

Papers relating to the 1995 Audit Review

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Extract from Director of Audit's Report No. 24 - March 1995

Highways Department

3. The lane rental trial and other measures to reduce the incidence of delays in the completion of utility works on Hong Kong roads

Introduction

3.1 Traffic disruptions caused by roadworks have long been a subject of public concern. The table below shows some statistics of road openings in recent years:

Year	No. of openings	Total length of roads (km)	No. of openings per km
1990	47,413	1,484	31.9
1991	47,891	1,529	31.3
1992	56,791	1,559	36.4
1993	60,888	1,625	37.5
1994	58,102	1,661	35.0

Road openings are required either by the Government for the maintenance of the road network, or by utility undertakers for the laying, upgrading and maintaining of their utilities (utility works). The number of road openings had increased from 47,413 in 1990 to 58,102 in 1994, or an increase from an average of 32 to 35 road openings per kilometre of road a year. Of the 58,102 road openings in 1994, 60% were for utility works and the remainder for road maintenance purposes. The traffic delay time, that is the additional time spent by road users in getting past the road opening site, could have been utilized in a more constructive way in the production of goods and services. It has been accepted by the Government that the cost of traffic delay is a serious social cost which should be reduced wherever possible.

3.2 The Government's control of the utility undertakers' opening of roads is exercised through the excavation permit (EP) system. Under section 8 of the Crown Land Ordinance (Cap. 28), a utility undertaker is required to obtain an EP for making excavations from the following designated authorities:

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Area	Authority
Urban area	Director of Lands
New Territories, except New Kowloon	Director of Highways in the case of streets maintained by the Highways Department (HyD)
	Director of Lands in the case of unleased land and streets, other than streets maintained by the HyD

The Director of Lands has delegated the above authority to the Director of Highways in respect of streets in the urban area maintained by the HyD. Under the Crown Land Regulations (Cap. 28), an EP is issued to the applicant free of charge.

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3.3 Measures to reduce the incidence of delays in the completion of utility works on Hong Kong roads was a subject I referred to in paragraphs 5.1 to 5.21 of my Report No. 17 of October 1991. In its Report No. 17 of January 1992, the Public Accounts Committee:

- noted with grave concern the increase in the number of road openings and the related social costs;
- urged the Administration to expedite its review of the proposed lane rental scheme and to ensure that resources were made available for its early implementation;
- urged the Administration to introduce, in the meantime, measures to improve the existing road-opening system having regard to the importance of forward planning and effective co-ordination among parties concerned; and

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- urged the Administration to seriously consider the suggestion of carrying out the utility works at night-time.

In the Government Minutes of May 1992 and May 1993, the Public Accounts Committee was informed by the Administration that:

- mock trials of a lane rental scheme had been carried out. No comprehensive conclusion could be made at that stage due to limited data. Works on all the selected sites would be completed in June 1993 when a final evaluation would be made;
- the Joint Utilities Policy Committee and the Utilities Technical Liaison Committee had been established to supplement the three Regional Road Opening Co-ordinating Committees of the HyD. As a result, there had been further improvement to overall co-ordination among the Government and the utility companies; and
- night works were carried out at locations where construction noise level could be kept within the required limits.

The trial of the lane rental scheme referred to above was called the Lane Rental Trial (LRT) which was carried out from July 1992 to June 1993 to assess the viability of a charging scheme for utility companies occupying road space longer than necessary. In its Report No. 21 of January 1994, the Public Accounts Committee expressed concern at the slow progress of the Administration's evaluation of the trial of the lane rental scheme and urged the Administration to complete the evaluation without further delay.

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3.4 Up to December 1994, the position remained more or less the same. A follow-up audit review was therefore conducted recently to ascertain:

- whether there were any problems associated with the LRT; and
- what other measures the Government had taken to reduce the incidence of delays in the completion of utility works on Hong Kong roads.

Development of the lane rental initiative

3.5 In the late 1980s, the HyD obtained information from the Department of Transport of the United Kingdom on the application of the lane rental concept to road works contracts. In January 1990, the White Paper on Transport Policy in Hong Kong was issued. It stated that “The Government is also exploring the possibility of imposing a charge for occupancy of road space by utility companies to avoid unnecessary lengthy delays of utilities works”. An inter-departmental Working Group on Lane Rental Form of Contracts was established in February 1990. It comprised representatives from the HyD, the Finance Branch and the Transport Branch of the Government Secretariat, the Transport Department (TD), the Water Supplies Department, the Drainage Services Department and the Legal Department. Its main objective was to study the feasibility of introducing the lane rental scheme to government roadworks contracts, waterworks main-laying contracts and public utility operations.

3.6 In May 1990, the Chief Secretary indicated at a meeting with the Secretary for Transport his interest in seeing early implementation of a scheme whereby utility undertakers would be financially penalized for occupying road space longer than necessary. After a series of consultations with the interested departments and the utility undertakers, in October 1991 the Working Group on Lane Rental Form of Contracts obtained the

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approval of the Transport Policy Co-ordinating Committee to:

- continue with the lane rental study with the aim of implementing a lane rental scheme;
- explore at the same time other alternatives to reduce disruptions caused by roadworks; and
- introduce an EP fee to cover the cost of issuing permits irrespective of the decision on the future of the proposed lane rental scheme.

