

Head 43 — CIVIL ENGINEERING DEPARTMENT

Controlling officer: the Director of Civil Engineering will account for expenditure under this Head.

Estimate 2000–01	\$892.1m
Establishment ceiling 2000–01 (notional annual mid-point salary value) representing an estimated 1 656 non-directorate posts at 31 March 2000 and at 31 March 2001	\$541.4m
In addition there will be an estimated 35 directorate posts at 31 March 2000 and at 31 March 2001.	
Capital Account commitment balance	\$74.6m

Controlling Officer's Report

Programmes

Programme (1) Tourism and Recreational Development †	This programme contributes to Policy Area 5: Travel and Tourism (Secretary for Economic Services).
Programme (2) Port and Marine Facilities §	This programme contributes to Policy Area 3: Air and Sea Communications (Secretary for Economic Services).
Programme (3) Site Formation and Reclamation	This programme contributes to Policy Area 22: Buildings, Lands and Planning (Secretary for Planning and Lands) and Policy Area 23: Environmental Protection and Conservation (Secretary for the Environment and Food).
Programme (4) Slope Safety and Geotechnical Standards	These programmes contribute to Policy Area 27: Intra-Governmental Services (Secretary for Works).
Programme (5) Geotechnical Services	
Programme (6) Supervision of Mining, Quarrying and Explosives	

† New programme as from 2000

§ Programme (2): Port and Marine Facilities covers both Programme (1): Airport and Port Development and Programme (2): Marine Facilities in the 1999 Controlling Officer's Report.

Detail

Programme (1): Tourism and Recreational Development

	1998–99 (Actual)	1999–2000 (Approved)	1999–2000 (Revised)	2000–01 (Estimate)
Financial provision (\$m)	7.2	7.7 (+6.9%)	7.1 (–7.8%)	29.5 (+315.5%)

Aim

- 2 The aim is to plan, design and implement tourism and recreational developments in Northeast Lantau.

Brief Description

3 In accordance with the Government's decision to develop Northeast Lantau into a tourism and recreational area, the department undertook the planning and design of the site formation together with the associated infrastructures for the proposed theme park development in Penny's Bay, Northeast Lantau.

- 4 The key performance measures relating to tourism and recreational development are:

Targets

	Target	1998 (Actual)	1999 (Actual)	2000 (Plan)
complete the feasibility study for Northshore Lantau Development (June 2000) (%)	100	29	70	100

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Indicators

	1998 (Actual)	1999 (Actual)	2000 (Estimate)
value of projects under planning and design (\$m)†	5,420	16,480	17,640
expenditure on works under construction (\$m)†.....	—	—	600

† New indicators as from 2000

Matters Requiring Special Attention in 2000–01

5 During 2000–01, the department will:

- recommend development schemes for Northeast Lantau under the Northshore Lantau Development Feasibility Study;
- commence the reclamation works for the theme park development;
- commence the detailed planning and design for the associated infrastructures for the proposed theme park development; and
- gazette the proposed road works for the theme park development.

Programme (2): Port and Marine Facilities

	1998–99 (Actual)	1999–2000 (Approved)	1999–2000 (Revised)	2000–01 (Estimate)
Financial provision (\$m)	243.4	224.0 (–8.0%)	217.2 (–3.0%)	204.9 (–5.7%)

Aim

6 The aims are to implement the port development programme; to design, construct and maintain public marine facilities, including seawalls, mooring areas and piers; to maintain adequate water depth in navigation channels in the harbour; and to provide advice and service to other departments on matters relating to marine works.

Brief Description

7 The department continued to plan and design port development projects at Tseung Kwan O Area 131. It continued to plan, design and implement typhoon shelter projects to provide additional sheltered areas to cope with the anticipated demand. The Hei Ling Chau Typhoon Shelter was opened in September 1999 while planning for future shelters continued.

8 In 1999, the department made satisfactory progress in implementing projects for marine facilities. The construction of jetties and dolphins at the Government dockyard on Stonecutters Island and the widening of the entrance to the China Ferry Terminal were completed. The construction of the fire boat berth at West Kowloon Reclamation, the construction of the pier at Tai Pai Kok and the reconstruction of the pier at Tung Lung Chau commenced. The planning and design for the re-construction of the Pak Sha Wan public pier was completed. The planning for the re-provisioning of the pier at Cheung Sha Wan Wholesale Market Complex Stage II commenced. The planning and design for the Tang Lung Chau Dangerous Goods Anchorage and the sheltered boat anchorage at Tai O, and the planning for the re-construction of the existing piers at Hei Ling Chau, Tai Lam Chung, Castle Peak, Peng Chau, Cheung Chau, Kat O Chau and Wu Kai Sha continued.

