

CHAPTER 6

THE GOVERNMENT OF THE HONG KONG SPECIAL ADMINISTRATIVE REGION

GENERAL REVENUE ACCOUNT

GOVERNMENT DEPARTMENT

Highways Department

Management of outdoor road maintenance staff

**Audit Commission
Hong Kong
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MANAGEMENT OF OUTDOOR ROAD MAINTENANCE STAFF

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MANAGEMENT OF OUTDOOR ROAD MAINTENANCE STAFF

Summary and key findings

Introduction

A. Over 400 staff of various ranks and grades (with an annual staff cost of \$155 million) in the three Regional Offices of the Highways Department (HyD) perform outdoor road maintenance and utility duties. These outdoor staff include Inspectorate Officers and Works Supervisors (Maintenance Staff) who supervise the work of road maintenance contractors and check the road opening sites of utility operators. The outdoor staff also include the HyD's Direct Labour Force (DLF) which performs minor road maintenance works (para. 1.5).

Audit review

B. Audit conducted a review during the period July to November 1999 on the HyD's management and monitoring of the work, including overtime (OT) work, performed by the outdoor staff of the HyD's Regional Offices. The audit has identified areas for attention which are described in paras. C to K below (para. 1.6).

Monitoring of outdoor staff

C. **Productivity standards.** In the absence of formal time/productivity standards for the Maintenance Staff and the DLF, the HyD relied on the experience and judgement of the supervisory staff, who may have their own informal productivity standards, to set the workload of their subordinates. Audit considers that this arrangement does not provide the HyD with a uniform and objective benchmark for effectively monitoring the productivity and workload of its outdoor staff (para. 2.9).

D. **Management information.** Audit noted that there was scope for improvement in the HyD's management information on staff productivity. For example, the HyD did not systematically collect and analyse data on the time spent by the Maintenance Staff to help the senior management assess their performance objectively (para. 2.11).

E. **Detection and deterrent measures.** Audit noted that the HyD had not issued clear instructions on the procedures for verifying, through document and physical checks, the quantity and quality of work performed by the outdoor staff. Audit also noted that the results of three ad hoc calibration exercises, conducted in 1998 by the Research and Development Division of the HyD, revealed that there was scope for improvement in the quality of site inspection reports. Audit considers that there is a need for similar calibration exercises to be conducted on a regular basis to provide independent assurance on the quality of site inspections (paras. 2.12 to 2.15).

Management of the Direct Labour Force

F. **HyD's decision to run down the DLF.** Following a review completed in 1988, the HyD considered that it was more cost-effective to let contractors do some of the work of the DLF and, accordingly, action was taken to reduce the size of the DLF. In 1996, the HyD decided to further run down the DLF and eventually transfer all the DLF's work to contractors. The HyD expected that, through natural wastage and transfer-out, there would be no Workmen II in the DLF by 2006 and that the DLF could be completely run down by 2016. However, Audit's projection, based on natural wastage, indicated that there would still be 27 Workmen II in the DLF by 2006. Audit noted that the transfer of Workmen II to other units of the HyD had only limited success because the transfer was on a voluntary basis and the Workmen II were not keen to take up posts in other units. Audit also noted that the HyD's run-down plan did not cover all DLF staff. Audit considers that the run-down plan should also include the supervisory staff and Motor Drivers, who account for 44% of the DLF's staff cost (paras. 3.5 to 3.16).

G. **Ineffective utilisation of the DLF.** Audit's analysis of the operational reports of the DLF from April 1996 to September 1999 revealed that the DLF had not been effectively utilised. The DLF was not given sufficient work to do in its core business. It spent too much time in preparation work and in non-core business, and it was idle for a significant part of its working hours (paras. 3.20 to 3.22).

H. **High costs of using the DLF.** According to the results of a cost comparison study carried out by Audit, the services provided by the DLF were much more costly than similar services provided by contractors. Audit noted that the productivity of the DLF was low and there was scope for improvement in its mode of operation (paras. 3.24 to 3.26).

Management of OT work

I. **Expenditure on OT allowance.** The expenditure on OT allowance (OTA) for staff performing road maintenance and utility duties in the Regional Offices rose from \$12.6 million in 1995-96 to about \$18 million in 1999-2000 (para. 4.3).

J. **Audit's analysis of OT hours.** Audit's analysis of the OTA paid during the 12-month period August 1998 to July 1999 indicated that many HyD staff in the Regional Offices routinely worked a large number of OT hours. For example, 81 staff were each paid OTA for more than 500 hours and, among them, 17 were each paid for over 800 hours. These OT hours were equivalent to more than 25% and 40% of their normal duty hours respectively. The analysis raises several issues that need to be addressed by the HyD's senior management (paras. 4.7 and 4.8). These issues are:

- (a) the need to critically review and revise the HyD's staff deployment methodology, so as to reduce its expenditure on OTA, maximise staff productivity and minimise the risk of bribery (para. 4.9);

- (b) the need to keep sufficient records of time-off in lieu and to ensure that the option of time-off in lieu, as a recompense for OT work, is fully considered before paying OTA (paras. 4.10 and 4.11);
- (c) the need to use contractors (instead of the DLF) to perform work outside normal duty hours, if it is more cost-effective to do so (para. 4.12); and
- (d) the need to provide assurance, through the use of productivity standards, that OT work is kept to the absolute minimum according to operational requirements (para. 4.13).

K. **Case studies on selected OTA claimants.** Audit also carried out case studies on selected OTA claimants. The results of these case studies revealed areas for improvement in the HyD's OT approval process and supervision of OT work (para. 4.14).

Audit recommendations

L. The following are the main recommendations made by Audit to the Director of Highways in the light of the audit findings. Audit has recommended that he should:

Monitoring of outdoor staff

- (a) establish procedures for ensuring that sufficient operational input data are systematically collected and analysed to produce useful management information on staff productivity, and that the management information is periodically reviewed by the HyD's senior management (para. 2.16(a));
- (b) develop formal time/productivity standards through work studies and analyses of operational data (para. 2.16(b));
- (c) issue clear instructions on the frequency and procedures for verifying the quantity and quality of work performed by the outdoor staff, and on the documentation of verification results (para. 2.16(c));
- (d) incorporate into the HyD's instructions a requirement to conduct regular calibration exercises to provide independent assurance on the quality of site inspections (para. 2.16(f));

Management of the Direct Labour Force

- (e) critically review the justification for retaining the DLF until 2016, having regard to the fact that the services provided by the DLF are not cost-effective (para. 3.28(a));

- (f) if there is no justification for retaining the DLF until 2016, set an earlier target date for the complete run-down of the DLF (para. 3.28(b));
- (g) in consultation with the Civil Service Bureau, actively explore measures to expedite the run-down of the DLF (para. 3.28(c));
- (h) set up a mechanism for monitoring regularly the progress of the run-down of the DLF by the HyD's senior management (para. 3.28(d));
- (i) in the meantime, take positive action to improve the performance of the DLF (para. 3.28(e)); and

Management of OT work

- (j) take vigorous action to strengthen the management controls and minimise the expenditure on OT work. In particular, the Director should:
 - (i) for staff/units with significant OTA claims, critically review their mode of operation, workload and productivity in order to assess whether the OT work is really needed (para. 4.27(a));
 - (ii) ensure that the HyD always uses time-off in lieu as the normal recompense for OT work. Where OTA is granted instead, the approving officers should provide a documented assessment of the staffing/workload position to satisfy the senior management that time-off in lieu is not a feasible option (para. 4.27(d)); and
 - (iii) establish a mechanism for the HyD's senior management to review regularly the issues raised in this audit report, so as to ensure that OT work is always kept to the absolute minimum (para. 4.27(l)).

Response from the Administration

M. The Director of Highways has accepted in principle the audit recommendations as a whole. He has set up a working group, chaired by the Deputy Director of Highways, to follow up the audit recommendations and devise appropriate measures to enhance the HyD's monitoring system. He has assured Audit that the HyD will make its best endeavour to plug potential loopholes in the shortest possible time (paras. 2.17, 3.29 and 4.28).

PART 1: INTRODUCTION

1.1 This PART explains the background to the audit and outlines the audit objectives and scope.

Background

1.2 In recent years, there have been increasing public concerns over the performance of the Government's outdoor staff. In 1998, Audit conducted a review on the monitoring of outdoor staff of three selected government departments. The audit revealed weaknesses in the management of outdoor staff. The audit results were published in Chapter 12 of the Director of Audit's Report No. 31 of October 1998 (Note 1). The Administration supports the audit recommendations and has agreed that there should be strict control on the quality of work and productivity of outdoor staff.

1.3 In its report No. 31 of February 1999, the Public Accounts Committee (PAC) expressed concern that similar problems regarding the monitoring of outdoor staff might exist in other departments. The PAC considered that Audit should conduct similar investigations into the operations of other government departments.

Highways Department's road maintenance staff

1.4 The Highways Department (HyD) is responsible for the maintenance of all public roads, including road furniture, road drainage and roadside slopes. It is also responsible for the coordination and control of utility openings on public roads. The HyD performs its road maintenance and utility duties through its three Regional Offices, namely the Hong Kong Region, Kowloon Region and New Territories (NT) Region.

1.5 Over 400 staff of various ranks and grades (with a total annual staff cost of \$155 million) in the Regional Offices perform outdoor maintenance and utility duties on a regular basis. These staff are:

- (a) **Maintenance Staff.** These include Inspectorate Officers and Works Supervisors with maintenance and utility duties. These staff are responsible for the planning, inspection and supervision of maintenance works carried out by contractors. They are also responsible for checking the road opening sites of utility operators and investigation of public complaints. As at October 1999, there were 315 Maintenance Staff (see details at Appendix A) with an annual staff cost of \$129 million in 1999-2000; and

Note 1: *The three selected departments were the Census and Statistics Department, the Government Supplies Department and the Water Supplies Department. Similar observations on the management of outdoor staff by the Regional Services Department, the Housing Department and the Urban Services Department were raised in Chapter 3 of the Director of Audit's Report No. 31 of October 1998, Chapter 1 of Report No. 32 of March 1999 and Chapter 1 of Report No. 33 of October 1999 respectively.*

- (b) **Direct Labour Force (DLF).** The DLF performs labour-intensive road maintenance duties, including resurfacing works, patching of potholes and road testing. DLF outdoor staff include Senior Artisans, Artisans, Workmen II and Motor Drivers. They are supervised by Chief Technical Officers (CTOs), Inspectorate Officers and Works Supervisors. As at October 1999, there were 109 DLF staff (see details at Appendix A) with an annual staff cost of \$26 million in 1999-2000.

Audit review

1.6 Given their work nature and mode of operation, Audit considers that staff performing road maintenance and utility duties constitute a high-risk area insofar as the monitoring of their performance is concerned (Note 2). Therefore, Audit conducted a review during the period July to November 1999 at the HyD's Regional Offices:

- (a) to examine the HyD's management and monitoring of the work, including overtime (OT) work, performed by its outdoor staff responsible for road maintenance and utility duties; and
- (b) to ascertain if there is any room for improvement.

1.7 The audit has identified areas where the attention of the HyD's senior management is needed. The audit findings are presented in this report in the following order:

- (a) **PART 2.** This PART examines how the HyD manages its outdoor staff performing road maintenance and utility duties;
- (b) **PART 3.** This PART examines the performance of the DLF and the HyD's progress in the run-down of the DLF; and
- (c) **PART 4.** This PART examines how the HyD manages the OT work of its staff. While the audit focused on staff performing outdoor maintenance and utility duties, it also examined, where appropriate, the OT work of other staff of the HyD for the sake of completeness.

Note 2: *Unlike staff working on capital works projects, staff performing road maintenance and utility duties are not stationed at a particular office when performing outdoor duties. Furthermore, although Maintenance Staff have to attend to different work sites, Audit noted at the time of the audit that the HyD did not have a pre-scheduled itinerary to facilitate the monitoring of their work. Given this mode of operation, Audit considers that this is a high-risk area.*

PART 2: MONITORING OF OUTDOOR STAFF

2.1 This PART examines how the HyD manages its outdoor staff performing road maintenance and utility duties.

Work of Maintenance Staff

2.2 *Inspectorate Officers.* The Inspectorate Officers are classified as outdoor staff because they spend some of their working hours at sites. They also spend part of their working hours in the office carrying out various office activities, including processing excavation permit applications, planning maintenance works and issuing works orders.

2.3 *Works Supervisors.* Works Supervisors, under the direction of the Inspectorate Officers, are primarily responsible for site supervision of maintenance works and for inspection of utility openings. They visit several sites a day and the majority of their working hours are spent on sites. They schedule their site visits based on the progress reports submitted by contractors and the number of active utility openings.

Work of DLF staff

2.4 The DLF staff usually work together in a team of seven to ten staff under the direction of a Works Supervisor. The DLF performs road maintenance and road testing activities based on works orders from various HyD units. When there is no programmed maintenance or testing work, the DLF staff are deployed to perform various menial duties such as cleaning traffic signs and cutting grass.

HyD's review of its system of staff supervision

2.5 Following Audit's report on the monitoring of outdoor staff in three government departments, in November 1998, the Civil Service Bureau (CSB) requested all government departments to review their systems of staff supervision. In response, the HyD completed a departmental review of its system of staff supervision in January 1999. Following the review, in February 1999, the HyD issued three departmental circulars to tighten and formalise the internal checking mechanism for verifying the reliability of attendance records and for monitoring staff productivity. These circulars set out, for the reference of the Office Heads and supervisory officers, some general guidelines on the monitoring of staff output. According to these guidelines, the monitoring of staff output should cover the quantity of work performed, the way in which the work is done and whether the work is performed strictly according to the time schedule. The guidelines also refer generally to the need for periodic supervisory spot checks and reviewing of work processes.

CSB's Circular on supervision of outdoor duties

2.6 In October 1999, the CSB issued a set of guidelines (Civil Service Bureau Circular No. 11/99) on the supervision of outdoor duties. The CSB advised bureaux and departments that:

- (a) because the nature of outdoor work varies between organisations, bureaux and departments should devise their own monitoring mechanisms to suit their circumstances. Departmental instructions on the mechanisms should also be drawn up and promulgated regularly;
- (b) it is of the utmost importance for departments to develop a culture that recognises the need to deliver quality services to the public. Senior management should pay personal attention to ensure that the supervision and monitoring mechanism is working effectively; and
- (c) even where the existing mechanism for staff supervision is considered adequate and effective, departments should institute a mechanism for reviewing the existing monitoring system regularly, so that improvement and enhancement may be introduced in the light of experience and changing circumstances.

2.7 According to the CSB's Circular, the following are the essential elements of an effective monitoring system for outdoor work:

- (a) ***Realistic workload.*** The workload assigned to outdoor staff must be realistic. Departments should ensure that outdoor work schedules are well planned to maximise utilisation of duty hours. Appropriate time/productivity standards should be set for completion of the tasks concerned. Workload and work schedules should be reviewed regularly and updated in the light of any changes in circumstances;
- (b) ***Clear instructions and expectations.*** Departments should ensure that staff performing outdoor duties have a clear understanding of the management's expectations and requirements. Clear instructions on attendance, work procedures, target finishing time, and quantity and quality of work should be issued to individual outdoor staff. Regular outdoor work should be pre-approved and pre-scheduled, and routes should be designated in advance. There should also be sufficient and regular communication between supervisors and subordinates;
- (c) ***Deterrent measures.*** Departments should ensure that the level of details in the attendance registers is sufficient to facilitate subsequent checking and identification of

irregularities. Adequate guidelines must be issued on the use, management and control of attendance registers. An officer should be appointed to personally supervise staff making entries in the attendance register. Arrangements should be made for outdoor staff to report on the work they have done;

- (d) **Detection measures.** Departments should institute mechanisms to enable the management to detect irregularities. There should be document checks and physical checks. Document checks should include the checking of attendance records, job registers etc. Cross-checking should be done, as far as possible, with the actual job done or with third parties. Physical checks should include regular and random spot checks by supervisors to ensure proper attendance and performance of outdoor duties. More vigorous spot checks should be made where there are reasonable suspicions or previous records of staff having been engaged in irregularities. Departments should also issue clear instructions to prescribe the frequency and procedures for both document and physical checks. The rank of officers who conduct these checks should be clearly specified. The details of these checks such as date, time and outcome should be fully documented. Immediate follow-up action should be taken where irregularities have been identified;
- (e) **Auditing of service.** Departments with a sizeable portion of their staff engaged in outdoor work should set up quality assurance/audit units to conduct inspections for quality assurance, identify areas for procedural improvement and check compliance with internal controls, practices and procedures; and
- (f) **Disciplinary action.** Appropriate penalties should be imposed on those who attempt to abuse the system. Departments should ensure that prompt disciplinary action is instituted against any officer suspected of malpractice or misconduct.

