

**For discussion
on 14 April 2014**

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LEGISLATIVE COUNCIL PANEL ON WELFARE SERVICES

Redeployment of a permanent directorate post and establishment of next generation infrastructure for the information technology development of the Social Welfare Department

PURPOSE

This paper briefs Members on two proposals as follows –

- (a) to redeploy permanently one post of Principal Social Work Officer (PSWO) (D1) post, to be designated as Principal Social Work Officer (Information Systems and Technology) [P(IST)], to head and provide directorate steer to the Information Systems and Technology Branch (ISTB) in the Social Welfare Department (SWD); and
- (b) to establish the next generation information technology infrastructure (ITI) for SWD.

BACKGROUND

2. SWD relies heavily on its own ITI and application systems of various scales to bring about improvements in service provision, operational efficiency and cost-effectiveness. To this end, ISTB has been playing a pivotal role in the formulation and implementation of departmental information technology (IT) policies and strategies to achieve service objectives, as well as overseeing the IT development in SWD with a staff size of around 5 600. It also assists in promoting the use of IT for corporate administration and service delivery in the social welfare sector comprising over 170 subvented non-governmental organisations (NGOs) working in close partnership with SWD for the provision of social welfare services. ISTB is currently headed by P(IST) which is a supernumerary PSWO (D1) post created on 14 October 2005 by holding against one vacant permanent PSWO (D1) post in the Department.

3. The existing ITI of SWD was set up in 2005. It includes data centres, network, file servers, personal computers, email system, security system and system management facilities, etc. to support effective and efficient operation of about 5 600 staff members at 238 SWD offices over the territory. The ITI also enables the development and daily use of IT application systems to cater for the business needs of SWD in the delivery of a wide range of quality welfare services.

JUSTIFICATION

(A) Redeployment of a permanent PSWO post

Lapse of supernumerary P(IST) Post

4. The supernumerary P(IST) post was created on a time-limited basis to oversee the enhancement and maintenance of the Technical Infrastructure project after its launch in early 2005, as well as the development and implementation of the Client Information System (CIS) project. The supernumerary post has been reviewed and approved for re-creation annually since 2006 to meet operational requirements.

5. In 2012, SWD commissioned a consultant to conduct a review of the Departmental Information Technology Plan (DITP). Among all other matters, the long-term need to retain the PSWO (D1) post in ISTB was examined critically. Noting the growing scale of IT development and the complexity of IT systems within SWD and in the social welfare sector, the consultant recommended that ISTB should continue to be headed by a directorate staff on an ongoing basis to sustain the provision of high level steer for formulation and implementation of policy, strategies, guidelines and initiatives on IT in SWD and the social welfare sector in support of the delivery of social welfare services.

6. The re-creation of the supernumerary P(IST) post will lapse on 14 October 2014 or until such time that the permanent redeployment proposal be approved by the Legislative Council (LegCo) Finance Committee (FC), whichever is the earlier.

Need to retain the post of P(IST)

Formulation of IT policies and strategies

7. The use of advance information technology is crucial to the delivery of public service, particularly for SWD which provides multifarious services to meet the basic needs of the public. In accordance with the guidelines promulgated by the Office of the Government Chief Information Officer (OGCIO), ISTB is obliged to regularly review and update the IT development in the Department, and formulate corresponding IT policies and strategies so as to accommodate new service requirements arising from changes in welfare service policies and government-wide IT strategies, as well as rising public expectations about the use of advance technology in service delivery. The P(IST) post at directorate level is essential to provide high level steer to ISTB on a long-term basis to review and formulate IT plans to guide IT-related resource planning and programme management.

Major ongoing IT activities

(a) IT development in SWD

(i) Management and upgrading of ITI

8. The ITI provides a communication backbone for SWD to deploy department-wide information systems. It allows the integration of IT systems and provides a common office environment for word processing, spreadsheet, email, etc. for about 5 600 users at 238 SWD offices. To provide a reliable ITI in support of the daily operation of SWD, ISTB is responsible for the proper and timely maintenance of the high-value facilities, including data centres, network, file servers, personal computers, email system, security system and system management facilities, etc. As the current ITI was set up in 2005, SWD plans to establish the next generation ITI by 2017-18 to keep pace with the latest technological advancement and to pave way for the implementation of the new IT projects under the DITP. Given the scale, cost and impact of the ITI, a directorate officer's strong steer is indispensable in directing SWD's ITI development from wider perspectives and in securing cooperation from counterparts throughout the planning, development, operation and maintenance stages.