Objectives of the LRT

3.7 An LRT was therefore carried out commencing from July 1992 which was initially planned to take about six months to complete. However, completion of the trial was extended to June 1993 because of a lack of suitable sites. The objectives of the trial were to:

- assess the additional resources that would be required to operate the lane rental scheme;
- assess the costs and benefits associated with the operation of the scheme;
- validate the assessment of permit period;
- determine the class of road on which the scheme, if it was to be implemented, could be applied; and
- assess the adequacy of the lane rental rate devised by the TD.

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Charging options under the LRT

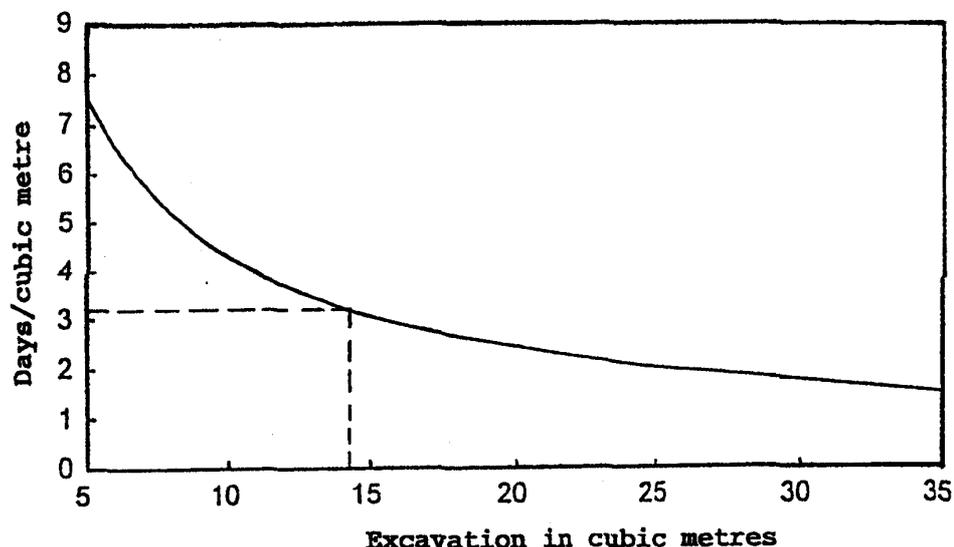
3.8 In the LRT, a number of works sites in various categories of roads were chosen from each of the five non-government utility undertakers, the Water Supplies Department and the Drainage Services Department. The sites were either selected by the HyD or proposed by the utility undertakers. The following three simulated charging options of the scheme were evaluated in the trial:

- (a) ***Standard Unit Working Time (SUWT) option.*** The utility undertaker was allowed a permit period free of charge to carry out the works. The permit period was determined by multiplying the quantity of works to be carried out with a set of unit working times jointly assessed by the HyD and the utility undertakers, plus an additional period to take into account site conditions and special circumstances. The permit period could be extended where unforeseen circumstances were encountered. A rental fee would be charged for any delays that could not be justified;

- (b) ***Average Working Time (AWT) option.*** The utility undertaker was allowed a permit period free of charge to carry out the works. The permit period was determined from a formula or an AWT curve (see Figure below) based on the quantity of excavation. The formula was derived from the data extracted from EPs issued between 1990 and 1991. Due to the difference in nature of works, different AWT curves were used for different utility undertakers. Under this option, no time extensions would be allowed. A rental fee would be charged for any delays; and

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A typical AWT curve (based on 1990-91 data)



- (c) *Daily Rental (DR) option.* The utility undertaker was not allowed a permit period free of charge to carry out the works. A rental fee would be charged for the period during which a road lane or part thereof was occupied.

Under the first two options, when applying for an EP, the utility undertaker had to submit a works programme showing how the permit period was calculated.

3.9 Since an amendment to the Crown Land Regulations would be necessary to provide a legal basis for the charging and collection of lane rentals, the lane rental scheme was investigated on a simulated trial basis and rental charges to the utility undertakers were not actually raised during the trial period.

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Lane rental rate under the LRT

3.10 Since a rental fee would be charged for the DR option and for any delays not justified under the first two options, daily rental rates had to be determined. Attempts were made to relate the lane rental rate to traffic delay cost as this was expected to be the most significant area of impact on the general public.

3.11 The TD carried out surveys to find the likely traffic delay costs at eight road opening sites before the start of the trial. It was found that the traffic delay costs varied greatly from about \$100 to \$11,000 per day. The TD concluded that the traffic delay cost on one site would not provide a basis for estimation of the traffic delay cost for another road. This was because of the numerous factors (such as class of road, traffic volume, traffic capacity, road gradient, length and width of roadworks, etc.) involved. In addition, the wide variation and the non-linear relationship between these factors and the traffic delay cost made the estimation of traffic delay costs for other sites, based on the measured data, an impracticable task. As the traffic delay cost could vary significantly from a few dollars (e.g. a feeder road leading to a few buildings) to a few million dollars (e.g. at cross harbour tunnel approach roads), the TD considered that it was impractical to base the rental charge on traffic delay cost due to the vast staff resources required to assess the traffic delay cost involved. Instead, the TD proposed a simpler approach to calculate the lane rental rate, using a formula based on the rental rate of land for open storage and the traffic capacity per lane.