9 The department conducted hydraulic studies to investigate the impact of Tang Lung Chau Dangerous Goods Anchorage and to investigate the erosion of a section of coastline at Ha Pak Nai. The wave monitoring programme in the harbour continued and the wave measurements since 1994 were documented. A technical note on the design of wave absorbing seawalls was issued. Five research studies on the design of seawalls and reclamation, and the use of rubber fenders at seawall landings were completed. To identify problem areas of natural shore and man-made structures, a five-year study programme for the establishment of a shoreline database commenced.

10 The department satisfactorily maintained 105 kilometres of seawalls and 297 piers including franchised and licensed ferry piers. About three million cubic metres of material were dredged from the seabed for the maintenance of fairways and mooring areas, as well as from the Shing Mun River. Major structural repair works to 12 public piers commenced.

11 The department continued to check submissions for private marine facilities and to provide advice to other departments on matters relating to marine works. The targets in 1999 for inspection of piers and timely provision of responses to enquiries on information about marine facilities were met.

12 The key performance measures relating to port and marine facilities are:

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Targets

	Target	1998 (Actual)	1999 (Actual)	2000 (Plan)
inspect each public pier (urban: twice a year; rural: once a year) (%)	100	100	100	100
respond to enquiries on information about marine structures and facilities within eight days (%)†	100	100	100	100

† Target was improved from nine days to eight days as from 1999. The figure for 1998 is related to previous target.

Indicators

	1998 (Actual)	1999 (Actual)	2000 (Estimate)
expenditure on maintenance works and maintenance dredging (\$m)	63	80	78
submissions processed and advice provided	2 500	2 500	2 500
length of seawalls maintained (kilometres)	105	105	105
number of piers maintained	292	297	297
value of marine facilities projects under planning and design (\$m)	5,370	2,880	2,870
value of port projects under planning and design (\$m)	67,030	31,150	33,260
expenditure on marine facilities construction works (\$m)	34	26	52
expenditure on port construction works (\$m)	147	57	13
expenditure on maintenance and marine facilities construction works/post (\$m)	0.5	0.5	0.7
expenditure on port construction works/post (\$m)	4.9	4.4	4.3

Matters Requiring Special Attention in 2000–01

13 During 2000–01, the department will:

- ensure the adequate provision of public marine facilities and an appropriate level of service within the available resources;
- continue to maintain public marine facilities and fairways to a satisfactory level of service;
- carry out hydraulic modelling to produce a tidal stream atlas and wave atlas for Hong Kong Waters;
- continue the study for establishing the shoreline database;
- commence the re-construction of the public pier at Pak Sha Wan; and
- commence the feasibility study on the development of port facilities in Tuen Mun West.

Programme (3): Site Formation and Reclamation

	1998–99 (Actual)	1999–2000 (Approved)	1999–2000 (Revised)	2000–01 (Estimate)
Financial provision (\$m)	114.9	146.0 (+27.1%)	141.9 (–2.8%)	169.4 (+19.4%)

Aim

14 The aims are to undertake site formation and reclamation projects required for development; to advise and comment on land formation proposals; to ensure adequate provision of facilities for reception of inert construction and demolition materials for use as public fill in reclamation projects; and to implement environmental protection projects.

Brief Description

15 In 1999, the department implemented land formation projects, forming 38 hectares of land to cope with development needs. Various land formation projects were under planning. These major projects included the site formation (Phase 2) at Chung Hom Kok to provide a world class teleport; the land formation at Mount Davis Cottage Area, Chai Wan (north of Pamela Youde Hospital), Sham Tseng, Cha Kwo Ling and Kennedy Town (Lung Wah Street) to provide land for housing developments; the site formation in various parts of the territory to provide a total of eight sites for school developments; and the demolition of the Kwai Chung Incineration Plant. Design for the land formation at Anderson Road, Jordan Valley (near Choi Wan Road), Sai Kung Area 4 and Kennedy Town (Victoria Road), and the demolition of the Kennedy Town Incineration Plant commenced. A number of land formation projects, including those at Tseung Kwan O Area 137 (Stage 1 and 2), Fanling Area 36 (Phase 1), Hung Shui Kiu Area 13, West Kowloon

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Reclamation (Southern), Yung Shue Wan (Phase 1), Tuen Mun Area 38 (Stage 1) and Pak Shek Kok were under construction. The land formation project at Chung Hom Kok (Phase 1) was completed.

16 The department operated three public filling areas at Tuen Mun (closed in May 1999), Tseung Kwan O and Pak Shek Kok and a public fill stockpiling area at Mui Wo. It continued to identify opportunities to maximise the use of public fills in reclamation projects. About 5.9 million cubic metres of public fill were accepted in the public filling areas in 1999.

17 The department continued to operate the barging point at Sha Tin. It planned to set up a barging point at Tuen Mun Area 38 in early 2000. It completed studies and started detailed design for the operation of a network of long-term barging facilities on Hong Kong Island by 2002. To maintain adequate outlets on Hong Kong Island for construction and demolition materials prior to commissioning of the long-term facilities, two short-term facilities at Quarry Bay and Sai Ying Pun were commissioned in December 1999.