(ii) Development and administration of application systems

9. Infrastructure aside, SWD has applied IT widely in corporate administration and service delivery. Currently, there are over 50 application systems in use. ISTB is responsible for overseeing the administration and enhancement of these application systems which have individual sophisticated designs and a great number of users. For instance, CIS, a client-focused, workflow-driven and automated case management system, is used by 2 700 staff members at over 140 offices for the provision of service to some 76 000 clients receiving social welfare services (excluding those receiving social security services). Ongoing enhancement of CIS is required to leverage new technologies for the implementation of new policy initiatives as well as the improvement of system efficiency and effectiveness.

10. ISTB is also responsible for the ongoing development of new application systems to cater for the changing business needs of SWD and to implement government-wide IT policy and initiatives. For the coming three years, six new application systems have been identified for development and implementation. These application systems include revamping the SWD's Intranet, establishment of the centralised data repository for department-wide information management, implementation of e-communication platform with a view to enhance SWD's interaction with subvented and subsidised welfare service providers, etc. Since all the new IT projects and system enhancements carry far-reaching implications on the departmental ITI, system security as well as service improvement, the steer at directorate level is essential in the development and administration of these systems to ensure their proper and stable functioning for a large number of users in different office locations.

(b) IT development in social welfare sector

11. To advise on and oversee the IT development in the welfare sector, SWD has set up the Joint Committee on IT for the Social Welfare Sector (JCIT) since 2001 under the chairmanship of the Director of Social Welfare with members from the social welfare and IT sectors. JCIT is responsible for formulating the IT strategy to identify the direction and development of IT for the social welfare sector. In view of rapid advancement of IT, ongoing review for the IT strategy is required to catch up with the latest progress of IT development. In April 2013, a review of the IT strategy was completed with a total of 13 recommendations formulated for the IT development in the social welfare sector in the coming five years. These recommendations aim at enhancing IT capacity

for NGOs, providing more flexibility in funding IT projects, enhancing data security and web accessibility, as well as sharing of resources and experiences among NGOs in IT development and management. P(IST) is responsible for overseeing the implementation of the concerned IT strategy and steer the formulation of facilitating measures.

12. The \$1 billion Social Welfare Development Fund (SWDF) was launched in January 2010 using the Lotteries Fund to provide NGOs with financial resources to develop, among others, IT projects to enhance agency administration and service delivery. ISTB is responsible for vetting the funding applications in respect of IT projects and monitoring implementation of the approved applications until their completion. Up till April 2014, NGOs have made use of SWDF in the development or enhancement of over 400 IT projects involving a total sum of about \$150 million. P(IST)'s steer and administration on each and every approved IT project are required, in particular the handling of special requests/concerns raised by the NGOs during project implementation, to safeguard the proper use of public money.

(c) Management of the IT Office

13. P(IST) is underpinned by a Chief Social Work Officer and a Senior Systems Manager, who oversee the Business Section and Technology Management Section respectively. These two functional sections are manned by a mix of about 60 social work, IT and clerical grade staff.

14. In view of the immense scope and growing complexity of IT development within SWD and in the social welfare sector, the high-value ITI and mission-critical application systems with read-across implications involved, as well as the operational experience required in overseeing various major IT initiatives, SWD considers that a PSWO post with extensive experience in the delivery of social welfare services and thorough understanding of the needs of the welfare sector is vital to the smooth operation of ISTB and the provision of quality service to the public in the long run. With IT being a strategic enabler for achieving SWD's service vision and corporate mission, P(IST)'s permanent steer at the directorate level is required for setting appropriate directions from wider perspectives and maintaining effective communication with the stakeholders internally and externally on a long-term basis so as to guide the various tasks as described in paragraphs 7 to 13 above. The job description of the proposed P(IST) post is at **Enclosure 1**. The existing and proposed organisation chart of SWD at the directorate level is at **Enclosure 2**.

Alternative Considered

15. SWD has critically examined the feasibility of identifying an existing branch head of the Headquarters to absorb the duties of the proposed P(IST). Given the rapid expansion in different service areas of social welfare, all existing branch heads are already fully committed to their responsibilities relating to elderly services, family and child welfare services, rehabilitation and medical social services, youth and correctional services, social security and subvention matters. Such an alternative is therefore considered not feasible.

(B) Establishment of next generation IT infrastructure

Need to establish new ITI

16. Having been in place for nine years, some product components of the current ITI will become obsolete. For example, network equipment that connects SWD offices to data centres will go out of support by October 2016, and Microsoft will not provide further support to SharePoint Server 2007, a software for document management and sharing, after October 2017. As a result, SWD cannot procure the necessary maintenance support for critical network equipment and cannot receive updated security patches for software after the de-support dates. Maintenance of the existing ITI with aged hardware and software is becoming increasingly costly and difficult. System reliability will also be undermined without proper and professional support. As such, replacement of aged products is deemed necessary. This will also ensure continual support from the concerned vendors.

