

CITY OF DUNEDIN,

NEW ZEALAND.



DEPARTMENTAL REPORTS

FOR THE YEAR 1915-16.

REPORTS

BY

Town Clerk

City Treasurer

City Engineer

Superintendent of Reserves

Librarian

City Electrical Engineer

Tramways Manager.

Dunedin:

JOHN MCINDOE, PRINTER & BOOKBINDER, VOGEL STREET.

1916.

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CITY OF DUNEDIN.

STATISTICS.

Founded 23rd March, 1848.

Constituted (Town Board) 27th August, 1855.

Incorporated as a Borough, 1st August, 1865.

Constituted a City, 21st December, 1877.

Caversham Amalgamated with City, 1st November 1904.

South Dunedin Amalgamated with City, 1st April, 1905.

North East Valley Amalgamated with City, 13th Oct., 1910.

Roslyn Amalgamated with City, 1st November, 1912.

Mornington amalgamated with City, 1st January, 1916.

Maori Hill amalgamated with City, 1st January, 1916.

Baytown amalgamated with City, 1st January, 1916.

Population, 57,591.

Population, with Suburbs, 68,347.

Area, 14,315 acres.

Miles of Streets, 217.

Miles of Footways, 274.

Number of Dwellings, 13,319.

Number of other Buildings, 765.

Rateable Value, £668,701.

Gas first lighted in Dundin, 9th May, 1863.

Water first turned on in Dunedin, 9th December, 1867.

Tramways taken over by City Corporation, 16th March, 1901.

First Sod Electric Tram Service turned, 26th February, 1903.

Number of Miles of Electric Tramways—

Single Track	24 miles 41 chains.
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Double Track	10 miles 23 chains.
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Route Mileage	13 miles 76 chains.
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Number of Miles of Cable Tramways—

Single Track	2 miles 40 chains.
--------------	-----	-----	--------------------

Double Track	1 mile 0 chains.
--------------	-----	-----	------------------

Route Track	1 mile 40 chains.
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Electric Power and Light from Waipori Falls Hydro-Electric

Works first turned on, 27th April, 1907.

Caversham Gasworks taken over, 1st November, 1907.

Public Library opened, 2nd December, 1908.

Tepid Public Baths in Moray Place opened 29th March, 1914.

Turkish Baths in Moray Place opened 6th June, 1914.

LATITUDE	45°	52'	28"	South.
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LONGITUDE	170°	30'	38"	East.
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TOWN CLERK'S
ANNUAL REPORT,
1915-16.



BY
G. A. LEWIN
FELLOW REGISTERED ACCOUNTANT N.Z

Town Clerk's Office,
Town Hall, Dunedin,
30th April, 1916.

To His Worship the Mayor.
(J. J. Clark, Esq., J.P.),
Dunedin.

SIR,—

I have the honour to submit my report on the work and proceedings of the Dunedin City Council for the period that commenced on the 5th May, 1915, and ended on the 31st March, 1916, the term embraced being from the date of the Mayoral installation to the end of the financial year.

The period is a memorable one inasmuch as during its currency a historic event in the civic life of the City was attained—i.e., the jubilee of local government, the incorporation of the original City having taken place on the 1st August, 1865. In addition to this, the amalgamation with the City of three of the remaining four outside municipalities was brought about, enlarging the City to 14,315 acres, which area is considerably greater than that embraced by any other city or borough in the Dominion.

Apart from these outstanding features in the history and growth of the City, it can be said that, although no very large works of construction or new undertakings of any great magnitude have been embarked upon, the period has been a busy one for the Council and its Committees in controlling and administering the many municipal and trading activities.

With the above preface, I will now proceed to enumerate for record purposes the more important points and questions that have from time to time engaged attention, the first of which, of course, is the

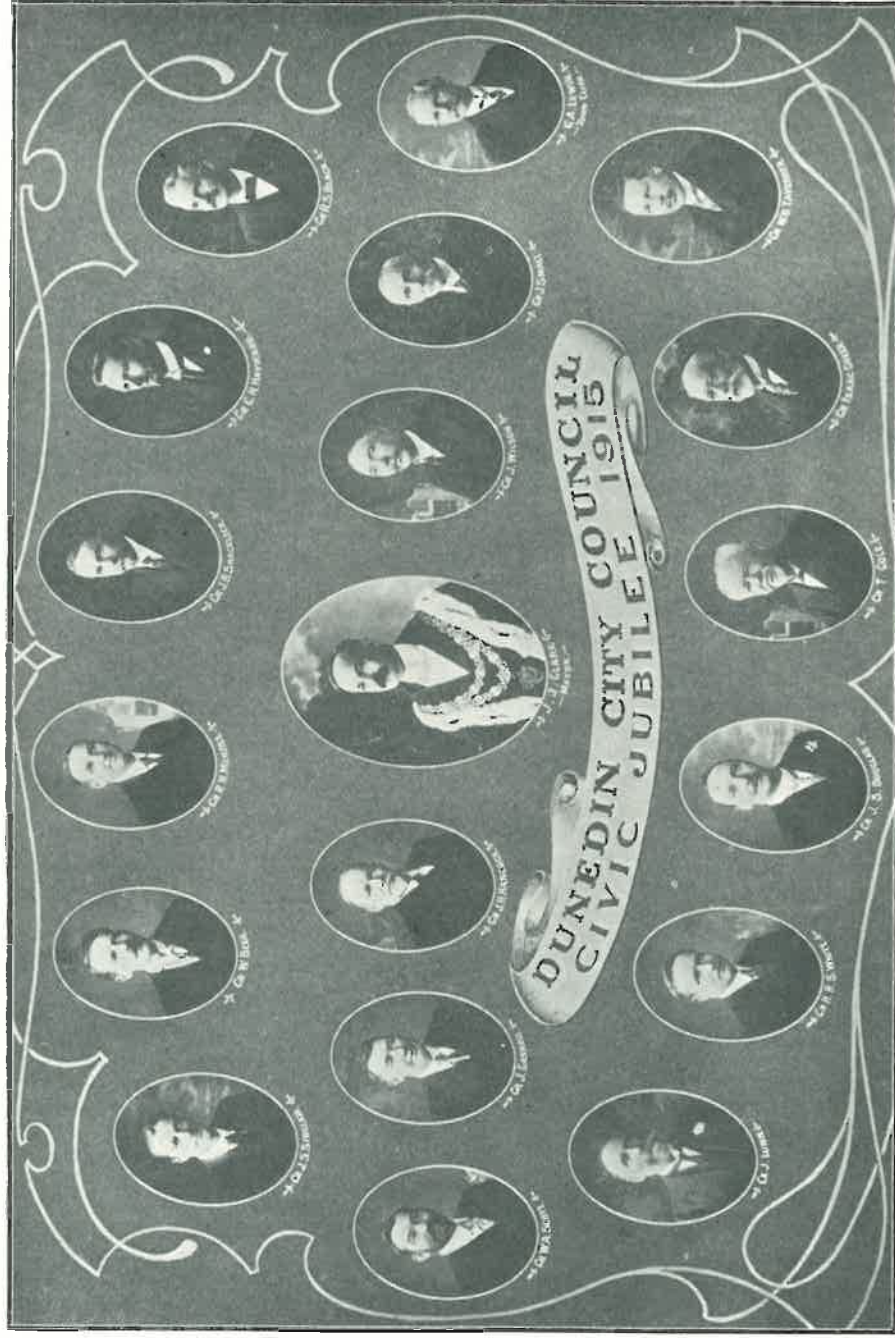
MAYORAL INSTALLATION.

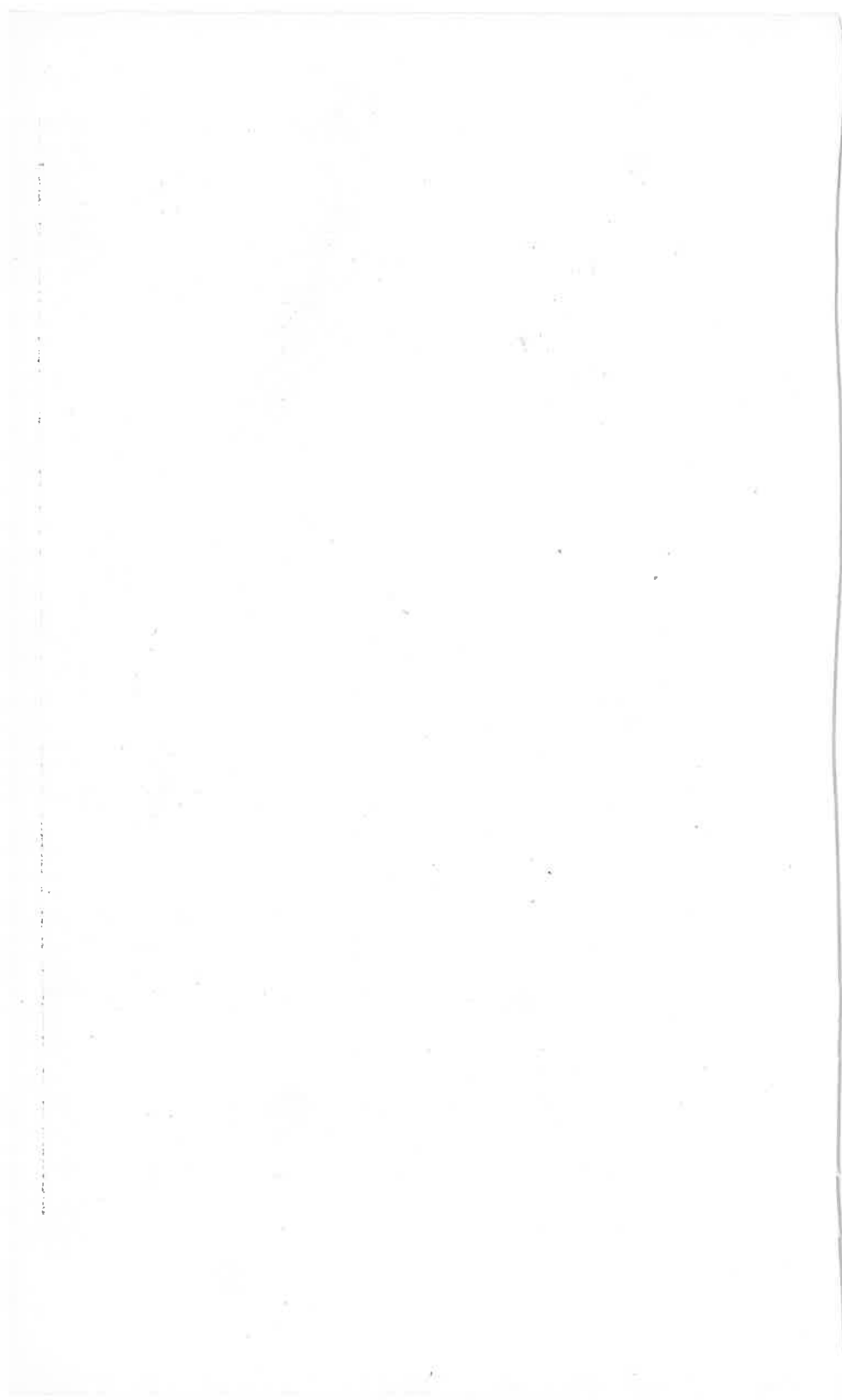
The ceremony of installing Mr J. J. Clark as Mayor for the years 1915-17 took place at a special meeting of the Council on 5th May at 12 o'clock noon in the presence of a large gathering of representative citizens. After having been installed in office and invested with the insignia of his office and the Mayoral robes by the retiring Mayor (Mr J. B. Shacklock), His Worship took his seat amid loud applause, and, after delivering a brief speech, moved:—

That the thanks of the Council be tendered to Mr John Bradley Shacklock for the efficient services rendered



JAMES JOHN CLARK, ESQ., J.P.
Mayor of Dunedin, 1915-17.





ROLL OF MAYORS OF DUNEDIN.

William Mason	...	...	1865-67
John Hyde Harris	...	...	1867-68
Thomas Birch ...	...	...	1868-70
Henry Smith Fish, junr.	...	...	1870-73
Andrew Mercer	...	...	1873-74
Keith Ramsay ...	...	...	1874-75
Henry John Walter	...	...	1875-76
Charles Stephen Reeves	...	...	1876-77
Richard Henry Leary	...	...	1877-78
Henry John Walter	...	...	1878-80
Archibald Hilson Ross	...	...	1880-81
James Gore ...	...	...	1881-82
John Bryce Thomson	...	...	1882-83
William Parker Street	...	...	1883-84
Arthur Scoullar	...	...	1884-85
John Barnes ...	...	...	1885-86
Richard Henry Leary	...	...	1886-87
William Dawson	...	...	1887-88
Hugh Gourley ...	...	...	1888-89
John Roberts ...	...	...	1889-90
John Carroll ...	...	...	1890-91
Charles R. Chapman	...	...	1891-92
Charles Haynes	...	...	1892-93
Henry Smith Fish, junr.	...	...	1893-95
Nathaniel Y. A. Wales	...	...	1895-96
Hugh Gourley	...	...	1896-97
Edward B. Cargill	...	...	1897-98
William Swan ...	...	...	1898-99
Robert Chisholm	...	...	1899-01
George Lyon Denniston	...	...	1901-02
James Alexander Park	...	...	1902-03
Thomas Scott ...	...	...	1903-04
Thomas R. Christie	...	...	1904-05
Joseph Braithwaite	...	...	1905-06
George Lawrence	...	...	1906-07
John Loudon ...	...	...	1907-08
John McDonald	...	...	1908-09
James H. Walker	...	...	1909-10
Thomas Cole ...	...	...	1910-11
Wm. Burnett ...	...	...	1911-12
John Wilson ...	...	...	1912-13
William Downie Stewart	...	...	1913-14
John Bradley Shacklock	...	...	1914-15
James John Clark	...	...	1915-17

ROLL OF Town Clerks of Dunedin.

TOWN DISTRICT.

Malcolm Graham	...	...	Aug. 1855 to Oct. 1858.
Charles Reid	...	...	Oct. 1858 to Nov. 1863.
John Lazar	...	...	Nov. 1863 to Aug 1865.

BOROUGH.

John Lazar	...	...	Aug. 1865 to April 1866.
Henry P. Morse	...	...	April 1866 to May 1867.
Jos. M. Massey	...	...	May 1867 to Dec. 1877.

CITY.

Jos. M. Massey	...	...	Dec. 1877 to Oct. 1881.
Adam Gibson	...	...	Oct. 1881 to March 1890.
Wm. B. Taylor	...	...	March 1890 to Sept. 1899.
H. W. Wilson (acting)	...	...	Sept. 1899 to March 1900.
Thos. F. Fairburn	...	...	March 1900 to May 1905.
John Jacobs	...	..	May 1905 to Dec. 1905.
R. W. Richards	...	...	Dec. 1905 to Feb. 1911.
G. A. Lewin	...	...	February 1911.

THE CITY COUNCIL,

1915 - 16.

MAYOR:

JAMES JOHN CLARK, ESQ., J. P.

VALLEY WARD:

ISAAC GREEN.

WILLIAM BEGG.

LEITH WARD:

JAMES SMALL,

HENRY HARPER SPENCER WHITE,

CHARLES HENRY HAYWARD,

JAMES SANDILANDS DOUGLAS,

WALTER ALEXANDER SCOTT.

CENTRAL WARD:

JOHN SUTHERLAND SINCLAIR,

JOHN CARROLL,

JOHN LUNN.

CAVERSHAM WARD:

THOMAS COLE (died 12th October, 1915),

JOHN HENRY HANCOCK,

JOHN WILSON,

JOHN BRADLEY SHACKLOCK,

WILLIAM BURGOYNE TAVERNER,

CHARLES JOHN THORN (elected 3rd November 1915),

ROSLYN WARD:

ROBERT SPROULL HUTTON MENZIES (resigned 14th
September, 1915).

ROBERT SHERIFF BLACK.

HUGH FRANCIS WRIGHT (elected 6th October, 1915).

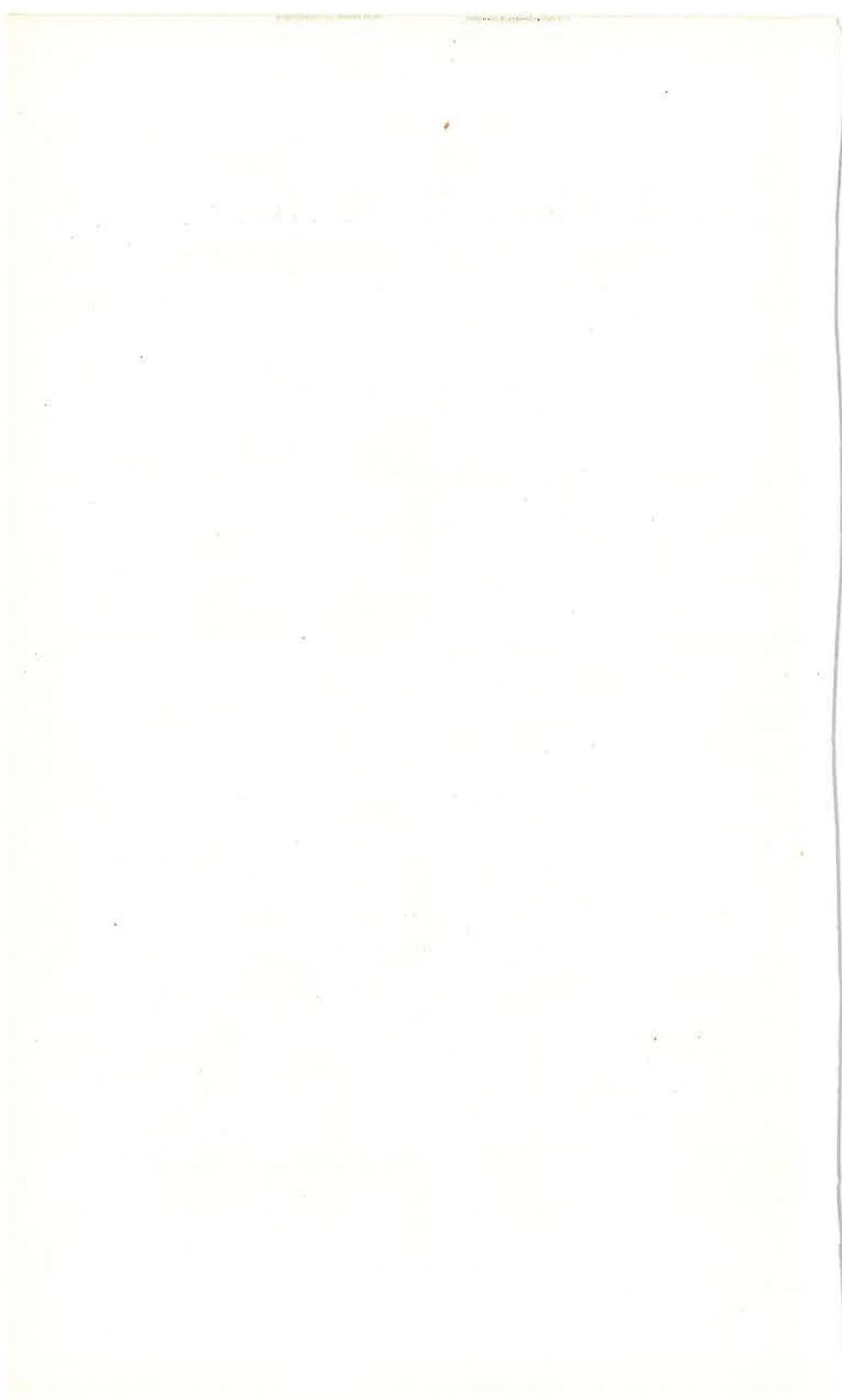
MORNINGTON.

MAORI HILL.

BAYTOWN.

(From 1st January, 1916).

Edwin Sincock, William Hastie, Matthew Henderson,
James Wright Patton, Alexander McMillan, John Whyte,
John Thompson. Michael Finnerty. Albert Williams.



by him to the City of Dunedin during his term of office as Mayor for the year 1914-15; and that this resolution be recorded in the minutes, and an engrossed copy be forwarded to Mr Shacklock.

The motion was seconded by Mr Councillor Thos. Cole and carried unanimously.

It is interesting to note that Mr Clark, while being the fortieth holder of the office, is the first Mayor to hold the seat for two years under a recent amending statute.

RETIRING MAYOR.

At the conclusion of the Council meeting on the 16th June His Worship the Mayor presented Mr. Councillor Shacklock (the immediate past Mayor) with an illuminated address in recognition of his services as chief magistrate of Dunedin, and also a signet ring engraved with the City Arms, together with a silver cakestand for Mrs. Shacklock.

In making the presentations His Worship referred in eulogistic terms to the services rendered by Mr. Shacklock, while Mrs. Shacklock, although handicapped by ill-health, had, nevertheless, made a very excellent Mayoress, and deserved the thanks of the citizens as well as her husband.

Councillor Shacklock returned thanks on behalf of Mrs. Shacklock and himself in suitable terms.

RETIRING COUNCILLORS.

Councillors R. H. S. Todd and C. E. Statham, M.P., did not offer themselves for re-election at the biennial election in April, and therefore went out of office when their successors were elected. As a mark of appreciation of the highly efficient services rendered by each during his office, the Council adopted the following resolution on the 26th April—viz.:

That this Council places on record its appreciation of the valuable services rendered by Councillors R. H. S. Todd and C. E. Statham to the citizens of Dunedin during their term of office as councillor for Caversham and Central Wards respectively, and regrets that they will not be offering their services at the forthcoming elections.

After the Mayoral election, the Council further resolved that the names of Councillors J. J. Marlow and S. S. Myers, both of whom had unsuccessfully contested the Mayoral

election, be included in the above resolution, and that an engrossed copy be presented to each of the gentlemen named therein.

Accordingly, by request of His Worship the Mayor, Councillors Todd, Marlow, and Myers attended the Council meeting on the 30th June, and were presented by His Worship with a framed engrossed copy of the above-mentioned resolution. The recipients suitably replied, and were afterwards, with other councillors, entertained by the Mayor at a social function in the Committee Room. Ex-councillor Statham was not able to attend, owing to his parliamentary duties, and subsequently a framed copy of the resolution was forwarded to him.

THE WAR.

The titanic struggle, the commencement of which was chronicled in my last annual report, continues to exact its terrible toll of human lives and money, and after over 20 months of terrific warfare there is no indication that the end is yet in sight. The Dominion of New Zealand continues to do its part in assisting the Motherland by maintaining its Expeditionary Forces in the field, regular reinforcement drafts going forward to join their war-scarred and more seasoned comrades already abroad with the colours. Large bodies of Otago men have been regularly despatched to the training camps in the North Island, and each, prior to entraining, has been publicly farewelled by the Mayor and other prominent citizens; while, emblematical of the price we are called upon to pay in the interests of justice and freedom, numbers of wounded and invalided New Zealanders, fresh from the fields of battle, have been periodically returned to Dunedin. These brave men, many of whom took part in the historic landing at Anzac, on Gallipoli Peninsula, and later in the attack on Suvla Bay, and thereby earned fame that will live for all time in the history of the Empire, have been afforded civic receptions and publicly thanked for the sacrifices they have made for King and country.

Many volunteers for the Expeditionary Forces have been obtained from the officials and employees of the City Council, and the following list is an extension of that set out in last year's annual report:—

Official Staff.

Mr L. W. Swan, clerk, E.P. and L. Department.
Mr Jas. M. Fraser, clerk, Municipal Department.
Mr Stanley Thompson, clerk, Gas Department.

OTAGO PATRIOTIC AND GENERAL WELFARE ASSOCIATION.
Statement of Receipts and Payments—Period, 15th August, 1914, to 31st December, 1915.

RECEIPTS.			EXPENDITURE.		
	£	s. d.	£	s. d.	£ s. d.
Relief Funds—			Relief Funds—		
Belgian	58,987	14 7	Local Grants	1,312	10 0
Local	8,222	10 8	Belgian	55,050	17 11
Great Britain and Ireland	6,177	16 9	Great Britain and Ireland	5,553	9 0
Serbians	862	2 8	Serbians	802	8 0
Poles	5	1 0	Labour and Material Re-		
			lief Works	8,936	17 11
					71,656 2 10
Soldiers and Dependents' Fund—			Soldiers and Dependents' Fund—		
Proceeds Queen Carnival	104,223	5 2	Grant Chaplain "Maheno"	200	1 0
Donations	17,459	7 4	Grant Y.M.C.A.	1,000	0 0
			N.Z. War Contingent		
Miscellaneous—			Association	1,000	0 0
Ambulance	...	...	Hospital Ship "Marama"	2,700	0 0
Equipment Expeditionary Force	...	...	Grants Soldiers and De-		
Refunds	...	...	pendents	1,855	2 6
Interest Temporary Deposits	...	...	Purchase War Fund De-		
Leather Vest Fund	...	...	bentures	90,000	0 0
General Donations (unconditional)	...	...			96,755 3 6
			Miscellaneous—		
			Equipment Expeditionary Force	3,426	7 9
			Ambulance	275	8 0
			Leather Vest Fund	319	5 10
			Votes to Women's Committee	557	13 0
			Printing and Advertising	550	2 8
			Typiste—Salary (Aug., '14, to Jan., '15)	40	2 0
			Receptions Returned Soldiers	220	19 7
			Sundry Accounts Queen Carnival	29	1 9
			Expenses Delegates to Conferences	22	1 2
			Grant Y.M.C.A.—Damages tent Forbury	45	0 0
			Incidentals	92	17 3
					£173,990 5 4
			Balance, December 31, 1915	...	31,411 12 2
					£205,401 17 6

Town Hall, Dunedin, March, 1916.

G. A. LEWIN, for Hon. Treasurers.

Outdoor Staff.

ENLISTMENTS FROM OUTDOOR STAFF.

ELECTRIC DEPARTMENT.—T. Anderson, E. Jones, J. Ryan, P. Sheehan, J. A. Jephson, F. F. Gilmore, W. Anderson, T. R. Overton, L. McLean, and N. Arundel.

GAS DEPARTMENT.—F. Miller.

RESERVES DEPARTMENT.—J. Knox.

SANITARY DEPARTMENT.—W. Leaper.

TRAMWAYS DEPARTMENT.—R. W. R. Graham, A. E. Holley, W. P. Matthews, A. H. Cameron, B. H. Winchester, G. M. Pye, J. S. W. Bunting, J. Broadfoot, A. Smolenski, F. G. Hilliker, A. D. Ewart, J. Dyer, A. Mills, F. H. Rainham, M. McLean.

WATER DEPARTMENT. —M. O'Neill, T. Butler, A. Reeves, V. G. Robertson, G. Finnerty, H. McKay.

WORKS DEPARTMENT.—L. J. Coughlan, W. M. Durant, P. Donlan, G. R. Simpson, W. Bauchop, W. E. Herring.

DEATHS.—It has to be recorded that Messrs. A. Moir, Claude Ingle, G. H. Browning, T. Page, M. McQuilkan, A. Miles have, in addition to those mentioned in the last Annual Report, given their lives for their king and country, having been either killed in action, died of wounds received in action, or died of disease.

In terms of the Council's resolution the above are receiving half-pay during absence, and for the year ended 31st March, 1916, this item of the Council's expenditure amounted to £3607, while the estimate for the year 1916-17 is £4750.

The Otago Patriotic and General Welfare Association, which was set up shortly after the outbreak of war, continues to do splendid work and to fully meet the purposes for which it was brought into being. The funds of the Association were amplified by over £104,000, being the proceeds of a Queen Carnival. To-day the funds of the Association are rapidly approaching the quarter of a million mark. The following is a copy of the Hon. Treasurers' balance sheet from commencement of operations in August, 1914, to 31st December, 1915:—

The following is a copy of the Hon. Treasurers' last financial statement as presented to the Executive of the Association:—

FUND.	RECEIPTS.		EXPENDITURE.		BALANCE.	
	£	s. d.	£	s. d.	£	s. d.
Belgian Relief ...	65,023	11 10	61,050	17 11	3,972	13 11
Local Relief ...	8,222	10 8 }				
Refunds ...	2,198	18 0 }	10,377	17 2	43	11 6
Great Britain and Ireland	6,221	3 5	5,553	9 0	667	11 5
Serbian ...	4,731	6 2	4,302	8 0	428	18 2
Poles ...	5	1 0	—		5	1 0
Soldiers and Dependents	19,188	10 4 }				
Queen Carnival ...	104,223	5 2 }	*101,314	17 6	22,096	18 0
Ambulance ...	328	3 6	275	8 0	52	15 6
Expeditionary Force ...	4,323	16 0	3,531	7 9	792	8 3
Interest on Deposits ...	1,356	16 1	—		1,356	16 1
Unconditional ...	1,646	16 2	1,638	9 0	8	7 2
Leather Waistcoats ...	373	2 4	373	2 4	—	
Red Cross ...	19	6 0	—		19	6 0
Y.M.C. Association ...	1,166	0 6	—		1,166	0 6
Totals ...	£219,028	4 2	£188,417	16 8	£30,610	7 6

* £90,000 of this amount expended in purchase of Government Debentures.
May 8, 1916. G. A. LEWIN, for Hon. Treasurers.

Wednesday, 4th August, 1915, was the first anniversary of the declaration of war by Great Britain, and the Association, at the request of His Worship the Mayor, arranged a united service in connection with the universal movement throughout the Empire to carry a resolution affirming determination to prosecute the war to a successful issue. The gathering was held in the Garrison Hall on the evening of that date. The building was filled with a large audience, and the proceedings were impressive throughout, those present apparently looking upon the occasion as one of solemn import. The Rev. G. H. Balfour presided, the Mayor on one side and the Rev. R. S. Gray on the other. The stage was occupied by representatives of the City and Borough Councils, the Otago Patriotic Association, churches of all denominations, etc., and the Salvation Army Band, which led the singing.

The proceedings commenced with the singing of the Hundredth Psalm, after which the Lord's Prayer was repeated in unison. Major Colvin read the Forty-sixth Psalm, and the hymn, "Our God, our help in ages past," was sung. Prayer was offered by Professor Hewitson, and the Revs. W. A. Hay and R. S. Gray delivered stirring addresses.

The hymn, "O God of Love, O King of Peace" having been rendered, His Worship the Mayor moved a resolution that it was proposed to be put and carried throughout the Empire as follows:—

That on this anniversary of the declaration of a righteous war this meeting of the citizens of Dunedin records its inflexible determination to continue to a victorious end the struggle for the maintenance of those ideals of liberty and justice which are the common and sacred cause of Great Britain and her Allies.

The Primate of New Zealand (His Lordship Bishop Nevill) seconded the motion, the audience afterwards rising en masse to signify entire concurrence with its terms. The National Anthem was then sung, and the solemn and memorable service was concluded.

JUBILEE OF THE CITY.

On the 16th June, His Worship the Mayor brought before the notice of the Council the fact that it would be 50 years on the 1st August since the Borough was incorporated. He suggested that there should be some fitting public recognition of the occasion, and intimated that it was his intention to ask ex-Mayors to meet him and discuss the matter. He added that he would be pleased if the Council would appoint a committee to co-operate with him, and it was agreed by the Council that the chairmen of the various committees should confer with the Mayor and ex-Mayors with a view to bringing forward a scheme to celebrate the historic event, which would be the first of its kind in the Dominion, Dunedin being the first borough constituted under The Municipal Corporations Act.

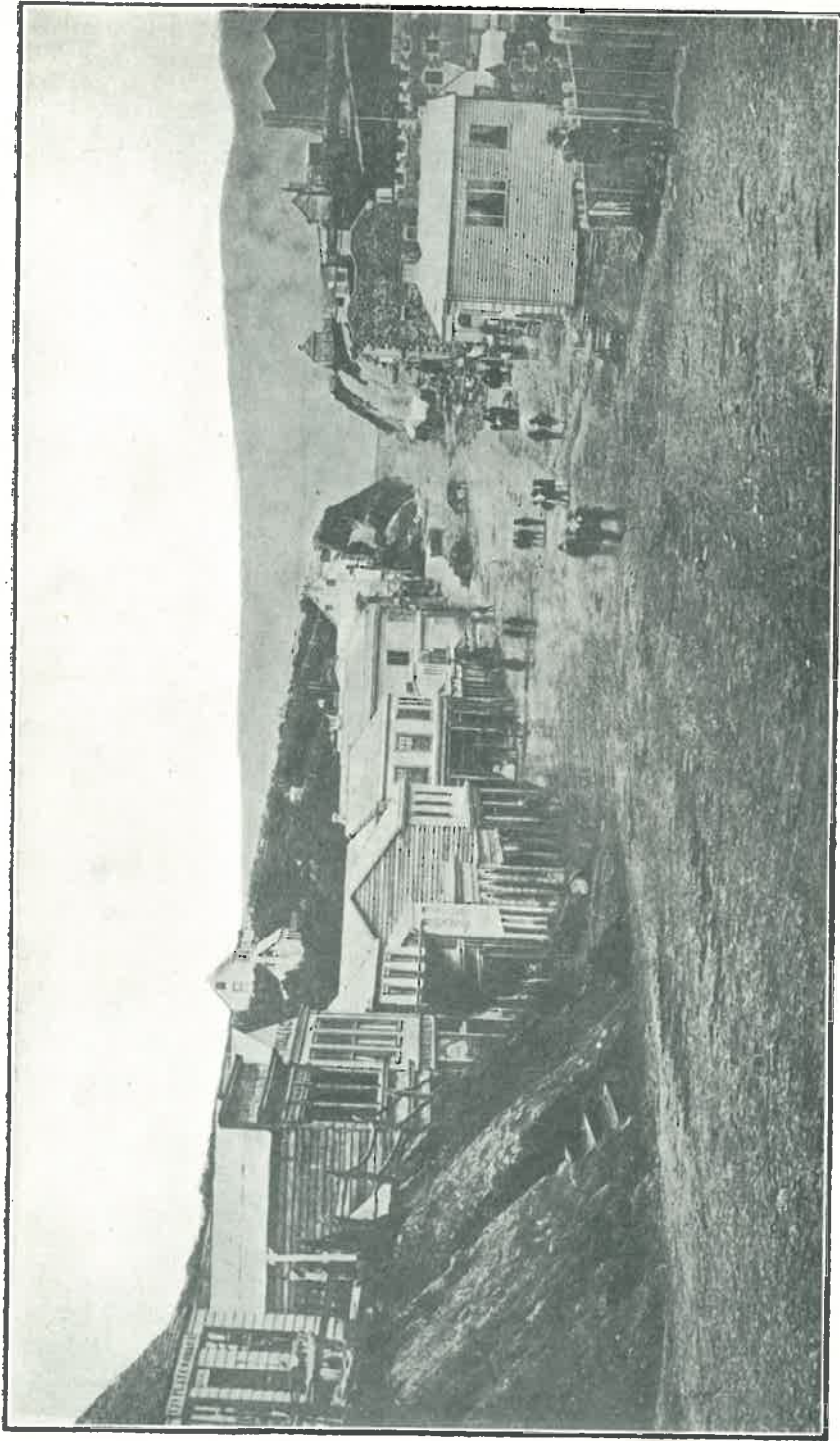
A meeting of the above Committee was held in the Mayor's room on the 28th June, His Worship the Mayor presiding. The matter was fully discussed, and the consensus of opinion was that, while it would be unwise to have anything in the nature of public festivities in view of the national war crisis, something should be done to recognise an event of such civic and (in New Zealand) unique importance. It was eventually decided to carry out the following programme:— A special church service on Sunday afternoon, 1st August, a public meeting on 2nd August, in the Garrison Hall; and a Mayoral reception on the afternoon and evening of Wednes-

day, 4th August, in the Art Gallery Hall. It was further decided to issue a booklet showing the progress of the City during the past 50 years, the gross proceeds of the sale of which was to be donated to the Wounded Soldiers' Fund.

Church Service.—The Church Service was held in First Church, Moray place, on the afternoon of 1st August, the church being crowded in all parts. A procession of civic representatives, past and present, was formed at the Town Hall, and shortly before 3 p.m. moved off to attend the service. The procession was lead by ex-Mayors, and following came ex-councillors, the Mayor and Town Clerk, councillors, departmental representatives, Mayors and councillors of St. Kilda, Morningside, Maori Hill, and West Harbour, and representatives from the Bay Town Board, Harbour Board, Hospital and Charitable Aid Board, and Drainage and Sewerage Board.

The service in the church was presided over by the Rev. G. H. Balfour, and a number of the clergy of the various denominations took part in the proceedings. Mr W. Paget Gale, who divided the duties of organist with Mr Jesse Timson, played an Elegiac Romance as an opening voluntary, and the choir, which had been much strengthened for the occasion by contingents from various other churches, and the congregation joined in singing the Hundredth Psalm. This was followed by the Lord's Prayer. The National Anthem was sung with much fervour, and subsequently portions of the Scriptures were read by the Rev. E. Drake and the Rev. R. S. Gray. Prayer was offered by the Primate (Bishop Nevill), the Rev. W. Saunders, and the Rev. R. E. Davies; and psalms and hymns appropriate to the occasion were sung by the choir and congregation, among the hymns being one especially for the men at the front. The choir rendered the anthem, "O Worship the Lord," during the singing of which a collection was made on behalf of the Wounded Soldiers' Fund.

The Rev. J. Chisholm, to whom was allotted the duty of addressing the vast congregation, spoke on "A Citizen of No Mean City." He took for the basis of his remarks the twenty-ninth verse of the twenty-first chapter of the Acts of the Apostles, and said that the words that he had chosen were a kind of motto and part of a statement made by St. Paul to the chief captain of the Roman garrison in Jerusalem. It might be taken for granted that those present would gladly join hands with Paul across the bygone centuries and say



PRINCES STREET, DUNEDIN, 1861

with justifiable pride: "I, too, am a citizen of no mean city." That being so, it was fitting that the most prominent note of the proceedings should be one of thankfulness to God for the work that had been done in transforming what had seemed in its primitive state a somewhat unpromising site into a beautiful and prosperous city, with all the appliances of modern civilisation, for the succession of honourable citizens, who, doubtless at no small personal inconvenience—and it might be pecuniary loss—had planned and toiled for the benefit of the whole community.

The speaker then went on to give a description of what Dunedin was like close on 60 years ago, and concluded a splendidly-thought-out sermon by a reference to the war crisis through which the Empire was then passing.

The proceedings were brought to a close by Mr Jesse Timson playing the Hallelujah Chorus from "The Messiah."

Public Meeting.—The citizens assembled in large numbers in the Garrison Hall on the evening of the 2nd August for the purpose of commemorating the jubilee. The hall was handsomely decorated with foliage, flags, and fairy lamps, and there were conspicuously displayed along the front of the gallery placards bearing the dates of the foundation of the City (1848), the constitution of a Town Board (1855), incorporated as a Borough (1865), the constitution as a City (1877), and the dates of the merging of the several suburban areas with the City.

His Worship the Mayor was in the chair, and was supported by ex-Mayors and a number of well-known citizens. The National Anthem having been sung, the Dunedin Orchestral Society played the march "King George," under the baton of Mr George Coombs, and later, "The Castagnettes," the remainder of the musical part of the programme being filled by Mrs R. Hudson, Mr E. Drake, and Mr Percy James, all of whom were recalled for their items. One very interesting feature of the gathering, especially to those of long residence in Dunedin, was a display of old views of the City, concerning which brief explanations were given by Mr George Fenwick. Speeches were made by His Worship the Mayor, His Honour Mr Justice Sim, Mr George Fenwick, and Mr W. Burnett, after which the proceedings closed with the singing of the National Anthem.

Mayoral Reception.—The Mayoral Reception was held in the Art Gallery Hall on Wednesday, 4th August. The hall

had been previously very beautifully decorated by the Council's Reserves Department. Afternoon tea and refreshments were provided, while an efficient orchestra was in attendance. The function was quite devoid of all formality, and was very largely attended by all sections of the community.

Jubilee Booklet.—This booklet, compilation of which was entrusted to Mr George Fenwick, was a profusely illustrated volume, containing over 150 pages. It was exceedingly well got up, being printed on good paper, with a suitably-inscribed cover, and contained an interesting resume of the historical events of the previous 60 years, both in the social and civic life of the City, by reason of which it will become more and more valuable as a book of record from a municipal and historical point of view as time passes.