HyD's monitoring mechanism needs improvement

2.8 In November 1999, Audit noted that the HyD's monitoring mechanism did not fully meet the requirements laid down by the CSB. Audit considers that there is scope for improvement in:

- (a) the HyD's monitoring of staff productivity; and
- (b) the HyD's detection and deterrent measures.

Audit observations on the monitoring of staff productivity

2.9 ***Difficulties in setting productivity standards.*** Audit noted that the HyD did not have formal time/productivity standards (Note 3) for assessing the workload of its Maintenance Staff and DLF staff. Instead, it relied on the experience and judgement of the supervisory staff, who may have their own informal productivity standards, to set the workload of their subordinates. **Audit considers that the existing arrangement does not provide the HyD with a uniform and objective benchmark for effectively monitoring the productivity and workload of its outdoor staff.** As the expectations of individual supervisory staff may vary, Audit considers that it is not entirely satisfactory to rely solely on different officers' individual judgement to monitor the staff productivity and workload. When discussing Audit's findings, the HyD explained to Audit that setting formal productivity standards for its outdoor staff could be a very difficult task. This was because, unlike factory workers, its outdoor staff performed multiple tasks and there were many factors that affected the time required to complete these tasks. However, despite the difficulties, the HyD remained open-minded and would be willing to consider Audit's views on this issue.

2.10 ***The need for productivity standards.*** Audit considers that, while difficulties may be encountered, it is a good management practice to set productivity standards for the effective monitoring of staff performance and for ensuring that adequate workload is assigned to the staff. Audit recognises that the development of productivity standards takes time and effort and is a continuous process. Audit considers it necessary for the HyD to start the process as soon as possible through work studies and the collection/analyses of operational data. It is also necessary, as a continuous process, to keep on refining the standards in the light of experience.

2.11 ***The need for sufficient management information.*** Audit noted that there was insufficient management information to facilitate the HyD's senior management to assess the productivity of its staff. Audit identified the following areas which warrant the HyD's attention:

- (a) ***Maintenance Staff.*** At the time of audit, the HyD's prevailing management information focused on outputs. **The HyD did not collect sufficient information on the time spent by outdoor staff to produce these outputs.** For example, the Maintenance Staff conducted inspections on utility openings and recorded the inspection results in a standard inspection report. The total number of inspections for each Region was compiled every month, but the number of inspections conducted by each Works Supervisor and the amount of time he had spent on the inspections were not systematically collected and

Note 3: *Time/productivity standards refer to the time expected to complete a maintenance task such as handling a works order or carrying out a utility inspection.*

analysed (Note 4). Without sufficient management information, the HyD's senior management could not assess objectively the performance of Works Supervisors or set productivity standards for them; and

- (b) ***DLF staff.*** There were operational reports indicating the DLF's daily activities, the location of the activities and the quantity of its output. **However, the HyD did not systematically analyse the data to produce management information to help senior management assess the DLF's productivity.** In this regard, Audit's own analysis of the data in the operational reports indicated that the productivity of the DLF was unsatisfactory. The audit findings are shown in paragraphs 3.20 to 3.22 below.

Audit observations on detection and deterrent measures

2.12 ***The need for clear instructions.*** Audit noted that the HyD had not issued clear instructions on the procedures for verifying, through document and physical checks, the quantity and quality of the work performed by outdoor staff. The HyD also had not clearly specified the officers who should conduct such verifications, and how the verification results should be documented. **Without clear requirements, the HyD's senior management would not have objective and documented assurance that the output of the outdoor staff was satisfactory in terms of both quantity and quality.** The HyD's senior management could only rely on the general assurance of its frontline supervisors.

2.13 ***The need to conduct physical spot checks.*** According to the CSB's Circular, regular and random spot-checking by supervisors is an effective measure to ensure that outdoor duties are properly performed. **Audit noted that, while the HyD had specified the requirement for spot-checking on OT work (see paragraph 9 of Appendix J), it had not issued clear instructions on the frequency and procedures for conducting spot checks during the normal duty hours.** Furthermore, the HyD did not set a schedule for the Works Supervisors to follow and they were not required to inform their supervising Inspectorate Officers in advance of the sites they were going to visit each day. As a result, it was difficult for the HyD to conduct effective spot checks to ensure that the Works Supervisors were in fact present at the works sites. Towards the end of the audit, in late 1999, the HyD introduced a logging form for recording the activities of outdoor Maintenance Staff and a standard spot-check record form for the DLF. In January 2000, the HyD was considering the introduction of a standard proforma which would require Works Supervisors to state, in advance, the sites to be visited each day (i.e. a pre-scheduled itinerary). **Audit welcomes these new requirements. Audit considers that there is a need for the HyD to**

Note 4: *In late 1998, the HyD asked all the Inspectorate Officers and Works Supervisors with road maintenance and utility duties to each complete a time sheet on their work during the three-week period from 16 November to 6 December 1998. The purpose of this study was to identify ways to optimise the utilisation of site staff resources. Audit appreciates the HyD's initiative in conducting this study but notes that: (a) this was only an ad hoc exercise; (b) information was given on a voluntary basis and, therefore, not all staff returned the time sheets; and (c) the information was submitted anonymously and was, therefore, unverifiable.*

closely monitor the implementation of these new requirements, so as to ensure that the outdoor staff comply with them and the Inspectorate Officers make use of the pre-scheduled itineraries to conduct effective spot checks.

2.14 *The quality of site inspection reports needs improvement.* Between February and November 1998, the Research and Development (R&D) Division of the HyD conducted three ad hoc calibration exercises on a number of utility work sites inspected by the Regions. The purpose of the exercises was to compare the standards of inspection on work sites between the three Regions and the R&D Division. According to the R&D Division's calibration reports, the quality of site inspection reports needed improvement. For example, in November 1998, the R&D Division conducted a number of calibration inspections, of which 17 were on sites which had been visited by the Works Supervisors of the Regions on the same day. The R&D Division identified 19 defective items during these 17 calibration inspections whereas, in contrast, no defective items were recorded in the inspection reports of the Works Supervisors. As a result of the calibration exercises, the R&D Division recommended that the three Regions should conduct random checks on the Works Supervisors' inspection reports to ascertain whether the reports accurately reflected the actual site situation. **However, up to November 1999, the HyD had not taken specific actions to address this issue.**

2.15 *The need for independent quality assurance.* According to the CSB's Circular, departments with a sizeable portion of their staff engaged in outdoor work should set up quality assurance units (see paragraph 2.7(e) above). As the R&D Division operates independently of the Regional Offices, it is well placed to serve as the quality assurance unit as suggested in the CSB's guidelines. The results of the ad hoc calibration exercises in 1998 demonstrated its independence. **Audit considers it necessary for the HyD to conduct similar exercises on a regular basis, so as to provide independent assurance on the quality of site inspections.**

Audit recommendations on monitoring of outdoor staff

2.16 **Audit has recommended that the Director of Highways should implement an effective control mechanism for monitoring the performance of all the HyD's outdoor staff, particularly those performing road maintenance and utility duties. This control mechanism should include all the essential elements required by the CSB's Circular issued in October 1999. In particular, the Director of Highways should:**

Monitoring of staff productivity

- (a) **establish procedures for ensuring that:**
 - (i) **sufficient operational data which reflect the input of staff resources (including the time spent by staff on the various activities and outputs) are**

systematically collected and analysed to produce useful management information on staff productivity (see paragraph 2.11 above); and

- (ii) the HyD's senior management will periodically review and assess the management information on the productivity of its outdoor staff (see paragraph 2.11 above);**
- (b) develop formal time/productivity standards through work studies and analyses of operational data (see paragraph 2.10 above);**

Detection and deterrent measures

- (c) issue clear instructions on:**
 - (i) the frequency and procedures for verifying, through document and physical checks, the quantity and quality of work performed by the HyD's outdoor staff (see paragraph 2.12 above); and**
 - (ii) the documentation of verification results, specifying the ranks of officers responsible for performing the verification (see paragraph 2.12 above);**
- (d) closely monitor the implementation of the new requirements for pre-scheduled itineraries and documentation of spot checks, so as to ensure that the HyD's outdoor staff comply with these requirements and the Inspectorate Officers make use of the pre-scheduled itineraries to conduct effective spot checks (see paragraph 2.13 above);**
- (e) take positive action to address the findings of the R&D Division's calibration exercises. In particular, action should be taken to improve the quality of the Works Supervisors' site inspections to ensure that all defective items at the work sites are properly identified, reported and rectified (see paragraph 2.14 above); and**
- (f) incorporate into the HyD's departmental instructions a requirement to conduct regular calibration exercises in order to provide independent assurance on the quality of site inspections (see paragraph 2.15 above).**

Response from the Administration

2.17 The **Director of Highways** has said that he welcomes Audit's constructive recommendations to enhance the HyD's monitoring mechanism. The audit recommendations as a whole are accepted in principle. He has also said that:

- (a) the CSB's Circular on the supervision of outdoor duties (see paragraph 2.6 above) was issued on 29 October 1999. It takes time for the HyD to comply with the requirements. He agrees with Audit that there is scope for improvement as continuous improvement is always on the top of his agenda. As part of the continuous improvement programme, the Structures Division (Note 5) of the HyD has successfully developed procedures and standards under the ISO 9001 accreditation system. The HyD is extending these procedures and standards to all HyD's offices, with a view to obtaining ISO accreditation for the whole HyD by the end of 2000. By then, the control mechanism for outdoor staff will be more properly documented and unified throughout the HyD; and
- (b) the HyD will make its best endeavour to plug potential loopholes in the shortest possible time. The HyD has already set up a working group, under the chairmanship of the Deputy Director of Highways, to examine the audit recommendations and devise appropriate measures to enhance the HyD's monitoring system. He will keep Audit informed of the progress.

2.18 The **Secretary for the Civil Service** has said that he will work with the HyD to improve the system for the supervision of outdoor staff.

2.19 The **Secretary for the Treasury** has said that, as in the past, she welcomes Audit's investigations into the monitoring of outdoor staff.

2.20 The **Secretary for Transport** has said that he welcomes the suggestions made in the audit report and endorses the positive actions taken (and to be taken) by the HyD to improve the supervision and monitoring of outdoor staff.

Note 5: *The Structures Division, headed by a Chief Engineer under the HyD's Headquarters, is responsible for the maintenance of highway structures such as bridges and flyovers. As at October 1999, it had about 50 outdoor staff (mainly Inspectorate Officers and Works Supervisors). As indicated in paragraph 1.6 above, the audit focused mainly on staff performing road maintenance and utility duties in the HyD's Regional Offices. The Structures Division was excluded from the audit scope because it was not a high-risk area insofar as the monitoring of staff performance was concerned.*

PART 3: MANAGEMENT OF THE DIRECT LABOUR FORCE

3.1 This PART examines the performance of the DLF and the HyD's progress in the run-down of the DLF.

Organisation of the DLF

3.2 The HyD uses contractors to carry out its road maintenance works. In 1998, payments to contractors on road maintenance (including road resurfacing and minor reconstruction) amounted to \$860 million. The HyD also uses its own staff in the DLF (see paragraph 1.5(b) above) to carry out minor resurfacing works, patching of potholes and road testing.

3.3 The DLF is managed by CTOs who are assisted by Inspectorate Officers. It is organised into eight teams (i.e. two teams in the Hong Kong Region, three in the Kowloon Region and three in the NT Region). Each team is made up of a Works Supervisor, Senior Artisans, Artisans, Workmen II and Motor Drivers. In addition, other staff (e.g. clerical staff) provide support services to the DLF. The DLF staff are based at the depots at various locations. Property Attendants are employed to provide security services for these depots.

3.4 As at October 1999, there were a total of 127 staff, including both support and outdoor staff, in the DLF in the three Regions. Details are at Appendix B. In 1999-2000, the annual staff cost of the DLF (excluding overtime allowance) amounts to \$33 million.

HyD's decision in 1988 to run down the DLF

3.5 The DLF has a long history in the HyD. In 1988, a working group within the HyD completed a review on the operations of the DLF. The working group considered that, while it was cost-effective to retain the paving teams, it would be more cost-effective to let the maintenance contractors do the work of the painting teams and the road teams (Note 6). A task force was set up to implement the working group's recommendation to gradually run down the painting teams and the road teams. The task force's target was to reduce the size of the DLF from 360 staff in 1989 to 264 staff by 1992. In the event, the size of the DLF was reduced to 121 staff (excluding the CTOs, Inspectorate Officers, Works Supervisors and Motor Drivers) in July 1996.

HyD's decision in 1996 to further run down the DLF

3.6 In 1996, the HyD decided to further run down the DLF and, eventually, transfer all the DLF's work to the maintenance contractors. At a Director of Highways' Meeting held in July 1996

Note 6: *At that time, the DLF was organised into paving teams, painting teams and road teams. The paving teams were responsible for road resurfacing works. The painting teams were responsible for painting traffic marks. The road teams were responsible for patching potholes, cleaning traffic signs, cutting grass and carrying out road tests.*

(Note 7), a situation report on the staffing position, natural wastage and job opportunities of the DLF staff was discussed. The situation report focused on the Senior Artisans, Artisans, Workmen II, Timekeepers and Property Attendants. A plan for the run-down of these staff was proposed, as shown in Table 1 below.

Table 1

HyD's plan in July 1996 to run down the DLF

	Number as at July 1996	Retirement between 1996 and 2006	To be transferred out between 1996 and 2006	Expected number by July 2006	Retirement between 2006 and 2016	Expected number by July 2016
	(a)	(b)	(c)	(d) = (a)-(b)-(c)	(e)	(f) = (d)-(e)
Senior Artisans	18	7	—	11	9	2
Artisans	34	14	—	20	12	8
Workmen II	53	11	42	—	—	—
Timekeepers	3	1	—	2	1	1
Property Attendants	13	6	—	7	6	1
Total	121	39	42	40	28	12

Source: HyD's records

3.7 The HyD expected that, by July 2006, all the Workmen II would have left the DLF mainly through transfers to other units (see column (d) in Table 1 above). According to the plan, by that time the remaining 11 Senior Artisans and 20 Artisans would be grouped to perform appropriate duties until their numbers were further reduced through natural wastage (Note 8). The HyD expected that, by 2016, the total number of Senior Artisans and Artisans would be reduced to ten and redundancy would become a manageable problem.

Note 7: *Members of the Director of Highways' Meeting comprised the Director, the Deputy Director, the Assistant Director/Headquarters and the Departmental Secretary.*

Note 8: *The HyD considered that the skills and education level of these staff might not enable them to find alternative employment within the civil service.*

Audit's analysis of the staffing position of the DLF

3.8 Since the HyD's run-down decision was made in 1996, the number of DLF staff, referred to in column (a) of Table 1 above, had decreased from 121 as at July 1996 to 87 as at October 1999.

