley and has also risen less. Thus taking 1948 as the base year, and equating the then ruling retail prices to 100, the figure for the cost of living in Stanley for the average of 1966 was 202, but in the Camp only 169.
72. Wages, both on the farms and in Stanley have been increased very considerably in recent years, and improvements have also been made in many other conditions of employment. In 1948 the general farm worker's (navvy's) basic rate was £6 a month, together with a cost of living bonus; and his wage also included a prosperity bonus which was related to the price of wool. At intervals thereafter there were increases in the basic rate, and from time to time cost of living bonuses were consolidated into that rate. In 1961 the consolidated rate for general farm workers (navvies) was raised from £20 2s. 6d. to £27 per month; and, as part of the agreement the prosperity bonus (which contained features which the trade union side disliked) was abolished. In 1964 the basic monthly rate for the navvy was put up to £32 8s. Od., to which was attached a monthly addition to meet

(1)

The absence of purchase-tax or import duties on such things as wireless sets, tape recorders, washing machines, etc., and their high value in relation to their bulk, makes them cheaper than in the United Kingdom; while the converse holds for such articles (also tax-free) as packets of breakfast cereals or toilet rolls.

risers in the cost of living. The latest agreement, arrived at after much negotiation in September 1966, left the basic rate unaltered, but re-instated an amended form of prosperity bonus; ⁽¹⁾and also introduced an eight-hour day for certain stock work, including shearing.

73. In the case of Stanley, the wage system is quite different, as befits an urbanised community, and the workers there are on hourly rates. Here too there have been substantial advances in the level of wages, e.g. from 1s. 2d. an hour in 1948, for the general labourer's rate, to 2s. 10d. in 1958; 3s. 5d. in 1965; and 4s. 6d. in 1966, equivalent to £10 2s. 6d. a week. Both in the Camp and in Stanley there are differentials for the more skilled grades of labour.
74. The negotiation of terms and conditions of employment in the Falkland Islands has some unusual features which reflect the structure of the economy. All categories of labour, whether in the Camp or in Stanley are organised in a single trade union, the Falkland Islands General Employees Union, ⁽²⁾which has a membership of about 550, a good quarter of the entire population; and has, as its officers a President and a full-time General Secretary. In July of each year (mid-winter, when activity on the farms is normally at its lowest level) representatives of the Sheep Owners' Association meet together with the Union in Stanley to negotiate an agreement for the Camp workers for the coming year. In the following October representatives of the Government and of the Falkland Islands Company (the two largest employers in Stanley) meet the Union to negotiate a similar agreement appropriate to Government, port, and other employees in Stanley. I have heard some criticism of the timing of these two separate sets of negotiations; and it seems to me that consideration might be given to the feasibility, and desirability (or otherwise) of making these meetings follow more closely upon one another than is the present practice.
75. Although the general trend of wages and conditions of employment in the Falkland Islands has not differed much from that in the United Kingdom, I understand that there has been no endeavour on the part of the Union to relate wage or other claims in any direct way to what was taking place in this field in the United Kingdom; but rather to have regard to the special circumstances and requirements of the Colony itself. Thus the British wage freeze following on the crisis of July 1966 did not lead to any stand-still of wage movements in the Falkland Islands. Industrial relations in general in the Falklands appear to be satisfactory; and both sides have shown willingness to reach agreement by mutual compromise without having recourse to industrial warfare.

(1)

In its present form this bonus starts from a floor price of 45d. (gross) per lb; and an addition of 12½ per cent is made to the basic monthly wages in 1967 for every 1d. by which the average wool price during 1966 has exceeded 45d. There is no deduction from the basic wage if the price falls below 45d.

(2)

The union, which was founded in October 1943, was originally called the Falkland Islands Federation of Labour, but later adopted its present name.

76. In any consideration of the adequacy of the ruling wage levels in the Colony, regard must be had to a number of important facts. First, the nominal basic wage is by no means the same as the earnings of the employees. In Appendix IV I have set out a selection of actual wages and earnings of individual farm workers during the year 1966, extracted from the wage books of a number of farms. It will be seen from the figures given there that "extras" may raise earnings by as much as 50 or even 100 per cent or more above the basic wage. In the Camp there are many operations which can be done on contract (notably shearing, fencing, house-painting, etc.) which afford an opportunity of augmenting the basic wage; and extra earnings can arise from overtime payments; there are also increments for long service.⁽¹⁾ One farm (Port Howard) in an endeavour to give more attractive terms to those whom it is seeking to recruit from the United Kingdom, offers them a guaranteed wage, which in March 1967 was some £70 a year higher than the basic rate.⁽²⁾ Almost all the farms have Provident Funds, with large sums standing to the credit of their employees; and some farms have also Pension Funds for long service employees, on their retirement. In Stanley, too, where there is at the present time an acute shortage of labour, there are considerable opportunities for earning additional money; and I was told of workers there with a basic wage of £500 a year, who were in fact earning fully £800.
77. Secondly, as I have mentioned already, the farm worker receives, in addition to his cash earnings, free housing, free meat and milk, and free fuel; and these items enter most materially into his real income. In Stanley, most workers have small gardens in which they grow their own vegetables; and, as the retail price of mutton for some years past has been only 7d. per lb., at least a part of a household, food requirements can be met at relatively low cost. Peat, the only fuel available for heating and cooking, is also free, but has to be cut and carted.⁽³⁾
78. Thirdly especially in the farming settlements where the cost of living is low, and where there is little on which to spend money, apart from the rather restricted supplies of household requirements and beverages stocked by the settlement stores, there is plenty of scope for saving quite considerable sums of money, if this is what a worker sets himself out to do. An inspection of farm accounts show that sums of £100 or more a year are

(1) In addition, farm workers are entitled to free passage to the United Kingdom, as follows: contract workers, at the end of their four-year contract. Other farm workers, if, after not less than 5 years service, a man pays his own passage to the U.K., the Farm will pay his passage back to the Falklands, and his wife's, if married. If, after return to the Falklands, he works for the same Farm for a further two years, the Farm will refund the cost of his passage to the U.K., and his wife's where applicable. (The cost of a single passage to the U.K. is of the order of £160, according to the route).

(2) The undertaking reads as follows: "Provided the contract runs its full term [four years] we undertake that while working on the Farm your income from all sources shall not be less than £44 per month, and we will pay you on leaving any difference between that figure and the amount you have received."

(3) For the elderly in particular in Stanley there is a very real peat problem, which can cause hardship in individual cases.

often saved; and I have been told that a bachelor living in the cookhouse could put by as much as £400 to £500 in a single year. Moreover, the extensive acquisition of such things as motor cars and motor cycles, wireless sets, tape recorders, washing machines, etc., testifies to the possibility of accumulating very substantial surpluses over and above necessary living expenses. Another indication of the volume of saving in the Colony as a whole is afforded by the deposits in the Government Savings Bank, which increased from £1,015,180 in 1961 to £1,293,000 in 1965; although not all those deposits represent saving in the proper sense of the word, as it also does an appreciable amount of current account business, owing to the absence of a commercial bank.

79. Finally, I would emphasise that the prosperity of the Falkland Islands as a country, and therewith the standard of living of its people, depend chiefly upon three main factors: the ability and enterprise of the farm managers; the numbers and quality of the employees on the farms; and the world price of wool.

Chapter VII

The Public Finances

80. Financially, the Colony stands, and has long stood, on its own feet. Over the years it has been able to balance the budget from its own resources, without needing, unlike so many other of Britain's colonial possessions, to be subsidised by the British tax-payer; although from time to time in recent years it has received subventions from the Colonial Development and Welfare Fund for capital purposes, such as the improvement of Stanley roads and the provision of an up-to-date small vessel for internal communications within the Islands. There is no Public Debt; and in fact it obtains quite a useful revenue from interest on its accumulated funds. Most of the revenue is derived from the taxation of income and profits, and from customs duties on alcohol and tobacco. There is no purchase tax, and the only other customs duty is a small levy on the importation of matches.