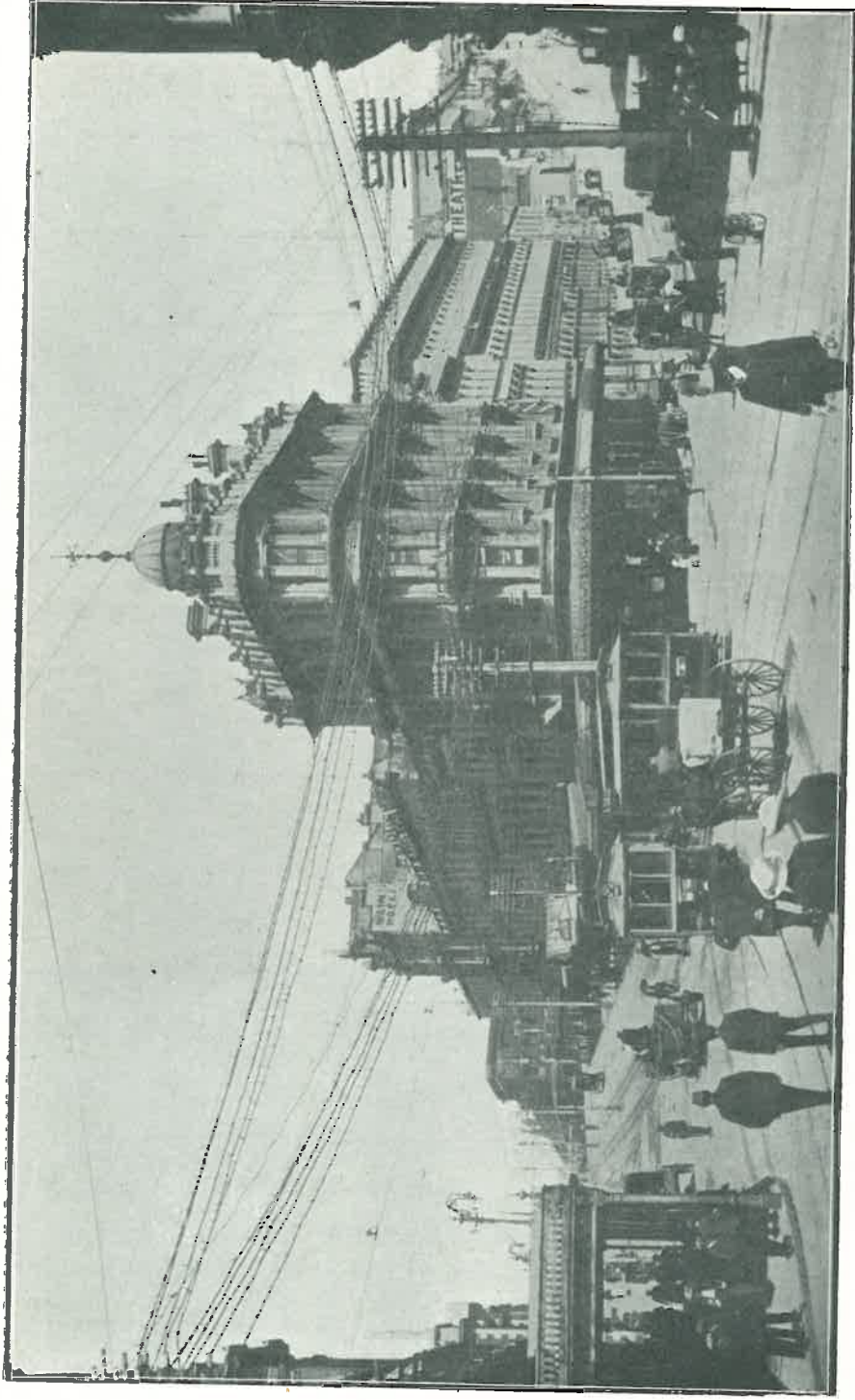
MAYORAL PHOTOGRAPHS.

Included in the illustrations in the Jubilee Booklet above-mentioned was a photograph of each Mayor of Dunedin since the inception of the Borough in 1865. In all, 40 gentlemen have occupied the Mayoral Chair, and, in addition to a photograph of each appearing in the booklet, a somewhat larger one has been procured. These have been tastefully framed and hung in the Mayor's Room, and while forming in themselves a unique collection, they are an interesting record of the gentlemen who have assisted to successfully guide our City through the vicissitudes of 50 years, and who have in no small measure helped by their foresight and energy to lift it to that important position it occupies to-day among the cities of Australasia.

AMALGAMATIONS.

Three more of the municipalities surrounding the City have ceased to exist by deciding to throw in their lots with the City. The areas in question are the Boroughs of Mornington and Maori Hill, and the Bay Town District.

The poll of the electors of Mornington on the proposal to joint the City was taken on the 11th August, and was carried by a considerable majority, 786 votes being cast in favour of the proposal and 333 votes against it. The poll in Maori Hill was taken on the 20th September, and here again an overwhelming majority declared itself in favour of the union, the official figures at the poll being: For the proposal, 549



INTERSECTION PRINCES AND HIGH STREETS, DUNEDIN, 1915.

votes; against, 120 votes. On the 7th September the electors of the Bay Town District were called upon to vote on a similar proposal, which was declared to be carried, the voting showing that 425 electors were in favour of it, and only 156 opposed to it.

Some doubt existed as to whether the City and the Town District could be said to form "one continuous area," by reason of the fact that the two districts were separated at their nearest points by a public road, jurisdiction over which was claimed by neither the City nor the Town District. This road has been described as being "No Man's Land," and to remove any doubts as to the legality of the union, Parliament was asked to declare the two areas to be one continuous area for the purposes of the provisions relating to the union of boroughs with town districts. Parliament did so declare, and its enactment is included in the "Washing-up" Bill of last session.

At a later date, however, the Minister of Internal Affairs intimated that as the provisions of the above enactment were not retrospective, a fresh poll would require to be taken on the amalgamation proposal. Accordingly, the Town Board made the necessary arrangements, and on the 17th November the electors of the district for the second time decided in favour of the union, the voting on this occasion being: For the proposal, 360 votes; against, 58 votes.

The necessary legal steps to accomplish the union of the three districts having been complied with, the respective areas were proclaimed to be parts of the City of Dunedin from the 1st January, 1916.

In accordance with an amendment to the Municipal Corporations Act, passed during last session of Parliament, which provides that any borough, town district, or road board which may decide to amalgamate with any of the cities of Dunedin, Christchurch, Wellington, and Auckland, shall be represented on the united council by three members to be selected by each council from its own number, the following gentlemen became members of the City Council as from the date of the union—viz.: Messrs Edwin Sincock (late Mayor), James W. Patton, and John Thompson (representing Mornington); Messrs Alex. McMillan, Wm. Hastie, and M. Finerty (representing Maori Hill); and Messrs Matthew Henderson, John Whyte, and Albert Williams (representing Bay Town), each of whom will hold office until the next biennial election of councillors in 1917.

The united Council now consists of 27 members, being six more than is allowed in ordinary circumstances by the Municipal Corporations Act. Automatically with the union of the districts above-mentioned, the City became an undivided borough, and the intention is that it shall remain so until the question is considered prior to the next elections.

DUNEDIN DRAINAGE BOARD.

The question as to the desirableness of the functions of the Dunedin Drainage and Sewerage Board being absorbed by the City Council is one that has been often raised during recent years. The matter was again brought into prominence in August by the receipt of a letter from the Dunedin Municipal Association, conveying a copy of a resolution adopted by the Association, in the following terms:—

That in view of the necessity at the present time to economise, the Executive of this Association respectfully requests that the City Council take the necessary steps to absorb the Drainage Board without delay.

This resolution was considered by the Council on the 11th August, and was by it referred to the Finance Committee for report, the Committee being also instructed to take into consideration the proposed Bill that was to be presented to Parliament by the Board for the purpose of obtaining authority to raise a further loan of £100,000 with which to carry on its functions.

The report of the Committee, which was duly adopted by Council, was to the effect that, in the opinion of the Committee, the time had arrived when the remaining functions of the Board could be performed by the Council quite as efficiently and more economically than by the Board; and in view of this fact the proposal of the Board to seek parliamentary sanction to increase its borrowing powers by a further £100,000 should be opposed by the Council. The matter of absorbing the Board, however, could not be done without legislation, and as time would not allow of the statutory steps being taken to permit a Bill being introduced by the Council during the then current session of Parliament, the Committee recommended that the necessary measure should be introduced during the next ensuing year.

Relative to the Board's Bill seeking authority to raise a further sum of £100,000, and also for an extension of its

rating powers from 1s to 1s 3d in the sewered area, and from 6d to 7½d in the unsewered area, the Committee was strongly of opinion that the Bill should be opposed in Parliament, for which purpose the Committee asked for and was granted power to arrange to be heard before the Local Bills Committee of the House of Representatives. One of the chief considerations that impressed the Committee when dealing with the whole subject was the somewhat doubtful methods of the Board in regard to finance. The Board had been in existence for about 14 years; it had borrowed £550,000 on the security of the rateable property of the district; but the provision made by the Board for meeting any portion of this heavy liability at the maturity of the loans was conspicuous by its absence. It was understood that the total accrued sinking fund at that time was represented by the almost insignificant sum of £500. Such a provision could not be characterised as sound finance, and whatever the future constitution of the Board might be, the burden must in any event fall upon the city ratepayers. When the existing loans come to be renewed they will require to be renewed in full, despite the fact that conceivably fresh loans may be required to renew the works upon which the original loans were expended. If, in addition to this, the Board is permitted to further add to its already heavy borrowings, and the practices of the past are to be perpetuated, the burden on the ratepayers must very soon become exceptionally heavy.

The objections by the Council were set out in a petition to the House of Representatives. The petition was entrusted to Mr T. K. Sidey, M.P. for Dunedin South, and it first came before the Local Bills Committee for consideration on the 17th September. To support the petition the Finance Committee authorised His Worship the Mayor, Mr Councillor Small, and Mr W. C. MacGregor (City solicitor) to proceed to Wellington; Mr Jas. Arkle also attended as a private citizen to oppose the Bill. The Board was represented in Wellington by Messrs J. S. Douglas (chairman), W. T. McFarlane, A. Slinger (engineer), P. B. Foote (secretary), and Mr J. C. Stephens (solicitor). Under date of the 30th September the Minister of Internal Affairs wired that the result of the Council's opposition to the Bill was that the Local Bills Committee in reporting the Bill to the House had reduced the amount of loan asked for to £35,000; and that all parties were agreed that the Board was certain to be absorbed by the City Council next session.

In due course the Council will doubtless be asked to con-

sider the question of promoting legislation to give effect to the decision already arrived at.

OBITUARY.

It is with feelings of deep regret that I have to record the death of Mr Councillor Thomas Cole, which took place at his residence, King Edward street, on the 12th October. The late Mr Cole's municipal career commenced in 1884, when he secured representation for Kensington Ward in the late Caversham Borough Council; and upon the amalgamation of Caversham with the City in 1904 he was elected a City Councillor. In 1910 he was elected as Mayor of the City, and on completion of his term of office he took a holiday abroad. Returning to the Dominion he re-entered the Council in 1911, and held office until the time of his death. The late Councillor Cole was very highly esteemed by the members of the Council, and on the 20th October, the Council, on the motion of the Mayor, adopted the following resolution, and then adjourned for five minutes as a mark of respect—viz.:

That this Council desires to place on record its deep appreciation of the loyal and devoted services rendered to the City of Dunedin by our late Councillor Thomas Cole. During his long years of service the welfare of the City was ever uppermost in his mind, and he fully recognised the responsibility attached to his public position. His honesty of purpose, courage, and devotion, and sincere work assisted very materially in the advancement of our City, and won the esteem and respect of his fellow-workers. The Council tenders to his family an assurance of its deep and heartfelt sympathy with them in their bereavement; and, further, the Council do now adjourn as a mark of respect for our late Councillor Thos. Cole.

The funeral, which was a very large one, took place on the 15th October, and was attended by His Worship the Mayor and several members of the Council.

ELECTIONS.

Since the last general elections in 1915 two extraordinary vacancies have been created in the Council; the first by the resignation of Councillor R. S. H. Menzies (Roslyn Ward), and the second by the death of Councillor Thos. Cole (Caversham Ward).

The election to fill the first vacancy was held in Roslyn on the 6th October, and resulted in the return of Mr H. F. Wright by a majority of 177 votes over his opponent, Mr J. H. F. Hamel. The voting at the several voting places was as under:—

	J. H. F. Hamel.	H. F. Wright.
Roslyn Municipal Offices ...	219	232
Wakari Hall	132	158
Roslyn Institute	69	207
Wedderspoon's Restaurant ...	64	64

The vacancy in Caversham Ward was filled on the 3rd November by the election of Mr C. J. Thorn, who secured a margin of 72 votes over Mr W. Fleming. In this election the voting was as under:—

	Wm. Fleming.	C. J. Thorn.
South Dunedin Hall	298	106
Oddfellows' Hall, Kensington	89	74
Oddfellows' Hall, David street	67	330
Hotel Metropole, St. Clair ...	5	21

CONGRATULATIONS.

Since the Mayoral Installation the Council has adopted resolutions of congratulations as follows:—

To the New Zealand Expeditionary Force in the Dardanelles on their splendid and heroic achievement at the landing at Anzac.

To ex-Mayor W. Downie-Stewart on volunteering and being accepted for active service.

To the Hon. Sir Thos. MacKenzie, K.C.M.G., F.R.G.S. (High Commissioner for New Zealand in London) upon the honour of knighthood being conferred upon him.

CONDOLENCES.

Resolutions of sympathy and condolence have been adopted as under:—

With members of the New Zealand Expeditionary Force.

With the relatives of those who lost their lives in the landing at Anzac on Gallipoli Peninsula.

With Mr D. Tannock (Superintendent of Reserves) on the death of his son.

With ex-Mayors G. L. Denniston and Jos. Braithwaite on the death of their sons whilst on active service.

With ex-Mayor W. Downie-Stewart on the death of his brother while on active service.

With the Hon. (now Sir) Thos. MacKenzie, High Commissioner for New Zealand in London, on the injuries received by his son whilst on active service.

With Mrs J. A. Millar, on the death of her husband, the Hon. J. A. Millar, M.P.

With Mr Councillor J. Carroll, on the death of his brother.

With Mr Councillor M. Finnerty, on the death of his wife.

With Mr Councillor H. H. S. White, on the death of his sister.

DEPUTATIONS.

The following is a record of the deputations that have waited on the Council:—

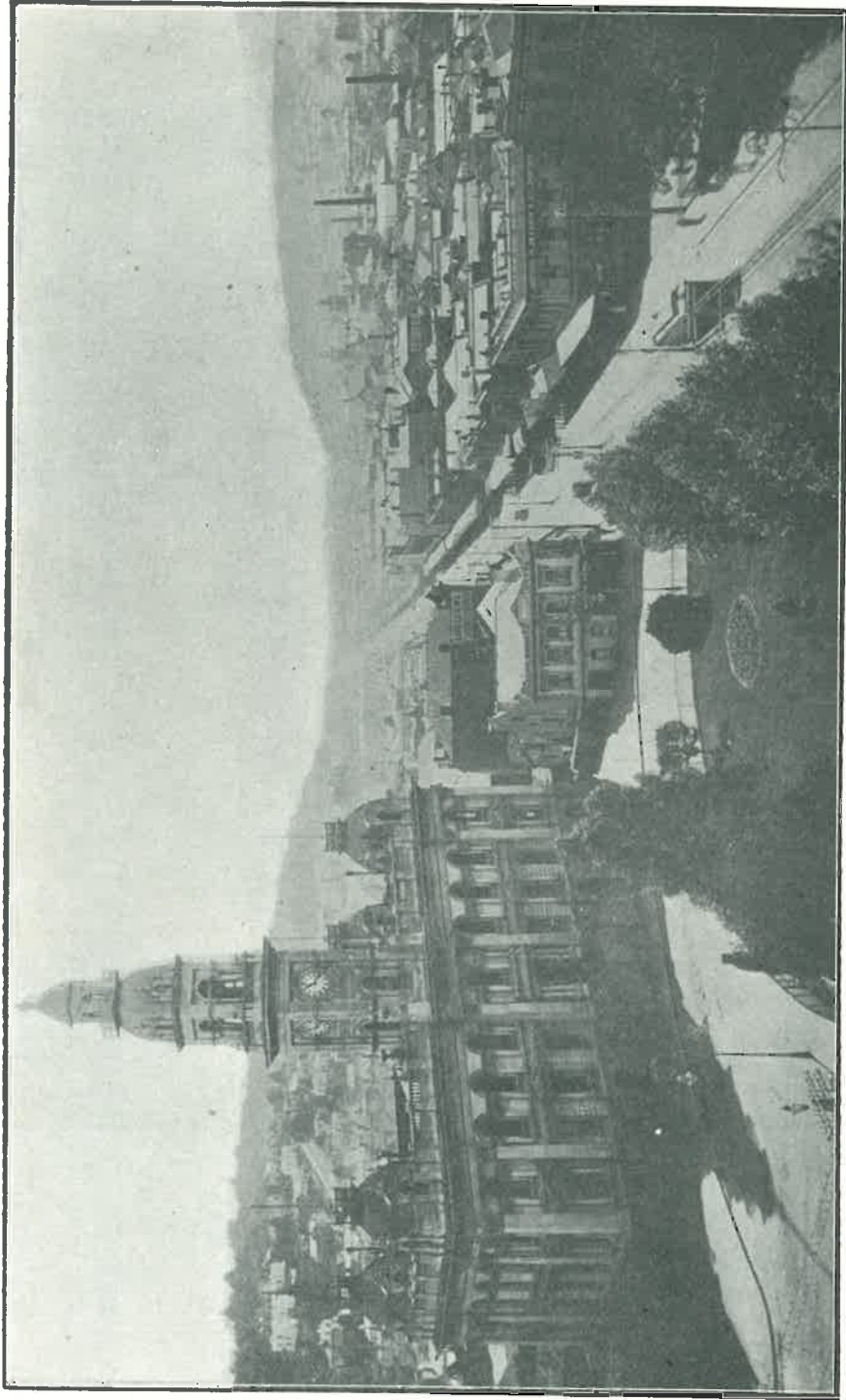
On the 14th July, a deputation consisting of Messrs J. H. Walker, S. Solomon, K.C., R. Duncan, and 14 others, representing the St. Clair Improvement Association and the Otago Expansion League, waited on the Council and submitted a proposal urging the provision of conveniences for the public on the Council's property at St. Clair.

The matter was referred to the Tramways Committee for report, and temporary conveniences were afterwards erected.

On the same date as above a deputation consisting of Messrs Wilkinson and Inglis Wright, representing the Otago Expansion League, waited on the Council and submitted a request for the continuance of the Council's contribution to the League.

The matter was referred to the Finance Committee, and ultimately a vote of £100 was made out of the Unauthorised Expenditure vote.

On the 6th October, Mr Wm. Davidson, chairman of the Public Service section of the Otago Queen Carnival, waited on the Council and presented to the citizens of Dunedin the painting, "The Storming of the Dardanelles," by Mr R. Hawcrige, founded on an historic event in the history of the Dominion—viz., the landing of New Zealand troops on Gallipoli Peninsula at Anzac.



TOWN HALL, DUNEDIN.

His Worship the Mayor returned very hearty thanks to Mr Davidson and his Executive, and a motion accepting the presentation with sincere thanks was carried unanimously with acclamation.

On the 20th October, a deputation consisting of Messrs S. Solomon, K.C., and Calvert, waited upon the Council and asked for a grant in aid of the funds of the Dunedin Competitions Society.

The matter was referred to the Finance Committee for report, and its subsequent recommendation that the request be declined was agreed to.

On the 26th January a deputation consisting of Messrs Robt. Miller and T. H. Dalton, representing the Kensington School Committee, waited on the Council and protested against the proposal to establish a refuse tip on the foreshore in proximity of the school.

The matter was referred to the General Committee, which afterwards made other arrangements for the disposal of the refuse.

VALUATION OF THE CITY.

The annual valuations made in pursuance of the Rating Act are set out in the following table, which shows the figures for each ward for the last rating year for comparison with those of the current year—viz.:

Ward.	1915-16.	1916-17.
Leith	£171,888	£174,837
Central	210,768	213,554
Caversham	99,750	104,602
Valley	37,966	38,504
Roslyn	55,720	56,310
Mornington	36,897	39,642
Maori Hill	—	21,974
Bay Town	—	19,278
Totals	£612,989	£668,701

In the following table will be seen the valuation of rateable property from the year 1900 to the current year. The figures for 1906 include, for the first time, the Caversham and South Dunedin additions; while those for 1910 include the North-East Valley district, the Roslyn district being included for the first time in the figures for 1914; and the districts of Mornington, Maori Hill, and Bay Town in those for 1917.

1900	£239,812	1909	£397,889
1901	246,600	1910	421,572
1902	260,602	1911	435,458
1903	268,965	1912	485,298
1904	279,555	1913	499,418
1905	288,209	1914	563,130
1906	361,970	1915	575,598
1907	373,397	1916	576,092
1908	385,047	1917	668,701

YEARLY ESTIMATES.

The yearly estimates prepared in accordance with the provisions of the Municipal Corporations Act, and also those for the trading departments prepared in accordance with the Council's Standing Orders, were submitted to and approved by the Council at the end of March.

In reporting to the Finance Committee on the draft estimates, the Town Clerk wrote as follows:--

"I beg to submit herewith, for the consideration of the Finance Committee, the draft estimates, as approved by the several departments, for the fiscal year ending 31st March, 1917. The statement has been compiled on similar lines to those of previous years, and is, I venture to hope, very largely self-explanatory.

"One point that occurs to me as requiring emphasis is the absence of anything approaching buoyancy on the receipts side of the General Account. The total receipts in this account for the year are estimated to produce £81,360, as against £72,581 last year, or an advance of £8779. No less than £8500 of this advance is derivable from the direct rate due almost wholly to the inclusion of the districts of Maori Hill, Mornington, and Bay Town.

"The Works Committee's expenditure is based practically on last year's figures for maintenance, the increase from £22,383 (last year's allocation) to £25,747 (the vote asked for this year) being due to the enlarged district. The figures provide only for actual street maintenance and scavenging, and such works as kerbing and channelling and other like works of a permanent nature are to be provided for by a further draw on the Public Works Loan of £175,000 authorised two years ago.

“Whilst it must be admitted that apparently there is no other course to follow, short of a substantial addition to the direct rate, I feel compelled to again point out that the scheme on which the loan was originally raised is not being, and, as it would appear, cannot be, adhered to. The reason for this has been previously made clear, and is that increases of a most abnormal character in other branches of expenditure have more than absorbed any saving that is being effected by restricting the Public Works allocation to purely maintenance expenditure. Nor is there any tendency in the estimated expenditure for the incoming year of any abatement of this gradual creeping up; on the contrary, the demands for public lighting, sanitary services, public gardens, baths, library, and the charge for interest all show a tendency, to a greater or less degree, to grow, and when we compare the demands for Hospital and Charitable Aid purposes, and those of the Fire Board, with the figures of previous years a most pronounced advance is at once apparent. This year we are called upon to provide £11,000 to the Hospital and Charitable Aid Board, as against £7762 for last year, or comparable with the contribution from the City and the recently-joined districts of £8800.

“This year’s demand for Hospital and Charitable Aid is therefore an advance of £2200; while the Fire Board also anticipates an increased request amounting to £1000. Then, again, we are required in this year’s figures to provide for £1800 of estimated expenditure due to the war—i.e.. £800 half-pay to employees who have enlisted, and £1000 for grants and kindred expenditure, including some heavy items due to the reception, and, to a less extent, the departure of troops. Some £250 to £300 of this latter amount has already been incurred.

“The position can be made plain by reducing the figures to the basis of a rate in the £ of the rateable valuation of the City, and comparing the figures with those of last year:

ESTIMATED EXPENDITURE.

		Pence in £ of rateable value.	
		1915-16.	1916-17.
Street Maintenance	...	9.24	10.43
Street Lighting	...	3.30	3.30
Public Baths	...	.94	.93
Sanitation	...	2.98	2.67
Reserves Department (Gardens, etc.)	...	1.65	2.04
Public Library	...	1.01	.90
Interest on Loans and Overdraft	...	5.73	5.72
Sinking Fund	...	.89	.83
Hospital and Charitable Aid	...	2.89	3.95
Fire Board	...	1.38	1.60
Administration	...	2.03	1.74
Incidentals	...	2.92	1.66
War Pay and Grants	...	—	.64
Total Estimated Expenditure	...	34.96d	36.43d

ESTIMATED INCOME.

Direct Rate	...	21.00	21.00
Rents and Fees	...	6.95	6.06
Incidentals	...	1.43	2.15
Transfer from Trading Departments	...	5.58	7.22
Total Estimated Income	...	34.96d	36.43d

[NOTE.—A rate of one penny in the £ produces £2786.]

“The table indicates that it is proposed to make provision for a total expenditure equivalent to a rate of 36.43d in the £ of the rateable valuation of the City, distributed as indicated. To provide for this we have the equivalent of 8.21d as the product of rents, licenses, and incidental forms of income; the balance is to be found by the product of the direct rate, together with transfers from the Water and Trading Departments.

“If the general rate is to remain as at present, and for the purposes of comparison I have, in the figures herewith submitted, assumed that it is, then it is evident that we are required to make a particularly heavy demand on the other accounts, a sum equal to the rate of 7.22d in the £, or £20,116 being required to balance the statement.

“The basis of transfers from the Trading Departments has been fixed by Council at 1 per cent. of the loan capital, which gives us £8870, made up as follows:—

Gas Department	...	£1,080
Tramways Department	...	3,000
E.P. and L. Department	...	4,790
		£8,870

This leaves £11,246 to be transferred from the Water Account, as against a transfer for the current year of only £5768; and is certainly more than the surplus that the Water Account is likely to show at 31st March, 1917.

"A word is perhaps necessary regarding the estimated expenditure for sanitary services. It was hoped that the out-of-date system of collection for night work would have been entirely eliminated last year, but that hope appears not likely to be consummated for some considerable time yet. The service is increasing in cost per house visited, due to the diminishing number of such premises, and it seems to be quite inequitable that the ratepayer who has incurred the expense of connecting his premises to the sewage system should be called upon to bear any portion of the cost of an undesirable and antiquated system that is made necessary by the inaction of the ratepayer who has not elected to do so. The remedy lies in compelling the latter class to bear the entire cost of the night service, and in the figures herewith submitted that course is contemplated, inasmuch as the estimated expenditure is met by a like amount of the contra side of the statement. The effect of this is that the annual charge per pan in the Leith, Central, Valley, and Caversham Wards should be 16s in lieu of the charge of 13s now imposed; while in Roslyn, where the service consists of a monthly visit in lieu of the three-weekly one in the Wards enumerated, the figures show that the charge should be 11s 4d, as against the 10s per pan now imposed; while in respect to Mornington, Maori Hill, and Bay Town, the estimated cost is 15s per pan. Regarding this service in the newly-added areas the arrangements prevailing under the late administrations do not appear to be all that might be desired, for, although a service was available for those requiring it, and the charge collected by the local authority, yet the yearly fee does not appear to have been imposed on the statutory basis to give it the force of a rate. It is now proposed to call for tenders for the performance of the service in these districts, and the charge ascertained as the result of the tenders should be levied in terms of the statute on those availing themselves of the service.

"It is for the Finance Committee now to approve or modify the Estimates as set out on the printed draft, and to recommend Council how the amount shown to be required is to be found.

"The existing rates and charges are as follows:—

- (a) General rate of 1s 9d in the £ of rateable value.
- (b) Water rate as under:—

Land and buildings to which water is supplied whose rateable value does not exceed £12 10s, a rate of 10s; exceeds £12 10s, but does not exceed £300, a rate of 5 per cent.; exceeds £300, a rate of 5 per cent. on the first £300, and 4 per cent. on the amount in excess of £300.

Lands and buildings within 100 yards of the water works which can be, but are not connected, and all buildings used as stores or warehouses, or for any purpose other than as dwelling houses, one-half of the above rates.

- (c) Annual sanitary charge of 13s per pan for removal of nightsoil in the Leith, Central, Valley, and Caversham Wards of the City.
- (d) Annual sanitary charge similar to (c) in respect of Roslyn Ward, of 10s per pan.

"As hereinbefore indicated the amount required to be transferred from the other accounts after providing for the general rate to remain as at present, and the sanitary fees to be increased to cover the actual cost of the service, is £20,116. The amount is unquestionably a heavy one, and the effect of calling on the Water Account to the extent of £11,246 will certainly be to entirely deplete the estimated surplus in that account, and leave it with a balance on the contra side.

"The total estimated revenue in the Water Account on the basis of the existing charges is £47,000. The ordinary outgo is estimated at £31,140, while £5000 is estimated to be required for extensions as a charge to Capital Account. This latter figure does not, however, include provision for augmenting the supply by the utilisation of the Powder Creek waters, on which it is at present proposed to spend £2500. If this be included the total requirement of the Water Department for its own purposes is increased to £38,640 out of its revenue of £47,000, leaving only £8360 to meet the requirement of the General Account, amounting to £11,246, or, in other words, a shortage of £2887, equal to a rate of 1d in the £ of the rateable value of the City.

TRAMWAYS DEPARTMENT.

Statement of ESTIMATED REVENUE and EXPENDITURE for the Year ending 31st March, 1917.

REVENUE.				EXPENDITURE				Remarks.
Item.	Revenue for 1915.	Approximate Revenue for 1916.	Estimated Revenue for 1917.	Item.	Expenditure for 1915.	Approximate Expenditure for 1916.	Estimated Expenditure for 1917.	
	£ s. d.	£ s. d.	£ s. d.		£ s. d.	£ s. d.	£ s. d.	
Revenue ...	77,425 0 0	76,830 0 0	76,000 0 0	Power Expenses ...	7,673 10 8	7,670 0 0	7,700 0 0	
Pavilion Insurance ...	...	3,245 0 0	...	Traffic Expenses ...	24,222 17 4	24,100 0 0	24,500 0 0	
				General Expenses ...	2,720 14 1	2,600 0 0	2,700 0 0	
				Repairs & Maintenance	8,385 7 4	7,900 0 0	9,000 0 0	
				Renewal Fund ...	11,083 15 4	11,050 0 0	11,050 0 0	
				Accident Ins. Fund ...	750 0 0	750 0 0	750 0 0	
				Interest ...	13,667 5 3	13,450 0 0	13,600 0 0	
				Sinking Fund ...	3,000 0 0	3,000 0 0	3,000 0 0	
				Sundries ...	174 1 7	190 0 0	250 0 0	
				War Pay ...	356 3 6	1,470 0 0	1,600 0 0	
					£72,033 15 1	£72,180 0 0	£74,150 0 0	
				Municipal Department	1,500 0 0	3,000 0 0	3,000 0 0	
				Capital Expenditure ...	100 0 0	...	...
	£77,425 0 0	£80,075 0 0	£76,000 0 0		£73,633 15 1	£75,180 0 0	£77,150 0 0	

Approved by Committee on 17/3/1916.

Approved by Council on 22/3/1916.

WATER DEPARTMENT.

Statement of ESTIMATED REVENUE and EXPENDITURE for the Year ending 31st March, 1917.

REVENUE.				EXPENDITURE				
Item.	Revenue for 1915.	Approximate Revenue for 1916.	Estimated Revenue for 1917.	Item.	Expenditure for 1915.	Approximate Expenditure for 1916.	Estimated Expenditure for 1917.	Remarks.
	£ s. d.	£ s. d.	£ s. d.		£ s. d.	£ s. d.	£ s. d.	
Rates	29,806 13 6	31,400 0 0	35,000 0 0	General Expenses ...	3,088 5 10	3,455 0 0	3,700 0 0	£5,000 is the City Engineer's estimate of amount required for extensions, land purchase, etc. The increases in the other estimates are chiefly on account of the recently amalgamated boroughs.
Special Supplies ...	11,602 9 1	11,780 0 0	11,650 0 0	Compensation ...	...	16 0 0	500 0 0
Sundries	270 11 1	250 0 0	250 0 0	Maintenance ...	5,514 10 5	5,500 0 0	6,000 0 0	
Land, Woodhaugh ...	100 0 0	100 0 0	100 0 0	Interest ...	12,375 7 10	12,500 0 0	13,450 0 0	
				Renewal Fund ...	1,813 0 0	2,450 0 0	3,000 0 0	
				Sinking Fund ...	2,749 10 0	2,749 0 0	2,957 0 0	
				War Pay ...	378 15 7	875 0 0	1,000 0 0	
				Debentures Repaid ...	633 0 0	733 0 0	533 0 0	
					£26,552 9 8	£28,278 0 0	£31,140 0 0	
				Capital Account ...	9,403 2 4	11,500 0 0	5,000 0 0	
				Municipal Department	7,896 4 9	5,768 0 0	9,171 0 0	
	£41,779 13 8	£43,530 0 0	£47,000 0 0		£43,851 16 9	£45,546 0 0	£45,311 0 0	

Approved by Committee on 25/2/16.

Approved by Council on 22/3/1916.

ELECTRIC POWER AND LIGHTING DEPARTMENT.

Statement of ESTIMATED REVENUE and EXPENDITURE for the Year ending 31st March, 1917.

REVENUE.				EXPENDITURE				Remarks.
Item.	Revenue for for 1915.	Approximate Revenue for 1916.	Estimated Revenue for 1917.	Item.	Expenditure for 1915.	Approximate Expenditure for 1916.	Estimated Expenditure for 1917.	
	£ s. d.	£ s. d.	£ s. d.		£ s. d.	£ s. d.	£ s. d.	
Lighting	22,965 10 5	26,920 0 0	28,600 0 0	Generation	5,451 4 6	5,000 0 0	6,000 0 0	CAPITAL EXPENDITURE 1916-17.
Power	27,785 7 7	30,330 0 0	32,500 0 0	Distribution	7,732 6 10	8,000 0 0	8,500 0 0	
Public Lighting	4,160 8 4	4,580 0 0	4,600 0 0	Public Lighting	352 10 5	300 0 0	400 0 0	Reticulation and
Meter Rents	2,188 5 9	2,600 0 0	2,700 0 0	General	5,083 0 1	5,200 0 0	5,500 0 0	Services £6,000
Sundries	527 16 4	570 0 0	600 0 0	Interest	20,661 5 5	20,600 0 0	20,800 0 0	Meters ... 2,000
				Renewal Fund	10,145 17 8	10,800 0 0	11,000 0 0	Sundries ... 500
				Sinking Fund	1,646 0 0	3,146 0 0	3,146 0 0	
				War Pay	179 19 11	75 0 0	1,200 0 0	£8,500
					£51,252 4 9	£53,796 0 0	£56,546 0 0	This allows for ordinary increase in reticulation only. Additions to plant have not been included.
				Municipal Department	4,790 0 0	4,790 0 0	4,790 0 0	
				Capital Account ... ..	...	9,000 0 0	8,500 0 0	
	£57,627 8 5	£65,000 0 0	£69,000 0 0		£56,042 4 9	£67,586 0 0	£69,836 0 0	

Approved by Committee on 15/2/16.

Approved by Council on 22/3/16.

GAS DEPARTMENT.

Statement of ESTIMATED REVENUE and EXPENDITURE for the Year ending 31st March, 1917.

REVENUE.				EXPENDITURE				
Item.	Revenue for for 1915.	Approximate Revenue for 1916.	Estimated Revenue for 1917.	Item.	Expenditure for 1915.	Approximate Expenditure for 1916.	Estimated Expenditure for 1917.	Remarks.
	£ s. d.	£ s. d.	£ s. d.		£ s. d.	£ s. d.	£ s. d.	
Gas Revenue ...	34,014 6 6	33,000 0 0	33,000 0 0	Manufacture ...	23,633 16 8	23,100 0 0	24,000 0 0	CAPITAL EXPENDITURE
Street Lighting ...	4,446 19 9	4,500 0 0	4,500 0 0	Distribution ...	2,164 4 5	2,500 0 0	2,500 0 0	Works exten-
Residuals ...	9,013 14 11	8,500 0 0	8,500 0 0	Street Lighting ...	1,872 6 4	2,000 0 0	2,000 0 0	sions ... £3,000
Sundries ...	370 6 10	350 0 0	350 0 0	General ...	2,951 18 1	2,950 0 0	3,000 0 0	Booster ... 1,000
				Interest ...	5,096 18 6	5,500 0 0	5,750 0 0	Electric Plant ... 500
				Renewals ...	4,689 15 0	4,900 0 0	5,000 0 0	Condensers ... 1,000
				Sinking Fund ...	540 0 0	540 0 0	540 0 0	Yard connec-
								tions ... 1,000
								Mains services
				Municipal Department	£40,948 19 0	£41,490 0 0	£42,790 0 0	& Meters ... 6,000
				Extensions ...	1,080 0 0	1,080 0 0	1,080 0 0	Sundries ... 500
					15,627 14 1	12,000 0 0	13,000 0 0	
								£13,000
	£47,845 8 0	£46,350 0 0	£46,350 0 0		£57,656 13 1	£54,570 0 0	£56,870 0 0	

Approved by Committee on 17/2/16.

Approved by Council on 22/3/16.

CITY ABATTOIR DEPARTMENT.

Statement of ESTIMATED REVENUE and EXPENDITURE for the Year ending 31st March, 1917.

REVENUE.				EXPENDITURE				Remarks.
Item.	Revenue for 1915.	Approximate Revenue for 1916.	Estimated Revenue for 1917.	Item.	Expenditure for 1915.	Approximate Expenditure for 1916.	Estimated Expenditure for 1917.	
	£ s. d.	£ s. d.	£ s. d.		£ s. d.	£ s. d.	£ s. d.	
Fees	3,406 0 0	2,940 0 0	2,884 0 0	Salaries & Wages	581 5 5	580 0 0	580 0 0	
Feed Account	997 0 0	860 0 0	700 0 0	Maintenance	271 0 4	200 0 0	250 0 0	
Slaughtering	4,528 0 0	4,150 0 0	4,000 0 0	Coal & Water	144 15 6	130 0 0	150 0 0	
				Inspection Fees	345 14 5	320 0 0	320 0 0	
				Insurance, etc.	38 15 7	40 0 0	40 0 0	
				Loan Interest	794 0 0	794 0 0	794 0 0	
				Interest on debit Balance	281 15 1	250 0 0	240 0 0	
				Renewal Fund	300 0 0	300 0 0	300 0 0	
				Sinking Fund	210 0 0	210 0 0	210 0 0	
					£2,967 6 4	£2,824 0 0	£2,884 0 0	
				Feed Account	681 0 0	520 0 0	700 0 0	
				Slaughtering Account	4,528 0 0	4,150 0 0	4,000 0 0	
	£8,931 0 0	£7,950 0 0	£7,584 0 0		£8,176 6 4	£7,494 0 0	£7,584 0 0	

Approved by Committee on 14/2/16.

Approved by Council on 22/3/16.

Andrews bequest ..	230 0 0			230 0 0			230 0 0
Drainage Board, Account Sewers ..	850 0 0			850 0 0			850 0 0
Fire Board, Account Plant ..	98 0 0			98 0 0			98 0 0
Cemeteries ..		1,198 0 0			1,236 0 0		1,198 0 0
Temid Baths ..		1,300 0 0			1,400 0 0		1,400 0 0
Transfer from Water Dept. ..	5,768 0 0			5,768 0 0	800 0 0		800 0 0
do. Gas Dept. ..	1,080 0 0			1,080 0 0			
do. Tramways Dept. ..	3,000 0 0			3,000 0 0			
do. Electric Dept. ..	4,790 0 0			4,790 0 0			
The Rateable Value of Property on the Valuation Roll is £668,701.		14,638 0 0			14,638 0 0		
A General Rate of 1/9 in the £ produces ..							
	£88,391 0 0			£87,219 0 0			58,500 0 0
							£81,360 0 0

EXPENDITURE.