3.9 Taking into account the retirement dates of the staff concerned and assuming that the staff will leave only through natural wastage, Audit has projected the staffing position of the DLF as at 2006 (i.e. the first milestone date of the HyD's plan). Table 2 below shows Audit's projection and compares it with the HyD's target.

Table 2

**Audit's projection of the size of DLF by 2006
based only on natural wastage**

	Strength as at October 1999	HyD's target (by July 2006)	Audit's projection (by July 2006)	Projected variance
	(a)	(b)	(c)	(d) = (c)-(b)
Senior Artisans	16	11	10	(1)
Artisans	28	20	18	(2)
Workmen II	31	—	27	27
Timekeepers	3	2	2	—
Property Attendants	9	7	7	—
Total	87	40 (Note)	64	24

Source: Audit's analysis of HyD's records

Note: See column (d) of Table 1 in paragraph 3.6 above.

3.10 It can be seen from Table 2 above that the run-down of the DLF, with the exception of the Workmen II, is broadly on target. With regard to the Workmen II, Audit's analysis indicates that:

- (a) the HyD had only limited success in transferring out the Workmen II; and
- (b) as there will still be 27 Workmen II in the DLF, greater efforts are needed if the HyD is to achieve its target that there will be no Workmen II in the DLF by 2006.

Limited success in transferring out the Workmen II

3.11 *Reliance on transfer.* The HyD cannot rely on natural wastage alone to run down the strength of the Workmen II in the DLF because most of them are in relatively young age groups (Note 9). According to Table 1 in paragraph 3.6 above, the HyD's plan was to transfer 42 Workmen II out of the DLF between 1996 and 2006. Subsequent to the Director of Highways' Meeting in July 1996, the HyD had invited the Workmen II of the DLF on seven occasions (up to October 1999) to take up posts in other HyD units. In the event, only 18 Workmen II were successfully transferred, as shown in Table 3 below.

Table 3

**Number of Workmen II transferred out of the DLF
from August 1996 to October 1999**

Period	Number transferred
August 1996 - March 1997	7
1997-98	6
1998-99	5
April - October 1999	0
Total	18

Source: Audit's analysis of HyD's records

Note: There were 53 Workmen II in the DLF in July 1996 (see column (a) of Table 1 in paragraph 3.6 above). During the period August 1996 to October 1999, four of them left the civil service and 18 were transferred out. In October 1999, there were 31 Workmen II in the DLF (see column (a) of Table 2 in paragraph 3.9 above).

Note 9: *As at October 1999, the age distribution of the 31 Workmen II in the DLF was as follows: eight aged below 41; nine aged between 41 and 45; seven aged between 46 and 50; five aged between 51 and 55; and two aged above 55. The normal retirement age of these staff (except two) is 60.*

3.12 ***Lukewarm response from Workmen II.*** Audit's enquiries indicated that the HyD's prevailing practice was to let the Workmen II apply for transfers on a voluntary basis. However, the Workmen II in the DLF were not keen to take up posts in other units. For example, in 1998, there were 29 Workman II vacancies (Note 10) in other units of the HyD, but the Workmen II in the DLF showed little interest in those posts. The HyD had to resort to external recruitment to fill these vacancies and 12 Workmen II were recruited. The lukewarm response from the Workmen II largely explains why, up to October 1999, only 18 Workmen II had been transferred.

Greater efforts are needed to achieve the run-down target

3.13 According to Table 2 in paragraph 3.9 above, if the HyD relies on natural wastage alone, 27 Workmen II will still remain in the DLF by the target date of 2006. **To achieve the run-down target, Audit considers that a more proactive approach is necessary (e.g. through directed transfers) to ensure that the Workmen II in the DLF are transferred to other HyD units as and when vacancies arise (Note 11).**

3.14 **Furthermore, opportunities may also arise from minor staff vacancies in other ranks/grades in the civil service. In order not to lose these opportunities, it is necessary for the HyD to actively consider, in consultation with the CSB, retraining the Workmen II to help them take up vacant posts elsewhere in the civil service.**

Audit observations on the staffing position of supervisory staff and Motor Drivers

3.15 As mentioned in paragraph 3.6 above, the situation report in July 1996 focused on the Senior Artisans, Artisans, Workmen II, Timekeepers and Property Attendants. The report did not deal with the supervisory staff (e.g. Inspectorate Officers and Works Supervisors) and the Motor Drivers. Audit's enquiries indicated that this was because the supervisory staff could be transferred readily to other units within the HyD, and the Motor Drivers could be returned to the Government Land Transport Agency to suit the HyD's needs. Therefore, the HyD's immediate concern then was to deal with the other staff.

Note 10: *Workman II posts are for unskilled workers. Therefore, insofar as skill is concerned, there should not be any difficulty for the Workmen II in the DLF to take up the duties of the Workman II posts in other units.*

Note 11: *Audit estimated that there would be some 20 Workman II vacancies arising between now and 2006 in other HyD's units. In estimating the number of vacancies, Audit took into account the normal retirement dates of the existing Workmen II, Artisans (High Speed Road) and Chainmen. The retirement of Artisans (High Speed Road) and Chainmen is relevant because these vacant posts can be filled by Workmen II.*

3.16 Audit noted that, during the period August 1996 to October 1999, the number of supervisory staff in the DLF had decreased from 20 to 19 and Motor Drivers from 19 to 18 (i.e. both decreased by 5%). The extent of reduction was much lower than that of the other staff which was reduced by 28% during the same period (Note 12). **As the supervisory staff and Motor Drivers account for 44% of the DLF's staff cost, Audit considers it necessary for the HyD to draw up a detailed action plan, with a definite timetable for specific actions, to address the issue of running down the entire DLF, including supervisory staff and Motor Drivers.**

Performance of the DLF

3.17 Paragraphs 3.18 to 3.27 below examine the performance of the DLF. It can be seen that:

- (a) the DLF has not been effectively utilised; and
- (b) the services provided by the DLF are much more costly than similar services provided by maintenance contractors.

Audit's analysis of the utilisation of the DLF

3.18 **Assurance by Regional Offices.** In April 1999, the HyD Headquarters asked the three Regional Offices to submit a report on the deployment of the DLF. In May 1999, all the three Regional Offices assured the HyD Headquarters that the DLF was usefully employed. They also said that if there was insufficient resurfacing, patching and testing work, the DLF would be deployed to perform minor duties such as grass cutting, cleaning of road furniture (e.g. railings, street name plates and traffic signs), tools repairing, calibration and maintenance of testing equipment, and assisting in general office work.

3.19 **DLF operational reports.** Audit's enquiries indicated that there was no readily available management information on how much time the DLF had spent on each activity. Therefore, in order to find out how the DLF spent its time, Audit had to make use of the operational reports

Note 12: *In July 1996, there were 121 staff (see column (a) in Table 1 in paragraph 3.6) in the DLF other than supervisory staff and Motor Drivers. By October 1999, the corresponding number of such staff was 87 (see column (a) in Table 2 in paragraph 3.9). The decrease was 34 staff, i.e. a 28% reduction.*

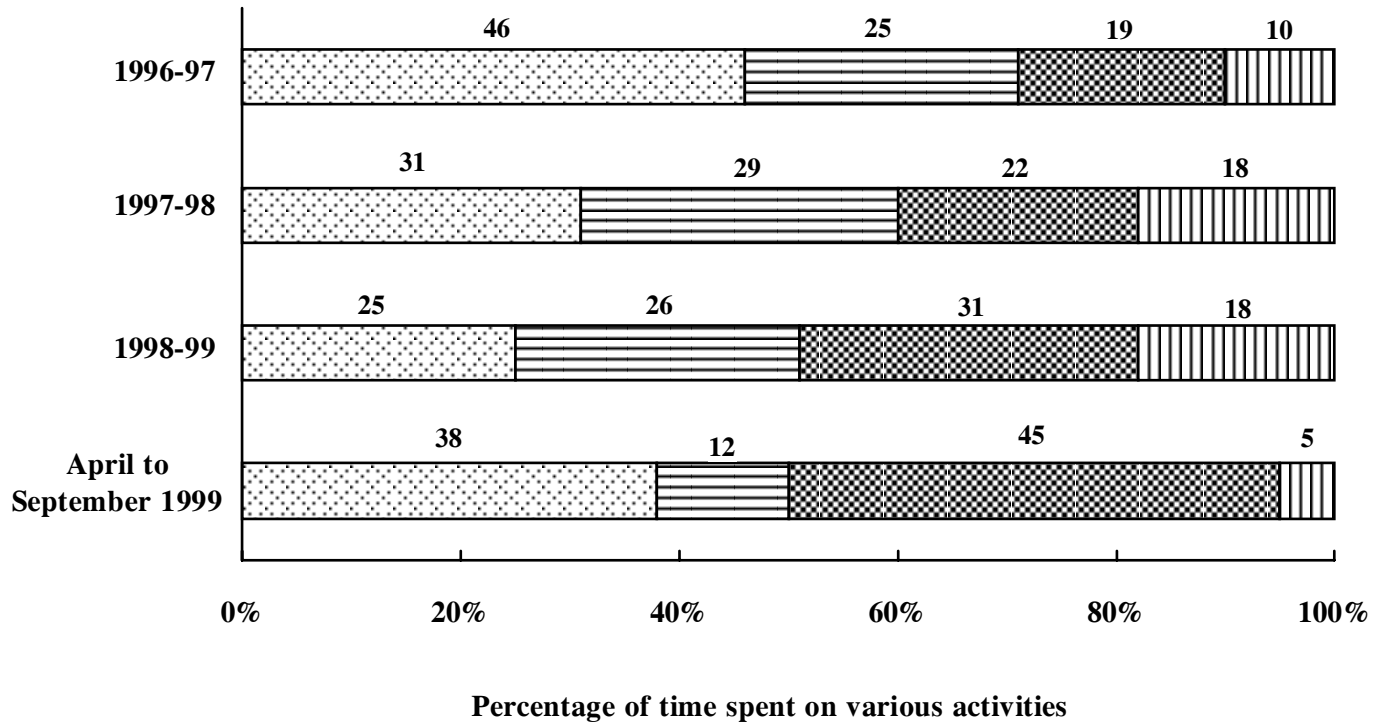
prepared weekly/monthly for each DLF team by Works Supervisors or Inspectorate Officers. These reports indicated, for each day of the week or month, the DLF's activities (e.g. road resurfacing), the location of the activities and the quantity of output produced (e.g. area of road resurfaced).

3.20 ***Audit's analysis of the DLF operational reports.*** There are a total of eight DLF teams in the three Regions. To ascertain how they spent their time during normal duty hours (i.e. excluding OT), Audit analysed the operational reports of six of these eight teams (Note 13) from April 1996 to September 1999. The overall results of Audit's analysis are shown in Figure 1 below. Audit's further analyses of the operational reports of individual teams are at Appendices C to H.

Note 13: *The remaining two teams were the Paving Team and the Patching Team of the Kowloon Region. These two teams were excluded from Audit's analysis because, although output records were kept by these two teams, the records did not contain sufficient details for the purpose of this analysis. In this connection, Audit noted that a standard format of operational reports for all DLF teams was implemented only with effect from June 1999.*

Figure 1

Overall utilisation of six DLF teams
from April 1996 to September 1999



Key:



Core business (including resurfacing, patching of potholes and road testing)



Preparation work (including setting out, maintenance and repair of tools and calibration of equipment)



Non-core business (including cleaning road furniture, cutting grass and assisting in office work)



Time without activities (see Note 14 below)

Source: Audit's classification based on HyD's records

Audit observations on the utilisation of the DLF

3.21 Figure 1 above shows the utilisation pattern of the DLF, as follows:

- (a) **Core business.** The DLF was not allocated sufficient workload in its core business (i.e. resurfacing, potholes patching and road testing). The percentage of time spent on the core business dropped from 46% in 1996-97 to 25% in 1998-99. Although the percentage rose to 38% in the first six months of 1999-2000, it was still lower than that in 1996-97;
- (b) **Preparation work.** In the three years 1996-97 to 1998-99, the time spent on preparation work for conducting core business was on average more than 25% which appeared to be excessive. In the first six months of 1999-2000, the time spent was reduced significantly to 12%;
- (c) **Non-core business.** The activities in this category were performed by the DLF when it did not have sufficient core business work to do (see paragraph 3.18 above). These activities included grass cutting, cleaning of road furniture and assisting in general office work. The DLF spent a significant (and increasing) percentage of its time on such activities. In 1996-97, the percentage of time spent was 19%. This rose to 31% in 1998-99 and further to 45% in the first six months of 1999-2000; and
- (d) **Time without activities.** In 1996-97, the percentage of time without activities (Note 14) was 10%. The percentage rose to about 18% in 1997-98 and 1998-99. It then dropped to 5% in the first six months of 1999-2000, due mainly to an increased use of the DLF for road furniture cleaning and grass cutting.

3.22 From the above, it can be seen that the DLF has not been effectively utilised because it was not given sufficient work to do in the core business. The DLF spent too much time in preparation work and in non-core business, and was idle for a significant part of its working hours.

Comparison between the costs of using the DLF and HyD's contractors

3.23 **Cost comparison studies by the HyD.** All the work currently done by the DLF can be carried out to the same standard by contractors. In the years from 1991-92 to 1994-95, the HyD conducted several cost-effectiveness studies of the DLF Paving Teams. The studies indicated that the cost of using the DLF in resurfacing work was nearly twice the cost of using contractors. The HyD has not conducted similar cost-effectiveness studies since 1995.

Note 14: *Audit noted that there were occasions where the DLF teams did not record any activities in their operational reports. There were also occasions where the teams put the word "standby" in the reports. Either way, there were no recorded activities. They were classified as "time without activities" by Audit for the purpose of this analysis.*

3.24 **Cost comparison study by Audit.** In order to ascertain the present position, Audit compared the cost per unit output of the DLF of the Hong Kong Region with contractors' rates (Note 15). The Hong Kong Region was selected because it maintained relatively good records on the output quantity and daily activities. The following types of work, performed by the DLF from April to September 1999, were compared:

- (a) **Road resurfacing.** During the selected period, the DLF resurfaced some 17,000 m² of road. Based on the reported time spent by the DLF, Audit calculated that the staff and material cost of road resurfaced by the DLF was \$64 per m² (Note 16). **This was 94% (or \$31) higher than the contractors' rate of \$33 per m²;**
- (b) **Patching of potholes.** The DLF patched about 2,100 potholes during the selected period. Audit calculated that the staff and material cost for patching one pothole by the DLF was \$555 (Note 16). **This was about six times higher than the contractors' rate of \$76 for patching a pothole of comparable size; and**
- (c) **Cleaning of road furniture.** During the selected period, the DLF cleaned some 4,400 traffic signs, 660 street name plates and 9,000 metres of railings. Based on the reported time spent by the DLF, Audit calculated that the staff and material cost of cleaning one piece of road furniture (e.g. a traffic sign or one metre of railings) by the DLF was \$159 (Note 16). Similar service was provided by the contractors at an average rate of \$7 a piece. **The cost of cleaning road furniture by the DLF was over 20 times higher than the contractors' rate.**

Audit observations on cost comparison

3.25 **From the above cost comparison, it is clear that the services provided by the DLF are much more costly than similar services provided by contractors.** The case in paragraph 3.26 below serves as an example to illustrate why the services of the DLF are so costly.

