

ADMINISTRATION REPORT

OF THE

CORPORATION OF MADRAS

FOR

1915-1916.

செப்பனிருவர் பெயர்

No 012000

செப்பனிருவதற்காக எடுத்த

கொள்ளப்பட்ட நாள் 1915

1916

செப்பனிரு முடிந்த நாள் 1916

1916

தாபார்க்கும்

சு.பா.எ.

கையொப்பம்.

1916
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Madras:

PRINTED BY THOMPSON & CO.,

33, ROYAL BROADWAY.

1916.

2

CONTENTS.

Introduction	...	Pages 1 to 6
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GENERAL.

	Paragraph.	Paragraph.
Changes in the constitution of the Corporation	1	Committees and Sub-Committees ... 11
Executive Officers	8	Tramways ... 12
Meetings	9	Resolutions of the Corporation ... 13
		Revenue Administration ... 14
		Finance ... 15

RECEIPTS.

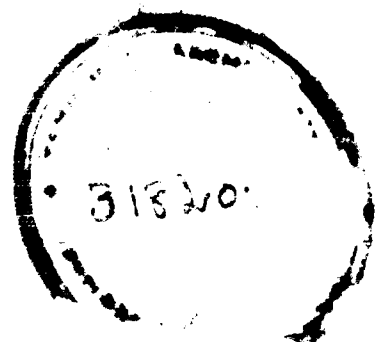
Tax on Professions, Arts, Trades and Callings	17	Grass Farm ... 41
House, Water and Drainage and Lighting Taxes combined	21	Moore Market ... 42
Tax on Vehicles with Springs and on Animals	29	Private Markets ... 44
Tax on carts and other Vehicles without springs	33	Licence fees on import of timber and firewood ... 45
Tolls on Vehicles and animals entering municipal limits	36	Distrain fees ... 47
Revenue derived from Municipal property and towers apart from taxation	37	Fines under Municipal and other Acts ... 48
Payment for occupation of Municipal lands	39	Fees for licenses, &c. ... 49
		Interest on investments ... 50
		Grants and Contributions ... 51
		Payment for water supplied for non-domestic purposes ... 52
		General incidence of taxation ... 54
		Advance Account ... 55

EXPENDITURE.

Communications	56	Contributions ... 101
Buildings	64	Health Department ... 111
Special Works Department	71	Anti-Malarial Operations ... 112
Restricted proposals	72	Watering roads ... 113
Filter beds	74	Lighting ... 114
Water distribution system	79	Avenues ... 115
Drainage works	80	Public Parks ... 116
New Sewage Farm	81	Fire ... 122
Drainage—ordinary	82	Supervision and Management ... 123
Water-supply—ordinary	84	Repayment of debt ... 124
Miscellaneous works	85	Refund of other than current collections ... 125
Administration	86	No. II Account ... 126
Education	90	Workshop ... 127
Hospitals and Dispensaries	94	

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N16



CONTENTS.

APPENDIX I.

	Page.
I. Statement of Revenues and Receipts	42—45
II. Do. of Expenditure	46—57
Do. of Liabilities and Assets	58—62
II-A. Details of allotment for expenditure on public works	63—68
IV-A. Demand, collection and balance statement of taxes, &c. (Current)	69—91
IV-B. Do. do. do. (Arrear)	92
IV-C. Classification of assessments of Profession Tax	93
IV-D. Outstanding arrears yearwar under the combined property taxes	94
IV-E. Gradation List of the combined rates on buildings and lands	95
IV-F. Classification of assessments under tax on vehicles with springs and on animals	96
IV-G. Receipts from the license fees on import of timber and firewood	97
IV-H. Processes adopted for realization of the various taxes	98
IV-J. Analysis of the collection of each tax at each stage	99
Table No. 1. Statement showing current demand, collection, remission and balance, under the combined property taxes as compared with the corresponding figures for 1913-14 and 1914-15	100
" 2. Statement showing demand, collection, remission and balance, under the combined arrear property taxes as compared with the corresponding figures for 1913-14 and 1914-15	100
" 3. Statement showing the number of vehicles and animals assessed for 1915-16 as compared with that of 1914-15	101
" 4. Statement showing the details of refunds of other than current collections during 1915-16	101
" 5. Statement of actual arrear balance under combined property taxes outstanding at the close of the year 1915-16 inclusive of amounts covered by decrees	102
" 6. Statement showing the results of the elections in 1915-16 to fill vacancies among divisional commissioners	102
Statement showing the constitution of the Corporation on 31st March 1916	103
Statement of Loans	104—106
Account Current, General Fund	106
Do. Water and Drainage Fund	106
Do. Lighting Fund	107
Revenue and Capital Accounts	107
Statement showing the expenditure from the special grants received from Provincial funds	108

APPENDIX II.

Table No. 1. Statement showing the expenditure on works since the creation of the Special Works Department	109
" 1-A. Expenditure under Capital Account, Special Works Department	110
" 2. Statement showing details of petty works carried out by Special Works Department	111
" 3. Statement showing cast iron pipes and specials received up to 31st March 1916 for water distribution scheme	112
" 3-A. Laying of C. I. Pipes up to 31st March 1916	113
" 4. Laying cast iron pipes for water distribution scheme	114
" 5. (A to C) Construction work, Drainage Section	115—116
" 5. D. North Triplicane Storm water drains	116

CONTENTS.

Page.

Table No. 6. Statement of contracts awarded in connection with the new water supply	117
" 6-A. Do. do. do. Special Drainage	118
" 7. Statement showing the private works executed by Special Works Department	119
" 8. Statement showing the value of pumping station buildings and plant	120
" 9. Statement showing the value of tools, plant and materials, Special Works Department	121
" 10. Maintenance of Sewage pumping stations	122
" 11. Cost of Design and Supervision—Special Works Department	123
" 12. Statement showing sizes and lengths of water pipes laid in 1915-16	124
" 13. Reforming roads	125
" 14. Regrading roads with gravel	125
" 14-A. Tarring roads	125
" 15. List of roads and streets reformed or repaired during 1915-16	126—139
" 15-A. List of roads tarred	140
" 16. Statement showing the monthly rainfall and water level in the Red Hills Lake	141
" 17. Amount of water used for non-domestic purposes	141
" 18. Table showing the prosecutions instituted—Works and License Departments	142—143
" 18-A. Statement showing the number of electric lights fixed in 1915-16	144—146
" 19. Statement of applications for licenses received, granted and refused. 147 to 149	147 to 149
" 20. Do. receipts and disbursements of People's Park	150
" 21. Do. do. do. of Napier Park	150
" 22. Do. do. do. of Robinson Park	151
" 23. Do. do. do. of Loane Square	151
" 24. Statement showing number and cost of works executed by Workshops	152
" 25. Statement showing some of the more important works done in the Workshops	152
" 26. Statement showing number and description of carts, &c., manufactured in the Workshops	153
" 27. Statement of new machinery purchased for Workshops	153

APPENDIX III.

Report of the Sub-Assistant Inspector of Schools, Triplicane Range	154—155
Educational Statistics	156

APPENDIX IV.

Report of Rayapettah Hospital	157—158
" Chintadripet Dispensary	158—159
" Washermanpet Dispensary	159—160
" Bauliah Naidu Dispensary	160
" Rajah Sri Ramaswami Mudaliyar Maternity Hospital	161
" Georgetown Dispensary	161—162
" Sri Kanyaka Parameeswari Dispensary	163—165
" Kalyani Hospital	165
" St. Thome Dispensary	166—167
" Venkatarangana Dispensary	167—168
" St. Thomas Convent Dispensary	168—169

CONTENTS.

Statement showing the diseases treated in hospitals and dispensaries ...	Page. 170—171.
Statement showing the attendance of patients treated, the income and the expenditure of hospitals and dispensaries ...	172
APPENDIX V.	
Report on Anti-malarial operations ...	173—236

CORPORATION OF MADRAS.

Administration Report for 1915-16.

ADDENDA Et. CORRIGENDA.

On page 13 paragraph	32 line 26	for "leaving a balance of Rs. 82" read "and Rs. 2-1-11 was written off, leaving a balance of Rs. 79-14-1."
" 26	" 73	31 for "supply" read "water-supply."
" 27	" 75	9 for "largely due" read "due largely."
" "	" "	36 for "were" read "had been."
" 28	" 79	37 delete "even."
" 40	" 126	17 for 11,67,497-13-7 read 11,39,807-5-11.
" "	" "	18 for 10,96,642-14-1 read 10,68,952-6-5.
" 62		under heading "amount" for "1,09,122" against arrears of taxes, &c., read "1,09,120."
" "		Do. do. for total "74,56,807," read "74,56,805."
" "		Do. do. for total assets 1,55,89,763, read 1,55,89,761.
" 92		Statement IV-B in item 9 under column 9 insert "2-1-11."
" "		Do. do. do. 9-A insert "23."
" "		Do. do. do. 10 for "38-2-11" read "31-1-0."
" "		Do. do. do. 10-A for "8-84" read "3-61."
" "		Do. for the total of 139-4-9 of column 9 read 141-6-8.
" "		Do. do. 2-44 under column 9-A read "2-45."
" "		Do. do. 31,526-2-8 under column 10 read "31,524-0-7."
" 142		for 23 8 under the heading "No. of summonses granted" read "2,308."
" 150		Table No. 20, under the heading "amount" in column 2, for "3,258-0-5" read "3,258-8-5."
" 151		Table No. 22, under the heading "amount" insert ... against "tools and plant."
" 172		under the heading "average daily attendance indoor" for "1229" read "12-22."
" 188		Item No. 9, column 5 in Table E, for "1,996-1-7" read "2,996-1-7."
" 206		line 29 for "in" read "into."
" 217		Appendix '5' for "8" under heading "grass farm" read "9."
" "		Column 4 for "1,417-11-4" read "1,447-11-4."

CORPORATION OF MADRAS.

7th September, 1916.

J. C. MOLONY,

President.

INTRODUCTION.

The interest attaching to an annual administration report is invariably lessened by the interval that must elapse between the close of an official year and publication. This interval or delay is unavoidable, for though enlightening figures of receipts and expenditure may be summarised in a very small space, the accurate adjustment of inter-departmental accounts on which these figures are based is necessarily a long and tedious process. Still the delay is not without its advantages, inasmuch as five months actual experience of a new year affords valuable material on which to base criticisms of policy in a year that is past.

2. Of more real interest than a recital of events which actually happened in the year 1915-16 is the statement of a general question which the Corporation has had to consider often and again during that year, and which will become most inconveniently insistent twelve months hence. The question is that of obtaining sufficient money wherewith to carry on the administration of the city. The superfluity of wealth shown by the following figures is, I fear, quite illusory :—

			Revenue.		Capital.	
			Revised Estimate 1915-16.	Actuals 1915-16.	Revised Estimate 1915-16.	Actuals 1915-16.
Receipts	...	...	39,05,900	39,08,512	15,56,850	15,50,107
Expenditure	...	...	33,13,830	31,23,088	15,45,460	14,07,631
Closing balance	...	...	5,92,070	7,85,424	11,390	1,42,476

For in the first place we have to record our gratitude to Government for an unexpected windfall of four lakhs of rupees in the last days of the year. In the second place a certain amount of quite unintentional "window dressing" seems inevitable in our accounts. All bills unpaid on the evening of March 31st go to swell our closing balance.

3. A Committee which in October 1915 drew up revised estimates of receipts and expenditure during the year anticipated a real closing balance of Rs. 1,31,850 on revenue account, and Rs. 61,390 under the head of capital. This forecast, I may say, has proved substantially correct, if due allowance be made for the large donation of Government and for bills due but not actually presented until after March 31st, 1916. One proposal or step of this Committee deserves specific mention; it has been subjected to considerable criticism, but was in my opinion a natural and advisable step under the circumstances prevailing when it was taken. A considerable sum was required about the time that this Committee sat for "capital expenditure." The Committee considering the circumstances of

the time decided that the moment was inopportune either to ask Government for a grant or to float a loan. They found at their disposal Rs. 5,00,000 of revenue balance which could not possibly be spent within the financial year 1915-16; they therefore decided to lend four lakhs of this amount to the capital account of drainage and water-supply, to lend one lakh to the account of electric lighting, and to float a loan at the commencement of the year 1916-17. The policy seemed wise at the time, inasmuch as, all question of the terms on which a loan could be obtained being set aside, the Corporation thus worked with its own spare money instead of paying interest on borrowed capital. But when at the close of 1915-16 the money market was closed to local borrowing, this apple of the Committee's forethought turned to very acid dust and ashes in their mouths. Government solved the temporary difficulty by presenting four lakhs to the Corporation for water and drainage works, and by advising reduction of capital expenditure on electric lighting from Rs. 1,00,000 to Rs. 50,000.

4. After this digression I return to my main theme, the exposition of our present poverty and approaching penury. Of this indigence there can be no doubt; the cause thereof is the fact that the normal expenditure of the city is beginning to exceed its normal receipts. I have had prepared a series of these "normal" figures extending over several years; and, though probably no two persons will quite agree as to the definition of "normal," my figures may be relied on at least in so far as they exhibit proportion and tendency.

5. The "normal" income of the city in 1906-07 was Rs. 18,75,896, and the "normal" expenditure, from which all expenditure on new works is excluded, was Rs. 17,86,598. Up to 1914-15 "normal" income increased much faster than "normal" expenditure; even with large expenditure on new works large balances remained, or appeared to remain, on hand. I say "appeared to remain" advisedly, for I fear the fact that money due but not paid out on March 31st does not constitute a real balance was at times overlooked. But in 1915-16 "normal" expenditure has risen to Rs. 28,59,730 as against a "normal" income of Rs. 28,01,720; and this excess, I anticipate, in 1916-17 will reach the disquieting total of Rs. 1,10,000. The deficit can be made good, and a certain amount of practically essential new work undertaken from balances, but when these balances are exhausted, as they soon must be, the financial shoe will develop a most inconvenient pressure on the administrative foot.

6. I do not consider this increase of expenditure to have been due to extravagance; I believe that it was inevitable. The Corporation has done more of the things that the Corporation of a big city is bound to do. Increase of capital expenditure has meant increased payments to interest and sinking fund from revenue. Each new school or hospital founded, each water or sewage pumping installation accomplished, has meant a heavy annual increase in running charges.

7. The main financial trouble of the Corporation has been, is, and will be the Special Works Department, or department of water and drainage. Much has been written and more talked on this subject, yet I may venture a succinct justification of a department which the average rate-payer, I fear, looks on as an

—esurient and insatiable white elephant that preys on the substance of the people. Digressing for a preliminary moment, I may characterise as unfounded a charge often made against the Special Engineer (Mr. Madeley) that his estimates unceasingly increase. From the estimates of his water and drainage scheme reports, Mr. Madeley has not varied; but he has been asked to design and estimate for several additional works not originally contemplated either by him or by the Corporation.

8. The maximum water-supply of the city in former days, when water was distributed by gravitation, was approximately seven million gallons per day. The new pumping installation at Kilpauk supplies on an average twice that quantity, and has on occasion supplied up to 20 million gallons per day. Though the cost of this pumping (inclusive of establishment) during 1915-16 amounted to more than a lakh, no reasonable person could wish for a return to the old conditions. To the part played by increased water-supply in improving our vital statistics in the past year the Health Officer has testified; it is a fair assumption that much of the deplorable mortality of Madras has hitherto been due not so much to bad water as to the absolute lack of water of any kind. Increased water-supply necessarily means increased sewage; the cost of sewage pumping has risen from Rs. 60,000 in 1908-04 to Rs. 1,54,000 in 1915-16, and with the laying of water pipes into parts of the city hitherto untouched this cost will rise still further in 1916-17.

9. But in respect of drainage I can feel much sympathy with the dissatisfaction of the ratepayers. Drainage work has been going on for thirty years or thereabouts, and yet Madras is not drained. The truth is that early sewers were insufficient in size, the gradients were too flat, the materials and workmanship often bad. Mr. Madeley's present work is to tear up and replace much of what has been done before, and to utilise to better advantage the small portion that is utilisable. Much has been done, but the result is as yet only apparent in the negative sense, that save for what has been accomplished, the condition of affairs in Madras with its vastly increased sewage would be appalling. It is, however, difficult to get the "man in the street" to appreciate this fact, and it is certainly unjust to blame him for failing to appreciate it. It only remains for the Corporation to persevere.

10. I shall not labour this point further. Our present sources of taxation can yield us little if anything more; new sources must be rendered available to us by legislation. We must go on; we have no collective Corporate throat, we cannot with Mr. Micawber quote Addison ("Cato thou reasonest well") and merely bethink ourselves of shaving tackle. Sanitation, health, progress, all have to be paid for, but they are well worth the payment.

11. Finance is mainly an executive care; the ratepayer in all countries soon realises that a public body can be poor, and is apt to keep his eyes fixed on the whole that should be done rather than on the part that can be paid for. The alpha and omega of municipal administration to my mind is care for the public health. What has been accomplished in this matter during the past year is far less than I could desire, but I may fairly claim that to attain the progress

that has been made no effort of the Corporation's servants has been spared. Though the Health Officer in his report lays no claim to credit, most people who know the inside of things in Madras will admit that Dr. Raghavendra Rao has succeeded in infusing an entirely new spirit into his department. I wish also to acknowledge the excellent work done by Dr. Singaravelu Mudaliyar in directing the conservancy of the city and above all to recognise the cheerful loyalty with which he accepted a decision of mine that to him must have been a disappointment.

12. The report of the Health Department deals with the calendar year 1915, not with the official year 1915-16. From January to December 1915 we have been spared the scourge of cholera; I can only hope that our good fortune will continue in the three and a half months of the year 1916 that have yet to run their course. We suffered from a severe epidemic of small-pox, and the disease still lingers in the city. Our statistics, in my opinion, exaggerate the virulence of the outbreak; the report of deaths from this disease I believe to be far more complete than that of attacks. Yet even in the matter of death reports the medical profession, I venture to think, could do more to help us than is now done. The percentage of deaths reported by medical men during 1915 was 11.6, and to this small total private medical men contributed but 2.6, the remaining 9 per cent. coming from public hospitals.

13. I would again emphasise my belief that "the people" can do more for the sanitation of Madras than can "the Executive." A man who is ill cannot complain of his ill-health if he refuses or neglects to carry out the treatment prescribed by his physician; the sanitary regulations of the Municipality are the treatment prescribed by that collective doctor the Health Department for the collective patient known as "the public." The patient is undoubtedly becoming more amenable to reason, but he is still far from complete reasonableness, and from a recognition of the fact that nature, if impartial, is merciless. The meaning of this last observation I wish to explain.

14. The Corporation can prescribe and to some extent enforce, certain objective acts and forbearances. We can demand that people shall build their houses in accordance with certain sanitary regulations, that they shall not scatter rubbish in the streets, shall not themselves use, or allow their children to use these streets as latrines. On these themes I have discoursed, possibly a better description would be to say "yapped," for the last two years, and I gratefully admit that "the people" have on the whole paid more attention to the intentions of my discourse than to the manner of my speech. But neither a corporate body nor its executive can enact the rôle of a social or religious reformer, and much of the ill-health of Madras, irremediable by the Corporation, can, I suspect, be traced to social customs over which time has cast the glamour of religion.

15. The Health Officer has recorded that the several communities of Madras occupy positions unvarying from week to week in the scale of mortality. European, Anglo-Indian, Indian Christian, Hindu, Muhammadan, this order in the precedence of death, is unchanging. The European community I disregard; the European emigrant to India is usually what the Insurance Offices call a "picked

life," and in case of serious illness he returns to his home land. But the Muhammadan at the other end of the scale, what explanation can be assigned for his unvarying "bad pre-eminence"? Ignorance and poverty have been suggested, but to my mind these are effects of a great underlying cause, namely, the debarment of one half the population from free air and liberty of movement. If the *gosha* system is founded on religion, the Muhammadan may claim that he is right in acting according to his conscience. But nature pays no heed to conscience; though martyrs have gone to the stake for conscience, the fire has not on that account refrained from its burning. I cannot myself believe that a social system needed and advised fourteen hundred years ago in Arabia is necessary or advisable to-day in the slums of Triplicane. Similarly I believe that deep-rooted social habit underlies the excess of Hindu over Eurasian and Anglo-Indian mortality; the mental and material disparity between the average Brahmin and the average Indian Christian is not adequately represented by a difference of 5.7 per cent. in the death-rates of their respective communities.

"Strike me, but hear me," said Themistocles. In the same spirit I commend this train of thought to the attention of my Indian fellow citizens.

16. To the excellent remarks of Dr. Raghavendra Rao regarding congestion, I have but one remark to add—*decies repetita placebit*? Congestion in Madras will never be relieved till we have more tram lines. The Corporation has acquired for demolition extensive rookeries in Triplicane; these cannot be pulled down until some possibility of accommodation is provided for the evicted. And poor people cannot move far from their work unless there be available some cheap and easy method of getting back to it. The Tramway Company, in consultation with the Corporation, has submitted to Government a programme of extensions: I express the common wish in praying for speedy sanction.

17. In the introduction to the report of 1914-15 I alluded to an increasing spirit of co-operation apparent in the attitude of the people towards our anti-malarial campaign. It is gratifying to record that this spirit has waxed, not waned. The drainage of the Puraswakkam swamps has been designed by Mr. Barker, and part of the design executed with marked success. A large storm-water drain, designed by the same officer to relieve the constant flooding and soaking of North Triplicane, though not yet absolutely complete has proved of much service in dealing with such rain as we have had. Mr. Barker has now left our service to become Professor of Civil Engineering at the Madras Engineering College; I am sure that all Commissioners will join me in hoping that he will impart his own thoroughness and energy to his pupils. In dealing with the subject of malaria I may record the accomplishment of what the Corporation set out to do at the old Sewage Farm. The situation of the farm may not be ideal, but pending provision of a new and better farm outside the northern boundary of the city it was but obvious common sense to set in order that which we had. *Chappar* has been entirely eradicated; the old pits in which sewage and rain-water stagnated and bred mosquitoes have disappeared, the flow of sewage over the farm has been regulated and controlled. For all this much credit is due to Mr. Nicholas, who has lavished on this hitherto unpromising domain the enthusiasm of Zola's hero reclaiming *Chantebled*.

18. If I make no detailed mention of the Works Department, it is not from any desire to belittle the Corporation Engineer or his staff. Finance and sanitation lend themselves to theorising; roads, bridges, buildings, are concrete facts which speak for themselves. The department has worked with solid energy through the year, and its works are apparent to all who care to look at them. One portion of the building programme, I regret to say, has been dropped, temporarily at least. The Corporation has been unable to carry out the provision of two primary schools for each division of the city. But when money is scarce, and the claims of sanitation and primary education come into conflict, it is, I think, but right and proper that sanitation should take precedence. It is of little use to educate a child while neglecting what best effort may be made to keep him alive; there are many agencies which provide the three R's, but the responsibility for the public health is primarily on the Corporation.

19. A suggestion made by me last year of several small Committees to deal with special subjects has fructified. A most helpful Committee, to which I have already referred, drew up the most accurate revised estimate of income and expenditure that the city has yet had, and got it ready several months earlier than the Executive unaided had hitherto done. Committees aided the consideration of conservancy, office establishment, drainage bye laws. These Committees did not, I am glad to say, embody cast-iron recommendations in formal reports; their great value, in my opinion, consisted in conversational suggestions of new methods which the Executive could test and follow or recede from in the light of experience gained.

20. I feel it the most pleasant of my duties to record again my gratitude for the assistance and co-operation of the Commissioners. Not that our proceedings throughout the year bore any great resemblance to those of a Mutual Admiration Society; what we said at times to each other remains on record, what at times we must have thought is in mercy hidden. But though I can recall many an honest and fairly heated difference of opinion, I have no memory of personal ill-feeling on either side,

CORPORATION OF MADRAS. }

12th August 1916. }

J. CHARTRES. MOLONY.

President.

CORPORATION OF MADRAS.

Report of the President from 1st April 1915 to 31st March 1916.

Changes in the Constitution of the Corporation.

1. *Elections.*—As required by Section 46 of the Madras City Municipal Act, 1904, the lists of persons qualified to be elected Municipal Commissioners and of those qualified to vote at such elections were revised with the result that 495 persons were registered as eligible for elections as Municipal Commissioners and 11,964 as eligible to vote against 501 and 12,648 respectively in the previous year. The percentage of persons qualified for election as Commissioners to the total literate (English) adult male population of the City was 1.3756 and that of persons qualified to vote to the total adult male population of the City, both literate and illiterate, was 7.6235.

2. Two elective seats fell vacant during the year of which one was owing to the expiry of the term of M.R.Ry. G. R. Audikesavalu Nayudu Garu, Commissioner for the 16th Division, and the other to the resignation of Major F. Clarence Smith, Commissioner for the 14th Division. The election of the 16th Division was contested. M.R.Ry. G. R. Audikesavalu Nayudu was elected. The number of persons who voted at this election was 72.03 per cent. of the total number of registered voters. In the 14th Division the ballot was dispensed with under Section 39 of the Madras City Municipal Act, 1904, and M.R.Ry. S. Venkataramasawmy Mudaliyar Avargal, was declared duly elected.

3. *Representatives of the Chamber of Commerce.*—Mr. A. J. Leech and Mr. J. W. Crusha, who were appointed on 7th April 1914 and 3rd February 1914, respectively, continued to hold office during the year. Mr. A. J. Powell, who was appointed on 9th June 1914, resigned his seat on the Corporation on 25th June 1915 and Mr. J. F. Simpson was appointed in his place on 10th August 1915.

4. *Representatives of the Trades Association.*—Mr. G. U. Cuddon, who was appointed on 19th May 1914, resigned his seat on the Corporation on 6th May 1915 and Mr. W. M. Wales was appointed in his place on 6th July 1915. Mr. C. J. Higgs, who was appointed on 18th August 1914, resigned his seat on the Corporation on 27th May 1915 and Mr. C. H. Higginbotham was appointed as his successor on 6th July 1915. Mr. D. Morrison, who was appointed on 15th September 1914, continued to hold office during the year.

5. *Representatives of the Harbour Trust Board.*—Khan Bahadur Muhammad Abdul Kuddus Badsha Sahib Bahadur, who was appointed on 2nd March 1915, continued to hold office during the year.

6. *Representatives of the Madras and Southern Mahratta Railway Company*:—Mr. J. F. Fawcett, who was appointed on 15th December 1914, continued to hold office during the year.

7. *Nominations by Government*:—The Hon'ble Dr. T. M. Nair, Yaqui Hasan Sahib Bahadur, Mr. E. R. Osborne, Mr. H. A. Hart and Major R. Bryson continued to hold office during the year. The Hon'ble Mr. J. O. Robinson resigned his seat on the Corporation on 18th February 1915 and Mr. Gordon Fraser was appointed in his place, on 20th April 1915. The term of office of Lt. Col. C. Donovan, who was appointed on 30th April 1912, expired on 30th April 1915, but he was reappointed on 18th May 1915. M.R.Ry. Dewan Bahadur M. Andinayana Ayya Garu, who was appointed on 2nd February 1915, died on 17th March 1916 and the Hon'ble Mr. J. O. Robinson was appointed in his stead on 4th April 1916.

Executive Officers.

8. I continued to hold the office of President during the year. Dr. W. R. Macdonald continued to hold the office of Health Officer up to 11th October 1915, when he resigned his office and M.R.Ry. K. Raghavendra Rao Garu, B.A., M.B. & C.M., who was appointed as Special Malaria Officer from 11 January 1915, was appointed to perform the combined duties of Special Malaria Officer and Health Officer of the Madras Corporation from 11th October 1915. M.R.Ry. Rao Bahadur T. Vijayaraghavacharya Avargal, M.A., continued to be the Revenue Officer except from 19th May 1915 to 29th June 1915, when he was absent on privilege leave and M.R.Ry. S. Dandapani Aiyar Avargal was appointed to act for him. Mr. J. R. Coats continued to hold the office of Engineer except for the period from 4th June 1915 to 14th November 1915, when he was absent on combined privilege leave and leave on medical certificate for five months and eleven days and M.R.Ry. E. R. Srinivasachariar Avargal acted for him. Mr. J. W. Madeley continued to be the Special Engineer for the design and execution of the special water and drainage works except for the period from 5th to 28th May 1915, when he was absent on privilege leave.

Meetings.

9. During the year the Corporation held 19 meetings of which 12 were general meetings, two adjourned general meetings, three special meetings and two adjourned special meetings. The average number of commissioners including the President, present at each meeting, was 27 against 26 in the previous year. The percentage of attendance to the sanctioned strength was 79.4 among Divisional Commissioners, 62.5 among Institutional Commissioners and 63.8 among Nominated Commissioners as against 71.9, 63.0 and 64.7, respectively, in the previous year.

10. The Standing Committee met 26 times

Committees and Sub-Committees.

11. (1) The Committee appointed by the Corporation on 21st August 1912, to consider and report on rule 15 of the Building Regulations, requiring the

provision of one-third open space in the case of certain buildings, recommended the adoption of revised rules drafted by the Engineer. These rules were approved by the Corporation on 2nd February 1915, with some modifications. The Government, to whom the rules as modified were submitted for sanction, communicated the remarks of the Municipal Commissioner and Engineer of the Bombay Corporation, on the working of similar rules in that City, and asked the Corporation of Madras to reconsider the whole matter in the light of the experience of Bombay (Government Memorandum No. 3347-1M., dated 9th July 1915). The question was not disposed of pending the results of the competition instituted under His Excellency's auspices for designs for model dwelling houses in Madras.

(2) A Committee consisting of the President, Mr. J. O. Robinson and M.R.Rys. Rao Bahadur P. Theagaraya Chetti Garu, K. N. Ayya Ayyar Avargal and P. M. Sivangnana Mudaliyar Avargal, was appointed by the Corporation on 15th December 1914, to meet the representatives of the Tramway Company and the officers appointed by Government, to discuss the question of the extension of tram lines in the City for the convenience of those desirous of residing in suburbs outside the City. The Committee reported that, in their opinion, the extension of the system might proceed as follows:—

Replacement of the Chintadripet section by a line running down Body Guard Road, then

- (i) A line running from Thousand Lights to the Law College.
- (ii) A line running north in the direction of Tiruvotthiyur.
- (iii) Extension of the Mylapore line to the Adyar Tollgate.
- (iv) Extension along Poonamallee Road.
- (v) Extension towards Perambur.

The report was adopted by the Corporation and forwarded to Government. But the Government considered that the proposed lines from the Law College to the Thousand Lights and from the Vizianagram Fountain through the Chepauk Park would detract from the amenities of pleasant parts of the City without materially relieving congestion or bringing in much revenue and they requested the Corporation to decide the order in which the other lines referred to in the Committee's report should be taken up and submit proposals for their construction with a draft order under Section 6 of the Indian Tramways Act, 1886, (vide G.O. No. 571-M., dated 12th April 1915). The Government have been requested to state whether among the "other lines" referred to therein, the replacement of the Chintadripet section by a line running down Body Guard Road is included. The orders of Government on the reference are awaited.

(3) A Committee consisting of the President, M.R.Ry. P. M. Sivangnana Mudaliyar Avargal and M.R.Ry. K. N. Ayya Ayyar Avargal was appointed by the Corporation on 15th December 1914, to meet a conference consisting of Mr. James Gray, the Managing Director of the Madras Electric Tramways, Ltd., and officers appointed by Government, and discuss the question of the realignment of the tramway line in Chintadripet. The Committee recommended the

proposal that a new line should be laid along the Body Guard Road and Mount Road. The Corporation approved of this proposal and in Memorandum No. 5948-3 M., dated 23rd January 1915, the Government requested the Corporation to submit in consultation with the Tramway authorities detailed proposals for the alignment of this new line. The plans received from the Tramway Company were forwarded by the Corporation to Government with the recommendations that the Government House Bridge and Penitentiary Bridge should be widened sufficiently to admit of a double track and foot-paths on each side of the road, that there should be no centre post, that all the lines should be in the centre of the road, and that steps should be taken to prevent the protruding of the rails above the surface of the road. The orders of Government are awaited.

(4) His Excellency the Governor of Madras offered Rs. 1,500 to provide prizes for a competition for the best design for the construction of model dwelling houses for the poor and Mr. Madeley also offered Rs. 100 for the best design of water-supply and drainage for certain classes of houses. The conditions for the competition were duly framed and the competition was advertised on 1st October 1915. The designs received from the competitors were submitted to a Committee consisting of the President, M.R.Ry. Rao Bahadur P. Tyagaraya Chetti Garu and the Hon'ble Dr. T.M. Nair with Rao Sahib Dr. U. Rama Rau and Messrs. H.V. Lanchester, J. R. Coats and J. W. Madeley as advisers, and the results were declared and published. The prizes were then distributed to the winners of the competition.

(5) A Sub-Committee consisting of the President, Mr. C. J. Higgs and M.R.Ry. K. N. Ayya Aiyar Avargal was appointed by the Standing Committee on 12th March 1915, to consider and report the powers which should be delegated to the Special Engineer and his Assistants. The Sub-Committee recommended the delegation of some powers to the Special Engineer, but reported that it was unnecessary to grant any special powers to his Assistants. The recommendations of the Sub-Committee were approved by the Standing Committee on 14th May 1915, and by the Corporation on 22nd June 1915; and the Government who were addressed on the subject approved the proposals of the Corporation to delegate to the Special Engineer the following powers:—

- (i) Powers to fix the headquarters of his assistants;
- (ii) powers to sanction estimates up to a limit of Rs. 1,000 for the purchase or the repairs of tools and plant;
- (iii) power to issue orders for the disposal of unserviceable or surplus stores.

They also stated that the delegation of the other powers suggested by the Corporation would be considered in connection with the amendment of the Madras City Municipal Act of 1904. (*Vide* G.O. No. 1304-M., dated 19th August 1915).

(6) The Special Engineer proposed that an unmetered service be laid down as comprising one single tap placed in an approved position visible from the road and that a provision of Rs. 20,000 be made in the Budget for 1916-17 for the

service, new and existing. The Standing Committee recommended that the Special Engineer's proposal be approved, every house being allowed one tap free and houses with more than one tap being metered and that a provision of Rs. 20,000 required in connection with the fixing of meters at the cost of the owners be made in the Budget for 1916-17. A Committee consisting of the President, M.R.Ry. Rao Bahadur P. Tyagaraya Chetti Garu, M.R.Ry. G. A. Natesan Avargal, and M.R.Ry. K. N. Ayya Aiyar Avargal was appointed by the Corporation to select typical houses in the various divisions where meters at the cost of the Corporation might be fixed and to report on the amount of water spent usefully and of water wasted. The report of the Committee is under preparation. The Corporation approved also of the proposal to make a provision of Rs. 20,000 in the Budget for 1916-17 for fixing meters to houses at the cost of the owners.

(7) A sub-committee consisting of the President, M.R.Ry. G. A. Natesan Avargal and M.R.Ry. K. N. Ayya Aiyar Avargal, was appointed by the Standing Committee at their meeting held on 9th July 1915, to report on the alterations in the draft drainage by-laws proposed by the Special Engineer. The sub-committee recommended that the alterations be approved, subject to certain modifications. This recommendation of the sub-committee was approved by the Standing Committee and has since been tentatively sanctioned by the Corporation.

(8) A committee consisting of the President, M.R.Ry. Rao Bahadur P. Tyagaraya Chetti Garu, M.R.Ry. G. A. Natesan Avargal, M.R.Ry. K. C. Desikachariyar Avargal, The Hon'ble Dr. T. M. Nair, M.R.Ry. C. P. Ramaswami Aiyar Avargal, Mr. J. F. Simpson and Mr. J. W. Crusha was appointed by the Corporation at their meeting held on 8th February 1916, for considering the Engineer's report on conservancy. The report is still under consideration.

Tramways.

12. The stage which the correspondence regarding the removal of the line in Chintadripet has reached is mentioned in paragraph 11 (3). The land required for the improvement of the corner of Choolai Bazaar Road was acquired and double track in that road is being laid by the Madras Electric Tramway Company. The Corporation sanctioned the proposal of the Madras Electric Tramway Company, Limited, to lay a double tramway track in Elephant Gate Road. The Corporation also sanctioned the proposal of the Tramway Company to lay a double track in Wallajah Road subject to the condition that the Tramway Company undertook at its own expense to support and, if necessary, to divert the cables, feeder boxes, standards, etc. for the construction of the North Triplicane Storm Water Drain along the south side of Wallajah Road from the east side of Triplicane High Road to the junction of Harris Road and Mount Road.

Resolutions of the Corporation.

13. The following are among the more important resolutions passed by the Corporation during the year:—

(1) Resolution of 27th April 1915.—The Corporation passed the following resolution:—

“That the Corporation is of opinion that it is highly desirable that the notices recently issued by the President under section 293 requiring the

occupiers of houses to collect and keep at or near the entrances to their premises all rubbish and offensive matter accumulated therein should be withdrawn and the Corporation is further of opinion that the President should so regulate the provision of dust-bins in congested areas, that there may be available one dust bin at least for every group of six houses, the same being shifted from place to place periodically."

(2) *Resolution of 21st September 1915.*—In connection with the proposal to train midwives in the Rajah Sir Ramaswami Mudaliyar Lying-in-Hospital the Corporation resolved that midwives be trained under the following conditions :—

- (i) that the monthly teaching fees and stipends be paid to midwives under training,
- (ii) that no bond need be taken and that no stipend need be paid after training, and
- (iii) that the Corporation leave it to the Superintendent of the Raja Sir Ramaswami Mudaliyar Lying-in-Hospital to apportion the number taken in for the city and for moffussil.

(3) *Resolution of 21st September 1915.*—The Corporation recommended that by-law No. 229 (1) be amended by the insertion of the words "and at the time appointed by the Health Officer" after the word "Memorandum" in the by-law and the hours to be fixed for verification be from 7 to 8 A.M. and from 8 to 9 A.M. The by-law as amended by the Corporation was confirmed and sanctioned by Government (*Vide G.O. No. 210-M., dated 31st January 1916*).

(4) *Resolution of 21st September 1915.*—The Corporation passed the following resolution :—

"That the Government be requested to revise the scale of track rent for all Tramway lines, old and new, within the Madras municipal limits on a uniform scale of Rs. 1,000 a mile per year for single lines and Rs. 1,500 a mile per year for double lines."

The Government to whom this resolution was communicated stated that the rates of track rent could not be modified except by a further Tramway order passed under the Indian Tramways Act on the application of and with the consent of the Madras Electric Tramway Company. (*Vide G. O. No. 520-M., dated 16th March 1916*).

(5) *Resolution of 21st September 1915.*—The Corporation passed the following resolution unanimously :—

"That with a view to give an opportunity to the Corporation to express its views on the proposals of the Government of Madras, to amend or alter the Madras City Municipal Act, before the Government of India gives its sanction for the introduction of the proposed measure in the Madras Legislative Council, the Government of Madras be requested to forward the proposed measure for consideration by this Corporation."

The resolution was communicated to Government.

(6) *Resolution of 23rd September 1915.*—The Corporation passed the following resolution :—

"That the President's Administration Report and the Health Officer's Report for 1914-15, be adopted and forwarded to Government with the remark that the Commissioners are of opinion that the Government and the Executive of the Corporation should set an example to the ratepayers and citizens of Madras by themselves conforming to all Laws and Regulations affecting the health and appearance of the city to which laws they compel the public to conform on pain of penalties under the Municipal Act."

The resolution was communicated to Government.

(7) *Resolution of 19th October 1915.*—The Hon'ble Dr. T. M. Nair moved the following resolution :—

"As it is becoming more and more evident that the work of the Health Department, especially in the direction of ensuring pure water and food-supply or the city cannot be satisfactorily carried out without a full time Corporation Chemical Analyst, the Corporation decides to appoint an Analyst forthwith, on a salary of Rs. 350—500 per month."

He pointed out that the salary of the Analyst should be Rs. 300—500 instead of Rs. 350—500, as stated in the resolution. The Corporation resolved that the consideration of the question be taken up along with the report of the Engineer on the conservancy system of the city which is under the consideration of the Corporation.

(8) *Resolution of 16th November 1915.*—With reference to G.O., No. 1682-M., Mis., dated 25th October 1915, transferring to the Corporation of Madras for consideration Dr. K. T. Mathew's petition, dated 26th August 1915, requesting that he might be granted pension for a period of over 16 years of his service under the Corporation as Senior Assistant Health Officer, the Corporation passed the following resolution :—

"Having regard to the long and faithful services rendered by Dr. K. T. Mathew, the Corporation are willing to give the pension, if the rules permit, and they recommend the application for favourable consideration."

The Government to whom the resolution was communicated stated as follows (*Vide G.O., No. 211-M., Mis., dated 31st January 1916*) :—

"Under Civil Service Regulations, no pension would ordinarily be permissible in such a case, but under Article 924, the Local Government might, with the approval of the Secretary of State, grant a pension or gratuity as a special case."

"In applying the Civil Service Regulations to their subordinates in the rule above referred to, the Corporation have substituted the Standing Committee for the Local Government and the Government of Madras for the Government of India. They have, however, appointed no substitute for the Secretary of State. If it is their desire that the Government of Madras should perform the functions

med to the Secretary of State under the Civil Service Regulations, they are requested to submit an amendment of the rule in that sense.

"On receipt of sanction to such an amendment they will be requested to make specific proposals in regard to the grant of a pension or gratuity to Dr. Athew."

The Corporation before whom the matter was placed agreed to the proposal that the Government of Madras should perform the functions assigned to the Secretary of State under the Civil Service Regulations in respect of the grant of pensions in special cases. A draft amendment of the rule made by the Corporation of Madras with the previous sanction of the Government under the provisions of section 64 (c) of the Madras City Municipal Act, 1901, as approved by the Corporation at their meeting held on 29th March 1916, has been forwarded to Government for their sanction. Their orders are awaited.

(3) *Resolution of 29th March 1916.*—In G.O., No. 422 M., dated 28th February 1916, the Government, while making a grant of four lakhs in 1915-16 towards the special water and drainage works on which the Corporation is engaged during 1915-16 and 1916-17, stated that the Corporation should not expect any further help from Government during 1916-17, and that the funds required during 1916-17 could be provided for by increasing the lighting tax and by revising the assessment on houses and lands and requested the submission of a clear statement of the liabilities of the Corporation both capital and recurring and of the expenditure necessary for completing the works in hand and showing how the necessary funds for meeting this expenditure were proposed to be raised. The Standing Committee recommended that the President be requested to inform Government in reply to the G.O. read above that, under the present abnormal circumstances, the Corporation found themselves unable to finance the Special Works Department in the coming year as the money market was practically closed to them, that, in these circumstances, they had to request the Government to render them such assistance as would enable them to carry on the Special Works Department, that the Corporation had no desire to shirk their responsibility in financing this department and were willing to contribute their share of the expenditure when adequate sources of taxation were rendered available to them and when the money market resumed its normal condition. The Corporation requested the President to reply to Government with some modifications in the form suggested by the Standing Committee. The Government have accordingly been addressed on the subject.

Revenue Administration.

14. The work of the Revenue Department continued to be satisfactory and there was a further increase in the revenues of the Corporation during the year under report. The current revenues under Tax on Arts, combined property taxes and the tax on vehicles rose by Rs. 46,564-4-4. There was a fall of Rs. 2,114-8-0 under tax on animals due to the fall in the number of horses kept in the City. Thus, the total net increase in the current revenues under the prin-

121
cipal taxes amounted to Rs. 44,449-12-4 against Rs. 1,11,186-9-6 in 1914-15, the marked increase in the latter being due

- (i) to the realisation of enhanced taxes by Rs. 32,138-4-2 in Government Civil Buildings which were under appeal and
- (ii) to the increase gained by general revision of assessments in 5 Divisions by Rs. 39,306-6-1.

No general revision was undertaken in any of the divisions in the year under report.

The tax on Government military buildings was paid according to the old assessment and the enhanced tax thereon as settled at the end of the year has to be realised from Government.

The increase under current revenues would have amounted to Rs. 49,379-14-10, if this had come in before the close of the year.

The policy of restricting the issue of warrants has been steadily carried out, the number of warrants issued in the year under report being only 2,191 against 10,588 in 1914-15. With reference to a resolution moved in the Corporation, a sum of Rs. 912-12-10, including Rs. 35-11-6 under arrear, was remitted under Section 117 of the Act, the owners having become too poor to pay the taxes on account of the adverse conditions produced by the War.

Finance.

Capital Account.

15. The year opened with a balance of Rs. 8,01,848-14-3. The receipts for the year amounted to Rs. 7,48,258-6-4, which includes a free grant of Rs. 7,00,000 from Government for the improvement of water-supply and drainage, an interest of Rs. 23,233-9-9 on investment of the surplus fund and recovery of Rs. 25,024-12-7 from advances made in the previous years. The total receipts, including the opening balance, were Rs. 15,50,107-4-7. The total expenditure was Rs. 14,07,630-15-1 and the balance left at the close of the year was Rs. 1,42,476-5-6.

Revenue Account.

16. The year under report opened with a balance of Rs. 10,48,476-3-8 against Rs. 8,34,126-3-10 in the previous year. The Corporation received special grants amounting to Rs. 20,607 from Government for the acquisition of lands for washermen settlement (Rs. 10,384) and for the improvement of Kelly's drain (Rs. 10,223). The revenue from all sources, inclusive of the Government grant, amounted to Rs. 28,60,036-3-1 against Rs. 33,17,397-4-10 in 1914-15. The total receipts for the year including the opening balance were Rs. 39,08,512-6-9 against Rs. 41,45,523-8-8 in the preceding year. The net income of the year, after deducting the opening balance and the special Government grants, was Rs. 28,39,429-3-1 against Rs. 28,36,397-4-10 in the previous year, thus showing an increase of Rs. 3,031-14-3. Towards the net income of Rs. 28,39,429-3-1 specified above, the

by the Engineer for taking in such apprentices. The scheme was approved by the Corporation at their general meeting held on 20th May 1916.

(1) *Private Service*.—During the year, 507 new services as against 452 in the previous year were laid by licensed plumbers and 5,562 existing services as against 2,412 were repaired, cleaned, altered, and extended. The increase in the number of repaired services is due to the leakage detected in the old defective pipes owing to the increased pressure in the mains. Of the 507 new services, 33 were first class and 474 were second class connections under the new regulations referred to above. The total number of house services laid up to the end of 1915-16 was 28,218. There were 32 licensed plumbers on 31st March 1916.

The quantity of water charged for as having been used for non-domestic purposes was 191,849,662 gallons. The amount collected during the year was Rs. 1,34,482-6-8 as shown in detail in Table No. 17, Appendix II. The charge for water supplied for non-domestic purposes continued to be 12 annas per 1,000 gallons.

(2) *New Works*.—During the year, 18,211 feet of pipes were removed, cleaned and relaid and 4,873 feet of new mains were laid in certain streets at a cost of Rs. 4,481 out of the total expenditure of Rs. 14,168 under this head. Besides these, 48 fountains were newly erected and 9 valves, 17 stop cocks, 6 pumps, 1 hydrant and 91 meters were fixed. Table No. 12 of Appendix II shows the length of pipes laid.

(3) *Red Hills*.—On the 1st April 1915, the level of Red Hills Lake stood at 43.76 and on the 31st March 1916 at 41.51.

The rainfall and average water level for each month as furnished by the Public Works Department are shown in Table 16, Appendix II.

The quantity of water-supply measured at the Red Hills during 1915-16 was 899,476,812 c.ft. (equal to 5,605,539,492.384 gallons) as against 606,987,108 c.ft. in the previous year. The increase in consumption is mainly due to the laying of additional mains and the supply of water under the increased pressure.

(4) *Red Hills Lake, Filter Beds and Conduit, Delivery Channel, Fountains and Pipes*.—The cost of maintaining these including the establishment amounted to Rs. 65,682 as against Rs. 56,306 in the previous year. The increase is due to the maintenance of staff for filter beds and conduit newly added in the year, to the repair of old defective pipes, and also to the temporary maintenance of the special staff engaged for water waste detection and prevention.

There are now 1,470 fountains and cattle troughs within the municipal limits, 48 having been newly erected during the year.

Miscellaneous.

85. *New Works*.—The expenditure under this head amounted to Rs. 13,655 against a sum of Rs. 9,310 exclusive of the Government Grant of Rs. 10,381 in the

Rs. 1,905-8-0 in 1914-15. This demand was reduced to the extent of Rs. 90 by remissions and reduction on appeal and the net arrear demand amounted to Rs. 2,212-8-0. Of this Rs. 2,159-8-4 was collected during the year, and Rs. 7-15-8 was written off as irrecoverable, leaving Rs. 45-0-0 uncollected at the close of the year. Out of this balance, Rs. 2-8-0 has since been collected, and a claim for Rs. 37-8-0 registered in the office of the Official Assignee in 1912-13, is still pending payment, and Rs. 5 is covered by a decree of court. The percentage of collections to the demand was 97.60 against 96.86 in the previous year.

House, Water and Drainage and Lighting Taxes Combined.

Current.

21. The gross current demand under the consolidated rates levied on buildings and lands amounted to Rs. 16,97,340-13-3 against Rs. 16,53,135-15-2 in the preceding year. The gross increase of Rs. 45,806-10-4 over the net demand of the previous year was due to revaluations as per annual and supplemental surveys made during the year as particularised below:—

(1) Rs. 18,824-3-2 to the cursory revision of assessments in all divisions of which Rs. 13,544-1-10 represents the increase by assessments imposed on new buildings; and Rs. 5,280-1-4 represents the increase by enhancements of assessments on buildings on account of alterations and improvements.

(2) Rs. 26,982-7-2 to the enhancement of assessments made in 1914-15, which had effect only for one half-year of that year against a full year in the year under report. With reference to the wishes of the Corporation, no general revision was undertaken.

22. During the year, 1,367 notices were issued under section 137 on account of enhancement of valuations and assessments newly imposed against 7,573 in 1914-15. seventy-four appeals were preferred against these enhancements and assessments and 89 against the standing assessments, making a total of 163 appeals against 437 in the previous year. These appeals were heard at three sittings of the Appeal Board constituted under section 172 of the Act, with the result that in 42 cases, the assessments were reduced, and in 121 cases, the assessments were confirmed. Nine appeals were preferred to the Presidency Magistrates under section 175 of the Act against the decision of the Appeal Board; in one case, a compromise was effected and in the remaining eight cases, the appeals were dismissed. The total reduction thus made aggregated to Rs. 564-12-8.

23. The net increase after deducting the reductions made by the Appeal Board was Rs. 45,241-13-8 against Rs. 82,150-2-1 in the preceding year, and the net demand amounted to Rs. 16,96,776-0-7 against Rs. 16,51,534-2-11 in the previous year.

The net current collections amounted to Rs. 16,27,644-0-10 against Rs. 15,93,403-4-5 in 1914-15. This figure includes a sum of Rs. 3,961-7-10 paid in advance in 1914-15 for the year under report and excludes a sum of Rs. 6,829-3-6 received in advance in the year under report for the ensuing year, as well as:

sum of Rs. 192-0-4 which remained undisbursed at the end of the year out of the amounts refundable to parties in consequence of the reduction of assessments allowed on appeal. A sum of Rs. 18,768-2-5 was remitted on account of vacancy, under section 142 of the Act and other causes against Rs. 14,647-6-7 in 1914-15 and Rs. 850-5-10 was remitted under section 117 of the Act as per resolution of the Corporation, on account of adverse conditions produced by the war. The balance left outstanding at the end of the year (after excluding Rs. 4,930-2-6 due by Government in respect of Military buildings under appeal) was Rs. 41,583-5-0 against Rs. 34,919-9-7 at the end of 1914-15.

The percentage of collections to the demand (exclusive of the sum due by Government Military Department) was 96-21 against 96-90 in the previous year. Throughout the year, the practice inaugurated in 1914-15 was continued and the bulk of the collections was made without issue of warrants, only 1,955 warrants having been issued as against 9,155 in the previous year. The incidence of taxation per head of the population was Rs. 1-1 against Rs. 3-2 11.

24. The total current demand, collection remission and balance under the combined property taxes, as compared with the corresponding figures for the previous two years, are exhibited in Appendix I, Table No. 1.

Arrear.

25. The arrear balance at the beginning of the year was Rs. 57,700-12-10 which by subsequent amendments was reduced to Rs. 50,963-14-2. Of this demand, a sum of Rs. 32,789-14-7 was realised during the year and Rs. 1,800-11-9 was remitted on account of vacancy and other causes. Rs. 35-11-6 was remitted under section 117 of the Act on account of adverse conditions produced by the war and Rs. 10-3-4 was written off as irrecoverable. The balance left outstanding at the end of the year was Rs. 16,327-2-0 which includes Rs. 11,700-7-6 due by Government in respect of Military buildings under appeal. The percentage of collections to the demand (exclusive of the sum due by Government, Military Department and the amount covered by decrees) was 51-39 against 57-12 in 1914-15.

26. The total demand, collection, remission and balance under arrears, as compared with the corresponding figures for the previous two years, are shown in Appendix I, Table No. 2.

27. Out of the total balance of Rs. 16,119-15-6 outstanding at the end of the year, viz., Rs. 44,583-5-0 under current and Rs. 1,535-10-6 under arrear (exclusive of the sum due on Government Military buildings under appeal, viz., Rs. 19,720-10-0) a sum of Rs. 40,213-1-4 has been collected and adjusted up to the end of June 1916 leaving a sum of Rs. 5,906-14-2 for recovery and adjustment in the course of the year.

28. The details relating to each of the combined property taxes dealt with above, viz., house, land, water and drainage and lighting taxes are exhibited separately in Appendix, I, Statements IV A and B.

Tax on Vehicles with Springs and on Animals under Section 150.

Current.

29. The net demand under this tax amounted to Rs. 1,12,762-12-0 against Rs. 1,12,194-14-0 in the previous year.

30. Appendix I, Table No. 3, compares the number of vehicles and animals assessed for the year 1915-16 under the several classes of Schedule VI of the Act, with the corresponding figures for the previous year.

31. The current collections inclusive of Rs. 3,573-4-0 received in advance for the ensuing year, amounted to Rs. 1,08,710-10-0. The net collections for the year were thus Rs. 1,05,137-6-0 which with Rs. 2,356 prepaid in the previous year on account of taxes due for the year under report amounted to Rs. 1,07,493-6-0 against an estimate of Rs. 1,01,400. Rs. 24 was remitted under section 117. The balance left uncollected at the close of the year was Rs. 4,545-6-0 and of this sum Rs. 1,738-13-4 has since been collected and Rs. 252-12-0 has been cancelled as erroneous demand leaving Rs. 2,553-12-8 for further recovery and adjustment. The percentage of collections to the demand was 96-00 for vehicles and 95-76 for animals against 97-63 and 97-40 respectively in the previous year. The incidence of taxation per head of the population was Re. 0-2-4 for vehicles, Re. 0-1-1 for animals the corresponding figures for the previous year being Re. 0-2-4 for vehicles, Re. 0-1-2 for animals.

Arrear.

32. The arrear demand at the beginning of the year both under vehicles and animals was Rs. 2,844 which by subsequent amendments and additions rose to Rs. 3,244-4-0. Of this sum, assessments amounting to Rs. 843-2-0 were found on investigation to be erroneous and were cancelled and the actual demand stood at Rs. 2,401-2-0. Of this amount Rs. 2,319-2-0 was collected leaving a balance of Rs. 82 at the close of the year. The percentage of collections to the demand was 96-82 for vehicles and 96-16 for animals against 92-47 and 94-98, respectively, in the previous year.

Tax on Carts and other Vehicles without Springs under Section 153.

Current.

33. The demand under this tax amounted to Rs. 32,115 against Rs. 32,016 in the previous year. The number of carts voluntarily offered for registration was 7,964 against 7,517 in the previous year, and the number seized under section 162 for non-registration fell from 3,125 to 2,741. Of the 2,741 carts seized, 2,714 were released on payment and six were sold by public auction in default of payment, leaving 21 carts for disposal at the close of the year.

34. The current collections inclusive of Rs. 1,683 received in advance for the ensuing year amounted to Rs. 32,101-14-9. The net collections excluding the advance payment were Rs. 30,418-14-9 which with Rs. 1,629 collected in the

previous year towards the demand of the year under report amount Rs. 32,047-14-9 against Rs. 31,982-9-5 in 1914-15. A sum of Rs. 3-4-3 was written off leaving a balance of Rs. 63-13-0 at the close of the year. Out of this sum, Re. 0-13-0 represents the difference between the taxes payable and the amount realised by sale in the case of five out of the six carts referred to above and Rs. 68 are the taxes on 21 carts seized and awaiting disposal at the close of the year. The percentage of collections to the demand was 99-79 against 99-89 in 1914-15. The incidence of taxation per head of the population was Re. 0-1-0 as in the previous year.

Arrear.

35. The arrear demand at the beginning of the year was Rs. 36-6-7 which by subsequent amendments rose to Rs. 75-6-7. Of this sum Rs. 65-10-0 was collected and Rs. 1-10-3 was written off leaving a balance of Rs. 8-2-4 being the tax on two carts seized and awaiting disposal at the close of the year plus the difference between the taxes payable and the amount realised by sale of four carts.

Tolls on Vehicles and Animals entering Municipal Limits.

36. The right of collecting tolls for the year under report was put up to public auction and sold for Rs. 44,700 against Rs. 46,300 in the previous year.

The total amount recovered during the year amounted to Rs. 45,519-7-8 which includes interest paid for overdue instalments.

The incidence of tolls per head of the population was Re. 0-1-3.

Revenue derived from Municipal Property and Powers apart from Taxation.

Rent of Lands and Buildings.

Current.

37. The demand under this head for the year was Rs. 37,254-0-1 against Rs. 31,936-4-11 in the preceding year. The increase was partly due to the rents realised from the properties in Suparigunta Paracheri, 17th Division and from Anglo-Indian dwellings and other houses and partly to the leasing of more lands during the year. The collections amounted to Rs. 35,369-5-6 against Rs. 30,805-4-10 in 1914-15. The amount shown as collected excludes a sum of Rs. 938-12-9 being 50 per cent. of the rent collected from certain lessees on Wall Tax and Basin Bridge Roads which was paid to Government under G.Os. Nos. 32 and 878, Revenue, dated 6th January 1902 and 22nd August 1903, respectively. The balance outstanding at the end of the year was Rs. 1,884-10-10 of which a sum of Rs. 1,326-11-0 has since been collected. The percentage of collections to the demand was 94-95 against 96-46 in 1914-15.

Arrear.

38. The arrear outstanding at the commencement of the year was Rs. 1,208-15-0, which by subsequent assessments rose to Rs. 1,240-15-0. Of this

sum, Rs. 704-12-8 was collected and Rs. 115-10-0 was remitted, leaving a balance of Rs. 420-8-4 at the close of the year for realisation.

The percentage of collections to the demand was 56-81 against 90-23 in the preceding year.

Payment for Occupation of Municipal Lands under Section 408.

Current.

39. The demand under encroachments amounted to Rs. 4,527-0-0 against Rs. 5,112-12-0 in the previous year. The collections from trash-sellers amounted to Rs. 805-12-6 against Rs. 1,055-5-0 in the preceding year. The fall under this head was again due to the stringent measures adopted by the Health Department on sanitary grounds against roadside vendors.

The total demand under the above two heads amounted to Rs. 5,332-12-6 against Rs. 6,168-1-0 in 1914-15, and of this amount a sum of Rs. 5,235-6-6 was collected leaving a balance of Rs. 97-6-0 uncollected at the end of the year against Rs. 71-3-0 in 1914-15. Of this balance, a sum of Rs. 29-8-0 has since been collected. The percentage of collections to the demand was 98-16 against 98-85 in the previous year.

Arrear.

40. The arrear outstanding at the beginning of the year was Rs. 77-5-0, which with supplemental charges, rose to Rs. 79-6-0. Of this sum, Rs. 69-4-0 was collected and Rs. 10-2-0 remitted.

41. *Grass Farm—Tondiarpet.* The farm was worked departmentally, and the total receipts from all sources amounted to Rs. 38,209-2-9 against Rs. 37,438-1-1 in the previous year. There was on hand on the 31st March 1916, a stock of 50 tons and 1516 lbs. of hay, the value of which at Rs. 50 per ton amounted to Rs. 2,533-13-5, so that the total income from the farm for the year under review may be placed at Rs. 40,743. Considering that motor cars have greatly reduced the number of horses in the City, the above results which give a revenue of about Rs. 425 per cawni may be taken as satisfactory.

The improvements to the farm were continued and completed during the year. These comprised the filling in of tanks, complete eradication of chappar and the reclamation of low ground. The entire farm has been brought under cultivation of hariali and it will be interesting to await the results of these improvements as there can be no doubt that the outturn in future years will be greatly increased. During the year there was a small curtailment of the farm by 8 grds. and 1,543 sq. ft. caused by erosion of the sea.

Owing to the discontinuance of cattle-grazing on the chappar portion of the farm before it had been eradicated and replanted with hariali, there has been constant trespass of cattle by nights and during the last year 525 head of cattle were seized and sent to the Police pound. In one case a cattle-grazer was fined

Rs. 100 with an alternative of three months rigorous imprisonment for trespass and mischief. The total irrigable area of the farm within the fencing is 95 caw. 20 grds. and 855 sq. ft.

The total expenditure on the maintenance of the farm amounted to Rs. 26,404-11-8. This sum does not include Rs. 86,182-2-11 spent on improvements for the three years ending 1915-16 from the Malaria grant which, under G. O. No. 1,708-M. Mis, dated 27th October 1915, has been ordered to be taken as a charge on the general revenues of the Corporation.

42. *Moore Market.* The income amounted to Rs. 19,447-10-6 against an estimate of Rs. 18,410.

The demand was fully collected within the year.

A decree was obtained during the year against Abdul Majid Khan, late contractor of the fowl stalls in the Moore Market, for the arrear demand of Rs. 1,210 and a sum of Rs. 225 in three monthly instalments of Rs. 75 each was realised through the Court during the year, leaving a balance of Rs. 985 for recovery. A sum of Rs. 75 has been realised.

43. *The New Guzili Bazaar.*—The collections amounted to Rs. 14,195-9-0 against an estimate of Rs. 14,000. The demand was realised within the year with the exception of annas four, which has since been recovered.

44. *Private Markets.*—A vegetable market was opened during the year in Muthialpet and the market in Venkatesa Naick Street, Tiruvateeswarenpet, was closed as it was kept in a very insanitary condition. A small market in Perambur High Road was also closed. There were 43 markets at the end of the year and the fees collected amounted to Rs. 3,750 against Rs. 3,700 in the previous year.

45. *License Fees on Import of Timber and Firewood.*—The gross collections under this head amounted to Rs. 1,88,104-2-2, which includes a sum of Rs. 3,969-7-6, relating to the previous year in the hands of the collecting agencies and paid in during the year under report and excludes Rs. 2,902-7-0, the fees levied and received by the collecting agencies for March 1916, but not remitted to the office till after the close of the year. The corresponding gross collections for 1914-15 amounted to Rs. 1,89,827-6-4. The fall in the gross collections is due to shortage in the imports of timber by sea as a consequence of the War, owing to dearth of vessels and increase in freight charges.

46. *Refunds of fees on exports granted during the year* amounted to Rs. 47,644-10-0 against Rs. 58,348-3-2 in the previous year. The net collections for the year stood at Rs. 1,40,459-8-2 against an estimate of Rs. 1,30,000-0-0 and against Rs. 1,31,479-3-2, the actuals of the previous year.

In addition to the refund of Rs. 47,644-10-0 paid from the current collections on account of timber exported from imports made during the year, a sum of Rs. 19,305-10-0 was also refunded from collections of previous years under the head of "Refund of other than current collections."

47. *Distraint Fees.*—The distraint fees realised during the year amount to Rs. 87-7-1 against an estimate of Rs. 150 and against Rs. 110-14-5 collected in the previous year. There were 188 distraints made in the year against 158 in the previous year. Only in 21 of these cases against 84 in the previous year, the distress had to be pushed on to the final stage of sale by auction. The number of warrants issued in the year was 2,257 as against 11,916 in the previous year.

48. *Fines under Municipal and other Acts.* The amount realised under this head amounted to Rs. 5,031-12-6 against an estimate of Rs. 8,000 and Rs. 5,615-3-6, the collections in the previous year.

49. *Fees for Licenses, Registration, etc.*—The fees collected under this head amounted to Rs. 67,754-8-0 against Rs. 65,181-4-0 in the previous year. Details will be found in Table No. 19. Appendix II.

As in the previous year, care was taken to see that sanitary conditions were enforced as required by the by-laws.

50. *Interest on Investments.*—A sum of Rs. 2,938-2-2 was realised as interest on the securities in favour of Raja Sir Ramaswami Mudaliyar Maternity Hospital. The interest derived on investments of the surplus funds of the Corporation amounted to Rs. 46,787-11-6 under the Revenue and Capital accounts put together against Rs. 73,442-11-11 in the previous year.

51. *Grants and Contributions.*—Contributions amounting to Rs. 7,60,957 as detailed under, were paid by Government during the year against Rs. 10,15,350 in 1914-15:—

- (1) a contribution of Rs. 20,000 for the maintenance of the Mount and Poonamallee Roads;
- (2) a contribution of Rs. 4,443 for the repair of the bridges over the Cooum and Buckingham Canal;
- (3) a contribution of Rs. 2,000 towards the zoological collections in the People's Park;
- (4) a contribution of Rs. 300 for the payment of *batta* to pregnant women in Raja Sir Ramaswami Mudaliyar Maternity Hospital;
- (5) a compensation of Rs. 13,607 for withholding sanction for the issue of licenses by the Corporation for places used for the sale of spirituous and intoxicating liquors;
- (6) a special grant of Rs. 7,00,000 for the improvement of water-supply and drainage of the City;
- (7) a special grant of Rs. 10,384 for the acquisition of lands for washermen settlement, and
- (8) a special grant of Rs. 10,223 for the improvement of Kelly's drain.

Payment for Water Supplied for Non-domestic Purposes.

Current.

52. The demand under this head amounted to Rs. 1,43,882-13-2 against Rs. 1,39,250-10-0, which excludes a sum of Rs. 5,203-6-0 due by Government and South Indian Railway Company for supply of water to their buildings during the two months of the last quarter of the year, the bills for which amount could, under the existing arrangement with them, be issued only after the close of the year. The current collections came up to Rs. 1,28,257-3-2 against Rs. 1,37,640-2-0 in the preceding year and Rs. 15,625-10-0 were outstanding at the end of the year for the following reasons :—

- (1) a sum of Rs. 8,689 is due by the Buckingham and Carnatic Mills Companies payable under the terms of the existing contract only after the 30th September 1916 ;
- (2) a sum of Rs. 6,925 represents the amount of the bills for February issued on the 20th March, whose collection becomes due only in April.