	Estimate, 1915-16.		Approximate, 1915-16.		Estimate, 1916-17.	
	£	s. d.	£	s. d.	£	s. d.
Public Works ..	22,383	0 0	22,500	0 0	25,247	0 0
Street Lighting ..	8,000	0 0	7,900	0 0	9,100	0 0
Land Purchase ..	1,000	0 0	4,275	0 0	1,000	0 0
Standard Survey ..	1,250	0 0	—	—	1,250	0 0
Anderson's Bay Bridge ..	400	0 0	363	0 0	—	—
Mornington Quarry ..	350	0 0	350	0 0	—	—
St. Clair Baths ..	75	0 0	90	0 0	75	0 0
Temid Baths ..	3,290	0 0	2,598	0 0	2,446	0 0
Roslyn Baths ..	—	—	—	—	25	0 0
SANITARY—						
House Refuse ..	3,180	0 0	4,500	0 0	4,124	0 0
Nightsoil, City and Roslyn ..	1,355	0 0	—	—	795	0 0
Mornington, Maori Hill, and Baytown ..	—	—	—	—	—	—
Inspection ..	692	0 0	555	0 0	375	0 0
Conveniences ..	1,000	0 0	950	0 0	857	0 0
Stables and Plant ..	1,000	0 0	1,035	0 0	1,050	0 0
Morgue ..	80	0 0	57	0 0	135	0 0
					100	0 0
RESERVES—						
Gardens ..	1,665	0 0	1,530	0 0	4,072	0 0
Town Belt and Recreation ..	2,432	0 0	2,420	0 0	1,364	0 0
Cemeteries ..	1,412	0 0	1,200	0 0	—	—
LIBRARY ..						
MAINTENANCE—						
Town Hall ..	450	0 0	540	0 0	600	0 0
South Dunedin Town Hall ..	100	0 0	90	0 0	100	0 0
N.E. Valley ..	150	0 0	35	0 0	100	0 0
King Edward St. Property ..	100	0 0	50	0 0	100	0 0
Sundry Property ..	80	0 0	—	—	50	0 0
Weighbridges ..	280	0 0	290	0 0	300	0 0
Public Clocks ..	200	0 0	200	0 0	220	0 0
INTEREST, &c.—						
Loans ..	7,260	0 0	7,260	0 0	8,583	0 0
Deposits and Overdraft ..	6,500	0 0	6,600	0 0	7,200	0 0
Bank Charges ..	140	0 0	150	0 0	160	0 0
Sinking Fund ..	2,065	0 0	2,059	0 0	2,326	0 0
Repayment of Loans ..	100	0 0	100	0 0	—	—
CONTRIBUTIONS—						
Hospital and C. A. Board ..	7,000	0 0	7,762	0 0	11,000	0 0
Fire Board ..	3,400	0 0	3,400	0 0	4,400	0 0
Ocean Beach Domain Bnd. ..	303	0 0	300	0 0	347	0 0
Technical School ..	200	0 0	200	0 0	100	0 0
Green Island Borough ..	—	—	50	0 0	—	—
Bands ..	100	0 0	100	0 0	100	0 0
Roslyn Institute ..	—	—	10	0 0	—	—
Art Gallery ..	75	0 0	75	0 0	75	0 0
Museum & Hocken Library ..	75	0 0	75	0 0	—	—
MISCELLANEOUS—						
Salaries ..	3,000	0 0	2,900	0 0	3,150	0 0
Valuation ..	550	0 0	600	0 0	700	0 0
Advertising, Printing, and Stationery ..	600	0 0	550	0 0	600	0 0
Dog Registration ..	300	0 0	250	0 0	300	0 0
Vehicle Licenses ..	145	0 0	115	0 0	145	0 0
Licensing Expenses ..	50	0 0	50	0 0	50	0 0
Election Expenses ..	800	0 0	530	0 0	50	0 0
Law Costs ..	250	0 0	249	0 0	300	0 0
Insurance ..	500	0 0	335	0 0	500	0 0
Valuation Fees, Leases ..	200	0 0	200	0 0	70	0 0
Rates Refunded ..	150	0 0	160	0 0	180	0 0
Unauthorised Expenditure ..	508	0 0	360	0 0	580	0 0
Sundry Expenses ..	500	0 0	500	0 0	500	0 0
Andrews Bequest ..	250	0 0	180	0 0	250	0 0
War Pay ..	—	—	450	0 0	800	0 0
Patriotic Grants ..	—	—	82	0 0	1000	0 0
	7,803	0 0	7,511	0 0	9,175	0 0
	£88,391 0 0		£89,530 0 0		£99,401 0 0	
Estimated Expenditure as above ..	..	..	..	..	£99,401	0 0
Estimated Receipts as above ..	..	..	..	..	81,360	0 0
Estimated Balance required at 31st March, 1917 ..			..	..	£18,041	0 0

The Finance Committee decided to make up the balance estimated to be required at 31st March, 1917, by transfers from the Trading Accounts on the following basis:—

Electric Account ..	..	..	..	£4,790	0 0
Gas Account ..	..	..	..	1,080	0 0
Water Account ..	..	..	..	9,171	0 0
Tramways Account ..	..	..	..	3,000	0 0
				£18,041	0 0

"It appears to be worth considering whether the Council should not be advised to strike a separate rate to provide for the Hospital Board's levy. I am conscious of the fact that the present time might be regarded as inopportune to impose additional taxation, but despite that fact, a perusal of the figures seems to impell the suggestion that, if the expenditure side of the Estimates are incapable of curtailment, then a prudent course to follow would be to obtain more revenue. If a separate rate for hospital and charitable aid purposes were levied, we should require this year to impose a rate of 4d in the £; and in that event the general rate, on the basis of last year's levy, would be reduced to 1s 5d; whereas it would require to be 1s 6d to allow of the demand on the Water Account being reduced to obviate that account being in debit at 31st March, 1917.

"The Estimates of the Trading Departments, prepared in accordance with the Council's Standing Orders, are submitted herewith as approved by the respective Committees. The following schedule shows in concise form the estimated revenue and expenditure of each department for the year ending 31st March, 1917.

Department.	Estimated Revenue.		Estimated Expenditure.		
			Ordinary.	Capital.	Total.
Water ...	£47,000	...	£31,140	£ 5,000	£36,140
Gas ..	46,350	...	42,790	13,000	55,790
Tramways	76,000	...	74,150	—	74,150
E.P. & L.	69,000	...	56,546	8,500	65,046
Totals ...	£238,350	...	£204,626	£26,500	£231,126

In considering the draft estimates in conjunction with the above report, the Finance Committee modified the figures by deducting the following items as shown:—

Public Works, from	£25,747 to £25,247
Street Lighting, from	9,200 to 9,100
Standard Survey, from	2,300 to 1,250
Public Baths, from	2,496 to 2,446
Reserves, from	4,322 to 4,072
Library, from	2,500 to 2,450
Museum and Hocken Library	75 deleted

While the Committee further recommended that, owing to the heavy calls on the finances of the City, all applications for grants from outside associations or organisations be declined.

The Estimates, as recommended by the Finance Committee, and finally approved by the Council in terms of the statute and the Standing Orders, are appended.

BUILDING OPERATIONS.

I am indebted to the City Building Surveyor, Mr G. W. Gough, for the following details of the building operations for the past year, as compared with those for the previous year—viz.:

I beg to submit the annual report of the City Building Surveyor's Department for the year ending 31st March, 1916:

	Year 1914-15.	Year 1915-16.
Building permits	355	304
Value	£151,771	£169,665
Building fees	£301 17 6	£320 15 0
Water for building purposes	£118 17 6	£124 7 6
Valley Ward	5 new buildings 28 additions	6 new buildings 22 additions
Leith Ward	16 new buildings 87 additions	31 new buildings 53 additions
Central Ward	11 new buildings 48 additions	14 new buildings 43 additions
South Ward	62 new buildings 61 additions	35 new buildings 50 additions
Roslyn Ward	19 new buildings 27 additions	21 new buildings 29 additions
Business premises	110	99
Domestic premises	254	205
Brick buildings	45	55
Wooden buildings	70	63
Additions and alterations ...	249	186
Old buildings removed	68	55
Buildings wholly or partially destroyed by fire	76	69
Fees for hoarding permits ...	£18 13 0	£17 4 0
Fees for crossing footway ...	£4 10 0	£10 0 0
Fees for placing ladders on footway	£0 10 0	£4 0 0

There has been an increase in value of buildings over last year, although the number of permits are less, the values being made up principally on a few important buildings, amongst which are 13 dwellings over £1000 in value. "Everybody's" and "Empire" Pictures Halls, warehouse premises for Messrs Fairbairn, Wright and Co., Hudson and Co., Kaiapoi Woollen Co., G. Ritchie, Drapery Supply Association, Otago Farmers' Co-operative Association, Wright, Stephenson and Co., Methven and Co., G. A. Findlay and Co., Evening Star Co.; additions to Otago Boys' High School, Public Trustees' Office, Colomaba College, Electric Light and Power Station; motor garages for J. Rhodes and Co.; new premises for Travellers' Club, Medical School for Otago University, St. Paul's new Cathedral, alterations to Tramway Car-sheds.

The following works were carried out:—Reinstatement of Public Baths after a fire, drainage operations at City Morgue and Southern Cemetery and general repairs to sexton's house, repairs at St. Clair Baths, superintending additions to Power Station, Half-way Bush, alterations to Tramway Car-shed front, plan of proposed additions to Public Library, and general repairs and renovating of various Corporation properties.

I respectfully beg to request that as the City boundaries are now so much increased by the inclusion of Anderson's Bay, Mornington, and Maori Hill, assistance (as anticipated) be granted me for the outside inspection work, increasing yearly. I find my time is much occupied waiting on the public during office hours, with attending to the upkeep of Corporation properties and reporting on various subjects.

COUNCIL AND COMMITTEE MEETINGS.

Attendance.—The following table gives in a concise form the aggregate attendances of each member of the Council at all meetings during the Mayoral year. The headings are self-explanatory, the figures in bolder type representing the total number of meetings convened; whilst that on the next page shows the number of meetings attended by each councillor, together with the individual total attendance out of the highest possible, the last column giving the percentage for each councillor:—

	No. of Members.	Total Meet- ings.	Aggregate Attend- ances.	Average Attend- ances.	Average time for Meetings.
Council	27	31	580	19	120 Minutes
Library Committee	12	22	134	6	33
Public Works	10	30	189	6	103
Water	10	24	131	5	51
General	11	28	164	6	81
Reserves	9	23	100	4	41
E. P. & L.	10	26	164	6	52
Tramways	10	30	191	6	60
Gas	10	23	132	5	39
Finance	10	30	179	6	57

It might be advisable to state that His Worship the Mayor is, by virtue of his office, ex-officio a member of all committees; but it is not expected that he can possibly attend all meetings. As a matter of fact, many of the committee meetings are held simultaneously, whilst again others are in progress at the same time that many matters of a public or semi-public nature are engaging the attention of His Worship the Mayor in his official capacity.

TOTAL NO. MEETINGS
His Worship the Mayor
(J. J. Clark, Esq.)
Councillor J. S. Sinclair
" J. Carroll ...
" John Lunn ...
" Thomas Cole ...
" J. H. Hancock ...
" John Wilson ...
" W. B. Tavernier ...
" R. S. Black ...
" W. Begg ...
" Isaac Green...
" W. A. Scott ...
" J. S. Douglas ...
" C. H. Hayward ...
" H. H. S. White ...
" James Small ...
" J. B. Shacklock ...
" R. H. S. Menzies ...
" H. F. Wright ...
" C. J. Thorn ...
" John Thompson ...
" Edwin Sinecock ...
" J. W. Patton ...
" M. Finnerty ...
" W. Hastie ...
" A. McMillan ...
" A. Williams ...
" J. Whyte ...
" M. Henderson ...

Council.	Library.	Public Works.	Water.	General.	Reserves.	Electric P. and L.	Tramways.	Gas.	Finance.	Highest Possible.	Total Attendance	Percentage
31	22	30	24	28	23	26	30	23	30	267	142	53
28	11	12	13	3	9	14	21	13	18	116	98	84
29	...	...	7	25	...	...	22	19	20	91	82	90
31	...	26	15	15	...	...	...	...	...	113	87	77
15	...	12	...	9	23	...	12	...	25	52	48	92
29	...	12	...	...	...	...	...	...	...	109	98	90
29	...	26	21	...	...	21	29	...	...	115	105	91
27	14	...	...	...	...	...	...	17	...	102	79	77
26	18	22	...	...	...	26	...	14	...	106	80	75
29	12	28	...	24	1	...	...	22	...	103	90	87
29	13	...	10	...	...	22	28	...	...	119	109	91
29	...	...	15	20	...	21	10	...	...	107	84	78
29	...	...	...	...	13	20	...	...	...	103	76	74
30	...	...	...	...	17	...	...	13	...	107	89	74
26	...	29	...	...	...	...	21	20	22	107	101	83
29	...	...	19	...	...	23	...	...	25	121	99	89
10	...	...	6	...	...	...	8	...	4	36	28	78
12	...	...	10	11	7	...	...	...	12	51	41	80
13	...	...	...	5	4	...	13	...	...	44	41	93
8	5	...	...	...	4	7	...	...	...	32	25	78
8	...	8	6	...	4	...	10	...	8	35	32	91
8	4	7	...	4	4	...	...	5	...	32	25	78
8	...	...	...	8	4	...	...	...	1	38	28	74
8	...	...	7	8	1	...	8	7	...	35	31	88
6	...	...	2	...	...	8	...	...	...	33	32	97
8	5	...	...	...	7	2	...	2	...	32	12	37
7	...	7	...	8	...	...	9	...	...	36	29	91
...	...	...	...	...	...	...	...	...	8	...	30	83

STANDING COMMITTEES.

The Standing Committees for the year were appointed at the meeting of the Council held on the 5th May. Several changes were subsequently made, due chiefly to the union of outlying districts; and at the close of the financial year the personnel of each committee was as under, His Worship the Mayor being ex-officio a member of all committees:—

LIBRARY.—Councillors Black (chairman), Begg, Scott, Taverner, Thompson, White, and Messrs M. Cohen, W. J. Morrell, R. W. Rutherford, and R. Gilkison.

PUBLIC WORKS.—Councillors Green (chairman), Black, Finnerty, Hancock, Henderson, Lunn, Patton, Small, and Wilson.

WATER.—Councillors Wilson (chairman), Carroll, Douglas, Lunn, McMillan, Shacklock, Sincok, Williams, and Wright.

GENERAL.—Councillors Sinclair (chairman), Carroll, Douglas, Green, Hastie, Henderson, Lunn, Thompson, and Thorn.

RESERVES.—Councillors Hancock (chairman), Finnerty, Hayward, Patton, Thorn, White, Whyte, and Wright.

ELECTRIC POWER AND LIGHTING.—Councillors Shacklock (chairman), Begg, Douglas, Hayward, McMillan, Scott, Taverner, Thompson, and Williams.

TRAMWAYS.—Councillors Scott (chairman), Green, Hastie, Sincok, Sinclair, Small, Thorn, Whyte, and Wilson.

GAS.—Councillors Begg (chairman), Black, Carroll, Hastie, Hayward, Patton, Taverner, White, and Williams.

FINANCE.—Councillors Small (chairman), Hancock, Henderson, McMillan, Shacklock, Sinclair, Sincock, White, and Wright.

During the year's work many matters of importance were dealt with, and the following summary may be considered as embracing the chief questions that from time to time engaged the attention of councillors.

LIBRARY COMMITTEE.

The Committee held 22 meetings during the year, the average attendance at each being six members. Mr Councillor R. S. Black was again Chairman of the Committee.

The Committee continues to do good work in maintaining the Library as an up-to-date and useful public institution. Many additional volumes have been placed on the shelves of the various departments since my last report, and in choosing these the Books Sub-committee and the Library Committee have, as heretofore, exercised a wise and tasteful discretion.

With the lapse of time the institution proves unmistakably that it is supplying a want in the community, and that it is able to meet the ever-increasing demands put upon its usefulness by patrons whose requirements extend in almost every conceivable direction is due to a very large extent to the judicious labours and keen interest of the members of the Committee.

BRANCH LIBRARIES.—The question of branch libraries was fully gone into as the result of extra business that was taxing to the utmost the available accommodation and stock in the main building. Coupled with this was the fact that the Council would at no distant date be faced with the problem of catering for the patronage of residents of outside boroughs that, it was thought likely, would before long become part of the city by amalgamation in terms of "The Municipal Corporations Act."

After an exhaustive review of the position and a consideration of ways and means, the Committee on April 26 recommended Council to apply to the Carnegie Trustees for a grant for a branch library on a site already set aside for

the purpose in Caversham Ward. This recommendation, it may be noted, was made by a committee whose term of office was about to expire, and at the meeting of Council at which it was set down for consideration it was withdrawn in order that the new committee might go into the question. The new committee reviewed the whole matter, and on June 16 it recommended the Council to make an application to the Carnegie Trustees for a grant of £12,000 towards the cost of erecting and establishing three branch libraries—one in Caversham Ward, one in Roslyn Ward, and another in Valley Ward.

The Council, however, declined to approve of the recommendation, and during the discussion thereon the opinion was expressed that the time was not opportune for incurring the expenditure proposed, while several councillors considered that, when the time was ripe for branch libraries, the cost should be raised by the Council locally, and not from the outside source suggested by the Committee.

ALTERATIONS TO LIBRARY.—The above recommendation not having met with the approval of the Council, it became necessary for the Committee to evolve some other method of overcoming its difficulties in the way of satisfactorily coping with the disabilities that were already beginning to present themselves. Several methods were discussed, and, on instructions from the Committee, the City Building Surveyor in due course submitted a plan showing how, by alterations and extensions, it was possible to obtain the additional space necessary to enlarge the building.

Briefly stated, the proposal is to add a storey above the newspaper room and extend the wall on the north side of the magazine room. The Committee is advised that this proposal will, after certain internal rearrangements shall have been made, give increased accommodation in the lending library to the extent of at least 18,000 volumes, which is almost double the number now stocked. The estimated cost of giving effect to the suggestions is £1895, while the estimated annual expenditure for administration is £165. No decision has yet been arrived at regarding the matter, but now that the amalgamation of three of the outside areas has since become an accomplished fact the question will engage the consideration of the Committee at an early date.

Tabulated returns of the business done at the institution follow the Librarian's annual report hereinafter appearing.

PUBLIC WORKS COMMITTEE.

This Committee held 30 meetings during the period, the average attendance at each being six members. Mr Councillor Isaac Green was Chairman.

OPOH ROAD LEVELS.—The question of fixing permanent levels for Opoho road, Valley Ward, was gone into by the Committee, and on the 20th October the Council adopted its recommendation that the plan showing the proposed levels be approved. The new grades were decided upon after very careful consideration and an inspection of the ground, and will, when given effect to, greatly improve the roadway for vehicular traffic to and from the high levels of Valley Ward.

CARGILL ROAD WIDENING.—In order that the widening of Cargill road could be advanced another stage, and at the same time allow of the removal of the reserve curve in the tramline at this point, the Council, on the recommendation of the Committee, purchased the property on the corner for £4100.

In February a further recommendation by the Committee that the shop fronting King Edward street be taken down and removed, and that the remainder of the buildings be set back to the rear boundary of the allotment was referred back to the Committee for further consideration. This recommendation also intimated that the Tramways Committee had agreed to contribute £300, and, as the buildings were within the brick area, a modification of the building regulations was suggested to permit of the building being re-erected as proposed.

Following on the Council's instruction to further consider the matter, the Council was again approached on the 22nd March with a recommendation that two of the buildings fronting King Edward street be taken down and removed, while a woodyard and dwelling facing Cargill road be allowed to remain for the present. Under this proposal it was intended that the Tramways Department should bear £1000 of the purchase money, but, on a division being taken, Council again referred the question back to the Committee with a view to arrangements being made for the whole of the buildings to remain.

ANDERSON'S BAY RESERVE.—Prior to the amalgamation of the Bay Town District with the City, the Town Board had entered into an agreement with the Otago Harbour Board whereby the latter would, when called upon, erect at the cost of the Town Board a retaining wall in the Anderson's Bay Inlet for the purpose of reclaiming from the harbour an area of about ten acres, which was to be set aside as a public reserve. Some time after the amalgamation had taken place the matter was raised, and, after the question had been reviewed and an opinion obtained from the City Solicitors, the Committee recommended Council on the 23rd February that application be made to the Governor-in-Council for the issue of a proclamation under "The Harbours Act, 1908," authorising the Harbour Board to proceed.

The Proclamation has since been issued, but it is understood that the Harbour Board will not commence operations, which will entail an estimated expenditure of £1200, until it is actually requested to do so by the City Council.

STREET PAVING.—As portion of the work to be done out of the Public Works Loan of £175,000, authority was granted to invite tenders for street paving on a specification which provided for either wood blocks, European asphalt, or Trinidad asphalt being used. In March, after tenders had closed, the Committee reported that no tender had been received for any of these specified materials. One tender, however, had been received for Californian asphalt, manufactured by the Union Company, of San Francisco, but as this particular material was not sufficiently known in Dunedin to warrant the Council in placing so large a contract, the Committee granted authority to obtain from the tenderers a price for a sample length in Stuart street from Castle street to the Octagon.

This information is now awaited, and upon its receipt the matter will receive further attention.

STREET LIGHTING.—In March the Committee, on a reference from the Electric Power and Lighting Committee, considered a report by the City Electrical Engineer in which the charges paid for electrical street lighting were reviewed at some length. It was pointed out by the Electrical Engineer that, as a result of the use of an improved type of lamp and other contributory factors, a considerable annual

saving was being effected in the cost of street lighting by electricity. The first intention of the Committee was that, while guaranteeing to the Electric Department the same revenue as formerly, it would utilise the whole saving in providing additional street lamps in various parts of the City, but after further investigation it recommended Council on the 22nd March that the saving should be utilised partly by providing for longer hours of burning with a higher candle-power and partly by the erection of additional lamps.

This was agreed to by the Council, and the result is that for the same amount paid to the Electric Department last year for street lighting the candle-power of all lamps in the greater City area will be increased from 60 to 100, the hours of burning will be considerably lengthened, while 50 additional lamps will be provided.

PUBLIC WORKS LOAN.—On the 22nd March Council granted authority to take the necessary steps to raise a further £10,000 of this loan. A statement, which has been prepared in connection with the matter and approved, shows that this amount is to be apportioned to the several wards participating in the loan, on the following basis:—

Caversham Ward	...	...	...	...	...	...	...	...	£3,224
Central Ward	...	...	...	...	...	...	...	...	1,568
Leith Ward	...	...	...	...	...	...	...	...	2,077
Roslyn Ward	...	...	...	...	...	...	...	...	1,332
Valley Ward	...	...	...	...	...	...	...	...	1,799
									<hr/> £10,000

while a schedule showing the works in the wards on which the above sums are to be expended is now under consideration by the Committee.

It may be mentioned that a first instalment of £30,000 of the Public Works Loan was authorised last year (see Annual Report for 1914-15), and in connection therewith the following statement shows the expenditure on account thereof at the 31st March, 1916—viz.:

VOTE.	Amount of Estimate or Authorisation	Total Expenditure to 30/3/1916	Over- drawn	Amount Still Available
Valley Ward	£2 178	£2,061 8 8	..	116 16 9
Leith Ward	1,340	1,373 0 7	33 0 7	..
Central Ward	785	801 18 3	66 18 3	..
Caversham Ward	1,850	1,850 8 4	0 8 4	..
Roslyn Ward	1,813	1,584 1 2	..	228 18 10
Ward Totals	£7,916	£7,670 11 7	..	245 8 5
Leith Wall at Dundas Street ..	1,000	671 9 8	..	328 10 4
Leith Walling (Leith St. to Har- bour Terrace) including bridge abutments	7,000	6,788 11 4	..	211 8 8
Bridges at Leith, Clyde & Forth Streets	4,084	..	..	4,084 0 0
Rattray Street Paving	10,000	..	..	10,000 0 0
	£30 000	£15 130 12 7	..	£14,869 7 5

Preliminary Expenses amounting to £204 0s. 7d. were incurred on account of the above expenditure

WATER COMMITTEE.

This Committee, under the chairmanship of Mr Councillor John Wilson, has held 24 meetings, the average attendance at each being five members.

SULLIVAN DAM.—After having been in progress for some few years this work has now been completed so far as actual construction is concerned. All that remains to be done is a general tidying-up in the vicinity, and the dismantling of the plant and camps. In ordinary circumstances the work would have been completed some months ago, but on the 5th December Council granted authority to expend a further sum of £2500 in removing clay spurs and other irregularities on and excavating to a depth of one foot from the bottom of the dam. This expenditure, although not provided for in the original scheme, gives an increased storage capacity of 7,000,000 gallons, which brings the total storage to 30,000,000 gallons. The total cost of the whole work from commencement to completion is stated to be approximately £25,000.

SHORTAGE OF WATER.—The past summer has been a considerably dry one, and has imposed a most severe strain upon the capabilities of our several water supply systems. Although the danger of a water famine is now passed, there was every probability at one time (especially in the closing days of February and early days of March) that this undesirable state of affairs would require to be faced. That such a visitation did not take place was largely due to the steps taken to conserve the available water; public and private swimming baths could not be filled, the Octagon Reserve

could not be watered, the streets were watered by salt water pumped from the harbour, church authorities were prohibited from using the supply for organ purposes, domestic privileges, such as hosing, etc., were curtailed altogether, while an active inspection for the detection of water waste was inaugurated. However, when the outlook was anything but consoling, small showers of rain fell, and these somewhat eased the public demands on the daily draw-off on the reservoirs, and enabled the latter to maintain a restricted supply until heavy rain was experienced in the last week of March. It is safe to say that the City supplies have not often been called upon to bear such a demand as was put upon them on the occasion under notice, and it was only by enforcing the strictest economy, both publicly and privately, that the danger was averted.

The Committee has long been alive to the position regarding the water supplies, and has for a lengthy period been considering proposals whereby the existing systems may be augmented. That of a supply from Lee Stream has engaged attention by previous committees as well as the present one. A large expenditure is entailed in bringing in the waters for supply purposes, and the present Committee has been reluctant to ask for the necessary authority to proceed without having first assured itself that an adequate and less costly source of supply was not available elsewhere. It was for this reason that a scheme for boring for artesian water on the Taieri Plain, and also one for raising the waters of Powder Creek into the Silverstream Race were gone into and ultimately rejected by the Committee in favour of Lee Stream. A short history of the dealings with each of the proposals are recorded hereunder.

POWDER CREEK SUPPLY.—The proposal in this case was to install an electrically-driven pump with necessary pipes to lift the water of Powder Creek into the Silverstream Race. The estimate of the City Engineer to do this was £2500, and the lowest recorded flow (February, 1911) was 420,000 gallons a day, which, if added to the present supply, including the stored water in the Sullivan Service Dam, would, it was considered, do much to relieve anxiety until the Lee Stream had been brought in. In terms of the Standing Order the Finance Committee was asked to and did approve of the proposal, but so far no steps have been taken to obtain the approval of Council.

TAIERI PLAIN SUPPLY.—This scheme was to supplement the existing supplies by obtaining artesian water by bores on the Taieri Plain. Mr R. T. Stewart, at the request of the Committee, submitted a report on the matter, and in the course of an interview with the Town Clerk it became apparent that what was really required was evidence of the existence of water on the Plain in quantities sufficient to warrant the question being proceeded with in lieu of dealing forthwith with the Lee Stream proposition. It was obvious that this data could be obtained only by means of test bores, and finally Mr Stewart was asked to state the terms upon which he would drive these. His terms to drive not less than six bores of 6 inches diameter 100 feet in depth were 8s per foot, and for every foot exceeding 100 feet 12s 6d. In view of the fact that both the City Engineer and Professor James Park, of Otago University, were of opinion that a sufficient supply could not be obtained from the Plain, and as the former had estimated, on the assumption that a supply could be obtained, that the proposal would entail a capital expenditure of £60,000, with an annual maintenance charge of £9200, plus the cost of maintaining the Silverstream Race, the scheme was finally rejected in favour of Lee Stream.

LEE STREAM SUPPLY.—The matter of obtaining water from Lee Stream has been often mooted in past years, and during the last few years has received careful consideration by the Water Committee. Following on previous annual reports wherein the subject has been mentioned, the present Committee took an early opportunity of reviewing the whole question, and in August communicated with the owners of private land through which passes the tunnel that requires to be pierced. This was done in order that some amicable arrangements may be come to regarding compensation.

The City Engineer's estimate of the cost of taking the water from the stream and delivering it into the Southern Reservoir, including tunnel work, 18 miles of pipe line, bridges, etc., is £126,000. This amount has since been increased by the Committee to £140,000 to cover probable increases in the cost of materials and other contingencies due to war conditions, and under date of the 18th February, the Town Clerk, in reporting to the Finance Committee on the Water Committee's request that the necessary steps be taken to obtain authority to proceed with the work of completing the tunnel at Lee Stream, leaving the work of laying the pipe line to stand over for further consideration later on, inter alia, as follows:—

“ . . . the Committee proposes, subject to the financial arrangements being approved, to proceed forthwith with the work of piercing the Lee Stream tunnel. It is estimated that to do this work economically it would occupy two years to complete. The estimate of the City Engineer for the tunnel work is £16,248 for driving 5416 feet, the rate at which the work has been computed being £3 per foot, plus £5000 for lining an estimated length of 2000 feet, or in all a total of £21,248.

The Committee's proposal is that the work should be started right away, the cost being debited meanwhile to the Water Account in anticipation of loan proposals for the complete Lee Stream scheme being given effect to. The objection to submitting the loan proposals to the ratepayers at the present time is that it is impossible to make full provision in the amount sought to be authorised for the pipes to convey the water from the tunnel outlet to the Southern Reservoir. This circumstance is due to the inflated condition of the iron markets of the world. It may be quite impossible to procure the pipes at any price to-day, even if they were required. They would not be required for two years, even if the tunnel work should be proceeded with forthwith, and no one can safely predict the condition of the iron market in the near future, even should the war come to an abrupt ending, say, within a year from date.

From a strictly financial point of view I incline to the opinion that there are no difficulties in the way of financing the proposed expenditure. The Water Account at 31st March next will be just about square, despite the fact that during the past two years the whole of the works at Sullivan Dam have been debited to the Revenue Account. That absorbs £23,000. During the coming year, however, we shall require to draw much more heavily on this account to meet the requirements of the General Account than during the current year. The amount so transferred to 31st March, 1916, is £5768, while I fear that during the coming year we shall require at least £10,000. The effect of this will be that, without any abnormal capital expenditure during the coming year, the Water Account would be again

square at March, 1917. It follows, then, that the whole of the proposed expenditure on the proposals of the Water Committee as herein dealt with must be met by way of overdraft. We should, of course, use temporary deposits for the purpose, and so finance on a 3 per cent. basis, pending the authority for the loan and the sale of the debentures. As already stated, I foresee no difficulties in following such a course. So much for the financial aspect of the Committee's proposals.

The policy view of the matter should not be entirely thrust into the background in considering the above proposals, because it is clear, of course, that by the expenditure of the proposed £21,000 on the Lee Stream tunnel the Council would be committed to that scheme, and also to the proposition that the work should be pushed on and completed within a reasonable period, say, four or five years at the outside from date.

If it can be shown that the Lee Stream proposition is imperative at or about that time, then the matter is plain; but the Council would be putting itself in an unenviable position if, when it came to submit the question of loan proposals respecting Lee Stream to the ratepayers, say, in 18 months or two years' time, it had to contend with opposition proposals for a supply from other sources, such, for instance, as the proposed Taieri Plain subterranean scheme. We would find some difficulty in escaping condemnation, inasmuch as by the heavy expenditure on the tunnel we had practically nullified any possibility of the ratepayers voting the proposal out.

Personally I have always taken the view that, before any heavy expenditure is incurred on a work of this nature, we should be armed with the authority to raise the necessary loan. There are, it must be freely admitted, exceptional circumstances existing in the present case, and it is for the Committee and Council to determine if the exigencies of the present case warrant a departure from the generally recognised procedure."

The Finance Committee referred the request back to the Water Committee in order that the general policy question of water supply may be further reviewed, and after again considering the matter the latter approached the Finance Committee on the 17th March with a view to the Council being recommended to take a vote of the ratepayers on a proposal to borrow the sum of £140,000 for the Lee Stream works. At the subsequent meeting of the Council on the 22nd March the Water Committee reported that it had referred the matter to the Finance Committee, while the latter Committee submitted a recommendation in the following terms:—

“Authority be and is hereby granted to take the necessary steps to take a poll of the ratepayers on a proposal to raise a loan of £140,000 for the purpose of extending and augmenting the City water supply by bringing in the waters of Lee Stream, subject to the condition that a report be first obtained from an outside hydraulic engineer of standing in conjunction with the City Engineer as to the proposals submitted by the City Engineer, and his estimates for the work.”

The recommendation was debated to some length by Council, and finally an amendment in the following terms was agreed:—

“That Mr Robert Hay, C.E., be engaged to report, conjointly with the City Engineer, on—

- (1) The present proposition before the Council;
- (2) The advisability of the Council utilising water from any other source in and around the City, and the cost of bringing in and storing same;
- (3) The advisability of the Council deciding to ultimately abandon the Silverstream supply;
- (4) The suitability of the waters of Lee Stream for utilisation for domestic purposes.”

Mr Hay has, in terms of the amendment, been communicated with, and upon receipt of his reply the matter will again engage attention.

GENERAL COMMITTEE.

This Committee held 28 meetings during the period herein covered, the average attendance of members being six. Mr Councillor J. S. Sinclair was Chairman.

CENSORSHIP OF PICTURES.—On the recommendation of the Committee the Council on 3rd November resolved that in view of the fact that so many of the patrons of moving picture entertainments are females and young children, the Government be advised that, in the opinion of the Council, the Government should take action to ensure that the strictest possible censorship was exercised to prevent the screening of any pictures of an undesirable or immoral nature.

DESIRABLE LEGISLATION.—In the early part of the period covered by this report consideration was given to the matter of the power of the Council to control the design of buildings and also to prohibit the erection of stables and the use of existing stables in any defined area. The Committee was advised that the Council had no power to make a by-law controlling "architectural design or style" of a building, as the existing power was limited to "construction or repair," that is to say, to the material used and the safety of the public, whether occupier or otherwise. In regard to the question of stables, it was felt that the two points between which the Council could proceed was, on the one hand, the provision that gives a wide discretion in the framing of by-laws, and, on the other hand, the practice of the Court in holding a by-law to be void on the score of its unreasonableness.

In order therefore that requisite authority may be obtained to enable these two important matters being dealt with, they will form the subject of remits to the next sitting of the Municipal Conference.

HOUSE REFUSE AND DESTRUCTOR.—Following on the reference in my last report to a destructor, the question has again engaged attention as the result of pressing requirements in the matter of the disposal of house refuse. These latter requirements have since been met for the immediate future by an arrangement with the Otago Harbour Board for an extension of the Wharf street tip to accommodate the deposits for at least 12 months. In writing on the general question of the method to be adopted in dealing with house refuse disposal, the Town Clerk wrote as follows under date of the 17th January—viz.:

"Upon my return to duty last week the position regarding the disposal of house refuse was brought under my notice.

In consequence of the representation made to me a visit of inspection was arranged, and on Friday last His Worship the Mayor, Mr Councillor Sinclair, the Town Clerk, and Inspector Thomson visited the Albany and Wharf street tips, and also a new area on the foreshore that it has recently been arranged to fill in. This latter area is leased by the Public Works Department, and the engineer in charge gave the Acting Town Clerk permission to use it as a tip. The formal consent of the Public Health Department was obtained, and we have spent a fairly large sum in making the place ready for use (about £60 for labour and material).

Subsequently, however, protests have been made by (a) the Telegraph Engineer, whose department leases the adjoining section, and (b) a section of the public representing the Kensington School Committee.

I am of opinion that if these protests are persisted in it would be practically impossible for the Council to continue to use the area, and as the Harbour Board seems to have determined that no further extensions of sites on the foreshore are to be given, we are forced to go into the whole question of house refuse disposal in a comprehensive way. The Wharf street site was originally secured as a destructor site, but the matter of erecting a destructor has been left in abeyance for a variety of reasons, and it would be unwise to proceed in that direction at present. In this connection the fact cannot be too strongly insisted upon that the City of Dunedin has hitherto been satisfied with a most inefficient and altogether obsolete system of house refuse disposal. In my first report, dated April, 1911, I dealt fully with the subject as it then existed, and one paragraph from the report will bear repetition at the present time. I wrote:—

“One fact is abundantly clear: to-day no city can claim that its sanitary cleaning department is on a sound and perfectly satisfactory footing unless it can point to a more modern or more efficacious method of disposing of house garbage than by means of evil-smelling ‘tips.’ That is an obvious, if, perchance, somewhat embarrassing fact, but it is not likely to be overcome by being ignored or kept in the background until it should make its

presence evident in some more distressing form. I am writing entirely untrammelled by any prejudices of the past, and as yet free from any of those influences which are popularly understood as agencies in breeding contempt; these seem sufficiently cogent reasons to warrant me in saying that the whole system stands much in need of re-organising. The remedy lies in the erection of a destructor, but that is a costly undertaking, and in any event would take a considerable time to accomplish, even if no other obstacle barred the way. As a palliative, however, it might be found, upon investigation, that the garbage could be deposited on some area handy to the Harbour Board's reclamation works, where its evil tendencies would speedily be checked in the process of reclamation. Any additional cost of cartage to such a site, would, it seems to me, be amply repaid in the removal of what at present is not only a menace to the health of our people, but something that is a sure means of prompting periodical outbursts of censure on the City's good name."

Vast improvements have been made since that date, but the time has arrived for a further forward movement, and as the foreshore is now closed to us it seems to me that transport and deposit in Chisholm Park, or by lightering to sea, are the only alternatives, pending the time when some form of destructor can be provided.

The former of these two methods appears upon investigation to offer the most advantages. Motor traction is practically indispensable, and we would require, say, three 5-7 ton motor waggons working from at least three depots—one for the north end, one, say, on the Wharf street site, and the third in the southern area. Inclined ways would have to be provided at these depots, and the refuse, collected as at present by horse traction, would be dumped into bins so placed that the motor waggon could load from the bin by means of a lever-operated opening. These waggons would cost, landed here, about £1000 each, and the total cost of even temporary depots would run into another £2000 at least, making a total probable outlay of about £5000. Then the

provision for roading at the Park would be fairly costly, as the roadway would be called upon to carry heavy loading. From these general observations it seems clear that the City must face very heavy additional cost in the matter of house refuse disposal, and meanwhile the City Engineer should be requested to report on the whole subject, while it would also be well to submit the matter of deposit at Chisholm Park to the Reserves Committee if that idea should appear to find favour with the Committee.

This report is intended merely to initiate the subject as time did not permit of a close investigation."

After considering the above minute, and also various other aspects of the matter, the City Engineer was instructed to report on the whole subject of a destructor and the disposal of house refuse, and when that officer's report is available the Committee will no doubt have sufficient data before it to enable some definite decision being come to regarding this much-vexed matter.

FILTRATION FOR BATHS.—Following on consideration given to the question of the purity of the fresh water at the Public Baths, authority was granted to invite tenders for the supply and delivery of a filtering apparatus, which would be capable of purifying, aerating, and cleaning all water required for the baths. Two tenders from Messrs A. and T. Burt (Ltd.), were received, and these, together with the prominence given to the water supply due to the dry season and the consequent shortage of water, again directed very pointed reference to the supply to the baths, with the ultimate result that the idea of installing filters in the near future was abandoned in favour of a proposal to obtain clean salt water from the harbour.

SALT-WATER SUPPLY.—This matter was discussed in a casual way when the baths were first established, but as the cost was considered as likely to be fairly heavy, having regard to the fact that the Council was not then faced with the difficulty of maintaining a continuous fresh-water supply from its mains, it was not proceeded with. However, following on the dry season just experienced, when it was found necessary to close down the baths for a period due to the shortage of supply, the question of salt water was again mooted in February, as also a proposal to obtain fresh water

from underground sources in and about the City. These matters were reviewed by the Town Clerk in a minute to the Committee, who instructed the City Engineer to report on the several reported sources of supply, and, in particular, to give an estimate of the cost of piping for and pumping a supply of clean sea water from the nearest available point on the foreshore.

After considering the Engineer's report on the matter, the Committee, in March, decided to report to Council that, as a result of a full investigation of the position, it was of opinion that a filtration plant would be obviated, and an adequate water supply assured by obtaining salt water from the harbour front at Frederick street, and pumping it as often as may be required by a 20 h.p. motor through a six-inch pipe; and, further, that it would be in a position to approach Council with a definite recommendation when an intimation had been received from the Public Works Committee whether or not it would, in view of the fact that provision would be made for the six-inch pipe being tapped at any point to enable water being drawn off for street watering purposes, bear one-half of the whole cost, which was estimated at £1800.

This report the Council on 3rd March referred back to the Committee for further consideration, but in April a recommendation by the Committee in the following terms was adopted—viz.:

“Your Committee begs to report having further considered the question of water supply for the Public Baths, and now recommends that authority be and is hereby granted to lay the necessary 6-inch main, and install an electrically-driven pump at an estimated cost of £1800, for the purpose of bringing in sea-water from the harbour at the foot of Frederick street. Meanwhile the Works Committee has been asked whether a proportion of the cost should not be borne by the Works Department.”

The work will be put in hand as soon as the necessary pipes are available, but it is anticipated that by reason of the unsettled state of the iron market, due to war conditions, some time must elapse before these are landed.