3.26 **Mode of operation.** On 8 November 1999 (Monday), the Paving and Patching Team of the Hong Kong Region was deployed to carry out duties on Peak Road. The Team consisted of 12 members, including a Works Supervisor, four Senior Artisans, four Artisans, two Workmen II and a Motor Driver. Five Team members were deployed to clean road furniture and seven were deployed to identify potholes for patching. According to the HyD's records, the Team arrived at the work location at 8:40 a.m. and worked until 11:20 a.m. The records did not indicate what happened between 11:20 a.m. and 1:40 p.m. (which included an official one-hour lunch break), but showed that the Team recommenced work at 1:40 p.m. and worked until 4 p.m. The records also

Note 15: *For cost comparison, Audit used the contractors' rates charged in four maintenance contracts which were awarded by the HyD in 1999. Of these four maintenance contracts, two contracts run from April 1999 to March 2001 and the other two run from April 1999 to March 2002.*

Note 16: *In Audit's calculations of the DLF's cost per unit output, only staff and material cost was included. This was because other costs such as accommodation cost, the cost of stores and equipment and administrative overheads were not readily available. Had such costs been included in Audit's calculations, the cost per unit output of the DLF would have been much higher.*

did not indicate what happened after 4 p.m., although Audit's subsequent enquiries indicated that at that time the Team left the work location to return to the depot in Causeway Bay where it stayed until 5 p.m. According to the records, the five Team members who were deployed to clean road furniture on that day cleaned a total of eight traffic signs and 120 metres of railings. This means that each Team member, on average, cleaned only 1.6 traffic signs and 24 metres of railings. As for the other seven Team members, the records indicated that no potholes were patched by the Team on that day. This low level of productivity indicates that there is much scope for improvement in the DLF's mode of operation.

Justification for retaining the DLF needs review

3.27 Given the fact that the services provided by the DLF are not cost-effective, Audit considers that there is a need for the HyD to critically review the justification for retaining the DLF until 2016 (see paragraph 3.7 above), and to examine all possible options (e.g. voluntary retirement or abolition of office) to expedite the run-down process. In the meantime, there is also a need to improve the performance of the DLF.

Audit recommendations on the management of the DLF

3.28 Audit has *recommended* that the Director of Highways should:

Run-down of the DLF

- (a) critically review the justification for retaining the DLF until 2016, having regard to the fact that the services provided by the DLF are not cost-effective (see paragraph 3.27 above);
- (b) if there is no justification for retaining the DLF until 2016, set an earlier target date for the complete run-down of the DLF (see paragraph 3.27 above);
- (c) in consultation with the CSB, actively explore measures to expedite the run-down of the DLF. For example, the Director should:
 - (i) actively encourage the DLF staff to take up similar posts in other units of the HyD or in other departments (see paragraph 3.13 above);
 - (ii) where appropriate, direct the DLF staff to fill vacancies in other units of the HyD (see paragraph 3.13 above);
 - (iii) consider retraining the DLF staff to help them take up vacant posts in other ranks/grades in the civil service (see paragraph 3.14 above);

- (iv) **consider offering the staff the option of voluntary retirement (see paragraph 3.27 above); and**
- (v) **if necessary, consider taking action to abolish the office/posts of the DLF (see paragraph 3.27 above);**
- (d) **set up a mechanism for monitoring regularly the progress of the run-down of the DLF by the HyD's senior management. In this regard, a detailed action plan should be drawn up. It should:**
 - (i) **cover all the DLF staff including the supervisory staff and Motor Drivers (see paragraph 3.16 above); and**
 - (ii) **have a definite timetable for specific actions (i.e. actions on the transferring out of DLF staff, retraining, voluntary retirement or abolition of office — see paragraph 3.16 above); and**

Performance of the DLF

- (e) **in the meantime, take positive action to improve the performance of the DLF. In particular, the Director should:**
 - (i) **ensure that sufficient core-business work is allocated to the DLF, so as to reduce idle time and the time spent on non-core business activities (see paragraph 3.22 above);**
 - (ii) **critically review the mode of operation of the DLF in order to improve its work processes and enhance its cost-effectiveness (see paragraphs 3.25 and 3.26 above); and**
 - (iii) **establish productivity standards and set up an effective mechanism for monitoring the performance of the DLF (see paragraphs 2.16(a) and (b) above).**

Response from the Administration

3.29 The **Director of Highways** has said that Audit's recommendations on the management of the DLF will be considered and followed up by the working group chaired by the Deputy Director of Highways (see paragraph 2.17(b) above). He has also said that:

- (a) he agrees that using the DLF to perform maintenance duties is not cost-effective. This is the reason why the HyD intends to run down and ultimately disband the DLF;

- (b) the amount of core business available to the DLF is affected by the following factors:
- (i) some work cannot be carried out during normal working hours because of objections, complaints or stringent requirements from other parties including the Police, the Transport Department, the Environmental Protection Department and the public;
 - (ii) milling (Note 17) of the road surface has to be performed by contractors because the DLF does not have the necessary plant and equipment. The DLF has to standby in order to carry out the subsequent resurfacing work; and
 - (iii) on Saturday, with only half a working day, the DLF staff usually stay in the depots to carry out maintenance work on plant and equipment. The DLF cannot carry out work in remote areas because of the long travelling time; and
- (c) in the circumstances, the DLF has been instructed to carry out other activities such as cleaning of traffic signs, street name plates and railings. This will contribute to the “Healthy Living into the 21st Century Campaign” (Note 18) and will help meet the HyD’s performance pledges.

3.30 The **Secretary for the Treasury** has said that:

- (a) she supports the run-down of the DLF at a quicker pace on grounds of cost-effectiveness; and
- (b) however, satisfactory arrangements have to be put in place to deal with the surplus staff, especially given the Administration’s intention to minimise redundancy as far as possible. The Administration is, therefore, pursuing redeployment of staff within and between departments proactively and is seriously considering the option of voluntary retirement.

3.31 The **Secretary for Transport** has said that he agrees to dispensing with the DLF at an earlier date in view of its higher operating costs.

Note 17: *“Milling” refers to the removal of the existing road surface which is a process prior to the laying of bituminous material.*

Note 18: *The “Healthy Living into the 21st Century Campaign” is a three-year campaign launched by the Government in May 1998. The objective of the Campaign is to raise the standards of Hong Kong’s environmental hygiene, food hygiene and personal hygiene. The HyD’s responsibilities under this Campaign include maintaining the cleanliness of road furniture, footbridges and subways. It is also responsible for grass cutting and clearance of road drainage.*

PART 4: MANAGEMENT OF OT WORK

4.1 This PART examines how the HyD manages the OT work of staff performing maintenance and utility duties. While the audit focused mainly on staff performing outdoor maintenance and utility duties, it also examined where appropriate the OT work of other staff of the HyD for the sake of completeness.

Background

4.2 OT work is defined as work undertaken at times over and beyond an officer's conditioned hours of work. An overtime allowance (OTA) may be paid to eligible officers for OT worked (Note 19). The normal hourly rate of OTA is 1/140 of an officer's monthly salary.

4.3 Staff who have maintenance/utility duties in various ranks/grades in the HyD are eligible for OTA. These include Assistant Inspectors of Works, Works Supervisors I and II, Senior Artisans, Artisans, Workmen II, Motor Drivers and other supporting staff (e.g. clerical staff). The expenditure on OTA for these staff from 1995-96 to 1999-2000 is shown in Table 4 below.

Table 4

Expenditure on OTA from 1995-96 to 1999-2000

Year	Maintenance Staff		DLF		Total	
	Amount (\$ million)	Increase (decrease) over the previous year (%)	Amount (\$ million)	Increase (decrease) over the previous year (%)	Amount (\$ million)	Increase (decrease) over the previous year (%)
1995-96	7.4	—	5.2	—	12.6	—
1996-97	8.7	17.6%	5.5	5.8%	14.2	12.7%
1997-98	11.8	35.6%	5.3	(3.6%)	17.1	20.4%
1998-99	13.9	17.8%	5.0	(5.7%)	18.9	10.5%
1999-2000 (Note)	13.7	(1.4%)	5.0	—	18.7	(1.1%)

Source: HyD's records

Note: The amounts for the year 1999-2000 represent the approved provisions for that year. For the seven months up to the end of October 1999, the actual expenditure amounted to \$9.8 million (i.e. \$7.8 million for Maintenance Staff and \$2 million for the DLF).

Note 19: The eligibility criteria for OTA are set out in the Civil Service Regulations. Under normal circumstances, civilian officers in ranks whose salary scales have the maximum point at or below Point 25 (\$32,190) and whose salary scales have the minimum point at or below Point 19 (\$24,320) of the Master Pay Scale are eligible for OTA.

ICAC reviews

4.4 In recent years, the ICAC has conducted a number of reviews on the administration of OT in government departments. The results of the reviews indicate that:

- (a) in some cases, staff work a large number of OT hours on a recurrent basis;
- (b) as OT appears to be routinely granted, staff may regard OTA as an integral part of their regular take-home pay. The substantial monetary gain may induce staff members to secure the continuous allocation of OT through bribery; and
- (c) it is questionable whether, with unduly long OT hours, staff can remain efficient and effective in discharging their duties.

CSB's revised guidelines

4.5 In the light of the ICAC's findings, in May 1998 the CSB issued a set of revised guidelines (Civil Service Bureau Circular No. 10/98) on the administration of OT to bureaux and departments. According to the guidelines:

- (a) OT work may only be undertaken when it is strictly unavoidable. It is the *personal responsibility of a Head of Department* to ensure that OT work is kept to the absolute minimum compatible with operational requirements, and that at all times it is strictly controlled and properly supervised;
- (b) to ensure close supervision of OT work, departments should establish a clearly understood system, incorporating the following control measures as appropriate:
 - (i) written applications for OT should be approved in advance by an officer who is ineligible for OTA. The application form should contain such information as the purpose and location of OT work, the estimated number of OT hours required, the number and ranks of staff involved, and the consequences if OT is not worked;
 - (ii) where possible, a team leader should be appointed to supervise officers throughout the OT period;
 - (iii) where possible, physical spot checks should be conducted by supervisors during the OT period, with proper records made;
 - (iv) the OT work schedule should be fixed beforehand to facilitate random spot checks by supervisors;

- (v) where appropriate, clients' confirmation of work done should be obtained;
 - (vi) the work output during the OT period should be monitored, preferably against established work measurement standards; and
 - (vii) supervisors at all levels should be reminded regularly that they may be held accountable for any misconduct or malpractices of their subordinates in particular in respect of unauthorised absence or fraudulent OT claims;
- (c) excessive or regular OT should be discouraged as far as possible. When OT becomes a regular pattern of work or has reached an excessive level, departments should review the work patterns and consider alternative methods of deploying staff such as rescheduling duty hours or the weekly rest days. Where the problem is serious, they should review the establishment of the office concerned to see if additional resources are required; and
 - (d) time-off in lieu is the normal recompense for OT work. OTA should only be granted when time-off in lieu is impracticable.

Audit review of the HyD's management of OT work

4.6 In view of the significant amounts of OTA paid to staff performing maintenance/utility duties, Audit reviewed the HyD's management of their OT work with reference to the CSB's guidelines. In the audit, the following methodologies were adopted:

- (a) Audit analysed the OT hours for the period August 1998 to July 1999 to obtain an overall picture of the pattern and level of OT worked by these staff (see paragraphs 4.7 to 4.13 below); and
- (b) Audit conducted case studies to ascertain whether the HyD's supervision and control of OT work was satisfactory (see paragraphs 4.14 to 4.22 below).

Audit's analysis of OT hours from August 1998 to July 1999

4.7 Audit's analysis indicated that, in the 12-month period August 1998 to July 1999, some 400 staff with maintenance/utility duties had been paid OTA. Audit's analysis of the OTA paid to them also indicated that, during this period:

- (a) on average, these 400 staff were each paid OTA for 360 OT hours (i.e. equivalent to 18% of their normal duty hours — Note 20);

Note 20: *The number of normal duty hours of an officer is about 2,000 a year.*

- (b) 81 staff had OTA for more than 500 hours each and, among them, 17 had over 800 hours (i.e. equivalent to more than 25% and 40% respectively of their normal duty hours); and
- (c) members of the DLF were paid OTA for a total of 45,000 OT hours, despite the fact that a significant proportion of their normal duty hours were spent on non-core business or reported as idle (see paragraphs 3.21 and 3.22 above).

Issues arising from Audit's analysis of OT hours

4.8 Audit's analysis above indicated that many staff routinely worked a large number of OT hours. Several issues need to be addressed. These are discussed in paragraphs 4.9 to 4.13 below.

4.9 ***The need to review staff deployment.*** According to the ICAC, regular or excessive OT increases the risk of bribery and adversely affects staff productivity. According to the CSB's guidelines, when OT becomes a regular pattern of work or has reached an excessive level, departments should review the work patterns and consider alternative methods of deploying staff such as rescheduling their duty hours or the weekly rest days. **Given the fact that many staff in the HyD routinely work a large number of OT hours, Audit considers it necessary for the HyD to critically review and revise its staff deployment methodology, so as to reduce its expenditure on OTA, maximise staff productivity and minimise the risk of bribery.**

4.10 ***The option of time-off in lieu not fully considered.*** According to the CSB's guidelines, OTA should only be granted when time-off in lieu is impracticable. In response to Audit's enquiries as to whether the CSB's guidelines had been followed, the HyD informed Audit that most of the officers who were paid over 800 OT hours (see paragraph 4.7(b) above) belonged to the High Speed Road (HSR) sections and, instead of compensating their OT work fully by OTA, the HyD had requested these staff to take a substantial amount of time-off in lieu. The HyD cited, as an example, a Works Supervisor of the HSR Section of the NT Region who worked a total of 132.5 OT hours in March 1999. He was paid 70 hours in OTA and took 52 hours of time-off in lieu, mostly after his night duty. The remaining 10.5 hours were credited to his time-off balance. The HyD said that the above arrangement had operated smoothly for a few years, and assured Audit that OTA would not be given unnecessarily. **Notwithstanding the HyD's assurance, Audit found that the HyD had paid OTA in some instances where time-off in lieu, as a recompense, should have been more appropriate.** The Testing Team of the Kowloon Region's DLF is a case in point. Audit noted that members of the Team were paid OTA for 3,799 OT hours during the period August 1998 to July 1999. During the same period, the Team members had on record a total of 4,600 idle hours (Note 21) within their normal duty hours, which indicated that time-off in lieu was feasible. **However, there was no documentary evidence to show that the HyD had fully considered the option of time-off in lieu before paying OTA.**

Note 21: *The 4,600 idle hours, as derived by Audit from the Team's operational reports, included those hours recorded as "standby" hours in the reports and those hours during which no activities were recorded.*

4.11 ***Insufficient records of time-off in lieu.*** According to the CSB's guidelines, applications for time-off in lieu should be submitted in advance to officers who have been nominated for this purpose by the Heads of Department personally. Approval for such time-off in lieu must be properly recorded. The HyD's departmental instructions also state that records of time-off in lieu should be properly kept. **However, Audit noted that not all units in the three Regional Offices had kept sufficient formal records to keep track of the earning, applications, approvals and taking of time-off in lieu.** In response to Audit's requests, the HyD could only produce the time-off records for the HSR Section and the Reporting Centre of the NT Region for Audit's examination (see also paragraph 4.18(b) below).

4.12 ***Use of DLF not cost-effective.*** Compared with the HyD's maintenance contractors, it is significantly more costly to use the DLF for maintenance works (see paragraph 3.25 above). **Therefore, unless time-off in lieu is granted as a matter of course to reduce the DLF's idle time (or time spent on non-core business) during normal duty hours, it would not be cost-effective to use the DLF for work outside their normal duty hours.**

4.13 ***The need for productivity standards.*** Due to restrictions imposed by other parties (e.g. the Police), many road works can only be carried out at night or during holidays. While this explains why work has to be carried out outside the normal duty hours, this general reason provides little assurance that OT work is kept to the absolute minimum according to operational requirements (see paragraph 4.5(a) above). To provide such assurance, Audit considers that the HyD will need to assess the productivity of its staff and demonstrate that they are operating efficiently at all times. This, in turn, calls for the setting of productivity standards, and the use of these standards for work allocation and monitoring of staff productivity. **However, as there are at present no productivity standards for the staff concerned (see paragraph 2.9 above), the HyD cannot provide such assurance.**

Audit case studies on selected OTA claimants

4.14 In addition to the overall analysis of OT hours, Audit carried out case studies on selected OTA claimants to ascertain how the HyD actually supervised and controlled the OT work of its staff. In these case studies, Audit identified areas for improvement in the HyD's OT approval process and supervision of OT work. Some examples of Audit's case studies are given below for illustration purposes.

