Controlling officer: the Director of Civil Engineering and Development will account for expenditure un	der this Head.
Estimate 2019–20	\$3,040.4m
<b>Establishment ceiling 2019–20</b> (notional annual mid-point salary value) representing an estimated 1 931 non-directorate posts as at 31 March 2019 rising by 67 posts to 1 998 posts as at 31 March 2020	\$1,161.5m
In addition, there will be an estimated 66 directorate posts as at 31 March 2019 rising by two posts to 68 posts as at 31 March 2020.	
Commitment balance	\$36.2m

## **Controlling Officer's Report**

<b>Programmes</b>
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Programme (1) Tourism and Recreational This programme contributes to Policy Area 5: Travel and Tourism (Secretary for Commerce and Economic Development). **Development Programme (2) Port and Marine Facilities** This programme contributes to Policy Area 3: Air and Sea Communications and Logistics Development (Secretary for Transport and Housing) and Policy Area 21: Land and Waterborne Transport (Secretary for Transport and Housing). Programme (3) Provision of Land and This programme contributes to Policy Area 18: Recreation, Infrastructure Culture, Amenities and Entertainment Licensing (Secretary for Home Affairs), Policy Area 21: Land and Waterborne Transport (Secretary for Transport and Housing) and Policy Area 22: Buildings, Lands, Planning, Heritage Conservation, Greening and Landscape (Secretary for Development). Programme (4) Slope Safety and This programme contributes to Policy Area 24: Water Supply, Geotechnical Standards Drainage and Slope Safety (Secretary for Development). This programme contributes to Policy Area 22: Buildings, **Programme (5) Greening and Technical** Lands, Planning, Heritage Conservation, Greening and Services Landscape (Secretary for Development). This programme contributes to Policy Area 24: Water Supply, **Programme (6) Supervision of Mining,** Quarrying and Explosives Drainage and Slope Safety (Secretary for Development). This programme contributes to Policy Area 23: Environmental Programme (7) Management of Protection, Conservation, Power and Sustainable Development Construction and **Demolition Materials** (Secretary for the Environment). This programme contributes to Policy Area 22: Buildings, **Programme (8) Advice on Development** Lands, Planning, Heritage Conservation, Greening and **Proposals** 

### **Detail**

### Programme (1): Tourism and Recreational Development

	2017–18	2018–19	2018–19	2019–20
	(Actual)	(Original)	(Revised)	(Estimate)
Financial provision (\$m)	49.2	51.2	51.8 (+1.2%)	<b>54.1</b> (+4.4%)

Landscape (Secretary for Development).

(or +5.7% on2018–19 Original)

## Aim

The aim is to plan, design and implement the supporting engineering works for the tourism and recreational developments in Lei Yue Mun, as well as to provide engineering input to the development plans of the Ocean Park and Hong Kong Disneyland Resort, and the development of Kai Tak Tourism Node.

### **Brief Description**

- 3 To strengthen the position of Hong Kong as a premier destination for visitors, the Department continued to provide engineering advice to Tourism Commission on the development plans of the Ocean Park and Hong Kong Disneyland Resort, as well as to co-ordinate and liaise with these two theme parks and relevant parties.
- 4 To capitalise on the strength of the Lei Yue Mun area, being one of the most popular tourist attractions in Hong Kong for its seaside ambience and excellent seafood, and to enhance its attractiveness, the Department continued with the planning and detailed design of a public landing facility and related marine works in Lei Yue Mun to facilitate visitors' access by sea.
  - 5 The key performance measures relating to tourism and recreational development are:

#### Indicators

	2017 (Actual)	2018 (Actual)	2019 (Estimate)
commitment balance of projects under planning, design and			
construction (\$m)a	1,696.2	1,751.6	1,814.6
expenditure on works under construction (\$m)	0	0	0

α Revised scope and description of the previous indicator "value of projects under planning and design" as from 2018. In addition to projects under planning and design, committed value of projects under construction was included in the indicator to present a full picture of ongoing projects. For comparison, the figure for 2017 had been adjusted accordingly.

## Matters Requiring Special Attention in 2019–20

- **6** During 2019–20, the Department will continue:
- to monitor and co-ordinate the development plans of the Ocean Park and Hong Kong Disneyland Resort, and the development of Kai Tak Tourism Node; and
- the planning and design of the proposed public landing facility and related marine works in Lei Yue Mun.

### **Programme (2): Port and Marine Facilities**

	2017–18 (Actual)	2018–19 (Original)	2018–19 (Revised)	2019–20 (Estimate)
Financial provision (\$m)	233.6	236.7	265.8 (+12.3%)	<b>257.3</b> (-3.2%)
				(or +8.7% on 2018–19 Original)

#### Aim

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

## **Brief Description**

- **8** In 2018, the Department continued the planning, design and construction of various projects for improving port and marine facilities. The Department carried out the residual dredging works at the Kwai Tsing Container Basin and its approach channel.
- **9** The Department maintained 127 kilometres of seawalls, 318 piers including public piers as well as franchised and licensed ferry piers, all fairways, anchorage areas and major tidal river channels.
- 10 The Department continued to vet submissions for private marine facilities and to provide advice and services to other departments on matters relating to marine works.