Of this balance, Rs. 5,769-8-0 have since been collected.

The percentage of collections to the demand exclusive of item (1) above was 94.87 against 98.84 in the previous year.

Arrear.

53. The arrear outstanding at the beginning of the year was Rs. 1,663-7- which rose to Rs. 6,225-3-6 by supplemental charges made for the previous year and by bills issued against Government for the two months of the last quarter of the previous year, and the amount was fully collected.

General Incidence of Taxation.

54. The incidence of taxation per head of the population under all taxes including tolls was the same as that of 1914-15, viz., Rs. 3-14-5. Excluding toll the incidence was Rs. 3-13-0, as in the previous year.

Advance Account.

55. The amount outstanding at the beginning of the year was Rs. 1,69,487-15-7, of which permanent advances held by the several officers of the Corporation amounted to Rs. 93,085 and miscellaneous advances to Rs. 76,402-15-7. During the year permanent advances amounting to Rs. 84-4-5 and miscellaneous advances of Rs. 53,679-0-10 were adjusted and fresh advances were made to the extent of Rs. 1,540 under "Permanent" and Rs. 44,542-11-4 under "Miscellaneous." The advances outstanding at the close of the year were Rs. 94,540-11-9 under permanent and Rs. 67,266-10-1 under miscellaneous and Rs. 1,61,807-5-10 in the aggregate against Rs. 1,69,487-15-7 at the end of the previous year.

EXPENDITURE.

Grant I—(Public Works).

Communications.

New Works.

56. Besides the usual improvements of roadways by acquisition of lands for widening streets, rounding off dangerous corners, etc., which were comparatively few during the year, some minor works such as the removal of Tramway and Telegraph Posts at important junctions, and refixing them at the sides of roads were carried out. The "Spring Haven Road" constructed by the Madras Port Trust was taken over by the Corporation at the request of the Chairman of the Trust. A Skew Bridge was constructed over the Otteri Nullah at Stephenson Road.

The total amount of expenditure under this head was Rs. 31,417 against the Revised Estimate of Rs. 56,600; the decrease in expenditure is due to the withdrawal from certain acquisitions with a view to economy.

57. Lands and buildings were acquired in the following places :—

- (1) In Tondiarpet for widening Lawyer Chinnathambi Mudali 2nd Street, and connecting it with Sanjeeviroyan Covil Street.
- (2) In Georgetown for rounding off the corner at the junction of Armenian Street and Mukur Nallamuthu Chetti Street.
- (3) In Georgetown for widening Popham's Broadway at R. S. Nos. 5617 (1 a, 1 b & 2) 5623 to 5626, 5629, 5630, 5632, 5633 and 5631 (1).
- (4) In Vepery for connecting Cuddappah Rangiah Chetti Street with Mattukkara Veerabadran Street.
- (5) In Mylapore for connecting Chanda Sahib Street with Masthura Begam Pettah Road.
- (6) The land occupied by Messrs. Shivji & Co. at R. S. No. 11452 of Georgetown in Broadway was taken over under Section 235 of the Municipal Act and the road widened.
- (7) The Tramway and Telegraph Posts at the junction of General Hospital Road and Evening Bazaar Road, the Madras Electric Supply Corporation Posts at the junction of Nungambakkam High Road and College Road, and the Tramway Poles in Cutcheri Road, Mylapore, were all shifted to the sides of the roads to facilitate traffic.

58. In order to alleviate the long standing complaints about the flooding of the road dam in Stephenson Road, by the Otteri Nullah, a Skew Bridge was proposed.

at a cost of Rs. 14,120. This as well as a parapet wall rounding off the approach of the Nullah Bridge at the junction of Coonoor Road and Cook's Road were progress during the year.

59. *Spring Haven Road*.—This road is 2,175 feet long and runs eastward continuation of Fraser Bridge Road. It was constructed by the Madras Port Trust at a cost of Rs. 38,467 and was taken over by the Corporation on 8th March 1916, for future maintenance.

This road will be the only mode of access to the following places where the existing road which runs from Parry Corner across the railway eastwards to the Post Office stables is closed on account of the contemplated enlargement of the New Beach station yard :—

- (a) Harbour Station yard.
- (b) Spring Haven Road and the South Quay.
- (c) Port Trust Explosive Magazine.

Repairs.

60. The total expenditure incurred under this head was Rs. 3,89,651 against the Revised Estimate of Rs. 3,60,840 and the actuals of Rs. 2,10,673 of the previous year. The increase in both, is due to the greater number of miles of roads reformed during the year, many roads having been left unreformed in the previous year owing to the non-receipt of road metal. In the year under report systematic and timely expenditure was incurred on the maintenance of roads under the new contract which was entered into in April 1915, and the increased expenditure has brought the roads to a fairly satisfactory condition.

61. *Reform and Repair of Roads*.—During the year 3 miles, 5 furlongs and 103 yards as against 2 miles, 3 furlongs and 210 yards last year of unmetalled roads were metalled for the first time.

The number of squares (100 sq. ft.) laid in the reform of roads was 62,625-88 which is equivalent to 59-30 miles of roads, 20 feet wide against 31-23 miles of roads reformed in the previous year.

Vide details in Tables 13 and 14, Appendix II.

The quantity of materials used in reform and in repair of roads by port is as follows :—

	B. Granite. C.ft.	V. Granite. C.ft.	Latente. C.ft.
Reform	10,10,569	3,10,361	5,90,009
Patch-work	63,283	15,673	29,600

The cost of reform including materials, cartage and laying but exclusive of rolling was Rs. 2,57,760.

The 59-30 miles of roads completely reformed cost Rs. 4,347 per mile against Rs. 4,211 in 1914-15 and Rs. 4,311 per mile in 1913-14.

The excess represents the acceptance of higher rates due to change of contract for the reform of roads.

The comparative figures for granite reform are as shown below, the figures being squares in each case.

	6"	4"	3"	2"
1914-15	410½	12,984	16,225	...
1915-16	1,423	20,767	20,783-37	2,038

62. *Tarring Roads*.—To the already existing 6 miles, 7 furlongs and 48 yards of tarred roads in the city, the following new roads to the aggregate length of 1 mile, 4 furlongs and 142 yards were tar sprayed during the year, viz.:—

- (a) Band Practice Road from Band Beach Road to a length of 545 feet.
- (b) Police Commissioner's Office Road from Harris Road to Poona-mallee High Road.
- (c) Wallajah Road from Triplicane High Road to Bell's Road.
- (d) South Beach Road from Presidency College to Ice House Road.

In addition, the following roads were retarred to a length of 1 mile, 4 furlongs and 10 yards thus representing 3 miles and 152 yards of roads which were tarred in all during the year:—

- (a) Mount Road from Government House Bridge to Wallajah Road and from Messrs. W. E. Smith & Co. to Messrs. Spencer & Co.
- (b) General Patter's Road from Mount Road to Wood's Road and West Cott Road from Pycraft's Road to Peters Road.

Of the above, Band Practice Road was experimentally treated with a material known as "Petroleum Pitch" for a length of 545 feet, instead of with the usual distilled coal tar. South Beach Road from Sunkumar Street to Ice House Road for a distance of 770 feet was treated with "Petroleum Pitch" combined with coal tar. This new material was claimed as better suited for roads than the ordinary distilled coal tar, but the above experiments did not prove the claim; hence use of the material was discontinued. The failure was in some degree due to want of proper plant to handle the material.

The laying as a demonstration of an asphaltic concrete road, by the Standard Oil Company could not be started within the official year, as Mr. Staber of Standard Oil Company, who was to have carried out the demonstration was away from India and returned to Madras only at the end of May 1916. The experiment was therefore started on the 29th May in that portion of the road between Munro Statue and Wallajah Bridge extending to a length of 150 feet under the supervision of Mr. Staber. Detailed reports as to the costs, durability, etc., will be embodied in the next report.

Repairs to Culverts, Foot-paths and Bridges.

63. (1) *Culverts*.—The culvert at the junction of Kelly's Road and Purasawakkam High Road was extended, the culverts opposite to the Madras Volunteer Guards' Head Quarters, Poonamallee High Road were enlarged, and a retaining wall was constructed. The culvert at the junction of Moore's Road and Anderson Road in Nungambakkam was dismantled and reconstructed.

Culvert No. 1 in DeMellow's Road was widened and the widening of culvert No. 2 in the same street was in progress.

Side walls at the junction of Mowbray's Road and Oliver Road were constructed and the parapet wall in front of the Model School at Arunachalam Naick Road was removed and the drain was covered with granite slabs.

(2) *Foot-paths*.—A foot-path in Mount Road from Wood's Road up to Messrs. Nailer and Co., and a platform for the location of Hackney Carriages at the junction of Wall Tax Road and General Hospital Road were constructed.

(3) *Bridges*.—Punthottam Aqueduct and Soolai Cathai Bridge at Mylapore were repaired by the Corporation for transferring them to Government for maintenance. Napier Bridge and the newly repaired wooden railings of Government House Bridge were painted during the year.

Buildings.

New Works.

64. An expenditure of Rs. 2,27,031, was incurred under this head against Rs. 2,98,740 in the Revised Estimate. The decrease was due partly to the withdrawal of two acquisition cases, and partly to the fact that works in progress during the year and works completed were not actually paid for within the year.

Hospitals.

65. (1) *Rajah Sir Ramaswamy Mudaliar Lying-in-Hospital*.—The construction of quarters for Indian Nurses was completed during the year.

In addition to the electrical installations which were newly carried out during the year, other improvements, such as the fixing of iron bars and windows with teakwood shelves and frames and of wire netting to all the openings of the verandah of the several wards were effected at the instance of the Resident Surgeon of the Hospital.

(2) *Royapettah Hospital*.—The installation of sanitary and electrical fittings for the Sub-Assistant Surgeons' quarters was completed during the year and two compound walls, one dividing the Sub-Assistant Surgeon's quarters and the new proposed hospital Dhobykhana, and another enclosing the newly acquired land for the khana were built during the year.

(3) *Infectious Disease Hospital in Barracks Square*.—The improvement designed to make the present building suitable for use as an hospital for the treatment of infectious diseases were in progress during the year.

Model Paracherri.

66. The construction of the Model Paracherri of 34 tenements in Cemetery Road, with the exception of the latrine which was under progress, was completed during the year at a total cost of Rs. 18,130; and the tenements have been let to the conservancy sweepers at a rental of As. 8 per tenement.

Model Schools.

67. The construction of school buildings at the following places was completed during the year:—

- (a) Angappa Naick Street, Georgetown
 - (b) Rama Naick Street, Nungambakam
 - (c) Venkatarangam Pillai Street, Triplicane
- and main buildings with the exception of latrines at
- (a) Cemetery Road, Tondiarpet
 - (b) Salai Vinayager Covil Street, Georgetown
 - (c) Triplicane High Road, Triplicane, and
 - (d) Bells Road, Triplicane

were constructed during the year thus making up a total of 18 schools in all to the end of the year under report.

The construction of buildings at (a) Vasapmode Paracherri, Georgetown; (b) Vadhyar Canda Pillai Street, Purasawakkam and at (c) Ammayappa Mudali Street, Mylapore was under progress.

In addition to the 7 sites already acquired, or alienated by Government for the construction of model schools, the Corporation land behind "Hope Lodge" in Vyasarpady, was selected by the Corporation as site for the 10th Division school at the instance of the Divisional Commissioner and the Inspector of Schools.

Works carried out for the Health Department.

68. (1) *Model Milch Cow-houses*.—Though the acquisition of the land occupied by the old Fiji Emigration Depot was completed during the year at a cost of Rs. 22,093-12-10, actual alteration of the existing buildings to suit the needs of a model cow house had to be postponed on account of financial stringency.

The alterations to B. Depot, Basin Bridge Road needed to make it suitable for a Cow house were under progress during the year.

(2) *Passport Office in Tiruvottiyur High Road*.—Alterations to this building as dispensary and for offices for Sanitary Inspector, Conservancy Overseer, Vaccinator, Medical Registrar and Plague Inspector were completed during the year.

(3) *Latrines*.—The acquisition of land for the construction of a flush-out latrine in Thambu Chetty Lane and the construction of a flush-out latrine at Polu Naicken Street, Perambur was completed during the year.

A new type of a sanitary urinal called "Torfeit Urinal" was installed in Wall Tax Road near the Central Station as an experimental measure, as it was

represented by the manufacturers, Messrs. Vacha & Co., of Bombay, that by the introduction of these urinals, flushing by water might be entirely dispensed with and the latrines would be free from smell.

The construction of flush-out latrines at (a) Kasimodu Garden near Flag Staff Street; (b) Mottai Garden; (c) Periathambi Street, Kasimodu; (d) Narayanappa Naick, 8th Street and (e) Cemetery Road in the Tondiarpet Division; (f) at the junction of Basin Road and Old Jail Street and (g) at Shaik Maistri Street junction of Thambu Chetty Lane in Georgetown, were in progress during the year. Tenders for the construction of similar flush-out latrines at other parts of the city as noted below at :—

- (a) Shaik Maistri Street in Tondiarpet
- (b) Palmyra Kuppam in Tondiarpet
- (c) Kuppam Hutting Ground
- (d) Cooum River Road
- (e) Angalamman Coil Street
- (f) Swami Reddi Street
- (g) Candappa Mudali Street, and
- (h) Sirdar Jungs Garden

were approved by the Corporation and the works are in progress during the current year.

(4) *Burial and Burning Grounds.*—Land was acquired at a cost of Rs. 2,070 for the extension of the Hindu Burial ground in Suriyanarayana Chetti Street, and the fallen shed at the Mylapore Burial and Burning ground was reconstructed during the year.

(5) *Bathing Fountains.*—The corrugated iron sheet enclosure at the Ice House Road bathing fountain was dismantled and in its place a new one with masonry walls was constructed. Another fountain was also constructed in Basin Bridge Road at the junction of Mint Street.

(6) Besides the above the following minor works were carried out :—

Four small incinerators at Cochrane Basin Road, 3rd Division; one at Chulai Mills, 11th Division, and one at Pycroft's 1st Lane, 18th Division, were constructed.

The Smithfield Market was improved and a verandah was added to the Vaccination Depot at Kalmantapam Road Police Station.

A shed for dogs near the Basin Bridge Road incinerator was constructed and alterations and additions to the lethal chamber at Kistnampet were in progress.

The construction of a dust-bin platform as advocated in the Conservancy Report as an experimental measure was under progress and it is intended to construct similar platforms in the city if the experiment proves a success.

Other Works.

69. (1) *Central Fire Station at Puduket.*—The construction of quarters for a European and an Indian driver by the side of the existing quarters could not be

carried out but had to be postponed in the face of other and more important works which had to be given effect to. But tenders for the additions to the existing engine shed to accommodate the two more engines were accepted at a cost of Rs. 11,860, and the work was in progress.

(2) *Parks.*—The fencing of the small deer enclosure in the menagerie, People's Park, was completed during the year and roadways were formed around the new bear's cage.

The construction of a room on the upper floor of the Superintendent's quarters and the extension of the foliage shed in front of the gate in Robinson Park were completed during the year.

(3) *Workshops and Stores.*—The original tenderer for Rs. 5,496-2-0 for the construction of a compound wall for the Corporation Workshop and Stores, having failed to start the work within the stipulated time, the contract was relet and the revised tender for Rs. 6,110 was accepted by the Standing Committee on 1st October 1915. This work as well as the construction of a corrugated iron shed at Stores were under progress during the year.

(4) Two offices and stores, one for the Drainage Overseer at Mannarsamy Koil Street, and another for the Sewer-Cleaning Staff next to 'C' Pumping Station and quarters with an office room for the Licensing Clerk at Adyar were newly constructed during the year.

Repairs.

70. Details of repairs and improvements carried out to Municipal Buildings and the cost of such works are shown in Appendix I, Statement II-A, Part II.

Water-Supply and Drainage—Special Works Department.

71. The work of the Special Works Department consists mainly in the design and construction of new works for the water-supply and drainage of the City. It also undertakes the maintenance of these works, until they are ready to be handed over to the Works Department.

Under normal conditions, the year under review would have witnessed a maximum output of construction work. Unfortunately, owing to the war, the year was not normal. It has been necessary to reduce work as much as possible, in order to curtail expenditure. During the second half of the year, as the war showed no sign of coming to an end, it became difficult to finance the works. No new works were started, and works already in progress were slowed down and the staff reduced as much as possible, consistent with carrying out the contracts already let. By these means, the expenditure, which under normal conditions would have been some Rs. 30 lakhs, was reduced to Rs. 11½ lakhs. Since the war started, the cost of the Special Works Department establishment has been reduced by some Rs. 3,000 per mensem.

72. *Restricted proposals.*—In the circumstances, it was felt that the Corporation could not contemplate the execution in the immediate future of the whole of the works designed in pre-war days by the Special Engineer, works which are

estimated to require for their completion a sum of Rs. 150 lakhs, in addition to the amounts already spent.

It was felt, however, that the water and drainage works in the course of construction must proceed, both from sanitary and economical point of view. From a sanitary point of view, because the drainage of Madras is at present in a very unsatisfactory condition, owing to the neglect of many years, and from an economical point of view, because the Corporation is committed to an expenditure of some 20 lakhs of rupees in contracts, which could not be cancelled except by paying heavy damages, and also because a considerable sum has been sunk in work which is only partially executed, and will be of no use unless it is completed.

In these circumstances, the Special Engineer prepared what has been called a "Restricted Programme," which contemplates the completion of the most urgently required works, 'both for water-supply and drainage,' at a total estimated cost of Rs. 50 lakhs spread over a period of five years.

73. *Scope of restricted proposals.*—When this restricted programme has been completed, the water-supply will be in a satisfactory condition except that the filter beds will be insufficient in area. The additional filter beds, for which estimates amounting to Rs. 5,30,000 were sanctioned by Government in July 1914, are no doubt desirable and should be started as soon as funds can be obtained. They will take two or three years to construct.

The drainage works included in the restricted proposals are in conformity with the comprehensive scheme of City drainage, which has already been sanctioned and which can be completed as urgency arises and funds become available. The works proposed are those necessary to obtain the greatest benefit from the works now wholly or partially constructed, and to remedy the worst cases of insanitation. While they leave large sections of the municipal area unprovided with underground drains, they will greatly improve the sanitary condition of the whole of the thickly populated areas of the City.

It must, however, be clearly understood that the whole of the Main Drainage Scheme should be carried out as early as possible, for the increased supply has brought about the breakdown of the drainage system foretold by the Special Engineer in 1910.

The delay which has now been decided on, means a postponement of the time when Madras as a whole can be made sanitary, and the death-rate reduced to that of a normal healthy community. It should, therefore, be made as short as possible.

74. *Filter Beds.*—On the Waterworks Section, the work done during the year under review has consisted chiefly of placing filtering materials in the filters already built, and of extending the Distribution System. Owing to the extreme dilatoriness of the contractor, the Corporation has done most of the filter filling by direct labour. Eleven filters out of the fourteen have now been filled, leaving three to be completed. Even when the whole 14 filters have been completed, they will be insufficient in area to deal with the whole quantity of water now consumed by the City.

In G.O., No. 1442-M., dated 31st July 1914, Government sanctioned estimates, amounting to Rs. 5,30,000 submitted by the Special Engineer for the construction of seven additional filters, an additional pure water tank, and accessory works, but owing to the present financial stringency, it has been decided to postpone construction until more favourable conditions obtain.

75. *Prevention of waste of water.*—As is the case in every large Indian City, great difficulty is found in limiting the waste to reasonable proportions. The consumption during the past year is approximately twice what it was before the new waterworks were opened. The big increase is largely due to the waste caused by leaky fittings, taps left open, and the irrigation of gardens by means of pipe water. To reduce this waste, the Corporation has, during the past year, introduced regulations and rules to prevent waste, contamination, and misuse of water, and has also adopted the principle recommended by the Special Engineer of having two classes of house services: a first class service in which the consumer is required to hire water meters from the Corporation, and to adopt only specified fittings, the positions and numbers of which have to be approved, and a second class service, in which the consumer is allowed to fix one tap of approved pattern, provided it is placed in such a position that it is visible from the road, and can at all times be inspected by the municipal staff.

The Corporation has also introduced a scale of fees for connecting and testing house services, and for the rent of meters. The strict enforcement of the regulations should minimise waste of water due to leakage and misuse in the house services. In addition, there is undoubtedly leakage in the street pipes. This leakage is very difficult to discover, especially where the pipes are laid in sand.

In Madras, iron pipes have a shorter life than in many other Cities, and experience has shown that a large proportion of the pipes laid 20 years and more ago are unsound. From these unsound pipes which include many house communication pipes, water must be escaping in thousands of small leaks. Many small leaks will account for a large total loss, which will be quite invisible in porous soils where the water gets away readily. To detect these hidden leaks, a complete waste-water meter system has been designed, and plans and specifications drawn up. The calling for tenders has been postponed on account of the war.

House to house inspection.—With a view to reducing waste, a small special staff was sanctioned on 20th September 1915, to carry out house to house inspection. Up to 31st March 1916, 11,500 houses were inspected of which some 5,000 had leaky fittings. Notices have been served on the owners, and in most cases the defects have been rectified.

76. *Water pressure maintained.*—In spite of this work, it has been found quite impossible to maintain the full available pressure during the whole day. A pressure of about 45 feet above ground level is provided in the principal mains between 5-30 A.M. and 9-30 A.M.; from 9-30 A.M. to 6 P.M. it is reduced to 30 feet; from 6 P.M. to 10 P.M. to 15 feet; and from 10 P.M. to 5-30 A.M. to 10 feet. This method of controlling the waste by reducing the pressure has also been adopted by Calcutta, where even though the total water-supply exceeds 50 gallons per

head per day, it has been found impossible to maintain the full head throughout the 24 hours.

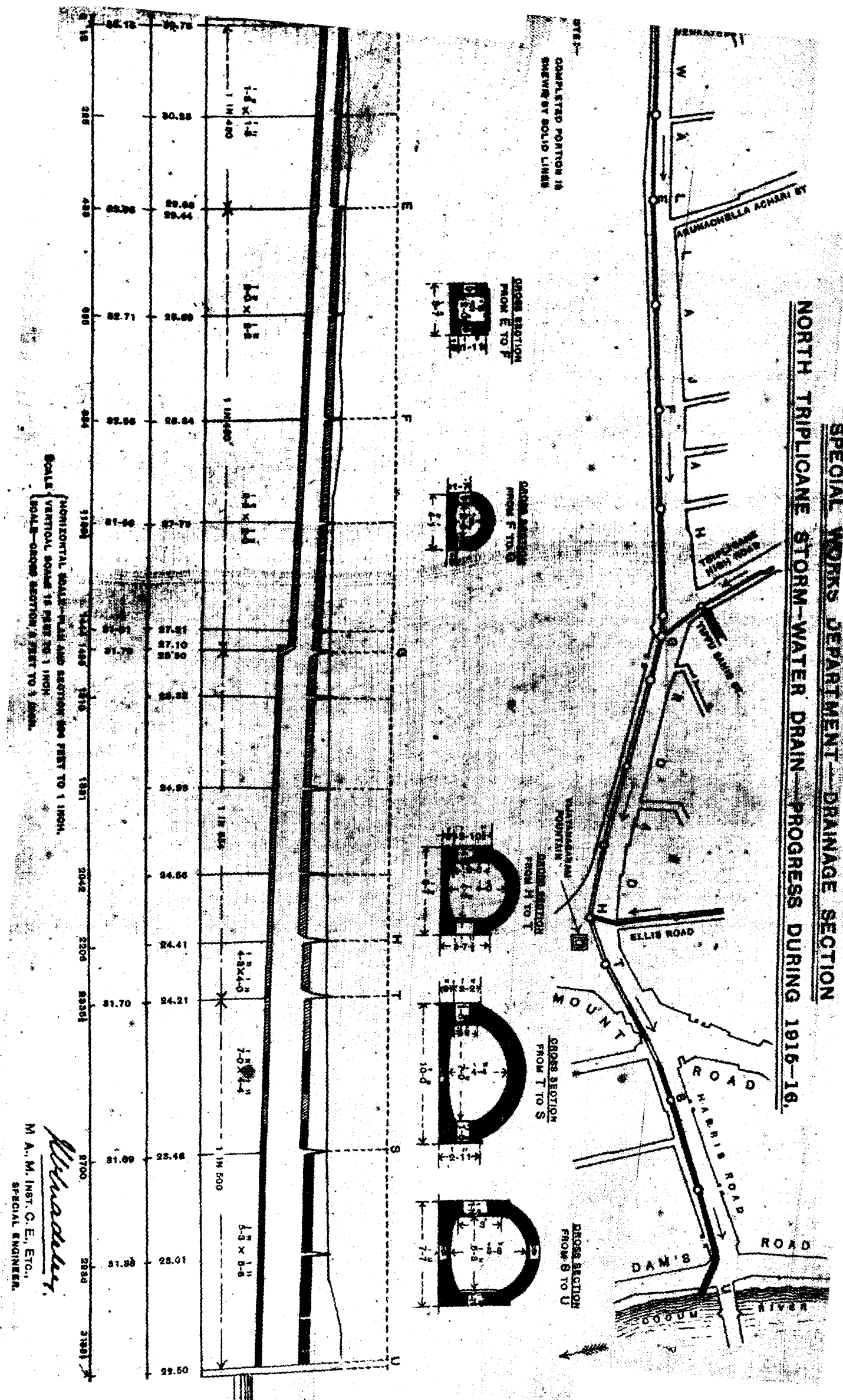
77. *Quantity of water supplied.*—By means of the above-mentioned methods—remedying defects in house services, and limiting the pressure of the supply—the consumption in Madras City has been kept under control. The maximum quantity taken during any week was about 135 million gallons, which is equivalent to 39 gallons per head per day. This was gradually reduced to about 24 gallons per head per day during the monsoon period, after which it gradually increased to 29 gallons per head per day. As the system is only designed to supply 25 gallons per head per day, the increased consumption has led to a greater cost pumping than anticipated. It has also taxed the filters to such an extent that unfiltered water has to be mixed with filtered water every day in the proportion of about one to three.

78. *Water-supply and Health.*—The death-rate returns appear to prove that the new water-supply has improved the healthfulness of the city. The works were opened on 17th December 1914, and it is very interesting to note that while the death-rate during 1914 — as 46.6 per 1,000, it dropped to 36.0 in 1915. Moreover this death-rate is the lowest during the last 20 years with the exception of that of 1897 when it was 35.5. While it may be a coincidence that so great a drop in the death-rate has occurred during the first year that the new water-supply has been in use, still the fact that it is the lowest death-rate for so many years, makes it fairly safe to infer that the new supply has largely added to the healthfulness of the City because, except for the water-supply, the health factors must have been at least as favourable during several other years.

79. *Water Distribution System.*—The Water Distribution System has been considerably extended during the year under review. The two large mains to the north and south of the City have been completed, and a number of subsidiary and street mains have been laid in districts and streets where a better water-supply was urgently required. The total length of water pipes laid to date under the new scheme is 2,24,000 feet of which 88,000 feet were laid during the year.

On account of the war, it was decided not to proceed with the large pipe contract amounting to some 13 lakhs, for which the Corporation had received tenders, but owing to the urgency of providing a better supply in many areas, pipe contracts amounting to about Rs. 5,60,000—exclusive of freight and war risk insurances—have been entered into during the year. When the pipes under these contracts have been delivered and laid, the distribution system should be fairly satisfactory, even though it will not include many of the pipe lines which the Special Engineer proposed in his Water Distribution Report of 1913.

80. (1) *Drainage Works.*—On the Drainage Section of the Special Works Department work has been restricted to carrying out works already in progress. These are the most difficult of the urgently required works—those which will take the longest to complete and that employ largely local labour, and those which are required to get the fullest benefit from the works already carried out.



Briefly stated, the works consist of the deepest sewers in the Napier Park and Purasawakam drainage areas, the laying of deep intercepting sewers in Georgetown, and the connection of houses to the newly laid sewers in Tondiarpet.

(2) *Method of construction.*—The construction of drainage work is carried out by contract wherever possible. Unfortunately this system has many disadvantages. In Madras there are very few contractors who possess that combination of capital, plant, and energy, which is requisite to carry out difficult work. In consequence all the most difficult work is executed by labour, working under direct departmental control. Furthermore during the last two or three years contractors have greatly increased their prices but have not increased their speed of doing work. Consequently contract work compares unfavourable with direct departmental work in all the three most important factors in the construction of work, viz., ability to overcome difficulties, cost, and speed of execution. This is most unfortunate, for there is no doubt that departmental work gives subordinates opportunities to supplement their pay by improper means, and it is on this account that the Corporation has decided that work should be carried out by contract wherever practicable.

(3) *Difficulties encountered.*—The principal works in course of execution are the Gravitation Mains for the Napier Park and Purasawakam areas. In constructing these mains, great difficulties have been encountered due to water and bad ground. This has been more particularly the case with the Purasawakkam Main, where it was found necessary to use interlocking steel piles for excavation, and to substitute cast-iron pipes for the brick sewer originally intended. The ground in which the pipes were laid proved so treacherous that very special methods had to be adopted. For a considerable length the ground consisted of semi-liquid black mud, necessitating the driving of long timber bearer piles with cross pieces, to which the pipes were strapped to prevent them sinking into the mud when they were full, or being forced upwards by the mud when empty. These difficulties coupled with the rise in prices have caused the cost to exceed that provided in the original estimates of 1913.

In the Napier Park area, the principal difficulty has been the large quantity of water to be handled. In this case, it has been possible to neutralise the increased expense by effecting economies in the arrangement of sewers, so that the total cost will be no greater than the original estimates in spite of the great rise in prices that has occurred since the estimates were prepared.

(4) *North Triplicane Storm Water Drainage.*—In addition to foul water drainage, a new work, considered of great urgency—the storm water drainage of North Triplicane—has been taken up. Designs have been prepared and half the work completed, direct departmental labour being employed to secure economy and expedition.

The plan facing this page shows the line of the large sewer, which forms the principal work of the North Triplicane Storm Water drainage. A longitudinal section of the sewer, and cross sections at different points are also shown.

(5) *Anti-Malaria Drainage.*—A scheme for anti-malaria drainage work in the Purasawakkam area of Madras has also been designed. The general principle

is to drain the tanks to the lowest level possible by gravitation. The drains are designed to discharge into the Otteri Nullah at various points. As an experiment, a small portion of the scheme has already been carried out, and the results are sufficiently favourable to indicate that the execution of the whole of the proposed scheme is most desirable in order to drain the Purasawakkam tanks and swamps which form such extensive breeding grounds for malaria-carrying mosquitoes.

New Sewage Farm.

81. During the previous year a staff was sanctioned for the preparation of plans and estimates for a new Sewage Farm three miles to the north of the City boundary, but owing to the war, only a very small proportion of the staff has been engaged. The Special Engineer has submitted an approximate estimate amounting to Rs. 12 lakhs for the acquisition of land, levelling and laying out the farm, purchasing and erecting pumping plant, and constructing pump ing mains, channels, and distributaries and everything else necessary to force the sewage the three miles which separates the old and proposed farms, and to distribute it over the latter. Detailed estimates have now been completed and will be submitted as soon as an estimate has been received from the Collector of Chingleput of the cost of acquiring land and moving certain Kuppams which will be rendered uninhabitable, if the area proposed by the Corporation is used for the farm.

Some details of the work executed by the Special Works Department during the year under review are given in statements (vide Appendix II tables I to 11).

Drainage—(Ordinary).

New Works.

82. *House Drainage (1) Tondiarpet Area.*—Alteration of house drains in this area was continued and the drainage of 1,138 houses was altered. In addition, 268 connections between the house and the syphons and 148 connections between the syphons and the sewers were carried out during the year.

(2) *Georgetown Area.*—This was the next area to be treated and the work was begun in December 1915. Within the 31st March 1916, the drainage of 69 houses was altered and connections of the house drains with the sewers were effected in 401 cases.

Besides the work in these two areas, alterations of house drainage to 180 houses were carried out in various other parts of the City.

The expenditure on ordinary drainage amounted to Rs. 12,361 against Rs. 16,400 in the Revised Estimate.

Under ordinary drainage works, the construction of seven manholes in Mylapore where the sewers did not work satisfactorily, was completed during the year, and other minor works, such as,

- (a) The construction of masonry drains in certain streets in Tondiarpet, Purasawakkam, Chulai, Kosapet and Triplicane;
- (b) The demolition of old syphons at Sadayappa Mudali Street, Mylapore, and the construction of new syphons;

(c) The removal of broken pipes in Arunagiri Mudali Street, Mylapore, and relaying with 6-inch stoneware pipes, and

(d) Construction of silt pits in certain streets in Georgetown and Wall Tax Road, were carried out during the year.

Repairs.

83. The repairs done to drains and their cost are shown in Appendix I, Statement II-A, Part II.

Sewer-Cleaning.

During the year, 6,14,345 feet of sewers were cleaned and 4,410 obstructions, from sewers, and 970 from syphons were removed. The quantity of silt removed from the manholes and separators was 1,14,894 cubic feet.

In the areas of Triplicane, Mylapore, Mirsahibpet, Royapettah and in various other portions of the City, 1,702 syphons were raised and provided with silt catcher buckets on the house connections. Connections to the several sewers throughout the City were treated in the same way by the provision of silt catchers with the result that the admission of silt to the sewers was prevented to a great extent and the surcharging in the sewers complained of during the past years was greatly minimised.

The sewers at Guffur Sahib Street and Jawar Hussain Street, Triplicane, showed signs of collapse and it was arranged with the Special Works Department to relay these sewers and provide silt catchers.

Water-Supply—(Ordinary).

84. With a view to ensure good and sound work and to prevent waste and contamination of water, certain regulations and rules in the maintenance and carrying out of the waterworks were framed which, with but slight modifications at the hands of a special committee appointed for the purpose, were approved by the Corporation at the general meeting held on 20th April 1915. Some of the main features of the new regulations are:—

(a) Classification of house connections into two classes, first and second, the former implying the provision of more than one tap with a meter and the latter implying the fixing of only one tap with an $\frac{1}{2}$ -inch pipe;

(b) the charging of rents for different classes of meters proposed to be newly fixed;

(c) charging of fees for connections with municipal water works, and

(d) fees for testing communications, pipes and fittings in cases where new pipes were laid to ensure sound joints.

The new regulations came into force from the 12th December 1915.

A scheme to train certain apprentices for qualifying themselves as water-works overseers and plumbers was formulated, and detailed rules were drawn up.

by the Engineer for taking in such apprentices. The scheme was approved by the Corporation at their general meeting held on 20th May 1916.

(1) *Private Service*.—During the year, 507 new services as against 452 in the previous year were laid by licensed plumbers and 5,562 existing services as against 2,412 were repaired, cleaned, altered, and extended. The increase in the number of repaired services is due to the leakage detected in the old defective pipes owing to the increased pressure in the mains. Of the 507 new services, 33 were first class and 474 were second class connections under the new regulations referred to above. The total number of house services laid up to the end of 1915-16 was 28,218. There were 32 licensed plumbers on 31st March 1916.

The quantity of water charged for as having been used for non-domestic purposes was 191,849,662 gallons. The amount collected during the year was Rs. 1,34,482-6-8 as shown in detail in Table No. 17, Appendix II. The charge for water supplied for non-domestic purposes continued to be 12 annas per 1,000 gallons.

(2) *New Works*.—During the year, 18,211 feet of pipes were removed, cleaned and relaid and 4,873 feet of new mains were laid in certain streets at a cost of Rs. 4,481 out of the total expenditure of Rs. 14,168 under this head. Besides these, 48 fountains were newly erected and 9 valves, 17 stop cocks, 6 pumps, 1 hydrant and 91 meters were fixed. Table No. 12 of Appendix II shows the length of pipes laid.

(3) *Red Hills*.—On the 1st April 1915, the level of Red Hills Lake stood at 43.76 and on the 31st March 1916 at 41.51.

The rainfall and average water level for each month as furnished by the Public Works Department are shown in Table 16, Appendix II.

The quantity of water-supply measured at the Red Hills during 1915-16 was 899,476,812 c.ft. (equal to 5,605,539,492.384 gallons) as against 606,987,108 c.ft. in the previous year. The increase in consumption is mainly due to the laying of additional mains and the supply of water under the increased pressure.

(4) *Red Hills Lake, Filter Beds and Conduit, Delivery Channel, Fountains and Pipes*.—The cost of maintaining these including the establishment amounted to Rs. 65,682 as against Rs. 56,306 in the previous year. The increase is due to the maintenance of staff for filter beds and conduit newly added in the year, to the repair of old defective pipes, and also to the temporary maintenance of the special staff engaged for water waste detection and prevention.

There are now 1,470 fountains and cattle troughs within the municipal limits, 48 having been newly erected during the year.

Miscellaneous.

85. *New Works*.—The expenditure under this head amounted to Rs. 13,655 against a sum of Rs. 9,310 exclusive of the Government Grant of Rs. 10,381 in the

Revised Estimate, and was incurred on the acquisition of land for the construction of a hackney carriage stand in Harris Road and on other miscellaneous works. The apparent increase in the expenditure is due to the adjustment in the accounts in respect of the piece of land occupied by a small tank next to the Police Station, Egmore, which had already been transferred to the Corporation by the Trustees of the property who were unable to pay to the Corporation the sum of Rs. 5,000 incurred in the filling of the tank.

Administration.

86. *Notices*.—6,612 notices as against 1,543 were served under the various sections of the Municipal Act dealing with the construction or reconstruction of masonry buildings or huts, removal of encroachments or projections, precautions in case of buildings, tanks, etc., in ruinous state, fencing of buildings or lands and pruning of hedges and trees, maintenance of pipes for catching water falling from roofs and far greater than all in the case of misuse, wastage and contamination of water-supply. In 5,757 cases, the notices were complied with. The increase is due to more careful supervision.

87. *Permits*.—2,954 permits were issued under Sections 268 and 278 of the Municipal Act for the construction or reconstruction of masonry buildings, huts and for carrying out simple repairs.

88. *Prosecutions*.—Magisterial proceedings were taken in 216 cases as against 141 in the previous year. In 173 cases, the defaulters were convicted and fined; in three cases they were acquitted and in 22 cases they were withdrawn. Owing to the whereabouts of the defaulters not being known, the summonses could not be served in 17 cases, and only one case on the whole remained undisposed of. The increase in the number of prosecutions has been chiefly under Sections 198 and 319 in respect of contamination of the Red Hills Lake. Fines in cases of conviction amounted to Rs. 181-8-0.

89. Provisional orders under Section 287 (1) and (2) of the Municipal Act were issued in 669 cases and in 502 cases final orders were issued under Section 287 (3) as the parties failed to comply with them.

Grant II—Education.

90. The progress made under elementary education during the year is given in the report of the Sub-Assistant Inspector of Schools, printed in Appendix III.

The expenditure under this head amounted to Rs. 32,301-6-6 against Rs. 27,392-0-5 in the previous year, the increase being due to the establishment of four new elementary schools at Venkatarangam Pillai Street, Bells Road, Salai Vinayagar Koil Street and Angappa Naick Street.

91. According to the scheme sanctioned in G.O., No. 820-M., dated 25th May 1911, 20 schools should have been constructed and 16 opened by the end of the year. Fifteen schools were actually completed and opened excluding the school at Chetpet. Two school buildings were completed and ready for occupation and three other school buildings were in course of construction during the year.

92. The total number of schools maintained by the Corporation at the end of the year was 16. There were 1,931 boys and 386 girls on the rolls of these schools on 31st March 1916 against 1,570 boys and 220 girls at the end of 1914-15. There were 82 teachers in the Corporation Schools besides four Drawing and Kindergarten Instructors, two Gymnastic Instructors and one Supervisor for Drawing and Kindergarten employed for the benefit of all the elementary schools in the City and most of them were professionally qualified. Those that were not qualified have been informed that they will not be confirmed until they qualify themselves fully.

93. Nine teachers were under training during the year in the Government Training School, Saidapet, and four in the Government Training School, Triplicane. The total amount of stipends paid to these teachers was Rs. 1,169-15-11.

Grant III—Sanitation and Medical Services.

Hospitals and Dispensaries.

94. *Royapettah Hospital* :—The expenditure on the maintenance of this hospital rose from Rs. 44,202-0-6 to Rs. 46,595-2-7, but was less than the revised estimate by Rs. 794-13-5. The increase was due to the fact that the X ray apparatus was newly installed in the hospital during the year. The total number of in-patients treated in this hospital was 2,512 against 2,580, in the previous year but that of out-patients rose from 60,145 to 62,844.

95. *Raja Sir Ramaswami Mudaliar Maternity Hospital* :—The amount spent on this institution was Rs. 10,261-4-3 against Rs. 10,030-7-9 in the previous year and Rs. 9,350 in the revised estimate. The increase over the expenditure of last year was due to the increase in the price of articles due to war. The number of in-patients treated was 1,229 against 1,269 and that of out-patients 894 against 838 in the previous year.

96. *Georgetown Dispensary* :—The charges of this institution amounted to Rs. 12,388-10-11 against Rs. 11,004-8-0 in 1914-15, and Rs. 12,240 in the revised estimate while the number of patients treated in it fell from 43,046 to 42,111. The increase in expenditure notwithstanding the fall in the number of patients was due to a rise in the prices of European medicines and other articles.

97. *Washermanpet Dispensary* :—The maintenance of this institution cost Rs. 4,023-1-6 against Rs. 5,514-2-4 in the previous year. The decrease when compared with the previous year was due to the fact that the large quantity of European medicines purchased in 1914-15 was utilised during the year under report. The number of patients treated was 19,136 against 19,338 in the previous year.

98. *Baliah Nayadu Dispensary* :—The expenditure amounted to Rs. 9,501-11-8 against Rs. 8,012-15-9 in the previous year and against Rs. 9,520 in the revised estimate while the number of patients treated in it fell from 54,579 to 43,491, the decrease in the latter case being explained by the Surgeon to be due to the remarkable fall in the number of malaria cases treated. The increase in the expenditure as compared with the previous year notwithstanding the fall in the number of patients treated was due to a rise in the prices of European medicines and to the larger quantity of them purchased during the year.

99. *Chintadripet Dispensary* :—The outlay on the maintenance of this institution was Rs. 4,132-7-10 against Rs. 3,767-1-8 in the previous year and Rs. 4,020 in the revised estimate. The number of patients treated was 35,214 against 33,876 in the previous year. The increase in expenditure was due to the larger number of patients treated.

100. The reports of the Medical Officers in charge of the above hospitals and dispensaries appear in Appendix IV.

Contributions.

101. *Hospitals* :—The usual contribution of Rs. 20,000 for hospitals was paid to Provincial Funds during the year.

102. *San Thome Dispensary* :—The usual monthly contribution of Rs. 66-10-8 and the annual contribution of Rs. 300 were paid to this dispensary during the year. The number of patients treated was 10,474 against 10,412 in the previous year.

103. *St. Thomas' Convent Dispensary* :—A monthly contribution of Rs. 20 was as usual paid to the dispensary. The number of patients treated fell from 11,377 to 9,687.

104. *Victoria Caste and Gosha Hospital* :—A contribution of Rs. 1,000 provided in the budget for the hospital was not claimed and paid for during the year.

105. *Sri Kanyaka Parameswari Devasthanam Ayurvedic Dispensary, Georgetown and Venkataramana Dispensary, Mylapore* :—Contributions amounting to Rs. 500 and Rs. 100, respectively, were paid to these two institutions in the year under report for 1915-16. The number of patients treated in the Sri Kanyaka Parameswari Devasthanam Dispensary was 28,375 and that in the Venkataramana Dispensary was 21,637 against 25,727 and 45,005 respectively, in the previous year.

106. *Kalyani Hospital* :—A contribution of Rs. 600 for 1915-16 was paid to the institution during the year.

107. The reports of the above institutions appear in Appendix IV except that of the Victoria caste and Gosha Hospital, the Honorary Secretary to the Governors of the Hospital not having furnished it.

108. *Sembium Dispensary* :—A sum of Rs. 780 was as usual paid to the District Board of Chingleput, being the moiety of the charges for the up-keep of this Dispensary.

109. *Pasteur Institute of South India, Coonoor* :—The annual contribution of Rs. 250 sanctioned in G.O., No. 14-M., dated 15th January 1909, was paid during the year.

110. *Monegar Choultry and Native Infirmary* :—The annual contribution of Rs. 1,500 sanctioned in G.O., No. 646-M., dated 22nd April 1909, was paid towards the maintenance of these institutions.

Health Department.

111. With reference to G. Os., No. 407-M., dated 6th March 1914 and No. 506-M., dated 11th March 1914, the Health Officer has submitted a separate report on the working of the Health Department and the statistics relating to that department have been omitted from the present report.

Anti-Malarial Operations.

112. The report of the Special Malaria Officer on the Anti-Malarial Operations carried out during 1915 is printed in Appendix V.

Watering Roads.

113. As a result of tarring in Police Commissioner's Office Road, South Beach Road from Pycroft's Road to Ice House Road and West Cott Road from Peter's Road to Pycroft's Road, watering was here discontinued and the cost incurred under this head was Rs. 18,771 as compared with Rs. 19,638 in the previous year.

About the middle of June 1915, a proposal was put forward by the Madras Electric Tramways to undertake the watering of the road by tram car along their tram lines between Egmore and Royapuram Terminus a distance of 4 miles. This was considered by the Standing Committee at its meeting held on 23rd July 1915, and an offer of Rs. 150 per mensem was made to the Tramway Company and tentatively accepted by them. A trial was made and the experiment proved satisfactory, but the want of a storage tank for water was felt, and an estimate for the construction of such a tank at China Bazaar Road near Pachaiyappa's College to hold 2,000 gallons was under preparation about the close of the official year.

GRANT IV—(Miscellaneous Municipal Purposes.)

Lighting.

114. The amount paid to the contractors alone for the maintenance of lamps was Rs. 95,390 as detailed below as against Rs. 69,382 in the previous year and a further sum of Rs. 1,766 against Rs. 1,539 was spent on the maintenance of these lamps departmentally.

	Rs.
Kerosene lamps	53,964
Power lamps	9,354
Electric lights	32,072
Total	95,390

Thus the total cost of maintenance amounted to Rs. 97,156 as Rs. 70,922 in the previous year. The increase in cost is due to the acceptance of higher rates for kerosene oil lamps and power lights and to the fixing of 8 additional electric lights during the year.

The total amount of fines imposed on the contractors for bad work was Rs. 2,319-10-0 against Rs. 4,106 in 1914-15.

There were 5,270 kerosene oil lamps, 39 power lamps and 1,009 electric lights at the beginning of the year. During the year 663 oil lamps and eight electric lights were removed and 65 oil lights and 868 electric lights were newly fixed.

Out of 39 power lights, 19 lights were removed and all of them were refixed at different places at the instance of the Commissioners. Thus at the end of the year there were 4,672 kerosene oil lights, 39 power lamps and 1,869 electric lights in the city.

The various places where 868 new electric lights were fixed and the streets and roads where cables were laid and lights fixed departmentally are shown in Table No. 18-A, Appendix II.

The lighting of these several lamps was inspected by the three lighting inspectors as usual on an average 41 times during the year as against 39 in the previous year.

Avenues.

115. The number of the avenue trees was approximately 18,000 at the end of the year under report and of these 2,633 trees were required to be watered.

Arrangements were made in the year to number all the avenue trees in the city, to ascertain the actual number of avenue trees, and to classify them as ordinary and fruit-bearing trees. The numbering is under progress under the supervision of Mr. Houghton, the Honorary Arborist, and the trees will be classified accordingly.

Public Parks.

116. *People's Park*:—(1) Receipts.—(a) The right to collect fees at the menagerie was leased for Rs. 607-15-11 per month or Rs. 7,295-15-0 per year against Rs. 567-15-11 per mensem in the previous year. The whole of this sum was collected during the year.

(b) The right of plying pleasure boats on the lake near the menagerie enclosure in the People's Park was leased as usual for three years from 1st April 1913 for Rs. 340 against Rs. 652 on the previous occasion.

(c) The right of reaping the produce of the productive trees in the People's Park for the year ending 31st March 1916 was leased for Rs. 41 against Rs. 40 in the previous year.

(d) The right of keeping a bazaar at the entrance to and inside the menagerie for the year ending 31st March 1916 was leased for Rs. 81 against Rs. 50 in the previous year.

(2) Charges:—Food for the animals and birds in the menagerie enclosure was supplied at the following rates:—

Goat's meat at 5½ lbs. per rupee.	
Mutton	5½ "
Beef	8½ "
Kids	Re. 0-0-3 each.
Ducks	Re. 0-0-3 "

Provisions were supplied at a cost of Rs. 469-2-1 per mensem approximately.

The total receipts of the Park including the Government grant of Rs. 2,000 rose from Rs. 10,867-9-6 to Rs. 11,164-8-6 and the expenditure rose from Rs. 22,449-1-7 to Rs. 29,280-3-7.

The increase in expenditure is due (1) to the purchase of animals for the zoological collections at a cost of Rs. 2,559-10-0; (2) to the consequent increase in the cost of feeding charges and (3) to the painting done afresh to the menagerie enclosure at a cost of Rs. 2,060-0-5.

(3) The saleable value of the live stock is Rs. 15,517-1-0.

(4) The following animals were presented during the year :—

- 1 young bear.
- 1 Tigress cub.
- 1 Otter
- 2 Sambhur stags.
- 1 Black buck
- 1 Spotted deer.
- 1 Chinkara.

(5) The following animals and birds were purchased during the year at a cost of Rs. 2,559-10-0:—

- 4 White crested cranes.
- 1 Ourangoutang
- 2 Lions, male and female.

(6) 79 cows, 20 buffaloes, 2 ponies, 1 donkey and 5 goats were impounded during the year for grazing in the Park.

117. *Napier Park*:—(1) The right of grazing cattle was leased for Rs. 56 for the year ending 31st March 1916.

(2) The right of reaping the produce of the productive trees was leased for Rs. 32 for the year ending 31st March 1916.

The total income from the Park amounted to Rs. 114-11-2 while its maintenance cost the Corporation Rs. 1392-11-6.

(3) 17 cows, 29 buffaloes and 16 goats were impounded for grazing in this Park without permission.

118. *Robinson Park*:—The receipts and charges of this Park amounted to Rs. 292-12-0 and Rs. 4,944-12-10, respectively, against Rs. 255-15-0 and Rs. 5,124-4- in the previous year.

119. *Loane Square*:—This is very popular as a recreation ground. The cost of its maintenance was Rs. 1,360-10-4 against Rs. 1,778-8-7 in the preceding year.

120. The details of the receipts and charges of the above four Parks appear in Appendix II, Tables 20 to 23.

121. The Band of the Madras Volunteer Guards played as usual twice a week on the Marina, four times a month in the People's Park, twice a month in the Robinson Park, four times a month in the Loane Square and twice a month in the High Court compound.

Fire.

122. The cost of maintaining the three motor fire engines and the two manual fire engines was Rs. 12,086 as against Rs. 11,293 in the previous year.

There were in all 16 fires during the year as against 32 in the previous year. Of these in only seven cases against 18 in the previous year the engines had actually to pump water; the remaining cases were all minor affairs for which the engines were not required. The two engines which were received during the year were located in a temporary shed erected at the back of the existing masonry fire engine shed, as the additional masonry sheds were not completed within the year.

The arrival of the two new engines completed the reorganization of the fire brigade started in 1913-14.

Grant V (Supervision and Management).

123. The expenditure under this head amounted to Rs. 1,71,098-7-7 and was 5.98 per cent. of the total receipts of the year; the portion of this sum spent on the establishment maintained for the purpose of assessment and collections, amounted to Rs. 92,547-15-7 or 3.24 of the total receipts.

Repayment of Debt.

124. The sinking fund account appertaining to the several loans of the Corporation, exclusive of the Government instalment loans of sixteen lakhs of rupees, opened with a balance of Rs. 23,68,700 in Government Promissory Notes and Madras Municipal Debentures and Rs. 6,792-2-8 in cash. During the year under report an allotment of Rs. 98,420 was made to this fund from the general revenues and a sum of Rs. 40,771-12-6 was derived as interest on prior investments made to the fund. An advance of Rs. 2,04,680 was taken from the Bank of Madras on the security of the Government Promissory Notes of the face value of Rs. 2,40,800 and Rs. 46,700 was realised by the sale of the Madras Municipal Debentures of the face value of the same amount belonging to the sinking fund for the Georgetown Drainage Loan of 1885. The total cash receipts of the year amounted to Rs. 3,97,363-15-2. Out of this sum Government Promissory Notes and Madras Municipal Debentures of the face value of Rs. 1,37,200 were purchased at a cost of Rs. 1,29,448-7-6. During the year Rs. 2,93,500 of the Georgetown Drainage Loan of 1885 were repaid to the debenture holders and Madras Municipal Debentures of the face-value of Rs. 6,500 relating to the same loan were cancelled as discharged. The aggregate investments at the close of the year to the credit of this fund stood at Rs. 24,52,700 in Government Promissory Notes and Madras Municipal Debentures with a minus cash balance of Rs. 25,584-8-4. The minus cash balance under this account was due to a sum

of Rs. 33,206-0-10 having been met from other monies for the repayment of the Georgetown Drainage Loan of 1885 and which will be made good from the general revenues in the coming year. Payments amounting to Rs. 92,069-3-2 were also made during the year towards the Government Instalment Loans. Out of these payments, a sum of Rs. 37,337-6-1 was appropriated by the Accountant-General towards the repayment of the loans and Rs. 54,731-13-1 towards the interest.

Refund of other than Current Collections.

125. The total amount refunded during the year was Rs. 26,653-7-3 against an estimate of Rs. 42,000. The details of the refund are given in Appendix Table No. 4.

No. II Account.

126. This account which exhibits the transactions relating to the Corporation Stores and Workshop, the payments made on account of the sinking fund for loans raised in the open market, the security deposits of the Corporation servants and contractors, &c., opened with a balance of Rs. 13,73,600-13-8. The receipts during the year amounted to Rs. 11,67,497-18-7 and the expenditure to Rs. 10,96,642-14-1, leaving a balance of Rs. 14,44,455-13-2 at the close of the year.

Workshop.

127. The total value of works turned out in workshops during the year under report was Rs. 1,28,197-5-8 (*vide* Appendix II, Table No. 24) against Rs. 1,32,220-10-9 in 1914-15.

The amount earned in the shape of supervision charges, etc., was Rs. 18,563-4-10 against Rs. 19,816-5-7 in 1914-15.

The expenditure on account of wages of Maistries and contingent charges amounted to Rs. 8,249-9-7 or 6.44 per cent. on the value of works turned out against 5.72 per cent. in the previous year. The cost of establishment including allowances amounted to Rs. 11,818-2-2.

The total expenditure exceeded the receipts by Rs. 1,704-6-11 against a surplus of Rs. 757-6-9 in the previous year.

CORPORATION OF MADRAS,
2nd August 1916.

J. CHARTRES MOLONY,
President

STATEMENT I.—Revenues and Receipts of the Municipal Fund of the City of Madras during the Official Year 1915-16.

Items.	Actuals, 1915-16.		Budget Estimate for 1915-16.	Revised Estimate for 1915-16.	Actuals, 1914-15.	Explanation of variations between the Actuals and the Revised Estimate of 1915-16.	
	Details of Minor Heads.	Totals of Major Heads.					
I	2	3	4	5	6	7	
I.—CAPITAL ACCOUNT—							
1. Opening Balance—							
(a) General Fund	2,19,211 12 8		1,07,860 0 0	2,19,210 0 0	27,478 1 7		
(b) Water and Drainage Fund	4,95,966 7 8		5,20,810 0 0	4,96,987 0 0	9,13,290 8 3		
(c) Lighting Fund	86,631 10 4		18,370 0 0	86,380 0 0	—31,626 11 1		
Total		8,01,808 12 3	6,46,980 0 0	8,01,807 0 0	9,19,068 14 9		
3. Revenue derived from Municipal property and powers apart from taxation—							
(b) Interest on Investments							
4. Grants and Contributions—							
(a) From Government—							
i. Improvement of Water-supply and Drainage		28,280 9 9	25,000 0 0	28,440 0 0	55,030 0 5		
6. Extraordinary and Debt—							
(a) Loan—							
i. From Government		7,00,000 0 0	8,00,000 0 0	7,00,000 0 0	8,00,000 0 0		
ii. In the market from private individuals							
Total					8,00,000 0 0		
Advances recovered—							
I. Permanent					5,50,000 0 0		
II. Others					5,50,000 0 0		
Total	26,024 12 7		11,000 0 0	32,000 0 0	1,81,112 4		
Transferred from Revenue Account		26,024 12 7	11,000 0 0	32,000 0 0	1,81,112 4		
Total Capital Account		52,048 12 7	22,000 0 0	64,000 0 0	2,62,224 11 1		
II.—REVENUE ACCOUNT—							
1. Opening Balance—							
(a) General Fund	10,11,526 7 0		7,11,990 0 0	10,11,534 0 0	8,19,889 8 1		
(b) Water and Drainage Fund	86,949 12 8		83,084 0 0	86,954 0 0	14,166 14 9		
(c) Lighting Fund							
Total		10,98,476 3 8	7,95,074 0 0	10,98,488 0 0	8,34,055 2 10		

APPENDIX I.

Items.	Actuals, 1915-16.		Budget Estimate for 1915-16.	Revised Estimate for 1915-16.	Actuals, 1914-15.	Explanation of variations between the Actuals and the Revised Estimate of 1915-16.	
	Details of Minor Heads.	Totals of Major Heads.					
I	2	3	4	5	6	7	
2. Municipal Rates and Taxes—							
(a) Tax on Area, &c. (Sec. 120)	1,72,436 8 4		1,54,000 0 0	1,64,000 0 0	1,77,363 3 4		
(b) Tax on Buildings and Lands (Sec. 129)	9,26,212 1 0		9,19,650 0 0	9,45,180 0 0	9,32,662 11 3		
(c) Tax on Lands (Sec. 141)	13,667 15 0		10,800 0 0	12,880 0 0	1,088 0 0		
(d) Water and Drainage Tax on Buildings and Lands (Sec. 145)	6,00,399 2 1		5,96,310 0 0	6,19,970 0 0	6,02,468 11 9		
(e) Water and Drainage Tax on Lands (Sec. 146)	8,141 4 2		6,930 0 0	8,360 0 0	7,110 9 7		
(f) Lighting Tax on Buildings and Lands (Sec. 148)	1,15,489 12 3		1,14,860 0 0	1,18,140 0 0	1,16,892 8 2		
(g) Lighting Tax on Lands (Sec. 149)	1,682 8 5		1,360 0 0	1,630 0 0	1,366 9 7		
(h) Tax on Vehicles with springs (Sec. 150)	75,594 2 11		71,800 0 0	70,780 0 0	74,362 3 9		
(i) Tax on Animals (Sec. 150)	35,436 9 1		36,500 0 0	32,840 0 0	37,367 6 7		
(j) Tax on Carts and other Vehicles without springs (Sec. 155)	82,167 8 9		80,900 0 0	80,900 0 0	82,474 9 5		
(k) Tolls on Vehicles and Animals entering Municipal limits (Sec. 164)	45,519 7 6		44,700 0 0	44,700 0 0	46,476 6 8		
Total		20,21,646 13 8	19,89,900 0 0	20,43,180 0 0	20,23,650 1 3		
3. Revenue derived from Municipal property and powers apart from Taxation—							
(a) i. Payment for Occupation of Municipal Lands	5,304 10 6		5,880 0 0	5,190 0 0	6,126 7 6		
ii. Rent of Lands and Buildings	86,074 2 2		28,900 0 0	34,400 0 0	81,526 4 3		
(b) i. Sale-proceeds of Lands	18,962 0 1		1,000 0 0	17,000 0 0	2,986 4 0		
ii. Esplanades, &c. Grazing Rents	1,437 2 8		300 0 0	1,360 0 0	2,978 0 0		
iii. Rent of Cattle and	4,988 7 10		6,000 0 0	5,680 0 0	6,000 0 0		
iv. Rent of Municipal Wharf	1,600 0 0		1,600 0 0	1,600 0 0	1,600 0 0		
v. Produce of Lands, Gardens, &c.—							
(1) People's Park	9,164 8 6		7,250 0 0	8,050 0 0	8,867 9 6		
(2) Napier Park	114 11 2		80 0 0	80 0 0	135 1 10		
(3) Robinson Park	282 12 0		300 0 0	250 0 0	255 15 0		
(4) Grass Farm	38,204 2 9		40,000 0 0	40,000 0 0	37,438 1 1		
(5) Office Lawn	46 3 8		10 0 0	30 0 0	16 0 0		
vi. Sale-proceeds of old materials	1,109 2 0		2,500 0 0	1,600 0 0	1,249 12 0		
(c) i. Concessory Receipts—							
Sale of Rubbish	20,643 2 4		13,000 0 0	16,370 0 0	16,957 14 10		
Private Scavenging	8,538 15 6		7,000 0 0	7,210 0 0	7,007 3 7		
(d) Hospital Receipts	598 8 6		450 0 0	500 0 0	541 0 0		
(e) i. Income from Markets (Sec. 237)—							
(1) Smithfield Market	3,668 14 10		4,880 0 0	4,000 0 0	4,536 0 0		
(2) Moon Market	83,998 8 6		22,250 0 0	38,410 0 0	82,871 6 4		
Total	1,84,310 12 0		1,80,450 0 0	1,76,680 0 0	1,61,880 16 11		
Carried over		80,78,135 8 2	2,37,31,840 0 0	2,30,91,640 0 0	2,28,57,776 8 1		

Decrease due to non-payment by Government of the increased tax on military buildings under appeal for arrears and current for 4 years, from 1912-13 to 1915-16.

APPENDIX I.

Items.	Actuals, 1916-16.			Budget Estimates for 1916-16.			Revised Estimate for 1916-16.			Actuals, 1914-15.			Explanation of variations between the Actuals and the Revised Estimate of 1915-16.
	Details of Minor Heads.		Totals of Major Heads.	Estimates for 1916-16.		Revised Estimate for 1916-16.	Actuals, 1914-15.		Explanation of variations between the Actuals and the Revised Estimate of 1915-16.				
	A. P.	B. S.		A. P.	B. S.		A. P.	B. S.		A. P.	B. S.		
1	7												
Brought forward ...													
3. Revenue derived from Municipal property and powers apart from Taxation—(Continued) ...			30,78,123		3,27,37,840		0	0	0	0	0	0	0
ii. Income from Slaughter-houses (Sec. 331) and Slaughter of Animals for food (Sec. 334) ...					1,50,450		0	0	0	0	0	0	0
iii. Income from Dhotykhana ...					62,000		0	0	0	0	0	0	0
iv. Income from Lethal Chamber ...					600		0	0	0	0	0	0	0
v. Cart-land Fees ...					560		0	0	0	0	0	0	0
vi. School Fees ...					1,124		0	0	0	0	0	0	0
vii. District Fees ...					711		0	0	0	0	0	0	0
viii. Other Fees—					1,40,459		0	0	0	0	0	0	0
i. Import of Timber and Firewood (Sec. 337) ...					3,750		0	0	0	0	0	0	0
ii. Private Markets (Sec. 344) ...					67,754		0	0	0	0	0	0	0
iii. Licenses, Registration, &c. ...					377		0	0	0	0	0	0	0
iv. Fees for furnishing extracts of births and deaths ...					780		0	0	0	0	0	0	0
v. Cart-land Fees ...					1,191		0	0	0	0	0	0	0
vi. School Fees ...					87		0	0	0	0	0	0	0
vii. District Fees ...					8,031		0	0	0	0	0	0	0
viii. Fines under Municipal and other Acts—					3,984		0	0	0	0	0	0	0
i. Municipal ...					25,564		0	0	0	0	0	0	0
ii. Police ...					1,870		0	0	0	0	0	0	0
iii. Interest on Investments—					10,000		0	0	0	0	0	0	0
Medical ...					4,84,750		0	0	0	0	0	0	0
General ...					5,02,718		0	0	0	0	0	0	0
iv. Premium on Loans ...					20,000		0	0	0	0	0	0	0
v. Grants and Contributions—					4,400		0	0	0	0	0	0	0
(i) From Government ...					4,400		0	0	0	0	0	0	0
(ii) From ...					4,400		0	0	0	0	0	0	0
(iii) From ...					4,400		0	0	0	0	0	0	0
(iv) From ...					4,400		0	0	0	0	0	0	0
(v) From ...					4,400		0	0	0	0	0	0	0
(vi) From ...					4,400		0	0	0	0	0	0	0
(vii) From ...					4,400		0	0	0	0	0	0	0
(viii) From ...					4,400		0	0	0	0	0	0	0
(ix) From ...					4,400		0	0	0	0	0	0	0
(x) From ...					4,400		0	0	0	0	0	0	0
(xi) From ...					4,400		0	0					

iii. Other purposes—												Decrease due to outstandings due from Government, Railway Companies and Mills.
(1) Compensation for Tax on places used for sale of Spirituous & Intoxicating Liquors	13,607 0 0	12,510 0 0	12,510 0 0	12,510 0 0	12,510 0 0	12,510 0 0	12,510 0 0	12,510 0 0	12,510 0 0	12,510 0 0		
(2) Zoological Collection in People's Park	2,000 0 0	2,000 0 0	2,000 0 0	2,000 0 0	2,000 0 0	2,000 0 0	2,000 0 0	2,000 0 0	2,000 0 0	2,000 0 0		
(4) Raja Sir S. Ramasamy Mudaliar Lying-in-Hospital	300 0 0	300 0 0	300 0 0	300 0 0	300 0 0	300 0 0	300 0 0	300 0 0	300 0 0	300 0 0		
(5) For Malaria investigation	...	...	...	...	...	...	...	...	...	...		
(6) For acquisition of lands for Washermen Settlement	10,384 0 0	10,384 0 0	10,384 0 0	10,384 0 0	10,384 0 0	10,384 0 0	10,384 0 0	10,384 0 0	10,384 0 0	10,384 0 0		
(7) For improvements to Kelly's drain	10,223 0 0	10,223 0 0	10,223 0 0	10,223 0 0	10,223 0 0	10,223 0 0	10,223 0 0	10,223 0 0	10,223 0 0	10,223 0 0		
(8) For acquisition of lands for sewage farm	...	...	...	...	...	...	...	...	...	...		
(9) For construction of model cow-houses	...	...	...	...	...	...	...	...	...	...		
Total	...	60,957 0 0	40,350 0 0	50,960 0 0	5,15,320 0 0	...	...	...	...	...		
5. Miscellaneous—												
(a) Payment for water for non-domestic purposes	1,34,432 6 8	1,40,000 0 0	1,40,000 0 0	1,40,000 0 0	1,40,000 0 0	1,40,000 0 0	1,40,000 0 0	1,40,000 0 0	1,40,000 0 0	1,40,000 0 0		
(b) Sundry Receipts—Water-works	7,500 0 0	4,500 0 0	4,500 0 0	4,500 0 0	4,500 0 0	4,500 0 0	4,500 0 0	4,500 0 0	4,500 0 0	4,500 0 0		
(c) Sale of Lymph	181 0 0	180 0 0	120 0 0	120 0 0	120 0 0	120 0 0	120 0 0	120 0 0	120 0 0	120 0 0		
(d) Refund from expenditure of previous years	7,444 9 1	1,000 0 0	3,000 0 0	3,000 0 0	3,000 0 0	3,000 0 0	3,000 0 0	3,000 0 0	3,000 0 0	3,000 0 0		
(e) Workshop receipts	18,563 4 10	20,000 0 0	21,070 0 0	21,070 0 0	21,070 0 0	21,070 0 0	21,070 0 0	21,070 0 0	21,070 0 0	21,070 0 0		
(f) Suspense	894 2 9	...	...	...	...	...	...	...	...	...		
(g) Other Items	28,258 9 0	10,000 0 0	20,000 0 0	20,000 0 0	20,000 0 0	20,000 0 0	20,000 0 0	20,000 0 0	20,000 0 0	20,000 0 0		
Total	...	1,96,804 1 4	1,75,550 0 0	1,88,680 0 0	2,14,978 13 11	...	...	...	...	...		
6. Extraordinary and Doubt—												
(a) Realization of Sinking Fund—Interest on Water-works Loan of 1866-73	...	46,110 13 11	46,200 0 0	46,000 0 0	46,000 0 0	46,000 0 0	46,000 0 0	46,000 0 0	46,000 0 0	46,000 0 0		
Total	...	46,110 13 11	46,200 0 0	46,000 0 0	46,000 0 0	46,000 0 0	46,000 0 0	46,000 0 0	46,000 0 0	46,000 0 0		
Advances recovered—												
i. Permanent	84 4 3	...	...	...	...	...	...	...	...	...		
ii. Others	28,554 4 3	5,000 0 0	5,000 0 0	5,000 0 0	5,000 0 0	5,000 0 0	5,000 0 0	5,000 0 0	5,000 0 0	5,000 0 0		
Total	...	28,788 8 8	5,000 0 0	5,000 0 0	5,000 0 0	5,000 0 0	5,000 0 0	5,000 0 0	5,000 0 0	5,000 0 0		
Total Revenue Account	...	39,08,512 6	9,31,39,790 0	0,39,05,900 0	0,41,45,628 8	...	...	...	...	...		
Grand Total	...	64,58,619 11	4,61,42,320 0	0,54,62,780 0	0,61,71,634 4	...	...	...	...	...		