Case One

4.15 ***Background.*** The officer (Officer A) in this case was a Timekeeper in the NT Region. His main duties included overseeing the clock-in and -out time of DLF staff stationed at the Kowloon Bay Depot, and preparing monthly records relating to the OT work and attendance of DLF staff. During the period August 1998 to July 1999, he received OTA which amounted to 40% of his basic salary. He was given approvals to work OT routinely (from 7 a.m. to 8 a.m., from 5 p.m. to 8 p.m., at night and on Sundays) for the following reasons:

- (a) general timekeeping and opening/closing office door; and
- (b) paper work and checking log books.

4.16 **Audit observations.** In examining the OT approval and claim forms of Officer A for three randomly selected months, Audit raised the following observations (details are at Appendix I):

- (a) with regard to paragraph 4.15(a) above, the OT approvals were inconsistent with the HyD's own departmental instructions on the clock-in and -out procedures. As these departmental instructions did not require the Timekeeper's presence before 7:30 a.m., after 5:30 p.m., at night and on Sundays, the need for Officer A to work OT during these periods was questionable (see paragraph 6 of Appendix I);
- (b) with regard to paragraph 4.15(b) above, there was no documented evidence to indicate that the HyD had critically assessed the workload of Officer A before approving the OT (see paragraph 7 of Appendix I);
- (c) there was no documented assessment to clearly establish why time-off in lieu could not be granted instead of OTA (see paragraph 8 of Appendix I);
- (d) in some instances, there was inadequate documentary evidence to demonstrate that Officer A's supervisors had actually conducted spot checks on his OT work (see paragraph 11(a) of Appendix I); and
- (e) there were no spot checks conducted during high-risk periods to detect unauthorised absence (see paragraph 11(b) of Appendix I).

Case Two

4.17 **Background.** In this case, Audit selected for examination the OTA claims of five officers (including three Works Supervisors, one Senior Artisan and one Workman II) in the HSR Section of the NT Region. During the period August 1998 to July 1999, each of these officers on average received OTA which amounted to 58% of their basic salaries.

4.18 **Audit observations.** Due to the high traffic volume during daytime, most of the HSR maintenance works (done by contractors) were performed at night and on weekends/holidays. Therefore, the Works Supervisors were required to work OT almost every night to supervise the maintenance works. Similarly, the Senior Artisan and Workman II were also required to work OT almost every night to supervise the cleansing contractor in road sweeping and rubbish pick-up work along the high speed roads. Audit raised the following observations (details are at Appendix J):

- (a) despite the regular pattern and routine nature of the OT work, there was no documentary evidence to show that the HyD had reviewed and had tried to reschedule the officers' duty hours in order to reduce the need for OT (see paragraph 3 of Appendix J);

- (b) there were occasions where the officers had taken more time-off in lieu than they had earned in OT work. There were no formal procedures in the HyD for preventing its officers from taking such excessive time-off in lieu (see paragraph 4 of Appendix J);
- (c) the Senior Artisan and the Workman II supervised the cleansing contractor's work by each riding in a contractor's truck (one rode in a sweeper and the other in a rubbish pick-up truck) for four to six hours (from 8 p.m. up to 2 a.m.) almost every night. The cost-effectiveness of this routine "ride-along" supervisory arrangement was questionable (see paragraphs 5 to 7 of Appendix J);
- (d) although the contractor's rubbish pick-up tour started daily at 8:30 p.m., the Senior Artisan routinely claimed OTA for four hours from 8 p.m. to midnight for the "ride-along" supervision. There were no documented reasons to justify the need for working OT for an extra half-hour daily from 8 p.m. to 8:30 p.m. (see paragraph 8 of Appendix J); and
- (e) the HyD's departmental instructions regarding spot checks on OT work had not been properly followed by the supervising officers (see paragraph 9 of Appendix J).

Case Three

4.19 **Background.** In the Kowloon Region, the Testing Team of the DLF, led by a Works Supervisor, was made up of eight members including one Senior Artisan, one Artisan, two Motor Drivers and four Workmen II. During the period August 1998 to July 1999, each of these officers on average received OTA which amounted to 25% of their basic salaries. From time to time, the Team worked overnight and claimed OTA for performing road testing duties. When working overnight, the Team typically started to work OT at about 8 p.m. and finished its OT work at about 3 a.m. to 6 a.m. the next day. It then resumed normal duty at 8 a.m. and remained on duty until 5 p.m. At times, this work pattern would occur repeatedly on a number of consecutive days.

4.20 **Audit observations.** Audit analysed the Team's duty hours (including both OT and normal duty hours) from 8 a.m. on 23 February to 5 p.m. on 26 February 1999 (i.e. a continuous period of 81 hours) during which the Team worked OT every night on a road testing assignment. Audit's analysis indicated that the Team members generally had unduly long duty hours. Of the eight Team members, six had duty hours ranging from 56 to 60 hours (i.e. 69% to 74% of the time). This raises a number of issues that the HyD's senior management needs to address, as follows (details are at Appendix K):

- (a) with such unduly long working hours, it is questionable whether it was possible for the Team to discharge its duties efficiently and effectively. Audit's analysis of the Team's work records casts doubt on the productivity of the Team during the normal duty hours of the four days concerned. For example, the records did not show what happened in the morning of 24 and 26 February. Furthermore, the Team was reported to be on "standby" duty (i.e. waiting for work) for the whole afternoon on these two days (see paragraph 4(a) of Appendix K);

- (b) unduly long working hours adversely affect the health and safety of the workers. However, it is questionable whether the HyD had fully considered the issue of health and safety before requiring the Team to work overnight on consecutive days (see paragraph 4(b) of Appendix K); and
- (c) given the low daytime productivity of the Team and the health and safety concerns, Audit would expect time-off in lieu to be the most appropriate recompense in the circumstances. However, there was no documentary evidence to show that the option of time-off in lieu had been critically considered by the HyD (see paragraph 4(c) of Appendix K).

4.21 When discussing the above audit findings, the HyD informed Audit that the long duty hours in this case illustrated the difficulties in carrying out some of the maintenance works and the HyD's dedication in completing the works on schedule under the stringent requirements of the Police. The HyD said that it was very concerned about the health and safety of its staff and had tried its best to minimise the number of similar incidents.

Cases Four and Five

4.22 Further examples of cases (i.e. Cases Four and Five), which bear some resemblance to the foregoing cases, are at Appendices L and M.

Supervisory accountability and senior management responsibility

4.23 ***Supervisory accountability.*** Frontline supervisory staff are responsible for the day-to-day need assessment and supervision of OT work. Unneeded OT and malpractices (such as unauthorised absence for long duration) are unlikely to escape the notice of conscientious supervisors. Supervisory controls, therefore, are the most important requirements in the management of OT work. However, Audit's case studies revealed a need for improvement in the supervisory controls of the HyD. **Audit considers it necessary for the HyD to take vigorous action to strengthen supervisory control accountability.**

4.24 ***Senior management responsibility.*** According to the CSB's guidelines, it is the personal responsibility of a Head of Department to ensure that OT work is kept to the absolute minimum compatible with operational requirements, and that at all times it is strictly controlled and properly supervised (see paragraph 4.5(a) above). The results of this audit have revealed issues that require the attention of the HyD's senior management. **Audit considers it necessary for the HyD's senior management to immediately address these issues and set up a mechanism for reviewing the management of OT on a regular basis.**

OT work of staff other than those performing road maintenance and utility duties

4.25 Apart from the staff with road maintenance and utility duties, other HyD staff (e.g. staff working on road capital projects) also work OT routinely. In 1999-2000, the estimated OTA expenditure on these HyD staff amounts to \$23 million. Audit's analysis of their OT hours, for the period August 1998 to July 1999, indicated that some 750 staff were, on average, paid OTA for 198 OT hours each (i.e. equivalent to 10% of their normal duty hours). Furthermore, 52 of these

staff had OTA for more than 500 hours each and, among them, six had over 800 hours (i.e. equivalent to more than 25% and 40% of their normal duty hours respectively — Note 22).

4.26 **Audit considers that, when the HyD draws up a future action plan to address the issues raised in this report, it should ensure that the plan covers all facets of OT work in the entire HyD.**

Audit recommendations on the HyD's management of OT work

4.27 **Audit has *recommended* that the Director of Highways should take vigorous action to strengthen the management controls and minimise the expenditure on OT work. The action plan should cover all HyD staff who work OT. In particular, the Director of Highways should:**

Assessment of need for OT work

- (a) **for staff/units with significant OTA claims, critically review their mode of operation, workload and productivity in order to assess whether the OT work is really needed. Particular attention should be paid to the specific cases mentioned in this report which include the Timekeeper in Case One, the “ride-along” arrangement in Cases Two and Four, and the excessive overnight work arrangement in Cases Three and Five (see paragraphs 4.13, 4.16(a)&(b), 4.18(c)&(d), and 4.20 above and Appendices L and M);**
- (b) **develop productivity standards as soon as possible to help monitor staff productivity and assess the need for OT work (see paragraph 4.13 above);**
- (c) **consider rescheduling the duty hours or the weekly rest days of the staff concerned so as to make the staff available for the work which has to be performed at night or on Sundays and public holidays (see paragraph 4.9 above);**
- (d) **ensure that the HyD always uses time-off in lieu as the normal recompense for OT work. Where OTA is granted instead, the approving officers should provide a documented assessment of the staffing/workload position to satisfy the HyD's senior management that time-off in lieu is not a feasible option (see paragraphs 4.10, 4.16(c) and 4.20(c) above);**

Note 22: *Of the six staff who had been paid OTA for over 800 hours each, three worked in the General Registry of the NT Region, one in the District Section of the NT Region, one in the General Registry of the Kowloon Region, and one in the HyD's Headquarters.*

- (e) ensure that there are sufficient records to keep track of the earning, applications, approvals and taking of time-off in lieu. In particular, adequate procedures should be established to prevent staff from taking more time-off in lieu than what they have actually earned (see paragraphs 4.11 and 4.18(b) above);
- (f) for work outside normal duty hours which the HyD considers necessary, use contractors instead of the DLF to perform the work whenever it is more cost-effective to do so (see paragraph 4.12 above);

Physical checks of OT work

- (g) require supervisory officers to record the dates/time of spot checks on the OTA claim forms to document that spot checks have actually been carried out (see paragraph 4.16(d) above);
- (h) require supervisory officers to plan and carry out their spot checks based on the assessment of risks. Spot checks should adequately cover those periods where the risk of unauthorised absence is high (see paragraph 4.16(e) above);
- (i) ensure that the HyD's departmental instructions requiring both the authorising and recommending officers to perform regular spot checks on OT work are properly followed (see paragraph 4.18(e) above);

Supervisory accountability

- (j) issue departmental instructions to clearly convey to the supervisory staff the message that they are accountable for any misconduct and malpractices of their subordinates, and to regularly remind them of the need to perform their supervisory duties properly (see paragraph 4.23 above);
- (k) take necessary action (including disciplinary action) against those supervisors who are found to be not performing their supervisory duties properly (see paragraph 4.23 above); and

Senior management responsibility

- (l) establish a mechanism for the HyD's senior management to review regularly the issues raised in this audit report, so as to ensure that OT work is always kept to the absolute minimum (see paragraph 4.24 above).

Response from the Administration

4.28 The **Director of Highways** has said that Audit's recommendations on the management of OT work will surely be considered and followed up by the working group chaired by the Deputy Director of Highways (see paragraph 2.17(b) above). With regard to the option of time-off in lieu, he has said that:

- (a) for many years, the HyD has experienced chronic and acute staff shortage. For example, due to the booming construction industry, the vacancy percentage of the 360-strong Works Supervisor Grade in the HyD reached a record high of 16% in October 1996 and, in 1998, the vacancy percentage was 13% (i.e. a shortage of some 50 staff); and
- (b) with the slowdown of the economy in the last two years, the HyD has managed to gradually reduce the vacancy percentage. In mid-1999, in the light of the improved staffing situation which made granting time-off in lieu possible, the HyD decided to reduce its expenditure on OTA. This measure has been taken despite the fact that additional commitments in recent years, such as the maintenance of 12,000 roadside slopes and the "Healthy Living into the 21st Century Campaign", will require additional manhour input. In July 1999, the HyD informed the Finance Bureau of its plan to cut OT expenditure in 2000-01 by \$5 million.

4.29 The **Secretary for the Civil Service** has said that he will work with the HyD to improve its management of OT and will take appropriate disciplinary action as necessary.

4.30 The **Secretary for the Treasury** has said that she welcomes Audit's investigations into the management of OT and has taken the following measures to ensure better financial control of OTA:

- (a) the provision for OTA, and indeed for other job-related allowances, is now controlled and managed on a cash-limited basis. In calling for submissions for the 2000-01 Draft Estimates, she has asked Controlling Officers to exercise stringent control over the provision for allowances and ensure that the level of provision sought is absolutely essential. Where Controlling Officers are seeking a higher level of provision on operational grounds, she will require them to provide real offsetting savings in other expenditure; and
- (b) to encourage departments to economise on the use of OTA, reduction in such payments may be counted towards productivity savings required under the Enhanced Productivity Programme.

4.31 The **Secretary for Transport** has said that he welcomes the suggestions made in the audit report and endorses the positive actions taken (and to be taken) by the HyD to improve the management of OT.

Appendix A
(paragraphs 1.5(a)
and (b) refer)

**Number of outdoor Maintenance Staff and DLF staff
as at October 1999**

	Hong Kong Region	Kowloon Region	NT Region	Total
Maintenance Staff				
Inspectorate Officers (Note 1)	40	32	51	123
Works Supervisors (Note 2)	48	50	86	184
Other minor staff (Note 3)	0	0	8	8
Sub-total	88	82	145	315
DLF				
Inspectorate Officers (Note 1)	2	2	2	6
Works Supervisors (Note 2)	2	5	3	10
Senior Artisans	6	5	5	16
Artisans	10	8	10	28
Workmen II	4	13	14	31
Motor Drivers	5	6	7	18
Sub-total	29	39	41	109
Total	117	121	186	424

Source: HyD's records

Note 1: Inspectorate Officers include Senior Inspectors of Works, Inspectors of Works and Assistant Inspectors of Works.

Note 2: Works Supervisors include Works Supervisors I and Works Supervisors II.

Note 3: Other minor staff are Senior Artisans, Artisans and Workmen II.

Note 4: As at October 1999, the mid-point monthly salaries of the above staff were as follows: Senior Inspector of Works (\$51,355); Inspector of Works (\$37,818); Assistant Inspector of Works (\$23,170); Works Supervisor I (\$19,533); Works Supervisor II (\$15,628); Senior Artisan (\$14,730); Artisan (\$12,595); Workman II (\$9,980); and Motor Driver (\$12,595).

