

KUALA
LUMPUR

The
Formative
Years



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KHOO KAY KIM



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INTRODUCTION

It was approximately 145 years ago that the development of modern Kuala Lumpur commenced. Even at the time when it had become the state capital in 1880, it was barely more than "a collection of huts and shanties". J.H.M. Robson who was in Kuala Lumpur, beginning from 1889, said, in his very interesting *Records and Recollections* (Kuala Lumpur, 1934), that at that time "The Judge ... who was known as Chief Magistrate, the late ... H. Conway Belfield, lived in a wooden house with an atap roof."

The imposing buildings which still stand around the Padang belong to another phase of development. The Sultan Abdul Samad Building (directly opposite the Royal Selangor Club), for example, emerged just before Kuala Lumpur became the capital of the Federated Malay States (formed in 1896). Kuala Lumpur's subsequent growth undoubtedly owed much to its status as the Federal Capital. The physical transformation was evident by the time war broke out in Europe in 1914. The Mosque at the confluence of the Klang and Gombak Rivers, the Chartered Bank to the south of the Padang and the Railway Station, were all built in the early 20th century.

Indeed, it was at the turn of the century that considerably more attention was given to municipal problems in Kuala Lumpur. The Sanitary Board had been established since 1890, but its autonomy was somewhat circumscribed. It had no

control over finance and could only make recommendations for the sanction of the British Resident.

The documents now published in this volume—*Kuala Lumpur: The Formative Years*—provide some idea of the problems which troubled many of the concerned residents of Kuala Lumpur at that time. They also enable the reader to obtain glimpses of Kuala Lumpur town with brothels, imperfect bridges, narrow and congested roads, squatters, and dark thoroughfares at night. In fact, even by 1905, it was considered “too late in the day to hope that Kuala Lumpur can even become a city of great grandeur.”

Of particular interest is the lengthy report on the experimental work done in Kuala Lumpur on the eradication of malaria. The success achieved here has been given no place in history. It is evident that Dr. Watson should not be solely credited with this breakthrough in medical science.

Kuala Lumpur did not have a town-planner until 1921. Meanwhile, the town grew somewhat spontaneously. The *Malay Mail* played a useful role in attempting to draw the attention of the authorities to problems which required immediate remedy. The paper was particularly vocal in 1905 (a few of the leader articles are reproduced here). And in 1905, Robson and two other persons wrote a lengthy memorandum on “The Future Policy of Municipal Schemes in the Town of Kuala Lumpur”. Robson was, of course, the founder of the *Malay Mail* (1896) and, although he later abandoned journalism for greener pastures, remained Managing Director of the Malay Mail Press Ltd.

The documents reprinted here help to explain a number of the municipal problems which continue to confront the City Council. Suggestions for improvements often fell on deaf ears and although the Sanitary Board, in general, was quite vigilant, it never really foresaw the day when the rate of Kuala Lumpur's growth would be accelerated many times and drastic measures would have to be taken to avoid congestion. This, however, would be difficult because of the substantial sums involved in paying compensation to land owners.

Still, comparatively, Kuala Lumpur was more fortunate than most other towns not only in Malaysia but Asia as a whole. Even if the whole process of town improvement took place all too slowly, it was never neglected. There was always some semblance of order. The situation, however, changed radically during the Japanese Occupation (1942-1945).

Prof. Datuk Dr. Khoo Kay Kim
January, 1996



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Common mode of transport in the early Kuala Lumpur.

KUALA LUMPUR WATERWORKS From Official Sources

1888

The Klang and Gombak Rivers meet in the centre of the town, and besides greatly adding to the picturesqueness of the place, they provide a constant supply of water in case of fire, and are very useful for drainage purposes. All drinking water is obtained from the wells with which every house is provided, and though this supply is not open to serious objection, there is no doubt that a stream of pure water would be a vast improvement on the wells in use. Last year, a suitable head of pure water was after months of exploration, found in the limestone hills northeast of Kuala Lumpur at a distance of $7\frac{1}{2}$ miles. Levels were taken, and a preliminary survey of the intervening country made and is now believed that, when a small portion of the bed of the stream has been converted into a reservoir, and Government is prepared to go to the necessary expenditure, this very beneficial work can be successfully carried out.

— Resident's *Annual Report for 1888*.

1890

The importance of providing a good and pure water supply for the town of Kuala Lumpur was pressed upon me by H.E.

the Governor [Sir Cecil G. Smith] early in the year, and I gave the subject special attention. A personal visit of inspection to the source of supply mentioned by Mr. Swettenham in para. 75 of his Administration Report for 1888 convinced me that it could not be depended upon to furnish sufficient water for a town the size of Kuala Lumpur. I then requested the Superintendent, P.W.D., to examine the upper portion of the Ampang River, having reason to believe that this might be turned to account. Preliminary researches were made with such good results that in September, I was able to request that a competent hydraulic engineer might be engaged to make the necessary surveys, to prepare drawings and estimates, to construct a reservoir and other works, and to lay the necessary mains and services. This gentleman (Mr. H.C. Paxon) has arrived since the close of the year, and I trust in my next Report to be able to record that substantial progress has been made.

— *Resident's Annual Report for 1890.*

1891

Progress has been made by Mr. H.C. Paxon in the work of providing a good water supply for Kuala Lumpur. A site for an impounding reservoir has been selected, and it has been ascertained that the pipeline, which it was supposed at one time would be as much as 11 miles, will not exceed $6\frac{1}{2}$ miles in length. The reservoir will contain 7,000,000 cubic feet, and the dam will be 53 feet in height at its centre and 300 feet long. The outlet will be 340 feet higher than the altitude of the town at Market Street bridge.

The works will include a service reservoir at Kuala Lumpur, to which the water will be conducted from the impounding reservoir by an iron ten-inch main. From this it will be possible to supply all Government buildings as well as the native town.

— *Resident's Annual Report for 1891.*

1892

On the 17th of June detailed estimates for the Kuala Lumpur Waterworks amounting to \$368,860 were submitted and approved, with the exception of an item of \$20,250 for a branch main and house service, which is in abeyance for the present.

The pipes and cement were at once requisitioned for through the Crown Agents. There had been spent in the preliminaries in 1891, a sum of \$13,433 on these works, and the expenditure on them in 1892 amounted to \$43,876. The works were carried out departmentally, the site of the impounding reservoir, 6½ miles from the town, was cleared of all stumps and roots, a storm channel round it was excavated, and the approach road, 2½ miles in length from Ampang Road, was completed and metalled with granite. Cooly lines, in which 330 persons are living, and a temporary hospital were built at some distance from the impounding reservoir as the latter site was found to be most unhealthy; great delay was caused by sickness, as it frightened away the workmen and prevented others from coming. The rainfall at the reservoir site during the year was 98.62 inches.

Mr. Paxon reports as to the sufficiency of the water supply that will be ample for 40,000 or twice the present population, and that the water will be easily brought from the original site for the reservoir in a pipe conduit into the impounding reservoir, and though there is no pressing necessity for this, he urges that the Waterworks Reserve should be extended to embrace the whole of the hills on the right bank of the Ampang River from its source to its junction with the Klang River, so as to preclude of these hills being denuded of the jungle. In this I entirely concur.

— Resident's Annual Report for 1892.

1893

Waterworks, Kuala Lumpur—The original estimate made in July 1892 for supplying the town with water from a distance of

6½ miles was \$368,869. The granite rock at the impounding reservoir has proved to be less reliable than had been hoped, necessitating a puddle floor over the bed of the reservoir, and it is probable that the estimate will have to be raised to \$424,038. The service reservoir will be finished during 1894, but the completion of the scheme cannot be expected till next year. Labour has been a difficulty, working in hill granite being invariably unhealthy. Contractors on scheme rates have been resorted to, better progress is being made and Chinese have been found to be the suitable labourers for this work. The fall in exchange has also materially affected the original estimate.

—Resident's Annual Report for 1893.

1894

The progress for the year on all the works was good, even in spite of a loss of nearly two months work on the impounding reservoir through a modification in the design becoming necessary owing to the bedrock turning out to be fissured and not watertight which resulted in the Honorable Colonial Engineer and the Municipal Engineer called in to give their opinions.

- (a) As I have submitted a special report on the commission and forwarded the Hydraulic Engineer's annual report on the works, it is unnecessary for me to give any further details, but simply state that a proposal by the Hydraulic Engineer to meet the difficulty was eventually approved only on a much more extensive scale, which to carry out, it would be necessary to supplement the vote by \$208,652 instead of \$53,197, as recommended in my report forwarding the Hydraulic Engineer's proposals.
- (b) The revised scheme provided for immediately supplementing the supply of water, which was considered by the Singapore Engineers to be sufficient for a population of 25,000, by tapping the catchment area outside that of Streams Nos. 1 and 2 by means of an open channel two miles in length, to be run in the direction of the original stream on the Ampang River side of the watershed, and

to be used, eventually to convey that water to the reservoir, should the population of Kuala Lumpur render it necessary to extend the scheme.

- (c) The cost of the scheme per head of population for 25,000 will be \$22.80, but for 95,000, the number to which the scheme is capable of supplying, would be \$10.30 per head, as shown by the Hydraulic Engineer in his report.
- (g) The service reservoir was almost completed and is since finished. The main was completed from Ampang to the service reservoir excepting the bridges across the rivers. The water from Ampang, I must add, reached to the service reservoir at 3 p.m. on the 24th ultimo, when only three defects were found throughout the whole line, which were speedily rectified; this cannot be but considered as creditable work. The town mains were more or less completed. The bungalow main was completed, and the service pipes into the bungalows were well forward.

Public Works Department Annual Report for 1894.

1895

- (o) The catchment area available, and that can still be secured by extending channel No. 1 to the old reservoir site, is 441 acres—but to secure it would cost \$71,000 to be spent in driving a tunnel through the hill for 2,600 feet, at a cost of \$39,000, and extending the channel to the right and left for 3½ miles, or 18,540 feet.
- (p) The works as provided for will, when completed, cost \$577,572 for a population of 25,000 at \$23.10 per head, theoretically the supply is equal to a population of 50,000, and when extended, to their full capacity, including duplicating the mains and filters, \$931,760 or \$9.31 per head of 100,000.
- (x) It has been decided that the Sanitary Board are to be in charge of the Waterworks after completion. As the scheme, though designed to provide ample water for a population of 25,000 [in 1901, it was 32,381], cannot afford undue

waste of a too liberal supply per head, it will be necessary to guard against this by careful gaugings of the service reservoir, and the exercise of vigilance and prompt action at the impounding reservoir to prevent the available supply running to waste along the channels, the latter has been too clearly demonstrated during the heavy falls that occurred last month, pointing to great care in regulating the flow in the channels being necessary.

Public Works Departmental Annual Report for 1895.

The storage capacity of the reservoir is estimated at 7,008,495 cubic feet and this is considered sufficient for a 70 days' supply for a population of 25,000, or 9½ days' supply including minimum inflow, at 15 cubic feet per minute, during such 70 days. The storage supply of the service reservoir at Kuala Lumpur is estimated at about three days' supply.

— Resident's Annual Report for 1895.

1896

Services—During the eight months under report the following services were applied and fitted: Four services control led by metre for trade purposes; two services controlled by metre to Government buildings; fourteen services to private houses; seven services to Government buildings; one standpipe was erected in Sultan Street.

There were 309 bursts in the lead service pipes, which were repaired by the Waterworks staff.

Filters—The filter beds were cleaned an average once in two months and the sand layer taken out and washed.

It was found that one filter will supply sufficient filtered water for the supply of Kuala Lumpur for one month.

— Sanitary Board Engineer's Annual Report for 1896.

1897

The Waterworks have worked very satisfactorily, subject to the points noted below, and the amount of water in the impounding

reservoir has been ample. Should it be decided to supply Klang and Kuala Klang from Kuala Lumpur, it is probable that the present source will be found equal to the demand without any extensions at present of the supply channels.

The capital cost of the works is put down at \$570,355. The net revenue derived in 1897, exclusive of reimbursements and after deducting working expenses, was \$9,720.68, equal to a return of 1½ per cent. If the water supplied to Government institutions and barracks is allowed for at the reduced rate of 25 cents per 1,000 gallons, the net revenue is increased by \$3,700, showing a return on capital invested of 2½ per cent.

— *Sanitary Board Annual Report for 1897.*

1898

A letter from Towkay Loke Yew is considered in which he proposes to have water laid on all his brick houses in Kuala Lumpur, and enquiring what rate will the Board charge:

- (a) if the work is done at his expense; and
- (b) if the work is done at the cost of the Board.

Resolved that the applicant be informed that the Waterworks Regulation provides for private supplies being laid on by the Board at the cost of the householder and an annual rate of 2 per cent on the annual value of the building being levied. In this connection the Deputy Commissioner of Police gives notice that at the next meeting of the Board he will propose that the Government be approached with a view to obtaining funds either from revenue or by loan for introducing on application, water pipes into each house in Kuala Lumpur, a charge of 1 per cent being made in agreement for the water service.

—“Minutes of Sanitary Board Meeting of December 15th, 1898.”

1898

Private Water Supply—A sum of \$2,056 exclusive of collections from Government quarters were received from this source resulting in an excess of \$2,156 over the amount estimated. The Railway Department was the largest consumer.

There are in the town some 1,200 shophouses, and of these 49 have so far arranged for a private water supply. Applications, however, continue to come in and are executed as soon as possible.

— *Sanitary Board Annual Report for 1898.*

1899

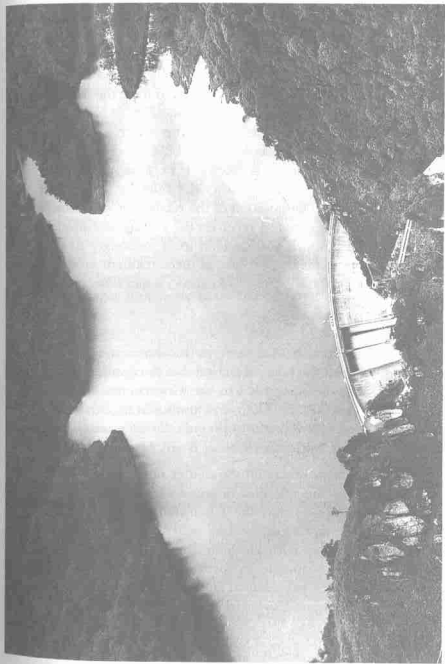
Both the filters in use alternately throughout the year, but one filter working alone cannot supply sufficient water to meet the present demands. The average consumption in town is now about 70,500 cubic feet per minute. When a filter is first started and for a week it is possible to pass through it 55 cubic feet per minute, then it rapidly becomes choked and the volume of water discharged from it gradually becomes less, so that by the end of five weeks, when the second filter is again ready for use, the volume of water discharged from it is no more than 15 to 20 cubic feet per minute, and the balance required to meet the requirement in the town has to be supplied direct from the impounding reservoir without filtration. I would again point out the necessity of a third filter bed with sufficient labour so that each filter can be cleaned out in three weeks instead of five to six weeks as is now the case.

The revenue from the water supply shows also an increase over 1899, especially under the heading of private supply; this is quite a natural consequence resultant on the greater convenience of getting water from a tap rather than having to draw it from a well, besides that the water supplied seems to be healthy, and so popular.

— *Sanitary Board Engineer's Annual Report for 1899.*

The proposal that application be made to Government for funds from either revenue or loan, for the purpose of introducing water pipes into the houses in Kuala Lumpur on application from householders, an additional rate of one per cent being charged for water service, is discussed and it is resolved that the proposal be brought up again for consideration in three months time.

— "Minutes of Sanitary Board Meeting January 19th, 1899."



Klang Gates Dam—1 in Klang catchment area.

1900

Preliminary steps were taken at the end of the year to increase the extent of the catchment area of the Kuala Lumpur Waterworks, recent experience having conclusively proved that the amount of the present supply is inadequate to meet the demand occasioned by largely increased consumption.

An abnormally dry year caused the water in the impounding reservoir to fall as low as to be a source of continuous anxiety to the urban authority. It became necessary to cut off private supplies and to otherwise limit the amount of daily consumption. The question of the relative proportions of the supply and the demand received the careful attention of the Government, and it was decided to be necessary to take immediate steps to enlarge the size of the catchment area.

— *Resident's Annual Report for 1900.*

1901

A letter is read from the Secretary to the Government re: the scarcity of water at the Gaol. Resolved that the Sanitary Board Engineer's letter be forwarded to the Government with the recommendation that the Engineer's proposals be carried out at once and that Government to provide the necessary funds.

— "Minutes of Sanitary Board, March 14th, 1901."

The Chairman brings up the matter of scarcity of water in the town and the question of supplementing the supply. Capt. Lyons proposes and the Chairman seconds that the Engineer's proposal to use the lake water be laid before the Government together with the State Engineer's proposal; the Board, however, is unable to form any opinion as to the feasibility of either proposal. The Health Officer and the Engineer are requested to send a sample of lake water to Singapore for analysis.

— "Minutes of Sanitary Board, March 28th, 1901."

The report of the Waterworks Commission is laid before the Board. Mr. Grove addresses the Board on the subject of

the report, after being warned that the Board are not in a position to render him assistance.

The Health Officer brings to the notice of the Board the action the Government proposes to take with regard to Sidney Lake [Lake Garden] water supply, and states that the supply may be considered satisfactory.

— "Minutes of Sanitary Board, July 18, 1901."

The original proposal for the extension of the catchment area of the Kuala Lumpur water supply involved the construction of a tunnel 1,900 feet in length. After careful consideration, another scheme for a high-level supply by pipeline direct from the upper branches of the Ampang River has been adopted. The construction of a tunnel will be avoided, and the cost of the new scheme, which is more satisfactory in every way, is very little more than that of the original one.

— Resident's *Annual Report for 1901*.

The revenue for the water supply is satisfactory, considering the great scarcity which existed throughout the year. It was found necessary to cut off the private supply in the town and it will hardly be possible to resume this supply until the extensions at the Waterworks are completed.

— *Sanitary Board Annual Report for 1901*.

As the rainfall for the months of February and March at Ampang was only four inches, the level of the water in the impounding reservoir fell below the level of the inlet of the main pipe; and, as a continuation of such dry weather would have deprived Kuala Lumpur of its water supply, the sum of \$25,000 was specially voted for pumping water from Sidney Lake into the service reservoir, the necessary piping being borrowed from the Klang Waterworks. All the work connected with this temporary pumping arrangement was duly carried out, but by restricting the consumption, and having a rainfall of about 23 inches for the months of April and May, the most difficult period was passed and it was not found necessary to

1901

Preliminary work commenced on the occasion

pouring water into the reservoir cut off daily the supply to the C. im-

1901

A letter was received from the Engineer on the

in the Capt. Engin. Gove. Board. feasible. Engin. Singa

the B

resort to this means of augmenting the supply, the water level in the reservoir at Ampang having risen to 15.65 feet in December and to stop board out the weir channel 19.00 in January.