3.12 Based on the proposed formula, the daily rental for local distributor roads was \$3,850 per 100 metres of lane. For each higher category of road, an arbitrary increase of \$1,000 was added to the basic rental to reflect the different effects on traffic on different roads, as follows:

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Road category	Daily rental rate per 100 metres of lane (or part of 100 metres or part of day)
Trunk road	\$6,850
Primary distributor	\$5,850
District distributor	\$4,850
Local distributor	\$3,850

**Implementation of
the LRT**

3.13 A total of 103 utility sites in three road categories (no site was identified in the trunk road category) were selected and monitored by the HyD during the one-year trial. For each site, the progress of the works was closely monitored and data was collected for the actual working time spent by the utility undertakers to complete the works and the additional staff time spent to operate the trial by both the HyD and the utility undertakers. To facilitate monitoring progress and resolving problems, a working group chaired by a Chief Engineer of the HyD and comprising representatives of the utility undertakers was set up in August 1992.

**Limitations of the
LRT**

3.14 The HyD had recognized the following limitations of the LRT:

- the actual traffic delay due to utility road opening works was not investigated during the trial as the TD considered that it would not be practical to carry out the necessary traffic survey assessment due to the resources required;
- no assessment on the impact on pedestrian flow, environmental nuisance, disruption to local occupiers of premises and the increased accident potential to road

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users due to utility works was made. Consequently, these factors could not be taken into consideration;

- as the trial was carried out without actual rental charges, it was assessed that under an actual lane rental scheme, additional staff would be required to assess and negotiate any claim for extension of permit periods;
- additional construction costs incurred by contractors under the scheme were not assessed; and
- benefits of the lane rental scheme were difficult to quantify accurately in view of the intangible nature of the disruption to the public due to utility works.

Results of the LRT

3.15 The trial results indicated that on average the actual working time was lower than the permit period for both the SUWT and AWT options, indicating that there had been an apparent reduction in traffic disruption. The HyD also found that, for the SUWT and the AWT options, the average additional staff cost was less than the average monetary benefit from the reduction of disruption to traffic (quantified using the lane rental rate). However, the HyD could not conclusively determine from the trial results whether the utility undertakers actually sped up their works or whether the permit period was excessive. The HyD noted that since quite a number of the sites, where the permit period was not exceeded, were unattended at some stage, it could be deduced that the permit period for these sites was excessive. As no free period was allowed under the DR option, a similar comparison was not possible.

3.16 Based on the results of the LRT, the HyD was of the view that:

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- although the trial results gave an apparent reduction in disruption to traffic, it did not indicate that the works had been carried out faster due specifically to the lane rental scheme. It was believed that co-operation from the top management of the utility undertakers, rather than the scheme, had encouraged the utility undertakers to deploy more resources to carry out the works;

- the SUWT option was not appropriate for assessing the permit period. It was not practical to assess a standard unit working time for each activity of utility works because the reasonable working time of each activity depended on the actual site conditions. Similarly, it was not practical to apply the AWT option to assess the permit period due to the wide variation in the nature of utility works and site conditions;

- the additional staff resources deployed for the trial were not sufficient to operate the SUWT option, but could provide sufficient information and a level of control required for the AWT option;

- as the daily traffic delay cost for some roads could be less than \$100, it would not be cost-effective to apply the lane rental scheme to these roads but should be applied to trunk roads, primary distributors and networks of roads within areas where traffic was busy; and

- since no actual rental charge was imposed, it could not be concluded whether the rental rate was adequate to have a deterrent effect on utility undertakers so as to minimize unnecessary delay in their works.

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Viability of the lane rental scheme

3.17 Regarding the viability of the lane rental scheme, the HyD noted that:

- it was practically very difficult to determine a reasonable permit period;
- there was no incentive to complete the works in the least possible time;
- a substantial increase in staff would be required for both the HyD and the utility undertakers to operate the scheme. Such staff would be more effectively utilized to increase monitoring, control and co-ordination of the utility works rather than to operate the scheme;
- it was likely that the utility undertakers would transfer the rental charge and additional costs to consumers and no feasible and practical means could be devised to avoid this potentiality. Therefore, the scheme would not have a deterrent effect on the utility undertakers so as to minimize unnecessary delay; and
- assessment of the permit period and extension of time under the scheme would involve personal judgement and would create conflict between the staff of the HyD and the utility undertakers and increase opportunities for corruption.

3.18 In view of the above unfavourable findings, the Director of Highways did not recommend pursuing the lane rental scheme. In September 1994, in a progress report on outstanding issues in previous Government Minutes, the Administration informed the Public Accounts Committee that the Director of Highways had concluded, arising from the LRT Study, that it would be difficult

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and ineffective to implement a lane rental scheme in Hong Kong. There were strong reservations from the utility companies citing problems in determining a reasonable permit period. The costs of operating the scheme for both the Government and the utility companies would be high. In view of such unfavourable findings, the idea had been shelved.

Audit observations on the LRT

3.19 Due to the difficulty in quantifying in monetary terms the reduction in disruption to traffic, the social and economic benefits of reduced disruption to traffic had not been assessed. Consequently, the additional operating costs of the LRT had to be compared with the monetary benefits based on the daily lane rental rates and not the traffic delay costs. In this connection, only the engineering and technical staff of the HyD and the utility undertakers directly involved were included in the costs. The costs of supporting staff, such as accounting personnel which would be required for implementing the scheme, and the additional costs likely to be incurred by the utility undertakers' contractors had not been included in the costs.

3.20 An important objective of the LRT was to validate the assessment of the permit period and to ascertain whether a lane rental scheme would cause a change in the utility undertakers' working practice so that the utility works would be completed earlier. However, as noted by the HyD, both the SUWT and the AWT options were found to be inappropriate for assessing the permit period, and the effect of the lane rental scheme on the utility undertakers' working practice might not have been fully reflected in the trial because the utility undertakers were aware that no lane rental would actually be imposed on them.