Appendix B
(paragraph 3.4 refers)

Number of staff in the DLF of each HyD Region as at October 1999

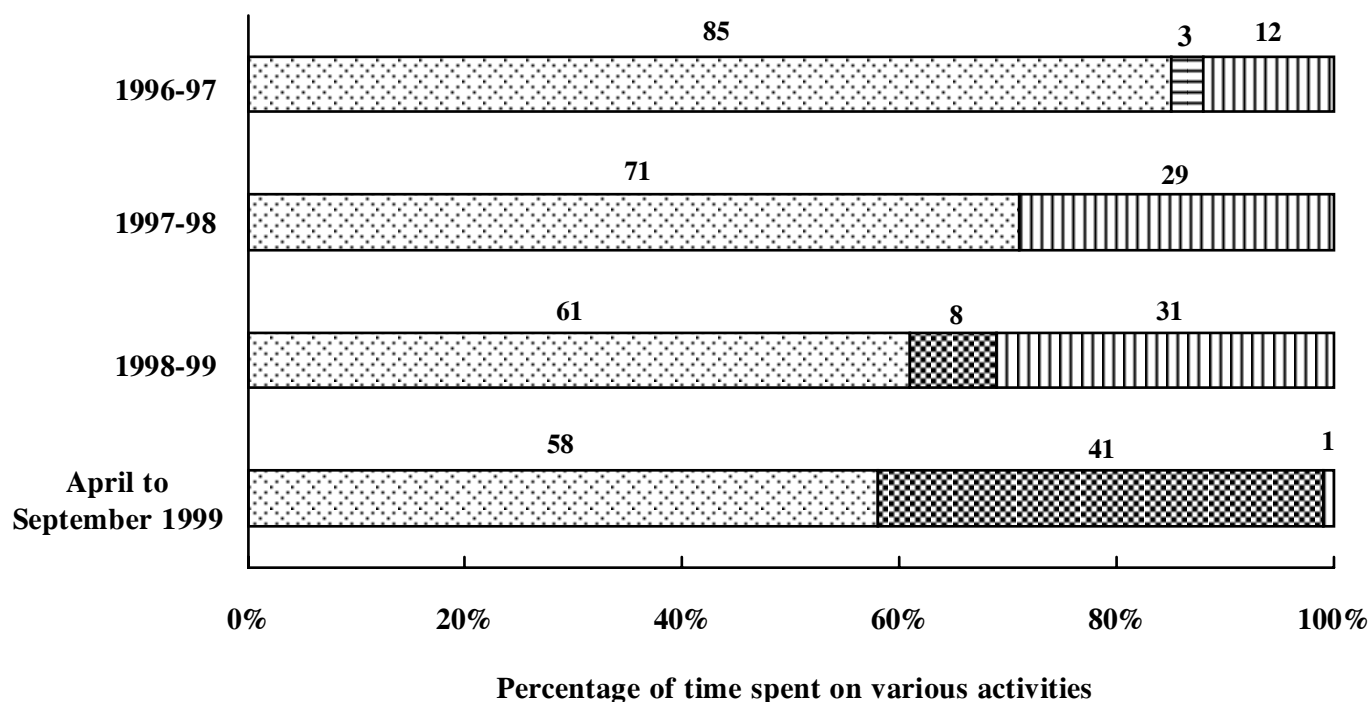
	Hong Kong Region	Kowloon Region	NT Region	Total
Chief Technical Officers	1	1	1 (Note 1)	3*
Inspectorate Officers	2	2	2	6
Works Supervisors	2	5	3	10
Senior Artisans	6	5	5	16
Artisans	10	8	10	28
Workmen II	4	13	14	31
Motor Drivers	5	6	7	18
Timekeepers	1	1	1	3*
Clerical staff	0	1	2	3*
Property Attendants	4	0	5	9*
Total	35	42	50	127 (Note 2)

Source: HyD's records





Note 1: The DLF of the NT Region was managed by two CTOs, with each CTO spending half of his time in managing the DLF.

*Note 2: The total number of 127 staff was made up of 109 outdoor staff (see Appendix A) and 18 indoor staff (those marked with *).*

Utilisation of the Paving and Patching Team of the DLF
of the Hong Kong Region from April 1996 to September 1999

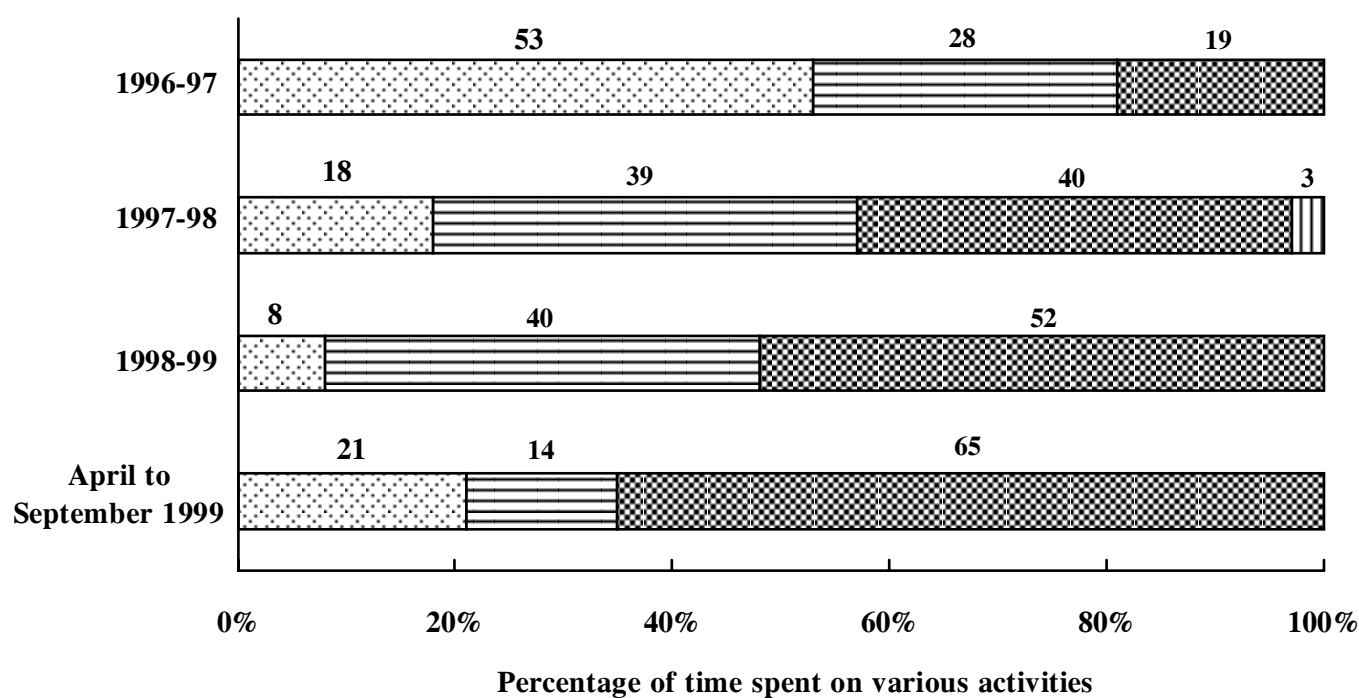


Key:

-  **Core business** (including resurfacing, patching of potholes and road testing)
-  **Preparation work** (including setting out, maintenance and repair of tools and calibration of equipment)
-  **Non-core business** (including cleaning road furniture, cutting grass and assisting in office work)
-  **Time without activities** (see Note 14 above)

Source: Audit’s classification based on HyD’s records

Utilisation of the Testing Team of the DLF of the Hong Kong Region
from April 1996 to September 1999



Key:



Core business (including resurfacing, patching of potholes and road testing)



Preparation work (including setting out, maintenance and repair of tools and calibration of equipment)



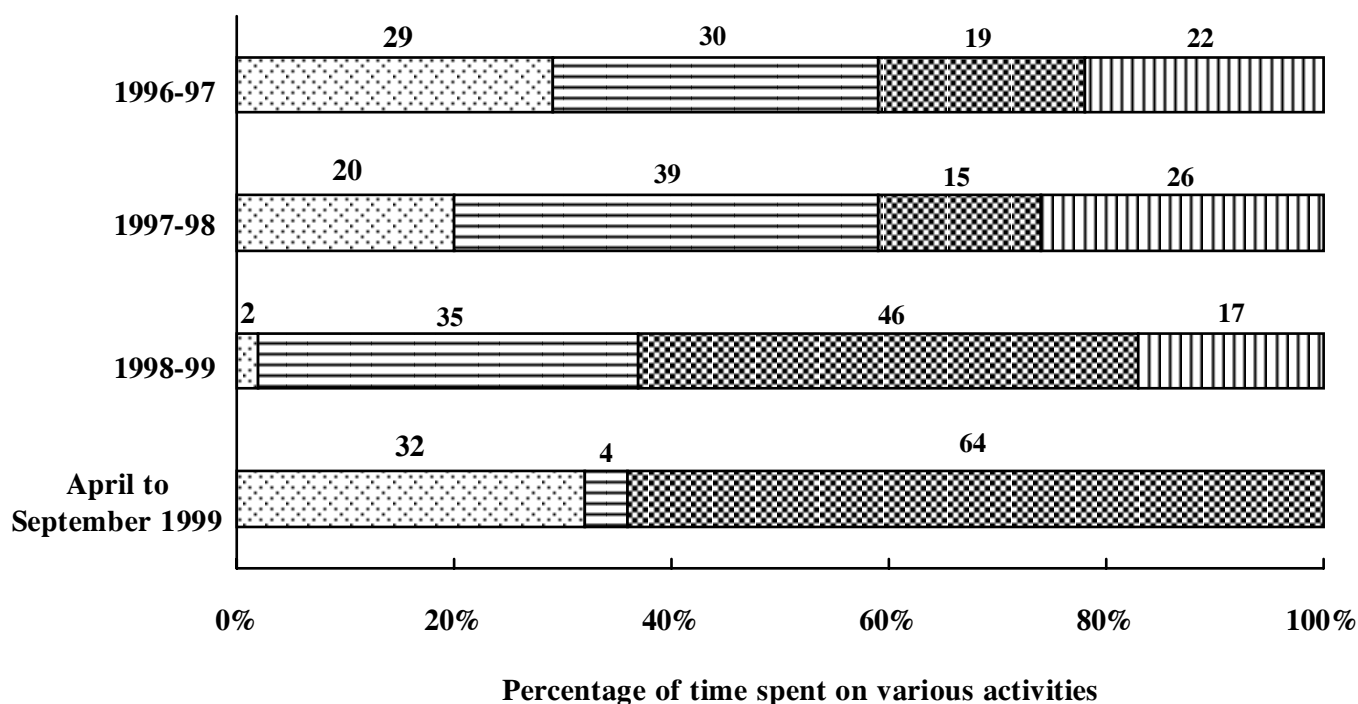
Non-core business (including cleaning road furniture, cutting grass and assisting in office work)



Time without activities (see Note 14 above)

Source: Audit's classification based on HyD's records

Utilisation of the Paving and Patching (East) Team of the DLF
of the NT Region from April 1996 to September 1999



Key:



Core business (including resurfacing, patching of potholes and road testing)



Preparation work (including setting out, maintenance and repair of tools and calibration of equipment)



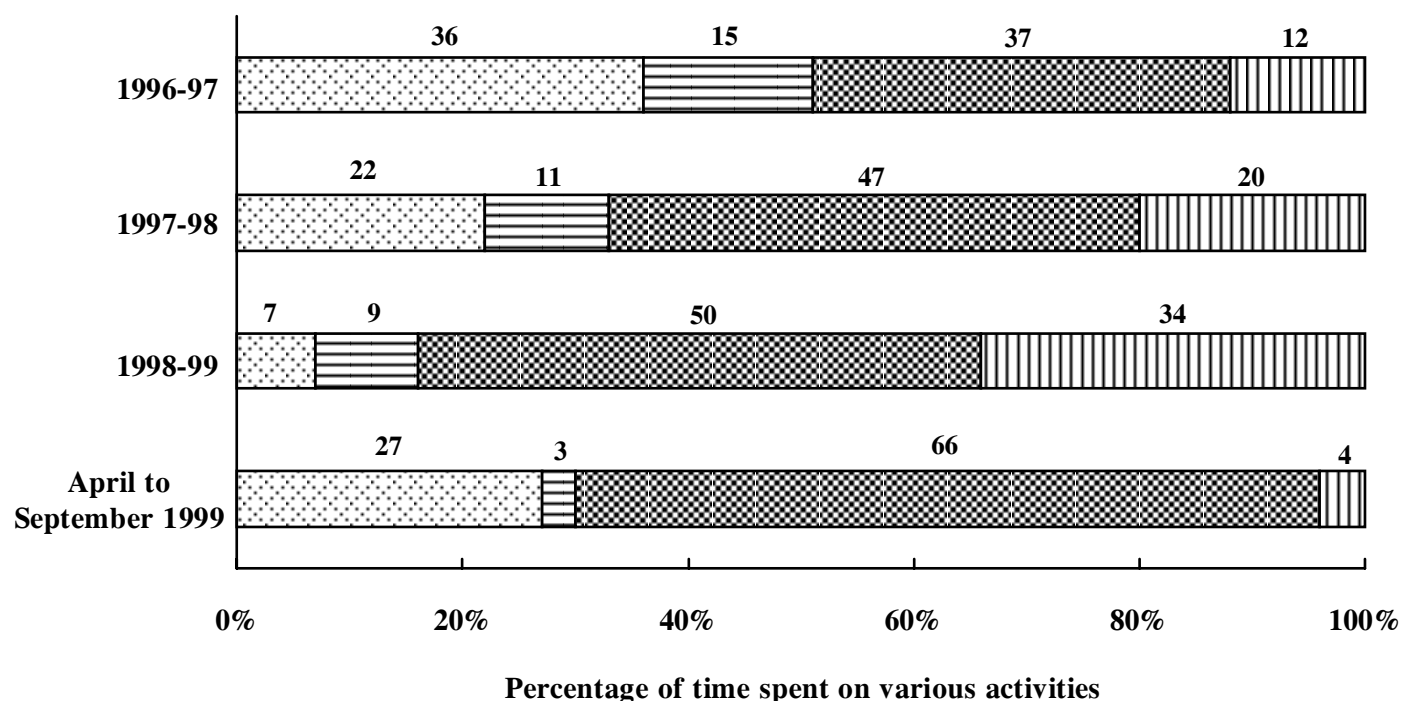
Non-core business (including cleaning road furniture, cutting grass and assisting in office work)



Time without activities (see Note 14 above)

Source: Audit's classification based on HyD's records

Utilisation of the Paving and Patching (West) Team of the DLF
of the NT Region from April 1996 to September 1999



Key:



Core business (including resurfacing, patching of potholes and road testing)



Preparation work (including setting out, maintenance and repair of tools and calibration of equipment)



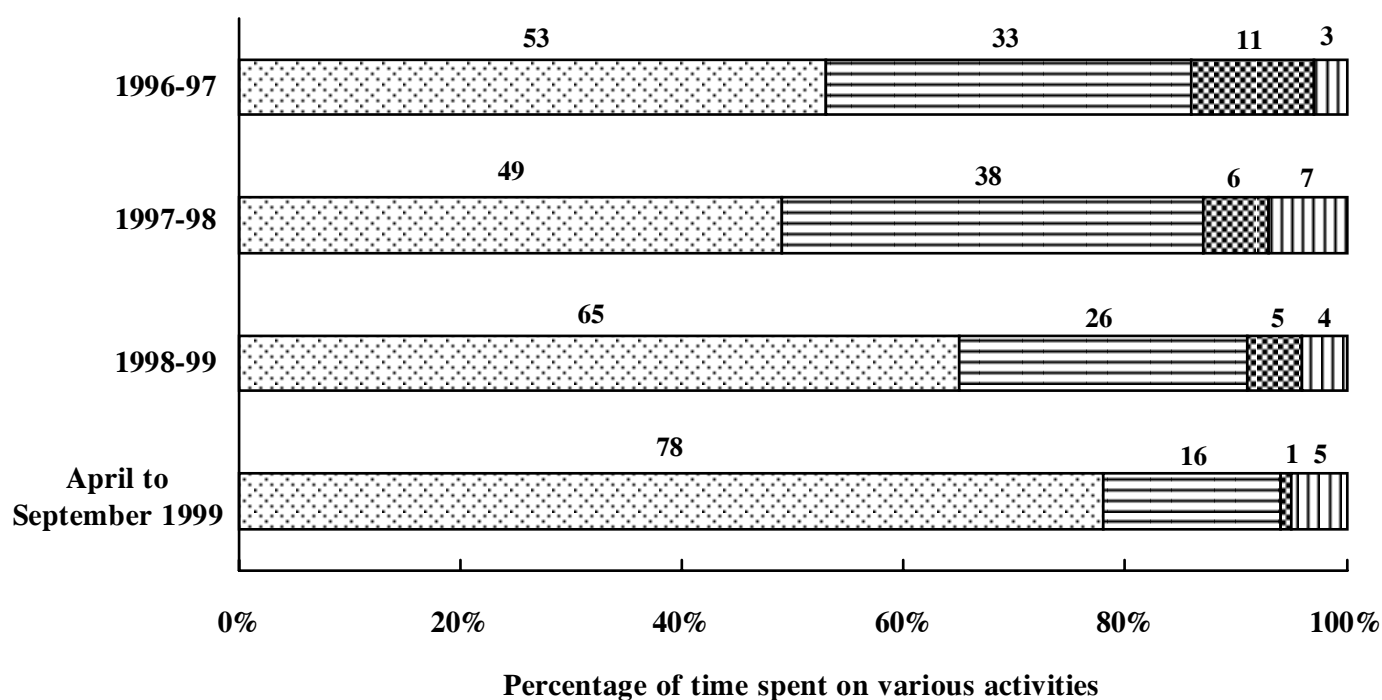
Non-core business (including cleaning road furniture, cutting grass and assisting in office work)