Sum Voted	\$25,000.00
Expended to 31st December	\$17,358.07
Balance	\$7,641.93

In D.B.W. No. 188 1901, the Director has made a report with reference to the Kuala Lumpur Waterworks since the date of their inception in 1888 until the present time.

Public Works Department Annual Report, 1901.

1902

Wells—It was resolved by a vote of five to one that permission should be granted to sink wells in dwelling premises within given limits except in cases where no stand-pipes were available.

Water Supplies—It was resolved:

- That the Government be asked to restore water supply from the Government reservoir to all private consumers applying for such services, the said supplies if necessary being limited to certain specified hours of the day;
- That if this cannot be done, that water supplies should be restored where desired during the Coronation and week holidays.

—“Minutes of Sanitary Board, June 23rd, 1902.”

The unusually heavy rainfall of the past year kept the impounding reservoir of the Kuala Lumpur Waterworks supplied with water, and good progress was made with the extension of works which were decided on in 1901. Work started in February, pipe-laying was commenced in October on arrival of the supply from England, and the construction of the head works was begun in September. It is anticipated that the dam and filters will be ready before the pipe-laying is completed. The amount expended on these works up

end of the year was \$57,500. The catchment area now covers 2,670 acres.

— *Resident's Annual Report for 1902.*

1903

Private Water Supply: In reply to a petition from Low Boon Kim and others praying for the supply of pipe water to private houses to which they have at considerable expense laid down water pipes, it is resolved that the petitioners be informed that the whole question of private water supply has been recently submitted to Government and that nothing can be done for them at present.

Water supply to Federated Malay States Union Club: In reply to a letter from the Acting State Engineer, it is resolved that the Board have no objection to a water service by a metre at a rate 50 cents per 1,000 gallons being laid on to 24, Sultan Street, so long as the building is occupied by a registered club.

— “Minutes of Sanitary Board, October 5th, 1903.”

Private Water Supply: In reply to an application from Mr. G.L. Tuck, (Weld's Hill, entrance road off Klyne Street) it is resolved that the Board acknowledge the application and regret to reply that they are unable to accede to his request on the ground that the house-to-house supply of pipe water has been withheld from a great number of previous applicants, and at present no such supply is available.

— “Minutes of Sanitary Board, October 29th, 1903.”

Water Supply to Private Houses: In reply to the Board's resolution No. 12 of 8th October, asking within what period of time private water supply can be restored to the public, a letter is read from the Government stating that no definite answer can be given till surveys have been made in 1904. The Board acknowledge receipt of the information.

— “Minutes of Sanitary Board, November 19th, 1903.”

Private Water Supply, No. 26, Java Street: An application from R. Alibhoy is refused on the usual grounds—i.e. prior unsatisfied claims.

Water Supply, Aerated Water Factory: An application from Messrs. Fraser and Neave being considered, it is resolved that, subject to a report from the Acting State Engineer of a sufficiency of water supply a maximum supply of 60,000 gallons per month be approved at a rate of 50 cents per 1,000 gallons.

—“Minutes of Sanitary Board, November 26th, 1903.”

THE MALAY SETTLEMENT

Resident-General to Acting High Commissioner, Federated Malay States.

The following correspondence explains the present position of the Malay Settlement in Kuala Lumpur.

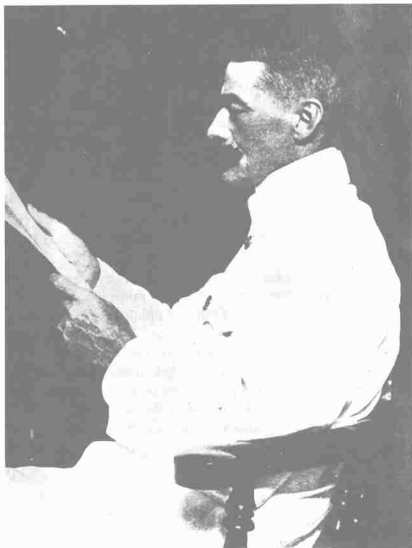
Resident-General's Office, Taiping, Malay Peninsula,
13th February 1904.

Sir,—When going through with me the Selangor Annual Estimates for the current year Sir Frank Swettenham asked me to call for a report on the present position of the Malay Agricultural Settlement and Technical Schools, situated on a Government reserve of about 220 acres in the suburbs of Kuala Lumpur, which Your Excellency inspected on the 14th December last.

3. The idea of such a Settlement for the Malays is unique in these States, and was originated by Mr. D.G. Campbell in 1900, and an annual provision of \$6,000 has been made by Government since then. The suggestion was a happy one, had the entire approval of Sir Frank Swettenham, and might be extended to larger towns in other States in or near which any considerable number of Malays reside.

4. As regards technical instruction the Settlement cannot be considered a success. At date there are:

Two Silversmiths at \$240 per annum, with one scholar or apprentice who is paid \$96* to be taught;



Frank Swettenham the Malay Straits Settlements Governor 1901-1904

One Blacksmith at \$204, with one student who is paid \$96 a year to be taught;

One Wood-carver at \$204, with one student who is paid \$96* year;

One Rattan-worker at \$204—no students;

One Mat-worker at \$180, who teaches in the Girls' School, which is also provided with a Weaving Mistress, whose salary is paid by the Education Department.

The enrolment at the Girls' School in 1903 was:

Number on Register 26

Average attendance 22

There is now a Boys' School in the Settlement belonging to the Education Department, the 1903 figures for which are:

Number on Register 40

Average attendance 32

(*Mr. Campbell explains that the payments to the students are intended merely to cover the cost of their food, etc., and are not wages).

Producing Revenue

Enclosure B to Mr. Hale's Report shows amount credited to Selangor revenue as the result of the silversmith, wood-carver, and blacksmith, being total of \$453 for 1900-1903. But these artificers have also done, or are doing, work for the Settlement, and in Paragraph 12 of his report, Mr. Hale expresses the opinion:

"That if the Committee cannot point to very conspicuous success in teaching, at least the State has not been put to a very heavy charge."

Mr. Hale even calculates that their work will be a continuous source of revenue in the future as other artisans are taken into the employment of the Committee (report, paragraph 28). I have talked over the matter with the Federal Inspector of Schools, and agree with him that the technical department of the Settlement might as well be given a further trial for two or three years.

5. As I have referred to Schedule B of this report, I may remark that the item of revenue, \$322, for survey fees, was a payment to the Selangor Government revenue out of the Settlement i.e., the Government Funds. The settlers pay nothing on this score.

6. Paddy planting, as might have been anticipated, has not taken on with the settlers. Mr. Hale is hardly correct in saying that similar experiments have failed in other States, because nowhere else has an attempt been made to foster paddy cultivation by town dwellers in the suburbs of a large town.

Its Real Use

7. As a reservation for the proper class of town-inhabiting Malays, the Settlement has proved a success and fairly fulfilled expectations "by taking out of the town a class of people whose earnings do not probably average more than \$10 per month, and those who lived in very poor and dilapidated houses in one quarter of the town, which since their exodus has vastly improved in appearance, the land having been sold and nice villas having been built where before there was a crowded community living in tumbledown huts."

Each settler, who must be a pure Malay—the present settlers are nearly all foreign Malays—obtains, without any payment whatever, about half an acre of land for his house and garden, no survey fees or quit-rents are charged, roads are made from Government funds, and the Settlement is exempted from Sanitary Board rates and taxes, it being a Government reserve.

A Girls' School has been established by the government, "Five typical Malay houses have been put up for technical schoolmasters, a forge, a pound, and a large house of the old-fashioned type for a Girls' School" at the cost of Government funds, from which they will have to be maintained. \$700 has been contributed to the cost of erecting a mosque and the recreation ground, and other communal lands are maintained in good order from public funds, which further provide prizes for the best kept gardens and for annual sports.

8. The regulations allow for a house tax of \$1 per house or alternatively 10 per cent of the produce of each garden, but these collections have not yet been commenced.

9. Of the 196 holdings into which the Settlement is divided, 92 are held under permit, 37 have been applied for, and of the balance of 67, 26 are larger holdings of swamp land intended for paddy planting.

10. It will be noticed that a large Malay house has been built to serve as a boarding house for Malay boys attending the Victoria Institution. The cost—\$1,000—was provided by the Settlement, which also pays the wages of the housekeeper. This idea is to be commended (report, paragraph 14).

Title for Occupation

11. The management of the Settlement is not legalised by any Enactment, and it is doubtful whether the permits for holding land are strictly in accordance with the provision of the Land Enactment.

The reserve was created under section 6 of the 1897 Land Enactment, which requires that "the terms in which it is reserved" shall be declared.

In the notice of reservation it is laid down that it shall be "kept and maintained in good order by the Board of management for that purpose appointed by the Resident."

The "permits" are certainly not in accordance with the provisions of the Land Enactment, and indeed, are not permits to occupy at all. They merely consist of a Malay translation of the rules, with details on the cover showing to whom they have been handed.

Road Making

12. The total expenditure for 1900-1901 is returned at \$18,399, out of which amount \$6,423 are assigned to road-

making and maintenance and upkeep of playgrounds, and \$5,289 to buildings. The building programme appears to have been completed. "The roads which we are making this year and in 1904, in 1905 will require metalling, which will take all the extra money for that year, I expect. I do not, therefore, see any chance of reducing in 1905, and probably in 1906 other works will require taking in hand". (Mr. Hale's Memorandum, 19.12.03, paragraph 6).

13. The experiment is an example of paternal Government, and a paternal system will be necessary for Malays for some years to come. My only regret is that it benefits almost entirely non-Native States Malays—the majority come from Malacca; were the settlers our own people it might have the effect of encouraging them to adopt a better class of dwelling house, better sanitary surroundings, and a higher standard of domestic comfort.

A Valuable Asset

However, I do not think that Mr. Hale, who is probably the best officer we have for ensuring the success of an undertaking of this kind, is unduly optimistic in the concluding paragraphs of his report, where he writes:

It is claimed for the Settlement that if it has not as yet succeeded in furthering technical education to any great extent, it will certainly do so presently; its other object, in providing a healthy life and a cheap place of residence for the Malays employed in the town of Kuala Lumpur, has been well carried out, and the town is proportionately improved by this provision. The money spent on public works is also a valuable asset.

In an experiment such as this, everything depends upon the personality of the supervising officer, and no doubt an adverse or prejudiced critic would be able to demolish the fabric of its idea and execution to his own entire satisfaction.

I have, etc.,
W.H. Treacher.

Mr. Hale's Report

1. The Malay Settlement was started in 1900 by the appropriation of about 220 acres of land, partly high flat land and partly swamp, within the town boundaries of Kuala Lumpur; the site chosen was practically wasteland, covered with coarse grass and bushes, and with only a few Chinese squatters on it, who did a little gardening and kept pigs.

2. Rules were made by the Resident under the "Land Enactment Act, 1887," for the management of the Settlement by a Committee appointed by him; these rules were designed to keep the Settlement entirely Malay and to encourage agriculture and useful arts and handicrafts, as well as to provide a place for working Malays near the actual town and their daily work, at a cheap cost.

3. Advantage of this place was first taken by the Peons and Messengers employed by the Government offices, who immediately realised that here was a boon especially designed for them; afterwards bullock cart drivers, chiefly Malacca people, came in, and now several foreign Malays, Javanese and Sumatrans are taking up holdings. There are practically no native Malays (here) and except Raja Mahmud, the Penghulu, and one or two others, the population is entirely foreign.

A Nationality Difficulty

4. The class of Peons consists largely of Malays with a mixture of Indian or Chinese blood, and much difficulty is experienced in keeping these people out of this place, which is designed entirely for pure Malays and not for Mohamadans, even though, by reason of one of their parents being native, they may claim to be, and call themselves Malays.

5. The Settlement has fulfilled its work very effectively by taking out of the town a class of people whose earnings did not probably average more than \$10 per month, and who lived in

very poor and dilapidated houses in one quarter of the town, which since their exodus has vastly improved in appearance, the land having been sold and nice villas having been built, where before there was a crowded community living in tumble-down huts. And the Malays who have thus vacated the land between Batu Lane and the river have, each family, been provided with 1 rood 2.1 perches of good building land, semi-detached from a similiar block, in a healthy district near the town and well provided with roads in every direction.

6. Life on the Settlement—which is elevated flat land in a large open plain—has proved to be very healthy indeed, owing in a great measure, I believe, to the fact that it is so arranged as to follow the traditions of Malay kampung life, but on an improved system; each holding of nearly half an acre being bounded on two sides by similiar holdings and on the other two by wide, well drained grass roads, thus allowing free circulation of air and fine play places for the children.

7. Appreciation of the place by the people is shown by the following statistics taken from each Annual Report:

During the year 1900, 31 titles were issued.

“1901, 75 do.

“1902,

“1903, 16 do.

Up to the present date, some of these have been cancelled, and at present there are 92 title holders. But it must be understood that no title is issued until the applicant has fenced and made a good start to cultivate the land, and has built a substantial house, until he has done this he claims merely by promise of the executive officer of the Committee who placed him on the land, which promise is recorded in a Settlement book.

At the time of writing, besides the 92 titles issued and in force, there are 37 such promises recorded, leaving only 67 holdings for future occupation; and of these 26 are larger proportions of swamp land, designed for paddy planting.

Work Done

8. Several attempts have been made to get the swamp land planted with paddy, and I still have hopes that this will be done sometime in the future, but there are so many things against it that the difficulty is great. The Governments of Perak and Selangor have the same trouble in getting paddy land, which has cost very many hundreds of thousands of dollars in irrigation works, provided with cultivators; so it is not surprising that the 105 acres of swamp land in the town of Kuala Lumpur are left without appreciators; the people find much more congenial and profitable work than paddy planting. The only way this land will become paddy fields is, I think, by the Malay women taking it in hand; which they will do as soon as they have got all their gardens in good order, for the majority of them are Malacca women, who are used to outdoor work.

9. The gardens are being very well managed and improved, there are of course many neglected ones, for the Malay is by no means industrious or careful of appearance but on the other hand there are very many most creditable. It is most likely that what good results have been produced are largely dependent on the fact that annual prizes are given for the best kept holdings.

Applicants for land generally start by putting up a very small and rough hut, often built of old packing cases and roofed with kerosene oil tins; sometimes this lasts for a couple of years but generally it is replaced by a good-looking and well built house before the end of that time.

10. The Malay Settlement has been provided with a vote of \$6,000 a year since its inception. I have attached as Schedule A, a table showing how this vote has been extended and will comment on the items as they appear.

12. The item for road-making is and will be for two more years the heaviest expenses, by that time Hale Road, the main highway through the Settlement, will be a fairly level road, a chain wide and metalled at least fourteen feet wide; the grass

roads, which cut the whole of the Settlement up into one acre and half-acre blocks will be completed and supplied with the necessary side drains and culverts. Thereafter the expenditure on this item should not exceed \$1,500 per year for upkeep of roads and playgrounds.

Technical Education

13. Technical education is as yet confessedly not a very great success; it is most difficult to persuade Malays of the use of it, and I think I am not wrong in saying that one of the requisites to make it a success is continuity of policy. The Settlement has been unfortunate in this respect, because when I was on leave from March, 1902, to June, 1903, several officers had executive control at different times, and with the very best intentions on their part it could not be expected that the young officers, who knew that they were only put in for a few months, would take sufficient interest, or have sufficient technical knowledge, to arrange work for artisans.

Good work has been done by a silversmith, at first to the order of the Committee, when his work was sold by auction at a good profit, during part of 1901 and 1902, in response to private orders, when his work for about a year showed a slight loss; during most of his time he also had a paid apprentice, this was of course all loss; there has been no silversmith during about a year up to within the last month. The wood-carver's work was not so profitable, and it was decided not to let him work for the public, he therefore commenced a *mimbre* (pulpit) for the projected mosque in 1901, and after working on it for about a year, he left the Settlement and has only just returned to his work. The *mimbre* is nearly completed; it is built of ansenah wood, elaborately carved, and when completed will be an asset belonging to the Settlement worth quite \$300. The Committee has not succeeded in including an apprentice to work with the wood-carver.

The blacksmiths and their apprentices, who have worked intermittently during 1901, 1902 and 1903, have been employed

almost exclusively on making wood-cutters' tools and weapons, for sale to the public; his work is not profitable and it is proposed that he shall now start on a set of iron standard and bracket lamps for the mosque.

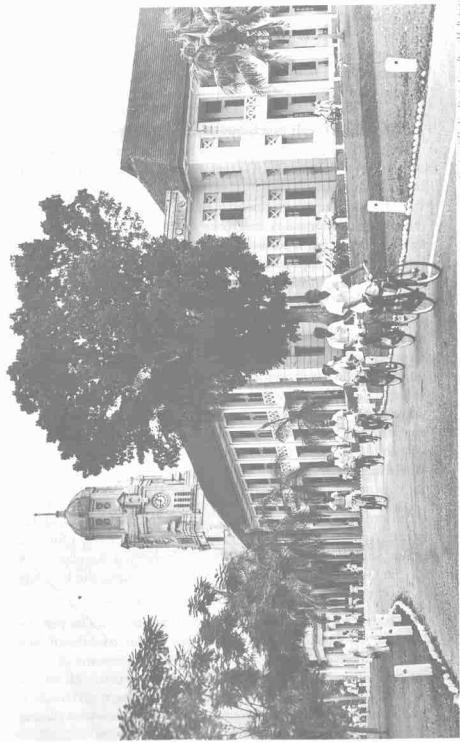
The tailor with two apprentices worked for about a year during 1901 and 1902; but it is to be feared more for his own profit than anything else. He was given a government contract, but failed to carry it out.

The amount put down in the Schedule as salaries for technical schoolmasters has to be largely reduced before it is fairly understood; it includes that pay of all apprentices mentioned above, the pay of master-builder in charge of the building for the Girls' School, the pay of the cook employed by the Committee to cook for and look after the Victoria Institute boarding house, and the salaries of a vernacular school master and school-mistress for a few months each, the Education Department having no provision on their vote; when these items are deducted as well as the credit shown in Schedule B and the value of the *mimbre*, it will be seen that if the Committee cannot point to very conspicuous success in teaching, at least the State has not been put to a very heavy charge.

Buildings

13. The amount spent on building is, I expect, nearly all that is required for the objects of the Settlement, five typical Malay houses have been put up for technical schoolmasters, a forge, a pound, and a large house of the old-fashioned Rembau type for the Girls' School, it only remains now to keep the building in good repair.

14. It was thought that the healthy situation would be just the place for scholars attending Victoria Institution. Also that if they were persuaded to live there the place would become of more interest to the people, as games would have a better chance; a large Malay house was therefore built on contract; this house is fairly well occupied during school terms, the Settlement paying the wages of a housekeeper who cooks for the boys.



Victoria Institution

Governor of The Victoria Institution, Mr. M. R. B. B. B.