STATEMENT II.—Expenditure from the Municipal Fund of the City of Madras for the Official Year 1915-16.

Items.	Actuals, 1915-16.		Budget Estimate for 1915-16.	Revised Estimate for 1915-16.	Actuals, 1914-15.	Explanation of variations between the Actuals and the Revised Estimate of 1915-16.
	2	3				
I. CAPITAL ACCOUNT—						
GRANT I.—(Public Works)—						
(a) Works—						
(i) Drainage	1,25,622 9 3		1,08,280 0 0	1,08,000 0 0	1,88,263 5 4	Vide para. 54 of the report.
(ii) Water-supply	5,97,011 15 3		5,63,200 0 0	5,78,850 0 0	2,31,176 8 6	Estimates and actuals do not differ very much considering the abnormal conditions caused by the war.
(iii) Miscellaneous	4,23,431 5 7		3,20,200 0 0	3,20,120 0 0	3,78,699 9 8	
(d) Water-supply	...	...	...	...	...	
Total	...	...	...	...	...	
3. Establishment—						
i. Drainage	76,841 5 1		1,62,410 0 0	61,100 0 0	69,356 14 9	
ii. Water-supply	39,721 6 1		52,370 0 0	48,180 0 0	56,222 7 4	Decrease due to restriction of works and staff owing to the financial stringency.
iii. Allowances	3,446 7 8		7,670 0 0	6,300 0 0	4,647 13 7	
Total	...	...	...	...	...	
Total Grant I	...	...	...	...	...	
GRANT IV.—Miscellaneous Municipal Purposes—						
1. Lighting—						
Additional Lamps	...	...	...	...	...	
Advances Recoverable—						
i. Permanent	1,500 0 0		...	...	500 0 0	
ii. Others	12,117 4 3		...	...	23,504 10 6	
Total	...	...	...	...	...	
Total, Capital Account	...	...	...	...	...	
REVENUE ACCOUNT—						
GRANT I.—(Public Works)—						
1. New Works—						
(a) Communications	31,416 9 4		67,180 0 0	56,000 0 0	44,715 5 0	Decrease due to some of the acquisition proposals having been withdrawn with a view to economy.

(b) Buildings	1,01,178 9 1	1,30,760 0 0	1,88,670 0 0	0 0	95,007 11 0	Vide para. 44 of the report. Decrease due to works completed and in progress not having been paid for during the year.
(c) Drainage	12,360 10 1	14,000 0 0	16,400 0 0	0 0	10,857 5 0	
(d) Water-supply	14,157 8 1	15,000 0 0	16,280 0 0	0 0	11,480 10 3	
(e) Miscellaneous	12,655 8 2	1,27,200 0 0	19,680 0 0	0 0	1,99,748 14 11	Vide para. 55 of the report.
Total	...	...	...	...	...	
2. Repairs—						
(a) Communications	3,64,052 18 8	8,86,900 0 0	8,50,810 0 0	0 0	2,10,678 4 7	Vide para. 60 of the report.
(b) Buildings	27,611 9 6	31,070 0 0	43,560 0 0	0 0	20,982 4 8	Decrease due to some of the works having been in progress and to works completed not having been paid for.
(c) Drainage—						
Repairs to Works, &c.	8,62,786 14 10	9,61,310 0 0	8,55,790 0 0	0 0	8,16,988 11 2	
Establishment	54,638 14 6	67,490 0 0	60,660 0 0	0 0	52,785 0 6	
Overtime	411 2	300 0 0	150 0 0	0 0	159 13 0	
Allowances	1,378 13 7	3,470 0 0	2,700 0 0	0 0	1,918 1 1	Savings.
(d) Water-supply—						
Repairs to Works, &c.	1,92,716 9 9	74,590 0 0	1,26,370 0 0	0 0	85,318 3 6	Increase due to an under estimate of coal consumption based on maker's guarantees but mainly to the large consumption of water in the City.
Establishment	18,481 12 7	19,170 0 0	21,210 0 0	0 0	16,003 9 3	
Allowances	1,423 1 4	1,870 0 0	1,640 0 0	0 0	1,102 10 0	
(e) Miscellaneous	671 12 10	1,300 0 0	1,050 0 0	0 0	1,144 8 10	Savings.
Total	...	...	...	...	...	
3. Establishment—						
(a) General	43,312 15 10	61,250 0 0	51,000 0 0	0 0	45,358 15 7	
Allowances	4,216 9 7	4,800 0 0	4,400 0 0	0 0	4,244 10 11	
(b) Steam Road Roller—						
Establishment	4,957 4 2	5,700 0 0	5,330 0 0	0 0	4,852 8 9	
Overtime	40 7 11	200 0 0	100 0 0	0 0	20 5 3	
Total	...	...	...	...	...	
4. Tools and Plant	...	...	...	...	...	
5. Miscellaneous—						
(a) Stationery	2,319 6 0	3,000 0 0	3,000 0 0	0 0	2,771 14 10	
(b) Printing Charges	4,218 2 2	2,500 0 0	2,800 0 0	0 0	1,669 8 0	
(c) Advertising Charges	2,170 11 0	4,240 0 0	2,600 0 0	0 0	2,951 0 2	Increase due to payment of arrears works.
Carried over	8,028 3 2	...	9,740 0 0	0 0	8,304 0 0	
	...	12,28,215 15 6	13,92,630 0 0	0 0	13,01,461 0 0	

APPENDIX I.

[illegible]

George Town Dispensary—		4,878 8 9	5,040 0 0	5,040 0 0	4,880 14 8
(a) Establishment	...	...	...	...	...
(b) Allowances	...	...	...	...	...
(c) Medicines and supplies	...	...	...	...	...
(d) Bahiah Naida Dispensary—	...	...	...	...	...
(a) Establishment	...	...	...	...	...
(b) Allowances	...	...	...	...	...
(c) Medicines and supplies	...	...	...	...	...
(d) Chintadripet Dispensary—	...	...	...	...	...
(a) Establishment	...	...	...	...	...
(b) Medicines and supplies	...	...	...	...	...
(c) Allowances	...	...	...	...	...
(d) Kaja Sir S. Ramaswamy Mudaliar Lying-in Hospital—	...	...	...	...	...
(a) Establishment	...	...	...	...	...
(b) Allowances	...	...	...	...	...
(c) Medicines and supplies	...	...	...	...	...
(d) Training of Midwives	...	...	...	...	...
(e) Washermanpet Dispensary—	...	...	...	...	...
(a) Establishment	...	...	...	...	...
(b) Medicines and supplies	...	...	...	...	...
(c) Allowances	...	...	...	...	...
(d) Contribution to Provincial Funds—	...	...	...	...	...
(e) Hospitals	...	...	...	...	...
(f) Contribution for St. Thomé Dispensary	...	...	...	...	...
(g) Covent Dispensary	...	...	...	...	...
(h) Victoria Castle and Gusha Hospital	...	...	...	...	...
(i) Sembium Dispensary	...	...	...	...	...
(j) Surgeon-General's establishment to consolidate indents.	...	...	...	...	...
(k) Monsagar Choultry and Native Infirmary	...	...	...	...	...
(l) Pasteur Institute of South India, Coonoor	...	...	...	...	...
(m) Kalyani Hospital	...	...	...	...	...
(n) Kanyala Parameswari Dispensary	...	...	...	...	...
(o) Venkataramana Dispensary	...	...	...	...	...
(p) Hospitals	...	...	...	...	...
Total	...	...	...	...	...
3. Vaccination—	...	...	...	...	...
(a) Establishment	...	...	...	...	...
(b) Allowances	...	...	...	...	...
(c) Contingencies	...	...	...	...	...
Total	...	...	...	...	...
Carried over	...	...	...	...	...

APPENDIX I.

STATEMENT II.—Expenditure from the Municipal Fund of the City of Madras for the Official year 1915-16—(Continued).

Items.	Actuals, 1915-16.			Budget Estimate for 1915-16.	Revised Estimate for 1915-16.	Actuals, 1914-15.	Explanation of variations between the Actuals and the Revised Estimate of 1915-16.
	Totals of						
	Minor Heads.	Major Heads.					
1	2	3	4	5	6	7	
Brought forward ...							
GRANT III.—(Continued).							
4. Registration of Births and Deaths—							
(a) Establishment	16,226	1 2	15,890	0 0	16,410	0 0	16,713 13 0
(b) Allowances	2,367	4 0	2,300	0 0	2,300	0 0	2,400 0 0
(c) Contingencies	...	...	...	...	2,300	0 0	2,761 11 8
Total ...	...	16,573 5 2	18,430 0 0	18,780 0 0	19,715 8 8	...	...
5. Conservancy—							
(a) Establishment—General	65,604	9 10	68,200 0 0	67,970 0 0	68,311 18 10	...	Savings.
Allowances	3,898	12 11	4,000 0 0	3,820 0 0	3,465 1 10	...	Do.
(b) Hire of Scavengers	48,037	7 7	55,550 0 0	60,590 0 0	40,130 12 6	...	Do.
(c) Private Scavenging	2,406	11 2	2,580 0 0	2,330 0 0	2,358 10 4	...	Do.
(d) Maintenance of Bullocks—	...	...	...	...	...	...	...
Establishment	4,900	5 4	5,000 0 0	4,910 0 0	4,627 3 3	...	...
Allowances	220	0 0	440 0 0	320 0 0	234 13 5	...	...
Labor, Fodder, contingencies, &c.	1,68,855	7 8	1,90,520 0 0	1,74,350 0 0	1,45,039 1 10	...	...
(e) Incinerator—	...	...	...	...	...	...	...
Establishment	1,080	11 7	1,110 0 0	1,110 0 0	1,058 12 1	...	...
Labor	20,970	0 6	80,500 0 0	24,940 0 0	18,996 7 8	...	...
(f) Night-soil Depôts and Shoots—	...	...	...	...	...	...	...
Establishment	1,564	11 8	1,570 0 0	1,680 0 0	1,579 10 2	...	...
Labor	12,693	10 5	13,550 0 0	12,110 0 0	8,944 10 7	...	...
(g) Sanning Latrines	9,051	12 9	2,100 0 0	5,000 0 0	959 15 0	...	...
(h) Maintenance of Grass Farm—	...	...	...	...	...	...	...
Establishment	3,658	2 4	3,540 0 0	3,660 0 0	3,449 2 3	...	...
Labor	1,08,928	12 3	21,500 0 0	23,000 0 0	81,182 1 2	...	...
(i) Rent of Lorry Stations and Cart Depôts	336	0 0	300 0 0	140 0 0	835 0 0	...	...
(j) Burial and Burning Grounds—Labor	2,067	6 6	3,000 0 0	2,500 0 0	1,872 0 5	...	...
(k) Repair of Carts, Bows and Buckets	20,553	10 10	15,000 0 0	13,000 0 0	17,622 13 5	...	...
(l) Contingent—General	9,721	0 4	6,000 0 0	6,000 0 0	4,992 7 8	...	...
(m) Epidemic Charges—	...	...	...	...	...	...	...
Plague	19,564	10 6	2,000 0 0	19,050 0 0	...	...	...
Cholera and Small-pox	14,955	1 9	11,000 0 0	13,300 0 0	...	...	...
Malaria	7,851	3 6	1,42,880 0 0	1,80,400 0 0	...	...	...
Increase due to the cost of improvements to the farm during the 3 years ending 1915-16 met from the Malaria grant now debited to this head in accordance with G.O., No. 1798, Mla., dated 27th October 1913.							
Increase due to repairs to motor lorries for the last 3 years met from the Malaria grant now debited to this head.							

Increase due to the cost of improvements to the farm during the 3 years ending 1915-16 met from the Malaria grant now debited to this head in accordance with G.O., No. 1798, M.S., dated 27th October 1915.

Increase due to repairs to motor lorries for the last 3 years met from the Malaria grant now debited to this head.

APPENDIX I.

	2,535	6 4	2,400	0 0	2,400	0 0	2,400	3 1	1	
	16,245	2 7	21,450	0 0	15,500	0 0	17,148	1 8	8	
	62,819	2 8	17,000	0 0	80,000	0 0	15,097	2 3	6	
	...	...	5,86,976	0 0	9,43,030	0 0	6,13,850	0 0	5	
Total	...	...	...	...	...	...	7,13,719	3 5	5	
6. Miscellaneous	1,080	6 4	1,040	0 0	1,800	0 0	2,061	11 6	6	
(a) Stationery	3,637	10 6	1,500	0 0	1,900	0 0	1,657	8 9	9	
(b) Printing Charges	557	11 0	800	0 0	700	0 0	370	7 0	0	
(c) Advertising Charges	911	0	300	0 0	180	0 0	139	10 0	0	
(d) Law Charges and Stamp Duties	136	15 5	800	0 0	600	0 0	792	0 0	0	
(e) Office Furniture	...	...	...	...	...	...	...	...	...	
(f) Labor—Punkah	427	5 6	1,500	0 0	1,020	0 0	1,447	5 3	3	
(g) Clothing, Badges and Belts	...	...	120	0 0	40	0 0	40	0 0	0	
(h) Bara Staff	...	...	...	...	...	...	...	...	...	
Total	...	...	5,86,914	8	9,760	0 0	6,240	0 0	6,622	3 6
Total, Grant III.	...	...	7,37,764	14 3	7,87,030	0 0	7,65,930	0 0	8,64,178	5 11
1. Lighting—	1,744	5 4	1,750	0 0	1,750	0 0	1,112	12 10	10	0
(a) Establishment	177	13 5	180	0 0	80	0 0	578	6 3	3	0
(b) Allowance	8,076	9 9	7,900	0 0	8,210	0 0	5,409	11 7	7	0
(c) Labor	97,185	8 5	75,000	0 0	92,000	0 0	70,921	11 8	8	0
(d) Maintenance	...	...	...	...	...	...	...	...	...	...
Total	...	...	1,000	0 0	50,800	0 0	552	5 10	10	0
Additional Lamps and Sundries	6,342	12 3	5,000	0 0	8,400	0 0	3,040	8 10	10	0
Repairs to Lamps and Posts	...	...	...	...	...	...	...	...	...	...
Total	...	...	1,4,134	0 3	50,830	0 0	1,61,140	0 0	31,685	3 11
2. Markets and Slaughter-houses—	...	...	...	...	...	...	...	...	...	...
(a) Smithfield Market—	...	...	...	...	...	...	...	...	...	...
Establishment	604	0 1	580	0 0	600	0 0	599	8 5	5	0
Labor and Contingencies	454	7 4	500	0 0	500	0 0	439	11 11	11	0
(b) Mace Market—	...	...	...	...	...	...	...	...	...	...
Establishment	2,459	2 0	2,370	0 0	2,450	0 0	2,257	3 8	8	0
Labor and Contingencies	6,773	8 2	6,570	0 0	6,750	0 0	6,393	5 4	4	0
(c) Slaughter-houses—	...	...	...	...	...	...	...	...	...	...
Establishment	3,418	0 0	3,450	0 0	3,410	0 0	3,259	18 11	11	0
Labor and Contingencies	14,129	13 2	15,000	0 0	14,100	0 0	15,614	8 5	5	0
Allowances	45	0 0	60	0 0	50	0 0	...	...	...	0
Total	...	...	27,883	14 9	28,680	0 0	27,880	0 0	28,553	9 8
Carried over	...	...	1,42,027	15 0	1,19,350	0 0	1,89,000	0 0	1,10,248	13 7
	...	...	20,18,849	1 4	22,40,240	0 0	21,28,370	0 0	20,17,931	0 1

Save.

Increase due to the cost of motor lorries not from the Malaria grant now debited to this head.

Increase due to greater number of electric lights fixed in the year and due to acceptance of higher rates for oil lamps and power lights.

Decrease due to receipt of cables indented from from England.

Decrease due to certain items having been charged to maintenance instead of to this head.

GRANT IV.—Miscellaneous Municipal Purposes.)

Increase due to greater number of electric lights fixed in the year and due to acceptance of higher rates for oil lamps and power lights.

Decrease due to receipt of cables indented for from England.

Decrease due to certain items having been charged to maintenance instead of to this head.

7. Other Charges—	2,388 0 0	3,000 0 0	3,100 0 0	3,243 6 6
(a) Expenditures	2,388 0 0	3,000 0 0	3,100 0 0	3,243 6 6
(b) Quit-rent	83,847 0 0	35,000 0 0	35,000 0 0	4,884 8 8
(c) Payment for Red Hills water				24,874 0 0
(d) Rewards for destruction of Dogs and Venom.				
one Snake	2,081 14 11	4,020 0 0	2,920 0 0	2,981 45 8
(e) Municipal Proceedings, &c., Charges—				
Stationery	986 3 6	1,000 0 0	1,050 0 0	1,602 4 2
Printing	5,751 4 11	4,800 0 0	6,020 0 0	1,803 10 0
Advertising	1,059 1 0	1,500 0 0	1,500 0 0	2,678 16 0
(f) Law Charges—				
Establishment	2,400 0 0	2,400 0 0	2,400 0 0	2,400 0 0
Stamp, &c., Charges	2,514 9 11	1,000 0 0	4,000 0 0	1,619 9 8
(g) Election Charges	846 3 6	1,000 0 0	1,000 0 0	847 6 2
(h) Tu Tickets	526 1 5	900 0 0	1,400 0 0	1,406 12 6
(i) Tools and Plant	11 2 8	100 0 0	100 0 0	102 6 11
(j) Contribution to Provincial Funds, General				
(k) Stores—				
Establishment	4,792 7 8	4,420 0 0	4,000 0 0	5,252 10 9
Contingencies—				
Coolies for Stock-taking Stationery, Clothing, &c.	2,430 9 9	2,900 0 0	2,900 0 0	1,084 8 1
(l) Workshops—				
Establishment	11,484 18 8	10,860 0 0	12,130 0 0	11,128 18 0
Allowances	883 4 11	430 0 0	360 0 0	368 9 2
(m) Labor and Contingent	8,349 9 7	8,720 0 0	8,580 0 0	7,566 8 7
(n) Insurance on Municipal Buildings	3,261 18 0	3,340 0 0	3,270 0 0	3,365 13 0
(o) Public Ceremonies				119 14 0
(p) Motor Car—				
Establishment	560 0 0	430 0 0	340 0 0	965 0 0
Maintenance	2,018 12 2	2,600 0 0	2,000 0 0	3,211 14 7
(q) Office Tapal	1,068 13 8	2,020 0 0	2,000 0 0	1,940 14 5
(r) Loss on Municipal Stores				6,321 7 6
(s) Census				
(t) Contribution for St. Patrick's Orphanage, Adhyar.	269 11 0	220 0 0	350 0 0	249 12 0
(u) Charges for the treatment of patients at the Pasteur Institute, Coonoor				
(v) Contribution to the Madras Society for Protection of Children				
(w) Other Items	13,532 2 6	17,000 0 0	15,500 0 0	19,088 12 4
Total	1,01,834 18 9	99,090 0 0	1,11,560 0 0	1,69,882 14 0
Total, Grant IV	8,61,866 11 6	3,51,000 0 0	4,24,868 2 10	2,79,312 1 1
GRANT V.—(Superintendence and Management)—				
1. (a) Salaries of Officers	31,281 12 6	30,720 0 0	30,750 0 0	88,865 15 6
(b) Allowances	880 5 7	960 0 0	880 0 0	960 0 0
Total	32,161 18 3	31,680 0 0	31,630 0 0	89,825 15 6
Carried over	33,76,316 12 4	31,680 0 0	31,630 0 0	34,785 15 6
				34,785 15 6
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STATEMENT II.—Expenditure from the Municipal Fund of the City of Madras for the Official year 1915-16—(Continued).

Items.	Actuals, 1915-16.				Budget Estimate for 1915-16.	Revised Estimate for 1915-16.	Actuals, 1914-15.	Explanation of variations between the Actuals and the Revised Estimate of 1915-16.
	Totals of							
	Minor Heads. Major Heads.							
1	2		3		4	5	6	7
	Rs.	A. P.	Rs.	A. P.	Rs.	Rs.	A. P.	
Brought forward ..			28,75,215 12	4,26,91 24 0	0	25,33,130 0	0 2,297,174 1 2	
			32,112 2 0	31,680 0 0	0	31,660 0 0	31,783 15 5	
	26,155 15 10							
	1,186 7 1							
	1,826 15 9							
	911 4 11							
	51 12 0							
	1,186 15 4							
	1,670 0 0							
	334 13 1							
	345 1 0							

APPENDIX I.

APPENDIX I.

W. W. Loan, 1889-73	14,30,000 0 0	26,600 0 0	26,600 0 0	26,600 0 0	26,600 0 0	26,600 0 0	26,600 0 0
G. T. Drainage Loan,	3,00,000 0 0	...	...	...	...	...	...
Do.	1885	2,800 0 0	2,800 0 0	2,800 0 0	2,800 0 0	2,800 0 0	2,800 0 0
Do.	1887	1,00,000 0 0	820 0 0	820 0 0	820 0 0	820 0 0	820 0 0
Do.	1888	1,40,000 0 0	1,300 0 0	1,300 0 0	1,300 0 0	1,300 0 0	1,300 0 0
Do.	1889	1,50,000 0 0	1,300 0 0	1,300 0 0	1,300 0 0	1,300 0 0	1,300 0 0
Water-works Loan,	1889	20,000 0 0	170 0 0	170 0 0	170 0 0	170 0 0	170 0 0
G. T. Drainage Loan,	1890	60,000 0 0	400 0 0	400 0 0	400 0 0	400 0 0	400 0 0
Water-works Loan,	1895	4,00,000 0 0	3,050 0 0	3,050 0 0	3,050 0 0	3,050 0 0	3,050 0 0
Market Loan,	1897	1,00,000 0 0	750 0 0	750 0 0	750 0 0	750 0 0	750 0 0
Plague Loan,	1899	2,00,000 0 0	1,520 0 0	1,520 0 0	1,520 0 0	1,520 0 0	1,520 0 0
Water-works Loan,	1899	50,000 0 0	380 0 0	380 0 0	380 0 0	380 0 0	380 0 0
Drainage Loan,	1899	4,20,000 0 0	3,190 0 0	3,190 0 0	3,190 0 0	3,190 0 0	3,190 0 0
Market Loan,	1899	1,50,000 0 0	1,140 0 0	1,140 0 0	1,140 0 0	1,140 0 0	1,140 0 0
Drainage Loan,	1900	7,80,000 0 0	5,930 0 0	5,930 0 0	5,930 0 0	5,930 0 0	5,930 0 0
Water-works Loan,	1900	1,50,000 0 0	1,140 0 0	1,140 0 0	1,140 0 0	1,140 0 0	1,140 0 0
Plague Loan,	1900	1,00,000 0 0	760 0 0	760 0 0	760 0 0	760 0 0	760 0 0
Sewer Loan,	1901-1902	1,20,000 0 0	910 0 0	910 0 0	910 0 0	910 0 0	910 0 0
Drainage Loan,	1901-1902	2,00,000 0 0	1,520 0 0	1,520 0 0	1,520 0 0	1,520 0 0	1,520 0 0
Do.	1903	5,00,000 0 0	3,800 0 0	3,800 0 0	3,800 0 0	3,800 0 0	3,800 0 0
Do.	1905	7,00,000 0 0	17,707 3 3	17,710 0 0	17,710 0 0	17,019 11 8	17,019 11 8
Special Buildings Loan,	1907	1,00,000 0 0	2,100 0 0	2,100 0 0	2,100 0 0	2,100 0 0	2,100 0 0
Drainage Loan,	1908	4,00,000 0 0	8,992 1 5	8,990 0 0	8,990 0 0	8,642 14 8	8,642 14 8
Special Buildings Loan,	1909	4,25,000 0 0	8,920 0 0	8,920 0 0	8,920 0 0	8,920 0 0	8,920 0 0
Napier Bridge Loan,	1909	1,00,000 0 0	2,100 0 0	2,100 0 0	2,100 0 0	2,100 0 0	2,100 0 0
Drainage Loan,	1909	4,00,000 0 0	8,642 14 8	8,640 0 0	8,640 0 0	8,607 4 10	8,607 4 10
Napier Bridge Loan,	1910-1911	50,000 0 0	1,040 0 0	1,040 0 0	1,040 0 0	1,040 0 0	1,040 0 0
Drainage Loan,	1911	1,00,000 0 0	1,996 0 0	1,990 0 0	1,990 0 0	1,917 9 2	1,917 9 2
Special Buildings Loan,	1912	8,00,000 0 0	6,300 0 0	6,300 0 0	6,300 0 0	6,300 0 0	6,300 0 0
Do.	1913	8,49,000 0 0	7,190 0 0	7,190 0 0	7,190 0 0	7,190 0 0	7,190 0 0
Do.	1914	2,00,000 0 0	4,160 0 0	4,160 0 0	4,160 0 0	4,160 0 0	4,160 0 0
Do.	1915	1,70,000 0 0	3,540 0 0	3,540 0 0	3,540 0 0	3,540 0 0	3,540 0 0
Electric Lighting Loan,	1914	50,000 0 0	1,040 0 0	1,040 0 0	1,040 0 0	1,040 0 0	1,040 0 0
Do.	1915	1,30,000 0 0	2,700 0 0	2,700 0 0	2,700 0 0	2,700 0 0	2,700 0 0
Total			1,35,757 6 1	1,35,750 0 0	1,35,750 0 0	1,39,627 8 4	1,39,627 8 4
Carried over			26,82,071 10 0	26,05,560 0 0	26,81,120 0 0	26,16,451 8 5	26,16,451 8 5

* Loans taken from Government.

Items.	Actuals, 1915-16.			Budget Estimate for 1915-16.	Revised Estimate for 1915-16.	Actuals, 1914-15.	Explanation of variations between the Actuals and the Revised Estimate of 1915-16.
	Details of Minor Heads.		Totals of Major Heads.				
	Rs.	A. P.	Rs.				
Brought forward ...							
Interest—							
4 " W. W. Loan, 1869-73	14,80,000		26,82,071 1/10	0 0	0 0	0 0	
" " G. T. Drainage Loan, 1883	1,00,000						
" " do. 1883	3,00,000						
" " do. 1885	18,000						
6 " do. 1885	2,62,000						
" " do. 1887	1,00,000						
5 " do. 1888	1,50,000						
" " do. 1889	1,50,000						
" " do. 1899	20,000						
" " do. 1890	50,000						
4 1/2 " G. T. Drainage Loan, 1890	4,00,000						
" " W. W. Loan, 1897	1,00,000						
" " Market Loan, 1898	2,00,000						
" " Plague Loan, 1899	50,000						
" " Water-works Loan, 1899	4,20,000						
" " Drainage Loan, 1899	1,50,000						
" " Market Loan, 1899	7,80,000						
" " Drainage Loan, 1900	1,50,000						
" " Water-works Loan, 1900	1,00,000						
" " Plague Loan, 1900	1,20,000						
" " Sewer Loan, 1901-1902	2,00,000						
" " Drainage Loan, 1901-1902	5,00,000						
" " do. 1903	7,00,000						
" " do. 1905	1,00,000						
" " Special Buildings Loan, 1907	1,00,000						
" " Drainage Loan, 1908	4,00,000						
" " Special Buildings Loan, 1909	4,25,000						
" " Napier Bridge Loan, 1909	1,00,000						
" " Drainage Loan, 1909	60,000						
" " Napier Bridge Loan, 1910-11	1,00,000						
" " Drainage Loan, 1911	3,00,000						
" " Special Buildings Loan, 1912	3,42,000						
" " do. 1913	2,00,000						
" " do. 1914	1,70,000						
" " do. 1915	50,000						
" " Electric Lighting Loan, 1914	1,30,000						
" " do. 1915	2,14,580						
" " Payment Loan 1915							
Total			3,57,738 7 1/2	3,46,200 0 0	3,41,570 0 0	3,40,000 10 0	

Decrease due to claims not preferred and paid for in the year.

Decrease due to claims not preferred and paid for in the year.

Advances Recoverable—																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																	
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Loans from Government.

N.B.—Sums aggregating Rs. 12,68,454-18-1 were transferred from the General Fund to the credit of the Water and Drainage Fund to close the latter account in pursuance of G.O. No. 519 M., Local and Municipal, dated 4th June 1887, up to 31st March 1916.

APPENDIX I.

Statement showing the Liabilities and Assets as closed in the Books on the 31st March 1916 and forming the Opening Balances of 1916-1917.

List of Liabilities or Credit Balances transferred to the ensuing year—				RS.	A.	P.	RS.	A.	P.	RS.	A.	P.
BALANCE OF LOANS—												
*Waterworks Loan of 1869-73	...	...	...							14,30,000	0	0
G. T. Drainage Loan	1887	...	...							1,00,000	0	0
Do.	1888	...	...							1,50,000	0	0
Do.	1889	...	...							1,50,000	0	0
Waterworks Loan	1889	...	...							20,000	0	0
G. T. Drainage Loan	1890	...	...							50,000	0	0
Waterworks Loan	1895	...	...							4,00,000	0	0
Market Loan	1897	...	...							1,00,000	0	0
Plague Loan	1899	...	...							2,00,000	0	0
Waterworks Loan	1899	...	...							50,000	0	0
Drainage Loan	1899	...	...							4,20,000	0	0
Market Loan	1899	...	...							1,50,000	0	0
Drainage Loan	1900	...	...							7,50,000	0	0
Waterworks	1900	...	...							1,50,000	0	0
Plague Loan	1900	...	...							1,00,000	0	0
Sewer Loan	1901-02	...	...							1,00,000	0	0
Drainage Loan	1901-02	...	...							1,20,000	0	0
Do.	1903	...	...							2,00,000	0	0
Do.	1905	...	...							5,00,000	0	0
Special Buildings Loan	1907	...	...							5,50,872	7	8
*Drainage Loan	1908	...	...							1,00,000	0	0
Do.	1909	...	...							8,13,931	7	6
Special Buildings Loan	1909	...	...							3,52,923	9	1
Napier Bridge Loan	1909	...	...							4,25,000	0	0
Do.	1910-11	...	...							1,00,000	0	0
*Water-supply and Drainage Loan 1910-11	...	...	...							50,000	0	0
Special Buildings Loan	1912	...	...							93,478	11	8
Do.	1913	...	...							3,00,000	0	0
Do.	1914	...	...							3,32,000	0	0
Electric Lighting Loan	1914	...	...							2,00,000	0	0
Do.	1915	...	...							50,000	0	0
Special Buildings Loan	1915	...	...							1,30,000	0	0
Repayment Loan	1915	...	...							1,70,000	0	0
Deposits to be adjusted	...	...	...							2,04,680	0	0
Unpaid Liabilities	...	...	...							3,70,840	5	6
										1,59,286	0	0
List of Assets or Debit Balances transferred to the ensuing year—												
MUNICIPAL BALANCE—												
Revenue	...	...	...	7,85,424	3	7						
Loan	...	...	...	1,42,476	5	6						
DEPOSIT BALANCE—							9,27,000	9	1			
Cash	...	...	...									
Fixed Deposit	...	...	...	80,335	4	11						
Government Securities, etc.	...	...	...	70,898	15	9						
				1,86,400	0	0						
SINKING FUND FOR THE LIQUIDATION OF							3,37,634	4	8			
*Waterworks Loan of 1869-73	...	...	...	18,53,500	0	0						
George Town Drainage Loan of 1885	...	...	...	2,40,800	0	0						
Do. Do. " 1887	...	...	...	37,072	11	10						
Do. Do. " 1888	...	...	...	52,275	8	3						
Do. Do. " 1889	...	...	...	50,722	0	11						
Waterworks	" 1889	...	...	6,788	14	2						
Drainage	" 1890	...	...	15,824	12	6						
Waterworks	" 1895	...	...	95,061	10	9						
Market	" 1897	...	...	22,183	13	2						
Plague	" 1899	...	...	36,167	15	10						
Waterworks	" 1899	...	...	8,862	12	6						
Drainage	" 1899	...	...	74,677	2	4						
Market	" 1900	...	...	26,720	8	11						
Waterworks	" 1900	...	...	1,28,544	8	10						
Plague	" 1900	...	...	24,373	1	11						
Sewer	" 1901-02	...	...	16,392	10	9						
Drainage	" 1901-02	...	...	16,859	13	1						
Do.	" 1903	...	...	27,537	14	11						
Special Buildings	" 1907	...	...	62,988	10	4						
Do.	" 1909	...	...	22,536	4	8						
Napier Bridge	" 1909	...	...	62,186	14	8						
Do.	" 1910-11	...	...	14,883	4	0						
Special Buildings	" 1912	...	...	5,041	1	3						
Do.	" 1913	...	...	26,842	10	1						
Do.	" 1914	...	...	14,418	15	10						
Electric Lighting	" 1914	...	...	7,377	13	11						
Special Buildings	" 1915	...	...	1,844	12	6						
Electric Lighting	" 1915	...	...	3,720	8	0						
				2,815	13	11						
Carried over	...	...	...				24,60,321	8	6			
							37,25,856	6	3	90,12,006	9	5

* Loans from Government

APPENDIX I.

Statement showing the Liabilities and Assets as closed in the Books on the 31st March 1916 and forming the Opening Balances of 1916-17—(Continued).

Divisions	Description of Buildings.	Amount. Rs.
1	Shed for the peons, Ac., of the Hindu Burial Ground in Surivanarayana Chetty Street	100
	Medical Registrar's Office and Vaccination Depot, Mannarsamy Coll Street	550
	Sewage Farm Overseer's Office	440
	Shed for storing hay in the sewage farm	2,640
	Drainage Overseer's Office in Mannarswami Coll Street	4,000
2	Store and Office of the sewer cleaning staff in Kalmadaram Road	280
	Vaccination Depot in Tiruvattur High Road junction of Cumbalammam Civil Road	2,910
	Cattle Shed in Robinson Park	1,700
	Fernery in Robinson Park	800
	Reservoir for water near Band Stand in Robinson Park	250
	Compound wall to Robinson Park	7,580
	Superintendent's Office at Robinson Park	580
	Kitchen in Robins in Park	750
	Peon's quarters at Robinson Park	1,200
	Foliage shed in Robinson Park	1,980
	Pumping shed and two wells in Robinson Park	430
	Corrugated zinc shed for the Fire Engine Station at Royapuram Pumping Station	350
	Fire engine shed close to the temple gate in Mannarsami Civil Street	10,000
	Georgetown Dispensary	1,800
	Vaccination shed in Monegar Choultry Road	490
	Tiled shed Toll Gate, Tiruvattur High Road	2,950
	Overseer's Office and store room of 2nd Division in Mint Street	2,870
	Sanitary Inspector and Works Department Overseer's Office, Ebramji Sahib Street	28,040
	Raja Sir Ramaswamy Mudaliar Lying-in-Hospital, Monegar Choultry Road	4,850
	Contagious wards in do.	1,800
	Kitchen in Lying-in-Hospital	14,050
	Nurses quarters in Lying-in-Hospital	980
	Roller shed in Slaughterhouse Road	57,000
	Model Paracherry, Cemetery Road	14,000
	Drivers' Lines in Slaughterhouse Road	980
	Razars attached to Drivers' Lines	20,270
	H. Bullock depot Slaughterhouse Road	1,750
	Tiled shed for 12 pairs of bullocks in H bullock depot, Slaughterhouse Road	1,650
	Do 6 pairs of sick bullocks in H bullock depot, Slaughterhouse Road	1,000
	Gram shed at H bullock depot	379
	Wheel trough in H Bullock depot	12,500
	Model School in Sanjeevirayan Civil Street	12,950
	Do Cemetery Road	2,000
	Buildings in the acquired Fiji Emigration Depot in Tondiarpet	540
3	Bathing fountain in Basin Bridge Road	5,400
	A Depot Bullock shed in Basin Bridge Road	3,370
	C Kathiwakam High Road	200
	Shed for Rubbish Depot Superintendent at Manali Bridge	400
	Toll-gate Building No. 3 in Manali Road	15,000
	Overseer's Office and Vaccination and Dispensary in Tiruvattur High Road	580
	Coolies' shed Rubbish Depot in Ennore Road	490
	Rubbish Depot, Superintendent's Office, Korukupet	9,558
	Drivers' Lines at Kathiwakam High Road	370
	Wheel Trough in C Depot	980
	Do A Do	1,850
	Hindu Burial Ground (Shelter shed for Hindus)	800
	Do do Chetties	300
	Do do Brahmins	300
	Do do Pariabs	1,260
	Toll-gate, Old Ennore Road	11,780
	Gram shed at C Bullock Depot	1,340
	Model School in Korukupet (Mint Subroyal Naidu Street)	12,350
	Four small incinerators at Cochrane Basin Road	7,000
4	Model School in Angappa Naick Street	1,500
5	Corner Building of Erbbalu Chetti Street	6,950
	Water Works Stores including Bathing Fountain in Thambu Chetty Street	12,590
	Mahamadan Model Buildings in Salai Vinayagar Coll Street	30,000
	Model School in Salai Vinayagar Civil Street	25,000
6	Model Paracherry, Vasamode (new) Broadway	1,500
	Do do (old) do	7,000
7	Overseer's Office and Bathing Fountain at Govindappa Naick Street	200
	Superintendent's Office and bullock sheds at Basin Bridge Road	14,780
	Storekeeper's Office, old Basin Road	57,570
	Model School in Malayappan Street	400
8	Municipal Stores and Workshops, including gram depot and Trevillyan Basin Wall	5,200
	Portion of Police Station in Wall Tax Road	7,100
	Building Overseer's Office, 8th and 9th Divisions	200
9	Municipal Cart-stand and Bathing Fountain, Elephant Gate Road	1,600
	Superintendent's shed at the Wharf in Wall Tax Road	1,500
	Bathing Fountain in Badriah Garden Street	
	Cart-stand at the commencement of Wall Tax Road.	
	Carried over	4,70,890

APPENDIX I.

Statement showing the Liabilities and Assets as closed in the Books on the 31st March 1916 and forming the Opening Balances of 1916-17—(Continued).

Divisions.	Description of Buildings.	Amount. Rs.
	Brought forward...	4,70,000
10	Trevellian Wharf ...	1,000
	Incinerator, Basin Road ...	1,000
	Superintendent's quarters, at the Incinerator, Basin Road ...	1,000
	Lethal Chamber at Basin Esplanade Road ...	1,000
	Mantapam at DeMellows Road Burial and Burning Ground ...	1,000
	Pig Pen, DeMellows Road ...	1,000
	Hog Slaughterhouse, DeMellows Road ...	1,000
	Bullock Slaughterhouse, Gantz Road ...	1,000
	Sheep Slaughterhouse, Gantz Road ...	1,000
	Superintendent's quarters, Bullock Slaughterhouse, Perambur ...	1,000
	Chief Superintendent's quarters Slaughterhouse and Drivers' Lines, "Hope Lodge" ...	1,000
	Toll-gate building in Erokanjeri Road (new) ...	1,000
	Do in Perambore High Road ...	1,000
	Do in Connoer Road ...	1,000
	Do in Madavaram Road ...	1,000
	Water Works Overseer's Office in DeMellows road ...	1,000
	Rat Station in Puliantope Road ...	1,000
	Toll-gate in Perambur Tank Road ...	1,000
	Shed in Vyasarpady Burial Ground ...	1,000
11	Smithfield Market, Avadanam Paupier Road ...	1,000
	Vaccination Depot in Rutler's Road ...	1,000
	Conservancy Cart Depot including gram shed Choolai ...	1,000
	Balah Naidu Dispensary, Rutler's Lane ...	1,000
	School in Kalathiappa Mudali Street ...	1,000
	Model School in Valaikarai Street ...	1,000
12	Masonry Incinerator inside Choolai Mills ...	1,000
	Office and Stores of the Overseer in Gangadeswarer Coll Road ...	1,000
	Moore Market with Electric Engine Shed, People's Park ...	1,000
	New Evening Bazaar with refreshment stalls People's Park ...	1,000
	Superintendent's quarters, People's Park ...	1,000
	Sergeant's quarters in People's Park ...	1,000
	Band Stand in People's Park ...	1,000
	Menagerie shed with the shed at the entrance in the People's Park ...	1,000
	Foliage shed in People's Park ...	1,000
	Shed for swans and other birds in the Island, People's Park ...	1,000
	Bear's cage in People's Park ...	1,000
	New Aviary in ...	1,000
	Store shed in the Menagerie, People's Park ...	1,000
	Pumping Station in People's Park ...	1,000
	New Corporation Office, Ripon Buildings, Poonamallee High Road ...	1,000
	Model School in Poonamallee High Road ...	1,000
13	Fire Engine Shed at Vepery Police Station ...	1,000
	Office and Stores of the Overseer's in Harris Road ...	1,000
	Cart Depot including Bullock sheds and Sanitary Overseer's Office, Harris Road ...	1,000
	Gram Shed, Harris Depot ...	1,000
	Incinerator, pumping station and compound wall, etc., Langs Garden Road ...	1,000
	Steam Road Roller Shed in Langs Garden Road ...	1,000
	Vaccination Depot, Poonamallee High Road ...	1,000
	Motor fire engine shed and drivers' quarters, in Subroya Mudali Street ...	1,000
	Model dwellings Anglo-Indians, Nariangadu ...	1,000
14	Model School, Goyatope, Nagappa Mudali Street ...	1,000
	Rest-house in Otary Burial and Burning Ground ...	1,000
	Toll-gate No. 8 in Madavakam Tank Road ...	1,000
	Do 8-A in Subroya Chetti Street ...	1,000
	Toll Gate No. 9 in Kilpauk Garden Road ...	1,000
	Do 10 in Poonamallee Road, Chetput ...	1,000
	Do 11 in Harrington Road, Chetput ...	1,000
	Do in Subbaraya Gramany Street ...	1,000
	Sheds for tools and plants in Otary Burial Ground ...	1,000
	Dhobykhana in McNicholas Road, Chetput ...	1,000
	Day School at Chetput ...	1,000
	Kubbish Depot Shed in Brick Kiln Road ...	1,000
15	Driver's quarters at Kilpauk or Wankin's cottage and Channel Overseer's quarters ...	1,000
	Overseer's Office and Stores in Village Road ...	1,000
	Tiled shed in Sterlings Road Burial Ground ...	1,000
	Toll-gate No. 12 Kodambakam Road ...	1,000
16	Corporation School in Thousand Lights Azimulak Street ...	1,000
	Model School in Rama Naick Street, Nungambakam ...	1,000
	Do Arunachala Naick Road ...	1,000
	Shed for ambulance in Napier's Park ...	1,000
	Napier's Park Superintendent's Shed and Waterworks Overseer's Office and store room ...	1,000
	Do gatekeeper's lodge at east side of Napier's Park ...	1,000
	Dispensary, Vaccination Depot and Sanitary Inspector's Office in Arunachala Naick Road ...	1,000
	Carried over...	21,50,530

APPENDIX I.

Statement showing the Liabilities and Assets as closed in the Books on the 31st March 1916 and forming the Opening Balances of 1916-17—(Continued).

Divisions.	Description of Buildings.	Amount. Rs.
	Brought forward...	21,50,530
	Manual fire engine shed at F. Y. Police Station ...	1,800
	Old pumping engine house now occupied by sewer cleaning staff and special plague ...	1,800
	Medical Officer ...	1,800
17	Building Overseer and Road Overseer's Office, Stores in Balamuthu Street ...	1,800
	Model School in Vallabha Agrabaram Street ...	1,800
	Corrugated iron shed in Veeran Parachery ...	1,800
	Do at Chetty's Garden for keeping the night-soil buckets, etc. ...	1,800
	Public bathing fountain in Veeraraghava Mudali Street ...	1,800
	Model School in Bells Road, Triplicane ...	1,800
	Vaccination Depot at Pulibone Bazaar in Pycrofts Road ...	1,800
18	Masonry incinerator at Pycrofts Lane ...	1,800
	18th Division, Overseer's Office and Stores Pycrofts Road ...	1,800
	Sanitary Inspector's Office in Chengalraya Mudali Street ...	1,800
	Steam Road Roller shed, Westcott Road ...	1,800
	Bathing fountains in Ice House Road ...	1,800
	Model School at Venkatarangam Pillai Street ...	1,800
	Do at Triplicane High Road ...	1,800
	Old Depot of Registrar of Births and Deaths, Mount Road Opposite to Neil Statue ...	1,800
19	Vaccination Depot at the junction of White's Road and Mount Road ...	1,800
	Isolation Hospital, Krishnampet ...	1,800
	Incinerator at Krishnampet ...	1,800
	Shed for the Superintendent of the Incinerator at Krishnampet ...	1,800
	Overseer's Mustering Depot shed, Krishnampet ...	1,800
	Krishnampet Cart Depot ...	1,800
	Barber's Bridge Cart Depot ...	1,800
	School at Krishnampet including compound wall ...	1,800
	Royapettah Hospital including Sub-Assistant Surgeons' quarters and Nurses' quarters ...	1,800
	and store shed and compound wall ...	1,800
	Wharf with crane and Superintendent shed at Venkatarangam Pillai Street ...	1,800
	Tiled shed at Krishnampet Burial Ground ...	1,800
	Lethal Chamber, Krishnampet ...	1,800
	Peon's room for Krishnampet Burial Ground ...	1,800
20	Gram shed at Krishnampet ...	1,800
	Vaccination Depot, Cutcheri Road ...	1,800
	Shed at Mylapore Hindu Burial and Burning Ground ...	1,800
	Damodar Street Panchama School ...	1,800
	Wharf with crane, etc., in Ellapatha Matha Civil Road ...	1,800
	Toll-gate in Mount Road ...	1,800
	Do Chamier's Road ...	1,800
	Do Adyar Bridge Road ...	1,800
	Overseer's Office and Stores, 20th Division ...	1,800
	Watchman's room and compound wall in Mahomedan Burial Ground in Ellapatha Matha Civil Road ...	1,800
	Overseer's Office and Stores of Waterworks Overseer, 20th Division ...	1,800
Outside	Model School in Mandavalli Street, Mylapore ...	1,800
	Overseer's quarters at Red Hills ...	1,800
	Channel Overseer's quarters ...	1,800
	Red Hills Bungalow (Big) ...	1,800
	Out-house of the above bungalow ...	1,800
	Red Hills Bungalow (small) ...	1,800
	Out-houses of the above bungalow ...	1,800
	Stable with out-houses ...	1,800
	Tower House old with fittings ...	1,800
	New Tower house ...	1,800
	Cottage No. 1 Delivery Channel ...	1,800
	Do 2 do ...	1,800
	Do 3 do ...	1,800
	Do 4 do ...	1,800
	License Clerk's quarters at Ennore Lock ...	1,800
	Quarter for the Licensing Clerk at Adyar ...	1,800
	Night-soil Depot ...	1,800
	Settling basin and valve house ...	1,800
	Conduit ...	1,800
	Filter beds ...	1,800
	Filter water reservoirs ...	1,800
	Other subsidiary buildings ...	1,800
	Stores sheds at Kilpauk ...	1,800
	Distribution stores at Royapettah ...	1,800
	Do People's Park ...	1,800
	Drainage stores at ...	1,800
	Do Napier Park ...	1,800
	Do Puraawakum ...	1,800
	Do Georgetown ...	1,800
	Cement shed at Napier Park ...	1,800
	Do testing shed at do ...	1,800
	Carried over ...	59,29,170

APPENDIX I.

Statement showing the Liabilities and Assets as closed in the Books on the 31st March 1916 and forming the Opening Balances of 1916-17—(Continued).

Divisions	Description of Buildings.	Amount. Rs.
	Brought forward...	39,29,170
	Pumping Station Buildings—	
	Pumping Station and Drivers' quarters at Royapuram ...	10,410
	DeMellow's Road Pumping Station ...	3,510
	Lings Garden do ...	6,880
	Napier Park do ...	10,750
	Ice House Road do ...	8,460
	Mylapore do ...	8,490
	Law College do ...	18,940
	Tondiarpet do "A" ...	12,290
	Do do "B" ...	14,010
	Do do "C" ...	11,810
	Kilpauk Pumping Station ...	3,80,600
	Total...	44,07,100
	Value of Municipal lands	
	Do tools and plant and materials ...	7,21,668
	Do furniture ...	63,01,880
	Do live stock ...	48,000
	Arrears of Taxes, &c. ...	1,14,880
	Advances Recoverable ...	1,09,123
		1,61,807
	Total ...	74,56,807
	Total Assets...	188,89,765
	Total Liabilities...	90,12,007

APPENDIX I.

STATEMENT II-A.—Details of Allotment for Expenditure on Public Works estimated to cost Rs. 100 and upwards.

Part I.—New Works.

No.	Particulars.	Revised Estimate Grant.	Expenditure during the year.	REMARKS.
		Rs.	Rs.	
	GRANT I.—Public Works.			
	1. NEW WORKS.			
	(a) Communications.			
8	Constructing a skew bridge in Stephenson Road junction with Otteri Nullah ...	12,000	8,549	In progress.
10	Constructing floor and parapet wall of Nullah Bridge for the portion affected by rounding off the approaches at the junction of Connor Road and Cook's Road ...	1,800	...	Do.
11	Acquisition of land and buildings in R. S. Nos. 2812, 2813, 2901/1, and 2901/2 of Tondiarpet for widening Lawver Chinnathambi Mudali 2nd Street and connecting it with Sanjiviroyan Civil St. ...	5,310	5,310	Paid in full.
12	Acquisition of land and buildings in R. S. Nos. 2767 and 2774 of Georgetown for opening a street from Venkatayyan Street to Kamasamy Street ...	3,700	...	Withdrawn with a view to economy.
13	Acquisition of land in R. S. No. 4886 of Georgetown for rounding off the corner at the junction of Armenian Street and Mukernallamuthu Chetti Street ...	250	250	Paid in full.
14	Acquisition of land in parts of R. S. Nos. 5617 to 5620 (1a, 1b and 2), 5623 to 5626, 5629, 5630, 5632, 5633, and 5631 (1) for widening Popham's Broadway ...	9,770	11,947	Land acquired. Paid in full. Excess sanctioned by S. C. on 11-2-16.
15	Compensation for shifting back the building in R. S. No. 11452 of Georgetown for widening Popham's Broadway ...	1,500	2,461	Paid in full. Excess sanctioned by S. C. on 10-12-15.
16	Removing and refixing the Tramway and Telegraph posts at the junction of the General Hospital Road and Evening Bazaar Road ...	260	188	Paid in full.
17	Acquisition of land in Vepery for connecting Cuddapah Rangiah Chetti Street with Mattucara Veerabadran Street ...	255	253	Do.
18	Acquisition of land and buildings in R. S. Nos. 1064 and 1055 of Egmore for widening Venkatachella Naick Street ...	3,000	...	Withdrawn with a view to economy.
19	Compensation for shifting back the building in R. S. No. 3738 of Triplicane occupied by the portico of Messrs. Wile and Klein in Mount Road ...	580	...	Land was taken possession of under sec. 233 of the Act.
20	Excess amount awarded by High Court in respect of the land acquired by Corporation for widening Mosque Lane and connecting the same with Bell's Road ...	485	434	Paid in full.
21	Regulation fees to the Government Solicitor for land case No. 47 of 1914 regarding the acquisition in R. S. No. 2770 of Triplicane for widening Khana Bagh Street ...	200	198	Do.
	Carried over ...	44,060	29,685	

APPENDIX I.

STATEMENT II-A.—Details of Allotment for Expenditure on Public Works estimated to cost Rs. 100 and upwards.

Part I.—New Works—(Continued).

No.	Particulars.	Revised Estimate Grant.	Expenditure during the year.	REMARKS.
	Brought forward ...	Rs. 44,080	Rs. 29,585	
	GRANT I.—Public Works—(Contd.)			
	1. NEW WORKS—(Contd.)			
	(a) Communications—(concl'd.)			
22	Acquisition of land and structure in R. S. No. 376 of Triplicane for widening General Patter's Road near Brind's Hotel ...	2,200	...	Withdrawn with a view to economy.
23	Shifting the Madras Electric Supply Corporation posts at the junction of Nungambaukam High Road and College Road to the side of the road on account of road improvement ...	180	127	Paid in full.
24	Acquisition of land in R. S. No. 664 of Mylapore for connecting Chanda Sahib Street with Masthura Begam Pettah Road.	850	850	Do.
25	Shifting two Tramway poles in Cutcheri Road, Mylapore, owing to the widening of the road by the removal of three building projections ...	320	320	Do.
26	Acquisition of land and buildings in George-town for widening Salai Vinagar Civil Street.	8,440	...	Under correspondence.
27	Petty Works ...	200	217	
(a)	Acquisition of two strips of land in Cutcheri Road, Mylapore, (out of the land acquired by the Government for constructing Police Lines) for widening the road ...	...	318	Sanctioned by Corporation on 23-12-15. Paid in full. Met from savings.
	Total ...	56,600	31,417	
	(b) Buildings.			
2	Constructing a bathing fountain with six taps in Ice House Road in the place of the existing corrugated sheet iron enclosure which is to be dismantled ...	600	373	Completed.
3	Constructing a compound wall for the additional land of Corporation Workshops and Stores ...	6,110	1,691	In progress.
5	Constructing a shed 20 feet by 16 feet in the Mylapore Burial and Burning Ground ...	550	528	Paid in full.
6	Construction of four Model Schools in 1916 ...			
(a)	In Cemetery Road, Tondiarpet ...		12,953	Main building completed, but latrine in progress.
(b)	In Triplicane High Road, Triplicane ...		12,458	Do.
(c)	At Ammayappa Mudali Street, Mylapore ...	70,725	12,815	In progress.
(d)	At Vadhyar Canda Pillai Street Purasawakam ...		10,781	Do.
	Carried over ...	77,985	51,599	

APPENDIX I.

STATEMENT II-A.—Details of Allotment for Expenditure on Public Works estimated to cost Rs. 100 and upwards.

Part I.—New Works—(Continued).

Particulars.	Revised Estimate Grant.	Expenditure during the year.	REMARKS.
Brought forward ...	Rs. 77,985	Rs. 51,599	
GRANT I.—Public Works—(contd.)			
1. NEW WORKS—(contd.)			
(b) Buildings—(Contd.)			
Acquisition of land in R. S. No. 3537 of Tondiarpet for the extension of the Hindu Burial Ground in Surianarayana Chetti Street ...	2,000	2,068	Land acquired. Paid in full. Excess sanctioned by S. C. on 15-10-16 and on 25-2-16.
Alteration of existing latrines to flush-out latrines in Tondiarpet where new sewers are laid and construction of new latrines in various parts of the city :—			
installing a flush-out latrine of 30 seats in Kasimode Garden, near Flag Staff Street ...	...	...	In progress.
installing a flush-out latrine of 30 seats in Mottai Garden ...	...	29	Do.
installing a flush-out latrine of 30 seats in Shaik Maistri Street ...	...	...	Work commenced in 1916-17.
installing a flush-out latrine of 30 seats in Palmyrakuppam ...	...	...	Not begun.
installing a flush-out latrine of 30 seats in Periatthambi Street, Kasimodu Garden ...	...	...	In progress.
installing a flush-out latrine of 20 seats in Narayanappa Naick 8th Street ...	...	...	Do.
installing a flush-out latrine of 30 seats in Kuppam Putting Ground with sanitary fittings and water-supply connections ...	...	...	Not begun.
installing a flush-out latrine of 30 seats in Coobum River Road with sanitary fittings and water-supply connections ...	...	...	Do.
constructing a flush-out latrine of 30 seats in Angalammen Covil Street with sanitary fittings and Water-Supply Connections ...	10,000	...	Work commenced in 1916-17.
installing a flush-out latrine of 30 seats in Swami Reddi Street ...	...	...	Do
installing a flush-out latrine of 30 seats in Sundappa Mudali Street, including sanitary fittings and water-supply ...	...	...	Not begun.
installing a flush-out latrine of 30 seats in Cemetery Road ...	...	152	In progress.
connection to Devaraja Mudali Street flush-out latrine in Triplicane.	...	326	Completed.
installing a flush-out latrine of 4 seats at the junction of Basin Road and Old Jail Street.	...	474	In progress.
installing a flush-out latrine of 30 seats in Shaik Maistri Street at the junction of Hambu Chetti Lane ...	...	...	Do.
installing a flush-out latrine in Sirdarjung arden Street ...	...	...	Work commenced in 1916-17.
Carried over ...	80,985	54,648	

APPENDIX I.

STATEMENT II-A.—Details of Allotment for Expenditure on Public Works estimated to cost Rs. 100 and upwards.

Part I—New Works—(Continued).

No.	Particulars.	Revised Estimate Grant.	Expenditure during the year.	REMARKS.
	Brought forward ...	Rs. 89,985	Rs. 54,648	
	GRANT I.—Public Works—(Contd.)			
	1. New Works—(Contd.)			
	(b) Buildings—(contd.)			
(g)	Partitioning the sanded latrine in Cox Paracherri into two at the junction of Rix Street and Coom River Road ...	...	569	Paid in full
(r)	Torfeit urinals ...	...	439	Completed.
9	Making alterations and additions to Lethal Chamber, Krishnampet ...	630	...	In progress.
11	Construction of 4 Model Schools in 1913-14...			
(a)	In Goyalope, Egmore ...		710	Paid in full.
(b)	In Nungumbaukam near Azimolk Street, Thonsand Lights ...	23,110	1,920	Do.
(c)	In Vasapmodu Paracherri, Georgetown ...		7,056	In progress.
(d)	In Bell's Road, Triplicane ...		12,938	Main building completed and lat in progress.
12	Construction of 4 Model Schools in 1914-15.			
(a)	At Rama Naick Street, Nungumbaukam ...		3,707	Completed.
(b)	At Venkataram Pillai Street, Triplicane ...	45,630	9,485	Do.
(c)	At Angappa Naick Street, Georgetown ...		11,122	Do.
(d)	At Salai Vinayagar Koli Street, Basin Road ...		12,335	Main building completed but lat not begun.
13	Improvements to passport office, Tiruvottiyur High Road and constructing an office building for Sanitary Inspector, Conservancy Overseer, &c. ...	13,065	8,875	Main building completed but latrine in progress.
14	Housing of Milch Cattle...			
(a)	Constructing a model milch cow house in "B" Depot, Basin Bridge Road, 7th Division and the purchase of a sterilizing boiler.	12,000	21,600	In progress Excess provided in budget 1915-17 as it was not anticipated that the expenditure would be incurred within the year.
(b)	Acquisition of land and building in R. S. No. 3547 of Tondiarpet (Old Fiji Emigration Depot) for the construction of model milch cow houses ...	27,000	22,182	Land acquired. Alterations of building were postponed for want of funds. In cludes pay of the watchman in charge of the buildings in the acquired area.
15	Constructing corrugated iron shed at stores.	2,410	1,899	In progress.
17	Constructing dust-bin platforms ...	1,350	...	Trial bin in progress.
20	Improvements to Smithfield Market ...	1,000	...	Completed.
	Constructing a bathing fountain with 6 taps in Basin Bridge Road at the junction of Mini Street ...	600	595	Do.
21	Constructing a room on the upper floor of the Superintendent's Office in Robinson Park ...	825	824	Paid in full.
	Carried over ...	2,17,605	1,71,144	

APPENDIX I.

STATEMENT II-A.—Details of Allotment for Expenditure on Public Works estimated to cost Rs. 100 and upwards.

Part I—New Works—(Continued).

No.	Particulars.	Revised Estimate Grant.	Expenditure during the year.	REMARKS.
	Brought forward ...	Rs. 2,17,605	Rs. 1,71,144	
	GRANT I.—Public Works (contd.)			
	1. New Works (contd.)			
	(b) Buildings—(contd.)			
23	Constructing two flush-out latrines of design No. 3 in Velayudha Chetti Street and making 4-inch water main connections from Harris Road ...	2,560	1,825	Paid in full
23	Extending Olcott Free Panchama School Buildings, Kistnampet ...	180	179	Do.
24	Installing a convertible latrine of 32 seats in Pole Naicken Street, Perambur ...	2,260	2,255	Do.
25	Installing a flush-out latrine of 36 seats between Thoppai Mudali and Rama Naick Streets, Tondiarpet ...	230	106	Completed.
26	Installing a flush-out latrine of 10 seats for the model school at Sanjiviroyanpet ...	240	48	Do.
27	Acquisition of land and building in R. S. No. 3081 of Georgetown in Thambu Chetti Lane for the construction of a flush-out latrine ...	340	337	Land acquired. Paid in full.
28	Constructing a model paracherri of 34 tenements in Cemetery Road, Tondiarpet, including the connections of drains with the sewer and the construction of a latrine ...	6,000	5,454	Main building completed but latrine in progress.
29	Repairing and fencing the emus and casowary cages in the menagerie enclosure, People's Park ...	180	127	Paid in full.
30	Forming roadways round new bear's cage in the menagerie enclosure, People's Park.	350	49	Do.
31	Constructing a shed for dogs near the Basin Bridge Road Incinerator ...	310	311	Do.
32	Constructing quarters for the two native nurses in the Lying-in-Hospital, Monegar, Choultry Road ...	9,160	8,503	Completed.
33	Fixing a weigh-bridge at the roller shed, Madras Club ...	700	...	Weigh-bridge was fixed at Kilpauk Pumping Station and hence charged to Repairs, water-supply.
34	Constructing model cottages for poor Anglo-Indians in Pudupet including sanitary fittings and water-supply ...	750	747	Paid in full.
35	Constructing new Corporation Office Buildings ...	8,500	6,816	All minor works completed.
36	Excess awarded by Court and regulation fees paid to Government Solicitor in land case No. 8 of '15 in regard to the acquisition of land in Singanna Naick Street, Chintadripet, for the construction of a model school ...	360	361	Paid in full.
	Carried over ...	2,49,675	1,98,263	

APPENDIX I.

STATEMENT II-A.—Details of Allotment for Expenditure on Public Works estimated to cost Rs. 100 and upwards.

Part I.—New Works—(Continued).

No.	Particulars.	Revised Estimate Grant.	Expenditure during the year.	REMARKS.
	Brought forward ...	Rs. 2,49,675	Rs. 1,98,262	
	GRANT I.—Public Works—(Contd.)			
	1. NEW WORKS—(Contd.)			
	(b) Buildings.—(Contd.)			
37	Excess amount awarded by Court to the 3rd claimant in land case No. 105 of 1914 for the acquisition of land in R. S. No. 1840 in Triplicane High Road for the construction of a model school ...	1,845	2,174	Paid in full. Excess sanctioned on 25-2-16.
38	Acquisition of land and buildings in R. S. Nos. 325 to 329 of Tondiarpet in Madhav Church East Side Road for the construction of a model school ...	8,000	...	Withdrawn with a view to economy
39	Construction of a model school in Arunachala Naick Road, Chintadripet and in Mint Suboryalu Naidu Street, Georgetown ...	1,900	1,900	Paid in full.
40	Construction of a central fire station at Pudurpet ...	1,000	768	Completed.
41	Constructing additions to the existing motor fire engine sheds at Pudurpet ...	11,860	5,914	In progress.
42	Fixing the rail hose posts in concrete and connecting the existing one with the new one by four beams, pulleys, &c., for drying the hoses of motor fire engine at Pudurpet ...	140	...	Completed.
43	Constructing a verandah for the vaccination depot opposite to Kalmantapam Road Police Station ...	220	...	Do.
44	Fixing electric fittings for the new nurses' quarters in the Lying-in-Hospital, Rayapuram ...	600	610	Paid in full. Excess sanctioned b
45	Fixing iron bars and windows on the first floor and fixing teakwood shelves, with frames, shutters etc., in ground and first floor of the nurses' quarters in the Lying-in-Hospital, Rayapuram ...	500	...	Completed.
46	Fixing wire netting with teakwood frames to all the openings of the verandah of the several wards in Rajah Sir Ramaswamy Mudaliar Lying-in-Hospital, Rayapuram, to prevent crows coming in ...	1,350	1,491	Completed. Excess sanctioned b
47	Improvements to the Cholera Hospital in Barracks Square ...	12,000	6,265	In progress.
48	Constructing four small incinerators at Cochrane Basin Road, 3rd Division ...	1,400	...	Completed.
49	Constructing a masonry incinerator at Chulai Mills ...	330	...	Do.
50	Erecting a masonry incinerator of the ordinary type in Pycrofts 1st Street ...	270	289	Paid in full.
	Carried over ...	2,91,090	2,17,613	

APPENDIX I.