INFANTILE PARALYSIS.—In December an outbreak of the dread disease commonly known as infantile paralysis assumed such alarming proportions in some of the northern cities and

towns that, at the instance of the Acting District Health Officer, a conference was held in the Mayor's room on the 10th March to discuss the precautionary measures that should be taken to prevent the spread of the disease in Dunedin. In addition to Dr S. T. Champtaloup, those present at the conference were His Worship the Mayor, Mr Councillor Green (chairman of the Works Committee), Mr J. H. Walker (chairman of the Hospital Board), Mr J. S. Douglas (chairman of the Drainage Board), Mr S. M. Park (secretary to the Education Board), the Town Clerk, the City Engineer, and Sanitary Inspector, F. G. Thomson.

Dr Champtaloup reported that there were three cases of the disease in the Otago district, while two other cases were under observation. The local cases came from the north end of the City, in the vicinity of Albany and Dundas streets, the locality in which the disease made its appearance two years ago.

After a general discussion, it was decided to extend the street watering by means of salt water; to engage in a house-to-house inspection of the area between Albany and Dundas streets, from George street to the sea, paying special attention to the condition of stables, fowl yards, dust tins, etc.: also to continue the work of spraying the refuse tips with kerosene with a view to killing the fly embryo: and to confer with the Drainage Board with the object of accelerating the progress of connecting unsewered properties to the sewerage system. In view of the importance of the matter it was decided to start the house-to-house inspection of the area mentioned forthwith, and on the 13th March these operations were put in hand.

Thanks to these precautionary measures, and also to our healthy climatic conditions, it is worthy of note that outside the three cases mentioned by the Health Officer the disease has made no headway in Dunedin, and now that the colder weather of approaching autumn is being experienced it is thought improbable that the malady will again manifest itself.

PUBLIC BATHS.—The following statement shows the revenue and expenditure at the Public Baths in Moray Place for the year ended 31st March, 1916—viz.:

REVENUE.

	£	s.	d.
2694 Single baths at 6d	67	7	0
2538 Adults' tickets, 3 baths for 1s	126	18	0
2167 Youths' tickets, 4 baths for 1s	108	7	0
1756 Children's tickets, 6 baths for 1s	87	16	0
3061 Towels or costumes at 2d	25	10	2
4972 Trunks at 1d	20	14	4
44 Hot baths at 1s	2	4	0
Season tickets	42	13	0
Education Board—993 pupils at 2s 3d	111	14	0
Hire of baths and sundry	35	16	9
568 Turkish baths at 3s	85	4	0
158 Turkish bath tickets, 4 for 10s	79	0	0
	<u>£793</u>	<u>4</u>	<u>3</u>

EXPENDITURE.

	£	s.	d.
Wages	645	14	6
Coal	337	5	9
Coke	59	18	6
Alteration to Turkish baths	162	15	0
Sundries	38s	17	5
Interest on capital expenditure	623	10	5
	<u>£2,215</u>	<u>1</u>	<u>7</u>

RESERVES COMMITTEE.

Mr Councillor J. H. Hancock was chairman of the Reserves Committee, which held 23 meetings, at each of which the average attendance was four members.

BETHUNE'S GULLY.—On the 10th May the Reserves Committee considered a communication from the agents for the owners of the property at Normanby, known as Bethune's Gully, renewing their former offer to sell the area to the City for the sum of £2500. The obstacle which caused the abandonment of the previous negotiations for the joint purchase of this property by the Council and the Otago Acclimatisation Society having been removed, the Reserves Committee referred the question to the Finance Committee, with a suggestion that £2000 should be offered, and intimated that the Acclimatisation Society was not prepared to join in financing the purchase, but was agreeable to expend £1000 in erecting fish hatcheries and game enclosures if it were allowed the use of about eight acres of the area.

The Finance Committee, however, in reporting the above facts to Council on the 16th June, recommended that the land be not purchased, and this recommendation was adopted.

ASTRONOMICAL SOCIETY.—On the 9th November a deputation representing the Otago Astronomical Society waited on the Committee and asked permission to re-erect its observatory, then standing on Tanna Hill (which was about to be removed by quarrying), on a site in the Botanic Gardens near the Cemetery road frontage; and under date of 7th December the desired permission was granted during the pleasure of the Council, and subject to (a) the observatory being painted green, (b) no bush or trees being cut or destroyed, and (c) no fence being erected around the building.

OPEN-AIR GYMNASIUM.—Early in January, the desirability of providing open-air gymnasia on the reserves for the use of boys was brought under the notice of the Committee, and with the assistance of the Garden Fete Society, who contributed £10, being one-half the estimated cost, a gymnasium has been erected on the reserve at Pine Hill terrace.

This gymnasium consists of sand trenches for long jumping, vaulting bars, loose top manuka hurdles for high jumping, and climbing apparatus, and the Committee hopes that if it proves a success arrangements will be made to provide the boys.

ELECTRIC POWER AND LIGHTING COMMITTEE.

This Committee, under the presidency of Mr Councillor J. B. Shacklock, held 26 meetings, the average attendance at each being six members.

SELLING POLICY.—The matter of a recision of the charges for electrical energy supply was fully investigated by the Committee as the result of minutes on the subject submitted respectively by the Town Clerk and the City Electrical Engineer, in which the financial position of the department was carefully gone into. The reports contain a vast amount of information that will no doubt prove of interest and instruction in the future, and for that reason they are set out hereunder in their entirety for reference:—

Table I.**SHOWING PROGRESS OF DEPARTMENT FROM INCEPTION TO 31st MARCH, 1915**

ITEM.	1908.	1909	1910	1911	1912	1913	1914	1915
1. Capacity of Plant in Kwts. ...	2,000	2,000	2,000	4,000	4,000	4,000	6,000	6,000
2. Total Connected in h.p. ...	2,916	5,659	7,175	9,133	10,500	12,188	14,601	16,963
3. Output in Units ...	3,624,650	4,850,685	6,855,844	8,140,104	9,184,990	9,578,397	10,155,471	10,999,608
4. Consumers Connected...	211	444	820	1,347	2,037	2,986	3,995	5,015
5. Revenue £ ...	9,977	19,775	28,112	33,530	38,710	43,721	51,940	57,627
6. Working Costs £ ...	7,074	9,454	11,575	12,590	13,660	14,872	19,672	19,135
7. Interest £ ...	7,282	9,466	12,407	12,439	13,558	16,216	18,471	20,661
8. Renewal and Depreciation £ ...	...	...	5,125	9,567	10,482	11,551	12,804	13,970
9. Net Profit or Loss £ ...	<i>Loss</i> 4,380	<i>Profit</i> 854	<i>Loss</i> 994	<i>Loss</i> 1,066	<i>Profit</i> 1,007	<i>Profit</i> 1,079	<i>Profit</i> 992	<i>Profit</i> 3,860
10. Average Price per Unit Sold ...	.66	.97	.98	.99	1.01	1.09	1.22	1.25



"1. At a recent meeting of the Committee, the Town Clerk and the City Electrical Engineer were requested to report upon a Minute submitted by the Chairman (Mr. Councillor Shacklock) relative to a certain aspect of the Special Rate charges for power, and also respecting certain shop lighting.

In response to my enquiry the order of reference was subsequently enlarged to embrace practically the whole of the rates and charges now in operation.

2. Pursuant to these instructions, I have had several conferences with the City Electrical Engineer, who has given me every possible assistance in assembling the data for this report. However, when we came to discuss the draft it soon became evident that it would be advisable to submit separate reports in lieu of a joint one. The advisability for this course was accentuated on account of the extended order of reference. Accordingly, a draft of what follows was supplied to the City Electrical Engineer, and his covering report is submitted herewith.

3. The order of reference is a wide one, embracing as it does the whole selling policy of the department, which in turn involves an enquiry into the past progress and present financial position of the Waipori undertaking. The department completed its eighth year of operation at March, 1915, and the following table shows the progress during that period:—

TABLE I.

SHOWING PROGRESS OF DEPARTMENT, 1907-15.

4. The table indicates a steady rise in the output, a gradual, although small, increase in the average return per unit, and a somewhat fluctuating movement in respect of the actual profit, the figures representing the net profit for the year ended March 1915, being much in advance of those of the preceding years.

Many other conclusions of interest and instruction may be drawn from a careful perusal of the table. Columns 1 and 2 show respectively the capacity of the plant in "kilowatts"

and the connected load in horse power. An electric kilowatt is equal practically to 1.3 horse power, but when allowance is made for losses in transmission and transformation a "kilowatt" at the generation station is equal to a "horse power" at the point of distribution. It has always been understood that we were working on a fairly safe margin as between capacity of plant and connected load, if the latter was not greater than the former than the ratio 1-3, but should the connected load increase above that ratio, then we were liable to be in trouble at the peak load period.

5. It is worthy of note to glance at the financial results achieved when the operations of the department had attained this position on the respective capacities shown in Column 1. In 1910 the connected load had considerably exceeded the ratio named, but Column 9 indicates that a loss of practically £1,000 was shewn. It seems clear then that on the selling policy that had been adopted at that time, it was hopeless to expect the undertaking to pay on a 2,000 kilowatt installation. Then again in 1913, with 4,000 kilowatt capacity, the connected load had again exceeded the ratio 1-3 as is shown; but again, as indicated in Column 9, the financial result cannot be regarded as at all satisfactory with declared profit of only £1,097. The indication I take from this result is that, even on a generating capacity of 4,000 kilowatts, the margin between earnings and expenditure was quite inadequate, although a slight improvement was certainly noticeable. Now, in March 1915, with a further increase of 2,000 in the installed capacity, we are again approaching the maximum connected load (at 31st March it stood at 16,963 horse power, at 30th July it had risen to 17,500 horse power, or only 500 horse power below the ratio to which I have previously referred).

Referring again to Column 9 for the financial result for this year shows a pronouncedly better position. That is satisfactory so far as it goes, but if the ratio of connected load to installed capacity, which has been regarded as the limit of safety in the past, is to be adhered to, then it foreshadows a further heavy capital expenditure at Waipori at a very early date. I dealt with this aspect of the future development of the department in a minute dated June 1913, which is included with the Departmental Reports to March 1914 (see pages 74 *et seq.*). Such extensions would include additional water storage, an additional pipe line, a fourth generating set, and reinforcement to the transmission line.

These works would cost between £50,000 and £60,000, and would occupy eighteen months or two years to complete, and at the rate of progress during the past years we should then have about 20,000 horse power as a connected load. These facts seem to point to the conclusion that the progress of the department has reached a point that peculiarly adapts itself to a process of critical review, with the avowed object of determining if the financial results now obtained justify further heavy borrowing, and failing a satisfactory answer to that enquiry, if a prudent policy would not rather call for a readjustment of the selling policy, even if such readjustment should result in the giving up of the least profitable class of business. The general conclusion that seems to be justified from a careful consideration of the table, taken collectively, is that originally the rates were set primarily with a view to create a demand, and not with a due regard to the actual cost of production ; and that, whilst it may still be necessary to adjust the tariff, that necessity is not nearly so pressing to-day as it was in 1909, when the second unit was decided upon, nor again in 1911 when the third unit was authorised. In other words, the increased output, and the gradually improving ratio of supply for lighting, as compared with that for power, has resulted in a financial result appreciably in advance of that shown in the earlier years.

6. One of the factors that operated against a reasonable surplus when the plant was about its maximum as a 2,000 and also as a 4,000 kilowatt installation, is to be found in the fact that, in each such instances, heavy capital expenditure was being incurred for further extensions. The interest on this expenditure had to be met out of revenue, but the works upon which it was being spent were, of course, non-productive at the time.

Speaking generally, and having regard to the charges under our tariff for power and light respectively, the ideal position would be that the lighting consumers should bear, at least during the earlier years of the undertaking, a fairly substantial portion of the total revenue. In our case, it is plain, I think, that at the low rates ruling for power, this due ratio was not attained. The position in this connection is improving, but at a rate that can hardly be considered satisfactory in view of the early prospect of further borrowing.

The consumption for light as compared with that for power is shown in the table following :—

TABLE II. SHOWING OUTPUT FOR POWER AND LIGHT RESPECTIVELY.

Year ended	Total Output.	Power, Including Tramways.	Percentage of Total.	Lighting.	Percentage of Total.
March 1909	...	4,850,685	87.78	592,985	12.22
" 1910	...	6,855,844	87.69	843,952	12.31
" 1911	...	8,140,104	87.95	980,900	12.05
" 1912	...	9,184,999	87.12	1,182,579	12.88
" 1913	...	9,578,397	86.02	1,338,699	13.98
" 1914	...	10,155,471	84.46	1,578,036	15.54
" 1915	...	10,999,608	82.79	1,892,780	17.21

7. Leaving for the moment actual results, as set out in the table, it seems appropriate here to attempt an estimate of the probable profit at the end of the current year. Last year's profit of £3,860 was distributed over the year as follows :—

Period.	Profit.	Loss.
Quarter ended June ...	£1,112	—
„ „ September ...	2,103	—
„ „ December ...	—	£231
„ „ March ...	876	—

For the current year the June quarter shows a profit of £3,369, and assuming that the balance of the year should prove no more productive than the corresponding months of last year—which must be regarded as a distinctly conservative estimate—then the probable net profit at March, 1916, should be about £6,000.

8. It is proposed to compare the operations of the Department for the past year with the working of a number of electricity supply undertakings in England. For this purpose I have selected the figures of ten of these undertakings whose capital is in fairly close agreement with our own, while two larger concerns are included as likely to be of interest.

The table that follows calls for some explanation, from the fact that a rather deplorable absence of uniformity exists in the method employed in preparing municipal financial statements, and it is to this fact, I am persuaded, that a great deal of confusion prevails in any comparison of results. The figures in the statement have been reduced to a common basis.

Here it should be noted that in England a local authority is placed under statutory obligations regarding the currency of all loans raised by it. The currency of the loan is based on the estimated life of the asset upon which it is to be spent, and the table is compiled to show the disposition of the total revenue. First, the working costs are deducted, then the charge for interest, leaving the balance of revenue as available for repayment of capital, or as the declared surplus. Reducing our figures to this basis, I have been obliged to treat, merely for the purpose of comparison, the amount set aside by us for renewal fund (£10,145) and the amount written off for depreciation (£3,825) as available for repayment of capital. With this necessary explanation the table is inserted as follows :—

TABLE III. COMPARISON OF CERTAIN BRITISH UNDERTAKINGS WITH THAT IN DUNEDIN.

9. It should be stated here that the whole of the British concerns are steam-generated plants, a fact that is brought into prominence by the cost of coal per unit sold. The average cost for this purpose over the twelve cases cited is .37 of a penny, and the average total working cost per unit figures at .85 of a penny, without provision for interest on capital; whereas with us, calculating on a like basis, the total charge, including interest on capital, is .86 of a penny, or only one one-hundredths of a penny per unit higher than the British figures, which do not cover interest. Most of the British undertakings referred to have been in operation more than double the life of Waipori.

10. At first glance it might be assumed that, on this showing, we do not appear to a great disadvantage compared with the British undertakings, inasmuch as our return shows a percentage of 8.10 of gross profit on the capital involved, whereas there are many of the examples given that fall far short of that figure. A closer investigation, however, reveals the fact that, in the case of a steam-generated system, working costs include fuel which, taking an average over the twelve cases, represents almost half the total costs. This is made clear in the second portion of the table. On the other hand, when we come to include the charge for interest our position is distinctly less favourable, due not only to the higher rate paid on our loans, but even to a greater extent than with us all our capital expenditure is loan money, whereas it is evident that, in many of the British examples, the figure shown as capital includes considerable sums expended on extensions out of revenue, and therefore not subject to a charge for interest. Taking the average receipts per unit sold, and counting the working costs and charge for interest in the case of the twelve examples, and reducing these amounts to a basis of a charge per unit sold, comparable with our figures, gives this result:—

TWELVE BRITISH EXAMPLES.

	Average.
Price obtained per unit sold ...	— 1.68d.
Working costs " " " ...	.85d. —
Interest " " " " ...	.30d. —
	— 1.15d.
Margin for sinking fund, renewals, depreciation, and surplus	.53d.

DUNEDIN.

	Average.
Price obtained per unit sold ...	— 1.25d.
Working costs „ „ ...	.40d. —
Interest „ „ „ ...	.46d. —
	— .86d.
Margin for sinking fund, renewals, depreciation, and surplus	.39d.

11. Despite the fact therefore, that in the cases cited, the average cost of production is much higher than with us, yet the selling policy is set to provide a considerably higher margin than in our case. Our figures indicate that to a cost of .86d. we are adding .39d., while the English figures indicate that to a cost of 1.15d. they are adding .53d. If we were working on a like margin our average price per unit sold would be 1.39d., and would even then be lower than the British rate by .29d. Incidentally, too, if we were working on a margin of .53d. per unit, on last year's figures our nett profit would have been £10,320 instead of £3,860.

12. The deduction to be drawn from these figures is, I think, that notwithstanding the higher rate of interest and higher cost of wages with us, we can produce at a cost much lower than with steam-generated plants in England, but that, despite their higher cost of production, the English authorities find themselves able to set their selling policy at such a standard as to provide a margin between income and expenditure much higher than we have hitherto attempted. The conclusion seems to be irresistible that, in fixing the scale of charges, the consumer has not only derived full advantage from a cheap method of production, but that he has also been favoured by a far too modest demand to ensure a sound commercial basis for the undertaking. It is clear, at all events, that, compared with the consumer who finds the revenue for the British concerns enumerated in the table, he occupies in this connection a manifestly favoured position.

13. In working these calculations on a basis of income and cost per unit sold, I am not unmindful of the fact that such a method cannot give absolutely conclusive results. It is plain, of course, that a method of calculation that involves the total units sold into the total working expenses, is less applicable in a water-generated system than in a steam-generated plant. It is equally plain that with us at certain hours of the 24, water is running to waste, and unless a class of customers can be got for current at these hours, no

revenue would result at all, while the absence of such business would have practically no effect in diminishing our works cost ; in which case the cost of production of the total output at per unit would show a proportionate increase. In spite of this admission, however, I must confess that I have been unable to devise any other method at all capable of intelligent presentation. Where the method errs, it appears to err on the side of safety ; furthermore, after we have completely exhausted all the complex considerations regarding "load factor," "maximum demand," "duration of supply," and the other wealth of technical or quasi-technical factors that are introduced into the subject, we are still confronted by the bald fact that the margin between income and expenditure is not such that the result can be regarded as highly satisfactory from a strictly commercial standpoint. The factors referred to should unquestionably not be ignored : there is no intention to depreciate their importance, but the difficulty seems to be to apportion to each of them not more than its full measure of influence in the tariff of charges. An ideal tariff would be so based that each class of user would pay a fair return of the expenditure due to the call he makes upon the generating station. The charge would be made up of at least two factors, one consisting of his due proportion of the fixed or primary charges, such as interest, sinking fund, and other costs which have no connection at all with the actual quantity of current generated. The other factor to influence the tariff of rates would consist of a due proportion of the actual working expenses and which have a more direct connection with the quantity of current generated. It is a much more difficult task to equitably apportion these charges in a water-generated plant than in a steam plant, but all electricity supply tariffs aim at doing so. We seek to achieve the object by means of the maximum demand system, but it is problematical whether in every instance such a result is attained.

14. As a matter germane to the present financial position of the department, it is proposed to show the position of the sinking fund, renewal fund, and the provision made for depreciation. Dealing first with the sinking fund, it is to be noted that the total loan liability of £479,200 is made as follows :—

Maturing 1st March 1922	...	£199,200
Maturing 1st January 1934	...	280,000
		<hr/> £479,200

We are setting aside as sinking fund towards the redemption of this sum, $\frac{1}{2}$ per cent. on £329,200 and 1 per cent. on £150,000. It is calculated that when the 1922 loan matures we shall have in hand £14,800 towards repayment, while on the 1934 loan the sinking fund should have accumulated to £77,500. In this connection it should be stated that reckoning interest at $4\frac{1}{2}$ per cent. per annum, a sinking fund of 1 per cent. would repay the loan in 39 years, provided the yearly increments remain unbroken for the whole period, while under like conditions a fund based at $\frac{1}{2}$ per cent. would repay the loan in 52 years. In practice, however, we do not raise loans for these periods, and it is instructive to show the operations of such funds when the loan is renewable in periods of 20 years, the accumulated fund being used at the end of each period to repay part of the loan, and the 1 per cent. or $\frac{1}{2}$ per cent. (as the case may be) of sinking fund calculated *on the balance of the loan*. In such circumstances 1 per cent. of sinking fund repays 31 per cent. of the loan in 20 years, while only 15 per cent. is repaid with a $\frac{1}{2}$ per cent. sinking fund. The steps in the process may be shown as under :—

REPAYMENTS OF LOAN BY SINKING FUND BASED
RESPECTIVELY AT 1 PER CENT. AND $\frac{1}{2}$ PER CENT.

	At 1 per cent. per cent. of loan repaid.	At $\frac{1}{2}$ per cent. per cent. of loan repaid.
At end of 20 years	31	15
" 40 "	52	28
" 60 "	67	39
" 80 "	77	49
" 100 "	84	57
" 200 "	97 $\frac{1}{2}$	81

If, however, the amount of annual payment for sinking fund is calculated throughout at the 1 per cent. or the $\frac{1}{2}$ per cent. respectively *on the original amount of the loan* the repayment would be as under :—

	At 1 per cent. per cent. of loan repaid.	At $\frac{1}{2}$ per cent. per cent. of loan repaid.
At end of 20 years	31	15
" 40 "	62	31
" 60 "	93	46
" 66 "	100	—
" 80 "	—	62
" 100 "	—	77
" 120 "	—	93
" 132 "	—	100

The suggestion that seems to emerge from a perusal of these figures is that no sinking fund less than 1 per cent. is desirable for any such utility service as gas, tramways, or electric supply, while the further fact to be emphasised is that, when loans with a currency of about 20 years are renewed, the sinking fund for the new loan should be calculated on the original amount and not on the amount of the redemption loan. On that basis the loan would be fully redeemed in 66 years, which is the limit as to currency permitted by the Local Government Board in England in their orders authorising loans for utility service undertakings. Judged by such a standard our yearly contribution to sinking fund for the Waipori loans should be increased from £3,146 to £4,792 per year.

15. Turning now to the renewal fund, which, as the result of six years operations, stood at £42,729 at 31st March last. For the purpose of comparing our position with that of the British undertakings the payments to this fund were regarded as part of the surplus over and above actual working costs, but the fact cannot be too strongly insisted upon that ample provision for renewals is a legitimate charge against revenue, before any attempt can be made to show a surplus. Indeed, such provision is as much a part of the working costs as the oil used in lubricating the engines. It is a scientific method of providing, out of revenue, for ordinary wear and tear by charging a fixed yearly amount against the revenue, and by that means establishing something approaching a uniform financial result. This fixed yearly amount is based on the estimated life of the assets that represent the loan liability, and consequently the yearly total so provided has only a remote connection with the capital outlay in comparison with another undertaking of a totally different description. For instance, should we spend £30,000 in piercing a tunnel and provide £150 a year out of revenue for a renewal fund, we might be making an infinitely better provision for the future than another controlling authority which, having spent a like amount of loan money on, say, turbine engines, even if in this latter case revenue should be debited with £1,800 per year. In the former case, the payment is based on an estimated life of fifty years, whilst in the latter the estimated life is thirteen years. The question to be answered is, which of these two concerns is working on safer lines—in other words, having regard to wear and tear and the risk of obsolescence, would the tunnel at the

end of 50 years represent an asset equal to or better than the engines at the expiration of 13 years. The comparison seems to be in favour of the tunnel.

16. Comparisons are sometimes made by quoting the percentage on loan liability set aside for renewals; the illustration given in the preceding paragraph should indicate that such a comparison may be absolutely fallacious. We are paying in this way renewal fund contributions on assets valued at £375,885, and a careful survey of the estimated life allotted to the respective items seems clearly to show that we are well positioned as compared with leading authority in England, on the Continent, and in America. A specific case may be quoted. We have just let tenders for a new storage battery. The cost is less than the amount standing to the credit of this item in the renewal fund, and the new apparatus is estimated to be of greater efficiency than the one it will replace. It should not be forgotten that the fund is a liquid one, and earned interest for the past year amounting to £1,609. Whilst there is every reason to believe that we are making ample provision under this head, I do not think the provision is more than ample. The rise and fall of a renewal fund has been likened to the upward speed of a rocket and the downward speed of the stick, and it is obvious that during the earlier years of the undertaking there should be but few demands on the fund. We are in that phase at the present time, and if we are to be prepared for the latter condition the fund must not only be maintained, but it must be jealously guarded to the intent that nothing but legitimate claims may be made against it. The position of the renewal fund, I regard as a bright page in the financial position of each of our trading concerns. It is a tangible thing, a liquid asset lying to our credit at the bank, and owing to our general method of finance is being credited with interest at the rate of 5 per cent. per annum.

17. The provision for depreciation, apart from the renewal fund, consists of a book entry writing down by 1 per cent. the value of the wasting assets. This represents about £3,800 per annum, and reference to the balance-sheet shows that in all £21,244 of the earnings have been appropriated in this way during the past six years. Having regard to the existence in the assets side of our balance-sheet of such items as law costs £2,396, preliminary expenses £8,176, discount on loans £6,164, added to the further fact that we are still short by £8,832 of an equal poise between liabilities and

assets, prompts the suggestion that a prudent policy calls for an increased provision under this head. In an electricity supply concern, the risk of obsolescence is, perhaps, greater than in any other of our concerns, and this risk will not be met by ignoring its existence.

18. The provision made for renewals and depreciation should not be confused with the provision made for sinking fund. The purpose of the two funds is quite different. A sinking fund is to provide for the repayment of loans; a renewal fund is to provide out of revenue for the maintenance of the undertaking at its full value to avoid living on capital. The latter is a working expense, the former is an allocation of profits. If no provision be made for renewals then the plant would be worn out at the maturity of the loan, and would require a fresh loan to replace it. Such a policy would be devoid of financial progress and should not be entertained for a moment.

19. Having, in the preceding paragraphs, attempted to show the position of the department in all its bearings, the crucial question concerning the sufficiency or otherwise of its selling policy may, perhaps, still be regarded as unanswered. It has been shown that the net surplus is increasing, and it may be argued that in view of that fact there is no occasion to disturb the present scale of rates for either power or lighting. That question must finally depend for an answer on what Council, as an important policy question, considers the undertaking should return in the way of surplus revenue over expenditure—a question that invariably creates a sharp conflict of opinion. On its satisfactory solution depends, among other things, a just apportionment of the burden of public debt as between the present and the future. It is assumed that we are prepared to bear our legitimate portion of that burden, but while we are thus willing to do not less than our share, we are unwilling to do more.

20. Before any completely satisfactory answer can be given to the question of the sufficiency or otherwise of the rates, it seems to me therefore that Council should be invited to decide the policy point herein raised, as it seems futile to attempt any serious re-adjustment of the charges until some such indication is forthcoming. My own view, as the result of this somewhat full enquiry, is that the margin between income and expenditure is insufficient to ensure a position of sound finance. In testing the accuracy or otherwise of this opinion, it may help the Committee and Council to know

that in electric lighting orders issued by the Local Government Board in England the maximum net surplus permitted is 5 per cent. on the aggregate capital expenditure, and that may presumably be regarded as embodying the opinion of the House of Commons on the subject. Writing on this point in a recent work, a well-known authority states :—

“ As the electricity business is a fairly risky one, a net surplus equal to 5 per cent. on the total capital outlay does not seem unfair. That is a limit fixed by the central authorities in this country as a protection to consumers. If the revenue exceeds that amount prices must be reduced. In practice this limit does not appear to have exercised much influence on prices, as competition has tended to keep prices at levels, which afford little or no net surplus.”

Now, if we were operating on a basis of a 5 per cent. surplus on our capital, we should have £23,960, with which to meet renewal fund, sinking fund, depreciation, and net surplus, as compared with £17,010. made up of £9,325, the net contribution to the renewal fund, £3,825 written off for depreciation, and £3,860 the declared surplus : and curiously enough too, that result is in close agreement with the net surplus we should be enjoying if the margin between income and expenditure with us was equal to that of the British undertakings, as shown in paragraph 10.

21. Fortified then by these facts, I venture the opinion that we should be justified in expecting the department to return a surplus, in round figures, of not less than £15,000 per year, apart from the provision for renewal fund, which must be regarded as working expenses. This suggested surplus is in comparison with a return of £7,685 to March 31, 1915, that is, £3,825 written off as depreciation, and £3,860 the declared net surplus ; or again, in comparison with about £9,800, the estimated result at March 31, 1916, made up of a probable net surplus of £6,000, plus £3,800 for depreciation. Such a sum might be apportioned as follows :—1 per cent. on capital invested each to sinking fund, depreciation, and surplus, the latter to be transferred to the General Account. That totals to £14,376, and would enable us to increase our contribution to sinking fund as suggested in paragraph 14, to continue the transfer to the

General Account in relief of rates and which has already been accepted by Council as a general policy, and still leave us with, say, £5,000 to write off as depreciation, and which would be available for extensions on capital account. The only alternative to some such policy appears to be repeated heavy borrowings every three or four years. Relative to the transfer to General Account in relief of rates, it should be mentioned that this aspect of the subject was dealt with in the Town Clerk's Annual Report to March, 1914, to which the Committee is referred, should that phase be deemed worthy of review.

22. The results that should accrue from a policy of selling rates based on an anticipated excess of revenue over expenditure on working account, such as that suggested in the preceding paragraph, might reasonably be as follows :—

- (a). A steadying of the output and a consequent postponement of the time when further borrowing would become necessary to enlarge the generating capacity at Waipori.
- (b). Consequent upon the restricted rate of progress the estimated amount mentioned as available for extensions (£5,000) would in all probability be found sufficient to provide for the cost of reticulation and new service installations ; whereas, under the existing conditions, the department is required to provide considerably more than that amount for these purposes, and which is being obtained at the present time by drawing on the bank by way of overdraft.

A reference to the approved estimates of the department for the current year would show that the expenditure on Capital Account is set down as £12,265. It is true that a considerable portion of this amount is to be spent on non-recurring items, but after making due allowance for these, it seems altogether too optimistic to suppose that any substantial portion of the extensions can be met out of revenue on the basis of the present income.

The actual cash position at 31st March, 1916, may be expected to appear somewhat as follows :—

Requirements (including work-			
ing costs, sinking fund,			
renewal fund, transfer to			
General Account, and exten-			
sions on Capital Account ...	£72,126	0	0
Estimated revenue ...	63,000	0	0
<hr/>			
Showing on a strictly cash			
account basis a shortage of	£9,126	0	0

This should not, however, be confused with the financial result on the year's operations.

23. The specific point raised in the minute by Councillor Shacklock has not been dealt with. A large amount of data showing income from the new contracts which carry a guarantee of 60 per cent. of the maximum demand, and others have been examined, but for reasons already explained, no attempt has been made to particularise. It seems clear, however, that in respect of the Special Rate No. 2, these conditions should not apply to so low a guarantee as 150,000 units per year, unless the consumer is required to take a fairly large percentage of the current between midnight and 6 a.m. Then, in respect of the special class of lighting referred to by the Chairman, it is evident that a radical change is also required there, but final consideration of the matter awaits the wider question raised in this report, as, should Council determine on the lines herein suggested, or any modification of them, the whole question of revision would require to be very carefully considered, if we are to equitably distribute over all classes of customers any increase that may be resolved upon. That the class of lighting referred to by the Chairman is not bearing its due proportion of the revenue, can, I think, be amply demonstrated by a few figures. Last year our total income was £57,627 with

a plant that allowed of a maximum load carrying capacity of 5,000 kilowatts. Now, if we divide the income into a 300-day year we find that the daily rate is equal to slightly more than 9.2d. per kilowatt, that is to say, each kilowatt should produce slightly over 9.2d. per day. But a consumer on our 5-1d. rate per unit would require to light on an average of over 3 hours per day for the 300 days, to pay his proportion of the income. It is manifest, I think, that he does not do this, a fact that was pointed out by the late City Electrical Engineer in his report to 31st March, 1911.

24. In considering the general subject of rates it should be borne in mind that a fairly large amount of our revenue is subject to agreements extending over several years in advance, and even if, upon a full consideration of the question of policy, it should be deemed necessary to so adjust the rates to ensure a fairly substantial increase in revenue some considerable time would elapse before we could derive the full benefit from the change. Amongst the data I have examined in reaching the conclusions set out in this report is a return showing the revenue resulting from a number of power consumers under the old form of agreement, which did not provide for a minimum guarantee of the maximum demand as compared with the new form which contains this provision. Whilst under the new form two or three of these cases give substantial increases for the same quality of current used, yet there is no consistency to be noted. It is evident that if the average consumption and the maximum demand are nearly co-incident, then the guarantee is of no value, whereas on the other hand if the maximum demand is considerably higher than the average consumption then the guarantee operates in our favour. These latter conditions are in evidence in a few cases, but as the yearly revenue concerned is so small, relatively to our total income from this source, the practical effect is almost insignificant. This seems to provide a further cogent reason for a comprehensive review of the whole tariff, and here I venture the opinion

that any apprehension that may prevail that the present charges, either for power or for light, are set at the maximum "that the traffic will bear," does not appear to have emerged as the result of my perusal of the various returns that have come under review.

25. It is conceivable that there may be instances where, owing to the peculiarities of operations, the "traffic" could not bear any advance, yet even if such be the case it is obviously not sound business to base a general tariff with an eye to what in practice may prove to be the least productive class of user. That remark is intended to apply more particularly to power users. Relative to lighting consumers it should not be overlooked that the present rates were originally set on the basis of consumption by means of the old carbon filament lamp. That form of lamp is now replaced by the metal filament type that takes only about one-third of the current for a light of equal intensity as compared with its predecessor, while we are now threatened by the "half-watt" type, which in turn is expected to further reduce the consumption by 50 per cent. Leaving the expectations out of the calculation, it is evident that if the "traffic could bear" the original charge which has been divided by three by means of the lamp now in general use, then presumably there is a good margin on which to work in the lighting branch.

26. In concluding this report I desire to emphasize one point. The opinions herein given have been reached as the result of as full an investigation as the time at my disposal would allow. I have attempted, as far as possible, consistent with the order of reference, to refrain from putting forth an individual expression of opinion unsupported by some evidence. The most suggested for the conclusions reached is that some of them at least are worthy of a fuller investigation, in order that Council may determine the many very important and highly complex considerations—technical, commercial, and social—that pertain to the policy of an adequate and equitable scale of charges for a public utility undertaking of the nature of Waipori."

The City Electrical Engineer's report, which was dated the 15th August, 1915, was in the following terms :—

“In connection with the minute of Councillor Shacklock dealing with the rates charged by this Department for the supply of electrical energy, which has been referred to the Town Clerk and the City Electrical Engineer for report, I would state at the outset that some of the terms and conditions attached to the prices at present in force should in my opinion be modified, so that certain classes of consumers will be required to pay considerably more for the service which is rendered to them by the Department. Such a modification would certainly make a substantial addition to the revenue, and should be carried out if for no other reason than that of justice to the other consumers.

The wider question as to whether the rates should be raised all round is quite another matter, and, it appears to me, depends primarily on the consideration whether the revenue derived by the present rates is sufficient to meet all reasonable and legitimate charges. If it is, then although a modification as suggested above will still be advisable, I can see no reason for raising the rates, as I take it that in a public utility undertaking such as a municipal electric supply, which is to all intents and purposes a monopoly, while on the one hand it is not right that electric light consumers should get a supply at such prices as to leave the undertaking a burden on the rates; on the other hand, it is unjust that one portion of the ratepayers, *i.e.*, electric light and power consumers, should be required to pay increased prices to provide for heavy transfers to the Municipal Department, with the object of reducing the rates of that portion of the ratepayers who do not use electric light. And the further fact must not be lost sight of that a water power scheme such as we have in Dunedin, must, from the very nature of the case, always be liable to failures of longer or shorter duration, which, with a local steam plant, would be practically non-

existent. A certain margin in rates must therefore be expected in a hydro-electric system, as compared with those charged where steam plant is used, otherwise the whole advantage of the former disappears.

In order, if possible, to arrive at a true understanding of the position, the question at once arises as to what such reasonable and legitimate charges are, and they may be briefly stated thus :—

1. Working costs which include fuel, stores, wages, rents, and taxes, general management expenses, and repairs to the plant necessary to keep it in efficient working order.
2. Interest on the loan.
3. Renewal Fund charges.
4. Antiquation or obsolescence.
5. Depreciation,
6. Surplus after meeting above charges, available for sinking fund and transfers to Municipal Department.

The first two items require no comment, as apart from the first year's operation, the revenue has been more than sufficient to meet these charges, and no trading department can be considered sound that is unable to meet these out of revenue.

With regard to the Renewal Fund, there may be a difference of opinion as to what amounts should be set aside for this purpose, and in my opinion the best course to take is to compare the rates which have been adopted in Dunedin, with those that have been considered adequate by other electric supply undertakings in Great Britain and America, in so far as they are comparable with the conditions that exist here.

The following tables show what is considered to be a fair life for the various portions of such plant by men who are, I believe, competent and reliable authorities on these matters.

The figures relating to British plants are taken from a report dated 1906, which the late Sir Wm. Preece—of Messrs. Preece & Cardew, London, who are consulting electrical engineers to several of the Colonial Governments—made on the Bristol electrical undertaking; those dealing with American plants were supplied as late as February of this year by the Secretary of the American Institute of Electrical Engineers, in response to a letter which I addressed to him, asking for particulars of the practice in that country with regard to this very question. My letter was handed on to a consulting engineer in New York, who is referred to as “a specialist in the valuation of public utilities,” and who supplies the figures, which show the rates of depreciation ordered by the Manitoba Public Utilities Commission of Canada to be used by the City of Winnipeg to provide against depreciation in the municipally-owned electric utilities, which includes a hydro-electric plant.

It should be noted that the British station contains steam plant, but such items as buildings, generators, transformers, cables, batteries, and meters, are absolutely comparable whatever the type of prime mover may be.

A careful perusal of the following list shows, in my opinion, that the renewal fund in Dunedin is practically beyond criticism, and that the amounts being set aside will be ample for renewing the various portions of the plant as they wear out; and further, it should be pointed out that the scrap value of many of the items will be considerable, although that has not been taken into consideration in fixing the rates, *e.g.*, the copper in the transmission lines will, in all probability, increase in value rather than diminish, as there is no wear on it such as we have in the tramway trolley wire.

If the above figures are not considered conclusive, and it can be shown that in one or more items the rates fixed are too low, I consider that they should be amended, so as to place them beyond all question, and it would also be advisable to increase the fund to the amount at which it would now be standing if the payments had been commenced the first year of the undertaking.

LIFE IN YEARS IF PROPERLY MAINTAINED.

		British.	American.	Life on which renewal fund rates are based in Dunedin.
Hydraulic Works (<i>i.e.</i> , Weirs, Tunnels, etc.)	...	None	50	50
Brick or Concrete Buildings	...	80	50	50
Pipe Lines ...	...	None	—	30
Pelton Wheels	...	None	30	20
Generators	...	30	20	20
Transformers ...	...	25	20	20
Transmission Lines, Poles, and Wires	...	None	30	30
Insulators ...	...	None	10	30
Underground Cables	...	35	25	20
Overhead Lines	...	None	20	20
Storage Batteries	...	15	None	7
Meters ...	...	12	15	14

The question of antiquation has still to be considered, as it is quite obvious that portions of the plant might have to be discarded long before their estimated life has been reached. With short life items, such as storage batteries and meters, the risk of such a contingency is practically non-existent, as it is a certainty that in replacing these, the very latest and most efficient plant will always be obtained, when replacements are made, and experience shows that improvements are gradual and not revolutionary. With long life items the case is different, and it has been found in many steam plants in Great Britain that engines have had to be scrapped to be replaced by steam turbines long before the useful life of the former has been reached, because of the greater efficiency of the turbines. The conditions in a water power plant are radically different. Whereas the most efficient steam boiler and turbine does not deliver as a maximum more than 20 per cent. of the energy in the coal, the water driven units, such as we have at Waipori, have an efficiency of fully 80 per cent., in other words, improvements in boiler house and steam plant have a range of 80 per cent. in efficiency to work upon, while in water driven plant they have only 20 per cent. It is manifest that the possibilities of improvement in the former case are much greater than in the latter, and therefore also the risk of obsolescence.

In all other portions of the plant, such as generators, transformers, transmission lines, cables, etc., the efficiency is already so high that further improvement such as would warrant replacement through obsolescence is practically cut of the question. To take the case of transformers, the efficiency guaranteed by any reputable manufacturer for ordinary commercial plant is not less than 97 per cent. at full load, and in special cases as high as 98.5 per cent.