15. A mosque for the community was one of the requisites and in 1900 a sum was paid to the P.W.D. factory for materials; subscriptions were solicited and nearly \$700 has been collected from the Malay community, to which a like amount is to be added from available funds on the vote this year, and a contract will be signed for the building probably next month.

16. The public Mohamadan Cemetery is on the other side of the Klang River near Ampang Road. A strong six feet bridge was erected to give necessary access to it.

17. Money was spent during 1902 to further the planting of paddy, two Persian wheels were erected and advances made to prospective planters; the wheels fell to pieces and the advances were not returned; this matter will require a good deal of pressing before it is brought to a satisfactory result.

18. An egg incubator was purchased, but it has not as yet proved a marked success.

Management

19. The clerical work—keeping the petty cash and paying the bills—was at first done by my Chief Clerk, for which extra work, as well as that attached to the Public Gardens and Museum, of both of which Institutions I was honorary executive officer, he got a bonus of \$100 year; this year a paid Secretary has been employed by the Settlement Committee on \$50 per month.

20. The amount spent on the survey of the Settlement was paid to the Survey Department and thus returned to the revenue of the State.

21. English seeds have been distributed, but very little interest has been taken in making them grow. The Malay prefer the vegetables and flowers he is used to.

22. During 1900 and 1901 subscriptions were collected for Malay sports, the funds collected also provided prizes for the best upkept gardens; in 1902 the prizes for gardens were paid

out of the Settlement funds, and in 1903 the same funds supplied the means for holding the sports. Prizes for the gardens are to be given next month.

23. Schedule B shows how certain amounts which have been credited to the State revenue; this will probably be an increasing item, as other artisans are taken into the employment of the Committee.

24. It is now proposed that a drum and fife band shall be started, and the scheme is highly favoured by His Highness the Sultan, who has promised to take great interest in it.

25. His Excellency the High Commissioner, Sir Frank Swettenham, visited the Settlement in 1901 and expressed himself as satisfied with what had, at that time, been done in furtherance of his instructions.

26. His Highness the Sultan spent about ten days on the Settlement this year. He brought up a considerable household from Klang, including Her Highness the Tunngu Puan; his party was lodged in the Victoria Institute boarding house. His Highness took great interest in the place and was pleased to express his thanks to the Committee for the assistance given by them in managing the Settlement. His Highness marked his visit by presenting each of the little girls attending the school with a veil.

27. It is claimed for the Settlement that if it has not as yet succeeded in furthering technical education to any great extent, it will certainly do so presently; its other object, in providing a healthy life and a cheap place of residence for Malays employed in the town of Kuala Lumpur, has been well carried out, and the town is proportionately improved by this provision. The money spent on public works is also a valuable asset.

**Land Office,
Kuala Lumpur,
22nd October, 1903**

**A. Hale
Vice Chairman**

MUNICIPAL ADMINISTRATION

At one time economy was the order of the day; then it was understood that in a rapidly developing country like this it was a mistake not to spend every cent of revenue as speedily as possible—the Straits had served up money and had it taken by the home Government for Imperial purposes—now it appears that the authorities deem it wrong not to lay by for the lean years which may perhaps be ahead of us, and in the meantime have decided to take these savings for the construction of the Johore railway, which will be of considerable benefit to Singapore. Now a railway from one end of Johore to the other is going to cost a good many million dollars, and, as we have got to supply those dollars, it is not unreasonable to anticipate a disinclination-to-spend-money policy in these States for the next five or six years. Owing to the gloomy secrecy observed in the production of the annual estimates, it is impossible to say to what extent these States will suffer in this the first year of the Johore Loan era. We shall, doubtless, be told that there will be no suffering at all and that every reasonable requirement will be attended to. According to all we hear, the 1903 estimates were ruthlessly cut down. It is evident that on the extent to which the disinclination-to-spend-money policy is carried will depend the satisfaction or dissatisfaction of these States with Sir Frank Swettenham's railway schemes. The present is therefore a favourable opportunity for recapitulating some of the municipal requirements of this town.

Owing to the absence of any permanent municipal President, no attempt has hitherto been made to provide for the future expansion of the town or to meet the future requirements of an increased population—witness the water-works fiasco! We should, therefore, place first on the list the drawing up of a comprehensive scheme for *The Enlargement of the Town* to twice its present size. We refer, of course, to the business quarter of the town, not to the residential quarters.

Overhauling the Market: The present market reflects no credit on the Sanitary Board. Meat is still sold in the most inconvenient corner; there is still no public weighing machine; the cement floor of the main building is still in holes which become puddles; the same inconvenient and unsatisfactory tables are in use; it is still, although to a much less extent, used as a store house; the same dirty rags and bits of packing cases still form the walls of the vegetable market; goods for sale are still stacked out in the road for sale although there is plenty of unoccupied land within the market rails. The market is just big enough for the sale of fresh fish, meat, vegetables, fruit and poultry. All the other people should be turned out or the market be enlarged. There is enough packing cases timber in the market to build a house with!

The Food Supply: The importation, fattening and selling of cattle by a Government department seems to be our only hope of getting a regular supply of good beef and mutton at moderate prices. This may seem to be an "extreme" in Municipal trading, but much of our government is conducted on unorthodox lines. Far more is expected of a Government which allows the people no voice in the spending of public money than in one that does.

Cementing Verandahs: Is the five foot way in front of shop houses public property, or is it not? If the answer be in the affirmative, why is a blacksmith allowed to erect an anvil in the middle of the five foot way whilst another man is fined for placing a box of goods there? After compelling the owner of the land to give up a portion for a public footpath, such

footpaths should be properly cemented and graded at the public expense.

Widening of Market Street: The railway wall must be put back. The dispensary (which might have been acquired for a third of its present value three years ago) should be demolished.

Extension of Klyne Street: A new Street of the same width as Klyne Street is badly wanted along the Yap Ah Loy Street route to Old Market Square. At the other end the road requires levelling and cutting to its full width as far as the Weld's Hill Road where the building of houses has already commenced.

New Bridge, Rodger Street: The Sanitary Board has already expressed its approval of the scheme for utilising an old bridge and for relieving the congestion in Market Street by diverting the railway goods traffic.

New Approach to the Ampang Road: The necessity for this work has been expatiated on time after time.

Another Approach Road: At the first mile on the Pudoh Road, opposite to the Gaol Road, is a road reserve leading to a number of houses and a quarry, which has never been made into a road.

Bukit Bintang Road: A part of this road requires deviating—if possible. When we last saw it, it was in a shocking state.

Damansara Road has been much improved but could stand a good deal more cutting down.

Weld's Hill Road: A main thoroughfare, on which the owner has spent a good deal of money, should be taken over by the Board. We see no reason why roads for the general public should be constructed at private expense.

A New Road: The road from Damansara Road to the new Hospital should be extended along the west of the railway line, thus opening up a fine extensive valley.

Ampang Street: The surface of this street is very bad at one end. Like one or two other streets it is sadly in want of metal.

The Pudoh Road: Is described as being in a very bad state, especially around the town itself.

The Court Hill: If something is not done soon to beautify the footpaths in use on this hill, people will mistake them for dried up waterfalls.

Neither Ornamental Nor Useful best describes the land between Malacca Street and the river. The so-called market cannot be used as a market, and had better be pulled down. None of the land is fit to build on. At present it is mostly used as a timber yard or rubbish heap. Better turn it into an ornamental garden.

The Fire Brigade should be a municipal department under the Sanitary Board. Its chief official should be paid a small salary. Enthusiasts like Mr. Bellamy are not to be met with every day.

Squatters: The region round Birch Road offers picturesque possibilities of improvement.

Opium Dens and Lodging Houses should both be licensed by the Board — not controlled. No licenses should be issued after a given period except to specially constructed houses.

Cleaning the Town: We suppose every oriental town smells (polite word) more or less, but that is no reason why heaps of refuse and garbage should be lying round indiscriminately. It is merely a question of money. A beginning might be made with the river. Go and look over Market Street bridge any day and observe how useful the embankment is. A wire lower down the river would help to cleanse that portion of it flanked by Ampang Street and Rodger Street.

More Lamps Wanted: The main throughfare through the Malay Settlement and Weld's Hill Estate should be supplied with lamps, as they are both rapidly coming forward as residential quarters. The same remark applies to the water supply.

Although not exactly a municipal affair, *The Acquisition of Vacant Land* for public building is a matter of some urgency and

expense. But the greater the delay, the greater the expense. The vacant land opposite the new Municipal Offices and the vacant land alongside Sultan Street station should be acquired now before their value is doubled by the erection of buildings. We would suggest that the Courts and Police Offices should be turned into Federal Offices and that new Courts and Police Offices be effected on the Sultan Street site. This would relieve the congestion in the present Selangor Offices. If any further relief is required, build a Post Office opposite the new Municipal Offices.

This is by no means a complete list of the town's requirements, but it is sufficiently extensive to show that a good deal of money must be expended and the Sanitary Board staff increased to make the capital worthy of its name. Much has been done in the past, but much remains to be done in the future, and hence our fear of the disinclination-to-spend-money policy which we are afraid will be the natural corollary of the Johore Loan scheme.

— *Malay Mail*, 7 February, 1903.

In 1901, if we remember correctly, the substantial iron bridge in Market Street was demolished to make way for a larger one. Since then the iron work of the old bridge has been left to rust on the ground, we believe. At first it was suggested that this material should be used for the construction of a bridge in Rodger Street to replace the worn out wooden one leading to the Station. This idea however was abandoned in favour of using it for a new bridge at the back of the market to afford an outlet for the railway goods yard at that place, and so relieve the congestion in Market Street. The Sanitary Board approved of this idea, but it does not seem to have met with the approval of the railway department, and nothing has been done. The position is an unsatisfactory one. The town is in need of three new bridges, one for the Station approach to Rodger Street, one to draw off the goods traffic behind the Market, and one at the river end of Malay Street to provide a respectable approach to the Ampang Road. Yet, in spite of

these needs, a dismantled bridge of no little value is allowed to lie rotting on the ground for the best part of two years. Rotting may seem a strange word to apply to iron, but in this climate iron does rot, and very quickly too, unless looked after.

But that is only one aspect of the case. It appears that the Rodger Street approach to the station is to be permanently closed. This is a more serious matter. The Sanitary Board proposed to lease a portion of this roadway to the Victoria Institution for extra playground accommodation at a nominal rental without a bridge—the wooden one was swept away in the flood—the road cannot be used and there is no objection in handing it over for the time being to the Institution. This arrangement does not meet with the approval of the Government which directs that the roadway shall be given outright to the Institution. A glance at the map will show that the alternative route to the station from the town is just about twice the distance. Ordinary common sense would lead one to believe:

- (a) that the most direct route from the business part of a town to a railway station is about the last street to be permanently abolished;
- (b) that the gentlemen who devote their time and attention to the needs of the town would not have their opinions ignored in a matter of this sort.

If this was the first case of its kind it might be urged that although a Resident may not be infallible he would be a poor creature if he never had any opinion of his own and did not occasionally disagree with the united wisdom of the Sanitary Board. Unfortunately this is not the first case of its kind, and there is a principle at stake. Sultan Street was blocked by an overhead bridge when a level crossing would have served the same purpose.

No compensation was paid to the people who owned houses along the street for the natural depreciation of their property. In each case a town street in constant use is blocked for vehicular traffic by the order of the Resident. Who happened to be Resident on these occasions is perfectly immaterial.

There is some talk of the railway workshops being erected in Perak and not at Kuala Lumpur after all, owing to the high prices asked by local owners of the selected site near the Batu Road. People along this road who would have been only too glad to have sold their land for \$900 an acre before they heard of the workshops now glibly talk of a thousand dollars an acre. We trust the government will not allow itself to be imposed upon, but, at the same time, if valuable property in a town is required for a public purpose it is only fair that the owners should be most liberally dealt with.

If a man invests his money in building houses in a small town in the hope and belief that it will some day be a big place he should not be deprived of the fruits of enterprise and pluck whilst those fruits are palpably ripening. On the other hand a man who has merely bought land and spent next to nothing on it ought to be satisfied with the present value, provided, as is practically always the case, that the present value means a fair profit.

When enquiring into compensation claim the record of recent transactions should not always be taken at their face value, as there is nothing —except a conscience— to prevent a selling his land to B for \$100 and signing a transfer to the effect that he has received \$1,000. This fictitious document, of course, places the stamp of a fictitious value on the land.

In regard to the railway workshops there is probably plenty of state land available a little way out of town without expending large sums of public money in buying up private property. For the sake of the trade and business the erection of these workshops would bring Kuala Lumpur, we should be sorry to hear that they were to be built elsewhere, and trust that an attempt will be made to find a suitable site on State land if the cost of the privately owned land is prohibitive.

— *Malay Mail*, 9 March, 1903.

Few of our readers, we imagine, will regret that we are to see the last of the present unwieldy hand-carts which infest our streets. The Sanitary Board passed a resolution in favour of their abolition, and now it has received the necessary approval.

Our roadways are none too wide for the ever-increasing volume of traffic they are called upon to find room for, and the wayfarer will for a long time to come carry only too vivid a recollection of how he attempted to negotiate in safety the slight descent from Market Street bridge as huge vehicle, heavily laden with this world's goods, surged violently out of the Goods Station and attempted to mount the slope. There was one brawny coolie, perspiring profusely, with muscles dangerously strung, and, mark it, with eyes ever searching the ground at his feet, while two or more fellow toilers blindly used their utmost exertions at the back of the cart to enable him to reach his destination and to spill everybody and everything that came in his path.

These hand-carts are not to be arbitrarily cast aside altogether, for the authorities are giving permission to owners to convert them into single-bullock carts. But how different the conditions will be! Instead of violent struggles by human beings spasmodically endeavouring to buy the whole thoroughfare, we shall only have to encounter the grave and even-paced gait of our bovine friend.

In bringing about this satisfactory state of affairs the community is once again indebted to the Sanitary Board. But there are other matters in the same line, which we do not doubt will receive their attention. There is the question of the limiting of the length of bamboos, etc., to be carried on bullock-carts along the public thoroughfares. At present one frequently meets with narrow escapes from these obstacles when suddenly rounding a corner, or when the sleepy driver, called upon at a moment's notice to fulfil his duty, causes his toiling beasts to swerve so rapidly as to completely block the road. It may be argued that merchandise of length must be taken from place to place somehow, and how would this be possible if not conveyed along the public roads? Bamboos are often responsible for the inconvenience, and they might very well be cut down to a reasonable length, instead of, as at present, being unlimited to enable carters to pack as much of the light produce on their vehicles as possible. But then there

remains the question of beams and other material for building purposes. For the conveyance of these we would advocate the adoption of a somewhat similar style of timber-dray as one sees in England. It is true the length would still be the same, and the same amount of space would be taken up, perhaps even more, but when anybody sees before him a vehicle with practically no projecting burden, he takes his measurements accurately, whereas in the other case he is apt not to allow for the projection but to judge the matter from the point of view of the cart only.

It may be thought that we have dilated on this point at unnecessary length, but there are many whom we have heard expressing their opinions on the matter, especially those who have frequently to make use of roads with many blind corners.

— *Malay Mail*, 17 September, 1903.

The Sanitary Board has recently obtained further funds, with the result that road repairing has been given fresh lease of activity. Java Street, which was in shocking condition, has been and is being tackled, and what was previously a path of dire torture has been converted into the smooth highway which one expects to find in a town of ever growing importance. Java Street is not much to look at, in fact it has been called the slum of slums of our local paradise, yet it is a street of no little activity; for in it are congregated a large number of native shops which, to judge from the crowds continually around them, should be doing a roaring trade. Moreover, this thoroughfare is the outlet for a large amount of all the traffic flowing on to the Ampang Road, to the locality which is becoming more and more popular amongst the unofficial section of the community as a place of residence; and besides, it is the neighbourhood of the Race course. Since polo has been started, the course has come more and more into use, with the result that four residents are now frequently taken into a quarter of the town which previously they did not often visit. Campbell Road was opened, connecting the Ampang and Batu Roads, and it was generally preferred to crowded

Java Street. But unfortunately a bridge was erected in it which has only succeeded in making it an intermittent means of passage; sometimes this bridge was deemed safe, sometimes not; and now for some weeks the road has been entirely closed to vehicular traffic at the Ampang end. We have before pointed out that there is an iron bridge lying rusting near the market, and the Sanitary Board is willing to erect it. Lack of funds has, as usual, prevented them hitherto from carrying out the plan, but with a further lease of pecuniary life we are led once again to hope.

Although the Sanitary Board has done much in the way of road repairing—we might truthfully say remaking—during the past few months, there is yet much that remains to be done. To take two bad cases, we may mention the awful state of the junction of Petaling and High Streets and a very long stretch of the Batu Road. Not so very long ago attention was drawn to the state of this latter thoroughfare in our columns, and, if we remember rightly, a reply was elicited to the effect that there was no ground for complaint. We differed from this view at the time, and further wear and tear have not improved the highway in question.

We often hear comparisons made between laterite, the metal which we use locally for making roads, and white metal, and there can be little doubt that the latter is the best for the purpose for which it is required. Laterite obviously wears badly. This can be seen frequently in the case of places remetalled where, after only a short period, the old signs begin to reappear, and it is curious that the breaking up process nearly always seems to take its course across the road and not in direction of ruts. This is not due to side drainage, for the ribs, if we may so call them, are often only a few feet long and do not approach the drain. One great advantage laterite possesses over its rival, and that is that it is quiet for the eye. On white roads the glare is so terrible that it is frequently necessary to use those glasses of coloured hue which, while preserving the sight, do not materially add to personal appearance. But this advantage of laterite is more than counter-balanced by the

terrible nature of its dust. On the slightest provocation this rises in clouds from the speedily crumbled surface, and where it alights there it sticks, sticks with a tenacity which is worthy of a far better cause and which would make the fortune of the lucky proprietor were it discovered in any of those adhesive substances which floods the market. Man need not be so careful of his personal appearance, and we imagine that the lady residents here would cheerfully permit the other sex to indulge in this trifling disfigurement during the heat of the day if they could their evening drive along a route coated with a more friendly substance and besides, would not the change prove economical in the long run?

—*Malay Mail*, 25 November, 1903.

