

LEGISLATIVE COUNCIL.

No. 577.

REPORT OF THE DIRECTOR OF PUBLIC WORKS, FOR THE YEAR 1905.

*To be laid before the Legislative Council by Command of
His Excellency the Governor.*

EXPENDITURE.

1. The amounts voted, as compared with those actually expended by the Department under the various headings, were as follows:—

	AMOUNTS VOTED.			Actual Expenditure.
	In Estimates.	Supplement- ary Votes.	Total.	
	\$	\$	\$	\$
(i.) Personal Emoluments and other Charges, ...	264,458.00	400.00	264,858.00	219,603.56
(ii.) Annually Recurrent Works.....	380,500.00	21,250.00	401,750.00	383,798.06
(iii.) Extraordinary Works,	1,815,200.00	346,997.83	2,162,197.83	1,775,138.83
Total,	2,460,158.00	368,647.83	2,828,805.83	2,378,540.45

Detailed statements of items (ii.) and (iii.) are given in Appendices A and B.

With regard to (i.), the saving shown is largely due to the rise in Exchange, the Estimates having been prepared on the basis of a *1s. 8d.* dollar, as against an average actual rate of *1s. 11d.*

In the case of (ii.), the principal excesses occurred in the items "Maintenance of Telegraphs" (\$7,589.31) and "Maintenance of Praya Wall and Piers" (\$5,329.33). The former was due to the introduction of metallic circuiting on all the Government telephone lines, rendered necessary by the establishment of the Electric Tramway Service on the trolley system, and the latter to the extension and repair of the public pier, opposite Observation Place, Praya East, which it was considered advisable to carry out before the Praya Reclamation plant was disposed of. The excesses on these and a few other votes were nearly balanced by savings on others.

As regards (iii.), the works on which the expenditure fell much below the estimate were:—

"Law Courts" (\$89,429.50), "Post Office" (\$85,599.75), and "Kowloon Water Works" (\$78,290.56).

The principal items on which expenditure occurred in excess of the provision made in the Estimates or for which no provision had been made were:—

"Tytam Tuk Water-works Scheme" (\$39,075.32), "Kowloon-Canton Railway—Surveys and Preliminary Expenses" (\$64,463.31), "Forming and Kerbing Streets" (\$24,746.45), "Resumptions for widening Salisbury Road, Kowloon" (\$17,286.75), "Rainstorm Damages" (\$12,768.43), "Gunpowder Depot" (\$20,003.44), "Miscellaneous Drainage Works" (\$14,673.15).

The savings and excesses nearly balanced each other, the expenditure only falling short of the amount provided in the Estimates by \$40,061.17, or less than 2¼%.

The following is a statement of the expenditure in 1905, as compared with that of the previous year :—

	1904.	1905.	Increase.	Decrease.
	\$ c.	\$ c.	\$ c.	\$ c.
Personal Emoluments and Other Charges,	214,334.62	219,603.56	5,268.94	.....
Annually Recurrent Works,	532,751.85	383,798.06	.....	148,953.79
Extraordinary Works,	1,264,351.30	1,775,138.83	510,787.53	.....
	2,011,437.77	2,378,540.45	516,056.47	148,953.79
Deduct Decrease,			148,953.79	
Net Increase,			\$367,102.68	

As will be seen, the gross expenditure exceeded that of the previous year by \$367,102.68, practically the whole of this increase being due to Extraordinary Works. The reduction in expenditure under Annually Recurrent Works is more apparent than real, being due to the transfer of several votes from this head to Extraordinary Works under which the expenditure was correspondingly increased. The votes referred to were :—

Expenditure in 1905.

Miscellaneous Works,	\$ 44,900.35
Miscellaneous Drainage Works,	59,673.15
Miscellaneous Water-works,	24,872.66
Forming and Kerbing Streets,	64,746.45
Extension of Gas Lighting,	1,699.00
Total,.....	<u>\$195,891.61</u>

LAND SALES AND SURVEYS.

2. *Land Sales, Extensions, Grants, &c.*—The following tabulated statement gives particulars of these:—

	NO. OF LOTS.		AREA IN SQUARE FEET.		ANNUAL RENT.		PREMIUM.		
	...	Total.	..	Total.	\$	c.	\$	c.	
<i>Sales by Auction.</i>									
Island of Hongkong,	21		262,252		1,213.00		36,328.00		
Kowloon Peninsula,	2		149,637		1,692.00		74,611.00		
N. T., Southern District, ...	9		15,632,559		2,866.00		16,092.00		
.. Northern ..	29		328,153		590.40		984.70		
		61		16,372,601			6,361.40	128,015.70	
<i>Sales without Auction.</i>									
Island of Hongkong,	3		3,736		22.00		1,396.00		
Kowloon Peninsula,	1		264,000		3,030.00		79,200.00		
		4		267,736			3,052.00	80,596.00	
<i>Extensions Granted.</i>									
Island of Hongkong,	5		5,664		45.72		1,141.46		
Kowloon Peninsula,	3		74,919		6,816.00		59,006.15†		
		8		80,583			6,861.72	60,147.61	
<i>Grants on Nominal terms.</i>									
Island of Hongkong,	1		42,000		1.00		...		
Kowloon Peninsula,	1		43,550		...		...
		2		85,550			1.00	...	
<i>Grants on Short Leases.</i>									
Island of Hongkong,	3		24,820		42.00		...		
Kowloon Peninsula,	2		7,300		110.00		...		
New Territory,	2		1,836,120		219.00		...		
		7		1,868,240			371.00	...	
<i>Permits to occupy land for Short Periods, &c.</i>									
Island of Hongkong,	141		Not available.		3,135.29*		...		
Kowloon Peninsula,	42				2,764.31*		...		
New Territory,	100				635.33*		...		
		283					6,534.93*	...	
<i>Extensions of Short Period Leases to 75 Years Leases.</i>									
Kowloon Peninsula, .....	...	22	...	160,135	...		2,204.00	24,023.00
Total, .....	...	387	...	18,834,845	...		25,386.05	292,782.31

* These amounts are not entirely Annual Crown Rents, as many of the permits are for very short periods.

† This amount was largely counterbalanced by the surrender to the Government of land valued at \$50,807.35.

The actual amount of premium paid into the Treasury during the year was \$394,560.96, or considerably less than the estimate, which amounted to \$500,000. It included the following sums which do not appear in the above tabulated statement:—

Deferred payment of premium on M. L. 289, sold in December, 1904, plus interest,	\$99,294.00
Premia derived from sale of rights to erect piers,	61,583.00
Fees for boundary stones to mark lots,	50.00

One lot was put up to auction, but the purchaser failed to pay the purchase money into the Treasury and his deposit of \$100 was therefore forfeited to Government.

Lots in the New Territory sold by the Public Works Department numbered 8 and realized \$15,788. In addition to this, the Assistant Land Officer at Tai Po sold 28 small lots which realized \$584.70 and the Assistant Land Officer at Hongkong 2 small lots which realized \$704.

The following are details of the principal land sales, of which there were, however, few:—

Number of Lot.	Area Square feet.	Crown Rent.	Premium.	Rate Realized.
K. M. L. 87,	145,350	\$ 1,668	\$ 72,876	\$ 0.50 per square foot.
R. B. L. 123,	112,000	258	5,620	\$ 0.05 „
Sai Kung F. L. 1, I. L.'s 1-5 & M. L. 2,	acres 339.93	3,298	13,288	\$39.00 per acre.

The large area in the New Territory (339.93 acres) comprised 300 acres let on a Farm Lot lease, the remainder being Inland and Marine Lots, in connection with the establishment of a flour mill by the Hongkong Milling Co., Ltd.

The sales without auction included a large area of sea-bed (264,000 square feet) in front of Kowloon Marine Lot 49; a lot at Aberdeen (3,180 square feet) for a Roman Catholic School; a re-adjustment of the boundaries of Inland Lot 1610 in Bridges Street (326 square feet) and a small extension (230 square feet) for a District Watchmen's house in Third Street.

The extensions granted comprised an area of 3,556 square feet for Inland Lot 1518 on Macdonnell Road; an area of 1,696 square feet for Inland Lot 1703, on which a naphtha godown has been erected at Kennedy Town; two small areas, totalling 181 square feet, for Aberdeen Inland Lots 68 and 76 and a small area (231 square feet) occupied by an encroachment in connection with Rural Building Lot 96 on Mount Kellett. In Kowloon two large extensions (15,125 square feet and 54,294 square feet respectively) occurred owing to the inclusion in Kowloon Marine Lots 74 and 75 of the areas intended for a roadway in front of these lots. This was done under special arrangements with the lessees whereby they undertook to defray the cost of the resumption of certain areas for widening Salisbury Road to 100 feet in width. In the remaining case, an area of 5,500 square feet was added to Kowloon Inland Lot 423 in connection with a readjustment of that lot to enable Reclamation Street to be formed between Dundas and Soy Streets.

The Grants on nominal terms were an area of 42,000 square feet (Marine Lot 290) at North Point for the Royal Hongkong Yacht Club and an area of 43,550 square feet (Kowloon Inland Lot 1164) near Ma Tau Wai for a cemetery.

The Grants on short leases consisted of an area of cultivated land at Pokfulam (Garden Lot 25—area 23,300 square feet) formerly held under squatter's licence and now let on a 5-years' lease; an area of 1,125 square feet reserved for formation of a public lane at Shaukiwan Lot 402, but not at present required for that purpose; an area of 395 square feet adjoining Inland Lot 1,336, for the erection of a small pump in connection with the large reservoir for Quarry Bay Sugar Refinery, let on an annual lease; two small areas in Kowloon let on an annual lease for a cracker factory; an area of 37 acres in the New Territory, near Tsün Wan, let on a 5-years' lease as a pleasure garden; and another area of 3.4 mows of land, also in the New Territory, let for purposes of cultivation.

The permits to occupy land for short periods were of a very miscellaneous character and too numerous to admit of individual mention. Generally, they were issued quarterly and the areas dealt with were small.

The extensions of short leases to 75 years' leases were in connection with 22 Lots in the neighbourhood of Mongkoktsui originally held under squatters' licences. The Squatters' Board awarded the licensees short leases and these have since been converted into long leases on payment of a premium and additional Crown Rent.

3. Resumptions & Re-adjustments.—In connection with the scheme for constructing main thoroughfares in Kowloon, numerous resumptions and re-adjustments of Lots were effected. Altogether 15 Lots were dealt with, the total area resumed amounting to 114,941 square feet. The resumptions of land required for the railway south of the Kowloon Range of Hills were also undertaken by this Department; those to the north being carried out by the Assistant Land Officer for the Northern District.

4. Lease Plans.—Plans and particulars (in duplicate) of 50 Lots were furnished to the Land Office in connection with the issue of leases.

5. Boundary Stones.—Boundary stones were fixed for 11 Lots in Hongkong, 18 Lots in Kowloon and 1 Lot in the New Territory.

6. Sites for Booths at the Race Course.—A sum of \$2,811.05 was realized by the letting of sites for the erection of booths and stands at Happy Valley during the Race Meeting.

7. *Squatters' Licences.*—The number of squatters' licences on the roll at the beginning of the year was 272 representing an annual rental of \$872.70. During the year, 28 were written off and an effort is now being made to settle the claims of all squatters. Surveys are being prepared for that purpose.

8. *Military Lands.*—The negotiations between the Colonial Government and the Military Authorities for exchanges of land have now been practically brought to a conclusion, the only matters requiring settlement being the boundaries and areas of the various plots, for which surveys are required.

Colonel LEWIS who came out from England to settle the matter, compiled a report on all the Military holdings and made recommendations as to settlement which were eventually agreed upon by both parties. The Military Authorities are now preparing plans of all lands held by them and defining the areas by boundary stones in order that they may be checked by the Colonial Government.

9. *Naval Lands.*—There is nothing to record under this heading beyond the fact that the vexed question of the boundary between the Naval and Military property and the proposed Praya East Reclamation was settled.

10. *Piers.*—The right of erecting piers under long leases was granted in 3 cases in Hongkong and in 3 in Kowloon whilst extensions of two piers formerly sanctioned—one in Hongkong and one in Kowloon—were also granted. The premia derived from the above in Hongkong amounted to \$58,375 and in Kowloon \$1,583 while the annual rentals were \$3,780 and \$480 respectively. Licences for the following temporary piers for various periods were issued:—18 in Hongkong, 14 in Kowloon, and 19 in the New Territory, the amount of fees payable for these being \$5,335.

11. *New Territory.*—Matters in the New Territory have absorbed a large part of the time of the Survey staff during the year. It was considered desirable to define the Anglo-Chinese Boundary between Sha Tau Kok and Lin Ma Hang and this was done, permanent boundary stones of a substantial character being established and surveyed. Certain areas of padi land which had been omitted in the original Survey were picked up and mapped and all the quarries between Kowloon City and Lyemun Pass were surveyed and marked with boundary stones.

The prints of Mr. NEWLAND'S 2" map were received from England and have proved most useful.

WORK UNDER THE BUILDINGS ORDINANCE.

12. As the result of a more extended acquaintance with the Public Health and Buildings Ordinance of 1903, the plans submitted by Architects have been generally in accordance with its provisions, but applications for a modification of one or more of these are very numerous and, as nearly all such applications have to be referred to the Sanitary Board as well as to the Governor in Council, the carrying out of the new Ordinance involves a great deal more work than the old.

13. *Plans.*—Plans were deposited during the year for the following, the figures for 1904 being given in a parallel column for purposes of comparison:—

	1904.	1905.	Increase.	Decrease.
European houses,	56	35	...	21
Chinese houses,	156	164	8	...
Buildings and structures other than the above,	195	150	...	45
Alterations and additions to existing buildings, ...	1,468	1,744	276	...
Verandahs,	42	43	1	...
Balconies,	35	73	38	...
Sunshades,	34	41	7	...
Areas,	2	3	1	...
Piers,	9	6	...	3
Total,	1,997	2,259	331	69

The diminution in the number of new buildings for which plans were deposited indicates a depression in building operations, though there was a large increase in the number of plans for the alteration or extension of existing buildings. This increase is however in great measure due to the enforcement by the Officers of the Sanitary Board of those provisions of the new Ordinance which require the opening out of back-yards or the enlargement or insertion of windows in existing houses.

14. Certificates.—The following certificates for new buildings were issued :—

54	for domestic buildings under s. 53 of Ordinance No. 15 of 1889.
211	„ „ „ „ s. 204 of Ordinance No. 1 of 1903.
21	„ non-domestic buildings.

These figures show an increase of 22 in the number of buildings certified, as compared with 1904.

