

**SUPPLEMENTAL REPORT OF THE
PUBLIC ACCOUNTS COMMITTEE
ON
REPORT NO. 51 OF THE DIRECTOR OF AUDIT
ON
THE RESULTS OF
VALUE FOR MONEY AUDITS**

May 2009

P.A.C. Report No. 51A

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The Establishment of the Committee The Public Accounts Committee is established under Rule 72 of the Rules of Procedure of the Legislative Council of the Hong Kong Special Administrative Region, a copy of which is attached in *Appendix 1* to this Report.

2. **Membership of the Committee** The following Members are appointed by the President under Rule 72(3) of the Rules of Procedure to serve on the Committee:

Chairman : Dr Hon Philip WONG Yu-hong, GBS

Deputy Chairman : Hon Paul CHAN Mo-po, MH, JP

Members : Hon Andrew CHENG Kar-foo
Hon Abraham SHEK Lai-him, SBS, JP
Hon Alan LEONG Kah-kit, SC
Hon Starry LEE Wai-king
Hon WONG Yuk-man

Clerk : Ms Miranda HON Lut-fo

Legal Adviser : Mr Arthur CHEUNG

The Committee's Procedure The practice and procedure, as determined by the Committee in accordance with Rule 72 of the Rules of Procedure, are as follows:

- (a) the public officers called before the Committee in accordance with Rule 72 of the Rules of Procedure, shall normally be the Controlling Officers of the Heads of Revenue or Expenditure to which the Director of Audit has referred in his Report except where the matter under consideration affects more than one such Head or involves a question of policy or of principle in which case the relevant Director of Bureau of the Government or other appropriate officers shall be called. Appearance before the Committee shall be a personal responsibility of the public officer called and whilst he may be accompanied by members of his staff to assist him with points of detail, the responsibility for the information or the production of records or documents required by the Committee shall rest with him alone;
- (b) where any matter referred to in the Director of Audit's Report on the accounts of the Government relates to the affairs of an organisation subvented by the Government, the person normally required to appear before the Committee shall be the Controlling Officer of the vote from which the relevant subvention has been paid, but the Committee shall not preclude the calling of a representative of the subvented body concerned where it is considered that such a representative could assist the Committee in its deliberations;
- (c) the Director of Audit and the Secretary for Financial Services and the Treasury shall be called upon to assist the Committee when Controlling Officers or other persons are providing information or explanations to the Committee;
- (d) the Committee shall take evidence from any parties outside the civil service and the subvented sector before making reference to them in a report;
- (e) the Committee shall not normally make recommendations on a case on the basis solely of the Director of Audit's presentation;
- (f) the Committee shall not allow written submissions from Controlling Officers other than as an adjunct to their personal appearance before the Committee; and
- (g) the Committee shall hold informal consultations with the Director of Audit from time to time, so that the Committee could suggest fruitful areas for value for money study by the Director of Audit.

2. **Confidentiality undertaking by members of the Committee** To enhance the integrity of the Committee and its work, members of the Public Accounts Committee have signed a confidentiality undertaking. Members agree that, in relation to the consideration of the Director of Audit's reports, they will not disclose any matter relating to the proceedings of the Committee that is classified as confidential, which shall include any evidence or documents presented to the Committee, and any information on discussions or deliberations at its meetings, other than at meetings held in public. Members also agree to take the necessary steps to prevent disclosure of such matter either before or after the Committee presents its report to the Council, unless the confidential classification has been removed by the Committee.
3. A copy of the Confidentiality Undertaking signed by members of the Committee has been uploaded onto the Legislative Council website.
4. **The Committee's Report** This Report contains the Public Accounts Committee's supplemental report on Chapter 4 of Report No. 51 of the Director of Audit on the results of value for money audits which was tabled in the Legislative Council on 26 November 2008. Value for money audits are conducted in accordance with the guidelines and procedures set out in the Paper on Scope of Government Audit in the Hong Kong Special Administrative Region - 'Value for Money Audits' which was tabled in the Provisional Legislative Council on 11 February 1998. A copy of the Paper is attached in **Appendix 2**. The Committee's Report No. 51 was tabled in the Legislative Council on 18 February 2009.
5. **The Government's Response** The Government's response to the Committee's Report is contained in the Government Minute, which comments as appropriate on the Committee's conclusions and recommendations, indicates what action the Government proposes to take to rectify any irregularities which have been brought to notice by the Committee or by the Director of Audit and, if necessary, explains why it does not intend to take action. It is the Government's stated intention that the Government Minute should be laid on the table of the Legislative Council within three months of the laying of the Report of the Committee to which it relates.

Meetings The Committee held a total of nine meetings and three public hearings in respect of the subject covered in this Report. During the public hearings, the Committee heard evidence from a total of 10 witnesses, including two Directors of Bureau and two Heads of Department. The names of the witnesses are listed in *Appendix 3* to this Report. A copy of the Chairman's introductory remarks at the public hearing on 9 December 2008, which was the first in the series of public hearings held by the Committee relating to the Director of Audit's Report No. 51, is in *Appendix 4*.

2. **Arrangement of the Report** The evidence of the witnesses who appeared before the Committee, and the Committee's specific conclusions and recommendations, based on the evidence and on its deliberations on the relevant chapter of the Director of Audit's Report, are set out in Part 4 below.

3. The audio record of the proceedings of the Committee's public hearing is available on the Legislative Council web site for the public to listen to.

4. **Acknowledgements** The Committee wishes to record its appreciation of the cooperative approach adopted by all the persons who were invited to give evidence. In addition, the Committee is grateful for the assistance and constructive advice given by the Secretary for Financial Services and the Treasury, the Legal Adviser and the Clerk. The Committee also wishes to thank the Director of Audit for the objective and professional manner in which he completed his Reports, and for the many services which he and his staff have rendered to the Committee throughout its deliberations.

A. Introduction

The Audit Commission ("Audit") conducted a review to examine the economy, efficiency and effectiveness in the provision of the emergency ambulance service by the Fire Services Department ("FSD") in response to emergency calls. The review focused on the following areas:

- use of the emergency ambulance service;
- performance measurement;
- use of ambulance resources;
- maintenance of ambulances; and
- procurement of replacement and additional ambulances.

2. The Committee held three public hearings on 6 and 8 January and 10 March 2009 respectively to receive evidence on the findings and observations of the Director of Audit's Report ("Audit Report").

3. **Prof Hon K C CHAN, Secretary for Financial Services and the Treasury**, and **Hon Ambrose LEE Siu-kwong, Secretary for Security**, respectively made an opening statement at the Committee's public hearing held on 10 March 2009. The full text of their statements are in *Appendices 5* and *6* respectively.

B. Use of the emergency ambulance service

4. According to paragraphs 2.3 and 2.4 of the Audit Report, the FSD did not have information on the degree of urgency of the emergency calls, and there was no assessment on the degree of urgency of the patients in the ambulance journey records. In response to the audit recommendation in paragraph 2.7(a), the FSD said that it would explore the feasibility of incorporating information on the degree of urgency of patients in the electronic ambulance journey records. The Committee questioned why the FSD did not keep such important management information, which could have been used for optimal deployment of emergency ambulance resources, and about the timetable for implementing the electronic ambulance journey records.

5. **Mr LO Chun-hung, Director of Fire Services**, said at the public hearing and in his letter of 7 January 2009 in *Appendix 7* that:

- the ambulance crew currently kept information manually on an ambulance journey record when handling an emergency call. To enhance service quality, the FSD was developing a paramedic service quality assurance system, which would include the introduction of electronic ambulance journey records. As the original system design had not included the capturing of information on the degree of urgency of patients, the FSD was exploring with its medical directors and system developer to see how such information could be incorporated in the electronic ambulance journey records; and
- given the complexity of the project, it was expected that the electronic ambulance journey records could only be implemented by November 2009.

6. Paragraph 2.5 of the Audit Report pointed out that, according to the Accident and Emergency ("A&E") Triage Categorisation System of the Hospital Authority ("HA"), from 2004 to 2007, on average, 40.5% of the conveyance of patients by ambulances to the A&E Departments of the HA were non-emergency cases. In view of the substantial number of non-emergency cases, the Committee asked:

- whether the FSD had any information on the extent of misuse of ambulance service;
- whether the FSD could provide more specific guidelines to the public on the proper use of emergency ambulance service; and
- about the implementation timetable for collaborating with the HA and other ambulance service providers to explore the practicability and feasibility of jointly launching education programmes for promoting the proper use of the emergency and non-emergency ambulance services, as stated in paragraph 2.8(c) of the Audit Report.

7. In response, the **Director of Fire Services** said at the public hearing and in his letter of 23 April 2009 in *Appendix 8* that:

- the HA's figure only reflected the patients' conditions when they reached the A&E Departments. Some patients' conditions might have improved as a result of the emergency care tendered by ambulance staff on the way to hospitals. The HA also considered that it was inappropriate to correlate the 40.5% with the over-use of the emergency ambulance resources;

- although the FSD did not have the actual number of non-emergency cases, it did note from the audio records of its Fire Services Communication Centre that there were some non-emergency calls involving misuse of ambulance service. Besides, according to a consultancy study commissioned by the FSD on the implementation of a medical priority despatch system ("MPDS") in Hong Kong, it was estimated that for 50% of the calls received, the patients' conditions would be classified as critical, life-threatening or serious. Non-life-threatening and less serious cases would constitute 28% and non-emergency cases 22%;
- the FSD agreed that more information on the degree of urgency of patients should be collected through the implementation of the electronic ambulance journey records. Efforts on public education should also be stepped up. The FSD would consult its medical directors and consider publicising some typical cases of misuse so as to educate the public on the proper use of the emergency ambulance service; and
- the FSD had, in collaboration with other ambulance service providers including the HA, St. John Ambulance Brigade and Auxiliary Medical Service, reviewed the feasibility of jointly organising public education programmes to encourage the proper use of ambulance service. All ambulance service providers welcomed the idea and would make every effort to devise suitable education programmes to enhance the effectiveness of public education. A working group had been set up to formulate strategies and organise related activities. Various ways and means to strengthen public education had been worked out for further action by the group, e.g. broadcasting of education programmes in the A&E Departments and clinics of the HA, developing web-based programmes for publicity through the web and conducting out-reach programmes at schools, etc.

8. Regarding the effectiveness of the FSD's publicity campaigns on the proper use of the emergency ambulance service, the Committee asked:

- why the FSD had not reviewed the effectiveness of its publicity campaigns since August 2006 (paragraph 2.12 of the Audit Report refers), and whether it had evaluated the publicity campaigns launched in 2008; and
- about the other publicity channels that would be adopted to enhance the effectiveness of publicity campaigns (paragraph 2.16(b) of the Audit Report refers).

9. The **Director of Fire Services** said that:

- he regretted that the FSD had not, since August 2006, followed the Good Practice Guide to Mounting Publicity Campaigns issued by the Information Services Department to review the effectiveness of its publicity campaigns. Previous publicity campaigns in 2005 were considered effective as shown in the subsequent reduction in the number of emergency calls. Regarding the publicity campaigns in October 2008, the FSD was in the process of collecting and analysing data; and
- meanwhile, the FSD was actively considering launching publicity campaigns on television, in view of the positive feedback on the fire prevention campaigns on television launched several months ago.

10. Noting from paragraph 2.9 of the Audit Report that the Security Bureau ("SB") and the FSD would explore the long-term options for better meeting the demand for the emergency ambulance service and the feasibility of introducing the MPDS in Hong Kong, the Committee enquired about the details of the MPDS as well as the Administration's plan and timetable for introducing the system.

11. The **Director of Fire Services** stated in his letter of 7 January 2009 that:

- in order to provide better services to the general public with limited resources, the FSD commissioned a consultancy firm to study the feasibility of the MPDS in Hong Kong. The study, completed in October 2005, recommended the implementation of the system in Hong Kong;
- as pointed out by the study reports, the local ambulance service could improve its response time for critical calls and achieve the international best practice standards with the implementation of the system. The system had been widely adopted around the world. In practice, communications personnel would categorise and prioritise a call by asking the caller some specific interrogative questions set by the system software, and then make a decision on an appropriate response mode and give pre-arrival instructions for the case;
- the reports recommended the adoption of five despatch prioritisation categories and related deployment strategies so as to achieve the target response time. For the categories involving critical or life-threatening patients, the target response time was 9 minutes. The target response time for serious but non-life-threatening patients was set at 15 minutes. For non-life-threatening and less serious cases, the internal target was 20 minutes. As for the non-emergency category, the internal target was 30 minutes;

- the primary purpose of establishing the MPDS was to enable the FSD to prioritise the despatch of ambulances in accordance with the seriousness of the patients' conditions. While a lower priority would be given to calls which were not of an emergency nature under the proposed system, no request for an ambulance would be denied;
- as the MPDS involved a wide range of issues, it was of paramount importance that the FSD conduct a prudent and comprehensive study prior to implementation. To this end, the FSD commissioned a consultancy firm in 2007 to study different response time scenarios under the system and accepted the findings of the study reports in early 2008. The FSD and the SB were reviewing in depth the findings and recommendations of the two reports; and
- the FSD was working out the specific options and detailed proposals on the MPDS. The FSD would consult the Panel on Security of the Legislative Council, medical institutions and organisations concerned, FSD staff, as well as the general public in 2009, before any concrete decision on the plan was made.

C. Performance measurement

12. According to paragraph 3.3 of the Audit Report, since November 1998, the FSD had adopted the target response time of 12 minutes (comprising a 2-minute activation time and a 10-minute travelling time) for the emergency ambulance service. Audit analysis of the response time of ambulances in Table 1 of paragraph 3.4 indicated that, from January 2004 to June 2008, the percentage of emergency calls answered within the 2-minute activation time increased from 87.4% to 95.6%, whereas that of the 10-minute travelling time decreased from 91.2% to 87.4%. The Committee enquired:

- about the reasons for the decrease in the percentage of emergency calls answered within the 10-minute travelling time, despite the implementation of the Third Generation Mobilising System ("TGMS") in June 2005;
- whether such decrease was related to the breakdown of the TGMS, about the details of the breakdown from June 2005 to December 2008, and the measures that had been or would be taken to improve the TGMS's reliability; and
- whether the benefits brought about by the implementation of the TGMS justified its cost.

13. The **Director of Fire Services** said at the public hearing and in his letter of 7 January 2009 that:

- with the implementation of the TGMS, information was exchanged by means of graphics and text transmission, and the time spent on voice communication was reduced. Therefore, more emergency calls were answered within the 2-minute activation time;
- the performance of the 10-minute travelling time was not directly related to the TGMS. Due to the ever-increasing demand for emergency ambulance service, it was often necessary to despatch ambulances in other districts to handle the calls. Hence, the travelling distance and time to the scene of incident were inevitably longer. Besides, according to reports of the Fire Services Communication Centre, there were more cases of traffic congestion;
- there were indeed some problems during the initial phase of launching the TGMS in 2005. After system improvement was made by the contractor, the problems had been fixed and the TGMS had become a stable system. Details of the system breakdown between June 2005 to December 2008, including the number of times of breakdown, the duration of each breakdown and the ambulance services affected, were set out in Attachment 2 to *Appendix 7*; and
- the cost of the TGMS was justified as the following benefits had been realised after its implementation:
 - (a) Accurate and efficient resources deployment. The TGMS identified and located real time ambulance resources automatically for immediate despatch to the scene of incidents. It helped achieve more accurate incident tasking and optimise resources management;
 - (b) Direct and effective operational information exchange. The automation features of the TGMS could improve the efficiency in information exchange by means of graphics and text transmission through Wireless Digital Network and hence reducing the time spent on voice communication;
 - (c) Enhanced flexibility in resources identification and mobilisation. Through open platform design, the TGMS allowed easy programme development and enhancement and had the flexibility to meet future operational requirements and demand for continuous improvement in fire and emergency ambulance services; and

- (d) No additional staffing resources. With the introduction of the automatic call-out function at fire stations and ambulance depots, and mobile data terminals on vehicles for address confirmation, console operators at the Fire Services Communication Centre would not have to broadcast mobilising instructions and confirm incident addresses. Hence, the time spent by a console operator in handling an emergency call could be reduced and, as a result, the operator could be released earlier to handle the next call. Overall, the TGMS would enable console operators to cope with the increase in the number of calls without the need for additional staffing resources.

14. As the decrease in the percentage of emergency calls answered within the 10-minute travelling time might reflect a shortage of ambulances and/or ambulance crew, the Committee asked whether the FSD had discussed the situation with the SB, and sought additional resources to meet the ever-increasing demand. The **Director of Fire Services** said that:

- the FSD had adopted a multi-pronged approach to meet the rising demand of emergency ambulance service. Several management measures had been implemented to boost performance. For example, urgent care fleet manned by a 2-man crew instead of a 3-man crew was introduced to handle transfer of patients between hospitals, thus releasing resources for the emergency ambulance service. Also, to meet the service demand in the evening and night time, the working hours of staff on day shift had been adjusted to correspond better to the pattern of demand;
- the FSD had also submitted requests for ambulances and manpower to the Financial Services and the Treasury Bureau ("FSTB") via the SB, through the annual resource allocation exercises ("RAEs"). As resources were limited, the FSD had to make the best use of existing resources; and
- the FSD held regular meetings with the Secretary for Security every two to three months. The response time performance and manpower requirement were always discussed and examined in such meetings.

15. It appeared to the Committee that the FSD might have made use of the improvement in the 2-minute activation time to compensate for the increase in the 10-minute travelling time, so as to achieve the performance target of answering 92.5% of the emergency calls within a target response time of 12 minutes. The Committee therefore requested the FSD to provide an analysis of the number and percentage of emergency calls answered in respect of the 2-minute activation time for the periods from 2005 to 2008, and from 1 to 14 February 2009, according to five categories of actual response time. The **Director of Fire Services** provided the relevant information in *Appendices 9* and *10* respectively.

16. The Committee noted that the actual response time within the 2-minute activation time had shown a consistent improvement over the past few years, with a majority of the calls answered within 1 minute and 30 seconds. Also, according to paragraph 3.5 of the Audit Report, since 1999, the FSD had not conducted any review of the 12-minute target response time for the emergency ambulance service. The Committee asked whether the SB and the FSD would review the 12-minute target response time, including the division into the 2-minute activation time and the 10-minute travelling time.

17. The **Secretary for Security** and the **Director of Fire Services** said that:

- the performance pledge of answering 92.5% of the calls within 12 minutes was discussed and agreed to by the Panel on Security before it was adopted in 1998. The division of the 12-minute target response time into two components was to facilitate the FSD's monitoring of the respective response time for activation and travelling, so as to make corresponding improvement;
- as shown in the analysis of the response time from 1 to 14 February 2009, only about 72% of the ambulances could be activated within 1 minute. Hence, it might not be opportune to adjust the 2-minute activation time at this stage. The FSD would continue to monitor the response time; and
- despite the increase in the 10-minute travelling time, the overall target response time could be met because the activation time had been improved due to the adoption of the TGMS. Nevertheless, in view of the changes in the percentage of emergency calls answered within the 2-minute activation time and the 10-minute travelling time, the FSD and the SB would review the target response time and report the findings to the Panel on Security for further consultation.

18. According to paragraph 3.7 of the Audit Report, the FSD had started a benchmarking study on the 1-minute turnout time since June 2006, but had yet to finalise the study. The Committee enquired about the progress and target completion date of the study.

19. The **Director of Fire Services** replied at the public hearing and in his letter of 23 April 2009 that the review aimed to examine the turnout time of ambulances for different types of ambulance depots. The relevant figures might be used to identify room for improvement in the design of depots, with a view to shortening the turnout time. The FSD had completed data collection and was carrying out analyses. The review would be completed in May/June 2009.

20. The Committee noted from paragraph 3.8 of the Audit Report that from January 2004 to June 2008, the FSD could not achieve the performance target for the emergency ambulance service in the New Territories ("NT") Region. During this period, the percentage of emergency calls in the NT Region answered within the target response time ranged from 87.1% to 91.5%. The Committee asked:

- why the performance target could not be achieved over such a long period;
- whether the non-achievement of target was due to inadequate allocation of ambulance resources to the NT Region as compared to the Hong Kong and Kowloon Regions; and
- about the criteria for determining the number of ambulance shifts in different divisions under the Ambulance Command.

21. The **Director of Fire Services** explained at the public hearing and in Attachment 4 to his letter of 7 January 2009 that:

- due to the comparatively larger geographical coverage of the NT Region and hence longer travelling time, there were difficulties in achieving the performance target in the NT Region. It was noted that the East and West Division of the NT Region ("NT/E&W Division") could not achieve the performance target. The response time in the NT South Division and the Hong Kong and Kowloon Divisions was better because the turnaround time of ambulances was shorter in these areas; and
- in deploying ambulance resources for each division, other than population, the following factors were also taken into consideration:
 - (a) demand of emergency ambulance service in the area;
 - (b) the response time performance in the area;
 - (c) the available location serving as the base of ambulance and space for deploying additional ambulance resources;
 - (d) new developments (e.g. new towns, border control points);
 - (e) exceptional considerations (e.g. off-shore islands, remote areas);
 - (f) traffic condition; and
 - (g) risk factors (e.g. airport).

22. At the request of the Committee, the **Director of Fire Services** provided the number of emergency ambulance calls and the average age of ambulances at the four Divisions (viz. Hong Kong, Kowloon, NT/E&W and NT South) in Attachment 3 to his letter of 7 January 2009. He also said at the public hearing that the FSD had all along deployed ambulances according to the specific operational needs in different divisions. For example, as shown in the Attachment, the average age of ambulances in the NT South Division was 7.7, lower than that in the Hong Kong and Kowloon Divisions. This was because the NT South Division covered the Lantau Island, which had very steep roads. The FSD would continue to closely monitor the allocation of resources among different divisions.