The official minutes of Sanitary Board meetings, which we published yesterday, afforded interesting, yet somewhat painful reading in that those of the second account of its deliberations formed one long refusal of the supreme power to sanction the recommendations which it had thought fit to put forward. One after another the projects were thrown aside, projects which had doubtless been carefully weighted beforehand by the body whose duty it is, apparently, to have regard for the health and welfare of this town. We will take a case. Some time ago the Board expressed its opinion that the block of buildings along the river embankment between Java and Market Streets was, owing to its being below the embankment level, a serious menace to the public health, and asked Government for its sanction for the buying up of the whole area and the raising of the ground to the proper level, with a view to future sale, probably at a considerable profit, after having done its duty in safeguarding the public health to the best of its power. Moreover, the carrying out of this scheme would allow of the widening of the portion of Java Street adjoining the area, provided a satisfactory arrangement could be made with the Malays relative to the removal of their mosque; and this idea of enlarging out thoroughfares is one, it must be remembered, that the authorities are bound to keep steadily before

them. Yet the Board's recommendation met with an absolute refusal, the reason given being, as our readers will doubtless remember, that the area in question was no worse than others of its kind in Singapore and Penang. We expressed our opinions upon this verdict at the time, but the matter has been recalled by the paragraph which records that "the Board note with much regret, with regard to the dangerously insanitary condition of the house drainage along the river embankment between Java and Market Streets, the Residents's opinion that, unless there is some extreme urgency which is not at present apparent to the Resident, the suggestion cannot be considered till annual Estimates, 1905." In other words, a splendid opportunity is to be afforded government of exemplifying the old proverb of locking the stable door, etc. No preventive measure is to be taken, in spite of the fact that the State Surgeon is the Health Officer of the town and a member of the Sanitary Board—but we are simply to await quietly the outbreak of some ghastly epidemic. Yet there is a gleam of hope, which never appeared on the horizon before, for the year—1905, or afterwards; but unfortunately we have to live in the present. We know, of course—and the proposers of the scheme also know—that the course suggested to Government will involve a big outlay, but we venture to think it would be money well invested, for it appears to us to be obvious that property built upon a sanitary site must be worth more than that founded on a cesspool. In such a state of absolute filth that it is liable to condemnation by the authorities at any moment.

Anyway should we shrink from facing resolutely a problem which others have had and always will have at times to wrestle with? Are we poorer than our neighbours, or have we less power to enforce the law? The latter surmise cannot hold good, neither can the former. We, speaking of the States generally, are wallowing in wealth accumulated and accumulating, in fact we are at the present moment lending more than considerable aid to outside projects. We have already quoted one proverb in the course of the article; we will now quote another, "Charity begins at home." It might be argued that there is no particular reason

why the Federation's money should be expended on Kuala Lumpur, even though it be the capital, yet we do not think that anybody within these States would raise an objection if the amount were to be advanced as a kind of municipal loan with an ample guarantee. There may be no need for such a step as this; but if no step out of the ordinary be necessary, why this hesitation on the part of Government?

Looking at this matter and at various others recorded in the Sanitary Board minutes, it must be obvious to all that in the present state of affairs that body is not only greatly restricted as to its powers but also rendered comparatively useless. It has, nominally, large powers; it is supposed to be the town's guardian angel, yet it has perforce to bow its head before the fist which extinguishes in a moment its most cherished projects. Constituted as it is under present conditions, i.e. appointed by Government, it is clear that some control is necessary, chiefly of a financial character. Nobody would like to see the public money being uselessly squandered, but there is a great difference between exercising salutary financial supervision and withholding consent to expenditure which it is obvious ought to be incurred. It is said that our town is not yet ripe for constitutional municipal control, though it would not be easy to say why, but at any rate we imagine there would be many prepared to run the risk of failure if there were a possibility of their being allowed to have some voice in the management of their own affairs and in the treatment meted out to those whose duty it is to watch over them.

At present our municipal(?) body seems to spend its life in violent endeavours to accomplish adequately that hardest of all tasks, the serving of two masters.

— *Malay Mail*, 5 December, 1903.



Sanitary Board Building and Gombak Bridge in early Kuala Lumpur

Courtesy of National Archives of Malaysia

MEMORANDUM ON THE FUTURE POLICY OF MUNICIPAL SCHEMES IN THE TOWN OF KUALA LUMPUR

INTRODUCTION

The Town of Kuala Lumpur as the Capital of the Federated Malay States should continue to grow in importance with even greater strides than it has made in the past. Its development has been phenomenal, but the lines on which it has taken place have been somewhat haphazard.

There is a danger of repeating the kind of mistake that has arisen hitherto. They may be attributed generally to a want of continuity of policy, to the absence of a programme of development of far-reaching nature, and there can be no wonder that so simple a cause has sufficed to give occasion for a word of warning at the present epoch in the history of the town, when we consider the constant change of officials. The Resident, the Board and its officers, may be said to have found their hands full from time to time with the municipal work of the year in hand, which one and another has had to relinquish without formulating a programme for the remoter future, having, as a rule, held a responsible relation to the department for a comparatively short period.

The lesson of the past is therefore the need of a programme of improvements, an outline which may be kept in view and handed on from year to year for fulfilment. We have set out in this memorandum a sketch of the progress which we

think should be made in the course of the next few years. The evils for which we have tried to indicate a remedy are mainly those of overcrowding, with the consequent higher mortality, and of dearness of living, and, without going into detail, we have made proposals which, we conceive are suggestive of an advance in the right direction, and will, if acted upon, form a sound basis on which to found a progressive policy with a view to later schemes.

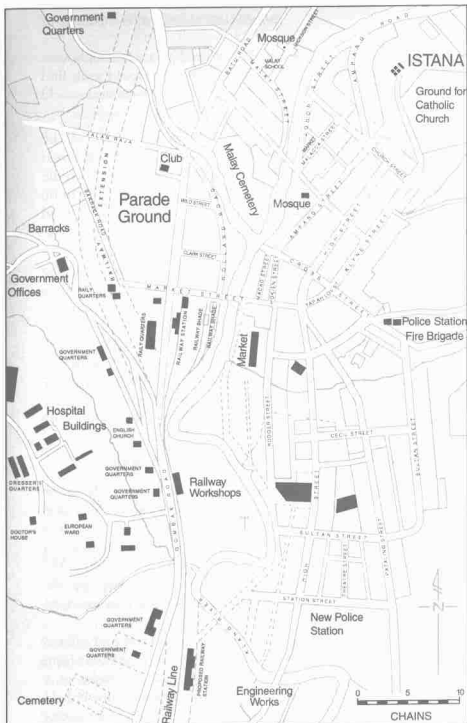
New Map of Kuala Lumpur Town

1. The existing map of Kuala Lumpur town was made nine years ago. It does not show all the roads, and is otherwise incomplete and out of date. A new map is badly required. It should show all existing roads, both in and around the town; all Government reserves should be clearly marked in one colour and permanently alienated land in another. The Public would find such a map of great use. Any form of assistance to encourage building will well repay any small financial outlay. These town maps could be sold at a profit.

Birch Road

2. One of the most pressing needs of the town is additional shophouses. The present limited number means high rents and over-crowding. Owing to the haphazard way in which town lands were alienated in the past, it is extremely difficult to indicate where new streets can be laid out in such a manner as to extend the business quarter of the town. Chinese do not care to build in isolated localities. For instance at Pudo, where a number of vacant town lots are available, there is no building activity because the place is cut off from Kuala Lumpur by a stretch of road which is at present neither available nor suitable for shophouses.

3. Birch Road should be widened and regarded as far as it goes, and should be continued to Pudo, as shown on the old town map. It starts from the end of one of the busiest streets in



The centre of Kuala Lumpur by W.T. Wood, 1889

the town, and if people can be induced to erect shophouses along its northern side, the suburb of Pudoah would soon find itself in touch with the main centre of the town and would rapidly develop.

4. Before shophouses can be built along this road it will be necessary to excavate into a sloping bank at the Petaling Street end. The cost of the excavation should be divided between the owners and the Government, as the soil will be required to fill the unsightly and insanitary gully on the south side of the road at its junction with Petaling Street. An abandoned Chinese cemetery occupies a portion of the land on the northern side. Unless this route can be utilised, or the Pudoah Road itself be made available (*vide* paragraph 29) it is hard to see how Kuala Lumpur can ever become a large city; for, with the exception of this locality and one other which will be referred to later, there are no alternative directions in which the business part of the town can be extended. It is confined on the west by the river, railway, etc., on the east and south by hills traversed by narrow gorges, and on the north-east by a residential quarter largely built on.

New Approach Road to Town from Ampang

5. The want of a better and more direct approach to the town from the Ampang Road has been talked about for years. At one time provision for the necessary new bridge appeared in the Estimates. But engineers differed as to the adequacy of the vote, and the scheme fell through. It is understood that the Government is again prepared to vote the money for the construction of this bridge, but two courses of action are open to the authorities:

- (i) To compulsorily acquire the necessary land and offer a nominal sum for its purchase on the ground that, far from losing, the owner actually gains by the surrender of a small portion of it for a road. If this view was not upheld by the Court, it should be open to the government to pay whatever costs the Court ordered and decline to proceed

with the acquisition of the land. If the Land Enactment does not give the Government this right of withdrawal, an amendment is evidently required. Otherwise improvement schemes will be looked at askance by the authorities, owing to indefinite liability for compensation once a scheme is promulgated. If land owners realised that too great a demand would mean no sale, their demands would become more moderate.

- (ii) The alternative is to select another route.

Main Road Through Malay Settlement to be Continued to Meet Circular Road

6. It is anticipated that the Batu Road will ultimately become one continuous line of shophouses, and if an electric tramway is ever introduced into the town it would almost certainly follow that route. It is desirable to retain certain roads where people may take their evening drives amid picturesque and healthy surroundings. The main road through the Malay Settlement if continued to Circular Road—as shown on the old town map—will supply that want and should therefore be taken over by the Sanitary Board. It will permit a circular drive via the Ampang Road without necessitating the negotiation of any steep hills.

East Approach to Petaling Hill

7. The present approach to those fine breezy uplands, called the Petaling Hill (where land in plenty is available for building), is a steep road winding up Hare's Hill, starting from the end of Petaling Street. By continuing the unnamed road which passes in front of the gaol, it is probably possible to tap the recently constructed road on the Petaling Hill by means of a not very deep cutting. This would bring some of the best residential building site on the Petaling Hill within a mile and a half of the town by a straight road with an easy incline.

Another Route to Petaling Hill

8. There is another way of reaching the Petaling Hill, *viz.*, by placing a bridge across the river at the end of Scott Road. It would be well to have a report on both routes.

New Roads

9. The old town map shows a number of roads which have not yet been made. The road from Pudooh police station to Circular Road is one which should be constructed as soon as possible. There are buildings along the existing "road reserve". The same remark also applies to the "road reserve" between allotment of section 52 and allotment 1 of section 67.

Ultimately the unmade roads laid down on paper for section 62, 67 and 72 should be taken in hand. No money spent on the construction of roads within town limits is wasted, now that all land is alienated subject to a building or cultivation clause, and privately owned land is changing hands at high prices.

Ampang Road to Circular Road

10. The road shown on the old town map between section 43 and 44 should be constructed, because it offers a direct route to the largest expanse of available flat country on the town boundary. The present route from the Ampang side is bad. There are considerable possibilities for this stretch of flat country.

Planting of Roadside Trees

11. Trees should be planted along all road sides within town limits. Kuala Lumpur is behind other Oriental towns in this respect. The cost would be chiefly for iron guards as a protection against cattle.

Road Levels

12. In order to arrange for the better grading of existing roads, a work which may reasonably be spread over a number

of years, detailed plans showing the levels of all town roads should be prepared and kept at the Sanitary Board office. The municipal Estimates provide for a surveyor on an inadequate salary, and consequently the Board has not been able to obtain or retain the services of a qualified man.

Streets—New Street Parallel to Batu Road

13. It cannot be too often or too emphatically stated that the most pressing need of Kuala Lumpur both now and for the future is a large increase in the number of available shophouse building lots. A street parallel with the Batu Road ought to have been laid out years ago. Had this been done, several hundred additional building lots would have been available today. As it is, there is still room for considerably over a hundred. If the native holders of land in this locality were all intelligent, shrewd men, there would be no difficulty in getting them to surrender the necessary land for the construction of a street between Malay Street and the lane south of allotment 5 section 40. But unfortunately several of them think their land is more valuable as it is than if a street ran through it. It will therefore be necessary to exercise compulsory powers of acquisition.

14. It is understood that the High Commissioner has issued instructions that public money is not to be expended in the construction of new streets or roads through private property which will benefit the owners of that property, unless such owners are prepared to surrender the necessary land free of all charge. Nobody can cavil against the soundness of such a ruling, but this is an exceptional case due to want of foresight in the past and to the crying need for more shophouse accommodation, both now and for the future. The question arises whether it would be more economical to acquire the land wanted for the new street and allow the land owners affected to reap the reward at the expense of the State, or whether it would be better to buy all the land outright, set out the street, and then sell the surveyed shophouse lots with a building clause attached. If local arbitrators and/or the Court of the Judicial

Commissioner can be relied on to grant only a fair and reasonable compensation for land without a road frontage—and there is no reason to suppose that such a reliance would be misplaced—the cost of such acquisition should be more than recovered after the street has been constructed and the land marked out and sold. This course also offers two other advantages. All the lots would pass into the hands of genuine builders at once and not be held for speculative rises in land value. The Malay squatters would not be summarily ejected and could be given time and assistance by the Government in order to enable them to rebuild on the Malay Settlement or elsewhere.

Widening Yap Ah Loy Street

15. The widening of Yap Ah Loy Street is the natural and necessary corollary to the widening of Market Street. To widen it on the north side means practically the question of the whole of section 16. It will probably be less expensive and be more advantageous to acquire the necessary land from section 18 on the south side, where compensation will have to be paid for only one full-sized town lot and three or four small plots. At present two broad streets meet at each end of the narrow Yap Ah Loy Street, which is less than 200 feet in length.

Widening Java Street

16. The only other street which forms part of a main entry from the town is Java Street and this also requires widening by about a third of its present width. Land has already been acquired for this purpose along a part of the street. To acquire the remainder will be a somewhat costly proceeding, but, judging from recent experience, the longer action is delayed the greater will be the cost. It will probably be found more economical in the end to buy the houses outright, pull them down, widen the street and re-sell the shortened lots. Thus new and better build houses will replace what otherwise will become a patchwork of existing building with new facades.

Widening Ampang Street Between Old Market Square and Java Street

17. The widening of Ampang Street beyond Old Market Square as far as Java Street will complete the necessary enlargement of the main town streets, and will give a magnificent business square with public offices on one side and merchants offices and the more important shops on the other three, with—provided Java Street is widened—a fine roadway all round. Owing to expense and more urgent calls on the public purse it may not be possible to undertake this work for some time to come but year by year, as occasion offers, the 31 houses should be bought up or the individual owners offered a substantial sum of money to induce them to rebuild further back on their lots along this section of Ampang Street.

Corner of Malay Street

18. The junction of Malay and Java Streets at the bridge is an awkward narrow corner which would be vastly improved by the acquisition of the two small houses at the corner of section 6.

New Outlet from Goods Yard

19. All traffic from the railway goods yard debouches on to the main business street of the town, and so long as hand-carts are allowed this will always mean congested traffic. It is to be hoped that the transference of the railway workshops and loco sheds will enable the railway department to arrange for an additional exit from the goods yards on to Rodger Street, and thus mitigate to some extent the present congested traffic in Market Street. The substitution of motor lorries for handcarts and bullock carts, at least for a number of them, may at some future date help to free Market Street of its slow-moving and unwieldy traffic.

River Embankment

20. Each year's Estimates should contain a vote for

"embankment extension." Wherever, in the business part of the town, it is impossible to maintain a clean grass bank, an embankment is wanted. The next section to be undertaken should be from Java Street bridge to meet the section now being constructed in front of the Town Hall, and for this purpose the land on which the Boyanese Kongsis now stands in Java Street should be acquired, giving the lane at the back of section 4 a much-needed outlet. In order to utilise the vacant land opposite the Municipal Offices above the Gombak Bridge it will probably be necessary to build an embankment along the river front. Whether an embankment along the Malacca Street recreation ground would retard or accelerate the flooding of Malacca Street when the river is swollen by very heavy rain, is a question for engineers—which has possibly never been put to them, although Malacca Street has been under water several times of recent years.

Verandahs

21. The Sanitary Boards Enactment compels the builder of a house to provide a clear five feet of verandah way in front of his house for a public footpath, and, although he is as much the legal owner of this verandah way as he is of the rest of his land, he is forbidden by law to place his own property on it lest the public be thereby incommoded or impeded. Allowing for the pillars supporting the upper storey, the owner gives up the best part of seven feet of his frontage to the public. The original Sanitary Boards Enactment recognised that if a man was forced to give up a portion of his land, without compensation for a public footpath, it was the duty of the public to pay for the upkeep of that foot-path. But no money was ever voted for the purpose. The wealthier shopkeepers have maintained their verandah ways in good walking condition, the poorer ones have not. In few streets it is possible to walk from end to end over a clean, even foot-way. There should be an annual vote for "upkeep of verandahs." If the verandahs of a few streets were levelled and cemented every year, the general appearance

of the streets would be vastly improved as time went on, especially if a uniform pattern of drain cover was adopted for the entrance to each shop.

Raising Malacca Street

22. The raising of Malacca Street would lessen the awkwardness of the corner where it drops suddenly from the end of Java Street bridge, and would render it less liable to finding itself under water at flood time. It would be interesting to have expert advice on this matter.

Street Levels

23. There are no records in the Sanitary Board Office showing the levels of the different streets. In view of the fact that portions of some of our streets are under water at flood time, such records would be useful.

DWELLING HOUSES

Private Residences

38. Many people who now live in shophouses would gladly live in compound houses, but the number of such houses is very limited and rents are high. It is well known among business people that "bungalow property does not pay." The reasons for this are:

- (i) the high price of land;
- (ii) the style of building generally erected;
- (iii) liability to be unlet;
- (iv) the cost of repairs;
- (v) the use of timber which, with a careless tenant, means damages by white ants;
- (vi) the difficulty of obtaining water.

Shophouse property is certainly more remunerative. But although the building of compound houses is not likely to prove

a great attraction to the capitalist, there is no reason why it should not do so to individuals who would gladly live amid healthy surroundings and own their own houses, particularly in the case of persons whose incomes range from fifty to two hundred dollars a month.

39. Two years ago a portion of Weld's Hill Estate was cut up into small suburban plots, and nearly all have been sold, prices ranging from six hundred to a thousand dollars an acre. Other suburban land on main roads has changed hands at two thousand dollars an acre and over, a cost beyond the reach of people whose incomes range from fifty to two hundred dollars a month. When the remainder of the Weld's Hill Estate has been sold, in the near future, there will again be a dearth of small moderate-priced suburban plots.

40. The abandoned cantonment reserve on the Petaling Hill might therefore with great advantage be cut up into acre and half acre plots and sold at a moderate premium, subject to two conditions:

- (i) that a house of approved pattern be erected on each lot within 12 months;
- (ii) that only one house be erected on each plot.

There would be no difficulty about this, as the auction law does not apply to land outside town limits. Ultimately the town boundary might be extended to include this location in order to give its inhabitants lighting and water supply.

41. The insufficiency of the water supply is a check on building, as it is often impossible to sink a well on hilly sites.