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

### **Targets**

	Target	2017 (Actual)	2018 (Actual)	2019 (Plan)
inspecting each pier (urban: twice a year; rural: once a year) (%)responding to enquiries on information	100	100	100	100
about marine facilities within seven days (%)\$	100	100	100	100

Revised description of the previous target "responding to enquiries on information about marine structures and facilities within seven days" as from 2018.

#### **Indicators**

	2017 (Actual)	2018 (Actual)	2019 (Estimate)
expenditure on maintenance works and maintenance			
dredging (\$m)	91.4	120.6	92.0
submissions processed and advice provided	2 050	2 050	2 050
length of seawalls maintained (km)τ	127		_
piers maintainedτ	317		
commitment balance of marine facilities and port projects under planning, design and construction (\$m) $\Omega$ expenditure on marine facilities and port construction	216.4	158.7	179.2
works (\$m)	92.8	1.5	40.0

- τ Indicator removed as from 2018 as the information on seawalls and piers maintained is available under Brief Description of this Programme.
- Ω Revised scope and description of the previous indicator "value of marine facilities and port projects under planning and design" as from 2018. In addition to projects under planning and design, committed value of projects under construction was included in the indicator to present a full picture of ongoing projects. For comparison, the figure for 2017 had been adjusted accordingly.

### Matters Requiring Special Attention in 2019-20

12 During 2019–20, the Department will continue to upgrade the marine facilities.

## Programme (3): Provision of Land and Infrastructure

	2017–18 (Actual)	2018–19 (Original)	2018–19 (Revised)	2019–20 (Estimate)
Financial provision (\$m)	598.7	668.2	673.1 (+0.7%)	<b>776.9</b> (+15.4%)
				(or +16.3% on 2018–19 Original)

## Aim

13 The aim is to provide land and supporting infrastructure for development.

## **Brief Description**

- 14 The Department is responsible for planning, co-ordinating, programming and implementing provision of land and supporting infrastructure to accommodate various types of development for the public and private sectors to meet the needs of the community.
- 15 In 2018, the Department continued the reclamation works for the Tung Chung New Town Extension (TCNTE), the site formation and infrastructure works for development of Anderson Road Quarry site, and the design for the first phase works of the Kwu Tung North and Fanling North New Development Areas (NDAs). The Department commenced the construction of the advance works for the Initial Sites of Kam Tin South, and the construction of the Government Flying Service Kai Tak Division to tie in with the TCNTE implementation.
- 16 The Department commenced the advance works and the detailed design of the main works package 1 for the Lok Ma Chau Loop development.

- 17 The Department continued the land formation and engineering infrastructure works of Wan Chai Development Phase II to facilitate the construction of Central Wan Chai Bypass and Shatin to Central Link projects. The Department commenced the construction of footbridge across Hip Wo Street near the junction of Hip Wo Street/Mut Wah Street, Kwun Tong.
- 18 The Department commenced the investigation and design of the site formation and infrastructure works for industrial sites in Tuen Mun, Hung Shui Kiu and Yuen Long, and the detailed design of Yuen Long South development stage 1 works. The Department continued the detailed design of the site formation works for police facilities in Kong Nga Po, and the design for various infrastructure projects covering the phased development of ex-Cha Kwo Ling Kaolin Mine Site. The Department also continued the detailed design of Hung Shui Kiu NDA advance works (part) and stage 1 works, and the detailed design of the site formation and infrastructure works for the TCNTE.
- 19 The Department commenced the technical study on potential sites for relocation of wholesale markets and other industrial uses in North West Tsing Yi, the feasibility study on fostering a pedestrian and bicycle-friendly environment in Hung Shui Kiu NDA and Yuen Long South development, the study on river revitalisation and flood attenuation facilities for Hung Shui Kiu NDA, the urban and green design study for the future town centre and the district commercial node in Hung Shui Kiu NDA, and the feasibility study on preliminary technical review on potential sites in Yuen Long Areas 13 and 14 for housing development. The Department continued the planning and engineering studies on the future land use at ex-Lamma Quarry Area at Sok Kwu Wan, Yuen Long South, Tuen Mun Areas 40 and 46 and the adjoining areas, the re-planning of Tseung Kwan O Area 137 and the planning for phase 2 development at Yung Shue Wan. The Department also continued the preliminary land use study for Lam Tei Quarry and the adjoining areas, the feasibility study on environmentally friendly transport services in Hung Shui Kiu NDA and adjacent area, and the engineering feasibility studies on private housing sites in Ma On Shan. The Department took forward the feasibility studies on proposed multi-storey buildings for brownfield operations.
- 20 The Department continued to co-ordinate the overall implementation of Kai Tak Development whilst pressing ahead with the staged design and construction of engineering infrastructure.
- 21 To provide a new boundary control point (BCP) at Liantang/Heung Yuen Wai, the Department has substantially completed the associated road infrastructure works for the BCP. The Department also worked in conjunction with the Hong Kong Airport Authority on the Planning, Engineering and Architectural Study for Topside Development on the Hong Kong Boundary Crossing Facilities Island of the Hong Kong-Zhuhai-Macao Bridge.
- 22 The Department also continued the pilot study on underground space development in selected strategic urban areas including seeking stakeholders' views on suitable conceptual schemes. The Department continued the technical study on underground quarrying-cum-cavern development and commenced the feasibility study for relocating the Public Works Central Laboratory in Kowloon Bay to caverns.
- 23 The Department continued the construction of the new cycle track between Tuen Mun and Sheung Shui. The Department commenced the construction of the advance works for the cycle track between Tsuen Wan and Tuen Mun and continued the investigation and design for the remaining cycle track section from Tuen Mun to Tsuen Wan.
- 24 The Department continued the detailed design and construction of site formation and infrastructure works for public housing development in Tuen Mun Area 54.
- 25 The Department continued to take forward the conservation and development initiatives/projects set out in the Sustainable Lantau Blueprint. For local improvement works, the Department continued the construction of phase 2 stage 1 improvement works at Mui Wo and Tai O as well as the improvement and expansion of mountain bike trail network in south Lantau.
- 26 The Department continued the site formation and infrastructure works for public housing development in Hong Kong. The Department continued the feasibility studies for public housing development in Tseung Kwan O and Yuen Long. The Department also continued the investigation and design including public housing development sites at Tseung Kwan O, Ka Wai Man Road in Kennedy Town (Phase 2), Kam Tin South, Pok Fu Lam South, Pik Wan Road in Yau Tong, Chung Nga Road West in Tai Po, Long Bin, Wang Chau, Tan Kwai Tsuen in Yuen Long and Tuen Mun Central. The Department continued the construction of site formation and infrastructure works for public housing development including Queen's Hill in Fanling, Area 54 in Tung Chung, Area 9 in Tai Po and Chung Nga Road. The Department has completed the construction of phase 1 demolition and ground decontamination works for the development at North West Kowloon Reclamation Site.
- 27 The Department commenced the investigation and design for construction of subway in support of columbarium development at Shek Mun. The Department continued the site formation and associated infrastructural works for development of columbarium at Sandy Ridge Cemetery, and continued the design of the site formation and associated infrastructural works for development of crematorium and related facilities at Sandy Ridge Cemetery.
- 28 The Department continued the design of the site formation and infrastructure works for the establishment of an agricultural park in Kwu Tung South.
- 29 The Department commenced the feasibility study on North-South Link(s) as alternative to So Kwun Po (Kai Leng) Roundabout in North District and the investigation study on Trunk Road T4 in Sha Tin. The Department continued the feasibility study on proposed multi-storey heavy goods vehicles car park cum modern logistics building in Kwai Chung, and the feasibility study on proposed multi-storey complex for container storage and cargo handling in Tsing Yi.