In this connection the statement of Mr. Charles Merz, consulting engineer for the Melbourne Suburban Railway Electrification Scheme, which is to cost something over £2,000,000, in his report to the Victorian Railway Commissioners, may be quoted: "No antiquation fund is necessary for the motors, sub-station plant, transmission cables, etc., because the only part of the equipment, from the coal to the train that is capable of material improvement in efficiency, and therefore would have to be replaced on account of inefficiency is in connection with the power station." The power station referred to contains a steam plant.

Assuming for the moment that the above statement of the position is correct, as I believe it is, it has to be borne in mind that the revenue of the Department during the past five years has been more than sufficient to meet the charges in items 1, 2, 3, and 4, and if this undertaking were in the hands of a Company, it is doubtful if more ample provision would be made for the future.

With regard to depreciation, I fail to see the necessity for such a charge in addition to the renewal fund—if it is decided that the latter has been fixed high enough to ensure the plant being maintained for all time in a state of efficiency—unless it be with a view to gradually writing off the cost of those portions of the plant that have been discarded, and will therefore not require renewal, such as the benching and fluming, and other items, such as preliminary expenses.

There remains to be considered what further charges the Department can justly be called upon to meet, namely those classed under “surplus available for sinking fund and transfer to Municipal Department.”

The sinking fund charge is, in my opinion, a matter of policy on the part of the Council, and depends on what burden they consider the present generation of ratepayers may justly be asked to bear in order to relieve future generations. The transfer to the Municipal Department is also a matter of policy, and on the assumption that it is to be a permanent annual charge at the present rate of 1 per cent., the question arises whether the revenue derived from the present rates will prove adequate to cover it, seeing that it has not done so in the past. In his report, the Town Clerk has estimated that the profit for the current year may be taken as £6,000, and I believe this is a conservative figure if we take the results of the first quarter as compared with the same period last year as a guide, as this year's returns have undoubtedly suffered through the war. Past experience has of course shown that unforeseen contingencies may arise that upset all estimates, such as the trouble at Waipori in 1913, but there appear to be good grounds for believing that the current year's balance will more than meet the transfer to the Municipal Department.

The whole of the above may be summarized briefly by stating that, if the present charges for renewal fund, depreciation, and transfer to Municipal Department are maintained

at the same rate as in the past year, I believe that the revenue to be derived from our present plant under the existing rates, will prove sufficient to cover these, and there is therefore no need to increase prices under present conditions.

The above statement is based on the possibilities of the 6,000-Kilowatt capacity now installed at Waipori, but the future extension and progress of the undertaking has to be considered, and the position has to be faced that, if the present rate of increase in our connected load is maintained, it will very soon be necessary to make provision for an extension of plant. This means an increase in water storage, a new pipe line, extension to power station, generators, increase of copper on transmission line, transformers at Halfway Bush, and low tension transmission line to the City. An increase in capacity, similar to the two previous extensions, will entail an expenditure of approximately £65,000, in addition to which there are, further, the extension to the overhead reticulation, service connections, and meters, which must be carried out in order to dispose of the supply from the increase of plant. For the present year this has been estimated at £10,000, and taking the rate of expansion of past years as a guide, it cannot be much less than this amount for future years, unless an artificial slackening up is caused by increasing the rates.

In this connection it should be pointed out that the water storage mentioned above is in addition to the extension to Lake Luella, the completion of which was postponed on the break up of the drought in 1911, but which should be proceeded with not later than next autumn, so that it may fill up during the winter. This was estimated to cost £3,400 with the addition of £2,850 for the bridge, which will be necessary owing to the increased storage area submerging the county road to Waipori Township.

During the past winter the maximum load has been 4,500-Kilowatt, and with the normal increase it should be possible to run until June, 1916, without requiring to use the sixth unit, and after that for a few hours only during the day, when the Diesel engines would be the only standby.

Authority was granted for the third extension at Waipori in January, 1911, and the generators were first put into operation in July, 1913. This delay was caused through

abnormal circumstances, but a period of two years at least must be counted on as necessary for the completion of a further extension, and under the abnormal conditions which hold at the present time, this would probably be considerably increased. The result would be that the sixth unit would have a considerable load before the new plant was ready, but as this would occur only on the day shift, it would not be incurring undue risks, or relatively as great as taken before the completion of the first and second extensions. This of course is on the understanding that a further extension is to take place; if it is not, or is to be delayed, it will very soon be necessary to accept applications for power under certain restrictions as to hours of use. Applications for light, on the other hand, could be accepted for two years yet at least, as the Department has the right to call upon certain consumers to discontinue the use of motors, totalling about 350 h.p., during the winter months at the time when the power and light loads overlap, a right which it has not yet been necessary to exercise.

As the Town Clerk has dealt very fully with this aspect of the question, pointing out the effect that the interest charges on the new loan have had on the revenue, or rather the expenditure, in the past while the extensions were in progress and the new plant was not yet revenue producing, it is unnecessary for me to dwell upon it, except to draw attention to the probability that the time required to load up the new plant will be considerably longer than was the case on previous occasions, as the industries still using steam or other sources of power are always becoming more limited. In view of this phase of the question, I am of opinion that if a further extension is to be authorised in the near future, the financial position of the Department can be maintained during the next two or three years only by an increase in the rates.

In this report I have purposely avoided the use of technical terms such as "load factor," "diversity factor," &c., in order to leave the point at issue as clear as possible. Should it finally be decided simply to modify the conditions of service as suggested in the opening paragraph, or to increase the rates in order to meet the contingencies arising out of extensions to the plant, these will all require careful attention, so as to adjust the extra burden as equitably as possible."

Both these reports were placed before Council on the 8th September, but in order that councillors could familiarise themselves with the different aspects as raised therein, consideration was deferred pending a recommendation being made by the Council to a later meeting of the Council. Accordingly, on the 22nd September, the Committee reported as follows:—

“Following on the preliminary report to Council at its last meeting on the subject of the selling policy of the Electric Power and Lighting Department, your Committee now begs to further state that, with a view to submitting a definite proposal regarding the rates for power for consideration by Council, an instruction has been forwarded to the Electrical Engineer in the following terms—viz.:

To submit a revision of the rules and regulations governing the use of electrical energy on such lines as will enable the department to utilise the present installation to the fullest advantage, such revision to be based on the following considerations—i.e.:

(a) An annual payment by the department to the Municipal Fund of an amount equal to 1 per cent. on the total loan capital;

(b) The continuation of payments to both sinking and renewal funds at the present rates;

(c) All sinking fund payments to be calculated on the original amount of loans until such times as the loans of any remaining portion of the same shall have been fully paid.

In the general discussion that followed an amendment was proposed that a further subclause be added, providing for an annual payment by the department equal to 1 per cent. on the capital invested to an Extension Fund, and after this had been defeated the clause as above was adopted.

Following on the instruction, a report in terms was submitted by the City Electrical Engineer, and on the 3rd November Council, on a notice of motion, rescinded the then existing charges and substituted new ones based on the lines already set out.

EMPLOYEES' WAGES.—In June the Committee, with a view to bringing engineers, etc., not included in the Official List into line with members of the Official Staff, approved of a schedule of minimum and maximum wages for members of the department, and reported the fact to Council. The Council, however, agreed to the report going back to the Committee in order that further consideration might be given to the proposal. After again considering the matter the Committee reported on the 14th June that it considered that the rates fixed for each of the positions embraced in the proposals were fair and equitable, and that therefore the previous adoption of the schedule had been confirmed.

In connection with the schedule it is to be noted that those employees whose present wages are shown at less than the minimum have been increased to the minimum, while those who have been in receipt of the minimum during the 52 weeks ended 31st March, 1915, have been placed on the second year rating. This condition also applies to the meter readers, whose present wages are less than the second year rating; and also to the engineer-in-charge at Halfway Bush substation. These increases are retrospective to the 1st April, 1915, and all others take effect from the 1st April, 1916. The schedule is as follows:—

CONVERTER STATION.

	Present	1st year	2nd year	3rd year
J. Scott, 1st Engineer ...	6 0 0	5 15 0	6 0 0	6 5 0
J. Ellis, 2nd Engineer ...	4 10 0	5 0 0	5 2 6	5 5 0
W. Gillanders, 3rd Engineer ...	4 5 0	4 10 0	4 12 6	4 15 0
G. McLean, 4th Engineer ...	4 5 0	4 5 0	4 7 6	4 10 0
G. Turner, Relief ...	3 15 0	4 0 0	4 2 6	4 5 0
W. Richards, S.B. Engineer ...	3 10 0	3 10 0	3 12 6	3 15 0
W. Gray, S.B. Engineer ...	3 10 0	3 10 0	3 12 6	3 15 0
W. Cameron, S.B. Engineer ...	3 10 0	3 10 0	3 12 6	3 15 0
Dodd, S.B. Engineer ...	3 10 0	3 10 0	3 12 6	3 15 0

WAIPORI FALLS.

	Present	1st year	2nd year	3rd year
A. Aldridge, 1st Engineer ...	6 0 0	5 15 0	6 0 0	6 5 0
D. Stewart, 2nd Engineer ...	4 15 0	5 0 0	5 2 6	5 5 0
B. Marshall, 3rd Engineer ...	4 7 6	4 10 0	4 12 6	4 15 0
O. B. Reynolds, 4th Engineer ...	4 5 0	4 5 0	4 7 6	4 10 0
G. Lindsay, Spare Engineer ...	3 15 0	4 0 0	4 2 6	4 5 0
J. McShain, S.B. Engineer ...	3 7 6	3 10 0	3 12 6	3 15 0
W. Swaney, S.B. Engineer ...	3 7 6	3 10 0	3 12 6	3 15 0
W. Manning, S.B. Engineer ...	3 5 0	3 10 0	3 12 6	3 15 0
Abernethy, S.B. Engineer ...	3 5 0	3 10 0	3 12 6	3 15 0
Average for 12 months		Weekly		
G. Firman, Fitter ...	4 0 0	3 15 0		
M. Stevenson, Carter	3 2 6	3 2 6		
J. Hallinan, Carpenter	3 12 6	3 10 0		

TEST ROOM.

	Present.	1st year.	2nd year.	3rd year.
T. Overton, Tester ...	5 0 0	4 15 0	5 0 0	5 5 0
A. Mackie, 1st Assistant ...	3 12 6	3 15 0	3 17 6	4 0 0
L. McLean, Install. Inspec. ...	3 5 0	3 5 0	3 7 6	3 10 0
F. Gilmore Asst. Instal. Inspec. ...	3 0 0	3 0 0	3 2 6	3 5 0
G. Orchiston, Meter Tester ...	3 0 0	3 0 0	3 2 6	3 5 0
W. Anderson, Meter Tester ...	3 0 0	3 0 0	3 2 6	3 5 0
S. Russell, Meter Reader ...	...	2 15 0	2 17 6	3 0 0
G. McDowall, Meter Reader ...	...	2 15 0	2 17 6	3 0 0
O. Judd, Meter Reader ...	...	2 15 0	2 17 6	3 0 0
W. Everest, Asst. Test Room... ..	3 0 0	3 0 0	3 2 6	3 5 0
E. Young, Improver ...	2 8 0	...	...	...
T. McCarten, Storeman ...	3 10 0	...	3 10 0	...

OUTRAM, HALF-WAY BUSH, &c.

	Present	1st year	2nd year	3rd year
W. Kofoed, Outram Sub. ...	3 10 0	...	3 10 0	...
C. Kofoed, Outram Sub. ...	0 15 0	...	0 15 0	...
D. McLean, Lineman, Outram ...	3 10 0	...	3 10 0	...
W. Gates, H.W. Bush Sub. ...	3 12 6	3 15 0	3 17 6	4 0 0
W. Anderson, S.B. Engineer ...	...	...	...	...
M. Josephson, S.B. Engineer ...	3 0 0	3 5 0	3 7 6	3 10 0
Watson, S.B. Engineer ...	3 0 0	3 5 0	3 7 6	3 10 0
W. Iles, Clerk ...	3 0 0	3 0 0	3 2 6	3 5 0
A. Davies, Inspector ...	5 0 0	4 15 0	5 0 0	5 5 0
J. Linklater, Ganger ...	...	...	3 15 0	...
D. Wheeler, P.C. Attendant ...	...	...	3 10 0	...

TRAMWAYS COMMITTEE.

Mr Councillor R. S. H. Menzies was Chairman of the Tramways Committee until his resignation was received in September. Mr Councillor Thos. Cole was then appointed to the position, and held office until his death in October. Since the latter date Mr Councillor W. A. Scott has conducted the meetings of the Committee. Thirty meetings have been held during the period, the average attendance at each being six members.

ST. CLAIR CONVENIENCES.—To meet the urgent need of public conveniences at St. Clair, and to replace those previously in use in the St. Clair Pavilion, which was destroyed by fire on the 4th May, the Committee made arrangements for the erection of temporary premises on the property of the St. Clair Life-saving Club, upon conditions stated. The cost of erecting the necessary convenience was estimated at £60.

PURCHASE OF PROPERTY.—On the recommendation of the Committee, and to make provision for future extensions of the car depot, the Council on the 22nd March accepted an offer made on behalf of the Trustees of the Estate of the late

This leaves out of account the further increased charges against revenue of the cost of running the six additional cars, because the fact should not be overlooked that the new plant is calculated to deal only with the traffic that is now being dealt with by the existing plant, and presumably that, when the new plant is in full running, we shall be able to deal only with the same number of passengers as we are now carrying, the whole expenditure having been incurred to enable the department to give its patrons increased comfort in the matter of travel.

I might refer the Committee to my minute of the 19th June, 1914, on this subject for a few additional facts, and a comparison of the two reports would indicate that the only alteration in the previous figures is due to the fact that 20 per cent. has been added to the estimated cost of the work now contemplated.

The attention of the Committee is directed to the final clause in the Manager's minute, as follows:—

"I would also like to state that the present is a most inopportune time to proceed with the work as outlined in this report, and in my opinion such work should not be proceeded with unless it is thought absolutely necessary. Of course, if the Regulations are to be issued in the near future, in my opinion, notwithstanding the far-reaching effect they will have on the financial position of this service, the work must be proceeded with."

In this connection it should be noted that the estimated yearly standing charges show an increase from £2723 to £3535, consequent upon the difference in the estimated additional cost of the work at the present time, as compared with the figures used in June, 1914. Despite this fact I quite agree with the opinion expressed by the Tramways Manager that, if the Regulations are to be imposed, the expenditure must be undertaken forthwith. Seeing the somewhat serious nature of the matter, it is much to be regretted that some final pronouncement cannot be obtained from the Public Works Department regarding the gazetting or otherwise of the proposed Regulations. In the absence of such a pronouncement we are unable to say if it is imperative that

work should be expedited at a cost far exceeding the figure at which it could have been done under normal industrial conditions.

Following on the consideration given to the above report, the Committee's recommendation to Council on the 2nd June that a poll of the ratepayers be taken on a proposal to borrow £26,000 for giving effect to the suggestions was adopted, as also the Finance Committee's report on the proposal in the following terms:—

- (a) It is understood that the whole of the expenditure is required to retain the present earning power of the service consequent upon the Government's proposed regulations;
- (b) The annual standing charges of the department will be increased by £3535 on the estimated expenditure as submitted by the Tramways Committee, while there will be a further demand on the revenue to meet the cost of running the six additional cars;
- (c) The proposal of the Tramways Committee is that this estimated additional charge or the actual additional charge that is presumed to have been incurred must be made good by a revision of the charges, and the Finance Committee begs to endorse this proposal as the only method of providing the increased revenue open to the Council.
- (d) It will be necessary to formally pledge a special rate of $\frac{3}{4}$ d in the £ to cover interest and sinking fund on the proposed loan.

The poll of the ratepayers was taken on the 21st July, and resulted in the proposal being carried by the narrow margin of one vote, 312 votes being cast in favour of, and 311 votes against the proposal; and the money will be obtained from the Dunedin City Renewal Fund Commissioners when required.

Since then a contract for alterations to the carsheds has been let to Mr J. A. McKinnon, the contract price for which is £1024 15s; while alterations to the lay-out of track at the carsheds are being carried out by day labour. Tenders have also been invited for cars in three sections, but these do not close until May next.

TRAFFIC RETURNS.—The traffic returns of the tramways for the year 1915-16, as compared with the preceding year 1914-15, are set out in the Tramways Manager's Report.

GAS COMMITTEE.

Mr Councillor Wm. Begg was Chairman of the Gas Committee, which has held 23 meetings, the average attendance at each being five members.

The work of the Committee has consisted for the most part of administering the gas undertaking, which, despite the competition of electric light and power, shows a satisfactory return on the capital invested, although the revenue continues to decrease.

GASHOLDER.—The work of dismantling the large gas-holder which previously stood on the gasworks site in Anderson's Bay road, and of re-erecting it in Wilkie road, was completed, and the holder put into commission last year.

The cost of the holder stood in the books at £23,774 17s 10d, which was made up as follows:—

Estimated value in 1911 at time of re-valuation	£15,000	0	0
Cost of new foundations	1,504	9	5
Dismantling and re-erecting	7,270	8	5

But in order that the holder may stand at a fair valuation, the Gas Committee in March authorised a reduction of the above value to £15,000, by writing off the sum of £8774 17s 10d, being the cost of the new foundations, dismantling, and re-erection. The effect of this is that the annual charge for depreciation will be reduced by £87.

SLOT-METER INSTALLATIONS.—This branch of the department's business has again been instrumental in obtaining many new consumers. Since operations were commenced in 1913, 892 services have been installed in premises in different parts of the City. The total outlay to the department is shown to be £1928 7s 9d, but the conditions under which the gas is supplied are such that this amount is ultimately refunded to the Council. The revenue from slot-meter installations since the inception of the arrangement to the present time is £1189 7s; while the sum of £248 10s 3d has been refunded by consumers on account of the cost of installation.

GASWORKS RESULTS.—I am indebted to the Gas Engineer (Mr John Hungerford) for the following summary of the operations of the Gas Department for the past year:—

SUMMARY OF RESIDUALS.

FOR YEAR ENDED 31ST MARCH, 1916.

CARBONISING STATEMENT.

Coal Gas made	...	...	162,686,600 cub. ft.
Carburetted Water Gas made	...	...	2,071,000 cub. ft.
Total Gas made	...	...	164,757,600 cub. ft.
Coal Carbonised	...	...	12,456 tons 10 cwt.
Make per ton	...	...	13,063 cub. ft.
Calorific Value (B.T.U. Net)	...	...	507.
Gas Oil used	...	...	6,072 gallons.
Gallons of Oil per 1,000 cub. ft.	...	...	2.9
Gas accounted for	...	...	148,987,935 cub. ft.

STATEMENT OF RESIDUAL PRODUCTS.

Description	In Stores 31/3/15	Made during Year (Est)	Used in Manufacture	Sold during year	In Stores 31/3/16
Residuals					
Coke (Tons)	315	7272	2861	4125	501
Tar (Gallons)	84,822	141,029	Nil.	143,543	82,308

STATEMENT OF COALS.

Description	In Stores 31/3/15	Received during year	Carbonised during year	In Stores 31/3/16
Common	4051 tons	13349t 10c.	12,456t. 10c.	4944 tons
Cannel	280 tons	Nil.	Nil.	280 tons

During the year there have been seven hundred and fifty-two services connected (752)

Number of meters connected, 2,525.

Number of meters returned, 1,872.

The total extension to mains during the year was 114½ chains

FINANCE COMMITTEE.

Mr Councillor James Small was Chairman of the Finance Committee, which held 30 meetings, with an average attendance of six members at each.

HOSPITAL AND CHARITABLE AID LEVY.—In June the Committee reported to Council that it had received from the Otago Hospital and Charitable Aid Board the statutory statements showing the estimates of the Board for the coming year, together with the proposed apportionment of the estimated expenditure amongst the contributory local authorities. The estimated expenditure showed an advance of £16,826, as compared with the estimated expenditure for the previous year. The estimates included £8000 on capital

expenditure. The effect of this increase in the estimated expenditure was that the levy on the City Council would be increased from £6706 in 1914-15 to £9452 in 1915-16, or an advance of £2746. This represents slightly more than the product of a rate of one penny in the £ on the total rateable valuation of the City and brought the proposed demand of the Board up to the equivalent of a rate of 3.9d on our rateable valuation.

As a result of the above facts, the Council, on the recommendation of the Committee, resolved as follows:—

“That this Council views with considerable alarm the rapidly-growing expenditure of the Otago Hospital and Charitable Aid Board, as disclosed by the estimates submitted by the Board for the year ending 31st March, 1916, in which the estimated expenditure is set down as £65,634, as against £48,808 for the previous year, and desires to enter a most emphatic protest against the method of finance adopted by the Board in providing in a yearly levy so large a sum as £8000 for capital expenditure. In this opinion of this Council the Board should avail itself of its statutory powers to so arrange its finances that such items of expenditure on capital account, assuming the same to be imperative at the present juncture, would be spread over a number of years, and thus lighten the burden of ratepayers.”

At a later date the Board advised that the sum of £16,000 for capital expenditure, which it was proposed to provide by levy on contributory local authorities would be provided by a levy of £4000 only, with Government subsidy thereon, and the balance by way of loan to be arranged. The effect of this was a reduction in the levy to be paid by the Council from £9452 to £7762, a difference of £1690.

OCEAN BEACH DOMAIN BOARD ABSORPTION.—At the meeting of Council on the 8th March a deputation representing the Otago Expansion League, Amenities and Town-planning Society, and Dunedin Citizens' Garden Fete Society waited upon the Council and urged that steps be taken to vest the control of the Dunedin Ocean Beach Domain in the Council.

The matter was referred to the Finance Committee for report, and its subsequent recommendation that in future members of the City Council only be appointed to seats on the Board was adopted.

STAFF CHANGES.—The personnel of the Official Staff has been changed by the resignations of Miss E. Rollo (Town Clerk's Department), Mr H. H. Sykes (Municipal Department), Mr John Sim (Rangers, etc.), and Sanitary Inspector Day; and also by the death of Mr Chas. Wedge (Municipal Department).

The position vacated by Miss Rollo has been filled by the temporary appointment of Miss E. G. Allen, while Mr J. M. Fraser was appointed to the position held by Mr Sykes, Mr R. McMeeking being appointed ranger, etc., in place of Mr Sim. Inspector Day's resignation raised the question of the re-organisation of the Sanitary Department, which, when given effect to, resulted in the appointment of Mr E. J. King as Chief Sanitary Inspector, Mr J. E. S. Findon as Sanitary Inspector, and Mr G. Lawrie as Sanitary Inspector and Assistant to the Building Surveyor, Mr H. M. Wilkinson, Cadet at the gasworks, being transferred to a similar position in the Sanitary Department. Other appointments made were those of Mr A. L. Burk and Mr N. Bacon as Cadets in the Water and Gasworks Departments respectively, the former to fill the position previously held by Mr S. L. Carey, who was temporarily appointed to the position of Paymaster in the Town Hall, the latter to fill the vacancy caused by the transfer of Mr Wilkinson.

At the Public Library the resignations were those of Miss Turnbull and Miss Clothier. Miss Mowat was promoted to the Senior Assistant Grade, while Miss Gibbs and Miss McFarlane were appointed to the Junior Assistant Grade.

In addition to the above, several temporary appointments and internal arrangements have been necessary to meet the altered conditions due to certain members of the Official Staff proceeding on active service.

STAFF SALARIES.—The schedule of officers and salaries, as embraced in the Council's classification scheme, is set out hereunder—viz.:

UNCLASSIFIED LIST.

OFFICER AND CAPACITY.	Salary at date of Classification 1913	INCREMENTS.				Maximum Salary To be reviewed in Feb. 1918
	£	1914	1916	1916	1917	£
Alexander, C. F., Tramways Mgr.	£ 550
Crawford, W., Water Inspector	£ 275
Dean, A., Library Caretaker	£ 275
Donaldson, R. R., Insp. Nuisances	...	10	...	...	...	£ 120 and house
Duncan, D., City Valuer	12 10s.	...	...	£ 225
Edgar, G. I., Asst. Elec. Eng.	25	12 10s.	£ 350
Finden, J. E. S., Sanitary Insp.	10	...	£ 25 400
Foster, F., Yard Clerk	£ 200
Frye, C., Gas Inspector	12 10s.	...	12 10s.	£ 180
Gough, G. W., City Bldg. Surveyor	£ 250 and house
Henderson, H. H., City Treasurer	£ 325
Henderson, M. C., City Elect. Engr.	25	...	£ 500
Hill, Miss M., Typiste	...	10	10	10	10	£ 700
Hungerford, J., Gas Engineer	£ 100
King, E. J., Chief Sanitary Insp.	£ 500 and house
Lawrie, G., San. Insp. and Asst. to Bdg. Sur.	170	...	...	...	...	£ 250
Lewin, G. A., Town Clerk, etc.	50	...	10	£ 190
Low, J. D., Messenger, etc.	£ 800 and house
Matheson, Miss D., Typiste	75	10	10	5	...	£ 100
McCurdie, W. D. R., City Engineer	£ 650
McEwan, W. B., Librarian	25	...	25	£ 400
McLachlan, J., Chief Works Insp.	15	...	£ 290
McMeeking, Robt., Ranger, etc.	£ 160 and all'ce
Simon, Miss L., Typiste	£ 100
Snowball, W. D., Abattoir Mgr.	£ 200 and all'ce
Tannock, D., Supt. Reserves	...	25	...	...	...	£ 350 and house
Thomson, F. G., Sanitary Inspector	£ 225

FIRST GRADE.

Minimum, £220 ; Maximum, £280. Six increments
of £10.

NAME.	1913	1914	1915	1916	1917	1918
	£	£	£	£	£	£
H. Titchener ...	300	300	300	300	—	—
R. A. Johnston ...	265	275	280	280	—	—
A. Black ...	280	280	280	280	—	—
R. Quin ...	265	275	280	280	—	—
A. Mitchell ...	265	275	280	280	—	—
J. W. Timlin ...	235	245	255	265	275	280
D. Love ...	235	245	255	265	275	280
J. Long ...	235	245	255	265	275	280

SECOND GRADE.

Minimum, £160 ; Maximum, £220. Six increments
of £10.

NAME	1913	1914	1915	1916	1917	1918
	£	£	£	£	£	£
G. Gray ...	220	220	220	220	—	—
T. Webb ...	215	220	220	220	—	—
W. H. Mackenzie ...	215	220	220	220	—	—
F. C. Reynolds ...	200	210	220	220	—	—
R. C. T. Evans ...	200	210	220	220	—	—
A. Walker ...	200	210	220	220	—	—
A. Wadie ...	190	200	210	220	—	—
W. J. Low ...	170	180	190	200	210	220
S. Thompson ...	170	180	190	200	210	220
J. M. Fraser ...	170	180	190	200	210	220

THIRD GRADE.

Minimum, £50 ; Maximum, £150. Four increments
of £15 and four of £10.

NAME.	1913	1914	1915	1916	1917	1918
	£	£	£	£	£	£
G. A. Dempster ...	145	150	150	150	—	—
E. A. L. Grigg ...	120	130	140	150	—	—
S. L. Carey ...	105	115	125	135	145	150
H. E. Lyon ...	100	110	120	130	140	150
H. C. Jeffery ...	100	110	120	130	140	150
L. W. Swan ...	70	85	100	110	120	130
J. A. Aitcheson ...	55	85	100	110	120	130
C. S. James ...	55	70	85	100	110	120
S. A. C. Dowland ...	55	70	85	100	110	120
A. E. Austin ...	50	65	80	95	110	120
H. M. Wilkinson ...	—	50	65	80	95	110
A. L. Burk ...	—	—	—	50	65	80
N. Bacon ...	—	—	—	50	65	80

PUBLIC LIBRARY.

SENIOR ASSISTANT GRADE.

Minimum, £80; Maximum, £120. Three increments
of £10 and two of £5.

NAME.	1913	1914	1915	1916	1917	1918
	£	£	£	£	£	£
Miss Meggett ...	80	90	100	110	115	120
Miss Mowat ...	—	—	—	80	90	100

JUNIOR ASSISTANT GRADE.

Minimum £40; Maximum, £75; Two increments of £15
and one of £5.

NAME.	1913	1914	1915	1916	1917	1918
	£	£	£	£	£	£
Miss Bryant ...	60	70	75	75	—	—
Miss Morrison ...	50	65	75	75	—	—
Miss Ramsay ...	40	55	70	75	—	—
Miss Gibbs ...	—	—	—	55	70	75
Miss McFarlane ...	—	—	—	55	70	75

GOVERNMENT RECRUITING SCHEME.

On the 23rd February Council considered a request from the Government Recruiting Board, Wellington, to undertake the work entailed by a new scheme for securing voluntary recruits for the New Zealand Expeditionary Force now on active service. The Hon. Jas. Allen (Minister of Defence in the National Government) attended the Council meeting, and verbally explained the scheme, which took as its basis the recent National Register, to some length. The Council, as a result, unanimously adopted the following resolution:—

“That this Council views with hearty approval the efforts now being put forward by the Government with the object of obtaining the services in adequate numbers of those of military age and fitness to represent this Dominion in the fighting line. Moreover, it is fully recognised that the obligations to keep up a steady stream of reinforcements to support those of our citizens who have already so nobly responded to the Empire's call, is our bounden duty, and this Council extends its hearty sympathy and co-operation to the scheme now formulated by the Government to the intent that the full resources of the Dominion should be made available to bring the war to an

early and victorious conclusion. Further, that should the proposed scheme not provide for full obligations to the Empire, this Council desires to assure the Government of its hearty support to any more drastic means that should be considered necessary."

To give effect to the scheme, His Worship the Mayor and Councillors Sinclair, Taverner, Wright, McMillan, Henderson, J. Whyte, and Hastie were appointed to confer with the Recruiting Committee of the Otago Patriotic and General Welfare Association. A meeting was held on the 25th February, when arrangements were forthwith made for the preparation of the sectional rolls of the district. After the preparation of the rolls a subsequent meeting was held, when it was resolved that an Executive Committee consisting of six members of the Council, with a like number from the Recruiting Committee and the City members of both Houses of Parliament, be set up to complete the scheme.

His Worship the Mayor and Councillors Wright, Hayward, H. H. S. White, Taverner, and Sincock were appointed to represent the Council on this body, which took as its name the "Dunedin Recruiting Executive." His Worship the Mayor was elected President, while Mr Councillor H. F. Wright undertook to continue the duties of Hon. Secretary and Organiser.

The members of the Executive put in some very hard work; the City was divided into districts, and efforts to compile a complete roll of those of military age within the whole City was eminently successful. Under date of the 1st May, the Hon. Secretary and Organiser submitted a concise report as to the results obtained by the scheme, in the following terms:—

I beg to submit the following report on the working and results of the scheme under the Dunedin Recruiting Executive to date.

The rolls of Dunedin City, Mornington, Maori Hill, and the Anderson's Bay portion of the Peninsula contained about 10,000 names.

Transfers were received of 135 names from the Taieri roll, and 13 from various other sources throughout New Zealand

Transfers from Dunedin Rolls were sent out as under:-

Eight hundred and fifty names wrongly on Dunedin roll to mayors and chairmen of counties all over the Dominion. Two hundred and eight men who had left Dunedin since the compilation of the National Register were transferred to 28 local bodies. The same authorities were advised of the names of 21 men not on the Dunedin roll, who had removed to their districts.

The Recruiting Board, Wellington, and local Group Office, were furnished with copies of all transfers. The Recruiting Board will also be supplied with a list of persons supposedly of military age, whose names do not appear on the Dunedin roll, and who have not filled in Recruiting Report Cards.

One hundred and forty names not on the Dunedin roll were added to the local roll. Four hundred and ten men not on the roll, and giving Dunedin addresses, registered for examination at the Octagon and Fountain booths. A further number giving country and adjacent borough addresses also registered at these booths.

Circulars sent out were responsible for getting 75 per cent. of the persons on the roll to come to the rooms of the Sectional Committees and fill in their Recruiting Report Cards. Of the balance, 20 per cent. has been reached during the past fortnight by consistent personal canvassing. The remaining 5 per cent. are being actively sought after. It was hoped that all cards would have been in previous to this meeting. Unfortunately delays occasioned by the Easter holidays and other causes have prevented a few of the Committees from completing their task. The Committees who are behind are urged to see that the few remaining cards reach the Town Hall not later than Friday morning, 5th instant.

Attention has also been given by Committees and canvassers to the men who are not on the roll. A special close canvass was made of all large boarding-houses and hotels of a class where the floating population usually foregathers.

A large number of young single men who have filled in their Report Cards have refused to enlist, giving no reason for their refusal. A further number has also set themselves down as "Unfit." It may be necessary to request those men, especially where they are single, to submit themselves for examination.

The canvassing and general conduct of the campaign has been carried out with practically no friction. The bulk of those concerned being only too ready to assist the Committees.

A very limited number of would-be superior persons have seen fit to refuse information; but their defection is hardly worth remarking on except for their so-called standing in the community, and the fact that some occupy official positions in the Public Service.

A large number of circulars were returned through the Post Office owing to the addressees having left, and their present location being unobtainable. A considerable number of names on the roll were set down with wrong addresses, or street numbers that did not exist. This gave a great deal of trouble with but little result. It is therefore only fair to assume that the addresses given in the National Register were in those cases designedly faulty.

From various sources of information it is quite evident that there has been a considerable exodus to the country during the past few months of men of military age. Numbers of them, who usually look for work in the City, can be found on farms, flax-mills, sawmills, threshing mills, etc., throughout the rural districts.

Some 340 men who signed Registration Cards have so far failed to come up for examination, though notified to do so. The military authorities may require further assistance in looking after those men.

The actual net result of the campaign is not yet available. A considerable number of men who have signed Registration Cards (and in addition to those mentioned above) have yet to be medically examined.

When the balance of Recruiting Report Cards are received, returns can be made of those enrolling, those refusing to enlist, unfits, etc., if thought desirable. This information, however, is in the hands of the Government from the cards sent in.

The Executive should note, and make representations in the proper quarter regarding the undue drain on Dunedin to make up shortages in the Invercargill, Milton, and Oamaru groups of the Otago Military District. Dunedin has practically never been short of its quota. Thus, if we take the 14th Reinforcements, though Dunedin group left six men short, during the month 31 men from Dunedin were sent on, thereby providing a surplus of 25 men. The 15th Reinforcements left with four men in excess from Dunedin, and during the month a further 25 men were sent. Therefore, during the last two months Dunedin has contributed 54 men in excess to make up shortages as above. A continuance of this unfair leaning on Dunedin can only have the inevitable result of making Dunedin short sooner or later. A strong effort should be made to induce Invercargill, Milton, and Oamaru groups to provide their proper proportion on a population basis. From press reports indications point that the 16th Reinforcements will occupy the same relative position—possibly worse if Dunedin is to supply the still existing shortages in the 14th and 15th Reinforcements over the rest of Otago.

In conclusion, I desire to gratefully acknowledge the great assistance that we have received from the officers of the local Defence Department. Their aid was sought and cheerfully rendered in many instances, and was largely instrumental in lessening the work entailed by the new scheme.

A copy of this report was forwarded to the Recruiting Board, and in due course the following reply was received—viz.:

Memorandum for His Worship the Mayor, Dunedin.

Your letter of the 2nd instant, forwarding the report of the work of the Dunedin Recruiting Executive in connection with the new recruiting scheme has been duly laid before the Board. I have read the document with much interest and pleasure. It constitutes a splendid record of work loyally and cheerfully undertaken, and most faithfully and successfully carried to completion.

The Recruiting Board is very greatly indebted to your councillors, to the members of your Committee, and to yourself for the valuable services rendered to the State in this time of crisis. Please accept yourself, and convey to your fellow workers the obligations of the Board and its appreciation of the work done. Your City has shown its patriotism in the most practical way, and its achievement in the number of recruits secured, and in the perfecting of the roll of eligible men is one to be proud of. Your work has also been most helpful, inasmuch as it has demonstrated so conclusively to other local bodies throughout the Dominion the value of the Board's scheme if actively and sympathetically taken in hand.

The Recruiting Board sincerely hopes that your Executive will not disband for the present, but will remain in office as at present constituted, and so be available to assist the Board in connection with recruiting matters that may require its attention in the immediate future. The Board is of opinion that its assistance may be particularly valuable to the local defence authorities in connection with the men who signed Registration Cards, but who have so far failed to respond to the request to come up for medical examination.

Again thanking you and the members of your Committee most sincerely,

W. F. MASSEY, Chairman.

NOTABLE EVENTS.

28/4/15.—Mayoral Election: J. J. Clark, 6862; S. S. Myers, 5251; J. J. Marlow, 3940.

5/5/15.—Mr J. J. Clark installed as Mayor.

- 11/5/15.—Mr Mark Cohen, editor Evening Star, celebrated his fiftieth year of journalism. Citizens met in the Council Chamber. The Mayor presided, and congratulated Mr Cohen on the event, and presented him with a substantial cheque on behalf of the citizens.
- 29/5/15.—Departure of Otago men for Earl of Liverpool's Own Regiment.
- 8/6/15.—Foundation stone of St. Paul's Cathedral laid by His Lordship the Primate (Bishop Nevill).
- 12/6/15.—Departure of 7th Reinforcements, N.Z. Expeditionary Force.
- 19/7/15.—Return by Willochra of first wounded men from Gallipoli.
- 1/8/15.—Jubilee of civic government in Dunedin, celebrated by service at First Church on this date.
- 2/8/15.—Meeting of citizens in Garrison Hall in connection with civic jubilee.
- 4/8/15.—Reception by His Worship the Mayor in Art Gallery Hall in connection with civic jubilee.
- 4/8/15.—Anniversary of Declaration of War with Germany. Public meeting held in Garrison Hall.
- 24/8/15.—Departure of 8th Reinforcements.
- 25/8/15.—Queen Carnival for Wounded Soldiers' Fund closed. The amount realised was £126,134.
- 22/9/15.—Welcome to returned soldiers ex Warrimoo.
- 7/10/15.—Soldiers' Club opened at Young Men's Christian Association building.
- 19/10/15.—Otago Bible Society celebrated its jubilee.
- 19/10/15.—Departure of 9th Reinforcements.
- 22/10/15.—Anzac Soldiers' Club in Moray Place opened.
- 27/10/15.—Welcome to returned soldiers ex Tofua.
- 30/10/15.—Welcome to returned soldiers ex Willochra.
- 18/11/15.—Departure of 10th Reinforcements.
- 16/12/15.—Departure of 11th Reinforcements.
- 26/12/15.—Welcome to returned soldiers ex Tahiti, at Port Chalmers.
- 5/1/16.—Welcome to returned soldiers ex hospital ship Maheno. His Excellency the Governor present.
- 15/1/16.—Departure of 12th Reinforcements.
- 30/1/16.—Welcome to returned soldiers ex Willochra.
- 10/2/16.—Departure of 13th Reinforcements.
- 9/3/16.—Departure of 14th Reinforcements.

- 15/3/16.—Welcome to returned soldiers ex Tahiti.
 21/3/16.—Government Recruiting campaign launched by City Council.
 30/3/16.—Welcome to all returned men. Sir Joseph Ward present.
 6/4/16.—Departure of 15th Reinforcements.
 15/4/16.—Welcome at Port Chalmers to returned men ex hospital ship Maheno.
 25/4/16.—Anzac Day anniversary and celebrations.

CONCLUSION.

In presenting this brief review of the year's operations, I wish again to thank His Worship the Mayor and members of the Council for the kindly consideration extended to the Staff during the year. Speaking for myself, I have every reason to be satisfied with the generous way the recommendations I have been called upon to make have been treated by the respective Committees. I fully realise that the duty of an executive official is to present his views and advice to the Council, and that that constitutes the limit of his concern with the matter.

Whether the Committee concerned, either for reasons that would appeal less forcibly to an executive officer than to an elected representative, or from a pure matter of policy, should see fit not to endorse the recommendation, is a consideration that should not, in my opinion, in any degree concern the official. I have, therefore, thought it advisable, whilst thanking the members of the Council for the generous consideration extended to any recommendations I have felt obliged to make, to avail myself of this opportunity of putting on record what should, in my opinion, mark the limit of the official's concern with any question upon which a Committee or the Council is called upon to adjudicate. A clear and definite understanding on this point may hope to aid in the continuation of that confidence between councillor and official which has prevailed in the past, and which tends in a marked degree not only to harmony, but to efficiency in the administration of the City's affairs.

I desire also to thank the members of the Staff for their ready co-operation and loyal support during the year. This reference has especial application to the heads of departments and also to my own immediate staff, and the reference on this occasion is particularly fitting from the fact that, owing to my enforced absence from duty, due to ill-health, an extra strain was put upon the energy of most of the Staff.