Want of Standard Plans

42. The inability of the would-be house builder to obtain stock plan is another drawback which might be obviated. With few exceptions the individuals who make a profession of drawing plans in this town are not qualified architects. They have little or no idea of cost, and consequently, acting on the instructions of ignorant clients, they produce plans which the applicant

ultimately finds are beyond his means. In quite recent times clerks drawing comparatively small salaries have erected small bungalows costing about \$3,000. It is not impossible to build a house for \$1,000, or even less, if native models are followed. The Sanitary Board would be conferring a benefit on a hardworking section of the community—besides facilitating house building—if it kept a few stock plans of cheap houses for public inspection. Say houses costing approximately \$1,000, \$1,600, \$1,800, \$2,000 and \$2,200.

Sale of Food and Drink—The Markets

43. The Kuala Lumpur market provides insufficient accommodation. The dry goods stalls have more than once been the subject of discussion, but provided there is enough available space of fresh provisions they need not be interfered with. A small extension of the market this year and a proposed further extension next year will, it is hoped, provide all necessary accommodation.

44. A few new tables are required in the meat market to replace worn ones. The fish market should have a substantial wooden counter in parallelogram form to replace the wooden boxes, etc., on which much of the fish is sold.

The vegetable market, which required early enlargement, should be furnished with marble top slabs in place of the present roughly knocked together wooden platforms. The goods of the end stall-holders should not be allowed to spread on to the street.

45. The Ampang market is in need of new stalls.

Drinking Shops

46. All drinking shops should be licensed by a specially constituted Licensing Board. The number of such shops in certain streets is largely in excess of requirements. There is no direct check at present on the quality of the liquor sold. There

should be. Later on the Government might consider the advisability of keeping the retail liquor traffic entirely under State control.

Eating Houses

47. A stricter supervision of eating houses is recommended; particularly in regard to the state of the floors, kitchens and drainage.

Watersupply

48. The available water supply is insufficient for the wants of the town. If time and money expended are any criterion, the State does not seem to have been very fortunate in its efforts to give the town a good water supply. The water policy of the Government is unknown. It is earnestly hoped that it is one of immediate action. More filter beds, an additional pipe line and more service reservoir accommodation are said to be wanted.

Town Improvements—Hovels

49. The hovels and huts along Birch Road should be removed as soon as possible, but, as explained in paragraph 33, the difficulty is to know how the ejected people can be provided with accommodation. An enquiry into the means and occupations of the people who dwell in these shanties should be instituted in the first instance.

Birch Road Gully

50. The Birch Road gully is both unsightly and insanitary. It requires early attention.

Weld's Hill Road

51. The triangle on which the bath-house stands at the end of Church Street is flanked by what will shortly be a good direct

road to a large residential area. This land should be cleaned up, levelled and fenced in. It is hardly consistent for the Sanitary Board to compel private owners to fence in their land and leave places like this uncared for.

The Padang

52. It is too late in the day to hope that Kuala Lumpur can ever become a city of great grandeur, but even now it is not without its redeeming features. Many aspects of the town compare favourably with other oriental cities. The one show place of noble buildings is the Padang. When a steeple has been added to the Church, the Padang will be flanked on three sides by buildings not unworthy of the capital of the Federated Malay States. But the side of the railway is still open to great improvement. If the Hotel and adjoining shophouses were pulled down it would be possible to erect a main Station and Hotel combined on that side of the Padang and still leave room for—what at present does not exist—a fine wide roadway. A new road should be constructed from the skew bridge on the Damansara Road along the face of the hill overlooking the Padang, and, after meeting Club Road, should descend over the line by a bridge, and passing behind the Church, come out by the Gombak Bridge. By excavating into the hill this would provide room for a tier of buildings overlooking the proposed Station, and thus create a noble setting to the Padang.

53. This scheme would involved the demolition of the Selangor Club, Recreation Club, Guards Quarters and Rest House. It is suggested that Mr. Spooner should be asked to design, and the railway department to erect, a new Selangor Club at the Gombak Street corner of the Padang, in keeping with the surrounding buildings. The Town Club might be accommodated in the same building and therefore might be willing to contribute something towards its cost; or the upper storey might be devoted to the purpose of a Public Library and Reading Room.



Selangor Club, established in 1884 to meet the social and recreational needs

Courtesy of The New Straits Times Press (M) Berhad.

54. The Recreation Club might be accommodated in the triangle formed by the Damansara Road, the railway line and the back of the bank premises, with an opening on to the Padang alongside the Printing Office. None of the railway buildings on this site are permanent.
55. The Rest House would no longer be required.
56. For all practical purposes the Padang itself will suffer no curtailment except where the new club would stand, and even this need not be any real loss either to the beauty or utility of the Padang as a playing field.
57. Rickshaws and carriages would wait in a courtyard where the Rest House now stands and not on the road running along the edge of the Padang.
58. In order to have a straight through line from north to south, it is anticipated that trains will ultimately be run direct from the skew bridge to Sultan Street without going into the present station at all (where the engine would have to be shunted from one end of the train to the other). In any case, however, this station would be useful for the people living at that end of the town and for the boat and coolie traffic. But it has not over much accommodation and might well be improved upon if the main station of the whole railway system was erected on the suggested site. The shunting yard would remain as at present.

SITES FOR PUBLIC BUILDINGS

Market Street—Holland Road Site

59. All private land between Market Street, Holland Road and Clarke Street should be acquired for public buildings sites. It seems a pity that the whole block was not acquired when the Post Office site was purchased. Had this been done it would not have been necessary for the frontage of the new Post Office to extend out in front of the line of the Government Offices.

60. The Government proposes to make a back lane through the block. Such a lane would render the premises of the Straits Trading Company useless for the business now carried on. The compensation to be paid would therefore be enormous, and the property might just as well be bought outright at once. The same probably applies in a modified degree to Mr. A.C. Harper's godown.

61. Mr. Loke Yew has a deep-seated attachment to this residence on the block; but as it would not be necessary to pull down most of the building, for some years to come at all events, it could probably be arranged for him to remain in occupation of one of them.

62. The use to which the other buildings could be put is dealt with in a later paragraph.

Batu Road

63. The garden on the Batu Road, opposite the new Municipal Offices, should also be acquired for a public building site. The road to the Electric Light Works should be deviated to the northern end of the garden, and then, when an embankment is built along the river bank, the acquired site and the existing plot of State land will provide a magnificent site for some important public building of the future (see paragraph 20).

High Street

64. Precautions should be taken to reserve the land round the Chinese Secretariat. At present it is not specifically reserved.

Public Buildings—The Court Hill

65. The Court buildings, although central, are inaccessible from the fact that they are built on the top of a steep hill. They are lacking in suitable office accommodation and are generally admitted to be somewhat unsatisfactory. No complaints have

been heard from the Police Office. It is suggested that the Market Street-Holland Road site is where the Courts ought to be, or else on the site referred to in paragraph 63 *supra*. It is further suggested that the Court Hill buildings be offered to the Convent in exchange for the Convent site and adjoining small church. If this exchange could be effected, the next suggestion is that a new Girls' School should be erected at the corner of Damansara and Hospital Road and that the Slaughter House be moved.

Victoria Institution

66. This would free quite a large site which it is proposed should be given to the Victoria Institution in exchange for their present site. The division of the latter into town lots is expected to realise about \$100,000 before any money need be spent in filling up the diverted river bed, but after a bridge had been re-erected across the river to give direct approach from Rodger Street. It was only by closing this approach that the Government saved the cost of the bridge last year, so that it is fair to exclude its cost from the proposed transfer of buildings scheme.

67. The money realised from the sale of the Victoria Institution site should be sufficient to erect all new school buildings required on the new site—a number exist there already—to build another Girls' School, and to make such necessary additions and alterations to the buildings on the Market Street-Holland Road site that they could be used for Courts and Police Office. In later years these buildings would give place to one of more magnificent proportions and one more in keeping with other Government buildings in the vicinity.

68. The reason why it is not suggested that the Victoria Institution should take over the Court Hill is that to get a large playing field would necessitate a costly excavation at the foot of the forest reserve. A small playing ground for girls offers no difficulties.

Slaughter House

69. At present there are two slaughter houses, one next to the Girl's School and the other near Pudo. When Kampong Atap was a grazing ground there was an obvious advantage in having the slaughter house in the vicinity. That position no longer exists. All slaughtering for Kuala Lumpur should be done at one place, and the Inspector's quarters should be close by. The present arrangement is entirely unsatisfactory.

General—Want of Maps

70. The need of an up-to-date town map has already been remarked on. A municipal map is equally badly wanted, i.e. a map showing municipal members of houses erected on the survey-numbered lots. No. 91 High Street, for example, cannot be located on the town map unless the enquirer measures up the distance with a tape from the end of the street and then uses a scale. This is the only way, for instance, by which a purchaser can ascertain the area of a house he wishes to buy, or that it is actually on the land described in the title deed he is shown by the seller. So also with arbitrators or land valuers when they enquire which houses are actually on the land under review. In this country people buy, mortgage, value, etc., land, and not houses, in that the houses are never mentioned in the legal documents.

71. The municipal map should take the form of the town section map kept in the Land Office. Each of the seventy odd sections of the town is shown on a separate sheet and is drawn on a fairly large scale. The title deed member of each lot is also shown on these section sheets, in addition to the ordinary lot and section number. The sheets are bound up in book form. The cost of the preparation of a similar map would be the salary of a competent tracer. If done on the rough side of tracing cloth, the Sanitary Board could fill in the municipal numbers in pencil where there was any likelihood of a street having to be renumbered.

Brothels

72. Brothels should not be allowed in more than one street. It might be better if they were in a less central street than Petaling Street. If the town extends towards Pudooh, it may be found possible to move them farther away in that direction.

Electric Tramway

73. An electric tramway running between the second mile on the Batu Road and the end of Brickfields Road, *via* High Street, with, later on, a branch to Pudooh, cannot be considered a Utopian vision of the distant future. Cheap and speedy transit to the suburbs is an object worth keeping well in view, and the matter should be brought up for discussion when the electric installation is in full working order.

Forest Reserves

74. It is doubtful if Forest Reserves in Kuala Lumpur are of any practical value. They seem to be used as public latrines and as the hunting ground of vagrants after a handful of firewood. These remarks apply to the reserves on both sides of the Weld's Hill Road, and not to the plantations on the Circular Road. The Ampang Road reserve, which is of no particular benefit as a Forest Reserve, might be simply declared a Government reserve.

Hackney Carriage Stables

75. The stables at the river end of Sultan Street should be pulled down, and a municipal hackney carriage stable erected to replace it on a more suitable site. The Sanitary Boards Enactment sanctions expenditure for such a purpose. Gharry ponies would then be housed in sanitary and well ventilated stables, and the Sanitary Board would feel less compunction in closing various privately owned stables. The Board would probably be content with a very moderate rent per stall.

Police Protection

76. A Police Station is wanted at the junction of Ampang Road and Circular Road.

Public Library

77. A well-housed, well-managed Public Library and Reading Room does not exist in this town at present. It is hoped that before long this want will be met.

Town Traction

78. The heavy-cumbersome hand-carts used for hauling goods from the railway yard, etc., are behind the times in these days of motor haulage. Private enterprise should be encouraged to introduce motor vehicles. Such encouragement might take the form of a promise of Government patronage.

Blacksmiths' Shops

79. All blacksmiths' shops should be relegated to some more or less isolated quarter of the town. Several blacksmiths erect their anvils in the middle of their verandahs, which are supposed to be public foot-paths, and nearly all of them utilise a portion of their verandahs for trade purposes. Other traders are not permitted to do this.

Protection from Fire

80. The existing system of signalling fires does not seem to work satisfactorily. A two per cent assessment is imposed on all houses as fire rate, but the upkeep of the fire-brigade costs a comparatively small sum. Hence there can be no question of expense.

Control of Government Buildings, Roads, etc.

81. The words "other than a Government building" should be omitted from by-law 2. It is not fair to make the public comply

with conditions from which Government departments are exempt. For example, why should a Government department be permitted to erect quarters without proper latrine accommodation, or, if in a town street, without the back lane approach which is insisted upon in the case of the private builder.

Fire-Brigade river approaches should not be constructed without reference to the Board, and the same remark applies to the erection of electric light standards, telegraph poles, telephone poles, etc. The control of the streets should be absolutely under the control of the Board. See also by-law 40(ii).

Estimates

82. After the requirements of the ensuing year have been submitted for Government consideration approval, the Board is left in ignorance of the votes sanctioned until within a few days of the new year. This means that for six months the Board is absolutely in the dark concerning the suggested programme for the ensuing year. Yet the work to be carried out during those six months may have a close connection with the following year's programme. It is suggested that the Board might be informed immediately any of its proposals have been sanctioned.

TAXATION OF LAND

Municipal Assessment

83. A municipal rate is now levied on buildings only. The Sanitary Board has decided in virtue of the power conferred upon it by section 15 of the Sanitary Boards Enactment to levy a rate on vacant land next year. Hitherto house owners have contributed to municipal revenue funds for municipal work whilst owners of vacant land have paid nothing, although greatly benefitted by municipal expenditure.

84. The Enactment provides for the levying of an annual rate upon the "annual value". But it is somewhat difficult to arrive at the annual value of vacant land or even of cultivated land. A

reasonable percentage upon capital value (i.e. selling value) is the nearest approach which can be made towards determining the annual value. For example, a vacant town lot worth \$2,400 would have an annual value of \$192 if reckoned on an 8 per cent basis. This would not be high valuation in a town where 10 per cent is considered but a reasonable and moderate return on all kinds of investments. It is doubtful, however, if native land owners would understand how such a valuation was arrived at.

85. The following extract from a recent Daily Chronicle is not without interest:

Mr. Asquith's reference to Finchley in a debate the House of Commons on the taxation of land values stimulated the Finchley Urban District Council to write to the town clerks of Brisbane (Queensland) and Wellington (New Zealand) as to the new methods of assessment and rating of land values, now rapidly being extended to all the Australian Colonies.

The town clerk of Brisbane has now replied that the new system—an assessment made on the selling value of the land instead of on the annual rental value—is a distinct advance on the old system. The collection is simple and easy, and no additional burden has been cast upon the occupier. The tax is regarded as a satisfactory method of adding to the revenue, which from this source alone amounted last year to over £62,000 on an assessable value of £6,500,000.

Wellington's experience is of a similarly satisfactory character, and it is expected that in the near future some rates now levied on annual value will be struck on the selling value, thus throwing the whole burden of the rates on to a single tax on the land.

86. In Kuala Lumpur it would certainly be advisable to give the Sanitary Board an optional right to assess either on selling value or annual value. Otherwise land owners would elect to pay "annual value" on some insignificant building and pay nothing for acres of surrounding land worth far more than the building.

87. In order not to tax "improvements" the Board should have power to impose a differential rate on cultivated and uncultivated land, the latter being prohibitive in order to discourage the tying up of the land.

The Sanitary Board—Constitution of the Board

88. The present constitution of the Board is fairly satisfactory provided members attend regularly at the fortnightly meetings. The proportion of officials to unofficials is much greater on the Kuala Lumpur Sanitary Board than on the Municipal Commission of the Colony. Of the five unofficial members of the local Board, four are native gentlemen who do not speak English. Hence time is occupied in interpreting to them and, even then, they only gather the main outline of what is being said. A knowledge of English should be a *sine qua non* for the future. There will be no difficulty in finding native gentlemen with that knowledge. It is suggested that the Chinese member, or members, of the Board should be nominated by the Resident from a short list of names submitted by the Chinese Chamber of Commerce. This will give some of the more important rate-payers a small voice in the management of their own affairs. The town might be divided into wards and unofficial members specifically nominated to represent such wards. It is suggested that the Board should be styled the Municipal Commission and its members Municipal Commissioners.

Attendance of Members

89. No useful purpose is achieved by the nomination of officials to sit on the Board who seldom or never attend the meetings. The remedy lies in a radical alteration of the Board's responsibility, authority and standing, followed up by a rule that a member, official or otherwise, absenting himself from more than two consecutive general meetings should, unless absent from the State, *ipso facto* vacate his seat. (The rule would not apply to doctors.)

90. Hitherto the Board's activities have been hampered through being kept under the direct control of the Government in all matters, great or small. It has been able to do little more than suggest. Time after time its suggestions have been neglected or ignored. Consequently the members of the Board

have lost heart in their work. Gentlemen who sacrifice their time and devote their energies to municipal work are disheartened by the veto of a Resident on proposals set forward only after much earnest deliberation. It is hoped that these remarks will not be misunderstood; the Residents have not exceeded their powers and there is no intention of criticising their decisions.

Authority and Responsibility

91. The law practically places all municipal authority in the hands of the Resident. The time is ripe for delegating a large share of that authority to a Municipal Commission. It is suggested that:

- (i) The Chairman, Secretary, Engineers, Health Officer and all officers drawing more than one hundred and fifty dollars a month should be appointed by the Resident and all other subordinated by the Commissioners.
- (ii) The Municipal Budget should be drawn up by the Commissioners.
- (iii) The expenditure should be shown under three headings (a) salaries and other charges (b) annually recurrent expenditure (c) special services.
- (iv) The money voted under (a) and (b) should be under the sole control of the Commissioners. As a present, money voted under (c) should not be expended without the Resident's sanction.
- (v) The full legal powers of the Commission should be exercised without reference to Government, except where special expenditure is likely to result from the exercising of that power.
- (vi) The standing order for regulating and governing the proceedings of the Municipal Commission should be drawn up on the lines of those laid down for Penang in the Straits Settlements Government Gazette of July 17th, 1903.
- (vii) The minutes of meetings should not require the Resident's sanction and should be published in the Gazette without

excision; unless any resolution be in itself ultra vires, when it should be excised and returned to the Commissioners with a notification to that effect.

- (viii) The Press should be admitted to the meetings of the Commissioners.

Engineering Department

92. The present position of the engineering department is absolutely unsatisfactory, although it is difficult to say exactly what that position is. A P.W.D. engineer, who is a member of the Board, carries out municipal engineering work under the orders of the State Engineer. He takes no orders from the Board, neither does the State Engineer. "Requests" have to travel to the latter officer, *via* the Chairman of the Board and the Resident. All three may hold entirely divergent views. The P.W.D. usually short-handed, has but a secondary interest in municipal work, and the head of the department is only in touch with the ideas and wishes of the Board through his subordinate, who may have voted with the minority on, say, a town improvement scheme. The control of the refuse destructor, the dumping of night-soil, the inspection of buildings and building plans, the control of the town lighting and the charge of a portion of the subordinate outdoor staff are all matters which should be under the engineer's supervision. Under the present system the P.W.D. members of the Board would appear to take a benevolent interest in those matters which do not come under the heading of public works. On the other hand, matters affecting the improvement of town streets and roads would appear to be dealt with by the P.W.D. without reference to the Board.

93. The Board should have a *properly qualified* municipal engineer directly under its own control. See section 4(b) of the Sanitary Boards Enactment. Such a man should be at least 30 years of age and have held a similar post in a town of at least corresponding size elsewhere. The commencing salary should be not less than £500 a year.