- 30 The Department commenced the construction of Cross Bay Link, Tseung Kwan O and the widening of Tai Po Road (Sha Tin Section), continued the construction of the Tseung Kwan O Lam Tin Tunnel and continued the detailed design of Trunk Road T2 and Cha Kwo Ling Tunnel.
- 31 The Department is pursuing the staged implementation of public infrastructure works and integrated basement to support the West Kowloon Cultural District (WKCD) development.
  - 32 The key performance measures relating to provision of land and infrastructure are:

#### Indicators

	2017 (Actual)	2018 (Actual)	2019 (Estimate)
area of land formed (hectares)	8.3	9.5	27.9
road constructed/widened for development (m)	9 820	21 759	11 030
projects under planning, design and construction $(\$m)\mu$ expenditure on construction for land formation and	196,007.3	188,390.1	232,523.7
infrastructure (\$m)no. of land formation and infrastructure projects under	10,281.8	11,818.8	13,140.4
planning, design and construction	196	187	191

μ Revised description of the previous indicator "value of land formation and infrastructure projects under planning, design and construction" as from 2018.

## Matters Requiring Special Attention in 2019-20

- 33 During 2019–20, the Department will:
- continue to ensure that all land and infrastructure required to meet development targets are delivered on time and cost-effectively;
- commence the review for the ground decontamination works at the site of ex-Kennedy Town incineration plant/abattoir and adjoining area;
- commence the construction of the first phase works and conduct detailed design for the remaining phase of the Kwu Tung North and Fanling North NDAs;
- commence the site formation works for police facilities in Kong Nga Po;
- commence the construction of advance works (part) and stage 1 works, and conduct detailed design for advance works (remaining portion) and stage 2 works, of the Hung Shui Kiu NDA;
- commence the planning and engineering study on Sunny Bay reclamation;
- commence the studies related to the artificial islands in the Central Waters and a new major transport corridor to link up the coastal areas of Tuen Mun, North Lantau, the artificial islands in the Central Waters and Hong Kong Island:
- commence the study for a highway parallel to the North Lantau Highway;
- commence a study on Lantau trails and recreation plan;
- commence the planning and engineering study for nearshore reclamation at Lung Kwu Tan and the study on re-planning of River Trade Terminal and the adjacent areas;
- commence the feasibility study for the development sites at Diamond Hill upon relocation of service reservoirs;
- commence the pilot planning and engineering study for selected Strategic Cavern Areas;
- pursue the setting-up of Lantau Conservation Fund for conservation and local improvement projects in Lantau;
- commence the construction of the Sam Mun Tsai cycle track extension;
- complete the detailed feasibility study for the Environmentally Friendly Linkage System for Kowloon East;
- complete the construction of phase 2 stage 1 improvement works at Mui Wo;
- commence the site formation and infrastructure works for the Wang Chau public housing developments of Yuen Long Phase 1 and Yan Wing Street in Yau Tong;
- complete the detailed design for site formation and infrastructure works for public housing development at Ka Wai Man Road in Kennedy Town (Phase 2);
- commence the investigation and design of road improvement works for columbarium development at Wo Hop Shek Cemetery;

- commence the site formation and infrastructure works for the establishment of an agricultural park in Kwu Tung South (Phase 1); and
- commence the construction of Trunk Road T2 and Cha Kwo Ling Tunnel.