Time without activities (see Note 14 above)

Source: Audit's classification based on HyD's records

Utilisation of the Testing Team of the DLF of the NT Region
from April 1996 to September 1999



Key:



Core business (including resurfacing, patching of potholes and road testing)



Preparation work (including setting out, maintenance and repair of tools and calibration of equipment)



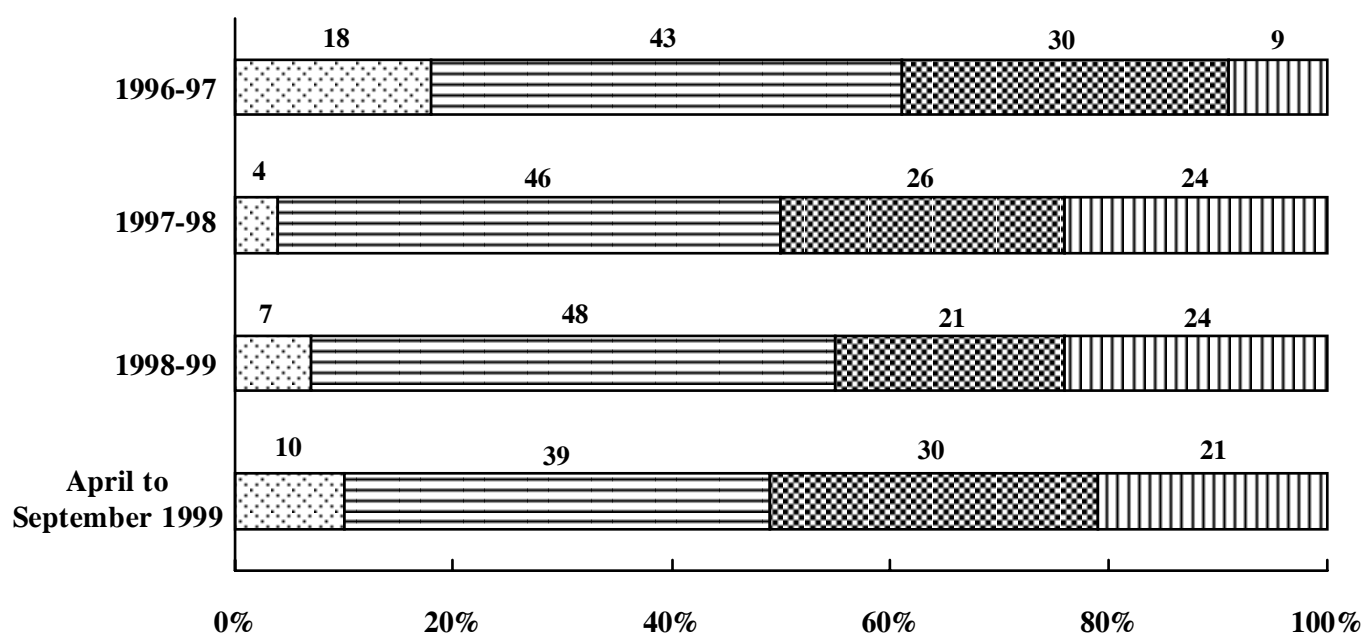
Non-core business (including cleaning road furniture, cutting grass and assisting in office work)



Time without activities (see Note 14 above)

Source: Audit's classification based on HyD's records

Utilisation of the Testing Team of the DLF of the Kowloon Region
from April 1996 to September 1999



Percentage of time spent on various activities

Key:



Core business (including resurfacing, patching of potholes and road testing)



Preparation work (including setting out, maintenance and repair of tools and calibration of equipment)



Non-core business (including cleaning road furniture, cutting grass and assisting in office work)



Time without activities (see Note 14 above)

Source: Audit's classification based on HyD's records

Audit case studies — Case One

Background information

1. The officer (Officer A) in this case was a Timekeeper in the NT Region. His main duties included overseeing the clock-in and -out time of DLF staff stationed at the Kowloon Bay Depot, and preparing monthly records relating to the OT work and attendance of DLF staff.

2. **Substantial OT.** The normal duty hours of Officer A were 8 a.m. to 5 p.m. from Monday to Friday and 8 a.m. to 1 p.m. on Saturday. In addition, Officer A routinely worked a large number of OT hours. During the period August 1998 to July 1999, he was paid OTA for a total of 694 OT hours which amounted to 40% of his basic salary.

Inadequate assessment of need for OT work

3. **Approval process.** Applications for OT were approved in advance on a monthly basis. In the applications, the recommending officers had to certify that the OT work was strictly essential and could not be recompensed by time-off in lieu. In the case of Officer A, monthly applications for OT were separately approved in two application forms. One application form was approved by the CTO of the NT East (NTE) Section and the other by the CTO of the NT West (NTW) Section.

4. **Audit scrutiny of OT application forms.** To obtain a better understanding of the HyD's OT approval process, Audit scrutinised the OT application forms of Officer A for three randomly selected months. The following are the relevant details of the approvals.

OT hours approved for Officer A for September 1998, November 1998 and June 1999

Month	Time of OT work	NTW Section		NTE Section	
		OT hours approved	Time of OT work	OT hours approved	Total OT hours approved
September 1998	7 a.m. - 8 a.m. 5 p.m. - 8:30 p.m.	50	Sundays and night work	30	80
November 1998	7 a.m. - 8 a.m. 5 p.m. - 8 p.m.	75	Sundays and night work	50	125
June 1999	7 a.m. - 8 a.m. 5 p.m. - 8 p.m.	50	Sundays and night work	60	110

Source: HyD's OT application forms

5. ***Reasons for granting OT.*** In the application forms, the following reasons were given for Officer A to work OT:

- (a) general timekeeping and opening/closing office door; and
- (b) paper work and checking log books.

6. ***Departure from clock-in and -out procedures.*** With regard to paragraph 5(a) above, Audit noted that the OT approvals were inconsistent with the HyD's own departmental instructions on the clock-in and -out procedures for the DLF, as follows:

- (a) ***Clock-in.*** The departmental instructions stipulated that the Timekeeper would arrive at the Depot ***no later than 7:30 a.m.*** to unlock the box in which time record cards were stored. He would personally distribute the record cards to each officer and monitor the clock-in process. However, the table in paragraph 4 above shows that approvals were routinely given for Officer A, as the Timekeeper, to work OT during 7 a.m. to 8 a.m. No reasons were given to justify why it was necessary for him to start working at 7 a.m. (instead of at 7:30 a.m. as stipulated in the departmental instructions). **The need for OT for the period 7 a.m. to 7:30 a.m. was therefore questionable; and**
- (b) ***Clock-out.*** The departmental instructions also stipulated that at 4:50 p.m. the Timekeeper should personally distribute the time record cards to each individual officer and monitor the clock-out process. Except for those required to work OT, all staff should clock-out ***before 5:30 p.m.*** After that time, the Timekeeper would lock up all the record cards. For those DLF staff who were required to work OT on that day, he would pass the record cards (and the keys) to the team leaders for monitoring the clocking-in and -out of these staff. The team leaders would be responsible for locking up the cards before leaving the Depot. They would return the keys to the Timekeeper on the next working day. According to these instructions, the Timekeeper would not be needed after 5:30 p.m. However, the table in paragraph 4 above shows that approvals were routinely given for Officer A to work OT up to 8 p.m. (or 8:30 p.m.) as well as on Sundays and at night. No reasons were given to justify the need for the departure from the departmental instructions. **The need for OT for the period 5:30 p.m. to 8 p.m. (or 8:30 p.m.) and on Sundays and at night was therefore questionable.**

7. ***Workload/productivity not adequately assessed.*** With regard to paragraph 5(b) above, Officer A was routinely allowed to work substantial OT despite the fact that there had been a consequential reduction in the DLF's activities and paper work following the significant downsizing of the DLF over the years (see paragraphs 3.5 and 3.8 of the report). Apparently, the HyD had not critically assessed the workload and productivity of Officer A before approving the OT. **There was no documented assessment, with quantitative analyses of workload and productivity, to determine that Officer A could not perform the paper work during his normal duty hours and that OT work was "strictly unavoidable" (see paragraph 4.5(a) of the report).**

8. ***Time-off in lieu not granted.*** There was also no documented assessment to clearly establish why time-off in lieu could not be granted.

Physical checks of OT work

9. According to the CSB's guidelines, where possible, physical spot checks should be conducted by supervisors during the OT period, with proper records made. The HyD's departmental instructions also required supervising officers to conduct random spot checks at least once a month on the OT work under their supervision.

10. In the monthly OTA claim forms submitted to the Accounts Section of the HyD, supervisory officers were required to record the dates and time of the spot checks conducted. They were also required to put their signatures next to the dates and time of spot checks recorded in the claim forms.

11. With regard to Officer A, Audit's scrutiny of the OTA claim forms for three selected months revealed the following deficiencies in the spot-checking process:

- (a) ***Spot checks inadequately documented.*** In some instances, although the supervisors' signatures appeared in the spot-check column of the OTA claim forms, the time of the spot checks was not recorded in the forms. **There was, therefore, inadequate documentary evidence to demonstrate that spot checks had actually been conducted; and**

- (b) ***High-risk periods not covered.*** In the six instances where the exact time of spot checks was recorded in the claim forms, Audit noted that the spot checks were all conducted during weekdays. Audit further noted that, of these six spot checks, one was conducted at 7:45 a.m. and the other five were conducted between 5:15 p.m. and 5:45 p.m. **There were no spot checks covering the OT periods before 7:45 a.m., after 5:45 p.m., on Sundays or at night. In Audit's view, these are high-risk periods as far as unauthorised absence is concerned.**

Absence without permission

12. ***Investigation of complaint.*** In late September 1999, Audit received a complaint which alleged that Officer A had been absent from duty without permission during OT periods. Audit referred the complaint to the HyD for investigation. On 13 October 1999, the HyD's investigation team (consisting of an acting CTO and an Assistant Inspector of Works) conducted a surprise check at the Kowloon Bay Depot where Officer A was supposed to be on OT duty. The HyD investigation team arrived at the Depot at 6:38 p.m. and stayed there for about an hour. The investigation team found that Officer A had left the Depot without permission, and that the time record cards of the DLF were not locked up, contrary to the departmental instructions mentioned in paragraph 6 above. As at January 2000, disciplinary proceedings against Officer A were in progress.

13. ***The need to cover high-risk periods.*** As mentioned in paragraph 11(b) above, the regular spot checks were all conducted during low-risk periods (e.g. before 5:45 p.m.) and no irregularities were detected. Prompted by the complaint, the surprise check on 13 October 1999 was conducted during a high-risk period at 6:38 p.m. and, as a result, major irregularities were found. **It is evident that there is a need for spot checks to be conducted to cover high-risk periods.**

Audit case studies — Case Two

1. **Background.** As mentioned in paragraph 4.7(b) of the report, 17 officers were each paid OTA for more than 800 OT hours during the period August 1998 to July 1999. Sixteen of these officers worked in the HSR Section of the NT Region. Audit selected for examination the five officers who were paid OTA for the greatest number of OT hours, including three Works Supervisors, one Senior Artisan and one Workman II.

2. **Substantial OT.** The normal duty hours of the Works Supervisors were 8 a.m. to 5:15 p.m. from Monday to Friday, and 8:30 a.m. to 5 p.m. on alternate Saturdays. The normal duty hours of the Senior Artisan and the Workman II were 8 a.m. to 5 p.m. from Monday to Friday, and 8 a.m. to 1 p.m. on every Saturday. During the period August 1998 to July 1999, these five officers were paid OTA for a total of 4,856 OT hours (i.e. on average, 81 hours a month for each officer). On average, the OTA amounted to 58% of their basic salaries.

Inadequate assessment of need for OT

3. **Using OT to perform routine work.** According to the CSB's guidelines, excessive or regular OT should be discouraged (see paragraph 4.5(c) of the report). Audit noted that OT work for the officers was scheduled almost every night. Upon enquiry, the HyD informed Audit that due to the high traffic volume during daytime, most of the HSR maintenance works (done by contractors) were performed at night and on weekends/holidays. Therefore, the Works Supervisors were required to work OT at night to supervise the maintenance works. The Senior Artisan and Workman II were required to supervise at night the cleansing contractor in road sweeping and rubbish pick-up work along the high speed roads. **Despite the regular pattern and routine nature of the OT work, there was no documentary evidence to show that the HyD had reviewed and had tried to reschedule the officers' duty hours in order to reduce the need for OT.**

4. **Inadequate control over time-off in lieu.** Audit noted from the HSR Section's time-off records that there were occasions where the officers had taken more time-off in lieu than the time they had earned in OT work. **However, Audit could not find any formal procedures in the HyD for preventing its officers from taking such excessive time-off in lieu (i.e. in excess of the time they had actually earned).** Audit also could not find any evidence to show that such excessive time-off had been properly justified and approved before they were taken.

5. **Contractor's cleansing work.** As mentioned in paragraph 3 above, the Senior Artisan and the Workman II worked OT to supervise the work of the cleansing contractor. Under a carriageway cleansing programme agreed with the HyD, the contractor was required to arrange for the following:

- (a) a sweeper to clean daily the high speed roads from 8 p.m. to 6 a.m. (Note 1);
- (b) a second team to drive along the high speed roads to pick up rubbish on the roadway from 8:30 p.m. to 6 a.m. (Note 2); and
- (c) staff to walk along the roadside verges to pick up rubbish during daytime from 8 a.m. to 5 p.m. (Note 3).

6. **Mode of supervision.** With regard to paragraphs 5(a) and (b) above, Audit noted that the Senior Artisan and the Workman II supervised the contractor's work by riding in the contractor's trucks (one of them rode in the sweeper and the other in the rubbish pick-up truck). **They worked OT for four to six hours (from 8 p.m. up to 2 a.m.) almost every night from Monday to Saturday to perform the "ride-along" supervision.** Usually, they were not present during the second part of the contractor's shift (i.e. between 2 a.m. and 6 a.m.). They were also not present during the contractor's walk-along pick-up referred to in paragraph 5(c) above.