94. At the same time an experienced engineer should be engaged to take entire charge of the construction and maintenance of the Kuala Lumpur Waterworks. The salary offered should be large enough to secure the services of a man with a practical knowledge of such work. Judging from the past history of the waterworks, the amount of money expended and the present insufficiency of supply, there is plenty of scope here for such a man. If for no other reason than that they wish to know what is being done, the public would welcome a transfer of responsibility from the P.W.D. to the Sanitary Board. The efficiency of the water supply is a question of vital interest to everybody, and yet nobody seems to know how to find out what is being done.

95. As all special services involving the spending of large sums would be submitted to the Resident for approval and sanction, he could refer any engineering proposals to the Director of Public Works, who would thus practically become Consulting Engineer to the Board. If deemed necessary, he could actually be so styled and paid a retaining fee. This would put the engineering department of the Board on a sound basis for the first time in its history.

Finance

96. In 1894 the municipal revenue was \$123,225 and the expenditure \$71,205, the balance of \$52,000 going into the State Exchequer. At the present time the ordinary annual expenditure is in excess of the revenue, whilst special service votes still further increase the State's share of municipal expenditure. On the other hand the State obtains revenue as the direct result of municipal expenditure and pays no municipal taxes itself. For example, every time a house or plot of land in the town changes hands, the State gets a commission in the form of a stamp duty at the rate of 60 cents per centum. None of the farm rents are credited to municipal revenue

although it is obvious that municipal expenditure indirectly helps to raise these rentals as time goes on. No assessment is levied on Government buildings although the State derives a rental from some of them. There is practically no return for the municipal expenditure incurred in lighting and upkeeping the roads in that part of the town which is practically set apart for official residences. The railway, which reaps such a large revenue from the town, contributes nothing to municipals funds. No charge is made for the conveyance of night soil from the barracks and other Government buildings.

97. In considering the financial position of the suggested Municipal Commission, and bearing in mind the requirements of the town as set forth in this memorandum, it must be remembered the cost of the Padang scheme would be borne by the Federated Malay States Railways, and that the acquisition and disposal of land for building purposes would not fall under the heading of municipal expenditure.

98. There are three alternative schemes for providing future municipal funds.

- (i) To continue the present arrangement.
- (ii) Government to give a fixed annual grant.
- (iii) Government to make good the difference, if any, between collected revenue and annual recurrent expenditure (including salaries, etc.). All special service to be paid for from municipal loans.

It is suggested that until the proposals set forth in this memorandum have been dealt with, the present system should continue, after which the third alternative should come into operation.

99. The Municipal Commission would then take over a scheduled list of town property, which, together with the rates, would form the security for municipal loans if it should be necessary to raise additional funds. In this way the cost of improvements would be equitably borne by those who will benefit at once and those who will benefit in the future.

Legislation

100. Municipal work in Kuala Lumpur is carried out under the Sanitary Board Enactment, which appertains to all Sanitary Boards throughout the Federated Malay States. A new enactment would be required for the proposed Municipal Commission, but it might be almost identical with the Sanitary Board Enactment subject only to such amendments and additional clauses as may be necessary to give effect to any sanctioned scheme for the constitution of a Municipal Commission on the lines indicated.

Conclusion

101. This memorandum is written in the hope that a review of the requirements of the town of Kuala Lumpur, undertaken, not in connection with the annual Estimates or immediate needs, but bringing experience of the past to bear upon probable future developments, may be of some assistance to those responsible for the care of the town.

The rapid progress of the capital of the Federated Malay States should be anticipated.

Kuala Lumpur
November, 1904

H.C. Ridges
J.H.M. Robson
E.A.O. Traves (Dr.)

Malay Mail, January, 1905.

KUALA LUMPUR IN 1905 SUGGESTED IMPROVEMENTS

In the portion of the memorandum for improvements in the town of Kuala Lumpur which we published yesterday, there was a suggestion to move the main railway station from its present site and place it on the ground now occupied by the Hotel and the Recreation and Selangor Clubs, or rather on the roadway behind the Selangor Club. Now that the through Railway from Singapore to Penang is well within sight, it is obvious that the Railway Department will have soon to make up its mind whether it means to leave matters more or less as they stand a present, or whether it will make the alterations necessary for linking up the northern and southern sections direct, and for turning the Port Swettenham line into a branch.

At present the latter is our main line, but this will be altered when the time arrives for Port Swettenham to fall more or less into disuse, as our late Resident-General prophesied it would do. But the project of making the northern and southern sections into one is a task, we believe, of very considerable difficulty, owing to the awkward angle at which the northern line has to pass under the Damansara Road. This allows only a very small space in which to negotiate the very considerable curve required. The simplest plan would appear to be to start to curve earlier, by, say, the Recreation Club; but then another difficulty arises. The gradient on the nearside of Skew Bridge is quite steep enough and every foot that the bridge was moved

in the direction of the Government Offices would increase the steepness. A level crossing, besides being undesirable, also seems out of the question, as Bluff Road would be cut off from the world below. But it may be found possible to lower the line sufficiently to pass under the road at an angle which will permit of the curve required.

The question which the Department will then have to decide is whether the site by the Padang is the best for the Station, or whether that of the Sultan Street Station is preferable. To our mind the ideal spot is that occupied, we believe, by the Station in earlier times, namely the ground on which the Railway Offices and Goods Yard now stand. It is splendidly central, but a station placed across from the Skew Bridge to the river would entirely block the way to the present Goods Sheds and would therefore necessitate their removal. Again, there is a large amount of open ground around the market on the far side of the river, but unfortunately this land is alienated, and even if the market were moved, the purchase of the requisite amount of land would make the scheme a costly one. Otherwise, and but for having to move the market, there seems to be an excellent site, for the part of Rodger Street adjoining the market could very well be built over as the road has ceased to be thoroughfare of any importance. The two ends of it could then be used as the main approaches to the Station, which would be equally handy for all parts of the town, and near the large open space which we hope ultimately to know as "Tram Head".

If this scheme could be adopted, Sultan Street Station would no longer be necessary, but one would be required in the neighbourhood of Brickfields Road. With the Station across Rodger Street, the present Goods Yard could be left untouched, though a small portion of it might be required for a wing to the passenger station into which the trains from the Klang section could run direct. Passengers would then only have to cross the new bridge over the river when getting on to the main line. The present Skew Bridge and that over the river could be left as they stand to enable the goods traffic on the main line to be shunted into the goods station.

The alternative to building the station directly on the main line, is to leave it as it is. This plan would at present necessitate nothing more arduous or expensive than uncoupling an engine at one end of the train, and coupling another on at the other; but as considerable structural alterations are required, we think that the opportunity for choosing a new site should not be missed.

— *Malay Mail*, 24 January, 1905.

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It is now July but little visible progress has been made in carrying out the authorised Kuala Lumpur Municipal programme of new works, such as road improvements, new roads, etc. It is getting on for two years ago, we believe, since the residents and buildings on Weld's Hill asked the Government to give them a good approach road from Klyne Street. The present Resident and the late Resident-General gave every help, but the matter was hung up elsewhere pending the taking over of a private road. However, once this difficulty was overcome and the local Government had power to act, both the then Resident and Acting Head of the PWD did all that could be expected of them and provision was made in the 1905 estimates. Yet we are now well into July and the contractor's men have not yet appeared on what we can only describe as the most disreputable and abominable apology for a road in the town (not even excluding the one through the Malay Settlement). Part of this route, chiefly the abominable part, has been a public road for years, and the other part a private road which was in good condition when taken over, but which has never since been properly upkept. A fine long approach road to the new government bungalows has been completed, but the road served quite a number of tax-payers still awaits its start. Is it astonishing that we feel annoyed? We feel certain that if the Board had had its own engineer the work would have been well in hand by this time. If the present system is able to be a success surely now is the time. There is an excep-

tionally well qualified engineer in charge of Municipal work (in addition to his other duties): the Acting Head of the PWD is certainly not a slow-coach: there is no friction between the Sanitary Board and the Government, and all the leading officials drive motorcars and can see for themselves how work is progressing.

We do not blame the PWD, it is simply an over-worked department trying to do its best against odds. But it is false economy to burden it with a heavy municipal work of a town like Kuala Lumpur. The position is equally indivious for the PWD and the Sanitary Board. That the municipal work will get done in the end is as true as the statement that death awaits for all men, but neither delay nor death are welcome to people who are even moderately alive.

- *Malay Mail*, 13 July, 1905.

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European residents in Ceylon lived in much better style than they do over here. They have better houses, better furniture and better laid-out grounds. They make Ceylon their home: most of us here are content with a resting place. Ceylon is an old Colony and many of its people are comfortably off. The Federated Malay States is a young country where most of the wealth is in the hands of the Government, the Chetties and a few Chinese.

It is practically impossible for the European Government official to make himself a permanent home. With few exceptions nobody here is a fixture in one place. Mr. Berrington, Mr. Baxendale and Mr. Russell have, we believe, always been stationed in Kuala Lumpur, but their houses have passed to others when they have gone on leave. Probably each of them has lived in four or five different houses during the last 15 years.

There are over 60 unofficial Europeans living in Kuala Lumpur, and the number of planters in the outstations is rapidly increasing. These people are not likely to be moving about much. The planters hope to make fortunes, and the rest

sufficient for the day and a little over. Therefore as time goes on we may expect to see the unofficial community living in well-built, well-furnished houses surrounded by nice gardens.

The complete house furnisher who will supply really good furniture has not yet been attracted to the Federated Malay States. Judging from local auction sales there is an opening for him. Good furniture can be obtained in Singapore and Penang by those who know what to order and can afford to pay for it, but the ordinary cheap furniture to be seen in many houses is certainly not worth carting about, much less storing when on leave. Rattan furniture is all very well in its way, but it soon gets to look worn and is seldom very comfortable.

The country produces many excellent kinds of timber and no doubt Nadun wood could be obtained from Ceylon. The Singhalese make good carpenters and turn out some beautiful furniture. Before now people in this country have sent to Ceylon for their furniture. But the prices for this Ceylon furniture are higher than those charged for good furniture in the Straits although we have never seen anything made on this side which quite comes up to the Ceylon work for artistic finish; although we are told that one particular firm is now turning out some really fine work.

— *Malay Mail*, 31 July, 1905.

We frequently hear nowadays complaints made by those who dwell in the neighbourhood of rubber plantations of the swarms of mosquitoes which are beginning to infest the locality. In view of this, would it not be advisable for the local authorities to consider whether the planting of rubber in any considerable quantity should be permitted within town limits? Of course a large number of these trees have already attained to considerable growth on Weld's Hill and Evelyn Estate, and on the Government land on Swettenham Road, but as the two former have been, or are being, sold in building lots, it is

probable that many of the purchasers will cut the trees down in the event of their finding that they bring the insect pests within too easy reach of their homes.

The policy of our City Fathers is now to clear the town as much as possible of dense growth: is it, then, logical to cut down in one place what is allowed to be set up in another? For a long time past we have advocated this policy of clearing up, and it must be very gratifying to those who dwell in the vicinity of dense patches of tangled jungle and undergrowth to note the steps which are now being taken. These are particularly noticeable near the Federal Quarters and the General Hospital. It is true that the primary cause for this clearance is in each case the draining of swampy ground, which is in itself an excellent measure; but it is nonetheless useful that at the same time cover for both snakes and insects is being swept away. It is to be hoped that the system which has thus been inaugurated will be carried to a conclusion within our town boundaries. Such a course would necessarily take time, but we believe that the community generally would derive great benefit from it, while building sites hitherto valueless, would be opened up for use or sale. We do not mean to advocate that the beauty of the town should be impaired by the ruthless cutting down of everything green within it, but we should like to see all the worthless stuff rooted out leaving behind any timber which may be of value, either from a pecuniary or an artistic point of view.

—*Malay Mail*, 14 August, 1905.

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It is a well-known fact that those at home have little knowledge of this part of the world, that little frequently not embracing the title of the Federal Capital. It is not surprising therefore to hear newcomers express astonishment when they find that we possess excellent highways in place of the mere jungle tracks which they anticipated. We used the word "excellent" with regard to our road system, and we think we are justified in so doing in the majority of cases, though there have been times—notably some

three years ago—when upkeep, in the general accepted sense of the term, appeared to have vanished from the official programme. But we have changed all that now. We have, in the first instance, effected a great improvement by substituting harder metal for the old laterite, with the result that the ravages made by wear and tear are not so conspicuous as in the past.

Within our town boundaries the wayfarer cannot fail to have noticed the amount of work which has been done of late in improving our road system, for not only have several sections been widened, thereby affording relief from the congestion from which we suffered, but repairing has been steadily going on, with the result that at last most of the arrears of the dark age mentioned above have been wiped off. Much of this work has been performed in the centre of the town, but other tasks such as the re-metalling of the entire length of Campbell Road, have been concluded, and have been held to swell the record of good work which the Sanitary Board has established.

But some time must elapse before the programme which has been mapped out is completed; for there yet remain the principal roads through Weld's Hill, which have to be metalled and, in one case, graded. Work has already been commenced in this latter instance. Another important scheme is the raising of a section of the Circular Road between Bukit Bintang and Ampang Roads; and this is now on its way to completion; while yet another task remaining is the metalling of the continuation of Hale Road through the Malay Settlement to meet Jalan Sempang. Also, now that the town boundary is being enlarged to include the Railway Workshops' region, it will fall to the lot of the Sanitary Board to continue the widening of the Batu Road up to the new boundary—a work which will be appreciated by the ever increasing number of those who have to make use of this highway.

There has, we believe, in the past been difficulty about obtaining the money and the requisite number of rollers in order to cope with the task of keeping the town streets in an efficient state of repair, and it may be that this difficulty is not yet entirely overcome, but no one who remembers how matters

stood in 1902 and 1903 will fail to appreciate the fact that steady efforts have been, and are being, made to place our street system upon a basis worthy of the town.

— *Malay Mail*, 17 August, 1905.

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It was only the other day that the *Singapore Free Press* gave vent to some strong but by no means unmerited remarks on the insanitary conditions prevailing in Singapore—resulting, of course, in a high death rate. The causes may be briefly summed up in the following order:

- (1) Absence of back lanes
- (2) Want of air
- (3) Want of light
- (4) Filth
- (5) Absence of sanitation system
- (6) Polluted floor areas
- (7) Over-crowding.

The second, third, fourth and fifth hang on the first.

Luckily here in Kuala Lumpur we are a long way ahead of Singapore in remedying most of these evils. We began, or rather allow others to begin, in the same idiotic manner. The bulk of the business quarter of Kuala Lumpur, as we see it today, was built with houses back to back. When Mr. Venning and the late Mr. John Welford took the town in hand, they laid out back lanes on every vacant section, and then gradually, year by year, the Sanitary Board constructed back lanes through the section already built on. Sometimes compensation was paid for vacant land and sometimes not. But times have changed; there are lawyers in the land, and progress is now both slow and far more costly. Some of our most crowded, most central, and therefore most valuable sections still await attention. The Government has given and is anxious to give, large sums of town improvements. The difficulty lies, we believe, in a judicial ruling which makes it almost as expensive

to buy the land for a back lane as to buy up the whole section. With all due regard to the rights of property owners, it seems that where a section is a teeming hive of native humanity the State should be empowered by law to drive back lanes through it without liability for unlimited compensation. When a section has been condemned by the Health Officer and the local municipal authority as an insanitary area, the land for a back lane should be resumed forthwith under a special Enactment providing nominal compensation of \$100 a lot, irrespective of the amount of land resumed. But in order that this somewhat arbitrary law should not act harshly on the land owners concerned, a small commission should be appointed to value the actual loss, if any, sustained by the owners, not covered by the \$100, and the same be tendered as a compassionate allowance. To buy the land required under the ordinary law for resumption is hopeless. Very few people dream of submitting a fair claim: they prefer to fight for as much as they can get. In this class of arbitration there is no real basis for valuation, and the side with the cleverest lawyer and most "expert" witnesses is likely to win the day.

The Bench is really powerless under such circumstances. We remember one case before a former Judicial Commissioner in which the Government arbitrator offered—we forget the exact figure—say, \$4,000—or a small shop, and the owner claimed, say, \$6,000. The owner's arbitrator was also his counsel. After hearing both sides, the learned Judge admitted that he knew little about land values, and split the difference. That was a plain straight forward case when the actual market value of a complete lot was the issue. How much more difficult to decide what varying slices and ends of houses are worth! A small commission, consisting, say, of the Collector of Land Revenue, Mr. Hampshire and Mr. Kock, would we believe, give a fairer decision than could be obtained by the forensic efforts of fighting advocates.

Our sanitary system is being extended as fast as funds allow, but not a quarter of the houses, we fancy, are yet being dealt with. We hope the report is not true that the Government

has cut out the proposed vote to purchase a motor lorry next year, for capacity and speed are most important considerations in selecting vehicles for this work.

A number of houses in this town have polluted floor areas. Every year sees an improvement in the new houses, although we doubt if the now commonly used square Malacca aisles are enduring enough for kitchens and back premises where timber is chopped or heavy goods handled.

Legislation to prevent over-crowding may be able to do something in the direction of providing more cubic feet of air per inmate. It would be a difficult law to enforce, and daily, as it must do, constant raids on private houses by public officials at night. However, this will not do away with the filth and darkness inseparable to cubicles built in the ordinary existing shophouses. Nothing short of pulling down the cubicles in about half the houses in town can effect a cure. Such action by the authorities would almost certainly lead to serious disturbances. The only course open is to insist that all building plans in future shall show cubicles opening on to an air space, both upstairs and downstairs. It has hitherto been the custom in Kuala Lumpur for the tenant to build up his own cubicles in whatever way he pleases after entering into possession. The houseowners have apparently always regarded these cubicles as part of the tenant's fixings and not as part of the construction. We understand that the Kuala Lumpur Sanitary Board has recently given a good deal of attention to nearly all these points, and is taking action in several directions. Among other things it has provided plans for the benefit of local architects, which show a window in every cubicle opening onto an air space. At present it has no power to enforce the adoption of this particular plan, but we understand they are considering the adoption of a new bye law dealing with cubicles generally.

— *Malay Mail*, 21 August, 1905.

(A correspondent informs us that Messrs. Venning and Welford were not the originators of the back lanes in Kuala Lumpur but that the honour belongs to Mr. W.T. Wood of the Survey Department who is still with us.)

MALARIA ITS HISTORY IN KUALA LUMPUR METHODS AND MEASURES

(We reproduce) a paper read at a recent meeting of the Malaya Medical Association by Dr. A.R. Wellington, Senior Health Officer, Federated Malay States dealing with "malaria" in Kuala Lumpur and the measures taken to bring about its abatement, showing the failure of empiricism and the success of a scheme based on the findings of bactiological research. The paper forms one of the chapters of Dr. Malcolm Watson's forthcoming new book.

In his introduction Dr. A.R. Wellington says:

The town of Kuala Lumpur is situated on the Klang River near the centre of the State of Selangor. It is a double capital being the capital of the State and the capital of the Federation, and it is the headquarters of both the State Government, and the Federal Government. The whole township has an area of about 20 square miles.