81. The financial state of the Colony since 1959 can be seen from the figures in the following table:

	Ordinary Revenue £	Ordinary Expenditure £	Revenue Surplus or Deficit	
			£	£
1958/59	288,154	262,352	25,802	
1959/60	284,367	242,959	41,408	
1960/61	237,486	247,978		10,492
1961/62	258,340	284,550		26,210
1962/63	293,426	317,376		23,950
1963/64	285,941	320,758		34,817
1964/65	384,624	327,508	57,116	
1965/66	410,054	365,270	44,784	
	<u>£2,442,392</u>	<u>£2,368,751</u>	<u>£169,110</u>	<u>£95,469</u>

82. For the period 1958/59 to 1963/64 there was little change in the total annual receipts, but there have been substantial increases during the last two years, owing to good prices for wool (56d in 1963 and 57d in 1964); to an issue of postage stamps which attracted buyers from other parts of the world; and, in the case of 1965/66, to a big increase in the yield of the import duty on spirits, the rate of which had been doubled in 1965. The Ordinary Revenue and Expenditure are supported by a Reserve Fund which stood at £102,245 at 30th June 1966; and there was also an accumulation of surplus revenue amounting to £82,828 at that date.

83. In considering the individual items which make up the total of Ordinary Expenditure, it is of interest to note that in 1964/65, when this amounted in all to £327,508, just over half this amount was accounted for by the following five items:

	£
Aviation	18,708
Education	44,178
Medical	36,669
Posts and Telecommunications	48,724
Electricity	17,261
	<hr/>
Total	= 165,540

Of the expenditure on these items, just under half (£74,544) was covered by revenue received in respect of Aviation, Electricity and Posts and Telecommunications. These are highly important services which Government provides for the Colony as a whole, and not least for those who live in the Camp. I would add that the high proportion of the national income which is absorbed by Government expenditure (roughly 30 per cent) in 1964/65, is due essentially to the fact that a population of only about 2,000 persons in all (no larger than a medium-sized English village) has to finance its own medical, educational and other necessary services, which in England would be provided by the Central Government or by the nearest town.

84. During the same period, 1958/59 and 1965/66, capital expenditure amounted in total to £210,259, financed as to £72,906 from the Colonial Development and Welfare Fund; while the remainder came from the Islands' own resources. The Colony has a Development Fund, mainly derived from the proceeds of the sale of Crown Lands to the sheep farmers, which stood at £324,159 on 30th June 1966; and it is estimated that by 30th June 1968 there will still be an uncommitted balance in this Fund amount to £183,000.
85. One conclusion that can be drawn from this general picture of the finances of the Colony is that the present expenditure level can be financed so long as wool commands a price which is over 50d per lb. In any year in which it falls below 50d, there is liable to be a deficit; and in the face of the continuance of rising prices and costs in a community whose economy is so closely linked with that of the United Kingdom, there can be little expectation of a reduction in the major items of expenditure; indeed rising standards (e.g. in education) are more likely to lead to larger expenditure in the future.
86. Hence the budgetary situation of the Islands remains a precarious one, with only small margin to meet adverse circumstances, in particular the contingency of a fall in the world price of wool. The most important contribution that the Colony could make to the solution of this problem would be to find ways of increasing the production of wool. Regarding it in terms of simple arithmetic, it would seem that if the budget can be comfortably balanced when 5 million lbs of wool are sold at 55d per lb, then the same result should be obtained if 6 million lbs were produced and sold at 46d per lb. As I have pointed out earlier in Chapter II (paragraphs 13-14), the quantity of wool produced today is virtually the same as it was at the beginning of the present century; while the number of sheep on the farms has shown a marked decline; and there is evidence pointing to a deterioration of soil fertility over the years. In Chapter III (paragraphs 45-49) I have shown that a small number of farms have been actively engaged in recent years in pasture improvement, by such methods as subdivision and rotational grazing, ploughing up and re-seeding, etc., which have resulted in those farms being able to carry more sheep and produce additional wool. But it is still only a minority of farms to which this applies; and on the remainder little appears to have been done so far along these lines.

87. I consider it imperative that the Sheep Farming Industry throughout the Falklands should participate in the work of pasture improvement, which will be for the ultimate benefit of the Colony as a whole, as well as of the farm owners themselves. What is needed now is to find an appropriate form of inducement which will help to achieve this end.

88. For this purpose I make the following recommendations:

- (i) The existing rate of Profits Tax should be raised from 2s. to 4s. in the £.
- (ii) In conjunction with the doubling of the rate of Profits Tax an Investment Allowance⁽¹⁾ should be introduced in order to enable capital investment for pasture improvement to be set off against the additional 2s. in the £ Profits Tax.
- (iii) The Investment Allowance would operate after computation of Profits Tax at 4s.
- (iv) The Investment Allowance should be calculated by reference to a specified percentage of profits to be allocated, in principle, to approved schemes of grassland improvement. (I set out in paragraph 90 a number of examples to illustrate how this would operate.)
- (v) There should be a limit to the amount of the claim that could be made in any one year, so that the Profits Tax assessment would not fall below what would have been paid had there been no increase in Profits Tax and no approved investment.
- (vi) Unsatisfied claims, i.e. claims otherwise entitled to Allowance, but disallowed under clause (v), should be carried forward.
- (vii) Provision should be made for past expenditure, as from some specified date (say 1960) to be brought into account for the purpose of qualifying for an Allowance.
- (viii) Provision should be made for exemption from the increased rate when corporate bodies or persons could not, owing to the nature of their business, qualify for an Investment Allowance.
- (ix) The type of investment that would qualify for an Investment Allowance would need to be carefully defined.

89. I wish to make it very clear that the purpose of the proposed increase in the rate of Profits Tax is not to raise additional revenue now for the Government, but to strengthen the foundations for increased production in the future. In fact the smaller the immediate additional revenue the more successful will the scheme have been in achieving its objective. If it is successful it will increase the wealth of the Colony as a whole, and in the process will help to stabilise Government revenue; offset adverse effects of possible future reductions in the price of wool; and meet the increase in recurrent expenditure on the salaries of employees in the Public Service, which will result in due course from the acceptance in March 1965 of the proposals of the Gleadell Report.

(1)

This would be an outright allowance, not a depreciation allowance.

90. The following examples show how the scheme would operate under different assumptions: (1)

A. Where the proportion of Profits deemed to be allocated to Grassland Improvement is $\frac{1}{4}$

Profit (assumed for illustration) ..	£12,000
Profits Tax at 4s.	£2,400
Capital Expenditure subject to Investment Allowance	£4,000+
Investment Allowance at 6s.	£1,200
Tax Assessment	£1,200

In this case the whole of the additional tax is offset and the tax-payer's liability remains as before at £1,200, i.e. 2s. on £12,000.

B. Assuming the proportion of $\frac{1}{4}$ of the Profits, as before:

Profit	£12,000
Profits Tax at 4s.	£2,400
Capital Expenditure subject to Investment Allowance	£6,000
Investment Allowance limited to	£1,200
Tax Assessment	£1,200

This would leave £2,000 capital expenditure to be carried forward to the following year as offset against additional Profits Tax in that year.

C. Assuming the proportion of $\frac{1}{4}$ of the Profits, as before:

Profit	£12,000
Profits Tax at 4s.	£2,400
Capital Expenditure subject to Investment Allowance	£2,000
Investment Allowance at 6s.	600
Tax Assessment	£1,800

Here the failure to invest $\frac{1}{4}$ of the profits in approved expenditure results in an increased tax liability of £600, i.e. the difference between £1,200 and £1,800.

(1)

The examples given in this paragraph assume that the profits are in excess of £12,000; and they would need modification if the profits do not exceed £12,000.

D. Where the Proportion of Profits deemed to be allocated to Grassland Improvement is $\frac{1}{4}$

Profit	.. .. .	£12,000
Profits Tax at 4s.	.. .. .	£2,400
Capital Expenditure subject to Investment Allowance	.. .. .	£3,000
Investment Allowance at 8s. on £3,000	.. .. .	£1,200
Profits Tax Assessment (as previously)	.. .. .	£1,200

Here the additional tax is wholly offset by the Investment Allowance.

E. On the same assumption of $\frac{1}{2}$ of the Profits:

Profit	.. .. .	£12,000
Profits Tax at 4s.	.. .. .	£2,400
Capital Expenditure subject to Investment Allowance	.. .. .	£6,000
Investment Allowance limited to	.. .. .	£1,200
Profits Tax Assessment (as previously)	.. .. .	£1,200

This would leave £3,000 of capital expenditure to be carried forward to the following year.

F. On the same assumption of $\frac{1}{5}$ of the Profits:

Profit	.. .. .	£12,000
Profits Tax at 4s.	.. .. .	£2,400
Capital Expenditure subject to Investment Allowance	.. .. .	£2,000
Investment Allowance at 8s.	.. .. .	800
Profits Tax Assessment	.. .. .	£1,600

Here the increased tax liability under the scheme would be £400, i.e. the difference between £1,200 and £1,600.