STATEMENT II-A.—Details of Allotment for Expenditure on Public Works estimated to cost Rs. 100 and upwards.

Part I.—New Works—(Continued).

No.	Particulars.	Revised Estimate Grant.	Expenditure during the year.	REMARKS.
	Brought forward ...	Rs. 2,91,090	Rs. 2,17,613	
	GRANT I.—Public Works—(Contd.)			
	1. NEW WORKS—(Contd.)			
	(b) Buildings.—(Contd.)			
51	Acquisition of additional land in R. S. No. 841 of Georgetown in Angappa Naick Street for enlarging the play ground of the Model School and for the construction of a latrine ...	4,200	...	Withdrawn with a view to economy
52	Constructing a compound wall in the south west corner of the Rayapettah Hospital to enclose the newly-acquired land ...	800	650	Paid in full.
53	Constructing a compound wall between the Sub-Assistant Surgeon's quarters and the newly proposed Dhobykhana at the Rayapettah Hospital ...	350	330	Do
54	Constructing an office room and quarters for the licensing clerk and his lascar at Adyar ...	1,800	1,581	Completed.
55	Petty works ...	500	457	...
a)	Excess compensation in the award of the High Court in L. C. appeal No. 56 of '15 for the acquisition of land and buildings in R. S. No. 2,862/2 of Triplicane for the construction of a Model School in Bells Road ...	...	4,886	Sanctioned by S.C. on 8-4-16. Paid in full. Met from savings.
b)	Payment of fees to the Government Solicitor for L. C. appeal Nos. 35 of '15, 56 of '15 and 418 of '14 ...	...	379	Sanctioned by S.C. on 25-2-16. Paid in full. Met from savings.
c)	Additional allotment for the acquisition of land in R. S. No. 1,330 of Egmore for a Model School at Goyatepe ...	...	1,185	Sanctioned by S.C. on 8-4-16. Paid in full. Met from savings.
	Total ...	2,98,740	2,27,031	
	(c) Drainage—Special.			
	Mahab Main Drainage.			
	Law College and Royapuram Pumping Stations—			Completed.
	Buildings ...	...	...	Do.
	Machinery ...	...	...	Do.
	Alterations to sewers and pumping mains ...	...	...	Do.
	Constructing flush-out latrine for Engine drivers &c., at Law College Pumping Station ...	...	...	Do.
	Carried over ...			

APPENDIX I.

STATEMENT II-A.—Details of Allotment for Expenditure on Public Works executed by the Special Works Department, and estimated to cost Rs. 100 or upwards.

Part I—New Works.

No.	Particulars.	Revised Estimate Grant.	Expenditure during the year.	REMARKS.
		Rs.	Rs.	
	Brought forward ...			
	GRANT I.—Public Works—(Contd.).			
	1. NEW WORKS—(Contd.).			
	(c) Drainage—Special—(Contd.).			
	Madras Main Drainage—(Contd.).			
2	Open channel at Sewage Farm, New Road, Bridges, Sluices, &c. ...	...	...	Completed.
3	Raising existing 36" cast iron pipes at Sewage Farm and relaying them together with certain new pipes and specials as a raising main from Royapuram Pumping Station to the Belmont Chamber at the head of 4 ft. 6 inch Sewer ...	...	...	Do.
4	Circular brick sewer 5 feet 6 inch and 4 feet 6 inch diameter to carry all the sewage from Suryanarayana Chetty Street, Georgetown and Tondiarpet to the Farm Pumping Station ...	...	...	Do.
5	Sewage Farm Pumping Station buildings, sewers, overflows, &c. ...	1,000	Cr. 78	Do.
6	Machinery ...	30,000	146	
7	Laying 36 inch brick gravitation main from near Paracherry Road to the Farm Station. ...	40,000	25,770	
8	Sewage Farm work ...	...	...	Do.
9	Laying 16 inch cast iron main pipe from Law College Pumping Station to Royapuram Pumping Station... ...	...	...	Do.
	Tondiarpet Drainage.			
10	Stoneware pipe sewers ...	10,000	8,209	Do.
11	Cast iron pipe sewers ...	100	8	Do.
12	Brick sewers ...	...	...	Do.
13	Manholes ...	1,000	68	Dq.
14	General, &c., ventilating columns, timber left in trenches, flushing chambers and restoring road surfaces ...	5,000	630	Do.
15	House connection to sewers ...	3,000	3,269	Do.
16	Alterations to house drainage ...	75,000	65,067	In progress.
17	Overflows (A. B. & C.) ...	500	...	Completed.

APPENDIX I.

STATEMENT II-A.—Details of Allotment for Expenditure on Public Works executed by the Special Works Department, and estimated to cost Rs. 100 or upwards.

Part I—New Works—(Continued).

No.	Particulars.	Revised Estimate Grant.	Expenditure during the year.	Remarks.
		Rs.	Rs.	
	Brought forward ...	1,65,600	1,08,084	
	GRANT I.—Public Works—(Contd.)			
	1. NEW WORKS (Contd.)			
	(c) Drainage—Special—(Contd.)			
	Tondiarpet Drainage—(Contd.)			
18	Pumping Stations, including Engine Houses, Receiving Chambers, Office Tools and Store Room, Latrine, Compound Wall, Machinery, etc.			
	A. Station ...	...	...	
	B. Do. ...	1,500	758	Completed.
	C. Do. ...	...	...	
19	Acquisition of Land ...	...	...	Do.
20	Contingencies ...	7,000	3,089	
21	25 sets of medium size storm water separators for Tondiarpet ...	250	789	Do.
	Miscellaneous Works.			
22	New Sewage Farm, North of Tiruvottiyur and East of Ennore Road ...	2,000	1,494	Preparation of scheme is in progress.
23	Installation of a temporary pumping station at Buckingham Canal, South of Pycroft's Road ...	8,000	8,646	Completed.
24	Storm Water Drainage of North Triplicane ...	10,000	13,637	In progress.
	General Scheme.			
25	Drainage of Mylapore Area ...	18,000	7,754	Do.
26	Do. Ice House Road Area ...	50,000	31,252	Do.
27	Do. Edward Elliot's Road Area ...	500	...	
28	Do. Napier Park Area ...	75,000	70,863	Do.
29	Do. Graem's Road Area ...	1,000	...	
30	Do. Lang's Garden Area ...	1,000	...	
31	Do. Parasawakkam Area ...	65,000	1,21,238	Do.
32	Do. Law College Area ...	5,000	1,230	Do.
33	Do. Royapuram Area ...	1,00,000	31,357	Do.
	Carried over ...	5,09,850	2,60,146	

APPENDIX I.

STATEMENT II-A.—Details of Allotment for Expenditure on Public Works executed by the Special Works Department, and estimated to cost Rs. 100 or upwards.

Part I—New Works—(Continued).

No.	Particulars.	Revised Estimate Grant.	Expenditure during the year.	Remarks.
	Brought forward ...	Rs. 5,09,850	Rs. 4,50,148	
	GRANT I.—Public Works—(Contd.)			
	1. NEW WORKS—(Contd.)			
	(c) Drainage—Special—(contd.)			
	General Scheme—(Contd.)			
34	Allowance for Drainage of Tondiarpet, North Area ...	1,000	...	
35	Gravitation mains, intercepting sewers, &c. ...	70,600	44,435	In progress
36	Pumping mains, branch mains, &c. ...	1,000	...	
37	Alteration of house drainage in George Town ...	40,000	4,788	Do.
38	Alterations to house drainage wherever necessary, &c. ...	80,000	14,246	
	Various other items.			
39	Supplies and services (Home Charges) ...	3,000	7,394	
40	Miscellaneous such as Stationery, Tools and Plant, &c. ...	20,000	18,600	
41	Stores (Suspense account) ...	1,50,000	3,41,807	
42	Special Engineer's Office Latrine ...	...	Cr. 720	
	Realization by sales of stores ...	8,26,850	8,80,809	
	Total ...	Cr. 1,50,000	Cr. 2,23,797	
	(c) Drainage—Ordinary	6,76,850	5,87,612	
1	Construction of side drains and water-tables ...			
1	Constructing storm water drain in Shaik Maistri Street, Tondiarpet ...	1,500	1,706	In progress.
2	Constructing a storm water drain in East Madan Church Street near Kasimoda ...	400	308	Paid in full.
3	Constructing a masonry drain from Murugappa Mudali Street to Kandappa Mudali High Road, Purasawankam ...	240	238	Do.
4	Constructing a 6" drain in Raghava Chetti Street, Purasawankam ...	1,230	1,229	Do.
5	Constructing a 4" drain in the hospital plain, Purasawankam ...	880	879	Do.
6	Constructing a 6" masonry drain in Edward's lane, Kosapet ...	1,175	954	Do.
	Carried over ...	8,825	5,294	

APPENDIX I.

STATEMENT II-A.—Details of Allotment for Expenditure on Public Works estimated to cost Rs. 100 and upwards.

Part I—New Works—(Continued).

No.	Particulars.	Revised Estimate Grant.	Expenditure during the year.	REMARKS.
	Brought forward ...	Rs. 8,825	Rs. 5,294	
	GRANT I.—Public Works—(Contd.)			
	1. NEW WORKS—(Contd.)			
	(c) Drainage—Ordinary—(Contd.)			
7	Constructing masonry side drains and covering them with cut-stones in Ashtabujam Road ...	220	219	Paid in full.
8	Connecting drain from toddy shop to the sewer at De Mellow's Road, Chulal ...	100	90	Do.
9	Making 4" connection with the cistern and constructing silt catcher chambers at the end of Satanna Naick Street to the South ...	200	178	Completed.
10	Connecting drain to the sewer and constructing silt pit and fixing cast iron gratings in Tucker Street, Popham's Broadway ...	430	440	Do.
11	Constructing a silt pit in Anna Pillai Street, Georgetown ...	175	183	Do.
12	Constructing three silt pits in Tirupalli Street, Georgetown ...	520	407	Do.
13	Constructing silt pits in Wall Tax Road ...	325	188	Do.
14	Remodelling a Tipping depot in Langs Garden Road ...	180	104	Do.
15	Constructing masonry side drain in Begum Sahib Street in Suparigunta Paracheri ...	420	832	Paid in full.
16	Curbing and covering the existing masonry drain running through the property of late Mr. Buchi Babu Naidu ...	510	439	Completed.
17	Demolishing the old syphons and replacing the same at Sadayappa Mudali Street, Mylapore ...	475	549	Do.
18	Removing the existing broken pipes and relaying with 6" stoneware pipes in Arunachala Mudali Street, Mylapore ...	1,950	1,161	Do.
19	Constructing a 9" masonry drain in Dharma-raja Covil Street ...	265	265	Paid in full.
20	Constructing a drain in Arunachala Pandarav Street ...	430	431	Do.
21	Diverting foul water into the drain at Nurses quarters, Royapettah Hospital ...	120	119	Do.
22	Diverting the drain in Singanna Naick Street owing to the widening of the Street and carrying out house connections in the Street ...	810	810	Do.
23	Constructing a manhole in Adanja Mudali Street, Mylapore ...	180	181	Do.
24	Constructing manholes in Mandavalli Street, Mylapore ...	170	166	Do.
	Carried over ...	15,455	10,781	

APPENDIX I.

STATEMENT II-A.—Details of Allotment for Expenditure on Public Works estimated to cost Rs. 100 and upwards.

Part I.—New Works—(Continued).

No.	Particulars.	Revised Estimate Grant.	Expenditure during the year.	REMARKS.
	Brought forward ...	Rs. 15,455	Rs. 10,761	
	GRANT I.—Public Works—(Contd.)			
	1. New Works—(Contd.)			
	(c) Drainage—Ordinary—(Concl'd.)			
25	Constructing manholes in Brodies Road, Singara Naicken Street, Mudurama Mudali Street, Selva Vinayagar Coil Street, and Paripurana Vinayagar Coil Street, Mylapore ...	345	344	Paid in full.
26	Constructing a 4" masonry side drain in Raghava Chetti Street (Eastern half), 11th Division ...	...	...	
III	Petty works ...	600	539	{ Sanctioned by S. C. on 29-10-12. { Completed. Met from Savings.
	Total ...	16,400	12,361	Excess met from savings for mkt works carried out.
	(d) Water supply—Special.			
	Main Works.			
1	Completing the outlet tower at Red Hills and Bridge ...	...	8	Completed.
2	Settling basin and valve house ...	2,000	2,193	Do.
3	Conduit 7 miles long from settling basin to filter beds ...	300	272	Do.
4	Filter beds ...	50,000	49,325	Do.
5	Filtered water reservoir ...	200	125	Do.
6	Engine and Boiler House and Engine foundations, pump, well and chimney ...	10,000	8,180	Do.
7	Engines, pumps and boilers ...	10,000	10,000	Do.
8	Elevated tank (1) Steel tank (2) Masonry substructure ...	10,000	9,787	Do.
9	Other Works—Subsidiary buildings ...	1,000	336	Do.
10	Pumping main ...	2,500	2,528	Do.
11	Land-fencing round filter beds, &c. ...	8,000	7,235	Nearly completed.
12	Connection between delivery channel and filter beds ...	...	...	Completed.
13	Seven additional filter beds and an additional pure water tank ...	5,000	2,439	
	Distribution Works.			
14	Pipes, specials, valves, meters, including laying ...	3,00,000	2,66,488	In progress.
15	Masonry works connected with Distribution works ...	...	...	
16	Connections to existing and new system at Kalpauk Shaft ...	...	2,757	Completed.
	Carried over ...	8,92,000	3,61,678	

APPENDIX I.

STATEMENT II-A.—Details of Allotment for Expenditure on Public Works estimated to cost Rs. 100 and upwards.

Part I.—New Works—(Continued).

No.	Particulars.	Revised Estimate Grant.	Expenditure during the year.	REMARKS.
	Brought forward ...	Rs. 3,95,000	Rs. 3,61,678	
	GRANT I.—Public Works—(contd.)			
	1. New Works—(contd.)			
	(d) Water supply—Special—(Concl'd.)			
	Distribution Works—(Concl'd.)			
17	Contingencies ...	10,000	8,246	
18	Water connection Works ...	5,620	...	
19	Supplies and Services (Home charges) ...	5,000	5,693	
20	Miscellaneous such as tools and plant, etc. ...	10,000	5,330	
21	Stores (Suspense account) ...	50,000	93,855	
	Realization by sales of stores ...	4,79,620	4,69,803	
	Total ...	Cr. 50,000	Cr. 46,371	
	(d) Water-Supply (Ordinary.)			
1	Purchasing and fixing meters :—			
1	Fixing one 8" crown meter at Workshop ...	700	690	Paid in full.
2	Manufacturing 12 meter doors wrought iron 2½ x 2' for Water Works Overseer, 16th and 17th Divisions ...	310	252	Do.
3	Fixing 1½" meter to the 8" service connection at the east gate of the Medical College, General Hospital Road ...	260	260	Do.
4	Fixing 1" meter to premises No. 34, Muker-Nallamuthu Chetti Street (hotel) ...	120	66	Do.
5	Fixing 1" meter to premises No. 42, Mannadi Street (hotel) ...	120	71	Do.
6	Purchasing spare Meters for the use of Water Works Overseer, 6th and 7th Divisions ...	110	108	Do.
7	Fixing 1½" meter (Tylor and Sons) for Harris School, Peters Road ...	140	76	Do.
8	Fixing one 1½" and one 1¼" meter to the Dhobykhana at Chetput ...	280	183	Do.
9	Fixing one 1" meter to Wesley Girls' School at Peters Road ...	110	102	Do.
10	Fixing 1" meter to premises No. 192, Broadway (Madras Laundry) ...	120	84	Do.
11	Fixing 1" meter to premises No. 138, Broadway (Georgetown Laundry) ...	120	88	Do.
12	Fixing 1½" meter to premises No. 3, in General Collin's Road ...	150	119	Do.
13	Fixing 1½" meter to the chunam grinding enclosure of Buckingham Mills, Stephenson's Road ...	130	114	Do.
	Carried over ...	2,670	2,213	

APPENDIX I.

STATEMENT II-A.—Details of Allotment for Expenditure on Public Works estimated to cost Rs. 100 and upwards.

Part I—New Works—(Continued).

No.	Particulars.	Revised Estimate Grant.	Expenditure during the year.	REMARKS.
	Brought forward ...	Rs. 2,870	Rs. 2,313	
	GRANT I.—Public Works—(Contd.)			
	I. NEW WORKS—(Contd.)			
	(d) Water-Supply (Ordinary) (Contd.)			
14	Fixing 1" meter to the hotel premises in No. 25, Pycroft's Road ...	105	72	Paid in full.
15	Fixing a 1" meter to the premises No. 20 in Mount Road ...	105	79	Completed
16	Fixing 1" meter to the premises No. 78, Viraraghava Mudaly Street, Triplicane ...	105	33	Do.
17	Fixing 1" meter to the Carnatic Mill School in Ganit Road, 10th Division ...	100	10	Do.
18	Fixing 1" meter to the cattle market No. 89, Puliaatope Road, 10th Division ...	100	26	Do.
19	Fixing 1" meter to premises No. 37, in De-Mellow's Road, 10th Division ...	100	25	Do.
20	Fixing 1" meter to the Model School in Triplicane High Road ...	115	77	Do.
21	Fixing meters—Petty works ...	5,600	6,128	Excess met from savings.
(a)	Fixing 1" meter to premises No. 1/185, Mount Road ...	...	7	Completed. Met from savings. Ing Committee 29-10-15.
(b)	Fixing 1" meter after connecting four connections into one in European Convent, Rosary Church Road ...	...	202	Standing Committee 12-11-15.
11	Purchasing and fixing hydrants ...	...	...	Completed. Met from savings.
III	Petty works:—	500	153	...
1	Extending the existing 4" main at the eastern end of Subbaraya Mudali Street for laying 4" C. I. pipes and connecting with the existing 2" main in front of motor fire engine shed at Pudupet ...	210	178	Paid in full.
2	Cleaning 275 feet of 2" pipe in Murugappa Mudali Street ...	120	119	Do.
3	Cleaning 840 feet of 2½" C. I. pipe in Audiappa Mudali Street to the junction of Pathala Ponniammen Coil Street from the 8" main in Venaitteerba Mudaly Street, Purasawakam ...	190	63	Estimate to be cancelled as S. V. is laying 1" main.
4	Cleaning 910 feet of 2" C. I. pipe in Saravana Perumall Mudali Street from Ramasami Pillai Street to the junction of Audiappa Mudali Street, Purasawakam ...	200	120	Completed.
5	Taking connection from the 2" main in Polu Naicken Street and laying 324 feet of 2" pipe for supplying water to the new latrine in the above street ...	240	229	Paid in full.
	Carried over ...	10,490	9,736	

APPENDIX I.

STATEMENT II-A.—Details of Allotment for Expenditure on Public Works estimated to cost Rs. 100 and upwards.

Part I—New Works—(Continued).

No.	Particulars.	Revised Estimate Grant.	Expenditure during the year.	REMARKS.
	Brought forward ...	Rs. 10,490	Rs. 9,736	
	GRANT I.—Public Works (contd.)			
	I.—NEW WORKS (contd.)			
	(d) Water-Supply (Ordinary) (contd.)			
6	Cleaning 640 feet of 3 inch and 750 feet of 2½" pipe in Jani Patcha and Hussain Mulk Streets ...	330	240	Completed.
7	Laying 3 inch pipe from 4 inch main in Kishbada Street and fixing a fountain in the middle of the 3rd street ...	300	287	Paid in full.
8	Laying 400 feet of 1½ inch pipe and fixing a fountain in Harbers' Bridge 1st Lane ...	180	164	Do.
9	Fixing a fountain in Mylapore Bazaar Lane ...	125	118	Do.
10	Cleaning 1000 feet of 3 inch, 2½" and 3" pipes in Mandavalli Street, Mylapore ...	270	208	Completed.
11	Cleaning 2" pipe in Periana Mudali Street between Annikarakonam Street and Barracks Street ...	120	109	Paid in full.
12	Cleaning the pipes in Venkatarangam Pillai Street, Candappa Mudali Street and Murugappa Mudali Street ...	290	127	Completed.
13	Cleaning 885 feet of 2" C. I. pipe in Ari-mutha Mudali Street, Chulal, from the junction of Vathiar Kanda Pillai Street up to Vethanachala Mudali Street ...	175	108	Paid in full.
14	Cleaning 2½" pipe in South Madah Street from Thangur Selva Vinayagar Covil Street to Goodies Road ...	210	72	Estimate cancelled.
15	Cleaning 700 feet of 2" C. I. pipe in Perumall Mudali Street, Egmore, from the fountain in the middle of the street towards west ...	170	111	In progress.
16	Cleaning 500 feet of 2" C. I. pipe in Candappa Mudali Street from the junction of 1st Salt Street to Venkatachala Mudali Street ...	150	59	Estimate cancelled.
17	Cleaning 1400 feet of pipe in Paripurana Vinayagar Covil Street and Nattuvachi Mudaliar Street ...	260	211	Paid in full.
18	Cleaning pipe in Muthu Mudali Street and Varanathi Vinayagar Covil Street, Teynampet ...	230	259	Do.
19	Constructing a new cattle trough with water, pipe, etc., in Wall Tax Road adjoining jalka stand. ...	110	80	Completed.
20	Cleaning 2½" and 2" C. I. pipe to a distance of 600 feet in Pelathope Street, Mylapore ...	125	103	Paid in full.
21	Laying 550 feet of old pipes 2½" for dead end connection in Vadagoor Selva Vinayagar Covil Street ...	130	8	Completed.
22	Removing 310 feet of 2" rotten pipe and laying a new pipe in Graeme's Lane, 15th Division ...	240	228	Paid in full.
	Carried over ...	13,895	13,168	

APPENDIX I.

STATEMENT II-A.—Details of Allotment for Expenditure on Public Works estimated to cost Rs. 100 and upwards.

Part I—New Works—(Concluded).

No.	Particulars.	Revised Estimate Grant.	Expenditure during the year.	REMARKS.
	Brought forward	Rs. 13,695	Rs. 12,168	
	GRANT I.—Public Works (contd.) 1.—New Works (concl'd.) (d) Water-Supply (Ordinary) (concl'd.)			
23	Acquisition of land in R. S. Nos. 1099 and 1020 in Moneghar Choultry Road for laying a 9" water pipe and valve	520	514	Paid in full.
24	Petty works	1,835	1,405	
(a)	Extending 400 feet of 2" C. I. pipe and fixing a fountain in Alwarpet Pilliar Covel Street, 20th Division		81	Standing Committee, 10-12-15. Completed.
	Total	16,550	14,168	
	(e) Miscellaneous.			
1	Putting up a rail fence with M. S. M. rails above river bank on the north side of Anderson Road in Nungambakam	1,110	336	Completed.
2	Acquisition of land in R. S. No. 3758 of Pondiarpet required for a settlement of washermen in North Madras	10,324		Permission from Government to use the grant for construction of a di khana in Robinson Park, is awaited.
4	Compensation for the building and trees on the land in R. S. No. 999 of Mylapore alienated in favour of the Corporation for improving the road at the junction of Barbers' Bridge Road and Canalewarer Pagoda Street	500	600	Paid in full.
5	Acquisition of land in R. S. No. 3,151 of Parasawakam for a pathway for the carts to approach the Kilpauk shaft for earthing pipes, etc.	160		Acquisition taken on hand.
6	Excess compensation awarded by Court in the case of the acquisition of land in R. S. No. 1054 of Vengalpet to connect Vengalpet Road with Kowmy Road Street, Chintal	410	400	Paid in full.
7	Acquisition of land and structures in R. S. No. 1152 of Egmore in Harris Road for the construction of a cart stand	4,200	1,930	Do.
8	Pay of the Special Deputy Collector for the acquisition of land and his staff	2,870	3,210	
9	Putting up a tennis court for the employees of the Corporation	500	294	In progress.
10	Raking out the ground and filling in sand at the proposed park in Meddunark Street.	520	645	Completed.
21	Petty works	400		
(a)	Making drainage and water connections for the model houses at the Industrial Exhibition, People's Park		521	Completed. Met from—Petty work.
(b)	Debit adjustment owing to the site of the filled up tank in Egmore having been taken over by the Corporation from the owners of the tank in lieu of the cost of filling up the same		5,000	Met from savings.
	Total	29,894	13,655	

APPENDIX I.

STATEMENT II-A.—Details of Allotment for Expenditure on Public Works estimated to cost Rs. 100 and upwards.

Part II—Repairs.

No.	Particulars.	Revised Estimate Grant.	Expenditure during the year.	REMARKS.
	GRANT I.—Public Works—(Contd.) II REPAIRS.	Rs.	Rs.	
	(a) Communications.			
1	Remotalling of Roads	2,50,000	2,77,680	Excess met from savings under new works communications.
2	Labour for rolling	9,000	6,987	
3	Fuel, oil, sundries, repairs &c for road rollers	18,000	14,763	
4	Repairs, materials	40,000	44,357	Excess to be met from general savings from the closing balance.
5	Repairs to culverts and foot paths			
(a)	Extending the culvert at the junction of Kelley's Road and Parasawakam High Road, for widening the road	215	215	Paid in full.
(b)	Constructing side walls, &c. to storm water drains &c., in the portion acquired at the junction of Mowbray's Road and Oliver's Road with covering stone	2,200	1,816	Do.
(c)	Constructing platform for hackney carriage stand at the junction of Wall Tax Road and General Hospital Road	1,970	1,555	Completed.
(d)	Enlarging the culverts and constructing retaining wall opposite the Volunteer Guards Quarters, Poonamallee High Road	3,680	2,242	Do.
(e)	Repairing the culverts in 19th and 20th Divisions by replacing the broken granite stones	220		Not begun as granite stones are not available at present.
(f)	Repairs to culverts in Cochrane Basin Road.	165		Completed.
(g)	Widening the culvert No. 2 in DeMellow's Road with old rail tracks in the 10th Division	700		In progress.
(h)	Constructing a foot-path along Mount Road from Wood's Road up to Nailer's	5,200	5,103	Completed.
(i)	Providing barbed wire fencing to a length of 480 feet by the side of the storm water drain in Iyasawmy Pillai Street	140		Work abandoned.
(j)	Widening culvert No. 1 by 4 ft. on the Northern side of DeMellow's Road	370	370	Paid in full.
(k)	Removing the parapet wall in front of model school at Arunachala Nalck Road and covering the drain with granite slabs	570	572	Do.
(l)	Extending the culvert at the junction of Pantheon Road and Commander-in-Chief's Road	325	325	Do.
(m)	Repairs to culverts and drains in Audiappa Mudali Street, Monegar Choultry Road	825	825	Do.
(n)	Dismantling and reconstructing the culvert in Anderson Road at the junction of Munn's Road, Nungambakam	430	430	Do.
(o)	Petty works	1,120	1,172	
	Carried over	3,36,150	3,58,402	

APPENDIX I.

STATEMENT II-A.—Details of Allotment for Expenditure on Public Works estimated to cost Rs. 100 and upwards.

Part II.—Repairs—(Continued).

No.	Particulars.	Revised Estimate Grant.	Expenditure during the year.	REMARKS.
	Brought forward ...	Rs. 3,25,130	Rs. 3,25,403	
	GRANT I.—Public Works—(Contd.).			
	II. REPAIRS—(Contd.).			
	(a) Communications—(Contd.).			
(f)	Doing connection of drain and constructing a chamber at the end of hackney carriage stand and urinal newly constructed at Wall Tax Road ...	...	...	Standing Committee 17-5-16. The work is in progress in 16-17. To be met from savings of item 6 (c).
6	Repairs to bridges—Canal bridges ...	...	...	
(a)	Painting Napier Bridge by Messrs. Wilson & Co. ...	1,865	1,865	Paid in full.
(b)	Repairing the broken bays of wooden railings of the Government House Bridge in Mount Road ...	160	60	Do.
(c)	Repairing the 9th and 10th bays of the eastern side railing of Government House Bridge in Mount Road ...	185	141	Do.
(d)	Painting the wooden railings of the Government House Bridge in Mount Road ...	350	350	Do.
(e)	Repairing the four broken bays of the teak-wood railings of the Government House Bridge in Mount Road ...	685	683	Do.
(f)	Repairing the bridge at Sunkwar Street across Buckingham Canal ...	300	188	Do.
(g)	Removing the old wooden bridge and laying concrete with iron hand railings over the drain at the east end of Pycrofts Road near Buckingham Canal ...	300	199	Do.
(h)	Petty works ...	1,405	586	...
(i)	Repairs to Poonthottam and Soolai Cathai Bridges in Mylapore ...	...	...	Corporation 16-11-15. Completed. To be met from general savings from the closing balance. Includes value of stock on hand.
7	Tarring roads ...	15,000	22,121	
8	Petty works ...	...	...	
(a)	Repairing the existing wire fencing in Popham's Esplanade and Fraser Bridge Road ...	120	106	Paid in full.
(b)	Repairing the wire fencing in Benfield Road to a distance of 600 feet ...	150	84	Completed.
(c)	Providing wrought iron pipe fencing with C. I. verticals for Cupid's Bow Garden ...	290	291	Paid in full.
(d)	Laying pipe fencing all round the open land in Leonard Street ...	110	...	Completed.
(e)	Shifting 10 electric tramway poles and one telephone pole in North Beach Road near Clive's Battery ...	1,445	1,446	Paid in full.
	Carried over ...	3,57,245	3,86,443	

APPENDIX I.

STATEMENT II-A.—Details of Allotment for Expenditure on Public Works estimated to cost Rs. 100 and upwards.

Part II.—Repairs—(Continued).

No.	Particulars.	Revised Estimate Grant.	Expenditure during the year.	REMARKS.
	Brought forward ...	Rs. 3,57,245	Rs. 3,86,443	
	GRANT I.—Public Works (Contd.).			
	II. REPAIRS—(Contd.).			
	(a) Communications—(Contd.).			
(f)	Shifting the feeder Pillar No. 5 from the junction of the general Hospital Road and Wall Tax Road to Wall Tax Road near the newly shifted cart stand ...	1,440	1,439	Paid in full.
(g)	Shifting the M. E. S. C. and M. E. T. Co.'s posts at the junction of Blacker's Road and Dam's Road to the side of the road on account of the corner rounded off ...	260	310	Paid in full. Excess sanctioned by S. C. on 7-1-16.
(h)	Painting the pipe railing and "T" iron verticals in Graemes Road ...	115	113	Paid in full.
(i)	Petty Works ...	1,780	1,151	...
(j)	Shifting two electric lamp posts at Parry's Corner, 4th Division ...	...	197	Standing Committee 7-1-16. Paid in full. Met from savings.
	Total ...	3,60,840	3,89,658	
	(b) Buildings.			
1	Repairs and improvements to Municipal buildings including petty works:—			
1	Repairing the water cistern in "C" bullock depot ...	620	...	Completed.
2	Repairs to "C" Depot ...	285	281	Paid in full.
3	Repairs to the conservancy overseer's office and stores at "F" Depot ...	110	84	Do.
4	Repairs to "G" depot, store room and water trough ...	425	...	Completed.
5	Repairs to "H" bullock depot ...	1,800	93	In progress.
6	Repairs to drivers' lines in "H" depot ...	430	...	Completed.
7	Repairing the central gram depot ...	350	296	Paid in full.
8	Flooring the front verandah and fixing curb stone in central gram depot ...	130	120	Do.
9	Making improvements to gram shed conservancy depot, Chulai ...	695	695	Do.
10	Repairing the 144 houses and bazaars in the model paracherri at Cemetery Road ...	1,710	1,707	Do.
11	Repairs to Muhammadan model dwellings in Salai Vinayagar Covil Street ...	380	244	Do.
12	Repairing the Chetties' waiting shed in Washermenpet burial and burning ground ...	930	930	Do.
13	Repairs to the shed at Krishnampet burial and burning ground ...	450	...	Completed.
	Carried over ...	7,815	4,480	

APPENDIX I.

STATEMENT II-A.—Details of Allotment for Expenditure on Public Works estimated to cost Rs. 100 and upwards.

Part II.—Repairs—(Continued).

No.	Particulars.	Revised Estimate Grant.	Expenditure during the year.	REMARKS.
	Brought forward ...	Rs. 7,815	Rs. 4,450	
	GRANT I.—Public Works (Contd.)			
	II. REPAIRS—(Contd.)			
	(b) Buildings—(Contd.)			
14	Repairing the two incinerators in Swami Reddi Paracherri, Egmore ...	170	171	Paid in full.
15	Manufacturing 6 W. 1. Meter doors 2½' x 2½' inside, for Water Works Overseer 1st to 3rd divisions ...	150	184	Do.
16	Widening the existing gateway of the open ground adjoining the overseer's stores, 12th and 13th divisions, near Harris Bridge.	180	...	Work abandoned.
17	Repairing the licensing clerk's quarters at Ennore ...	450	...	In progress.
18	Repairs to the overseer's office in grass farm ...	180	...	Completed.
19	Improvements to the slaughter-house superintendent's quarters (Hope Lodge) ...	1,000	89	In progress.
20	Repairing the out-houses in Hope Lodge ...	170	...	Completed.
21	Repairing the slaughter-houses in the 10th Division ...	160	179	Paid in full.
22	Laying 2" galvanized pipes and fixing fittings and valves inside the sheep slaughter-house for cleaning platforms ...	235	214	In progress.
23	Excavating and removing pipe in DeCosta Road junction up to inside of Sheep slaughter-house ...	100	...	Completed.
24	Repairs to the Lying-in-Hospital, Monegar Choultry and Georgetown Dispensary ...	3,555	...	In progress.
25	Repairing the electric installation in Rajah Sri Ramaswami Madaliar's Lying-in-Hospital ...	110	110	Paid in full.
26	Repairing the rooms and out-houses in the remaining portion of the cholera hospital and barracks ...	516	514	Do.
27	Providing a wooden ceiling to the operation room in the Bauliah Naidu Dispensary in Rutler's Lane ...	320	...	In progress.
28	Alterations for fixing the "X" ray apparatus at the Royapettah Hospital ...	140	119	Paid in full.
29	Diverting the drains from the Royapettah Hospital, including raising, curbing, etc. ...	260	260	Do.
30	Repairs to Isolation Hospital, Krishnampet...	450	...	Completed.
31	Constructing curbs, storm water separator and connecting the sewer of the Krishnampet Isolation Hospital with the sewer in Pillaiyar Kovil Street ...	965	954	Paid in full.
	Carried over ...	16,865	7,174	

APPENDIX I.

STATEMENT II-A.—Details of Allotment for Expenditure on Public Works estimated to cost Rs. 100 and upwards.

Part II.—Repairs—(Continued).

No.	Particulars.	Revised Estimate Grant.	Expenditure during the year.	REMARKS.
	Brought forward ...	Rs. 16,865	Rs. 7,174	
	GRANT I.—Public Works—(Contd.)			
	II. REPAIRS—(Contd.)			
	(b) Buildings—(Contd.)			
32	Repairs to the latrines in drivers' lines near "C" depot ...	180	...	Completed.
33	Repairing the latrine in Wall Tax Road Paracherri ...	180	179	Paid in full.
34	Repairing the latrine in Sundaram Pillai Lane ...	495	493	Do.
35	Repairing the latrine in Pole Naicken Street, Perambur ...	130	119	Do.
36	Repairing the male and female latrine in Mottakuppam ...	170	169	Do.
37	Repairing the male and female latrine in Hanumantharayan Covil Street ...	125	122	Do.
38	Repairs to Parthasarathi Petta latrine in Tey-nampet ...	135	132	Do.
39	Repairs to the store room attached to the Corporation Workshop and Stores ...	1,900	1,841	Do.
40	Shifting the topmost corrugated iron sheet of the roof 5" upwards, ridge corrugated iron sheet 6" downwards and fixing 1½" expanded metal ventilator at both sides of store shed, Corporation of Madras ...	335	309	Do.
41	Repairs to the peons' quarters in the Robinson Park ...	380	...	In progress.
42	Repairing the eastern wing of the store shed in the Napier Park ...	380	340	Paid in full.
43	Repairs to tigers' cages in the menagerie enclosure, People's Park ...	130	128	Do.
44	Repairs to the Mangalore-tiled roofing in the Moore Market ...	300	...	Completed.
45	Supplying 32 demi-watt lamps 400 C. P. 230 volts for the use of the Moore Market for replacing the old bulbs ...	435	432	Paid in full.
46	Repairs to the Superintendent's quarters at the Moore Market ...	400	...	Completed.
47	Repairing and carrying out of certain improvements to the Evening Bazaar at the Moore Market ...	475	8	Do.
48	Cleaning 350 feet of 2½" C. I. pipe leading to the latrine attached to the Moore Market.	130	47	Do.
49	Painting the staircase in the Evening Bazaar.	120	120	Paid in full.
50	Repairing the European water closet at the Moore Market and fixing sanitary fittings ...	180	129	Do.
	Carried over ...	23,335	11,732	

APPENDIX I.

STATEMENT II-A.—Details of Allotment for Expenditure on Public Works estimate to cost Rs. 100 and upwards.

Part II—Repairs—(Continued).

No.	Particulars.	Revised Estimate Grant.	Expenditure during the year.	REMARKS
	Brought forward ...	Rs. 59,336	Rs. 11,732	
	GRANT I—Public Works (contd.)			
	II. REPAIRS (contd.)			
	(b) Buildings—(Contd.)			
51	Removing the existing Cuddapah slabs stalls and putting up side railing in the northern outer verandah of the Moore Market to accommodate iron mongers ...	525	524	Paid in full.
52	Securing the wrought-iron gates in the Moore Market ...	100	85	Do.
53	Putting up brick-nogged partitions between the restaurants over the New Evening Bazaar ...	586	582	Do.
54	Supplying and fixing one ceiling fan for the northern half of the room occupied by the Profession Tax Section of the Revenue Department, Ripon Buildings ...	100	101	Do.
55	Fixing an alarm bell, &c., in the strong room of the Ripon Buildings ...	1,000	665	Completed.
56	Providing a false window at the north-east corner of the Ripon Buildings ...	100	94	Paid in full.
57	Supplying and fixing 2 fans in the Revenue Department, Ripon Buildings ...	150	128	Do.
58	Constructing a drain by the side of the tiffin shed at the Ripon Buildings ...	390	324	Do.
59	Supplying and fixing one fan and light point and also for shifting one fan and one light in the record room, Ripon Buildings ...	125	124	Do.
60	Manufacturing 4 teak bicycle stands for the Ripon Buildings ...	110	110	Do.
61	Alterations to motor pump rooms in the Ripon Buildings, People's Park ...	195	194	Do.
62	Repairs to houses 11 and 13 in Subraya Mudali Street, Pudupet, for accommodating the Indian drivers and the cleaners of the motor fire engine ...	350		Completed.
63	Constructing a temporary shed at motor fire engine shed ...	225	207	Paid in full.
64	Connecting the drain from the latrine of motor fire station, Pudupet, to sewer and constructing a manhole in Subbaraya Mudali Street, Pudupet ...	155	135	Do.
65	Blackening the upper surface of the desks and low tables and drawing graph lines 1" square in yellow or white and every tenth line in red for the schools at Goyalope, Nungambakam, Thousand Lights and Korukupet ...	420		Work transferred to Grant II—E
66	Providing sunshades and screens for the training class in the model school at Malayappan Street ...	375	329	Paid in full.
	Carried over ...	28,140	15,234	

APPENDIX I.

STATEMENT II-A.—Details of Allotment for Expenditure on Public Works estimated to cost Rs. 100 and upwards.

Part II—Repairs—(Continued).

No.	Particulars.	Revised Estimate Grant.	Expenditure during the year.	REMARKS
	Brought forward ...	Rs. 28,140	Rs. 15,234	
	GRANT I—Public Works (contd.)			
	II. REPAIRS (contd.)			
	(b) Buildings—(Contd.)			
67	Providing expanded metal screen, door, and sunshade for the training class attached to the model school in Mandavalli Street ...	350	...	Completed.
68	Do in Goyalope, Egmore ...	350	308	Paid in full.
69	Do in Vakkalkaren Street, Purasawakam ...	350	303	Do.
70	Do in Aziz-mulk Street, Thousand Lights ...	350	316	Do.
71	Gravelling inside the compound in the Model School at Rama Naick Street, Nungambakam ...	125	82	Do.
72	Repairing the small bungalow at Red Hills ...	500	342	Do.
73	Repairing, colour-washing, painting and varnishing the furniture, &c., at the Red Hills Bungalow ...	320	280	Paid in full.
74	Repairs to the Corporation bazaar attached to the cart-land in Elephant Gate Road ...	475	...	Not begun.
75	Repairing the north-eastern corner of the zinc sheet roof at the Krishnampet Incinerator ...	150	192	Paid in full.
76	Repairs to Krishnampet Incinerator ...	1,500	62	Completed.
77	Petty works ...	4,390	4,860	Some minor works were done from the general savings of other works.
78	Repairs to latrine at the south end of Thoppai Mudali Street ...	...	...	Standing Committee, 29-10-15. In progress. To be met from savings.
79	Painting white and colour-washing wood work of roofing of Nurses' Quarters in the Lying-in-Hospital in Moneghar Choultry Road ...	...	238	Standing Committee, 26-11-15. Paid in full. Met from savings.
80	Preventive repairs to the "F" Depot at Krishnampet ...	...	...	Sanctioned by S. C. on 11-2-16. Not begun.
II	Labour ...	5,060	4,715	
III	Repairs to pumping stations ...	1,500	685	
	Total ...	43,560	27,612	
	(c) Drainage—Ordinary.			
I	Repairs to Masonry drains :—			
1	Repairing the damaged side drain walls, cement plastering and covering the same with granite stones in front of house Nos. 1/1, 1/2, and 3/2, Iyah Mudali Street, Chintadripet ...	655	654	Paid in full.
2	Repairing the side drain in Candappa Mudali Street, 8th Division ...	195	195	Do.
	Carried over ...	850	849	

APPENDIX I.

STATEMENT II-A—Details of Allotment for Expenditure on Public Works estimated to cost Rs. 100 and upwards.

Part II.—Repairs—(Continued)

No.	Particulars.	Revised Estimate Grant.	Expenditure during the year.	REMARKS.
	Brought forward	Rs. 850	Rs. 849	
	GRANT I.—Public Works (Contd.)			
	II. REPAIRS (Contd.)			
	(a) Drainage (Ordinary) (Contd.)			
3	Repairing the drain in Nelenkara Veeva Madali Street, Mount Road	220	147	Paid in full.
4	Manufacturing C.I. Cesspool covers 1' 6" x 3' 8", C.I. cesspool covers 1' 6" x 3' for B.O. 1-3 Divisions	115	101	Do.
5	Repairs to drains, pipes, &c. in the Moore Market	150	...	Completed.
6	Covering the side drain in Bell's Road with Cuddapah slabs 2" thick from house Nos. 16 to 25	100	85	Paid in full.
7	Repairs to the drains in Ramanuja Iyer Street	170	...	Completed.
8	Raising and covering the drain in Chinna Reddi Street, Egmore	100	89	Paid in full.
9	Repairs to the drain in Venkatachala Naick Street, Royapuram	150	...	Completed.
10	Repairing the side drain in Ponnappa Madali Lane, 10th Division	700	98	Paid in full.
11	Repairing the side drain in Wall Tax Road near Elephant Gate Police Station	100	81	Paid in full.
12	Constructing a manhole in Sengalaner Pilliar Coil Street	250	124	Completed.
13	Raising and providing cast-iron "A" pattern door to the manhole in Ice House Road	100	53	Paid in full.
14	Connecting drain with the sewer and constructing manhole for drivers' quarters, Pudupet	115	26	Do.
15	Raising and providing cast-iron "A" pattern door to the manhole in Ramasamy Maistri Street	100	48	Do.
16	Connecting house drain to the main sewer of Cosmopolitan Club and constructing a manhole in Mount Road	310	298	Do.
17	Constructing manholes in Owlian Sahib Street and Lane, Triplicane	160	142	Do.
18	Repairs to drainage works inside the premises of Messrs. Simpson & Co., Mount Road	550	104	In progress.
19	Linking dead ends between South Madah Street head manhole to West Madah Street manhole No. 20, Mylapore	170	150	Paid in full.
20	Raising manholes near Mundakanniamman Covil Street, Mylapore	200	122	Completed.
	Carried over	3,990	2,587	

52

APPENDIX I.

STATEMENT II-A—Details of Allotment for Expenditure on Public Works estimated to cost Rs. 100 and upwards.

Part II.—Repairs—(Continued).

No.	Particulars.	Revised Estimate Grant.	Expenditure during the year.	REMARKS.
	Brought forward	Rs. 3,990	Rs. 2,587	
	GRANT I.—Public Works (Contd.)			
	II. REPAIRS—(Contd.)			
	(a) Drainage (Ordinary) (Contd.)			
21	Removing 4" ventilator pipe and constructing silt pit behind the premises of Messrs. Whiteway, Laidlaw & Co., Mount Road	140	132	Paid in full.
22	Draining off the storm water in North Beach Road opposite to Royapuram goods shed	830	882	Do.
23	Removing wrought iron gratings and replacing the cast iron gratings with light covers of Oates in Thayar Saib Street, Triplicane	160	152	Do.
24	Constructing storm water separator in Ganga-defeswarer Coil Street, Putasawaukham.	175	94	Completed.
25	Extending the sewer in Singanna Chetti Street, including house connections and connecting masonry drains in Sunkumar Agraharam Street with the sewer	1,210	757	Do.
26	Removing and relaying 6" stoneware pipe in Meer Bakshi Ali Street	965	897	Do.
27	Constructing storm water separator and silt pit at Alanthur Subbaraya Achari Street	275	257	Paid in full.
28	Constructing storm water separator and silt pit in Audiappa Naick Street, Chulai	275	158	Completed.
29	Constructing storm water separator and silt pit in Arimuthu Maistri Street, Chulai	275	199	Completed.
30	Constructing storm water separators at Avadi Srinivasa Iyer Street, Chulai	140	152	Paid in full.
31	Constructing Chambers &c. in Arimuthu Maistri Street, Chulai	125	98	Do.
32	Constructing drain from Avadi Srinivasa Iyer Street to DeMellow's Road Manhole, Chulai	1,265	817	Completed.
33	Connecting drain from Strabam's Road to Angalammen Kovil Street, Chulai	405	444	Paid in full.
34	Examining and repairing the overflow drain in Ramanen Street	620	620	Do.
35	Raising the Manholes and reconstructing the same to the road level in Mundakanni Amman Koil Street, Mylapore	122	122	Do.
36	Raising the Manholes and reconstructing the same to the road level in Munuakanni Amman Koil Garden, Mylapore	193	192	Do.
37	Constructing silt pit and blocking up the overflow at Wall Tax Road junction of Ramanen Street near Salt Depot	195	55	Completed.
38	Covering the side drain in Bell's Road with Cuddapah Slabs 2 inch thick from Thiruvatteswarenpettah Road junction of Wallajah Road	210	211	Paid in full.
	Carried over	11,060	7,756	

APPENDIX I.

STATEMENT II-A—Details of Allotment for Expenditure on Public Works estimated to cost Rs. 100 and upwards.

Part II.—Repairs—(Concluded).

No.	Particulars.	Revised Estimate Grant.	Expenditure during the year.	REMARKS.
	Brought forward ...	Rs. 11,060	Rs. 7,716	
	GRANT I.—Public Works (Concl'd.)			
	II. REPAIRS—(Concl'd.)			
	(a) Drainage (Ordinary.) (Concl'd.)			
39	Extending a drain from Macdonald house to Begum Saib Street in Graeme's Road ...	210	208	Paid in full.
40	Repairing the side drains in 11th Division ...	170	...	In progress.
41	Repairing the masonry under ground drain in Karpura Mudali Street, Periamet ...	483	483	Paid in full.
42	Repairing the storm water drain at Male Asylum Road, 13th Division ...	...	...	Standing Committee 29-10-16. Completed. To be met from general savings.
43	Repairing the overflow drain in the premises of Messrs. Simpson & Co., Mount Road ...	...	...	Standing Committee 25-8-16. In progress.
44	Supplying and fixing best iron light covers to the Municipal drain inside the Ordnance Lines, 9th Division ...	...	...	Standing Committee 22-1-16. Not begun for want of light covers. To be met from savings.
II	Petty Works ...	7,000	7,060	
III	Sewer, Main drain etc., cleaning ...	36,360	36,428	
IV	House Drainage ...	2,690	2,891	
V	Tondiarpet Drainage ...	2,200	1,639	
VI	Pumping Stations ...	1,45,070	1,44,697	
VII	Hire of coolies ...	55,900	49,970	
VIII	Maintenance of bullocks ...	87,180	81,928	
IX	" carts ...	7,200	10,277	Increase due to repairs to lorries having been debited to this head.
	Total ...	4,55,790	3,52,757	
	(a) Water-Supply (Ordinary).			
1	Repairing fountains.			
1.	Labour ...	15,900	15,250	
2.	Repairs, Materials ...	15,000	10,568	
2	Repairing pipes ...	12,000	11,454	
3	Repairs to Meters, including replacing old ones and fixing new meters ...	5,000	5,047	
4	Red Hills Lake Staff ...	1,860	2,218	Excess met from Item # (1).
5	Filter Beds and conduit ...	2,970	2,127	
6	Maintenance of temporary electric pumping schemes ...	500	494	
7	Pumping Station, Kilpauk ...	69,390	81,881	
8	Repairs to delivery channel ...	2,950	2,714	
1.	Labour ...	1,000	816	
2.	Repairs, Materials... ...	1,950	1,898	
	Total ...	1,26,570	1,32,716	
	(c) Miscellaneous.			
1	Petty Works ...	1,050	878	

APPENDIX I.

STATEMENT IV-A - Demand, Collection and Balance Statement of Taxes, &c., for the year 1915-16 (Current).

STATEMENT IV-A - Demand

Description of taxes, &c.	Gross Demand.		Remitted on appeal.	Net Demand (Column 2 minus Column 3).		Collection.		Remission.		Balance.		
	Ra.	A. P.		Ra.	A. P.	For the year 1915-16.	Taxes prepaid in advance for 1916-17.	For vacancy, &c.	Written off.	Column 4 minus Columns 5, 7 and 8.	Percentage of net Demand.	
1	2	3	4	5	6	7	8	9	10	11	12	
1 Tax on Arts, &c.	(a) 1,71,615 0 0	12 8 0	(a) 1,71,602 8 0	(a) 10 0 0	1,70,272 0 0	5 0 0	99.22	...	...	1,390 8 0	0.79	
2 Tax on Buildings and Lands	(a) 2,859 15 7	183 12 5	(a) 2,223 3 2	(a) 2,223 3 2	2,223 3 2	3,755 0 5	10,543 8 2	469 9 7	26,987 6 7	...	...	
3 Tax on Lands	(a) 9,42,003 0 0	181 6 9	(a) 9,41,821 2 10	(a) 9,08,873 10 6	810 0 0	92 6 6	(d) 313 13 7	80 1 7	9 7 8	957 8 0	...	
4 Water and Drainage tax on Buildings and Lands	(a) 12,574 11 3	...	(a) 12,574 11 3	(a) 11,577 0 0	92 6 6	60 1 0	(d) 204 0 1	19 9 0	4 4 8	624 4 4	...	
5 Water and Drainage tax on lands	(a) 1,533 15 8	88 14 5	(a) 1,445 1 3	(a) 1,445 1 3	2,440 12 4	469 6 1	6,883 4 6	807 2 2	17,507 6 10	...	...	
6 Lighting tax on Buildings and Lands	(a) 6,11,815 0 0	117 14 9	(a) 6,11,197 2 1	(a) 5,86,529 4 7	240 0 1	18 8 4	(d) 204 0 1	1317 15 0	68 11 2	3,367 2 10	...	
7 Lighting tax on Lands	(a) 8,080 0 0	...	(a) 8,080 0 0	(a) 7,432 5 0	60 1 0	11 8 9	(d) 204 0 1	312 2 1	1 3 0	119 10 11	...	
8 Tax on Vehicles with springs	(b) 1,381 0 0	...	(b) 1,381 0 0	(b) 1,381 0 0	3,369 8 0	96.00	...	15 0 0	0.02	3,080 8 0	3.98	
9 Tax on Animals	(b) 34,929 12 0	...	(b) 34,929 12 0	(b) 33,403 14 0	1,523 0 0	95.76	...	9 0 0	0.08	1,514 14 0	4.21	
10 Tax on Carts and other Vehicles without springs	(b) 1,629 0 0	...	(b) 1,629 0 0	(b) 1,629 0 0	1,628 0 0	96.73	...	3 4 8	0.02	63 13 0	0.19	
11 Tolls on Vehicles and Animals entering Municipal limits	(c) 15,519 7 6	...	(c) 15,519 7 6	(c) 15,519 7 6	100.00	...	...	...	...	...	...	
12 Payment for occupation of Municipal Lands	5,332 12 6	...	5,332 12 6	5,285 6 6	96.16	...	...	...	...	97 6 0	1.84	
13 Rent of Lands and Buildings	37,264 0 1	...	37,264 0 1	35,369 5 6	94.91	...	...	...	...	1,844 10 10	5.06	
14 Sale proceeds of Lands	19,982 0 1	...	19,982 0 1	18,952 0 1	100.00	...	...	...	...	...	...	
15 Esplanade, &c., grazing rent	1,437 2 8	...	1,437 2 8	1,437 2 8	100.00	...	...	...	...	...	...	
16 Rent of Cart Stand	4,698 7 10	...	4,698 7 10	4,698 7 10	100.00	...	...	...	...	...	...	
17 Rent of Municipal wharf	1,600 0 0	...	1,600 0 0	1,600 0 0	100.00	...	...	...	...	...	...	

APPENDIX I.

18 People's Park	8,849 8 6	...	...	8,849 8 6	...	...	315 0 0	100.00	...	...	...
19 Napier Park	77 3 2	...	...	77 3 2	...	...	37 8 0	100.00	...	...	...
20 Robinson Park	292 12 0	...	...	292 12 0	...	...	...	100.00	...	...	...
21 Grass farms	(b) 316 2 9	...	...	(b) 316 2 9	...	...	221 4 1	99.75	...	90 8 5	0.25
22 Sale of rubbish	20,643 2 4	...	...	20,643 2 4	...	...	...	100.00	...	...	...
23 Private scavenging	8,533 15 6	...	...	8,533 15 6	...	...	...	100.00	...	...	...
24 Hospital receipts	645 0 6	...	...	645 0 6	...	...	...	100.00	...	...	...
25 Smithfield Market	3,668 14 10	...	...	3,668 14 10	...	...	...	100.00	...	...	...
26 Moote Market	83,643 7 6	...	...	83,643 7 6	...	...	...	100.00	...	...	...
27 Income from slaughterhouses and slaughter of animal for food	70,174 3 10	...	...	70,174 3 10	...	...	...	100.00	...	...	...
28 License fees on import of timber and firewood	1,87,037 1 8	...	...	1,87,037 1 8	...	...	...	...	28.47	2,002 7 0	1.26
29 Private Markets	8,750 0 0	...	...	8,750 0 0	...	...	...	100.00	...	...	...
30 Licenses Registration	(b) 1,130 4 0	...	...	(b) 1,130 4 0	...	...	436 8 0	94.06	...	1,338 12 0	1.94
31 Cart stand fees	67,418 8 0	...	...	67,418 8 0	...	...	...	100.00	...	...	...
32 School fees	780 0 0	...	...	780 0 0	...	...	...	84.28	...	148 9 6	14.72
33 Payment for water for non-domestic purposes	1,271 0 11	...	...	1,271 0 11	...	...	...	89.14	...	15,625 10 0	1.86
34 Refunds on account of certain reclamation works	1,13,882 13 2	...	...	1,13,882 13 2	...	...	...	...	...	...	...
Total	27,08,249 5 2	...	334 8 3	27,07,914 12 11	...	25,68,028 10	2,13,060 11 11	94.68	877 10 1	77,646 12 3	2.86

(a) The amounts prepaid in advance in the previous year under Section 171 for the demand of 1915-16.
 (b) The amount prepaid in advance in the previous year towards the demand of 1915-16.
 (c) The difference refundable between the taxes prepaid under Section 174 and subsequently reduced on appeal.
 (d) Represent the amount already refunded towards the taxes prepaid under Section 174 and subsequently reduced on appeal.
 (e) Includes penal interest on instalments over due.

STATEMENT IV-D.—Outstanding arrears yearwar under the combined property taxes and the collections and adjustments made during the year as compared with 1914-15.

Period.	1914-15.						1915-16.					
	Opening outstand- ing balance includ- ing subsequent amendments and additions.		Collection.		Remission and written off.		Opening outstand- ing balance includ- ing subsequent amendments and additions.		Collection.		Remission and written off.	
	Rs.	A. P.	Rs.	A. P.	Rs.	A. P.	Rs.	A. P.	Rs.	A. P.	Rs.	A. P.
For 1910-11	...	3	3	2	...	...	...	...	...	...	...	...
" 1911-12	...	422	5	4	395	0	5	20	14	9	16	7
" 1912-13	...	39,924	1	8	32,575	1	7	5,179	0	7	12	2
" 1913-14	...	52,207	9	11	49,208	10	1	6,704	8	3	191	5
" 1914-15	...	...	...	...	...	...	...	39,555	6	7	1,574	9
Total	92,557	4	1	76,184	15	3	790	13	1	15,351	7	9

(a) Includes Rs. 14,590-7-6, viz., increased tax for 1912-13, 1913-14 and for 1914-15 on Government military buildings as settled in the year under report.

APPENDIX I.

APPENDIX I.

STATEMENT IV-E.—GRADATION LIST.—The following is a Gradation of the Combined Rates levied on Buildings and Lands.

Gradation of Annual Taxes.	Number of Buildings and Lands.		Amount of House, Water and Drainage and Lighting Taxes thereon.		Number of Lands.		Amount of House, Water and Drainage and Lighting Taxes thereon.		Amount of House, Water and Drainage and Lighting Taxes thereon.		Number of Buildings and Lands.		Amount of Taxes thereon.	
	Rs.		Rs.		Rs.		Rs.		Rs.		Rs.		Rs.	
	A.	P.	A.	P.	A.	P.	A.	P.	A.	P.	A.	P.	A.	P.
Under 8 Annas	...	...	1,010	7	409	14	248	69	15	7	1,288	479	14	2
8 Annas and under 1½ Re.	...	...	3,096	8	2,952	13	629	748	2	4	3,725	3,701	0	0
1½ Rupee and under Rs. 5	...	...	9,270	11	31,509	3	715	2,116	5	9	9,985	33,625	9	8
5 Rupees and under Rs. 15	...	...	14,954	10	1,54,816	8	287	3,016	15	8	15,241	1,57,833	8	6
15 Rupees and under Rs. 30	...	...	10,121	9	2,25,984	5	181	2,739	12	6	10,302	2,28,784	2	3
30 Rupees and upwards	...	...	14,520	3	12,58,860	13	70	13,491	0	9	11,650	12,72,551	14	0
Total	...	...	50,071	0	16,74,533	12	2,150	22,242	4	7	52,201	16,96,776	0	7

APPENDIX I.

STATEMENT IV-H.—The several processes adopted for realization of the various Taxes, &c., abstracted below.

Description of Taxes, &c.	WARRANTS.			WARRANTS ADJUSTED.				Number of warrants remaining unexecuted at the close of the year.	Number of cases in which distress was sold.	Amount realized.	Demand towards which it was so realized.		Number of cases.		Result of sales.		Number of Prosecutions instituted for default.	18	Distraint fees realized.				
	2	3	4	5	6	7	8				12	13	14	15	16	17			RS.	A. P.	RS.	A. P.	
Number of bills issued.	Number issued including arrears.	Number remaining unexecuted at the beginning of the year.	Total.	By payment before execution.	By payment after execution and cancellation.	Total.	11	12	13	14	15	16	17	RS.	A. P.	RS.	A. P.	RS.	A. P.				
1 Tax on Arts, &c. ...	11,027	76	66	142	122	16	137	6	8	18	19	0	...	...	...	...	...	...	4	13	1		
2 House, Water and Drainage & Lighting Taxes on Buildings and Lands ...	1,04,408	1,956	970	2,925	2,524	149	2,673	252	14	49	13	7	146	0	11	1	8	9	5	13	99	12	9
3 Tax on Vehicles with springs and Animals ...	10,753	160	137	297	137	18	155	142	4	66	1	1	69	0	0	1	1	0	0	2	3	13	11
4 Tax on Carts ...	...	...	...	...	...	...	...	...	...	63	10	1	45	...	...	...	26	1	4	9	7	7	8
5 Payment for occupation of Municipal Lands ...	14,207	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
6 Rent of Municipal Lands and Buildings ...	3,952	51	10	61	41	8	44	17	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
7 Miscellaneous Receipts ...	4,829	15	29	44	44	...	44	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...

APPENDIX I.

STATEMENT IV-J.—The following is an analysis of collection of each tax at each stage.

1	ARREAR.					CURRENT.					Total of Columns 6, 7, 8 & 9.	Total of Columns 6 & 10.									
	Description of Taxes, &c.	On service of bill.	After issue and before execution of warrant.	After execution of warrant.	Total of Columns 2, 3 & 4.	Collected in advance in the previous year.	On service of bill.	After issue and before execution of warrant.	After execution of warrant.												
RS.	A. P.	RS.	A. P.	RS.	A. P.	RS.	A. P.	RS.	A. P.	RS.	A. P.										
1. Tax on Arts, &c.	...	1,912	8 0	207	8 0	39	5 4	2,159	8 4	10	0 14	1,89,362	0 0	295	0 0	15	0 0	1,70,252	0 0	1,72,441	8 4
2. House Tax on Buildings and Lands	...	1,116	2 7	16,896	12 8	458	2 6	18,473	1 9	2,231	13 2	9,08,450	13 7	6,856	0 2	114	6 9	9,17,688	1 8	9,36,156	3 5
3. Water and Drainage Tax on do	...	726	8 1	110,984	5 6	297	12 9	12,007	10 3	1,450	11 0	5,89,411	6 9	4,475	14 8	74	6 2	5,95,412	4 7	6,07,419	14 10
4. Lighting Tax on do	...	139	8 4	2,112	5 11	57	4 4	2,309	2 7	278	15 8	1,13,384	10 1	850	12 0	14	4 10	1,14,818	10 7	1,16,837	13 2
5. Tax on Vehicles with springs and on Animals	...	772	2 0	1,457	0 0	80	0 0	2,319	2 0	2,356	0 0	1,04,677	4 10	431	18 2	28	4 0	1,07,493	6 0	1,09,812	8 0
6. Payment for occupation of Municipal Lands	...	67	6 0	...	...	1	14 0	69	4 0	...	...	5,225	12 0	...	...	9	10 0	5,235	6 0	5,804	10 5

APPENDIX I.

TABLE No. 1.

Statement showing the current demand, collection, remission and balance under the combined property taxes as compared with the corresponding figures for 1913-14 and 1914-15.

Year.	Gross Demand.		Remitted on appeal.		Net Demand.		Collection.		Remission and written off.		Balance.		Percentage of collection to net demand.
	Rs.	A. P.	Rs.	A. P.	Rs.	A. P.	Rs.	A. P.	Rs.	A. P.	Rs.	A. P.	
1913-14	15,70,971	11 1	1,537	10	15,69,384	0 10	14,89,090	11 5	14,267	16 0	86,016	6 5	93.61
1914-15	16,53,135	16 2	1,601	12	16,51,534	2 11	15,93,708	4 5	16,011	9 5	42,119	5 1	96.48
1915-16	16,97,340	13 3	564	12	16,96,776	0 7	16,37,644	0 10	19,618	8 3	49,513	7 6	(b) 95.93

(a) Includes Rs. 4,930-2-6, amount due by Government for enhanced assessments on Military buildings.

(b) The percentage of collection to the net demand exclusive of the amount due by Government for enhanced assessments on Military buildings is 96.21.

APPENDIX I.

TABLE No. 2.

Statement showing the demand, collection, remission and balance under the combined arrear property taxes on buildings and lands as compared with the corresponding figures for the years 1913-14 and 1914-15.

Year.	Outstanding balance at the beginning of the year.		Subsequent amendments and additions.		Total demand.		Collection.		Remission and written off.		Balance.		Percentage of collection to net demand.
	Rs.	A. P.	Rs.	A. P.	Rs.	A. P.	Rs.	A. P.	Rs.	A. P.	Rs.	A. P.	
1913-14	79,859	15 7	885	1 1	80,245	0 8	7,173	7 0	443	9 9	72,627	16 11	8.94
1914-15	1,58,644	6 4	66,087	2 3	92,557	4 1	76,184	15 3	790	13 1	15,581	7 9	82.31
1915-16	57,760	12 10	6,736	14 8	60,963	14 2	82,789	14 7	1,846	13 7	41,627	2 0	(b) 64.34

(a) Includes Rs. 14,790-7-6 the amount due by Government for enhanced assessment on Military buildings.

(b) The percentage of collection to net demand exclusive of the amount due by Government for enhanced assessment on Military buildings and the amount covered by decrees is 91.80.

APPENDIX I.

TABLE No. 3.

Statement showing the number of Vehicles and Animals assessed for the year 1915-16 as compared with that of 1914-15.