23. The Committee noted from paragraph 3.10 of the Audit Report that in the NT/E&W Division, the percentage of emergency calls answered within the target response time on the night shift was lower than that on the day shift, and enquired about the reasons for that.

24. The **Director of Fire Services** explained in Attachment 4 to his letter of 7 January 2009 that:

- during night shift, the number of ambulances available would be reduced to about half of the strength of the day shift. As such, the number of locations with ambulance resources at night shift would be less than that on the day shift. Hence, the travelling distance was relatively longer; and
- as there were more ambulances on run and more ambulance calls on the day shift, there were more available ambulances travelling on the road in its hospital-to-base journey. Thus, the probability of having an available ambulance passing by the address of a patient would be higher on the day shift. As a result, the day shift response time performance in the NT/E&W Division was slightly higher than that of the night shift.

25. According to paragraph 3.9 of the Audit Report, the FSD was aware that the emergency ambulance resources in the NT Region had been stretched to their limits and there was a growing demand for the emergency ambulance service in the northern part of the NT Region. The Director of Fire Services also mentioned in paragraph 3.13 of the Audit Report that the FSD would continue to search for new sites (e.g. Sheung Shui) for constructing ambulance depots. The Committee enquired about the progress made by the FSD in identifying suitable sites for constructing additional ambulance depots in the NT Region, and whether there was a timetable.

26. The **Director of Fire Services** responded at the public hearing and in his letter of 7 January 2009 that:

- the FSD had identified a site in Sheung Shui for constructing a permanent ambulance depot. However, the site was quite large and the Lands Department advised that to ensure optimal usage of the land, it had to look for other users before the land could be developed for use by the FSD;
- as a permanent site was not yet available, the FSD had requested the Lands Department to carry out site search for the temporary provision of a site in Sheung Shui. The FSD had inspected several closed down schools as possible sites for placing ambulances but they were found not suitable. A table showing details of these sites and the results of site inspection was in Attachment 5 to *Appendix 7*; and
- in view of the above, there was no definite timetable for the construction of additional ambulance depots in the NT Region.

27. The Committee noted from Table 2 in paragraph 3.8 of the Audit Report that the FSD could not meet the performance target in 2004, 2005 and the first six months of 2008, and asked whether the FSD had looked into the underlying reasons for the non-achievement of performance target.

28. The **Director of Fire Services** stated that:

- although the FSD failed to achieve the performance target in 2004 and 2005, its performance had been on the rise since 2006. The performance target achieved was 92.7% in 2006 and 92.8% in 2007 respectively. The percentage decreased to 91.8% in the first six months of 2008 due to the prolonged period of cold weather in February 2008, which resulted in the increase in the number of calls to more than 2,000 calls per day, as compared with an average of 1,600 calls per day in 2007; and
- the FSD's performance was mainly affected by the ever-increasing number of emergency calls. Therefore, the FSD had to make use of existing resources through various management measures on the one hand and request additional resources from the Government on the other. In the past few years, although additional resources had been allocated to the FSD, the increase was not commensurate with that of the number of calls.

D. Use of ambulance resources

29. According to paragraph 4.3 of the Audit Report, as at 30 June 2008, the FSD had 2,198 ambulancemen, of which 64 were in training, 330 were on leave, 886 were off-duty, and 34 were deployed to perform other administrative duties. Since almost 60% of the ambulancemen could not be deployed for providing emergency ambulance service, the Committee asked whether the FSD's failure in achieving the performance target in some recent years was due to the shortage of manpower.

30. The **Director of Fire Services** responded that:

- since ambulancemen worked on a five-day cycle, with a normal shift pattern of "two day-shifts, one night-shift and two day-offs", there would be times when they were off-duty. Besides, some ambulancemen would be on sick leave, or released to training, physical fitness assessment and other job-related activities, resulting in shortage of manpower; and
- the FSD did not have sufficient manpower reserve for training and sick leave. Because of their job nature, many ambulancemen suffered from occupational diseases such as back pain, and could only perform light work. The FSD had therefore set up an occupational safety and health group to educate staff to take precautionary measures at work to avoid injury.

31. According to paragraph 4.6 of the Audit Report, as at 30 June 2008, the baseline daily ambulance availability ("DAA") was 184 ambulances on the day shift and 100 ambulances on the night shift for the provision of the emergency ambulance service. Paragraphs 4.7 to 4.9 showed that, from January 2007 to June 2008, the FSD could not achieve the baseline DAA for 229 days (i.e. 42% of 547 days) on the day shift and 435 days (i.e. 80% of 547 days) on the night shift. Despite the implementation of a scheme since August 2007 for deploying off-duty ambulancemen to augment the DAA, from January to June 2008, the FSD still could not achieve the baseline DAA for 71 days on the day shift and 124 days on the night shift. The Committee enquired:

- about the reasons for not achieving the baseline DAA on both shifts; and
- whether the scheme of deploying off-duty ambulancemen to man additional ambulances was temporary or permanent.

32. The **Director of Fire Services** and **Mr MAK Kwai-pui, Chief Ambulance Officer, FSD**, said that:

- the baseline DAA was derived from the average actual DAA over a period of time in the past and had not factored in staff turnover and increasing training needs. It was used to facilitate the management of the daily operation of the emergency ambulance service. As the baseline DAA was only meant to reflect a reasonable availability target, it would be normal that the actual availability fluctuated above or below the baseline DAA. In fact, in 2007, the average DAA achieved was 182.2 ambulances on the day shift (i.e. 99.8% of the baseline DAA), and 95.9 ambulances on the night shift (i.e. 3.5% lower than the baseline DAA). The FSD would ascertain the reasons for not meeting the baseline DAA on the night shift in 2007; and
- the scheme of deploying off-duty ambulancemen was temporary. In the long run, the FSD wished to obtain sufficient manpower to man the ambulances.

33. The **Director of Fire Services** supplemented in his letter of 23 April 2009 that:

- the reasons for not meeting the baseline DAA on the night shift in 2007 included:
 - (a) the rate of staff absence due to sickness was higher on night shift than on day shift as there was a smaller pool of staff on night shift;
 - (b) the urgent care fleet and emergency medical assistant motorcycle, which were available on day shift only, could not be deployed to augment the inadequacy of staff due to sickness during night shift; and
 - (c) the manpower on day shift, comprising two watches of ambulance personnel, doubled that on night shift comprising one watch only. The smaller pool of staff on night shift was less capable of covering unexpected staff absence due to sickness; and
- having regard to the above reasons, the FSD would continue to monitor and review the situation so as to further improve the overall availability.

34. The Committee further enquired about the estimated number and cost of additional manpower required by the FSD, including the manpower reserve required, in order to achieve the baseline DAA for the provision of the emergency ambulance service stated in paragraph 4.6 of the Audit Report.

35. The **Director of Fire Services** replied in his letter of 2 March 2009, in *Appendix II*, that:

- the baseline DAA was the level of ambulance availability that the FSD aimed to achieve, having due regard to the actual level of ambulance availability that was achieved on average over a period of time. It was only a management tool based on past statistics for the purpose of monitoring the day-to-day performance of ambulance availability;
- while the level of DAA might in theory have a direct bearing on response time performance, the eventual performance was subject to a number of other variable factors, including the traffic, weather and road conditions, the bunching of calls at any one time, the distance between callers and ambulance resources, etc. As such, the FSD did not consider it appropriate to use the baseline DAA to work backward and derive the estimated number and cost of additional manpower required; and
- the FSD's bids for additional manpower were principally based on the ratio of ambulances to emergency calls recommended in the consultancy report of December 2001 with the ultimate objective of achieving the response time performance target.

36. According to paragraph 4.12 of the Audit Report, the Secretary for Financial Services and the Treasury, in responding to the audit recommendations in paragraph 4.10, said that "the SB and the FSD were provided with additional resources in the 2005 Recurrent Expenditure Resource Allocation Exercise to improve the emergency ambulance service. With the additional resources, it was expected that the FSD should be able to meet the baseline DAA (i.e. 184 ambulances on the day shift and 100 ambulances on the night shift as at 30 June 2008)". The Committee asked:

- whether the FSD had specifically stated in its submission in the 2005 RAE that, if its bid was approved, the FSD should be able to meet the specified baseline DAA; and
- the reason why, with the allocation of additional resources, the FSD still could not meet the baseline DAA.

37. The **Director of Fire Services** said at the public hearing and in his letter of 7 January 2009 that:

- the FSD had not specifically stated in the 2005 RAE submission that it would meet the baseline DAA of "184 ambulances on the day shift and 100 ambulances on the night shift" if its bid was approved;

- the FSD could not meet the baseline DAA as the increase in manpower could not catch up with the increase in emergency calls. From 2005 to 2007, the number of calls had increased by 6.4% whereas its manpower had increased by 3.7%;
- in 2005, owing to the government-wide initiatives to control expenditures, funding request had to be closely scrutinised by a panel chaired by the Chief Secretary for Administration and the Financial Secretary. Hence, the FSD put forward its bid for manpower in a prudent manner without adopting the recommendation of the consultancy report. The bid, if approved, would provide the minimum level of manpower to fully utilise its ambulances. Nevertheless, the bid for additional manpower was not approved in full; and
- furthermore, lead time would be required for the recruitment and training of new appointees before they could be deployed for service. The recruitment process normally took 8 months, and 6 more months were required for training. The maximum capacity of the training school was about 80 trainees and the appointees might have to attend training in batches. Coupled with the natural wastage of ambulance staff, the FSD had always faced a tight supply of manpower.

38. Regarding his comments in paragraph 4.12 of the Audit Report, the **Secretary for Financial Services and the Treasury** explained in his letter of 7 January 2009 in *Appendix 12* that the FSTB's comments took into account the fact that the FSD had created 28, 47 and 30 additional posts in 2006-2007, 2007-2008 and 2008-2009 respectively (i.e. 105 new posts in total), and that these posts should in turn enable it to operate approximately 4, 7 and 5 additional shifts in the respective years (i.e. approximately 16 additional shifts eventually). Since the FSD had indicated to the FSTB in 2005 that it was operating 281 ambulance shifts on average daily between January and June 2005, the additional shifts supported by the additional posts created should enable the FSD to meet the baseline DAA of 184 day and 100 night ambulances (i.e. a total of 284 ambulance shifts).

39. According to paragraph 4.16 of the Audit Report, from 2004 to 2007, although the number of urgent calls had remained rather stable, the number of urgent calls handled by the urgent care fleet had decreased from 9,390 in 2004 by 1,037 (11%) to 8,353 in 2007. Paragraph 4.18 also revealed that the number of urgent calls handled by emergency ambulances had increased from 19,821 in 2005 by 4,808 (24%) to 24,629 in 2007. A significant number (i.e. 15 out of 25 cases selected by the Audit for examination) of urgent calls were handled by emergency ambulances within the operating hours of the urgent care fleet. The Committee enquired about the reasons for the low utilisation of the urgent care fleet, and the timetable for completing the review of the efficiency and effectiveness of the urgent care ambulance service, as mentioned in paragraph 4.22(a) of the Audit Report.

40. The **Director of Fire Services** replied at the public hearing and in his letter of 23 April 2009 that:

- since the urgent care fleet comprised only 12 ambulances, it could not handle all urgent calls on their own and sometimes emergency ambulances had to respond to urgent calls when no urgent care ambulance was available in the vicinity;
- the FSD also noted that urgent care ambulances had to wait at the hospitals for a long time, very often over 30 minutes, before the picking up or handing over of patients. Noting that such long idling time would undermine the efficiency of the fleet, the FSD had, since 2006, worked with the HA to improve the communication between the ambulance crews and the HA staff, with a view to shortening the waiting time at hospitals. The waiting time at hospitals had been improved; and
- the FSD had examined the efficiency and effectiveness of the urgent care ambulance service. As there were a few issues to be further considered, the FSD aimed to conclude the review in May/June 2009. Pending the outcome of the review, the FSD was in parallel working closely with the HA to enhance the efficiency of the service. The FSD was also exploring other means to enhance the effectiveness and efficiency of the service.

E. Maintenance of ambulances

41. According to paragraph 5.7 of the Audit Report, from 2003 to 2007, the percentage of downtime of the ambulances maintained by the Electrical and Mechanical Services Department ("EMSD") increased from 10.3% to 15%. The percentage of downtime for unscheduled maintenance significantly increased from 6.4% in 2003 by 70% to 10.9% in 2007. Paragraph 5.8 further revealed that up to 30 June 2008, the FSD had not kept management information on the breakdown and the maintenance of individual ambulances. The Committee enquired:

- about the reasons for the increase in downtime, especially that of unscheduled maintenance; and
- why the FSD had not kept information on the breakdown and the maintenance of individual ambulances, which could help substantiate its requests for replacing ambulances.

42. The **Director of Fire Services** replied that:

- the increase in downtime was partly due to the practice in recent years that, if unscheduled maintenance was carried out at a time close to scheduled maintenance, the EMSD would take the opportunity to conduct scheduled maintenance together, so as to enhance the availability of ambulances. The time required for carrying out scheduled maintenance under such circumstances was counted into the time for unscheduled maintenance;
- because of the ageing of ambulances, there were increased incidents of ambulances on fire from 2005 to 2007. The EMSD had to immediately inspect these ambulances, thus increasing the number of days of unscheduled maintenance;
- the installation of new equipment and systems in the ambulances in recent years had also increased the time for scheduled maintenance; and
- as the FSD had engaged the EMSD to provide maintenance service for its ambulances, information on the breakdown and maintenance of individual ambulances was kept by the EMSD. Such information, if required, could be easily accessed by the FSD through the computer system. Nevertheless, the FSD agreed that such information should be kept by the FSD itself.

43. The Committee noted from paragraph 5.10 of the Audit Report that from 20 July to 19 August 2008, there were 67 ambulance breakdowns. Among these ambulances, 53 had been in service for over 9 years. 31 of the 67 breakdown cases occurred when the ambulances were conveying patients to hospitals. The Committee asked whether:

- these breakdowns and consequent delays had resulted in the death of patients before conveyance to hospitals;
- the FSD had conducted a comprehensive review of the causes of the increase in breakdowns; and
- the FSD had introduced measures to minimise the frequency of breakdowns.

44. The **Director of Fire Services** and **Mr SHE Siu-kuen, Assistant Director, EMSD**, said that:

- fortunately, no patients had lost their lives due to the breakdowns. However, frequent breakdowns were certainly unacceptable;
- the ageing of the ambulance fleet was the main cause of the increase in

breakdowns. Generally speaking, there were more incidents of breakdown in the summer time, owing to the adverse effect of the heat and humidity, which made the air-conditioners more prone to damage. The FSD would liaise with the EMSD before summer to strengthen the maintenance; and

- in view of the recent breakdowns, the EMSD had allocated additional manpower to perform a round of special inspection on the whole ambulance fleet, and replaced the batteries, air-conditioning components and engine belts where necessary. The EMSD had also increased the frequency of scheduled maintenance from three times to four times a year. As a result, there was considerable improvement in the reliability of ambulances.

45. According to paragraph 5.12 of the Audit Report, the FSD was the only disciplined services department joining the Minimum Cost Refurbishment Programme ("MCRP") for its ambulances and, in order to maintain the availability of the ambulance fleet, the FSD had since September 2007 reactivated 8 refurbished ambulances. Paragraph 5.14 of the Audit Report further revealed that the average downtime of the 8 ambulances under the MCRP was 12.4%. The Committee therefore asked:

- why the FSD joined the MCRP for its ambulances;
- whether the FSD would join the MCRP if it were provided with sufficient ambulances; and
- why the FSD had not evaluated the effectiveness of using the 8 refurbished ambulances since November 2007 (paragraph 5.14 of the Audit Report refers).

46. The **Director of Fire Services** said that:

- in 2003, the Government Logistics Department ("GLD") adjusted the percentage of maintenance reserve for the FSD's ambulances from 13% to 10%. Although the FSD did not agree to the reduced rate, it had to follow the established procedure. In view of the ageing of the ambulance fleet and the reduced number of maintenance reserve on the one hand, and the anticipated increase in demand for emergency ambulance service on the other, the FSD considered it necessary to make a contingency arrangement, i.e. joining the MCRP and identifying ambulances for refurbishment. If there were sufficient replacement ambulances and maintenance reserve, it was not necessary for the FSD to join the MCRP;

- the use of these refurbished ambulances was only intended to be a temporary measure. Besides, at the time of audit review, these ambulances had only been used for a short time and hence no comprehensive review on the effectiveness of using these ambulances had been conducted. Nevertheless, the FSD had been monitoring the situation of these ambulances; and
- in 2009 and 2010, a total of 196 ambulances would be replaced, amounting to 80% of the ambulance fleet. With the delivery of new ambulances, it was expected that there was no need to use the refurbished ambulances.

47. As it appeared to the Committee that the FSD had to join the MCRP to augment the ambulance availability due to inadequate provision of resources, the Committee queried why the SB did not seem to have recognised this problem, and paid due regard to the importance of the reliability of the ambulance fleet. In response, the **Secretary for Security** said at the public hearing and in his letter of 28 February 2009 in *Appendix 13* that:

- the SB had not instructed or encouraged the FSD to join the MCRP. The FSD joined the MCRP in April 2006 for the refurbishment of a total of 10 town ambulances ("TAs"). In fact, the 10 TAs proposed for refurbishment under the MCRP had been approved for replacement in the 2002 RAE and were actually replaced by new TAs between October 2004 and January 2006. Had these 10 TAs not undergone refurbishment, they would have been disposed of by the GLD in accordance with established procedures;
- the FSD proposed to refurbish and retain the 10 TAs as a temporary measure to enhance ambulance availability on a need basis. They were not intended for active emergency ambulance service. In 2006, there was no need to reactivate any refurbished TAs for active service. The response time performance of ambulance service in that year was 92.7%, which was above the FSD's pledge of 92.5%. Also, as a result of the 2005 and 2006 RAEs, the FSD had obtained funding for the replacement of another 35 TAs; and
- in late 2007, whilst the procurement of the 35 replacement TAs approved in the 2005 and 2006 RAEs was still in progress, it became clear that the new vehicles would not be fully delivered until the first quarter of 2009. The FSD saw the need to reactivate the refurbished TAs in batches on a need basis. In September 2007, 2 refurbished vehicles were reactivated. By the time this Audit Report was finalised in mid-2008, 8 TAs had been reactivated. The last 2 were reactivated in August 2008. That being the case, the situation would improve substantially when all 35 new TAs were delivered by March 2009. Furthermore, funding had been approved in the 2007 and 2008 RAEs for the replacement of another 161 ambulances, of which

65 would be available for service before the end of 2009 and the remaining 96 within the first half of 2010.

F. Procurement of replacement and additional ambulances

Economic life model ("ELM")

48. According to paragraph 6.3 of the Audit Report, as at 30 June 2008, 244 ambulances, excluding the 8 ambulances under the MCRP, had been in service, on average, for 8.1 years. Of the 244 ambulances, 176 (72%) were aged ambulances, including 64 (26%) ambulances in service for 10 years or more. The Committee asked why such aged ambulances had not been replaced, given that frequent breakdowns jeopardised rescue operations.

49. The **Director of Fire Services** explained that:

- according to the procedures for identifying ambulances to be replaced under the RAE set out in Appendix H of the Audit Report, the GLD prepared a first provisional replacement list for ambulances which had reached the end of their economical lives under the ELM. The GLD also prepared a second provisional replacement list for ambulances which had been in service for over 7 years but had not been included in the first provisional replacement list. The EMSD would then examine the conditions of the ambulances on the second provisional replacement list to determine the need for replacement. Under this mechanism, it was unavoidable that the majority of ambulances could only be replaced after having been in service for over 7 years; and
- the FSD had also expressed disagreement to applying this model on specialised vehicles like ambulances. In fact, the former Director of Fire Services ("former DFS") had sent two memoranda to the then Secretary for Financial Services and the Treasury ("then SFST") in 2005, expressing concerns about the use of the ELM in assessing ambulances due for replacement.

50. Regarding the two memoranda sent by the former DFS to the then SFST in 2005, the Committee asked:

- about the specific concerns raised by the then DFS;
- about the then SFST's subsequent response and actions taken to address those concerns; and

- whether the FSTB would consider not applying the ELM when assessing ambulances due for replacement, in view of the special function of emergency ambulance service.