18 The department commenced the detailed design for the environmental improvement works to Shing Mun River using bioremediation technique. The project of artificial reef deployment at Yan Chau Tong to enhance fisheries resources was satisfactorily completed. A pilot project to remove polluted sediments at Cheung Sha Wan and Sham Wan Fish Culture Zones was completed.

19 The key performance measures relating to site formation and reclamation are:

Targets

	Target	1998 (Actual)	1999 (Actual)	2000 (Plan)
issue dumping licence within six days (%)†	100	95	95	95
recover construction and demolition material as public fill for reclamation (%).....	80	80	78	80

† Target will be improved from seven days to six days as from 2000. The figures for 1998 and 1999 are related to previous target.

Indicators

	1998 (Actual)	1999 (Actual)	2000 (Estimate)
area of land formed (hectares)	51	38	34
road constructed/widened for development (metres)	3 690	1 910	100
value of land formation projects under planning and design (\$m)	10,380	10,490	10,650
expenditure on construction for land production (\$m).....	500	510	490
area of land formed/post (square metres).....	3 290	3 170	2 960
expenditure on land production works/post (\$m)	3.1	3.1	3.0
volume of public fill accepted in public filling areas (million cubic metres)	5.0	5.9	5.3

Matters Requiring Special Attention in 2000-01

20 During 2000-01, the department will:

- continue to form land for development by reclamation and site formation;
- continue to co-ordinate the provision of adequate public filling facilities;
- provide public filling facilities at Pak Shek Kok, Tseung Kwan O, Tuen Mun and on Hong Kong Island;
- start the operation of the temporary sorting facility at Tseung Kwan O and continue the planning of the long-term sorting facilities on Hong Kong Island and in Kowloon aiming to provide more opportunities for recycling of inert construction and demolition materials;
- continue the detailed design and site investigation for implementing a network of long-term barging facilities on Hong Kong Island by early 2002;
- commence a strategic study for the long-term co-disposal of dredged mud and construction and demolition materials;
- commence planning for the site formation at the former Mount Butler Quarry;
- commence the detailed design and site investigation for the land formation at Cha Kwo Ling and Kennedy Town (Lung Wah Street);

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- continue the detailed design and site investigation for the land formation at Anderson Road and Jordan Valley (near Choi Wan Road);
- continue the detailed design for the land formation at Kennedy Town (Victoria Road) for school development;
- complete the detailed design for the land formation at Braemar Hill Road for school development; and
- commence the feasibility study of the land formation at Woodside, Quarry Bay for school development.

Programme (4): Slope Safety and Geotechnical Standards

	1998–99 (Actual)	1999–2000 (Approved)	1999–2000 (Revised)	2000–01 (Estimate)
Financial provision (\$m)	317.5	336.6 (+6.0%)	332.1 (–1.3%)	275.9 (–16.9%)

Aim

21 The aims are to check the geotechnical aspects of designs for building and civil engineering works; to identify and register man-made slopes and retaining structures; to complete the five-year Accelerated Landslip Preventive Measures (LPM) Programme; to implement the ten-year Extended LPM Programme to commence in the year 2000; to investigate serious landslides; to identify squatter dwellings which are especially vulnerable to landslides during heavy rainfall; to undertake public education related to slope safety; to set standards for geotechnical work; to provide advisory services to private slope owners on slope maintenance and improvement; and to audit slope maintenance by Government departments.

Brief Description

22 A Slope Safety Strategic Plan has been developed and adopted by the department to guide further development of the slope safety regime. Regarding landslip risk control, the checking of geotechnical aspects of construction works continues to be the foremost duty in terms of staff deployed. Geotechnical checks were made on 12 194 design proposals during the year. There were many more landslips than in the average year due to more rainfall, resulting in heavier input to handling incidents as required. The upgrading of sub-standard Government slopes is another important function. During 1999, a total of \$820 million was spent on the LPM Programme, upgrading works were completed on 267 Government slopes, and safety screening studies were completed for 291 private slopes. Priority was given to slopes affecting schools. Preparatory work for the ten-year Extended LPM Programme has been completed. Serious landslides occurring in 1999 were investigated as part of a three-year project on development and trial implementation of an integrated approach of slope assessment through systematic landslide studies which commenced in 1997. A strategy for the long-term implementation of landslide investigation has been formulated for implementation from the year 2000 onward. The maintenance responsibilities for the 54 000 man-made slopes in the Government Slope Catalogue have been identified. The department has inspected about 3 800 squatter structures in 1999 and has made rehousing recommendations on slope safety grounds.