15. Notices and Permits.—Notices relating to structures in a dangerous condition were served in 169 cases whilst 1,058 permits and 260 notices of a miscellaneous nature were issued. These figures show a decrease of 47 in the dangerous structure notices and an increase of 203 in those of a miscellaneous nature, as compared with 1904.

16. General Remarks.—No damage of any importance was caused to buildings by typhoons or rainstorms during the year. Much attention was given to the quality of the mortar used in the erection of the various buildings which were in progress with the result that, out of 29 samples taken, 7 were found to be deficient in lime. Prosecutions were successfully instituted in all these cases and resulted in the infliction of fines amounting to \$1,700. It is hoped that these prosecutions will have a salutary effect in improving the quality of the mortar used throughout the Colony.

The Naval Yard Extension and Messrs. BUTTERFIELD & SWIRE'S Shipyard Works were in progress throughout the year. In the case of the former, the reclamation, outer quay wall and tidal basin were practically completed and substantial progress was made with the construction of the graving dock. Several of the buildings connected with the scheme were in progress, some delay being caused in the case of the pump-house by the failure of the timbering just as the excavation for the pump-wells, about 70 feet in depth, was nearly complete. In the case of the Shipyard Works, the reclamation and levelling of the site made good progress and the inner portion of the graving dock was completed; work on the entrance, for which a very heavy cofferdam was required, being in active progress by the close of the year.

The remaining large blocks of buildings on the Praya Reclamation east of Pedder Street, including "Hotel Mansions", "King's Building", "York Building" and "Royal Building", were completed during the year. A great many of the leading firms of the Colony—business, commercial and professional—are now housed in these and other buildings occupying the area indicated. The buildings have an imposing appearance and compare favourably in many respects with similar buildings in our large home cities.

Other works worthy of mention are Sharp's Memorial Hospital, Mount Kellett, and the new Military Hospital above Bowen Road, both of which were nearing completion at the close of the year. Work was begun on the erection of the buildings to form the premises of the Hongkong Milling Co. in Junk Bay. The Star Ferry Co.'s new pier opposite the end of Salisbury Road, Kowloon, was constructed during the year and was nearly ready for traffic. It will afford a much more convenient point of arrival and departure than the old pier, both for the ferry steamers and for passengers and vehicles, being clear of the Kowloon Wharves with all their obstructions afloat in the way of cargo-boats, lighters, etc. and ashore in the way of rails, trucks and masses of cargo constantly being moved to and fro. The new pier also affords much better accommodation and protection from the weather than the old one.

The reclamations at Kowloon and Blackheal's Point and of Kowloon Marine Lot 83 at Hung Hom mentioned in last year's report were practically completed, whilst those of Marine Lot 235, at North Point, and of Kowloon Marine Lot 85, at To Kwa Wan, made good progress. The following further reclamations were in progress :—

	<i>Area, sq. ft.</i>
New Kowloon Marine Lot No. 2, Lai Chi Kok,	345,928
Kowloon Marine Lot No. 87, Yaumati,	145,350
Sai Kung Marine Lot No. 2, Junk Bay,	653,400

The areas stated are those of the lots, which, in two cases, extend for some distance above old high-water mark and, though largely so, are not therefore exclusively reclaimed from the sea. In the remaining case, the purchaser has been required to fill in and reclaim a considerable area of Crown foreshore in addition to the entire area of his Lot.

PUBLIC WORKS RECURRENT.

17. *Maintenance of Buildings.*—The buildings upon which any considerable sum was expended were the following:—

Government Civil Hospital—Constructing boarded ceilings, tiling verandahs and lavatories, asphaltting verandah roof (A Block), general repairs, painting, &c.,	\$ 7,520
Mountain Lodge—General repairs, painting externally and painting, colourwashing, &c., internally,.....	4,929
Central Police Station—General repairs, painting, colourwashing, &c.,.....	3,459
Tsim Sha Tsui Police Station—General repairs,	2,023
Kennedy Town Sheep & Swine Depôt—General repairs, painting, &c.,.....	1,949
Victoria Gaol & Warders' Quarters—General repairs, painting, &c.,	1,879
General Post Office and Treasury—General repairs, painting, &c.,	1,770
Observatory—General repairs, painting, &c.,	1,454
Lunatic Asylums, European and Chinese—General repairs, painting, &c.,	1,272
Hunghom Slaughter House—General repairs,	1,265
Yaumati Police Station—General repairs,	1,167
Victoria Hospital—Rendering roofs with cement and general repairs,	1,060
Western Market—General repairs,	1,016
Aberdeen Police Station—General repairs, painting, &c.,	979
No. 8 Police Station—General repairs, painting, &c.,	973
Kowloon British School—General repairs, painting, &c.,	929
Central Market—General repairs, painting, &c.,.....	859
No. 5 Police Station—General repairs, painting, &c.,	848
Sai Ying Pun Market—General repairs, painting, &c.,.....	621
Assistant Superintendent's Quarters, Central Police Station—Painting, &c.,	557
No. 1 Police Station—General repairs, painting, &c.,	423
Peak Signal Station—General repairs, painting, &c.,.....	415
Stanley Police Station—General repairs, painting, &c.,.....	400

18. *Maintenance of Buildings, New Territory.*—In the case of the New Territory Buildings, the following are those which entailed considerable expenditure :—

Cheung Chau Police Station—Repairs to roof, &c ,	\$ 2,149
Ping Shan Police Station—Colourwashing, &c.,	922
Sham Shui Po Police Station—General repairs, painting, &c.,.	859
Kowloon City Police Station—General repairs, painting, &c.,	832
Cap Sui Mun Old Customs Station—Re-building portion of old temple,	594
Au Tau Police Station—General repairs, painting, &c.,.....	417

19. *Maintenance of Lighthouses.*—The following sums were expended upon the various lighthouses :—

Gap Rock,	\$ 1,820
Waglan,	1,348
Green Island,.....	461
Cape Collinson,	283

All these structures were maintained in good condition, some special repairs being rendered necessary in the case of Gap Rock Lighthouse owing to the damage done by the typhoon of the 31st August. On that occasion the seas broke over the lighthouse and quarters, injuring one of the glass panes in the light tower, displacing railings and seriously injuring the derricks at both landing places.

The light apparatus (a First Order one), which had been allowed to remain at Cape D'Aguilar after the lighthouse there was thrown out of service on account of the establishment of one on Waglan Island, was transferred to Green Island where a new and suitable tower had been built to receive it. In carrying out the transfer, the light was converted into an occulting one by fitting it with special apparatus obtained from Messrs. CHANCE BROTHERS, the well-known makers of lighthouse apparatus. Everything was in readiness for starting the new light on the first January, 1906.

20. *Maintenance of Clock Tower.*—There is nothing special to record under this heading.

21. *Gas Lighting, City and Hill District.*—The total number of lamps in use at the end of the year in the City was 943—an increase of 2 over the previous year—and in the Hill District, the general lighting of which has now to be recorded for the first time, 106. The lighting of the Military Cantonment by 15 lamps remained on the same footing as formerly.

22. *Electric Lighting, City.*—No alteration has been made in the number of lamps which remains at 75.

23. *Gas Lighting, Kowloon.*—The total number of lamps in use at the close of the year was 224, an increase of 22 over the previous year. This is almost entirely due to developments at Kowloon Point and the laying out of new thoroughfares there.

24. *Electric Lighting, Kowloon.*—For lighting the new 100-foot main thoroughfare between Hunghom and Yaumati, known as Gascoigne Road, 22 incandescent electric lamps were erected—21 of 16 and 1 of 32 candle-power. The current is supplied by the China Light and Power Co., at an annual cost of \$883.20, which includes the maintenance of the lamps themselves. In the absence of a vote for electric lighting, the expenditure was charged against "Gas Lighting, Kowloon".

25. *Maintenance of Roads and Bridges in City.*—Disturbance of the roads was again of extensive occurrence, due this time to the laying of Rider Mains throughout the Central and Western Districts to enable the water supply to be regulated during periods of short supply, the running of underground cables by the Telephone Co., to take the place of their overhead wires along the main routes, followed in turn by the Electric Co., who are also substituting underground cables for certain of their overhead wires. The Gas Co. also laid

a larger main for the supply of the Hill District on account of the installation of public lighting there. The roads on the Praya Reclamation suffered a good deal in consequence of the extensive building operations in progress in that neighbourhood. The small encroachment caused by the old Provost Prison, which has prevented the completion of the Queen's Road widening scheme, still remained at the close of the year, but it is understood that it will soon disappear. By way of experimenting with different classes of paving, a small portion of Des Vœux Road at its intersection with Pedder Street was laid with wood blocks (Borneo Camphor wood) and a short length of Queen's Road West was laid with slabs of granite of irregular shape, dressed to a fairly uniform surface. Generally speaking the roads throughout the City were maintained in good condition with concrete or macadam as the case might be.

26. Maintenance of Roads and Bridges outside City.—In the case of the Peak District, a good deal of disturbance of roads was caused by the running of underground cables by the Telephone Co., and by the laying of a gas main in Chamberlain Road to supply the public lamps. As mentioned in last year's Report, Harlech Road and Black's Link are now under the charge of the Public Works Department and make a substantial addition to the roads of the Colony. All the roads were maintained in good condition, many of those finished with decomposed granite being re-surfaced.

27. Maintenance of Roads and Bridges in Kowloon.—The satisfactory maintenance of the roads in many parts of Kowloon was rendered difficult on account of the transport of great quantities of earth from one point to another in order to level off, reclaim or raise the level of various areas and also the large amount of quarrying that is carried on in different parts of the peninsula. Numerous alterations or improvements of roads were undertaken but these will be referred to under the heading of Public Works Extraordinary; "Forming and Kerbing Streets". The substitution of macadam for decomposed granite was extended to a number of streets in Yaumati. So far as the circumstances above referred to permitted, the roads generally were maintained in good condition.

28. Maintenance of Roads and Bridges in New Territory.—A number of the rough native paths in the New Territory have been improved in an inexpensive way by getting the village headmen to undertake contracts for their formation and maintenance. Though the improvements are not such as to transform these paths into good roads, traffic is considerably facilitated and cycling is rendered possible in many places where the gradients admit of it. The road to Tai Po was maintained in good condition except where interfered with by quarrying operations. The flood caused by the heavy rainstorm of the 1st June caused serious injury to one of the piers of the large bridge at Tai Po, necessitating its reconstruction.

29. Maintenance of Telegraphs.—Telephone lines were constructed between the following points:—

The temporary Pumping Station, Tytam Valley, and the site of the permanent Pumping Station, Tytam Bay.

The Exchange at the Central Police Station and the Chief Detective Inspector's Office.

The Attorney General's Office and the Government Printers.

The Civil Hospital and the Maternity Hospital.

An additional telephone was provided at the Kowloon Disinfecting Station and the positions of various telephones in Government Buildings were altered. With a view to the improvement of inter-departmental communications, a new Telephone Exchange was established in the Government Offices and all lines other than Police lines were removed to it from the Exchange at the Central Police Station, thus bringing all the Government Departments into direct communication with the Colonial Secretary's Department. It involved the construction of a new line with 16, 30-foot iron poles from the Central Police Station to the Government Offices.

The working of the Electric Tramway has rendered it necessary to provide metallic circuits for all lines, a matter which has entailed a great amount of work.

The metallic circuiting of the following sections of the Government Telephone System was completed during the year :—

North Point to Shaukiwan.

Shaukiwan to Stanley.

Central Police Station to Victoria Gap.

Do. do. to Des Vœux Road.

Do. do. to Government Offices.

Do. do. to No. 7 Police Station.

With regard to the last-mentioned section, as the old route by Des Vœux Road was incapable of accommodating the additional wires rendered necessary by the adoption of metallic circuiting, a new and additional route by way of Caine and Hospital Roads and Second Street had to be constructed.

The cable to Gap Rock Lighthouse became defective about the end of June and broke close to Gap Rock in the beginning of August. Temporary repairs were executed departmentally as the services of a cable ship were not available at the time. Towards the end of August, the cable ship "*Store Nordiske*", which was repairing one of the Great Northern Co.'s cables in the vicinity of Hongkong, was chartered to lay a new shore end to replace the part which had given way, and this was successfully accomplished on the 24th August. Unfortunately, the cable was again broken during the typhoon of the 30th August and communication was once more interrupted. Repeated attempts were made to effect further repairs departmentally but, on account of the rough seas prevailing, it was not until the 14th December that they were successful, communication being restored on that date. All possible protection to the cable, where it comes in contact with the rock, is being arranged for to obviate a repetition of the occurrence.

30. Maintenance of Telegraphs, New Territory.—The re-construction of the telephone line between Tai Po and Sheung Shui with iron poles in place of wooden ones was undertaken, but had not reached completion at the close of the year. In carrying out the work, arrangements were made for leading the lines to Au Tau and Ping Shan by this route, thus abolishing the line through the Lam Tsun Valley. Though somewhat longer, maintenance will be facilitated by this arrangement and the additional poles required by the present independent route will be saved. Many of the timber poles throughout the New Territory were found to be decayed and were replaced by iron poles, 84 of which were fixed.

31. Maintenance of Praya Wall and Piers.—One of the principal works undertaken under this heading was the extension and repair of the masonry pier opposite the end of Observation Place, Praya East, which is a somewhat important one as it is most conveniently situated for parties landing from ships to go to Happy Valley. Owing to the shallowness of the water alongside and the damages caused by storms, the pier had become of very little service. An extension of 75 feet, bringing its total length up to 155 feet, was carried out, the old concrete blocks left over from the Praya Reclamation Works being utilized for the purpose, and the old portion of the pier was thoroughly repaired. Some dredging was also done in the neighbourhood of the pier to improve the depth of water.

The Police Pier at Tsim Sha Tsui Point was extensively repaired and put in good order, all decayed timbers being removed and replaced by new ones. Some necessary repairs were executed at some of the other public piers but these were not extensive. Kowloon City Pier is in a very dilapidated condition but, as it is intended to reconstruct it in ferro-concrete at an early date, repairs were confined to rendering the deck safe for passengers.

The following were the principal items of expenditure :—

Tsim Sha Tsui Pier—Repairs,	\$4,853
Observation Place Pier—Extension and Repairs,	4,695
Temporary Pier adjoining Telegraph Office—General maintenance,.....	742
Blake Pier—Repairs,	675
	—————

32. Maintenance of Public Cemetery.—The retaining walls alongside the Roman Catholic Cemetery were completed and no further trouble was experienced with landslips. A new terrace for the interment of Japanese was laid out early in the year and various repairs were executed to the plant-houses, &c. Permits to the number of 65 were issued for the erection and repair of monuments.