3.21 Due to the inherent limitations, I have expressed the view to the Director of Highways that the LRT carried out did not provide a realistic evaluation of the true benefits and costs of implementing the lane rental scheme.

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Other measures to reduce traffic disruptions

3.22 To address the concern that action to improve the management of road openings had so far produced only barely measurable results, in August 1993 the Road Openings Working Party (ROWP) was established. It was chaired by the Secretary for Works and comprised representatives from the Works Branch, the Transport Branch, the HyD, the TD, the Environmental Protection Department and the Royal Hong Kong Police Force. The ROWP's terms of reference were to:

- reduce the incidence of road openings and their duration and ameliorate their effects so as to minimize disruption to traffic and maximize space for vehicles and pedestrians; and
- formulate by the end of October 1993 short term and medium to long term measures, taking into account the practicability of procedures implemented successfully overseas.

3.23 In October 1993, the Governor said in his annual address to the Legislative Council that the Government would introduce tougher controls on road excavation, a major and particularly irritating cause of road congestion, and that a government working group would report at the end of October 1993 on ways to reduce the problems caused by road excavations.

3.24 An action plan was accordingly drawn up by the ROWP to tackle the problems of road excavations. The improvement measures included the following:

- 48 additional posts were created in the HyD in 1993-94 to co-ordinate road excavation works and to increase the frequency of site inspections to ensure compliance of permit conditions, especially to reduce the occurrence of

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road openings unattended without valid reasons;

- as a condition of permit, publicity signboards were required to be displayed on road opening sites since early 1994. These signboards would show the expected completion date, nature of work and telephone numbers for enquiry or complaints. Larger signs for motorists were provided for major highway works and the requirement would be expanded to cover all major road openings;
- close monitoring and periodic reviews of emergency road excavations would be carried out with a view to cutting down the number of EPs for road openings not of a real emergency nature;
- temporary decking would be required over excavations left open for two days or more;
- more information would be gathered on the layout of underground utilities by carrying out surveys not involving digging so as to minimize delay and the risk of damaging existing services;
- the co-ordinating procedures would be tightened to minimize the need for re-opening roads. Since October 1994, the utility undertakers were required to submit the works programme for large scale works or works in major roads at least three to six months in advance for consideration, co-ordination and endorsement of the Road Opening Co-ordinating Committee;
- an overall ban was imposed on daytime utility road opening on major roads from December 1994 and the use of quieter excavation equipment was promoted to

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facilitate night-time works;

- traffic impact assessments would be required to be carried out for all utility road opening works, except emergency works, to evaluate the impact of road opening works on traffic and to formulate mitigating measures for the agreement of the TD and the Traffic Wing of the Royal Hong Kong Police Force before the EP application. This was implemented in stages since September 1994 and was expected to cover all major roads by April 1995;
- consultants would be employed to design a map-based computer system to be completed in late 1995, to facilitate co-ordination and management of road excavations and information flow between utility undertakers;
- a list of contractors for road opening works would be established to facilitate the utility undertakers in selecting suitable contractors for road opening works. Performance of the contractors on the list would be made known to the utility undertakers;
- permanent road reinstatement would be carried out by utility undertakers to shorten the duration of road opening. Action was implemented in stages and would be completed by April 1995; and
- the conditions of the EP would be amended to make them more stringent. New conditions would be added requiring the utility undertakers to provide effective and proper supervision over their contractors.

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Audit observations on other measures to reduce traffic disruptions

3.25 In September 1994, the Secretary for Transport said in a ROWP meeting that “in the attempt by Government to reduce inconvenience to the public, not enough had been done to achieve tangible results still there was no plan to introduce incentives for early completion of works on public roads and insufficient temporary decking of road openings during peak hours.” He also said that “it was particularly important to achieve tangible results to confirm to the public that Government was making a concerted effort to improve road conditions.”

3.26 It may now be premature to have a comprehensive evaluation of the effectiveness of the various measures to reduce traffic disruption, as:

- some of the measures are long-term targets;
- some measures (e.g. the proposed computer system and the use of new low noise equipment) have been under consideration or on trial; and
- others (e.g. increased control and supervision, temporary decking and traffic impact assessments) are in the process of being implemented.

Nevertheless, there is a need for more expeditious action to produce quicker and more tangible results. For instance, according to the EPs issued, over 50% of the road openings of two utility undertakers were still classified as for emergency works. Tightening the monitoring may still be required so as to reduce the number of EPs being granted for openings not of a real emergency nature.

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Delay in introduction of an EP fee

3.27 Under the Crown Land Regulations, an EP is issued free of charge. In 1987, a study conducted by the Finance Branch concluded that utility undertakers should be charged a fee for an EP application. The fee would cover administrative costs and would have the effect of reducing the large proportion of EPs issued and subsequently cancelled. In October 1991, the Transport Policy Co-ordinating Committee agreed to the fee charging proposal, irrespective of the decision on the future of the proposed lane rental scheme.

3.28 Although the utility undertakers were informed in December 1991 of the Government's intention to collect an EP fee, the fee proposal has still not been implemented. In February 1992, when a nine-month moratorium on increases in departmental fees and charges was due to expire, the Director of Highways put up the fee charging proposal to the Secretary for the Treasury. However, the Director of Lands did not support the proposal as the issue of the EP was considered to be an exercise to tighten land administrative control at the district level. However, the Secretary for the Treasury did not agree to this argument.