G. Where the Proportion of Profits deemed to be allocated to Grassland Improvement is $\frac{1}{5}$

Profit	.. .. .	£12,000
Profits Tax at 4s.	.. .. .	£2,400
Capital Expenditure subject to Investment Allowance	.. .. .	£2,400
Investment Allowance at 10s.	.. .. .	£1,200
Profits Tax Assessment	.. .. .	£1,200

Here the increase in the Profits Tax is completely offset by the Investment Allowance.

H. On the same assumption of 1/5 of the Profits:

Profit	.. .. .	£12,000
Profits Tax at 4s.	.. .. .	£2,400
Capital Expenditure subject to Investment Allowance	.. .. .	£6,000
Investment allowance limited to	.. .. .	£1,200
Profits Tax Assessment (as previously)	.. .. .	£1,200

This would leave £4,800 of capital investment to be carried forward to the following year.

I. On the same assumption of 1/5 of the Profits:

Profit	.. .. .	£12,000
Profits Tax at 4s.	.. .. .	£2,400
Capital Expenditure subject to Investment Allowance	.. .. .	£2,000
Investment Allowance at 10s.	.. .. .	£1,000
Profits Tax Assessment	.. .. .	£1,400

Here the increased tax liability under the scheme would be £200.

91. Arising out of the above examples I would observe first, that the assumption of a specified proportion of profits to be allocated to capital expenditure on grassland improvement is necessary for the calculation of the amount of the proposed Investment Allowance - it is not (as can be seen from examples C., F., and I. above) a requirement that this proportion of profits must be so expended; and, secondly, that the lower the assumed proportion of profits, the smaller will be the inducement afforded by the scheme, for the investment of profits in grassland improvement.
92. Considering the proposed scheme as a whole, it is clear that decisions will need to be taken on two matters of great importance: the definition of the kinds of capital expenditure which should qualify for Investment Allowances; and the proportion of profits deemed to be allocated to capital expenditure on grassland improvement. In the case of both these matters I consider that the decisions must rest with the Falkland Islands Government, and I would not wish to put forward views of my own with regard to these matters.
93. In making the foregoing recommendations, I am fully aware of their possible repercussions on the labour requirements of the farms. The erection of sub-division fencing and the use of the plough or rotovator or other equipment, are liable to involve additional labour as well as capital. Moreover, insofar as grassland improvement is successful in its object of enabling the pastures to carry a large number of sheep, there will then be more sheep to be sheared; and in some cases shearing is already constituting a bottle-neck. But this consideration only reinforces what I say in Chapter VIII (paragraphs 115-121), as to the urgent necessity of taking appropriate measures to maintain, and, where possible, increase the working population of the Falkland Islands, above all on the farms.

94. I have had under review the tax system now in force in the Colony, and have no suggestions to offer in respect of indirect taxation at the present time. But there are two recommendations I wish to make with regard to Income Tax. The first is a very minor one. As the Law stands now, there is a sum of £150 which is deducted from each person's income in calculating his assessable income for liability to the tax. The way this particular provision operates is not easily understood by some people, and gives rise in practice to a certain amount of unnecessary discussion and correspondence. I recommend that the Colony should adopt the British system of a Personal Allowance of the same amount, to replace the present system. This would mean substituting in the Scale the words "Personal Allowance £150" for the words "150 nil".
95. My second recommendation is concerned with the Scales themselves. In their present form there is a gradual progression of the tax ratio until they reach their maximum of 5s. 9d. in the £ for incomes of over £6,000.⁽¹⁾ I consider that this upper figure of income is unduly high, and that the top rate should begin to be applicable where an income exceeds £2,500. I make this recommendation, not because it will bring in more revenue - the estimated additional revenue from the change is only of the order of £2,200 - but on grounds of justice. The present Scales fall too lightly on the upper income brackets in comparison with those at the lower end. Tables A and B of Appendix V, which set out the way in which the new Scales, if adopted, would differ from those now in force, appear to me to support the view that a modification of the Scales on the lines I am now recommending, would result in a more equitable distribution of the Tax burden.
96. Finally, an inspection of the list of securities held in the various Funds of the Colony, e.g. the Development Fund, the Government Savings Bank, etc., leads me to the conclusion that they stand in need of review; and I recommend that this should be carried out in consultation with the Commonwealth Office.

(1)

The top Scale rate of 5s. 9d. is not high when compared with the "standard rate" of 8s. 3d. in England, together with an additional liability to surtax for some incomes.

Chapter VIII

Population

97. The Census figures in Table A in Appendix VI reveal that the population of the Falkland Islands reached a total of just over 2,000 at the beginning of the present century, and has not altered greatly since then. The peak number of population, 2,392, was recorded at the 1931 Census; but thereafter it gradually declined until in 1965 the estimated figure was 2,079, virtually the same as in 1901, when the total was 2,043.
98. Table B in Appendix VI shows the process by which the decline since 1931 has come about. The natural increase of the population (the excess of births over deaths) has been quite high: according to the 1962 Census, the average annual birth rate for the years 1953-61 was 21.09 per 1,000, and the average annual death rate 10.82 per 1,000. But this is only part of the picture, which has to be completed by bringing in the balance of emigration and immigration. Taking the ten-year periods set out in Table B, it can be seen that in every decade, since 1927 there has been an excess of emigration over immigration, amounting in all, during 1927-30, to 198; during 1937-46 (the war years) to 286; during 1947-56, to 122; and during the nine years 1957-65,⁽¹⁾ to 483. In two of these periods (1927-36 and 1947-56) the natural increase was slightly greater than the balance of emigration. On the other hand, during 1937-46 there was a net decline of population of 113; while during the latest and most important period, 1957-65, the net decline amounted to 274, or approximately 30 per annum; the excess of emigration over immigration, which excess amounted to 483, being more than double the natural increase of 209.
99. Tables C and D in Appendix VI set out the changes in the distribution of population between 1953 and 1962, and in its age structure. Table C shows that the decline in population was more or less evenly divided between Stanley and East Falkland; while Table D indicates rather surprisingly little alteration in the age-distribution of the population. Unfortunately more recent figures are not available and for these we must wait till the next Census is taken.
100. Emigration from the Falkland Islands consists, partly of elderly retired workers, usually going to join other members of their family living in the United Kingdom, or New Zealand or Australia; partly of men who have come out from the United Kingdom to work on farms on contract (now a four-year term) and who are returning home after its completion; partly of youngsters who leave the Colony to find employment or get higher education; and partly of adults who seek better prospects for their future in other countries and take their families with them. The most favoured places in which to settle appear to be the home country,⁽²⁾ and more recently New Zealand and Australia.

(1) The 1957-65 figure covers only nine years, because the inclusion of 1966 would have been misleading, since in that year there was a temporary and abnormal excess (62 males and 5 females) of immigration over emigration, caused by the importation of a Chilean road gang to work on roads in Stanley, and also personnel for the Space Research and other projects.

(2) It is a very sore point with Falkland Islanders that under the recent immigration provisions only those whose father or grandfather was born in the United Kingdom can claim domicile there as of right. Others only come in under the quota.