In this latter connection my warmest thanks are due to His Worship the Mayor (Mr J. J. Clark), whose ample knowledge of the internal affairs of the Corporation, added to the fortunate circumstances that Mr Clark was able to devote practically the whole of his time to the supervision of the City's affairs, brought me a good deal of consolation during the period of enforced absence. An especial word of thanks is also due to the Chief Clerk, Mr R. A. Johnston, who, under the direction of His Worship the Mayor, took up the administrative duties of the Council.

The year has been a fairly busy one, despite the fact that no work of special magnitude has been undertaken, and the duties of the Town Clerk's Department have been enlarged by the addition of the administration of the Otago Patriotic and General Welfare Association, the Town Clerk being honorary secretary and treasurer of that body. In this connection much of the routine work has fallen to Messrs F. C. Reynolds, R. C. T. Evans, and J. D. Low, whose valuable assistance I take this opportunity of acknowledging.

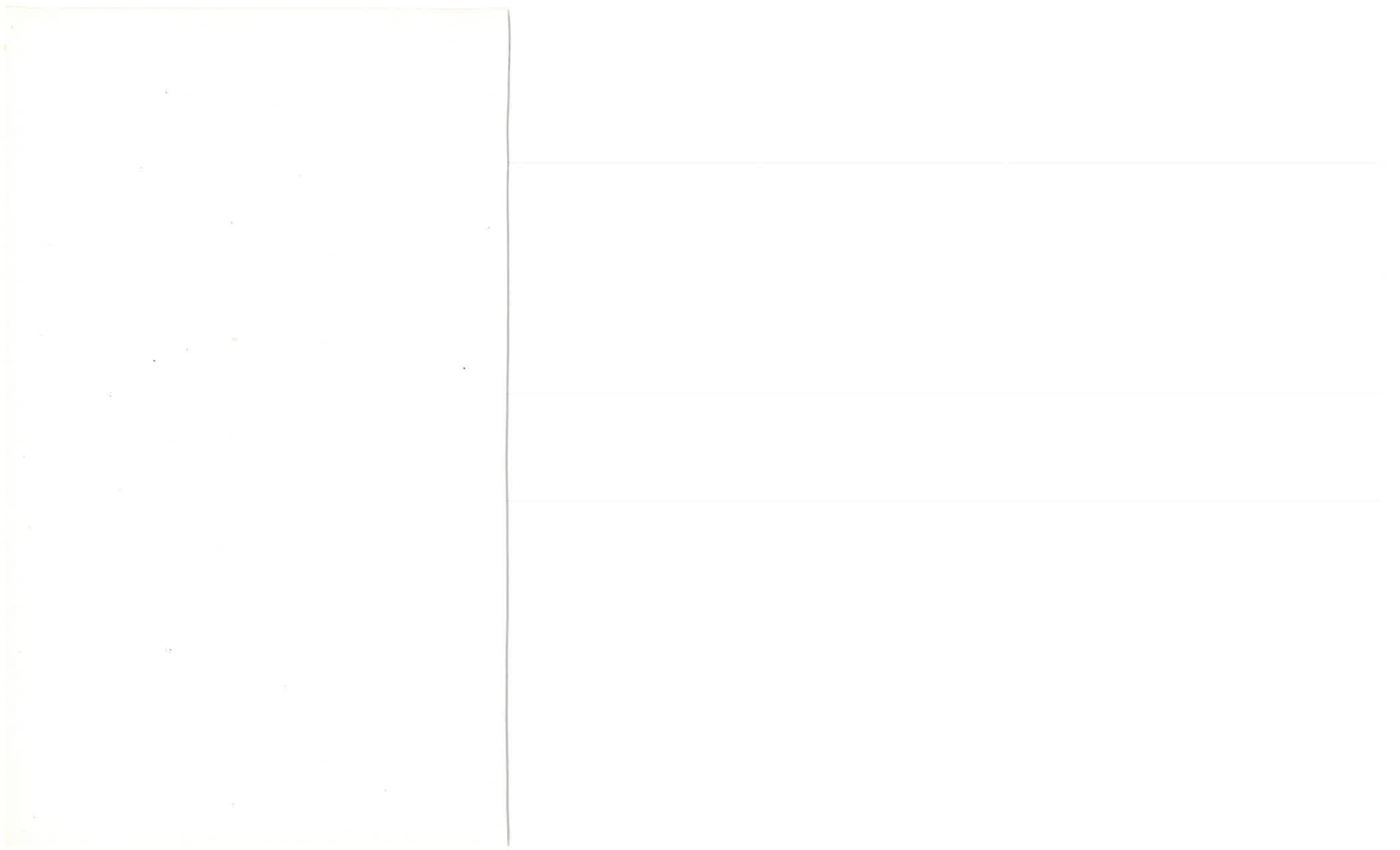
I have the honour to be,

Sir,

Your obedient servant,

G. A. Lewin

Town Clerk.



Balance Sheets
AND
Profit & Loss Statements

FOR YEAR
ENDED 31st MARCH, 1916.



BY
H. H. HENDERSON, F.I.A.N.Z.,
CITY TREASURER.

City Treasury,

Town Hall, Dunedin.

18th April, 1916.

The Town Clerk, Dunedin.

Sir,—I have the honour to submit my report of the financial operations of the Corporation for the year ended 31st March, 1916, together with Statement of Revenue and Expenditure in the General Account, and also Profit and Loss Accounts and Balance Sheets of the Trading Departments.

In the General Account the total revenue amounts to £88,560, including the transfer of £14,638 from the Trading Departments, while the total ordinary expenditure was £91,649, or an excess expenditure of £3089 for the year. This amount is accounted for by the purchase of property at Cargill's Corner, which was not allowed for in the Estimates. Our overdraft is further burdened in the meantime by the repayment of the Abattoir Loan of £5700, which matured during the year, and also by the amounts standing to the debit of the Bank Accounts at 31st March, of the recently-amalgamated boroughs, as follows:—

Mornington	...	...	...	£6,358.
Maori Hill	...	...	...	1,156.
Anderson Bay	...	...	...	739.

Making a total of £8,253

Our bank overdraft has therefore been increased during the year by £17,042. The amount due to the bank by the General Account, plus the amount of temporary loans, is £167,056.

The expenditure on Public Works of £23,598 includes stock in hand, which has increased by approximately £1000 during the year, and is not shown in the City Engineer's figures. The amount standing against Tanna Hill (£504) represents the balance of expenditure after crediting the material taken away and used on the streets or Leith wall.

Trading Departments.

Compared with the previous year, the net results of the Trading Departments are as follows:—

Department.		Net Profit, 1914-15.			Net Profit, 1915-16.			Decrease or Increase.			
Gas	...	£5,919	18	6	£5,238	3	2	Dec.	£681	15	4
Water	...	16,162	14	0	16,858	8	7	Inc.	695	14	7
Tramways		5,255	12	0	4,840	5	4	Dec.	415	6	8
Electric		3,860	0	7	11,494	17	10	Inc.	7,634	17	3

£31,198 5 1 £38,431 14 11 Inc. £7,233 9 10

The year's profits may, therefore, be considered very satisfactory, the result of the Electric Department especially being much in excess of estimates.

Gas Department.

The net profit of the Gas Department is £5238, as against £5919 for the previous year, or a decrease of £681. The revenue has decreased by £1195, as compared with the previous year, although there has been an increase of 609 in the number of consumers. The average consumption per consumer has been decreasing for several years past. For the year just ended it is £3 16s 9d for 8587 consumers, as against £4 5s 4d for the previous year; whereas, for 1909 the average was £7 14s 6d. These figures exhibit in a striking manner the effect the Electric Department has had on the Gas Department.

Nearly all our new lighting customers are small consumers, and the most profitable field for expansion is in heating and cooking, and it appears specially necessary to push this branch unless the department is to fall behind.

For the purpose of analysing the working expenses and comparing them with those of the previous year, I have calculated the respective items on a basis of the cost per thousand feet of gas sold. On the revenue side we ascertain that the gross revenue per thousand feet sold is 75.14 pence, made up of 60.56 pence for gas, 13.44 pence for residuals, and 1.14 pence for sundries. The expenditure side shows that the cost of manufacturing the gas is 35.7 pence per thousand feet, as against 37.13 pence for the previous year. On the other hand the cost of distribution has increased from 3.4 pence to 4.03 pence. This is due to the fact that we have to attend to a much larger number of consumers while the average consumption is smaller.

The whole working expenses have amounted to 47.55 pence per thousand, as against 48.11 pence for the previous year. We thus see that, although the output has been lessened, it has cost less to produce and distribute a thousand feet of gas than it did last year.

Interest has increased by £294, consequent upon extensions, and absorbs 8.68 pence per thousand feet, as against 8 pence last year; 10.46 pence is set aside for renewal fund and depreciation, and the profit is represented by 8.45 pence, as against 9.3 pence last year.

Five years ago the manufacturing charges were equivalent to 38.7 pence per thousand feet. Owing to the recent extensions and improvements this charge is now reduced to 35.7 pence, or a saving of 3 pence per thousand feet. These extensions, however, have entailed considerable capital expenditure, with a consequent increase in interest, which now absorbs 8.68 pence per thousand feet, as against 6 pence five years ago. We thus see that we are deriving little financial benefit from the extensions because of the fact that our output is not increasing, and it therefore behoves the department, especially in view of the increasing price of coal, to find means of increasing the consumption of gas.

The cost of dismantling and re-erecting the holder has been written off, and charged against Profit and Loss Appropriation Account. The amount of capital expenditure for extensions, etc., during the year was £10,197, and the bank overdraft has been increased by £5314.

Water Department.

The figures of the Water Department indicate a steady progress, and call for no special comment. The revenue has increased by £1613, and the net profit amounts to £16,858, being an increase of £695. The items of expenditure show little variation.

The amount spent on extensions during the year was £10,662, principally on Sullivan Dam, and this, together with the contribution to the Municipal Department of £5768 and £3282 for sinking fund and repayment of loans, necessitated an increase in the bank overdraft of £2461.

Tramways Department.

There is very little variation in the figures of the Tramways Department for the year. The revenue shows an increase of £262, while the working expenses have decreased by £28. Renewals, depreciation, and interest all show reductions consequent chiefly on the loss of the St. Clair Pavilion, and the receipt of the insurance money. The only item which has been materially increased is war pay, which is £1514 for the year, as against £356 for the previous year. This has had the effect of reducing the profits for the year, the net profit being £4840, as against £5255 for the previous year. For the purpose of comparison with previous years, and also with the figures of other cities, the average cost per car mile is shown against each item of expenditure. The revenue per car mile has increased from 14.24 pence to 14.53 pence, which is partly due to the reduction in car mileage. The net profit works out at .91 pence per car mile, as against .97 pence for the previous year.

Electric Department.

The Electric Department has improved to a material extent during the year. The revenue has increased by £7435, while the working expenses have decreased by £509, notwithstanding the increase in war pay of £555.

The amount allowed for depreciation and renewal fund has been increased by £869, while interest is reduced by £560. The result is an increase in the net profit of £7635, the profit for the year being £11,494, as against £3860 for the previous year. In the past the department has had to bear heavy and increasing charges for interest, renewals, and depreciation before it was deriving the full benefit of its installations. These charges have now about reached their maximum, until further extensions are required, and in the meantime any increases in revenue should mean somewhat similar increases in the profits.

From a purely cash point of view the year has considerably exceeded our estimates. The department has expended £6641 on extensions, has paid off the overdraft on Loan Account of £4752, has put aside £3146 for sinking fund, has contributed £4790 to the Municipal Department in relief of rates (being equal to a rate of 2d in the £), and finishes the year with an increased credit balance at the bank of £792 above what it started the year with. These figures amount to £20,122, and this means that after paying all working expenses and interest, and besides setting aside £10,800 for renewal fund the department had cash to the extent of over

£20,000 available for the above purposes as the result of the year's working. These funds were provided by the net profit of £11,495, plus depreciation written off of £4030, and a reduction in sundry debtors, etc., of £4597, making a total of £20,122. The reduction in sundry debtors is due to the accounts now being payable within 10 days after meters are read, instead of about a month, which was previously allowed.

General.

Assuming that the Gas, Tramways, and Electric Departments were public companies with capital equivalent to the amount of their respective loans, the profits we have shown would be increased by the amount we have paid for interest on debentures, and would be as follows:—

Gas	... ..	£9,558, equal to 8.8% on capital
Tramways	... ..	17,530, equal to 5.8% on capital
Electric	... ..	32,274, equal to 6.7% on capital

making a total of £59,362, on a capital of £887,200, or an average profit of 6.7%.

The renewal funds for all departments now amount to £170,468, which is an increase for the year of £29,862. The withdrawals for renewals have been £6810, but this has been more than counterbalanced by the interest earned by the fund, which was £7185 for the year.

During the year £27,501 has been spent on extensions, £14,638 has been contributed to the Municipal Department, and £9968 paid out for sinking funds. This has all been provided for out of the year's revenue, with the exception of £2011, which is the amount by which the combined bank overdrafts of the Trading Departments have increased during the year.

Amalgamating the figures of the four departments, we find:—

The total revenue was	... ..	£232,694	1	8
Of which working expenses absorbed	... ..	102,329	17	8=44%

Leaving a difference of	... ..	£130,364	4	0
The payment for interest was	... ..	51,729	18	2=22.3%

Leaving	... ..	£78,634	5	10
The amount reserved for renewals and depreciation was	40,202	10	11=17.3%

Leaving a net profit of	£38,431	14	11=16.4%
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GENERAL ACCOUNT

For Year ended 31st March, 1916.

REVENUE.			EXPENDITURE.		
	£	s. d.	£	s. d.	£ s. d.
RATES—					
General	50,889	4 5	Public Works	23,598	1 11
Special (Arrears)	4 16 3		Anderson's Bay Bridge	363	4 0
Ten Per Cent. Penalty	238 15 4		Street Lighting	7,996	0 10
			Land Purchase and Street Widening	4,651	5 0
RENT—			Tanna Hill	504	10 9
General	10,204	11 9			37,113 2 6
King Edward Street	360	2 0	Tepid Baths Maintenance... ..	1,591	11 2
			" " Interest	623	10 5
Licenses	5,496	1 0	St. Clair Baths Maintenance	97	5 10
Government Subsidy	450	0 0			
Fees and Fines	179	6 0	SANITARY—		
			House Refuse	3,136	16 11
SANITARY—			Nightsoil	1,384	14 11
Conveniences	375	5 5	Stables and Plant	1,077	16 2
Sanitary Fees and Rates	1,200	15 2	Inspection	561	4 2
Extra Services	19	9 0	Conveniences	964	18 11
					7,125 11 1
Drainage Board—A/c. Sewers	850	0 0	RESERVES—		
Drainage Board—Commission	256	16 3	Gardens	1,596	15 3
Dunedin Fire Board	98	5 3	Town Belt and Recreation Reserves	2,618	15 1
Sth. Dunedin Town Hall Hire	53	17 5	Cemeteries	1,291	9 3
N.E. Valley Town Hall Hire	64	2 6			
Weighbridges	312	1 6	PUBLIC LIBRARY—		
Andrews Bequest	288	15 1	Books and Maintenance		5,506 19 7
Town Belt Grazing Rights, etc.	64	17 0			2,303 0 8
Sundry Revenue	73	10 0			
			MAINTENANCE—		
Moray Place Baths	796	11 3	Town Hall	615	19 7
Abattoir Fees—Surplus	255	16 7	Sth. Dunedin Town Hall	107	13 5
Cemeteries	1,389	13 3	N.E. Valley Town Hall... ..	31	18 7
			Morgue	63	4 1
TRANSFERS—			Weighbridges	313	9 8
Water Department	5,768	0 0	King Edward Street Properties	165	0 2
Gas Department	1,080	0 0	Public Clocks	227	5 3
Tramways Department	3,000	0 0	Sundry Properties	102	7 0
Electric Department	4,790	0 0			1,626 17 9
			INTEREST—		
			Loans	7,355	5 0
Temporary Loans	5,386	2 0	Deposits and Overdraft	6,552	14 8
Refund Loan Expenditure	4,369	5 8	Bank Charges	145	12 6
Contractors' Deposits	394	10 6	Repayment Roslyn Loans	100	0 0
			Sinking Funds	2,059	0 0
Bank Balance, 31st March, 1916					16,212 12 2
			CONTRIBUTIONS—		
			Hospital and C.A. Board	7,762	1 7
			Fire Board	3,400	0 0
			Ocean Beach Domain Bd.	300	0 11
			Technical School	200	0 0
			Bands	100	0 0
			Art Gallery	75	0 0
			Museum and Hocken Library	75	0 0
			Patriotic Association	71	19 8
			Green Island Borough	50	0 0
			Roslyn Institute	10	0 0
					12,044 2 2
MEMO:—			MISCELLANEOUS—		
Temporary Loans at 31st March, 1916: £49,520.			Salaries	2,846	19 5
			Valuation	559	18 11
			Advertising, Printing, etc.	648	17 0
			Dog Registration	249	9 8
			Vehicle Licenses	148	10 4
			Licensing Expenses	51	13 6
			Election Expenses	522	4 5
			Law Costs	234	7 0
			Insurance	327	9 9
			Valuation Fees—Leases	218	11 1
			Rates Refunded... ..	171	13 0
			Unauthorised Expenditure	373	2 1
			Andrews Bequest	181	5 4
			War Pay	428	11 5
			Sundry	441	19 7
					7,404 12 6
			Abattoir Loan Repaid	5,700	0 0
			Maori Hill Loan A/c. (to be refunded)	45	11 10
			Public Works Loan A/c. (to be refunded)	677	5 0
					6,422 16 10
			Balance, 31st March, 1915		98,072 2 8
					109,922 5 7
					<u>£207,994 8 3</u>

GAS DEPARTMENT.

PROFIT AND LOSS ACCOUNT for Year ended 31st March, 1916.

FOR PREVIOUS YEAR.				Pence per 1000ft.			FOR PREVIOUS YEAR.				Pence per 1000ft.								
Pence per 1000ft.	AMOUNT.						Pence per 1000ft.	£	s.	d.				Pence per 1000ft.	AMOUNT.				
	£	s.	d.												£	s.	d.		
25.49	16,222	1	6	To MANUFACTURE—	24.67	15,312	6	11	60.43	{	34,014	6	6	By Gas Revenue ...	60.56	32,967	19	1	
0.34	216	10	4	Coal and Shale	0.27	170	1	9			4,446	19	9	„ Street Lighting	13.44	4,628	1	6	
5.34	3,401	4	4	Water and Oil ...	5.24	3,254	16	9			9,013	14	11	„ Residual Products	1.14	8,347	10	4	
0.50	318	7	2	Carbonisation ...	0.32	198	8	5			370	6	10	„ Sundries		706	13	2	
3.84	2,444	4	3	Purification ...	3.56	2,209	8	0											
1.17	745	0	0	Maintenance ...	1.21	755	0	0											
0.45	286	9	1	Salaries ...	0.43	267	9	7											
				Water Gas ...															
37.13	23,633	16	8		35.70						22,167	11	5						
3.22	2,051	14	5	To DISTRIBUTION—	3.84	2,383	4	7											
0.18	112	10	0	Wages and Repairs ...	0.19	118	15	0											
				Salaries ...					2,501	19	7								
3.40	2,164	4	5		4.03														
2.94	1,872	6	4	To STREET LIGHTING	3.02				1,873	3	2								
2.03	1,293	1	8	To GENERAL—	2.03	1,265	13	10											
1.27	802	2	0	Salaries ...	1.31	814	17	0											
				Rent and Rates ...															
0.38	242	1	6	Printing, Stationery, and	0.29	178	5	3											
0.25	161	12	11	Law Costs ...	0.29	177	5	1											
0.11	71	1	8	Insurance ...	0.14	86	5	0											
0.60	381	18	4	Bank Charges ...	0.74	459	16	1											
				Sundries ...					2,982	2	3								
4.64	2,951	18	1		4.80														
48.11	30,622	5	6	Total Working Expenses	47.55				29,524	16	5								
8.00	5,096	18	6		8.68				5,390	18	2								
2.38	1,516	10	6	To INTEREST ...	2.61				1,619	0	0								
7.37	4,689	15	0	DEPRECIATION	7.85				4,877	6	4								
9.30	5,919	18	6	RENEWAL FUND	8.45				5,238	3	2								
				NET PROFIT															
75.16	£47,845	8	0		75.14	£46,650	4	1	75.16	£47,845	8	0		75.14		£46,650	4	1	

PROFIT AND LOSS APPROPRIATION ACCOUNT.

To Transfer to Municipal Dept.	...	...	...	£	s.	d.	By Balance, 31st March, 1915	...	...	...	...	£	s.	d.
„ Amount written off No. 3 Holder	..	..	..	1,080	0	0	„ Net Profit for year	...	...	...	...	48,856	7	6
„ Balance, 31st March, 1916	...	...	...	8,773	9	10						5,238	3	2
				44,241	0	10								
				£54,094	10	8						£54,094	10	8

WATER DEPARTMENT.

PROFIT AND LOSS ACCOUNT for Year ended 31st March, 1916.

FOR PREVIOUS YEAR.			% of Rev.				FOR PREVIOUS YEAR.			% of Rev.											
% of Rev.	AMOUNT.						% of Rev.	AMOUNT.													
	£	s.	d.		£	s.	d.	£	s.	d.		£	s.	d.	£	s.	d.				
3.0	1,285	9	8	To GENERAL EXPENSES— Salaries Audit Fees Law Costs Rent and Rates Heating and Lighting Insurance, Fire Do. Accident and Fidelity Printing, Stationery, and Advertising Bank Charges Preparation of Plans Sundry Charges	3.0	1,301	17	0	71.6 27.8 0.6	29,806	13	6	By WATER REVENUE— Water Rates Special Supplies... .. Sundries	72.0 27.1 .9	31,203	3	8	42,939 353	11	1	
	27	6	8		29	0	0	11,602		9	1										
	20	7	2		25	12	5														
	670	9	11		672	1	9	41,409		2	7										
	26	2	0		26	10	11														
	30	2	5		34	17	8	270		11	1										
4.3	171	7	2	4.3	152	4	6	3,139 16 831	4 0 0 8	102 201 250 302	14 7 0 18	9 3 0 10	100.0	£41,679	13	8	100.0	£43,293	6	8	
	102	14	9		101	12	6														
	201	7	3		251	19	4														
	250	0	0		247	11	8														
	302	18	10		295	16	9														
	3,088	5	10																		
0.9	378	15	7	1.9				5,159	9	8	12,375	7	10	29.0	12,414	9	6	29.0	12,562	3	3
13.2	1,616	3	6	To MAINTENANCE— City Waterworks Silverstream do. Ross Creek Waitati-Leith Maori Hill Water Reserves	11.9	2,001	2	9	2,453 2,274	0 0 0	49 19 11 294	8 9 11 14	5	39.0	16,162	14	0	100.0	£41,679	13	8
	1,978	2	4		1,763	17	5														
	826	1	6		371	14	8														
	749	8	9		339	18	4														
	49	19	11		72	16	10														
	294	14	5		609	19	8														
	5,514	10	5																		
29.7	12,375	7	10	To INTEREST ON LOANS Interest on Bank Draft... ..	29.0	12,414	9	6	12,562 2,453	3 0	4.4 4.4 1.2 38.9	0 0 0 0	29.0	16,162	14	0	100.0	£41,679	13	8	
4.4	1,813	0	0	To Renewals	5.7																
4.4	1,847	0	0	„ Depreciation	5.2																
1.2	500	0	0	Motor Waggon																	
38.9	16,162	14	0	Profit for Year	39.0																
100.0	£41,679	13	8		100.0																
																			</		

PROFIT AND LOSS APPROPRIATION ACCOUNT.

To Transfer to Municipal Department	£	s. d.	By Balance, 1st April, 1915	£	s. d.
„ Balance as at 31st March, 1916	5,768	0 0	„ Net Profit for year	43,728	3 3
	54,818	11 10		16,858	8 7
	£60,586	11 10		£60,586	11 10

GAS DEPARTMENT.

BALANCE SHEET, as at 31st MARCH, 1916.

LIABILITIES.						ASSETS.							
	£	s.	d.	£	s.	d.		£	s.	d.	£	s.	d.
Debenture Holders				108,000	0	0	Plant	73,293	12	11			
Bank of New Zealand Current Account				32,973	4	11	Buildings	16,231	9	1			
Gas Consumers' Deposits ...	1,312	0	0				Mains	48,653	13	11			
Sundry Creditors	1,022	2	0				Services	13,221	17	1			
Sundries	142	4	1				Meters	13,429	13	6			
Interest Outstanding	112	0	0				Land	8,705	0	0			
Interest Accrued	1,691	0	0								173,535	6	6
				4,279	6	1	Stock				14,846	4	8
Renewal Fund Account ...	29,972	8	1				Outstanding Accounts ...	1,323	1	0			
Sinking Fund Increment ...	794	14	4				Sundry Debtors	1,647	1	0			
Depreciation	8,450	10	6				St. Kilda Borough Street Lamps	784	16	11			
				39,217	12	11	Municipal Department Street Lamps	1,722	2	3			
Profit and Loss Account ...				44,241	0	10					5,477	1	2
							Sinking Funds	4,880	4	4			
							Bank of New Zealand Renewal Fund	29,972	8	1			
											34,852	12	5
				£228,711	4	9					£228,711	4	9

TRAMWAYS DEPARTMENT.

REVENUE ACCOUNT for Year ended 31st March, 1916.

FOR PREVIOUS YEAR.			Aver. Per Car Mile.			FOR PREVIOUS YEAR.			Aver. Per Car Mile.	
Aver. Per Car Mile.	AMOUNT.					Aver. Per Car Mile.	AMOUNT.			
	£ s. d.			£ s. d.	£ s. d.		£ s. d.			£ s. d.
1.40	7,673 10 8	To Power Expenses ...	1.45	7,867 10 2		14.08	76,534 0 10	By Traffic Revenue ...	14.41	77,042 6 9
4.45	24,222 17 4	„ Traffic Expenses ...	4.48	24,196 9 7		.16	891 6 3	„ Sundry „ ...	.12	645 17 2
0.50	2,720 14 1	„ General Expenses ...	0.54	2,782 9 2						
1.54	8,385 7 4	„ Repairs and Maintenance	1.50	8,127 6 10						
	34,422 17 8	„ Balance to Profit and Loss Account ...			42,973 15 9					
					34,714 8 2					
	£77,425 7 1				£77,688 3 11	14.24	£77,425 7 1		14.53	£77,688 3 11

PROFIT AND LOSS ACCOUNT for Year ended 31st March, 1916.

	£ s. d.			£ s. d.	£ s. d.				£ s. d.
2.05	11,083 15 4	To Renewal Fund ...	2.09	11,049 12 0				By Balance from Revenue Account ...	34,714 8 2
.13	750 0 0	„ Accident Insurance Fund	.13	750 0 0					
.57	3,136 0 0	„ Depreciation ...	.57	3,090 0 0					
					14,889 12 0				
2.54	13,667 5 3	„ Interest ...	2.57		13,338 14 6				
.06	356 3 6	„ War Pay ...	.27		1,514 2 6				
.03	174 1 7	„ Sundries ...	.02		131 13 10				
.97	5,255 12 0	„ Net Profit...	.91		4,840 5 4				
14.24	£34,422 17 8		14.53		£34,714 8 2				£34,714 8 2

PROFIT AND LOSS ACCOUNT APPROPRIATION ACCOUNT.

	£ s. d.		£ s. d.
To Transfer Municipal Department ...	3,000 0 0	By Balance, 1st April, 1915 ...	7,527 11 7
„ St. Clair Pavilion, balance written off ...	420 15 3	„ Net Profit for year ...	4,840 5 4
„ Balance, 31st March, 1916 ...	8,947 1 8		
	£12,367 16 11		£12,367 16 11

WATER DEPARTMENT.

BALANCE SHEET as at 31st March, 1916.

[illegible]

ELECTRIC POWER AND LIGHT DEPARTMENT.

BALANCE SHEET as at 31st March, 1916.

[illegible]

CITY ABATTOIR.

PROFIT AND LOSS ACCOUNT for the Twelve Months ended 31st March, 1916.

	£	s.	d.	£	s.	d.		£	s.	d.
To Bank Charges	3	6	10				By Abattoir Fees	8,511	3	11
„ Salaries and Wages	597	12	3							
„ Maintenance	214	5	2							
„ Interest on Debit Balance	375	18	0							
„ Loan Interest	723	2	6							
„ Insurance, &c.	41	14	11							
„ Inspection Fees	331	0	0							
„ Coal and Water	111	17	4							
				2,398	17	0				
„ Slaughtering	4,708	11	1							
„ Feed	510	8	7							
				5,218	19	8				
„ Renewal Fund	300	0	0							
„ Depreciation	238	10	2							
					538	10	2			
„ Net Profit					354	17	1			
				£8,511	3	11		£8,511	3	11

WOODHAUGH QUARRY.

PROFIT AND LOSS ACCOUNT for the Twelve Months ended 31st March, 1916.

	£	s.	d.	£	s.	d.		£	s.	d.
To Wages	1,832	6	10				By Metal Produced	2,333	4	0
„ Insurance	72	16	3				„ Quarry Rents		0	10
„ Tools	5	8	4				„ Profit and Loss	159	1	9
„ Maintenance	195	12	4							
„ Tar	62	8	3							
„ Oil, &c.	11	19	6							
„ Explosives	93	2	2							
„ Electric Power	93	18	2							
„ Rent	17	10	0							
„ Sundries	4	6	3							
				2,389	8	1				
„ Interest—Buildings and Plant					20	13	6			
„ Depreciation do.					82	14	2			
				£2,492	15	9		£2,492	15	9

ELECTRIC POWER AND LIGHT DEPARTMENT.

PROFIT AND LOSS ACCOUNT for Year ended 31st March, 1916.

FOR PREVIOUS YEAR.								FOR PREVIOUS YEAR.												
AMOUNT.			Pence per Unit sold.				Pence per Unit sold.				AMOUNT.			Aver. per Unit sold.						
£	s.	d.	D	To GENERATION—			D	£	s.	d.	£	s.	d.	D	By Sale of Current, Lighting					
124	12	3	.0027	Oil Fuel ...	...	...	.0045	227	11	8	22,965	10	5	D	Power ...	26,487	11	11		
51	7	5	.0011	Oil, Waste, etc. ...	...	...	.001	52	1	1	27,785	7	7	1.1980	Public Lighting ...	1.2312	30,930	11	6	
4,553	4	5	.0993	Wages ...	...	...	.0782	3,938	12	2	4,160	8	4		Meter and Indicator Rents		4,580	17	10	
722	0	5	.0157	Repairs & Maintenance	...	...	.0088	447	18	0	2,188	5	9		Sundries ...	.0608	2,598	1	4	
<hr/>											371	4	5	.0591	Penalties ...		282	12	9	
£5,451	4	6	.1188				.0925				156	11	11					182	11	8
<hr/>																				
6,705	18	1	.1463	To DISTRIBUTION—				6,924	19	4										
1,026	8	9	.0224	Wages ...	...	...	.1375	827	5	9										
<hr/>				Repairs & Maintenance	...	...	.0165				7,752	5	1							
£7,732	6	10	.1687				.1540													
<hr/>																				
182	17	4	.0040	To PUBLIC LIGHTING—				124	4	10										
169	13	1	.0037	Wages ...	...	...	.0024	114	16	3										
<hr/>				Repairs & Maintenance	...	...	.0023				239	1	1							
£352	10	5	.0077				.0047													
<hr/>																				
456	5	1	.0100	To GENERAL—																
536	9	5	.0117	Printing, Advertising, &	...	...	.0069	352	5	7										
2,153	15	8	.0470	Stationery ...	...	...	.0116	580	15	0										
1,034	8	1	.0225	Rates and Rents ...	...	...	.0459	2,311	10	3										
349	0	9	.0076	Salaries ...	...	...	.0154	772	11	1										
553	1	1	.0121	Sundries ...	...	...	.0069	351	1	11										
179	19	11	.0039	Accident Insurance ...	...	...	.0106	528	17	0										
<hr/>				Fire Insurance ...	...	...	.0146	735	4	5										
5,263	0	0	.1148	War Pay... ..	...	...					5,632	5	3							
<hr/>							.1119													
£18,799	1	9	.4100	Total Working Expenses			.3631				18,289	14	4							
<hr/>																				
20,968	0	0		To Interest on Loans ...				20,780	10	0										
306	14	7		Less Interest on Cr. Bank				678	10	9										
<hr/>				Balance ... ..			.3993				20,101	19	3							
20,661	5	5	.4508																	
336	3	0	.0073	„ Prop'n. Disc. on Loans ...			.0066				336	3	0							
3,825	0	0	.0835	„ Depreciation ..			.0800				4,030	0	0							
10,145	17	8	.2213	„ Renewal Fund ...			.2147				10,809	12	7							
3,860	0	7	.0842	„ Net Profit... ..			.2283				11,494	17	10							
<hr/>																				
£57,627	8	5	1.2571				1.292				£65,062	7	0	£57,627 8 5 1.2571		1.292	£65,062	7	0	

PROFIT AND LOSS APPROPRIATION ACCOUNT.

		£	s. d.			£	s. d.
To Balance, 1st April, 1915	...	8,832	6 10	By Net Profit for year	...	11,494	17 10
„ Transferred to Municipal Department	...	4,790	0 0	„ Balance, 31st March, 1916	...	2,127	9 0
		£13,622	6 10			£13,622	6 10

TRAMWAYS DEPARTMENT.

BALANCE SHEET as at 31st March, 1916.

[illegible]

STATEMENT showing disposal of PROFITS and EXPENDITURE on CAPITAL ACCOUNT, etc.

	Net Profit.	Depreciation Written Off.	Increase Bank Overdraft.	Decrease Floating Assets.	Fire Insurance Received.	Extensions.	Sinking Fund.	Paid Municipal Department.	Paid Loan Account Overdraft.
	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.
Gas ...	5,238 3 2	1,619 0 0	5,314 17 1	354 18 0 Increase }		10,197 2 3	540 0 0	1,080 0 0	
Water ...	16,858 8 7	2,274 0 0	2,461 2 1	1,880 11 10 Increase }		10,662 8 10	3,282 10 0	5,768 0 0	
Tramways ...	4,840 5 4	3,090 0 0	4,972 3 10 Decrease }	203 1 6 Increase }	3,245 0 0		3,000 0 0	3,000 0 0	
Electric ...	11,494 17 10	4,030 0 0	792 8 3 Decrease }	4,597 13 2 Decrease }		6,641 15 9	3,146 0 0	4,790 0 0	4,752 7 0
	38,431 14 11	11,013 0 0	2,011 7 1	2,159 1 10	3,245 0 0	27,501 6 10	9,968 10 0	14,638 0 0	4,752 7 0
	11,013 0 0					9,968 10 0			
	2,011 7 1					14,638 0 0			
	2,159 1 10					4,752 7 0			
	3,245 0 0								
	£56,860 3 10					£56,860 3 10			

RENEWAL FUND ACCOUNT.

	Balance 31st March, 1915	Payments into Fund.	Interest Added.	Withdrawals.	Balance 31st March, 1916.
	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.
Gas	24,267 9 11	4,877 6 4	1,241 17 7	414 5 9	29,972 8 1
Water	16,130 0 11	2,453 0 0	824 7 10	11 3 7	19,396 5 2
Tramways ...	55,166 12 4	11,049 12 0	2,793 17 2	2,359 12 1	66,650 9 5
Electric ...	42,729 5 0	10,809 12 7	2,206 13 3	4,025 10 6	51,720 0 4
Abattoir ...	2,312 13 4	300 0 0	117 2 5		2,729 15 9
	£140,606 1 6	£29,489 10 11	£7,183 18 3	£6,810 11 11	£170,468 18 9

All the above figures compare favourably with those of the previous year.

The amount allowed as half-pay to employees of these four departments who are serving at the front was £3180, and this amount has been charged to working expenses.

The usual statements giving details of the Removal Fund, expenditure on Capital Account, etc., and also Profit and Loss Account for the Abattoir and Woodhaugh Quarry, are attached.

I have the honour to be, Sir,

Your obedient servant,

H. H. HENDERSON,

City Treasurer.

CITY ENGINEERS' DEPARTMENT.

ANNUAL REPORT

1915-16.



BY

W. D. R. McCURDIE,

CITY ENGINEER.

(Member of the Institution of Municipal and County Engineers, England;
Licensed Surveyor; Past District Surveyor in the Dominion of New Zealand;
late District Engineer in the Department of Roads and Bridges, N.Z.)

City Engineer's Office,

Town Hall, Dunedin.

30th April, 1916.

The Town Clerk,
Dunedin.

Sir,—I have the honour to submit my report upon the operations of the Works and Water Departments for the year ended 31st March, 1916:—

ACCIDENTS.

The following is a list of accidents which happened during the year to workmen under the control of this office, and the amount of compensation paid by the New Zealand Insurance Company:—

Name.	Nature of Injury.	Time off Work.		Compensation.		
		weeks.	days.	£	s.	d.
Bauchop H. J., labourer	Jammed finger ...	6	3	9	2	0
Boutcher E., labourer ...	Poisoned finger ...	2	1	4	5	0
Breen J., labourer...	Sprained wrist ...	0	2	0	9	0
Brooks G., carpenter ...	Injured back (Medical Report)	1	1	0		
Dineen H. C., labourer...	Crushed finger ...	2	4	3	12	0
Douglas A., labourer ...	Cut wrist ...	0	5	1	12	6
Guyton P., labourer ...	Poisoned finger ...	2	1	2	12	0
Harvey S., labourer ...	Laceration ...	14	2	20	7	0
Hately F., labourer ...	Sprained wrist ...	2	0	3	9	0
McAlister A., labourer...	Sprained back ...	2	4	3	12	0
O'Brien C., labourer ...	Cut thigh ...	5	0	7	2	6
Sexton S., labourer ...	Jammed hand ...	2	0	2	14	0
Scott G. G., labourer ...	Jammed finger ...	2	0	3	6	0

AREA OF THE CITY.—The present area of the City is:—Anderson's Bay Ward, 715 acres; Caversham Ward, 1523 acres; Central Ward, 751 acres; Leith Ward, 1136 acres; Maori Hill Ward, 3700 acres; Mornington Ward, 654 acres; Roslyn Ward, 1856 acres; Valley Ward, 3980 acres.—Total, 14,515 acres.

ASPHALT FOOTPATHS.

Asphalt has been laid on footpaths in the various wards as follows. Top-dressing and repairing of footpaths have also been carried out where necessary:—

LEITH WARD.—Harbour Terrace, 270 square yards; Park Street, 360 square yards; Queen Street, 370 square yards.

ROSLYN WARD.—Epsilon Street, 198 square yards; Frances Crescent, 790 square yards; Gamma Street, 90 square yards; Hereford Street, 230 square yards; Hood Street, 880 square yards; Sargood Street, 620 square yards; Tweed Street, 520 square yards.

VALLEY WARD.—Craigleith Street, 1760 square yards; Islington Street, 650 square yards; Pentland Street, 530 square yards. In addition to this, the sum of £500 loan money was spent on the footpaths in Glenroy Township.

BATHS.

The question of installing filters at the Public Baths in Moray Place had been under consideration for some time, and early in the year a specification and drawings were submitted to the General Committee, providing for a complete filtration plant. The water was to be run from the swimming pool to the filters by gravitation, and there treated by the addition of a coagulant, and afterwards passed through a filtering process designed in accordance with up-to-date principles.

After consideration the Committee decided to give the firms engaged in manufacturing this class of goods an opportunity of tendering on their own designs. Owing to the dislocation of trade caused by the war, the majority of the firms were unable to tender, and only one tender was received. This was held over, pending a decision on the question of using salt water, pumped from the harbour, in the baths.

The drought experienced during the summer rendered it necessary to shut off the supply of water to the baths. To avoid closing down the baths when the water became impure, it was decided to remove the impurity by means of sedimentation and a suction plant designed by the City Engineer. The water was treated with a coagulant, and when the impurities and colouring matter in the water had sunk to the bottom the sediment was removed by means of a suction plant operated by a steam jet.

The operation was entirely successful so far as it went, but before it was completed a considerable rainfall occurred which enabled the baths to be emptied and refilled.

A proposal to use salt water in the baths to be obtained by pumping either from the harbour or St. Clair has lately been reported on by the City Engineer, and is now under consideration.

The stonework around the St. Clair Baths. had got somewhat out of repair, and during the year a certain amount of concrete facing was carried out and the stonework grouted and pointed.