3.29 In February 1994, the Secretary for the Treasury requested the Director of Lands to provide information on the costs of EPs issued by him. In September 1994, the Director of Lands informed the Secretary for the Treasury that according to his costing exercise, the proposed fee should be \$1,500 per permit. However, the Director of Highways had indicated that, based on his costing exercise, the fee should be \$720. Therefore, the Secretary for the Treasury asked for a consolidated fee proposal aimed for implementation in mid-1995.

Financial implications of the delay

3.30 The delay in introducing the EP fee has substantial financial implications for the Government. The costing exercises of the HyD and the Lands Department indicated that for 1994-95, the cost for processing EP applications would amount to

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\$22 million (\$16 million for the HyD and \$6 million for the Lands Department). Based on the data for the year 1994, 80% of the EPs were issued to the private utility undertakers. Therefore, if the costs had been recovered, the EP fee would have amounted to \$17 million (\$22 million x 80%) a year.

Audit conclusions and recommendations

3.31 The number of road openings have increased in the past few years because of the rapid development and redevelopment in the territory, and the general rise in living standards leading to upgrading of services including utility services. There has been a delay in finalizing the report on the LRT. Moreover, the true benefits and costs of a lane rental scheme could not be evaluated from the LRT because, on the one hand, the monetary benefits associated with the reduction in disruption to traffic had not been assessed and, on the other hand, the costs did not include all indirect costs. Although the other measures recommended by the ROWP to deal with the road opening problems appeared to be capable of improving the situation, greater effort will be required to produce more visible result.

3.32 I have *recommended* to the Director of Highways that:

- the HyD should finalize the report on the LRT as soon as possible so that a decision can be made on the viability of a lane rental scheme;
- as the public pressure on the Government to solve the problems of traffic disruption caused by road openings will not go away easily, the Government should implement as quickly as possible the measures identified by the ROWP so as to produce quicker and more tangible results in reducing disruptions to traffic due to road openings; and

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- expeditious action should be taken by the parties concerned to implement the EP fee charging proposal.
- Response from the Administration** 3.33 The **Director of Highways** has informed me that:
- the question of the lane rental scheme is being re-examined by the ROWP;
- regarding the emergency road excavations of over 50% by two utility undertakers, the relatively high percentage of emergency works is not unreasonable as the two types of utility services are concerned with street lighting and water supplies and are susceptible to damage; and
- random checks on the nature of emergency works are being carried out.
- 3.34 The **Commissioner for Transport** has informed me that, because of the practical difficulties in assessing the traffic delay cost, the TD suggested the use of the simple formula to determine the lane rental rate. However, he had stressed that such a formula, being arbitrarily fixed, did not necessarily reflect the economic loss and could not be defended on traffic grounds.
- 3.35 The **Secretary for Works** has informed me that:
- the lane rental scheme should be considered in conjunction with other improvement measures proposed by the ROWP. For instance, as daytime road opening in major roads have now been banned, adopting the lane

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rental scheme in such roads can only serve to speed up the night-time works which do not significantly affect the traffic;

- regarding the other measures to reduce traffic disruptions, the proposed amendments to the Gas Safety Ordinance (Cap. 51) will penalize careless contractors and will require the utility undertakers to keep accurate records, and to verify doubtful records if necessary, of the location of their underground utilities; and
- the report for the LRT has not yet been finalized. Additional information may be included in the final version.

3.36 Regarding the delay in the implementation of an EP fee, the **Director of Lands** has informed me that:

- due to the very heavy workload of the officers concerned, who had been given specific instructions to give priority to military land matters arising from the hand-back of land from the British Military and in preparation for subsequent handover to the Chinese Military, there was some delay in dealing with the costing exercise requested by the Secretary for the Treasury in early 1994;
- at a meeting held in February 1995, representatives of the Finance Branch, the Works Branch, the Transport Branch, the HyD and the Lands Department agreed that there should be a charge for the issue of EPs in line with the Government's general cost-recovery policy;
- the Secretary for Works will co-ordinate the costing

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results and views of the relevant works departments involved to formulate a fee proposal for the Secretary for the Treasury's consideration. Concurrently, the Secretary for Works will also clarify certain legal points with the Attorney General's Chambers; and

- all parties concerned agree that every effort should be made to ensure that the EP fee would be introduced as soon as possible.

3.37 The **Secretary for the Treasury** has informed me that he will continue to keep a close watch to ensure that the EP fee is introduced as soon as practicable.

Extract from P.A.C. Report No. 24 - July 1995

HIGHWAYS DEPARTMENT

Paragraphs 3.1 - 3.37: The lane rental trial and other measures to reduce the incidence of delays in the completion of utility works on Hong Kong roads

5.38 The problem of road openings had been a subject of concern of the Committee since it was first brought up by the Director of Audit in October 1991. The Committee had repeatedly urged the Administration to expedite measures to reduce the problem including the examination of a proposal to implement a lane rental scheme. In the light of the slow progress made and the apparent lack of effective action taken by the Administration in tackling the problem, the Committee invited the Director of Audit to review the latest situation and conduct this follow-up audit.

5.39 On 4 May 1995, the Committee received from the Director of Highways a copy of the Final Report on Lane Rental Trial. Prior to the public hearing on 15 May 1995, the Secretary for Works also provided the Committee with some briefing notes setting out his responses to the various comments and observations made in the Director of Audit's Report. A copy of the Secretary's briefing notes is at *Appendix O*.