23 The department continued the public education campaigns on slope maintenance and slope safety warnings. A training video for Government slope maintenance personnel and a teaching kit on slope safety for free issue to all secondary schools have been substantially completed. A new unit has been established in 1999 to enhance advisory services to private slope owners on slope maintenance and improvement. The landslip warning messages have been amplified by frequent TV broadcasting of announcements of public interest. A computerised Slope Information System (SIS) has been established, and information in the SIS has been available on the Internet since March 1999. First round audits of Government slope maintenance works of the departments will be completed in 2000. A new strategy has been prepared to improve the stability of old Government slopes not covered by the LPM Programme through the application of enhanced preventive maintenance. The results of research work on slope safety and other geotechnical topics were disseminated through the publication of geotechnical reports. Work continues on the preparation of the Highway Slope Manual. The Landslip Warning System has been improved based on a review of the correlation between rainfall and landslides and upgrading the Geotechnical Engineering Office automated raingauge system. The upgraded raingauge system comprises state-of-the-art equipment with improved data processing capabilities. The area coverage of the raingauges has also improved with the number of GEO raingauges increased from 48 to 86.

24 The key performance measures in respect of slope safety and geotechnical standards are:

Targets

	Target	1998 (Actual)	1999 (Actual)	2000 (Plan)
provide information about a slope within five days of an application (%)†	100	100	100	100

† Target was improved from ten days to five days as from 1999. The figure for 1998 is related to previous target.

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Indicators

	1998 (Actual)	1999 (Actual)	2000 (Estimate)
new features registered	4 960	500	500
detailed stability studies completed on Government slopes§ ..	150	255	250
slopes and structures upgraded	240	267	250
safety screening studies of private slopes§	400	291	300
value of LPM (\$m).....	700	820	830
value of LPM/post (\$m).....	3.60	4.00	4.00
submissions checked	13 050	12 194	10 000
submissions checked /post	111	117	81
inspections of active construction sites	899	1 090	950
guidance documents produced	28	34	34

§ Indicators have been revised in line with the 1999 Policy Address.

Matters Requiring Special Attention in 2000–01

25 During 2000–01 the department will:

- implement the ten-year Extended LPM Programme;
- commence the long-term implementation of landslide investigation;
- assist Government departments in slope maintenance by prioritising slopes for maintenance action and carrying out audits to maintenance standards;
- strengthen the education campaign on slope safety;
- continue to closely monitor construction safety measures in slope works with a view to reducing construction accidents; and
- enhance the advisory services provided to private slope owners on slope maintenance and improvement.

Programme (5): Geotechnical Services

	1998–99 (Actual)	1999–2000 (Approved)	1999–2000 (Revised)	2000–01 (Estimate)
Financial provision (\$m)	135.1	150.8 (+11.6%)	145.3 (–3.6%)	143.2 (–1.4%)

Aim

26 The aims are to provide ground investigation, materials testing, geological survey and other geotechnical services; and to manage the Hong Kong Special Administrative Region's (HKSAR) fill resources and mud disposal capacity.

Brief Description

27 In 1999, the department met its targets in respect of geotechnical services. Eight term contracts for ground investigation, soil and rock testing and geophysical survey were let in 1999. The Public Works Laboratories (PWL) continued to serve the construction industry by undertaking some 350 000 tests on construction materials, and applying for Hong Kong Laboratory of Accreditation Scheme (HOKLAS) accreditation to more calibration procedures. Research and development activities centred on durability of concrete, epoxy coated reinforcement bars, behaviour of loose fill and properties of clay-rich saprolite. In 1999 the department investigated the areas of Shatin, Pokfulam and Kwai Chung for geological features related to landslides. Studies continued on the mineralogy and shear strength of clay seams and of borehole geophysical methods. In 1999, major upgrading of the department's geoscience database was completed, and a marine magnetic survey was completed in central and western waters of the HKSAR. Research into the distribution and mechanisms of landsliding on natural terrain as well as analyses of the landslide database continued, and compilation of guidelines for natural terrain landslide risk assessment commenced. The procedures developed and the interim risk guidelines are being reviewed. In 1999 the department provided geotechnical advisory services to Government departments on a wide range of projects. The Geotechnical Information Unit in the Civil Engineering Library served about 12 000 customers during the year.

28 In connection with the management of the HKSAR's fill resources and mud disposal capacity, the department, on behalf of the Fill Management Committee, continues to undertake a series of geotechnical, environmental and ecological studies to examine the effects of the dredging and disposal activities, and to investigate possible ways to avoid or minimise adverse effects on the marine environment. Phase VI of the Study on environmental and ecological studies for sand dredging and mud disposal, technical assessment of potential sand sources and collection of information for increased use in Hong Kong projects of outside sand sources was completed. The disposal strategy and site selection for contaminated mud for the next ten years was studied between February 1999 and December 1999. Implementation of a centralised monitoring scheme for disposal of uncontaminated mud commenced in October 1999.