101. It is obvious that a declining population, due to a continuous net outflow, must have a serious impact on the supply of labour in the Colony. So far as the Camp is concerned, my own investigations seemed to point to something of a contrast between conditions in West and East Falkland. In West Falkland and where the wide stretch of the Falkland Sound causes them to be an even more self-contained and closely-knit community, I did not find the farmers to whom I talked unduly worried by shortage of labour. There is a good deal of labour turnover amongst the farms; and if a farm was a man or two short one year, it might still expect to be able to make up to deficiency in the following year. In some cases farmers seemed to have satisfactory contacts with sources of potential labour supply, for example, in Northern Ireland or Scotland, and were able to recruit an occasional family or single man. But I would emphasize that these are only my own impressions based on the farms I personally visited.
102. In East Falkland, the labour situation appears rather more difficult. In some cases, e.g. the Falkland Islands Company's large farms in Lafonia, heavy reliance has had to be placed on recruitment from the United Kingdom, which has proved uncertain and inadequate in quantity, and not infrequently unsatisfactory in quality.
103. In general, both in East and West Falkland, the position that presents itself with regard to labour, is that most farms are pretty much down to bed-rock minimum; hence a continuance of the population trends of the last decade would bring them into really dire straits for labour. What gives rise to the greatest anxiety for the future is the more recent tendency (still only on a fairly small scale) for Falkland Islanders, born and bred on the farms, to emigrate; for their skill and knowledge of local conditions are virtually irreplaceable.
104. In the township of Stanley, labour is in very short supply indeed at the present time. One indication of this can be found from the figures relating to the ages of men employed by Government in the Public Works Department. Out of 35 men in a number of different manual worker grades, as many as 27 are over 50 years of age; and of these, 13 are over 60, 5 over 70, and 2 are over 80 years old. It is almost impossible to find men willing to contract to cut peat; and all sorts of necessary work, such as maintenance of buildings, has to be left undone, because there is no one who is available and willing to do this kind of work. When two or three miles of roads had to be constructed lately in Stanley, it was found necessary to bring in a Chilean road gang as there was no other practicable means of obtaining the requisite labour.
105. If this is the situation, how has it come about, and what steps can be taken to remedy it? Amongst the causes which have stimulated emigration I would list the following:
106. First, there is the fact of isolation. The Colony is 7,000 miles from the United Kingdom; while the nearest port of call, Montevideo, is 1,010 miles distant across the South Atlantic Ocean, and the only regular passenger service is by R.M.S. Darwin, a small steamer which voyages once a month between Stanley and Montevideo. There is no air service to the Islands, and in the event of a serious illness requiring the professional and nursing resources of a big modern hospital, the patient must needs wait until the next departure of the Darwin can take him to the British Hospital in Montevideo. Many weeks must elapse before the answer to a letter home can be expected;⁽¹⁾ and even longer delays attend the arrival of goods which have been ordered from the United Kingdom. The existence of isolation has, of course, always been there; but with the increasing contacts with the outside world since the end of the last war, there has developed a much greater awareness of isolation and of what it implies.

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In midwinter, when the Darwin pays her annual visit to South Georgia, there is a six weeks interval before mail from the U.K. can arrive in the Falklands.

107. Secondly Education. It is impossible for a community of only about 2,000 people, with less than 350 children in the 5 to 15 age-group, to maintain a system of secondary and higher education. Hence a boy or girl, who is qualified to proceed beyond the primary stage of education, must be sent at great expense either to the United Kingdom or to the English School at Montevideo. The Falkland Islands Government gives a limited amount of financial assistance in the case of children receiving full-time boarding school education abroad. At the present time the Government provides two schools in Stanley, one for infants and juniors and one for older children up to the school leaving age of 14. There is also a boarding school at Goose Green for children from the Camp, and three full-time settlement schools.⁽¹⁾ In the smaller settlements and outlying shepherds' houses, education is provided by travelling (uncertificated) teachers who rotate between the different settlements and homes. At the end of December 1965 there were 13 certificated and 17 uncertificated teachers engaged in teaching 331 children. If this is the best that the Colony has been able to achieve so far in the field of education, it is not a very good best, and is clearly inferior to what similar children would receive in the United Kingdom or, say, New Zealand. Moreover, this situation has to be regarded in the light of the fact that the attitude of many parents towards their children's education has undergone a considerable change during the last 10 or 15 years; with the result that they are now more conscious of the desirability of having their children properly educated. This is certainly one of the causes encouraging the growth of emigration.
108. Thirdly, there is a lack of prospects for an able and ambitious boy or young man to rise to one of the top positions in the economic and social structure of the Islands. To be a head shepherd or a navy boss (foreman) is in general the highest post open to those employed on the sheep farms. It is true that some of the top positions in the Public Service in Stanley are held now by Falkland Islanders; but they are few in number, and, if only for educational reasons, must be outside the grasp of all but a tiny minority. I have found it generally acknowledged that a substantial number of the brightest and most enterprising of the younger generation of Falkland Islanders have left the Colony for good during the past decade; and there is little doubt that the apparent lack of prospects for advancement has played an important part in bringing this about. Part of this absence of opportunity derives also from the existing ownership and tenure of land in the Falklands, and from the nature of its sheep farming industry. Nearly all the land is owned freehold by a small number of companies and individuals; and except for the possibility that one or other of the smaller islands might some day come on the market, there would seem to be no hope for an outside person to acquire a piece of farm land of his own. In the minds of a number of those whom I met in the Falklands, the sale to the Falkland Islands Company, in April 1964 of 28,000 acres of land at Albemarle, the only sizeable block of Crown land remaining unsold in the Colony, marked the end of the last opportunity for putting land ownership on a wider basis, and giving a chance to the small man. Without going into much detail, it can be said that the decision proved a very difficult one and was not lightly taken by the Government. On the face of it, there appeared to be extremely strong grounds for not selling this land to the Falkland Islands Company, which was already much the largest single owner of land in the Colony. But there were also strong reasons which told the other way. Ever since 1948 the Company had held the Albemarle land on an informal lease from the Government, and

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Attendance in Stanley is compulsory between the ages of 5 and 14, but can be extended beyond 14 on a voluntary basis: it is also compulsory for children living close to one of the settlement schools.

I have been informed by people who are in a good position to judge, that Falkland Islands children, and not least those from the Camp, are good potential school material, well endowed with intelligence and the aptitude to learn.

had used it as its camp for breeding ewes, as part of its adjoining large farm of Port Stephen, much of which is not of good quality by Falkland Islands standards. The Company claimed, and so far as I am aware this was not challenged, that the Port Stephen farm would not be economically viable if the Albemarle land were to be detached from it; and it offered a high price in cash for the land. There were several alternative bids for all or portions of the land; but with one exception they came from individuals, with very little or no means of their own, who wanted to borrow the whole, or by far the greater part of the purchase price from the Government. It must be borne in mind in this context that there was no shearing shed or dwelling houses at Albemarle; and that in addition to the cost of acquisition and the initial capital outlay, a very considerable working capital would have been required. The exception was a substantial cash offer from a group of three persons; but some doubt was felt at the time whether they really intended to farm the land or whether they were regarding the transaction more as a form of land speculation. In the end, after much discussion, it was decided to sell Albemarle to the highest bidder, the Falkland Islands Company. My own conclusion from a careful study of the documents is that this was in the direct financial interest of the Colony. Whether it was in its long run interest, in the broadest sense of this term, remains a debateable question.⁽¹⁾ I might add that it appears that in an early stage of the negotiations the Falkland Islands Company offered to consider the exchange of Bleaker Island for Albemarle; but this was rejected by Government, mainly on the ground that, not having a qualified man as head of the Agricultural Department, it was not in a position to assume the responsibilities incumbent on a landlord. In retrospect, it would seem perhaps regrettable that this offer was not followed up.⁽²⁾

109. Fourthly, when compared with even a relatively young country such as New Zealand, the Falkland Islands has fewer of the modern amenities of life to offer to its inhabitants. The Camp dweller has little in the way of recreational opportunities; and the absence of roads makes visiting other farms or getting into or out of Stanley as boneshaking, and in winter, a daunting performance; though the large number of motor cycles, Jeeps, and Land Rovers, in the Camp, goes to show that despite these deterrents quite a lot of movement (to dances, etc.) does take place. The 10 to 20 mile wide sea barrier of the Falkland Sound restricts traffic between East and West Falkland; while the small sea-plane service is not too frequent, and scheduled flights have often to be cancelled owing to weather conditions. In Stanley, it is true that there are numerous flourishing sports clubs; but the daily cinema and other forms of recreation and distraction are missing, as are also many of the minor services to be found in every English town that is larger than a village. The climate also is less good than that of, say, New Zealand; though it may be doubted whether this plays a major part in causing Falkland Islanders to emigrate.

110. Fifthly, there is a marked disparity in the population between the number of females compared with the number of males. As the Census figures in Table C of Appendix VI show, 1,195 males were counted in 1962 as against only 977 females - i.e. 218 fewer females than males.⁽³⁾ The main cause of this has been the cook (or bunk) house system, whereby farms recruit unmarried men who live communally (though with separate rooms) in the cook houses.⁽⁴⁾ An additional factor has been that sailors in visiting ships,

(1) I discuss in paragraph 116 below some of the broader economic considerations which have a bearing on this question.

(2) I have dealt with the sale of the Albemarle land at some length because it has evidently left behind a legacy of strong feeling against this action by Government.

(3) This is not merely a very recent phenomenon: at the time of the 1946 census, the excess of males was 215; while in 1956 it was 262.

(4) If a man living in the cook house wishes to marry, he must normally wait until there is a vacant house for a married couple into which he can move, or else migrate to Stanley.

unmarried men recruited from the United Kingdom on contract, and other temporary visitors, sometimes marry Falkland Island girls, and take them away when they depart. One effect of this disparity between the sexes is to stimulate a few young men to migrate to another country where their chances of matrimony look more promising.