5.40 On the Administration's latest position on the lane rental trial, the **Secretary for Works** advised the Committee that the Road Openings Working Party had concluded that the lane rental scheme was not practicable in Hong Kong and should not be pursued further.

5.41 The Committee asked whether the lane rental trial had been a waste of time and money given that the trial had failed to address a number of important issues, such as the assessment of the social and economic benefits of reduced disruption to traffic, its effect on the utility undertakers' working practice, etc. The Secretary said that -

- although some of the facts revealed were quite obvious and did not need to be discovered through the trial, in his view, the trial was still a useful exercise and valuable means for all parties to come together in identifying and resolving the real problems associated with road openings and utility installations in Hong Kong;
- the trial further demonstrated that it was not possible to attempt to make reliable assessment of the time required to carry out utility works, particularly at locations where there were many different kinds of utility piping and cables buried underground. In view of the difficulties in working out a reasonable working period, it was not possible to calculate a lane rental charge or penalty on utility undertakers;

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- it also highlighted the absolute need for better supervision of contractors and management on the ground; and
- in the light of the results of the trial, the Administration had concluded that a better approach to the road opening problem would be through better supervision, co-ordination, planning and control beforehand.

5.42 The lane rental scheme was understood to be an experiment borrowed from the United Kingdom (UK). The Committee were interested to know whether the Administration was aware of any other countries practising the same. The **Director of Highways** said that the Administration was not aware of any other countries having a similar scheme. The **Secretary for Works** added that the UK scheme was related to motorway maintenance only. It was true that the UK did not attempt lane rental in the urban areas, but this was not realized at the time when the decision was taken to try out the scheme. At the invitation of the Committee, the **Director of Audit** commented that the Administration had apparently placed too much reliance on the UK scheme without examining it in more detail before trying it out in Hong Kong, as a result of which not much could be borne out of the trial except of the difficulties in determining a reasonable working period for charging purpose.

5.43 In view of the Administration's decision to abandon the lane rental scheme and that future efforts would be concentrated on other measures to reduce traffic disruption caused by road opening works, the Committee invited the Secretary for Works and the Director of Highways to elaborate in greater detail the measures as set out in paragraph 2 of the Secretary's briefing notes.

5.44 On the possibility of introducing an incentive scheme, such as requiring utility undertakers to provide a performance bond, the **Secretary for Works** said that the proposal had turned out to be rather disappointing because of the difficulty in determining a reasonable working period if the bond was related to timely completion of work. Nevertheless, the Administration would continue to explore the feasibility of a financial incentive or a financial penalty.

5.45 On the recruitment difficulties for the 48 additional posts in the Highways Department, the **Director of Highways** said that -

- the posts were mainly in the rank of Works Supervisor and difficulties in recruitment were experienced after the entry and qualification requirements for the rank were upgraded to graduates of tertiary institutions; and

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- the Highways Department was looking at all possible avenues to improve the situation and one of the possibilities was to resume the in-house training for this particular rank.

After the public hearing, the **Secretary for Works** advised the Committee in writing that at present only four Works Supervisor posts remained vacant and they would be filled by internal redeployment in June 1995. A copy of the supplementary information provided by the Secretary is at *Appendix P*.

5.46 On the publicity signboards put up at road works sites, the Committee suggested that the Administration should encourage more co-operation and assistance from the public to report to the authorities concerned when unattended sites were noticed. The **Director of Highways** said that -

- there were at present two pieces of information on the signboards displayed at all road works sites, namely the anticipated completion date of the works and a telephone number which members of the public might use to make enquiries and complaints. The information was shown in large prints so that it could be easily read by pedestrians and motorists;
- the Highways Department maintained a telephone hotline and information had been distributed to all district offices to enable the public to get in touch with the Department for making any suggestions or complaints relating to road works;
- through the Road Openings Working Party and enhanced co-ordination between the police and the works departments, the police also assisted in carrying out spot checks and informed the Highways Department of any unattended sites; and
- if any trench excavation was found to remain open and not being worked on for over 48 hours, immediate action would be taken and this could include withdrawing the relevant excavation permit, decking or filling that particular opening at the cost of the contractor concerned.

5.47 To further reduce the disruption to traffic at unattended road opening sites, the Committee asked whether the Administration would consider shortening the 48 hours criterion to 24 hours. The Director said that this would require additional staff to pay more frequent inspections to works sites.

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5.48 On the tightening of co-ordinating procedures, the **Secretary for Works** said that as a result of the action taken, there had been visible improvements in the situation of repeated opening of the same section of road as excavation permit applications were now received well in advance and better co-ordination could be made amongst the different utility companies through the Road Openings Co-ordinating Committee. The **Director of Highways** added that apart from co-ordination over the submission from individual utility companies, the Administration would also plan ahead in respect of future utility requirements in new developments, such as the Central reclamation. At the request of the Committee, the **Secretary for Works** provided after the public hearing some documentary evidence, with the illustration of specific cases (*Annex 2 to Appendix P*), which he claimed substantiated his assertion that overall traffic disruptions had been reduced as a result of tightening of co-ordination efforts.