33. Maintenance of Public Recreation Grounds.—The Wongneichong and Queen's Recreation Grounds were maintained in good order, a portion of the latter being returfed. An area of land to the eastward of the Tai Hang Nullah was levelled off and turfed to provide additional space for games.

34. Dredging Foreshores.—The total quantity of material dredged and deposited outside the Harbour limits during the year amounted to 18,464 cubic yards, of which 9,092 cubic yards were removed in order to form a channel across the foreshore in continuation of Bowrington Canal and 7,050 cubic yards from the site and approaches to Observation Place Pier. In addition to the above, 9,409 cubic yards of material were excavated by coolie labour from Bowrington Canal and disposed of by the Contractor.

The Dredger was docked for cleaning and painting in the month of September, the expenditure incurred being \$325.

35. Maintenance of Sewers, Nullahs, &c.—The sewers, storm-water drains and trained nullahs were cleansed and maintained in good condition. The flushing tanks have been systematically worked during the period of low water.

The details of the expenditure under this heading are as follows:—

Labour for cleansing operations,.....	\$12,860.81
Repairs,	3,681.83
Tools for cleansing operations,	569.24
	\$17,111.88

as against \$17,981.39 in the previous year. The establishment of proper flushing tanks and the extension of the new-type gullies doubtless assist in effecting a saving on this vote.

36. Maintenance of City and Hill District Water-works.—Recourse was had to the intermittent system of supply on the 27th February but, in consequence of early rains, it was found possible to restore a constant supply on the 29th March, thus giving a period of 30 days for intermittent supply. With the exception of bringing the rider mains into operation on the 1st October in those districts of the City in which they had been laid, subsequently extending their use as they were completed in other districts, and applying the intermittent system of supply to the section of the City lying east of Arsenal Street on the 15th December, it was found possible to maintain a constant supply up to the close of the year. Universally constant supply was thus in force for 243 days; universally intermittent supply for 30 days; and partially intermittent supply for 92 days.

The quantity of water stored in the Impounding Reservoirs on the 1st January amounted to 341,880,000 gallons. It reached a minimum on the 30th May, when it amounted to 85,617,000 gallons. Wong-nei-chong Reservoir only overflowed on the 9th June, Pokfulam ceased to overflow on the 25th June, Tytam Bye-wash on the 3rd September and Tytam on the 27th September. The total quantity of water remaining in the reservoirs at the close of the year amounted to 249,740,000 gallons.

The temporary pump for pumping up to the gauge basin the waters of the streams in the lower part of the Tytam Valley was kept in operation during the first portion of the year until the 3rd April and was again brought into operation during the latter portion on the 27th September. The quantity of water raised by it during the early part of the year was 30,889,000 gallons and during the latter part 57,399,000 gallons or a total of 88,288,000 gallons. About 10 million gallons were impounded in the new reservoir in course of construction and subsequently pumped up to the gauge basin, being included in the figures just given.

The total rainfall for the year at the Kowloon Observatory was 70.95 inches. The rains began early, the fall for the second half of March amounting to 11.07 inches: they also ceased early, the fall for the whole of September amounting to only 3.19 inches.

The total quantity of water supplied during the year was 1,556,508,000 gallons filtered and 10,800,000 gallons unfiltered, making a grand total of 1,567,308,000 gallons or 277,517,000 gallons more than in 1904.

The average consumption of filtered water per day during constant supply (243 days) was 4,600,000 gallons, which, with an estimated population of 229,100, gives an average daily consumption of 20.1 gallons per head for all purposes. During universally intermittent supply (30 days), the average daily consumption was 12.5 gallons per head, equivalent to a total daily supply of 2,872,400 gallons and during partially intermittent supply (92 days) the corresponding figures were 16.7 and 3,832,300 respectively. Taken over the whole year, the average consumption per head per day amounted to 18.61 gallons.

Full details of the consumption, contents of the reservoirs, &c., will be found in Appendices C. and D. The analyses made by the Government Analyst showed that the quality of the water throughout the year was excellent.

The system of supply by Rider Mains, which was brought into operation in certain portions of the City during the latter part of the year, constitutes a new feature in connection with the distribution of water. The Rider Mains, which are being laid throughout the Chinese quarters of the City, are subsidiary mains, to which, speaking generally, all house services are connected. They are fitted with valves close to their points of junction with the principal mains. Thus, the closing of the valves on the Rider Mains deprives all houses connected with them of water, but does not interfere with the circulation of water in the principal mains, with which all the fire hydrants and any premises which, for trade or other purposes, require a constant supply are connected. The latter are in all cases served through meters and, after receiving a certain allowance free on account of the rates paid in respect of them, are charged for any water consumed in excess of such allowance. It is intended that, in future, when the impounding reservoirs cease to overflow, the Rider Mains should be brought into operation, water being turned on to them daily for such period or periods as may be considered necessary to afford a reasonable supply to the houses connected with them. The supply being thus kept under control, it is believed that it can be regulated so as to obviate the serious risks and inconveniences attendant upon the adoption of the intermittent system by shutting off the water from the principal mains.

The work of laying the Rider Mains not being completed, it was only possible to partially apply the system towards the end of 1905, about 3,050 houses being thus supplied from the 1st October onwards and about another 1,000 from the 22nd November.

A comparison of the consumption during October with that of the previous month, and of the corresponding month in 1904 shows a substantial reduction. The figures are as follows:—

October, 1904,.....	140,058,000	gallons.
September, 1905,.....	144,792,000	„
October, 1905,.....	122,367,000	„

The quantity of water pumped to the High Level District of the City amounted to 59,364,000 gallons over the whole year, equal to an average daily consumption of 162,640 gallons, whilst 25,223,000 gallons were pumped to the Hill District, giving an average daily consumption of 69,100 gallons. As compared with 1904, there was a decrease of nearly a million gallons in the quantity pumped to the Hill District and an increase of 10,363,000 in that pumped to the High Level District. The grand total pumped during the year amounted to 84,587,000 gallons, as compared with 75,181,000 in 1904. Tabulated statements containing particulars of the quantities pumped to the High Levels and Hill District respectively and comparative statements of the quantities pumped during the last 10 years will be found in Appendices E. F. and G.

The new pumping engine and boilers installed at Bonham Road Pumping Station, a description of which will be found under Public Works Extraordinary—“Peak Supply” were brought into use on the 7th March and have since been systematically employed in pumping water up to the service reservoir at Victoria Peak for the supply of the Hill District. The engine is designed to pump into the service reservoirs for the supply of the High Level District also, but it was found that the main, through which the water had to pass, was not large enough being laid with 6" cast iron pipes. A new main of larger diameter will be required and, in the meantime, the small rams, which are intended for pumping to the Peak, are operated for the supply of the district referred to.

The Worthington Engine at Bonham Road Pumping Station, which was installed in 1891 and had since been used for maintaining the supply to the Hill District, was entirely dismantled and underwent thorough repairs and renovation in the P.W.D. Workshop. It was in course of re-erection at the close of the year and will in future be maintained as a reserve in case of the new engine requiring to undergo any considerable repairs.

All the motors were kept in a good state of repair. The introduction of the system of supply by Rider Mains in the western portion of the City restricted the use of the one at Bonham Road Pumping Station during the latter part of the year.

The number of meters in use at the end of the year was 782 in the City and 156 in the Hill District, or a total of 938, as compared with 815 and 151 in 1904, or a total of 966. The decrease in the number of meters in the City is due to the application of the Rider Main system, to which all premises are connected unless it is ascertained that their consumption exceeds 450 gallons per day.

The quantity of water supplied by meter was :—

	<i>Gallons.</i>
Filtered :—Trade,	131,013,000
Domestic (City),.....	101,489,000
,, (Hill District),	12,782,000
Unfiltered,.....	10,800,000
Total,.....	256,084,000

This shows an increase of 33,875,000 gallons in the quantity of water supplied by meter over 1904.

New services were constructed, old ones altered and improved and others inspected and connected to the mains to the number of 812, whilst 46 supplies for building purposes were laid on.

The number of inspections of house services was about 4,000. Advantage was taken of the issue of notices with regard to the Rider Main system to call attention to defects in services, so dispensing with the issue of special notices for the latter.

Water from the nullahs was made available for street watering at 10 points throughout the City, thus, to a great extent, obviating the use of salt water, which has been found to affect the roads injuriously.

37. Maintenance of Water-works, Kowloon.—Pending the completion of the tunnels in connection with the new works and the laying of the main through them, it was not possible to render available any further sources of supply. The water from the Cheung Sha Wan Intakes was distributed to Mongkoktsui and Yaumati and the pumped supply obtained from Wells Nos. 1, 2 and 3 in the Kowloon Valleys to the remainder of the Peninsula at present served with water. The supply, especially that obtained from the first-mentioned sources, was inadequate to meet requirements during the dry months.

The total consumption for the year amounted to 185,690,000 gallons, of which 77,876,000 gallons were derived from Cheung Sha Wan Intakes and 107,814,000 from Wells Nos. 1, 2 and 3. The average daily consumption amounted to 508,000 gallons or, taking an estimated population of 74,200, 6.9 gallons per head. These figures show an increase of 16,662,000 gallons over the consumption during 1904. Details are given in Appendices H. and J. The analyses made by the Government Analyst showed that the water was of excellent quality.

The pumping machinery, buildings, &c., were maintained in good condition throughout the year.

There were 280 meters in use at the end of the year, an increase of 33 over 1904. Private services were constructed, altered, or repaired in 64 instances, whilst 14 building supplies were laid.

38. Maintenance of Water-works, Aberdeen and Shaukiwan.—A satisfactory supply of water was maintained to Aberdeen and Shaukiwan during the year, the total consumption amounting to 5,743,000 and 9,532,000 gallons respectively, or 15,700 and 26,100 gallons per day. Details are given in Appendices K. and L. Repairs to the eastern intake at Shaukiwan were undertaken but were not completed at the close of the year. There were 3 meters in use at Aberdeen and 7 at Shaukiwan.

39. Lai Chi Kok Water-works—Water Boat Supply.—The supply of water to the shipping has not hitherto been on a satisfactory footing, many of the water boats having derived a supply from streams which were very liable to contamination. The arrangements for rendering the water available for filling the boats were also of a very primitive nature in most cases. It was therefore decided to construct works at Lai Chi Kok to enable water-boats generally to obtain a supply of filtered water. A description of the works will be found under "Miscellaneous Water-works". They were first brought into operation on the 7th March, the quantity of water supplied from them up to the close of the year amounting to 39,844,000 gallons equivalent to an average of 132,800 gallons daily. During December, the consumption rose to an average of 306,450 gallons daily. Particulars of the quantity supplied will be found in Appendix M. There were 9 meters in use at the close of the year, all the large companies or firms having private meters whilst a common meter served the small consumers who were supplied on presentation of tickets purchased beforehand at the Treasury. The establishment of the Lai Chi Kok Works enabled all the water-boat services connected with the City Water-works to be abolished.

As the expenditure for maintenance was very trifling, it was not considered necessary to take a special vote for it.

PUBLIC WORKS EXTRAORDINARY.

40. Bacteriological Institute.—The buildings comprised under this heading were designed by Messrs. LEIGH & ORANGE, who also supervised their construction. They occupy a site, 20,776 square feet in extent, in the upper part of the Taipingshan Resumed Area and consist of a main block and two subsidiary blocks—one for servants' quarters and the other for animal houses, &c. The main block contains a basement, ground floor and upper floor, and affords the following accommodation:—4 laboratories, each 28' 0" × 18' 0", a library, a combined waiting-room and office, a photographic room and a spare room, each 20' 0" × 12' 0", a store-room, incubating room, heating chamber and refrigerating room, besides a hall and staircase, small dark-room, lavatories, &c. Balconies extend along the whole of the north front on the ground and upper floors and there are verandahs on the east, south and west fronts. One of the subsidiary blocks (a one-storied building) affords accommodation for 11 Chinese attendants, with kitchen, &c., whilst the other (a two-storied building) contains a stable (4 stalls and 2 loose boxes); houses for 5 cattle and 8 calves; 2 sheep-pens and suitable accommodation for monkeys, fowls, rats, mice, guinea pigs and rabbits. There is also a room for 4 Chinese attendants, a doctor's room, a corn store and a fodder store.

All the buildings are of red brick, built in lime mortar and pointed externally in cement mortar. The main building, except where lined with tiles, is plastered internally; the subsidiary buildings are pointed. The roofs are covered with double pan and roll tiling, on timber purlins and principals. The walls of the laboratories are lined for a height of 6 feet and those of the dark-room and lavatories for a height of 3 feet with white glazed tiles. The two laboratories and all other apartments on the ground floor, including verandahs, &c., and the 2 laboratories and verandahs on upper floor have floors of cement concrete, supported on rolled joists and covered with encaustic tiles; the remaining apartments on the upper floor have teak floors supported on China fir joists. The windows of the laboratories, which are placed in the north front, are fixed and glazed with plate glass, the balconies affording access for cleaning their outside surfaces. Double doors are provided to all openings into the laboratories, one door being glazed and the other filled in with mosquito-proof wire gauze. The walls of the incubating chamber are lined with asbestos and double doors are provided to this apartment. A hot-water service is laid on to all the laboratories from a vertical boiler in the heating chamber.

The fittings for the laboratories were carried out by the Public Works Department. They consist of long wall benches, with teak tops and fitted with sinks; large centre tables, also fitted with sinks; drawers, cupboard, &c. A fume cupboard is also provided.

The floors of all the animal houses on the ground floor are laid with chequered tiles of local manufacture on a layer of lime concrete. The upper floor is entirely of cement concrete. Some of the walls have dadoes and the others skirtings of cement mortar. An incinerator is provided for destroying the carcasses of animals.

The whole of the compounds are laid with lime concrete surfaced with cement concrete and the site is enclosed by a brick boundary wall, with iron entrance gates.

Though practically completed, there were a few minor matters requiring attention and the building was consequently still unoccupied at the close of the year.

41. Central Police Station,—Additional Storey.—This work was completed and handed over to the Police at the end of May. The additional accommodation afforded consists of two dormitories for Indian Constables (18 beds each); two for European Constables (16 beds each); one for Lance Sergeants (5 beds), and two for Sergeants (2 beds each). There are also a library, a mess-room and a billiard-room and three small rooms for servants. A wide verandah extends along nearly the entire length of the northern front. The building is of red brick, plastered externally and internally to correspond with the old building of which it forms part. The floors of the rooms are laid with hardwood boarding on hardwood joists and of the verandah with cement concrete on rolled joists. All beams consist of steel rolled joists. The old roof principals, &c., were used as far as possible and new ones provided where necessary. Several parts of the old building were strengthened in various ways to enable it to support the additional storey, and sundry small alterations in it were effected. The total expenditure under the vote was \$33,000 and a further sum of \$7,579 for the alterations and strengthening of the old building was charged to the vote "Miscellaneous Works."