BRIDGMAN STREET.

The corner at the school was improved by shifting back four chains of fencing. The footpath fronting the new drill hall was regraded, and 264 feet of kerbing and channelling and 400 square yards of asphalt laid. The footpaths in the street were all top-dressed, and 265 cubic yards of metal were laid on the roadway.

The holding of the Queen Carnival in the new Drill Hall compelled the Council to give more attention to this street than would otherwise have been the case. The foot traffic was very great, and an enormous amount of motor traffic had to be prepared for. The street was lit by twenty-two electric lights, together with the three gas lamps previously in use.

CROSSINGS.

New crossings were laid in Chambers Street, Great King Street (2), William Street, and City Road.

Repairs, in some cases amounting almost to renewal of the whole crossing, were done in various streets. The number of private crossings put in for traffic over footpaths was 69.

The advent of the motor car is multiplying the number of private crossings enormously. Many of them get blocked in times of flood, and turn the water into the roadway, doing much harm by scour. It should be the duty of every owner of a private crossing to see that it is kept clear underneath at all times.

WARD EXPENDITURE FOR TWELVE MONTHS ENDED MARCH, 1916.

	VALLEY	LEITH.	CENTRAL.	CAVERSHAM.	ROSLYN.	12 MONTHS' EXPENDITURE	12 MONTHS' ALLOCATION.
Earthworks ...	£ s. d. 47 13 1	£ s. d. ...	£ s. d. ...	£ s. d. 16 18 9	£ s. d. 72 16 3	£ s. d. 137 8 1	£ s. d. 79 0 0
Metal ...	496 0 10	1,103 19 10	2,130 8 7	1,044 4 1	536 4 7	5,310 17 11	5,332 17 0
Ballast ...	19 12 4	...	2 8 2	...	146 13 3	168 13 9	229 0 0
K. & G. ...	2 4 11	18 0 1	54 13 0	372 9 4	9 13 0	457 0 4	550 0 0
Asphalt ...	100 0 3	409 13 10	364 15 1	284 9 10	274 9 7	1,433 8 7	1,412 0 0
Bridges ...	1 16 6	32 16 1	...	...	...	34 12 7	46 0 0
Crossings...	8 10 11	94 11 2	154 11 4	...	5 3 2	262 16 7	97 0 0
Steps ...	0 10 2	5 5 11	55 16 7	14 5 11	5 17 0	81 15 7	110 10 0
Fencing & Walling	21 5 0	16 2 7	25 5 7	2 2 10	1 2 5	65 18 5	144 0 0
Culverts ...	4 4 4	...	...	...	18 4 3	22 8 7	18 0 0
Seavenging ...	789 15 7	2,181 18 3	2,721 16 3	1,083 16 6	809 11 3	7,586 17 10	7,618 0 0
12 Months' Expenditure ...	1,491 13 11	3,862 7 9	5,509 14 7	2,818 7 3	1,879 14 9	15,561 18 3	15,636 7 0
12 Months' Allocation ...	£1,482 10 0	£3,809 7 0	£5,535 10 0	£2,969 0 0	£1,840 0 0	...	£15,636 7 0

EXPENDITURE ON LOAN WORKS FOR TWELVE MONTHS ENDED MARCH, 1916.

	VALLEY.	LEITH	CENTRAL	CAVERSHAM	ROSLYN	12 MONTHS' EXPENDITURE	12 MONTHS' ALLOCATION
	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.
Earthworks ...	300 7 3	366 10 1	...	...	229 8 11	896 6 3	1,151 0 0
Metal ...	54 2 8	...	...	...	141 7 11	195 10 7	425 0 0
Ballast ...	50 0 0	...	...	...	...	50 0 0	50 0 0
K. & G. ...	578 15 11	461 7 6	253 9 11	740 11 3	470 6 0	2,504 10 7	2,640 0 0
Asphalt ...	199 6 8	94 10 7	...	...	...	293 17 3	374 0 0
Bridges ...	...	...	...	...	...	...	...
Crossings...	...	...	5 1 6	...	...	5 1 6	15 0 0
Steps ...	...	...	39 8 7	...	...	39 8 7	36 0 0
Fencing & Walling	...	...	...	16 17 1	...	16 17 1	93 0 0
Culverts ...	...	...	...	...	13 8 10	13 8 10	91 0 0
12 Months' Expenditure ...	1,182 12 6	922 8 2	298 0 0	757 8 4	854 11 8	4,015 0 8	4,875 0 0
12 Months' Allocation ...	£1,340 0 0	£1,340 0 0	£298 0 0	£787 0 0	£1,108 0 0	...	£4,875 0 0

LOAN SCHEDULE.

EXPENDITURE ON LOAN WORKS TO MARCH 24, 1916.

	Allocation.		Expenditure.		
	£		£	s.	d.
Caversham Valley Road Formation	300		310	13	5
City Road Widening	380		210	1	5
Ettrick Street Formation and Regrading	50		54	6	7
Ferry's New Streets, 40ft formation	260		200	19	4
Leith Wall (Corporation—Materials)			6,788	11	4
Main North Road Widening, etc.	250		294	10	8
Norfolk Street Formation and Widening	200		30	4	7
Queen's Drive Widening and Town Belt (Central Ward)	315		419	7	4
Queen's Drive Widening (Leith Ward)	260		240	11	0
Ravenswood Road Formation	200		230	5	2
Serpentine Avenue Widening	270		84	10	11
Watts Road Widening	86		88	10	10
Valley Ward Asphalt	500				
Carr Street (£150)	£157	14	11		
Crown Street (£140)	137	1	0		
France Street (£90)	89	9	9		
Millar Street (£120)	111	3	7		
			495	9	3
Roslyn Ward Asphalt	500				
Ann Street (£16)	£19	19	6		
Avon Street (£9)	9	0	2		
Begg Street (£25)	37	14	4		
Belgrave Crescent (£48)	48	5	6		
County Road (£50)	64	1	8		
Frances Crescent (£104)	101	11	2		
Epsilon Street (£45)	37	4	8		
Hereford Street (£15)	14	15	5		
Hood Street (£66)	79	16	1		
Oates Street (£11)	16	4	4		
School Street (£44)	44	6	11		
Sligo Terrace (£26)	1	3	10		
			474	3	7
Caversham Ward Asphalt	500				
Baker Street	£66	3	5		
Beach Street (£27)	24	12	0		
Josephine Street (£27)	22	3	9		
Lav Street (£121)	61	15	3		
Macandrew Road (£27)	26	18	0		
Main South Road (£52)	74	7	7		
Melbourne Street	10	6	10		
Nelson Street (£25)	69	9	8		
Oxford Street (£81)	71	7	10		
Phillips Street (£18)	26	8	4		
Regent Street (£67)	68	4	2		
			521	16	10
			£10,444	2	3
Leith Street Wall (near Dundas Street)	£		£	s.	d.
Preliminary Expenses (polling, printing, etc.) ...	1,000		671	9	8
			204	0	7

SPECIAL SCHEDULE.

EXPENDITURE FOR TWELVE MONTHS ENDED MARCH, 1916.

	12 Months' Allocation.	12 Months' Expenditure.	
	£	£ s. d.	
Contingencies	600	836 7 10	
Harbour Board Streets	500	469 6 10	
Holidays for Workmen	600	672 15 2	
House Numbers	60	18 2 10	
Office Instruments	35	37 15 11	
Overbridge	40	40 0 0	
Plant and Repairs	700	1,056 19 10	
Printing and Stationery	100	136 12 1	
Road Roller—10-ton	500	500 0 0	
Salaries	2,150	2,296 15 4	
Sheds and Yards	250	71 17 8	
Sprinkler—Tramway	120	53 2 0	
Standard Survey	400	—	
Street Name Plates	100	57 3 9	
Surveys	100	123 18 3	
Telephones	70	43 12 5	
Town Belt Roads	150	246 18 1	
Tram Fares	35	30 12 8	
Water Troughs	30	24 14 0	
	£6,540	£6,716 15 4	

	£	£ s. d.	
Street Lighting	7,867	8,156 13 10	
Public Clocks	220	227 5 3	
Weighbridges	300	313 9 8	
Harbour Board Streets (payable by Board)		4 13 7	
Private Charges		1,418 5 6	
Refunds		156 13 0	
Woodhaugh Quarry		2,402 14 9	
Roslyn Quarry		1,609 11 4	
Caversham Quarry		31 13 6	
Tanna Hill Quarry		1,515 1 3	

KERBING AND CHANNELLING.

Concrete kerbing and channelling has been laid down in the various wards as follows during the year:—

CAVERSHAM WARD.—Ballance Street, 594 lin. feet; Bay View Road, 1188 lin. feet; Bridgman street, 300 lin. feet; Cashel Street, 396 lin. feet; Forbury Road, 1125 lin. feet; Hall Street, 429 lin. feet; Leckhampton Court, 627 lin. feet; Mavis Street, 528 lin. feet; McBride Street, 759 lin. feet; Melbourne Street, 1353 lin. feet; Nelson Street, 594 lin. feet; Percy Street, 198 lin. feet; Peter Street, 594 lin. feet; Phillips Street, 264 lin. feet; Queen Alexandra Street, 594 lin. feet; Rankeilor Street, 363 lin. feet; Regent Street, 1188 lin. feet; Royal Crescent, 264 lin. feet; Rutherford Street, 363 lin. feet; Valpy Street, 462 lin. feet.

CENTRAL WARD.—Anderson's Bay Road, 184 lin. feet; Arthur Street, 644 lin. feet (gutter only); Cumberland Street, 353 lin. feet; High Street, 558 lin. feet (gutter only); Moray Place, 962 lin. feet (gutter only); Russell Street, 205 lin. feet; Vogel Street, 61 lin. feet (gutter only); York Place, 907 lin. feet (gutter only); Young Street, 88 lin. feet.

LEITH WARD.—Bath Street, 390 lin. feet; Constitution Street, 200 lin. feet; Frederick Street, 260 lin. feet; George Street, 1155 lin. feet; Great King Street, 1320 lin. feet (gutter only); Hanover Street, 180 lin. feet (gutter only); Heriot Row, 460 lin. feet (gutter only); Park Street, 400 lin. feet (gutter only); Regent Street, 320 lin. feet; Royal Terrace, 950 lin. feet (gutter only); York Place, 150 lin. feet (gutter only); Ward Street, 1584 lin. feet (gutter only).

ROSLYN WARD.—Belgrave Crescent, 264 lin. feet; Brighton Street, 429 lin. feet; Epsilon Street, 198 lin. feet; Frances Crescent, 1120 lin. feet; Fifield Street, 528 lin. feet; Pennant Street, 264 lin. feet; Rose Street, 390 lin. feet; Stone Street, 170 lin. feet; Taieri Road, 495 lin. feet; Tweed Street, 594 lin. feet; Wales Street, 630 lin. feet.

VALLEY WARD.—Allen Street, 350 lin. feet; Beechworth Street, 200 lin. feet; Cardigan Street, 120 lin. feet; Carlyle Street, 150 lin. feet; Craigleith Street, 2400 lin. feet; Farquharson Street, 450 lin. feet; Gillespie Street, 360 lin. feet; Main North Road, 860 lin. feet; Sixth Avenue, 250 lin. feet; Third Avenue, 330 lin. feet.

LEITH CHANNEL.

This work which was mentioned in last year's report was completed during the year, a junction being made with the Harbour Board's channel at Harbour Terrace, after an undertaking had been obtained from the Harbour Board that they would be responsible for any damage done by floods below Forth Street. The abutments for the new bridges were built at the same time of concrete and dressed bluestone from the Woodhaugh Quarry. The foundations were carried down to boulder bottom, a depth in places of 8 feet. Erosion has been guarded against by concrete weirs across the full width of the stream at every 42 feet, and three weirs at each bridge crossing.

LETHAL CHAMBER.

The number of animals (dogs and cats) destroyed in the lethal chamber during the year was 118.

METALLING.

The quantities of metal laid on the various streets throughout the City during the year are as follows:—

VALLEY WARD.

METAL.

	Cub. yds.		Cub. yds.
Afton Terrace	2	Gillespie Street	6
Ainslee Place	6	Gladstone Road	30
Allen Street	2	Glencairn Street	5
Arden Street	3	Grev Street	2
Arnold Street	31	Haddon Street	8
Baldwin Street	5	Hadfield Street	5
Balmoral Street	5	James Street	8
Bayton Terrace	1	King William Street	2
Beechworth Street	3	Leckie Street	9
Blacks Road	8	Leicester Street	1
Botting Street	7	Main North Road	435
Bouverie Street	3	Manders Street	2
Buccleugh Street	20	McGregor Street	1
Calder Avenue	4	Maybank Street	2
Cardigan Street	8	Mechanic Street	12
Carlton Street	2	Millar Street	6
Carr Street	14	Montague Street	4
Castlecraig Street	25	Montrose Street	2
Chambers Street	18	Nathan Street	8
Chester Street	8	Normanby Street	2
Chetham Avenue	4	Norwood Street	60
Clifford Street	10	Opoho Road	12
Comely Bank	1	Orbell Street	31
Cornhill Street	2	Pentland Street	2
Cottle Street	6	Pine Hill Road	105
Craigleith Street	10	Pine Hill Terrace	7
Crown Street	6	Queensbury Street	6
Dalmeny Street	4	Raglan Street	1
Evans Street	6	Ramsay Street	5
Falkirk Street	13	Royston Street	2
Farquharson Street	4	Selwyn Road	1
Fea Street	24	Seventh Avenue	1
First Avenue	1	Signal Hill Road	15
Fortune Street	14	Uxbridge Street	3
Fourth Avenue	1	Warden Street	10
Frame Street	2	Watts Road	21
France Street	10	Windsor Street	5
Franklin Street	7		

BALLAST.

	Cub. yds.		Cub. yds.
Arden Street	7	Leckie Street	4
Beechworth Street	75	Main North Road	100
Bouverie Street	6	Norwood Street	20
Buccleugh Street	4	Orbell Street	20
Chester Street	2	Pine Hill Terrace	5
Craigleith Street	26	Warden Street	6
Gillespie Street	8		

LEITH WARD.

	Cub. yds.		Cub. yds.
Albany Street	87½	Howe Street	1½
Arran Street	5	Lambeth Road	6
Bow Lane	2	Leith Street	48½
Cargill Street	1	Littlebourne Road	4
Castle Street	86½	London Street	10
Cemetery Road	24	Moray Place	148
City Road	5	Pitt Street	58
Clarendon Street	16	Queen Street	48
Clyde Street	2½	Rattray Street	15½
Cumberland Street	603½	Royal Terrace	6
Duke Street	2	Short Street	8
Dundas Street	44½	St. Andrew Street	91
Eden Street	12	St. David Street	1
Ellis Street	2	Station Street	28½
Filleul Street	28	Stuart Street	116½
Forth Street	53½	Town Belt Roads	57½
Frederick Street	34½	Union Street	72½
George Street	11½	Vire Street	4
Grange Street	4	Ward Street	158
Great King Street	551	Wilson's Avenue	9
Hanover Street	79½	York Place	35
Harbour Terrace	16	Young's Terrace	2
Harrow Street	119		

CENTRAL WARD.

	Cub. yds.		Cub. yds.
Alva Street	20	Maitland Street	36
Anderson's Bay Road	89	Manor Place	22
Arthur Street	54½	Manor Street	19
Birch Street	102	Maori Road	20½
Bishop's Road	2	Market Street	1
Bond Street	84½	Melville Street	30½
Buller Street	6	Montpellier Street	2
Canongate	40	Moray Place	89
Castle Street	40	Police Street	8
Crawford Street	376	Princes Street	185
Cumberland Street	506½	Queen's Drive	11½
Dowling Street	26¾	Railway Overbridge	3½
Duncan Street	11	Rattray Street	571
Elm Row	15	Richardson Street	74
Fernhill Street	4	Roberts Street	26
Fish Street	303	Russell Street	28
French Street	10	Serpentine Avenue	196½
Hawthorne Avenue	8	Stafford Street	73½
High Street	283¼	Tewsley Street	77
Hill Street	8	Town Belt Roads	47¼
Hope Street	92	Victoria Crescent	4
Howard Street	6	Vogel Street	136½
Jervois Street	52	Walker Street	46¼
Jetty Street	51	Water Street	121½
Jones Street	1	Wharf Street	256
Lees Street	14	William Street	26
Macandrew Street	18	Wolseley Street	4
Maclaggan Street	200¾	York Place	54
Main South Road	18	Young Street	6

CAVERSHAM WARD.

	Cub. yds.		Cub. yds.
Alexandra Street ...	4	Lookout Point Road ...	16
Anderson's Bay Road ...	616	Loudon Street ...	160
Atkinson Street ...	37	Macandrew Road ...	181
Baker Street ...	59	Main South Road ...	564
Bathgate Street ...	10	Marion Street ...	49
Bay View Road ...	375	McBride Street ...	4
Bradshaw Street ...	34	Melbourne Street ...	74
Brunswick Street ...	4	Mornington Road ...	37
Burns Street ...	45	Morrison Street ...	2
Cargill Road ...	63	Nelson Street ...	3
Catherine Street ...	1	Neville Street ...	95
Caversham Valley Road...	200	Nicholson Street ...	2
College Street ...	1	Oxford Street ...	51
Corstorphine Road ...	12	Percy Street ...	2
Edwin Street ...	4	Peter Street ...	2
Esplanade ...	20	Railway Street ...	10
Fawcett Street ...	16	Regent Street ...	12
Forbury Road ...	42	Richmond Street ...	3
Great Queen Street ...	39	Royal Crescent ...	4
Grosvenor Street ...	18	Rutherford Street ...	7
Helena Street ...	40	Shortland Street ...	1
Josephine Street ...	24	Surrey Street ...	7
King Edward Street ...	80	Thomas Street ...	5
Law Street ...	6	Wilkie Road ...	30

ROSLYN WARD.

METAL.

	Cub. yds.		Cub. yds.
Brighton Street ...	140	Littlebourne Crescent ...	37
City Road ...	200	Mardale Street ...	90
County Road ...	67	Melrose Street ...	25
Hereford Street ...	26	School Street ...	14
Highgate ...	94	Shetland Street ...	69
Kaikorai Valley Road ...	500	Taieri Road ...	28
Leven Street ...	45	Tweed Street ...	24
Linden Street ...	30	Wallace Street ...	324

BALLAST.

	Cub. yds.		Cub. yds.
Anderson Crescent ...	50	Fraser's Road ...	170
Begg Street ...	120	Glenelg Street ...	120
Brighton Street ...	40	Hood Street ...	120
Chapman Street ...	24	Mardale Street ...	175
County Road ...	66	Wallace Street ...	206
Font Street ...	35		

OFFICE WORK.

INSTRUCTIONS.—The number of written instructions and specifications issued to the inspectors and assistants during the year was 3164.

PLANS.—One hundred and forty-two plans have been made in the drawing office during the year.

PRINTS.—Four hundred and ten prints of plans have been made during the year.

REPORTS.—The number of reports written by the City Engineer during the year was 1015.

TRACINGS.—One hundred and eight tracings of plans and drawings for taking prints were made during the year.

OPOHO ROAD.

A start was made during the year to regrade this road from a little below the bridge upwards, a distance of 16 chains. The bridge is also to be raised to suit the new level. As the greater part of the haulage is uphill, on a grade of 1 in 11, horse haulage was dispensed with, and electrically-hauled tip trucks substituted.

PITT STREET.

A much-needed improvement was made in this street during the year by widening the narrow portion by twelve feet between Queen Street and Heriot Row.

PLANT.

The whole of the plant has been overhauled during the year, and is now in first-class working order. No additions have been made during the year. An 8-ton steam roller has been ordered from Andersons Limited, of Christchurch, but has not yet come to hand. The Rangatira, with the roller on board, has been wrecked at the Cape on the way out.

PLAYFAIR STREET.

This street was widened 13 feet 2 inches from Marion Street, to join with the wider portion fronting the Hazelhurst sub-division. The sharp corner at Marion Street was also improved by being rounded off.

QUARRIES.

WOODHAUGH QUARRY.—The output from this quarry for the past year is as follows:—

	Cub. yds.		Cub. yds.
Spalls	30	Building Stone	51
3½-inch Metal	51	Pitchers (first class) ...	2851
2½-inch Metal	3872	Pitchers (second class) ...	440
1½-inch Metal	1632	Rubble	14
Screenings	1237½	Rotten Rock	205
Topping	137½	Asphalt, 1½in	4½
Sand	345	Asphalt Screenings	194½
Dust	428	Asphalt Topping	6½

Machinery and plant are all in first-class working order.

ROSLYN QUARRY.—The output from this quarry for the past year is as follows:—

	Cub. yds.		Cub. yds.
Spalls	54	Sand	58
2½-inch Metal	1718	Dust	112
1½-inch Metal	642	Rotten Rock	2248
Screenings	965	Blinding	233
Topping	268		

This quarry is now in good working order, and enough stripping is done to last for twelve months. Machinery and plant are in first-class order.

TANNA HILL QUARRY.—The total output for the six months it has been working is 4743 cubic yards. The work done for the past five months has been mostly stripping and carting material for filling in behind the walls of the Leith Channel. The quarry is now in good working order, and machinery and plant in first-class condition.

SPECIFICATIONS.

Specifications, with drawings when required, were prepared during the year. Twenty-three contracts were let, and of the remainder, five were unlet, and one was for the Inspector in charge of the work, as per following list:—

CONTRACTS.	CONTRACTORS.
Ballast for Caversham Ward, supply and delivery of	M. Stevenson
Beams, rolled steel, for Leith Bridges	Not let
Cement and Lime, supply and delivery of	Milburn L. & C. Co.
Clocks, maintenance of	Not yet let
Coal, supply and delivery of	John Mill & Co.
Control House at Waitati-Leith, erection of	King Bros.
Drainage Pipes, supply and delivery of	Lambert Bros. & Co.
Fencing at Leith Valley, erection of	Braid Bros.
Horses, Carts, and Drivers—	
For Anderson Bay Ward	W. Dunford.
„ Caversham Wards	Hargreaves Bros.
„ Leith and Central Wards	M. Stevenson

„ Maori Hill Ward	Purton Bros.
„ Morningson Ward	M. Stevenson
„ Roslyn Ward	Purton Bros.
„ Valley Ward	M. Stevenson
Hydraulic Elevator, supply and delivery of ...	Cossens & Black
Ladders and Fence Posts for Leith Walling ...	G. & J. Manson
Metal for Anderson Bay Ward, cartage of ...	W. Dunford
Metal for Caversham Ward, cartage of ...	Seddon & Rothwell
Metal for Maori Hill Ward, cartage of ...	M. Stevenson
Metal for Roslyn, Morningson, and parts of Leith and Central Wards, cartage of ...	M. Stevenson
Metal, Spalls, etc., cartage from Woodhaugh and Tanna Hill Quarries	M. Stevenson
Metal for Valley Ward, supply and delivery of	Not let
Moray Place Bath Filters, installation of ...	Not let
Opoho Road, reconstruction of	For Inspector
Street Paving, 48,000 square yards	Not yet let
Water Fittings, supply and delivery of	A. & T. Burt, Ltd
Water Mains, supply and delivery of	Paterson & Barr
Weighbridges, maintenance of	W. J. Brown

STANDARD SURVEY.

The field work of Roslyn and Valley Wards is now completed, and the plans are nearing completion. The extension of this much-needed work to the new wards of Anderson Bay, Morningson, and Maori Hill has been authorised by the Council, and the work has been commenced.

STREETS—LENGTH OF

The following is a list of the present lengths of streets in the various wards:—Anderson Bay Ward, 15 miles; Caversham Ward, 34 miles; Central Ward, 24 miles; Leith Ward, 29 miles; Maori Hill Ward, 23 miles; Morningson Ward, 18 miles; Roslyn Ward, 26 miles; Valley Ward, 48 miles.—Total, 217 miles.

STREET LIGHTING.

The number of street lights now in existence in the City is as follows:—

GAS LAMPS.				
In City ... ..	...	...	...	914
ELECTRIC LIGHTS.				
City Area ... ..	...	...	...	413
Southern Area ... ..	...	...	...	153
Valley Area ... ..	...	...	...	173
Town Belt Area ... ..	...	...	...	19
Roslyn Area ... ..	...	...	...	223
				<hr/> 981

ELECTRIC LIGHTS.—Owing to the adoption of a better class of lamp than was formerly in use, it became possible for the Electric Department to maintain the street lights at a lesser cost than formerly.

The annual charges will now be:—

Lamps burning all night	£3 7 6	per annum
Lamps burning to 2 a.m., and 4 a.m. to daylight	£3 3 6	„ „
Lamps burning to midnight, and 4 a.m. to day-light	£2 17 6	„ „

To make up the difference between the amount paid to the Electric Department last year, and the lesser amount that will be paid under the new schedule, 50 additional lamps are to be erected at points to be approved, at an annual cost of £2 17s 6d.

STREET NAMES.

The recent amalgamation of the boroughs of Maori Hill, Mornington, and Bay Town with the City has necessitated the changing of a large number of street names in these boroughs, which are similar to some already in use in the City. At the same time a number of street names in the City were brought under consideration, owing to two or more streets situated in entirely separate portions of the City possessing names almost exactly similar to one another. This has been a source of much trouble and inconvenience to the public, and it was decided to rename a number of such streets. The new names are still under discussion at the end of the year.

STREET OPENINGS.

The following is the number of street and footpath openings repaired by the Works Department during the year:—

Drainage Permits	693
Kerb Openings	30
Water Department Openings	180
Gas Department Openings	165
Electric Department Openings	58
Telegraph Department Openings	10

1136

STREET PAVING.

The schedule of works to be done out of the £175,000 loan authorised in 1913 included the paving of those portions of Rattray Street, Wharf Street, Cumberland Street, High Street, Castle Street, Stuart Street, Customhouse Square, and Princes Street which carry the heavy traffic to and from the wharves and railway yards. A small area at Cargill's corner was also included in the total of 48,000 square yards.

During the year a specification with plans and cross-sections and photographs of the streets to be paved was prepared, and tenders were called for paving in rock asphalt, Trinidad asphalt, or wood blocks. Tenderers were also given the option of quoting for any other material they wished.

Owing to the unsettled state of trade and the uncertainty of transport, the European and American paving firms did not feel disposed to tender, and only one offer (from a New Zealand contractor) was received for doing the work in Union asphalt, a Californian product. Negotiations are at present proceeding for laying a trial length of this paving in Stuart Street.

STREET WATERING.

The dry season necessitated the cessation of street watering with fresh water during the summer, and an electrically-driven centrifugal pump was erected at the Rattray Street wharf to pump sea water for street watering. The cost of using sea water is naturally greater, owing to the distance the greater part of it has to be carted; but this is offset in some measure by the increased time, as compared with fresh water, over which it is effective in keeping the dust from rising when once the street has been thoroughly watered.

The proposal to pump water from the harbour at Frederick Street to the Public Baths, now under consideration, includes provision for placing standpipes along the main for the use of the public and for street watering.

TOWN CLOCK.

During the year a mechanical engineer was engaged, at a cost of £16, to carry out the City Engineer's specification to put the Town Clock in repair, the striking gear being considerably worn and out of repair. The result is a decided improvement in the striking, which can now be heard at a much greater distance than formerly.

TOWN PLANNING.

Contour surveys of all the unsettled areas about the City likely to be subdivided at an early date have been carried out, or are in hand. New subdivisions will be required to conform as closely as possible to the requirements of a general plan designed for the benefit of the whole district. Thus the awkward routes and impossible grades of the older subdivisions will be avoided.

WAKARI ROAD BRIDGE.

The superstructure of the timber bridge over Ross Creek on the Wakari Road was dismantled during the year, and replaced by a concrete deck reinforced with old rails. This was done for the Maori Hill Borough Council just previous to amalgamation, the Borough providing the necessary funds.

WAIPORI FALLS—BERWICK ROAD BRIDGE.

This bridge, which was in process of erection at the end of last year, was completed early in the year, and opened for traffic on 9th August, 1915. The work was faithfully carried out by the contractors, who also constructed the approaches by arrangement.

WATER DEPARTMENT.

The following is a report on the works of the Water Department for the past year:—

CLOSETS SUPPLIED.

There are now 12,784 closets supplied with water, an increase of 1087 for the year.

DROUGHT.

The past year has been the driest experienced in Dunedin for a number of years. The rainfall in July, August, and September, which are usually the wettest months, was exceptionally light, and consequently, the watershed did not hold anything like the usual amount of water at the beginning of the summer. Early in December it became apparent from the diminishing inflow from all sources that a serious shortage of water was threatened, and steps were immediately taken to conserve the supply as much as possible. Early in the month of January the use of hoses and water for church organs was prohibited, and every effort made to check waste. This had the effect of considerably curtailing the consumption, but with a good deal of consequent inconvenience to the citizens. No further evidence is required of the utter inadequacy of the present supply, and the question of increasing the supply is now engaging the attention of the Council.

HIGH-LEVEL RESERVOIRS (ROOFING).

The service reservoirs on the high-levels of the City have hitherto remained uncovered, and during the year plans and estimates were prepared for roofing them, including the two in the lately-added district of Morningside. This is a necessary work, as the reservoirs are situated in thickly-populated areas, particularly in the case of the Maori Hill Reservoir, which adjoins a main street carrying a good deal of traffic, including an electric tramline.

LEAKS DISCOVERED AND REPAIRED.

Ballcocks defective, 635; bibcocks defective, 960; pipes defective, 91.—Total, 1686.

LEE STREAM SCHEME.

During the year the City Engineer was instructed to report on the question of bringing in an additional water supply from the Lee Stream. Preliminary plans of this scheme had already been prepared, and a full report, together with estimate of cost, was submitted by the Engineer on 10th September, 1915, dealing with the proposal to complete the tunnel partially driven some years ago, and convey the water by means of a pipe-line to the Southern Reservoir. The question of bringing in small emergency supplies from different points was also reported on at the same time.

MAINS SCRAPED.

The length of mains scraped inside during the year was 12 miles 45 chains. All the small mains in the City area have now been done, and those in South Dunedin are in hand.

MAORI HILL RESERVOIR.

During the year both the basins of this reservoir were emptied and thoroughly cleaned.

METERS.

The amalgamation of the outside boroughs during the year enabled the meters which measure the supplies to these districts being removed. This will improve the pressure to a certain extent, owing to the removal of the obstruction naturally caused by the meter on the main, and will also show a certain amount of reduction in administration expenses.

NEW MAINS LAID.

Leith Street, $4\frac{1}{2}$ chains; Signal Hill Road, 6 chains;
Chapman Street, $17\frac{1}{2}$ chains.—Total, 28 chains.

NOTICES SERVED.

In connection with the above list of leaks, 1175 notices were served.

RAINFALL.

The following table shows the rainfall for the years ended 31st March, 1911, to 31st March, 1916, as recorded at the three stations of the Water Department:—

Year ended:	WHARE FLAT.	ROSS CREEK.	UPPER LEITH.
	Inches.	Inches.	Inches.
March 31, 1911	28.709	27.996	32.779
March 31, 1912	46.455	42.494	55.526
March 31, 1913	44.475	44.421	60.610
March 31, 1914	64.918	43.678	68.080
March 31, 1915	33.485	28.320	42.960
March 31, 1916	26.190	20.852	30.860

The shortage of water during January, February, and March, 1916, was greatly alleviated by the oft-recurring light showers which kept falling over the whole period.

REPAIRS AND ALTERATIONS.

Fire-plugs altered and repaired, 210; new fire-plugs, 14; main valves altered and repaired, 214; peet valves altered and repaired, 28; services repaired, 719; stopcocks and anglecocks, repaired, 757; meters repaired, 58; new meters replaced, 36; mains repaired, 53. Thirty chains of 9in main were altered and relaid at the Sullivan Service Dam, and the 6in main in Opoho Road was lowered 9 feet at its highest point for a distance of 8 chains without cutting it.

ROSLYN RESERVOIR.

The minute algae, which has caused a certain amount of trouble in the Ross Creek Reservoir during the past or four years owing to the objectionable taste and smell which it imparts to the water at certain times of the year, made its appearance in the above reservoir in the early part of the summer in spite of the thorough cleaning to which the reservoir had been subjected early in the spring. The reservoir was cut off and the district supplied from the high-pressure main, and the water treated under the direction of the officers of the Health Department with a solution of copper sulphate. This process proved completely successful in killing the objectionable growths.

ROSS CREEK RESERVOIR.

The minute algae, which made its appearance in this reservoir in considerable quantities some three or four years ago, was again in evidence in the early part of the past summer, and caused considerable trouble by the objectionable taste and smell which it imparted to the water in the storage basin. Immediately on its appearance this basin was cut off from the pipe line, and the supply kept going from the upper basin by means of the pipe line laid for the purpose last year. In about a fortnight's time the algae, having reached its full development, sank to the bottom and was drained off through the scour pipe. The natural aeration exercised by the wind and the addition of fresh water gradually removed the objectionable taste and smell, and in the course of a few weeks the water was again quite sweet and fit for use. An unfortunate occurrence happened at this reservoir early in March, the body of a woman who had been missing for a day or two being found in the upper basin on Sunday, 5th March. This basin was fortunately cut off from the supply at the time of the accident, and was kept so until it was emptied a short time later.

SERVICES LAID.

Valley Ward, 71; City area, 60; Roslyn Ward, 36; South Dunedin area, 25; Caversham Ward, 17; Maori Hill, 18; Bay Town, 2.—Total, 229.

SILVERSTREAM RACE.

The whole length of the race has been cleaned out during the year, and the benching cleaned and sides trimmed down. A great deal of puddling has been done owing to the dry weather cracking the sides of the race above the waterline. Shell lime was put in the race occasionally to kill the crayfish. All drains under the race have been cleaned out, and all overhanging scrub has been cut back. At the slip at three miles the race has been straightened and built up level with the corresponding ends. There has been very little movement in the slip during the year. New fencing amounting to 7 miles 20 chains has been erected. One mile 10 chains of this is rabbit-proof fencing, but the netting has been left out until such time as prices come back to normal. Noxious weeds have been cut and grubbed where necessary, and rabbit trapping and poisoning

attended to. The flumings and bywashes have all been tarred and caulked, and all crossings tarred and sanded. The ranging of the watershed has been attended to continually. Eleven sheep, seven horses, and four cows have been found dead during the year, and either burned or carted away. The letting of the right to cut cocksfoot realised £10. Very little concreting has been done during the year, as, owing to the shortage, the water could not be cut off for any length of time.

SULLIVAN DAM.

This work, which was mentioned in last year's report, was completed (except certain tidying up) during the year for a little under the estimated cost of £22,000. An additional sum of £2500 was voted by the Council to provide for levelling out certain irregularities in the bottom, and deepening the dam by one foot over the whole area. This has now been completed, and will increase the holding capacity of the dam to about thirty million gallons. As previously mentioned, the whole of the storm-water and drainage channels and spillway are concrete lined. The face of the embankment is stone pitched up to 68 feet. From there to the top it is covered with concrete flags. The pipe tunnel through the embankment usual with this class of reservoir, and which is naturally the weakest part of an embankment, has in this case been done away with, and the water is elevated over the embankment by means of a hydraulic jet, the pressure for which is obtained from the pipeline from the Leith Saddle.

WAITATI-LEITH.

The whole length of the earthenware pipeline was overhauled during the year, and a number of pipes were replaced. The upper portion of the pipeline gave less trouble this year than usual, owing to the drier season. The rainfall table shows that the rainfall on this branch of the supply has been exceptionally low. The supply of water throughout the summer kept up very well, the frequent fogs experienced during the latter end of the summer and early autumn being a great help in keeping the supply steady. On many occasions, when only dense fog occurred at the recording station, the hilltops were drenched with light rain.

WATER SUPPLIED THROUGH METERS.

Total water supplied through meters, 255,917,000 gallons; water supplied to outside boroughs, 143,021,000 gallons; increase for year of water supplied through meters, 4,420,000 gallons.

WATER SUPPLIED TO SHIPPING.

The amount of water supplied to shipping for the year was 21,081 tons, an increase of last year's amount of 39 tons.

I have the honour to be, Sir,

Your obedient servant,

W. D. R. McCURDIE,

City Engineer.

RESERVES DEPARTMENT.

ANNUAL REPORT

1915-16.



BY

D. TANNOCK. F.R.H.S.

SUPERINTENDENT OF RESERVES.

Botanic Gardens, Dunedin,
12th April, 1916.

To the Town Clerk,
Dunedin.

Sir,—

I have the honour to submit the Annual Report of the Reserves Department for the year ended 31st March, 1916, as follows:—

From a gardening point of view the past season was an ideal one. There was enough moisture to maintain the growth both of the plants and the grass, sufficient sunshine to bring flowering plants to maturity, and the fine weather encouraged people to spend much of their time in the open air; consequently, the Gardens, Woodhaugh, and the smaller reserves were well patronised.

The opening of the rhododendron dell added a new and interesting feature to the Gardens, and during spring and early summer it was quite attractive. It extends from the Cemetery road to the top of the hill near the nursery, is 300yds long, and there are 640 rhododendrons and 90 other ornamental shrubs planted in it.

This is a form of gardening which, by the use of hardy flowering trees, shrubs, and herbaceous plants, provides the maximum display with the minimum effort and annual expenditure, and by providing artistic and natural surroundings and grouping, the formal lines of beds and borders so common in gardens is obviated, and impressions created which last.

New Work and New Features Added.

Portions of the rose garden were replanted, and some new beds formed, the shrubbery border near the main entrance was extended, portion of the oldest part of the rock garden which had become overgrown was rebuilt and replanted, and one of the duck ponds which was always dirty and unsightly was remodelled; the margins were planted with bog, and moisture-loving plants and water lilies planted. The rockwork which was such a success in front of the pipes under the stage in the orchid house was extended in the palm house and the greenhouse, and planted with ferns.

Though the season was considered a dry one, and we were unable to use the City water supply for watering, the only plants which suffered were the ferns and the rock plants. This difficulty was overcome by laying a pipe from the watchman's house to the fernery, and bringing in a supply from the Leith at a high enough level to water most of the ferns, and in the case of the rock garden we fixed a hydraulic ram in the creek, drawing the supply from the pond and forcing it up to tanks on the hillside, from which it was drawn. The pressure is sufficient to maintain a satisfactory spray.

Nursery.

The nursery work was again continued on as large a scale as formerly. The elms and maples which are being grown on for street trees were lined out along the margin of the nursery, where they can develop symmetrically and become accustomed to exposure, and a start was made to raise the plants necessary for planting the Sandhills, 5000 cuttings of veronicas, olearias, and senecios being inserted.

Since the nursery was established eleven years ago 31,925 ornamental trees and shrubs have been grown and sent out for planting in the Gardens, Town Belt, and various reserves.

Town Belt.

The clearing of broom, gorse, and elderberry, and the mowing of rough grass along the sides of the roads and paths and through the young plantations, was carried out as usual. A belt of pines was planted along the south side of the Opoho ground for shelter, and mountain ash planted up the side and along the top of the Northern Cemetery. This, with a background of native bush and pines, should be a fine feature in autumn.

The plantations near Roslyn and in Jubilee Park were thinned and pruned, and the scraggy bush cut back along the front of Wallace street.

Street Plantations.

The various street plantations were pruned and cleaned, many of the evergreen shrubs being removed and replaced with deciduous ones, and new plantations formed in Heriot Row, London Street, Willow Bank, and Elm Row.

Recreation Grounds.

The recreation grounds were top-dressed, and the grass mown regularly, and as there was nothing like the same amount of play on them during the winter they are in better order than usual.

One hundred loads of soil was spread on the hockey ground in Chisholm Park, and the formation of the Unity ground, which was started as relief works, is being completed by our own men as opportunity permits. There are now 25 football and hockey grounds, six basket ball grounds, and 16 cricket pitches on the various reserves.

Children's Playgrounds.

It becomes more apparent as the empty sections in the City are filled up that for the healthy development of the rising generation playgrounds must be provided within reasonable distance of all homes. During the past year one new ground was set aside and is partly developed, and a considerable area in the Kaikorai Valley is being reserved, and will be partly equipped during the present year; but though there are six playgrounds in use there is still need for more, and areas in North-East Valley, Anderson's Bay, Caversham, and on the reclaimed land near the Railway Station should be secured with a view to future development.

Woodhaugh continues to increase in beauty, usefulness, and popularity, and many Sunday School picnics were held there this season. The grass on the playing area was mown regularly with the lawn mower, thereby greatly improving both its appearance and usefulness; gas rings for boiling the billy were erected, a flagpole put up, and a pond enclosed with netting, with a view to shifting portion of the ducks and birds from the Gardens, and increasing the interest of the place for young children.

