

1903.

NEW ZEALAND.

POLICE PROVIDENT FUND:

ACTUARIAL EXAMINATION FOR THE PERIOD ENDED ON 31st MARCH, 1903.

Laid before Parliament in pursuance of Section 29 of "The Police Provident Fund Act, 1899."

REPORT by the Actuary appointed by His Excellency the Governor to make the Actuarial Examination of the Police Provident Fund for the Period ended the 31st March, 1903, as provided by Section 26 of "The Police Provident Fund Act, 1899."

Wellington, 17th June, 1903.

I HAVE the honour to submit a report on the Police Provident Fund as at the 31st March, 1903.

The Act came into operation on the 1st December, 1899, and the scheme, although optional on the part of members of the Force who held insurances on their lives at that date, is compulsory in the case of all members joining since the Act came into force.

The contributions, which vary according to the age at the time when the first contribution becomes payable, are as follows:—

Age 30 and under	...	...	...	...	5	per cent. of pay.
Over 30 and not exceeding 40	...	...	...	...	6½	"
Over 40 and not exceeding 50	...	...	...	...	8	"
Over age 50	...	...	...	...	10	"

The benefits are—

For members retiring with the consent of or by the direction of the Minister on the grounds of being medically unfit for further duty (section 12):

- (1.) With less than five years' service, a refund of contributions;
- (2.) Between five and fifteen years' service, one month's pay for every full year's service, not exceeding twelve months' pay;
- (3.) After fifteen years' service, a pension of one-sixtieth of annual salary for each year's service, with a limit of thirty-sixth sixtieths (three-fifths) of yearly salary.

Members who have served for twenty-five years, and have attained the age of sixty, may retire on giving three months' notice. Pension to be one-sixtieth of yearly salary for each year's service, with a limit of three-fifths of salary. (Section 13.)

Members becoming medically unfit for further duty owing to injuries received in the execution of their duty may be granted an increase in the pension payable under section 12, such pension not to exceed three-fifths of a year's pay. (Section 14.)

If a member dies from injuries received in the execution of his duty, the Board may grant an allowance to his widow (so long as she remains his widow) of not more than £18 per year, and an allowance of not more than 5s. per week to each child until the child attains the age of fourteen years. (Section 15.)

Other benefits consist of—

The return of three-fourths of contributions on voluntary resignation after ten and not exceeding twenty-five years' service, or, if entitled to a pension, the option of receiving on retirement a return of total contributions in lieu thereof:

And, with the consent of the Board,—

The return of not exceeding one-half of contributions on dismissal;

The return of an amount not exceeding total contributions at death before pension entered upon:

And, if pension entered upon,—

The return at death of difference between pension received to date and the contributions made to the Fund.

Pensions may also be forfeited in certain cases.

The contributions and pensions are payable monthly, and pensions are computed on the salary received at retirement, unless the member has been promoted within five years of his leaving the service, in which case the average salary for the last seven years is to be taken as the basis.

Any deficiency in the Police Provident Fund is to be met out of the Consolidated Fund of the colony.

The rights and benefits provided by the Act are subject to modification or repeal.

The Fund is somewhat difficult to value, as many of the benefits can be granted or withheld at the option of the Board, and the liability depends to a considerable extent on the view taken as to what constitutes medical unfitness.

Of the pensions granted since the commencement of the scheme,—

17	have been granted for old age, under section 13 ;
16	“ “ “ medical unfitness, under section 12 ;
2	“ “ “ injuries on duty, under section 14 ;
4	(widow and three children) under section 15.

Of those pensioned for old age two have died ; while of those pensioned for medical unfitness three have died and one returned to duty ; and of the two injured on duty one has since died : thus leaving thirty-two pensioners on the Fund. The number of contributors at the 31st March was 594.

The average age at retirement of the pensioners under section 13 was nearly sixty-four, and under the other sections of the Act about fifty-one.

The Valuation.