111. Sixthly, the criminal action of a small body of young Argentines in commandeering at gun point a passenger aeroplane, and compelling the pilot to land at Stanley in September 1966,⁽¹⁾ has given rise to some apprehension in the minds of Falkland Islanders who fear that there might be a repetition of such action; and their feeling of disquiet has been enhanced by the knowledge that talks have been in progress between the British and Argentine Governments over the issue of the Falkland Islands. It may be that in a small number of cases recently this has been a deciding factor in tipping the scales in favour of emigration.
112. Seventhly, there are now quite substantial numbers of ex-Falkland Islanders in parts of the United Kingdom and in New Zealand; and these tend to attract to them some of their relatives and friends remaining in the Falklands.
113. Finally, the whole of the causes I have listed above relate to the will to emigrate; but there is also an important factor which affects the power to emigrate. Since the end of World War II there have been big improvements in money wages, especially in the case of farm workers, many of whom have been able to save substantial sums out of their annual incomes, as I have shown in Chapter VI of my Report. Hence the farm worker can now use his accumulated savings to start life again in another land with some capital behind him; or he may use the money to finance his passage to some far distant country, such as Australia or New Zealand.⁽²⁾
114. If these appear to be the main causes which have encouraged emigration from the Falkland Islands in recent years, it remains to consider what measure can be taken to stabilise and if possible increase the population, especially the working population, of the Colony.
115. Isolation. I regard communication by air with the South American Continent as of the greatest importance - and this could be Punta Arenas, which is only 500 miles distant from Stanley, or some other point. I understand that a survey of land at Cape Pembroke to find a site for a landing strip, which could be usable in the first instance by charter planes, is being undertaken at the present moment by the Falkland Islands Government; and I recommend that very high priority should be given to this project and to its subsequent development, so that the first steps are taken with a view to the establishment of a permanent air link with South America. A number of people have impressed on me their view that television would constitute a great boon, especially for people living in the Camp, during the long winter months; but both the initial cost and the recurrent expenditure would be very large, and unless it was possible to get complete programmes from outside, this does not strike me as a feasible proposition for the Falkland Islands. I feel the same, regretfully, about the proposal for a road net-work in East and West Falkland, which, desirable as this would be on many grounds, would, as Mr. O'Reilly showed in his Report of 1963, be so costly both to construct and to maintain, that I do not believe that it could be justified in the circumstances of the Colony. But it is possible that modern development in methods of transport may make communication within

(1) At the moment of writing, I understand that all 14 of the perpetrators of this action are still languishing in prison in Tierra del Fuego.

(2) I have been told of one (no doubt exceptional) case of a farm worker who is paying the farms for flying himself and his family to New Zealand at a cost of the order of £1,000.

the Islands much easier in future than they have been in the past. I am, however, of opinion that consideration should be given to the expansion of the existing Islands broadcasting service, which at the present time has only a very small staff. A more continuous service, with a more professional selection of programmes, could be of real benefit to the Islanders.

116. Education. In view of the fact that the provision of secondary and higher education is beyond the means of the Colony, I consider that Government should make more numerous and, where necessary, more generous grants to the parents of children who go abroad to complete their education. It is true that not many of these children are likely to return to make their homes in the Islands; but it is the continued residence of the parents that is of such importance for the future development of the Colony. So far as primary education is concerned, this appears to me to be in need of a thorough overhaul. A common curriculum for teachers throughout the different schools, to which the travelling teachers also would be required to work, would seem to be urgently needed. School broadcasting also should come under review and should probably be extended. I recommend that expert assistance should be sought from outside the Colony to advise as to the best and most practicable ways of improving the educational services, in order to make them a more effective instrument for their purpose.

117. Prospects for advancement. Looking back over the past it appears to me that the sheep farmers, amongst others, have been remiss in not recognising the importance of providing opportunities for some Falkland Islanders to rise to occupy top positions.⁽¹⁾ In particular, the Falkland Islands Company with its six farms, all with salaried managers, would have been well advised if it had adopted the policy of offering cadetships to some of its abler and most promising employees; though in justice to the Company I should point out that the majority of its existing managers are in fact Falkland Islanders. It is still not too late for the owners of sheep farms, where family connections are not decisive, to seek out local men of the right type and give them the chance of proving their capacity.⁽²⁾ A salaried manager, however, is still not his own master; and I have met a number of people in the Falkland Islands who hanker after some wider possibilities of land ownership, or if not that, would like to see a system of tenant farming such as exists in many parts of England. The first of these possibilities - land ownership would seem to be no longer a practicable proposition, except very occasionally when one of the smaller islands comes up for sale, since the whole of the land is now owned freehold by a small number of companies, families or individuals. But quite apart from the matter of land tenure, the structure of the sheep farming industry does not lend itself in general to small scale ownership. I found widespread agreement that on the mainland (East and West Falkland), the minimum viable unit for a sheep farm would be enough land to maintain 2,000 sheep, or roughly 10,000 acres of fair average quality. Moreover, a sheep farm must have access to a shearing shed situated by the sea; it must have adequate boundary and sub-division fencing; and the necessary housing, buildings, and other equipment. By its very nature sheep farming in most of the

(1) Until fairly recently this also applied to higher posts in the Public Service, which used all to be filled from the United Kingdom; but the situation in this respect has improved a good deal during the last decade.

(2) One of the very real difficulties is to find a man who combines practical ability and knowledge with the capability of handling the complicated farm accounts which take up so much of a manager's attention and time.

Falkland Islands is quite a heavily capitalised industry, and as such does not lend itself to small scale operation.⁽¹⁾ In fact some of the smaller farms on the mainland would in all probability be run more economically if they were combined to form larger units. However much one may regret it, these would appear to be the facts: and wishful thinking does not alter hard facts. Many of the same considerations apply to the second possibility - the development of a system of tenant farming. But here there do seem to be a few, probably only a very few, instances where circumstances might make it practicable for one or other of the big farms to lease a suitable portion of its land to a tenant - to the advantage both of the tenant and of the owner of the land. When reading a Report written in 1946 by Dr. J. G. Gibbs (at that time head of the Colony's Agricultural Department, and himself a qualified man) I came across the following passage: "I would commend for the consideration of the sheep farmers the suggestion that they provide a good section on their farms which might be leased by those who have rendered them good service, so that the local boy can at least aspire to possess and develop for a period a part of his native land." I, in turn, would recommend this to the sheep owners as a suggestion that is still today worthy of their consideration. Even if action were to materialise in the formation of only one or two of such tenancies, the psychological effect could be out of all proportion to the number involved. Although "a stake in the country" in the form of land holding, would seem to be something to which only very few could aspire, there are other possible ways by which farm employees could be enabled to have some direct participation in the industry in which they work. I have heard the suggestion for the creation of a Unit Trust which would afford Falkland Islanders a means of investment in the industry. Another suggestion is that sheep owners should be prepared to accept loans from their employees at a fixed rate of interest, and possibly a share in the profits. These are clearly matters which only the farm owners themselves can decide. But I would emphasize the importance of devising ways and means by which workers on Falkland Island farms can be given the opportunity of knowing that they have a share in their own industry, and are not limited merely to the performance of a task in return for a wage: some closer nexus than this is what is needed.

118. External Political Relations. While there would appear to be very little likelihood of a repetition of the abortive Argentine coup of September 1966, a feeling of uneasiness and apprehension still exists among a section of the Falkland Islands population, mainly because of the fact that the discussions in progress with the Argentine Government are confidential. I believe that this feeling of uncertainty as to their future would be largely dispelled if they could be made aware of the fact that one of the British Government's objectives is the removal of the existing restrictions, etc., on communications between the Falkland Islands and the Argentine Republic. Taking the long view, it must surely be the case that Argentina would be consulting her own interests as well as those of the Falkland Islands, if normal friendly relations between the two countries could be resumed.