42. Disinfecting Station, Kowloon.—This work was completed and handed over to the Sanitary Board in April. The buildings occupy a convenient and central site, 19,300 square feet in area, at Yaumati, and are built of red brick, pointed in cement, with mouldings, window sills, arches, &c., finished in cement plaster. A statement of the accommodation afforded appeared in last year's report. The total expenditure on the work was \$40,219.13, which includes the cost of a new boiler and vacuum pan, amounting to \$3,136.62.

43. Civil Hospital—Extension of Staff Quarters.—A contract for this work was let at the end of January and the building was well advanced at the close of the year, the roof being completed and plastering, &c., in progress. The provision of the extra accommodation afforded will do away with the necessity of leasing a house which has had to be done for some years past.

44. Gunpowder Depot, Green Island.—This work was practically completed at the close of the year. It included the formation of a site on the north-east side of Green Island, 1.13 acres in area, partly by excavating the hill and partly by reclaiming from the sea. To obviate the risk of damage to shipping, &c., from an explosion of the contents of any of the magazines, the site has been protected on the seaward side by a rubble mound, 13 feet in height, faced with pitched slopes and extending into the hill at each end, the magazines being thus completely enclosed. Within the enclosure thus formed, four separate magazines have been built and, in order to limit the effects of an explosion, should one unfortunately occur, they have been separated from each other by mounds of earth 13 feet in height. Each magazine has a floor area of from 2,860 to 2,210 square feet and consists of an ordinary brick building, one storey in height, with tiled roof. The floors, which are of cement concrete, are covered with a layer of asphalt and the windows are protected with iron bars. Access to the depot is gained through an examination room, formed in the enclosing rubble mound, from which covered ways extend to the various magazines. The floors of the examination room and covered ways are also finished with a layer of asphalt. A temporary pier has been erected for landing or shipping explosives and will be replaced by a permanent pier at an early date.

From the depot, a path leads to the quarters for the officer-in-charge and guard, which are about 100 yards distant and protected by an intervening spur of the hill. The quarters contain 3 rooms for the officer-in-charge, one room for an assistant and another for an office, whilst accommodation is provided in separate buildings for 8 boatmen, an Indian Sergeant and 4 Indian Constables.

As the oil for use in the lighthouses had hitherto been stored near the Gunpowder Depôt on Stonecutters' Island and it was desired to hand over the whole of the land and buildings there to the Military Authorities, it was decided to erect an oil store in conjunction with the new depôt on Green Island. A suitable site was formed a little way below the lighthouse in convenient proximity to the lighthouse pier. The building had not been completed at the close of the year.

The establishment of the gunpowder depôt and signalling station on Green Island, in addition to the lighthouse, necessitated the residence of a number of men there and the question of water supply had therefore to be considered. After examination of the possible sources, it was decided to construct a tank to collect some small springs which issue from the cutting made in levelling the site of the depôt. A manual pump and line of piping will enable the water to be raised to a tank on the hill at such a level as to supply all the quarters by gravitation, except the signalman's, which are on the summit, 290 feet above sea level. The cost of this work is being defrayed out of the vote "Miscellaneous Water Works".

45. Harbour Office.—Progress on this work was much retarded by the difficulty experienced in obtaining the granite necessary for the completion of the principal front of the ground storey and it was not until November that all the requisite stone was obtained and set. The other portions of the building, which are of brickwork, were, however, pushed forward with the result that the main part of the building was almost completed by the close of the year and most of it roofed in. A considerable amount of the external plastering was done, some of the floors laid and ceilings, which are of timber, fixed and most of the joinery was in readiness for fixing.

46. Law Courts.—Here also great difficulty was experienced in obtaining a supply of granite, especially during the earlier part of the year, with the result that the progress of the work was slow. Owing to the numerous granite arches extending from the pillars of the colonnade to the main walls, it was not possible to proceed with the brickwork above the level of the first floor until these had been built and every effort was therefore made to get the granite-work pushed on. It may be mentioned that each of the stones in the pillars of the colonnade weighs from $2\frac{1}{2}$ to $3\frac{1}{4}$ tons and much careful dressing is necessary to adapt them for setting in the work.

Much of the steelwork and concrete forming the first floor were laid early in the year, the internal walls having then reached such a level as to admit of this being done. By the close of the year nearly all the external walls were completed to the same level, the pillars of the colonnade were built to an average height of 16 feet and some of the arches were in progress.

The average number of masons employed daily was 124. In addition to the stone set in the work, 129 granite balusters were prepared, bringing the number of these ready for fixing up to 200.

47. Mongkoktsui Market.—A contract for the erection of a small market at Mongkoktsui was let at the end of June and the building was completed in December. Being situated on land recently reclaimed, it was considered advisable to pile the foundations. The walls are of brick, the floor is laid with lime and cement concrete, rendered with cement mortar, and the roof is covered with single pan and roll tiling. In addition to the market building, which contains 20 meat and fish stalls and 20 fruit and vegetable stalls, there is a small store.

In connection with the work, the formation of the roads in the neighbourhood was undertaken and sewers and storm-water drains were laid, a considerable improvement in the locality being thus effected.

The cost of the market buildings, including filling in the area reserved for market purposes, was \$8,099.

48. Western Market.—Good progress was made with this work, the whole of the roofs being completed and most of the concrete floors laid. The fixing of gates, windows and finishings generally was proceeded with. A contract was entered into with Messrs. SANG LEE & Co., the Contractors for the superstructure, in November, for the fitting up of the shops and stalls, and this work was progressing satisfactorily, most of those on the upper floor being completed and the materials for those on the ground floor being mostly ready for fixing.

49. *Post Office.*—The contract for the foundations was nearly, but not quite completed, completion being delayed by the undertaking of additional work. One of the principal items was the covering of the entire area of the basement with asphalt, which was also carried up the outside of the main walls, so as to prevent the percolation of tidal or subsoil water into the basement rooms, which are to be used for the storage of mails, etc. The asphalt was laid on a layer of lime concrete 12 inches thick and was covered with a layer of cement concrete, 6 inches thick, the thickness of the asphalt being $\frac{3}{4}$ inch. It was also decided to make provision for a clock tower in the building and this necessitated some alterations and additional work in connection with the foundations. The addition of these items has considerably delayed the completion of the contract. The total number of piles driven has been 1,808 of an average length of 44' 6".

A contract for the superstructure was entered into with Messrs. SANG LEE & Co. on the 1st August. A quarry from which suitable stone could be obtained for the work was selected at Ngau Tau Kok, in New Kowloon, and a considerable amount of preparatory work was carried out to enable a good supply to be obtained, a quantity of roughly-squared blocks being in readiness to transport to the site when it became available. Some brick and plaster models of the principal parts of the stonework were also prepared.

50. *Post Office, Shanghai.*—Mr. COWAN of H.B.M.'s Office of Works was appointed architect for this work which consisted of carrying out considerable extensions to the old Post Office building. It was necessary to make arrangements with the Commissioners of the Board of Works, London, for the acquisition of the land required for the extensions and, after this had been successfully accomplished, negotiations were begun by the Shanghai Municipal Council for the surrender of a strip of land for widening Museum Road. A contract for the erection of the buildings was let in August and the work has since been proceeded with, but no expenditure was charged to the vote, up to the close of the year.

51. *Prison.*—It was not found possible to proceed with this work, but a site in Kowloon, which was considered suitable, was selected. The proposal to erect a prison on Stonecutters' Island was finally abandoned in consequence of its being considered advisable to hand over the island entirely to the Military Authorities.

52. *Public Latrines and Urinals.*—A latrine, containing 55 seats and 4 urinals, besides a caretaker's room and store, was constructed at the corner of Second and Western Streets. It is a permanent structure of brickwork and of the usual type. The formation of the site involved a considerable amount of excavation and the construction of retaining walls. Two urinals, built of rubble masonry and containing 8 divisions each, one in Connaught Road, opposite the end of Douglas Street, and the other in Salisbury Road, Kowloon, were constructed but were not quite completed at the close of the year.

The urinal at the Chair Shelter, Victoria Gap, (6 divisions), referred to in last year's report, was completed. The cost, which amounted to \$1,953, was defrayed out of a special vote.

53. *Yaumati School.*—This work was practically completed at the close of the year, being handed over to the Education Department a few days later. The site is immediately north of the Public Square in Yaumati and will border on the main thoroughfare known as Robinson Road when it has been extended a little further northwards. It has an area of 18,000 square feet. The buildings are one-storied, extending round two sides of the site and partly round the third, leaving an area of 10,870 square feet for the purposes of a playground. They contain 4 class-rooms (two of which are capable of accommodating 60 pupils each and the remaining two 40 pupils each, or 200 in all), a room for the headmaster, with lavatory attached, a cloak room and lavatory for the pupils, store, latrines and caretaker's quarters, and a play-shed, measuring 56 feet by 20 feet. The two principal class-rooms are separated by a folding and sliding partition, which enables them to be made into one large room when desired. A verandah extends along the south front, facing the playground. The buildings are of red brick in lime mortar, plastered internally and rough-cast plastered externally, except where the brickwork is left exposed for effect. The roofs are covered with double pan and roll tiling, laid on timber purlins and principals and the floors are of hardwood, laid on hardwood fillets bedded in cement concrete, 6" thick. The floors of verandah, cloak-room, latrines and caretaker's quarters are of cement concrete, 4" thick, finished with a layer of granolithic, 1" thick. The play-ground and play-shed are laid with lime and cement concrete, 6" thick. Ventilation is furnished by fresh air inlets on the Tobin tube system and flues are provided for the escape of foul air. The buildings are lit by gas throughout.

54. Quarters for Officers, Tai Po.—After many difficulties occasioned by the workmen deserting the work on account of the cold during the winter months and on account of sickness during the summer months, this work was nearly brought to completion at the end of the year. The building occupies an exceptionally fine situation on the summit of a small island near the head of Tolo Harbour, the site having been levelled off in connection with the construction of the Tai Po Road in order to obtain material for forming the embankment on which the road is carried at this point. The main building is 2 storeys in height and contains dining-room, drawing-room, office, 4 bed-rooms, 4 bath-rooms, hall, staircase, pantry and lavatory. It is in great measure surrounded by verandahs. In a small, detached building, erected at a somewhat lower level, are the servants' quarters, containing European kitchen, larder and store, 2 boys' rooms and accommodation for 6 coolies and, at the base of the hill is a stable, containing 2 stalls and a loose box, a coach-house and harness-room. A tower on the main building contains a water-tank and a light which is intended to serve as a beacon for purposes of navigation.

The buildings are of red brick in lime mortar, covered for the most part with rough-cast plaster. Cement panels, in imitation of timber framing, are introduced on the upper storey of the main building. The roofs are covered with double pan and roll tiling laid on timber purlins and principals and the floors are of hardwood on hardwood joists, except in the case of the verandahs, bath-rooms and out-buildings, where they are of cement concrete.

The walls of the drawing-room are panelled in China fir for a height of 6 feet, the remainder of the internal walls being plastered.

A short length of embankment leading to the island was widened from 5 to 14 feet, a road to the stable was formed and an entrance gate was erected near the main road.

55. Volunteer Headquarters.—The erection of new Volunteer Headquarters which has long been under consideration, was undertaken in June. It was at one time proposed to erect the necessary buildings at Happy Valley immediately to the north of the Golf Club House and designs for this were prepared, but the proposal was ultimately abandoned in favour of the site of the old building at the corner of Garden and Lower Albert Roads. The old building was practically entirely taken down, only some of the basement walls being made use of in connection with the erection of the new one. Fair progress was made with the work, the walls being generally 6 feet above the level of the drill-hall floor, the concreting of which was completed. A large quantity of joinery was in readiness for fixing. The cost of the building is being defrayed principally from funds in the possession of the Volunteer Corps, the Government contributing a sum of \$5,000 only.

56. Gullies Reconstruction.—This work was continued, 81 single and 56 double gullies of the new type being constructed during the year, or a total of 193 gratings. Most of these were situated in the Central and Western Districts of the City, between Queen's Road and Caine Road. The total number of new-type gullies is now 348 single and 495 double, or a total of 843.

57. Training Nullahs.—The following is a statement of the works executed under this heading :—

	<i>Length trained.</i>
(i). Albany Nullah—Branches south of Service Reservoir, ...lineal ft.	1,200
(ii). Bowen Road District—Two nullahs east of Military Hospital,	,, 1,421
(iii). Bowen Road District—Nullah east of I.L. 1711,	,, 190
(iv). Happy Valley—Nullah between Mahomedan Cemetery and I.L. 1578,	,, 670
(v). Stanley—Two nullahs east of village,	,, 846
(vi). Branch nullah south of Bridge No. 4 on Shaukiwan Road,	,, 200

Item (i.) includes 128 lineal feet of nullah, 12 feet wide and about 4 feet deep, with invert of rubble masonry, set and grouted in cement mortar, on a lime concrete foundation, 12 inches thick, and with side walls of rubble masonry built in lime mortar; 282 lineal feet, 6 feet wide and 6 feet deep, with invert of cement concrete, 4 inches thick, on a lime concrete foundation and with rubble masonry side walls; 418 lineal feet, semi-circular in section and 3 feet 6 inches in diameter, constructed of 3 inches of cement concrete laid on a bed of lime concrete; and 372 lineal feet irregular in section on account of its traversing the rocky bed of the stream.

Item (ii.) includes 598 lineal feet above Bowen Road and 823 lineal feet between Bowen and Kennedy Roads. Of the above, a length of 356 feet is semi-circular in section and 3 feet 6 inches in diameter and the remainder is of irregular or varying section, the greater part being formed out of the rocky beds of the streams, the irregularities in which were made good with cement concrete.

Item (iii.) is a short length of nullah of ordinary section, average width 4 feet 3 inches, depth 5 feet, with concrete invert and rubble masonry side walls as previously described.

Item (iv.) includes 350 feet of new nullah of ordinary section, 6 feet wide and 3 feet 6 inches deep, and the provision of a concrete invert to an old portion of nullah, 320 feet in length.

Item (v.) comprises the formation of two wide channels, each 200 feet in length and of a width of 6 feet and 4 feet respectively, paved with rubble masonry, and of 446 feet of lime and cement concrete channels varying from 18 to 15 inches in width.