51. In brief, the **Secretary for Financial Services and the Treasury** stated in his letter of 28 February 2009 in *Appendix 14* that:

- the two memoranda were part of a series of exchanges between the FSD and the FSTB in late 2005 regarding the allocation of non-recurrent funding in 2006-2007 for various purposes, including the procurement of ambulances;
- in the first memorandum, after being informed that funding had been approved for the replacement of 9 TAs, the then DFS requested additional allocation in 2006-2007 for him to pursue the original plan to replace a total of 21 replacement TAs. To substantiate this request, the then DFS said that "If they (the vehicles) are not replaced in time, their condition will deteriorate rapidly which will adversely affect our standard of service, not to mention the risk of breakdowns during fire fighting/rescue operation and the serious consequences that will bring to public safety and the safety of our staff";
- the FSD also requested additional allocation for the replacement of 2 village ambulances ("VAs"), after being informed that its original funding application to replace 3 VAs was unsuccessful. The FSD justified this request by stating that the serviceable lifespan of a VA was 7 years, and that by 2006-2007 all 4 VAs serving outlying islands would have been in service for 7 to 8 years and would require replacement. It added that the request for replacing 21 TAs and 2 VAs was supported by the GLD;
- on receipt of this memorandum, the FSTB invited the FSD to provide some quantifiable data to substantiate the appeal, including the number of breakdown for each vehicle in the original bid, as well as the maintenance and repair costs incurred for each vehicle. Having further considered the case, the FSTB wrote to the FSD confirming that the earlier decisions on allocation were upheld. The FSTB explained that when examining the appeal, it had taken into account the downtime record of individual vehicles (i.e. whether the downtime record exceeded 10%) and the absence of further data to substantiate the appeal;
- thereafter, the then DFS wrote a memorandum to the FSTB expressing his concern over the use of downtime record or "90% availability" as a "benchmark for determining the necessity for replacement of emergency vehicles". He added that the department could "not take the availability of an emergency vehicle as an indicator of its condition". He also stated that "the vehicles we are seeking to replace are not general purpose vehicles" and

cautioned that the Government "may end up paying a huge price in due course" from public safety angle if ageing vehicles were not replaced in time;

- following up the concern expressed by the then DFS in late 2005, the FSTB had been exploring with the FSD since mid-2006 the use of other indicators as additional reference points. The FSTB had also clarified that the downtime record was not an absolute yardstick and that it was prepared to consider cases on their individual merits;
- looking forward, the FSTB would work with the FSD, the SB, the GLD and the EMSD in reviewing the existing methodology, with a view to developing comprehensive indicators to guide management decisions on the replacement of ambulances;
- according to the FSD, the normal serviceable life of an ambulance should be 6 to 7 years, after which an ambulance should be replaced. The FSTB, however, remained of the view that it was not appropriate to base the replacement decision solely on the age of a vehicle, as an ambulance in poor condition might need replacement even if it had been in use for less than 6 to 7 years, while it would be a waste of public resources if an ambulance in good serviceable condition was disposed of only because it turned 6 to 7 years old;
- in this connection, the Director of Audit also pointed out in paragraph 41 of Chapter 11 of his Report No. 30 issued in June 1998 that vehicle replacement (with no exception for ambulances) should be based on the economic life and the cumulative maintenance costs rather than the age of a vehicle. In fact, the ELM was introduced in pursuance of the recommendation in that particular chapter of the Audit Report; and
- under the established procedures for identifying ambulances to be replaced, the ELM was only a step in the process and a tool to help identify ambulances due for replacement. As set out in Appendix H of the Audit Report, there were other procedures involving input by different parties. As the ELM could help identify ambulances due for replacement, the FSTB saw merit in continuing to make reference to it in the assessment work among other factors.

52. In response to the Secretary for Financial Services and the Treasury's statement in the above letter concerning the audit recommendation on the adoption of the ELM, **Mr Benjamin TANG, Director of Audit**, clarified in his letter of 10 March 2009, in *Appendix 15*, that according to paragraph 41 of Chapter 11 of Audit Report No. 30, the EMSD, in response to the recommendations made by the then Finance Bureau in May 1987, accepted the economic life concept for the replacement of vehicles. However, Audit

found that the EMSD had not followed the recommendations made by the Finance Bureau. The audit recommendations on the replacement of vehicles in paragraph 42 of that Audit Report were of a general nature. No exception for ambulances was specified.

53. The Committee further enquired that apart from the ELM, what other relevant factors would be considered in identifying ambulances due for replacement. **Ms Bernadette LINN Hon-ho, Deputy Secretary for Financial Services and the Treasury (Treasury)**, said at the public hearing and the **Secretary for Financial Services and the Treasury** stated in his letter of 18 March 2009 in *Appendix 16* that:

- unlike the replacement of general purpose government vehicles whereby recommendations were basically based on the ELM, recommendations for the replacement of ambulances were not confined to those generated from the ELM and might come from one or more of the following sources:
 - (a) recommended for replacement by the ELM;
 - (b) identified to be in need of replacement by the EMSD after vehicle inspection; and
 - (c) considered to be in need of replacement by the FSD having regard to its operational experience;
- the process incorporated recommendations from different sources, with a view to ensuring that all ambulances which might be in need of replacement could be identified for further consideration. When considering the recommendations from these different sources, the FSTB had also made reference to the availability rate of individual ambulances; and
- if the FSD could provide more information, such as the maintenance and breakdown records, to substantiate its requests for replacing ambulances which were not included under the ELM, this would certainly facilitate considerations by all relevant bureaux and departments.

Bidding for replacement ambulances

54. According to paragraph 6.6 of the Audit Report, 10 ambulances rejected in the 2006 RAE were not recommended for replacement by the FSD in the 2007 RAE. These 10 ambulances were subsequently recommended for replacement in the 2008 RAE. The Committee asked about:

- the accumulated maintenance cost, vehicle age, mileage run and replacement cost of the 10 ambulances rejected in the 2006 RAE, as compared to those of the cars of Government Principal Officials ("PO") due for replacement in 2006-2007;
- the reasons for rejecting the 10 ambulances in the 2006 RAE, as well as the breakdown records of each of these ambulances when they were recommended for replacement in the 2006 and 2008 RAEs respectively; and
- the reasons for not including the rejected ambulances in the 2006 RAE in the ensuing RAE.

55. The **Secretary for Financial Services and the Treasury** stated in his letter of 28 February 2009 that:

- as at 30 June 2006, for the PO cars, their age ranged between 8.50 – 9.08 years; accumulated mileage ranged between 154,068 – 263,935 km; accumulated maintenance cost ranged between \$371,710 – \$588,244; and their average replacement cost was \$357,000 each;
- for the 10 TAs, their age ranged between 7.83 – 9.00 years; accumulated mileage ranged between 173,807 – 282,539 km; accumulated maintenance cost ranged between \$635,254 – \$1,008,672; and their estimated replacement cost was \$962,000 each;
- for all the PO cars, their accumulated maintenance cost as at 30 June 2006 exceeded the replacement cost. However, for the 10 ambulances in question, only one of them had its accumulated maintenance cost higher than the estimated replacement cost; and
- the ELM supported the replacement of all PO cars. The ELM also recommended the replacement of the 10 TAs in question. Accordingly, the Director of Government Logistics and the Director of Fire Services had respectively included the PO cars and the 10 TAs when they bid funding for the relevant block votes for the year in question. However, in the case of the FSD, the provision required for replacing the 10 TAs had not been included in the final allocation.

56. On the reasons for rejecting the 10 ambulances, the **Secretary for Security** replied in his letter of 28 February 2009 that:

- in the 2006 RAE, the FSD requested 36 replacement TAs and the SB supported 26 of them. The remaining 10 TAs proposed for replacement were observed to yield a relatively high availability rate of around 90% at the time of application. Furthermore, the FSD had 10 TAs refurbished under the MCRP at that time that could be deployed on a need basis. The availability rate and breakdown record of the 10 TAs not supported for replacement in the 2006 RAEs were at Annex A to **Appendix 13**;
- regarding the 2008 RAE, the SB supported all 73 replacement TAs requested by the FSD, and the FSTB approved the SB's recommendation in its entirety. 10 of these TAs were previously included in the FSD's bid in the 2006 RAE. The availability rate and breakdown record of these 10 TAs were at Annex B to **Appendix 13**; and
- the FSD agreed with the audit recommendation and would ensure that all TAs rejected in the previous RAE were included in the bid of the annual RAE. To facilitate the submission of bids by the FSD in future exercises, the SB and the FSTB would specify the TAs not supported for replacement, so that the FSD could take them into account when preparing the list of proposed replacement in the subsequent year.

57. In respect of the audit recommendation in paragraph 6.11(b) of reviewing the methodology of determining the number of ambulances to be replaced, the Committee enquired about the Administration's plan and timetable for taking forward the review.

58. The **Secretary for Financial Services and the Treasury** stated in his letter of 18 March 2009 that:

- the Director of Fire Services had undertaken to work out, in collaboration with the EMSD and the GLD, an objective methodology of determining the number of ambulances to be replaced that was acceptable to all parties;
- the FSD had already started discussions with the relevant departments. The FSTB would work with all parties concerned and provide input along the way. It was hoped that the review would be completed by the third quarter of 2009, as this would facilitate the preparation and assessment work in relation to the FSD's bid, if any, for replacing its ambulances in the 2009 RAE; and
- by 2010 when all replacement ambulances approved in recent years had been delivered by phases, over 80% of the ambulance fleet would be under 2 years old and the fleet's age would be reduced from the current average age of around 8 years to 1.7 years.

59. Given that most of the ambulances would be replaced in 2009 and 2010, the Committee asked how the FSD could ensure that the problems brought about by ageing ambulance fleet would not recur several years later. The **Director of Fire Services** responded that the FSD would review the age distribution of the ambulances after all the new ambulances had arrived, and would discuss with the relevant bureaux and departments for a structured and staggered replacement of ambulances in future.

Lead time for ambulance procurement

60. According to paragraph 6.7 of the Audit Report, it took about three to four financial years to complete the process of replacing an ambulance (i.e. from the bidding of fund, drawing up of design and specifications, tendering to the delivery of an ambulance). The Committee enquired about:

- the reasons for taking such a long time for procuring an ambulance;
- the length of time normally required in each step of the procurement process; and
- the specific measures that would be adopted by the FSD, the EMSD and the GLD to expedite the procurement process.

61. The **Assistant Director, EMSD**, said at the public hearing and the **Director of Fire Services** stated in his letters of 18 March and 23 April 2009 that:

- the process of replacing the ambulances approved under the 2005 RAE had taken four financial years to complete because in October 2006, the EMSD noted that the ambulance model would be changed. The EMSD was also notified by the FSD that some more ambulances might be approved under the 2006 RAE. Having discussed with the FSD, the EMSD and the GLD arranged tendering for the 35 ambulances approved in the 2005 and 2006 RAEs in one go, thus lengthening the procurement process;
- it took about 4 months from the preparation of the bids by the bureaux and departments to the announcement of RAE results, normally around October each year. Funding for approved items would be available at the beginning of the new financial year on 1 April, following passage of the relevant vote on account resolution by the Legislative Council;
- once funding was secured in early April, the EMSD would draw up the design and specifications of the vehicles in collaboration with the FSD. This process took about 6 months to complete. The ensuing tendering process took about 5 to 6 months;

- delivery of ambulances after award of contract normally took about 12 months as the ambulance was a "purpose-built" vehicle which required installation of various equipment. If a large number of ambulances were to be procured or the new vehicles had to comply with the latest emission standard, longer lead time up to about two years might be required for delivery. For prolonged delivery schedule, partial or staged delivery would be sought;
- with a view to shortening the lead time for the procurement of ambulances, discussion had been held among the GLD, the EMSD and the FSD. Specific measures as follows would be adopted by the three parties to expedite the procurement process:
 - (a) the EMSD would start drawing up the design and specifications in collaboration with the FSD when the FSD was preparing funding bids under the RAE, with a view to completing the process within 4 months before the announcement of the RAE result; and
 - (b) the GLD would in parallel start making pre-tender preparation upon the submission of the RAE bid by the FSD, with a view to completing the preparatory work and inviting tender as soon as funding was secured; and
- with the above measures, the processes of bidding for fund, approval of fund, drawing up of design and specifications and tendering could be taken forward concurrently. The whole procurement process from the bidding of fund to the delivery of ambulances could be reduced, by 8 months, to 25 months. These measures would be adopted in the Non-works Capital Expenditure RAE for 2009.

Provision of ambulance and manpower resources

62. As it appeared to the Committee that many problems identified in the Audit Report on the provision of emergency ambulance service might be attributed to inadequate allocation of resources to the FSD to maintain the availability of ambulances, the Committee enquired about the details of the FSD's bidding of ambulances and manpower in the RAEs in 2005, 2006 and 2007, including the FSD's submissions to the SB, the SB's subsequent recommendations to the FSTB and the FSTB's decisions on the SB's recommendations.

63. The **Secretary for Financial Services and the Treasury** provided the details in his letter of 28 February 2009, setting out the number of ambulances and manpower requested by the FSD and the relevant justifications, as well as the SB's and the FSTB's considerations for supporting the requests or otherwise. Regarding resource allocation, the **Secretary for Security** also said at the public hearing that:

- since the amount of available resources was finite, bureaux had to prioritise the bids from departments and make recommendations to the central committee on the proposed allocations based on the justifications provided by the departments, the actual situation, and the resources available for re-deployment;
- the SB could not possibly support each bid to the full, but would ensure that the resources eventually allocated to the disciplined services departments would enable their heads to carry out their duties effectively and achieve the departments' performance pledges to the community. Therefore, as a Bureau Secretary, he would carefully consider the bids from each department within his purview and deploy resources as appropriate; and
- the decisions made by the SB on resource allocation to the FSD in the past few years had generally enabled it to achieve its performance pledge on the provision of ambulance service. For instance, the response time was 92.7% in 2006, 92.8% in 2007, 92.2% in 2008 and 92.8% in the first two months of 2009.

64. Responding to the Committee's query on whether the allocation of resources within the SB had been tilted towards the fire stream, the **Secretary for Security** said at the public hearing and in his letter of 18 March 2009 in *Appendix 17* that:

- there were eight disciplined services departments within the SB's purview, covering various areas of work including the maintenance of law and order, immigration and customs control, fire fighting and ambulance services, all of which were of great importance to social stability and public safety;
- in the annual RAEs, the departments within the SB's purview would propose the creation of thousands of new posts. The SB did not, and in fact could not, fully meet the requests made by the head of each of the disciplined services departments. Neither would the SB recommend priority to every bid without taking an overview of all the bids from departments; and
- the resources allocated to the ambulance stream in the past few years had in fact been more than those to the fire stream. Compared to the establishment as at 1 January 2006, the establishment of the ambulance stream had recorded a cumulative increase of 1.38%, 3.45% and 4.83% in 2007, 2008 and 2009

respectively, whereas that of the fire stream had only recorded a cumulative increase of 0.48%, 0.73% and 1.37% in these respective three years.

65. The Committee noted that in the 2005 RAE, the FSD submitted a bid for 231 posts to meet the increase in demand for the emergency ambulance service, but the SB only supported 115 posts and the FSTB eventually approved 110 posts. In the 2006 and 2007 RAEs, the SB did not support the FSD's request for manpower, but used the resources already approved in the 2005 RAE to create additional posts in 2006-2007, 2007-2008 and 2008-2009. The Committee asked:

- about the justifications of the SB for supporting only half of the posts requested by the FSD; and
- why the SB had made such phased arrangements in allocating the additional posts to the FSD in these years.

66. The **Secretary for Financial Services and the Treasury** stated in his letter of 28 February 2009 that:

2005 RAE

- in assessing the bid, the SB noted that the response time performance achieved in 2004 was below the target of 92.5% (91.1% in 2004). The SB agreed that additional resources were required. Having considered the competing bids by other departments under the SB, the SB supported the creation of 115 posts to provide 19 additional ambulance shifts, and considered that with effective use of resources, the FSD should be able to improve the response time performance. Approval was eventually given for the FSD to create not more than 110 posts for the improvement of emergency ambulance service;
- inherent in the approval were the concern that ambulance service appeared to have been abused, and the requirement for the SB to critically examine how the new resources should best be deployed and explore possible measures to reduce the alleged abuse of emergency ambulance service. The SB therefore explored a number of management options with the FSD, which included strengthening public education and consideration of an MPDS. Whilst the consultancy study on the feasibility to introduce the MPDS in Hong Kong was in active progress at that time, the FSD launched a publicity campaign to encourage the proper use of emergency ambulance service in late 2005;

- 28 additional posts were eventually created in 2006-2007 for operating 4 additional ambulance shifts, using the resources approved in the 2005 RAE. Decision on the use of the remaining resources was deferred until the effects of the publicity campaign were known and the way forward on the introduction of the MPDS was clearer;

2006 RAE

- the SB did not recommend the FSD's bid because the resources approved in the 2005 RAE had yet to be fully utilised and the proposed introduction of the MPDS in Hong Kong was still being considered. Also, the SB was already planning to provide another 47 additional posts, using the resources approved in the 2005 RAE, for the FSD to operate 7 additional ambulance shifts in 2007-2008. The SB considered that the additional posts should be sufficient for the FSD to meet demand in 2007-2008, having regard to the fact that the response time performance in the first six months of 2006 was above the performance pledge (an average of 92.9% from January to June 2006);
- it also appeared at that time that there was scope for the FSD to better manage demand in view of an ongoing publicity campaign against abuse of emergency ambulance service. The number of calls dropped by 7.4% in the first half of 2006 when compared with that of 2005; and

2007 RAE

- the SB did not recommend the FSD's bid, as it was already planning to provide another 30 additional posts for the FSD to operate 5 additional ambulance shifts in 2008-2009, using resources approved in the 2005 RAE. Together with the posts provided in 2006-2007 and 2007-2008, an accumulative total of 105 additional posts were provided by 2008-2009 for the FSD to operate a total of 16 additional ambulance shifts. The SB considered that this provision should be sufficient for the FSD to meet the demand for its ambulance service, having regard to the response time performance in 2006 (92.7%) and that in the first six months of 2007 (92.9%).

67. The Committee noted from the Secretary for Financial Services and the Treasury's letter dated 28 February 2009 that the number of additional posts recommended by the SB and approved by the FSTB in the 2008 RAE was substantially higher than that in previous years, and queried why there was a sudden increase in the allocation of resources to the FSD.

68. The **Secretary for Financial Services and the Treasury** explained in his letter of 18 March 2009 that:

- approval was given for the FSD to create 121 posts to strengthen its emergency ambulance service, close to the number of 130 additional posts recommended by the SB. The small difference was due to the consideration over fluctuations in emergency ambulance service calls that affected the estimated demand for ambulance resources;
- the approval had taken into account various factors. First, the number of ambulance calls increased by 6.7% in the first half of 2008 when compared with that in the same period of 2007. Moreover, the average response time performance in the first half of 2008 was 91.8%, as compared with 92.9% in the corresponding period of 2007. In this connection, the effects of the publicity campaign launched by the FSD in late 2007 on the proper use of emergency ambulance service also appeared to be not as effective as the one launched in late 2005. In the first half of 2006, after the publicity campaign in November 2005, the number of calls dropped by more than 7% when compared with that of 2005; and
- in the light of the above factors, the FSTB considered it necessary to approve additional resources for the FSD to cope with the prevailing and increasing demand in emergency ambulance service and meet the response time performance pledge.

69. The Committee noted from paragraph 6.16 of the Audit Report that since 2001, the FSD, based on the ratio of ambulances to emergency calls recommended in the consultancy report of December 2001, had estimated the number of additional ambulances required for the projected increase in emergency calls and bid funds under the Non-works Capital Expenditure RAE. However, according to the information provided by the Secretary for Financial Services and the Treasury vide his letter of 28 February 2009, the FSD's bids for additional ambulances from 2005 to 2007 had all been rejected, either by the SB or the FSTB. It appeared to the Committee that the FSD was not able to ensure a consistent achievement of performance target due to insufficient provision of ambulances. The Committee enquired about the justifications for rejecting the FSD's bids in these years.

70. The **Secretary for Financial Services and the Treasury** stated in his letter of 28 February 2009 that:

2005 RAE

- the FSD submitted a bid for procuring 9 additional TAs in order to keep the maintenance reserve ratio at 13% of the ambulance fleet. The SB supported

2 TAs based on the advice of the GLD that the maintenance reserve ratio should be at 10% instead of 13%. The maintenance reserve ratio was adjusted to 10% in 2003 as the GLD noted that the average downtime rate of the TAs dropped from 13% to 9.7% in the preceding three financial years;

- the FSTB, after consulting the GLD, decided to reject the funding required. The major considerations were that a number of existing ambulances were unmanned; about 40 new TAs which were put into service in late 2004 would begin to operate in full capacity after resolution of initial technical problems; and 4 new TAs would be delivered in the end of 2005;

2006 RAE

- the FSD submitted a bid for procuring 19 additional TAs, 17 of which were for meeting growing demand as the projected number of ambulance calls would reach 579,000 in 2007 and 368 ambulance shifts were required with reference to the recommendations in the consultancy report of December 2001. The other 2 TAs were required to keep the maintenance ratio at 10% of the ambulance fleet;
- the SB did not support the bid as the GLD advised that the ambulance fleet of the FSD at that time should have sufficient capacity to cope with the projected number of ambulance calls in 2007. The GLD also did not support the additional TAs for maintenance reserve as not all TAs were shown to be fully utilised by the FSD;

2007 RAE

- the FSD submitted a bid for procuring 26 additional TAs, 24 of which were for meeting growing demand as the projected number of ambulance calls would reach 624,000 in 2008 and 384 ambulance shifts were required with reference to the recommendations in the consultancy report. 2 TAs were required to keep the maintenance reserve ratio; and
- the SB did not support the bid in the light of the advice provided by the GLD, which was basically the same as the advice given in the 2006 RAE.

71. As the FSD's bids were generally based on the recommendations in the consultancy report, the Committee asked why the SB had not taken the consultant's recommendations in assessing these bids. The **Secretary for Security** replied that:

- the consultancy report summarised the results of the review of the paramedic ambulance service and made recommendations in various aspects. Its recommendation on the training of ambulancemen to be Emergency Medical Assistant IIs had been implemented and funding had been allocated for this purpose; and
- the report provided a forecast of the ambulance needed based on various assumptions. However, when handling annual funding bids, the SB had to make reference to the actual figures and service demand at that time instead of simply following the recommendations of the report. As the Bureau Secretary, he had to carefully scrutinise the bids and ensure that public money was properly spent.

72. The **Director of Audit** added that since the consultancy report was published in 2001, the ratio of ambulances to emergency calls recommended in the report might no longer be applicable. Also, several measures introduced by the FSD after 2001 might have affected the availability of ambulances. These included the introduction of the urgent care fleet in April 2003 and the TGMS in June 2005, reorganisation of the Ambulance Command in April 2007, as well as the implementation of a scheme for deploying off-duty ambulancemen to man additional ambulances in August 2007. Audit therefore recommended that the FSD should review the existing methodology of estimating the number of additional ambulances required to meet the projected increase in emergency calls.