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29 The key performance measures in respect of geotechnical services are:

Targets

	Target	1998 (Actual)	1999 (Actual)	2000 (Plan)
provide assistance at the registration counter of the Civil Engineering Library within ten minutes waiting time (%)	100	100	100	100
provide information about geology and natural resources within five days of a request (%)†	100	100	100	100

† Target was improved from nine days to five days as from 1999. The figure for 1998 is related to previous target.

Indicators

	1998 (Actual)	1999 (Actual)	2000 (Estimate)
ground investigation and laboratory soil and rock testing term contracts:			
total expenditure (\$m).....	200	130	150
total length of drilling carried out in soil (m).....	13 200	10 500	12 000
total length of drilling carried out in rock (m)	5 830	5 200	5 000
triaxial testing of soil specimens tested (No.)	2 160	970	1 300
material tests conducted in the PWL and in contract laboratories managed by the PWL (thousand)	290	360	350
land-use planning and engineering feasibility study advisory cases handled.....	1 525	1 577	1 550
geotechnical engineering advisory cases handled	275	389	340
advisory cases handled/post	27	27	27
value of fill management investigations and studies (\$m)	11	6	16
fill management reports and major papers	55	39	25

Matters Requiring Special Attention in 2000–01

30 During 2000–01, the department will:

- develop alternative management options for disposal of contaminated mud;
- implement a centralised monitoring and management scheme for disposal of uncontaminated mud;
- continue assessments of marine fill resources to support infrastructure development;
- produce a local standard as a basis for HOKLAS accreditation for soil consolidation and shear strength test;
- obtain ISO 9001 Certification for management of Works Bureau's List of Specialist Contractors in the category of Ground Investigation Field Work and Soil & Rock Testing; and
- develop a natural terrain landslide risk management strategy.

Programme (6): Supervision of Mining, Quarrying and Explosives

	1998–99 (Actual)	1999–2000 (Approved)	1999–2000 (Revised)	2000–01 (Estimate)
Financial provision (\$m)	63.6	69.3 (+9.0%)	67.4 (–2.7%)	69.2 (+2.7%)

Aim

31 The aims are to supervise contracts for quarrying in Hong Kong, to enforce the Mining Ordinance, to enforce the Dangerous Goods Ordinance in connection with the use of explosives, and to safeguard the public from the misuse of explosives.

Brief Description

32 Satisfactory progress was made by the department in respect of supervision of mining and quarrying during the year. The Mines and Quarries Division continued to supervise the contract quarry at Lam Tei and the rehabilitation contracts for Shek O Quarry, Lamma Quarry and Anderson Road Quarry. The department issued permits under the

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Sand Ordinance for the importation and transportation of sand, and regulated the use of site crushers on both public and private construction sites. Regular inspections of quarry sites were maintained to enforce safety regulations.

33 Satisfactory progress was made by the department in respect of supervision of the use of explosives during the year. To protect the public from the misuse of explosives, the department maintains strict control over the storage, handling, transportation and use of explosives and pyrotechnics from their manufacture or importation to their firing on construction sites or discharge points.

34 The key performance measures in respect of supervision of mining, quarrying and explosives are:

Targets

	Target	1998 (Actual)	1999 (Actual)	2000 (Plan)
issue a Sand Removal Permit within two days of an application which has satisfied government requirements (%)..	100	100	100	100
issue a Licence to Manufacture Explosives within four days of an application, where prelicensing requirements have been satisfied (%)† ...	100	100	100	100
issue a Permit to Remove Explosives within one day of an application (%).....	100	100	100	100
issue a Licence to Store Explosives within four days of an application where prelicensing requirements have been satisfied (%)†.....	100	100	100	100
issue a Licence to Use Explosives within four days of an application where prelicensing requirements have been satisfied (%)†.....	100	100	100	100
endorse Licence to Import or Export Explosives within one day of an application (%).....	100	100	100	100
issue a Mine Blasting Certificate within three days of an applicant passing an examination (%).....	100	100	100	100

† Target will be improved to four days as from 2000. The figures for 1998 and 1999 are related to previous targets of six days and five days respectively.

Indicators

	1998 (Actual)	1999 (Actual)	2000 (Estimate)
aggregates processed by contract quarries (million tonnes)....	8.3	8.2	8.2
revenue from royalty and rental payments (\$m).....	28.2	24.4	25
Sand Removal Permits issued.....	247	232	250
quarrying and rock crushing contracts supervised.....	4	4	4
safety inspections of quarries.....	48	48	48
tonnes of explosive consumed.....	3 600	2 790	3 000
number of blasting activities.....	4 865§	8 350§	4 000
inspections of blasting sites.....	678	715	650
inspections of pre-licensed sites, magazines, manufacturing plants and stores, and pyrotechnics.....	757	1 380	1 250
inspections/post.....	239	350	300
warnings issued.....	4	21	12
licences and permits granted.....	6 672	11 080	9 000
licences and permits renewed.....	140	175	170
number of permits to use pyrotechnics processed.....	201	180	200
tonnes of explosives delivered from government explosives depots.....	562	615	500
tonnes of explosives delivered/post.....	7	9	7
number of deliveries of explosives.....	2 600	2 480	2 300
number of deliveries of explosives/post.....	31	34	30

§ Including 2 100 numbers of one-shot blast in 1998 and 3 734 in 1999.