Item (vi.) is a short length of branch nullah adjoining the village of Quarry Bay. Messrs. BUTTERFIELD & SWIRE contributed \$120 towards the cost (\$709.56) as the nullah traversed one of their lots for a short distance.

In addition to the above, the nullah in Waterloo Road, Kowloon, was extended for a distance of 818 feet, but, as the cost of the work was defrayed out of the vote "Miscellaneous Drainage Works", it is more particularly referred to under that heading.

58. Miscellaneous Drainage Works.—There were heavy demands upon this vote in connection with the extensive reclamations carried out in Kowloon during the past few years and the consequent extension and raising of drains and sewers. The following is a statement of the principal items of expenditure, the amount stated being in some cases only a part of the cost owing to the work extending into more than one year:—

Kowloon.

(i.)	Taikoktsui Sewerage System,	\$16,109
(ii.)	Mongkoktsui Market neighbourhood :—	
	Sewers and storm water drains,.....	9,950
(iii.)	Robinson Road :—	
	New sewer and relaying old between	
	Middle and Carnarvon Roads,	\$ 1,741
	Storm water drain do., do.,	2,478
	Drains in connection with lowering	
	summit, etc.,	5,900
		————— \$10,119
(iv.)	Disinfecting Station neighbourhood :—	
	Extension of Nullah in Waterloo Road, \$	4,050
	Sewer,	2,607
		————— \$ 6,657
(v.)	Salisbury Road—Storm water drain,	3,015
(vi.)	Austin Avenue—Sewer and storm water drain,.....	1,961
(vii.)	Extension of sewer for Steam Laundry,.....	1,201
(viii.)	Filling in swamp near Do.,	650
(ix.)	Extension of sewer to Gun Club Hill,	444
(x.)	Do. for latrine, Gillies Avenue,	439
(xi.)	Do. for K.I.L. 615, Observatory Road,	436
		————— <u>\$50,981</u>

Hongkong.

(xii.)	Extension of sewer for R.B.L. 56, Mount Kellett Rd., \$	1,367
(xiii.)	Storm-water drain in Leighton Hill Road,	1,288
(xiv.)	Catchwater behind I.L.'s 1569 and 1577, do. do., ...	1,276
(xv.)	Drainage of Victoria British School,	591
(xvi.)	Extension of sewer for I.L. 1683, Macdonnell Road,...	450
		————— \$ 4,972
(xvii.)	General—Drain Connections,	<u>3,725</u>

Item (i.) This provides for the drainage of all existing lots and of future lots when the reclamation is extended further. A proper outfall has been constructed in the sea-wall, beyond which it is improbable that reclamation will be carried. The total length of sewers is 1,550 yards and they vary in diameter from 21" to 9". They are all of glazed stoneware pipes and, where laid in reclaimed land, are supported on piles and concrete.

Item (ii.) This comprises the laying of 533 yards of sewer pipes, from 21" to 9" in diameter, in Nelson and Argyle Streets and Macdonnell Road and of 313 yards of storm-water pipes, from 15" to 9" in diameter, discharging into the nullah in Nelson Street. Where necessary, the pipes are supported on piles and concrete.

Item (iii.) A large, egg-shaped culvert, formed of cement concrete, arched over with brick in cement, was constructed in Robinson Road for carrying off storm-water. It extends northwards from Middle Road a distance of 240 yards and varies in size from 5' 9" by 3' 10" to 4' 9" by 3' 2". The existing sewer, 9" diameter, on the east side of this culvert and the connections with it, had to be raised and a new 9" sewer, 156 yards in length, had to be laid on the west side of it to intercept the connections from houses which could not be taken across the culvert. These connections were raised where necessary. In connection with the Contract for lowering the summit of Robinson Road and extending it northwards, a storm-water culvert, 3' 0" by 2' 0", of masonry and concrete, 160 yards long, was constructed in that road between First and Third Streets. Other branch storm-water drains 15" and 12" in diameter, totalling 576 yards in length, were laid in the adjoining roads.

Item (iv.) The nullah in Trafalgar Road was extended for a distance of 600 feet. It has an average width of 9 feet and depth of 8 feet and is constructed with rubble masonry side walls on an invert of lime concrete 9" thick, surfaced with cement concrete, 3" thick. An iron railing of the usual pattern is provided to fence it off from the road. A temporary diversion of the stream, 218 feet in length, was also carried out. The sewer in Pitt Street was raised for a distance of 160 yards east of Station Street and was extended for a distance of 160 yards with 9" pipes.

Item (v.) A storm-water drain 320 yards long and varying in diameter from 18" to 12", was laid in Salisbury Road, west of Robinson Road. Part of it was supported on piles and concrete and part laid in a trench blasted out of solid and very hard rock.

The remaining items call for no special mention.

59. Extensions of Gas Lighting.—Under this heading, 23 new lamps were erected in Kowloon and 1 in the City. Those in Kowloon were principally in Salisbury and Robinson Roads, in connection with the construction of new main thoroughfares at Kowloon Point, and Mody Road was also provided with lamps. The lighting of the Hill District was carried out under a special vote and 4 lamps, which were provided in private lanes, were erected at the expense of the owners.

60. Miscellaneous Works.—The following are the principal items of expenditure under this heading, representing in some cases only a part of the cost of the works in consequence of their execution extending over more than one year:—

King's Park, Kowloon—Forming and turfing Cricket ground	...\$8,220
Central Police Station—Sundry works connected with the addition of a storey to main building and extension of European kitchens,	7,579
Paths in New Territory—Improvements:—	
Tai Po to Sheung Shui (5 $\frac{3}{4}$ miles),	\$1,878
Do. to Shun Wan (3 $\frac{1}{2}$ miles),	1,592
Do. to Ma Wat Wai (1 $\frac{1}{2}$ miles),	402
	————— 3,872
Government House—Additional Coolie Quarters,	2,657
Post Office—Extension in hall of Supreme Court, etc.,	2,360
Opium Searching Shed,	1,340

Granite Paving Experiments, Queen's Road West,.....	1,240
Block House on Frontier, at Kau Tau Wai,.....	1,025
Victoria Gaol—Renewing gas service,	993
Do. —Ventilators in roofs of A & B Blocks,	942
Store for signals, Blackhead's Hill,	748
Boundary stones to define Frontier near Sha Tau Kck,.....	685
Victoria British School—Alterations of Building and Resump- tion of cultivated land in vicinity,.....	668
Extension of telephone line to Kau Tau Wai Blockhouse,	631
Shelter for Chair Coolies : Lower Tramway Terminus,	587
Turfing slope behind Tung Wah Infectious Hospital at Kennedy Town,	553
Repairing Matsheds at Tai Po,	532
Improvements at Tai Po,.....	500
Forming channels below Stewart Terrace,.....	434
Botanical and Forestry Department—Installing electric light in Superintendent's Quarters,.....	430
Mount Caroline Cemetery—Sundry works,.....	430
Presses for filing papers in Colonial Secretary's Office,	420
Forming Channels at Magazine Gap,	395
Extension of Analyst's Quarters, Government Civil Hospital, ...	391
Victoria Gaol—Extension of Printer's Shop,.....	362
Yaumati Police Station— Sundry works,	314

61. *Reclamation, Tai-kok-tsui.*—This work consisted of the reclamation of an irregular area of Crown foreshore, about 3 acres in extent, situated between Kowloon Marine Lots 32 and 46. Apart from the advantage of removing a gap in the reclamation of this neighbourhood, it was considered necessary to fill in the area to prevent its becoming a nuisance on sanitary grounds and it was therefore decided to reclaim it in conjunction with the adjoining lots, the reclamation of which was in progress. As Messrs. DENISON, RAM & GIBBS were supervising the reclamation referred to, they were entrusted with the carrying out of the Government portion of the work, which was completed in August at a cost to Government of \$37,451.13. By arrangement with the owners of Kowloon Marine Lot 32, an area belonging to them was also reclaimed at the same time, at a cost of \$6,000 and their boundary was readjusted in such a way as to improve the laying out of the neighbourhood.

62. *Compensation under the Buildings Ordinance of 1903.*—This vote provides for the resumption of areas devoted to scavenging lanes and for the payment of compensation in connection with the removal of houses over the ends of private lanes or streets. In some cases, instead of resuming the areas devoted to scavenging lanes, an agreement has been entered into with the owner to the effect that the lane is to be properly maintained so long as the buildings abutting on it are occupied as dwellings and, in a few cases, the lane has been acquired by treating it as a set-off against some privilege granted, such as permission to erect verandahs or balconies over the public footpaths.

The following is a statement of the disbursements during the year :—

Scavenging Lanes :—

	<i>Area.</i> <i>sq. ft.</i>	<i>Compensation.</i> <i>paid.</i>
In rear of No. 106 Bonham Strand,.....	91.86	\$1,653.48
" " 108 Do.,	90.00	1,620.00
In rear of 6 houses on K.I.L. 615,	874.50	874.50

Houses over ends of private lanes :—

	<i>Area.</i> <i>sq. ft.</i>	<i>Compensation.</i> <i>paid.</i>
No. 101 Third Street, over Sheung Fung Lane, 488	488	\$1,200.00
Surveying Expenses,.....		1,068.00

The following three houses over the ends of private lanes were removed voluntarily by the owners without compensation or pulled down by Government :—

	<i>Area sq. ft.</i>
No. 1 Western Street, over Sai Wa Lane,.....	220
Wo Fung Street, over Pan Kwai Lane,.....	58
No. 12 Cleverly Street, over Kwai Wa Lane,	78

In addition to the above, arrangements were made with regard to other properties, but these had not been finally concluded when the year closed, and negotiations were in progress with regard to several others.

A small building, known as 301 Queen's Road Central, which had been in existence for many years, was found to form an encroachment on Crown land and was accordingly pulled down. Its removal has effected a distinct improvement in the approach to Cleverly Street, which it previously partially blocked.

63. *Insanitary Property Resumptions.*—A full account of the resumptions undertaken on sanitary grounds since 1894 was published in the form of a special report during the year.

The Kau U Fong Scheme, which was described in last year's Report, was fully completed. The cost of resumptions for the scheme, including certain legal charges, surveyors' fees, and interest, amounted to \$237,156.50 and of clearing and laying the area out afresh to \$17,591.28. A sum of \$744.42 was however retained under the Contract pending the expiry of the period of maintenance. The area of land resumed was 27,156 square feet, of which 13,909 square feet has been devoted to the formation of a road and lanes, &c., leaving 13,247 square feet available for building purposes. This area was put up to public auction in December, but, with the exception of one small lot, failed to find a purchaser. This is doubtless due to the present depression of trade in the Colony, land sales generally having been fewer than during recent years.

As the Kau U Fong Scheme approached completion, attention was turned to another resumption, which has been designated the Mee Lun Scheme. It included the whole of the properties occupying the central area of the block bounded by Gough Street on the north, Aberdeen Street on the east, Hollywood Road on the south, and the Belilios School for Girls on the west, together with several houses fronting on Gough Street and Hollywood Road required for opening roads through to these thoroughfares. The total number of houses affected was 52, 31 of which had been acquired by the end of the year, whilst negotiations for most of the others were in a forward state. Only a small portion of the back premises was required in the case of one house, the entire premises being required in the case of the other 51. The amount expended on the resumptions effected was \$125,125.

64. *Forming and Kerbing Streets.*—A large amount of work was undertaken under this heading, some of the chief items being in connection with the formation of the roads on the newly-reclaimed area at Kowloon Point, the alteration in width and level of existing roads adjoining and the carrying out of the scheme for the construction of main thoroughfares in Kowloon.

The following is a statement of the items of expenditure, the amount stated being in some cases only a part of the cost owing to the work extending into more than one year :—

Kowloon.

(i.) Resumption of part of Hung Hom L.L. 220 for construction of proposed main thoroughfare to Hok Un,	\$25,000
(ii.) Formation of Salisbury Road from the West Bund to Robinson Road,	8,013
(iii.) Extension of Robinson Road between Middle and Salisbury Roads and raising level of old road to a point south of Mody Road,	6,243
(iv.) Extension of Kimberley Road, from Observatory Road to Austin Road,	6,861
(v.) Retaining Wall, north side of Middle Road,	3,800
(vi.) Forming Pitt Street, Yaumati,	3,169

(vii.) Forming Streets in vicinity of Mongkoktsui Market,	3,051	
(viii.) Straightening Austin Road past Bowling Club ground, ...	1,376	
(ix.) Forming Sixth Street, Yaumati, 100 feet in width,	1,147	
(x.) Raising Des Vœux Road at its junction with Gascoigne Road,	1,054	
(xi.) Forming road to Observatory between Kowloon Inland Lots 441 & 611,.....	335	
		<u>\$60,049</u>

Hongkong.

(xii.) Lowering summit of Arsenal Street,	\$ 1,020	
(xiii.) Constructing retaining wall for road past Quarry Bay Shipyard,	750	
(xiv.) Laying foot-paths, &c., at Alexandra Buildings,.....	536	
(xv.) Forming portion of Mount Caroline Road past the Cotton Mills,.....	460	
(xvi.) Forming passage between Inland Lots 1569 and 1577, Wongneichong Road,	329	
		<u>\$ 3,095</u>

Item (i.) is to enable a main thoroughfare extending from Blackhead's Point to be constructed through to Hok Un in an approximately direct line, thus avoiding the comparatively narrow roads of Hunghom Village with their awkward bends. The greater part of the area to be resumed had been acquired by the close of the year.

Item (ii.) By arrangement with the Kowloon Wharf & Godown Co., a new main thoroughfare, 100 feet in width, in continuation of Salisbury Road, which has been widened from 50 to 100 feet, was formed through Kowloon Marine Lot 9, certain godowns being demolished to enable this to be done. The scheme also includes the erection of a new pier for the Star Ferry Co.'s service at the end of Salisbury Road, thus enabling the Ferry traffic to be diverted to a point where it will be free from the obstructions, both ashore and afloat, from which it has suffered to an increasing extent during recent years.

Item (iii.) requires no explanation.

Item (iv.) Kimberley Road, Kowloon, was extended from Observatory Road to Austin Road. The cutting through the hill adjoining Austin Road was performed by the lessee of Kowloon Inland Lots 1154 and 1158 in accordance with the Conditions of Sale for these Lots, but the formation of the remainder of the road, which involved a great deal of filling-in and the construction of some retaining walls, was carried out by the Public Works Department. Advantage was taken of the opportunity thus afforded of disposing of the material to cut down and re-grade a portion of the old road past Knutsford Terrace, thus effecting a substantial improvement in the road.