G. Conclusions and recommendations

73. The Committee:

- considers that the various problems identified in the Director of Audit's Report ("Audit Report") on the provision of an efficient, effective and reliable emergency ambulance service by the Fire Services Department ("FSD"), details of which are given in the ensuing parts below, may be attributed:
 - (a) not only to the fact that the FSD has not kept or made effective use of management information that could help to improve its management and use of existing ambulance resources, and to substantiate its requests for additional resources;
 - (b) but also to inadequate allocation of resources to the FSD to provide a level of service that can meet the expectation of the community;

Use of the emergency ambulance service

- expresses concern that:
 - (a) the FSD did not have information on the degree of urgency of the emergency calls, which could have been used for optimal deployment of emergency ambulance resources and to draw the public's attention to the proper use of the emergency ambulance service;
 - (b) there was no assessment on the degree of urgency of the patients in the ambulance journey records;
 - (c) according to the Accident and Emergency ("A&E") Triage Categorisation System of the Hospital Authority ("HA"), from 2004 to 2007, on average, 40.5% of the conveyance of patients by ambulances to the A&E Departments of the HA were non-emergency cases. Whilst it is not wholly appropriate to correlate this figure with the misuse of emergency ambulance service, as some patients' conditions might have improved as a result of the emergency care tendered by ambulance staff on the way to hospitals, it does show cause for concern over the possible misuse of the ambulance service; and
 - (d) since August 2006, the FSD has not reviewed the effectiveness of its publicity campaigns on the proper use of the emergency ambulance service;
- acknowledges that the Director of Fire Services:
 - (a) plans to introduce electronic ambulance journey records by November 2009, and incorporate information on the degree of urgency of patients in such records;
 - (b) is working out the detailed proposals on the medical priority despatch system, with a view to enabling the FSD to prioritise the despatch of ambulances according to the seriousness of the patients' conditions, and will consult the Panel on Security of the Legislative Council and the public in 2009 before making a decision;
 - (c) will launch joint education programmes together with the HA and other ambulance service providers to enhance the effectiveness of public education on the proper use of the emergency and non-emergency ambulance services. A working group has been set up to formulate strategies and organise related activities; and

- (d) has agreed to implement other audit recommendations in paragraphs 2.7 and 2.15 of the Audit Report;
- urges the Director of Fire Services to:
 - (a) facilitate and ensure the optimal deployment of emergency ambulance resources by taking appropriate measures, including launching the electronic ambulance journey records (with information on the degree of urgency of patients) by November 2009 without delay; and
 - (b) make reference to information on the degree of urgency of patients, and step up efforts to encourage the public's proper use of the emergency ambulance service;

Performance measurement

- expresses grave concern and finds it unacceptable that:
 - (a) since 1999, the FSD has not conducted any review of the 12-minute target response time (comprising a 2-minute activation time and a 10-minute travelling time) for the emergency ambulance service;
 - (b) from January 2004 to June 2008, the percentage of emergency calls answered within the 2-minute activation time increased from 87.4% to 95.6%, whereas that of the 10-minute travelling time decreased from 91.2% to 87.4% despite the implementation of the Third Generation Mobilising System in June 2005. In 2008, in respect of the 2-minute activation time, 88% of the calls could be answered within 1 minute 30 seconds;
 - (c) although the decrease in the percentage of emergency calls answered within the 10-minute travelling time might reflect a shortage of ambulances and/or ambulance crew, the FSD had not ascertained the reasons for such decrease, or used the decreasing figure, as appropriate, as one of the justifications to substantiate its requests for additional resources. Instead, the FSD made use of the improvement in the 2-minute activation time to compensate for the increase in the 10-minute travelling time in order to achieve the performance target of answering 92.5% of the emergency calls within a target response time of 12 minutes;
 - (d) despite the increase in the percentage of emergency calls answered within the 2-minute activation time, for the period from January to June 2008, the FSD failed to achieve the performance target and only

91.8% of the emergency calls were answered within the 12-minute target response time;

- (e) the FSD has not finalised the benchmarking study on the 1-minute turnout time conducted since June 2006; and
 - (f) from January 2004 to June 2008, the FSD could not achieve the performance target for the emergency ambulance service in the New Territories ("NT") Region. During this period, the percentage of emergency calls in this region answered within the target response time ranged from 87.1% to 91.5%. Efforts made to improve the response time have been in vain, as shown below:
 - (i) the FSD's review of the emergency ambulance service in the NT Region, conducted in June 2006, concluded that the East and West Division of the NT Region ("NT/E&W Division") could not achieve the performance target. After the reorganisation of the Ambulance Command in April 2007, the FSD still could not achieve the performance target in the NT/E&W Division. From April 2007 to June 2008, only 89.8% of the emergency calls in the NT/E&W Division were answered within the target response time; and
 - (ii) noting that the emergency ambulance resources in the NT Region had been stretched to their limits and there was a growing demand for the emergency ambulance service in the northern part of the NT Region, the FSD considered it necessary to construct additional ambulance depots in the region (e.g. Sheung Shui). However, no suitable sites could be identified;
- acknowledges:
- (a) the Secretary for Security's undertaking to review the 12-minute target response time for the emergency ambulance service, including the division into the 2-minute activation time and the 10-minute travelling time, and report the findings to the Panel on Security for further consultation; and
 - (b) that the Director of Fire Services:
 - (i) will finalise the benchmarking study on the 1-minute turnout time in May/June 2009; and
 - (ii) has generally agreed to implement other audit recommendations in paragraph 3.12 of the Audit Report;

- urges:
 - (a) the Secretary for Security to:
 - (i) set a definite timetable with the Director of Fire Services for taking forward the above review of the target response time; and
 - (ii) actively liaise with the relevant policy bureaux and government departments with a view to assisting the FSD in expeditiously identifying suitable sites in the NT Region for constructing additional ambulance depots; and
 - (b) the Director of Fire Services to critically review the allocation of ambulance resources among individual divisions, especially those in the NT Region, to ensure that the performance target is achieved in all divisions;

Use of ambulance resources

- expresses serious concern and finds it unacceptable that:
 - (a) from January to December 2007, the FSD could not achieve the baseline daily ambulance availability ("DAA") for 158 days on the day shift and 311 days on the night shift. Despite the implementation of a scheme since August 2007 for deploying off-duty ambulancemen to man additional ambulances to augment the DAA, from January to June 2008, the FSD still could not achieve the baseline DAA for 71 days on the day shift and 124 days on the night shift;
 - (b) the FSD failed to achieve optimal utilisation of the urgent care ambulances and emergency ambulances, as follows:
 - (i) from 2004 to 2007, on average, 10.7 urgent care ambulances were available for handling urgent calls on each day. However, on average, only 6.6 (62%) of 10.7 urgent care ambulances were used to handle urgent calls;
 - (ii) from 2004 to 2007, the number of urgent calls remained rather stable, ranging from 34,175 to 37,192. However, the number of urgent calls handled by the urgent care fleet decreased from 9,390 in 2004 by 1,037 (11%) to 8,353 in 2007;
 - (iii) it has been a lapse of five years since the FSD's last review of the operation of the urgent care fleet in April 2004;

- (iv) the number of urgent calls handled by emergency ambulances increased from 19,821 in 2005 by 4,808 (24%) to 24,629 in 2007. A significant number (i.e. 15 out of 25 cases selected by the Audit Commission for examination) of urgent calls were handled by emergency ambulances within the operating hours of the urgent care fleet; and
- (v) urgent care ambulances had to wait at the hospitals for a long time before the picking up or handing over of patients, resulting in a waste of ambulance resources. From January 2007 to May 2008, the ambulance crew had to wait for more than 30 minutes at the hospitals for 379 urgent cases. The average waiting time at the hospitals for these 379 urgent calls was 41 minutes, ranging from 31 to 71 minutes;
- (c) the FSD did not train the required number of Emergency Medical Assistant IIs ("EMA IIs") to provide the paramedic ambulance service for all the emergency calls. If an emergency ambulance manned by a 3-man crew is not supervised by an EMA II, it is assigned as a floating urgent care ambulance and normally not used to provide the paramedic ambulance service. The significant increase in the number of emergency calls handled by floating urgent care ambulances (from 6,819 in 2004 by 6,537 (96%) to 13,356 in 2007) calls for the need to assess the number of EMA IIs required and expand the relevant training programme; and
- (d) under the continuous quality improvement programme, except for the cardiac arrest cases, there was no specification of the minimum number of emergency cases to be reviewed for assessing the performance of the ambulance staff. In the first quarter of 2008, only 3,436 (2.17%) cases were reviewed;
- acknowledges that the Director of Fire Services:
 - (a) has ascertained the reasons for not meeting the baseline DAA on the night shift in 2007, and will continue to monitor and review the situation so as to improve the overall availability;
 - (b) aims to conclude the review on the efficiency and effectiveness of the urgent care ambulance service in May/June 2009; and
 - (c) has generally agreed to implement other audit recommendations in paragraphs 4.10, 4.21, 4.30 and 4.35 of the Audit Report;

- urges the Director of Fire Services to expeditiously implement the above audit recommendations to ensure the optimal utilisation of ambulance resources;

Maintenance of ambulances

- considers that from the public safety point of view, it is of paramount importance to ensure the safety, reliability and roadworthiness of the ambulance fleet, as it is used for emergency rescue operations;
- expresses astonishment and serious dismay that:
 - (a) the Security Bureau ("SB") not only underrated the problem of inadequate provision of resources to maintain the availability of the ambulance fleet at a level that could meet the public expectation, which had led to the FSD's being the only disciplined services department joining the Minimum Cost Refurbishment Programme ("MCRP"), the SB even used the FSD's participation in the MCRP as one of the justifications to reject part of its request for ambulance replacement in the 2006 Resource Allocation Exercise ("RAE"); and
 - (b) up to 30 June 2008, 8 out of the 10 refurbished ambulances under the MCRP had been reactivated. These ambulances had been in service, on average, for about 11 years and their average downtime was 12.4%. Despite the significant downtime of several refurbished ambulances, the FSD has not evaluated the effectiveness of using the 8 refurbished ambulances since November 2007;
- expresses serious dismay and finds it unacceptable that the FSD has not proactively monitored and enhanced the availability and reliability of ambulances:
 - (a) from 2003 to 2007, the percentage of downtime of the ambulances maintained by the Electrical and Mechanical Services Department ("EMSD") increased from 10.3% to 15%. The percentage of downtime for unscheduled maintenance significantly increased from 6.4% in 2003 by 70% to 10.9% in 2007. The significant increase in the downtime of ambulance maintenance, especially unscheduled maintenance, undermined the availability and reliability of the ambulance fleet for the emergency ambulance service;
 - (b) up to 30 June 2008, the FSD had not kept management information on the breakdown and the maintenance of individual ambulances. Neither had the FSD ascertained the causes and consequences of the increase in breakdowns of ambulances. The sudden breakdowns of ambulances

jeopardise the rescue operations, and reduce the availability and reliability of the ambulances;

- (c) even though some breakdowns occurred when the ambulances were conveying patients or casualties to the hospitals, the FSD had only started to keep a brief summary of the breakdowns since 20 July 2008. Records from 20 July to 19 August 2008 revealed that among the 67 ambulance breakdowns, 53 ambulances had been in service for over 9 years. 31 of the 67 breakdown cases occurred when the ambulances were conveying patients to hospitals; and
- (d) the performance of the EMSD in the maintenance of ambulances has not been closely monitored, as reflected in the following:
 - (i) under the Service Level Agreement ("SLA"), the guaranteed level of availability was only applicable to ambulances in service not exceeding 7 years. Although 147 (60%) of 246 ambulances had already exceeded their design serviceable life of 7 years (i.e. aged ambulances) on the commencement of the SLA (i.e. 1 April 2006), no target availability was set for these aged ambulances;
 - (ii) since the commencement of the SLA, the EMSD has not submitted, and the FSD has not requested for, the quarterly performance report specified in the SLA; and
 - (iii) from August 2006 to June 2008, the number of ambulances kept in the Fan Garden and the Siu Ho Wan workshops exceeded the quotas (i.e. the maximum number of ambulances that could be kept in the EMSD's workshops) for a significant number of days, ranging from 92 days to 224 days. These two workshops provided the maintenance service for ambulances which mainly handled emergency calls in the NT Region;
- acknowledges that the Director of Fire Services has generally agreed to implement the audit recommendations in paragraph 5.19 of the Audit Report;
- urges:
 - (a) the Secretary for Security, together with the Director of Fire Services, to critically review the provision of resources for the FSD to maintain the availability of the ambulance fleet at a level that can meet the public expectation; and

(b) the Director of Fire Services to:

- (i) in consultation with the SB, critically review the appropriateness of joining the MCRP for its ambulances and reactivating refurbished ambulances for rescue operations;
- (ii) keep and make effective use of management information on the breakdown and maintenance history of individual ambulances, such as the frequency of breakdowns, the risk of breakdown on rescue operations, and the downtime of unscheduled maintenance and the related costs, etc;
- (iii) in collaboration with the Director of Electrical and Mechanical Services, conduct a comprehensive review of the causes and consequences of the increase in breakdowns, including the impact on rescue operations; and
- (iv) proactively introduce measures to minimise the frequency of breakdowns and enhance the availability and reliability of the ambulance fleet;

Procurement of replacement and additional ambulances

- expresses dismay and finds it unacceptable that:

- (a) the problem of ageing ambulance fleet had not been addressed opportunely by the SB and the FSD. As at 30 June 2008, 244 ambulances, excluding the 8 ambulances under the MCRP, had been in service, on average, for 8.1 years. Of the 244 ambulances, 176 (72%) were aged ambulances, including 64 (26%) ambulances in service for 10 years or more. The average age of the FSD's ambulance fleet increased from 5.36 years in 2003 to 7.61 years in 2007. The number of aged ambulances increased from 23 in 2003 by 6.7 times to 178 in 2007;
- (b) when considering recommendations for replacement of ambulances, the Financial Services and the Treasury Bureau ("FSTB") mainly made reference to the economic life model and the availability rate of individual ambulances, without paying due regard to the special function of ambulances, i.e. providing emergency conveyance of patients and casualties to hospitals, and the impact of breakdown on rescue operations; and

- (c) the lead time for procuring ambulances was unduly long. It took about three to four financial years to complete the process of replacing an ambulance (i.e. from the bidding of fund, drawing up of design and specifications, tendering to the delivery of an ambulance);
- finds it unacceptable and inexcusable that the FSD management did not possess the relevant management skills to collate and present management information in a way that could better substantiate its request for resources for emergency ambulance service:
 - (a) the FSD did not keep management information on the breakdown and maintenance history of individual ambulances. As a result, it was difficult for the FSD to justify the replacement of its aged ambulances; and
 - (b) in bidding funds to procure additional ambulances for the projected increase in emergency calls and the maintenance reserve under the Non-works Capital Expenditure RAE:
 - (i) the FSD had since 2001 estimated the number of additional ambulances required based on the ratio of ambulances to emergency calls recommended in the consultancy report of December 2001. The ratio, which was based on data in 2000, might no longer be applicable; and
 - (ii) the FSD did not provide comprehensive information on the availability and reliability of its ambulance fleet to the Government Logistics Department ("GLD") to substantiate its request for additional ambulances for the maintenance reserve;
- acknowledges that the Director of Fire Services:
 - (a) will take measures to shorten the lead time for procurement of ambulances so that the whole process from the bidding of fund to the delivery of ambulances can be reduced to 25 months. The measures will be adopted in the Non-works Capital Expenditure RAE for 2009;
 - (b) will, in collaboration with the EMSD and the GLD, work out by the third quarter of 2009 an objective methodology of determining the number of ambulances to be replaced; and
 - (c) has generally agreed to implement other audit recommendations in paragraphs 6.11 and 6.21 of the Audit Report;

- urges:
 - (a) the Secretary for Security to critically review the provision of ambulance resources to the FSD, to ensure that it can maintain a high level of availability of ambulances and ambulance crew to cope with the future increase in emergency calls, and report the result of the review to the Panel on Security; and
 - (b) the Director of Fire Services to:
 - (i) in consultation with the FSTB and, in collaboration with the GLD and the EMSD, review the mechanism for the replacement of ambulances, having regard to the special function of ambulances, and report the findings of the review to the Panel on Security;
 - (ii) review the existing methodology of estimating the number of additional ambulances required to meet the projected increase in emergency calls, taking into account the availability of the ambulance fleet and the actual average time taken to handle an emergency call;
 - (iii) make forward planning and ensure that the problems brought about by ageing ambulance fleet will not recur several years later, given that most of the ambulances were approved for replacement in the 2007 and 2008 RAEs; and
 - (iv) strengthen its internal information and resource management functions through staff training and engaging professional assistance (e.g. the Efficiency Unit and/or the Treasury) where appropriate, so that the FSD management can make effective use of the management information (including the availability, utilisation and reliability of ambulances) to better substantiate its request for resources, and proactively formulate strategic measures to enhance the efficiency and effectiveness of the emergency ambulance service; and


Follow-up action

- wishes to be kept informed of:
 - (a) the measures taken by the FSD to facilitate and ensure the optimal deployment of emergency ambulance resources;
 - (b) the progress made in implementing the electronic ambulance journey records;

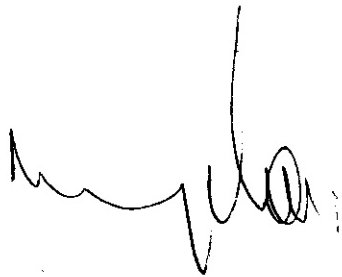
- (c) the measures taken to step up efforts to encourage the public's proper use of the emergency ambulance service;
- (d) the definite timetable and the result of the review of the 12-minute target response time for the emergency ambulance service;
- (e) the progress made in identifying suitable sites in the NT Region for constructing additional ambulance depots;
- (f) the result of the review of the allocation of ambulance resources among individual divisions;
- (g) the result of any review on the provision of resources for the FSD to maintain the availability of the ambulance fleet at a level that can meet the public expectation;
- (h) the result of any review on the appropriateness of the FSD's joining the MCRP for its ambulances and reactivating refurbished ambulances for rescue operations;
- (i) the progress made in keeping and making use of management information on the breakdown and maintenance history of individual ambulances;
- (j) the result of any comprehensive review of the causes and consequences of the increase in breakdowns;
- (k) the measures taken to minimise the frequency of breakdowns and enhance the availability and reliability of the ambulance fleet;
- (l) the result of the SB's review on the provision of ambulance resources to the FSD;
- (m) the result of the review of the mechanism for the replacement of ambulances, having regard to the special function of ambulances;
- (n) the result of the review of the existing methodology of estimating the number of additional ambulances required to meet the projected increase in emergency calls;
- (o) the progress made in planning for the replacement of ambulances in future to ensure that the problems brought about by the ageing ambulance fleet will not recur;

- (p) the measures taken to strengthen the FSD's internal information and resource management functions; and
- (q) the progress made in implementing other audit recommendations.

**SIGNATURES OF THE CHAIRMAN,
DEPUTY CHAIRMAN AND MEMBERS OF THE COMMITTEE**



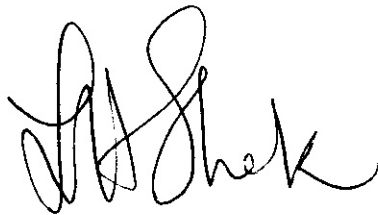
Philip WONG Yu-hong
(Chairman)



Paul CHAN Mo-po
(Deputy Chairman)



Andrew CHENG Kar-foo



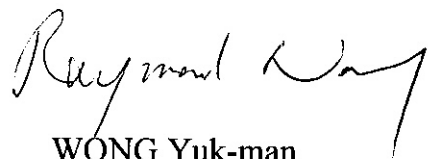
Abraham SHEK Lai-him



Alan LEONG Kah-kit



Starry LEE Wai-king



WONG Yuk-man

11 May 2009

**CHAPTER IN THE DIRECTOR OF AUDIT'S REPORT NO. 51
DEALT WITH IN THE PUBLIC ACCOUNTS COMMITTEE'S SUPPLEMENTAL REPORT**

**Director of
Audit's Report
No. 51**

**P.A.C.
Report No. 51A**

<u>Chapter</u>	<u>Subject</u>	<u>Part</u>
4	Emergency ambulance service	4

**RULES OF PROCEDURE OF
THE LEGISLATIVE COUNCIL OF
THE HONG KONG SPECIAL ADMINISTRATIVE REGION**

72. Public Accounts Committee

(1) There shall be a standing committee, to be called the Public Accounts Committee, to consider reports of the Director of Audit –

- (a) on the accounts of the Government;
- (b) on such other accounts required to be laid before the Council as the committee may think fit; and
- (c) on any matter incidental to the performance of his duties or the exercise of his powers as the committee may think fit.

(2) The committee shall also consider any report of the Director of Audit laid on the Table of the Council which deals with examinations (value for money audit) carried out by the Director relating to the economy, efficiency and effectiveness of any Government department or public body or any organization to which his functions as Director of Audit extend by virtue of any Ordinance or which receives public moneys by way of subvention.