## Programme (4): Slope Safety and Geotechnical Standards

	2017–18 (Actual)	2018–19 (Original)	2018–19 (Revised)	2019–20 (Estimate)
Financial provision (\$m)	376.9	389.1	389.9 (+0.2%)	<b>416.6</b> (+6.8%)
				(or +7.1% on 2018–19 Original)

#### Aim

34 The aim is to exercise geotechnical control on private and public developments, register slopes, implement the Landslip Prevention and Mitigation Programme (LPMitP), provide landslide emergency service, investigate serious landslides, set geotechnical standards, undertake public education and advise private slope owners on slope safety.

## **Brief Description**

- 35 The checking of geotechnical aspects of building and infrastructure developments continues to play a key role in reducing landslide risk. The Department has been providing specialised geotechnical input in the planning, investigation, design, construction and geotechnical risk management.
- 36 The Department continued the LPMitP to upgrade substandard government man-made slopes, mitigate landslide hazard arising from natural hillside catchments, and conduct safety screening for private man-made slopes. Among the 152 man-made slopes upgraded under the LPMitP in 2018, 78 affected buildings, 38 affected major roads and public facilities, and 36 affected squatter structures. In 2018, 33 hillside catchments mitigated under the LPMitP primarily affected buildings and important transport corridors, among which six also affected squatter structures.
- 37 The Department continued to maintain an automatic raingauge network to support the operation of the Landslip Warning System. It also provided 24-hour landslide emergency service in collaboration with other departments to remove immediate landslide danger and to restore essential services to the community. Serious landslides would continue to be investigated with a view to improving the slope safety system.
- 38 The Department continued to promote slope maintenance as well as public awareness and response towards slope safety. Warning signs to remind the public of keeping clear from the sites of natural terrain hazard mitigation works were put in use. The Department continued to advise private slope owners on slope maintenance and improvement. In addition, 20 guidance documents were produced on slope safety and other geotechnical topics, including reports on lessons learnt from landslides.
  - 39 The key performance measures relating to slope safety and geotechnical standards are:

## Target

	Target	2017 (Actual)	2018 (Actual)	2019 (Plan)
providing information about a slope within five days of an application (%)	100	100	100	100
Indicators				
		2017	2018	2019
		(Actual)	(Actual)	(Estimate)
new slope features registered		329	437	450
slope features upgraded and landscaped		155	152	150
natural hillside catchments with mitigation measur implementedsafety screening studies of private man-made slope		49	33	30
completed		103	100	100
expenditure for landslip prevention and mitigation		990.0	1,040.0	1,010.0
geotechnical submissions checked		20 547	18 939	19 000
active construction sites auditeda		3 297	3 337	3 200
guidance documents produced	•••••	20	20	20

Prevised description of the previous indicator "active construction sites inspected" as from 2018.

### Matters Requiring Special Attention in 2019–20

- **40** During 2019–20, the Department will:
- ensure adequate geotechnical input to the planning, design and construction of man-made slopes, tunnels and landslide mitigation measures to natural hillsides, and to blasting works by professionally qualified geotechnical engineers and suitably experienced competent persons;
- continue to audit government and private sector projects involving tunnel/cavern works to ensure that the works are carried out to an adequate standard of geotechnical risk management;
- continue to assist government departments in prioritising slopes for engineer inspection and maintenance action;
- continue to enhance the appearance of slopes in conjunction with slope upgrading and landslide risk mitigation works under the LPMitP;
- continue to implement the LPMitP to deal with the landslide risk arising from substandard man-made slopes and vulnerable natural hillsides;
- continue to enhance geotechnical guidance on the design and quality control of slope upgrading and landslide risk mitigation works; and
- build community resilience and enhance government preparedness for landslide disasters, in view of the increasing risk arising from climate change, increasing population and slope deterioration.

## **Programme (5): Greening and Technical Services**

	2017–18 (Actual)	2018–19 (Original)	2018–19 (Revised)	2019–20 (Estimate)
Financial provision (\$m)	136.9	149.5	152.0 (+1.7%)	155.3 (+2.2%)
				(or +3.9% on 2018–19 Original)

### Aim

41 The aim is to develop greening master plans and implement other landscape measures to improve the environment of Hong Kong, provide ground investigation, construction materials testing, geological surveys and other geotechnical services, and manage Hong Kong's marine fill resources and mud disposal facilities.