17. Moreover, the current ITI setup is not able to support speedy deployment of security patches, full disk encryption, etc. to address security concerns. If security patches cannot be deployed in time, chances for computers being infected by new viruses will be higher. In case of a disaster at the existing data centre, data files will have to be restored at the backup data centre, with equipment properly configured and tested before SWD users can access the computer systems again. The whole recovery process under the current setup can take up to 72 hours. The security and serviceability of the ITI can only be enhanced by upgrading the existing infrastructure.

18. In view of the foregoing, the Establishment of Next Generation ITI (the Project) has been accorded the highest priority under the DITP formulated in June 2012. The Project aims at replacing the ageing hardware and software, leveraging new technology for improvement in system efficiency and effectiveness, as well as paving way for the development of new IT application systems to meet new and changing business needs of the Department.

19. Due to the enormous scale and complexity of the proposed ITI, SWD commissioned a consultant to conduct a Technical Study from October 2012 to September 2013 to design the overall system architecture and define the detailed functional requirements of the new ITI. In the Technical Study, 19 items (**Enclosure 3**) are recommended for the Project with a view to improving system efficiency and effectiveness as well as IT security. These items focus mainly on the improvement of network infrastructure by using advanced data centre design, centralised storage and data repository, the adoption of cloud computing and virtualisation technology, the establishment of secured e-communication platform, and enhanced security management for data loss protection, etc.

Anticipated Benefits

20. The new ITI will have the following benefits –

- (a) to further improve resilience and stability of ITI under a new system architecture which will enable more efficient recovery in eight hours or less in the event of system failure during disaster situation;
- (b) to optimise the use of computer resources and provide room for service and capacity expansion through the enhanced scalability, efficiency and capacity of the new network;
- (c) to enable a more flexible and scalable open platform for the implementation of new IT projects through the construction of a solid and robust foundation with the adoption of relevant technology such as cloud infrastructure;
- (d) to facilitate systematic and evidence-based data and impact analysis for better service planning and policy implementation

through the establishment of the centralised data repository infrastructure;

- (e) to facilitate the implementation of e-communication with a view to enhancing SWD's interaction with over 500 subvented and subsidised service providers in the welfare sector through electronic means; and
- (f) to ensure high-level protection to personal data by means of modern centralised data storage and backup technology coupled with high performance data encryption solution.

Cost Savings and Avoidance

21. We estimate that the proposed replacement of ITI will generate annual recurrent savings of \$37,967,000, comprising –

- (a) realisable savings of \$23,786,000 from 2015-16 onwards, which being annual recurrent cost of hardware and software maintenance, communication line, system support services, facility management and consumables for the existing ITI. The savings will be ploughed back for covering part of the recurrent costs of the new ITI;
- (b) notional staff savings of \$13,250,000 per annum including –
 - (i) \$3,003,000 from 2015-16 onwards through reduction in staff effort required for supporting the existing ITI. The savings of staff effort will be re-deployed to support the new ITI;
 - (ii) \$10,247,000 from 2017-18 onwards upon the implementation of a department-wide management information system on the new centralised data repository which can be set up subsequently on the new ITI. The use of the centralised data repository for data and impact analysis will achieve notional savings of manpower required for searching information from individual application systems, office statistics and case

files. However, the manpower saving is fragmented and cannot be realised by deletion of posts or deployment of the staff concerned to other services; and

- (c) cost avoidance of \$931,000 from 2017-18 onwards for new servers and related maintenance costs resulted from the adoption of cloud computing technology.

22. The implementation of the Project will also achieve a non-recurrent cost avoidance of \$13,212,000, arising from a reduction in the number of servers to be purchased from 137 to 70 through the adoption of cloud computing technology in the new ITI.

Implementation Plan

23. Subject to Members' views and subsequent approval obtained from the Legislative Council Finance Committee (FC), the Project will commence in July 2014 the earliest and the tentative completion dates of the major activities are as follows –

Activity	Tentative Completion Date
(a) Tendering for the implementation of the new ITI	July 2015
(b) Development and deployment of the new ITI	March 2017
(c) User acceptance test for the new ITI	May 2017
(d) System live run of the new ITI	July 2017

FINANCIAL IMPLICATIONS

(A) Redeployment of a permanent PSWO post

24. The proposal is cost-neutral to the Government in terms of additional notional annual salary at mid-point as follows –

	Post	Notional Annual Salary Cost at Mid-point (\$)	No. of Post
	P(IST)	1,465,200	1
<i>Less</i>	District Social Welfare Officer (Yau Tsim Mong) ¹	1,465,200	1
	Total	<u>0</u>	<u>0</u>

The full annual average staff costs, including salaries and on-cost, of a PSWO post is \$2,017,000. There will be no net increase upon the proposed redeployment of the PSWO post from Yau Tsim Mong District Social Welfare Office to ISTB. The proposal will also not give rise to any increase in non-directorate supporting staff.