(3) The committee shall consist of a chairman, deputy chairman and 5 members who shall be Members appointed by the President in accordance with an election procedure determined by the House Committee. *(L.N. 214 of 2005)*

(3A) The chairman and 2 other members shall constitute a quorum of the committee. *(L.N. 214 of 2005)*

(3B) In the event of the temporary absence of the chairman and deputy chairman, the committee may elect a chairman to act during such absence. *(L.N. 214 of 2005)*

(3C) All matters before the committee shall be decided by a majority of the members voting. Neither the chairman nor any other member presiding shall vote, unless the votes of the other members are equally divided, in which case he shall give a casting vote. *(L.N. 214 of 2005)*

(4) A report mentioned in subrules (1) and (2) shall be deemed to have been referred by the Council to the committee when it is laid on the Table of the Council.

(5) Unless the chairman otherwise orders, members of the press and of the public shall be admitted as spectators at meetings of the committee attended by any person invited by the committee under subrule (8).

(6) The committee shall meet at the time and the place determined by the chairman. Written notice of every meeting shall be given to the members and to any person invited to attend a meeting at least 5 clear days before the day of the meeting but shorter notice may be given in any case where the chairman so directs.

(7) *(Repealed L.N. 214 of 2005)*

(8) The chairman or the committee may invite any public officer, or, in the case of a report on the accounts of or relating to a non-government body or organization, any member or employee of that body or organization, to give information or any explanation or to produce any records or documents which the committee may require in the performance of its duties; and the committee may also invite any other person to assist the committee in relation to any such information, explanation, records or documents.

(9) The committee shall make their report upon the report of the Director of Audit on the accounts of the Government within 3 months (or such longer period as may be determined under section 12 of the Audit Ordinance (Cap. 122)) of the date on which the Director's report is laid on the Table of the Council.

(10) The committee shall make their report upon the report of the Director of Audit mentioned in subrule (2) within 3 months (or such longer period as may be determined by the Council) of the date on which the Director's report is laid on the Table of the Council.

(11) Subject to these Rules of Procedure, the practice and procedure of the committee shall be determined by the committee.

**Paper presented to the Provisional Legislative Council
by the Chairman of the Public Accounts Committee
at the meeting on 11 February 1998 on
Scope of Government Audit in the
Hong Kong Special Administrative Region -
'Value for Money Audits'**

SCOPE OF WORK

1. The Director of Audit may carry out examinations into the economy, efficiency and effectiveness with which any bureau, department, agency, other public body, public office, or audited organisation has discharged its functions.
2. The term "audited organisation" shall include -
 - (i) any person, body corporate or other body whose accounts the Director of Audit is empowered under any Ordinance to audit;
 - (ii) any organisation which receives more than half its income from public moneys (this should not preclude the Director from carrying out similar examinations in any organisation which receives less than half its income from public moneys by virtue of an agreement made as a condition of subvention); and
 - (iii) any organisation the accounts and records of which the Director is authorised in writing by the Chief Executive to audit in the public interest under section 15 of the Audit Ordinance (Cap. 122).
3. This definition of scope of work shall not be construed as entitling the Director of Audit to question the merits of the policy objectives of any bureau, department, agency, other public body, public office, or audited organisation in respect of which an examination is being carried out or, subject to the following Guidelines, the methods by which such policy objectives have been sought, but he may question the economy, efficiency and effectiveness of the means used to achieve them.

GUIDELINES

4. The Director of Audit should have great freedom in presenting his reports to the Legislative Council. He may draw attention to any circumstance which comes to his knowledge in the course of audit, and point out its financial implications. Subject to these Guidelines, he will not comment on policy decisions of the Executive Council and the Legislative Council, save from the point of view of their effect on the public purse.

5. In the event that the Director of Audit, during the course of carrying out an examination into the implementation of policy objectives, reasonably believes that at the time policy objectives were set and decisions made there may have been a lack of sufficient, relevant and reliable financial and other data available upon which to set such policy objectives or to make such decisions, and that critical underlying assumptions may not have been made explicit, he may carry out an investigation as to whether that belief is well founded. If it appears to be so, he should bring the matter to the attention of the Legislative Council with a view to further inquiry by the Public Accounts Committee. As such an investigation may involve consideration of the methods by which policy objectives have been sought, the Director should, in his report to the Legislative Council on the matter in question, not make any judgement on the issue, but rather present facts upon which the Public Accounts Committee may make inquiry.

6. The Director of Audit may also -

- (i) consider as to whether policy objectives have been determined, and policy decisions taken, with appropriate authority;
- (ii) consider whether there are satisfactory arrangements for considering alternative options in the implementation of policy, including the identification, selection and evaluation of such options;
- (iii) consider as to whether established policy aims and objectives have been clearly set out; whether subsequent decisions on the implementation of policy are consistent with the approved aims and objectives, and have been taken with proper authority at the appropriate level; and whether the resultant instructions to staff accord with the approved policy aims and decisions and are clearly understood by those concerned;

- (iv) consider as to whether there is conflict or potential conflict between different policy aims or objectives, or between the means chosen to implement them;
- (v) consider how far, and how effectively, policy aims and objectives have been translated into operational targets and measures of performance and whether the costs of alternative levels of service and other relevant factors have been considered, and are reviewed as costs change; and
- (vi) be entitled to exercise the powers given to him under section 9 of the Audit Ordinance (Cap. 122).

PROCEDURES

7. The Director of Audit shall report his findings on value for money audits in the Legislative Council twice each year. The first report shall be submitted to the President of the Legislative Council within seven months of the end of the financial year, or such longer period as the Chief Executive may determine. Within one month, or such longer period as the President may determine, copies shall be laid before the Legislative Council. The second report shall be submitted to the President of the Legislative Council by the 7th of April each year, or such date as the Chief Executive may determine. By the 30th April, or such date as the President may determine, copies shall be laid before the Legislative Council.

8. The Director's report shall be referred to the Public Accounts Committee for consideration when it is laid on the table of the Legislative Council. The Public Accounts Committee shall follow the rules governing the procedures of the Legislative Council in considering the Director's reports.

9. A Government minute commenting on the action Government proposes to take in respect of the Public Accounts Committee's report shall be laid on the table of the Legislative Council within three months of the laying of the report of the Committee to which it relates.

10. In this paper, reference to the Legislative Council shall, during the existence of the Provisional Legislative Council, be construed as the Provisional Legislative Council.

**Witnesses who appeared before the Committee
(in order of appearance)**

Mr LO Chun-hung, FSDSM	Director of Fire Services
Mr MAK Kwai-pui, FSDSM, JP	Chief Ambulance Officer, Fire Services Department
Mr SHE Siu-kuen	Assistant Director, Electrical and Mechanical Services Department
Hon Ambrose LEE Siu-kwong, IDSM, JP	Secretary for Security
Ms CHANG King-yiu, JP	Permanent Secretary for Security
Ms Carol YUEN Siu-wai	Deputy Secretary for Security
Prof Hon K C CHAN, SBS, JP	Secretary for Financial Services and the Treasury
Ms Bernadette LINN Hon-ho	Deputy Secretary for Financial Services and the Treasury (Treasury)
Ms Maria KWAN Sik-ning, JP	Director of Government Logistics
Mr Edwin LEUNG Chiu-ping	Controller (Land Transport), Government Logistics Department

**Introductory Remarks by
Chairman of the Public Accounts Committee,
Dr Hon Philip WONG Yu-hong, GBS,
at the Public Hearing of the Committee
on Tuesday, 9 December 2008**

Good morning, ladies and gentlemen. Welcome to the Public Accounts Committee's public hearing relating to Report No. 51 of the Director of Audit on the results of value for money audits, which was tabled in the Legislative Council on 26 November 2008.

2. The Public Accounts Committee is a standing committee of the Legislative Council. It plays the role of a watchdog over public expenditure through consideration of the reports of the Director of Audit laid before the Council on the Government's accounts and the results of value for money audits of the Government and those organisations which receive funding from the Government. The consideration by the Committee of the Director's reports involves gathering evidence relevant to the facts contained in the Director's reports, so that the Committee may draw conclusions and make recommendations in a constructive spirit and forward-looking manner. I also wish to stress that the objective of the whole exercise is such that the lessons learned from past experience and our comments on the performance of the public officers or other personnel concerned will enable the Government to improve its control over the expenditure of public funds, with due regard to economy, efficiency and effectiveness.

3. The consideration of the Director's reports follows an established process of public hearings where necessary, internal deliberations and publication of the Committee's report. The Committee has an established procedure for ensuring that the parties concerned have a reasonable opportunity to be heard. After the Committee is satisfied that it has ascertained the relevant facts, it will proceed to form its views on those facts, followed by a process of formulating its conclusions and recommendations to be included in its report. In accordance with Rule 72 of the Rules of Procedure of the Legislative Council, the Committee is required to make its report on the Director's report to the Legislative Council within three months of the date at which the Director's report is laid on the Table of the Council. Before then, we will not, as a committee or individually, be making any public comments.

4. Following a preliminary study of Report No. 51, the Committee has decided, in respect of four chapters in the Report, to invite the relevant public officers and other personnel concerned to appear before the Committee and answer our questions. We have, apart from this morning's hearing, also set aside 15 and 16 December 2008 and 6 January 2009 for public hearings on the other chapters.

5. The public hearing this morning is on Chapter 6 of Report No. 51 on the subject of "Management of public markets". The witnesses are: Dr Hon York CHOW Yat-ngok (Secretary for Food and Health), Ms Olivia NIP (Deputy Secretary for Food and Health), Mr Francis HO (Principal Assistant Secretary for Food and Health), Mr CHEUK Wing-hing (Director of Food and Environmental Hygiene), and Ms Julina CHAN (Deputy Director (Administration and Development)) and Ms Rhonda LO (Assistant Director (Operations)) of the Food and Environmental Hygiene Department.

6. I now proceed to the public hearing.

Legislative Council Public Accounts Committee

**The Director of Audit's Report on the
results of value for money audits (Report No. 51)**

Emergency ambulance service (Chapter 4)

Opening Remarks by the Secretary for Financial Services and the Treasury

1. I am aware that during the last two hearings, Members of the Public Accounts Committee (PAC) discussed whether the Fire Services Department (FSD) had adequate resources to provide the public with effective emergency ambulance service (EAS). PAC therefore requested the Administration to furnish it with information on the resources allocated for EAS in the 2005 to 2007 Resource Allocation Exercises (RAEs).
2. As Members may be aware, RAE is part of the Government's internal policy planning process. Nevertheless, to facilitate the PAC hearing on this Audit Report, we have given an account of the facts relevant to FSD's submissions in the RAEs as carried in record. We believe that the information is sufficient to let Members have a full understanding of the case.
3. Normally, bureaux and departments submit a lot of bids for additional resources each year for providing new services or improving existing services. As the resources available for allocation can seldom meet all the bids in full, it is inevitable that both the Financial Services and the Treasury Bureau (FSTB) and the policy bureaux will need to scrutinise the bids received by them critically at their respective level to make sure that public resources can be efficiently and effectively allocated. I would like to emphasise that RAEs are not only about the allocation of new resources, but also about the review of the effective use of existing resources. Therefore, it is an integral part of the vetting process to raise enquiries or request additional information from the bureaux and departments concerned.
4. FSTB will consider a number of factors in processing the RAE bids. Officers responsible for resources allocation, policy bureaux and controlling officers are all required to ensure the effective use of the existing and new resources in providing public services and achieving performance targets in the respective policy areas.

5. In fact, the focus of this Audit Report is also on whether FSD has made effective use of the resources allocated for EAS to meet the genuine demands for the service, and whether it has had a good grasp of relevant data and management information (such as the use of EAS in various divisions, the repair and maintenance data of ambulances, etc.) so that it could make use of them to review the effectiveness of the service and identify room for improvement. We welcome the recommendations made in the Audit Report, and will be happy to exchange views with Members on the major concerns of the Audit Report.

**Speaking Note for
Mr Ambrose LEE, Secretary for Security
at the Public Hearing of the Legislative Council Public Accounts Committee
held on 10 March 2009**

(A) Focus of the Audit's Report

- At the public hearings conducted on 6 and 8 January, Members discussed the Director of Audit's Report No. 51 in detail.
- The focus of the report is on whether the Fire Services Department (FSD) has effectively deployed existing resources to meet the demand of those in genuine need of emergency ambulance service (EAS), and whether it has kept and made good use of information to improve the effectiveness of the EAS. The Security Bureau (SB) and the FSD welcome the recommendations made in the report. The FSD, in collaboration with the relevant departments, will follow-up on the recommendations, and the SB will also closely monitor the progress.

(B) General Principles governing the Resource Allocation Exercise

- The Secretary for Financial Services and the Treasury has earlier given a detailed account on the general issues of the Resource Allocation Exercise (RAE). The Administration has also provided much information on the RAEs conducted in the past few years and explained the process for allocating resources to FSD's EAS.
- As Members would be aware, departments would apply for the resources that they would like to be given on the basis of their operational requirements in the annual RAEs. However, as the amount of available resources is finite, bureaux have to prioritise the bids from departments and make recommendations to the Centre on the proposed allocations based on the justifications provided by the departments, the actual situation, and the resources available for re-deployment.
- There are eight disciplinary departments under SB's purview, overseeing various areas of work, including the maintenance of law and order, immigration and customs control, fire fighting and ambulance services, all of which are of great importance to social stability and public safety.

- In the annual RAEs, the departments under the SB's purview would propose the creation of thousands of new posts according to the established mechanism. We could not possibly support each bid to the full, but we would ensure that with our recommendations, the resources eventually allocated to the disciplinary departments would enable their heads to carry out their duties effectively and achieve the departments' performance pledges to the community.
- Therefore, as a Bureau Secretary, I would carefully consider the bids from each department and would deploy resources as appropriate.
- It is true that we did not, and in fact could not fully meet the requests made by the heads of each of the disciplinary departments. Neither would we recommend priority to every bid without taking an overview of all the bids from departments. This would not help the Centre in allocating limited resources to the most important or urgent services at the time.
- As a Bureau Secretary, I must manage the major resources and manpower demands from all departments under my purview, and at the same time responding to the special needs and concerns of the Centre in a responsible manner. Take the FSD as an example, the decisions we made on resource allocation in the past few years have generally enabled the department to achieve its performance pledge on the provision of ambulance service. For instance, the response time was 92.7% in 2006, 92.8% in 2007, 92.2% in 2008 and 92.8% in the first two months of 2009.
- In fact, we have all along been adopting a multi-pronged approach in meeting the response time performance pledge. We will seek provision of additional manpower as needed, and step up public education to minimise the misuse of ambulance service. Last but not least, we will continue to explore management measures such as introducing a medical priority despatch system, to give priority to people in urgent need of ambulance service.
- On the way forward, the SB and the FSD will continue to enhance communication on policy considerations and ways to effectively deploy existing resources, with the aim to ensure that our EAS can achieve the performance pledge.

(C) **Follow-up actions**

- In closing, I would like to assure Members that the bureaux and departments in attendance today will follow up on the recommendations set out in the Audit's report seriously and proactively. These recommendations include a review of the response time performance, to ascertain the reasons for failing to achieve the targets in certain districts and take appropriate remedial actions, and a review on the existing mechanism for the replacement of ambulances.
- As a matter of fact, we have numerous discussions at the meetings of the Panel on Security in the past on how to cope with the demand for ambulance service, the establishment in the ambulance stream and the future development of ambulance service. We believe that such issues will continue to be discussed and followed-up by the Panel on Security.
- We will continue to, as we have done before, ensure that the FSD will achieve its performance pledge on the provision of ambulance service to the public.

香港特別行政區政府
消防處

香港九龍尖沙咀東部康莊道一號
消防總部大廈



FIRE SERVICES DEPARTMENT
GOVERNMENT OF THE HONG KONG
SPECIAL ADMINISTRATIVE REGION

FIRE SERVICES HEADQUARTERS BUILDING,
NO. 1 HONG CHONG ROAD,
TSIM SHA TSUI EAST, KOWLOON,
HONG KONG.

本處檔號 OUR REF. : (17) in FSD 2/17/600/08C

來函檔號 YOUR REF. :

電子郵件 E-mail: : hkfsdenq@hkfsd.gov.hk

圖文傳真 FAX: : 852-2311 0066 (24 hours)

: 852-2369 0941

電話 TEL. NO. : 852-2733 7711

7 January 2009

Ms. Miranda HON
Clerk to the Public Accounts Committee
Legislative Council
Hong Kong SAR of the PRC

Dear Ms HON,

The Director of Audit's Report on the
Results of value for money audits (Report No. 51)
Emergency ambulance service (Chapter 4)

I refer to your letter of today's date and enclose the additional information requested by the Public Accounts Committee, using the same numbering in your letter, as follows –

- (a) Medical Priority Dispatch System (MPDS) – The Department is now working out the specific options and detailed proposals. When these become available, we will consult the Panel on Security of this Council as well as the public. However, it should be noted that the primary purpose of establishing the MPDS is to enable FSD to prioritize the dispatch of ambulances in accordance with the seriousness of the patients' condition. While a lower priority would be given to calls which are not of an emergency nature under the proposed system, no request for an ambulance would be denied. In order to encourage the public's proper use of the service, we agree that more information on the degree of urgency of patients should be collected through the implementation of the electronic ambulance journey records and the efforts on public education should be stepped up. Information on the MPDS is at **Attachment 1**
- (b) Implementation of the electronic ambulance journey records – given the complexity of the project, we regret that we will not be able to advance the implementation of the electronic ambulance journey records before November 2009

- (c) Timetable for implementation of joint education programme – The feasibility of a joint education programme to be launched together with the Hospital Authority and other ambulance service providers is being explored, which is expected to be completed in March 2009.
- (d) Third Generation Mobilizing System – see **Attachment 2**
- (e) Emergency ambulance calls and average age of ambulances – see **Attachment 3**
- (f) Benchmarking study on the turnout time – Information search and data collection for the Turnout Time Study have been completed. This Department is carrying out data analysis. The report would be finalized by the end of March 2009.
- (g) (i) & (ii) Criteria for deployment of ambulances and reasons for the lower percentage of emergency calls answered within target response time on night shift – **Attachment 4**
- (h) This Department has requested the Lands Department to carry out site search for the temporary provision of a site in Sheung Shui for constructing an ambulance depot. A table showing details of the sites and results of site inspection is at **Attachment 5**
- (i) Timetable for completing review of the urgent care ambulance service – The review of the efficiency and effectiveness of the urgent care ambulance service will commence shortly and be completed in March 2009.
- (j) Further breakdown of Appendix E by 4 Divisions – To be provided
- (k) FSD had not specifically stated that it would meet the baseline daily ambulance availability of “184 ambulances on the day shift and 100 ambulances on the night shift” if its bid was approved in the 2005 Recurrent Expenditure RAE submission.
- (l) Estimated number and cost of additional manpower to achieve baseline DAA – To be provided as soon as possible
- (m) In respect of the 2007 Recurrent RAE,
 - (i) when the resources for additional manpower were allocated to the FSD: April 2008;
 - (ii) when FSD started the recruitment process for hiring Ambulancemen: mid-2007 (to fill vacancies and anticipated new posts from 2007 Recurrent RAE);

(iii) when the new appointees commenced and completed training: there were three batches of new appointees in 2008 and the timing for their commencement and completion of training are set out hereunder:

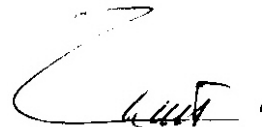
- Batch 1 : 38 ambulancemen from 7 April to 5 October 2008;
- Batch 2 : 45 ambulancemen from 25 August 2008 to 22 February 2009; and
- Batch 3 : 39 ambulancemen from 13 October 2008 to 12 April 2009

(iv) maximum capacity of the training school : about 80 trainees

- (n) Crow Maunsell Consultancy Report of December 2001 – The consultancy fee for the study is HKD1.08 million. A copy of the Report is at **Attachment 6**
- (o) (i) & (iii) Additional ambulances and manpower resources requested/approved in the RAEs in 2005, 2006 and 2007 – see **Attachment 7**
- (ii) To be provided as soon as possible
- (p) Calls per ambulance per division in 2008 (as requested by the Chairman of PAC) – see **Attachment 8**

Grateful if you would deliver the above to Members of the PAC.

Yours sincerely,



(LO Chun-hung)
Director of Fire Services

c.c. Secretary for Financial Services and the Treasury
Director of Electrical and Mechanical Services
(Attn: Mr. SHE Siu-kuen)
Director of Audit

***Note by Clerk, PAC:** *Attachments 6, 7 and 8 not attached.*

Attachment 1

I furnish the following information for your reference:

(a) Medical Priority Dispatch System

As regards ambulance service, the target response time is 12 minutes and the Department has pledged to achieve this target response time in 92.5% of all emergency calls since November 1998.

The Fire Services Communication Centre receives emergency calls of all types, ranging from arm and leg fractures to highly critical conditions such as cardiac arrest. At present, emergency calls are not prioritized. There is a possibility that an ambulance that is supposed to respond to more critical calls is sent for a less serious case.

In order to provide better services to the general public with limited resources, the Department commissioned a consultancy firm to study the feasibility of the Medical Priority Dispatch System in Hong Kong. The study, which was completed in October 2005, recommends the implementation of the system in Hong Kong.

As pointed out by the study reports, the local ambulance service can improve its response time for critical calls and achieve the international best practice standards with the implementation of the system. The system has been widely adopted around the world. In practice, communications personnel will categorize and prioritize a call by asking the caller some specific interrogative questions set by the system software, and then make a decision on an appropriate response mode and give pre-arrival instructions for the case.

The reports recommend adopting five dispatch prioritization categories and implementing related deployment strategies so as to achieve the target response time. For the Echo category, which involves critical patients, the target is 9 minutes, which also applies to the Delta category, which covers life-threatening patients. The target for the Charlie category is set at 15 minutes, which includes serious but non-life-threatening patients. The Bravo category refers to non-life-threatening and less serious cases and the internal target is 20 minutes. The Alpha category includes non-emergency patients and the

internal target is 30 minutes.