## **Brief Description**

- 42 The Department continued to implement the recommended greening measures in 2018.
- 43 The Department operates contracts for ground investigation and laboratory testing. In 2018, the Public Works Laboratories (PWLs) continued to serve public works projects by undertaking some 650 000 tests on construction materials. The Department continued technical development on the use of sustainable construction materials (e.g. Ground Granulated Blastfurnace Slag) in civil engineering and geotechnical works in Hong Kong. The Department continued to provide geotechnical advisory services to government departments on a wide range of projects. The Civil Engineering Library, which contains a large collection of geotechnical data on Hong Kong, served about 8 000 users in 2018.
- 44 Through the Marine Fill Committee, the Department continued to co-ordinate the supply and demand of local marine fill resources to meet development needs, oversee the operation of marine disposal facilities for the disposal of contaminated and uncontaminated sediments, and formulate strategies to ensure the provision of adequate marine disposal capacity.
  - 45 The key performance measures relating to greening and technical services are:

### **Targets**

	Target	2017 (Actual)	2018 (Actual)	2019 (Plan)
providing assistance at the registration				
counter of the Civil Engineering Library within ten minutes (%)	100	100	100	100
providing information about geology and	100	100	100	100
natural resources within 4.5 days upon				
request (%)	100	100	100	100

#### **Indicators**

	2017 (Actual)	2018 (Actual)	2019 (Estimate)
no. of greening master plans under planning, design and implementation	8	8	8
expenditure on greening works implemented under greening master plans (\$m)expenditure on term contracts for ground investigation and	74.4	25.0	4.0
laboratory soil and rock testing (\$m)	102.6	65.8	64.8
material tests conducted in the PWLs and in contract laboratories managed by the PWLs (thousand)geotechnical advisory cases handled in land-use planning	761	643	600
and engineering feasibility studies	2 103	1 966	2 000
geotechnical advisory cases handled in detailed engineering studies and designs	771	766	780
value of marine fill management investigations and studies (\$m)λ	8.2	2.9	3.5
marine fill management reports and major papers issuedθ	9	9	9

- Revised description of the previous indicator "advisory cases handled in respect of land-use planning and engineering feasibility studies" as from 2018.
- ε Revised description of the previous indicator "geotechnical engineering advisory cases handled" as from 2018
- λ Revised description of the previous indicator "value of fill management investigations and studies" as from 2018
- $\theta$  Revised description of the previous indicator "fill management reports and major papers issued" as from 2018.

### Matters Requiring Special Attention in 2019–20

- **46** During 2019–20, the Department will continue to:
- implement the recommended landscape works in greening master plans; and
- provide reliable and efficient construction material testing and ground investigation services to public works projects.

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

	2017–18 (Actual)	2018–19 (Original)	2018–19 (Revised)	2019–20 (Estimate)
Financial provision (\$m)	78.1	76.2	79.8 (+4.7%)	<b>81.6</b> (+2.3%)
				(or +7.1% on 2018–19 Original)

### Aim

47 The aim is to supervise contracts for quarrying in Hong Kong, enforce the Mining Ordinance (Cap. 285), enforce the Dangerous Goods Ordinance (Cap. 295) in connection with the use of explosives, and safeguard the public from the misuse of explosives.

### **Brief Description**

- 48 The Department made satisfactory progress in respect of supervision of quarrying in 2018. The Department continued to supervise the rehabilitation contract for Lam Tei Quarry, issue permits under the Sand Ordinance (Cap. 147) for importation and transportation of sand, and regulate the use of site crushers on both public and private construction sites. Regular inspections of the quarry site were conducted to enforce safety regulations. The Department is also undertaking studies on potential new quarry sites in Hong Kong with a view to developing new quarries to dovetail with the closure of Lam Tei Quarry.
- 49 The Department also made satisfactory progress in respect of supervision of the use of explosives during the year. To protect the public from the misuse of explosives, the Department continued to maintain strict control over the storage, handling, transportation and use of explosives from manufacture or importation to use on construction sites.