7. **Mode of supervision questionable.** In Audit's view, the cost-effectiveness of this routine "ride-along" supervisory arrangement for four to six hours a night is questionable. Apparently, it will be more cost-effective if the HyD conducts random spot checks on the contractor's work progress and, where appropriate, supplements such checks with output inspections (e.g. inspections after road sweeping). **Audit considers it necessary for the HyD to critically review the cost-effectiveness of the "ride-along" arrangements and examine the feasibility of adopting other more cost-effective modes of supervision.**

Note 1: *The sweeper, equipped with sweeping and suction devices, collects rubbish, sand and gravel near the kerb-side of the slow and fast lanes of high speed roads. The objective of this operation is to ensure cleanliness and safety of the road.*

Note 2: *This team travels along the carriageway away from the kerbs. It picks up rubbish of a bigger size left on the carriageway such as animal carcasses, tyres, bricks and fallen objects from vehicles. The objective of this operation is to ensure road safety.*

Note 3: *A workman, provided by the contractor, is tasked with walking along the roadside verges and collecting by hand rubbish such as papers, bottles and cans during daytime.*

8. ***Further audit observations on the “ride-along” supervision.*** According to the contractor’s work schedule, as mentioned in paragraph 5(b) above, the rubbish pick-up tour started daily at 8:30 p.m. However, Audit noted from the OTA claim forms that the Senior Artisan routinely claimed OTA for four hours from 8 p.m. to midnight (Note 4) for the “ride-along” supervision. **There were no documented reasons in the OT approval forms to justify the need for working OT for an extra half-hour daily from 8 p.m. to 8:30 p.m.**

Physical checks on OT work

9. According to the HyD departmental instructions, the authorising and recommending officers should both carry out random spot checks on OT work at least once a month. Audit examined the 60 OT claim forms of the five selected staff for the 12-month period August 1998 to July 1999. Audit found that:

- (a) in 11 claim forms (i.e. 18%), neither the authorising officer nor the recommending officer had signed in the spot check column to signify that monthly spot checks had been conducted;
- (b) in 32 claim forms (i.e. 53%), only the recommending officer, but not the authorising officer, had signed in the spot check column; and
- (c) in 17 claim forms (i.e. 29%), both the recommending and authorising officers had signed in the spot check columns in accordance with the departmental instructions.

10. Audit considers it necessary for the HyD to ensure the compliance with its departmental instructions which require both the authorising and recommending officers to conduct spot checks of OT work (and signify such checks in the OTA claim forms) at least once a month.

Note 4: *According to the HSR Section’s OT and time-off records, the Senior Artisan and the Workman II normally claimed OTA for four hours per day. The remaining one or two OT hours were compensated by time-off in lieu.*

Audit case studies — Case Three

1. **Background.** In the Kowloon Region, the Testing Team of the DLF, led by a Works Supervisor, was made up of eight members including one Senior Artisan, one Artisan, two Motor Drivers and four Workmen II. In the 12-month period August 1998 to July 1999, each of these officers, on average, received OTA which amounted to 25% of their basic salaries.

2. **Overnight work.** From time to time, the Team worked overnight and claimed OTA for performing road testing duties. For example, in February, March and June 1999, the Team worked overnight on eight, three and four occasions respectively. When working overnight, the Team typically started to work OT at about 8 p.m. and finished its OT work at about 3 a.m. to 6 a.m. the next day. It then resumed normal duty at 8 a.m. and remained on duty until 5 p.m. At times, this work pattern would occur repeatedly on a number of consecutive days.

3. **Unduly long duty hours.** To obtain a better understanding of the work pattern of the Team, Audit selected for examination a road testing assignment carried out by the Team in late February 1999 on Lung Cheung Road/Prince Edward Road (East). Audit analysed the Team's duty hours (both OT and normal duty hours were counted) for four consecutive days from 23 February 1999 (Tuesday) to 26 February 1999 (Friday) during which the Team worked OT every night on the assignment (Note 5). Audit's analysis covered a continuous period of 81 hours, counting from 8 a.m. on 23 February to 5 p.m. on 26 February. **Audit found that, during this 81-hour period, the Team members generally had unduly long duty hours. Of the eight Team members, six had duty hours ranging from 56 to 60 hours during the 81-hour period (i.e. 69% to 74% of the time).** For illustration purposes, the following shows the work pattern of an Artisan (Officer B) of the Team who was on duty for 60 hours with very short periods of off-duty time in between the duty hours.

Note 5: *This is not the only case where the DLF staff were engaged in unduly long duty hours, although it is certainly among the most serious cases. Audit noted that, in the three months examined (see paragraph 2 above), there were two other occasions (one from 8 to 13 February 1999 and the other from 2 to 7 March 1999) where the same Team had unduly long duty hours. Case Five in Appendix M gives a further example of unduly long duty hours of a DLF team in another Region.*

Work pattern of Officer B from 23 to 26 February 1999

Date	Particulars	Hours on duty	Off-duty hours
		(Note 1)	
23 February 1999 (Tuesday)	Normal duty (8 a.m. to 5 p.m.)	9	
	Off duty (5 p.m. to 8 p.m.)		3
	OT work (8 p.m. to midnight)	4	
24 February 1999 (Wednesday)	OT work continued (midnight to 6 a.m.)	6	
	Off duty (6 a.m. to 8 a.m.)		2
	Normal duty (8 a.m. to 5 p.m.)	9	
25 February 1999 (Thursday)	Off duty (5 p.m. to 8 p.m.)		3
	OT work (8 p.m. to midnight)	4	
	OT work continued (midnight to 3 a.m.)	3	
26 February 1999 (Friday)	Off duty (3 a.m. to 8 a.m.)		5
	Normal duty (8 a.m. to 5 p.m.)	9	
	Off duty (5 p.m. to 6 p.m.)		1
	OT work (6 p.m. to midnight)	6	
	OT work continued (midnight to 6 a.m.)	6	
	Off duty (6 a.m. to 8 a.m.)		2
	Normal duty (8 a.m. to noon) (Note 2)	4	
	Total	<u><u>60</u></u>	

Source: HyD's OT claims and attendance records

Note 1: The hours on duty consisted of 31 normal duty hours and 29 OT hours.

Note 2: Officer B took vacation leave in the afternoon of 26 February 1999.

4. ***Issues arising from Audit's analysis.*** Audit's analysis of the Team's work pattern raises a number of issues that the HyD's senior management needs to address. These issues are listed below:

- (a) ***Productivity.*** With such unduly long working hours, it is questionable whether it was possible for the Team to discharge its duties efficiently and effectively. **Audit's analysis of the Team's work records casts doubt on the productivity of the Team during the normal duty hours of the four days concerned.** For example, the work records of the Team did not show what happened in the morning of 24 and 26 February 1999. Furthermore, the Team was reported to be on "standby" duty (i.e. waiting for work) for the whole afternoon on these two days;
- (b) ***Health and safety.*** Unduly long working hours adversely affect the health and safety of the workers. If the records give a true picture of what happened during those four days, and if the Team members did not take unauthorised absence to get sufficient rest, then a health and safety issue arises. **However, it is questionable whether the HyD had fully considered the issue of health and safety before requiring the Team to work overnight on consecutive days; and**
- (c) ***Time-off in lieu.*** Given the low daytime productivity of the Team and the health and safety concerns, Audit would expect time-off in lieu to be the most appropriate recompense in the circumstances. Furthermore, Audit's analysis of the time record cards of the Team members revealed that most of them took vacation leave during or shortly after the 81-hour period selected by Audit for examination. The fact that vacation leave could be taken indicated that, from the HyD's operations point of view, granting time-off in lieu was a feasible option. **However, there was no documentary evidence to show that the option of time-off in lieu had been critically considered by the HyD.**

5. When discussing the above audit findings, the HyD informed Audit that this case illustrated the difficulties the HyD encountered in carrying out some of the maintenance works. The fact that its staff worked long hours with very short periods of off-duty time in this assignment indicated the HyD's dedication in completing the works on schedule under the very stringent requirements laid down by the Police. The HyD said that it was very concerned about the health and safety of its staff and had tried its best to minimise the number of similar incidents.

Audit case studies — Case Four

Background information

1. **Background.** The officer in this case (Officer C) was an Artisan of the Testing Team of the DLF in the Hong Kong Region. His duties included assisting in the placing of traffic signs, setting out of road test positions and carrying out of road tests.

2. **Substantial OT.** The normal duty hours of Officer C were 8 a.m. to 5 p.m. from Monday to Friday, and 8 a.m. to 1 p.m. on every Saturday. He routinely worked a large number of OT hours. For example, during the period August 1998 to July 1999, he was paid OTA for a total of 668 OT hours (i.e. on average, 56 hours a month) which amounted to 40% of his basic salary.

Inadequate assessment of need for OT work

3. **OT approvals.** Audit scrutinised the OT application forms for Officer C for the period August 1998 to July 1999. Audit found that the CTO/DLF of the Hong Kong Region gave monthly advance approvals, in one lot for Officer C and some 30 other DLF staff in the Region, to work OT “from 9 a.m. to 5 p.m. on Sundays” and “from 5 p.m. to 7 a.m. of the following day or where necessary”. In the application forms, it was stated that OT work was required for “road resurfacing, road testing, repainting of road marking, road patching — traffic congested zones, works supervision and timekeeping”.

4. **OT hours not covered in the approvals.** Audit’s examination of the OTA claim forms revealed that Officer C in fact routinely worked OT from 6 a.m. to 8 a.m. **Although this varied significantly with the advance OT approvals given by the CTO (see paragraph 3 above), the variance had not been spotted and rectified by the HyD’s internal checking mechanism. In Audit’s view, this reflects weaknesses in the HyD’s control over OT payments.**

5. **Using OT for routine work.** Similar to the Senior Artisan and Workman II in Case Two (see paragraphs 6 and 7 of Appendix J), Officer C worked OT almost every day to supervise the

cleansing contractor in rubbish pick-up work along the Island Eastern Corridor (Note 6). Each morning, Officer C signed in at 6 a.m. at the High Speed Road/Hong Kong Depot. He then rode in the cleansing contractor's truck for two hours to supervise the contractor's rubbish pick-up work. He claimed OTA for two hours each day for performing the "ride-along" supervision. **There was no documentary evidence of any review by the HyD to reschedule Officer C's duty hours in order to reduce the need for OT work. There was also no documentary evidence to indicate that, before deciding to pass the OT claims for payment, the HyD had fully considered the option of granting time-off in lieu.**

6. *Mode of supervision questionable.* On Audit's enquiry in October 1999, the HyD advised that it had been a long standing practice for Officer C to perform the daily "ride-along" supervision and claim OTA for the two hours worked. No similar "ride-along" supervision was arranged for the contractor's second rubbish pick-up trip in the afternoon. **In Audit's view, similar to Case Two, the cost-effectiveness of the routine "ride-along" supervision is questionable.** There was, however, no documentary evidence to indicate that the HyD had considered adopting other modes of supervision (e.g. random spot checks or output inspections) in order to reduce OT work and enhance the cost-effectiveness of its operations.

Physical checks of OT work

7. **Audit's scrutiny of Officer C's OTA claim forms for the 12-month period August 1998 to July 1999 revealed that the authorising and recommending officers did not sign in the spot check column to signify that they had conducted monthly spot checks on Officer C's OT work.** Apparently, the HyD's departmental instructions, which required the authorising and recommending officers to carry out random spot checks on OT work at least once a month, had not been followed.

Note 6: *Similar to the NT Region, the Hong Kong Region contracts out the work of carriageway cleansing for the Island Eastern Corridor which is a high speed road. Under the carriageway cleansing programme agreed with the HyD, the contractor is, among other things, required to arrange for a rubbish pick-up trip every morning (6 a.m. to 8 a.m.) and another trip in the afternoon to pick up dangerous refuse articles along the road.*

Audit case studies — Case Five

Background information

1. In the NT Region, members of the Paving and Patching (West) Team, led by a Works Supervisor, worked many OT hours. Audit examined the OT pattern of the five members with over 600 OT hours during the period August 1998 to July 1999. These five members consisted of one Artisan, two Motor Drivers and two Workmen II.

2. In the four months from August 1998 to November 1998, the five Team members worked a total of 1,937 OT hours (i.e. 97 hours a month for each member). There has however been a reduction in the number of OT hours for the Team since December 1998. For the eight months from December 1998 to July 1999, the five Team members worked a total of 1,145 OT hours (i.e. 29 hours a month for each member).

Issues arising from Audit's analysis of OT hours claimed by the Team

3. **Overnight work.** From time to time, the Team worked overnight and claimed OT to carry out road resurfacing and patching works. For example, in October 1998, November 1998 and June 1999, the Team worked overnight on six, five and two occasions respectively. When working overnight, the Team typically started to work OT at about 7 p.m. and finished its OT work at about 7 a.m. the next day. It then resumed normal duty at 8 a.m. and remained on duty until 5 p.m. At times, this work pattern would occur repeatedly on a number of consecutive days.

4. **Unduly long duty hours.** Audit analysed the duty hours (counting both OT and normal duty hours) of the Team for six consecutive days from 18 to 23 October 1998 during which the Team worked OT for four nights. **Audit's analysis covered a period of 118 hours, counting from 7 p.m. on 18 October 1998 (Sunday) to 5 p.m. on 23 October 1998 (Friday). Audit's analysis indicated that, during this 118-hour period, the Team was on duty for 93 hours (i.e. 79% of the time).** The following are further details of Audit's analysis.

Work pattern of the Team from 18 to 23 October 1998

Date	Particulars	Hours on duty (Note)	Off-duty hours
18 October 1998 (Sunday)	OT work (7 p.m. to midnight)	5	
19 October 1998 (Monday)	OT work continued (midnight to 7 a.m.)	7	
	Off duty (7 a.m. to 8 a.m.)		1
	Normal duty work (8 a.m. to 5 p.m.)	9	
	Off duty (5 p.m. to 7 p.m.)		2
	OT work (7 p.m. to midnight)	5	
20 October 1998 (Tuesday)	OT work continued (midnight to 7 a.m.)	7	
	Off duty (7 a.m. to 8 a.m.)		1
	Normal duty work (8 a.m. to 5 p.m.)	9	
	Off duty (5 p.m. to midnight)		7
21 October 1998 (Wednesday)	Off duty (midnight to 8 a.m.)		8
	Normal duty work (8 a.m. to 5 p.m.)	9	
	Off duty (5 p.m. to 7 p.m.)		2
	OT work (7 p.m. to midnight)	5	
22 October 1998 (Thursday)	OT work continued (midnight to 7 a.m.)	7	
	Off duty (7 a.m. to 8 a.m.)		1
	Normal duty work (8 a.m. to 5 p.m.)	9	
	Off duty (5 p.m. to 7 p.m.)		2
	OT work (7 p.m. to midnight)	5	
23 October 1998 (Friday)	OT work continued (midnight to 7 a.m.)	7	
	Off duty (7 a.m. to 8 a.m.)		1
	Normal duty work (8 a.m. to 5 p.m.)	9	
	Total	<u>93</u>	

Source: HyD's OT claims and attendance records

Note: The hours on duty consisted of 45 normal duty hours and 48 OT hours.

5. ***Productivity.*** Similar to the observations on Case Three (see paragraph 4(a) of Appendix K), with such unduly long working hours, it is questionable whether the Team could discharge their duties efficiently and effectively. Specifically, the Team's daily work records for two of the six days showed that, after working overnight, members of the Team were only involved in tidying up the depot areas during their normal duty hours. Furthermore, according to the HyD's records, on 24 October 1998 (i.e. the day immediately following the continuous overnight work) the Team was only engaged in moving office furniture. The records, however, did not indicate how much area was tidied up and how many pieces of furniture were moved by the Team.

6. ***Time-off in lieu.*** Similar to Case Three above, given the low daytime productivity of the Team and the health/safety concerns, time-off in lieu as a recompense should have been more appropriate (see paragraph 4(c) of Appendix K). **However, there was no documentary evidence to indicate that the option of time-off in lieu had been critically considered by the HyD.**

Acronyms and abbreviations

CSB	Civil Service Bureau
CTO	Chief Technical Officer
DLF	Direct Labour Force
HSR	High Speed Road
HyD	Highways Department
NT	New Territories
NTE	New Territories East
NTW	New Territories West
OT	Overtime
OTA	Overtime allowance
PAC	Public Accounts Committee
R&D	Research and Development