(B) Establishment of next generation ITI

Non-recurrent Expenditure

25. According to the Technical Study, we estimate that the implementation of the Project will incur a non-recurrent cost of \$175,767,000 over a period of four years from 2014-15 to 2017-18. The cost breakdown of the non-recurrent expenditure is set out at **Enclosure 4**.

¹ The planning and provision of social welfare services are delivered through the District Social Welfare Offices (DSWOs) of SWD, each headed by a PSWO (D1). SWD has over the past years implemented a number of efficiency saving measures. These changes have necessitated a review of district structure with reference to the social and demographic characteristics, demands for social welfare services of each district and scope of control, including the number of service units under the supervision of each DSWO. The review recommended, among others, that the Yau Tsim Mong DSWO be merged with Kowloon City DSWO to form a new Kowloon City / Yau Tsim Mong DSWO. This proposal was implemented in October 2005. As a result of the review, there are presently 11 DSWOs over the territory. Upon the above merger, one PSWO post was released and is currently being held against for the creation of one supernumerary PSWO (D1) post in ISTB.

26. The Project also entails an additional non-recurrent staff cost of \$15,037,000 during the project period from 2014-15 to 2017-18. The cost represents a total of 140 man-months of social work and IT grade staff for planning, coordination and implementation of the project. SWD will absorb the requirement through internal redeployment.

Recurrent Expenditure

27. The ongoing maintenance and support of the new ITI will require an estimated recurrent cost of \$53,697,000 per annum at 2013 price level, of which \$23,786,000 will be offset by realisable savings upon retirement of the existing ITI as mentioned in paragraph 21(a) above. The remaining annual requirement of \$29,911,000 will be absorbed by SWD within its existing resources. In addition, a recurrent staff cost of \$3,003,000 per annum is also required to provide ongoing support for the new ITI. The resources will be redeployed from the savings of staff effort in supporting the existing ITI as stated in paragraph 21(b)(i) above.

ADVICE SOUGHT

28. Members are invited to comment on the above two proposals. Subject to Members' views, we plan to submit the proposal on the creation of a permanent P(IST) post to the LegCo Establishment Subcommittee in May 2014 and then both proposals to the FC in June 2014.

Social Welfare Department
April 2014

**Proposed Job Description for
Principal Social Work Officer (Information Systems and Technology)**

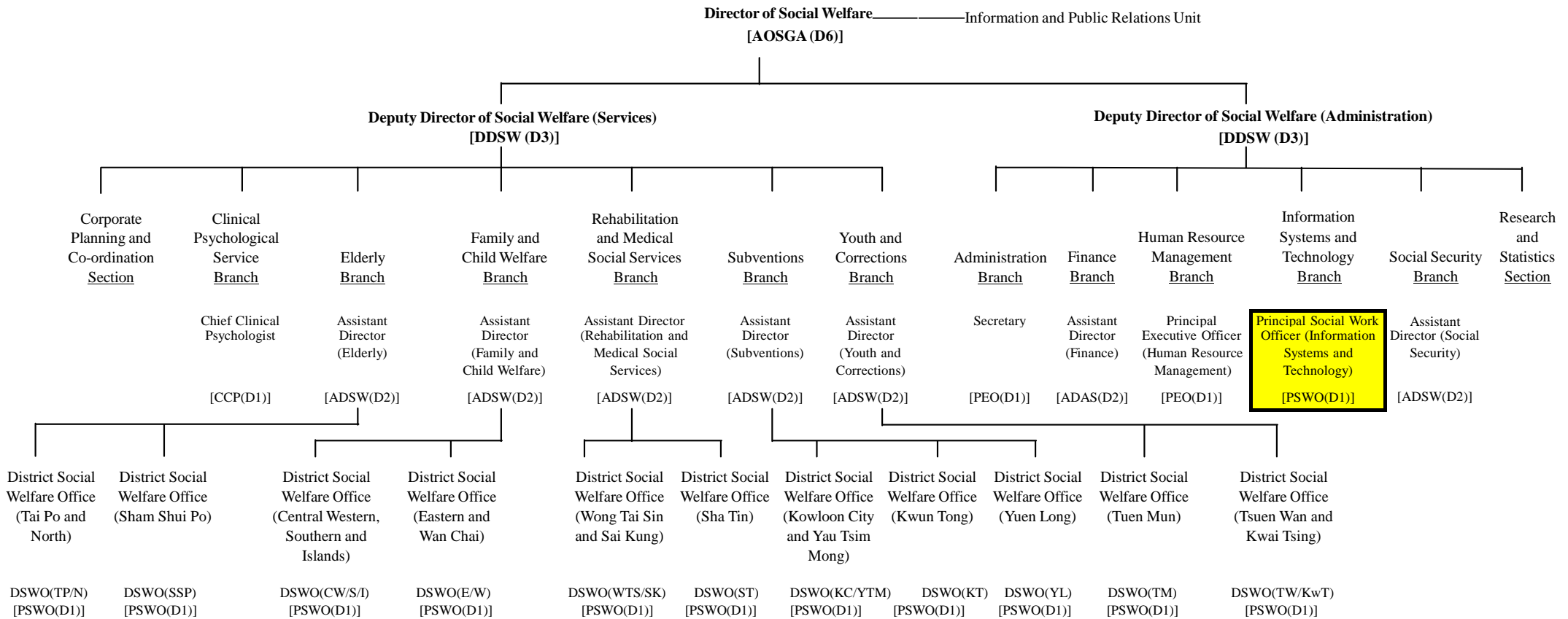
Rank : Principal Social Work Officer (D1)