50 The key performance measures relating to supervision of quarrying and explosives are:

## Targets

	Target	2017 (Actual)	2018 (Actual)	2019 (Plan)
	Target	(Actual)	(Actual)	(1 lall)
issuing a Sand Removal Permit within two days of an application which has satisfied government requirements (%) issuing a Licence to Manufacture  Explosive within two days of an explication without two days of an	100	100	100	100
application, where pre-licensing requirements have been satisfied (%)	100	100	100	100
issuing a Permit to Remove Explosives	100	100	100	100
within one day of an application (%)issuing a Licence to Store or Use	100	100	100	100
Explosives within two days of an application, where pre-licensing requirements have been				
satisfied (%)	95	97	100	95
issuing a Mine Blasting Certificate within				
one day of an applicant passing an examination (%)	100	100	100	100
Indicators				
		2017	2018	2019
		(Actual)	(Actual)	(Estimate)
Sand Removal Permits issued				
Quarrying		(Actual) 1 135	(Actual) 1 213	(Estimate) 4 000
Quarrying quarrying and rock crushing contracts supe revenue from royalty and rental payments (	rvised \$m)	(Actual)	(Actual)	(Estimate)
Quarrying quarrying and rock crushing contracts supe revenue from royalty and rental payments ( aggregates processed by contract quarries ( tonnes)	rvised \$m) million	(Actual) 1 135 2 113.6 0.9	(Actual) 1 213 1 117.9 1.1	(Estimate) 4 000 1 94.1 1.1
Quarrying quarrying and rock crushing contracts supe revenue from royalty and rental payments ( aggregates processed by contract quarries ( tonnes)safety inspections of quarries conducted Explosives and Blasting	rvised \$m) million	(Actual) 1 135 2 113.6	(Actual) 1 213 1 117.9	(Estimate) 4 000 1 94.1
Quarrying quarrying and rock crushing contracts supe revenue from royalty and rental payments ( aggregates processed by contract quarries ( tonnes)safety inspections of quarries conducted Explosives and Blasting inspections of pre-licensed sites, magazines	rvised	(Actual) 1 135 2 113.6 0.9	(Actual) 1 213 1 117.9 1.1	(Estimate) 4 000 1 94.1 1.1
Quarrying quarrying and rock crushing contracts supe revenue from royalty and rental payments ( aggregates processed by contract quarries ( tonnes) safety inspections of quarries conducted  Explosives and Blasting inspections of pre-licensed sites, magazines manufacturing plants and stores conduct licences and permits grantedß	rvised	(Actual) 1 135 2 113.6 0.9 19	(Actual) 1 213 1 117.9 1.1 12	(Estimate) 4 000 1 94.1 1.1 1.2
Quarrying quarrying and rock crushing contracts supe revenue from royalty and rental payments ( aggregates processed by contract quarries ( tonnes) safety inspections of quarries conducted  Explosives and Blasting inspections of pre-licensed sites, magazines manufacturing plants and stores conduct licences and permits grantedβ	rvised	(Actual) 1 135  2 113.6  0.9 19  451 6 825 160	(Actual) 1 213 1 117.9 1.1 12 415 7 728 135	(Estimate) 4 000 1 94.1 1.1 12 350 7 050 150
Quarrying quarrying and rock crushing contracts supe revenue from royalty and rental payments ( aggregates processed by contract quarries ( tonnes) safety inspections of quarries conducted  Explosives and Blasting inspections of pre-licensed sites, magazines manufacturing plants and stores conduct licences and permits grantedβ	rvised \$m) million	(Actual) 1 135  2 113.6  0.9 19  451 6 825 160 701	(Actual) 1 213 1 117.9 1.1 12 415 7 728 135 679	(Estimate) 4 000 1 94.1 1.1 1.2 350 7 050 150 700
Quarrying quarrying and rock crushing contracts supe revenue from royalty and rental payments ( aggregates processed by contract quarries ( tonnes) safety inspections of quarries conducted  Explosives and Blasting inspections of pre-licensed sites, magazines manufacturing plants and stores conduct licences and permits grantedβ	rvised \$m) million	(Actual) 1 135  2 113.6  0.9 19  451 6 825 160 701 1 259	(Actual) 1 213 1 117.9 1.1 12 415 7 728 135 679 1 266	(Estimate) 4 000  1 94.1  1.1 12  350 7 050 150 700 1 450
Quarrying quarrying and rock crushing contracts supe revenue from royalty and rental payments ( aggregates processed by contract quarries ( tonnes) safety inspections of quarries conducted  Explosives and Blasting inspections of pre-licensed sites, magazines manufacturing plants and stores conduct licences and permits grantedβ licences and permits renewedβ inspections of blasting sites conducted no. of blasting activities tonnes of explosives consumed	rvised \$m) million	(Actual) 1 135  2 113.6  0.9 19  451 6 825 160 701 1 259 697	(Actual) 1 213  1 117.9  1.1 12  415 7 728 135 679 1 266 826	(Estimate) 4 000  1 94.1  1.1 12  350 7 050 150 700 1 450 860
Quarrying quarrying and rock crushing contracts supe revenue from royalty and rental payments ( aggregates processed by contract quarries ( tonnes) safety inspections of quarries conducted  Explosives and Blasting inspections of pre-licensed sites, magazines manufacturing plants and stores conduct licences and permits grantedβ	rvised	(Actual) 1 135  2 113.6  0.9 19  451 6 825 160 701 1 259	(Actual) 1 213 1 117.9 1.1 12 415 7 728 135 679 1 266	(Estimate) 4 000  1 94.1  1.1 12  350 7 050 150 700 1 450
Quarrying quarrying and rock crushing contracts supe revenue from royalty and rental payments ( aggregates processed by contract quarries ( tonnes) safety inspections of quarries conducted  Explosives and Blasting inspections of pre-licensed sites, magazines manufacturing plants and stores conduct licences and permits grantedβ licences and permits renewedβ inspections of blasting sites conducted no. of blasting activities tonnes of explosives consumed no. of deliveries of explosives tonnes of explosives delivered from govern	rvised	(Actual) 1 135  2 113.6  0.9 19  451 6 825 160 701 1 259 697 723	(Actual) 1 213  1 117.9  1.1 12  415 7 728 135 679 1 266 826 1 074	(Estimate) 4 000  1 94.1  1.1 12  350 7 050 150 700 1 450 860 1 350
Quarrying quarrying and rock crushing contracts supe revenue from royalty and rental payments ( aggregates processed by contract quarries ( tonnes) safety inspections of quarries conducted  Explosives and Blasting inspections of pre-licensed sites, magazines manufacturing plants and stores conduct licences and permits grantedβ	rvised	(Actual) 1 135  2 113.6  0.9 19  451 6 825 160 701 1 259 697	(Actual) 1 213  1 117.9  1.1 12  415 7 728 135 679 1 266 826	(Estimate) 4 000  1 94.1  1.1 12  350 7 050 150 700 1 450 860

β These include all licences and permits except Sand Removal Permits.