Sanitary conveniences are required for both sexes, and it would be an advantage if we could erect a watchman's house on the ground.

An open-air gymnasium on the lines suggested by Mr Lloyd Philips was erected near Pine Hill. It provides for high jump, vaulting, long jump, balancing, and climbing poles and ropes. It should form a legitimate outlet for the desire to climb trees and swing on the branches.

Tree Planting on the Water Reserves.

Tree-planting was further extended, 241,470 being put out. The open, dry winter was suitable both for clearing and planting, and this work was carried out at a very reasonable rate.

The ground on Flagstaff is covered with scrub and fern, which has to be cleared and burned, the area to be planted has to be enclosed with rabbit netting, and the rabbits trapped before planting can commence. The result of this work means an improvement in the water catchment area at once. The ground soon becomes clean, and grass springs up, which greatly increases its water-holding capacity, and the young trees come away at once, and seldom need clearing afterwards. The effect of tree-growing on the catchment areas was very evident during the past dry season; at Whare Flat there was a nice little stream of pure water flowing into the race from every gully where a few years ago there was very little water, and any there was was contaminated, and had to be run under or over the race.

The older plantations have again made excellent growth, the gorse was cut through those at Ross Creek, but in only a few places was it spoiling the trees, and they looked healthier among the gorse than round the margins, where it was mown regularly.

In good soil and favourable situations there is no more satisfactory tree than the Oregon pine (*Pseudotsuga douglasii*). The growth is good and its timber excellent; it transplants well, and is free from disease. For wind-breaks and in exposed positions we plant *Pinus radiata* and *Cupressus macrocarpa*, in swamp place alders, and for fire-breaks silver birch or poplars.

The nursery at Ross Creek is now abandoned, and will be planted up; a further area in the Gardens was fenced, and will be brought into use next spring. There should now be no difficulty in keeping the annual output up to 250,000 a year.

The War.

Five men (D. McIntyre, R. Torrie, C. Finnerty, T. Page, and W. Murphy) joined the Main Body of the Expeditionary

Force, two more (H. McKay and G. Finnerty) have gone with the Reinforcements, and J. Knox and L. McCall have passed as fit and will be leaving shortly. I regret to report that D. McIntyre was killed at Gallipoli, and that T. Page and R. Torrie died of wounds. All the single men in this Department except three have either enlisted or been rejected as unfit.

NURSERY STOCK, 1916.

Trees and Shrubs lined out	...	...	...	...	5,309
Trees and Shrubs lined in	...	...	...	...	1,085
Trees and Shrubs in cutting beds	5,000
Herbaceous and Alpine Plants	6,325

Total	17,719
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SEEDS AND PLANTS INWARDS.

Seeds purchased (packets)	120
Seeds donated (packets)	162
Plants purchased	...	...	...	...	185
Plants donated	...	...	...	...	1,714

SEEDS AND PLANTS OUTWARDS BY EXCHANGE.

Seeds (packets)	...	...	...	...	...	50
Plants	...	...	...	...	...	230

PLANTS RAISED AND SENT OUT TO GARDENS AND RESERVES.

Bedding Plants	...	...	...	...	...	50,500
Pot Plants for the Winter Garden	...	...	...	...	...	1,700
Trees and Shrubs to Gardens	...	...	...	...	...	819
Trees and Shrubs to Reserves	3,359
Trees and Shrubs to Cemeteries	162

Total	56,530
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TREES PLANTED OUT, SEASON 1915.

WHARE FLAT—

Oregon	29,480
Larch	7,300
Oaks	3,000
Alders	...	...	...	...	...	3,000
Pinus radiata	...	...	...	...	...	5,300
Pinus austriaca	...	...	...	...	...	3,750
Pinus strobus	...	...	...	...	...	5,050
Pinus laricio	...	...	...	...	...	1,450
						<hr/> 60,580

PAUL'S, FLAGSTAFF—

Oaks	...	...	...	8,000	
Pinus rigida	...	...	...	6,550	
Abies alba	...	...	...	10,500	
Alders	...	...	...	34,850	
Pinus ponderosa	...	...	...	23,850	
Pinus laricio	...	...	...	600	
Pinus sylvestris	...	...	...	7,450	
Pinus radiata	...	...	...	10,490	
Pinus muricata	...	...	...	1,175	
Macrocarpa	...	...	...	7,800	
Ash	...	...	...	7,200	
Abies menziesii	18,750	
Abies excelsa	12,000	
Oregon	2,250	
				<hr/>	151,375

LEITH VALLEY—

Alders	23,700
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SOUTHERN RESERVOIR—

Pinus muricata	500
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ROSS CREEK—

Cedars	380
Red Wood	580
Gums	4,530
				<hr/>	5,490

Total Trees planted	<hr/> 241,470 <hr/>
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SEEDLING TREES IN THE GARDENS NURSERY.

Pinus radiata	...	116,000	valued at	£116	0	0
Pinus ponderosa	...	10,000	"	10	0	0
Cupressus macrocarpa	...	81,000	"	81	0	0
Cupressus Lawsoniana	...	1,600	"	1	10	0
Pinus strobus	...	4,500	"	4	10	0
Juniperus virginiana	...	2,000	"	2	0	0
Robinia pseudo-acacia	...	4,000	"	4	0	0
Sequoia sempervirens	...	500	"	0	10	0
Tsuga canadensis	...	1,000	"	1	0	0
				<hr/>	<hr/>	<hr/>
Total	...	220,600	"	£220	10	0

TREES LINED OUT IN GARDENS NURSERY.

Pinus strobus	...	...	2,500	valued at	£7 10 0
Pinus ponderosa	...	...	5,000	"	15 0 0
Pinus taeda	...	...	1,000	"	3 0 0
Pinus laricio	...	...	45,000	"	135 0 0
Picea sitchensis	...	...	59,000	"	177 0 0
Abies alba	...	...	60,000	"	180 0 0
Larix leptolepsis	...	...	3,000	"	9 0 0
Larix europæa	...	...	2,000	"	6 0 0
Cupressus Lawsoniana	...	...	5,000	"	15 0 0
Pseudo-tsuga Douglasii	...	...	4,500	"	13 10 0
Robinia pseudo-acacia	...	...	1,500	"	4 10 0
Alnus glutinosa	...	...	14,000	"	42 0 0
Populus pyramidalis	...	...	5,000	"	15 0 0
Fraxinus excelsior	...	...	19,000	"	38 0 0
Quercus pedunculata	...	...	3,000	"	9 0 0
Sequoia sempervirens	...	...	500	"	3 0 0
Fagus sylvatica	...	...	7,000	"	28 0 0
Elms, various species	...	...	9,000	"	36 0 0
Various species	...	...	3,000	"	12 0 0
Total	...	...	249,000	"	£748 10 0

METEOROLOGICAL RECORDS, APRIL, 1915, TO MARCH, 1916.

	Temperature.			Rainfall.	
	Mean.	Maximum.	Minimum.	Inches.	Days.
April	50.7°	57.9°	43.5°	1.42	12
May	47.8°	54.0°	41.7°	2.45	11
June	43.1°	49.0°	37.3°	2.18	11
July	45.5°	51.9°	39.2°	.75	10
August	47.0°	53.1°	40.7°	.78	5
September	51.8°	60.2°	43.4°	.98	7
October	54.2°	61.8°	46.7°	4.19	12
November	54.1°	62.3°	45.9°	3.01	15
December	56.9°	64.8°	49.1°	2.65	10
January	57.6°	66.2°	49.0°	1.00	13
February	60.4°	69.0°	51.8°	2.17	13
March	58.8°	65.7°	51.9°	2.24	9

MEAN TEMPERATURE FOR YEAR.

Mean.	Maximum.	Minimum.
52.3°	59.6°	45.0°

RAINFALL FOR YEAR.

23.82 inches fell on 128 days.

RAINFALL AT PAULS AND WHARE FLAT**For Year ended 31st March, 1916.**

April	...	1.45	inches
May	...	3.13	"
June	...	1.33	"
July	...	.96	"
August	...	.45	"
September	...	1.14	"
October	...	4.37	"
November	...	3.12	"
December	...	2.36	"
January	...	.74	"
February	...	1.62	"
March	...	3.12	"

Total	23.88
-------	-------

RAINFALL AT LEITH VALLEY**For Year ended 31st March, 1916.**

April	...	2.06	inches
May	...	2.23	"
June	...	2.60	"
July	...	1.31	"
August	...	.75	"
September	...	1.36	"
October	...	4.97	"
November	...	3.27	"
December	...	3.54	"
January	...	1.23	"
February	...	2.14	"
March	...	3.78	"

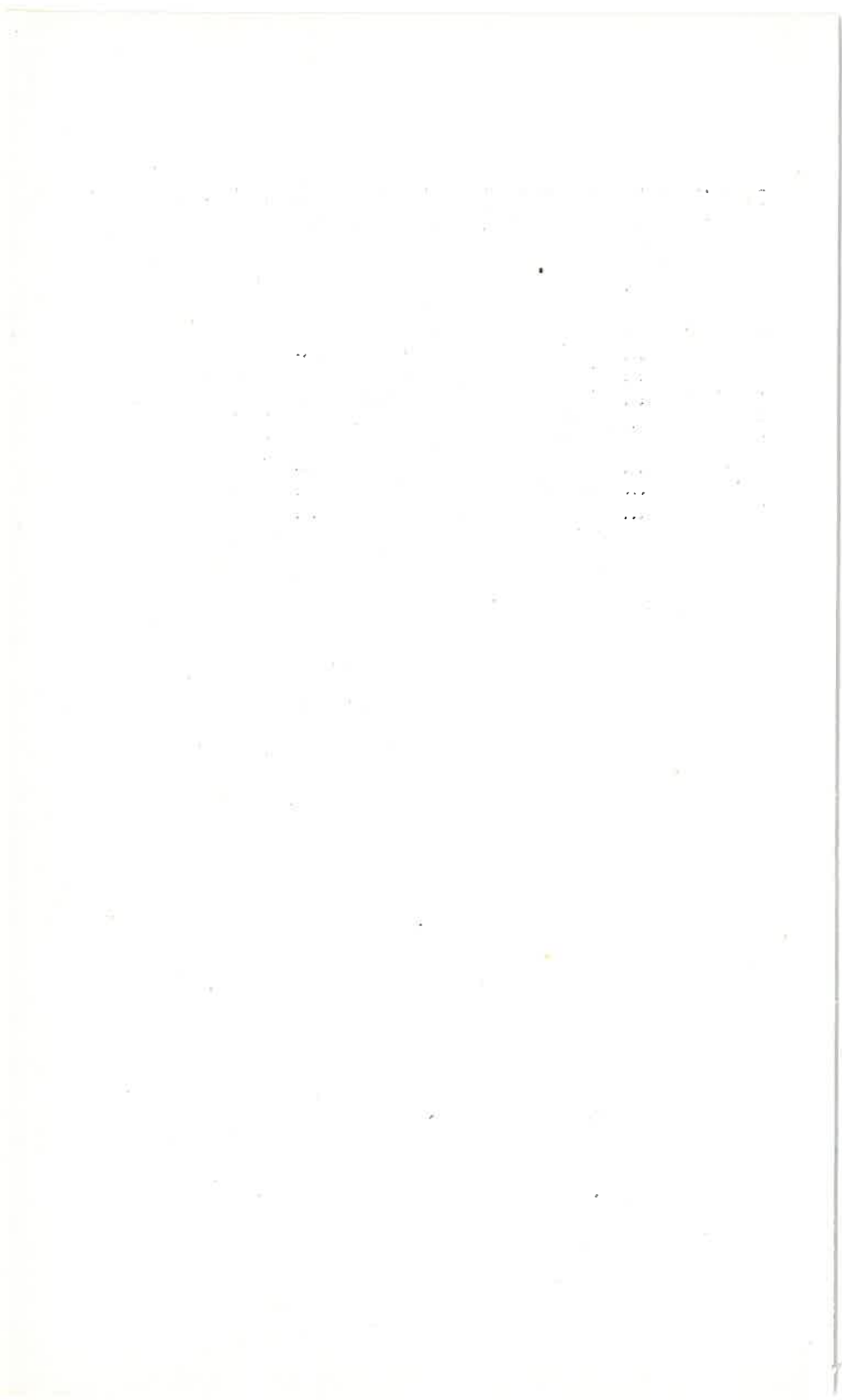
Total	29.32
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I have the honour to be, Sir,

Your obedient servant,

D. TANNOCK,

Superintendent of Reserves.



PUBLIC LIBRARY.

ANNUAL REPORT

1915-16.



BY

W. B. MCEWAN,
LIBRARIAN.

Public Library, Moray place,
Dunedin, 1st April, 1916.

To the Town Clerk, Dunedin.

Sir,—I have the honour to submit the report of the Public Library Department for the year ended 31st March, 1916.

REFERENCE LIBRARY.

In the year under review the Reference Library has suffered by reason of the great European War. The large number of students who have gone to take their place in the fighting forces of the Empire has seriously affected the attendance. The total number of visitors was 21,049, a daily average of 70 readers, as compared with 84 per day in 1914-15. The comparative quietness enabled the staff to overtake in some measure the cataloguing of the books in the McNab Library. Over 1300 volumes were classified and catalogued during the year, and 186 volumes were added to the stock of the Reference department, which now amounts to a total of 7632 volumes, including the books catalogued in the McNab room.

In comparison with last year there has not been the demand for books dealing with what may be termed War subjects, but the sections in Useful Arts and Literature still maintain their high place in the public wants.

As in former years, a number of purchases were made from the Dunedin Savings Bank donation.

At the annual stock-taking six volumes were missing from this department.

LENDING LIBRARY.

The Lending Library was closed for stock-taking and cleaning from December 6, 1915, to January 4, 1916. The result of the stock-taking was very satisfactory, there being only one class book and 13 novels missing. The books were thoroughly examined, 291 volumes which were too dilapidated for future use were withdrawn, and 145 volumes were set aside for re-binding. The readers' tickets were suspended, each borrower being required to make application for a new ticket; and 4241 tickets have been issued since the date of reopening. A large number of applications are being received from the residents in the late boroughs of Maori Hill, Mornington, and Bay Town District.

In view of so many readers joining the Lending Library by reason of the amalgamation movement in the City, the Committee have under consideration the advisability of extending the Library building, so as to provide extra accommodation in the Lending Library. It is recognised that this particular department is too small for the requirements of Greater Dunedin, but the problem is a difficult one to solve; and whether branches should be erected in the suburbs, or the present building extended, has yet to be decided. Plans for the suggested additions have been submitted by Mr G. W. Gough, City Building Surveyor.

The stock in the Lending Library now stands at 14,452 volumes, of which number 7296 are fiction, and 7157 are class books. The books added during the year numbered 1304, and 137,387 volumes were issued for home reading. Several volumes were destroyed by order of the Health Department, under the regulation of dealing with infectious diseases.

JUVENILE LIBRARY.

The attendance in the Juvenile Library has been well maintained, though the figures are slightly under those of last year. The falling-off may be accounted for by the splendid weather conditions which have prevailed, the interest in the patriotic meetings, and the increasing number of places of amusement in the City. A fine series of lectures had to be abandoned on account of the Queen Carnival; but it is hoped that arrangements will be made to renew them during the incoming winter months. There are 2981 volumes in this department, 14,311 books were issued for home reading, and there are 471 borrowers on the roll. Four volumes were missing from the stock at the annual stock-taking.

READING ROOMS.

In common with the other departments the attendance at the Newspaper and Magazine Rooms has decreased; 200,569 persons visited the rooms, as compared with 219,295 visitors in 1914-15, which was the record year. The war has affected this department, the supplies of newspapers and magazines have been very irregular, the lack of shipping facilities seriously interfering with our contractor's arrangements. As was noted last year a number of magazines have ceased publication, while a number of periodicals are being published monthly instead of weekly.

DONATIONS.

The donations received include Bishop Percy's "Ballads and Romances" (three volumes), from Mr George Joachim; New Zealand and Otago Gazettes, from Mr J. C. Stephens; and complete sets of the works of Jonathan Swift, Edmund Burke, and Samuel Johnson, from Miss McGlashan, Balmac-ewen. A number of volumes were donated by other private persons. The New Zealand Government's official publications were received, also the publications of the Australian Government.

PUBLIC ATTENDANCE.

A schedule of the attendance is attached in which is shown the comparison with last year.

STAFF.

Miss S. B. Clothier resigned on taking up her residence in Wellington, and Miss Emily Turnbull on the occasion of her marriage. Miss Marjorie E. Gibbs, who had completed her probation, was appointed to the staff, and Miss Doris MacFarlane joined on probation.

GENERAL REMARKS.

The Book Committee has had regular meetings for the purpose of selecting books for the department. The contract for the supply of books, newspapers, and magazines was let to Messrs Whitcombe and Tombs, and I have to acknowledge the attention received from Messrs R. J. Stark and Co., during the period they have held the contract. Our thanks are due to the proprietors of the Evening Star for their kindness in publishing matter of interest to our readers.

In conclusion, I beg to thank the Committee for its interest and encouragement, and I have also to thank the members of the staff for their earnest endeavours and loyal co-operation.

I have the honour to be, Sir,

Your obedient servant,

W. B. McEWAN,

Librarian.

APPENDIX No. 1.

GENERAL DATA.

Newspaper and Magazine Rooms ... Opened Dec. 2, 1908
 Reference Library ... Opened Nov. 22, 1909
 Juvenile Reading Room ... Opened Mar. 12, 1910
 Juvenile Lending Library ... Opened June 20, 1910
 Adult Lending Library ... Opened July 3, 1911
 Juvenile Library opened as separate room Sept. 16, 1912

APPENDIX No. 2.

Hours of Attendance.

NEWSPAPER AND MAGAZINE ROOMS.

Daily ... 9 a.m. to 10 p.m.
 Sunday Hours ... 2 to 5, 7 to 9 p.m.
 Closed on Christmas Day, New Year's Day, Good
 Friday, and Labor Day.

REFERENCE LIBRARY.

Daily ... 10 a.m. to 9.30 p.m.
 Closed on Sundays and Public Holidays.

LENDING LIBRARY.

Daily ... 10 a.m. to 9 p.m.
 Closed on Sundays and Public Holidays.

JUVENILE LIBRARY.

Daily ... 3 to 6 p.m.
 Saturdays ... 10.30 to 12.30, 2 to 6 p.m.
 Closed on Sundays and Public Holidays.

APPENDIX No. 3

Newspaper &

		Magazine Rooms	Reference Library	Total 1915-16	Total 1914 15
1915—April	...	16,988	1,701	18,689	19,358
May	...	18,328	1,833	20,161	20,679
June	...	16,843	1,923	18,766	21,488
July	...	17,789	1,704	19,493	23,742
August	...	17,382	1,713	19,095	21,725
September	...	16,937	1,966	18,903	20,577
October	...	16,557	2,144	18,701	21,573
November	...	16,058	1,689	17,747	20,760
December	...	14,760	1,499	16,259	17,607
1916—January	...	16,058	1,573	17,631	18,422
February	...	15,510	1,332	16,842	18,950
March	...	17,359	1,972	19,331	20,204
		<u>200,569</u>	<u>21,049</u>	<u>221,618</u>	<u>245,085</u>

JUVENILE DEPARTMENT.

		1915-16	1914-15
1915—April	...	608	519
May	...	512	543
June	...	544	626
July	...	538	646
August	...	482	643
September	...	582	628
October	...	581	627
November	...	569	509
December	...	146	374
1916—January	...	604	478
February	...	527	390
March	...	597	555
		<u>6,290</u>	<u>6,538</u>

APPENDIX No. 4.

Stock of Books in the Library March 31st, 1916.

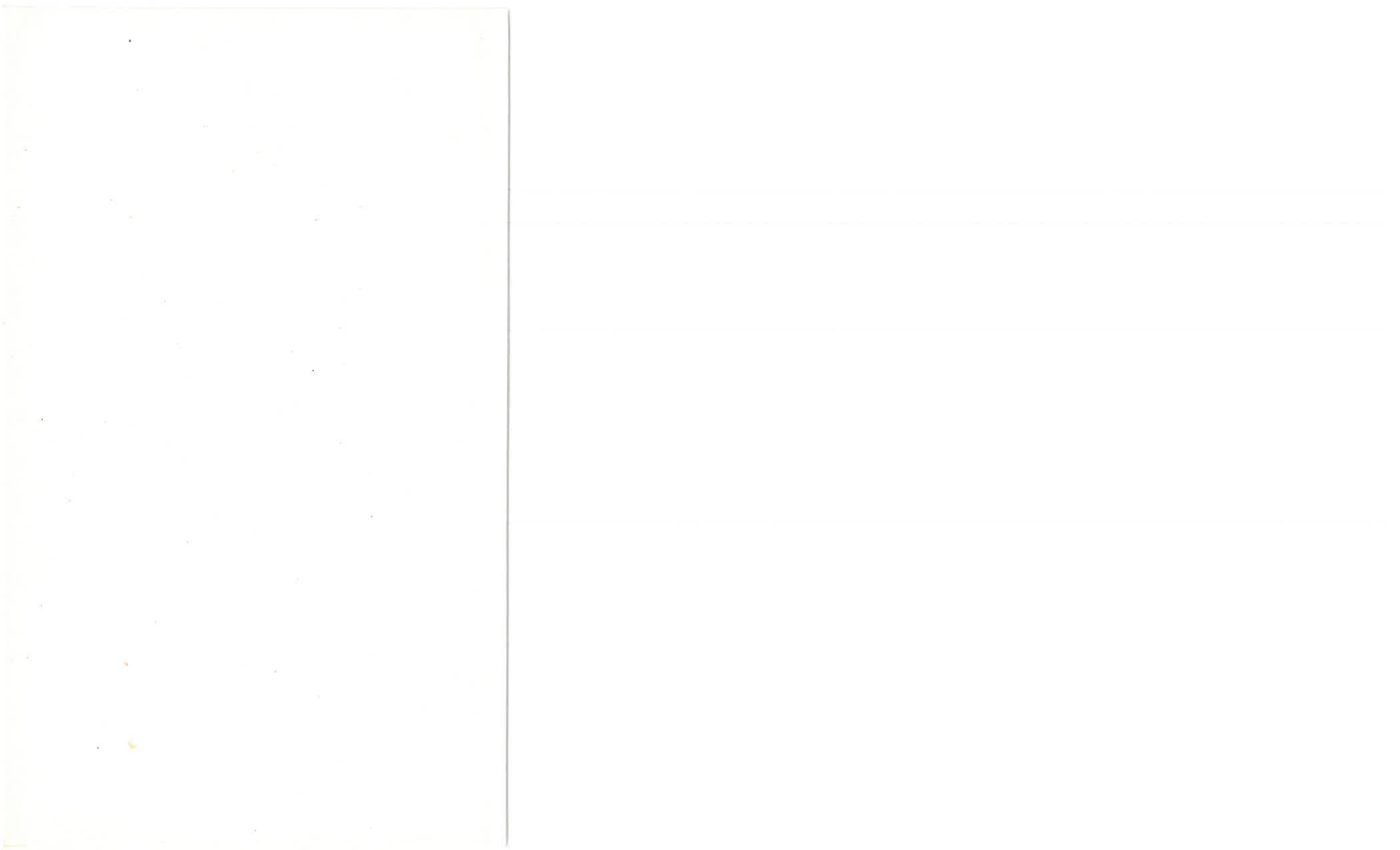
	Reference Library	McNab Library	Lending Library	Juvenile Library
General Works	159	361	9	83
Philosophy	281	3	194	4
Religion	420	88	283	32
Sociology	668	182	693	47
Philology	127	4	8	—
Natural Science	490	81	460	174
Useful Arts	652	26	623	89
Fine Arts	573	3	367	52
Literature	1,693	33	1,019	84
History and Travel	994	553	2,036	276
Biography	221	20	1,464	114
Fiction	...	...	7,296	2,037
	<u>6,278</u>	<u>1,354</u>	<u>14,452</u>	<u>2,982</u>
Reference Library	...	...	6,278	
McNab Library	...	...	1,354	
Lending Library	...	...	14,452	
Juvenile Library	...	...	2,982	
Total	...	...	<u>25,066</u>	

APPENDIX No. 5.

Books Circulated.

		Adult Library	Juvenile Library
Philosophy and Religion	...	861	6
Sociology ...	...	1,240	94
Natural Science	...	675	194
Fine and Useful Arts	...	3,820	241
Literature	...	2,391	102
History and Travel	...	6,866	356
Biography	...	2,433	158
Fiction ...	...	119,101	13,160
		<u>137,387</u>	<u>14,311</u>
Adult Library	...	137,387	
Juvenile Library	...		14,311
		<u>151,698</u>	

Total number of books circulated, 151,698, and of this number 19,437 volumes were other than Fiction.



ELECTRIC POWER & LIGHTING
DEPARTMENT.

ANNUAL REPORT
1915-16.



BY
M. C. HENDERSON,
CITY ELECTRICAL ENGINEER.

City Electrical Engineer's Office,

Dunedin, April 17, 1916.

G. A. LEWIN, Esq., Town Clerk, Dunedin.

Dear Sir,—I have the honour to submit herein a brief review of the working of this department during the year ended March 31, 1916.

A perusal of the table accompanying this report shows very clearly the progress made during the past year compared with previous years, and from this it will be seen that, when all the circumstances are taken into consideration, it has been well maintained. While the new consumers connected, as well as the installed capacity of the new load, falls behind the record of the two previous years, the number of units sold is considerably in excess, and gives no indication of bad trade. The financial aspect is fully dealt with by the City Treasurer, and need not be mentioned here.

As there have been no extensions to the generating plant, the construction work has been confined almost entirely to extensions to the overhead reticulation in order to supply the demands of new consumers. At the present time the extension of the 3000-volt line from Port Chalmers to Sawyer's Bay is in hand, to supply the tannery with power and the private houses with light.

Mention was made in last year's report that tenders had been called for the reconstruction of Halfway Bush Substation. The tender of Messrs Armstrong and Moore at £2358 10s was accepted, and the work was commenced in August, 1915. Owing to the necessity for maintaining uninterrupted supply during the alterations, it was anticipated that the work would be prolonged, and that a considerable amount of it would have to be carried out on Sundays. Aided by remarkably fine weather the contractors made excellent progress, and the work was practically completed in five months, and the only interruption to supply was for a period of ten minutes, a record that speaks well for all concerned. Owing to the dislocation of oversea trade some of the switch

gear necessary to complete the work is not yet to hand, so that part of the rewiring has still to be carried out; but the risk of serious fire from the transformers has now, I believe, been entirely removed. Those who knew the cramped nature of the old building and its fire risk will readily understand the improvement that has been effected, as it is now possible to carry out the work of the station in perfect safety, and a saving of valuable time will also result in cases of shut down. It was anticipated that the cooling of the transformers in their cells would be somewhat more difficult than before, but the opposite is found to be the case, as there seems to be a natural draught created by the new type of building.

A feature of the year's work has been the remarkable freedom from trouble on the main transmission lines, as there has not been a case of shut down from this source during the twelve months. A new method of testing for faulty insulators has lately been devised in America, and our experience goes to prove its efficacy; but apart from that the record of the past year speaks well for the material and construction of the line.

In spite of the dry summer and the heavy load that is now being carried at Waipori compared with what it was in the autumn of 1911, comparatively small use was made of the storage water. As past experience shows, however, that dry years come in cycles, it is safe to assume that next summer will be drier than this, and such a contingency should be anticipated by the completion of the extension to Lake Luella, work on which was suspended on the break-up of the drought of 1911.

If any assistance is to be obtained next summer from this increased storage, the work must be put in hand as soon as the winter frosts are over, so that the dam may be filling up while the extension is in progress.

The new road has now been metalled from end to end, and it is possible to travel from Dunedin right to the Falls by motor car in about two and a-half hours, a marked change from the best that could be done under the old conditions, and one that is highly appreciated by all who have occasion to visit the Power Station, and especially by the staff at the Falls.

As a consequence of the efficiency and long life of the nitrogen-filled tungsten lamps which are now being used for street lighting purposes, the Electric Power and Light Committee have lately been able to make an offer to the Municipal Department under which the lighting of the City will be very much improved. The original metal filament lamps used in the streets were 60 c.p.; under the new arrangement all street lamps will be of 100 c.p. A large section of the tram track will be lit all night, while the outlying portions of the City will be lit until midnight, and again from 4 a.m. till daylight. In my opinion this is a move in the right direction for a city of the size of Dunedin, and will be highly appreciated by all who require to use the streets at these hours.

During the year a change has been made in the method of rendering and collecting accounts, whereby the meter readers are authorised to accept payment and give a receipt, and that this is a great convenience to the consumers is borne out by the fact that a large and increasing number of them now pay their account to the readers.

As a result of a report submitted in September last on the financial position of the department, an instruction was given to revise the rates charged by the department for various classes of service with a view to obtaining the best results from the present installation. An amended schedule was submitted to and approved by Council. The chief alteration in the power rates is the insertion of a clause whereby a consumer who requires unrestricted supply during the hours of heavy load—that is between 8 a.m. and 5 p.m.—must pay a minimum revenue per horse-power of his demand. This is a very common condition in water-power plants, and is in my opinion a sound principle. At the same time provision has been made to meet the case of consumers who, at perhaps a little inconvenience to themselves, are prepared to take their supply at times of light load. In this way our load factor is improved—or, in other words, the present plant is capable of earning a larger revenue for the same maximum load.

The department's contribution to the oversea forces has been increased to 16 during the year, and, while we have been proud to see them go, the departure of so many skilled men from an industry for which it has always been a difficult task to find experienced men, has been a source of anxiety.

Following is a list of employees who have enlisted and are now in camp or on active service:—

T. MOONEY	J. RYAN
A. MACKIE	P. SHEEHAN
E. HAYDON	J. JEPHSON
J. CORMACK	F. GILMORE
T. ANDERSON	W. ANDERSON
T. BANKS	T. OVERTON
E. JONES	L. MACLEAN
O. B. REYNOLDS	N. ARUNDEL

Several of them have been wounded, fortunately none seriously; one has been invalided home, and one, F. Pearson, met his death at Gallipoli a few hours after he landed.

I would take this opportunity of expressing my appreciation of the co-operation of all the employees of this department throughout the year, as I am well aware that the departure of so many members on active service has thrown considerably greater responsibility upon those who are left, a responsibility which they have willingly undertaken as assisting in some measure in carrying on the war.

I have the honour to be, Sir,

Your obedient servant,

M. C. HENDERSON,

City Electrical Engineer.

SYSTEM OF GENERATION AND DISTRIBUTION.

Source of Power, Waipori Falls.
 System, alternating 3 phase 50 cycle.
 Generating Voltage, 2,400.
 Transmission Voltage, 35,000.
 Length of E.H.T. Transmission Line, 37 miles.
 Distribution Voltage, 3,300.
 Supply Voltage, 3,000 and 400 3-phase, 230 single-phase.

FINANCIAL POSITION.

March 31st, 1916.

	£	s.	d.
Amount of Loan Sanctioned	479,200	0	0
Amount Borrowed	479,200	0	0
Amount Expended	481,530	0	0

RESULT FOR YEAR ENDING MARCH 31ST, 1916.

REVENUE—

	£	s.	d.
Private Lighting	26,487	11	11
Public Lighting	4,580	17	10
Power and Heating	23,725	19	3
Tramway Supply	7,204	12	3
Other Sources	3,063	5	9
Total Revenue	65,062	7	0
Total Costs	18,289	14	4
Interest on Loans	20,101	19	3
Gross Profit before providing for Interest, Depreciation, and Renewal Fund ...	46,772	12	8
Prop. Discount on Loans	336	3	0
Depreciation	4,030	0	0
Renewal Fund	10,809	12	7
Financial Result—Profit	11,494	17	10

ANALYSIS OF COSTS.

	£	s.	d.
Fuel Oil	227	11	8
Oil, Waste, etc.	52	1	1
Wages of Workmen	10,863	11	6
Repairs and Maintenance of Hydraulic Works, Buildings, Plant, Instruments, Tools, Mains, Meters, etc. ...	1,275	3	9
Public Lighting Maintenance and Material...	239	1	1

GENERAL COSTS.

Rents and Rates, Insurance, Management, Proportion of Salaries Town Hall Staff, Salaries Engineers' and Clerical Staff, Printing and General Charges ...	4,897	0	10
War Pay	735	4	5

CAPITAL CHARGES.

Interest on Loan	20,101	19	3
-------------------------	--------	----	---

GENERATION AND DISTRIBUTION.

				Pence per unit sold.	
				1916.	1915.
	£	s.	d.		
1. Fuel Oil	227	11	8	.0045	.0027
2. Oil, Waste, etc. ...	52	1	1	.001	.0011
3. Wages	10,863	11	6	.215	.233
4. Repairs and Maintenance of Hydraulic Works, Buildings, Plant, Instruments, Tools, Mains, Meters, etc.	1,275	3	9	.0253	.0499
Works Costs ... ..				.246	.287

GENERAL COSTS.

5. Rents, Rates, Management, Salaries Town Hall Staff, Salaries Engineers' and Clerical Staff, Printing and General Charges	4,897	0	10	} .1119	.114
6. War Pay	735	4	5		
Total Costs ... ..				.358	.402

CAPITAL CHARGES.

Interest on Loan ...	20,101	19	3	.399	.458
----------------------	--------	----	---	------	------

SUPPLY RECORDS.

	1916.	1915.
Kilowatts connected during year ...	1,470	1,771
Total kwts. connected 31st March ...	14,192	12,722
Units Sold—Private Lighting ...	1,802,577	1,642,977
Public Lighting ...	290,920	249,803
Power and Heating ...	7,570,513	6,488,003
Tramways ...	2,415,915	2,618,825
Total ...	12,079,925	10,999,608
Capacity of Plant (kilowatts) ...	6,000	6,000
Maximum Load Reached (average kilowatts $\frac{1}{2}$ -hour) ...	4,580	4,350
Load Factor ...	31.4	30.1

AVERAGE PRICE PER UNIT SOLD.

Private Lighting	3.526	3.35
Power and Heating ... ..	.752	.739
Tramways ... ..	.715	.715
Total Supply	1.292	1.25

CONSUMERS.

Consumers connected during year ...	922	1,020
Total Consumers connected 31st March	5,937	5,015

MOTORS.

Motors connected during year ...	83	133
Total Motors connected 31st March ...	928	845
H.P. Motors connected during year ...	686	878
Total H.P. Motors connected 31st March	7,770	7,084

Year of Working.	Capacity of Plant K.Ws.	Units Sold.	Revenue.	Gross Profit.	% Gross Profits to Capital Expenditure.	Total Working Costs.	Interest.	Renewal Fund Charge for Year.	Total Renewal Fund at end of Year.	Depreciation Charges for Year.	Total Depreciation Account at end of Year.	Net Profit.	Total K-Ws Connected.	K-Ws Connected during Year.	Total consumers connected at end of Year.	New Consumers connected during Year.	Total number Motors at end of Year.	No. Motors connected during Year.	Total H.P. Motors at end of Year.	H.P. Motors connected during Year.	Average Price Per Unit Sold
1st 1907-8	2000	3,624,650	£ 9,977	£ ..	..	£ 7,074	£ 7,282	£ ..	£ ..	£ ..	£ ..	£ Loss 4,380	£ 2,187	2,187	211	211	106	106	890	890	.66
2nd 1908-9	2000	4,850,685	19,775	10,363	4.65	9,454	9,466	..	..	..	..	Profit 854	4,244	2,057	444	233	203	97	2,095	1,205	.97
3rd 1909-10	2000	6,855,844	28,112	16,789	6.88	11,575	12,407	..	..	5,125	..	Loss 994	5,381	1,137	820	376	278	75	2,998	903	.98
4th 1910-11	4000	8,140,104	33,530	21,210	6.85	12,590	12,439	6,744	6,744	2,823	7,948	Loss 1,066	6,850	1,469	1,347	527	393	115	3,974	976	.99
5th 1911-12	4000	9,184,990	38,710	25,373	7.13	18,660	18,558	7,549	13,981	2,983	10,881	Profit 1,007	7,875	1,025	2,037	690	471	78	4,500	526	1.01
6th 1912-13	4000	9,578,397	43,721	29,005	7.17	14,872	16,216	8,365	22,362	3,186	14,067	Profit 1,079	9,141	1,266	2,986	949	559	88	5,133	633	1.09
7th 1913-14	6000	10,155,471	51,940	32,373	7.12	19,672	18,471	9,452	31,794	3,852	17,419	Profit 992	10,951	1,810	3,995	1,009	712	153	6,206	1,073	1.22
8th 1914-15	6000	10,999,608	57,627	38,828	8.023	19,135	20,661	10,145	42,729	3,825	21,244	Profit 3,860	12,722	1,771	5,015	1,020	845	133	7,084	878	1.25
9th 1915-16	6000	12,079,925	65,062	46,772	9.71	18,289	20,438	10,809	51,720	4,030	25,274	Profit 11,494	14, 92	1,470	5,937	922	928	83	7,770	686	1.292

TRAMWAYS DEPARTMENT.

ANNUAL REPORT

1915-16.



BY

C. F. ALEXANDER,
TRAMWAYS MANAGER.

Car Depot, Market street,
Dunedin, 18th April, 1916.

G. A. LEWIN, Esq.,

Town Clerk, Dunedin.

Sir,—

Herewith Summary and Traffic Records in connection
with this department for year ended 31st March, 1916; also
showing comparison with 1915.

SUMMARY.

Electric traction inaugurated 24th December, 1903.

	1915.	1916.
Single Lines open for traffic	24mls. 41chs.	24mls. 41chs.
Borrowing Powers ...	£300,000	£300,000
Borrowing Powers Exercised	£300,000	£300,000
Capital Expenditure ...	£321,366	£316,604
Capital Expenditure per mile of Single Track ...	£13,111	£12,917

REVENUE.

	£	s.	d.	£	s.	d.
Traffic Receipts ...	76,534	0	10	77,042	6	9
Other Receipts ...	891	6	3	645	17	2
Total Receipts ...	£77,425	7	1	£77,688	3	11

WORKING EXPENSES.

	£	s.	d.	£	s.	d.
Traffic Expenses ...	24,222	17	4	24,196	9	7
General Expenses ...	2,720	14	1	2,782	9	2
Repairs and Maintenance ...	8,385	7	4	8,127	6	10
Power Expenses ...	7,673	10	8	7,867	10	2
Total Working Expenses ...	43,002	9	5	42,973	15	9
Gross Profit on Working Ex- penses ...	34,422	17	8	34,714	8	2

DEDUCTIONS FROM GROSS PROFITS.

	£	s.	d.	£	s.	d.
Interest ...	13,667	5	3	13,338	14	6
Renewal Fund ...	11,083	15	4	11,049	12	0
Depreciation ...	3,136	0	0	3,090	0	0
Accident Insurance Fund ...	750	0	0	750	0	0
War Pay ...	356	3	6	1,514	2	6
Sundries ...	174	1	7	131	13	10
Total Deductions from Gross Profits ...	29,167	5	8	29,874	2	10
Surplus ...	5,255	12	0	4,840	5	4

OPERATING EXPENSES PER CAR MILE.

	1915.	1916.
Traffic	4.456d	4.48d
General ... ..	.5d	.54d
Repairs and Maintenance ...	1.543d	1.50d.
Power	1.411d	1.45d.
Total Operating Expenses per car mile	7.91d	7.97d
Percentage of Working Expenses to Total Receipts	55.54%	55.31%

BOARD OF TRADE UNITS.

Units used	1,880,441	1,876,784
Cost per Unit ... ..	.979d	1.00d
Units used per car mile ...	1.44	1.44

TRAFFIC RECORDS.

Estimated Population Served ...	42,000	42,000
Car Mileage	1,304,431	1,296,632
Passengers Carried	14,699,011	14,849,751
Passengers Carried per Car Mile	11.26	11.45
Average Fare per Passenger ...	1.24d	1.24d
Receipts per Car Mile	14.08d	14.37d
Average Car Miles per day per car in traffic	136	135
Traffic Revenue per mile of Single Track	£3,122	£3,143
Average Traffic Revenue per head of population served...	£1 16s 5d	£1 16s 8d
Operating Expenses per passenger	.70d	.69d
Average Distance for one penny cash fare	79 5-6chs.	79 5-6chs.
Average Cash Fare charged per mile	1.002d	1.002d
Average Speed per hour	9 miles	9 miles
Average Total Car Hours per day	394	399
Average Number of Cars in daily use	26.2	26.2
Number of Electric Cars in stock	49	49

I have the honour to be, Sir,

Your obedient servant,

CHAS. F. ALEXANDER,

MANAGER.