The consultant recommends the performance pledge be set at 90% for the Echo, Delta and Charlie categories, and no targets except internal ones be set for the Bravo and Alpha categories.

According to the consultants, the anticipated call distribution under the system is as follows:

<u>Category</u>	<u>Patient Conditions</u>	<u>% Estimate of Total No. of Calls</u>
Echo	Critical	2%
Delta	Life-threatening	29%
Charlie	Serious but non-life-threatening	19%
Bravo	Non-life-threatening and less serious	28%
Alpha	Non-emergency	22%

According to the recommendations of the consultant, the implementation of the system will provide a significantly quicker response to those cases in which time is critical. For high priority calls such as heart attacks, ambulances will arrive three minutes faster than that is currently pledged. As pointed out in the consultancy reports, the current response time pledge is set at 12 minutes for all types of calls. The response time for critical calls has exceeded the suggested time under the international best practices.

In support of the system, the Hospital Authority believes that it is logical to ensure that priority of medical care should be provided to patients and casualties who are more critical through the adoption of a form of triage system.

As the Medical Priority Dispatch System involves a wide range of issues, it is of paramount importance that the Department should conduct a prudent and comprehensive study prior to implementation. To this end, the Department commissioned a consultancy firm in 2007 to study different response time scenarios under the system and accepted the findings of the study reports in early 2008. The Department and the Security Bureau are reviewing in depth

the findings and recommendations of the two reports. Legco members, medical institutions and organizations concerned, staff of all ranks of this Department, as well as the general public are to be consulted in 2009 before any concrete decision on the plan is made.

**(d) (i) Summary of System Breakdown of the Third Generation Mobilizing System (TGMS)
from June 2005 to December 2008**

Date	Time	Affected Duration (minutes)	Total No. of Ambulance Calls Being Handled During the Period of System Fault	Total No. of Ambulance Calls Exceeding the Performance Pledge Due to System Fault	Remarks
17.8.2005	From 1834 hours to 1840 hours	6	17	1	The cause of the system breakdown was due to a software bug at the application server of the Computerized Mobilizing System. The fault was already fixed by the TGMS Contractor.
28.8.2005	From 1426 hours to 1428 hours	2	6	-	The cause of the system breakdown was due to a software bug at the database server of the Computerized Mobilizing System. The fault was already fixed by the TGMS Contractor.
21.8.2006	From 0305 hours to 0318 hours	13	2	-	The cause of the system breakdown was due to a software bug at the application server of the Computerized Mobilizing System. The fault was already fixed by the TGMS Contractor.

17.12.2007	From 0845 hours to 0928 hours	43	67	7	The cause of the system breakdown was due to a software bug at the application server of the Computerized Mobilizing System. The fault was already fixed by the TGMS Contractor.
29.12.2008	From 2313 hours on 29.12.2008 to 0024 hours on 30.12.2008	71	78	8	The cause of system breakdown was due to a bug in the software of Oracle Database 9.2 Enterprises Edition used at the database server of the Computerized Mobilizing System. The TGMS Contractor had modified the software to avoid recurrence.

Measures to improve the TGMS reliability

Given that the previous system breakdowns were solely involved software bug of the system, which had already been fixed by the TGMS Contractor after the incidents, the Contractor was advised to closely monitor the system performance and fine-tuning the software, including the application of software patches to fix any bug, if identified.

(d) (ii) Benefits after implementation of TGMS

The following benefits have been realized after implementation of the TGMS and therefore it is justified for its cost:

(I) Accurate and efficient resources deployment

TGMS identifies and locates real time resources automatically for immediate dispatch to the scene of incidents. It helps to achieve more accurate incident tasking and optimise resources management.

(II) Direct and effective operational information exchange

The automation features of TGMS can improve the efficiency in information exchange by means of graphics and text transmission through Wireless Digital Network and hence reducing the time spent on voice communication.

(III) Enhanced flexibility in resources identification and mobilization

Through open platform design, TGMS allows easy programme development and enhancement and has the flexibility to meet future operational requirements and demand for continuous improvement in fire and emergency ambulance services.

(IV) No additional staffing resources

With the introduction of the automatic call-out function at fire stations and ambulance depots and mobile data terminals on vehicles for address confirmation, console operators at the Fire Services Communications Centre will not have to broadcast mobilising instructions and to confirm incident addresses. Hence, the time spent by a console operator in handling an emergency call can be reduced and, as a result, they can be released earlier to handle the next call. Overall, TGMS will enable console operators to cope with the increase in the number of calls without the need for additional staffing resources.

(a) Ambulance Calls in 2008

	Hong Kong	Kowloon	New Territories East and West	New Territories South	Total
Total Calls	118,455	223,216	196,843	105,097	643,611
Percentage	18.4%	34.7%	30.6%	16.3%	100%

Average age of ambulance

	Hong Kong	Kowloon	New Territories East and West	New Territories South
No. of Ambulances	48	68	71	45
Average Age	8.1	8.8	8.8	7.7

(g) (i) Deployment of ambulance resource

In deploying ambulance resources in each division, other than population, the following factors are also taken into consideration :

1. Demand of Emergency Ambulance Service in the area
2. Response Time Performance in the area
3. Available location serving as the base of ambulance and sufficient space for deploying additional ambulance resources
4. New development e.g. New Town, Border Control Point
5. Exceptional consideration e.g. off-shore islands, remote area etc.
6. Traffic condition
7. Risk factors e.g. Airport

(g) (ii) Lower percentage of emergency calls answered within target response time on night shift

The reasons for lower percentage of emergency calls answered within the target response time on the night shift are listed below

1. During night shift, the number of ambulances available will be reduced to about half of strength of day shift. Such being the case, the number of locations with ambulance resources at night shift will be less than day shifts. As a result, the travel distance is relatively longer.
2. As there were more ambulances on run and more ambulance calls in day shift, there were more available ambulances travelling on the road in its hospital-to-base journey. Thus, the probability of having an available ambulance passing by the address of a patient would be higher in the day-shift. As a result, the day-shift RTP in NT/E&W Division was slightly higher than the night-shift (91.5% vs 86.9%).

Temporary Site for Sheung Shui Ambulance Depot

School	Address	Remarks
Kong Leng School	Ping Kong, Sheung Shui	Not recommended. The conditions of the existing school and connecting road are poor and the site is far away from Sheung Shui Town Area.
Kin Tak Public School	Lin Tong Mei, Sheung Shui	Not recommended. The access road within the school site is narrow and the site is far away from Sheung Shui Town Area.
Ping Yeung Public School (GLL N23948)	Ping Yeung, Sheung Shui	Not available. There is permanent/temporary programme.
Wah Shan Public School (GLL T19599)	Wah Shan, Sheung Shui	Not available. There is permanent/temporary programme.
Lung Shan School (GLL N8816)	Lung Yeuk Tau, Fanling	Not available. There is permanent/temporary programme.
Sing Ping School	Sing Ping Village, Ping Che	Not available. There is permanent/temporary programme.
SSSWH Fert & Rice Dealers Assn Public School	Ng Uk Tsuen, Sheung Shui	Not available. There is permanent/temporary programme.

香港特別行政區政府
消防處

香港九龍尖沙咀東部康莊道一號
消防總部大廈



APPENDIX 8

**FIRE SERVICES DEPARTMENT
GOVERNMENT OF THE HONG KONG
SPECIAL ADMINISTRATIVE REGION**

FIRE SERVICES HEADQUARTERS BUILDING,
NO. 1 HONG CHONG ROAD,
TSIM SHA TSUI EAST, KOWLOON,
HONG KONG.

FSD 2/17/600/08C

本處檔號 OUR REF. :
來函檔號 YOUR REF. :
電子郵件 E-mail: : hkfsdenq@hkfsd.gov.hk
圖文傳真 FAX: : 852-2311 0066 (24 hours)
852-2369 0941
電話 TEL. NO. : 852-2733 7711

23 April 2009

Ms. Miranda HON
Clerk, Public Accounts Committee
Legislative Council
Legislative Council Building
8 Jackson Road
Central
Hong Kong

Dear Ms HON,

**The Director of Audit's Report on the
results of value for money audits (Report No. 51)
Emergency ambulance service (Chapter 4)**

Thank you for your letter of 15 April 2009. The progress of the reviews in question is as follows :

Joint Education Programme

We have, in collaboration with other ambulance service providers including the Hospital Authority, St. John Ambulance Brigade and Auxiliary Medical Service, reviewed the feasibility of jointly organizing public education programmes to encourage proper use of ambulance services. All ambulance service providers welcome the idea and will make every effort to devise suitable education programmes to enhance the effectiveness of public education. A working group has been set up to formulate strategies and organize related activities. Various ways and means to strengthen public education have been worked out for further action by the group, e.g. broadcasting of education programmes in the Accident & Emergency Departments and clinics of the Hospital Authority, developing web-based programmes for publicity through the Web, conducting out-reach programmes at schools etc.

Benchmarking study on the 1-minute turnout time

We are finalizing the study and will complete the review in around May/June 2009.

Review on the efficiency and effectiveness of the urgent care ambulance service

We have examined the efficiency and effectiveness of our urgent care ambulance service. As there are a few issues to be further considered, we aim to conclude the matter in around May/June 2009. Pending the outcome of the review, we are in parallel working closely with the Hospital Authority to enhance the efficiency of the service, including improving the communication between the ambulance crews and HA staff with a view to shortening the waiting time of ambulances for picking up or handing over patients at hospitals. We are also exploring other means to enhance the effectiveness and efficiency of the service.

Review on the reasons for not meeting the baseline daily ambulance availability (DAA) on night shift in 2007

The reasons are that –

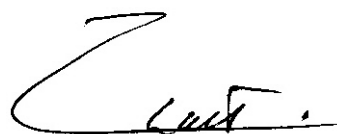
- (a) the rate of staff absence due to sickness was higher on night shift than on day shift as there is a smaller pool of staff on night shift;
- (b) the Urgent Care Fleet (UCF) and Emergency Medical Assistant Motorcycle (EMAMC) that are available on day shift only cannot be deployed to augment the inadequacy of staff due to sickness during night shift; and
- (c) the manpower on day shift comprising two watches of ambulance personnel doubles that on night shift comprising one watch only. The smaller pool of staff on night shift is less capable of covering unexpected staff absences due to sickness.

Having regard to the above reasons, we will continue to monitor and review the situation so as to improve further the overall availability.

Speeding up the procurement process for ambulances

The measures described in para (b)(ii) of my letter to you dated 18 March 2009 will be adopted in the coming Capital Non-Works Resource Allocation Exercise for 2009.

Yours sincerely,



(LO Chun-hung)
Director of Fire Services

c.c. Secretary for Security (Attn : Ms. Carol YUEN)
Secretary for Financial Services and the Treasury (Attn : Ms. Bernadette LINN)
Director of Electrical and Mechanical Services (Attn : Mr. SHE Siu-kuen)
Director of Audit (Attn : Ms. Hildy CHAN)
Director of Government Logistics

Internal

Chief Ambulance Officer

香港特別行政區政府
消防處

香港九龍尖沙咀東部康莊道一號
消防總部大廈



FIRE SERVICES DEPARTMENT
GOVERNMENT OF THE HONG KONG
SPECIAL ADMINISTRATIVE REGION

FIRE SERVICES HEADQUARTERS BUILDING,
NO. 1 HONG CHONG ROAD,
TSIM SHA TSUI EAST, KOWLOON,
HONG KONG.

FSD 2/17/600/08C

本處檔號 OUR REF. :
來函檔號 YOUR REF. :
電子郵件 E-mail: : hkfsdenq@hkfsd.gov.hk
圖文傳真 FAX: : 852-2311 0066 (24 hours)
: 852-2369 0941
電話 TEL. NO. : 852-2733 7711

18 March 2009

Ms. Miranda HON
Clerk to the Public Accounts Committee
Legislative Council
Hong Kong SAR of the PRC

Dear Ms HON,

**The Director of Audit's Report on the
results of value for money audits (Report No. 51)
Emergency ambulance service (Chapter 4)**

I refer to your letter of 11 March 2009 and would like to respond as follows –

- (a) **Analysis of the emergency ambulance calls answered in the years from 2005 to 2008** – An analysis showing the data required is at **Annex**.
- (b) **Process of procuring an ambulance**

Having consulted the Financial Services and Treasury Bureau (FSTB), Security Bureau (SB), Government Logistics Department (GLD) and the Electrical and Mechanical Services Department (EMSD), the position is set out in the ensuing paragraphs.

(i) The length of time required in each step of the existing procurement process

Bidding of funds, announcement of RAE result and availability of funds

- Under the Capital Non-Works Resource Allocation Exercise (CNW RAE), bureaux/departments are invited to submit proposals which will incur expenditure in the following financial year. It takes **about 4 months** from the preparation of the bids by the bureaux/departments to the announcement of RAE results ^{Note 1}. Funding for approved items will be available at the beginning of the new financial year on 1 April, following passage of the relevant vote on account resolution by the Legislative Council.

Drawing up of design and specifications

- Once funding is secured in early April, EMSD will draw up the design and specifications of the vehicles in collaboration with FSD. This process takes **about 6 months** to complete.

Tendering

- Upon completion of the design and specification process, the ensuing tendering process takes **about 5 to 6 months** to complete^{Note 2}.

Delivery

- Delivery of ambulances after award of contract normally takes **about 12 months** as the ambulance is a “purpose-built” vehicle which requires installation of various equipment. If a large number of ambulances are to be procured or the new vehicles have to comply with the latest emission standard, longer lead time up to about two years may be required for delivery. For prolonged delivery schedule, partial or staged delivery will be sought.

(ii) Improvement measures to expedite the procurement process

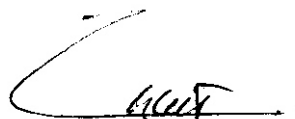
Discussion has been held among the GLD, EMSD and FSD with a view to shortening the lead time for procurement of ambulances. The specific measures to be adopted by the three parties to expedite the procurement process are as follows:

- EMSD will start drawing up the design and specifications in collaboration with FSD when FSD is preparing funding bids under the CNW RAE, with a view to completing the process within 4 months before the announcement of RAE result; and
- GLD will in parallel start making pre-tender preparation upon the submission of the RAE bid by FSD, with a view to completing the preparatory work and inviting tender as soon as funding is secured.

With the above measures, the processes of bidding for funds, approval of funds, drawing up of design and specifications and tendering could be taken forward concurrently. The whole procurement process from the bidding of funds to delivery could be **reduced by 8 months to 25 months** when compared to the lead time as set out in para. (b)(i) above.

The Chinese translation of this letter and attachment together with their e-copies will follow shortly.

Yours sincerely,



(LO Chun-hung)
Director of Fire Services

(Note 1 : *CNW RAE bids are normally invited in early July and results are announced around the end of October. In respect of the procurement of ambulances, the processes of bidding of funds and approval of funds involve FSTB, SB, GLD, EMSD and FSD, and the procedures for identifying ambulances to be replaced are set out in Appendix H of the Audit Report No. 51.)*

(Note 2 : *The tendering process includes review of specifications, preparation of tender document, invitation and evaluation of tenders, preparation and submission of proposals to tender board for the award of contract. Within the five to six months' tender processing time, pre-tender preparation by GLD normally takes one to two months which includes vetting of tender specifications, evaluation criteria and other terms in consultation with the Department of Justice as required. In line with the Government Procurement Agreement of the World Trade Organization, a tender closing period of 42 days is provided to give sufficient time to tenderers worldwide to prepare and submit their bids. Tender evaluation by EMSD normally takes around two months to complete. Longer tender processing time may be required depending on the number of offers received and whether clarification on tender proposals with tenderers, legal clearance on tender recommendation or negotiation with recommended tenderer is required.)*

c.c. Secretary for Security (Attn : Ms. Carol YUEN)
Secretary for Financial Services and the Treasury (Attn : Ms. Bernadette LINN)
Director of Electrical and Mechanical Services (Attn : Mr. SHE Siu-kuen)
Director of Government Logistics (Attn : Ms. Maria KWAN)
Director of Audit (Attn : Ms. Hildy CHAN)

Internal

Chief Ambulance Officer

Annex

Analysis of the 2-minute Activation Time for Emergency Ambulance Calls

Actual Response Time in respect of the 2-minute Activation Time	2008			2007			2006			*2005 (July – December)		
	No. of Calls	% of Calls	Cumulative % of Calls	No. of Calls	% of Calls	Cumulative % of Calls	No. of Calls	% of Calls	Cumulative % of Calls	No. of Calls	% of Calls	Cumulative % of Calls
≤ 30 seconds	114,722	19.1%	19.1%	98,073	17.1%	17.1%	26,497	4.9%	4.9%	5,056	1.9%	1.9%
> 30 seconds to ≤ 1 minute	287,651	47.9%	67.0%	279,968	48.8%	65.9%	169,276	31.4%	36.3%	46,087	17.3%	19.2%
> 1 minute to ≤ 1 minute 30 seconds	126,435	21.0%	88.0%	125,843	21.9%	87.8%	167,426	31.0%	67.3%	82,709	31.0%	50.2%
> 1 minute 30 seconds to ≤ 2 minutes	45,395	7.6%	95.6%	43,682	7.6%	95.5%	95,201	17.6%	84.9%	66,358	24.8%	75.0%
> 2 minutes	26,625	4.4%	100.0%	26,091	4.5%	100.0%	81,503	15.1%	100.0%	66,850	25.0%	100.0%
Total No. of Calls	600,828	100.0%	100.0%	573,657	100.0%	100.0%	539,903	100.0%	100.0%	267,060	100.0%	100.0%

* Remark : The Third Generation Mobilizing System (TGMS), which is capable of generating the required data, was put into full commission on 26 June 2005. The data for 2005 covers the full months after commissioning, viz. July to December 2005.

Analysis of 2-minute Activation Time for Emergency Ambulance Calls

Actual Response Time in respect of the 2-minute Activation Time	1 to 14 February 2009		
	No. of Calls	% of Calls	Cumulative % of Calls
≤ 30 seconds	5,834	23.78%	23.78%
> 30 seconds to ≤ 1 minute	11,838	48.25%	72.03%
> 1 minute to ≤ 1 minute 30 seconds	4,513	18.40%	90.43%
> 1 minute 30 seconds to ≤ 2 minutes	1,486	6.06%	96.49%
> 2 minutes	862	3.51%	100%
Total No. of Calls	24,533	100%	100%

香港特別行政區政府
消防處

香港九龍尖沙咀東部康莊道一號
消防總部大廈



**FIRE SERVICES DEPARTMENT
GOVERNMENT OF THE HONG KONG
SPECIAL ADMINISTRATIVE REGION**

FIRE SERVICES HEADQUARTERS BUILDING,
NO. 1 HONG CHONG ROAD,
TSIM SHA TSUI EAST, KOWLOON,
HONG KONG.

BY FAX

本處檔號 OUR REF. : FSD 2/17/600/08C
來函檔號 YOUR REF. :
電子郵件 E-mail: : hkfsdenq@hkfsd.gov.hk
圖文傳真 FAX: : 852-2311 0066 (24 hours)
852-2369 0941
電話 TEL. NO. : 852-2733 7711

2 March 2009

Ms. Miranda HON
Clerk to the Public Accounts Committee
Legislative Council
Hong Kong SAR of the PRC

Dear Ms HON,

**The Director of Audit's Report on the
results of value for money audits (Report No. 51)
Emergency ambulance service (Chapter 4)**

Further to my letter to you dated 7 January 2009 in connection with the captioned subject, I forward herewith my response to the three outstanding questions raised by the Public Accounts Committee at its hearing on 6 January 2009, including :

- Item (j)** – Further breakdown of Appendix E by four divisions.
- Item (l)** – The estimated number and cost of additional manpower required to achieve the baseline DAA for the provision of emergency ambulance service.
- Item (o)(ii)** – The basis used in calculating the numbers of additional ambulances and manpower resources required in the 2005, 2006 and 2007 RAEs - whether such numbers were based on the 2001 consultancy report; if not, what the numbers should have been had the consultancy report been followed.

The Chinese translation of this letter and attachments together with their electronic copies will follow shortly.

Yours sincerely,

(LO Chun-hung)
Director of Fire Services

c.c. Secretary for Security (Attn: Ms. Carol YUEN)
Secretary for Financial Services and the Treasury (Attn: Ms. Bernadette LINN)
Director of Electrical and Mechanical Services (Attn: Mr. SHE Siu-kuen)
Director of Audit (Ms. Hildy CHAN)

Internal

Chief Ambulance Officer

***Note by Clerk, PAC:** *Response to item (j) and item (o)(ii) not attached.*

Response to Item (I) in PAC's letter dated 7.1.2009

Question:

The estimated number and cost of additional manpower required by FSD, including the manpower reserve required, in order to achieve the baseline daily ambulance availability (DAA) for the provision of the emergency ambulance service (para. 4.6 of the Audit Report refers).

Response:

The "baseline" DAA is the level of ambulance availability that FSD aims to achieve, having due regard to the actual level of ambulance availability that was achieved on average over a period of time. It is only a management tool based on past statistics for the purpose of monitoring the day-to-day performance of ambulance availability. While the level of DAA may in theory have a direct bearing on Response Time Performance (RTP), the eventual RTP is subject to a number of other variable factors including the traffic, weather and road conditions, the bunching of calls at any one time, the distance between callers and ambulance resources, etc. As such, we do not consider it appropriate to use the DAA baseline to work backward and derive the estimated number and cost of additional manpower required. FSD's bids for additional manpower were principally based on the ratio of ambulances to emergency calls recommended in the consultancy report of December 2001 with the ultimate objective of achieving the RTP target.