Description of Vehicles and Animals.	Number assessed in 1914-15.	Number assessed in 1915-16.	Percentage of increase or decrease.
I. (a) Four-Wheeled Vehicle with springs propelled by electricity, gas, steam or any other mechanical power	792	944	+19.19
(b) Four-Wheeled Vehicle with springs drawn by two or more horses	135	100	-25.92
II. Four-Wheeled Vehicle with springs drawn by a horse, mule, bull or bullock or by two or more horses under thirteen hands, or by two or more mules, bulls or bullocks.	2,485	2,337	-5.95
III. Two-Wheeled Vehicle with springs drawn by one or more horses, mules, bulls or bullocks	2,689	2,647	-1.56
IV. Bicycle or tricycle propelled by electricity, gas or steam	616	592	-3.89
V. Every other bicycle or tricycle	4,562	4,512	-1.10
VI. Every other Vehicle with springs—			
(a) Perambulator	208	181	-12.98
(b) Rickshaw	1,924	1,922	-0.10
(c) Hand-cart with springs	148	122	-17.57
VII. Horse over thirteen hands	2,776	2,581	-7.02
VIII. Horse of or under thirteen hands or mule	2,033	1,994	-1.91
IX. Horse of or under eleven hands	298	276	-7.39
X. Bullock or Bull	7,614	7,596	-0.23
XI. Mule Buffalo	39	46	+17.95
XII. Ass	71	48	-32.67
XIII. Dog	3,806	3,875	+1.82

TABLE No. 4.

Statement showing the Details of Refunds of other than current collections during 1915-16.

Particulars.	Amount.		
	Rs.	A.	P.
Tax on Arts, &c.	145	0	0
House, Water and Drainage and Lighting taxes on Buildings and Lands	5,767	12	9
Tax on Vehicles with Springs	86	0	0
Tax on Animals	39	1	0
Tax on Carts	21	0	0
License fees on Timber and Firewood	19,305	10	0
Miscellaneous	1,288	15	6
Total...	26,653	7	3

V211M, 617 N1
N16

APPENDIX I.

TABLE No. 5.

Statement of actual arrear balance under combined property taxes on buildings and lands outstanding at the close of the year 1915-16 inclusive of the amount covered by decrees.

Period.	Actual arrear balance outstanding on 31st March 1916 exclusive of the sum due by Government for Military buildings		Amount covered by decrees.		Balance for Recovery.	
	Rs.	A. P.	Rs.	A. P.	Rs.	A. P.
1911-12	2	13 10	1	13 10	1	
1912-13	127	6 8	5	10 6	120	12 2
1913-14	127	13 1	103	1 1	24	12 0
1914-15	1,278	8 11	147	2 7	1,131	6 4
Total	1,536	10 6	258	12 0	1,277	14 6

TABLE No. 6.

The following statement exhibits the result of the elections in 1915-16 to fill vacancies among Divisional Commissioners.

Division.	Date of Election.	Date when gazetted.	Name of candidate elected.
14	10-12-1915	14-12-1915	M.R.Ry. S. Venkataramasawmy Mudaliyar Avargi
16	15-10-1915	9-11-1915	" G. R. Audikesavalu Nayudu Garu.

APPENDIX I.

Statement showing the constitution of the Corporation of Madras on 31st March 1916.

Serial No. of Municipality.	Name of District.	Name of Municipality.	The Madras City Municipal Act, 1904.	Population within the Municipal limits.	Number of Members of Constitution						Total.	Elected.	Nominated.	Ex-officio.	Indians.	Anglo-Indians.	Europeans and Anglo-Indians.	Total.
					(a)	(b)	(c)	(d)	(e)	(f)								
1	Madras.	Corporation of Madras.	The Madras City Municipal Act, 1904.	5,18,660	1	15	20	36	4	32	36	20	15	1	23	13	23	23

APPENDIX I.

Statement of Loans for 1915-16.

Amount of loan and rate of interest.	For what purpose and terms on which obtained and the year in which taken.	Date of Government Sanction.	Amount paid				Amount transferred to Sinking Fund				Invested	
			Up to 31st March 1915.		In 1915-1916.		Up to 31st March 1915.		In 1915-1916.		In Government Securities, &c.	In Bank.
			Number of years.	Amount.	Number of years.	Amount.	Number of years.	Amount.	Number of years.	Amount.		
1	2	3	4	5	6	7	8	9	10	11		
† 14,30,000	4 p.c.	Waterworks Project—Repayable in 50 years by a Sinking Fund at 2 per cent. per annum. Taken in 1900-74.										
18,000	5 p.c.	Construction of Drains and Sewers for the Drainage of Georgetown—Repayable in 30 years by a Sinking Fund of Rs. 6,720 per annum. Taken in 1885.										
2,88,350	6 p.c.	Do. do. 60 years Rs. 820 do. do. 1887. No. 763 M., dated 11th August 1897, L. & M.										
1,00,000	6 p.c.	Do. do. 60 years Rs. 1,200 do. do. 1888. No. 823 M., dated 4th Aug. 1891, L. & M.										
1,50,000	5 p.c.	Do. do. 60 years Rs. 1,200 do. do. 1888. No. 823 M., dated 4th Aug. 1891, L. & M.										
20,000	5 p.c.	Extension of Water supply—Repayable in 50 years by a Sinking Fund of Rs. 170 per annum. Taken in 1889.										
50,000	5 p.c.	Construction of Drains and Sewers for the Drainage of Georgetown—Repayable in 50 years by a Sinking Fund of Rs. 400 per annum. Taken in 1891.										
4,00,000	4 p.c.	Extension of Water supply—Do. Rs. 2,050 per annum. Taken in 1895.										
1,00,000	4 p.c.	Construction of Market—Do. Rs. 720 do. Taken in 1895.										
2,00,000	4 p.c.	To repay the Government loan of 1899—Repayable in 50 years by a Sinking Fund of Rs. 1,220 per annum. Taken in 1899.										
50,000	5 p.c.	For cleaning water pipes—Do. Rs. 360 do. do. 1899.										
4,20,000	4 p.c.	For drainage works—Do. Rs. 3,100 do. do. 1899.										
1,50,000	4 p.c.	Construction of Market—Do. Rs. 1,140 do. do. 1899.										
7,80,000	4 p.c.	For drainage works—Do. Rs. 5,480 do. do. 1899.										
1,80,000	4 p.c.	For cleaning water pipes—Do. Rs. 1,140 do. do. 1899.										
2,00,000	4 p.c.	To meet Plague charges—Do. Rs. 760 do. do. 1899.										

APPENDIX I.

1,20,000	4 p.c.	For substitution of O. I. pipes for a portion of Sewer No. 11, repayable in 50 years by a Sinking Fund of Rs. 910 per annum. Taken in 1901-02.																	
2,00,000	4 p.c.	For drainage works—Do. Rs. 1,580 do. do. 1902.																	
5,00,000	4 p.c.	Do. do. do. Rs. 3,900 do. do. 1902.																	
† 7,00,000	4 p.c.	Do. do. do. Rs. 3,900 do. do. 1902.																	
1,00,000	4 p.c.	For special buildings. Repayable in 30 years by a Sinking Fund of Rs. 2,100 per annum. Taken in 1905-07.																	
† 4,00,000	4 p.c.	For improvement of Water-supply and drainage works. Repayable in 30 years by six equal half-yearly instalments of Rs. 11,500 each. Taken in 1908-09.																	
† 4,00,000	4 p.c.	Do. do. do. Taken in 1909-10.																	
4,26,000	4 p.c.	For special buildings. Repayable in 30 years by a Sinking Fund of Rs. 8,920 per annum. Taken in 1909-10.																	
1,00,000	4 p.c.	For Napier Bridge. Repayable in 80 years by a Sinking Fund of Rs. 2,100 per annum. Taken in 1909-10.																	
50,000	4 p.c.	For Napier Bridge. Repayable in 30 years by a Sinking Fund of Rs. 1,040 per annum. Taken in 1909-10.																	
8,00,000	4 p.c.	For special buildings. Repayable in 30 years by a Sinking Fund of Rs. 6,800 per annum. Taken in 1909-10.																	
† 1,00,000	4 p.c.	For improvement of Water-supply and Drainage. Repayable in 30 years by six equal half-yearly instalments of Rs. 2,876 each. Taken in 1913.																	
8,42,000	4 p.c.	For special buildings. Repayable in 80 years by a Sinking Fund of Rs. 7,180 per annum. Taken in 1913.																	
2,00,000	4 p.c.	Do. do. do. Rs. 4,180 do. do. 1914.																	
50,000	4 p.c.	For Electric Lights per annum. Do. Rs. 1,040 do. do. 1914.																	
1,30,000	4 p.c.	Do. do. do. Rs. 2,700 do. do. 1914.																	
1,70,000	4 p.c.	For special buildings per annum. Do. Rs. 8,540 do. do. 1914.																	
2,04,680	4 p.c.	For repayment of the Georgetown drainage loan of 1885.																	
90,41,680																			

* Represents the value of securities purchased for the annual allotment shown in Statement II plus interest realized on previous investments on open market loans.
† Loans from Government.

APPENDIX I.

DR.

General Fund—[Vide G. O. No. 244, dated 13th February 1882.]

CR.

	RS.	A. P.		RS.	A. P.
To Grant I.—Public Works			By Opening Balance	12,80,738	5 3
" II.—Education	7,56,498	4 6	" Municipal Rates and Taxes	12,51,300	13 8
" III.—Sanitation and Medical Services	32,301	6 6	" Revenue derived from Municipal property and powers apart from Taxation	4,06,545	3 0
" IV.—Miscellaneous Municipal purposes	7,37,764	14 3	" Grants and Contributions	5,4734	0 0
" V.—Supervision and Management	2,04,728	12 1	" Miscellaneous	47,581	16 6
Repayment of Debt	1,04,570	13 10	" Extraordinary and Debt		
Interest on Loan	39,510	0 0	" Advances Recovered	28,738	8 6
Advances recoverable	89,798	0 0	Transferred from Water and Drainage Fund Loan Account		
Refund of other than Current Collections	32,465	7 1			
Discount on Loan	16,442	9 8			
Pensions and Gratuities					
Transfer to Water and Drainage Fund Revenue Account	24,168	5 9			
Transfer to Lighting Fund Loan a/c	1,18,868	10 10			
Closing Balance Revenue Account	54,828	12 9			
Do Loan Account	7,65,661	9 5			
	42,530	15 3			
Total	30,15,638	11 11	Total	30,15,638	11 11

DR.

Water and Drainage Fund—[Vide G. O. No. 244, dated 18th February 1882.]

CR.

	RS.	A. P.		RS.	A. P.
To Grant I.—Public Works—			By Opening Balance	4,95,965	7 8
New Works—			" Municipal Rates and Taxes—		
Buildings	769	6 6	Water Tax on Buildings and Lands	6,00,899	2 1
Drainage	5,99,372	9 4	Water Tax on Lands	8,141	4 2
Water-supply	4,37,598	14 8	" Tax on Vehicles, Animals and Cart	47,732	6 11
Repairs—			By Revenue derived from Municipal property and powers apart from taxation	1,19,467	5 7
Buildings	1,638	12 10			
Drainage—Repairs			By Grants and Contributions—		
Works, &c.	3,52,786	14 10	From Government—		
Establishment	54,686	18 5	Improvement of Water-supply and Drainage	7,00,000	0 0
Overtime	4	11 2	" Improvements to Kelly's drain	15,223	0 0
Allowances	1,978	15 7	" Miscellaneous—		
Water-supply—Repairs			Payment for Water for non-domestic purposes	1,34,482	6 8
Works, &c.	1,32,715	9 9	Sundry Receipts—Waterworks	7,600	0 0
Establishment	18,484	12 7	Workshop Receipts	6,197	2 8
Allowances	1,493	1 4	" Extraordinary and Debt—		
Establishment—General	1,38,621	2 3	Loan from Government		
Miscellaneous—W. W. Contingent			Interest on Sinking Fund—		
Grant IV.—Misc. Municipal purposes—	1,087	3 1	Waterworks Loan of 1869-73	46,110	10 11
Other Charges—			" Advances Recovered	25,024	12 7
Payment for Red Hills Water. Contribution to Provincial Funds	32,347	0 0	Transfer from General Fund Revenue Account	1,18,368	10 10
Stores					
Workshops	2,631	8 8			
Grant V.—Supervision and Management	7,323	11 4			
Repayment of Debt—	59,884	2 9			
Sinking Fund					
Interest	92,507	8 1			
Advances recoverable	2,61,231	7 1			
Refund of other than Current Collections	18,617	4 5			
Transferred to General Fund Revenue Account	9,806	12 6			
Closing Balance Loan Account	99,945	6 3			
Total	23,19,902	6 1	Total	23,19,902	6 1

APPENDIX I.

DR.

Lighting Fund—[Vide G. O. No. 244, dated 18th February 1882.]

CR.

	RS.	A. P.		RS.	A. P.
To Grant I.—			By Opening Balance—		
Establishment—General	2,099	7 6	" Municipal Rates and Taxes—	1,23,631	7 0
" Grant IV—			Lighting Tax on Buildings and Lands—	1,15,489	12 3
Lighting—Establishment	1,744	5 4	Lighting Tax on Lands—	1,548	8 5
Allowance	177	13 6	Miscellaneous—		
Labor	8,076	9 9	Refund from expenditure of previous years		
Maintenance	97,155	8 3	Workshop Receipts	742	8 6
Additional Lamps and Sundries	1,38,157	6 4	Extraordinary and debt		
Repairs to Lamps and Posts	6,342	12 3	Transferred from General Fund Loan Account	50,828	12 9
Other charges—					
Stores	289	4 6			
Workshops	802	11 4			
" Grant V—					
Salaries of Officers	1,284	7 9			
Head Office	1,347	4 1			
Assessment and Collection	4,211	11 2			
Repayment of Debt—					
Sinking Fund	3,740	0 0			
Interest	6,680	0 0			
" Refund of other than Current Collections	401	1 1			
" Closing Balance (Revenue account)	19,762	10 2			
Do Loan account					
Total	2,92,276	0 11	Total	2,92,276	0 11

Revenue and Capital Accounts for 1915-16 as compared with the Revised Estimate for 1915-16.

	REVENUE ACCOUNT.		CAPITAL ACCOUNT.		TOTAL.	
	Actuals, 1915-16.	Revised Estimate, 1915-16.	Actuals, 1915-16.	Revised Estimate, 1915-16.	Actuals, 1915-16.	Revised Estimate, 1915-16.
Receipts—	RS.	RS.	RS.	RS.	RS.	RS.
Opening Balance	10,48,476	10,18,480	8,01,849	8,01,850	18,50,325	18,50,330
Municipal Rates and Taxes	20,24,647	20,43,160			20,24,647	20,43,160
Revenue derived from Municipal property and powers apart from Taxation	5,92,779	4,83,520	23,233	23,000	5,26,012	5,06,520
Grants and Contributions	60,357	60,960	7,00,000	7,00,000	7,60,357	7,60,960
Miscellaneous	1,96,804	1,88,690			1,96,804	1,88,690
Extraordinary and Debt	46,111	46,000			46,111	46,000
Advances Recovered	28,738	35,090	25,025	32,000	53,763	67,090
Transferred from Revenue Account						
Total	39,98,512	39,95,900	15,50,107	15,56,850	54,58,619	54,62,750
Charges—						
Grant I.—Public Works	12,43,288	13,18,660	12,58,603	11,02,150	24,99,786	27,21,010
II.—Education	32,301	43,480			32,301	43,480
III.—Sanitation and Medical Services	7,37,765	7,65,930			7,37,765	7,65,930
IV.—Miscellaneous Municipal Purposes	3,61,867	4,24,860	1,87,511	1,38,310	4,99,378	5,63,170
V.—Supervision and Management	1,71,099	1,72,240			1,71,099	1,72,240
Repayment of Debt	1,35,767	1,35,760			1,35,767	1,35,760
Interest on Loans	3,57,729	3,61,370			3,57,729	3,61,370
Advances Recoverable	32,465	28,090	13,617	5,000	46,082	33,090
Refund of other than Current Collections	26,654	42,000			26,654	42,000
Discount						
Pensions and Gratuities	24,168	23,250			24,168	23,250
Transferred to Capital Account						
Closing Balance	7,85,424	5,92,070	1,42,476	11,390	9,27,900	6,63,460
Total	39,98,512	39,95,900	15,50,107	15,56,850	54,58,619	54,62,750

APPENDIX I.

Statement showing the expenditure incurred by the Corporation of Madras during the year 1915-16 from the special grants received from Provincial Funds.

Opening balance.	1	2	3	4	5	6	7	8	9	10
		No. and date of Government order sanctioning the grant for the year.	Purpose for which the grant was made.	Amount of grant received during the year.	Actual expenditure during the year out of the grants shown in col. 4.	Balance of grant at the close of the year (col. 4 minus col. 5).	Expenditure incurred during the year out of the balance of grants sanctioned in previous years shown in col. 1.	Balance of such grants remaining unutilized at the close of the year (col. 1 minus col. 7).	Closing balance (col. 8 plus col. 9).	REMARKS.
Rs. 76,587		G.O. No. 56-M. Mis. dated 2nd May 1914.	For Malaria investigation	...	Rs. ...	Rs. ...	Rs. 7,857	Rs. 68,730	Rs. 68,730	
4,971		G.O. No. 591-M. Mis. dated 24th March 1913.	For construction of bear pits and aviary in People's Park	...	...	...	...	...	4,971	
19,288		G.O. No. 1520-M. Mis. dated 6th August 1913.	For Sanitary Works	...	...	...	...	...	19,288	
3,67,780		G.O. No. 815-M. Mis. dated 28th May 1916 & No. 422-M. dated 28th Feb. 1916.	For improvement of Water-supply and Drainage	7,00,000	6,00,055	94,945	3,67,780	...	99,915	
1,25,000		G.O. No. 1045-M. Mis. dated 27th May 1914.	For acquisition of lands for Sewage Farm	...	...	...	...	...	1,25,000	
50,000		Do.	For construction of model cow-houses	...	...	...	43,682	6,318	6,318	
...		G.O. No. 870-M. Mis. dated 7th June 1916.	For acquisition of lands for washermen settlement	10,384	...	10,384	...	...	10,384	
...		G.O. No. 891-R. Eln. dated 6th Dec. 1916 & No. 475 M. dated 9th March 1916.	For improvements to Kelly's drain.	10,223	...	10,223	...	...	10,223	

APPENDIX II.—TABLE No. 1.

Statement showing the expenditure on works in charge of the Special Engineer for the last eight years since his Department was created.

Particulars.	1908-09.	1909-10.	1910-11.	1911-12.	1912-13.	1913-14.	1914-15.	1915-16.	Total.
Water-supply:—New Works	Rs. 94,108	Rs. 2,06,778	Rs. 3,47,217	Rs. 4,85,338	Rs. 6,63,591	Rs. 17,28,367	Rs. 6,36,480	Rs. 4,61,476	Rs. 46,24,355
Drainage:—Do.	67,240	86,216	4,18,032	5,37,049	4,69,810	3,20,136	3,03,622	6,66,175	28,68,280
Drainage { Pumping Stations	...	86,824	1,14,889	1,21,774	1,42,912	1,46,546	1,85,870	1,80,974	9,73,289
Maintenance { Sewer cleaning	...	15,303	21,344	14,885	18,270	...	...	...	69,302
Water-supply:—Repairs, Kilpauk Pumping Station	...	...	...	...	...	...	20,812	87,007	1,07,819
Works executed and the cost charged to Revenue account	...	7,930	9,863	8,864	1,373	13,380	6,152	...	47,562
Private work executed	...	455	1,013	729	1,354	23,298	72,337	3,736	1,02,922
Anti-Malaria Engineering Works	...	...	...	...	...	...	...	19,625	19,625
Total Rs. ...	1,61,348	4,03,006	9,12,358	11,64,139	12,97,310	22,31,727	12,25,273	14,21,993	88,17,154

APPENDIX II.—TABLE No. 1-A.

SPECIAL WORKS DEPARTMENT.

Expenditure under Capital Account.

Particulars.	Amount from 1-4-1908 to 31-3-16.		At 1915-16.	
	Rs.	A. P.	Rs.	A. P.
Drainage Section.				
New Drainage Works "Special"				
Establishment—	29,54,625	9 1	8,62,117	6 0
General Branch				
Design and Construction	1,35,219	4 0	23,438	9 3
Famine Allowance	2,98,749	11 3	52,962	3 6
Conveyance Allowance	1,56,811	8	28,015	7
Charge Allowance	10,812	5 9	2,321	0 3
Sewer No. 11	375	3 10	148	8 1
George Town Drainage	508	1 9		
Miscellaneous	229	0 0		
	1,35,089	7 5	18,691	1
Total for Drainage Works	35,38,854	6 1	9,59,971	10 7
Sales of Stores	6,70,575	1 10	2,93,796	12 10
Net Expenditure	28,68,279	1 5	6,66,174	13 9
Water-works Section.				
New Water-supply Works "Special"				
Establishment—	28,75,399	4 1	1,91,980	11 6
General Branch				
Construction	1,23,489	10 8	11,719	1 7
Famine Allowance	1,49,172	7 10	6,024	11 2
Travelling Allowances to Officers	1,591	2 3	102	12 3
Charge Allowance	3,762	6 8	169	9 6
Miscellaneous	732	15 9	50	0 0
	55,063	12 10	5,330	11 1
Distribution Scheme—				
Establishment				
Famine Allowance	63,891	6 7	21,746	11 7
Conveyance Allowance	141	13 9	77	15 4
Works &c.	2,710	13 1	1,154	8 9
	19,22,364	11 7	4,72,491	3 0
Total for Water-supply	51,98,230	9 1	5,10,847	11 9
Sales of Stores	5,75,874	15 11	46,371	6 0
Net Expenditure	46,22,355	9 2	4,64,476	5 9
Summary of Expenditure.				
Drainage Works				
Water-works				
	35,38,854	6 1	9,59,971	10 7
	51,98,230	9 1	5,10,847	11 9
Total	87,37,084	15 2	14,70,819	6 4
Deduct Sales of Stores	12,46,450	4 9	3,40,168	2 10
Net Expenditure	74,90,634	10 5	11,30,651	3 6

APPENDIX II. TABLE No. 2.

SPECIAL WORKS DEPARTMENT, DRAINAGE SECTION.

Statement showing details of works carried out from 1st April 1915 to 31st March 1916.

Note.—These do not include Tondiarpet and other Petty Works.

I. Lengths of Pipes laid—						Feet.
4" Stoneware Pipes for house connections	...	...	...	...	...	4,597
6" Do. do. for sewers	...	...	...	...	...	1,183
9" Do. do. do.	...	...	...	...	...	1,041
						No.
II. Manholes constructed	...	...	...	...	...	10
III. Lamphole	...	...	...	...	...	8

SPECIAL WORKS DEPARTMENT—DISTRIBUTION SCHEME.

Contract M. and M. No. 22-A (Turner Hoare & Co.)

Delivery of C. I. Pipes to 31st March 1916.

Diameter of pipes in inches.	Length of pipes in contract in feet.	Total number in feet delivered up to 31-3-16.	Length of pipes to be supplied.	Remarks.
42"	48	...	48	
40"	168	...	168	
36"	1,896	...	1,896	
33"	1,410	...	1,410	
30"	717	...	717	
27"	1,194	...	1,194	
24"	480	...	480	
22"	24	...	24	
21"	276	...	276	
20"	24	...	24	
18"	2,160	1,500	660	
16"	504	...	504	
14"	5,640	...	5,640	
12"	14,520	1,956	12,564	
10"	8,280	480	7,800	
9"	7,110	...	7,110	
8"	1,440	...	1,440	
7"	6,480	...	6,480	
6"	4,950	...	4,950	
5"	9,900	...	9,900	
4"	1,80,000	12,420	1,67,580	
3"	900	...	900	
2½"	6,300	...	6,300	
2"	...	...	...	
Total length in lineal feet.	*2,54,421	16,356	2,38,065	

* Includes 4 1/2" pipes.

SPECIAL WORKS DEPARTMENT—DISTRIBUTION SCHEME.

C. I. Pipes laid up to 31st March, 1916.

Diameter of Pipes.	Contract No. 10—Main No. 1. (M. Bashyam Naidu.)		
	Length in Contract.	Total laid to 31st March 1916.	Balance to be laid.
42"	13,738	1,368	153
40"	4,935	4,874	361
36"	1,648	1,328	—180
33"	1,698	1,692	6
30"	1,962	2,126	—164
27"	735	832	—117
24"	1,362	1,365	3
20"	2,225	2,323	—98
18"	...	...	...
16"	...	...	—72
14"	1,040	1,112	—113
12"	1,673	1,786	—10
10"	1,614	1,624	—113
9"	...	113	...
8"	...	...	...
7"	688	743	—55
6"	2,092	2,110	—18
5"	...	...	...
4"	...	...	...
Total length in lineal feet	35,430	35,923	—493
Value of Work, Rs.	1,22,388	1,52,757	—30,369

APPENDIX II—TABLE No. 4.

CONSTRUCTION WORKS—WATER DISTRIBUTION SCHEME.

DISTRIBUTARY PIPES.

Laying Cast Iron Pipes.

Diameter of Pipes.	Total to 31st March 1916.			Remarks.
	Contract P. W. No. 9.	Contract P. W. No. 10 & 10-A	Contract P. W. No. 11 & 11-A.	
	Lineal feet.	Lineal feet.	Lineal feet.	
18" ...	11	...	6,881	
16" ...	2,469	...	3,221	
14" ...	...	...	3	
12" ...	20	...	7	
10" ...	531	...	...	
8" ...	...	...	50	
7" ...	1,710	...	426	
6" ...	6,410	1,190	3,844	
5" ...	5,755	599	13,590	
4" ...	47,683	24,632	26,625	
3" ...	4,551	2,276	2,952	
2½" ...	130	...	38	
2" ...	197	...	37	
Total length in lineal feet ...	69,467	28,697	57,674	
Value of works executed ...	Rs. 53,000	Rs. 14,000	Rs. 63,000	

68

APPENDIX II—TABLE No. 5.

CONSTRUCTION WORKS—DRAINAGE SECTION.

Laying Cast Iron Pipes.

Diameter of Pipes.	Total to 31st March 1916.				Remarks.
	Purasawakam Gravitation Main No. 5.		Purasawakam Branch Sewers.		
	Lineal feet.	No.	Lineal feet.	No.	
42" ...	204	...	...	...	
36" and 33" ...	595	...	...	...	
24" ...	...	...	134	...	
18" ...	...	...	699	...	
16" ...	...	...	692	...	
Manholes ...	...	9	...	12	
Total length of pipes laid ...	799	9	1,525	12	
Value of work exe- cuted ...	Rs. 50,450		Rs. 53,390		

APPENDIX II—TABLE No. 5-A.
CONSTRUCTION WORKS—DRAINAGE SECTION.
Napier Park Gravitation Main—Brick Sewer.

	Total to 31st March 1916.		Remarks.
	Departmental Section.	Contract N. P. No. 1 (M. Bashyam Naidu).	
Completed Sewer ...	Lineal feet. 1,030	Lineal feet. 1,096	
Value of work executed ...	Rs. 16,400	Rs. 15,720	

APPENDIX II—TABLE No. 5-B.
CONSTRUCTION WORKS—DRAINAGE SECTION.
Purasawakam Gravitation Main—Brick Sewer.

		Total to 31st March 1916.	Remarks.
—		Contract P. M. No. 1 (O. Sudarsana Maistry.)	
Completed Sewer	...	Lineal feet. 125	Includes advance paid on value of timber supplied.
Value of work executed	...	Rs. 12,754	

APPENDIX II—TABLE No. 5-C.

CONSTRUCTION WORKS—DRAINAGE SECTION.

Departmental Sewer Laying.

Diameter of Pipes.	Total to 31st March 116.						Remarks.
	Purasawakam Area.		Royapuram Area.		Law College Area.		
	Lineal feet.	No.	Lineal feet.	No.	Lineal feet.	No.	
15" ...	452	...	...	...	...	...	
12" ...	702	...	...	...	...	...	
9" ...	1,625	...	14,591	...	354	...	
6" ...	...	...	16,428	...	164	...	
Manholes ...	...	26	...	145	...	4	
Lampholes ...	...	...	...	8	...	...	
Flushing shafts.	...	...	...	66	...	1	
Total ...	2,779	26	31,022	219	518	5	
Value of work executed ...	Rs. 33,041		Rs. 82,000		Rs. 1,310		

APPENDIX II—TABLE No. 5-D.
NORTH TRIPPLICANE STORM WATER DRAINS.

Departmental Works.

	Total to 31st March 1916.		Remarks.
	Blacker's Road.	Ellis Road.	
Completed drain ...	Lineal feet. 692	Lineal feet. 335	
Value of work executed ...	Rs. 10,380	Rs. 1,740	

APPENDIX II—TABLE No. 6.
STATEMENT OF CONTRACT AWARDED IN CONNECTION WITH THE NEW WATER-SUPPLY.

Statement of Contract awarded in connection with the New Water-supply.																	
Contract No.	Description of Works.	Amount of Estimate.		Name of Contractor.	Amount of Contract.	Value of work executed up to 31st March, 1916.		Amount of Security lodged.	Date of order to Commence.			Date of Completion.			Remarks.		
		Rs.	A. P.			Rs.	A. P.		A. P.	D.	M.	Y.	D.	M.		Y.	
W.W. No. 5	(Contract Nos. 1, 2a, 2b, 4, 8 and 9 completed and 2 and 3 cancelled.) Filter Beds, Filter Water Reservoir and Accessory Works ...	7,28,113	7	0	A. Subramania Iyer ...	7,12,869	14	1	88,000	0	6	1	10	...	...		
6	Laying and Jointing about 2,400 ft. of 48" Steel Pipes ...	18,612	12	8	M. Basham Naide ...	13,612	8	0	800	0	7	6	13	13	9	15	
7	Kilpaik Pumping Station and Elevated Tank Masonry Work ...	1,71,046	0	0	Messrs. M. Basham Naide and A. S. Krishnaswami Iyer ...	1,72,709	211	1	2,000	0	7	10	13	...	...		
10	Laying Main No. 1 ...	1,50,480	0	0	M. Basham Naide ...	1,32,388	14	9	2,000	0	7	6	13	...	...		
11	" " 7 ...	71,610	0	0	N. Munnawar Mudaliar ...	10,399	211	0	2,000	0	6	13	6	13	21	2	16
13	Compound wall for the New Water Works, Kilpaik ...	23,000	0	0	A. S. Krishnaswami Iyer ...	24,800	12	0	1,000	0	6	10	13	...	...		
M.M. No. 8	(Contract Nos. 1, 2, 4, 7, 8, 11, 13, 16 and 20 completed.) Steam Engines, Pumps and Boilers ...	4,00,000	0	0	Messrs. Simpson & Co.	3,50,696	0	0	10,000	0	8	11	10	...	...		
10	Elevated Tank ...	1,91,800	0	0	The South India Industrial, Ltd.	1,89,801	0	0	10,000	0	19	6	18	7	16		
22-A	Cast Iron Pipes and Specials ...	5,72,184	0	0	Messrs. Turner Hoare & Co.	5,33,110	12	9	18,000	0	1	2	16	...	...		
25	Venturi Meters, Waste Detection Meters, Special Castings, etc. ...	1,71,000	0	0	...	...	...	...	...	...	...	...	...	...	...		
28	Cast-Iron Pipes ...	...	...	...	Messrs. Turner Hoare & Co.	58,461	0	0	100	0	1	12	15	9	16		
P.W. No. 8	(Contract Nos. 1, 2, 3, 4, 5, 6, 13, 15 and 16 completed and 7 and 8 cancelled.) Cast-Iron Pipe Laying North Range ...	62,448	0	0	M. Shakti Devood Sah.	64,318	0	0	280	0	0	4	2	14	...		

SPECIAL WORKS DEPARTMENT.

Statement showing the Private work executed during 1915-16.

No.	Description of Works.	Amount of Revised Estimate.	Expendi- ture up to 31st March 1916.	Remarks.
1	Construction of Harbour over-flow Sewer in North Beach Road	Rs. 98,293	Rs. 98,293	
	Total ...	98,293	98,293	

APPENDIX II—TABLE No. 8.
SPECIAL WORKS DEPARTMENT.

Statement showing the value of Pumping Station buildings and plant, as given in the Administration Report for 1914-15, compared with the estimated value on the 31st March 1916.

		Value in Books on 31st March '15.	Estimated value on 31st March '16.
		Rs.	Rs.
Royapuram	{ Buildings Machinery	10,734 1,08,248	10,412 95,980
DeMellow's Road	{ Buildings Machinery	3,695 14,960	3,510 13,853
Langs Garden	{ Buildings Machinery	7,040 11,919	6,829 11,146
Napier Park	{ Buildings Machinery	11,082 19,426	10,750 17,921
Ice House Road	{ Buildings Machinery	8,720 13,552	8,458 12,714
Mylapore	{ Buildings Machinery	3,673 10,562	3,489 9,908
Law College	{ Buildings Machinery	16,436 76,535	15,948 67,837
Tondiarpet	{ A Buildings	12,600	12,222
	{ A Machinery	21,221	19,127
	{ B Buildings	14,443	14,010
	{ B Machinery	33,798	30,394
	{ C Buildings	12,173	11,808
	{ C Machinery	21,300	19,197
Night-soil Depot	{ Buildings	5,138	4,984
	{ Machinery	2,556	2,250
Kilpauk	{ Buildings	1,25,520	1,29,514
	{ Machinery	3,90,560	3,44,668
	{ Elevated Tank	1,74,250	1,65,537
	{ " Masonry and Foundation	88,100	85,457
Amount to be written off with the sanction of the Standing Committee for loss, wear and tear and depreciation			98,323
Total		12,18,241	12,26,241
Deduct value of Buildings added during the year			8,000
			12,18,241

SPECIAL WORKS DEPARTMENT.

Value of tools, plant and materials on 31st March 1915 (as given in the Administration Report for 1914-15) compared with the estimated value on 31st March 1916.

	31st March 1915.	31st March 1916.
	Rs.	Rs.
Tools and plant	66,545	70,001
Materials	3,99,229	5,06,518
Amount to be written off with the sanction of the Standing Committee for loss, wear and tear and depreciation	...	16,318
Total	4,65,774	5,92,837
Deduct value of Stoneware Pipes, etc., added during the year	...	1,27,063
		4,65,774

TABLE No. II.
SPECIAL WORKS DEPARTMENT
Cost of Design and Supervision.
Waterworks Section.

Year.	Design.		Construction.		Value of work designed.	Percentage of Designing Establishment on value of work designed.	Value of work executed.	Percentage of supervision on value of work executed.
	Engineers.	Subordinates.	Engineers.	Subordinate.				
	Rs.	Rs.	Rs.	Rs.	Rs.		Rs.	Rs.
1908-09	21,131	5,876	1,800	706	2,500		64,602	3.87
1909-10	17,640	9,664	4,600	2,300	6,900		1,72,574	3.99
1910-11	12,108	9,406	12,108	9,407	21,515		3,04,188	7.07
1911-12	12,624	10,441	12,625	10,441	23,066		4,35,207	5.30
1912-13	11,983	9,853	11,984	9,853	21,837		6,19,918	3.52
1913-14	9,955	15,121	9,955	15,122	25,077		16,78,214	1.49
1914-15	9,900	18,929	9,900	18,930	28,880		5,78,821	4.98
1915-16	9,980	10,543	9,980	10,542	20,522		4,23,481	4.85
Total...	1,05,321	89,833	72,452	77,395	1,50,247	2.86	42,76,955	3.51

DRAINAGE SECTION.

1908-09	17,801	7,418	25,219	1,600	800	2,400	9,82,910	6.06
1909-10	19,500	10,278	29,778	2,400	1,200	3,600	18,18,945	5.93
1910-11	12,777	8,859	21,636	12,777	8,859	21,636	3,81,714	5.67
1911-12	18,015	13,057	31,072	18,015	13,057	31,072	4,88,024	6.37
1912-13	15,437	15,716	31,153	15,437	15,716	31,153	4,07,632	7.64
1913-14	17,399	15,217	33,616	17,400	16,217	33,617	2,52,903	13.29
1914-15	14,820	21,464	36,284	14,820	21,463	36,283	2,31,055	15.41
1915-16	18,250	21,332	39,582	18,250	21,331	39,581	5,87,011	6.74
Total	1,38,999	1,14,841	2,48,340	1,00,639	98,643	1,99,342	24,48,625	8.72

APPENDIX II.

TABLE No. 12.

Table showing sizes and lengths of water pipes laid, during the year 1915-16.

Divisions.	Number of Four- lains erected.	4"	3"	2½"	2"	1½"	1"	¾"	REMARKS.
		ft.	ft.	ft.	ft.	ft.	ft.	ft.	
1 to 3	11	...	297	...	...	...	758	219	
4 & 5	...	...	...	...	...	...	...	...	
6 & 7	4	...	...	...	...	...	...	120	
8 & 9	6	...	...	...	...	...	...	243	
10 & 11	4	...	...	...	324	...	...	...	
12 & 13	...	156	...	...	...	...	...	30	
14 & 15-B	2	...	...	...	...	...	370	150	
16 & 17	...	...	...	...	...	...	...	...	
18 & 15-A	...	...	...	...	...	...	...	...	
19 & 20	21	4	...	776	400	600	250	...	
	48	156	297	776	724	600	1548	772	4,873 feet or 1,624½ yds.

APPENDIX II.

TABLE No. 13.

Reforming roads during 1915-16.

Thickness.	BLUE GRANITE.				VELACHERI GRANITE.				LATERITE.				REMARKS.
	Squares.	Miles.	Fur.	Yds.	Squares.	Miles.	Fur.	Yds.	Squares.	Miles.	Fur.	Yds.	
9"	...	...	...	...	...	...	...	...	276-50	0	3	142	
6"	1,379-50	0	2	85	148-50	0	0	159	2,970-75	2	5	84	
5"	...	...	...	...	...	...	...	...	210-00	0	1	80	
4"	13,065-50	8	2	119	7,701-50	7	2	18	11,674-25	11	0	2	
3"	10,888-27	10	6	104	1,898-00	2	1	89	1,084-00	0	7	171	
2"	2,898-00	0	7	58	...	...	...	...	46-00	0	0	123	
	24,371-27	20	2	171	9,740-00	9	3	216	14,261-51	15	2	123	M. F. Yds. 45 1 80

TABLE No. 14.

Roads regraded with gravel during 1915-16.

Thickness.	GRAVEL.				REMARKS.
	Squares.	Miles.	Fur.	Yds.	
Regrading	...	1,353-00	1	0	103

TABLE No. 14 (a).

Tarring roads during 1915-16.

No. of Casks and Barrels.	TARRING.				REMARKS.
	Squares.	Miles.	Fur.	Yds.	
164 casks of petro- leum pitch and 491 barrels of tar	6,456-25	3	0	152	

TABLE 15.—List of roads and streets reformed with blue granite during 1915-16.

No.	Division.	Names of roads.	From.	To.	Length.
1	3rd	Cochrane Basin Road	Basin Bridge Road	Railway Crossing	Feet. 2,640
2	3rd	Do.	Railway Crossing	Subramaniam High Road	1,980
3	3rd	Thiruvethore High Road	Mine Street	Railway Crossing	1,400
4	4th	North Beach Road	Muker Nallamuthu Chetty Street	Narayanaswami Naick Street	1,365
5	4th	Do.	Narayanaswami Naick Street	Gopal Chetty Lane	780
6	4th	Do.	Gopal Chetty Lane	Shenoi's Sub Street	1,160
7	4th	Corner at the junction of General Hospital Road and Renfield Road	...	...	105
8	4th	North Beach Road	Perry's Corner	Muker Nallamuthu Chetty Street	1,360
9	4th	Moor Street	China Bazaar Road	Errabala Chetty Street	645
10	4th	Band Practice Road	Wallajah Bridge	Chidambaram Garden	2,175
11	4th	Jehangir Road	Muker Nallamuthu Chetty Street	Arbuthnot Lane	1,100
12	4th	Band Practice Road	Band Beach Road	To a length of 600 feet	500
13	5th	Errabala Chetty Street	In front of Old Municipal Office	...	180
14	5th	Muker Nallamuthu Chetty Street	Thambu Chetty Street	Popham's Broadway	975
15	6th	Anna Pillai Street	Anchirappan Street	Do.	882
16	6th	Audiappa Naick Street	Varadamuthiappan Street	Auchappan Street	300
17	8th	China Bazaar Road	Do.	Mint Street	1,125
18	8th	Do.	Mint Street	Wall Tax Road	1,475
19	8th	Varadamuthiappan Street	China Bazaar Road	Audiappa Naick Street	1,450
20	8th	Do.	Audiappa Naick Street	Thalassamuthiappan Street	994
21	8th	Ramanna Street	Wall Tax Road	Audiappa Naick Street	600

APPENDIX II.

APPENDIX II.

TABLE 15.—List of roads and streets reformed with blue granite during 1915-16—(continued.)

No.	Division.	Names of roads.	From.	To.	Length.
22	8th	Audiappa Naick Street	Basin Street	Mint Street	Feet. 700
23	8th	Do.	Mint Street	Gorudappa Naick Street	880
24	9th	Wall Tax Road	General Hospital Road	Rasappa Chetty Street	1,700
25	10th	Elephant Gate Road	Sydenham's Road	Railway Crossing	1,455
26	10th	Road leading to Incinerator	Basin Road	Incinerator	760
27	10th	Erakenchery Road	Basin Bridge	Muthu Mudaly Street	3,000
28	10th	Do.	Muthu Mudaly Street	Audiseshiah's Bungalow	3,000
29	10th	Do.	Audiseshiah's Bungalow	New Toll Gate	3,000
30	10th	Basin Road	Demellow's Road	Basin Bridge	3,000
31	10th	Road over Basin Bridge	...	...	3,200
32	10th	Cooks Road	Sirahan's Road	Perambur High Road	2,600
33	10th	Stephen's Road	Gantz Road	Do.	2,900
34	11th	Avadaram Panpuri Road	Perambur Barracks Road	Choolai Bazaar Road	2,400
35	12th	Sydenham's Road	Elephant Gate Road	Rottigadungoo Thiruvengada Mudali Street	2,000
36	12th	Hunter's Road	Choolai Bazaar Road	The gate of S. P. G. High School	1,300
37	12th	Do.	The gate of S. P. G. High School	Purasawakam High Road	1,400
38	12th	Poonamallee High Road	Flowers Road	Police Commissioner's Office Road	1,550
39	12th	Do	Rundalls Road	Naval Hospital Road	1,400
40	12th	Do	Naval Hospital Road	Sydenham's Road	1,410
41	12th	Pethala Ponnammann Koil Road	Flowers Road	Gangadara Iswarer Koil Road	2,000
42	13th	Lang's Garden Road	Harris Bridge	St. Andrew's Bridge	3,200

APPENDIX II.

TABLE 15.--List of roads and streets reformed with blue granite during 1915-16--(Continued.)

No.	Division.	Names of roads.	From.	To.	Length.
43	13th	West Riverside Road	Col. Laws Bridge	Plague Hospital Compound	1,850
44	14th	Brick Kiln Road	Rubbish Depot	Strahans Road	1,950
45	14th	Poonamallice High Road	McNicholas Road	The Limit	2,000
46	14th	Barnaby's Road	Poonamallice High Road	Flowers Road	2,550
47	14th	A road at the junction of Ormes Road	Flowers Road	Barnaby's Road and Miller's Road	900
48	14th	Oteri Rubbish Depot Road	Brick-Kiln Road	The Bridge	360
49	14th	Miller's Road	Purasawakam High Road	Ormes Road	1,800
50	14th	Poonamallice High Road	Barnaby's Road	Flowers Road	2,100
51	14th	Do.	Do.	McNichols Road	2,000
52	16th	Arunachella Nalck Road	Mount Road	Coorum Canal Road	650
53	16th	Coorum Canal Road	Arunachella Nalck Road	Col. Laws Bridge	2,560
54	17th	Mount Road	Government House Bridge	Wallajah Road	1,880
55	16th-A	Do.	Whites Road	Peters Road	1,000
56	16th-A	Do. West	Messrs. W. E. Smith & Co.	Messrs. Spencer & Co.	2,600
57	16th	Pycrofts Road	Westcott Road	Jani Jan Khan Road	2,000
58	15th-A	Mount Road	Whites Road	Messrs. Spencer & Co.	2,660
59	18th	South Beach Road	Presidency College	Ice House Road	2,800
60	19th	Luz Church Road	Mowbray's Road	D Silva Road	1,157
61	19th	Do.	Brodies Road	Do.	2,493
62	19th	Edward Elliotts Road	Barbers Bridge Road	South Beach Road	1,817
63	19th	Do	Koyapettah High Road	Mowbray's Road	2,425

APPENDIX II.

TABLE 15.--List of roads and streets reformed with blue granite during 1915-16--(Concluded.)

No.	Division.	Names of roads.	From.	To.	Length.
64	19th	Barbers Bridge Road	Ice House Road	Erusappa Gramamby Street	1,460
65	19th	Road in Pail Depot in Ice House Road			400
66	20th	Brodies Road	Cutchery Road	North Mada Street	786
Total					1,07,484

APPENDIX II.

TABLE 15.—List of roads and streets reformed with Velacheri granite during 1915-16.

No.	Division	Names of roads.	From	To	Length. Feet.
1	4th	Sulian Street	Angappa Nalck Street	Narayanarang Garden Street	450
2	4th	Post Office Street	Thambu Chetty Street	Jehangir Street	645
3	6th	Sengalanir Pillayar Coil Street	Salai Vinayagar Coil Street	Mannady Street	1,755
4	5th	Nainiappan Street	Gells Street	Do	1,109
5	6th	Katchaleswarar Agrabaram South.	Ramaswami Street	Popham's Broadway	760
6	6th	Katchaleswarar Agrabaram North	Armenian Street	Katchaleswarar Agrabaram West	460
7	6th	Katchaleswarar Agrabaram West	Do	Do	430
8	6th	Post Office Street	Katchaleswarar Agrabaram North Street	Katchaleswarar Agrabaram South	200
9	6th	Chinnatbambi Street	Tharbu Chetty Street	Sembu Doss Street	720
10	6th	Do.	Anna Pillay Street	A distance of 768 ft. towards North	768
11	6th	Kandappa Chetty Street	Thathamuthiappen Street	A distance of 172 ft. towards South	172
12	6th	Peddu Nalcken Street	Anna Pillay Street	Thathamuthiappen Street	901
13	7th	1st Narayanan Street	Padavatammann Coil Street	Mint Street	1,374
14	7th	Tirupalli Street	St. Xavier Street	Mangammah Street	420
15	8th	Lakmudoss Street	Wall Tax Road	Mullah Sahib Street	1,430
16	9th	Karpooora Mudaly Street	Mint Street	Nainiappa Nalck Street	233
17	12th	Varasidhi Vinayagar Coil Street	Sydenham's Road	Erusappa Mudali Street	675
18	12th	Thoppai Pillay Street	Poonamallee High Road	Sydenham's Road	800
19	12th	Shalckali Subadar Street	Lalacutty Street	Palnul Sadar Singh Street	400
20	12th	Coveleg Mutha Gramany Street	Karpooora Mudaly Street	Thoppai Pillay Street	200
21	12th		Do	The End	300

APPENDIX II

No.	Division	Names of roads.	From	To	Length. Feet.
22	12th	Rama Pillay Street	Sydenham's Road	Kumarappa Chetty Street	300
23	12th	Kumarappa Chetty Street	Vepery High Road	The End	400
24	12th	Kandappa Mudaly Street	Sydenham's Road	Do	200
25	12th	Arunachalla Pillay Lane	Do	Do	180
26	12th	Elavaram Veeraswami Street	Do	Varasidhi Vinayagar Coil Street	150
27	12th	Sandusa Street	Elavaram Veeraswami Street	The End	200
28	12th	Palnul Sadar Singh Street	Karpooora Mudaly Street	Thoppai Pillay Street	240
29	12th	Swaminatha Gramany Street	Sydenham's Road	The End	180
30	12th	Muthu Gramany Street	Do	Coveleg Muthu Gramany Street	345
31	12th	The Lane south of Larkine in Naval Hospital Paracherry	Do		350
32	12th	Stringers Street	Naval Hospital Road	Barracks Street	500
33	12th	The Road leading to Water Works Stores in People's Park			1,160
34	14th	Gummalammen Coil Street	Taylor's Road	The End	800
35	14th	Thiruveethiammen Coil Street	Do	Do	625
36	14th	Muthusolai Street	Do	Do	400
37	14th	Alagappa Mudali Lane	Parasawakam High Road	Do	220
38	15th	New Street	Village Road	Do	230
39	15th	Kodambakam High Road	Toll gate	Limit	1,800
40	15th	Tank Bund Road	Rama Nalcken Street	Kodambakam High Road	1,900
41	16th	Singanna Chetty Street	Guruvappa Chetty Street	A distance of 478 feet	478

APPENDIX II.

TABLE 15.—List of roads and streets reformed with Velacheri granite during 1915-16—(Continued).

No.	Division	Names of roads.	From	To	Length, Feet.
42	16th	Swami Naick Road	Coorum Road	Arunachella Naick Road	1,180
43	16th	Kalavi Chetty Street	Iyah Mudali Street	Guruvappa Chetty Street	1,660
44	17th	Appavu Gramany Street	Bangaru Naick Street	Triplicane High Road	900
45	17th	Office Vencatachella Mudali Street	Thiruvalluwarenpetta Road	Pathanarathy Naidu Street	960
46	17th	Chinnathambay Naidu Street	Bangaru Naick Street	Model School	840
47	15th-A	Wesley Hostel Road	Whites Road	The Gale	830
48	18th	Arimuthu Asari Maistry Street	Sunkavar Street	Arimuthu Asari Maistry Street	400
49	18th	Arimuthu Asari Maistry Street	Venkataramangam Pillay Street	Arimuthu Asari Street	260
50	18th	Surappa Mudali Street	Devaraja Madaly Street	Agathimuthan Street	830
51	18th	Weavers Street	Thambu Naick Street	Mallan Ponnappa Mudali Street	375
52	18th	Shahk Davood Street	Ice House Road	Do	800
53	18th	Gazette Begum Street	Pallappan Street	Ice House Road	640
54	18th	Kareem Subadar Street	Ice House Road	Pallappan Street	450
55	18th	Venkataramangam Pillay Street	Pycrofts Road	Sunkavar Street	1,400
56	18th	Perumal Mudali Street	Tallari Street	Temple	880
57	18th	Tallari Street	Pycrofts Road	Perumal Mudali Street	400
58	18th	Hajee Shalk Hussain Street	Ice House Road	Hajee Shalk Hussain Lane	440
59	19th	Madavaperumal Pagoda Street	Mylapore Bazaar Road	Madavaperumal Pagoda Lane	595
60	19th	Elthama Road	Mount Road	Gas Light No. 13	1,544
61	19th	Do	Gas Light No. 12	Mowbrays Road	1,660
62	19th	Kasim Sahib Street	Royapetta Bazaar Road	Nallanna Mudali Street	390

APPENDIX II.

TABLE 15.—List of roads and streets reformed with Velacheri granite during 1915-16—(Concluded).

No.	Division	Names of roads.	From	To	Length, Feet.
63	19th	Thommalayappen Street	Royapetta Bazaar Road	Its Western End	474
64	19th	Ammayappa Mudali Street	Do	Nallanna Mudali Street	947
65	19th	Cundappa Mudali Street	Irusappa Gramani Street	Venkataramangam Pillay Street	1,640
66	19th	Murugappa Mudali Street	Cundappa Mudali Street	Kesappa Gramany Street	600
67	19th	Amman Covil Lane	Amman Covil Street	Its Southern End	361
68	19th	Arundal Street	Culchery Road	Paripoorana Vinayagar Covil Street	600
69	19th	Nallanna Mudali Street	Peters Road	Kalingaraya Mudali Street	1,350
70	20th	Arunagiri Mudali Street	Brodies Road	Adanjan Mudali Street	288
71	20th	Kesavaperumal South Ward Street	Kesavaperumal Street	Musque Street	460
72	20th	Solayappa Mudali Street	Chittrakulam East Ward Street	Mandavalli Street	780
73	20th	Chittrakulam East Ward Street	Appu Mudali Street	Chittrakulam West Ward Street	1,094
74	20th	The widened portion of Mandavalli Street	Mandavalli Street	Nallumuthu Komarappa Mudali Street	300
					50,149

APPENDIX II.

TABLE 15.—List of roads and streets reformed with laterite during 1915-16.

No.	Division.	Names of roads.	From	To	Length. Feet.
1	1st	Kalmandapam Road	Mannarswami Covil Street	C Pumping Station	1,784
2	1st	Thambu Chetty Street	Kalmandapam Road	End of New Police Lines	900
3	1st	Thiruvengada Naick Street	Venkatesa Naick Street	The End	465
4	1st	Mannarswami Covil Street	Cemetery Road	Barber's Lane	1,000
5	2nd	Solalyappan Street	Ramanuja Aiyer Street	House No. 80	1,300
6	2nd	Mannarswami Covil Street	Barber's Lane	Kalmandapam Road	1,400
7	2nd	Thoppal Mudali Street	Cemetery Road	Appier Lane	1,085
8	2nd	The road in Dakshinamurti Madam	Thiruvattore High Road	Dakshinamurti Madam in front of New Police Line	688
9	2nd	Kohandarama Iyer Lane	Do	Soliappen Street	600
10	3rd	Thiruvattore High Road	Gummalammen Covil Road	Lamp Post No. 3/237	880
11	3rd	Do	Lamp Post No. 3/237	Balakrishna Naick Street	870
12	3rd	Do	Varadappa Maistry Street	Varadappa Maistry Street	1,223
13	3rd	Roads in Kurukupet Kubbish Depot	Kathiwakam High Road	Tollgate	3,200
14	3rd	Kathiwakam High Road	Lamp Post No. 3/38	The End	1,696
15	3rd	Do	Do No. 3/39	Thiyagappa Chetty Street	800
16	3rd	Do	Cochrane Basin Road	Cochrane Basin Road	700
17	3rd	Do	Lamp Post No. 3/42	Lamp Post No. 3/42	1,250
18	3rd	Do	Triangular Garden in Frazer Bridge Road	Railway Crossing	750
19	4th	Narayanasarang Garden Street	Ebramjee Sahib Street		244
20	4th	Chellamuthu Mudali Lane	Coral Merchant Street	Sultan Street	920
21	6th			Ramaswami Street	266

APPENDIX II.

TABLE 15.—List of roads and streets reformed with laterite during 1915-16.—(Continued)

No.	Division.	Names of roads.	From	To	Length. Feet.
22	7th	Kanniah Naidu Street	Basin Bridge Road	Peddu Naicken Street	896
23	7th	Portuguese Church Street	Ammen Covil Street	Old Jail Street	2,387
24	7th	Murugesu Mudali Street	Saravana Mudali Street	Peddu Naicken Street	407
25	7th	Ratna Mudali Street	Pattabirama Iyer Street	Murugesu Mudali Street	198
26	7th	Pattabirama Iyer Street	Peddu Naicken Street	Saravana Mudali Street	898
27	7th	Telegraph Abboyi Naidu Street	Do	The End	482
28	8th	Audiappa Naick Street	Wall Tax Road	Basin Street	150
29	8th	Vykuola Vathiar Street	Ramanen Street	Audiappa Naick Street	280
30	8th	Bommaller Street	Do	Do	230
31	8th	Nallanna Mudali Street	Perumal Covil Garden Street	Anna Pillai Street	490
32	8th	Perumal Covil Garden Street	Thirupalli Street	Do	700
33	8th	Reddi Ramas Street	Audiappa Naick Street	Dead End	550
34	9th	Vangai Chetty Street	Isaac Street	Arrack Godown Street	600
35	9th	Mannaru Street	Wall Tax Road	Kalappa Asari Street	480
36	9th	Nannian Street	Do	Edappalam Street	460
37	9th	Kalappa Asari Street	Mannaru Street	Rasappa Chetty Street	460
38	9th	Bangarammen Street	Bommu Chetty Street	Do	320
39	9th	Bommu Chetty Street	Wall Tax Road	Bangarammen Street	320
40	9th	Nainappa Maistry Street	Arrack Godown Street	Rasappa Chetty Street	430
41	9th	Subbu Chetti Street	Wall Tax Road	Bangarammen Street	350
42	9th	Venkalayarar Street	Do	Dead End	100

APPENDIX II.

TABLE 15.—List of roads and streets reformed with laterite during 1915-16—(Continued).

No.	Division.	Names of roads.	From	To	Length.
43	10th	Connoor Road	Subbaraya Chetty Lane	Cooks Road	Feet. 1,250
44	10th	Do	Subbaraya Chetty Street	Its Limit	1,350
45	10th	Paddy Field Road	Perambur High Road	Vadivelu Mudali Street	1,900
46	10th	Polu Naick Street	Puliantope Road	The Latrine	380
47	11th	Ananthakrishna Iyer Street	Tottikalai Kumaraappa Mudaly Street	Audiappa Naick Street	180
48	11th	Avadanam Paupier 2nd Lane	Subba Naidu Street	Avadanam Paupier Street	500
49	11th	Conjeevaram Muniswami Maistry Street	Ashtabujam Road	Its Limit	70
50	11th	Vijavigneswarar Covil Lane	Vijavigneswarar Covil Street	Its End	800
51	11th	Subba Naidu Street	Avadanam Paupier Road	Vijavigneswarar Covil Street	680
52	11th	Thirumalaiyappa Mudali Street	Perambore Barracks Road	Valakkarai Street	520
53	11th	Madurai Chetty Street	Ashtabujam Road	Vijavigneswarar Covil Street	400
54	11th	Rutlers Lane	Purasawakam High Road	Avadanam Paupier Road	1,100
55	11th	Dalay Road	Vichoor Muthia Mudali Street	Rutlers Lane	200
56	11th	Avadi Sreenivasa Iyer Street	De Mellows Road	Arimuthu Maistry Street	960
57	11th	Audiappa Naick Street	Ananthakrishna Iyer Street	Avadi Sreenivasa Iyer Street	618
58	11th	Padavattammen Covil Street	Padu Street	Cundappa Mudali High Road	950
59	11th	Do	Do	Chellappa Mudaly Street	900
60	11th	Dharmaraja Covil Street	Kalathiappa Mudali Street	Avadanam Paupier Road	240
61	11th	Vichoor Muthia Mudali Street	Dalay Road	Kalathiappa Mudali Street	340
62	11th	Thottikalai Kumaraappa Mudali Street	De Mellows Road	Vijavigneswarar Covil Street	1,431
63	11th	Chellappa Mudali Street	Strahan's Road	Venkamma Samaj Road	2,100

APPENDIX II.

TABLE 15.—List of roads and streets reformed with laterite during 1915-16—(Continued).

No.	Division.	Names of roads.	From	To	Length.
64	11th	Vijavigneswarar Covil Street	Avadanam Paupier 1st Lane	Choolai Bazaar Road	Feet. 2,500
65	12th	Salay Street	Vepery High Road	Maddox Street	700
66	12th	Lakshmana Gramany Street	Purasawakam High Road	Abraham Lane	400
67	12th	Abraham Lane	Do	The End	880
68	13th	Vandimoddi Street	Labbai Street	Lange Garden Road	500
69	13th	Nagamany Sirang Street	Munia Pillai Street	Nagappa Mudali Street	400
70	13th	Thiruvengada Naick Street	Marshall's Road	Velayutha Chetty Street	1,000
71	13th	Tholasinga Naick Street	Do	Do	1,000
72	14th	A new road "H" in filter bed	Road "D"	Road "J"	300
73	14th	A new road "J" in filter bed	Do "G"	Do "K"	825
74	14th	A new road "M" in filter bed	Do "G"	The End	680
75	14th	A new road "K" in filter bed	Do "D"	Do	600
76	14th	A new road "D" in filter bed	Do "A"	Road "B"	825
77	14th	Jagannathapuram School Street	Mc Nicholas Road	Latrine	700
78	14th	Jagannathapuram 2nd Street	Jagannathapuram School Street	The End	550
79	14th	Jagannathapuram 4th Street	Mc Nicholas Road	Jagannathapuram 2nd Street	630
80	14th	A new road in Rubbish Tip at Brick Kiln Road	Do	Do	176
81	14th	Othavadi Street	Madavakkam Tank Road	Connoor Road	4,400
82	14th	Madavakkam Tank Street	Do	The End	566
83	14th	Kilpauk Shaft Road	Do	Shaft 8	1,029
84	14th	Subbaraya Chetty Street	Othavadi Street	Chinnababu Street	1,350

APPENDIX II.

TABLE 15.—List of roads and streets reformed with laterite during 1915-16—(Concluded).

No.	Division.	Names of roads.	From	To	Length.
85	14th	Subbaraya Chetty 2nd Lane	Connoor Road	Subbaraya Chetty Street	Feet. 780
86	15th	Azizulmulk 2nd Street	Greams Road	Newly proposed Road	1,100
87	15th	Do 1st Street	Do	Do	1,080
88	15th	A new road leading	Mount Road	The Model School in Azizulmulk Street	700
89	15th	Azizulmulk 1st Lane	Do	Azizulmulk 1st Street	115
90	15th	Do 7th Lane	Do	Do	210
91	15th	Do 6th Lane	Do	Do	210
92	15th	Do 5th Lane	Do	Do	300
93	15th	Do 4th Lane	Do	Azizulmulk 3rd Lane	490
94	15th	Do 8th Lane	Do	The End	335
95	18th	Bakshi Ali Street	Azizulmulk 3rd Lane	Manicka Maistry Street	900
96	18th	Mahomed Hussain Street	Mahomed Hussain Lane	Mahomed Hussain Lane	900
97	19th	Damodar Street	Manicka Maistry Street	Kharayan Street	581
98	19th	Natchiyappa Chetty Street	St. Georges Cathedral Road	Paripuravanayagar Cowl Street	448
99	19th	Oliver's Road	Madavaperumal Cowl Street	Veeraperumal Mudali Street	2,500
100	20th	D'Silva Road	Luz Church Road	Beemanna Mudali Garden Street	880
			Do		80,887

APPENDIX II.

TABLE 15.—List of roads and streets regraded with gravel during 1915-16.

No.	Division.	Names of roads.	From	To	Length.
1	4th	L. gha Chetty Street	Mannady Street	China Bazaar Road	Feet. 2,600
2	4th	Do	Do	Ebramjee Sahib Street	3,320
3	4th	Krishnan Cowl Street	Angappa Nalick Street	North Beach Road	770
					5,690

APPENDIX II.

TABLE 15(a).—List of roads and streets tarred and retarred during 1915-16.

No.	Division.	Names of roads.	From	To	Length. Feet.
1	4th	Band Practice Road	Band Beach Road	To a length of 545 feet	545
2	18th	Police Commissioner's Office Road	Harris Road	Poonamallee High Road	2,000
3	17th	Wallajah Road	Triplicane High Road	Bells Road	2,000
4	17th	Mount Road	Government House Bridge	Wallajah Road (Retarring)	1,800
5	17th	General Patters Road	Mount Road	Woods Road (Retarring)	2,000
6	18th A	Mount Road	Messrs. W. E. Smith & Co	Messrs. Spenter & Co. (Retarring)	2,600
7	18th	West Coat Road	Pycrofts Road	Peters Road (Retarring)	1,650
8	18th	South Beach Road	Presidency College	Sunkwar Street	2,080
9	18th	Do	Sunkwar Street	Ice House Road	770
					16,295

APPENDIX II.

TABLE No. 16.

Table showing the monthly rainfall and water level in the Red Hills Lake.

Month and year.	Rainfall in inches.	Tank water surface average.	Remarks.
April 1915	0.06	43.99	These figures are according to the Government P. W. D. datum, which differs from the Municipal datum.
May	0.21	42.40	
June	0.85	41.26	
July	7.99	41.39	
August	1.76	41.40	
September	3.31	40.21	
October	2.64	41.20	
November	19.55	43.34	
December	1.02	44.47	
January 1916	0.04	44.03	
February	...	43.11	
March	...	42.41	

TABLE No. 17.

Statement showing the amount of water used for non-domestic purposes and billed for during the year 1915-16 and the total collections of the year.

Period.	QUANTITY OF WATER USED DURING THE YEAR.		Bills issued during the year.		Amount collected during the year.		REMARKS.
		Gallons.	Rs.	A. P.	Rs.	A. P.	
March	1915	1,77,27,333	13,295	8 0			
April	"	1,89,64,333	10,473	4 0			
May	"	1,73,38,666	13,004	0 0			
June	"	1,81,11,666	13,533	12 0			
July	"	1,68,38,666	12,629	0 0			
August	"	1,77,70,833	13,328	2 0			
September	"	1,61,15,000	12,086	4 0			
October	"	1,78,67,500	13,400	10 0			
November	"	1,36,62,166	10,246	10 0			
December	"	1,50,96,500	11,322	6 0			
January	1916	1,37,17,500	10,288	2 0			
February	"	1,29,07,833	9,680	14 0			
Water supplied & billed for by Special Works Department.		7,31,666	548	13 2			
		19,18,49,662	1,43,887	5 2	1,34,482	6 8	
Deduct remissions and refunds.			4	8 0			
Balance		19,18,49,662	1,43,882	13 2	1,34,482	6 8	
Total for 1914-15		18,57,23,169	1,39,250	10 0	1,46,585	11 11	

* Includes arrears of previous years collected during the year.

TABLE No. 16.

Table showing the prosecutions instituted during the year 1915-16.

Works and License Departments.

Sections. or By-laws.	Charge.	No. of Summonses granted.	Convicted.	Acquitted.	Withdrawn.	Party not found.	Undisposed of.	Fines imposed.	
								Rs.	A. P.
WORKS DEPARTMENT.									
195, 198, 207, 221 and 319	Unlawful entry and prohibition against contamination of water-supply, &c. ...	128	121	3	3	1	...	182	8 0
256	For failure to take precautions in case of buildings in ruinous state ...	4	3	...	...	1	...	7	0 0
264 to 271, 273, 286 287 & 424	Construction or re-construction of buildings without sanction ...	73	40	...	18	14	1	80	0 0
459	For unlawful removal of earth, sand, or other material from land vested in the Corporation or the deposit of matter or encroachment in or on river, estuary, &c.	5	5	...	...	...	...	11	0 0
LICENSE DEPARTMENT.									
247 & 248	For encroachment or projection ...	238	87	9	2,160	27	25	100	12 0
249 (b)	For putting up temporary pandals without sanction ...	46	9	...	36	...	1	2	8 0
252 & 253	For making holes and causing obstruction in streets ...	213	12	1	189	3	8	14	2 0
262	For using inflammable materials for buildings ...	1,044	45	...	955	27	17	24	4 0
312	For unlawful keeping of swine or animals so as to be a nuisance and feeding them with offensive matter.	6	4	...	2	...	...	2	8 0
Carried over		3,827	326	13	33,63	73	52	424	10 0

APPENDIX II.