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Matters Requiring Special Attention in 2000–01

35 During 2000–01, the department will:

- assist Information Technology and Broadcasting Bureau in providing training and formulating guidelines/criteria on the use of pyrotechnics and explosives in film making;
- review and revise Dangerous Goods Ordinance together with Security Bureau and other Departments (i.e. Fire Services Department, Electrical and Mechanical Services Department and Marine Department); and
- carry out a study on the need for future quarrying in Hong Kong.

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ANALYSIS OF FINANCIAL PROVISION

Programme	1998–99 (Actual) (\$m)	1999–2000 (Approved) (\$m)	1999–2000 (Revised) (\$m)	2000–01 (Estimate) (\$m)
(1) Tourism and Recreational Development.....	7.2	7.7	7.1	29.5
(2) Port and Marine Facilities	243.4	224.0	217.2	204.9
(3) Site Formation and Reclamation.....	114.9	146.0	141.9	169.4
(4) Slope Safety and Geotechnical Standards...	317.5	336.6	332.1	275.9
(5) Geotechnical Services.....	135.1	150.8	145.3	143.2
(6) Supervision of Mining, Quarrying and Explosives.....	63.6	69.3	67.4	69.2
	881.7	934.4 (+6.0%)	911.0 (–2.5%)	892.1 (–2.1%)

Note: The responsibility for port development previously under Programme 1 will be transferred to Programme 2 with effect from April 2000. Moreover, the responsibility for the disposal of contaminated mud under Programme 3 will be transferred from Secretary for Planning and Lands to Programme 5 under Secretary for Works with effect from April 2000. For comparison purposes, the actual expenses for 1998–99 and the approved and revised estimates for 1999–2000 have been suitably adjusted to reflect the changes.

Analysis of Financial and Staffing Provision

Programme (1)

Provision for 2000–01 is \$22.4 million (315.5%) higher than the revised estimate for 1999–2000. This is mainly due to an increase of 36 posts resulting from the creation of posts and staff redeployment for the proposed theme park development project in Northeast Lantau.

Programme (2)

Provision for 2000–01 is \$12.3 million (5.7%) lower than the revised estimate for 1999–2000. This is mainly due to a net decrease of 42 posts associated with the savings identified under the Enhanced Productivity Programme, redeployment of staff to Programme 1 for the proposed theme park development project, and adjusted staff requirements for implementing port-related projects based on the latest implementation programme.

Programme (3)

Provision for 2000–01 is \$27.5 million (19.4%) higher than the revised estimate for 1999–2000. This is mainly due to a net increase of 12 posts associated with the creation of posts for the barging point and school site formation projects and additional staff requirements for undertaking housing development projects, and increased operating costs for barging points.

Programme (4)

Provision for 2000–01 is \$56.2 million (16.9%) lower than the revised estimate for 1999–2000. This is mainly due to decreased capital expenditure, partly offset by the provision for the net increase of one post as a result of re-distribution of work and the Enhanced Productivity Programme.

Programme (5)

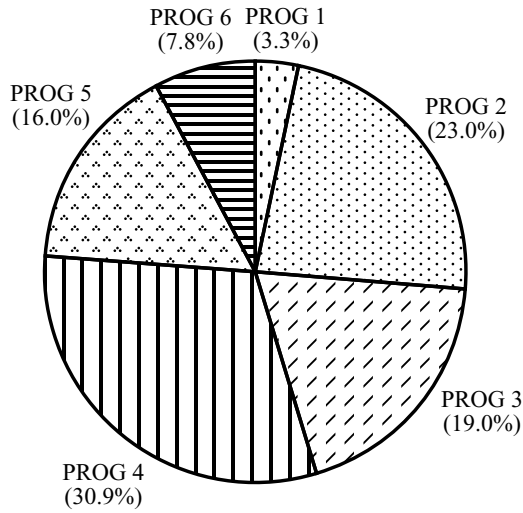
Provision for 2000–01 is \$2.1 million (1.4%) lower than the revised estimate for 1999–2000. This is mainly due to a net decrease of seven posts as a result of re-distribution of work and savings identified under the Enhanced Productivity Programme.