財經事務及庫務局

香港雪廠街
中區政府合署



FINANCIAL SERVICES AND THE
TREASURY BUREAU

Central Government Offices,
Ice House Street,
Hong Kong

7 January 2009

Our ref. : FIN 37/7/2 Pt. 1
Your ref.: CB(3)/PAC/R51
Telephone no. : 2810 2283
Fax no. : 2596 0729

URGENT BY FAX

Ms Miranda HON
Clerk, Public Accounts Committee
Legislative Council
Legislative Council Building
8 Jackson Road
Central
Hong Kong

Dear Ms Hon,

**The Director of Audit's Report on the
results of value for money audits (Report No. 51)**

Emergency ambulance service (Chapter 4)

Thank you for your letter of today requesting further information on the captioned subject.

In its submission for the 2005 Recurrent Expenditure Resource Allocation Exercise (RAE), the Fire Services Department (FSD) had not specifically made reference to the baseline daily ambulance availability (DAA) of "184 ambulances on the day shift and 100 ambulances on the night shift".

.... /

Our comment as recorded in para 4.12 of Chapter 4 of the above Audit Report takes into account the fact that FSD had created 28, 47 and 30 additional posts in 2006-07, 2007-08 and 2008-09 respectively (i.e. 105 new posts in total) and that these posts should in turn enable FSD to operate approximately four, seven and five additional shifts in the respective years (i.e. approximately 16 additional shifts eventually). Since FSD had indicated to us in 2005 that it was operating 281 ambulance shifts on average daily between January and June 2005, the additional shifts supported by the additional posts created should enable FSD to meet the baseline DAA of 184 day and 100 night ambulances (i.e. total of 284 ambulance shifts) mentioned in paragraph 4.12 of the Audit Report.

Yours sincerely,

A handwritten signature in cursive script, appearing to read "Bernadette Linn".

(Ms Bernadette Linn)
for Secretary for Financial Services
and the Treasury

c.c. Director of Audit

政府總部
香港下亞厘畢道



GOVERNMENT SECRETARIAT
LOWER ALBERT ROAD
HONG KONG

Our Ref. : SBCR 1/2366/08
Your Ref. : CB(3)/PAC/R51

Tel. No.: 2810 2766
Fax No.: 2868 9159

28 February 2009

Ms Miranda HON
Clerk, Public Accounts Committee
Legislative Council
Legislative Council Building
8 Jackson Road
Central
Hong Kong

Dear Ms Hon,

**The Director of Audit's Report on the
results of value for money audits (Report No.51)**

Emergency ambulance service (Chapter 4)

Thank you for your letter dated 16 January 2009. My response to the specific questions raised in your letter is set out in the following paragraphs.

(a) 2004 RAE

In 2004, having regard to budgetary considerations, the Financial Services and Treasury Bureau (FSTB) only invited new bids from bureaux/departments for additional resources for Capital Works and Capital Non-works expenditure, but not for recurrent expenditure. Accordingly, the Fire Services Department (FSD) submitted a bid in 2004 for the procurement of seven additional town ambulances (TAs) for maintenance reserve and four replacement village ambulances (VAs). Of these, the Security Bureau (SB) supported the procurement of four TAs and one replacement VA. SB supported four additional TAs in view of the fact that FSD had more than 230 TAs in hand at the time of application. It was considered that the procurement of four TAs would be sufficient to meet

FSD's maintenance reserve requirement. Of the four VAs that FSD proposed for replacement, all of them had a relatively high availability rate and only one of them was assessed by FSD to have poor condition. As a result, SB supported the replacement of one VA to maintain operational efficiency.

FSD's bid and SB's recommendation were processed by FSTB. Funding for one replacement VA was approved. FSTB decided to reject the funding requirement for any TAs after consulting the Government Logistics Department (GLD); the latter was of the view that FSD would have about 40 new TAs delivered in end September 2004 and the availability of TAs would be enhanced when the new TAs were put into service.

(b) Minimum Cost Refurbishment Programme (MCRP)

FSD joined the MCRP in April 2006 for the refurbishment of a total of 10 TAs. In fact, the ten TAs proposed for refurbishment under the MCRP had been approved for replacement in the 2002 RAE and were actually replaced by new TAs between October 2004 and January 2006. Had these ten TAs not undergone refurbishment, they would have been disposed of by GLD in accordance with established procedures.

Therefore, FSD proposed to refurbish and retain the ten TAs as a temporary measure to enhance ambulance availability on a need basis. They were not intended for active emergency ambulance service. In 2006, there was no need to reactivate any refurbished TAs for active service. The response time performance of ambulance service in that year was 92.7%, which was above the Department's pledge of 92.5%. Also, as a result of the 2005 and 2006 RAEs, FSD had obtained funding for the replacement of another 35 TAs.

In late 2007, whilst the procurement of the 35 replacement TAs approved in the 2005 and 2006 RAEs was still in progress, it became clear that the new vehicles would not be fully delivered until the first quarter of 2009. FSD saw the need to reactivate the refurbished TAs in batches on a need basis. In September 2007, the first two refurbished vehicles were reactivated. By the time the Director of Audit finalised his Report No.51 in mid-2008, eight TAs had been reactivated. The last two were reactivated in August 2008. That being the case, the situation will improve substantially when all 35 new TAs should be delivered by March 2009. Furthermore, funding has been approved in the 2007 and 2008

RAEs for the replacement of another 161 ambulances, of which 65 will be available for service before the end of 2009 and the remaining 96 within the first half of 2010.

(c) FSD's bids for additional staff as reserve in the 2006 and 2007 RAEs

In its bid for additional staff for reserve in the 2007 RAE, FSD quoted a recommendation of the Committee for the Review on Paramedic Ambulance Service (Review Committee), but not in its earlier bid in the 2006 RAE. Having said that, it should be noted that the Review, conducted in 2000, was about the training of Senior Ambulancemen and Principal Ambulancemen for paramedic service as Emergency Medical Assistants II (EMA IIs). It recommended the establishment of a reserve pool to facilitate the release of staff to receive paramedic training. The matter had been dealt with in the 2001 and 2007 RAEs. In the 2001 RAE, 50 time-limited posts were approved for creation for a three-year period from April 2002 to March 2005 so as to allow FSD to train an additional 550 EMA IIs. Together with the EMA IIs already in service, the special training reserve arrangement enabled about 800 EMA IIs in total for the full implementation of paramedic ambulance service by 2005.

A review was conducted in 2004 to assess the need for extension of the time-limited posts. It was noted that these time-limited posts were effective in relieving staff to receive paramedic training and increasing the number of EMA IIs in FSD. In fact, by September 2004, FSD had already trained over 520 additional EMA IIs, bringing the total of EMA IIs in service to about 770. This represented an achievement of over 95% of its original target and it was certain that by the time the special training service arrangement ended in 2005, FSD should be more than able to meet its target of attaining about 800 EMA IIs in total. This notwithstanding, it was decided in late 2004 that 15 time-limited posts should be retained for another three years starting April 2005 to enhance FSD's capacity to provide paramedic training. In the event, these 15 time-limited posts were further approved for creation on a permanent basis in the 2007 RAE.

It is clear from the above that the recommendation of the Review Committee for the establishment of a reserve pool to facilitate the release of staff to receive paramedic training had been addressed effectively in the 2001 and 2007 RAEs. Funding support was given to implement the recommendation in full because paramedic training was considered as a major upgrade of the skills of the staff and hence standard of emergency ambulance services for the public. Nevertheless, the provision of

additional posts as reserve to meet ongoing training needs would usually not be accorded priority, having regard to the great number of competing bids each year for priority service commitments or new initiatives.

(d) Breakdown records of the 10 ambulances not supported for replacement in the 2006 RAE

In the 2006 RAE, FSD requested 36 replacement TAs and SB supported 26 of them. The remaining 10 TAs proposed for replacement were observed to yield a relatively high availability rate of around 90% at the time of application. Furthermore, FSD had 10 TAs refurbished under the MCRP at that time that could be deployed on a need basis. The availability rate and breakdown record of the ten TAs not supported for replacement in the 2006 RAEs are at Annex A.

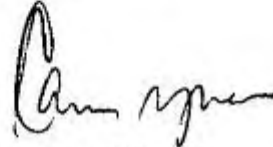
Members did not raise any questions in respect of the 2007 RAE, but Members may wish to note that funding was approved for the replacement of 88 TAs in 2007. As regards the 2008 RAE, FSD proposed to replace another 73 TAs. SB supported all 73 replacement TAs and FSTB approved SB's recommendation in its entirety. Of the 73 TAs proposed for replacement in the 2008 RAE, ten were previously included in FSD's bid in the 2006 RAE. As requested by Members, the availability rate and breakdown record of these ten TAs are at Annex B.

It should be noted that the ambulances in Annex A and Annex B are not entirely the same and cannot be compared directly. This is because the list of TAs proposed for replacement in each RAE was drawn up by FSD on the advice of GLD and the Electrical and Mechanical Services Department, taking into account the prevailing condition of the vehicles at the time. In this regard, it might contain vehicles that were previously supported for replacement but had not actually been replaced due to operational reasons, e.g. the need to urgently replace some other TAs first owing to their poor condition after traffic accidents.

We note that the Director of Audit recommended in his Report No.51 that FSD should introduce measures to ensure that all ambulances due for replacement, including those rejected in the previous RAE, are recommended for replacement in the annual RAE. FSD agrees with this recommendation and will ensure that all TAs rejected in the previous RAE are included in the bid of the annual RAE. To facilitate the submission of bids by FSD in future exercises, SB and FSTB will specify the TAs not

supported for replacement, so that FSD can take them into account when preparing the list of proposed replacement in the subsequent year.

Yours sincerely,



(Ms Carol Yuen)
for Secretary for Security

c.c. Director of Audit	(Fax No. 2583 9063)
Secretary for Financial Services and Treasury	(Fax No. 2537 1736)
Director of Fire Services	(Fax No. 2368 0175)
Director of Government Logistics	(Fax No. 2510 7904)
Director of Electrical and Mechanical Services	(Fax No. 2890 7493)

Annex A

The availability rate and downtime record of the ten ambulances not supported for replacement in the 2006 Capital Non-works RAE

Ambulance No.	2006 RAE	
	Availability Rate (%) (June 05 - May 06)	Downtime (%) (June 05 - May 06)
AM5024 *	91.5	8.5
AM5040 *	90.4	9.6
AM5051 ^	93.4	6.6
AM5067 ^	92.3	7.7
AM5284 *	91.5	8.5
AM5294 ^	89.9	10.1
AM5323 *	92.6	7.4
AM5326 *	92.9	7.1
AM5333 *	89.6	10.4
AM5339 *	91.0	9.0

* According to our record, these ambulances were not included in the 2007 and 2008 Capital Non-works RAE.

^ These ambulances were not included in the 2007 Capital Non-works RAE but were re-submitted in the 2008 Capital Non-works RAE.

Annex B

The availability rate and downtime record of the ten ambulances that had been submitted in 2008 and were previously included in the 2006 Capital Non-works RAE

Ambulance No.	2008 RAE	
	Availability Rate (%) (2007)	Downtime (%) (2007)
AM5051	94.5	5.5
AM5067	94.0	6.0
AM5294	93.2	6.8
AM5300 #	74.8	25.2
AM5301 #	96.1	3.9
AM5308 #	88.5	11.5
AM5314 #	93.7	6.3
AM5332 #	89.9	10.1
AM5341 #	92.9	7.1
AM5343 #	57.9	42.1

These ambulances were supported for replacement in the 2006 RAE

財經事務及庫務局局長

香港雪廠街
中區政府合署



SECRETARY FOR FINANCIAL
SERVICES AND THE TREASURY

Central Government Offices,
Ice House Street,
Hong Kong

28 February 2009

Our ref. : FIN 37/7/2 Pt. 2
Your Ref.: CB(3)/PAC/R51
Telephone no. : 2810 2283
Fax no. : 2596 0729

URGENT BY FAX

Ms Miranda HON
Clerk, Public Accounts Committee
Legislative Council
Legislative Council Building
8 Jackson Road
Central
Hong Kong

Dear Ms Hon,

**The Director of Audit's Report on the
results of value for money audits (Report No. 51)**

Emergency ambulance service (Chapter 4)

Thank you for your letter of 16 January 2009 requesting further information on the captioned subject.

2. We have consulted relevant parties including the Security Bureau (SB), the Fire Services Department (FSD), the Government Logistics Department (GLD) and the Electrical and Mechanical Services Department (EMSD) on information relevant to them. The requested information is set out below.

I. Resource Allocation Exercise (RAE) Process

3. Normally, the Financial Services and the Treasury Bureau (FSTB) will invite bids from bureaux/departments for additional resources each year. A policy bureau will be required to vet all the bids submitted by departments under its purview, and indicate the extent of its support for individual bids. When considering the bids, Directors of Bureaux (DoBs) will normally take into account factors such as the amount of initial envelope allocation for individual departments, scope of redeployment of existing resources in the departments, and the reasonableness and cost-effectiveness of the bids.

4. FSTB will then assess the bids from DoBs and make recommendations on the bids to be supported to a central committee for consideration, taking into account factors such as the fiscal position, scope of redeployment of existing resources within policy areas, effectiveness in the use of existing resources, demands for new and improved services as a whole, the size of the civil service, the priorities among different initiatives, etc.

5. As there are a lot of competitive RAE bids each year but the resources available for allocation can seldom meet all the proposed requirements in full, it is inevitable that both FSTB and the policy bureaux will need to scrutinise the bids received by them critically at their respective level to make sure that public resources can be efficiently and effectively allocated. In this sense, RAEs are not only about the allocation of new resources, but also about review of the effective use of existing resources.

6. Regarding the request for providing copies of FSD's submissions in the RAEs, Members may wish to note that the submission of a Controlling Officer, and eventually that of the DoB, normally covers a basket of initiatives under planning. To disclose the submissions in their original form will reveal confidential information on measures still under planning and on other non-related matters. To facilitate Members' understanding of the case in question, we have provided responses in the following sections based on facts relevant to the case as carried in record.

On Ambulances

2005 RAE

7. In the 2005 RAE, FSD submitted a bid for replacing 21 Town Ambulances (TAs) and three Village Ambulances (VAs), and for procuring nine additional TAs, with justifications as follows –

- ✧ 21 replacement TAs : 19 TAs were due for replacement as recommended by the Economic Life Model (ELM); another two TAs had already been disposed owing to their bad condition after traffic accidents and had to be replaced.
- ✧ 3 replacement VAs : one VA had reached and two were approaching the end of their normal serviceable life ^{Note 1}.
- ✧ 9 additional TAs : to keep the maintenance reserve ratio at 13% ^{Note 2} of the ambulance fleet. As the basic ambulance requirement was 231 and the ambulance strength at that time was 252, nine additional TAs were sought [9 TAs = 231 TAs x 1.13 less 252 TAs].

8. Of the ambulances proposed for replacement, SB supported nine TAs and one VA, including seven TAs with a relatively low availability rate (i.e. available for service for less than 90% of the time, with the rest of the time undergoing maintenance), two TAs already disposed of and the VA that was said to have reached the end of its normal serviceable life. As for the bid for additional ambulances, SB supported two TAs based on the advice of GLD that the maintenance reserve ratio should be at 10% instead of 13% ^{Note 3} [2 TAs = 231 TAs x 1.1 less 252 TAs].

9. FSTB processed SB's recommendations and approved funding for all of the nine replacement TAs recommended by SB. We had not approved funding for the replacement VA as it was serving a small outlying island supported by two VAs, one of which would be replaced before long. We also noted that the VA supported by SB had a relatively high availability rate at the time of the application (98% in 2002 and 2003, and 92% with no fault calls in 2004). As for the two additional TAs, after consulting GLD, FSTB decided to reject the funding required. The major considerations were that a number of existing ambulances were unmanned; about 40 new TAs which were put into service in late 2004 would begin to operate in full capacity after resolution of initial technical problems; and four new TAs would be delivered in end 2005.

^{Note 1} Due to the small fleet size of VAs in FSD (only four VAs in total), the ELM, which requires a large fleet size for meaningful data analysis, is not adopted to assess when VAs should be replaced.

^{Note 2} The maintenance reserve ratio of 13% for TAs was derived from the downtime rate agreed in 1988.

^{Note 3} After examining the downtime rate of TAs in the preceding three financial years, GLD noted that the average downtime rate of TAs dropped from 13% to 9.7% (say 10%), and adjusted the maintenance reserve ratio from 13% to 10% in 2003.

2006 RAE

10. In the 2006 RAE, FSD submitted a bid for replacing 36 TAs and three VAs and for procuring 19 additional TAs, with justifications as follows –

- ✧ 36 replacement TAs : 32 TAs were due for replacement as recommended by the ELM and four TAs were disposed of owing to their bad condition after traffic accidents.
- ✧ 3 replacement VAs : three VAs had reached the end of their normal serviceable life.
- ✧ 19 additional TAs : 17 TAs for meeting growing demand as the projected number of ambulance calls would reach 579 000 in 2007 and 368 ambulance shifts were required with reference to the recommendations in the Final Report of the Consultancy Study on Paramedic Ambulance Service in Hong Kong conducted by the Crow Maunsell Management Consultants Ltd. (Maunsell Report) in 2001. As the number of ambulance shifts that could be operated at that time was 345 and the planned distribution of 23 additional ambulance shifts (368 less 345) was 2 : 1 for the day and night shifts respectively, 17 TAs were required [23 shifts x 2/3 x 1.1 (for maintenance reserve)].
 - : two TAs to keep the maintenance reserve ratio at 10% of the ambulance fleet. As the basic ambulance requirement was 231 and the ambulance strength at that time was 252, two TAs were required [2 TAs = 231 TAs x 1.1 less 252 TAs].

11. Of the ambulances proposed for replacement, SB supported 26 TAs and three VAs. SB did not support the remaining ten replacement TAs in FSD's bid. It was observed that ten out of the 36 replacement TAs had a relatively high availability rate of around 90% at the time of the application and that FSD had joined the Minimum Cost Refurbishment Programme in April 2006 for the refurbishment of a total of ten TAs. SB was content that with 26 TAs replaced, FSD would be able to maintain its effective delivery of ambulance service. As for the bid for additional ambulances, SB did not support it in the light of the advice provided by GLD. GLD advised that the ambulance fleet of FSD at that time should have sufficient capacity to cope with the projected number of ambulance calls in 2007. GLD also did not support the additional TAs for maintenance reserve as not all TAs were shown to be fully utilised by FSD.

12. FSTB then processed SB's recommendation, approving funding for all the 26 TAs sought and one VA. FSTB did not approve the other two VAs supported, noting that the vehicles had a relatively high availability rate (98%, 99% and 96% for one VA and 98%, 92% and 96% for the other in 2003, 2004 and 2005 respectively).

2007 RAE

13. In the 2007 RAE, FSD submitted a bid for replacing 120 TAs and two VAs and for procuring 26 additional TAs, with justifications as follows –

- ✧ 120 replacement TAs : 61 TAs were due for replacement as recommended by the ELM, 56 TAs were recommended for replacement by EMSD after inspections and three TAs were disposed of owing to their bad condition after traffic/fire accidents.
- ✧ 2 replacement VAs : two VAs had reached the end of their normal serviceable life.
- ✧ 26 additional TAs : 24 TAs for meeting growing demand as the projected number of ambulance calls would reach 624 000 in 2008 and 384 ambulance shifts were required with reference to the recommendations in the Maunsell Report. As the number of ambulance shifts that could be operated at that time was 352 and the planned distribution of 32 ambulance shifts (384 less 352) was 2 : 1 for the day and night shifts respectively, 24 TAs were required [32 shifts x 2/3 x 1.1 (for maintenance reserve)].

: two TAs to keep the maintenance reserve ratio at 10% of the ambulance fleet. As the basic ambulance requirement was 231 and the ambulance strength at that time was 252, two TAs were required [2 TAs = 231 TAs x 1.1 less 252 TAs].

14. Of the ambulances proposed for replacement, SB supported 97 TAs and two VAs. The 97 TAs included 70 TAs with a relatively low availability rate (below 90%), 24 TAs over seven years old and with high mileage records (those run more than 3 000 kilometres per month) and three TAs disposed of due to their bad condition after traffic/fire accidents. As for the bid for additional ambulances, SB did not support it in the light of the advice provided by GLD (which was basically the same as the advice given in the 2006 RAE).

15. FSTB then processed SB's recommendation. For that year, we noted that nearly half of the TAs under request were outside the list of vehicles recommended by the ELM and the total number of replacement TAs requested was unusually large, amounting to more than one-third of the TA fleet. In the circumstances, FSTB saw a case for cross-checking and testing the strength of SB's bid by making reference to the availability rate as an additional reference in the vetting process. With this assessment, FSTB approved 85 TAs (on top of the three TAs already disposed of) with downtime record exceeding 10%. The total number of replacement ambulances approved (i.e. 88 TAs) is more than the recommendation by the ELM (i.e. 61 TAs), amounting to about one-third of the TA fleet in FSD. In addition, we also approved two VAs for replacement purposes.

16. Though not raised by Members, Members may wish to know that in the 2008 RAE, FSD made a bid for 73 replacement and 44 additional TAs. SB supported all the replacements and 21 of the additional TAs having regard to GLD's advice on maintenance reserve and additional ambulance shifts approved in the 2008 Recurrent RAE. FSTB approved SB's recommendations in their entirety.

17. We wish to point out that the reference to availability rate serves as a reference for FSTB in the vetting process. It is not an absolute standard for examining bids for replacement ambulances. In general, a vehicle with a high downtime record should be less fit for emergency purpose as its tendency of breakdown would likely be on the high side. Ultimately, a bid is assessed with reference to multiple factors as evidenced from the different RAEs set out above. For instance, in the 2007 and 2008 RAEs, SB had recommended for replacement some ambulances whose availability rate was above 90%. FSTB had also approved funding for replacement vehicles which would not have been recommended had it referred to the same benchmark on availability rate as applied in previous years.