APPENDIX II.

Works and License Departments.—(Contd.).

Sections. or By-laws.	Charge.	No. of Summonses granted.	Convicted.	Acquitted.	Withdrawn.	Party not found.	Undisposed of.	Fines imposed.		
								Rs.	A.	P.
LICENSE DEPARTMENT—Contd.)										
314	For using a place as a livery, hackstable or cattle yard without license or contrary to license	3,827	326	13	3,363	73	52	424	10	0
316	Construction or maintenance of stables, cattle yards, etc., contrary to act or rules	1,102	441	6	619	10	26	337	10	0
322 & 323	For carrying on dangerous trades without license	840	59	4	751	22	4	106	8	0
Do	For carrying on offensive trades without license or contrary to license	689	97	2	578	7	5	77	14	0
325	For having combustible depôts without license	486	27	1	437	19	2	15	8	0
328	For using a place as a bakehouse without license or contrary to license	152	29	1	112	5	5	50	0	0
	" " an aerated water factory without license or contrary to license									
344	For keeping open private market without license	19	6	...	13	...	...	11	0	0
350	For carrying on butcher's trade without license	175	16	...	136	13	10	24	0	0
By-law 44	For using an insanitary place for storing hides and skins	6	...	...	6	...	...	...	...	...
" 90-91	For keeping an oil mill or press in an insanitary condition	13	12	...	1	...	...	39	0	0
" 178, 179 & 180	For keeping cattle-yards and backstables in an insanitary condition	5	5	...	...	...	...	22	8	0
Total		7,317	1,020	27	6,017	149	104	1,112	2	0

APPENDIX II.

TABLE No. 18-A.

Table showing the number of electric lights fixed in 1915-16

No.	Locality.	No. fixed.
1	Ebramjee Sahib Street	4
*2	Light House Road	12
3	Sunkuram Chetti Street	2
4	Gosha Sahib Lane	2
5	Ranganayakalu Street	1
6	Anderson Street	3
7	Baddrian Street	2
8	Oil Monger Street	2
9	Muthumari Chetty Street	2
10	Jones Street	3
11	Savarimuthu Street	2
12	Amman Coil Street	5
13	Mullah Saib Lane	3
14	Nattu Pillar Coil Street	6
15	Moneghar Choultry Road	2
16	Basin Bridge Road	3
*17	Moore Road	11
*18	Fraser Bridge Road	9
19	Strotten Muthia Mudali Street	6
20	Chinnathambi Mudali Street	2
21	Reddy Raman Street	3
22	Anna Pillai Street	12
23	Thatha Muthiappan Street	4
24	Maniganda Mudali Street	1
25	Seenu Mudali Street	1
26	Narayan Mudali Street	3
27	Perumal Mudali Street	9
28	Devuraja Mudali Street	6
29	Venkatachallam Mudali Street	6
30	Nyniappa Naicken Street	13
31	Genguraman Street	1
32	Lakmudoss Street	1
33	Kope Venkatachallam Iyer Street	4
*34	Benfield Esplanade Road	8
35	Errabalu Chetti Street	8
36	Krishna Iyer Street	2
*37	General Hospital Road	6
38	Elephant Gate Street	12
39	St. Xavier Street	15
40	Geils Street	5
41	Krishnan Pagoda Street	6
42	Coral Merchant Street	15
43	Armenian Street	18
*44	Lights around Fort	36
45	Erusappa Maistri Street	27
Carried over		304

APPENDIX II.

No.	Locality.	No. fixed.
Brought forward		304
46	Wall Tax Road	35
47	Angappa Naick Street	10
*48	Band Beach Road	26
49	Mooker Nallamuthu Chetti Street	2
50	Vythinatha Mudali Street	4
51	Srinivasa Iyer Street	2
*52	Venkata Iyer Street	1
*53	Ponnappa Chetty Street	1
*54	Badriah Garden Street	2
55	Ayalur Muthia Mudali Street	1
56	Kandappa Chetti Street	1
57	Sengalaneer Pilliar Coil Street	4
58	Mannaru Street	1
59	Ekambareswarer Agraharam	3
*60	Katchaleswarer Agraharam	2
61	General Hospital Road near Memorial Hall	1
62	Kalathiappa Mudali Street	3
63	Rutler's Lane	2
64	Chulai Bazaar Road	12
65	Hunters Road	18
*66	Elephant Gate Road Level Crossing	6
67	Atkinson Road	3
68	Vepery High Road	17
69	Rundalls Road	18
70	Police Commissioner's Office Road	5
71	Sydenhams Road	29
72	Jerimiah's Road	9
73	Lauder's Gate Road	2
74	Pathala Ponniamman Coil Street	3
75	Karpura Mudali Street	1
76	Rotherdon Road	3
77	Venkatesa Gramany Street	1
78	Nariangadu Model Dwellings	1
79	Whannels Road	1
80	Male Asylum Road	9
81	Halls Road	9
82	Pantheon Road	27
83	Monteith Road	3
84	Chandrabhan Street	1
85	Binney's Road	6
86	Commannder-in-Chief's Road	13
87	Marshall's Road	23
88	Kennet's Lane	3
89	Ponniamman Coil Street	1
90	Casa Major Road	12
*91	Spur Tank Road	6
92	Poonamallee High Road	15
Carried over		662

APPENDIX II.

No.	Locality.	No. fixed.
93	McNicholas Road	662
94	College Road	9
95	Haddows Road	6
96	Anderson Road	3
97	Moore's Road	6
98	Graems Road	3
99	Nungambakam High Road	1
100	Mount Road and Thousand Lights Road	10
101	Army Clothing Board Lane	22
102	General Patters Road	1
103	St. Andrews Bridge	15
104	Iyah Mudali Street	4
*105	Agraharam Street, Chintadripet	2
106	Ellis Road	1
107	Nagappier Street	21
*108	Adams Road	4
*109	Veeraraghava Mudali Street	16
*110	Venkatesa Naick Street	5
111	Nallathambi Mudali Street	1
112	Edward Elliotts Road	2
113	St. George's Cathedral Road	4
*114	Triplicane Mada Street	12
115	Cutcheri Road	15
116	Murrays Gate Road	15
117	Chamier's Road	4
118	Brodies Road	3
*119	Edward Elliotts Road Junction of South Beach Road	2
120	Devady Gate Road	3
121	San Thome Road	1
122	Mowbrays Road	10
123	Appu Mudali Street	2
		3
Total		865

* Roads and streets where cables were laid and lights fixed departmentally.

APPENDIX II.

TABLE No. 19.

Total of License fees recovered and the number of applications or cases dealt with during the year 1915-16.

Total No. of applications or cases dealt with.	Number refused or undisposed.	Number sanctioned.	Purpose.	License fee.		
				Rs.	A.	P.
21	1	20	Aerated water and Ice factories	2,000	0	0
254	2	252	Bake Houses	1,880	0	0
5	...	5	Blasting powder	250	0	0
3	...	3	Bones	150	0	0
45	4	45	Brickkilns	410	0	0
2,386	30	2,386	Construction or reconstruction of buildings and huts	5,794	8	0
178	1	177	Breaking and hammering iron and manufacturing vessels out of iron.	1,770	0	0
288	...	288	Beating metals or manufacturing vessels, utensils, etc., with sheet metals	576	0	0
38	...	38	Candles	210	0	0
1	...	1	Carpet factories	4	0	0
25	1	24	Cart-stands	780	0	0
55	...	55	Casting metals	420	0	0
1	...	1	Cat gut	15	0	0
673	4	669	Cattle yards	4,373	8	0
89	...	89	Charcoal, coal or coke	1,244	0	0
13	...	13	Chemicals	325	0	0
62	...	62	Cloths manufacture in Indigo or other colours	264	0	0
4	...	4	Cocoanut fibre	20	0	0
12	...	12	Condiment factories	120	0	0
10	...	10	Cotton	205	0	0
71	...	71	Debentures registration	71	0	0
3	...	3	Dynamite	150	0	0
1	...	1	Fat	15	0	0
1,058	1	1,057	Firewood	3,506	0	0
5,280	44	5,236	Carried over	24,553	0	0

APPENDIX II.

Total No. of applications or cases dealt with.	Number refused or undisposed.	Number sanctioned.	Purpose.	License fee.		
				Rs.	A.	P.
5,280	44	5,236	Brought forward	24,553	0	0
187	...	187	Fireworks	504	0	0
11	...	11	Fish	33	0	0
50	...	50	Flour	250	0	0
4	...	4	Fulminate of mercury	200	0	0
4	...	4	Gas	200	0	0
54	...	54	Gilding and electroplating	270	0	0
83	...	83	Grave diggers	83	0	0
5	...	5	Gunpowder	500	0	0
198	...	198	Hack stables	702	0	0
11	...	11	Hair (souri)	55	0	0
2	...	2	Horns	100	0	0
17	...	17	Iron safe manufacturing	425	0	0
34	...	34	Lime	680	0	0
44	1	43	Markets (private)	3,750	0	0
384	...	384	Matches	1,521	0	0
34	6	28	Meat stalls, outside markets	140	0	0
818	...	818	Obstruction, scaffolding, etc., under sections 252 and 253	2,928	0	0
64	...	64	Oil petroleum under Municipal Act	560	0	0
74	12	62	Do under Petroleum Act	2,040	0	0
106	...	106	Oil mills and presses	1,425	0	0
100	...	100	Oils of sorts	1,180	0	0
10	...	10	Oil boiling	50	0	0
3	...	3	Offal	150	0	0
599	...	599	Paddy boiling	695	0	0
5,573	...	5,573	Pandals	10,448	4	0
1	...	1	Paper factories	5	0	0
8	...	8	Pitch	200	0	0
29	...	29	Plumbers' licenses	290	0	0
13,737	68	13,674	Carried over	53,937	4	0

89

APPENDIX II.

Total No. of applications or cases dealt with.	Number refused or undisposed.	Number sanctioned.	Purpose.	License fee.		
				Rs.	A.	P.
13,737	68	13,674	Brought forward	53,937	4	0
48	...	48	Pottery kilns	215	0	0
1	...	1	Rags	5	0	0
123	...	123	Skins, hides and leather	4,010	0	0
32	...	32	Spirits and turpentine	800	0	0
72	...	72	Straw, dry leaves, etc.	405	0	0
8,773	...	8,773	Sunshades	6,091	0	0
3	...	3	Sulphur	75	0	0
1	...	1	Swine	3	0	0
12	...	12	Tar	300	0	0
154	...	154	Timber, bamboo, palmyra rafters, etc.	4,845	0	0
2	...	2	Wool	100	0	0
2	...	2	Contractor's registration fee	2	0	0
342	3	339	Washing soiled clothes	Free.		
335	...	335	Butchers' licenses under sections 342 and 350	Free.		
399	...	399	Arrear collections	1,250	4	0
25	25	...	Advance collections	426	8	0
19,056	91	18,965	Less the amount refunded	72,465	0	0
				180	8	0
			Total	72,284	8	0
			Total of fees collected under "Licenses, Registration, etc.," including private markets and cart-stands.			
			During the year 1914-15	69,601	4	0
			Do. 1913-14	69,368	4	0
			Do. 1912-13	67,699	2	0

* Includes fees for Cart Stands Private Markets viz., Rs. 4,530-0-0.

APPENDIX II.

TABLE No. 20.

People's Park.—Statement of receipts and disbursements for the year 1915-16.

Disbursements.	Amount.	Receipts.	Amount.
Establishment	RS. A. P.		RS. A. P.
Allowance ...	4,519 7 4		
Labour.			
Gardeners, &c.	3,258 5	Sale proceeds of hay and grass...	1,210 7 3
Cost of food for animals	48 0 0	Payment by contractor for menagerie collections	7,295 15 0
Feeding animals and birds	12,360 10 6		
Purchasing animals and birds	2,559 10 0	Miscellaneous	658 2 3
Other charges.			
Clothing for sergeants and peons.	97 2 9	Government grant for the upkeep of the Zoological collections	2,000 0 0
Weeding and cutting grass	956 9 11		
Sundries, &c.	438 2 9		
Repairing gravel walks	33 13 8		
Do. bandstand, seats	0 4 7		
Do. lamp posts	19 11 6		
Purchasing tubs, manure, &c.	249 7 8		
Improving and covering foliage shed	217 4 11		
Constructing masonry stands	42 10 3		
General repairs to cages	1,487 1 10		
Stationery	26 4 3		
Printing	19 9 0		
Advertisement	24 14 0		
Fees for band	860 0 0		
Removing silt from the lake near menagerie	2,060 0 5		
Tools and plant	24,759 14 5		
	0 13 10		
Total	29,280 3 7	Met from the Corporation funds...	18,115 11 1
		Total	29,280 3 7

TABLE No. 21.

Napier Park.

Disbursements.	Amount.	Receipts.	Amount.
Establishment	RS. A. P.		RS. A. P.
Allowance ...	572 5 5		
Labour.	120 0 0	Sale proceeds of hay and grass.	
Gardeners, &c.		Miscellaneous	114 11 2
Clothing for peons	666 10 3		
Contingencies	30 5 5		
	3 6 5		
Tools and plant	700 6 1		
		Met from the Corporation funds...	1,278 0 4
Total	1,392 11 6	Total	1,392 11 6

APPENDIX II.

TABLE No. 22.

Robinson Park.—Statement of receipts and disbursements for the year 1915-16.

Disbursements.	Amount.	Receipts.	Amount.
Establishment	RS. A. P.		RS. A. P.
	1,026 8 1	Sale of grass, &c.	292 12 0
Labour.		Met from the funds of the Corporation	4,652 0 10
Gardeners, Engine Driver and Lascar	2,594 7 0		
Oil for lighting	10 0 9		
Clothing for peons	20 2 4		
Purchasing wire fencing	172 3 2		
Repairs to hand cart	35 14 4		
Renewing oak matting and other improvements of Fernery	34 0 0		
Repairing Lamposts, Lanterns and purchasing chimneys	12 6 10		
Purchasing tubs, manure, plants, &c.	175 1 4		
Fees for playing band...	525 0 0		
Extending Foliage shed, repairing Bridgegate and Portico	50 15 4		
Repairing and painting seats, &c.	7 9 10		
Stationery	6 12 11		
Printing	2 4 3		
Fuel, &c., for oil engine	27 11 8		
Tools and plant	3,918 9 9		
Total	4,944 12 10	Total	4,944 12 10

TABLE No. 23.

Loane Square.—Statement of receipts and disbursements for the year 1915-16.

Disbursements.	Amount.	Receipts.	Amount.
	RS. A. P.		RS. A. P.
Allowance	60 0 0	Met from the funds of the Corporation	1,360 10 4
Labour	250 10 4		
Purchasing tubs			
Painting railing gates and white washing			
Fees for band playing	1,050 0 0		
Tools and plant			
Total	1,360 10 4	Total	1,360 10 4

APPENDIX II.

TABLE No. 24.

CORPORATION WORKSHOPS.

Statement showing the number and cost of works executed during 1915-16.

	Number.	Cost.		
		Rs.	A.	P.
I. Departmental Works ...	3,005	1,24,842	4	8
II. Private Works ...	146	2,701	2	9
III. Foreign or Advances Recoverable Works ...	43	653	14	3
Total...	3,194	1,28,197	5	8
New Works ...	1,301			
Repairs ...	1,893			

TABLE No. 25.

CORPORATION WORKSHOPS.

Statement showing some of the more important works done during 1915-16.

No.	Particulars.	Estimate Amount.	Expenditure during the year.
		Rs.	Rs.
1	Manufacturing 30 rubbish carts, 20 box carts and 10 night-soil carts ...	13,150	12,064
2	Manufacturing 40 wooden drain planks with bamboos, 4 iron hand carts with buckets, 20 night-soil buckets with covers and 50 corrugated iron dust bins large, for Conservancy Overseer, 2nd Division ...	1,054	653
3	Manufacturing 6 wooden hand carts without boxes, 6 wooden hand carts with boxes, and 6 iron hand carts with buckets for Drainage Superintendent ...	1,704	1,452
4	Manufacturing 200 pairs cast iron naves for conservancy carts and 200 axles for rubbish carts for Chief Superintendent, Cart Depots ...	5,900	4,744
5	Constructing a corrugated iron shed 25' x 50' for storing ropes, twine, etc. ...	2,410	1,899
6	Manufacturing 10 single bullock night-soil carts for Chief Superintendent, Cart Depots ...	1,570	1,394
7	Do do do ...	1,600	1,577
8	Manufacturing 1,500 cast iron gratings, large ...	1,568	59
9	Do 10 single bullock rubbish carts (wooden body without axle and nave) for the use of Health Department. ...	1,380	1,045
10	Constructing a corrugated iron shed for storing electrical materials at Stores ...	2,650	1,876

APPENDIX II.

TABLE No. 26.

CORPORATION WORKSHOPS.

Statement showing the number and description of carts, buckets, dust-bins, &c., manufactured during 1915-16.

Particulars.	No.
Box carts, wooden ...	20
Rubbish carts ...	41
Hand carts, with buckets iron ...	21
Do box, wooden ...	38
Do without box ...	15
Trolleys, wooden ...	6
Barrel carts ...	4
Night-soil carts ...	38
Do buckets, with covers ...	250
Night-soil pails ...	84
Dust-bins, large ...	50
Gate doors, wrought iron ...	141
Lanterns ...	87
Manhole covers, diameter, 18" ...	4

TABLE No. 27.

CORPORATION WORKSHOPS.

Statement of New Machinery purchased during 1915-16.

Description of Machine.	No.	Value.
		Rs. A. P.
NIL.		

APPENDIX III.

Report from the Sub-Assistant Inspector of Schools, Triplicane Range, on the working of schools aided and maintained by the Corporation during the official year, 1915-16.

SCHOOLS MAINTAINED BY THE CORPORATION.

1. *Number and Strength.*—Four schools were opened during the year, all in March 1916. The total number of schools now maintained by the Corporation on 31st March 1916, comes to 16.

The necessary particulars with regard to their strength are given below :—

Serial No.	Name of School.	Standards.	No. on rolls on 31st March 1916.		Total.	Average attendance.
			Boys.	Girls.		
1	Vallabha Agraharam	Infant to Fourth				
2	Chetput					
3	Periamet		141	25	166	134
4	Chintadripet		170	36	206	170
5	Purasawalkam		91	49	140	100
6	Mylapore		161	31	192	136
7	Nungambakam		200	2	202	169
8	Goyatope		177	6	183	136
9	Thousand Lights		177	41	218	163
10	Venkataram Pillai Street		131	38	169	139
11	Bell's Road		104	85	189	86
12	Malayappen Street		74	84	158	87
13	Sanjeeviroyanpet		71	39	110	78
14	Korukupet		81	13	94	84
15	Angappa Naicken Street		173	7	180	145
16	Salaivinayagarkoil Street		160	24	184	132
			14	...	14	14
			6	6	12	12
		Total ...	1,931	386	2,317	1,785

Out of these 16 schools, the schools at Bell's Road, Angappa Naicken Street and Salaivinayagarkoil Street, were opened in the last week of March 1916, and hence their strength is low. In the case of the Malayappen Street school the strength has fallen down by about 20 per cent. on account of some disunion among the staff as against the remarkable growth it showed during the previous year. It is hoped that this school will early gain back its popularity.

Of these 16 schools the schools at Chetput, Periamet and Thousand Lights, are intended mainly for the panchamas and the one at Malayappen Street has also a good number of panchamas. In the other schools a good many of the pupils attending them are of the other backward classes and these backward classes of pupils are all admitted free and thus it may be said in a way that the opening of these schools has made education free to the poor and backward classes.

APPENDIX III.

building. All these buildings have more or less open space around them of which a portion is allotted for garden and the rest for play-ground.

In the case of the schools at Angappa Naicken Street and Salaivinayaga Koil Street newly opened, arrangements for permanent latrines have not yet been made.

All the schools have their full supply of furniture made to them and the equipment for these schools is satisfactory and up-to-date. But in regard to apparatus and appliances, the earlier opened schools have their full supply. In regard to others, sanction has been made for a supply of apparatus and appliance to the value of Rs. 350 for each school and arrangements are being made for the supply.

Staff and Instruction.—Each of these schools is staffed with five teachers and a Handicraft Instructor who gives instructions in carpentry. The staff has been efficient, most of the teachers employed having been trained or professional qualified. The Chetput school alone has got two additional teachers on account of the increased strength it has. In this connection I have the honour to submit that the instruction given in carpentry in the Chetput School and the progress made by the pupils therein is worth noting. In the case of the schools at Vallabha Agraharam and Periamet, a fair progress is made in carpentry.

Syllabuses of instruction were drawn up in conformity with the scheme and followed. Some of the finished articles of carpentry made by the pupils at the Periamet school were sold in auction during the year and the amount realised into the Corporation treasury.

Finances.—The particulars regarding this item are not available at this office.

2. *Schools aided by the Corporation.*—Nil. (Vide para. 2 of G. O. No. 820-M., dated 25th May 1911.)

General Remarks.—The schools were paid surprise visits by the Sub-Assistant Inspector of Schools and the working of the schools has been carefully watched by them. The Inspector of Schools has also paid some visits to the schools and to the aided schools. The copies of the reports on the Corporation schools made on their annual inspection have been duly forwarded to the President, Corporation of Madras. During the year standardisation has been made with regard to the supply of apparatus and appliances, stationery articles and forms. By the opening of the Corporation schools a good many of the backward and poor classes of pupils are given education free in the Municipality and it is hoped that by opening the remaining schools required under the scheme, more pupils will have the opportunity for getting free education.

APPENDIX III.

Statement No. 1 relating to general statistics in Educational Institutions in the area under the control of the Corporation of Madras, (1915-16).

Institutions.	1915.			1916.			Total population of School-going age.		REMARKS.
	Number of Schools.	Number of pupils on 31st March.		Number of Schools.	Number of pupils on 31st March.		Boys.	Girls.	
		Boys.	Girls.		Boys.	Girls.			
<i>Elementary Schools for Boys.</i>									
Municipal Aided from Municipal Funds	12	1,570	220	16	1,931	386			
Others:—	...	...	...	...	...	...			
(1) Recognized	182	14,289	2,491	192	15,488	2,468	39,970	37,829	
(2) Un-recognized	119	3,214	113	61	2,367	108			
Total	313	19,073	2,824	269	19,786	2,962	...	...	
<i>Elementary Schools for Girls.</i>									
Municipal Aided from Municipal Funds	...	...	...	...	...	...			
Others:—	...	...	...	...	...	...			
(1) Recognized	55	495	7,835	56	721	7,953	39,970	37,829	
(2) Un-recognized	...	...	...	3	82	290			
Total	55	495	7,835	59	753	8,243	...	...	

Statement No. 2 giving particulars as to the qualifications of the teaching staff employed in institutions maintained or aided from Municipal funds, (Corporation of Madras.),

Class of Institutions.	Number of teachers employed.	Number possessing professional certificates.	Number possessing general education certificates only.	Number entirely uncertificated.	REMARKS.
<i>Elementary Schools for Boys.</i>					
Maintained by the Corporation.					
{ Males ...	89 (a)	69	19 (a)	..	1 (a) Includes 15 Handicraft Instructors.
{ Females ...	..	..	..	..	There are also 4 Kindergarton Instructors, 1 Supervisor and 2 Gymnastic Instructors, common to all the schools.
Aided by the Corporation.					
{ Males ...	..	..	..	..	(b) Includes 2 Gymnastic Instructors, 8 Technical Instructors and 1 Drawing Master.
{ Females ...	602 (b)	246	290	66	
Aided from Provincial Funds.	45	19	21	5	
{ Males ...	..	..	..	..	
{ Females ...	..	..	..	..	
Total	691	815	309	67	
{ Males ...	45	19	21	5	
<i>Elementary Schools for Girls.</i>					
Maintained by the Corporation					
Aided by the Corporation					
Aided from Provincial Funds.					
{ Males ...	..	..	..	..	
{ Females ...	17 (c)	12	4	1	(c) Includes 1 Gymnastic Instructor and 2 Drawing Mistresses.
Total	858	271	75	12	

APPENDIX IV.

ANNUAL REPORT OF THE ROYAPETTAH HOSPITAL FOR THE YEAR 1916-16.

Accommodation.—The accommodation is for 76 patients, made up as follows:—

68 beds for Indians.

8 beds for Europeans and Eurasians.

At times beds have to be made on the floor to accommodate any superfluous number that may be admitted.

Patients Treated.—In-patients 2512 and out-patients 62,844 were treated during the year, against 2,580 and 60,145, respectively in the previous year. There was a slight decrease in the number of in-patients but an appreciable increase amounting to 2,699 in the out-patients. The decrease is due to the admission of very chronic cases of typhoid fever and kala azar.

Operations.—A total of 4,397 were performed during the year, 1,063 in-patients and 3334 out-patients. The corresponding figures for last year were a total of 4,379, made up of 1,261 in-patients and 3,118 out-patients. There was a falling off of 198 operations among the in-patients, due, it may be said, to a fewer number of patients seeking operative interference.

Amount of Recoveries.—The amount recovered from patients treated in the special ward came to Rs. 538-8-0, that is, at eight annas a day. A larger sum might with advantage and without any individual hardship, be charged for such patients, say Re. 1 per diem.

Establishment.—This is sufficient. The *toties* are a difficult lot to deal with, they have become very independent and leave the hospital without notice whenever the whim takes them.

Epidemics.—Small-pox was very prevalent and of a virulent type. Cholera, too, was present for a time of the year; several of such cases were successively treated in the Isolation Hospital by the Senior Sub-Assistant Surgeon Subbhan Khan by saline injections. I was sorry to lose the services of this subordinate, who has done very good work in the Kistnampet Hospital. Typhoid fever was rife in Triplicane; anti typhoid vaccinations were undertaken by me at this hospital, *i.e.*, Royapettah, as a prophylactic measure, but very very few people took advantage of this offer, notwithstanding it was to be performed gratuitously.

Inspections and Remarks by Visitors.—Visits were paid by the President of the Corporation of Madras, whenever any improvements or alterations in the hospital were required. The Surgeon-General paid a visit to investigate the suitability of the out-patient department for the large number of people seeking medical advice and treatment. For the daily attendance of 350 to 400 patients, the space in this department is considerably cramped and inadequate.

APPENDIX IV

General Remarks.—During the year, one of the medical staff of this hospital, Senior Sub-Assistant Surgeon N. Ramaswami Naidu, was honoured by Government by the distinction of Rao Sahib. A complete X-ray plant has been installed and is in daily use. I have been lucky in procuring one of my subordinates to undertake the task of working the apparatus. He performs this work without any allowance; I approached the President with a request for some monetary recognition of this extra work, outside the province of the legitimate duties of the subordinate in question, but the Standing Committee of the Corporation of Madras decided none was necessary. It is intended to broach the subject again at a suitable season. Further remarks and suggestions are forthcoming but as probably no attention would be paid to these, a discreet reticence is considered expedient.

MADRAS,

20th June, 1916.

C. DONOVAN, LT.-COL., I.M.S.,

Superintendent, Royapettah Hospital.

CONCISE ANNUAL REPORT OF THE CHINTADRI PET DISPENSARY FOR THE YEAR 1915-16.

(1) *Accommodation.*—Accommodation is sufficient.

(2) *Admission.*—The total number of patients treated and the daily average attendance were 35214 and 262.17 as against 33876 and 266.67, respectively, during the previous year. The number of operations performed was 1,517 as against 1,271 during the previous year. This shows that the dispensary is popular.

A statement showing the classes of diseases treated is attached.

(3) The dispensary was inspected often by the Surgeon, 3rd District.

(4) There have been some changes in the establishment during the year. In place of the European nurse whose services were dispensed with, there were appointed one compounder, one native nurse, one ayah and one peon.

(5) *Finance.*—The total cost of maintaining the dispensary for the year was Rs. 4,132-7-10 as against Rs. 3,767-1-8 in the previous year. The variation is explained under the following headings:—

(a) *Establishment.*—The expenditure under this head was Rs. 2,106-1-4 as against Rs. 2,054-9-8 in the previous year.

(b) *European Medicines.*—The cost of this was Rs. 1,378-8-7 as against Rs. 981-5-8 in the previous year. The difference in the total expenditure is due to the great difference in the cost of European medicines which was unavoidable on account of the large number of patients treated.

(c) *Bazaar Medicines.*—Expenditure under this heading was nil in both the years.

(d) *Miscellaneous Charges.*—These amounted to Rs. 647-13-11 as against Rs. 731-2-4 in the previous year. The difference of Rs. 83-4-5 was probably due to the cost of varnishing the dispensary furniture done last year.

APPENDIX IV

(c) *Buildings and Repairs.*—Nil during both the years.

(f) *General Remarks.*—Nil.

CHINTADRI PET DISPENSARY,

13th June, 1916.

E. VIJAYAM,

Sub-Assistant Surgeon in Charge

CONCISE ANNUAL REPORT OF THE WASHHERMANPET DISPENSARY FOR THE YEAR 1915-16.

1. *Accommodation.*—This dispensary was opened by the Corporation of Madras on 2nd February 1913 to treat malarial cases only. Since 1st January, 1914, necessary provision was made to treat all cases in a rented building at No 50, Tiruvotthiyur High Road. Owing to want of sufficient accommodation in this building, the Surgeon, 1st District designed a new dispensary with necessary alterations in the Old Police Station at 37, Tiruvotthiyur High Road, and it has been occupied since 1st December 1915.

2. *Inspections.*—During the year under report the Surgeon, 1st District inspected the dispensary every week; and the President and the Health Officer, Madras Corporation, at frequent intervals.

3. *Number of Patients treated as compared with the previous year.*—The total number of patients that attended the dispensary was 19,136 against 19,338 in the previous year; the decrease is due to a fall in the case of malaria which was not so prevalent in this part this year.

YEAR.	MALARIA.
1914-15	8,394
1915-16	4,821
	3,573

4. *The most common diseases treated were:—*

	No.
Malaria	4,821
All other diseases of the digestive system	2,103
Other diseases of the skin	2,058
Ulcers	1,990
All other diseases of the ear	1,471
All diseases of respiratory system	1,096
Diseases of the connective tissue...	931
Injuries (General and Local)	930
All other general disease	910

The maximum number that attended on any one day was 203. The daily average was 139.2 against 135.7 in the previous year.

5. *Operations.*—The total number of operations performed during the year under report was 579.

APPENDIX IV.

6. *Establishment*.—No change.

7. *Work done by the Midwife*.—The midwife attached to this dispensary attends to the surgical dressings of women and children from 7 to 10 A.M. daily; and conducted 138 cases of out-door labour for the year under report.

MADRAS,

26th April, 1916.

MUHAMMAD ALLY,
Sub-Assistant-Surgeon in Charge of
Washermanpet Dispensary.

Countersigned

R. BRYSON MAJOR, I.M.S.,
Surgeon, 1st District,
Madras.

CONCISE REPORT OF THE BAULIAH NAYUDU DISPENSARY, VEPERY,
FOR THE YEAR 1915-16.

The dispensary is situated in a central place, quite convenient to the people residing in Purasawalkam, Vepery, Chulai and Kilpauk, and even those residing in distant places such as Otary, Perambur, New Town, Egmore, Nungambaukam, Chetput and Pudupet, resort to the dispensary.

Establishment—consists of the following :—

one Senior Grade Sub-Assistant Surgeon.

one Second do do

three Compounders.

one Nurse and midwife.

one Male Ward Attendant.

one Female do

four Peons.

one Sweeper.

The total admissions of the out-patients treated during the year was 43,491 against 54,579 in the previous year. The decrease is due to the remarkable fall under malaria and other fevers—4,600 in the former and 4,226 in the latter were less than the previous year.

2,168 minor operations were performed during the year against 2,142 in the previous year.

The maximum number of patients treated on any one day was 359 on 20th October 1915.

Though it was notified that the services of the midwife are available at all hours, no one seem to utilise her services probably due to the several private midwives practising in the neighbourhood.

VEPERY,
12th June 1916.

S. SETH,
Senior Sub-Assistant Surgeon in-Charge.

J. MILTON,
Civil Surgeon Ag: Presidency Surgeon,
2nd District Madras.

APPENDIX IV.

*Report on the working of the Rajah Sir Ramaswami Mudaliar
Lying-in-Hospital for the official year 1915-16.*

Accommodation.—There are fifty beds in the hospital including eight beds in the contagious sheds.

Attendance.—894 out-patients and 1,229 inpatients were treated during the year as against 838 out-patients and 1,269 in-patients in the previous year.

The daily average sick was 21.82 in-patients and 5.29 out-patients as against 21.27 and 3.87 respectively, of the previous year.

Operations.—102 obstetric operations were performed during the year with a maternal mortality of 4. The principal obstetric operations performed were :

Forceps	...	...	...	...	62
Podalic version for transverse presentation	...	...	...	...	6
Podalic extraction	...	...	...	...	3
Evacuation of uterus	...	...	...	...	16
Craniotomy	...	...	...	...	1
Other operations	...	...	...	...	14

The expenditure of the institution during the year under report was in excess of that of the previous year by Rs. 4,317-1-0. This increase is due to an increase under the head 'Repairs to buildings etc.' The new nurses' quarters were completed and handed over for occupation in December last. There is accommodation for the two staff nurses and twenty-four probationary nurses.

General Remarks.—Since last October the Corporation are training Indian midwives in this hospital, such that after training they may scatter themselves in the city and may be readily available to the public. At present there are 18 midwives stipended by the Corporation under training and it is hoped in the course of a few years there will be a sufficient number to meet the requirements of the city.

H. S. HALGE,

Surgeon, in-Charge 1st District,
and Surgeon, Raja Sir Ramaswamy Mudaliar
Lying-in-Hospital.

ANNUAL REPORT OF THE GEORGETOWN DISPENSARY FOR THE
YEAR 1915-16.

Accommodation.—The same as the previous year.

Repairs to buildings.—Necessary repairs were carried out.

Attendance.—42,111 out-patients were treated during the year, and the daily average attendance was 302.63; as compared with the figures for the year 1914-15, there is a falling off in the number treated by 935, and an increase in the daily average attendance by 2.88.

APPENDIX IV.

The following table shows the most common diseases treated during the years 1914-15, and 1915-16 :—

Class of disease.	No. treated in 1915-16.	No. treated in 1914-15.
Diseases of the Digestive system ...	6,704	4,337
Diseases of the ear ...	4,884	3,764
Malaria ...	4,528	8,011
Diseases of the Respiratory system...	4,510	2,246
Injuries general and local ...	3,526	3,552
Diseases of the skin ...	2,923	1,679
Ulcers ...	2,759	2,658
Diseases of the connective tissue ...	2,364	1,718
Pyrexia of uncertain origin ...	1,601	1,995

Comparing the figures for the two years, it will be seen that there is a marked falling off in the number of cases of malaria and pyrexia of uncertain origin; in the year 1915-16, while most of the other figures show a marked increase, the reduction is due to the less prevalence of malaria during the year and to the treatment of such cases in Tondiarpet and Washermanpet by the Malaria staff and in the dispensaries in those localities.

Operations. —2,882 minor operations were performed—an increase by 381 over the year previous.

The statements showing the finance, attendance and diseases treated, are attached.

MADRAS,

14th June 1916.

H. S. HALGE, L. M. S.
Civil Assistant Surgeon,
in-Charge 1st District, Madras.

APPENDIX IV.

MADRAS, 16th May 1916.

From

AYURVEDA BHUSHANA PANDIT C. V. SUBRAMANIA SASTRY, A. K. A. C.,
Senior Physician, S. K. P. D. Dispensary,
Madras.

To

THE PRESIDENT,
Corporation of Madras,
MADRAS.

Sir,

I have the honour to submit herewith the Administration Report for the year 1915-16, showing the work of Sree Kanyaka Parameswary Ayurvedic Free Dispensary, Madras.

2. This institution was established in the year 1898. This was the first of its kind while the others are only of a more recent date. This institution is helping the rich and poor alike, and has gained wide popularity in Madras which will be evident from the undermentioned figures showing the total number of patients treated from 14th August 1898 to 1916.

Years.	Males.	Females and Children.	Total.
1898	8,330	6,402	14,731
1899	35,245	35,728	70,973
1900	32,799	38,923	71,732
1901	29,568	39,198	68,761
1902	28,773	38,352	67,125
1903	31,683	41,131	72,814
1904	35,822	37,400	73,222
1905	36,413	36,624	73,037
1906	34,985	34,933	69,918
1907	34,351	35,008	69,359
1908	36,041	36,395	72,436
1909	31,967	36,276	68,243
1910	30,345	38,236	68,581
1911-12	26,086	36,322	62,408
1912-13	26,436	38,230	59,666
1913-14	25,035	35,041	60,076
1914-15	25,177	35,504	60,681
1915-16	27,413	35,257	62,670

APPENDIX IV.

Besides the above figures I would like to show plainly the increased number of patients during this year when compared with those of the previous years which clearly shows the way how this dispensary is working.

	1914-15.	1915-16.	Increase.
Total number	... 25,727	28,375	2,648
Daily average	... 166.24	171.69	5.45

3. It is from this dispensary a start was given after two years of its opening in 1898 to equip a college for the training of Ayurvedic Physicians. It ran through successfully for about a period of 12 years and many physicians who are now successfully practising in this and other sister Presidencies such as Bengal, Punjab, United Provinces, Burma, etc., were the products of the said College.

4. Many respectable gentlemen inspected this dispensary and expressed themselves highly pleased with its way of working. Some of them are enumerated below :—

1. Mr. L. Gillam, A. D. C. to H. H. the Maharaja Gaekwar of Baroda 15th November 1910.
2. Rao Bahadur A. Srinivasa Charloo, Retired Inspector General of Registration and Mujary Secretary of Mysore Government, 3rd April 1903.
3. Dewan Bahadur P. Rajaratna Mudaliar Avargal, C.I.E., Retired Inspector General of Registration, 16th June 1903.
4. Dr. Sir S. Subramania Iyer, Kt. C.I.E., 15th October 1903.
5. The Hon'ble V. Krishnaswamy Iyer, Kt. C.S.E., 30th October 1903.
6. Lieut.-Colonel W. King, I.M.S., late Sanitary Commissioner to the Government of Madras, 30th August 1905.
7. Miss A. S. Kugler M.D., Guntur, 3rd October 1906.
8. Dewan Bahadur K. Kristnaswamy Rao, late Dewan of Travancore, 2nd October, 1907.
9. Sir P. N. Kristnamurthy, late Dewan of Mysore, 7th January 1908.
10. Sir V. P. Madhava Rao, C.I.E., Dewan of Baroda, 24th January 1908.
11. Hon'ble Shif-a-ul-mulk Zynulaludin Sahib, B.A., Sheriff of Madras, 2nd July 1914.
12. Kaviraj Jamini Bhusharao Kaviratna, M.A., M.B. & C.M. President, All-India Ayurvedic Conference, Madras, 23rd December 1915.
13. Mahamahopadhyaya Sree Pramathanada Tharka Bhushan, Calcutta.
14. Sree Prayagadisjee, Mahant of Tirupati, 29th December 1915.
15. Hon'ble Mr. A. S. Kristna Rao, Additional Member of the Legislative Council, 4th February 1916.

APPENDIX IV.

I herewith enclose a tabular statement of the patients who attended the dispensary, the diseases for which they were treated, the average daily attendance and the income and expenditure of the institution.

I have the honor to be,

Sir,
Your most obedient servant,
C. V. SUBRAMANIA SASTRY,
Senior Physician.

Madras 10th May 1916.

From

THE REV J. S. M. HOOPER, M.A.,
Honorary Secretary and Treasurer,
Kalyani Hospital, Mylapore, Madras.

To

THE PRESIDENT,
Corporation of Madras.

Sir,

I have the honour to submit the returns and report on the working of the Kalyani Hospital during the year 1915-16. Dr. Simonsen has been in charge of the hospital throughout the year, assisted by Miss C. James, Indian Lady Apothecary. The number of in-patients shows a considerable increase as compared with the previous year, and there is every reason to think that the hospital is increasingly gaining the confidence of the public of all classes. The income received from local sources has also shown some improvement, this being partly due to the fact that among the in-patients an unusually large number were from the well-to-do classes. Contributions from such quarters are the more needed as the majority of the patients, both in-door and out-door, continue to be from the poorer sections of the community.

Once again the Committee has to record the death of one of its members. The Rev. J. Cooling had been Chairman of the Committee from the commencement, and before the hospital was built and during all the subsequent developments of its work his was one of the strongest influences moulding its policy. It was entirely in keeping with the modesty of his character that no one should know of the generosity that led him, in association with Mrs. Cooling, to endow a bed in the hospital in perpetuity some years ago. The endowment remains as a concrete witness to his devotion to the hospital; but the Committee will long miss his sympathetic knowledge and wise control.

During the year the hospital was seen by a number of visitors among the rest by Her Excellency, Lady Pentland, who left on record her appreciation of the hospital buildings and of the work that is being done.

I have the honor to be,

Sir,
Your most obedient servant,
J. S. M. HOOPER,
Honorary Secretary,
Kalyani Hospital, Mylapore.

APPENDIX IV.

SAN THOME DISPENSARY,
SAN THOME,

From

MADRAS, 15th May 1916

RAO BAHADUR G. NARAYANASWAMI CHETTI GARU,
Honorary Secretary, San Thome Dispensary,

San Thome, Mylapore.

To

THE PRESIDENT,
Corporation of Madras,
MADRAS.

SIR,

I have the honour to submit herewith the report on the working of the San Thome Dispensary, for the year 1915-1916.

2. *History.*—This charitable institution was founded by the late Bishop Strachan, M.D., in 1874, apparently in connection with the S.P.G. Mission, and is of great value, not only to the general public, but also to the several charitable institutions in and around San Thome and Mylapore, and the poor of all classes of the community without distinction to caste, creed or nationality. It is in existence for the past 42 years affording medical aid and surgical relief to the sufferers that resort to the place. It is now supported by the Corporation and by the public and managed by a strong Committee, the Health Officer, Corporation of Madras, being its chairman.

3. *Accommodation and Repairs.*—The building in which the dispensary is located is the property of the S. P. G. Mission. It is suitable to its requirements. It is opened daily from 7 to 10 A.M. for treatment, medical advice, &c. As the mission has rented the building for a nominal rent of Rs. 10 per mensem, the Committee has been pleased to spend Rs. 279-8-0 and carry out the principal and urgent repairs from the dispensary fund. The building is now in a fair condition.

4. *Total treated.*—The number of new admissions during the year under report was 10,474 against 10,412 in the previous year and the average daily attendance was 64.52 against 64.33 in the previous year.

5. *Operations.*—603 operations of minor nature were performed during the year.

6. *Income.*—The total income of the year from all sources is Rs. 1,349-11-0.

7. *Establishment.*—The staff consists of a Sub-Assistant Surgeon, a Compounder and two menials.

8. *Inspection.*—The dispensary was inspected on several occasions by the Health Officer of the Madras Corporation and by the members of the committee during its working hours.

APPENDIX IV.

9. *General Remarks.*—The dispensary continues to do its good work to all in and around San Thome and Mylapore, and maintains its popularity as usual, but its support is inadequate to meet the finances in the way of repairs to buildings, purchase of medicines, furniture, &c., to create a new life to the dispensary.

10. The Sub-Assistant Surgeon Mr. F. Imanuel Pillai in charge of the dispensary spares no pains, time or trouble to make the institution popular among the poor classes and does his work with interest.

11. The members of the committee thank the Commissioners of the Corporation of Madras for their monthly grant of Rs. 66-10-8 and an annual grant of Rs. 300 for the up-keep of the dispensary.

12. Statements showing the attendance of patients treated, the finance and the diseases treated are attached.

I have the honor to be,

Sir,

Your most obedient servant,

G. NARAYANASWAMI CHETTI,

Honorary Secretary,
San Thome Dispensary.

REPORT OF THE WORKING OF THE VENKATARAMANA DISPENSARY.
MYLAPORE, DURING 1915-16.

The Hon'ble Mr. T. V. Seshagiri Aiyar Avargal, High Court Judge, Madras, having kindly agreed to accept office, as a member of the Board of Trustees of the Venkataramana Dispensary, was made a member accordingly. The Board thanks him for his kindness.

2. The dispensary continued to do its useful work. The daily average attendance of patients rose from 123 in the previous year to 143 during the year under report. All classes of people receive aid. Panchamas, Mahomads and other non-Brahmins resort as freely as Brahmins. All receive uniformly kind and considerate treatment.

3. The income of the dispensary from interest on invested capital slightly increased owing to the increased rate of interest on loans given on mortgage of house-property in Madras. Rs. 28,000 are invested in this manner and Rs. 3,000 are with Nattukottai Chetty firms. The Corporation of Madras was kind enough to continue its contribution of Rs. 100 for the year.

4. A larger quantity of medicines was prepared during the year, there being an increase of Rs. 350 under this head.

5. Arrangement was made towards the close of the year for the treatment of minor surgical cases. People in this part of the city are beginning to avail themselves of this aid as well.

6. Vaidya Visarada Bharatha Sastri, one of the Physicians of this dispensary was employed by Rao Bahadur Calavala Cunnun Chettiar Avargal, as Head-Physician of a similar charitable dispensary opened by him at Triplicane. Mr. Bharatha Sastri's services are, it is understood, much appreciated there. A passed student from the Venkataramana Medical School is employed as his assistant.

THE VENKATARAMANA DISPENSARY
MYLAPORE,

12th June 1916.

A. KRISHNASWAMI AIYAR,

for Secretary.

ST. THOMAS CONVENT DISPENSARY, SAN THOME, REPORT, 1915-1916.

The dispensary continues its good work. It is temporarily placed but in a short time will be permanently established on the ground floor of the same building as being more convenient to the patients.

The total number of patients treated during the year was 9,687 against 11,377 in the previous year. The decrease due chiefly to malaria and allied fevers may be attributed to the anti-malarial measures, cleaning of wells and tanks carried out by the Corporation during the year.

The principal diseases treated during the year were :—

Dysentery	... 227	Rheumatic affection	... 368
Diarrhoea	... 351	Tubercular diseases	... 89
Anaemia	... 872	All other general diseases	
		including worms	... 1,138
Malaria	... 458	Diseases of the skin	... 622
Injuries	... 339	Digestive system	... 478
		Diseases of the eye	... 480
		Diseases of the ear	... 510
Operations	145		

The average daily attendance was 181 of which 149 out-door and 32 in-door.

In the new accommodation two separate apartments are being provided for males and females with a verandah for the patients in waiting.

The chief object of the institution was to procure relief to the poorer classes of the locality, without distinction of caste or creed, but some respectable members of European, Brahmin and Hindu, etc., families attend and we receive no aid for treatment.

The dispensary is opened daily from 8 to 11-30 A.M. and from 5 to 6-30 P.M. Two European sisters, an Indian Nun and a female servant are in nursing attendance during these hours daily.

During the year there were 48 lepers who came to the dispensary for treatment—this increasing number of such patients circulating about, leads one to desire that some means be put within their reach so as to decide them upon going to some Asylum, where they would find relief for themselves and so prevent the risk of contagion among others. The usual reply given is:—no means of passage. A certificate of admission or a free pass of transport would seemingly better matters.

The convent has no funds and besides the small allowance from the Corporation, there is no other source of help towards the dispensary. An increase of this allowance so as to cover the cost of remedies and dressings (leaving aside the cost of the staff,) would enable the sisters to co-operate still more with the Corporation's work for the benefit of the people of the locality.

M. FLORA FUNN.

Statement showing the diseases treated in the undermentioned Hospitals and Dispensaries during the year 1915-16.

APPENDIX IV.

Names of Diseases.	Hospital and Dispensaries.													Total.
	George Town Dispensary.	Washermanpet Dispensary.	Italian Naidu Dispensary.	Chinadhalpet Dispensary.	San Thome Dispensary.	St. Thomas' (Convent) Dispensary.	Kangasir Hospital.	Madarai Hospital.	Sri Kanyaka Parvathiammai Dispensary.	Venkateswara Dispensary.	Kapattin Hospital.	Isolation Hospital.		
INFECTIVE DISEASES.														
Cholera	5	322	1,276	870	368	227	64	470	410	2,403	368	8	16	
Dysentery	642	1	181	152	21	30	1	114	105	1,911	24	2	7,105	
Typhoid fever	185	23	...	...	...	...	...	...	...	...	138	...	2,890	
Gonorrhoea	...	6	4	6	13	48	...	...	...	117	...	...	133	
Kala-azar	...	...	...	...	...	...	...	...	...	...	...	...	79	
Leishmaniasis	...	...	...	...	...	...	...	...	...	...	...	...	...	
Malaria	1,625	4,831	3,271	1,696	438	478	151	5,132	429	3,061	213	3	25,037	
Plague	...	...	...	...	...	...	...	...	...	...	...	...	...	
Pyrexia of uncertain origin	20	17	3	79	2	...	9	...	14	58	3	...	287	
Rickettsial fever and Rheumatism	1,401	94	2,148	3,340	356	...	101	...	1,712	2,832	365	...	12,839	
Scarlet fever	1,107	...	1,045	292	356	...	...	...	27	6,690	403	...	10,122	
Smallpox	33	7	...	...	...	...	...	...	...	...	...	...	264	
Syphilis (primary and secondary)	314	35	190	127	46	110	1	34	2	853	188	...	1,913	
Tuberculosis of the lungs	20	27	31	64	5	29	5	10	56	47	182	...	421	
Other Tubercular Diseases	1	3	38	45	66	...	...	...	31	105	...	...	889	
All other Infective diseases	...	...	...	...	...	...	...	...	...	...	1	...	217	
NON-INFECTIVE DISEASES.														
Goitre	414	16	843	33	113	872	30	312	677	2,523	219	...	5,978	
Diabetes	5	...	11	28	8	...	...	13	...	23	20	...	144	
Gravida (Non-Malignant)	188	2	7	4	...	...	2	...	254	44	61	...	608	
New growths (Malignant)	1	7	2	1	...	277	...	...	13	32	40	...	372	
All other Non-Infective diseases	1,63	913	3,135	2,745	1,130	1,138	6	9,515	194	6,407	219	...	31,184	
ALL DISEASES.														
Diseases of the nervous system	747	617	1,961	612	206	12	11	269	1,222	1,917	188	...	7,022	
Diseases of the eye	890	344	690	620	215	480	2	271	1329	905	261	...	6,811	
Diseases of the ear	4,881	1,471	3,886	2,974	799	780	...	9,813	862	1,923	329	...	20,413	
Diseases of the nose	154	16	161	31	25	...	...	8	866	318	122	...	1,810	
Diseases of the throat	28	21	39	32	20	128	4	25	343	70	52	...	557	
All Diseases of the respiratory system except Pneumonia and Tuberculosis of the lungs	4,210	1,006	4,886	5,557	1,124	29	215	1,310	1,508	5,061	586	...	26,364	
Dyspepsia	461	127	...	...	451	602	11	...	1,015	2,133	321	...	6,131	
Diarrhoea	555	386	...	...	864	561	49	...	1,077	1,946	299	...	4,286	

APPENDIX IV.

SYSTEMS.	HOSPITAL AND LOCAL.																			
	All other diseases of the liver	Appendicitis	All other diseases of the digestive system	Inflammation and suppuration of the lymph glands	Goitre	Bright's disease	All diseases of the urinary system	Hydrocele	Other diseases of the generative system	Diseases of the organs of locomotion	Disease of the connective tissue	Fleas	Other diseases of the skin	All other local diseases	Injuries (General and Local)	Poisons	Labor	Operations	Total...	
	2	11	...	...	...	17	185	6	...	...	...	...	...	...	3,525	...	...	...	...	42,111
	6,704	2,103	9,511	8,337	2,291	478	197	1,988	1,203	4,854	1,482	...	...	...	...	...	...	...	...	...
	191	69	179	168	40	314	5	...	...	...	...	...	...	...	...	...	...	...	...	...
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Note.—Statistics relating to the Victoria Caste and Gosha Hospital have not been furnished.

APPENDIX IV.

Name of Hospital.	Total number treated.		Average daily attendance.		Percentage of deaths to total in-door treated.	Income.			Expenditure.							Total.															
	In-door.	Out-door.	In-door.	Out-door.		From subscription, &c.	From Government.		From Municipality.	Reimbursement.	Date.	European Medicines.	Bazaar Medicines.	Miscellaneous.	Repairs to Buildings, &c.																
							Rs.	A. P.									Rs.	A. P.	Rs.	A. P.	Rs.	A. P.	Rs.	A. P.	Rs.	A. P.	Rs.	A. P.			
Boys' Hospital	2,512	22,844	71.28	374.03	8.70	634	8.70	47,431	8	11,499	12	9,026	12	6,186	6	1,189	8	10	2,778	10	4	1,544	13	5	4,140	0	0				
George Town Dispensary	...	42,171	...	302.03	...	...	...	12,358	10	11	4,578	3	9	...	...	...	...	...	...	...	...	...	...	...	...	12,808	10	11			
Wardman's Dispensary	...	19,136	...	139.2	...	...	...	4,714	7	2	1,987	8	9	...	...	...	...	...	...	...	...	...	...	...	5	4	714	7	2		
Basildon Dispensary	...	64,461	...	273.25	...	...	...	9,801	11	5	8,403	4	0	...	...	...	...	...	...	...	...	...	...	...	...	2,207	11	8			
St. Thomas' Dispensary	...	10,174	...	61.52	...	...	...	1,110	0	0	812	0	0	...	...	...	...	...	...	...	...	...	...	...	...	8	0	1,580	9	0	
St. Thomas' General Dispensary	198	8,703	30	149	9.8	...	...	240	0	0	1,636	0	0	370	0	0	120	0	0	...	...	...	...	...	...	45	0	3,177	0	0	
Venkataramana Dispensary	...	21,637	...	143	...	...	...	100	0	0	3,719	8	9	...	...	...	1,883	0	1	...	...	...	...	...	...	389	4	6,576	0	5	
Indra Hospital	309	...	13.28	...	9.70	...	...	2,288	10	0	3,306	10	2	123	14	5	...	...	...	1,667	11	0	...	...	...	...	2,988	10	6		
Chinnai Hospital	...	35,214	...	262.17	...	...	...	4,052	13	0	2,116	1	4	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1,182	7	10	
Basir Hospital	1,229	...	21.87	5.29	1.18	2,938	2	2	0	0	1,613	8	7	3,018	13	0	...	...	...	3,270	10	0	10,260	4	6	21,251	8	0			
Kalyan Hospital	578	9,112	12.6	25	0.9	10,376	9	0	...	...	600	0	0	7,899	8	0	924	11	6	...	...	...	...	...	...	...	...	2	10,854	6	2
Sri Kanyaka Ponnammal Dispensary	...	28,378	...	171.89	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...

CORPORATION OF MADRAS.

Report on the general conditions of the city of Madras with regard to malaria at the end of 1915.

I was in charge of the anti-malaria work in the City of Madras during the calendar year 1915. With a balance of Rs. 1,20,000 only on the 1st April 1915 out of the total Government grant of Rs. 4 lakhs, and with no prospects of my further grants from Government during the continuance of war, it became very necessary to adopt some scheme of retrenchment which, while effecting some real economy, would not, at the same time, interfere materially with the main plan of the anti-malarial campaign, at least so far as it concerned those measures of proven utility which were already in operation. Accordingly the following changes were effected from 1st April 1915.

1. Three Malaria Supervisors instead of four were working since 1st April 1915, and from 13th May 1915, the number was further reduced to two.
2. Six nurses on Rs. 100 per mensem each were retained as against nine on Rs. 200 each per mensem. This was with effect from 8th March 1915.
3. The original 28 gangs of six men and one maistry each, or 168 men and 28 maistries, entertained for tank cleaning and bush-cutting, were reduced to six gangs of ten men and one maistry each, or 60 men and six maistries. So also the number of coolies entertained for petrolising dangerous pools and puddles was reduced to six maistries and 42 coolies.
4. Only one Surveyor was retained out of four that were employed before 1st April 1915.
5. The services of the Sub-Assistant Surgeon who was Laboratory Assistant were dispensed with from 1st March 1915. It was also suggested that the work of investigation may be suspended for the time being; but this work could not altogether be suspended in view of the fact that it formed at once the basis and the test of the success of the anti-malarial measures that were inaugurated from time to time. The details of the staff in 1915 as compared with that in 1914 is shown in detail in Appendix I. After effecting measures of retrenchment mentioned above, the budget estimate of the department for 1915-16 was Rs. 1,43,000 as against Rs. 3 lakhs of 1914-15. I shall return to this subject later in the report.

Malaria investigation.—Although the Sub-Assistant Surgeon who was assisting the Special Malaria Officer in the laboratory work was withdrawn, the mosquito and malaria survey could not be stopped, and had to be carried on thereafter. This was conducted directly by me with the help of the laboratory attendant and three mosquito catchers. The work consisted mainly in marking down malarial zones and the breeding grounds of dangerous anophelene mosquitoes in and around these zones; as for example, in certain areas of Mylapore, Purasawakam and Tondiarpet. This was done with a view to undertake energetic

APPENDIX V.

and prompt preventive measures in order to avert or cut short a probable or break of malarial fevers. In addition to this routine work of general mosquito and malaria survey, certain special investigations as detailed below were also conducted:—

1. An investigation into the question of "Buckingham Canal as a breeding ground for mosquitoes" was undertaken and a separate report was submitted to the Malaria Board. (Copy enclosed in Appendix 2.)

2. A mosquito survey on the premises of the Madras Club and surroundings was undertaken upon the requisition of the Secretary of the Club and the following letter sent to the President of the Madras Corporation shows the results of this investigation and the recommendations thereupon.

Copy of letter No. 147, M. of 1915, dated 20th August 1915, from the Special Malaria Officer to the President, Corporation of Madras.

"With reference to letter No. L660, dated 30th July 1915, from the Secretary, Madras Club, I have the honour to inform that the ponds and wells within the enclosures of the Madras Club, have been regularly oiled by our staff. During my examination of these places recently I found a few culex larvæ in the ponds and wells within the Club premises, and no anophelene larvæ. But in and near the pond close to the Laundry there were a few tubs holding a little water in which anophelene Rossii were found breeding.

"The cess-pits are daily cleaned and are free from mosquito larvæ except in two instances (a) near the latrine and (b) near the servants' dressing room. On the morning of my inspection I showed the former to a gentleman who, I think, was the Secretary of the Club.

"Besides these there are ponds outside the Club premises in all of which anophelene mosquito larvæ were found. These are for instance:—

1. A pond north of Langham's Hotel.
2. A shallow pond north of 1. and
3. In Lodd Krishnadosh Bungalow, Royapettah High Road.

"Remedial measures.—The ponds in the Madras Club Compound are not of any use and if the Club authorities mind it these can be filled up and this I think is by far the best thing to do. They are kept free from anophelene larvæ by being regularly petrolised by our staff. This is after all a temporary measure and its continuation depends upon the working of this department.

"As regards ponds (1) and (2) outside the compound, these are not very big ones and may be notified for being filled up if you approve of the same.

"No. 3 belonging to Lodd Krishnadosh is a very big and deep one and filling this means something like Rs. 8,000 or Rs. 10,000. I had seen the owner of this and he has promised me to clean it and look after it. I am, however, writing to him about this.

"With regard to wells, either within or outside the enclosures of the Club, I would recommend that the mouths be hermetically sealed in all cases of

APPENDIX V.

disused ones or those in which pumps are already fitted. As for others, the few leaves, etc., floating on the water may be removed and fish introduced.

"The drains require cleaning every day so as not to allow stagnation of water."

It is not known what steps the authorities of the Madras Club have taken in the directions indicated above.

3. The small puddles formed in the bed of a storm water ditch starting at the junction of the Royapettah High Road and Venkatachala Moodali Street, and running eastwards to join the Buckingham Canal afford equally good facilities for the breeding of the anophelene mosquitoes.

4. Cooum River: the investigation into "the Cooum River as a breeding ground for anophelene mosquitoes" was completed during the year and a report on this was submitted to the Malaria Board (Copy enclosed—Vide Appendix 3.)

Mosquito survey and resurvey.—The mosquito survey and re-survey was completed in the following division:—

Georgetown.—Here a large number of domestic and public wells mostly in a neglected state formed very good centres for mosquito life chiefly of anophelene Stephensii and a few anophelene Rossii.

The old moat within the enclosures of the Salt Depot west of Wall Tax Road.

Triplicane.—The following were the chief centres where the anophelene mosquito larvæ were found breeding:—

1. The Government ponds in Chepauk, especially the one near the Agricultural office.
2. The big swamp in, what is called, 'Thimmappa Naick's Garden' to the north of the newly constructed Police Lines in Ice House Road (now being reclaimed.)
3. The marsh near the Mortuary in Ice House Road (now reclaimed and dry).
4. Elephant tank. (Prince of Arcot) in Barber's Bridge Road (now reclaimed).
5. Few domestic wells.

Chintadripet.—1. The puddles and swamps formed in the bed of the Cooum River and also along the moss covered edges of the water channel.

2. Domestic wells, again.

Mylapore.—1. Disused garden wells and ponds.

2. Marshy low grounds in Edward Elliot's Road and Royapettah High Road during the monsoons.

Re survey.—A re-survey of all tanks, ponds and disused wells in Tondiarpet, Pурсawakam and Mylapore was undertaken and completed during the year under review.

Mosquito survey.—Anophelene Stephensii is the chief well breeder whereas Rossii is the most common species distributed in other collections of water.

Anopheles listoni were found breeding in certain garden wells in Tondiarpet and Mylapore. The chief malaria carriers found are *Anopheles Culicifacies* and *Anopheles Fuliginosus*. *Anopheles Barbarostris* is found to breed in a few shady ponds covered with weeds and moss. *Anopheles Ludlowi* and *Jamesii* are much rarer varieties and the latter were found breeding in the Buckingham Canal to the west of the Barber's Bridge.

Malaria Survey—Random Sampling.—Captain Hodgson, I.M.S., before he was relieved of his duties here had carried out an examination of spleen in children in different parts of the city and as many as 353,35 children had been examined. This was done with a view to determine the worst affected parts of the city, and he had then submitted a report on the same. A combined and simultaneous survey of spleen index and parasite rates was undertaken by me with a view that it may serve as a guide for conducting anti-malarial operations urgently needed in certain parts of the City infected with malarial fevers. For this as many children as were available in a selected locality were examined for enlargement of the spleen and at the same time a blood smear was taken from the finger of each child and examined for malaria parasites. Of course, the number of children available for such a simultaneous survey is very much less than that available for a mere spleen survey, as the fear of a pin prick, though harmless and practically painless, scares away a good many cases.

The examination was conducted in certain selected localities in the midst of or in close proximity to marshy tracts and inhabited by the poorer classes of people, who would be more likely than others to be unhealthy generally, and also from a malarial standpoint. The following table gives details of investigation in this direction done during the year under review :—

Division.	Place.	Number examined for enlarged spleen.	Number with enlarged spleen.	Per cent.	Number of blood smears taken.	Number infected.	Per cent.
1	Flag Staff Street	21	1	4.7	21	4	19.4
1	Kasimode Kuppam	38	5	13.2	38	2	5.3
1	Palm Kuppam	35	4	11.4	35	3	8.6
2	Near Old Fiji Depot Paracheri	40	19	47.5	40	5	12.5
11	Ponnan Paracheri	38	5	13.2	36	4	11.1
11	Vethyan Paracherri	22	3	13.6	22	1	4.5
11	Ottary Ubrapalayam	49	5	10.2	45	3	6.7
11	Graman Paracherri	47	8	17.0	45	9	20.0
11	Seman Paracherri	38	2	5.3	38	1	2.6
11	Flowers Road	41	1	2.4	41	1	2.4
11	Madavakam Tank Road	21	3	14.3	21	1	4.8
11	Ubrapalayam	42	3	7.1	42	4	10.8
11	Cooum Cherry	37	4	10.8	37	1	2.7
11	Yemi Cherry	30	1	3.3	30	1	3.3
11	Graems' Cherry	40	2	5.0	40	1	2.5
13	Swami Perumal Reddy Street, in Paracherri.	44	1	2.3	43	3	7.0
	Total	583	67	11.5	574	42	7.3

These figures show that these tracts are undoubtedly malarious and measures have to be taken to render them healthier. But it has to be noted at the same time that these figures are nothing so high as those obtained in such malarial tracts as Ennore where the splenic index and parasite rate went up as high as 98 per cent. and 45 per cent., respectively.

Dispensary Statistics.—The Sub-Assistant Surgeons in charge of three malaria dispensaries were asked to send as many blood smears as possible from patients who resort to them for treatment for fever. This was done with the following objects :—

1. To gauge the extent of the actual prevalence of malarial fevers in any locality.
2. To discover any sudden rise in the incidence of malaria in places where malaria is more or less epidemic.
3. To find out the nature of the infection prevailing during a given season or quarter.

The details of this work are tabulated as under :—

Dispensary.	Total Number of blood smears examined.	Number infected.	Per cent.
1st Dispensary, Dhobipet	16	2	12.5
2nd " Washermanpet	29	9	31.3
3rd " Royapuram	285	115	40.3
4th " Purasawakam	246	123	50.0
Total	576	249	43.2

Dispensary.	April.	May.	June.	July.	Aug.	Sep.	Oct.	Nov.	Dec.
	B.T.	M.T.	Q.	B.T.	M.T.	Q.	B.T.	M.T.	Q.
1st Dispensary	...	...	...	...	...	...	1	1	...
2nd "	2	1	...	2	2	...	2	...	...
3rd "	6	3	...	28	1	...	65	10	...
4th "	4	...	2	16	2	...	85	12	3
Total	12	4	2	46	5	...	153	23	3

From the above table it may be seen that benign tertian infection is more common one in Madras than other varieties, although in winter months there is a slight increase of the sub-tertian. In this connection it is to be noted

APPENDIX V.

that these blood smears unlike those in random sampling, were obtained from those who happened to be suffering from fever and who resorted to the dispensaries for treatment. This examination was of great help in our anti-malarial campaign; for, as soon as signs of increased fevers were forthcoming, necessary measures were at once taken to cut short what might have otherwise flared into an epidemic. Thus in Purasawakam there was a rise of fevers during the quarter ending with September 1915 and the examination of blood smears as stated above, gave us the clue to our work.