Programme (6)

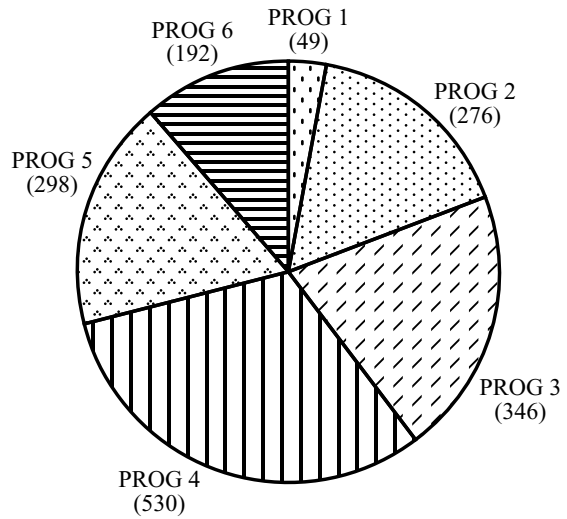
Provision for 2000–01 is \$1.8 million (2.7%) higher than the revised estimate for 1999–2000. This is mainly due to salary increments for existing staff and increased operating expenses.

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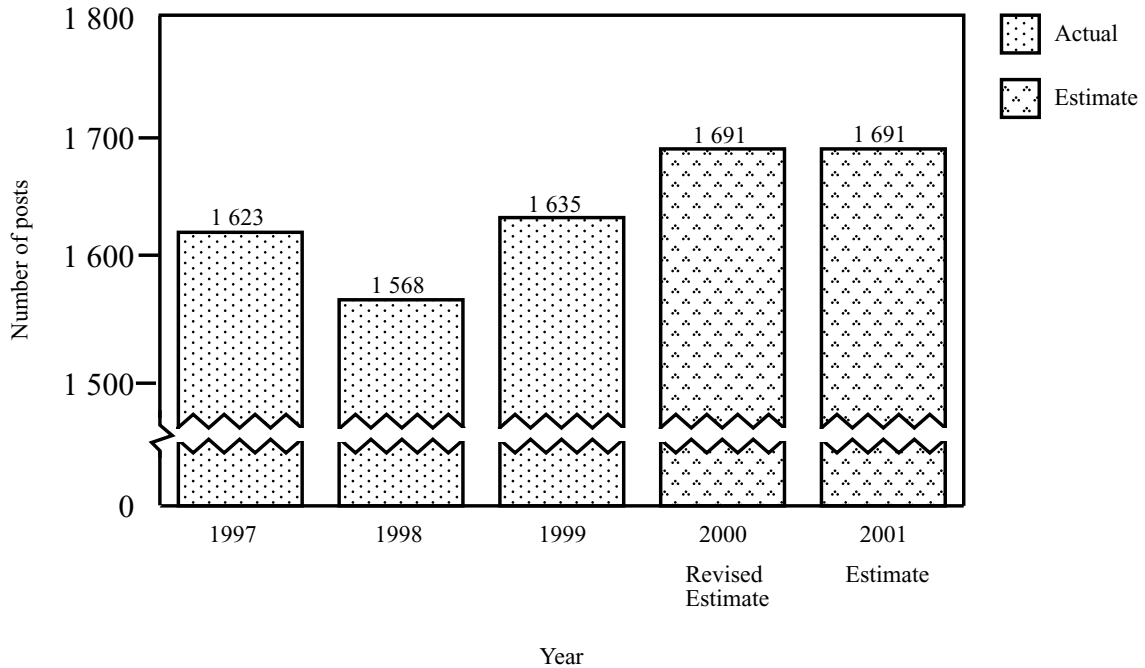
*Allocation of provision
to programmes
(2000-01)*



*Staff by programme
(as at 31 March 2001)*



*Changes in the size of the establishment
(as at 31 March)*



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Sub-head (Code)		Actual expenditure 1998-99	Approved estimate 1999-2000	Revised estimate 1999-2000	Estimate 2000-01
		\$'000	\$'000	\$'000	\$'000
Recurrent Account					
I — Personal Emoluments					
001	Salaries	595,194	632,354	618,678	634,397
002	Allowances	34,702	40,000	30,634	30,634
007	Job-related allowances	1,419	2,000	1,859	1,859
	Total, Personal Emoluments	<u>631,315</u>	<u>674,354</u>	<u>651,171</u>	<u>666,890</u>
III — Departmental Expenses					
121	Contract maintenance	99,628	86,886	86,886	107,486
149	General departmental expenses	66,093	81,378	81,378	86,759
	Total, Departmental Expenses	<u>165,721</u>	<u>168,264</u>	<u>168,264</u>	<u>194,245</u>
	Total, Recurrent Account	<u>797,036</u>	<u>842,618</u>	<u>819,435</u>	<u>861,135</u>
Capital Account					
I — Plant, Equipment and Works					
661	Minor plant, vehicles and equipment (block vote)	2,252	4,800	4,766	3,531
	Plant, vehicles and equipment	—	4,900	4,900	—
	Total, Plant, Equipment and Works	<u>2,252</u>	<u>9,700</u>	<u>9,666</u>	<u>3,531</u>
II — Other Non-Recurrent					
700	General other non-recurrent	81,486	81,102	81,102	25,694
841	Minor consultancy studies (block vote)	963	1,000	750	1,748
	Total, Other Non-Recurrent	<u>82,449</u>	<u>82,102</u>	<u>81,852</u>	<u>27,442</u>
	Total, Capital Account	<u>84,701</u>	<u>91,802</u>	<u>91,518</u>	<u>30,973</u>
	Total Expenditure	<u><u>881,737</u></u>	<u><u>934,420</u></u>	<u><u>910,953</u></u>	<u><u>892,108</u></u>