The town is bounded roughly by a circle having at its centre the junction of the Klang and Gombak rivers. The Klang makes with the Gombak, and its tributary the Batu, the figure of a "Y" which divides the town into three approximately equal portions.

The western portion, which is the European residential reserve, is made up of hills and ravines. The northern portion is flat. The eastern portion is flat in its northern half, and hilly in the southern half, except for a strip 60 chains long and 20 chains wide by the side of the river. This strip constitutes the

business area of the town. The population, which in 1905 was 38,459, is now (1920) 67,930.

In 1905 most of the European officials were housed on the hills in the European residential reserve. The sides of the hills were for the most part covered with jungle and the inverts of the valleys were jungle-covered swamps. The unofficial Europeans occupied houses on the flat to the east of the Klang River. They were isolated houses in their own compounds. The business area, in which three-fourths of the total population resided was closely built upon.

Distribution

Dealing with the distribution of Malaria previous to 1906, Dr. Wellington continues:

Dr. Fletcher in his report dated July 30th, 1907, states as follows: "Until the end of 1906 malaria among the inmates of the European quarters was almost unknown except in a few instances, and in these it could generally be proved that the disease had been contracted elsewhere. In those cases in which malaria was thus imported it never spread; no other inmates became infected. From this it may reasonably be inferred that no mosquitoes were present which were capable of carrying the infection. Until September 1906 I had not seen a case of malaria in a European house in which the probability of infection in another district could be excluded. Dr. Travers, whose experience in Kuala Lumpur extends over a period of 12 years, states that until this year he had not seen malaria among the European women and children of Kuala Lumpur, though cases have occurred among the men whose duties take them outside the town. Malaria is endemic amongst that portion of the population which resides along the banks of the river or near the swamps which border it. Since 1903 the blood of all patients suffering from fever has, when practical, been examined. Any figures therefore quoted hereafter refer only to cases which have been proved to be malarial by the demonstration of the parasite. During 1906 malaria parasites

were found in 66 cases from Kuala Lumpur. Nearly all the cases seen came from the endemic area, only three occurring in European houses and these during the last quarter of the year."

Dr. McClosky, who had 12 years experience in Kuala Lumpur, stated in August, 1907: "I saw my first case of malaria in a European contracted in Kuala Lumpur, only last month." There can be no doubt that up till 1906, malaria was confined to the areas which bordered on the river and the hills were free.

Outbreak West of River

Early in 1906 the jungle-covered swamp at the foot of Federal Hill was cleared and an attempt made to dry the area by means of earth drains. The clearing was done by the Public Works Department in order to improve the amenities of the locality prior to the erection of buildings on the high ground adjacent. About the same time Dr. Fletcher had the *belukar* and scrubs cleared from the swampy valley below the General Hospital. This was done to improve the appearance of the place and to allow for better drainage.

During the year the hospitals in Kuala Lumpur received many bad cases of malaria from the hill estates which were being started in the neighbourhood. The danger of opening up land had long been known to the pioneers of the country, who attributed the high malaria incidence and death rate to some miasma set free by disturbance of the soil.

Towards the end of the year cases of malaria began to occur in Kuala Lumpur among the Europeans occupying the bungalows near the clearings, and among the patients and servants in the hospital. Previously, both areas had been healthy. The incidence increased, and by the end of 1907, all the houses on Federal Hill and Carcosa Hill had cases of infection. Cases had also occurred in most of the houses near the hospital. The Police barracks which were on the hill opposite the hospital had many cases.

Dr. Fletcher, in July 1907, sent in a report describing the outbreak. By means of a spot map he showed that the cases

were coming from the neighbourhood of the clearings. He said: "The two main districts affected by the disease are:

- (a) Those parts near the swamps at the foot of Federal Hill;
- (b) The General Hospital and surroundings.

"The cause of this outbreak must be some condition favourable to the breeding of the mosquitoes which convey the infection. In each of the two neighbourhoods, the Federal Hill and the General Hospital, there is some low-lying swampy ground. A couple of years ago these swamps were not drained and in wet weather there was a considerable depth of water, but at that time there was no malaria in either neighbourhood."

"About 1½ years ago these swamps were drained and subsequently malaria appeared in the houses near. The drains which were made are very irregular and in places there are small pools and miniature dams which probably make ideal breeding places for the noxious mosquitoes. The remedy of the outbreak is efficient drainage. On the subject I am not qualified to advise but would venture to suggest that the matter be laid before the Health Officer."

Dr. Fletcher have gives figures showing the actual numbers of the cases from the various districts which had come under his personal notice, and points out that they are therefore merely an indication of the distribution of malaria in Kuala Lumpur, and not the actual number of cases which have occurred. To obtain the latter, the figures given would need to be multiplied by a factor, in most cases as large as 10 and in some, such as the Police Depot, not larger than 1.50.

Dr. McClosky, the acting State Surgeon, in forwarding the report to Government, wrote: "Dr. Fletcher rightly attributes this increase of Malaria to some condition favourable to the breeding of mosquitoes which convey the infection, but I think there is another factor to be considered, viz. the source of infection of mosquitoes. This has multiplied considerably by the large increase of malaria patients admitted to the General Hospital from the different estates."

The matter was referred to the Health Officer, Dr. Thornby, who wrote: "The method of draining valleys below

Federal Hill is far from satisfactory, if not entirely wrong, as far as the attainment of the object of preventing breeding grounds of mosquitoes is concerned. The herring-bone system adopted leaves the ground between dry, but the drains themselves are grand breeding place. The drains below the European Hospital are lined with stones and these result in the formation of small pools. The drains should be on the lines of Klang. Without money for upkeep it is a case of throwing money into swamps."

At Klang, Dr. Malcolm Watson used contour hill foot drains to intercept the water from the hills.

The Malarial Committee

In September of 1907 the British Resident appointed a Committee for the purpose of:

- (a) examining the area complained of;
- (b) enquiring into the results arising from the present condition; and
- (c) advising as to the methods to be employed for the improvement of such area and to make an estimate of the cost in each case.

The members of the Committee were the Chairman of the Sanitary Board, Mr. E.S. Hose, the Health Officer (Dr. Thornby), the Medical Officer (Dr. Fletcher) and the Executive Engineer (Mr. J.E. Jackson).

The Committee started work by asking for the services of the Government Entomologist (Mr. C.H. Pratt) to make a through (thorough?) investigation into the areas complained of for the purpose of ascertaining:

- (a) the actual existence of malaria mosquitoes in the quarters infected; and
- (b) the proportionate extent to which each area actually constituted a breeding ground for such mosquitoes.

The Entomologist during his investigations discovered larvae of anophele "present in the streams flowing through the cleared portion of the valleys but not in those parts where the streams remained covered with a thick growth of bushes. Even

in the open portion anopheles were not found where the stream flows swiftly between even banks, but wherever it has been scoured by flood and the stream had broadened out with retarded flow at the sides there anopheline larvae were present in large numbers."

Fletcher, who confirmed Pratt's discovery, was quick to recognise the importance of it, and in his letter to the Chairman he stated. "These facts demonstrate the great danger of clearing jungle unless it is possible at the same time to convert these streams into regular channels with clearly cut sides preferably of cement or brick?"

The Executive Engineer (Mr. J.E. Jackson) prepared surveys and estimates for a system of drainage in the areas referred to. The plans showed open brick drains running through the centre of the valleys and subsidiary rubble drains covered with turf discharging into them.

In February 1908 the Committee sent in a detailed report. The following extract from para 2 shows the importance they attached to Pratt's and Fletcher's discovery: "It is very noteworthy that anopheles were found to be most prevalent in sluggish streams or earth drains where the thick overhanging undergrowth had been cleared away, as is the case for instance in the valleys on both sides of Hospital Road below the General Hospital, and at the foot of Federal Hill, and in the low lying land in the angle between Brickfields Road and Damansara Road. These facts demonstrate the great danger of clearing the jungle covering of streams unless it is possible at the same time to convert such streams into regular channels of a uniform fairly steep gradient with clearly cut sides. The Committee do not however wish to under-rate the value of clearing jungle provided that efficient drainage is undertaken at the same time."

Plans of Mr. Jackson's drains, *viz.* open brick and *subsoil rubble* were put up, \$27,585 were asked for. In asking for upkeep the Committee said: "We consider that it will be necessary to maintain an upkeep gang of 10 men who should be constantly employed in keeping these drains free from obstruction and in good order after they have been made and

with this end in view we recommend an annual expenditure of \$1,500 to which should be added a further sum of \$500 for current repairs to drains.

Criticisms

The findings of the Committee came in for a good deal of criticism. Pratt's and Fletcher's discovery and deductions drawn from it were so incompatible with the generally accepted ideas and so contrary to the teaching of the day that little credence was given to them.

In every country where mosquito control had been attempted emphasis was laid on the importance of clearing up all scrub, undergrowth and jungle near to habitations and in towns. Local medical men had always advocated similar measures. In Klang and Port Swettenham jungle clearing had been used with success and to most there seemed to be no reason why the opposite should be the case in Kuala Lumpur.

That anopheles carried malaria was known to all the local medical men, but the fact that there were a dozen or more species of anophelines in Malaya and that some were carriers and others were not was known to two or three only, and their knowledge of the subject was very limited. Practically nothing was known of the life history of the different species, and it was not realised that conditions favourable for one might be unfavourable for another.

The anopheline which did the harm at Klang and Port Swettenham was *Umbrosus*, a jungle breeder of flat lands, that which did the harm in Kuala Lumpur was *Maculatus* (*Willmorei*) which breeds in the open on hilly lands.

In due time the report was submitted to the High Commissioner for his consideration. The High Commissioner, who paid a visit of inspection to the areas in question was not convinced that the clearing had had any connection with the outbreak. He pointed out that there were cleared valleys of a similar nature in Singapore and that they were free from malaria. He disallowed certain of the open brick or concrete

drains and substituted rubble drains. The sum asked for by the Committee was \$27,585, the sum sanctioned was \$10,320. Nothing was allowed for upkeep.

P.W.D. and Drainage

The European residential area was on State land and the task of ridding it of anopheline breeding grounds was entrusted to the State P.W.D. to carry out in 1908.

It does not seem to have been realised that the problem was chiefly an entomological one and that the engineering works necessary were only a means to an entomological end. The end aimed at was the rendering of certain areas impossible for mosquito propagation, and no system of drainage, however satisfactory from an engineering point of view, was of the slightest use if that end were not attained.

Also it seems to have been forgotten that the extermination of any animal from an area where it is prevalent is rarely possible unless the exterminators possess some knowledge of the animal and its habits and that the chances of success are infinitesimal when the hunter cannot recognise the animal when he sees it. Mosquitoes are animals and the above applies to any mosquito schemes.

With only one third of the sum deemed necessary by the Committee, the Public Works Department had no chance of success even had they gone to work in the best possible way. They did not however attack the problem in the proper manner, and it is probable that had the full sum been voted the result would still have been a failure.

The engineer had never made a study of mosquitoes and they could not spot an anopheline larvæ when they saw one. Being unfamiliar with the appearance of the larvæ they were unable to find out for themselves which were the dangerous areas and which were not. They could not tell therefore where to begin. The index of success was the absence of larvæ from areas which before treatment contained them. They could not check their results and they therefore did not know where to end.

As they knew nothing of the mosquitoes they wanted to get all of it was clearly a case for co-operation with those who did know. Cooperation was not invited. In direct opposition to the recommendations of the Committee the valleys were cleared without being efficiently drained.

Dr. Thornby had advocated drainage on the Klang system, that is to say, contour hill foot drains to intercept the water before it got to the swamps. His advice was not followed and straight tap drains were put in instead. These drains only dried the ground within a few feet of them, the intervening spaces remained wet, the subsoil rubble drains recommended by the Committee were not put in. Open rubble drains were used instead. These soon became choked with silt.

When all the money had been expended the valleys were only half done. No provision having been allowed for upkeep, the drains when finished were left to take care of themselves.

Health Officer's Findings

In the middle of 1909 malaria in the European quarters was as bad as ever, if not worse, and it was evident that the measures taken had not been successful. In an endeavour to arrive at the cause of failure, the writer, who had succeeded Dr. Thornby as Health Officer, made a personal survey of every valley in Kuala Lumpur from top to bottom, through cleared portions as well as through those still covered by jungle. Every stream, pool or collection of water met with was searched for anopheline larvae. Those cause were bred out and identified.

No larvae were found in the jungle-covered portions of the valleys, though water was plentiful and careful search was made. In the cleared portions they were easily found. There were many cases where larvae were plentiful right up to the edge of a clearing, but absent from the jungle-covered pools a few feet away. Pratt's and Fletcher's observations were thus confirmed. In the valleys which had been treated by the Public Works Department larvae were plentiful. They were particularly numerous in the spring water which trickled over the

surface of the rubble drains. Not having been covered with turf (as recommended by the Committee) or otherwise protected, the spaces between the stones had become blocked by mud and silt and the water which should have percolated through the rubble flowed over the top. In some valleys, where concrete drains had been constructed, the only place where one could walk dry-shod was the top of the drain itself, everywhere else was like a sponge and among the thousands of pools existing it was not difficult to find larvae.

A. Maculatus (Willmori) and *A. karrari* were the species most common in the spring water which oozed from the bases of the hills. The smaller the pool the more likely was it to contain larvae, even the scrapings from the surface of wet sand showed them. Running spring water contained them.

A. Rossi and *A. Kochi* were found in dirty water such as is contained in buffalo wallows, wheel tracks and rains contaminated by sewage.

A. Bargirostris and *A. Sinensis* were met with at the edges of larger pools and ponds, especially where those edges were grassy or grass appeared above the surface. They were also found among flating debris.

A. Umbrosus larvae were not met with.

After the valleys had been done the flats were searched. A report accompanied by a spot map was submitted to the principal Medical Officer. On the map 50 anopheline breeding places were shown. Attention was drawn to the fact that water in cleared valleys harboured anopheline larvae, while water in jungle-covered valleys did not.

Malcolm Watson had demonstrated that *Umbrosus* and *Maculatus* were carriers; nothing was known concerning the carrying properties of the other species. Watson had also shown that *Umbrosus* is a jungle breeder and that it disappears in clearing.

The cause of the fever could not be *Umbrosus*, for that species was conspicuous by its absence. Besides, the clearing of jungle would have lessened the amount of malaria whereas it seemed certain that it had the opposite effect.

Willmori (Maculatus) the only other carrier known was found breeding freely in the open valleys but not in those covered by jungle. The houses close to jungle covered valleys had no fever, those near cleared valleys had. The obvious inference was that the clearing of the valleys had created conditions favourable for the propagation of *Maculatus*, that the *Maculatus* population had therefore increased, and the increased number of carriers had, raised the incidence rate among those living in the neighbourhood.

Pratt's and Fletcher's theory was correct and the warning issued by the Committee was sound. In the execution of the anti-mosquito works that warning had been ignored. The valleys were felled and cleared but not efficiently drained, and an increased instead of a decrease in the number of breeding places resulted.

The following is an extract from the Health Officer's annual report of 1910. "It was noted that where the valleys had been cleared of jungle and *belukar*, larvae of the malaria carrying anopheline (*M. Willmori*) were found without difficulty in the clear water which had issued from the springs at the hill foots. In the valleys covered by *belukar* or jungle where the water (of which there was plenty) was coloured with vegetable matter not a single anopheline larvae was found. This experience agrees with that of Pratt and Fletcher in 1907. As malaria carrying anophelines breed in cleared valleys and shun those covered with *belukar*, the obvious inference is that the clearing of valleys will be followed by an outbreak of malaria if feci of infection be present and the valleys are left inefficiently drained."

The findings of the Health Officer were not generally accepted and even the medical officers remained unconvinced of the danger of clearing valleys. The subject was so important that independent action should have been taken to prove or disprove the theory, but nothing was done.

Petaling Hill Experiments

The investigations of the Health Officer commenced about the

middle of 1909 and the report on the anopheline survey was delivered to the Principal Medical Officer in April 1910.

Meanwhile notifications of malaria were constantly being received. Each case was gone into as thoroughly as time permitted. At the end of 1909 a European who lived on Petaling Hill, a new residential area not included in the Committee's report, wrote in, complaining that all his household had been down with fever. He blamed the ravines in front of his quarters in Belfield Road which contained scrub and *belukar* with open spaces in them. The inverta were wet and swampy. An anopheline survey by the Health Officer showed the presence of the fever carriers *Willmori Maculatus* in the open areas. It was reported to government and drainage recommended.

The State Engineer picked one of these valleys as a suitable place for experimentation in drainage. The valley was cleared of scrub and drainage on the herring-bone system tried. The central drain was an earth channel having at its invert concrete half pipe-roofed with flat perforated concrete slabs, the rest of the channel was filled with broken stone. The pipes were different but the drains were similar to those used with success at Panama. The subsidiary drains or ribs of the herring-bone were earth channels filled with broken stone.

The experiment was watched by the Health Officer, who checked the results by frequent mosquito surveys. The concrete pipes worked well. The rubble drain when new dried the soil for a couple of feet on either side. Beyond that they had no influence, and the ground remained wet and sloppy, and in the small pools larvae continued to develop. In a short time the interstices of the rubble drains became choked with mud and silt and the drains ceased to convey water, the choked drains were taken up and relaid. To dry the spaces between, some contour or intercepting drains were constructed at the hill foot. The contour arrangement was a great improvement on the simple herring-bone and for a time the valley was dry. In a month, however, the rubble drains had again become choked and it was decided to abandon them.

Dr. Watson

In February, 1910, Dr. Malcolm Watson at a meeting of the British Medical Association in Kuala Lumpur read a paper on malaria prevention. He described what had been done in Malaya and the results, and advocated a system of contour hill foot drainage by means of clay pipes laid underground. At that time, there were no clay pipes in Malaya. The local potters made flower pots and jars but they had never tried their hands at pipes. Dr. Watson pointed out that there was no reason why these pipes could not be turned out very cheaply and he showed specimens which he had made locally. He described a system of clay pipe drainage which he proposed to use on certain hill estates in the highly malarious Batu Tiga district.

In July, Dr. Watson paid a visit to the experimental drain at Petaling Hill and offered some friendly criticism. He considered that the main drain, the concrete pipe overlaid with stone, was performing its task satisfactorily, but that it was unnecessary.

The rubble drains he condemned. A trail of clay pipes was recommended and as none could be obtained in Kuala Lumpur he offered to provide a pattern which the local potters could copy. Mr. R.D. Jackson, who had newly taken over the anti-malarial drainage of State lands in Kuala Lumpur, took action on the lines suggested. The potters seeing there was money in it commenced making pipes on their own, this was the beginning of an industry which has so developed that there are now half a dozen potteries which manufacture pipes of clay for anti-malarial purposes.