Item (v.) In connection with the formation of Middle Road, Kowloon, which involved the cutting down of a portion of Blackhead's Hill having a maximum height of 95 feet, it was found necessary to construct a retaining wall 50 feet in height. The cutting down for the road was executed free of cost to the Government to obtain material for the reclamation at Kowloon Point. The excavation for the retaining wall was well advanced at the close of the year and a substantial start had been made with the construction of the wall itself.

Item (vi.) calls for no comment.

Item (vii.) In connection with the erection of a market at Mongkoktsui, the roads in the neighbourhood were formed to their proper levels and kerbed and channelled. The area dealt with extended from Nelson Street to Argyle Street and from Station Street North to the west side of the new market.

The remaining items call for no remarks.

65. Kowloon Roads.—Two contracts were undertaken out of this vote ; one for lowering the summit of Robinson and Austin Roads, extending the former to the Yaumati Theatre and completing that portion of Gascoigne Road between Robinson Road and Station Street, and the other for forming roads in the vicinity of the Disinfecting Station. Both works were nearly completed at the close of the year. That first-mentioned included the lowering of the summit of the roads named by 4.25 feet, the consequent regrading of portions of them, the extension of Robinson Road, 100 feet in width for a distance of 2,050 feet and the completion of the southern branch of Gascoigne Road, 100 feet in width, to its junction with Sixth Street. The other included the formation of about 500 yards of roads, 50 feet in width, between Robinson Road Extension and the Disinfecting Station. Part of the length mentioned constitutes the half-width of a future main thoroughfare, 100 feet in width, leading to Kowloon City.

The expenditure on the respective works was :—

Extension of Robinson Road, including lowering summit, &c. ...	\$10,493.57
Forming Roads in vicinity of Disinfecting Station,	\$1,700.00

66. Road across King's Park.—The expenditure under this heading included work done on some small branch roads adjoining Gascoigne Road and the payment of a balance due on the contract which was completed in 1904.

67. Extension and Reconstruction of Albany Filter Beds.—Operations during the year were confined to levelling the site, constructing the necessary retaining wall next the Peak Tramway, and erecting new quarters for the watchman and coolies employed at the beds. A considerable mass of rock was encountered at the south-east angle of the site, the removal of which occupied a good deal of time and delayed the work, but the various items mentioned were well advanced by the end of the year.

68. Kowloon Water-works, Gravitation Scheme.—Good progress was made with the various sections of the work, with the exception of the main dam which progressed rather slowly.

(i.) *Storage Reservoir.*—The main dam was constructed to an average height of about 400 feet above Ordnance Datum, or 48 feet below overflow level. The excavation of the channel for the bye-wash or overflow was well advanced. The following are the quantities of material deposited in the main dam during the year :—

Cement concrete,	16,100 cubic yards.
Rubble masonry facework,	550 „
Ashlar „ „	18,000 cubic feet.

(ii.) *Tunnels, Site for Filter Beds, &c.*—The tunnel through the Kowloon Range was pierced in October and the brick lining was in progress at the close of the year. Instead of having recourse to tunnelling for piercing the spur met with a little to the north, the Contractor preferred to make an open cutting, which attained a maximum depth of 111 feet. The requisite level was reached in December but the cutting required widening before the brick lining could be put in. The 18" pipes were laid all the way to the south face of the tunnel and some portions beyond the tunnel were also laid.

(iii.) *Catchwater and Clear Water Channel.*—A contract for the construction of a catchwater, 8,300 feet in length, was let to Mr. LI A PING in March. The length to be constructed was subsequently extended to 10,400 feet, or practically 2 miles, the work being designed with a view to its ultimate extension to about 4 miles in length. Where it enters the reservoir, the catchwater has an average width of 19' 9" and depth of 8' 0", diminishing gradually to 15' x 8' at 10,400 feet. The gradient is 1 in 2,400 and overflows are arranged at stream crossings. A path, 6 feet wide, is being constructed alongside the catchwater.

The Contract also includes a clearwater channel along the south side of the reservoir to intercept some of the water conveyed by the catchwater and conduct it to the gauge-basin without passing into the reservoir. This is found beneficial during rainy weather when the water in the reservoirs often contains fine matter in suspension, which causes trouble in filtration, whilst the water in the streams is running clear. The channel has an

average width of 1' 9" and depth of 1' 6" and, to avoid contouring some long spurs of hill which project into the reservoir, earthenware pipes, 15" in diameter, are laid in trenches cut through the spurs. In one case, the trench for the pipes reached a maximum depth of 28 feet.

69. *Miscellaneous Water-works.*—Practically the whole of the expenditure under this vote was confined to three items, viz :—

(i.) Lai Chi Kok Water-works—Water Boat Supply,.....	\$16,807
(ii.) Main to Sywan Battery,	6,116
(iii.) Hill District Fire Service,	3,429

(i.) *Lai Chi Kok Water works.*—The original scheme, which provided for supplying 200,000 gallons of filtered water per day, was completed in March and the works were at once brought into operation. They consisted of an intake on the Lai Chi Kok stream; a channel and pipes for conveying the water to the filter bed; a filter bed of an area of 200 square yards; a service reservoir of 100,000 gallons capacity; a delivery main, 6" diameter, to convey the water to a point where it could be distributed to the water-boats; and meters and shoots or pipes, supported on stagings, extending to where the water-boats could lie afloat whilst being filled.

Complaints arose almost immediately that the works were inadequate and that the rate of delivery into the water-boats was too slow, and a contract was let in June for the construction of an additional filter bed, area 235 square yards, and service reservoir, capacity 100,000 gallons, thus doubling the original works as regards filtration and storage. These extensions were completed in December.

With the further experience gained in the meanwhile, it was considered advisable to further extend the filtering capacity of the works, and a contract was therefore entered into in November for the construction of a filter bed, having an area of 440 square yards or equal to the combined area of the two beds previously constructed. When this has been completed, it is estimated that the works will be capable of dealing with half a million gallons of filtered water daily.

To enable the water-boats to be rapidly filled, a delivery main, 8" diameter, has been laid in addition to the 6" main referred to above.

(ii.) *Main to Sywan Battery.*—This main was laid by arrangement with the Military Authorities to enable a supply of water to be obtained by gravitation. It consists of 2,751 lineal yards of 4" cast-iron main, extending from the Mount Parker Catchwater to the Military Works on the summit of Sywan Hill. The Military Authorities contributed the sum of \$4,700 towards the cost of the work.

(iii.) *Hill District Fire Service.*—The question of providing a system of fire hydrants throughout the Hill District has been under consideration for a number of years but the difficulty of giving effect to it has hitherto been that the means of pumping and storing water were inadequate and the supply for ordinary purposes might be depleted if the water were used for fire purposes. The construction of the Peak and Mount Gough Service Reservoirs, the installation of No. 4 Motor with a 3" rising main to the latter and of a new steam pumping engine and enlarged rising main (partly 5" and partly 6" diameter) to the former have in great measure removed these objections and the work has now been undertaken. In all, 57 hydrants are being fixed, and of these, 54 have been completed. In consequence of the high pressures prevailing over many parts of the district, screw-down hydrants have been used instead of the ball-hydrants in use in the City.

70. *Peak Supply and Reconstruction of No. 2 Tank.*—It has been decided to relegate the latter item to a separate vote and to carry out the former only under this heading. The whole of the works were completed by the end of the year. They comprised sundry extensions and alterations of the old Pumping Station Buildings on Bonham Road, erected in 1891, the erection of a new and much more powerful pumping engine, the installation of 2 new boilers, the laying of a larger rising main to the Peak Service Reservoir and the necessary re-arrangement of pipes and valves in and about the Pumping Station.

The pumping engine is a compound, horizontal, surface-condensing engine, built by Messrs. TANGYE LTD., Birmingham, with cylinders $13\frac{1}{2}$ " and 25" diameter, stroke 24", actuating double ram pumps which are arranged for pumping either to the High Level Tanks or to the Peak Service Reservoir as may be desired. The plungers for the former are $7\frac{5}{8}$ " diameter and for the latter $4\frac{3}{8}$ " diameter, the capacity of the pumps being 7.5 gallons per revolution when pumping to the High Levels and 2.46 gallons when pumping to the Peak, and the ordinary working speed 40 revolutions per minute. The lift in the case of the High Levels is 438 feet and in the case of the Peak 1,648 feet. The engine commenced to work on the 7th March, and has been found to run smoothly and well.

The boilers are of the Cornish type, 6' 0" in diameter by 24' 0" long, and have a working pressure of 120 lbs. per square inch. They were supplied by Messrs. TANGYE LIMITED.

The main to the Peak Service Reservoir is 4,930 feet in length, the lower half being 5" diameter and the upper half, 6" diameter. It is laid with wrought iron pipes, with screwed socket joints. The pipes supplied have not been so satisfactory as those forming the older mains, 3" in diameter, laid in 1891 and 1901 respectively, and bursts have been somewhat frequent.

The total expenditure on the works has been \$65,267.95.

71. Tytam Tuk Scheme.—Fair progress was made with the various works comprised in this scheme considering the difficulties experienced on account of sickness among the workmen.

(i.) *Dam.*—The depositing of concrete was begun in January and by the end of the year the dam had reached a level of 155 feet above Ordnance Datum, the lowest part of the foundations being 93 feet and overflow level 200 feet above the datum mentioned. In all, 15,300 cubic yards of cement concrete were deposited and 15,000 cubic feet of ashlar masonry set during the year. It was found possible to impound at the end of the wet season about 10 million gallons of water, which was afterwards pumped up by the temporary pump for distribution to the City.

(ii.) *Pumping Station.*—The site was completed except as regards surfacing, &c., which cannot be undertaken until the material filled in has become consolidated and the buildings have been completed. The walls of the engine-house were ready to receive the traveller girders and the foundations for the pumping engines, which are of cement concrete, were practically completed. The overseers' quarters were completed, except as regards painting, and good progress was made with the boiler-house, workshop, store, chimney, flue, and boiler-seatings, for which additional contracts were let to Mr. KANG ON. A contract for quarters for the Chinese engine-drivers and stokers, &c., was also let to the same Contractor.

(iii.) *New Road.*—The new road from the gap on the Stanley Road was in a forward state up to where it bridges the stream below the dam, but beyond this little work had been done, the Contractor's efforts being concentrated on the first-mentioned section, on which the works are of a heavier nature. For the largest bridge (3 spans of 50 feet) the arches were being constructed; for another (3 spans of 20 feet and 1 of 30 feet) the arches were completed and the spandrels filled in up to stringcourse level; for another (2 spans of 20 feet and 1 of 30 feet) the piers and abutments were ready for the arches, and for the fourth the concrete foundations had been put in. All the heavy cuttings were completed and the larger retaining walls built. Piers to support the rising mains were constructed wherever embankments occur, being carried up from the solid ground.

(iv.) *Access Roads to Pumping Station and Gauge Basin.*—The cuttings and embankment for the road to the Pumping Station were nearing completion; the road to the gauge-basin at the Tunnel Inlet was begun and the track for the suction main was about completed.

(v.) *Rising Main, 18" diameter.*—Pipe-laying was begun on the 17th December and 240 feet were laid.

(vi.) *Suction Main, 18" diameter.* Pipe-laying was begun on the 20th June and by the close of the year 3,160 feet had been laid. The pipes are in 12-foot lengths and weigh 19 cwts. each and they are therefore awkward things to move about along roads in course of construction and much encumbered with materials. They were carried by gangs of 16 coolies to each pipe.

72. Rifle Ranges near Kowloon City—Construction of Butts.—In accordance with the arrangement come to for removing the ranges from the King's Park, the construction of the butts was carried out by the Military Authorities at the expense of the Colonial Government. The expenditure shown in Appendix B was a balance due on the work, which cost in all \$13,959.53, exclusive of land resumptions, which cost \$9,026.15, and some improvements subsequently carried out, as mentioned below, at a cost of \$2,985.62.

73. Rifle Ranges near Kowloon City—Diversion of Road.—It was intended to carry out some improvements to the diverted road, but, as the Military Authorities desired to have the road widened and otherwise improved, the work was delayed until an arrangement could be come to with them.

74. Rifle Ranges near Kowloon City—Improvements.—The necessary work was carried out by the Military Authorities at the expense of the Colonial Government, the cost being \$2,985.62.

75. Urinal near the Peak Tram Terminus.—This work has been referred to under the heading "Public Latrines and Urinals."

76. Green Island Light Improvement.—This work consisted of the transfer of the light apparatus—a First Order one—from Cape D'Aguilar to Green Island; the erection of a new tower, 31 feet high, to receive it; and the construction of additional quarters to accommodate the extra staff required to supervise its working. The light at Cape D'Aguilar was rendered obsolete by the erection of a lighthouse on Waglan Island by the Chinese Imperial Maritime Customs and, as the light on Green Island was only a Fourth Order one, it was decided to supersede it by the one from Cape D'Aguilar. In carrying out the change, the light was fitted with an occulting apparatus, so as to give it a distinctive character. The removal and re-erection of the apparatus was successfully carried out departmentally under the supervision of Mr. NICHOLAS, Light-keeper. Everything was in order for the light to be exhibited on the 1st January, 1906, only a little work remaining to be done in connection with the quarters.

77. Lighting of the Peak Roads.—In response to the representations of some of the Peak Residents, it was decided to light the public roads in the Hill District. Tenders were received from the Gas Co., the Hongkong Electric Co., Messrs. Dodwell & Co. (Kitson incandescent oil lamps) and Messrs. Wilks & Co., (independent electric light installation). These were referred to the Public Works Committee, which, after full consideration, recommended the acceptance of the Gas Cos.' tender. The necessary new lamps, 98 in number, were erected, a few lamps previously erected for experimental purposes were altered in position and lighting was commenced on the 1st September. Including lamps previously erected, 3 of which were in the grounds of Mountain Lodge and 3 on the road leading to Rural Building Lots 98, 99 and 113, the total number amounts to 106. All the lamps are fitted with incandescent burners, being generally of 23 candle-power each.

78. Rainstorm Damages.—As the result of a fall of 7.95 inches of rain on the 1st June, some damage was done, principally to roads and retaining walls. No exceptional damage worthy of special reference occurred.

79. Resumption of Portions of Kowloon Marine Lots 4 & 5 for widening Salisbury Road.—As already mentioned in connection with the description of works executed under the vote "Forming and Kerbing Streets", Salisbury Road has been widened from 50 to 100 feet and, for this purpose, it was necessary to resume portions of certain lots, among which were the two mentioned above.