Head 43 — CIVIL ENGINEERING DEPARTMENT

Details of Expenditure by Subhead

The estimate of the amount required in 2000–01 for the salaries and expenses of the Civil Engineering Department is \$892,108,000. This represents a decrease of \$18,845,000 against the revised estimate for 1999–2000 and an increase of \$10,371,000 on actual expenditure in 1998–99.

Recurrent Account

Personal Emoluments

2 Provision of \$666,890,000 for personal emoluments represents an increase of \$15,719,000 over the revised estimate for 1999–2000 and takes into account the full-year provision for posts created and filled in 1999–2000.

3 The establishment at 31 March 2000 will be 1 689 permanent posts and two supernumerary posts. No change in establishment is expected in 2000–01.

4 Subject to certain conditions, the controlling officer may under delegated powers create or delete non-directorate posts during 2000–01, but the notional annual mid-point salary value of all such posts must not exceed \$541,379,000.

5 Provision of \$30,634,000 under *Subhead 002 Allowances* is for standard allowances and the following non-standard allowance—

	<i>Rate</i>
post allowance for Survey Officers and Senior Survey Officers in the land and engineering streams	monthly allowance equal to the officer's next increment.

6 Provision of \$1,859,000 under *Subhead 007 Job-related allowances* is for standard job-related allowances.

Departmental Expenses

7 Provision of \$107,486,000 under *Subhead 121 Contract maintenance* includes provision for maintaining public filling areas, seawalls and piers, and for maintenance dredging at navigational channels, drainage outfalls and typhoon shelters. The increase of \$20,600,000 (23.7%) over the revised estimate for 1999–2000 is mainly due to increased provision for maintaining public filling facilities and temporary sorting facility.

8 Provision of \$86,759,000 under *Subhead 149 General departmental expenses* represents an increase of \$5,381,000 (6.6%) over the revised estimate for 1999–2000. This is mainly due to provision for employing non-civil service contract staff.

Capital Account

Plant, Equipment and Works

9 Provision of \$3,531,000 under *Subhead 661 Minor plant, vehicles and equipment (block vote)* represents a decrease of \$1,235,000 (25.9%) against the revised estimate for 1999–2000. This is mainly due to decreased requirement for new or replacement equipment.

Other Non-Recurrent

10 Provision of \$1,748,000 under *Subhead 841 Minor consultancy studies (block vote)* is for engaging consultants to conduct minor studies costing above \$100,000 but not exceeding \$2,000,000 each. The increase of \$998,000 (133.1%) over the revised estimate for 1999–2000 is mainly due to increase in requirements.

Head 43 — CIVIL ENGINEERING DEPARTMENT

Capital Account

Commitments

Sub-head (Code)	Item (Code)	Ambit	Approved commitment	Accumulated expenditure to 31.3.99	Revised estimated expenditure for 1999–2000	Balance
			\$'000	\$'000	\$'000	\$'000
700		<i>General other non-recurrent</i>				
	523	Quantitative risk assessment of landslide hazard	8,500	4,139	1,550	2,811
	524	Consultancy service for developing an improved process in assessing slope stability	115,500	74,217	30,500	10,783
	525	Consultancy service for developing measures in enhancing statutory geotechnical control over private slopes and developments	41,700	10,945	5,800	24,955
	526	Consultancy service for identifying the maintenance responsibility of man- made slopes	73,600	43,981	25,522	4,097
	527	Study on the use of prescriptive measures in slope improvement works	5,000	1,859	1,000	2,141
	528	Provision of warning signs in squatter areas.....	5,000	413	1,400	3,187
	529	Improvement of landslip warning system.....	7,500	3,356	3,670	474
	530	Engaging professional services to develop educational toolkits on slope maintenance and slope safety....	2,300	165	1,935	200
	531	Preparation of a highway slope manual ..	5,000	550	2,000	2,450
	532	Mineralogical and strength testing of clay-rich weathered rocks.....	2,400	523	1,000	877
	533	Evaluation of downhole geophysical and optical methods for ground investigation	5,060	749	4,000	311
	534	Monitoring of uncontaminated mud disposal area at South Cheung Chau and East Ninepins	7,800	—	2,100	5,700
	535	Monitoring of uncontaminated mud disposal area at north of Lantau and south of Tsing Yi.....	17,100	—	500	16,600
		Total	<u>296,460</u>	<u>140,897</u>	<u>80,977</u>	<u>74,586</u>