119. So far I have been considering possible ways of reducing the flow of emigrants out of the Falklands. I now turn to consider what action can be taken to encourage the right sort of people into the Colony. I begin with what seems to me the self-evident fact that married couples, with some farming experience, who would settle down and raise a family in the Camp, would constitute the most desirable type of immigrant. I do not regard the cook-house, servicing unmarried men, as a praiseworthy institution in itself; and I can see little future in trying to rely largely on this type

(1) The high dividends (20 to 30 per cent) which are frequently distributed by the companies to their shareholders in years when wool prices are satisfactory, give a misleading impression of the profitability of sheep farming. With hardly any exceptions the capital assets of the farms stand in their balance sheets at a nominal figure. If these assets were valued at anything like current replacement cost, the return on the capital invested would be seen to be quite low.

of labour to meet the requirements of the farms. Accordingly, I recommend that the Falkland Islands Government should subsidise largely, and to the necessary extent, the cost of passage from the United Kingdom of the wives and families (with their belongings) of married men who are willing to emigrate to the Islands to work on the sheep farms. But since the employment of more married couples will presumably involve the provision of more houses in which they can live, I recommend further that the Government should subsidise largely, and to the necessary extent, the construction of the additional housing accommodation (including ancillary services, such as water and electricity) which is required for this purpose. If it is asked where the money is to come from to meet the cost of these subsidies, I would reply that there will be an uncommitted balance of £183,000 in the Development Fund in June 1968; and this, together with the grants the Colony may hope to receive from the Colonial Development and Welfare Fund, should prove amply sufficient. I find it difficult to imagine any expenditure which would be more truly in the long run interests of the Colony than this, if it succeeds in its aim of helping to maintain a well balanced and stable population.

120. So far as the sheep owners themselves are concerned, I recommend that they should give urgent consideration to what they can do, individually or collectively, to improve their methods of recruitment, e.g. as to the selections of agents, the procedure for advertising, interviewing candidates, etc. It may be also that the net could be thrown more widely than it is at present. I would suggest that a suitably worded brochure⁽¹⁾ might be drawn up (possibly with illustrations), which would emphasise in particular the importance of non-monetary income (free housing, free meat and fuel, etc.); the scope for earning substantial sums in addition to the basic wage; and the possibilities for saving.

121. I am well aware of the fact that life on a Falkland Islands sheep farm is not likely to appeal to a great many people who are living in the United Kingdom. But it is important to bear in mind that we are not concerned with large numbers. The figures I have given above (paragraph 98) indicate that if not more than three additional persons had arrived each month, for the average of the nine years 1957-65, to live and work in the Colony, its total population at the end of that period would have shown a slight increase instead of a decrease. The population of the United Kingdom is of the order of 50 million, and life there is by no means without its drawbacks. Apart altogether from any positive financial inducements, there are assuredly some who would regard the freedom and absence of many irksome restrictions, which are enjoyed by the Falkland Islanders as a compensation for the isolation and other disabilities (some of which are at least partially remediable) to which I have referred earlier in this Chapter of my Report. The problem remains how best to seek out and find this admittedly small minority. But just because the numbers at issue are so small, I see no reason for feeling pessimistic about the future.

122. In the preceding paragraphs I have had in mind only immigration from the United Kingdom, and have not taken into account the possibility of introducing Chilean labour. At the moment there are fewer than a dozen Chilean workers in the Camp, some of whom have been there for many years. Any attempt to bring a considerable number of Chileans would meet with strong resistance from the Trade Union, which reflects the views of its workers on this issue. There is also the language difficulty - only a very few Managers can speak Spanish - and the fact that most Chileans dislike Falkland Islands food. I do not believe that the present shortage of labour on the farms can be solved by the importation of Chilean workers on a large

(1) I would suggest that, to avoid misunderstanding, the word "navvy" should be replaced as far as possible by some such words as "general farm worker." (The original navvies in England were labourers who excavated the ground for the construction of canals in the latter part of the 18th century.)

scale, though an occasional man would be a welcome addition to the labour force. But if an air link were to be established with Punta Arenas, there would then be the possibility of introducing Chilean shearing gangs on contract; and this might be of real benefit to the farmers, provided that it proved possible to surmount the various obstacles in the way.

123. The labour situation in Stanley at the present time is worse than in the Camp, and it is even more difficult to secure replacements from the United Kingdom. It is, however, conceivable that the position will become easier when existing work in connection with the installation of the European Space Research Organisation, and other projects, has been completed. But if this does not take place, and if essential work (including peat-cutting) is not being done because there is no one able or willing to undertake it, then I would recommend that Chilean or other Latin American labour be brought in under contract in sufficient numbers to meet the need.⁽¹⁾

(1) I am assuming that the present practice would be continued of paying such labour the ruling Falkland Islands rates of pay, so that there would be no question of the existing labour force being under-cut.

Chapter IX

Summary of Recommendations⁽¹⁾

124. That the Agricultural Research Council be asked to nominate a senior expert to advise as to the best way of conducting research into grassland improvement from 1968 onwards (paragraph 52).
125. That Sheep Owners should consider the possibility of increasing the number of cattle on their farms (paragraph 53).
126. That consideration be given to the possibility and desirability of making the annual wage negotiations in respect of workers in Stanley follow more closely on the negotiations in respect of workers on sheep farms (paragraph 74).
127. That the Profits Tax be increased from 2s. Od. to 4s. Od., but that farm owners should be enabled, by a system of investment allowances, to set off the whole or part of their increased tax liability, against approved capital expenditure on grassland improvement (paragraphs 88-93).
128. That the present wording of the Income Tax Law be altered so that the first item on the Scale "£150 nil" should read: "Personal Allowance £150" (paragraph 94).
129. That the existing Income Tax Scales, whereby the top rate of 5s. 9d. is applicable to incomes in excess of £6,000, should be modified so as to make the rate of 5s. 9d. applicable to incomes in excess of £2,500 (paragraphs 95, and Appendix V).
130. That the securities in which Public Funds are now invested should be reviewed (paragraph 96).
131. That high priority should be given to exploring the feasibility of constructing an airstrip near Stanley, with a view to establishing an air-link with the South American Continent (paragraph 115).
132. That Government should make larger contributions to parents towards off-setting the cost of the further education of their children outside the Colony; and that expert advice should be sought as to the best ways of improving the existing educational services (paragraph 116).
133. That the Sheep Owners should explore the possibility of establishing one or more tenant farms on their land; and that they should if possible devise means whereby their employees have some financial interest in Falkland Island sheep farms (paragraph 117).
134. That steps should be taken to reassure the population as to the political future of their country (paragraph 118).
135. That Government should subsidise the passages, etc., of the wives and families of men recruited to work on the farms; and that it should subsidise the cost of constructing the necessary accommodation for married people working in the Camp (paragraph 119).
136. That the Sheep Owners should give urgent attention to the improvement of their methods of recruitment (paragraph 120).

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This summary is only intended as a pointer to show where recommendations in the body of the Report are to be found. The actual recommendations are those set out in the paragraphs to which reference is made.

137. That if the labour situation in Stanley does not improve, Chilean labour on contract should be introduced there (paragraph 123).
138. In conclusion, I wish to express my personal belief and faith in the viability of the Falkland Islands' economy. But resolute action will be needed if a situation, which today is merely somewhat precarious, is to be prevented from reaching a stage when it becomes irreparable. It is not too much to say that it is the whole future of the Colony that is now at stake.

APPENDIX I

Ownership, Acreage, etc., of Falkland Island Farms (1)

The approximate acreages have been calculated from the 1 : 50,000 maps of the Falkland Islands (Directorate of Overseas Survey 453 of 1961/62).

The figures relating to the numbers of sheep, the acres on each farm supporting one sheep, and the pounds of wool produced per acre, are based on the Stock Return for 1962-63.

Public Companies Registered in the United Kingdom

	<u>Farm</u>	<u>Approximate Acreage</u>	<u>No. of Sheep</u>	<u>No. of Acres supporting one sheep</u>	<u>Pounds of Wool per acre</u>
<u>The Falkland Islands Co. Ltd.</u>	Darwin, North Arm and islands off the East Coast(2)	707,200	169,800	4.16	2.05
"	Fitzroy and Green Patch	198,200	41,300	4.80	1.45
"	Port Stephens	229,100	29,100	7.88	0.92
"	Speedwell, George, and Barren and islands in Falkland Sound	30,500	12,400	2.47	3.70
"	Fox Bay West	165,000	29,000	5.69	1.49
		<u>1,330,000</u>	<u>281,600</u>		

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- (1) I am indebted to Mr. W. W. Blake for the calculations of acreages etc., in this table. With a few exceptions I have rounded off to the nearest 100 the figures for acreage and the numbers of sheep.
- (2) Darwin and North Arm are two separately managed farms. According to my information the acreage of Darwin (including Lively and other Islands) is approximately 400,000 acres, carrying 103,000 sheep; and that of North Arm 307,000 acres, carrying 67,000 sheep.