5.49 Referring to the Administration's application for funds for the introduction of a Utility Management System, which had been rejected by the Finance Committee (FC) on 28 April 1995, the Committee asked to what extent the FC's decision had affected the Administration's overall plan for co-ordination in road opening works. The **Secretary for Works** said that -

- it was absolutely essential to have the management system in place not only to better control and co-ordinate the issue and management of excavation permits but also to enable a better understanding of the impact of such permits on the local road system through a computer mapping of utilities; and
- the Administration noted the FC's concern and reasons for rejection, and action was being taken to address those concerns and to re-submit the application to the FC at the earliest possible time.

5.50 Quoting the Japanese experience, the Committee enquired whether the Administration intended to provide, as a matter of policy, a common utility duct system for all new roads constructed and new developments planned such as the new airport and the Central reclamation. The Secretary said that whenever possible and as and when space was available and planned for the purpose, utility reserves would be provided alongside major routes in the territory.

5.51 Responding to a suggestion to impose a ban on all daytime utility works, the **Director of Highways** said that he considered it too drastic a measure to be taken. The Director advised the Committee that since December 1994, the daytime ban had been

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imposed on 45 major road sections. A list of these 45 road sections is at *Annex 1 to Appendix P*. He further explained that unless with good reasons, utility companies were not normally allowed to carry out trench opening works on these major road sections during daytime although sometimes there might be difficulties in adhering to the restriction.

5.52 Referring to a suggestion of the Road Openings Working Party that a list of contractors for road opening works should be established to keep a record of their performance and to facilitate selection of suitable contractors by utility companies, the Committee asked whether any progress had been made in this respect. The **Secretary for Works** said that -

- the Administration had been in discussion with the utility companies and was given to understand that they in fact had their own lists of suitable contractors/sub-contractors for road opening works;
- the utility companies also had their merit and demerit systems so that if contractors did not perform well, they would be taken out of the companies' lists;
- as far as Government was concerned, lists of approved contractors were maintained for different kind of government works. Equally, the contractors' performance was being monitored closely and they would not be included in the tender lists if they failed to perform up to standard; and
- it was however noted that problems still lay with the small sub-contractors and this would be the next stage of action required to ensure that neither the utility companies nor the Government contractors employed those irresponsible sub-contractors.

Subsequent to the public hearing, the Secretary wrote to give further advice to the Committee that in 1994, a list of contractors working for the utility companies, together with their performance rating, had been drawn up by the Works Branch with the assistance of the utility companies, to facilitate selection of suitable contractors. (Paragraph 4 of *Appendix P* is relevant.)

5.53 Referring to the comments expressed by the Director of Water Supplies (paragraph 2.10 of the Secretary for Works' briefing notes at *Appendix O*) concerning the aging water mains system, resulting in problems of mains burst, the Committee asked what action would be taken to address the problem. The Secretary said that -

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- the problem was caused not only by the age of the system but also by over-loaded vehicles putting stress on the road pavement, thus affecting the water mains buried underneath, in particular the salt water system which was very sensitive to movements;
- the Water Supplies Department was aware of the situation and available resources were channelled to deal with the problems; and
- a study had been commissioned and consideration was being given to improve the maintenance of the water distribution system in the longer term.

5.54 As regards the proposal for levying a charge for excavation permits, the Committee noted that the Finance Branch had agreed to the introduction of a permit fee and asked what progress had been made to implement the decision. The Secretary said that -

- this required changes to the existing legislation;
- consultation was being held with the Attorney General's Chambers as regards the best and fastest means to effect this; and
- the principle was to achieve a full-cost recovery.

5.55 **Conclusions and Recommendations.** The Committee -

- consider that the lane rental trial was a waste of time and money as it did not provide useful evaluation of the benefits and costs of implementing the lane rental scheme and many findings of the trial were known facts;
- consider it incompetent of the Administration to have borrowed the UK experiment indiscriminately without examining carefully details of the UK scheme and its applicability in Hong Kong before embarking on the lane rental trial;
- note the failure of the lane rental trial and concur with the decision taken by the Administration to abandon the lane rental scheme having regard to its many inherent problems;
- note the various measures adopted by the Administration to reduce the incidence of delays in the completion of utility works and recommend that

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measures should be taken to further improve their effectiveness, such as -

- better co-ordination amongst government departments and closer supervision of utility companies should be made;
 - penalty should be imposed on utility companies which delay their works without good reasons;
 - recruitment policy should be regularly reviewed by the Highways Department in order to ensure that sufficient staff are available to keep up inspections of road excavation works;
 - consideration should be given to shortening the two days or more criterion for temporary decking of unattended excavations to one day where appropriate; and
 - the telephone number on the publicity signboards at road works sites should be displayed prominently to make pedestrians and motorists fully aware that this is a complaint hotline, and publicity should be made to encourage the public to make use of the hotline;
- note the Secretary for Works' advice that some excavation works were necessitated due to burst of underground water mains caused by over-loaded vehicles putting excessive pressure on the roads, and urge that enforcement action against such over-loaded vehicles should be stepped up;
- recommend that the Administration should, as a matter of policy, consider introducing common utility ducts as standard provisions for all new trunk roads; and
- urge that the excavation permit fee should be implemented as soon as possible.

CB(1) 369/01-02(02)

Enclosure 3

THE GOVERNMENT MINUTE

in response to the

**REPORT NO. 24 OF
THE PUBLIC ACCOUNTS COMMITTEE**

dated July 1995

Government Secretariat

18 October 1995

HIGHWAYS DEPARTMENT

Paragraphs 5.38-5.55 - The lane rental trial and other measures to reduce the incidence of delays in the completion of utility works on Hong Kong roads

15. On the question of whether the lane rental trial was a waste of time and money, we accept that the trial did not turn out to be as successful as we would have liked, but disagree that its value should be totally ignored. As the Secretary for Works responded at a public hearing of the Public Accounts Committee, the trial scheme had served the purpose of bringing all parties together in identifying and addressing the real problems associated with road openings and utility installations.