Responsible to : Deputy Director of Social Welfare (Administration)

Main Duties and Responsibilities –

- (1) To assist in formulating information technology (IT) policy, guidelines and long-term IT strategy in the Department and promoting the use of IT in the social welfare sector.
- (2) To steer and oversee the development, implementation, management and redevelopment of IT infrastructure and all application systems in the Department.
- (3) To assist in monitoring the implementation of IT strategy in the social welfare sector and support the work of the Joint Committee on IT for the Social Welfare Sector chaired by the Director of Social Welfare.
- (4) To assist in the operation of the IT Steering Committee of the Department.
- (5) To manage and control the IT budget of the Department.
- (6) To review the IT training needs of staff in the Department and to formulate necessary training plans and support.
- (7) To oversee the operation of the Information Systems and Technology Branch.

Existing and Proposed Directorate Structure of Social Welfare Department



Legend:

AOSGA - Administrative Officer Staff Grade A
 DDSW - Deputy Director of Social Welfare
 ADSW - Assistant Director of Social Welfare
 PSWO - Principal Social Work Officer

ADAS - Assistant Director of Accounting Services
 PEO - Principal Executive Officer
 DSWO - District Social Welfare Officer

 Supernumerary post to lapse on 14 October 2014 / Proposed permanent post to be created

**Recommended Items
under the Establishment of the Next Generation ITI**

1. New Data Centres Setup
2. Network Infrastructure Establishment
3. Enterprise ITI and Centralised System Infrastructure Implementation
4. File Server and Backup Implementation
5. Email Upgrade
6. E-Communication Implementation
7. Centralised Data Repository Infrastructure Establishment
8. Identity Management System Upgrade
9. Desktop Operating System Upgrade
10. Virtualised Desktop Infrastructure Implementation
11. Desktop Security Solution Implementation
12. Mobile Computing Implementation
13. Enterprise System Management Implementation
14. Helpdesk Implementation
15. Security Information and Event Management Implementation
16. Data Loss Protection Implementation
17. Web Application Firewall and Database Activity Monitoring Implementation
18. Network Access Control Implementation
19. ITI Governance Establishment

**Non-recurrent Cost Breakdown for
the Establishment of the Next Generation ITI**

Expenditure	Purpose	Amount (\$'000)
(a) Hardware	Acquisition of computer hardware, including personal computers, servers, storage system, security devices, and backup and recovery equipment.	54,746
(b) Software	Acquisition of system software, including operating systems, virtualisation software, mobile device management system software, centralised data repository, enterprise system management software, backup and recovery software.	34,443
(c) Communication Network	Acquisition of network equipment and related services for the installation of communication lines connecting the two data centres and various service units of SWD.	24,445
(d) Implementation	Acquisition of implementation services from external service providers including system analysis and design, development and installation of the new ITI.	33,064
(e) Contract Staff	Hiring technical contract staff to provide project management services for the system development and implementation.	13,090
(f) Contingency	10% of the above expenditure items.	15,979
Total :		175,767