APPENDIX I (contd.)

<u>Farm</u>	<u>Approximate Acreage</u>	<u>No. of Sheep</u>	<u>No. of Acres supporting one sheep</u>	<u>Pounds of Wool per acre</u>	
<u>Holmested, Blake & Co.</u>	Hill Cove	147,000	31,800	4.62	1.56
<u>Packe Brothers & Co.</u>	Fox Bay East with Dunnose Head and Packe's Port Howard	142,600	28,600	4.99	1.63
<u>Private Companies Registered in the United Kingdom:</u>					
<u>James Lovegrove Waldron, Ltd.</u>	Port Howard	173,100	38,600	4.48	1.83
<u>Port San Carlos, Ltd.</u>	Port San Carlos	97,700	30,600	3.19	2.48
<u>John Hamilton Estates, Ltd.</u>	Weddell, Beaver, and neigh- bouring Islands	78,800	9,800	8.01	1.05
"	Saunders Island	30,300	8,000	3.82	2.15
<u>Private Companies Registered in the Falkland Islands:</u>					
<u>Chartres Sheep Farming Co. Ltd.</u>	Chartres	164,900	23,800	6.92	1.14
<u>Dean Brothers Ltd.</u>	Pebble, Keppel and ad- jacent Islands	48,000	20,400	2.35	3.33
"	Grand, Steeple, Islands	5,400	2,900	2.59	4.06

APPENDIX I (contd.)

<u>Farm</u>	<u>Approximate Acreage</u>	<u>No. of Sheep</u>	<u>No. of Acres supporting one sheep</u>	<u>Pounds of Wool per acre</u>	
<u>San Carlos Sheep Farming Co. Ltd.</u>	San Carlos	108,300	26,700	4.06	1.74
<u>Teal Inlet Ltd.</u>	Teal Inlet	123,600	23,300	5.30	1.21
<u>Bertrand & Felton Ltd.</u>	Roy Cove	74,600	17,500	4.27	2.01
<u>Douglas Station Ltd.</u>	Douglas Station	134,500	20,900	6.42	1.06
<u>Farms not Registered as Companies:</u>					
<u>R. M. Pitaluga</u>	Salvador	58,700	16,000	3.68	1.89
<u>Smith Brothers</u>	Johnson's Harbour	48,900	15,600	3.15	2.04
<u>Mrs. G. S. Yonge</u>	Bluff Cove	40,200	4,600	8.67	0.60
<u>Estate T. Robson</u>	Port Louis	37,700	12,800	2.96	2.30
<u>Estate S. J. Pitaluga</u>	Rincon Grande	25,700	11,000	2.34	2.81
<u>C. & K. Bertrand</u>	Carcass Island	4,250	2,200	1.91	5.65
<u>J. J. Davis</u>	New Island	5,720	2,800	2.01	4.55
<u>J. Lee</u>	Sea Lion Islands	2,180	1,700	1.28	5.96
<u>Mrs. J. Napier</u>	West Point Island	3,630	2,600	1.40	6.88
<u>W. Macbeth</u>	Sedge Island	850	380	2.26	1.18

APPENDIX I (contd.)

<u>Farm</u>	<u>Approximate Acreage</u>	<u>No. of Sheep</u>	<u>No. of Acres supporting one sheep</u>	<u>Pounds of Wool per acre</u>
<u>Crown Lands Leased to Tenants:</u>				
Moody Valley	8,570	1,300	6.59	0.70
Mullet Creek	5,370	1,670	3.22	1.49
Sparrow Cove	2,600	650	4.03	4.23
All Farms	2,903,100	637,800	4.56	1.68

APPENDIX II

The Gross and the Net Value of Wool Exports

<u>YEAR</u>	<u>AVERAGE LONDON PRICE PENNY PER LB.</u>	<u>WEIGHT LBS.</u>	<u>GROSS SALE PROCEEDS</u>	<u>APPROXIMATE NET VALUE i.e. GROSS LESS 7d. PER LB.</u>
1959	47.94	4,532,079	£ 905,283	£ 773,000
1960	46.75	4,634,075	£ 902,679	£ 768,000
1961	48.1	4,811,754	£ 964,356	£ 824,000
1962	47.047	4,661,386	£ 913,768	£ 778,000
1963	56.0	5,060,766	£1,180,845	£1,033,000
1964	57.06	4,840,687	£1,150,873	£1,010,000
1965	48.05	4,839,724 *	£ 968,161	£ 827,000

* Owing to a clerical error, for which the Collector of Customs was not responsible, the official figure of the weight of wool exported in 1965 has been given as 5,019,099 lbs. The correct figure is that shown in the above table.

APPENDIX III

TABLE A

ROY COVE Annual Cost of Pasture Improvement and Extra Revenue from Additional Stock carried

Year	Acreage ploughed and re-seeded	Cost per acre			Total Cost	Nett return per fleece			Extra Stock carried	Revenue increase from extra stock
		£	s.	d.		£	s.	d.		
1958-59	395	4	10	11	1793	1	13	10	nil	nil
1959-60	367	5	0	6	1845	1	15	2	nil	nil
1960-61	722	3	19	1	2856	1	13	9	nil	nil
1961-62	462	3	14	1	1711	1	15	0	498	871
1962-63	1146	3	1	2	3505	2	0	4	1082	2182
1963-64	607	3	17	2	2342	1	19	2	1650	3231
1964-65	674	3	17	2	2601	1	15	10	2982	5342
1965-66	297	5	7	1	1603	1	16	11	3850	7106
1966-67	450	4	12	11	2141	1	15	0 *	4612	8071 *
Total acres	5120	Total Cost			£20,397	Total Stock increase			4612	£26,803 Total revenue from extra Stock carried.

* Estimated on the basis of current wool prices.

APPENDIX III

TABLE B

ROTATIONAL GRAZING AT PORT HOWARD

		<u>MILES FENCING ERECTED SINCE JULY 1960</u>	<u>MILES FENCING ERECTED BEFORE JUNE 1960</u>
<u>GROUP 1</u>	<u>SHAG COVE TOP SIDES</u>		
	<u>ACRES</u>		
No. 7	2,097		
8	2,982		
9	1,670		
10	2,449		
SECOND CREEK	<u>4,474</u>		
	13,672	7 $\frac{1}{2}$ Miles 251 Yds.	30 $\frac{1}{2}$ Miles
<u>GROUP 2</u>	<u>WHITE ROCK EAST</u>		
PEAT BANKS	5,698		
WHITE ROCK POINT	1,681		
NEAR END	2,153		
LITTLE MOUNTAIN	1,667		
HOME FLOCK	<u>1,328</u>		
	12,527	3 $\frac{1}{2}$ Miles 54 Yds.	15 Miles 430 Yds.
<u>GROUP 3</u>	<u>SIX HILLS</u>		
FRONT SIX HILLS	1,802		
RAM PADDOCK MT.	2,300		
POND RIDGE	2,161		
GLADSTONE VALLEY	1,848		
MT. JOCK	2,388		
GAP PADDOCK	427		
TRIPLE CHANCE	<u>2,657</u>		
	13,583	25 $\frac{1}{2}$ Miles 254 Yds.	4 $\frac{1}{2}$ Miles
<u>GROUP 4</u>	<u>WARRAE</u>		
FRIZLEY BAY	5,797		
BOUNDARY CORNER	5,152		
MT. EDGEWORTH	7,124		
MT. ARTHUR	3,978		
BRIDGE MOUNTAIN	<u>5,091</u>		
	27,142	18 Miles 109 Yds.	11 $\frac{3}{4}$ Miles 372 Yds.
<u>TOTALS</u>	66,924	54 $\frac{1}{2}$ Miles 228 Yds.	62 Miles 362 Yds.