80. Repairs to Gap Rock Cable.—These have been described under "Maintenance of Telegraphs" and it is unnecessary to add anything here to what has already been stated.

81. Kowloon-Canton Railway, British Section—Survey & Preliminary Works.—Messrs. BRUCE and VALPY arrived from England in the middle of June to carry out the necessary surveys for the selection of a route and for the setting out of the line when the route had been decided upon. Mr BRUCE submitted his report on the result of his preliminary surveys in October, strongly recommending what is known as the Eastern Route. His recommendation having been approved, the setting out of the line was begun and steps were taken for the resumption of the land required for the construction of the railway. For the setting

out, the services of Mr. CARPENTER, Assistant Engineer, and Mr. DARBY, Land Surveyor, were lent to Mr. BRUCE and, under his supervision, these officers undertook the section between Tai Po and Lo Fu Ferry. So far did matters progress that, on the 9th December, by the instructions of His Excellency the Governor, the work of constructing this section was begun and some progress had been made by the close of the year.

A scheme for the provision of a terminus, alongside which there will ultimately be afforded deep-water berthage for steamers, was prepared by Mr. BOULTON and submitted to Government.

ADVANCE ACCOUNTS.

82. *Praya East Reclamation—Raising Roadway and Foot-paths.*—The work of raising the Praya East roadway and foot-paths was completed, except in the case of a few properties whose owners demurred to the raising of the latter. The total expenditure under the vote has been \$56,993.79 (of which \$16,464.85 was expended during 1905), and, when the reclamation is undertaken, this sum will be recovered from the lot-holders. At a meeting of the Marine Lot-holders interested, held on the 13th May, 1905, a resolution was passed, with only one dissentient, to the effect that it is inexpedient at the present time to take any further steps towards the proposed reclamation, and the matter is therefore in abeyance.

83. *Rider Mains.*—The various districts constituting the Central and Western divisions of the City were gazetted as Rider Main Districts Nos. 1 to 5. No. 1 was gazetted in 1904 and the others during 1905, work in Districts Nos. 1 to 4 being practically completed by the close of the year whilst in No. 5 it had been begun.

The following tabulated statements show the lengths of mains laid and the number of connections made with the mains, exemptions granted, &c. :—

MAINS LAID (LINEAL YARDS).

Cast Iron.		Wrought Iron.			
4"	3"	3"	2½"	2"	1½"
30	10	1,450	80	26,000	300

or fully 15¾ miles in all.

CONNECTIONS MADE, EXEMPTIONS GRANTED, &c.

District No.	No. of Tenements connected.	No. of Exemptions granted.	No. of Tenements still to be connected.	Totals.
1	851	14	74	939
2	304	1	4	309
3	1,771	16	163	1,950
4	966	4	100	1,070
5	500	5	1,495	2,000
Totals,	4,392	40	1,836	6,268

Exemptions from connection with the Rider Mains are granted by the Governor in Council and are confined to cases in which it can be shown to be essential for trade or other purposes that a larger supply than is likely to be obtainable from these mains should be given. In every case where exemption is granted a meter is fixed and payment is required for all water consumed in excess of the quantity allowed free in consideration of the sum paid as rates on the tenement.

As regards the tenements still to be connected, in some cases they are without water services and in others the services require to be altered before a connection can be made.

The expenditure on the work during the year amounted to \$101,769.83.

STAFF, &c.

84. *Leave granted, Appointments, Resignations, &c.*—The following Officers were granted leave exceeding one week's duration :—

Mr. P. N. H. JONES, Assistant Director of Public Works,	2 months & 5 days.
„ H. G. C. FISHER, Executive Engineer,	12 „
„ L. C. REES, Principal Land Surveyor,	2 „ & 2 „
„ W. DOBBS, Overseer, Building Ordinance,	1 „
„ V. WATSON, Do.,	2 weeks.
„ S. R. BOYD, Do.,	8 months & 24 days.
„ ERNEST AH CHIN, Clerk,	2 weeks.
„ KO HA CHUN, Do.,	12 days.
„ C. GRANT, Assistant Foreman,	1 month & 1 day.
„ AH HING, Do.,	2 weeks.
„ YAM SIN, Do.,	2 „
„ WONG TAK, Telegraph Workman,	2 „

The deaths of the following Officers occurred during the year :—

- Mr. HU MOK SHAN, Watchman at Tytam Filter Beds.
- „ LAM SHIU, Watchman at Fo Tau Chau.

The following Officers left the service of the Department :—

- Mr. A. C. MILNE, Clerk of Works.
- „ E. DOUGHERTY, Overseer.
- „ M. TAYLOR, Do.
- „ F. MASTERS, Do.
- „ A. A. PARK, Do.
- „ J. F. C. MACDONALD, Do.
- „ W. COBB, Do.
- „ W. NEWTON, Do.
- Miss A. M. de SOUZA, Clerk.
- Mr. CHEUNG HOK LING, Do.
- „ FUNG HING CHEONG, Do.
- „ CHAN YUK SHAN, Do. (Transferred to Magistracy.)
- „ NG KWAI TSUNG, Do. (Retired on gratuity.)
- „ LEUNG SOK PING, Do.
- „ LAU HONG, Tracer.

A TAN, YU TING, MAK WA LIM and CHAN CHING, Foremen.

CHAN PO and CHAN KEW, Fitters at Bonham Road Pumping Station.

LI SHEK, CHAU CHUNG, FOO FAT and HO SANG, Watchmen, and one Telegraph workman and 21 Coolies.

The following appointments were made :—

Mr. C. T. FOOK, Surveyor.
 „ H. C. SAYER, Do.
 „ I. A. REMEDIOS, Clerk.
 „ H. E. HENDY, Overseer.
 „ W. H. MANNERS, Do.
 „ G. COOKE, Do.
 „ H. A. MORRIS, Do.
 „ J. C. POLLOCK, Do.
 „ A. V. PARKER, Do.
 „ F. RYAN, Do.
 „ KO HA CHUN, Clerk.
 „ WONG KAI LEUNG, Do.
 „ CHEUNG SIT TING, Do.
 „ YEUNG KUN, Do.
 „ YEUNG SING U, Do.
 „ LI PING CHIU, Do.
 „ PAU CHUNG WING, Tracer.
 „ TANG NGOK WAN, Do.

TSUI CHEONG, CHONG LEUNG, TOM HONG and LAI A HING, Foremen.

LAI LAM, Fitter, Bonham Road Pumping Station.

KO HONG and LEONG LOW, Watchmen, and 2 Telegraph Workmen and 26 Coolies.

The following Officers entered and left the Service of the Department within the year :—

Mr. R. C. BIRD, Land Surveyor.

Dr. MA LUK, Resident Doctor at Tytam Tuk Water-works.

Mr. TANG YAU MING, Clerk.

„ WONG WO CHING, Do.

„ CHAN YING SZE, Do.

YEE TSAN HI, Foreman.

KUM SUN, CHAN PO FAN, and YEE KWAI, Watchmen, and 16 Coolies.

Mr. W. CHATHAM, Director of Public Works, returned from leave and resumed his duties on the 28th March.

Mr. A. H. HOLLINGSWORTH, Executive Engineer, returned from leave and resumed his duties on the 6th March.

There were no changes of any moment in the Staff during the year, except that it was found necessary to strengthen the Land Survey branch in order to overtake the work connected with the surveying of Tax-lord Claims and sales of numerous small lots in the New Territory.

W. CHATHAM, M.I.C.E.,
Director of Public Works.

Appendix A.

ANNUALLY RECURRENT EXPENDITURE, 1905.

<i>Establishment and Public Works Recurrent.</i>	<i>Amounts in Estimates.</i>	<i>Supplementary votes.</i>	<i>Total Amounts voted.</i>	<i>Expenditure.</i>
	\$ c.	\$ c.	\$ c.	\$ c.
ESTABLISHMENT.				
Personal Emoluments, including Exchange Compensation,	246,306.00	...	246,306.00	202,786.53
Other Charges,	18,152.00	400.00	18,552.00	16,817.03
	<u>264,458.00</u>	<u>400.00</u>	<u>264,858.00</u>	<u>219,603.56</u>
PUBLIC WORKS RECURRENT.				
<i>Buildings.</i>				
1. Maintenance of Buildings,	52,000.00	2,000.00	54,000.00	53,676.59
2. " " in New Territory,	8,000.00	...	8,000.00	7,553.07
3. " Lighthouses,	4,500.00	...	4,500.00	4,162.73
<i>Lighting.</i>				
4. Gas Lighting, City of Victoria and Hill District,...	42,000.00	1,050.00	43,050.00	42,827.37
5. Electric Lighting, City of Victoria,.....	23,000.00	...	23,000.00	22,390.94
6. Gas Lighting, Kowloon,	9,000.00	100.00	9,100.00	9,012.01
<i>Communications.</i>				
7. Maintenance of Roads and Bridges in City,	50,000.00	1,000.00	51,000.00	50,452.53
8. " " " outside City, ...	25,000.00	...	25,000.00	24,857.28
9. " " " in Kowloon, ...	20,000.00	...	20,000.00	19,408.14
10. " " " in New Territory,...	7,000.00	1,500.00	8,500.00	7,654.05
11. " Telegraphs,	7,500.00	7,600.00	15,100.00	15,089.31
12. " " in New Territory,	4,000.00	...	4,000.00	3,233.06
<i>Miscellaneous.</i>				
13. Maintenance of Praya Wall and Piers,	7,000.00	6,500.00	13,500.00	12,329.33
14. " Public Cemetery,	3,500.00	{ 1,000.00 500.00 }	5,000.00	4,560.49
15. " Public Recreation Grounds,.....	4,000.00	...	4,000.00	2,328.12
16. Dredging Foreshores,	12,000.00	...	12,000.00	8,444.92
17. Miscellaneous Services,	10,000.00	...	10,000.00	9,965.83
<i>Drainage.</i>				
18. Maintenance of Sewers, Nullahs, &c.,	18,000.00	...	18,000.00	17,111.88
<i>Water Supply.</i>				
19. Maintenance of City and Hill District,	50,000.00	...	50,000.00	46,636.76
20. " Kowloon,	12,000.00	...	12,000.00	11,739.66
21. " Shau-ki-wan,.....	1,000.00	...	1,000.00	219.92
22. " Aberdeen,	1,000.00	...	1,000.00	147.15
23. Water Account, (Meters, &c.),	10,000.00	...	10,000.00	9,996.92
Total,	\$ 380,500.00	21,250.00	401,750.00	383,798.06

Appendix B.

EXTRAORDINARY EXPENDITURE, 1905.

PUBLIC WORKS EXTRAORDINARY.	AMOUNTS IN ESTIMATES 1905.		SUPPLEMENTARY VOTES.		TOTAL AMOUNTS VOTED.		EXPENDITURE.	
	\$	c.	\$	c.	\$	c.	\$	c.
<i>Buildings.</i>								
1. Bacteriological Institute,.....	30,500.00		7,600.00		38,100.00		35,255.06	
2. Central Police Station, Additional Storey,	13,000.00		7,003.66		20,003.66		20,003.66	
3. Disinfecting Station, Kowloon, including Quarters for Inspector and Office for Medical Officer of Health,.....	4,200.00		{ 4,800.00 2,800.00 }		{ 11,800.00 }		11,690.26	
4. Govt. Civil Hospital, Extension to Staff Quarters, ..	20,000.00		...		20,000.00		12,938.16	
5. Gunpowder Depot, Green Island,	50,000.00		34,393.00		84,393.00		70,003.44	
6. Harbour Office,.....	43,000.00		...		43,000.00		36,073.47	
7. Law Courts,	160,000.00		...		160,000.00		70,570.50	
8. Mong-kok-tsui Market,	5,000.00		...		5,000.00		5,000.00	
9. Western Market,	67,000.00		...		67,000.00		66,953.23	
10. Post Office,	185,000.00		...		185,000.00		99,400.25	
11. Do., Shanghai,	15,000.00		...		15,000.00		...	
12. Prison,	10,000.00		...		10,000.00		...	
13. Public Latrines and Urinals,	12,000.00		...		12,000.00		8,953.51	
14. School at Yaumati,	12,000.00		13,081.06		25,081.06		19,199.03	
15. Tai Po Quarters for Officers,	15,500.00		7,500.00		23,000.00		17,584.34	
16. Volunteer Headquarters, (Contribution),	5,000.00		...		5,000.00		4,975.44	
<i>Drainage Works.</i>								
17. Gullies Re-construction,	10,000.00		...		10,000.00		9,966.44	
18. Training Nullahs,.....	20,000.00		...		20,000.00		19,793.91	
19. Miscellaneous Drainage Works,.....	45,000.00		15,000.00		60,000.00		59,673.15	
<i>Miscellaneous.</i>								
20. Gas Lighting, Extension of,.....	2,500.00		...		2,500.00		1,699.00	
21. Miscellaneous Works,	35,000.00		{ 150.00 9,800.00 }		{ 44,950.00 }		44,900.35	
22. Reclamation, Tai-kok-tsui,	20,500.00		6,295.95		26,795.95		23,747.08	
<i>Public Health & Buildings Ordinance, 1903.</i>								
23. Compensation for Scavenging Lanes, &c.,.....	20,000.00		...		20,000.00		6,415.98	
24. Insanitary Property Resumptions,	150,000.00		...		150,000.00		150,000.00	
<i>Roads.</i>								
25. Forming and Kerbing Streets,	40,000.00		25,000.00		65,000.00		64,746.45	
26. Kowloon Roads,	20,000.00		...		20,000.00		12,193.57	
27. Road across King's Park,	5,000.00		...		5,000.00		4,389.91	
<i>Water Supply.</i>								
28. Albany Filter Beds, Re-construction and Extension, ..	20,000.00		3,458.15		23,458.15		19,551.65	
29. Kowloon Water-works, Gravitation Scheme,	350,000.00		...		350,000.00		271,709.44	
30. Miscellaneous Water-works,	20,000.00		5,000.00		25,000.00		24,872.66	
31. Peak Supply and Re-construction of No. 2 Tank, ...	10,000.00		9,926.56		19,926.56		19,925.33	
32. Tytam Tuk Scheme,.....	400,000.00		40,000.00		440,000.00		439,075.32	
<i>Works for which no Provision was made in Estimates.</i>								
33. Rifle Ranges near Kowloon City—Construction of } Butts, .....	...		700.64		700.64		660.17	
34. Do. —Diversion of } Road, .....	...		1,535.16		1,535.16		...	
35. Do. —Improvements } in Ranges, ..	...		3,600.00		3,600.00		2,985.62	
36. Urinal near the Peak Tram Terminus,.....	...		893.00		893.00		832.41	
37. Green Island Light Improvement,.....	...		9,200.00		9,200.00		9,111.98	
38. Lighting of the Peak Roads, .....	...		5,500.00		5,500.00		5,316.45	
39. Rainstorm Damages, .....	...		{ 10,420.00 2,350.00 }		{ 12,770.00 }		12,768.43	
40. Resumption of Portions of K. M. Lots 4 & 5 for } widening Salisbury Road, .....	...		35,499.00		35,499.00		17,286.75	
41. Repairs to Gap Rock Cable, .....	...		5,871.65		5,871.65		5,869.38	
42. Kowloon-Canton Railway, British Section—Survey and Preliminary Works,.....	...		{ 25,000.00 50,000.00 }		{ 75,000.00 }		64,463.31	
43. Typhoon Damages, .....	...		4,650.00		4,650.00		4,583.74	
Total,.....	\$ 1,815,200.00		346,997.83		2,162,197.83		1,775,138.83	

Appendix D.
CITY AND HILL DISTRICT WATER-WORKS, 1905.
Particulars of Metered and Unmetered Supplies (gallons).