On Manpower Resources

2005 RAE

18. In the 2005 RAE, FSD submitted a bid for 231 posts (i.e. 38 shifts ^{Note 4}) to meet the increase in demand for the emergency ambulance service (EAS). According to FSD, the number of ambulances that could be utilised for the provision of EAS at that time was 213.

^{Note 4} 38 shifts = 231 posts / 6.067 posts (number of ambulancemen required for operating one shift)

However, the daily ambulance availability for the period of January to June 2005 was on average 182 and 99 ambulances for day and night shifts respectively. As FSD was not able to meet the response time performance (RTP) of attending 92.5% of the emergency calls within 12 minutes in 2004 (91.1%), to meet the demand for EAS and to enable full utilisation of the operational ambulances, FSD requested 38 additional ambulance shifts so that they could run on average 213 day and 114 night shifts. The additional ambulance shifts under request had taken into account the number of ambulancemen under recruitment training, after which eight more ambulance shifts could be operated.

19. The bid was partially supported by SB. In assessing the bid, SB noted that the RTP achieved in 2004 was below the target of 92.5% (91.1% in 2004). SB agreed that additional resources were required. Having considered the competing bids by other departments under SB, SB supported the creation of 115 posts to provide 19 additional ambulance shifts, and considered that with effective use of resources, FSD should be able to improve the RTP. Approval was eventually given for FSD to create not more than 110 posts for the improvement of EAS. Inherent in the approval were the concern that ambulance services appeared to have been abused and the requirement for SB to critically examine how the new resources should best be deployed and explore possible measures to reduce the alleged abuse of EAS. SB therefore explored a number of management options with FSD, which included strengthening public education and consideration of a medical priority dispatch system (MPDS). Whilst the consultancy study on the feasibility to introduce the MPDS in Hong Kong was in active progress at that time, FSD launched a publicity campaign to encourage the proper use of EAS in late 2005.

20. 28 additional posts were eventually created in 2006-07 for operating four additional ambulance shifts, using the resources approved in the 2005 RAE. Decision on the use of the remaining resources was deferred until the effects of the publicity campaign were known and the way forward on the introduction of the MPDS was clearer.

21. In 2006, with increased public education, the number of ambulance calls dropped by 1.6% to 575 666. Coupled with the effect of the 28 additional posts provided, FSD was able to improve the RTP to 92.7% and meet its performance pledge in 2006.

2006 RAE

22. In the 2006 RAE, FSD submitted a bid for 140 posts (i.e. 23 shifts). FSD projected that the number of ambulance calls would reach 579 000 in 2007 and 368 ambulance shifts were required with reference to the recommendations in the Maunsell Report. Discounting the ambulance shifts that could be operated at that time and having regard to the fact that the RTP could not be met in 2001 to 2005 (with the exception of 2003), FSD asked for 23 additional shifts.

23. The bid was not recommended by SB because the resources approved in the 2005 RAE had yet to be fully utilised and the proposed introduction of MPDS in Hong Kong was still being considered. Specifically, using resources approved in the 2005 RAE, SB had allocated to FSD provisions for creating 28 additional posts to operate four additional ambulance shifts in 2006-07. SB was already planning to provide another 47 additional posts, using the resources approved in the 2005 RAE, for FSD to operate seven additional ambulance shifts in 2007-08. SB considered that the 75 (28 + 47) additional posts should be sufficient for FSD to meet demand in 2007-08, having regard to the fact that the RTP in the first six months of 2006 was above the performance pledge (an average of 92.9% from January to June 2006). It also appeared at that time that there was scope for FSD to better manage demand in view of an ongoing publicity campaign against abuse of EAS. The number of calls dropped by 7.4% in the first half of 2006 when compared with that of 2005.

24. In 2007, with the additional posts provided in 2007-08, FSD was able to handle 611 707 ambulance calls and improve the RTP to 92.8%.

2007 RAE

25. In the 2007 RAE, FSD submitted a bid for 194 posts (i.e. 32 shifts). FSD projected that the number of ambulance calls would reach 624 000 in 2008 and 384 ambulance shifts were required with reference to the recommendations of the Maunsell Report. Discounting the ambulance shifts that could be operated at that time and having regard to the fact that the RTP could not be met in 2001 to 2005 (with the exception of 2003), FSD asked for 32 additional shifts.

26. The bid was not recommended by SB, as SB was already planning to provide another 30 additional posts for FSD to operate five additional ambulance shifts in 2008-09, using resources approved in the 2005 RAE. Together with the posts provided in 2006-07 and 2007-08, an

accumulative total of 105 additional posts were provided by 2008-09 for FSD to operate a total of 16 additional ambulance shifts. SB considered that this provision should be sufficient for FSD to meet the demand for its ambulance service, having regard to the RTP in 2006 (92.7%) and the RTP in the first six months of 2007 (92.9%).

27. In 2008, FSD handled a total of 643 611 ambulance calls and achieved a RTP of 92.2%. The performance pledge could not be met as there was an exceptional increase of calls in February 2008 (an increase of 21.9% in one single month as compared with that of 2007) due to the unusual cold spell that month.

2008 RAE

28. Members may wish to know that taking into account the increase of ambulance calls in the first half of 2008 (6.7% when compared with the number of calls in the same period of 2007), SB recommended creation of 130 additional posts, and 121 additional posts were eventually approved for 2009-10.

II. Economic life model

Exchanges between FSD and FSTB in 2005

29. The two memoranda mentioned by FSD at the hearing on 8 January 2009 were part of a series of exchanges between FSD and FSTB in late 2005 regarding the allocation of non-recurrent funding in 2006-07 for various purposes, including the procurement of ambulances. Since the exchanges covered internal discussions on other subjects which are not relevant to ambulance services, we will give an account for those parts of the exchanges which relate to ambulance services.

30. In the first memorandum, after being informed that funding had been approved for the replacement of nine TAs (see section in 2005 RAE under Ambulances above), the Director of Fire Services (DFS) requested additional allocation in 2006-07 for him to pursue the original plan to replace a total of 21 replacement TAs. To substantiate this request, DFS said that “If they (the vehicles) are not replaced in time, their condition will deteriorate rapidly which will adversely affect our standard of service, not to mention the risk of breakdowns during fire fighting/rescue operation and the serious consequences that will bring to public safety and the safety of our staff”. He added that “According to the Director of Government Logistics (DGL)’s recommendation based upon the Economic Life Model for motor

vehicles, 19 ambulances are due for replacement in 2006-07 and two ambulances were disposed of in 2004. All 21 vehicles require to be replaced in order to maintain the present level of service". FSD also requested additional allocation for the replacement of two VAs, after being informed that its original funding application to replace three VAs was unsuccessful (see section in 2005 RAE under Ambulances above). FSD justified this request by stating that the serviceable lifespan of a VA was seven years, and that by 2006-07 all four VAs serving outlying islands would have been in service for 7 – 8 years and would require replacement. It added that the request for replacing 21 TAs and two VAs was supported by GLD.

31. On receipt of this memorandum, FSTB invited FSD to provide some quantifiable data to substantiate the appeal, including the number of breakdown for each vehicle in the original bid, as well as the maintenance and repair costs incurred for each vehicle. Having further considered the case, FSTB wrote to FSD confirming that the earlier decisions on allocation for 2006-07 were upheld. We explained that when examining the appeal, we had taken into account the downtime record of individual vehicles (i.e. whether the downtime record exceeded 10%) and the absence of further data to substantiate the appeal.

32. Thereafter, DFS wrote a memorandum to FSTB (the second memorandum mentioned at the hearing) expressing his concern over the use of downtime record or "90% availability" as a "benchmark for determining the necessity for replacement of emergency vehicles". He added that the department could "not take the availability of an emergency vehicle as an indicator of its condition". He also stated that "the vehicles we are seeking to replace are not general purpose vehicles" and cautioned that Government "may end up paying a huge price in due course" from public safety angle if ageing vehicles were not replaced in time.

33. We support the Director of Audit's recommendation in his latest report about the need to review the methodology of determining the number of ambulances to be replaced, taking into account all relevant factors. Indeed, following up the concern expressed by DFS in late 2005, we have been exploring with FSD since mid-2006 the use of other indicators as additional reference points. We have also clarified that the downtime record is not an absolute yardstick and that we are prepared to consider cases on their individual merits. Looking forward, we will work with FSD, SB, GLD and EMSD in reviewing the existing methodology, with a view to developing comprehensive indicators to guide management decisions on the replacement of ambulances.

Comparison of maintenance cost, age, etc. between different types of vehicles

34. The ELM is a statistical model which recommends the need for replacement of a vehicle after taking into account the accumulated maintenance cost, vehicle age, mileage run and replacement cost. It applies to all general purpose vehicles and some types of specialised vehicles, including TAs, if those types of specialised vehicles comprise a sufficiently large pool to render the application of the ELM statistically meaningful.

35. As at 30 June 2006, for those cars used by the Principal Officials (PO), their age ranged between 8.50 – 9.08 years; accumulated mileage ranged between 154 068 – 263 935 km; accumulated maintenance cost ranged between \$371,710 – \$588,244; and their average replacement cost was \$357,000 each. For the ten TAs mentioned in paragraph 6.6 of the Audit Report, their age ranged between 7.83 – 9.00 years; accumulated mileage ranged between 173 807 – 282 539 km; accumulated maintenance cost ranged between \$635,254 – \$1,008,672; and their estimated replacement cost was \$962,000 each. For all the PO cars, their accumulated maintenance cost as at 30 June 2006 exceeded the replacement cost. However, for the ten ambulances in question, only one of them had its accumulated maintenance cost higher than the estimated replacement cost.

36. The ELM supported the replacement of all the PO cars. It also recommended the replacement of the ten TAs in question. Accordingly, DGL and DFS had respectively included the PO cars and the ten TAs when they bidded funding for the relevant block votes for the year in question. In the case of FSD, the provision required for replacing the ten TAs had not been included in the final allocation – the sequence of events has been set out in the earlier section accounting for the 2006 RAE (paragraph 11 above).

Applicability of the ELM in the assessment of ambulances due for replacement

37. According to FSD, the normal serviceable life of an ambulance should be six to seven years, after which an ambulance should be replaced. We, however, remain of the view that it is not appropriate to base the replacement decision solely on the age of a vehicle, as an ambulance in poor condition may need replacement even if it has been in use for less than six to seven years, while it will be a waste of public resources if we were to dispose of an ambulance in good serviceable condition only because it turns six to seven years old. In this connection, the Director of Audit also pointed out in paragraph 41 of Chapter 11 of his Report No. 30 issued in

June 1998 that vehicle replacement (with no exception for ambulances) should be based on the economic life and the cumulative maintenance costs rather than the age of a vehicle. In fact, the ELM was introduced in pursuance of the recommendation in this particular chapter (paragraph 42) of the Audit Report which stated that *“Audit has recommended that the Government Land Transport Administrator should, in conjunction with the Director of Electrical and Mechanical Services ... replace vehicles and prepare the provisional annual replacement list of vehicles on the basis of the economic life of each type of vehicle.”* The adoption of the ELM was subsequently reported to the Legislative Council via the Government Minute in response to the Public Accounts Committee Report No. 33 issued in February 2000.

38. We note that there are several references to “design serviceable life” in Audit Report No. 51, including paragraphs 5.3, 5.16, 5.19(h), 5.20(h), 6.3 and Note 2 of Appendix H, which seems to imply that an ambulance is designed for a serviceable life of seven years only and hence there would be a higher inherent risk of using it after seven years. We have sought the advice of the supply contractor of the ambulances and have been given to understand that there does not exist any serviceable life determined during the design process. In fact, according to the supply contractor, the serviceable life of a vehicle depends on the frequency of usage, road condition, climate, services and maintenance. In this regard, EMSD has also advised that although ambulances may need more maintenance service after they have been in use for around seven years, the service level required for individual ambulances may differ.

39. We would like to stress that under the established procedures for identifying ambulances to be replaced, the ELM is only a step in the process and a tool to help identify ambulances due for replacement. As set out in Appendix H of this Audit Report, there are other procedures involving input by different parties. As the ELM can help identify ambulances due for replacement, we see merit in continuing to make reference to it in our assessment work among other factors. We support the Audit recommendation that there should be a review of the methodology of determining the number of ambulances to be replaced, taking into account all relevant factors such as the risk of breakdown on rescue operation as suggested in the Audit Report. We will continue to work with SB, FSD, GLD and EMSD in this regard.

III. Final remarks

40. We hope that the above information will demonstrate to Members how the bids for ambulances and manpower put in by FSD over the years had been processed by SB and FSTB with reference to relevant factors and information available at the time, and how the process had ensured cost-effective uses of resources on the one hand and the effective delivery of ambulance service to the public on the other. On replacement of ambulances, we will work with SB and the relevant departments in reviewing the existing methodology, as recommended in the Audit report.

Yours sincerely,



(Ms Bernadette Linn)
for Secretary for Financial Services
and the Treasury

c.c. Director of Audit
Secretary for Security
Director of Fire Services
Director of Government Logistics
Director of Electrical and Mechanical Services



審計署
香港灣仔
告士打道七號
入境事務大樓
二十六樓

Audit Commission
26th Floor
Immigration Tower
7 Gloucester Road
Wanchai, Hong Kong

圖文傳真 Facsimile : 2583 9063
電話 Telephone : 2829 4217
電郵 E-mail :
網址 Website : <http://www.aud.gov.hk/>

本署檔號 Our Ref.: UB/BAR/PAC/51 Vol 4

來函檔號 Your Ref.: CB(3)/PAC/R51

Urgent by fax

10 March 2009

Ms Miranda Hon
Clerk, Public Accounts Committee
Legislative Council
Legislative Council Building
8 Jackson Road
Central, Hong Kong

Dear Ms Hon,

**The Director of Audit's Report on the
results of value for money audits (Report No. 51)**


Emergency ambulance service (Chapter 4)

Thank you for your letter dated 10 March 2009.

According to paragraph 41 of Chapter 11 of Report No. 30 of the Director of Audit, the Electrical and Mechanical Services Department (EMSD), in response to the recommendations made by the then Finance Bureau (FB) in May 1987, accepted the economic life concept for the replacement of vehicles. However, Audit found that the EMSD had not followed the recommendations made by the FB. The audit recommendations on the replacement of vehicles in paragraph 42 of the report were of a general nature. No exception for ambulances was specified.

A Chinese translation of this letter will be forwarded to you shortly.

Yours sincerely


(CHAN Bar-keung)
for Director of Audit

c.c. Secretary for Security (fax no. 2537 0325)
Secretary for Financial Services and the Treasury (fax no. 2147 5239)
Director of Fire Services (fax no. 2368 0175)
Director of Electrical and Mechanical Services
(Attn: Mr SHE Siu Kuen) (fax no. 2111 9658)
Director of Government Logistics (fax no. 2510 7904)

APPENDIX 16

財經事務及庫務局局長

香港雪廠街
中區政府合署



**SECRETARY FOR FINANCIAL
SERVICES AND THE TREASURY**

Central Government Offices,
Ice House Street,
Hong Kong

Our ref: FIN 37/7/2 Pt. 2
Your ref: CB(3)/PAC/R51
Telephone no: 2810 2283
Fax no: 2596 0729

18 March 2009

URGENT BY FAX

Ms Miranda HON
Clerk, Public Accounts Committee
Legislative Council
Legislative Council Building
8 Jackson Road
Central
Hong Kong

Dear Ms Hon,

**The Director of Audit's Report on the
results of value for money audits (Report No. 51)**

Emergency ambulance service (Chapter 4)

Thank you for your letter of 11 March 2009 requesting further information on the captioned subject. We have consulted the Security Bureau (SB) and other relevant departments for their input as appropriate. The information is set out below.

2008 Resource Allocation Exercise

In the 2008 Resource Allocation Exercise (RAE), approval was given for the Fire Services Department (FSD) to create 121 posts to strengthen its emergency ambulance service (EAS), close to the number of 130 additional

posts recommended by SB (the small difference is due to the consideration over fluctuations in EAS calls that affect the estimated demand for ambulance resources). The approval took into account various factors. First, the number of ambulance calls increased by 6.7% in the first half of 2008 when compared with that in the same period of 2007. Moreover, the average response time performance (RTP) in the first half of 2008 was 91.8% as compared with 92.9% in the corresponding period of 2007. In this connection, the effects of the publicity campaign launched by FSD in late 2007 on the proper use of EAS also appeared to be not as effective as the one launched in late 2005. In the first half of 2006, after the publicity campaign in November 2005, the number of calls dropped by more than 7% when compared with that of 2005. In light of all these factors, the Administration considered it necessary to approve additional resources for FSD to cope with the prevailing and increasing demand in EAS and meet the RTP pledge.

Relevant factors in identifying ambulances due for replacement

Unlike the replacement of general purpose government vehicles whereby recommendations are basically based on the Economic Life Model (ELM), recommendations for the replacement of ambulances are not confined to those generated from the ELM and may come from one or more of the following sources -

- (i) recommended for replacement by the ELM;
- (ii) identified to be in need of replacement by the Electrical and Mechanical Services Department (EMSD) after vehicle inspection; and
- (iii) considered to be in need of replacement by FSD having regard to its operational experience.

The process incorporates recommendations from different sources, with a view to ensuring that all ambulances which may be in need of replacement can be identified for further consideration. When considering the recommendations from these different sources, we have also made reference to the availability rate of individual ambulances.

Review on methodology of determining the number of ambulances to be replaced

In paragraph 6.11(b) of the Audit Report, the Director of Audit (D of A) has recommended that the Director of Fire Services (DFS) should review the methodology of determining the number of ambulances to be replaced, taking into account all relevant factors (in particular, the risk of the breakdown on rescue operations), to ensure the efficient provision of the emergency ambulance service. In response, DFS has undertaken to work out, in collaboration with EMSD and the Government Logistics Department, an objective methodology that is acceptable to all parties. We understand that FSD has already started discussions with the relevant departments. We will work with all parties concerned and provide input along the way. We hope that the review would be completed by the third quarter of 2009, as this would facilitate the preparation and assessment work in relation to FSD's bid, if any, for replacing its ambulances in the 2009 RAE. Meanwhile, we note that by 2010 when all replacement ambulances approved in recent years have been delivered by phases, over 80% of the ambulance fleet will be under two years old and the fleet's age will be reduced from the current average age of around 8 years to 1.7 years.

Yours sincerely,



(Ms Bernadette Linn)
for Secretary for Financial Services
and the Treasury

c.c. Director of Audit (fax no: 2583 9063)
Secretary for Security (fax no: 2537 0325)
Director of Fire Services (fax no: 2368 0175)
Director of Government Logistics (fax no: 2510 7904)
Director of Electrical and Mechanical Services (fax no: 2111 9658)

政府總部
香港下亞厘畢道



APPENDIX 17

GOVERNMENT SECRETARIAT
LOWER ALBERT ROAD
HONG KONG

本函檔號 Our Ref.: SBCR 1/2366/08

18 March 2009

來函檔號 Your Ref.: CB(3)/PAC/R51

Ms Miranda HON
Clerk, Public Accounts Committee
Legislative Council
Legislative Council Building
8 Jackson Road
Central
Hong Kong

Dear Ms Hon,

**The Director of Audit's Report on the
results of value for money audits (Report No. 51)**

Emergency ambulance service (Chapter 4)

Thank you for your letter dated 11 March 2009.

At the public hearing on 10 March 2009, the Secretary for Security referred to the changes in the establishment of the ambulance stream and the fire stream from 2006 to 2009. The relevant information is attached at Annex.

Yours sincerely,

A handwritten signature in black ink, appearing to read "Carol Yuen".

(Ms Carol Yuen)
for Secretary for Security

c.c. Director of Audit (fax no. 2583 9063)
Secretary for Financial Services and the Treasury (fax no. 2147 5239)
Director of Fire Services (fax no. 2368 0175)
Director of Government Logistics (fax no. 2510 7904)
Director of Electrical and Mechanical Services
(Attn: Mr SHE Siu Kuen) (fax no. 2111 9658)

Annex

Changes in Establishment of the Ambulance Stream and the Fire Stream

Stream	As at 1.1.2006	As at 1.1.2007		As at 1.1.2008		As at 1.1.2009	
	Establish- ment	Establish- ment	Cumulative Increase (%)	Establish- ment	Cumulative Increase (%)	Establish- ment	Cumulative Increase (%)
Fire	6,276	6,306	0.48%	6,322	0.73%	6,362	1.37%
Ambulance	2,318	2,350	1.38%	2,398	3.45%	2,430	4.83%

ACRONYMS AND ABBREVIATIONS

A&E	Accident and Emergency
Audit	Audit Commission
DAA	Daily ambulance availability
ELM	Economic life model
EMA IIs	Emergency Medical Assistant IIs
EMSD	Electrical and Mechanical Services Department
DFS	Director of Fire Services
FSD	Fire Services Department
FSTB	Financial Services and the Treasury Bureau
GLD	Government Logistics Department
HA	Hospital Authority
MCRP	Minimum Cost Refurbishment Programme
MPDS	Medical priority despatch system
NT	New Territories
NT/E&W Division	East and West Division of the New Territories Region
PO	Principal Officials
RAE	Resource allocation exercise
SB	Security Bureau
SFST	Secretary for Financial Services and the Treasury
SLA	Service Level Agreement
TAs	Town ambulances
TGMS	Third Generation Mobilising System
VAs	Village ambulances