### Matters Requiring Special Attention in 2019–20

<sup>51</sup> During 2019–20, the Department will continue to work with the Security Bureau and other departments in taking forward amendments to subsidiary legislation under the Dangerous Goods Ordinance in respect of the use of explosives. The Department will also continue with the feasibility studies of potential new quarry sites.

**<sup>52</sup>** The main blasting projects in 2019–20 will be the Rehabilitation of Lam Tei Quarry contract – Extended Works, the Tseung Kwan O – Lam Tin Tunnel – Main Tunnel and Associated Works contract and the Central Kowloon Route – Ho Man Tin Access Shaft contract. These projects will largely determine the demand for explosives and number of blasting related activities.

### **Programme (7): Management of Construction and Demolition Materials**

	2017–18 (Actual)	2018–19 (Original)	2018–19 (Revised)	2019–20 (Estimate)
Financial provision (\$m)	1,032.2	1,369.9	949.3 (-30.7%)	<b>1,258.6</b> (+32.6%)
				(or -8.1% on 2018–19 Original)

### Aim

53 The aim is to ensure good management and beneficial reuse of inert construction and demolition materials (also known as public fill).

## **Brief Description**

- 54 In 2018, the Department, on behalf of the Public Fill Committee, continued to scrutinise submissions from proponents of public works projects with a view to reducing generation and maximising the reuse of public fill. The Department also provided proponents of public works projects with guidelines to formulate construction and demolition materials management plans at the early design stage.
- 55 The Department continued to maintain adequate outlets at strategic locations for construction and demolition materials, including the fill banks and the temporary construction waste sorting facilities at Tuen Mun Area 38 and Tseung Kwan O Area 137. A short-term barging facility at Mui Wo and a long-term barging point at Chai Wan were being operated. Inert hard construction and demolition materials were also recycled at Tseung Kwan O Area 137 for use by works projects.
- 56 The Department continued to deliver surplus public fill for beneficial reuse in the Mainland and to liaise with the Mainland authority to ensure smooth operation.
  - 57 The key performance measures relating to management of construction and demolition materials are:

### **Targets**

		2017	2018	2019
	Target	(Actual)	(Actual)	(Plan)
issuing dumping licences within three days (%)issuing dumping licences within half day for applications submitted	100	100	100	100
in person (%)	100	100	100	100
Indicators		2017 (Actual)	2018 (Actual)	2019 (Estimate)
public fill received at public fill reception facilities (million tonnes)		13.3	14.6∧	15.2
public fill delivered to the Mainland for beneficial reuse (million tonnes)public fill supplied to local projects for beneficial		13.5	10.0^	9.0
reuse (million tonnes)		0.3	2.4^	20.2
as at year end (million tonnes)recycling inert hard construction and demolition		18.2	20.4∧	6.4
materials (million tonnes)submissions processed on behalf of the Public Fill		0.04	0.12	0.40
Committee		142	139	140
ticket system		356	348	350

<sup>∧</sup> Provisional actual subject to adjustment.

## Matters Requiring Special Attention in 2019–20

**58** During 2019–20, the Department will continue to supply public fill to the reclamation works of the Three-Runway System project and the TCNTE project for beneficial reuse.

### **Programme (8): Advice on Development Proposals**

	2017–18 (Actual)	2018–19 (Original)	2018–19 (Revised)	2019–20 (Estimate)
Financial provision (\$m)	36.7	38.3	38.2 (-0.3%)	<b>40.0</b> (+4.7%)
				(or +4.4% on

2018–19 Original)

Aim

59 The aim is to advise on development proposals.

## **Brief Description**

- **60** The Department continued to advise government departments and private developers on the engineering aspects of development proposals for the purpose of improving the environment and the infrastructural support to such proposals.
  - 61 The key performance measures relating to advice on development proposals are:

#### **Indicators**

	2017 (Actual)	2018 (Actual)	2019 (Estimate)
town plans and planning briefs on which advice and			
comments are given	126	114	103
public and private development proposals and planning			
applications examined	2 861	2 940	2 951
town plans, planning briefs, public and private development proposals and planning applications dealt with per post	71.1	72.7	72.7

## Matters Requiring Special Attention in 2019-20

- **62** During 2019–20, the Department will continue to provide:
- timely response to requests from the Buildings Department, Lands Department and Planning Department for
  advice on lease conditions, Town Planning Board applications, master development plans and building plans.
  Measures will also be taken to ensure that due regard is given to environmental factors including conserving
  natural features, reducing impact of engineering works and enhancing quality of the landscape; and
- technical advice and support to the WKCD Authority on the phased implementation of WKCD development.