APPENDIX IV

Wages and Earnings on Farms in 1966

	<u>Annual Wage</u>	<u>Extras</u>	<u>Total Earnings</u>
	£	£	£
Foreman	651	215	866
"	574	118	698
"	529	477	1006
Head Shepherd	498	319	817
" "	554	227	781
Outside Shepherd	457	134	591
" "	457	197	654
" "	457	191	648
" "	457	201	658
" "	457	190	647
" "	540	75	615
" "	540	86	626
Settlement Shepherd	418	45	463
" "	460	182	642
Handyman	450	261	711
"	346	148	494
"	483	202	685
"	483	166	649
"	483	118	601
Cowman-Gardner	540	78	618
" "	458	64	522
Mechanic	624	160	784
"	468	160	628
Head Ploughman	500	257	757
General Farm Worker (Navy)	389	72	461
" " "	457	75	532
" " "	360	247	607
" " "	351	264	615
" " "	427	184	611
" " "	501	179	680
" " "	389	233	622
" " "	498	284	782
" " "	387	291	678
" " "	389	71	460
" " "	348	563	911*
" " "	305	548	854

*The last two men on this list spent a large part of the year going fencing on contract. The Agreement provides that a worker is paid for fencing at the rate of either £38 17s. 6d. or £29 3s. 0d. per mile, according to the type of fencing carried out. It should be noted that men earning extra by working on contract do not receive the whole of the monthly wage to which they would otherwise be entitled.

APPENDIX V

Income TaxTable A (1)

Taxable Income after deductions	Present			Recommended		
	£	£	s. d.	£	s. d.	£
150		Nil			Nil	
200		2	10 0		2	10 0
300		10	0 0		10	0 0
400		20	0 0		20	0 0
500		31	5 0		32	10 0
600		43	15 0		45	0 0
700		56	5 0		60	0 0
800		71	5 0		75	0 0
900		86	5 0		92	10 0
1000		102	10 0		110	0 0
1100		120	0 0		127	10 0
1200		137	10 0		145	0 0
1300		155	0 0		167	10 0
1400		172	10 0		190	0 0
1500		190	0 0		212	10 0
1600		207	10 0		235	0 0
1700		225	0 0		257	10 0
1800		242	10 0		280	0 0
1900		260	0 0		302	10 0
2000		277	10 0		325	0 0
2500		390	0 0		437	10 0
3000		502	10 0		581	5 0
3500		615	0 0		725	0 0
4000		727	10 0		868	15 0
4500		840	0 0		1012	10 0
5000		952	10 0		1156	5 0
5500		1065	0 0		1300	0 0
6000		1177	10 0		1443	15 0

£	£	£	£
Scales	first 150	Nil	150
	next 100	1/-	100
	" 200	2/-	150
	" 250	2/6	200
	" 250	3/-	200
	" 1050	3/6	400
	" 4000	4/6	1300
	Over 6000	5/9	Over 2500

Personal Allowance	Taxable Income
150	150
100	100
150	150
200	200
200	200
400	400
1300	1300
2500	2500

(1) This table shows the tax payable on the net income, i.e. on the income after deductions have been made.

APPENDIX V

Income TaxTable B (1)

PERCENTAGE OF TAX TO GROSS INCOME FOR A SINGLE MAN

INCOME GROSS	PRESENT	RECOMMENDED
	%	%
300	1.36	1.36
400	2.80	2.80
500	3.84	3.84
600	4.625	4.83
700	5.39	5.57
800	5.97	6.225
900	6.45	6.86
1000	7.005	7.38
1100	7.459	7.96
1200	7.84	8.47
1300	8.3	8.89
1400	8.7	9.25
1500	9.07	9.57
1600	9.38	10.75
1700	9.65	10.53
1800	9.89	10.95
1900	10.11	11.33
2000	10.30	11.66
2500	11.93	13.83
3000	13.69	15.46
3500	14.95	17.36
4000	15.89	18.79
4500	16.63	19.89
5000	17.21	20.78
5500	17.69	21.51
6000	18.09	22.11

(1) This table shows the tax burden in terms of the percentage of his gross income payable by a single man.

APPENDIX VI

TABLE AThe Population in the Years 1851 to 1965

<u>Year</u>	<u>Population</u>
1857	287
1861	541
1871	811
1881	1,510
1891	1,789
1901	2,043
1911	2,272
1921	2,094
1936	2,392
1946	2,239
1953	2,230
1962	2,172
1963	2,152
1964	2,122
1965	2,079

The population figures for the years 1851-71 and 1962-65 are estimated, while the remainder are taken from the respective Census Reports.

APPENDIX VI

TABLE B

The Natural Increase of the Population and the Balance of
Emigration and Immigration, 1927/1965

	<u>Births</u>			<u>Deaths</u>			<u>Natural Increase</u>		
	M	F	Total	M	F	Total	M	F	Total
1927	266	266	532	124	83	207	142	183	325
to	<u>Arrivals</u>			<u>Departures</u>			<u>Excess of Emigration over Immigration</u>		
1936	M	F	Total	M	F	Total	M	F	Total
	641	392	1033	744	487	1231	103	95	198

The net increase of the population (i.e. the difference between the natural increase, and the excess of emigration over immigration) was 39 males and 88 females, making a total increase of 127 for the ten years 1927-1936.

	<u>Births</u>			<u>Deaths</u>			<u>Natural Increase</u>		
	M	F	Total	M	F	Total	M	F	Total
1937	236	193	429	155	101	257	81	92	173
to	<u>Arrivals</u>			<u>Departures</u>			<u>Excess of Emigration over Immigration</u>		
1946	M	F	Total	M	F	Total	M	F	Total
	584	404	988	728	546	1274	144	142	286

The net decrease of the Population (i.e. the difference between the natural increase and the excess of emigration over immigration) was 63 males and 50 females, making a total decrease of 113 for the ten years 1937-1946.

APPENDIX VI

TABLE B (contd.)

	<u>Births</u>			<u>Deaths</u>			<u>Natural Increase</u>		
	M	F	Total	M	F	Total	M	F	Total
1947	214	218	432	155	107	262	59	111	170
to	<u>Arrivals</u>			<u>Departures</u>			<u>Excess of Emigration over Immigration</u>		
1956	M	F	Total	M	F	Total	M	F	Total
	1382	750	2132	1387	867	2254	5	117	122

Although the Natural Increase of males (59) exceeded to excess of male emigration over immigration (5) by 54, the Natural Increase of Females (111) fell short of the excess of female emigration (117) by 6, resulting in a net increase in the total population of 48 for the ten years period, 1947-56.

	<u>Births</u>			<u>Deaths</u>			<u>Natural Increase</u>		
	M	F	Total	M	F	Total	M	F	Total
1957	203	214	417	136	72	208	67	142	209
to	<u>Arrivals</u>			<u>Departures</u>			<u>Excess of Emigration over Immigration</u>		
1965	M	F	Total	M	F	Total	M	F	Total
1957	141	82	223	172	111	283	31	29	60
1958	178	96	274	195	119	314	17	23	40
1959	158	99	257	214	121	335	56	22	78
1960	139	85	224	176	116	292	37	31	68
1961	150	126	276	187	139	326	37	13	50
1962	243	125	368	254	157	411	11	32	43
1963	218	135	353	220	161	381	2	26	28
1964	170	127	297	211	145	356	41	18	59
1965	201	158	359	241	175	416	40	17	57
Total	1,598	1,033	2,631	1,870	1,244	3,114	272	211	483

Against a Natural Increase of 209 (67 males and 142 females) there was an excess of emigration over immigration of 483 (272 males and 211 females), making a net decrease in the population of 274 (205 males and 69 females) for the nine-year period 1957-65, i.e. at the rate of 30 per annum over these nine years. I have omitted the year 1966 for the reason that in that year there was an abnormally and largely temporary excess of total immigration over total emigration of 67 (62 males and 5 females) owing to the importation of Chilean labour for road making, and in connection with the European Space Research Organisation and other projects.

APPENDIX VI

TABLE CDistribution of Population within the Falkland Islands

	<u>Males</u>			<u>Females</u>			<u>Total</u>		
	<u>1946</u>	<u>1953</u>	<u>1962</u>	<u>1946</u>	<u>1953</u>	<u>1962</u>	<u>1946</u>	<u>1953</u>	<u>1962</u>
Stanley	629	557	520	623	578	554	1252	1135	1074
East Falkland	343	410	360	236	232	237	579	642	597
West Falkland	219	279	277	145	174	183	364	453	460
Shipping	<u>36</u>	<u>-</u>	<u>38</u>	<u>8</u>	<u>-</u>	<u>3</u>	<u>44</u>	<u>-</u>	<u>41</u>
Total	1227	1246	1195	1012	984	977	2239	2230	2172

TABLE DAge Composition of the Population

	<u>Percentages</u> <u>at 1953 Census</u>	<u>Percentages</u> <u>at 1962 Census</u>
Under 5	8.66 per cent	10.63 per cent
5 to 15	15.87 " "	15.52 " "
15 to 60	65.02 " "	63.17 " "
60 and over	10.45 " "	10.68 " "
Total	100.00 per cent	100.00 per cent