The particulars supplied by the Commissioner have been valued by Dr. Farr's Healthy English Mortality Table (Males), using $3\frac{1}{2}$ per cent. interest (the rate allowed on the Fund by the Public Trustee). The benefits have been valued as if the pensions were payable at age sixty-three—viz., three years after members have the right to retire. The necessary allowances have been made for the usual increases in salaries, as well as for the return of contributions up to the date of death as provided by the Act. A further reserve has been made for the additional liability on account of retirements through medical unfitness, and on account of the other benefits allowed by the Act, after deducting the estimated relief afforded to the Fund by resignations and dismissals. This reserve has been based on the experience of the scheme during the three years and four months it has been in existence.

The liability brought out is the liability of the Government to existing members of the Force only, and no addition to this liability has been made for future entrants.

The Fund at the 31st March last amounted to £18,418 5s. 3d., and the present value of the liabilities under the Act to £207,410 6s., leaving a deficiency of £188,092 0s. 9d.

This liability is not altogether a new one, as prior to the passing of the Act the Government, I believe, as a rule, allowed compensation to members of the Force on retiring, and I gather from the annual reports on the Fund that the compensation that would probably have been paid to the members who have retired during the time the scheme has been in operation would have amounted to £9,646 10s. 7d., or about £2,894 per annum, which, if an annually recurring amount, would represent interest at $3\frac{1}{2}$ per cent. on a capital sum of £82,686.

The deficiency has been occasioned by the insufficient contributions and by the practice of allowing service in the Force prior to the 1st December, 1899, to count for the pension although no contributions have been made to the Fund on account of those years.

To have made the Fund self-supporting without Government aid, the rate of contribution for entrants, exclusive of back service, should have been—for age twenty-five, about £9 10s. per cent., instead of £5 per cent. ; for age thirty-five, about £11 18s. per cent., instead of £6 10s. per cent. The capital value of this deficiency in the case of each member on entering of the service, assuming the pay to be 7s. a day in each case, with the annual increases, is about £86 and £88 respectively at the ages stated.

I am aware that the Fund is believed to be in a flourishing state, and that these statements will be received with a certain amount of incredulity, for as long as the income exceeds the outgo it is difficult for many people to realise that this state of affairs will not always continue. But after a pension fund is established the aged and medically unfit members receiving pensions must increase from year to year until they bear much the same proportion to the staff on active service as the infirm and old in the colony bear to the remaining adult population.

Even a rough examination of the accounts shows that before many years are over the pensions and allowances will exceed the contributions. For the last three years they have been as follows :—

	Contributions.	Pensions and Allowances.	Differences.
	£	£	£
Year ending the 31st March, 1901	6,508	800	5,708
Year ending the 31st March, 1902	6,435	1,435	5,000
Year ending the 31st March, 1903	6,330	3,087	3,243

The income from contributions has a tendency to diminish as the men paying the higher percentages of their salaries leave the service, while the pensions and allowances are rapidly increasing. At the close of the triennial period, the pensions granted amounted to £2,918 1s. 6d. per annum, while pensions to the amount of about £1,700 per annum had accrued through old age and length of service, and can be drawn at any time the requisite notice is given.

I estimate that for the year ending the 31st March, 1906, the contributions and pensions will be approximately equal ; but it will probably be six or seven years later before the accumulated funds are exhausted and the Government will be called upon to pay the differences between the expenditure and receipts.

The clause in the Act providing for the deficiency in the Fund being paid out of the consolidated revenue is no doubt intended to apply when the actual expenditure for the year exceeds the receipts and funds in hand, and in this sense there will be no call on the Consolidated Fund for some years. The deficiency brought out by the valuation is the sum, as far as can be at present estimated, which should be placed to the credit of the Fund to enable it to meet the obligations to the present members without further Government aid.

The Consolidated Revenue Account, Valuation Balance-sheet, and Estimated Receipts and Expenditure for the three years ending the 31st March, 1906, are attached. The last-named, of course, can only be regarded as a rough approximation to the actual results, for in such small numbers a single death more or less among the pensioners, or among those near the pension age, would make a considerable difference to the fund. In addition to this, there is the uncertainty as to what will be paid as pensions to those medically unfit or injured on duty, and as to the other allowances which may be granted by the Board.

The deficiency on the 31st March, 1906, will probably be about £215,000.

Respectfully submitted.

P. MUTER,
Fellow of the Institute of Actuaries.

CONSOLIDATED REVENUE ACCOUNT of the POLICE PROVIDENT FUND from the 1st December, 1899, to the 31st March, 1903.