Again in March 1915 there was rise in fevers and fever mortality in a small Paracherri in Cochrane Basin Road (called Mulakuthalam) surrounded all round by the Railway borrow pits and pits formed by excavation of earth, close to dwelling huts and holding water, in which numbers of anophelene mosquitoes were found breeding. All breeding places were regularly attended to and systematic quininising was taken on hand. In two or three weeks the sharp outbreak ended.

Again in 2nd Division (or Washermanpet) fevers were found on the increase in the weavers' quarters in the months of October and November 1915 and an examination of the area revealed that in a number of dye-pots, (earthenware pots buried in the ground flush with the ground level) allowed to hold water and left stagnating, large numbers of anophelene *Stephensii* were found breeding. So, these were regularly petrolised until we were able to get them filled up or covered hermetically. Very soon after, the long-continued outbreak of malaria here came to an end.

Dissection of mosquitoes.—Adult mosquitoes were caught from dwelling places and the known Malaria carriers were dissected in the Laboratory for purposes of examination of the malaria parasite. In all cases the salivary gland were exposed and examined but in not a single one of them were any sporozoites found. The following table gives details:—

Quarter.	No. caught	An. Rossii.	No. Dissected	Culicifacies.	Listoni.	Fuliginosus.	An. Stephensii.
1st. ...	293	258	35	33	...	1	1
2nd. ...	619	596	23	21	1	1	...
3rd. ...	401	373	28	5	1	1	21
4th. ...	596	505	91	73	16	1	1
Total. ...	1909	1732	177	132	18	4	23

Anti-malarial measures.—The usual preventive operations undertaken by the Department are as follows:—

1. Cleaning of tanks, ponds and wells.
2. Petrolising.
3. Clearing rank vegetation.

APPENDIX V,

4. Introduction of larvicidal fish and ducks.
5. Reclamation.
6. Drainage.
7. Quininisation.

These measures were mainly confined to the three known malarial zones in Madras, namely, Tondiarpet, (including 1st, 2nd and 3rd Divisions), Mylapore (including Royapettah 19th Division and part of Triplicane, 18th Division) and Purasawakam (including Choolai and Vepery and part of Perambur Division).

Cleaning of tanks and ponds.—Those tanks and ponds which are not used for purposes of irrigation and which, being mostly small and shallow and always covered with weeds, form very good breeding grounds for anophelene mosquitoes are marked out and prophylactic measures as are suitable to each particular case adopted. Our effort is at present to clean and improve these bad places rather than to deal with them in a radical manner.

In my report for the year 1914 I stated that all tanks in Mylapore and Purasawakam were cleaned once and those in Tondiarpet thrice. The majority of these had however to be cleaned again as often as 3 times and in some instances as often as 5 or 6 times during the year 1915.

In addition, the cleaning of as many as 92 tanks in different parts of Madras for the first time had to be taken up either at the request of the owners or at our own instance. Thus 416 tanks were re-cleaned in all, as shown below:—

Tondiarpet	...	325	Georgetown	...	2
Purasawakam	...	26	Triplicane	...	4
			Vepery	...	8
Mylapore	...	50	Perambur	...	1

In appendix 7 is given the details showing the number of times each tank was cleaned.

It is sometimes said that after the 1st, 2nd or 3rd cleanings it would be enough to clean the tanks once in three months. This appears to be too long an interval especially in summer; and so far as tanks in Madras are concerned, it would perhaps be more correct to say that they require cleaning on an average once in 6 or 8 weeks. Of course this necessarily means a lot of recurring expenditure to the Corporation; but, as a means of lightening the burden, may be considered the advisability of taxing the land owner for cleaning the tanks and ponds in his holdings. Captain Hodgson, I.M.S., in his report on "Some deductions from the vital statistics of the Madras City from 1893-1914" suggested that the Municipality should charge a license fee for each tank and be responsible for keeping the tank in proper condition and that the staff to clean the tanks be paid from out of this collection. But it is doubtful if the Corporation can undertake this step in the present circumstances. Attempts were made to clean tanks after notification under the Municipal Act but this necessarily involved resorting to legal steps and the cleaning by the Corporation at owner's cost. And again it was not possible to collect monies spent on this behalf unless through a Civil Court. For all these reasons there were long

delays and cleaning of tanks could not be done promptly, and therefore the Corporation have at present undertaken this task free of charge to the owners of the tanks and ponds.

Cleaning and re-cleaning appear to be most promising and effective of all anti-malarial measures, save, of course, those measures of proven utility, such as, reclamation and drainage. Attention, however, is to be paid to cleaning the pond or tank so as to get rid of all weeds, leaves, grass, etc., and to allow free access of sunlight and air. To this latter effect the overhanging branches of trees and shrubs growing along the bund and the slopes of a tank must be thoroughly cleared. Although it is a measure that requires constant attention, yet, if carried out well, it is sure and effective in its results. The mosquito larvæ cannot thrive where they are not protected from direct sunlight, as, for example, in tanks cleared of weeds and such other growths that shelter the larvæ from the sun; neither do they thrive where they are exposed to enemies like fish.

Unfortunately it happens too often that tanks, etc., are not properly looked after; for, so long as it continues to subserve its chief purpose of irrigating a garden or other agricultural land the owners of those lands (who are mostly non-resident,) do not seem to be yet alive to the danger of such tanks to residents round about. Thus we are obliged to have recourse to certain measures of temporary utility such as petrolising, or using some other larvicidal agent.

Petrolising.—In the beginning of our work it was of great importance to stop mosquito breeding anyhow, and that promptly. Measures like filling or reclaiming and even cleaning, though all very effective would all mean time; whereas petrolising though temporary, was prompt; hence it was that petrolising was conducted on a far larger scale than at present.

Yet petrolising work could not be stopped altogether; for, soon after the monsoons a large number of puddies and pools are formed which, though temporary, are yet dangerous breeding grounds. As it is impracticable at present to prevent the formation of such temporary puddles and pools, the only remedy lies in making them innocuous from a malarial stand-point by petrolising them and thus keeping them free from mosquito larvæ. In the last three months of 1915: many as 510 places in Tondiarpet, 440 in Mylapore and Triplicane and 280 in Purasawakam were petrolised weekly; and this number included some pond wells and a large number of cess-pools. Some of the chief localities where such pools and puddles are formed are—

1. Government House compound.
2. Marshy land near the Government Record Office.
3. Madavakam Tank.
4. Spur Tank.
5. Land to the north of the College for Women (now being reclaimed).
6. Land to the west of the office of the Inspector-General of Police.
7. Otary Nullah.
8. Storm water drain in Royapettah.
9. Portions of Buckingham Canal.
10. Portions of Cooum River.

It has to be mentioned in this connection that petrolising was found necessary in those cases where the water was found unused and stagnating, while in the case of ponds and wells which are in constant use and which tap a perennial source of water supply as in irrigating tanks and wells in the various parts of the city, cleaning seems to ensure greater success as an anti-malarial measure. For one thing petrolising is objected to, because of its supposed deleterious effect on vegetable growth, and because the water surface gets coated with an oily scum, making the surface unsightly and the water unfit for human consumption. As is well-known, mosquitoes can rarely or never breed in places where the surface of water is kept absolutely free from weeds, grass and other vegetation and is freely exposed to the rays of the sun.

Bush cutting.—This is more in the nature of a sanitary measure intended to remove resting places of the mosquito before it is able to get access to the human dwellings. Areas of 1,16,160 sq. feet of ground in Tondiarpet, and 6,52,482 sq. ft. in Mylapore were so treated. But to pursue this measure with any appreciable success means an employment of a very large number of hands which neither the malaria grant nor the Corporation can afford. It is desirable that each householder should keep his compound and back-yard clean and free from such rank vegetation. Conformably to a communication received from the Director of Agriculture concerning the great danger caused to agriculture from the wild growth of water hyacinth, an attempt has been made to clear these wherever found in our areas of work. Clearing was done in a square area of 98,835 sq. ft.

4. (a) *Introduction of Larvicidal fish*:—A report on the utility of certain kinds of small fish as larvicides, was submitted to the Malaria Board along with the report on the anti-malarial operations for the 1st quarter of 1915. (Copy enclosed in Appendix '4'). The tanks and ponds existing for years in the midst of a large number of cocoanut gardens and bungalow compounds required no special introduction of fish as they were thriving there already. We were concerned chiefly with wells, domestic or public, especially in parts of Georgetown and Tondiarpet, where these wells were found to afford excellent facilities for the life of the anophelene *Stephensii*. In the early days of our work the methods adopted were either to cover the mouth of a well hermetically with or without a pump, or to completely fill them up. The great opposition to and unpopularity of the measure were, reasons why the letting in of certain larvicidal fish, reported to have been effective in certain other malarial tracts, was started in 1913-14, as an experimental measure. As it was soon found that this was not only a promising measure but also a popular one it was carried on a wider and more extended scale so that as many as 16,063 wells have in all been so treated up to the end of December 1915.

But here again we had to encounter another difficulty. In some cases, especially where the wells are filthy and disused, the fish thus introduced died out very soon and it required careful watching of every well from time to time to see that the fish put in continued to live and thrive. It was, therefore found necessary that, as the work of fish introduction was pushed on in one part of the city, a survey of the wells, where fish were previously let in, should be conducted in certain other parts. The object of this survey was twofold, firstly to

APPENDIX V.

mark the wells that were rendered fishless; and secondly to discover if those wells, where fish were alive, were rendered innocuous. In those wells where fish were dead they were re-introduced and the results were all mapped out for future reference. From what has been said it is obvious that this is a measure which requires constant attention and supervision.

Re-survey of wells stocked with larvicidal fish during the year 1915, disclosed the following:—

			per cent.
Number of wells examined ...	...	5,810	
Do of wells in which fish were found alive ...	...	5,420	93.2
Do in which fish were dead ...	...	390	6.7
Do in which mosquito larvæ were found ...	...	438	7.5

From the above it is seen that (1) fish continue to breed in a large proportion of wells; (2) mosquito larvæ are found in very few ones and (3) in these cases the fish are found invariably to have died.

Introduction of ducks.—At the suggestion of the Hon'ble Surgeon-General and Sanitary Commissioner, experiments have been undertaken to test the efficacy of ducks as larvicides. This experiment was based upon the successful results obtained in America where 'wild ducks'—"mallard"—were the birds used. I consulted Dr. Henderson, Superintendent, Government Museum, regarding this, and I was informed by him that these birds are exotic in Southern India and only migrate occasionally to parts of north-western India during winter. Further they are difficult of control and maintenance. He therefore advised me to experiment with domestic ducks, which are tame birds and easily obtained in any market. It was therefore suggested that the common domestic ducks be selected, and with the approval of the Sanitary Commissioner for the Government of Madras and the President of the Madras Corporation, experiments were commenced with a dozen of these birds. Moreover in view of the fact that Professor Geddes, during his last visit to Madras, laid stress on this aspect of the anti-malaria problem, it was thought desirable to try and know how far these ducks were useful as larvicidal agents in Madras. The experiment was started on 29th November 1915 and is being continued still; but, thus far the results are not encouraging. Certain ponds free from all fish but full of anophelene larvæ are selected and ducks are left there all day long, no food being supplied to them, except once at about 7 in the evening. It is noticed that the larvæ flourish in spite of the presence of these hungry ducks.

Two gentlemen in Mylapore had introduced ducks in their ponds; but during my examination of these places larvæ were found thriving very well. This experiment is being continued and the results being noted, although it must be confessed that the results are so far not promising. Moreover, as Dr. Henderson well observed in an interview I had with him, it is very fallacious to presume that experiments conducted under artificial conditions yield the same results when they are repeated under natural conditions. For example, it is quite true, that when ducks are confined in an artificial tank and mosquito larvæ are let in there, the latter are eaten up by the former. Perhaps, under the circumstances ducks

APPENDIX V.

have no option; either they must devour the mosquito larvæ or else die of starvation. But what is important for our purpose is, to know whether, in natural tanks under natural conditions, ducks take any note of the lowly larvæ when they can feed themselves on bigger and more substantial prey. It is often found that large sized fish are not of much use as larvicidal agents; because they prefer to feed themselves on organisms which are comparatively much larger than mosquito larvæ, such as small fish, etc. If therefore ducks also follow the same policy as the fish in letting mosquito larvæ severely alone when bigger and more substantial prey is available, the results are not surprising.

Reclamation.—Table A gives details of earth-work, &c., done under the supervision of the Special Malaria Department for the year 1915.

TABLE A.—

Serial No.	Division	Nature of place.	Owner.	Quantity of earth-work.		Cost.		
				Cubic feet.	Rs.	A.	P.	
1	2	Tank	Chinnammal	45,864	1,047	3	11	
2	"	"	Abboo Pillai	42,904	941	5	9	
3	"	"	Rajoo Gramany	13,818	342	14	5	
4	"	"	Perumall Gramany	2,842	216	13	1	
5	"	"	Ratnasabbapathy	6,000	471	11	0	
6	"	"	Madras Corporation	57,000	347	0	0	
7	"	"	Thygaroya Chetty	31,572	332	7	4	
8	"	"	Pakkam Abboo Chetty	30,000	482	8	0	
9	"	"	Madras Corporation	72,000	414	9	4	
10	"	Well	do	2,800	33	0	8	
11	"	Tank	do	1,34,400	944	14	8	
12	"	"	do	1,53,435	1,976	0	8	
13	"	"	do	500	15	8	9	
14	"	Pit	Mopurapah	1,372	6	13	4	
15	3	Pits and a well	Madras Corporation					
16	"	2 Wells	Inspector Salt Abkari and Customs Dept.	2,000	102	15	0	
17	"	Tank	V. S. Krishnaswamy Iyer	13,060	52	8	0	
18	"	Lowground	Arumugham Pillay	30,253	422	9	7	
19	"	Tank	Municipal Land Sepoy lines	1,12,100	3,121	13	2	
20	"	Pond	Fathima Bee Shiek Tippu Sahib	17,200	342	2	8	
21	"	Lowland	Gangadeshwar Temple land	33,700	722	6	0	
22	"	Pit	Nagarathnammal	1,700	24	6	11	
23	"	Pond	Padmanabha Mudaliar	17,715	161	8	0	
24	"	Tank	M. M. Isphani and Sons	40,328	913	3	3	
25	19	Lowland	Mary Subramaniam	1,31,640	3,273	7	3	
26	"	Pit	Thirunaraynachari	7,245	139	0	9	
27	"	Tank	Muhammad Ali Shah	8,505	171	15	9	
28	"	"	Gafoor Gafoor Unnissa	37,800	528	11	0	
29	"	Pits	Begum Sahiba					
30	"	Low land	Govindachary	13,890	82	12	2	
31	"	"	Ramachandra Iyer	23,200	289	6	0	
32	"	"	G. Sreenivasachary	10,440	145	8	9	
33	"	Ponds & lowland	B. Singarababu	23,200	463	18	0	
34	"	Pond	T. Sadashiva Iyer	11,355	341	5	6	
35	"	Low land	S. Gopalachary	5,000	76	8	6	
36	"	Tank	E. R. Sreenivasachary	1,20,800	2,300	3	7	
37	"	Pond	Sree Parthasarathy Swami Temple	31,000	186	10	1	
38	"	"	Janaki Ammal	2,800	48	4	4	
39	"	Lowland	Swami Sharvanam	4,800	72	6	3	
40	"	Tank	Prince of Arcot	1,900	51	14	2	
41	"	Lowland	V. S. Ratnam	1,300	21	10	2	
42	"	"	Krishnaswamy Ayer	4,800	77	2	8	
43	"	"	Sreenivasa Iyengar					
44	"	"	Work progressing					

Table 'B' shows the list of places reclaimed by the owners themselves after notification and prosecution where necessary.

TABLE B:—

Serial No.	Division.	Nature of place.	Owner.	Action taken by Special Malaria Dept.	Result.
1	1	Tank	Chidambara Iyer	...	Notified
2	2	Lowland	Mopurappah	...	Letter
3	2	Well	Government Salt Depot	...	do
4	2	Wells	Do	...	do
5	2	Tank	P. L. Palaniappa Chetty	...	Prosecuted and prosecution withdrawn.
6	2	Do	Oomer Sait	...	do
7	2	Do	O. Narayanaya	...	Notified.
8	3	Do	Krishnaswamy Iyengar	...	do
9	3	Two wells	Saravana Mudali and Krishna-swami Mudali	...	do
10	3	Pits	Do	...	Covered
11	3	One well	Munuram Pandia	...	do
12	3	Well	Sreenivasa Mudali	...	do
13	10	Well	Jamal Mohideen Sahib	...	Covered with Cuddappah slabs.
14	10	Pits	Hyduri Gardens	...	Notified.
15	10	Do	Raghavelu Naidu	...	do
16	11	Well	Kundappa Mudali	...	Prosecuted and fined
17	11	Pits	Venkitapathi Naidu	...	Covered with Cuddappah slabs.
18	11	Do	Mooljee Jaithee	...	Filled up
19	11	One well	T. Rangachari	...	Notified
20	11	Well	Muthia Pillai	...	By letter
21	11	Pit	Soory Bhan	...	Prosecuted and fined
22	11	Do	Arumugha Naicker	...	Notified
23	11	Two pits	Eswariah	...	do
24	12	Well	Govinda Chetty	...	do
25	12	Pits	Venkitapathi Naidu	...	Covered.
26	12	Pit	Subramani Iyer	...	Notified
				...	Prosecuted, prosecution withdrawn
					do

Serial No.	Division.	Nature of place.	Owner.	Action taken by Special Malaria Dept.	Result.
27	13	Well	Arumugam Chetty	...	Prosecuted and fined
28	13	Pit	Ethirajulu Naidu	...	Notified
29	13	Do	Sundarabhashyam Naidu	...	do
30	13	One well	Amratha Ammal	...	do
31	14	One pond	Appaswami Mudaliar	...	Covered with Cuddappah slabs.
32	19	Pits	Dr. Subramania Iyer	...	Filled up
33	19	Well	Dhanakoti Ammal	...	Letter
34	19	Pits	Subramania Iyer	...	Notified
35	19	Well	Appavoo Mudali	...	do
36	19	Tank	Parvathi Ammal and Munuswami Mudali	...	do
37	19	Two pits	Dewan Bahadur L. A. Govindaraghava Iyer	...	Prosecuted
38	19	Lowland	Dewan Bahadur Krishnaswamy Iyer	...	do
39	19	Do	Batcha Garden	...	Notified
40	19	Tank	Vishwanatha Mudali	...	do
41	19	Three pits	Begum Sahib's Garden	...	do
42	19	Do	Sayed Khader Batcha Sahib	...	do
43	19	Two pits	Mrs. A. Firth	...	do
44	19	Five pits	Bhojammal	...	Notified
45	19	One pit	Krishnaswami Naicker	...	do
46	19	Do	Chitti Babu Naidu	...	Prosecuted and fined
47	19	Two pits	Nasteruddin Sahib	...	Notified
48	19	Do	Abdullah Sahib	...	do
49	19	Lowland	Amirunisa Begum Sahiba	...	do
50	19	One pit	Rev. J. S. M. Hooper	...	do
51	19	Two wells	Trustees of Pachaiyappa's Charities.	...	do
52	19	One well	Guruswamy Gramany	...	do
53	19	One pit	Sab Jan Sahib	...	Prosecuted and prosecution withdrawn.
					do

The following is a list of cases that sent in an appeal to the Standing Committee of the Corporation against the action taken by this Department:—

TABLE C.

No.	Owner's Name.	Appeal.	President's Order.	Standing Committee's Decision.
1	Pankajammal.	Requesting to retain a well in No. 4, Mannaraswami Coil Street, Royapuram.		No further action, as the well is cleaned and fish being introduced.
2	C. Sreenivasa Nayagar, Secretary to Anandashrama Sadhu Maha Sangham.	Requesting to retain the tank in 4/5, Vedavinayar, Perambur Barracks Road.	If decided to close to come to an agreement with the Sangham	Once deferred and the Special Malaria Officer was requested to suggest methods for cleaning the tank. The tank was neither cleaned nor filled up. Again went to S. C. who resolved that the question may be dropped.
3	Trustees of Gangadeshwar Temple.	Requesting that the cost of filling up the lowland belonging to the temple for which a decree for Rs. 1,950-12-2 has been obtained, may be borne by the Corporation.	Cost to be borne by the temple ...	The request cannot be complied with. President's order confirmed.
4	Mirza Gulam Hussain Saib and two others.	Request to grant them permission to retain the tank in the 'Sirdar Jang's garden.'	To be filled up ...	Appeal rejected and the President's order confirmed. Failed to fill up. The case is pending.
5	Doraiswamy Pillai.	Appeal to retain the tank in Suryanarayana Chetty Street.	To be filled up ...	Appeal rejected and the President's order confirmed.
6	Andalammal ...	Appeal to retain the tank in Kalathiappa Mudali Street.	To be filled up and the party to pay Rs. 100.	Appeal was rejected and the party was asked to pay Rs. 100.
7	Rajoo Mudali.	Appeal stating his inability to pay Rs. 200 to fill up a pond in Ammen Coil Street.	To pay Rs. 200 towards filling.	President's order confirmed and the party to pay in instalments.
8	Seevaram Kakamma.	Appeal to retain the tank in 'Rama Bhavan' Gangadeshwar Coil Road.	To be filled up ...	S. C. resolved that the tank may be retained according to conditions laid down by Special Malaria Officer failing which owner will be prosecuted.
9	T. Singaravelu Gramany.	Appeal to retain a pond in Suryanarayana Chetty Street.	To fill up ...	President's order confirmed and appeal rejected.

Table 'D' shows the list of places cleaned by the owners themselves when they were served with notices to fill it up:—

TABLE D.

Serial No.	Division.	Owner.	Nature of the place and work done.
1	2	Murugesu Pillay	... Well cleaned.
2	2	P. L. P. L. Palaniappa Chettiar	... Do
3	8	Vedachela Mudali	... Do
4	11	Trustees of Vigneswara Coil	... Tank cleaned.
5	13	Maitland High Road	... Well repaired and cleaned.
6	17	Lodd Govindoss Krishnadoss	... Tank cleaned.
7	19	Rajoo Gramany	... Two wells repaired and cleaned.
8	19	Abi Bullah Sahib	... Tank cleaned.
9	19	Abdul Hussain	... Well repaired and cleaned.
10	19	Mrs. A. Firth	... Well cleaned.
11	19	Krishnaswamy Naicker	... Two wells cleaned.
12	19	Naseeruddin Sahib	... One well cleaned.
13	19	Ramaswamy Chetty	... Well repaired and cleaned.

APPENDIX V.

In table 'E' given below is shown the amounts recovered from private owners towards the cost of work done departmentally on their behalf.

TABLE E.

No.	Name of the owner.	Estimated cost.		Cost incurred by the Corporation.		Cost charged.		Cost recovered.		Remarks.
		Rs.	A. P.	Rs.	A. P.	Rs.	A. P.	Rs.	A. P.	
1	Rajoo Gramany ...	400	0 0	342	14 5	342	14 5	342	14 5	President has shown concession on appeal.
2	Rathnasabhapathy...	2,223	4 6	471	11 0	200	0 0	200	0 0	
3	Mopurappah ...	...	...	15	8 9	15	8 9	15	8 9	
4	V. S. Krishnaswamy Iyer ...	0	0 0	52	8 0	52	8 0	52	8 0	S. C. has shown concession on appeal.
5	Arumugam Pillai ...	600	0 0	422	9 7	140	13 10	140	13 10	
6	Fathima Bee, Sheik Tippi Sahib ...	...	...	342	2 8	342	2 8	54	0 0	
7	Padmanabha Mudaliar ...	100	0 0	161	8 0	50	0 0	50	0 0	Undertaken on contract by the Corporation, in view of the marshy land in the midst of a very unhealthy locality.
8	M. Isphani & Sons.	500	0 0	913	5 3	500	0 0	500	0 0	
9	Mary Subramaniam.	...	...	3,273	7 3	2,996	1 7	1,596	1 7	
10	Thirunarayanachari	...	...	137	0 9	135	0 9	135	0 9	Concession shown by the Special Malaria Officer.
11	Govindachary ...	...	...	82	12 2	82	12 2	82	12 2	
12	Ramachandra Iyer.	...	...	289	6 0	289	6 0	150	0 0	
13	G. Sreenivasachary.	...	...	143	8 9	104	8 0	104	8 0	Papers are with the Vakil for recovering the balance amount.
14	B. Singaratatu ...	...	...	463	13 0	463	13 0	362	8 0	
15	T. Sadasiva Iyer, Devonshire house.	160	0 0	331	5 6	160	0 0	160	0 0	

APPENDIX V.

TABLE E.—(Continued)

No.	Name of the owner.	Estimated cost.		Cost incurred by the Corporation.		Cost charged.		Cost recovered.		Remarks.
		Rs.	A. P.	Rs.	A. P.	Rs.	A. P.	Rs.	A. P.	
16	S. Gopalachary ...	...	...	76	8 6	76	8 6	76	8 6	Corporation has entered into a contract.
17	E.R.Sreenivasachary	750	0 0	2,300	3 7	760	0 0	760	0 0	
18	Manager, Sree Parthasarathy Temple	240	0 0	186	10 1	186	10 1	186	10 1	
19	Prince of Arcot ...	2,000	0 0	4,206	0 1	2,000	0 0	1,250	0 0	Letter has been addressed to pay the balance amount.
20	Mrs. Janaki Ammal.	...	...	48	4 4	48	4 4	48	4 4	
21	Swamisharvanam...	...	...	72	6 3	72	6 3	72	6 3	
22	Lodd Govindoss Krishnadoss ...	...	...	32	0 0	32	0 0	32	0 0	This is for cleaning his tank.
23	Nagarathnamal ...	...	...	24	6 11	24	6 11	24	6 11	
24	Inspector Salt Abkari and Custom Dept.	...	...	102	15 0	102	15 0	102	15 0	
25	V. S. Ratnam ...	...	...	51	14 2	51	14 2	51	14 2	
26	Krishnaswamy Iyer.	...	...	21	10 2	21	10 2	21	10 2	
27	Sreenivasa Iyengar.	...	...	77	2 8	77	2 8	77	2 8	

In the cases noted below the cost could only be recovered through a Court of Law

TABLE F.

Serial No.	Name.	Amount sued for.		Court order.	Result.
		Rs.	A. P.		
1	Gangatheswar low land	1,950	12 2	Court decreed for the full amount with costs.	Execution proceedings are being taken against the trustees.
2	Padmavathi Ammal	1,285	6 1	Court decreed for Rs. 1,086-10-1 with a deduction of Rs. 198-12-0 with costs.	Execution proceedings are being taken against the party.
3	Vedachellam Pillai	411	1 6	Court decreed for the full amount with costs.	Do
4	P. Rajoo Gramany	342	14 5	Do	Recovered from the party on 7-12-15.
5	P. Appaswamy Pillai	1,201	0 4	To pay Rs. 1,269-9-10 with half costs	Recovered from party on 7-12-15.
6	Pakkam Abbu Chetty	482	8 0	Court decreed for the full amount with costs.	Execution proceedings are being taken against the party.

APPENDIX V.

Table 'G' shows the number of places yet to be reclaimed. In a number of these cases the owners were prosecuted and the right of reclaiming them obtained by a Magistrate's order. While in others the Corporation have entered into a contract with the parties for their reclamation without resorting to legal steps.

TABLE G.

Division.	Name of the place.	Name of the owner.	Action taken.	Result.
1	Tank	Parthasarathy Chetty	Notified	
2	Two tanks	Mylaian alias Paliyan	Fined	
3	Do	Duraiswami Pillai	Do	
3	Tank	Ramaswami Gramani	Do	
1	Do	Singaravelu Gramani	Do	
11	Do	Adimoolam Pillai	Do	
11	Do	Andalammal	Case withdrawn	Promised to pay Rs. 100 and sanctioned by Standing Committee.
11	Pit	Narayana Reddy	Fined	
11	Tank	Chenniah Naidu	Do	
11	Do	P. N. Chidambaram Mudaliar, Trustee of Padawattaman Temple.	Do	
12	Lowland & small pit	Rama Ammal and Lakshmi Ammal	Letter	Promised to pay Rs. 200 and President consented.
12	Pits	Perumal Pillai, Perundurai Thayar-ammal and Manickam Pillai	Prosecuted and convicted.	
13	Well	Rajambammal	Fined	
14	Pond	C. A. P. Duraiswami Mudaliar	...	Promised to pay Rs. 350 and President consented.
15	Do	Venkitapathy Naidu	Fined	
15	Tank	Appadurai Mudali	Do	
19	Pond	K. Sreenivasa Iyengar and S. Kasturi Ammal	Letter	Each consented to pay Rs. 100.
19	2 small pits	Vicar-General, Luz Church Road...	...	To be done by the Corporation.
19	Tank and pits.	T. Kuppuswamy Gramany, Arumuga Gramany, Doraiswami Gramany and Papathi Ammal	Notified	They have promised to pay Rs. 500 and accepted by the President.
19	Pond	Rajoo Mudali	...	S. C. decided that he must pay at least Rs. 200 since reclaimed.
20	Pits	Valli Ammal	Fined	

APPENDIX V.

The following is the list of places under the charge of P.W.D. or Military or Collector of Madras requiring reclamation.

1. A large number of pits in and around Mulakuthalam in Cochrane Basin Road.
2. A large Military tank near Sepoy lines in Barracks Road.
3. An extensive lowland near the Record Office.
4. Otary Nullah construction of pukkah masonry channel along the Brick-kiln Road.
5. Excavation of sand along the foreshore of the Beach between the Napier's bridge and San Thome Cathedral.
6. A large marshy tract on the sandy beach to the east of the Spring Haven Road and the north-east of the fort.
7. One tank in the Government Muslim Hostel in Mount Road.
8. Tank in Victoria Hostel.
9. Tanks in Chepauk.
10. One tank in the Government House compound near the western side of the servants' line.
11. The ditch or drain connecting the Royapettah High Road, and intended to carry the overflow into the Buckingham Canal.
12. Tank in Ritherdon Road, Vepery.

In table 'H' is shown the details of prosecutions, etc., instituted by the Malaria Department.

TABLE H.—

Division.	Section.	Number prosecuted.	Number with drawn.	Number convicted.	Number dismissed by court.	Number pending.	Number complied after prosecution.
1	302	9	1	1	...	3	5
2	302	13	6	7	...	...	8
3	302	13	3	10	...	...	1
3	303	5	3	2	...	...	2
3	306	10	2	8	...	...	6
5	302	6	6	...	...	...	6
10	302	2	2	...	...	...	2
10	303	2	2	...	...	...	2
11	302	12	10	...	...	2	7
11	303	9	6	2	...	1	8
12	302	9	5	3	1	...	2
12	303	19	3	13	3	...	1
13	302	2	1	...	...	1	...
13	303	6	5	1	...	...	5
15	302	6	3	3	...	...	1
15	303	2	1	1	...	...	...
18	302	5	4	1	...	1	2
19	302	25	20	6	...	8	17
19	303	25	21	3	...	6	19

In this connection it may be as well to state that a prosecution is launched only as a last and desperate remedy when a case has turned out to be beyond all our powers of reasoning and persuasion; even then, greatest willingness is shown to meet the parties more than half way. The Corporation is willing even in these hard times of general financial stringency to do all it could in rendering financial aid to deserving cases and prosecutions are promptly withdrawn as soon as a party shows a real desire to comply with the notice served. Nevertheless it is to be regretted that in 61 instances the cases had to be pursued to convictions. It is, however, encouraging to note that the number of such prosecutions is comparatively small and continually diminishing.

From the above tables it will be seen that a large number of places are still awaiting reclamation. The work turned out during the year is small as compared with what it might be, although it is much more than what was done in previous years. But there are several difficulties in the way and these I would like to enumerate.

1. Material for reclamation is not available within easy approach of every individual owner.

2. In some cases the cost of reclamation would mean spending a large amount over a land which will not be worth one-tenth of the cost even at the best of times; and this, no individual owner would willingly undertake.

3. *Means for transhipment.* In the beginning the work was conducted by means of carts drawn by bulls. Finding this costly, four motor lorries were purchased and with these the work went on satisfactorily for sometime. When I took charge of the department all the four lorries were engaged in the work of transshipping earth, sand, etc. But about the middle of April 1915 two of these were placed at the disposal of the Health Department for carrying on the conservancy work of the City, as it was found that, in certain congested parts of Madras, motor transhipment was more speedy and satisfactory than bullock cart transhipment. Since then reclamation was carried on by this department by means of only two lorries, but in course of time it was found that these were not quite satisfactory either. The amount of work done by the lorries could not be as great as it used to be; they are soon worn out and are not likely to stand heavy loading with mud, sand, &c., unless they are repeatedly attended to by intelligent mechanics. Thus they had to be under repairs during the greater part of the working days. The work is, however, pushed on by hand-carts and box-carts of the Health Department and every effort is made to hasten the work of reclamation of undesirable and unhealthy marshes, ponds, pits, &c. Given a suitable and steady means for conveying material for reclamation, this work can be proceeded with at a much more rapid rate.

With a view to overcome partially this difficulty of transshipping material required for reclamation, I suggested in one of my quarterly reports a fairly easy means of solving the problem and it is this—

At present about one-third of the rubbish of Madras is burnt and the resulting ashes heaped up at two stations one in the north at De Mellow's Road

and the other in the south at the Krishnampet incinerator. A large number of small incinerators, each able to consume from 12 to 15 cart-loads of rubbish and scattered about in Madras, are responsible for the disposal of a third or little more and the rest is being dumped in its crude state in the marshy lands between the M. & S. M. Railway tracts and the Otary nullah. Apparently the present incinerators are far removed from or incapable of accommodating the rubbish collected by carts working in certain divisions and hence the last named course, namely, dumping, is adopted. If then, we put up an incinerator at any place selected for filling and reclaim the land from the ash resulting from burnt rubbish we will be killing two birds with one stone, this of course means close co-operation between the Health Department and the Special Malaria Department and a good understanding between them as to the ways and means of meeting the expenses of an incinerator and for working the same. The initial outlay for one incinerator is estimated at Rs. 350 and the working expenses at Rs. 30 per mensem; but, it has to be noted that, in some instances, where an estimate was called for, it was found that not only would it take a period of 5 to 7 years to reclaim the land under question, but the total cost would also far exceed the cost estimated for filling from earth carted from outside. We are thus confronted with difficulties on every side; first, there is the prohibitive cost of reclaiming offensive ponds and marshes with earth carted from outside. Second there is the difficulty—more often the impossibility—for one private owner to undertake such a task. Third, comes the consideration of the cost of putting up incinerators and their working and the difficulty of getting suitable places at close reach of our carts. And last, but not least, the objections often raised by the public around, on account of the nuisance from such incinerators have to be counted upon. Nuisance there is bound to be to a certain degree, but under proper supervision and care, a good deal of it may be overcome; one has to look to the eventual benefits. The Corporation has to carry on anti-malarial measures, and therefore to see that offensive ponds and marshes are reclaimed. It has also got to do the conservancy work of the City, and see the rubbish of the town is properly disposed of. Both these objects should be obtained at the cheapest cost to the rate-payer; for this, it is necessary that there should be proper understanding and co-operation between the individual who is the owner of the land, and the Corporation, who want to build incinerators thereon, and the work of reclamation should be pushed on with advantage to both parties. It is here that the Health Department of the Corporation have a free scope and with a properly sketched out programme, the many offensive places in and around the thickly populated centres in Madras may be rendered useful and the congestion around relieved by building on the spot so reclaimed.

4. Laws delay—perhaps inevitable in a number of cases—is one other cause of delay in starting our work. Moreover the law is sometimes difficult to please. We say there is such and such a pond or rather collections of water which is emphatically dangerous from a malarial stand-point; we pray that the parties may be ordered to do what we have asked them to do in the notice served on them or that, if they fail to do so within a reasonable time, we may be permitted to do the same and recover the cost from the parties. So far as we are concerned it is a plain case; in fact, nothing could be plainer. But 'no' says the Law 'I want

you to prove first that the particular collection of water is a tank, pit or well, &c., within the meaning of the Act.' It is no use merely arguing that the collection of water is undoubtedly dangerous from a malarial stand-point. Certain temporary ponds, puddles, &c., formed soon after the monsoons, in certain burrow pits and other excavations, were held to be merely 'depressions' and not pits, tanks or wells, &c., within the meaning of the Act and therefore no action lay in such cases. It is submitted that sections 302 and 304 of the Madras City Municipal Act may be modified as indicated hereunder since it may help us in overcoming the difficulties experienced at present.

Section 302.—If in the opinion of the President (a) any pool, ditch, tank, well, quarryhole, drain, water course, depression or any collection of water ; or

(b) any cistern or other receptacle for water, whether within or outside a building ; or

(c) any land on which water accumulates and which is situated within a distance of one-hundred yards from any building used as a dwelling house, is or is likely to become a breeding place of mosquitoes or in any other respect a nuisance, the President may, by notice in writing, require the owner thereof to fill up, cover over or drain off the same within a specified time and in such a manner and with such materials as the President shall prescribe, or to take such order with the same for removing or abating the nuisance as the President shall prescribe,

Section 304.—If the owner on whom a requisition is made under section 302 to fill up, cover over, or drain off a well delivers to the President, within the time prescribed for compliance therewith, written objection to such requisition, the President shall report such objections to the Standing Committee and shall make further enquiry into the case, and he shall not institute any prosecution under section 420 for failure to comply with such requisition except with the approval of the Standing Committee, but the President may, nevertheless, if he deems the execution of the work called for by such requisition to be of urgent importance, proceed in accordance with section 442 (2) and pending the Standing Committee's disposal of the question whether the said well shall be permanently filled up, covered over or otherwise dealt with, may cause such well to be securely covered over, so as to prevent the ingress of mosquitoes, and in every such case the President shall determine, with the approval of the Standing Committee, whether the expense of work already done as aforesaid shall be paid by such owner or by the President out of the Municipal funds or shall be shared, and, if so, in what proportions.

1. No new well, tank, pond, cistern or fountain shall be dug or constructed without the previous permission in writing to the President.

2. If any such work is begun or completed without such permission, the President may either

(a) by written notice require the owner or other person, who has done such work to fill up or demolish such work in such manner as the President shall prescribe, or

(b) grant written permission to retain such work, but such permission shall not exempt such owner from proceedings for contravening the provisions of subsection (1)

Closely connected with this question is that of new excavations, which soon after monsoons, became dangerous breeding grounds for anophelene mosquitoes. Bye-laws 270 and 271 under section 409 (30) of Madras City Municipal Act, 1904, regarding excavation of earth or sand, enact,

270. "Without the sanction of the President no person shall for the purpose of obtaining earth or sand for sale make any such excavation as is likely to cause stagnation of water nor without sanction shall any person make such excavation for building purposes within 50 feet of any existing or proposed building."

"An appeal shall lie to the Standing Committee against any refusal of the President to grant such sanction."

271. "Any person offending against this bye-law shall be punishable with a fine which may extend to twenty rupees, and in the case of a continuing breach, with a fine which may extend to ten rupees for every day during which the breach continues after conviction for the first breach."

And according to this we have to prove two facts namely,

1. That the excavation was made within 50 feet of a habitation.
2. That the earth excavated was sold or was used for building purposes.

It is not possible in most cases to prove either of these or both and thus no action lies against the defaulter.

Recently an alteration of this bye-law was suggested by the Government for approval of the Corporation but as the Commissioners did not approve of the proposal, it was dropped.

It is submitted that, in the interests of public health, the Corporation will reconsider the proposition and approve of the alterations as suggested by the Government.

Examples of such unlawful excavations even at a few yards from a dwelling house, are not wanting in the midst of hutting grounds and paracherries. In fact these excavations are made to obtain earth for erecting the walls of the future hut which is to be inhabited. Deep pits are thus formed and during the monsoons and after they form prolific breeding grounds for anophelene mosquitoes, more dangerous than the existing ponds and tanks.

Costs of reclamation and amounts recovered.

Table 'E' on page 24 gives details of this. Attention is drawn to the great variations in the estimated costs, and cost actually incurred and recovered.

At the start when reclamation work was commenced, no consideration appears to have been bestowed on the question whether the costs of such reclamation was to be borne by the Corporation or the person to whom the

reclaimed place belonged. The Government had made a grant with the specific object of carrying anti-malarial measures, and reclamation wherever possible, of dangerous offensive places formed the first and the foremost anti-malarial measure. So long as the money, which was spent for such sanitary purpose and under legal authority, was accounted for by the submission of a daily muster of coolies, etc., under the officer's direct supervision, it was believed that the total amounts spent would represent the quantity of work done. On this score no estimates were got for each individual case. Equally there appears to have been no idea of recovering the costs of such works in part or wholly from the owners whose land or lands were thus improved.

Since I took charge of this office in January last year, I thought it would be beneficial, not only for the malaria funds but also to the Corporation eventually, to recover monies spent by us on behalf of private property. Thus I called up all old records, started working out details, and submitted bills. For this, my experience at Ennore helped me a good deal and during the last year a fairly good sum of money was so realised. Meanwhile the Auditors objected the bills submitted for want of 'sanctioned estimates'. To satisfy the Auditors and to enable us to apportion the exact cost of each place of reclamation to the owner concerned, I began to get estimates in all cases. But here there was some difficulty. The Malaria Department was given no special staff of Overseers and Surveyors to render such accounts and the Works Department found this work very much interfered with their legitimate work. I had therefore to ask the one Surveyor in my office who was meant to prepare block maps, charts, etc., to do this estimating for me.

On 11th August 1915, I asked the Standing Committee to delegate to me some powers to undertake reclamation work without their formal sanction and as a result I was empowered to do works involving Rs. 200 or less.

There are several reasons for the great divergence of cost between the estimates and the expenses.

(a) *Change of Place.*—The estimates may have been prepared on the calculation of our obtaining earth from one place, but during the course of work, it was found that earth here was either exhausted or was difficult to excavate and load, and therefore a new site, mostly at some distance from the original one, had to be selected. This was so in the case of Mr. Sreenivasacharya in Edward Elliot's Road, for, the place from which we were taking earth near Nochi Kuppan was changed to one further south near the San Thome Church.

(b) *Excavation of Surrounding Earth on High Ground.*—This was undertaken in certain cases where the excavation could be easily made without rendering the whole plot of ground a low-land or less valuable. By this the heavy cost of work by the lorry was overcome. Hence a decrease of estimated cost.

(c) *The Exactness of the estimates.*—I know in some cases where the depth of a pond or tank was 10 or 12 feet, it was estimated as 3 or 4 feet. In estimating no consideration was given for such items as wear and tear of lorry and supervising charges.

(d) The lories would very often break down suddenly during a day's work so that while the coolies had to be paid wages for a full day, the work would probably have been for half a day or less sometimes; and these coolies had to be put on for work of some minor importance at the place.

If really the charges for supervising and wear and tear of lories are deducted from our accounts, estimates and expenses very nearly approximate.

Drainage.—The preparation of a scheme for draining the water logged area in Furasawakam is well advanced under the guidance of Mr. Barker, the Special Anti-Malaria Engineer, and even in its stage of a 'scheme' it has resulted in the draining of a large quantity of water from either side of Brick Kiln Road in the season were quite dry. It is and tracts which used to be full of water in this season were quite dry. It is expected that the whole area will be completely cleared of all swamps as soon as the scheme is put into effect. A separate report on this will be submitted by Mr. Barker. I take this opportunity of bringing to the notice of the Engineer the possibility of draining the following:—(1) The marshy land in and around Korukupet and Washermanpet and (2) the land to the west of the Office of the Commissioner of Police and close to the Buckingham Canal.

Quinisation.—(A) *Through Corporation Agency.*—For house to house administration of quinine to all those that needed it, and to women and children in particular, nine nurses were employed till 8th March 1915 and six during the rest of the year. Three Malaria dispensaries one each at Dhobipet, Royapuram and Purasawakam and the Corporation Dispensary at Washermanpet did very useful work in this direction and they were all very popular. The tables given below under statistics show the number of persons treated by nurses and at the dispensaries.

(B) *Through Social Workers.*—1. A supply of quinine and Magnesium Sulphate was made to Mrs. Whitehead at her request for distribution amongst the children in Nallancheri in Teynampet.

2. The Superintendent of the night-school, Purasawakam gets a free supply of quinine every month for the children attending the school.

It is desirable that some more of the Social Service Societies in Madras should help the Corporation in this direction, and it will always be the aim of the Corporation to try and arrange, as far as possible, for a supply of quinine to schools, asylums or other institutions, where the proper distribution of quinine can be satisfactorily arranged.

Vital Statistics and Observations.—It may be said at the outset that the conditions of the health of the city as far as malaria is concerned are very encouraging. The anti-malarial campaign inaugurated at great cost has worked to a great advantage and malaria and malarial mortality have steadily decreased over the entire City. Certain parts of Madras which used to be very unhealthy on account of malarial fevers and hence more or less deserted have been rendered healthier and people are going back to their residences.

APPENDIX V.

In the year under review the total mortality was 36.0 per mille as against 46.6 per mille in 1914 and the causes conducive to such happier times have been indicated in the report of the Health Officer. Amongst these causes decreased malaria has contributed to rendering the city healthier and to keeping down the total mortality rate.

Deaths from Malaria in 1915.—There were 4.5 per mille of fever deaths including deaths from malaria in 1915 as against 6.7 per mille in 1914 or 12.5 per cent. of total deaths as against 14.3 per cent. in 1914. Deaths from malaria as registered worked to 3.3 per mille as against 5.1 in 1914 or 9 per cent. of total deaths as against 11 per cent. in 1914.

As our anti-malarial operations are chiefly confined to certain parts of Madras as stated already, it may be desirable to study the results of our work with the figures of vital statistics for these parts.

Tondiarpet (1st, 2nd and 3rd Divisions) of Madras.

	year.			
Total number of treatments	... 1915	70,527		
Do	... 1914	64,739		
Fresh infections	... 1915	6,597		
Do	... 1914	13,261		
Total deaths	... 1915	3,384	44.5	} per mille.
Do	... 1914	4,049	53.2	
Average for 10 years	... 1915	4,167	54.8	
Fever deaths	... 1914	813	10.7	
Do	... 1915	935	12.3	} per 1,000 births registered.
Average for 10 years	... 1914	1,005	13.2	
Infantile deaths	... 1915	894	327.6	
Do	... 1914	928	332.4	
Average for 10 years	...	1,095	358.5	

For detailed table see Appendix '6'. From the above table it is obvious that during 1915 there was an encouraging fall in the death-rate from fevers, and also in infantile mortality, although the latter is still appallingly high. The detailed table in Appendix '6' shows there was a sudden rise in fever mortality in March and April 1915 and while commenting on this in my second quarterly report I said as follows:—

"The Health Officer reported to me that in March last there was a rise in fever mortality in this area and on very careful enquiry, it was found that as many as nine deaths from fever were reported from a small paracherri in Cochrane Basin Road in one week where really there was a sharp outbreak of malarial fevers. The nurse concerned was directed to pay more frequent visits to this area and the swamps, Railway burrow-pits, and ponds, etc., were at once cleaned and petrolised and as a result, the fevers were quickly arrested.

"The above is by no means a solitary or isolated instance. In fact it is merely a type of the numerous foci for mischief with which this Division abounds. Indeed the state of affairs in Tondiarpet is such that at any time there might be a general epidemic of varying degrees of severity; for, when one reflects

APPENDIX V.

over the enormous possibilities for mischief afforded by such conditions as the existence of (1) the numerous swampy areas in and around Korukupet and Washermanpet, (2) the unused dyeing and paddy pots, and (3) the extensive Railway burrow-pits on either side of the railway line running through these parts freely breeding mosquito larvæ of even dangerous descriptions, one need not be surprised if it should unfortunately happen that there is a great recurrence of such an epidemic as that which devastated these parts in 1912-13.

"As for remedial measures nothing short of radical procedure will probably be of any avail here; the whole of the swampy area has to be thoroughly drained. As for the dyeing and paddy pots action could not be taken under sections 302 and 303 of the Municipal Act but under separate sections dealing with removal of filth round human habitation. This course however involves some avoidable delay; nevertheless some satisfactory work is being turned out in this direction. Dealing with the railway burrow-pits is even a more difficult step as it appears that the Corporation cannot make its voice felt by the Railway authorities."

There was a steady fall till September when there was a small rise again but this was not of much consequence and the timely measures undertaken have since then improved the conditions. The remarks made above hold good at present as at the time they were made. But it is gratifying to note that the vast and extensive marshy tract in Washermanpet and Korukupet is being steadily but slowly reclaimed by the burnt ash from the incinerators working there. Much remains to be done still and the best results are obtainable only when every landed proprietor who owns a tank or a pond or a well is determined to make his tank pond or well innocuous from mosquito larvæ.

Purasawakkam (11th Division.)

	Year.			
Total number of treatments	... 1915	39,800		
Do	... 1914	43,827		
Fresh infections	... 1915	2,319		
Do	... 1914	11,678		
Total deaths	... 1915	1,413	34.0	} per mille.
Do	... 1914	2,143	51.6	
Average for 10 years	... 1915	1,676	40.4	
Fever deaths	... 1914	175	4.2	
Do	... 1915	308	7.5	} per 1,000 births registered.
Average for 10 years	...	302	7.3	
Infantile deaths	... 1915	431	269.8	
Do	... 1914	552	358.0	
Average for 10 years	...	499	299.2	

This is an area giving us lot of anxiety and we are always in a state of 'watchful expectancy'. The months of March, September and December were bad, but compared with 1914, the conditions are very gratifying. The fever mortality is only 4.2 per mille as against 7.5 in 1914 and the infantile mortality 269.8 against 358.0 per 1,000 births. The total mortality figures for the months of July

August and September 1915 showed a rise and in drawing up the report for the quarter ending with September 1915 I submitted the following :—

" A reference to the statistical figure for this quarter may, at first sight, lead one to think that malarial conditions have shown encouraging improvements during this quarter but as a matter of fact the reverse seems to be the truth. It is true that there is a noticeable decrease under the heads of total number of cases treated and fresh infections but the chief explanation for this lies in the fact that only six nurses were working during this quarter as against nine in the corresponding quarter of last year. It is also true that there is some decrease under the heads of total deaths, fever deaths and infantile deaths, both as compared with figures for last year and that for the average for ten years; but then one has to remember that last year there was a fairly severe epidemic of cholera which vitiated our figures for that year; further much reliance could not be placed on figures for fever deaths as these are not reliable as is so often pointed out. The most reliable factor however is 'Infantile mortality' the figures for which show no appreciable change at all, except in Tondiarpet where there is some noticeable decrease.

" Apart from comparisons, the figures for fever deaths and infantile mortality are by themselves yet too high. In spite of the popular opinion I beg to submit that malaria has not gone down during this quarter and that there is no use in deceiving ourselves into a false sense of security that malaria is going down, whereas as a matter of fact, it is just the other way. From what I know of local conditions, the extent of infection as judged by the number of infected slides in cases of random sampling and in those from the Malaria Dispensaries and from what I could read from the figures of Vital Statistics I come to the conclusion that, whatever the cause of it may be, the situation that had to be faced was one of increased malarial infection. At the same time it has to be noted that the large total mortality need not give us any alarm, for much of it seems to be due to causes other than malaria or fevers, although deaths from malaria are by themselves higher than they should be. Thus the total number of deaths during this quarter in the Municipal divisions concerned was 1,618 the chief contributing factors of which are :—

1. Diarrhoea	...	...	...	...	265
2. Fevers (including malaria)	...	...	...	...	237
3. Dysentery	...	...	...	...	210
4. Respiratory diseases	...	...	...	...	175

" It seems as though the quarter under review was specially an unhealthy one for which the unusually heavy summer rains may be a contributory cause at any rate it is always held to be so as far as malaria is concerned. It is well known that fresh inoculations occur most frequently at the beginning and end of great summer rains; further, rains also tend to bring on relapses, which, in turn, operate to increase the number of fresh infections, as patients with frequent relapses tend to show more game tides than those without them. Sir Ronald Ross further holds that they also increase the biting and decrease the recover

unusually heavy summer rains of this year may be at least one,—if not the only one, of the factors for the increase of malaria during this quarter.

" As soon as it became known that malaria was on the increase prompt and vigorous measures were at once adopted especially in the direction of quininisation and petrolising and otherwise dealing with temporary puddles and pools formed as a direct result of the said rains. How far these measures will tend to check malaria, the next quarter will doubtless show. Without desiring to be too much of an optimist or a prophet I however venture to express the hope that the measures so far taken will have every tendency to make the present outbreak of malaria a very short-lived one."

And as said above the conditions rapidly improved and the succeeding months witnessed a decreased malarial infection and total mortality.

As already said above a large quantity of water in the shallow grounds on either side of Brick Kiln Road was drained by the Anti-Malarial Engineer and this has helped us a great way in keeping down the fevers in this part of the city.

Mylapore (19th Division).

Total number of treatments	...	1915	9,958	
Do	...	1914	16,820	
Fresh infections	...	1915	2,316	
Do	...	1914	5,023	
Total deaths	...	1915	1,231	35.8
Do	...	1914	1,708	48.8
Average for 10 year	...		1,005	33.4
Fever deaths	...	1915	83	2.4
Do	...	1914	183	5.3
Average for 10 years	...		237	6.9
Infantile deaths	...	1915	331	253.8
Do	...	1914	359	295.0
Average for 10 years	...		358	313.2

per mille.

Per 1,000 Births registered.

Anti-malarial measures in this part of the city are conducted with much less opposition and greater co-operation and necessarily better work of a permanent nature was done during the year under review. This has resulted in a perceptible improvement from the point of view of malaria. The total mortality was 35.8 per mille as against 48.8 per mille in 1914 and the mortality from fever 2.4 as against 5.3 or 6.75 per cent. of the total mortality as against 10.90 per cent. in 1914. That is while the fall in total mortality for 1915 was only 26.65 per cent. that from fevers was 54.70 per cent. Nor is the infantile mortality behind. It was 253.8 against 295.0 in 1914.

MADRAS,

19th June 1916.

51

K. RAGHAVENDRA ROW, B.A., M.B. & C.M.,

Special Malaria Officer.

APPENDIX V.

APPENDIX '1.'

Statement of employees working in the Special Malaria Department during 1914 and 1915.

Serial No.	Name of office.	Pay or salary per mensem.		Remarks.
		On the 31st Dec. 1914.	During 1915.	
	Special Malaria Office.			
	<i>General Indoor Staff.</i>	Rs.	Rs.	
1	Special Malaria Officer	...		
2	Head Clerk	1,000	400	
3	Accountant	40	40	
4	Clerk (branch office)	30	30	
5	Clerk and Typist at Rs. 25 + 1	30	Nil	Abolished.
6	Cycle peons at Rs. 9 + 1 each	26	30	
7	Peons at Rs. 8 + 1 each	40	20	Reduction.
8	Watchmen at Rs. 8 + 1 each	18	18	
	Total	18	18	
		1,202	556	
	<i>Investigation Staff.</i>			
1	Laboratory Assistant at Rs. 100 + 20 + 15 + 8 per mensem	...		
		143	Nil	Rs. 20 special, Rs. 15 travelling, Rs. 8 house rent allowances. Reduction.
2	Sub-Asst. Surgeon at Rs. 50 + 15 per mensem	...		Reduction.
3	Surveyors at Rs. 60 + 5 each	65	Nil	
4	Laboratory Attendant	260	65	Rs. 5 Cycle allowance. Reduction.
5	Mosquito catchers at Rs. 10 each	30	30	
6	Peons at Rs. 8 + 1 each	40	30	Reduction.
		18	Nil	Do.
7	Lascars at Rs. 8 each	...		
	Total	88	9	Do. One lascar at Rs. 9 per mensem.
		644	134	
	<i>Prevention Staff.</i>			
	(a) OILING.			
1	Out-door Assistants at Rs. 140 + 25, each	...		
2	Supervisors at Rs. 100 + 5 each	330	165	Rs. 25 carriage allowance. Reduction.
		210	210	Rs. 5 Cycle allowance.

APPENDIX V.

Serial No.	Name of office.	Pay or salary per mensem.		Remarks.
		On the 31st Dec. 1914.	During 1915.	
(a) Oiling—(continued).				
3	Foremen at Rs. 30 each ...	90	90	Reduction. Do.
4	Cycle peon at Rs. 9 + 1 ...	10	Nil	
5	Peons at Rs. 8 + 1 each ...	45	27	
	Total ...	685	492	
(b) TREATMENT.				
1	Nurses at Rs. 200 each ...	1,800	600	6 Nurses at Rs. 100 each. Rs. 15 Conveyance allowance. In 1915 3 Sub-Asst. Surgeons.
2	Sub-Asst. Surgeons at Rs. 50 + 15 each ...	130	195	
3	Clerks at Rs. 15 + 1 each ...	32	32	
4	Compounders at Rs. 12 + 1 each ...	39	39	
5	Peons at Rs. 8 + 1 each ...	99	81	Reduction.
	Total ...	2,100	947	
Motor Lorry Staff.				
1	4 Drivers at Rs. 40 each ...	160	160	
2	4 Cleaners at Rs. 10 each ...	40	40	
3	4 Cleaners at Rs. 8 each ...	32	32	
	Total ...	232	232	
Labour Charges.				
1	1 Head Maistry ...	20	20	Reduction.
2	3 Process Servers at Rs. 15 each ...	45	Nil	
3	89 Maistries at Rs. 15 each ...	585	180	
4	30 Fishermen at Rs. 15 each ...	450	120	
5	1 Watchman at Rs. 8 ...	8	Nil	Only 12 maistries in 1915.
6	60 Oiling coolies at Rs. 8 each ...	480	336	10 fishermen at Rs. 12 each in 1915
7	30 Fishermen coolies at Rs. 8 each ...	240	Nil	Reduction.
8	168 cleaning coolies at Rs. 6 each per day ...	1,890	675	Only 42 coolies were retained in 1915.
9	3 Dispensary Sweepers at Rs. 2 each.	6	6	Reduction.
	Total ...	3,724	1,337	
	Grand Total ...	8,587	3,698	
	i.e., ...	1,03,044	44,376	per annum.

APPENDIX 2.

A report on "Buckingham Canal as a Breeding Ground for Mosquitoes."

History.—"The Buckingham Canal is a salt water navigation canal, tidal to a great extent wherever the river bars are open, which extends for 262 miles along the East Coast of the Madras Presidency from Pedda Ganjam in Guntur District, southwards through Madras City, and into Markanam in South Arcot. At Pedda Ganjam it communicates with the fresh water high level canal of the delta system of the Kistna river and so with the Godavery delta canals and thus opens up water communication with the port of Cocanada, making a total length of 462 miles of main navigable canal. The Buckingham Canal runs within three miles of the coast throughout its entire length and many portions of it are within half a mile of the sea. It utilises some portion of the Pulicat Lake.

"The excavation of the section from Madras City to this Lake was begun as long ago as 1806 as a private enterprise and was known after its originator as Cochrane's Canal. In 1837 this was taken over by Government, but up to 1876 only 5½ lakhs have been spent in extending it. It was at this time called the East Coast Canal. In the great famine of 1876-1878 it was resolved to take up the completion of the undertaking as a relief work, and an expenditure of over 29 lakhs was incurred. It was renamed the Buckingham Canal after the Duke of Buckingham and Chandos, then Governor of Madras. Up to date the total capital cost has amounted to 90 lakhs. The chief difficulty in maintaining it in order was that, as it crossed the whole drainage of the country it was extremely liable to be silted up. Between 1883 and 1891 large expenditure was incurred in remedying this tendency. In ordinary years the traffic upon it, though it amounts to 12½ millions of tons annually, is insufficient to meet the working expenses and a deficit of about of Rs. 20,000 occurs. The railway along the coast, which has been opened since the canal was constructed has robbed it of the long distance traffic which it was originally designed to carry. The chief traffic along it at present is salt from the various coast factories and firewood from Sriharikota to Madras City, but in bad seasons it is of value in connecting the two fertile deltas with the poorer country further south. Cargo boats and boats belonging to Government and private individuals ply along it. Wharves have been constructed at interval for their use and there is also a series of traveller's bungalows upon the banks."

Course in the City of Madras.—The canal enters the City of Madras at its northern limit at Satankadu and runs south along the western limit at Tondiarpet and is here at a distance of over a mile from all human habitations. It crosses the Madras and Southern Mahratta Railway line south-west of Massey & Co. (iron works) and turning slightly eastwards runs down south close to the west of the portions of Georgetown constituting Municipal Divisions 7, 8 and 9. A portion of the canal between the Basin Bridge and the Elephant Gate Bridge is situated within the enclosure of the Salt Depot and here a number of branch canals are opened by that department. Of these the easternmost branch sometimes known as the "Old Moat" has attracted some attention which will be referred to later in this report. From the Elephant Gate Bridge it takes its course between People's Park and Central Station and joins

the Cooum River at the College Bridge. The canal starts again from the Cooum River south-west of Napier's Bridge and west of Marine Villa and runs southwards through Chepauk close to the west of the row of public offices facing the Triplicane beach, forming thereafter the eastern boundary of Triplicane. From near Barber's Bridge it runs slightly westwards for about a few hundred yards and then passes through Mylapore and Adyar in a south-westerly direction and ends its course for the City of Madras by entering the river Adyar. It is thus seen that it traverses through the City of Madras for a length of nearly 10 miles and in the greater part of its course, i.e., from the Basin Bridge southwards it runs through very thickly populated parts of Madras as Georgetown and Triplicane.

It is therefore of the utmost importance to investigate whether it offers suitable conditions for the breeding of mosquitoes and if so, how far it is dangerous from a malarial standpoint.

Mosquito Survey.—The portion of the canal situated between Basin Bridge in the north and the bridge in Luz Church Road in the south was chosen for purposes of investigation and for convenience of tabulation and description this was again split up into eight smaller sections (*vide* below). Both culex and anophelene larvæ were found breeding in abundance everywhere. But our immediate concern is, however, only with the anophelene, some species of which alone are malarial carriers so far as it is known at present, and the following table shows the kinds of anophelene mosquitoes breeding in the several sections:—

No.	Section.	Species of mosquitoes.	Remarks.
1	From Basin Bridge to Elephant Gate Bridge ...	A. Rossii	Few only.
2	Branch canal (old moat) in the enclosure of the Salt Depot ...	A. Culicifacies A. Rossii	} Malaria carrier.
3	Elephant Gate Bridge to College Bridge ...	A. Culicifacies A. Barbirostris	
4	Near Marine Villa in Chepauk to Bridge in Pycroft's Road ...	A. Rossii	...
5	Bridge in Pycroft's Road to that in Ice House Road ...	A. Rossii A. Jamesii	} ...
6	From Bridge in Ice House Road to that in Edward Elliot's Road ...	A. Rossii	
7	From the Bridge in Edward Elliot's Road to Barber's Bridge ...	A. Jamesii	Few only.
8	Barber's Bridge to Bridge in Luz Church Road ...	A. Rossii A. Jamesii	} ...

APPENDIX V.

A Striking Observation.—It will be seen from the above that the parts of Madras close to the canal in the regions noted in columns 2 and 3 are gerous zones from a malarial point of view. In sections shown in columns and 7 the anophelene mosquitoes are far fewer in number than in other places a large number of Haplochilus fish (larvicidal) were present which cannot have in full play in the midst of weeds, leaves, etc., floating on the surface of water. the present state of the canal in the other regions these fish do not appear be able to thrive and here very large numbers of culex and anophelene vae are found breeding, and this difference in the distribution of mosquito vae in the different courses of the same canal is striking and calls for some planation.

An Explanation Suggested.—If then mosquito larvæ abound in some ortions of the same canal and not in others, it suggests itself that the surround- gs or the composition of water or both are favourable, or at any rate not imical, to mosquito life in some places, but unfavourable or even inimical in thers. For one cause or another, such as the continual silting up of the bed of he canal, the consequent stagnation favouring decomposition of dead and decaying natter that may fall into it, as for example, the leaves and twigs of the overhang- ng branches on either bank, or from the formation, as water recedes, of small pools and puddles on either banks, the water of the canal to the south of Elephant Gate Bridge is foul in appearance, unpleasant in its odour and dirty—brown in colour—not unlike the appearance, colour and odour of a neglected cess pool ; in fact in some portions of Triplicane where sewage overflow is allowed to run into the canal, it is no exaggeration to say that the canal is a huge cesspool and nothing less.

The condition of the canal to the north of the Elephant Gate bridge is not nearly so deplorable and with this is correlated the fact of the comparative freedom from mosquito larvæ here. For the purposes of this paper, this region may be broadly divided in two portions, namely, one under the control and within the limits of the Salt Department and situated near human habitations, and the other portion beyond this adjoining Tondiarpet which is at a safe distance from all human habitations and need not on that ground alone require much attention at present. Again the region of the canal within the enclosure of the Salt Depot is kept fairly clean and the surface of the water, which by the way is a very wide one, is kept in constant agitation by wind and by the frequent movement of boats; hence it is no wonder that this offers no congenial breeding ground for mosquitoes. On the other hand, it is to be noted in this connection that where a branching canal—here "the old moat" referred to already—is neglected and is allowed to silt up, the resulting conditions of stagnation, decomposition, etc., favour mosquito breeding. Of the three or four branch canals in the Salt Depot, it is only this neglected one that breeds dangerous mosquito larvæ. From these facts the conclusion is irresistible that the striking difference in the distribution of the mosquito larvæ in the different portions of the Buckingham Canal is mainly, if not chiefly, a product of the varying conditions of the canal in its several portions.

APPENDIX V.

207

Suggestions for improvements.—It is evident from the above that the portions of the canal that require urgent and immediate attention are—

1. The portion to the south of the Elephant Gate bridge.
2. The "Old Moat" above referred to.

Regarding the first, it is to be observed at the outset that the most satisfactory and radical measure of filling up is not within the range of practical sanitation; for one thing it has cost several lakhs to dig and would cost at a very modest computation as many lakhs to fill up; for another it has been serving some useful purpose both to Government and to trade by affording facilities for boat transport of salt, fuel, etc. It is therefore proposed to adopt some conserva- tive methods aimed at approximating the condition of the portion of the canal to the south of Elephant Gate bridge (where mosquito larvæ of even dangerous descriptions abound) to that which obtains to its north where there is comparative freedom from this dangerous pest. The measures calculated to produce this desired result are—

1. Removal of silt and maintenance of a proper gradient ensuring an uninterrupted flow down the canal.
2. Systematic cutting off of overhanging branches with the double object firstly of preventing leaves, twigs, etc., from falling into the water and getting decomposed and secondly, of exposing the water edges to the direct rays of the sun.
3. Maintenance of clean cut sloping edges so that the water level as it recedes may leave no pools and puddles.
4. Maintenance of a careful watch against the digging of pits and removal of earth from the sloping banks.
5. As far as feasible no sewage must be allowed to run into it.