The rubber drains were all taken up and replaced by clay pipes overlaid with broken stone, a system similar to that which had proved successful in Panama. The valley was dried and remained dry for a year or more. Upkeep was necessary.

P.W.D. Again

Somewhere around the middle of the year a sum was voted for the purpose of remedying the defects of the 1908 drainage

system and for certain extensions. The work was again entrusted to the Public Works Department to carry out. On this occasion both Federal and State lands were concerned. Operations on Federal land were allotted to a Federal engineer, that on State land to a State engineer. The two worked independently.

Plans for the State land were submitted to the Health Officer who passed them on condition that they were not to be considered final, but that any deviation found necessary during the progress of the work would be carried out. The Health Officer asked for the drainage of jungle-covered valleys and the felling to proceed side by side. This was rejected as impracticable. Plans for the Federal land were not submitted.

Work on State land commenced in July. The writer made frequent mosquito surveys during the progress of the work and communicated the results to the Executive Engineer.

Contour drainage had been repeatedly advocated by the writer but up to this time no engineer had consented to give it a trial. In this month a trial on a small scale was made both in Belfield Road experimental area and in Club Road Valley. An entry in the Health Officer's diary dated July 28th says: "Inspected Belfield Road and Club Road. I am glad to see the P.W.D. are trying contour drains at last, though they are not making them deep enough." That they were only half-convinced is shown by the following extract from the same diary: "Inspected anti-malarial drains in Club Road, the P.W.D. are putting in straight drains where they ought to put in contour drains. The scheme will be a failure unless the P.W.D. use common sense." Common sense eventually prevailed, for the diary entry of September 28th says: "Inspected Club Road valley. The contour drains have done the trick and the valley is perfectly dry." Leaving out the experimental one in Belfield Road this is the first instance of a valley having been drained to the satisfaction of the Health Officer.

Other valleys received attention, but the work there was not so thorough and when operations ceased there still remained sufficient breeding grounds to supply all the carriers necessary for maintaining the high malarial rate existing in the

neighbourhood. Much good work had been done but it had not gone far enough.

While the State authorities were engaged with the works on State land a Federal engineer was dealing with the Federal area. The Health Officer offered advice but it was not taken. Watch was kept and the various collections of water were frequently examined for the presence of larvae.

The concrete blocks intended for the open drains were cast on the spot. Unfortunately the ground chosen for the casting operation was wet and spongy and many small pools formed. The pools became populated with *Maculatus* larvae. At the end of 1910 so much breeding was going on that an increase of malaria seemed inevitable. Warning was given but no action was taken and the breeding continued.

Taiping

In January 1911 the Health Branch of the Medical Department came into existence and the writer was transferred to Taiping in the State of Perak as Health Officer, Perak North.

Taiping is situated on the flat at the base of the Hills, the European quarter is on that side of the town next to the hills. Until the previous year this quarter had been healthy but it was now malarious, the malaria followed the clearing of the hill land for rubber growing. Investigations were made and it was found that as in Kuala Lumpur the carriers were coming from the cleared valleys. All the valleys were searched. In those covered with jungle no larvae were found; in those which had been cleared *Maculatus* breeding grounds were found in plenty. A mosquito survey of the whole town was made and a spot map prepared. Only near the bases of the hills were carriers found. The European area suffered but there was little malaria in the rest of the town.

Malarious hill estates in the neighbourhood were investigated and in each case *Maculatus* breeding grounds were found in the cleared valleys and not in the jungle-covered ones. Pratt's and Fletcher's theory was true for the hill lands of Perak.

Malaria in Kuala Lumpur

Malaria in Kuala Lumpur in 1911 instead of declining increased. The conditions of the valleys at the beginning of the year were as follows.

Club Road valley was dry except at its mouth where there was a large pond. The pond did not furnish carriers and it therefore had no influence on the malaria. Bluff Road valley and Hospital valley had not been completely dried and there were still *Maculatus* breeding grounds, especially in the upper reaches. Venning Road valley was not satisfactory and breeding ground existed. In the Gardens there were still many dangerous places. *Maculatus* larvae were easily found near the Federal anti-mosquito works.

In fairness to the engineers it must be stated that the valleys which had been treated were not the only ones which contained anopheline breeding grounds. Owing to the general disbelief in the danger of clearing valleys no action had been taken to prevent further clearing. New valleys had been cleared by the Agricultural Department and by others and new breeding grounds had been created. These furnished their share of mosquitoes. Every house on Carcosa Hill and Federal Hill had cases. All were within easy flying distance of the Federal anti-mosquito works.

In the early part of the year the directors of a certain hill estate asked for investigations to be made by the Institute of Medical Research to confirm Watson's discovery that *Willmori* (*Maculatus*) carries malaria.

On June the 8th Dr. Stanton, the Government Bacteriologist, demonstrated the presence of zygotes in the stomach wall of *Anopheles Willmori* (*Maculatus*) taken in a house in Brickfields Road close to the Federal anti-mosquito works. On June the 28th in conjunction with Dr. Watson specimens of this mosquito were taken in coolie lines on a hilly estate in the notoriously malarious Batu Tiga district and sporozoites were demonstrated in the salivary glands. Watson's discovery made in 1906 that *Willmori* is a carrier in nature was thus confirmed.

Dr. Stanton says: "The number of *N. Willmori* taken in the lines and the readiness with which parasites demonstrated in them at a time when I was informed the estate was comparatively free of malaria and the absence of parasites in other species of anophelines examined show the great importance of this mosquito in malaria transmission in hill areas." It is a pity that Pratt's and Fletcher's theory was not tested at this stage. The question however was not taken up and the theory remained discredited until 1915 when Strickland published a paper confirming it.

Clearing went on steadily in Kuala Lumpur, an extract from Dr. Gerrard's health report of 1911 says: "During the year much jungle and undergrowth was cleared and many subsoil drains laid. In spite of this malaria has increased."

A further extract from the same report is of interest: "The anophelines of the environs of Kuala Lumpur are being worked out by Dr. Stanton of the Institute of Medical Research and maps showing where larvae are found are nearing completion." The fact that there was a recent anopheline survey map of Kuala Lumpur already in existence seems to have been overlooked, at any rate no use was made of it.

Dr. Charles Lane Sansom was appointed Principal Medical Officer, Federated Malay States in January.

On his arrival he found that the medical problem which most required attention was malaria and its prevention. The position in Kuala Lumpur was far from satisfactory. The subject had been engaging the attention of the authorities for four years, yet in spite of the efforts made, malaria was on the increase. Dr. Sansom made investigations and came to the conclusion that the reasons for failure to reduce malaria lay in division of responsibility, lack of thoroughness and unsuitable methods, resulting in bad drainage. The works had been controlled by various State and Federal authorities, each of whom proceeded independently.

In August, Dr. Sansom wrote in to Government and pointed out that the suppression of malaria in these States is not such a simple matter as it is described in the works of Ross and

Boyce. "Because of the difficulties which had to be overcome he recommended the appointment of a standing Committee to:

- (a) collect information and evidence with regard to the incidence of malaria;
- (b) select the most appropriate schemes which could be used in various parts of the States and advise Government as to how they should be carried into effect;
- (c) issue instructions as to details, control and upkeep of anti-malarial works;
- (d) diffuse information; and undertake any other duties which in the opinion of the Chief Secretary would be likely to prevent malaria."

The Committee recommended was—The Principal Medical Officer: Dr. Stanton "to keep members in touch with research work here and elsewhere," Dr. Malcolm Watson "as the medical representative who had much practical experience; one or two prominent planters; a district officer who had had experience in Sanitary Board Work; and an engineer skilled in drainage work."

"Such a Committee would inspire public confidence in the first place and therefore there would be less resistance to any measures which might have to be enforced. The Government would be advised as to the best means which could be adopted to control the disease, and if all contemplated schemes are submitted to the Committee, not only would uniformity result, but expenditure on useless fads and theories be prevented." Government accepted the recommendations and the Malaria Advisory Board was formed, the composition of the Board was: Mr. E.L. Brockman, C.M.G., Chief Secretary (President), Dr. C.L. Sansom, Principal Medical Officer (Vice President), Mr. J.H.M. Robson, Dr. Malcolm Watson, Mr. H.T. Quartley, Dr. A.T. Stanton, and Mr. F.D. Evans, Assistant Engineer, Public Works Department.

The Board met for the first time in November and there was a second meeting in December. It was decided that the drainage of the European residential area should be completed under the instruction of the Board, "to serve as an illustration

of what could be done by this means to free an area of malaria." It was decided to work on the following lines.

- (1) All ravines to be cleared for six feet up the hill.
- (2) Open earth channels to drain laid previous to pipe laying.
- (3) Subsoil contour pipe drains (clay pipes) to be placed at the feet of all slopes.

The cement drains already in position to be left for the time as they might prove satisfactory.

- (15) Mr. F.D. Evans to supervise the work.

Work Commences

Mr. Evans, who was seconded from the Public Works Department and appointed Executive Engineer to the Board, realising the vital importance of the mosquito side of the problem, early took up the study of the local anophelines. He was the first engineer in the Federated Malay States who had ever bothered about them. He was thus able to check results and ensure that each section had been freed from breeding grounds before another was commenced.

Some idea of the incompleteness of previous works can be got from the minutes of the Board of February 12th, 1912. "The Board is informed that every ravine head is left unfinished, thus creating typical mosquito breeding places for mosquitoes most dangerous to health. Additional drainage on Petaling Hill is approved." Undergrowth along drains in Federal Reserve to be cleared and when drainage has been completed jungle on both sides of the hill to be cleared. Additional work required in ravines between Club Road and Maxwell Road."

To subsoil the whole of the ravines west of the river was a big job, something like 50 miles of piping being necessary. The work was pushed on rapidly, but of course it took time to complete.

Experiments were made in drainage and it was early found that the rubble filling over pipes was not only unnecessary but harmful; better results could be got by protecting the pipes from silt with a layer of dried palm leaves and

covering in the trench with earth. The same system had been used with success on Seafield Estate, which had been drained under the supervision of Dr. Watson.

The subsoil drains laid in the 1910 campaign were left until they showed signs of blockage, when they were taken up and replaced by others. By the end of 1913 there were practically none of the old type left.

European Residential Area

The result of the drainage was most satisfactory, and in 1913 the European residential area for the first time in seven years was free from malaria and it has remained free ever since. For the first time in the history of Kuala Lumpur anti-mosquito works had been carried out under the authority of a Board containing medical entomologists familiar with the mosquito it was desired to get rid of.

The success was due to the complete eradication of *Maculatus* breeding ground brought about by a system of drainage specially designed to deal with the problem. Particular mention must be made of the excellent work done by Mr. F.D. Evans, the Board's executive engineer. He was keenly interested in the subject and he carried out the details of the scheme with such thoroughness and skill that no place was left suitable for *Maculatus* to breed in. Strict attention to detail was absolutely essential for with so efficient a carrier as *Maculatus* even small and insignificant looking pools of water are sufficient to keep the disease smouldering.

Malaria not being a notifiable disease the incidence figures are not available. Europeans, however, are never slow in complaining to the Health Officer when a case occurs in their households, and the fact that complaints which had been of almost daily occurrence in 1910 and 1911 ceased to be received after 1912 shows that malaria in the European residential area came to an end about that time.

The influence of drainage operation was not confined to the European quarters. The shophouse area of the town was

within flying distance. There is no doubt that it benefitted. The malaria death rate for the whole town dropped from 9.87 in 1911 to 5.53 in 1912.

The report of the Health Officer (Dr. A.R. Wellington) for 1913 says: "The great drop in the death rate for this disease must be attributed to the extensive drainage operations which were undertaken by the Malaria Advisory Board to get rid of the breeding places of malaria carrying mosquitoes. Valleys which were teeming with *Maculatus* larvae are now bone dry."

The action taken by the Malaria Advisory Board in the area selected for demonstration purposes had been so successful that it was decided to extend operations and deal with other areas in the town where malaria was prevalent.

The following table shows the number of deaths among the residential population due to "fevers" in most cases malarial, the fever death rate per mile population and the general death rate.

Year	Population	No. of deaths from fever	Fever death rate	General death rate
1907	41,331	537	12.99	36.40
1908	42,775	423	9.88	41.19
1909	43,209	341	7.89	32.95
1910	45,642	486	10.64	33.15
1911	47,075	465	9.87	39.02
1912	48,508	266	5.53	37.00
1913	56,487	314	5.56	35.62
1914	58,107	361	6.21	35.88
1915	59,727	325	5.44	27.83
1916	61,443	408	6.64	27.73
1917	63,064	293	4.65	28.45
1918	64,686	393	6.08	38.34
1919	66,308	311	4.69	26.36

The figures for the year previous to 1907 are too unreliable to be quoted, for until that year, the importance of distinguishing between deaths due to diseases contracted in the town and those contracted outside was not generally realised, and the subject did not receive the attention it merited, either at the hands of the hospital authorities, or the police, to whom deaths outside hospital were reported. The figures for any year are not strictly accurate, for often a native deliberately gives a fictitious address on entering hospital—they are however sufficiently accurate for general comparison.

In 1918 a severe influenza epidemic spread over the whole country and probably many of the deaths returned that year as due to fever were really influenza deaths.

Death Rate

The great drop in the general death rate from 39.02 in 1911 to 26.36 in 1919 that is 12.66 per mille population, must not be attributed solely to the action of the Malaria Advisory Board. The average fever death rate for 1908 to 1911, the period in which clearing of valleys was not followed by efficient drainage, was 9.57, that of 1912 to 1919, the period in which clearing was accompanied by efficient drainage, was 5.53, a drop of 4.04 per 1,000 only (1918 being the influenza year is not counted).

Malaria of course has an influence on other diseases, and the drop in the fever death rate does not indicate the total improvement brought about by the abatement of the disease. Again the operations of the Malaria Advisory Board were not the only anti-malarial measures being carried out in the town. The Health Officer's staff and the Sanitary Board staff had not been idle and a considerable amount of oiling and minor works had been done.

It is not unfair to the Malaria Advisory Board to attribute half to the operations and the other half to the improvement in the health conditions brought about by the Health Department of the Sanitary Board.

Pratt's and Fletcher's Theory

In 1912 Dr. C. Strickland came to this country as Medical Entomologist to carry out research in connection with the biology of mosquitoes. In 1915 this officer published a paper giving the results of his research in hilly lands. His experiences coincided with those of Pratt, Fletcher and Wellington in that he found wooded valleys practically free of anopheline larvae, while cleared valleys contained them. He said that hilly land, provided the valley were left alone, was not malarious, and that hilly land with cleared valleys was. He advocated the non-clearing of valleys in the vicinity of habitations and recommended that those cleared should be allowed to revert to their original state. The matter was taken up by the press and given full publicity. Pratt and Fletcher seem to have been forgotten for their names were never mentioned. The theory was called "Strickland's theory" and that is the name by which the public knows it today.

Danger of Clearing Valleys

The Malaria Advisory Board now for the first time gave the theory serious attention, and apparently it became convinced of its truth, for in August 1916 in a circular issued from the Federal Secretariat setting forth the aims of the board, the following Statement occurs:

"4. The Board aims at the extermination of anopheles mosquitoes in all thickly populated centres, and, wherever economically possible, in rural areas, and wishes to effect a reduction in mosquitoes generally. The means to be adopted are ... (e) Non-disturbance and encouragement of dense natural growth in ravines and swamps where effective drainage is not carried out and where the conditions are such that this course will result in preventing the formation of anopheline breeding places."

This, in other words, is the warning of the Malarial Committee issued in 1907, consequent to Pratt and Fletcher's

discovery. Nine years were allowed to elapse before the theory received formal recognition.

Work Done by Board

At the end of 1917 the area maintained by the Malaria Advisory Board was 4,500 acres (over 7 square miles). The drainage completed included 65 miles of subsoil piping, 8½ miles open masonry channels, and 12 miles of open earth channels. The following figures taken from the Board's report for 1918 show the money expended in anti-malarial works in Kuala Lumpur.

	<i>Year</i>	<i>Construction (\$)</i>
	1908-1911	47,705
	1912	37,526
Malaria	1913	68,459
Advisory	1914	22,314
Board	1915	8,988
Expenditure	1916	23,054
	1917	23,630
		<u>183,971</u>

	<i>Year</i>	<i>Maintenance (\$)</i>	<i>Total (\$)</i>
	1908-1911	6,986	54,691
	1912	5,559	
Malaria	1913	11,116	
Advisory	1914	11,156	
Board	1915	10,705	
Expenditure	1916	10,487	
	1917	10,205	
		<u>59,230</u>	<u>243,201</u>

How much of this would have been necessary had Pratt and Fletcher's theory received due recognition and the valleys been left in jungle it is difficult to say. One thing however is certain: the valleys had either to be left absolutely alone or

cleared completely, and thoroughly drained, for where so efficient a carrier as *Maculatus* is concerned partial measures are inadmissible. To keep the valleys in such a town as Kuala Lumpur undisturbed, fences and an efficient system of patrol are essential. Nothing short of this will prevent the Asiatic citizen from trespassing and interfering with the natural growth. Probably sooner or later clearing would have been found necessary.

Conclusion

The story of the rise and subsidence of malaria in the hill land of Kuala Lumpur has been told at some length for it is of much interest.

There is no doubt that the clearing of the valleys started malaria in the European residential area and increased the incidence and death rate in the town generally.

The findings of Pratt, Fletcher and Wellington showed the relative harmlessness of jungle-covered ravines, but those findings were disregarded.

From 1906 to 1911 the residential area became progressively more malarious and the anti-malarial campaigns carried out by the Public Works Department did more harm than good.

In 1912 a suitable system of drainage was laid down at considerable expense. The malaria disappeared from the hills and the death rate in the town fell considerably.

Kuala Lumpur stands as an expensive warning against interference with jungle ravines in "Inland Hills", unless provision has been made for draining those ravines bone-dry and maintaining them in that condition.

The lessons taught by the three anti-malarial campaigns (1908, 1910 and 1912) are:

- (1) That anti-mosquito schemes cannot be a success unless framed and carried out under the supervision of those familiar with the habits and life history of the species it is intended to get rid of.

- (2) That a scheme suitable for the eradication of one species of mosquito is not necessarily suitable for another. The methods found successful in the case of *Umbrosus* proved worse than useless in the case of *Maculatus*. Schemes suitable in one country should not be slavishly followed in another where the mosquito fauna is different. A thorough mosquito survey is an essential preliminary to any scheme and the scheme should be framed according to the mosquito findings.
- (3) That a problem full of indeterminate elements is impossible of solution without trials and experiments, unforeseen difficulties are certain to arise in the course of the work and allowance should be made for any deviation from the scheme which may prove necessary. In many cases the estimate of costs can only be a guess and a scheme should not be allowed to fail for want of a little extra money.
- (4) That in hill land, clearing of valleys unless followed by efficient drainage, is dangerous, as it promotes facilities for the propagation of the dangerous carrier anopheles *Maculatus*.

- *Malay Mail*, October, 1920.

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