<i>Dr.</i>	£ s. d.	<i>Cr.</i>	£ s. d.
To amount transferred from the Police Reward Fund on the 1st December, 1899	1,665 7 6	Pensions and other allowances	5,347 3 10
Contributions	20,886 4 2	Commission	104 19 10
Fines	55 11 6	Funds at the 31st March, 1903	18,418 5 3
Proceeds of sale of unclaimed property and cash found	55 19 11		
Interest	1,207 5 10		
	<u>£23,870 8 11</u>		<u>£23,870 8 11</u>

VALUATION BALANCE-SHEET.

<i>Dr.</i>	£ s. d.	<i>Cr.</i>	£ s. d.
Present value of pensions granted	29,591 0 0	Funds at the 31st March, 1903	18,418 5 3
Present value of prospective pensions to officers in the service at the 31st March, 1903	222,462 17 0	Present value of future contributions	83,406 1 0
Present value of return of contributions at death	19,215 10 0	Deficiency	188,992 0 9
Estimated additional reserve required for prospective pensions accelerated through medical unfitness, and other allowances, less the estimated relief afforded to the Fund by resignations and dismissals, &c.	19,547 0 0		
	<u>£290,816 7 0</u>		<u>£290,816 7 0</u>

ESTIMATED REVENUE and EXPENDITURE for the Three Years commencing the 31st March, 1903, and ending the 31st March, 1906.

<i>Dr.</i>	£ s. d.	<i>Cr.</i>	£ s. d.
Funds at the 31st March, 1903	18,418 5 3	Pension and other allowance	15,333 0 0
Contributions	18,300 0 0	Commission	91 10 0
Interest	2,060 0 0	Funds at the 31st March, 1906	23,453 15 3
Miscellaneous receipts	100 0 0		
	<u>£38,878 5 3</u>		<u>£38,878 5 3</u>

Government Insurance Department,
Head Office, Wellington, 22nd June, 1903.

THE Right Honourable the Premier read your report on Saturday, and desired me to ask you to ascertain what the position would be if the retiring-age were sixty-five instead of sixty-three. I gathered from him that the retiring-age had been fixed, either by Cabinet or by regulation, at sixty-five instead of sixty-three. You might make inquiries of the Police Department as to the actual age of retirement, and how it has been fixed.

The Acting-Actuary.

J. H. RICHARDSON, Commissioner.

Government Insurance Department,
Head Office, Wellington, 26th June, 1903.

Police Provident Fund.

CLAUSE 13 of "The Police Provident Fund Act, 1899," is as follows:—

"13. Any member whose length of service is not less than twenty-five years, and whose age is not less than sixty years, may at any time thereafter, retire from the Police Force at the expiration

of three months' notice so to do; and in such case he shall, on his retirement, be entitled to receive from the Fund an allowance for the rest of his life, at the yearly rate mentioned in subsection three of the last preceding section hereof, but not exceeding the maximum amount therein limited."

This, however, is slightly modified by Regulation 10A of "The Police Force Act, 1886" (see *Gazette* No. 106, 19th December, 1901), which is as follows:—

"10A. Every member of the Force shall retire from the service on attaining the full age of sixty-five years. This regulation to take effect from the first day of January next."

The position, therefore, from the 1st January, 1902, has been that while a member of the Force who has completed twenty-five years' service and attained the age of sixty *may retire*, he *must retire on attaining the age of sixty-five years*.

In the past the ages of the members who have retired under section 13 have ranged from sixty to seventy-four, but in future the limits will be from sixty to sixty-five only.

While members still retain the right to retire before age sixty-five, and freely exercise this option, it would understate the liability to assume that they all remain in the service until age sixty-five. The age at retirement I have assumed in the valuation is sixty-three, or, in other words, that members will remain in the Force three years after they have the right to begin to draw their pensions. This age was found by taking the average age at which pensions have been granted under section 13, taking into account that sixty-five will in future be the maximum age at retirement. I am satisfied no higher age at retirement than sixty-three could safely be assumed—indeed, as time progresses it is probable that the average age at retirement will be less than sixty-three.

P. MUTER, Acting-Actuary.

The Commissioner, Government Insurance Department.

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