MONTH.	FILTERED SUPPLY.						UNFILTERED SUPPLY METERED.	GRAND TOTAL.
	UNMETERED. (CITY.)	METERED.		TOTAL.				
		CITY.		HILL DISTRICT.				
		Trade.	Domestic.					
January,	117,392,000	7,620,000	7,025,000	823,000	132,860,000	738,000	132,598,000	
February,	92,254,000	7,505,000	6,919,000	772,000	170,850,000	875,000	108,725,000	
March,	72,772,000	6,916,000	7,737,000	856,000	88,281,000	366,000	88,647,000	
April,	103,164,000	11,407,000	9,012,000	839,000	124,422,000	576,000	124,998,000	
May,	129,140,000	11,445,000	8,990,000	867,000	150,442,000	1,330,000	151,772,000	
June,	115,342,000	11,411,900	9,005,000	901,000	136,659,000	1,323,000	137,982,000	
July,	134,591,000	15,968,000	9,620,000	1,171,000	161,350,000	1,387,000	162,737,000	
August,	130,458,000	16,022,000	9,637,000	1,160,000	157,277,000	1,388,000	158,665,000	
September,	117,965,000	16,017,000	9,632,000	1,178,000	144,792,000	1,388,000	146,180,000	
October,	104,252,000	8,692,000	8,032,000	1,391,000	122,367,000	476,000	122,843,000	
November,	98,090,000	8,800,000	8,107,000	1,412,000	116,409,000	477,000	116,886,000	
December,	95,804,000	8,810,000	7,773,000	1,412,000	113,799,000	476,000	114,275,000	
Total,	1,311,224,000	131,013,000	101,489,000	12,782,000	1,556,508,000	10,800,000	1,567,308,000	

Appendix E.

CITY AND HILL DISTRICT WATER-WORKS, 1905.

Water Pumped to Hill District and High Levels of the City (gallons).
(Theoretical Displacement of Pumps).

MONTH.	HILL DISTRICT.			HIGH LEVELS OF CITY.						GRAND TOTAL PUMPED.	
	MOTORS.	ENGINE.	TOTAL.	700' TANK (Peak Road District).		600' & 650' TANKS (Robinson Road District).		COMBINED TOTALS.			
				Motors.	Engine.	Total.	Motors.		Engine.		Total.
January,	620,000	1,871,000	2,491,000	751,000	.....	751,000	1,734,000	2,776,000	4,510,000	5,261,000	7,752,000
February,	721,000	822,000	1,543,000	354,000	.....	354,000	1,304,000	1,795,000	3,099,000	3,453,000	4,996,000
March,	530,000	1,512,000	2,042,000	273,000	.....	273,000	677,000	1,233,000	1,910,000	2,183,000	4,225,000
April,	490,000	1,862,000	2,352,000	398,000	.....	398,000	1,845,000	1,834,000	3,679,000	4,077,000	6,429,000
May,	999,000	1,371,000	2,370,000	534,000	.....	534,000	2,049,000	2,243,000	4,292,000	4,826,000	7,196,000
June,	1,079,000	1,326,000	2,405,000	610,000	.....	610,000	1,903,000	2,548,000	4,451,000	5,061,000	7,466,000
July,	929,000	1,453,000	2,382,000	714,000	.....	714,000	1,899,000	3,012,000	4,911,000	5,625,000	8,007,000
August,	728,000	1,243,000	1,971,000	586,000	.....	586,000	2,220,000	3,056,000	5,276,000	5,862,000	7,833,000
September,	818,000	1,266,000	2,084,000	743,000	.....	743,000	2,167,000	3,217,000	5,384,000	6,127,000	8,211,000
October,	485,000	1,580,000	2,065,000	637,000	.....	637,000	2,054,000	3,451,000	5,505,000	6,142,000	8,207,000
November,	461,000	1,290,000	1,751,000	616,000	.....	616,000	1,462,000	3,462,000	4,924,000	5,540,000	7,291,000
December,	303,000	1,464,000	1,767,000	622,000	.....	622,000	1,331,000	3,254,000	4,585,000	5,207,000	6,974,000
Total,	8,163,000	17,060,000	25,223,000	6,838,000	.....	6,838,000	20,645,000	31,881,000	52,526,000	59,364,000	84,587,000

Appendix F.

CITY AND HILL DISTRICT WATER-WORKS, 1905.

Comparative Table showing Water Pumped to Hill District during the last ten years (gallons).

Month.	1896.	1897.	1898.	1899.	1900.	1901.	1902.	1903.	1904.	1905.
January,	1,022,000	1,115,000	735,000	1,669,000	1,641,000	1,881,000	1,566,000	1,178,000	1,674,000	2,491,000
February,	741,000	873,000	1,434,000	1,553,000	1,347,000	1,516,000	814,000	935,000	1,196,000	1,543,000
March,	836,000	1,138,000	993,000	1,730,000	1,362,000	1,574,000	648,000	809,000	1,350,000	2,042,000
April,	992,000	1,093,000	1,373,000	1,542,000	1,613,000	1,751,000	740,000	1,476,000	1,317,000	2,352,000
May,	1,210,000	1,316,000	1,387,000	1,769,000	1,654,000	1,933,000	1,101,000	1,853,000	2,027,000	2,370,000
June,	1,176,000	1,409,000	1,553,000	1,957,000	1,939,000	2,001,000	1,796,000	2,715,000	1,557,000	2,405,000
July,	1,397,000	1,560,000	1,618,000	1,972,000	2,127,000	2,041,000	2,175,000	2,700,000	3,085,000	2,382,000
August,	1,462,000	1,498,000	1,808,000	2,157,000	2,323,000	2,451,000	1,920,000	2,868,000	2,740,000	1,971,000
September,	1,404,000	1,421,000	1,995,000	2,214,000	2,182,000	2,709,000	1,912,000	2,748,000	2,794,000	2,084,000
October,	1,346,000	1,297,000	1,926,000	2,185,000	2,097,000	2,601,000	2,524,000	2,898,000	3,164,000	2,065,000
November,	1,136,000	1,134,000	1,659,000	1,760,000	2,158,000	2,136,000	1,200,000	2,742,000	2,763,000	1,751,000
December,	1,030,000	1,464,000	1,699,000	1,800,000	2,144,000	1,549,000	1,047,000	2,574,000	2,513,000	1,767,000
Total,	13,752,000	15,318,000	18,180,000	22,308,000	22,587,000	24,143,000	17,443,000	25,496,000	26,180,000	25,223,000

Appendix G.

CITY AND HILL DISTRICT WATER-WORKS, 1905.

Comparative Table showing Water Pumped to High Levels of the City during the last ten years (gallons).

Month.	1896.	1897.	1898.	1899.	1900.	1901.	1902.	1903.	1904.	1905.
January,	962,000	1,358,000	1,478,000	1,951,000	2,221,000	2,433,000	1,700,000	2,255,000	3,364,000	5,261,000
February,	820,000	1,100,000	1,135,000	1,644,000	1,845,000	1,960,000	1,076,000	1,772,000	2,063,000	3,453,000
March,	1,009,000	1,352,000	1,404,000	2,091,000	591,000	2,185,000	968,000	2,045,000	2,020,000	2,183,000
April,	1,203,000	1,436,000	1,355,000	1,097,000	2,022,000	2,063,000	824,000	2,230,000	1,860,000	4,077,000
May,	1,463,000	1,646,000	1,608,000	1,491,000	1,835,000	1,869,000	1,460,000	4,264,000	2,555,000	4,826,000
June,	1,391,000	1,473,000	1,502,000	1,451,000	2,015,000	2,727,000	3,598,000	4,624,000	3,285,000	5,061,000
July,	1,478,000	1,632,000	1,613,000	1,490,000	1,939,000	2,732,000	4,070,000	4,920,000	4,962,000	5,625,000
August,	1,543,000	1,638,000	1,578,000	1,569,000	2,320,000	3,258,000	3,909,000	4,780,000	5,874,000	5,862,000
September,	1,449,000	1,600,000	1,701,000	1,704,000	2,173,000	3,065,000	4,342,000	4,728,000	6,066,000	6,127,000
October,	1,505,000	1,653,000	1,699,000	2,192,000	2,383,000	3,776,000	4,168,000	6,481,000	5,716,000	6,142,000
November,	1,425,000	1,526,000	1,641,000	1,957,000	2,158,000	1,839,000	2,129,000	6,227,000	5,774,000	5,540,000
December,	1,394,000	1,431,000	1,722,000	2,135,000	2,190,000	1,032,000	2,206,000	5,461,000	5,462,000	5,207,000
Total,	15,642,000	17,845,000	18,436,000	20,772,000	23,692,000	28,939,000	30,450,000	49,797,000	49,001,000	59,364,000

Appendix H.

KOWLOON WATER-WORKS, 1905.

Supplies from Old and New Sources—Monthly Consumption (gallons).

Month.	From old sources (Wells in Fo Pang & Tai Shek Ku Valleys, &c.) (Pumped.)	From new sources (Cheung Sha Wan In- takes.) (By Gravitation.)	Total.	Remarks.
January, ...	10,614,000	2,839,000	13,453,000	} Nos. 8 and 9 Intakes cut out on account of Military Encampment.
February, ...	9,961,000	2,220,000	12,181,000		Do.
March, ...	9,518,000	3,252,000	12,770,000	Do.
April, ...	9,816,000	4,519,000	14,335,000	Do.
May, ...	12,035,000	3,107,000	15,142,000	Do.
June, ...	10,279,000	10,077,000	20,356,000	Do.
July, ...	6,881,000	11,693,000	18,574,000	All Intakes (Nos. 1 to 9) in use.
August, ...	3,243,000	12,328,000	15,571,000	Do.
September, ...	3,708,000	11,908,000	15,616,000	Do.
October, ...	9,226,000	8,017,000	17,243,000	} No. 3 Intake cut out on account of Military Encampment.
November, ...	10,737,000	4,487,000	15,224,000		Do.
December, ...	11,796,000	3,429,000	15,225,000	Do.
Total, ...	107,814,000	77,876,000	185,690,000	

Appendix J.

KOWLOON WATER-WORKS, 1905.

Particulars of Metered and Unmetered Supplies (gallons).

Month.	Metered Supply.			Unmetered Supply.	Grand Total.
	Trade.	Domestic.	Total.		
January, ...	938,000	1,487,000	2,425,000	11,028,000	13,453,000
February, ...	919,000	1,463,000	2,382,000	9,799,000	12,181,000
March, ...	927,000	1,444,000	2,371,000	10,399,000	12,770,000
April, ...	1,417,000	1,796,000	3,213,000	11,122,000	14,335,000
May, ...	1,411,000	1,781,000	3,192,000	11,950,000	15,142,000
June, ...	1,560,000	1,912,000	3,472,000	16,884,000	20,356,000
July, ...	1,361,000	1,640,000	3,001,000	15,573,000	18,574,000
August, ...	1,362,000	1,644,000	3,006,000	12,565,000	15,571,000
September, ...	1,371,000	1,639,000	3,010,000	12,606,000	15,616,000
October, ...	614,000	1,390,000	2,004,000	15,239,000	17,243,000
November, ...	620,000	1,428,000	2,048,000	13,176,000	15,224,000
December, ...	618,000	1,429,000	2,047,000	13,178,000	15,225,000
Total, ...	13,118,000	19,053,000	32,171,000	153,519,000	185,690,000

Appendix K.

ABERDEEN WATER-WORKS, 1905.

Monthly Consumption (gallons).

Month.	Metered Supply.	Unmetered Supply.	Total.	Remarks.
January,	71,000	281,000	352,000	.....
February,.....	60,000	237,000	297,000	.....
March,	65,000	265,000	330,000	.....
April,	136,000	312,000	448,000	.....
May,.....	140,000	469,000	609,000	.....
June,	145,000	434,000	579,000	.....
July,.....	120,000	510,000	630,000	.....
August,	122,000	440,000	562,000	.....
September,	126,000	451,000	577,000	.....
October,	50,000	449,000	499,000	.....
November,	60,000	386,000	446,000	.....
December,	53,000	361,000	414,000	.....
Total,	1,148,000	4,595,000	5,743,000	.....

Appendix L.

SHAU-KI-WAN WATER-WORKS, 1905.

Monthly Consumption (gallons).

Month.	Metered Supply.	Unmetered Supply.	Total.	Remarks.
January,	8,000	714,000	722,000	.....
February,.....	13,000	571,000	584,000	.....
March,	15,000	569,000	584,000	.....
April,	26,000	490,000	516,000	.....
May,.....	30,000	718,000	748,000	.....
June,	28,000	912,000	940,000	.....
July,.....	27,000	1,057,000	1,084,000	.....
August,	62,000	951,000	1,013,000	.....
September,	50,000	892,000	942,000	.....
October,	104,000	843,000	947,000	.....
November,	108,000	599,000	707,000	.....
December,	104,000	641,000	745,000	.....
Total,	575,000	8,957,000	9,532,000	.....

Appendix M.

LAI-CHI-KOK WATER-WORKS, 1905.

Water Boat Supply. Monthly Consumption (gallons).

MONTH.	METERED SUPPLY.	REMARKS.
January, .....	.....	} Not in operation (works under construction).
February, .....	.....
March,	2,683,000	Works brought into operation on the 7th.
April,	3,061,000	
May,	4,792,000	
June,	2,998,000	
July,	1,742,000	
August,	1,710,000	
September,	4,305,000	
October,	2,873,000	
November,	6,180,000	
December,	9,500,000	
Total,	39,844,000	