Regarding the "old moat" the case is somewhat different. It is evident from the conditions of the other branches of the canal in the enclosure of the Salt Department that, if the department only minds it, this neglected portion too can be certainly kept in a satisfactory condition, but the department disowns all responsibility on the ground that it was originally used by the Municipal Corpora- tion for the boat transport of night-soil punts and that it was at no time in the possession or use of the department. For some years past it is not being used even by the Corporation, as a result of which it has silted, and is overgrown with rank weeds and vegetation. To make matters worse the sewage overflow from Georgetown also gets into it.

The most satisfactory and at the same time practicable method of getting rid of this nuisance is the entire filling up of this—a measure eminently desirable, if one remembers that it is within a dangerous distance of certain thickly populated parts of Georgetown. The earth for filling up is easily obtainable from the Choolai incinerator just to the west of Salt Cotaurs and the cost of filling up this portion which is about 1,500 ft. long, 50 feet wide and 10 feet deep on an average may approximately cost Rs. 5,000. Till such time as this desirable measure is not

carried out it is very urgent and necessary that the following palliative measures at least be adopted :—

1. Removal of silt and maintenance of proper gradient of flow.
2. Cleaning the moat of all its weeds and rank vegetation.
3. Prevention of the overflow of sewage.
4. Ensuring constant agitation of water directing that private boats shall ply through this portion of the canal.

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APPENDIX '3'.

A report on the Cooum River, as a breeding ground for anophelene mosquitoes.

History—“Cooum (Kuvam) River in Madras formed by the junction of the surplus water of a tank in the village of Kuvam in the Conjeevaram Taluk of Chingleput District, and the Old Bangaru Channel. It irrigates Kadambattur, Tinnanur and other villages, and from a dam thrown across it at Koratur sends down a supply to the Chembrembakam tank through the new Bangaru Channel. It then irrigates Vayanallur, Ayanambakam and other villages of the Saidapet Taluk and finally flows through the heart of Madras City, into the Bay of Bengal near the Fort St. George. In the latter part of its course the stream except in the rains is insufficient to keep an open channel and a sand bar forms across the mouth, converting the river into a brookish lagoon. At present some of the sewage of Madras passes into this and the stream has thus obtained an unsavoury reputation. The new drainage scheme for the city will, however, remove the sewage to a farm to the north and effect, it is hoped, a great improvement in the present condition of the lower reaches of the river.” (Imperial Gazetteer of India 1908).

Course in the City of Madras.—Within the Municipal limits of the City of Madras the Cooum River flows from west to east in a tortuous course, demarcating the boundary lines between the following Divisions : 14th and 15th, 13th and 15th, 13th and 16th and finally a portion of the 13th from the 17th Division where it enters the sea beyond the Napier Bridge. For over ten months of the year an immense bar of sand is formed impeding its flow onwards to join the sea so that during the whole of this period of the year it can only be described, as a filthy stagnant pool of water without any apparent flow in any direction.

From Munro's bridge eastwards as far as the St. Andrews Bridge the river is represented by a large number of filthy, stagnant polluted pools of water,

pools which are scattered about in the bed of the river and which are rarely connected in a continuous line except perhaps during the monsoons when the pools will be flushed out by heavy floods perhaps extending over a period of six weeks or two months. At other times these pools are small, shallow ones covered over with weeds and moss affording ample facilities for the breeding of mosquitoes as will be shown hereafter. East of the bridge near the Penitentiary on the north and the Government House Bridge on the south, i.e., round the island approximately the river is extremely broad.

Mosquito Survey.—For purposes of our investigation the extent of the river within the city limits was cut up into eight sections, commencing from Munro's Bridge eastwards. In each section a careful search was made for mosquito larvæ along the edges of the central stream of water in the puddles and pools of water in the bed of the river. This survey was continued during the course of one year at different seasons and the table given below shows details of the survey so conducted and the species of the mosquitoes hatched out from the larvæ collected.

River Cooum.	1st Inspection, February and March 1915.	2nd Inspection, July and August 1915.	3rd Inspection, September and October 1915.	4th Inspection December, 1915 and January 1916.
1. Munro's Bridge to Anderson's Bridge.	Rossii	Rossii	Fuliginosus Rossii	Fuliginosus Rossii
2. Anderson's Bridge to Commander-in-Chief's Bridge.	An. Rossii	Culicifacies	Rossii Culicifacies	Rossii Fuliginosus Culicifacies
3. Commander-in-Chief's Bridge to Harris Bridge.	Rossii Culicifacies	Rossii	Fuliginosus	Fuliginosus
4. Harris Bridge to Andrew's Bridge.	Culicifacies Rossii	Rossii	Culicifacies Rossii	Culicifacies Rossii
5. Andrew's Bridge to Law's Bridge.	Rossii	Rossii	Rossii	Rossii
6. Law's Bridge to Government House Bridge.	Rossii	Rossii	Rossii Culicifacies	Rossii Culicifacies
7. Government House Bridge to Penitentiary Bridge.	Rossii	Rossii	Fuliginosus Rossii Culicifacies	Rossii Fuliginosus
8. Penitentiary Bridge to Wallajah Bridge.	Rossii	Rossii	Fuliginosus Rossii Culicifacies	Rossii Fuliginosus

Species of mosquitoes.—It will be seen from this that by far the most common species of mosquitoes found in all parts of the Cooum River is anophelene Rossii while in certain regions malaria bearing anophelene do also breed, namely, anophelene Culicifacies and anophelene Fuliginosus. Except in sections 4 and 5 (*vide* Table) these latter mosquitoes breed at one season or other of the year. It will further be noted that till about the end of August no mosquitoes of dangerous description from a malaria point of view were found breeding in the

river except in one or two spots, whereas during the four months October to January such mosquitoes were the more common species found breeding. In other words only three species of Anophelene mosquitoes, namely, Rossii, Fuliginosus and Culicifacies were found breeding during the year of our survey and of these it is known that the two latter are very bad malaria carriers. Larvæ of Culex mosquitoes were found all over the area surveyed.

Breeding grounds.—The Cooum affords good many chief factors for the propagation of the mosquito species. Weedy margins, stagnant and semistagnant pools and puddles on the bed, pits formed by small excavations of earth, hollows of boats holding water for long periods and last but not least the sluggish flow of the stream itself, especially at the foliage covered edges—all these—are well known to be the ideal breeding places for the mosquito larvæ. Throughout the whole of the course of the river the water in it is fairly clear although certain amount of sewage still finds access to it, getting freely mixed and diluted with the large volume of water; so that no idea of the extent of contamination of the river water with this sewage can be formed by the naked eye, and probably not without a bacteriological examination. This is in contradistinction to the condition of the water of the Buckingham Canal at certain parts of its course in the City of Madras where mosquito life seems impossible; whereas all necessary facilities are afforded in the river Cooum for mosquito life and this in spite of thousands, if not millions, of larvicidal fish present in the river all along its length. In the sections from the Government House Bridge to Napier's Bridge on one side and Wallajah Bridge and Napier's Bridge on the other no mosquito larvæ were found and this is as expected; the sheet of water is wide and the sea breeze constantly blowing upon keeps the water in such constant wave motion causing ripples to be formed all along the edges of the water course that larvæ life appears impossible even if introduced accidentally.

Probable danger to parts of Madras.—In a rapid survey made by Captain Hodgson, I.M.S., and reported upon by him it was found that parts of Madras in close proximity of the river were not malaria ridden in spite of the above noted conditions and this cannot always be hoped to exist. For according to the malaria survey conducted during 1915 there is always a risk of a spread of malarial fevers in parts of Kilpauk, Mount Road, Pudupet, Komaleswarampet and Chintadripet parts of Madras on the close bank of the river; or at least it can be said there are a number of foci from which malaria may at any time burst forth into a severe form. Hence the need for improving or rather eradicating all possible mosquito breeding grounds irrespective of whether malaria is or is not prevalent at any particular period in question.

Remedial measures.—With this end in view the following remedial measures are suggested:—

1. Maintenance of clean cut sloping edges so that no puddles are left over the bed of the river as water recedes.
2. Reclamation of existing puddles and pools.

3. Maintenance of a watch against digging of pits and removal of earth from the sloping banks and the bed of the river.
4. Prevention of flow of sewage into the river as far as possible.
5. Maintenance of a gang of men to keep the water edges of the stream clear of all foliage, i.e., weeds, moss, grass, etc., and
6. Maintenance of a central stream in the place of the disjointed and the scattered sections along the course of the river.

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APPENDIX "4."

A report on the use of larvicidal fish in the wells and ponds in the City of Madras.

Though it has been recognised for some years past that certain kinds of fish play an important part in regulating and diminishing the degree of malarial infection in any locality, and though various Zoologists and Medical Officers in India had pointed out from time to time that there are in this country several species of fish which feed on mosquito larvæ, yet the subject did not evoke the attention it merited until five or six years ago, when Captain Sewell, I.M.S., and Mr. Chaudhuri, B. Sc., conducted a series of experiments in this direction and noted the following interesting facts:—

"The various species of fish that we have found to be of considerable utility in destroying the mosquito larvae belong to eight different genera in some cases, as the genus Haplochilus, all the species are of equal utility, in others, however as barbus, certain species are of much greater use than others. The difference is dependent very largely on the question of the size of adult fish, for it is obvious the smaller the species the more likely it will be to feed on such minute forms of life as mosquito larvæ, and we know that the young 'fry' of many of the larger forms devour these insects readily, although the adult gives up this habit in favour of some other diet more suited to increased bulk."

Of these several forms, the following are found in abundance in almost every pond or tank in and around the City of Madras:—

Genus.				Species.
1.	Haplochilus	...	...	(a) Panchax.
				(b) Melanostigma.
2.	Chela	...	...	Chela. Argentia.
3.	Therapon	...	...	Therapon Jarbua.

They are all hardy little fish and stand transfer from place to place extremely well. Further they can be acclimatised to live in brackish as well as fresh water.

A short description of each of these would not be put out of place here:—

1. *Haplochilus*.—The body is elongated, oval, depressed from above downwards anteriorly and flattened from side to side in the tail region. Head flat and snout shovel shaped; mouth horizontal, both jaws of equal length, teeth villiform in the jaws, present or absent in the palate; dorsal fin short commencing behind the origin of anal fin, which latter has an elongated base. Caudal fin has a bluntly pointed edge.

(a) *Haplochilus Panchax* (Tamil *Kulla Cundee*).—A small fish of two or three inches in length, greenish to olive in the upper surface fading into dull white on the sides and has usually a brilliant silvery spot on the occiput.

(b) *Haplochilus Melanostigma* (Munda *Cannu Tamil*).—The adult fish is an inch and a half long and while in the main resembling the previous one, it is distinguished by having a much more transparent appearance and by the possession of a narrow dark line along the side terminating behind in a dark spot at the base of the caudal fin.

These two varieties are the chief fresh water fishes indigenous in every pond and tank in the City of Madras and appear to be peculiarly suited for larval destruction by their small size, their frequenting the surface of the water constantly and their possessing a very flat head, the surface of which is kept almost in a level with the plane of water when they swim about in their natural surroundings. The anophelene larvæ which also subsists in a horizontal posture on a level with the plane of water appear to fall an easy prey to these fish. Of these two varieties again the *Haplochilus melanostigma* seems to be much more active and voracious animal. At least it is so in captivity.

2. *Chela*.—A species of fish attaining a length of 5 to 6 inches with a rather elongated and compressed body. Abdominal edge cutting; mouth directed somewhat upwards with the lower jaw prominent and generally with a knob above symphysis. Barbels absent; Pharyngeal hooked and slender. Dorsal fin is short situated principally and entirely opposite the anal, which latter has an elongated base. Pectorals long. Caudal forked. Lateral concave.

Chela Argentia (Tamil, *Vellache Cundee*) is silvery in colour with a lateral band which fades after death and the pectoral fin reaches the ventral; caudal dark edged as is also occasionally the anal.

These also are usually fresh water fish and being surface feeders their chief diet consists of flies and larvæ. All species are efficient as larvicidal agents especially the smaller ones. These are more suitable for tanks, big ponds and swamps, and are in fact found in large numbers soon after the monsoon.

Therapon.—Branchiostigals six, eyes of moderate size, opercle with teeth. Preopercle and sometimes preorbital serrated, teeth villiform in both jaws; deciduous ones on vomer and palatiness. Dorsal fin single, but more or less notched. Air vessel divided by a constriction.

Therapon Jarbua (Tamil, *Palin Keecham*). A common fish in the waters of India and in the tidal backwater of Ennore attaining a size of 12 to 13 inches. Colour; black, bluish grey becoming white on abdomen, a tinge of gold along cheeks and snout; three longitudinal reddish brown bands, having a slight convexity downwards on each side and sometimes there is a fourth band along the abdomen. Ventral and anal fins have a yellow tinge along their centre. Eyes yellowish red.

These fishes in India are marine but some are occasionally found in brackish water within tidal influence; they may even live temporarily in brackish or even fresh water ponds.

Although these fish are definitely proved to be the natural enemies of mosquito larvæ, yet there is a limit to their usefulness as larvicidal agents for here may be many mosquito breeding places unsuited for fish life and even suitable waters surface, weeds, etc., afford shelter to the larvæ which can escape from the ravages of these fish. This is just the condition of many a pond and tank in Madras where anophelene larvæ breed in thousands in spite of these fish.

It was desired that the utility of these fish be first tried, in places which, while forming breeding grounds for mosquito larvæ, are yet capable of being treated by this conservative measure. It is with this end in view that the domestic wells in the City of Madras were selected. It has been amply demonstrated that these wells, the water from which is rarely or never drawn except when the tap fails, do breed the larvæ of certain forms of mosquitoes for example *Anopheles Rossii*; *Anopheles Barbirostris* and *Anopheles Stephensii*; the last of which is known as a malaria carrier.

To conserve wells and yet make them innocuous in this direction, even without the necessity of filling up or covering the mouth of a well, was the object with which the malaria department of the Corporation inaugurated in May 1913, the introduction of these larvicidal fish in all wells in the first three divisions where malaria was then raging. At the commencement the staff consisted of a single fisherman only and a small charge was levied upon the owner of the well for the fish introduced. Whether or not it was due to the inadequacy of the staff or the unpopularity of the system of payment, the fact remained that the work made very little progress, and Captain Hodgson, I.M.S., after he took charge of his office on 17th November 1913, abolished this system of payment and also increased the staff to four fishermen. He conducted a rapid survey of wells into which fish were introduced and finding that the results were encouraging requested the Standing Committee of the Corporation for an establishment of 26 fishermen and 30 coolies. This staff was sanctioned by the Standing Committee in their resolution 56, dated 28th August 1914 and this enabled the work to be extended to the other malarial zones, viz., Pursawakam and Mylapore. Soon after I took charge,

ne above staff had to be reduced to 17 men and 17 coolies on account of many irregularities of attendance and work on the part of the other men. The following figures indicate the number of wells treated with fish till the end of May 1915 :—

Division.	No. of wells.			
Tondiarpet	...	...	...	2,193
Pursawakam	...	...	...	649
Mylapore	...	...	...	713
Vepery	...	...	...	455
Perambur	...	...	...	20
Georgetown	...	...	...	6,054
Egmore	...	...	...	502
Chintadripet	...	...	...	501
Total ..	11,092			

In the months of January and February and again in May last, I undertook an extensive survey of these wells with a twofold object, firstly of investigating what the factors were that bear on the life and activity of these fish in their new surroundings and secondly of ascertaining to what extent the fish had rendered the wells innocuous. A fairly long time was allowed to elapse between the introduction of fish into a well and its subsequent examination and in no case was there an interval of less than a month. 6 to 12 domestic wells were selected at random in each street and examined for larvæ and out of 392 wells examined in only 103 or 7.4 per cent. were anophelene larvæ found and in all these (except the 103) fish were observed to be alive and lively. In the 103 wells noted above fish were not seen being apparently dead and in all of these *Culex* and anophelene larvæ were obtained. The anophelenes were mostly *Rossii* and *Stephensii* and in some instances *Barbirostris*. The water in these wells was invariably foul and covered over with leaves, weeds, etc.

Some or all of the following causes appear to have contributed towards the extinction of the fish introduced in these wells and steps are being taken to remove remediable causes as far as possible :—

1. *Too sudden change of natural surroundings*—as from a too rapid transference of them from fresh water to brackish water and *vice versa*. The fishermen usually catch fish the previous evening or early morning and introduce them straight off into wells before midday, and in the case of many parts of Madras the existence of the Cooum close by is a great and almost irresistible temptation for the fishermen to obtain their stock from that source only and introduce them indiscriminately to fresh water and brackish wells alike. Steps are now being taken to ensure that the stock for fresh water wells is obtained from fresh water sources only.
2. *Too foul water*.—In some of the wells investigated, the water was covered over with a sort of glistening oily scum and more akin to sewage water than anything else and the well was full of moss and other noxious vegetation. During a

search for larvæ in the Buckingham Canal, it was noticed that whereas these fish were swarming in hundreds in the canal region between the bridge in Pycroft's Road and the Barber's Bridge where the foulness of water is not great, they were conspicuous by their total absence to the north of the former bridge as far as the Cooum where the water of the canal has the appearance and stench of ordinary sewage. To remedy this it would be necessary to ensure cleanliness of water by such measures as complete baling out of water before fish are introduced or by one or other of the commonly used precipitation methods.

3. *Too great overcrowding*.—A large number of these adult fish, say from 50 to 60, are sometimes let in a well of 3 or 4 feet in diameter by the cooly who requires constant supervision and checking and this large number would die ere long for want of sufficient food and room. Steps have been taken to prevent such overcrowding.

4. *Survival of the fittest*.—In certain wells these small fish were introduced unconscious of the existence of some big fish. The latter would certainly eat the former. Some people, under the impression that they will not be required to fill up the wells in their lands if fish of any sort are introduced into them, put in large fish into their wells apparently under the impression that the larger the fish, the more efficient it ought to be. Personally I myself have seen some of these big fish in a few wells examined. In such cases it is proposed to get the big fish removed by our staff before these larvicidal fish are introduced.

5. *Non-access of free sunshine and air*.—As in cases where the wells are situated in places completely barred from access to free sunshine and air or in cases where the mouth of the well was covered over after the fish were introduced. In these places, if arrangements could not be made to allow sunshine and free air, the only remedy will be either to fill up the well or hermetically seal the mouth of the well.

As is shown by the figures for wells to which the fish took kindly the results of this anti-malarial measure are encouraging, and if all the remedial measures suggested above succeed in stopping fish extinction in the said wells, the result may be even more encouraging. For one cause or other it has been found that in the City of Madras radical measures such as the filling up of wells, ponds, etc., cannot be accomplished and in a certain number of cases it is deemed neither necessary nor desirable. Granted then that radical measures are not feasible, it follows that conservative measures of some sort have to be adopted. Introduction of cresol and oil and poisonous substances have been tried with very little success, but the introduction of fish seems to be the most expedient method at present. It combines in itself the positive advantage of popularity with the negative advantage of not rendering the water unfit for domestic use. This latter is a much valued privilege in the city so long as the present condition of precarious water-supply continues and it is not easy to convince the average citizen that the unproved water supply will soon put an end to these troubles. Moreover, in a well treated with oil, cresol, etc., all fish life is impossible while a previous fish introduction would not interfere with subsequent treatment with these chemicals should it be deemed necessary.

It is therefore decided, to stop petrolising wells in the whole city and introduce larvicidal fish and a gang of one maistry and ten fishermen are engaged to carry out this work over the whole of Madras during the year 1915-16. A survey of all wells in a division in which fish are introduced will be undertaken after three or four weeks' time and in the case of those wells where fish are absent or dead, causes inimical to fish life will, if ascertained, be removed and the fish introduced a second time, and secure them into as many wells as possible in this city. The majority of the public have now little or no objection to this measure and the fact that the work is done free of cost to the owner contributes in no small degree to the popularity of this measure. In the cases of those few that object to this procedure even, no alternative is left but to ask them to fill up the well or hermetically cover the mouth of the well with the result that in a number of cases they choose what they deem to be the lesser of the two evils and allow the introduction of fish.

So much for the treatment of wells. The analogous treatment of ponds, tanks and swamps is by no means encouraging for there yet remains the question 'how to treat these' ? where in spite of the presence of shoals of these fish, anophelene larvæ breed in hundreds. This, as said above, is mostly the outcome of the inability of the fish to get access to those minute larvæ which find an easy shelter in the moss and weeds usually present in those places. It was therefore found necessary to conserve such waters by the removal of surface weeds and floating debris near the margins which should be trimmed and overhanging plants that reach to the surface of the water should be cut back as these tend to hold debris and protect the larvæ. In the case of big tanks and wide sheets of water mosquito larvæ are usually absent on account of the wave action except in selected secluded shallows where the water is more or less stagnant. But these are dangerous in so far that, on account of the unevenness of the foreshore as water recedes, small puddles are left behind which are inaccessible to fish. And for the same reason tanks which are cleaned once are covered with moss, weeds, etc., along the edge in from two to three weeks and give the necessary nidus for the breeding of mosquito larvæ. It is therefore essential that if fish are to be of any use as a larvicide, strict measures should be adopted to keep these tanks wholly clean of weeds, etc. At present, these ponds and tanks are being periodically cleaned by the Special Malaria Department; to keep them clean to the desired extent, would require the upkeep of a large permanent staff, whose continued maintenance for an unlimited time could be a serious question for the consideration of the Corporation.

K. RAGHAVENDRA RAO,

B.A., M.B. & C.M.,
Special Malaria Officer.

APPENDIX 'G'.
Statement showing the expenditure under various headings for the year 1915.

Months.	ESTABLISHMENT.			Amount spent for filling, cost of petrol, repairing charges, to lorries for Anti-Malarial Reclamation work.	Oiling, cleaning, Fishermen, bush-cutting and purchase of liquid fuel.	Stationery, Printing and Laboratory equipments.	Contingencies and rent of buildings, etc.	Grass Farm.	Total.
	Investigation, Prevention, Treatment and Lorry Staff.	Lorry Staff for Conservancy work and repairs thereof.	Engineering Staff.						
1	2	3	4	5	6	7	8	8	10
	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.
January	5,394 14 0	Nil.	255 4 2	3,565 6 3	5,120 12 5	66 12 10	823 8 11	4,150 6 7	19,377 1 2
February	3,920 15 1	Nil.	250 11 11	3,335 12 0	2,864 5 7	67 14 9	2,836 9 1	3,803 4 9	17,079 9 2
March	2,881 14 2	Nil.	264 1 2	2,511 13 7	2,306 4 9	41 13 3	3,137 8 5	4,468 2 3	15,011 9 7
April	2,738 10 7	83 2 2	624 12 5	1,687 1 5	1,639 5 4	Nil.	382 3 9	2,726 6 6	9,876 10 2
May	2,141 6 1	116 0 0	1,839 13 1	1,863 14 0	1,830 14 11	6 8 1	723 2 5	3,256 6 6	11,778 1 1
June	2,002 14 10	971 10 10	1,882 2 10	1,068 8 7	1,190 13 9	176 7 3	136 6 6	3,015 5 0	10,444 5 7
July	2,110 12 1	490 5 1	1,978 13 9	1,940 15 0	1,197 13 8	1 6 3	512 2 9	2,176 14 1	10,805 12 3
August	2,148 5 7	752 2 10	1,452 6 10	1,667 7 0	1,647 2 9	81 5 1	537 12 10	2,573 7 8	10,463 9 0
September	1,995 6 9	1,806 15 9	1,417 11 4	4,326 5 8	1,254 4 0	16 12 7	1,004 11 1	1,935 13 5	13,788 0 7
October	2,126 1 9	472 7 7	1,419 5 10	1,980 8 0	1,185 6 3	4 1 5	136 9 11	2,103 11 4	9,428 4 1
November	1,967 8 9	471 12 4	1,486 14 3	2,359 13 6	1,389 7 8	12 1 3	1,405 11 0	2,185 5 0	11,278 9 9
December	2,013 3 1	475 7 6	1,403 3 7	1,592 4 0	1,653 7 1	Nil.	175 14 5	3,020 10 5	10,334 2 1
Total expenditure for 1915.	31,437 0 9	5,640 0 1	14,305 5 2	27,899 13 0	23,280 2 2	475 2 9	11,812 5 1	35,415 13 6	1,50,265 10 6
Total expenditure for 1914.	57,132 15 3	Nil.	2,228 9 9	28,427 6 5	48,977 9 7	2,844 7 0	59,983 10 8	40,171 13 3	2,39,766 7 11

* N.B.—The expenditure under contingencies have exceeded owing to the purchase of four Motor Lorries at a cost of Rs. 12,207-8-0, each.

K. RAGHAVENDRA RAO, B.A., M.B. & C.M.,
Special Malaria Officer, C.M.

APPENDIX V.

APPENDIX 'G.'
Tondiarpet (1st, 2nd and 3rd Divisions of Madras).

—	Years.	Jan.	Feb.	March.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.	Total.	Per mille.	Remarks.
Total number of treatments	1915	8,913	8,622	6,987	5,107	5,023	4,121	5,004	5,163	5,875	5,499	5,112	5,101	70,527	...	
Do	1914	3,888	5,105	4,796	2,134	1,824	1,632	6,024	6,081	6,878	7,910	8,831	10,136	64,739	...	
Fresh infections	1915	595	535	518	446	469	480	521	628	637	599	564	605	6,597	...	
Do	1914	1,734	1,942	2,384	1,209	1,217	883	222	527	722	854	808	659	13,261	...	
Total deaths during	1915	325	290	417	260	224	231	218	310	361	240	195	283	3,384	44.5	
Do	1914	377	304	281	250	243	227	285	383	517	443	336	403	4,049	53.2	
Average for ten years	...	376	324	347	269	285	287	335	444	431	362	343	364	4,167	54.8	
Fever deaths during	1915	86	73	118	91	59	54	42	65	71	59	39	56	813	10.7	
Do	1914	102	75	72	47	65	43	55	83	132	89	76	96	935	12.3	
Average for ten years	...	88	79	84	72	79	72	75	96	97	88	84	91	1,005	13.2	
Infantile deaths during	1915	113	84	95	60	55	69	66	87	89	47	56	73	894	327.6	Per 1000 births registered.
Do	1914	87	75	67	81	70	55	71	86	96	76	43	121	328	332.4	
Average for ten years	...	105	87	87	78	93	89	94	104	92	89	82	95	1,095	358.5	

APPENDIX V.

Pursawakam (11th Division).

—	Year.	Jan.	Feb.	March.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.	Total.	Per mille.	Remarks.
Total number of treatments	1915	4,561	4,688	4,237	3,875	2,735	3,129	3,074	2,984	2,835	3,102	2,292	2,288	39,800	...	
Do	1914	240	223	581	704	5,850	7,761	5,711	4,296	4,250	3,906	4,904	5,401	43,827	...	
Fresh infections	1915	260	221	154	200	151	228	231	145	175	159	168	227	2,319	...	
Do	1914	148	190	185	801	3,660	4,835	344	263	199	323	465	265	11,678	...	
Total deaths during	1915	125	109	158	97	105	106	101	136	161	89	95	131	1,413	34.0	
Do	1914	194	166	159	160	192	151	150	127	208	310	159	167	2,143	51.6	
Average for ten years	...	154	135	132	122	122	117	129	173	164	146	127	155	1,576	40.4	
Fever deaths during	1915	15	9	25	16	17	8	10	14	20	8	13	20	175	4.2	
Do	1914	10	18	10	15	41	41	32	18	30	17	25	31	308	7.5	
Average for ten years	...	29	25	27	21	20	22	21	30	32	25	21	29	302	7.3	
Infantile deaths	1915	40	28	43	27	23	27	37	46	50	24	39	47	431	260.8	Per 1000 births registered.
Do	1914	64	35	46	48	64	39	40	36	58	50	24	48	552	358.0	
Average for ten years	...	43	36	37	39	41	36	43	47	46	45	39	47	499	299.2	

APPENDIX V.

Mylapore (19th Division).

	Year.	Jan'y.	Feb'y.	March.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.	Total.	Per mille.	Remarks.
Total number of treatments	1915	1,306	1,622	867	561	527	637	706	861	768	594	359	547	9,558	...	
Do	1914	1,079	627	1,386	1,162	1,277	1,062	1,071	985	1,689	1,756	2,499	2,277	16,820	...	
Fresh infections	1915	323	230	79	44	27	96	244	319	315	232	172	235	2,816	...	
Do	1914	284	231	639	137	558	510	531	276	290	338	533	396	5,023	...	
Total deaths during	1915	103	94	131	88	94	98	112	98	121	94	88	107	1,231	35.8	
Do	1914	206	182	111	104	114	98	89	131	183	242	132	116	1,708	48.8	
Average for ten years	...	100	89	89	20	23	84	96	105	96	102	95	106	1,005	33.4	
Ever deaths during	1915	5	13	9	6	10	7	5	5	5	5	3	10	83	2.4	
Do	1914	11	10	16	13	14	19	15	17	22	17	13	6	183	5.3	
Average for ten years	...	20	19	20	20	23	23	17	18	20	20	19	18	227	6.9	
Infantile deaths during	1915	31	25	31	27	21	21	31	29	35	25	26	26	331	253.8	
Do	1914	41	27	2	34	38	23	25	26	37	31	28	26	359	295.0	
Average for ten years	...	32	23	27	27	26	26	29	34	32	39	30	33	358	913.2	Per 1000 births registered.

K. RAGHAVENDRA RAU, B.A., M.B. & C.M.,
Special Malaria Officer.

APPENDIX V.

APPENDIX '7'.

Statement showing the tanks re-cleaned during the year 1915.

Serial No.	Block No.	Tank No.	R. S. No.	1st quarter.	2nd quarter.	3rd quarter.	4th quarter.	Total Number of times cleaned for the whole year.	Remarks.
				Number of times cleaned.	Number of times cleaned.	Number of times cleaned.	Number of times cleaned.		
Tondiarpet Division.									
1	78	2	4059	2	1	2	...	5	
2	"	3	4061	2	1	2	...	5	
3	"	5	4061	1	1	2	...	4	
4	"	6	4061	2	1	2	...	5	
5	"	7	4058	2	1	2	...	5	
6	"	9	4056	1	1	...	...	2	
7	"	10	4055	1	1	...	...	2	
8	"	11	4063	1	1	2	...	4	
9	"	12	4055	1	1	2	...	4	
10	"	1	4059	1	1	2	...	4	
11	69-B	2	3372	2	2	...	1	5	
12	69-D	1	3873	1	2	...	1	4	
13	"	2	3873	1	2	...	1	4	
14	"	3	3873	1	2	...	1	4	
15	77-A	1	4035	2	2	...	1	5	
16	"	2	4035	8	2	...	1	6	
17	"	8	4025	2	2	...	1	5	
18	"	4	4084	2	2	...	1	5	
19	"	5	4034	3	2	...	1	6	
20	77-B	1	4052	2	2	...	1	5	
21	"	2	4036	1	2	...	1	4	
22	"	4	4035	1	2	...	1	4	
23	"	5	4036	1	2	...	1	4	
24	"	6	4033	1	2	...	1	4	
25	"	6-A	4033	2	2	...	1	5	
26	"	7	4050/3	2	2	...	1	5	

APPENDIX V.

Serial No.	Block No.	Tank No.	R. S. No.	1st quarter. Number of times cleaned.	2nd quarter. Number of times cleaned.	3rd quarter. Number of times cleaned.	4th quarter. Number of times cleaned.	Total Number of times cleaned for the whole year.	Remarks.
Tondiarpet Division—(Continued).									
27	77-B	9	4050/2	2	2	...	1	5	
28	"	10	4059	1	2	...	1	4	
29	77-C	1	4040	1	2	...	1	4	
30	"	2	4032	1	2	...	1	4	
31	"	3	4031	1	2	...	1	4	
32	"	5	4032	1	2	...	1	4	
33	"	6	4033	1	2	...	1	4	
34	"	7	4039	2	2	...	1	5	
35	"	8	4039	1	2	...	1	4	
36	"	9	4040	1	2	...	1	4	
37	77-D	1	4048	1	2	...	1	4	
38	"	2	4046	1	2	...	1	4	
39	"	3	4038	1	2	...	1	4	
40	"	4	4039	1	2	...	1	4	
41	"	5	4040	1	2	...	1	4	
42	"	6	4040	1	2	...	1	4	
43	"	7	4043	1	2	...	1	4	
44	79-B	1	4066	1	...	...	...	1	
45	"	2	4066	1	1	1	...	3	
46	79-C	1	4139	1	...	...	...	1	
47	79-D	2	4139	1	1	...	...	2	
48	51-A	1	3482	1	1	1	...	3	
49	"	2	3482	1	1	1	...	3	
50	"	3	3481	1	1	...	...	2	
51	"	4	3481	1	...	...	...	1	
52	51-B	1	3480	1	1	1	...	3	
53	"	2	3478	1	1	1	...	3	

APPENDIX V.

Serial No.	Block No.	Tank No.	R. S. No.	1st quarter. No. of times cleaned.	2nd quarter. No. of times cleaned.	3rd quarter. No. of times cleaned.	4th quarter. No. of times cleaned.	Total No. of times cleaned for the whole year.	Remarks.
Tondiarpet Division—(Continued).									
54	51-B	3	3479	1	1	1	...	3	
55	"	4	3477	1	1	1	...	3	
56	76-A	1	3976	1	2	...	1	4	
57	"	2	3973	1	2	...	1	4	
58	"	3	3973	1	2	...	1	4	
59	"	4	3972	1	2	...	1	4	
60	"	5	3972	1	2	...	1	4	
61	"	6	3972	1	2	...	1	4	
62	"	7	3972	1	2	...	1	4	
63	"	8	3973	1	2	...	1	4	
64	"	9	3977	1	2	...	1	4	
65	76-B	1	3977	1	2	...	1	4	
66	"	2	3977	1	2	...	1	4	
67	"	3	3977	1	2	...	1	4	
68	"	4	3977	1	2	...	1	4	
69	"	5	3978	1	2	...	1	4	
70	"	6	3911	1	2	...	1	4	
71	"	7	3911	1	2	...	1	4	
72	"	8	3911	1	2	...	1	4	
73	"	9	3911	1	2	...	1	4	
74	80-B	1	4290	1	1	1	...	3	
75	80-C	1	4290	1	1	...	...	2	
76	81-A	1	4310	1	1	1	1	4	
77	81-B	3	4380	1	1	1	1	4	
78	"	4	4380	1	1	1	1	4	
79	81-C	1	4310	1	1	1	1	4	
80	"	2	4313	1	1	1	1	4	

APPENDIX V.

Serial No.	Block No.	Tank No.	R. S. No.	1st quarter.	2nd quarter.	3rd quarter.	4th quarter.	Total No. of times cleaned for the whole year.	Remarks.
				No. of times cleaned.	No. of times cleaned.	No. of times cleaned.	No. of times cleaned.		
Tondiarpet Division—(Continued).									
81	81-D	1	4317	1	1	1	1	4	
82	"	2	4319	1	1	1	1	4	
83	"	5	4317	1	1	1	1	4	
84	75-A	1	3953	1	1	...	1	3	
85	"	2	3953	1	1	...	1	3	
86	"	3	3953	1	1	...	1	3	
87	"	4	3953	1	1	...	1	3	
88	"	5	3953	1	1	...	1	3	
89	"	7	3955	1	1	1	...	3	
90	"	8	3964	1	1	1	...	3	
91	"	9	3967	1	1	1	1	4	
92	"	11	3968	1	1	1	...	3	
93	"	12	3969	1	1	...	1	3	
94	"	13	3911	1	1	...	1	3	
95	"	14	3920/2	1	1	...	1	3	
96	75-B	1	3957	1	1	1	...	3	
97	"	2	3956	1	1	1	...	3	
98	"	4	3955	1	1	1	...	3	
99	"	5	3957	1	1	1	...	3	
100	"	6	3957	1	1	1	...	3	
101	"	7	3958	1	1	1	...	3	
102	74-A	1	3951	1	2	1	1	5	
103	"	2	3949	1	2	...	1	4	
104	"	3	3949	1	2	...	1	4	
105	"	4	3949	1	2	...	1	4	
106	"	5	3946/2	1	2	...	1	4	
107	"	6	3948	1	2	...	1	4	

APPENDIX V.

Serial No.	Block No.	Tank No.	R. S. No.	1st quarter.	2nd quarter.	3rd quarter.	4th quarter.	Total No. of times cleaned for the whole year.	Remarks.
				No. of times cleaned.	No. of times cleaned.	No. of times cleaned.	No. of times cleaned.		
Tondiarpet Division—(Continued).									
108	74-B	1	3946/1	1	1	1	1	4	
109	"	2	"	1	1	1	1	4	
110	"	3	"	1	1	1	1	4	
111	"	4	3944	1	1	1	1	4	
112	"	5	3945	1	1	1	1	4	
113	"	6	3945	1	1	2	1	5	
114	"	7	3945	1	1	1	1	4	
115	"	8	3944	1	1	1	1	4	
116	"	9	3943	1	1	1	1	4	
117	53-A	1	3541	1	1	1	1	4	
118	"	2	3541	1	1	1	1	4	
119	"	3	3537	1	1	1	1	4	
120	"	4	3535	1	1	1	1	4	
121	"	5	3534	1	1	1	1	4	
122	"	6	3541	1	1	1	1	4	
123	"	7	3537	1	1	1	1	4	
124	"	8	3541	1	1	1	1	4	
125	"	9	3537	1	1	1	1	4	
126	"	10	3547	1	1	...	...	2	
127	"	11	3542	1	1	1	1	4	
128	53-B	2	3547	1	1	...	...	2	
129	"	3	3545	1	1	1	...	3	
130	"	4	3547	1	1	...	...	2	
131	53-C	1	3532	1	1	1	1	4	
132	"	2	3530	1	1	...	1	3	
133	"	3	3548	1	...	...	...	1	
134	"	4	3547	1	1	...	...	2	

APPENDIX V.

Serial No.	Block No.	Tank No.	R. S. No.	1st quarter.	2nd quarter.	3rd quarter.	4th quarter.	Total No. of times cleaned for the whole year.	Remarks.
				No. of times cleaned.	No. of times cleaned.	No. of times cleaned.	No. of times cleaned.		
Tondiarpet Division—(Continued).									
135	53-C	6	3555	...	1	1	1	3	
136	70-C	2	3884	...	...	...	1	1	
137	"	5	3883	1	1	...	1	3	
138	"	6	3882	...	...	...	1	1	
139	73	2	3941	1	1	1	1	4	
140	"	3	3941	1	1	1	1	4	
141	"	4	3941	1	1	1	1	4	
142	"	5	3941	1	1	1	1	4	
143	"	7	3941	1	1	1	1	4	
144	"	8	3989	1	1	1	1	4	
145	"	9	3939	1	1	1	1	4	
146	"	10	3939	1	1	1	1	4	
147	"	11	3938	1	1	1	1	4	
148	"	12	3937	1	1	1	1	4	
149	"	13	3936	1	1	1	1	4	
150	"	14	3940/C	1	1	1	1	4	
151	"	15	3940/B	1	1	1	1	4	
152	"	16	3937	1	1	1	1	4	
153	"	17	3937	1	1	1	1	4	
154	71-B	1	3892/6	1	1	1	1	4	
155	"	2	3896	...	1	1	1	3	
156	"	3	3896	...	1	1	1	3	
157	"	4	3892/6	1	1	1	1	4	
158	71-D	2	3894	...	...	1	1	2	
159	"	3	3897	1	...	...	1	2	
160	"	4	3897	1	1	1	1	4	
161	"	5	3882	1	1	1	1	4	

APPENDIX V.

Serial No.	Block No.	Tank No.	R. S. No.	1st quarter.	2nd quarter.	3rd quarter.	4th quarter.	Total No. of times cleaned for the whole year.	Remarks.
				No. of times cleaned.	No. of times cleaned.	No. of times cleaned.	No. of times cleaned.		
Tondiarpet Division—(Continued).									
162	71-D	6	3892	...	...	1	1	2	
163	"	7	3894	...	...	1	...	1	
164	"	8	3894	...	...	1	...	1	
165	"	1 Ditch	3892	...	...	1	...	1	
166	52-A	7	3522	1	1	1	...	3	
167	52-C	1	3527	1	1	1	...	3	
168	"	2	3527	1	1	1	...	3	
169	"	3	3527	1	1	1	...	3	
170	"	4	3528/2	1	...	...	...	1	
171	50-A	1	3465	1	1	1	...	3	
172	"	2	8464	1	1	...	...	2	
173	"	3	3464	1	1	1	...	3	
174	72-A	1	3899	1	1	1	...	3	
175	"	2	3900	1	1	1	...	3	
176	"	3	3900	1	1	1	...	3	
177	"	4	3902	1	1	1	...	3	
178	"	5	3902	1	1	1	...	3	
179	"	6	3902	1	1	1	...	3	
180	"	7	3905	1	1	1	...	3	
181	"	8	3912/1	1	1	1	...	3	
182	"	9	"	1	1	1	...	3	
183	"	10	3912	1	1	1	...	3	
184	"	11	3912 3 & 4	1	1	1	...	3	
185	"	12	3906	1	1	1	...	3	
186	72-B	1	3934	1	1	1	...	3	
187	"	2	3930	1	1	1	...	3	

APPENDIX V.

Serial No.	Block No.	Tank No.	R. S. No.	1st quarter. No. of times cleaned.	2nd quarter. No. of times cleaned.	3rd quarter. No. of times cleaned.	4th quarter. No. of times cleaned.	Total No. of times cleaned for the whole year.	Remarks.
Tondiarpet Division—(Continued).									
188	72-B	3	3926	1	1	1	...	3	
189	"	4	3907	1	1	1	...	3	
190	"	5	3905	1	1	1	...	3	
191	"	6	3903	1	1	1	...	3	
192	"	7	3901	1	1	1	...	3	
193	"	8	3900	1	1	1	...	3	
194	54-A	1	3659	1	1	1	1	4	
195	"	2	3660	1	1	1	1	4	
196	54-B	1	3618	1	1	...	...	2	
197	"	2	3618	1	1	1	1	4	
198	59-B	1	3822	1	1	...	...	2	
199	"	2	3823	1	1	...	...	2	
200	"	3	3821	...	...	1	...	1	
201	"	5	3823	1	1	...	...	2	
202	"	6	3822	1	1	...	...	2	
203	"	7	3822	1	1	...	...	2	
204	59-D	1	3824	1	1	1	...	3	
205	"	2	3825	1	1	1	...	3	
206	"	3	3825	1	1	1	...	3	
207	"	4	3825	1	1	1	...	3	
208	"	5	3825	1	1	1	...	3	
209	"	6	3827	1	1	1	...	3	
210	45-A	1	2996	...	...	1	1	2	
211	"	3	3050	1	...	...	...	1	
212	"	4	3058	1	1	1	1	4	
213	"	5	3053	1	1	1	1	4	
214	45-B	1	2993	1	1	1	1	4	

APPENDIX V.

Serial No.	Block No.	Tank No.	R. S. No.	1st quarter. No. of times cleaned.	2nd quarter. No. of times cleaned.	3rd quarter. No. of times cleaned.	4th quarter. No. of times cleaned.	Total No. of times cleaned for the whole year.	Remarks.
Tondiarpet Division—(Continued).									
215	45-B	3	3040	1	1	1	1	4	
216	"	4	3015	...	...	1	1	2	
217	"	5	3015	...	...	1	1	2	
218	49-B	1	3307	1	1	1	...	3	
219	"	2	3306	1	1	1	...	3	
220	"	2-A	3303	1	1	1	...	3	
221	55-A	1	367	1	1	1	1	4	
222	"	4	3121	1	1	1	1	4	
223	"	5	3721	1	1	1	1	4	
224	"	6	3667	1	1	1	1	4	
225	55-B	1	3667	1	1	1	1	4	
226	"	2	3713	1	1	1	1	4	
227	46-A	1	3057	1	1	1	...	3	
228	6-B	1	118	1	1	1	...	3	
229	56-A	2	3734	1	1	1	...	3	
230	"	3	3740	1	1	1	...	3	
231	"	4	3741	1	1	1	...	3	
232	"	5	3741	1	1	1	...	3	
233	"	6	3738	1	1	1	...	3	
234	"	7	3737	1	1	...	...	2	
235	"	8	3736	1	1	...	...	2	
236	"	9	3735	1	1	1	...	3	
237	56-B	1	3733	1	1	1	...	3	
238	"	2	3733	1	1	1	...	3	
239	"	3	3733	1	1	1	...	3	
240	"	4	3733	1	1	1	...	3	
241	"	5	3734	1	1	1	...	3	

APPENDIX V.

Serial No.	Block No.	Tank No.	R. S. No.	1st quarter.	2nd quarter.	3rd quarter.	4th quarter.	Total No. of times cleaned for the whole year.	Remarks.
				No. of times cleaned.	No. of times cleaned.	No. of times cleaned.	No. of times cleaned.		
Tondiarpet Division—(Continued).									
242	57-A	1	3801	1	1	1	...	3	
243	"	2	3799	1	1	1	...	3	
244	"	3	3800	1	1	1	...	3	
245	"	4	3783	1	1	1	...	3	
246	57-B	1	3752	1	1	1	...	3	
247	"	2	3795	1	1	1	...	3	
248	"	4	3793	1	1	1	...	3	
249	"	5	3756	1	1	1	...	3	
250	"	6	3764	1	1	1	...	3	
251	"	7	3763	1	1	...	...	2	
252	58-A	1	3812	1	1	1	...	3	
253	"	2	3811	1	1	1	...	3	
254	"	3	3811	1	1	1	...	3	
255	58-B	1	3810	1	1	1	...	3	
256	"	2	3802	1	1	1	...	3	
257	"	3	3809	1	1	1	...	3	
258	"	4	3802	1	1	1	...	3	
259	"	5	3808	1	1	1	...	3	
260	"	6	3808	1	1	1	...	3	
261	"	7	3805	1	1	1	...	3	
262	"	8	3806	1	1	1	...	3	
263	"	9	3807	1	1	1	...	3	
264	"	11	3813	...	...	1	...	3	
265	19-E	1	1088	1	1	1	...	1	
266	13-B	1	509	1	1	1	1	4	
267	9	1	267	1	...	1	...	3	
268	33-A	9	1890	1	1	1	...	2	
				1	1	1	...	3	

APPENDIX V.

Serial No.	Block No.	Tank No.	R. S. No.	1st quarter.	2nd quarter.	3rd quarter.	4th quarter.	Total No. of times cleaned for the whole year.	Remarks.
				No. of times cleaned.	No. of times cleaned.	No. of times cleaned.	No. of times cleaned.		
Tondiarpet Division—(Continued).									
269	33-A	10	1870	...	...	1	...	1	
270	"	11	1879	...	...	1	...	1	
271	"	13	1868	1	...	...	...	1	
272	"	14	1869	...	...	1	...	1	
273	"	15	1890	1	...	...	...	1	
274	"	16	1870	...	...	1	...	1	
275	"	18	1871	1	1	1	...	3	
276	33-B	1	1866	1	1	1	...	3	
277	"	2	1864	1	1	..	...	2	
278	"	3	1867	1	1	1	...	3	
279	"	4	1868	1	1	1	...	3	
280	"	5	1875	1	1	1	..	3	
281	"	7	1872	1	1	1	...	3	
282	"	8	1880	1	1	1	...	3	
283	33-C	1 ditch	1890	...	...	1	...	1	
284	24-B	1 tank	1700	1	1	2	1	5	
285	5	1	95	1	2	1	1	5	
286	"	2	96	1	2	1	1	5	
287	36-A	1	2082	1	1	1	...	3	
288	"	2	2081	1	1	1	...	3	
289	36-B	1	2080	1	1	1	...	3	
290	"	2	2081	1	1	1	...	3	
291	38-A	1	2385/1	1	...	1	...	2	
292	41-A	2	2656	1	1	1	...	3	
293	28-A	1	1802/2	...	1	1	...	2	
294	"	2	1802/1	1	1	1	...	3	
295	"	3	1802/1	1	1	1	...	3	

APPENDIX V.

Serial No.	Block No.	Tank No.	R. S. No.	1st quarter.	2nd quarter.	3rd quarter.	4th quarter.	Total No. of times cleaned for the whole year.	Remarks.
				No. of times cleaned.	No. of times cleaned.	No. of times cleaned.	No. of times cleaned.		
Tondiarpet Division—(Continued).									
296	28-A	4	1820/3	...	1	1	...	2	
297	"	5	1802/3	...	1	1	...	2	
298	28-B	1	1802	1	1	1	...	3	
299	"	2	1799	...	1	1	...	2	
300	27-A	1	1790	...	...	1	...	1	
301	"	2	1730	1	1	1	...	3	
302	"	3	1795	...	...	1	...	1	
303	"	5	1791	1	1	...	...	2	
304	"	ditch 3	1766/1	...	...	1	...	1	
305	"	" 4	1795	...	...	1	...	1	
306	27-B	2	1766	1	2	1	...	4	
307	68-B	1	3868	...	2	...	...	2	
308	"	2	3869	...	2	...	...	2	
309	17 A	1	1009	...	1	1	1	3	
310	30	1	1832/1	...	1	...	...	1	
311	"	2	1832/2	...	1	...	...	1	
312	"	ditch 1	1824/2	...	1	1	...	2	
313	"	2	1819	...	1	...	...	1	
314	"	3	1830	...	1	...	...	1	
315	"	6	1836/2	...	1	...	...	1	
316	"	7	1824	...	1	1	...	2	
317	"	8	1824	...	1	1	...	2	
318	"	9	1824	...	1	1	...	2	
319	34	1	1945	...	1	1	...	2	
320	30	10	1824/2	...	...	1	...	1	
321	"	ditch 11	1824/3	...	...	1	...	1	
322	"	" 12	1824/3	...	...	1	...	1	

APPENDIX V.

Serial No.	Block No.	Tank No.	R. S. No.	1st quarter.	2nd quarter.	3rd quarter.	4th quarter.	Total No. of times cleaned for the whole year.	Remarks.
				No. of times cleaned.	No. of times cleaned.	No. of times cleaned.	No. of times cleaned.		
Tondiarpet Division—(Continued).									
323	30	13	1826/2	...	...	1	...	1	
324	"	14	"	...	...	1	...	1	
325	3	1	29	...	...	3	3	6	
George Town Division.									
326	24	1	1686	...	1	1	1	3	
327	45	1	4977	...	...	...	1	1	
Mylapore Division.									
328	11	1	632	...	1	...	1	2	
329	"	2	629	...	1	...	1	2	
330	"	3	629	...	1	...	1	2	
331	"	4	629	...	1	...	1	2	
332	22	1	1063	...	1	...	1	2	
333	23	1	1099	...	1	...	1	2	
334	24-A	5	1136	...	1	...	1	2	
335	"	6	1147	...	1	...	1	2	
336	"	7	1148	...	1	...	1	2	
337	24-B	2	1128	...	1	...	1	2	
338	"	3	1130	...	1	...	1	2	
339	"	4	1146	...	1	...	1	2	
340	36	2	1722	...	1	...	...	1	
341	"	3	1723	...	1	...	1	2	
342	"	5	1701	...	1	...	1	2	
343	"	6	1706	...	1	...	1	2	
344	"	7	1703	...	1	...	1	2	
345	"	8	1706	...	1	...	1	2	

APPENDIX V.

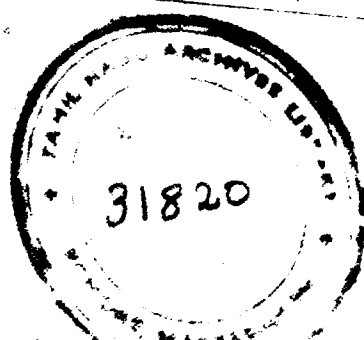
Serial No.	Block No.	Tank No.	R. S. No.	1st quarter.	2nd quarter.	3rd quarter.	4th quarter.	Total No. of times cleaned for the whole year.	Remarks.
				No. of times cleaned.	No. of times cleaned.	No. of times cleaned.	No. of times cleaned.		
Mylapore Division—(Continued).									
346	36	8	1706	...	1	...	1	2	
347	37	1	1731	...	1	...	...	1	
348	"	2	1734	...	1	...	...	1	
349	"	3	1825	...	1	...	...	1	
350	"	4	1825	...	1	...	...	1	
351	"	5	1825	...	1	...	...	1	
352	37-B	1	1736	...	1	...	...	1	
353	"	3	1825	...	1	...	1	2	
354	"	4	1825	...	1	...	1	2	
355	21	1	1037	...	...	...	1	1	
356	15-B	3	827	...	1	...	...	1	
357	20-C	1 pond	1001	...	1	...	1	2	
358	"	2	1001	...	1	...	...	1	
359	20-B	1	1003	...	1	...	...	1	
360	35	1	1693	...	1	...	1	1	
361	"	2	1674	...	1	...	1	2	
362	33	1	1594	...	1	...	1	2	
363	"	2	1594	...	1	...	1	2	
364	25-C	1	1203	...	1	...	1	2	
365	6-A	1	194	...	1	...	...	1	
366	"	2	190	...	1	...	1	2	
367	31-A	1 pond	...	...	1	...	...	1	
368	"	2 "	...	...	...	...	1	1	
369	31-B	1 "	...	...	...	...	1	1	
370	"	2 "	...	...	...	...	1	1	
371	"	3 "	...	...	...	...	1	1	
372	"	F ditch	1560	...	...	...	1	1	
				...	...	...	1	1	

APPENDIX V.

Serial No.	Block No.	Tank No.	R. S. No.	1st quarter.	2nd quarter.	3rd quarter.	4th quarter.	Total No. of times cleaned for the whole year.	Remarks.
				No. of times cleaned.	No. of times cleaned.	No. of times cleaned.	No. of times cleaned.		
Mylapore Division—(Continued).									
373	30-B	6	1554	...	...	...	1	1	
374	30-A	3	1545	...	...	...	1	1	
375	34-B	1 tank	1654	...	...	...	1	1	
376	1-C	1 pond	...	...	...	...	1	1	
377	45-A	1 tank	2295	...	...	...	1	1	
Triplicane Division.									
378	59-A	1	3171	...	...	...	1	1	
379	59-B	2	"	...	...	...	1	1	
380	"	8	"	...	...	...	1	1	
381	"	5	"	...	...	...	1	1	
Purasawakam Division.									
382	37	1	2383	2	1	...	1	4	
383	"	2	2355	2	1	1	...	4	
384	"	3	2355	2	1	...	...	3	
385	"	4	2355	2	...	1	...	3	
386	"	1 pond	2355	2	...	1	1	4	
387	41-B	1	2776	2	1	1	...	4	
388	"	2	2776	2	1	1	...	4	
389	"	3	2774	2	1	1	...	4	
390	"	Paddy field.	2770, 2767 2768, 2767 2774 & 2765	2	...	...	1	3	
391	41-A	1	2762	2	1	1	...	4	
392	"	2	2759	2	1	1	...	4	
393	"	3	2765	2	1	1	...	4	
394	"	1 cess pool	2760	2	...	1	...	3	
395	44	1	2861	2	1	1	...	4	
396	25	1	1522	2	1	1	...	4	

APPENDIX V.

Serial No.	Block No.	Tank No.	R. S. No.	1st quarter. No. of times cleaned.	2nd quarter. No. of times cleaned.	3rd quarter. No. of times cleaned.	4th quarter. No. of times cleaned.	Total No. of times cleaned for the whole year.	Remarks.
Purasawakam Division—(Continued).									
397	25	2	1517	2	1	1	...	4	
398	"	3	1523	2	1	1	...	4	
399	"	4	1545	2	1	1	...	4	
400	"	1 pond	1536	2	1	...	...	3	
401	"	3	1522	2	1	1	...	4	
402	"	4	1539	2	1	1	...	4	
403	"	Paddy field tank.	1544, 1543, 1542, 1540, 1539 and 1538.	2	1	2	...	5	
404	14-B	1	777	2	...	1	...	3	
405	8-B	1	231	2	...	...	...	2	
406	46	1	2905	...	...	1	...	1	
407	47	1	...	...	...	2	...	2	
Perambur Division									
408	17-C	4	301	...	...	2	...	2	
Yepary Division.									
409	15	1	660	2	...	1	...	3	
410	28	1	1269	...	...	3	3	6	
411	"	1 cess pool.	1269	...	...	3	8	6	
412	27-B	1-T	1268	...	...	3	3	6	
418	"	2	1268	...	...	3	3	6	
414	"	3	1268	...	...	3	3	6	
415	27-A	1	1268	...	...	3	3	6	
416	26-B	1	1267	...	...	3	3	6	



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Special Malaria Officer.

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VRM, 6/1/15
M.L.

CHART I
Graph showing total deaths malaria deaths and fever
according to months for the year 1914 & 1915

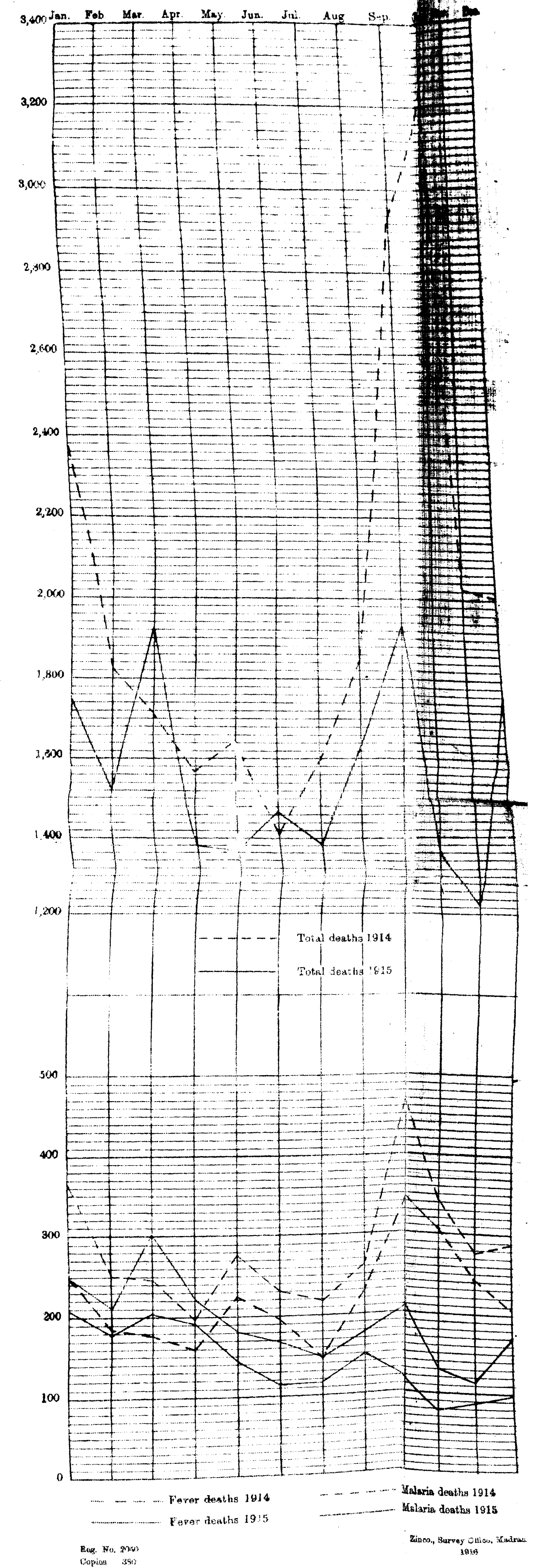


CHART II

Graph showing total deaths, infantile deaths and fever deaths according to months for the year 1914 & 1915

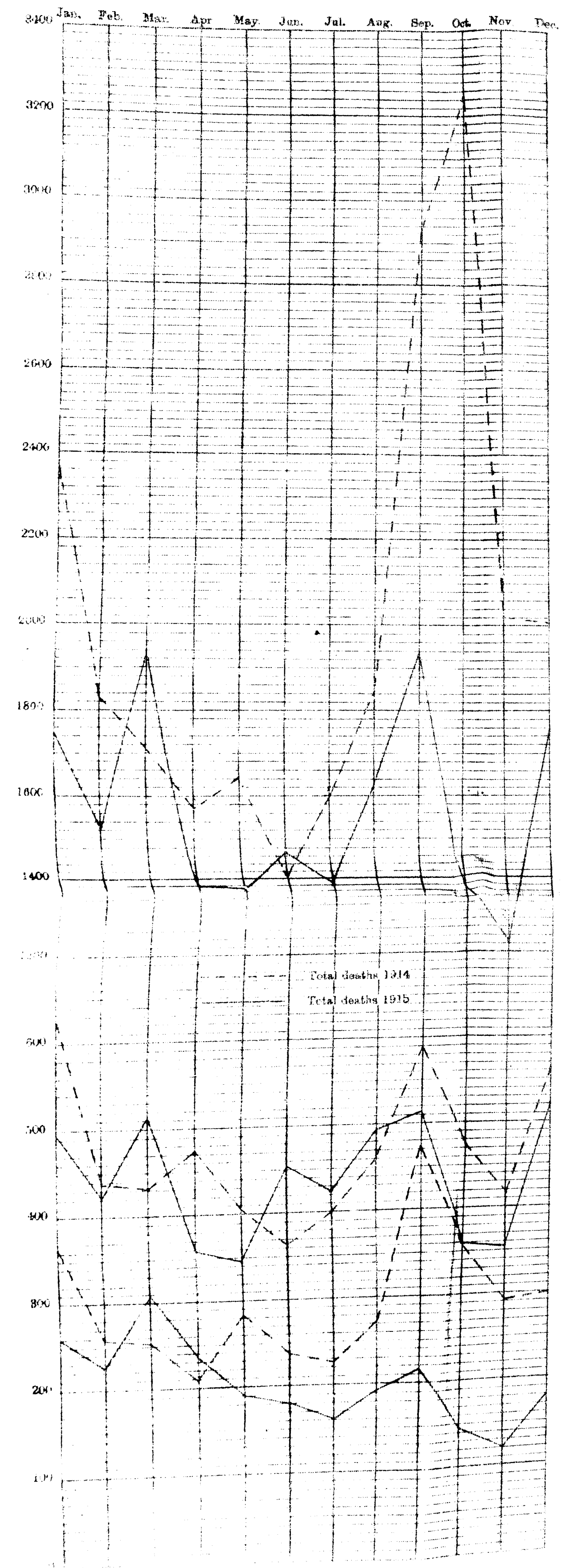


CHART III

Graph showing total deaths, malaria deaths and fever deaths according to divisions for the year 1914 & 1915.

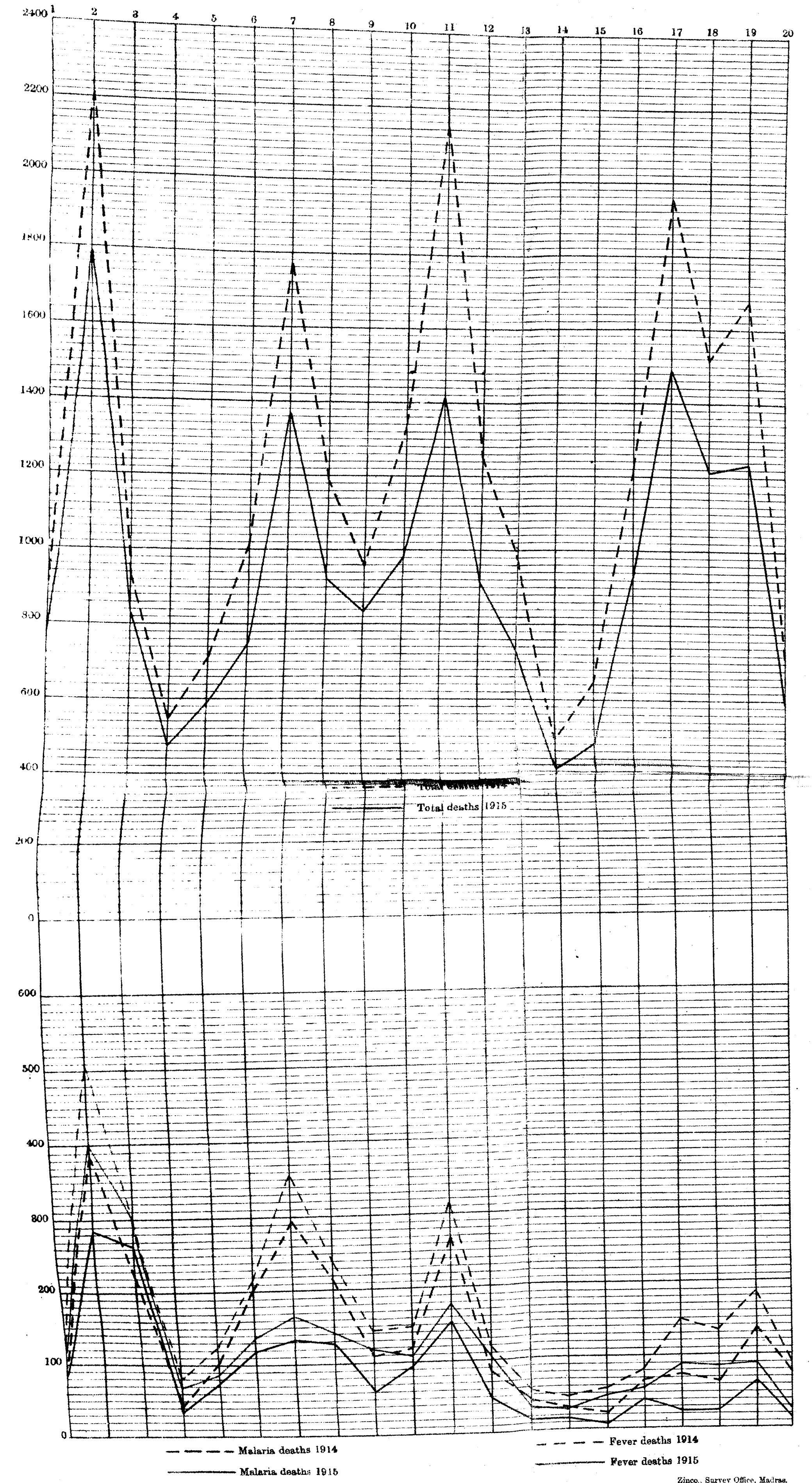


CHART IV

Graph showing total deaths, infantile deaths and fever deaths according to divisions for the year 1914 & 1915.