16. The Administration agrees with the Committee's recommendations on most control measures to reduce the incidence of delays in the completion of utility works on roads. The progress on the implementation of these measures is as follows -

- the Finance Committee has approved funds in July 1995 to implement a computerised Utility Management System to improve co-ordination and control of utility works;
- Secretary for Works will continue to consider the practicability of imposing a penalty system on utility companies who do not perform satisfactorily. He will report progress in six months' time;
- Director of Highways has fully filled the 48 additional posts created to tighten control on utility works by internal deployment. He will closely monitor the staffing position and keep the recruitment policy under regular review;
- Highways Department now warns the utility operators who leave their excavations unattended for 24 hours; and
- Highways Department has standardised the design of their publicity signboards to display the complaint hotline telephone number prominently.

17. On the suggestion of introducing common utility duct systems at new trunk roads, the Administration has previously considered the possibility in conjunction with a number of development studies such as the Central and Wanchai Reclamation Project. We have not adopted the idea because of the following problems -

- road openings cannot be completely eliminated as distribution connections of the utility services from the duct to the new buildings are still required;

- the on-going rapid development and redevelopment make it difficult to forecast accurately future demand on utility services and hence decide on a right capacity for the utility duct. Utility operators will have to go back to open excavations after the duct has been fully occupied;
- there will be security problems and the potential danger of vandalism;
- there are concerns about the compatibility among various utility systems placed close to each other in a common duct. The concerns include hazards from bursting watermains, gas leakage and explosion;
- there will be significant high capital and operating costs;
- it will be difficult to reach a cost sharing agreement among utility companies and the Government; and
- whether the Government or utility companies pay for the costs, the bill will be transferred to the end-users, i.e. tax payers or utility consumers.

Despite the above, we shall provide utility reserves alongside major routes in Hong Kong whenever possible.

18. The Administration is arranging the necessary amendments of the Crown Land Ordinance at the earliest opportunity for the implementation of the excavation permit fee scheme.

P.A.C. Report No. 27 — January 1997

Paragraphs 3.5 – 3.6

3.5 The lane rental trial and other measures to reduce the incidence of delays in the completion of utility works on Hong Kong roads (Paragraphs 5.38 - 5.55 of P.A.C. Report No. 24). The Committee were informed that -

- the Administration had implemented most of the recommendations of the Committee on control measures to reduce the incidence of delays in the completion of utility works on roads and would continue to take necessary coordination and control measures on utility openings to minimise disruption to the public;
- a contract for developing a computerised Utility Management System, which aimed at improving the planning, coordination and control of utility works, had been awarded in August 1996;
- the Administration had devised a two-tier Licence and Excavation Permit System after consulting the Legislative Council Panel on Planning, Lands and Works in March 1996. Under this proposed system, the utility undertakers would be required to apply for a licence while the contractor for the roadworks would be required to apply for an Excavation Permit. Charges would be imposed for processing applications of licences and Excavation Permits to recover the related administrative costs. The setting up of a prosecution team in the Highways Department to tighten up control on utility roadworks to reduce traffic disruptions had also been proposed;
- in view of the strong objections raised by the utility undertakers concerning the two-tier structure and the proposed charging of fees, the Secretary for Works would further consider with the Legal Department practicable ways to simplify the system and would present the details to the Legislative Council Panel on Planning, Lands and Works as soon as possible; and

- a plan was in hand to introduce amendments to the Crown Land Ordinance to allow the charging of Excavation Permit fee together with other related provisions in the second half of the 1996-97 legislative session.

3.6 The Committee note that the Legislative Council Panel on Planning, Lands and Works is closely monitoring the progress of the implementation of the charging of Excavation Permit fee and of the Licence and Excavation Permit System with a view to following them through.

CB(1) 369/01-02(02)

Enclosure 5

THE GOVERNMENT MINUTE

in response to the

**REPORT OF THE PUBLIC ACCOUNTS
COMMITTEE**

dated January 1997

Government Secretariat: Finance Branch

23 April 1997

Paragraphs 3.5 - 3.6 - The lane rental trial and other measures to reduce the incidence of delays in the completion of utility works on Hong Kong roads

6. The computerised Utility Management System, which aims at improving the planning, coordination and control of utility works, is now at the development stage. We plan to implement the system in October 1997.

7. We have simplified the previously proposed two-tier Licence and Excavation Permit system to a single-tier Excavation Permit system. Under the new system, an Excavation Permit issued to a utility undertaker will be deemed to be issued also to his contractor. With such an arrangement, we can prosecute the contractor directly, as one of the Permittees, for any breach of Permit condition.

8. We presented the simplified proposal together with a revised fee charging scheme to the LegCo Panel on Planning, Lands and Works in November 1996. The Panel raised no objection to the scheme except that one Panel member considered the fees were too low to have any deterrent effect on protracted road opening works. The Administration considers that the proposed fee charging scheme which is based on a cost recovery principle imposes a fair charge to relevant parties. We therefore have no intention to make further changes to the fee levels for the time being.

9. We intend to amend the Crown Land Ordinance to allow the charging of Excavation Permit fees together with other related provisions as soon as possible. We are finalising the drafting instructions for introducing the amendments.