#### ANALYSIS OF FINANCIAL PROVISION

		2017–18 (Actual) (\$m)	2018–19 (Original) (\$m)	2018–19 (Revised) (\$m)	2019–20 (Estimate) (\$m)
Pro	gramme	(* )	(* )	(* )	(- )
(1)	Tourism and Recreational				
	Development	49.2	51.2	51.8	54.1
(2)	Port and Marine Facilities	233.6	236.7	265.8	257.3
(3)	Provision of Land and Infrastructure	598.7	668.2	673.1	776.9
(4)	Slope Safety and Geotechnical				
	Standards	376.9	389.1	389.9	416.6
(5)	Greening and Technical Services	136.9	149.5	152.0	155.3
(6)	Supervision of Mining, Quarrying and				
	Explosives	78.1	76.2	79.8	81.6
(7)	Management of Construction and				
	Demolition Materials	1,032.2	1,369.9	949.3	1,258.6
(8)	Advice on Development Proposals	36.7	38.3	38.2	40.0
		2,542.3	2,979.1	2,599.9 (-12.7%)	3,040.4 (+16.9%)

(or +2.1% on 2018–19 Original)

### **Analysis of Financial and Staffing Provision**

## Programme (1)

Provision for 2019–20 is \$2.3 million (4.4%) higher than the revised estimate for 2018–19. This is mainly due to the increased provision for filling of vacancies and salary increments, partly offset by reduced cash flow requirement for other operating expenses.

## Programme (2)

Provision for 2019–20 is \$8.5 million (3.2%) lower than the revised estimate for 2018–19. This is mainly due to the reduced cash flow requirement for contract maintenance expenses, partly offset by the increased provision for filling of vacancies, salary increments and the creation of two posts, and the increased cash flow requirement for plant and equipment.

### Programme (3)

Provision for 2019–20 is \$103.8 million (15.4%) higher than the revised estimate for 2018–19. This is mainly due to the increased provision for filling of vacancies, salary increments and the net increase of 65 posts, and the increased cash flow requirement for other operating expenses.

### Programme (4)

Provision for 2019–20 is \$26.7 million (6.8%) higher than the revised estimate for 2018–19. This is mainly due to the increased provision for filling of vacancies, salary increments and the creation of two posts, and the increased cash flow requirement for other operating expenses.

## Programme (5)

Provision for 2019–20 is \$3.3 million (2.2%) higher than the revised estimate for 2018–19. This is mainly due to the increased provision for filling of vacancies and salary increments, and the increased cash flow requirement for other operating expenses.

### Programme (6)

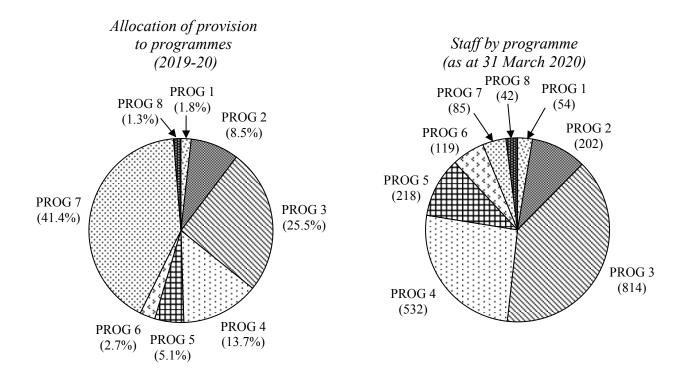
Provision for 2019–20 is \$1.8 million (2.3%) higher than the revised estimate for 2018–19. This is mainly due to the increased provision for filling of vacancies and salary increments, and the increased cash flow requirement for plant and equipment, partly offset by reduced cash flow requirement for other operating expenses.

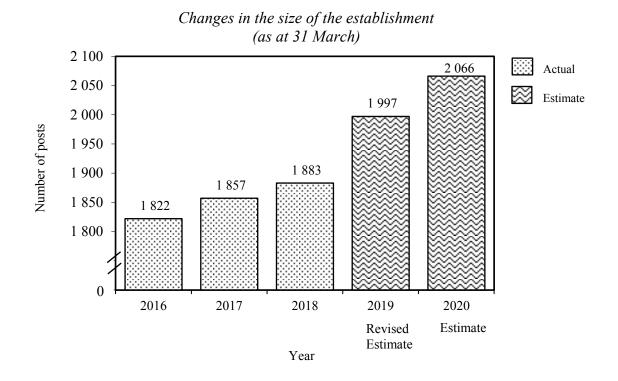
## Programme (7)

Provision for 2019-20 is \$309.3 million (32.6%) higher than the revised estimate for 2018-19. This is mainly due to the increased provision for handling surplus public fill.

## Programme (8)

Provision for 2019–20 is \$1.8 million (4.7%) higher than the revised estimate for 2018–19. This is mainly due to the increased provision for filling of vacancies and salary increments, and the increased cash flow requirement for other operating expenses.





Sub- head (Code)		Actual expenditure 2017–18	Approved estimate 2018–19	Revised estimate 2018–19	<b>Estimate 2019–20</b>
		\$'000	\$'000	\$'000	\$'000
	Operating Account				
	Recurrent				
000	Operational expenses	2,533,136	2,979,034	2,599,863	3,030,052
	Total, Recurrent	2,533,136	2,979,034	2,599,863	3,030,052
	Non-Recurrent				
700	General non-recurrent	14	100	50	35
	Total, Non-Recurrent	14	100	50	35
	Total, Operating Account	2,533,150	2,979,134	2,599,913	3,030,087
	Capital Account				
	Plant, Equipment and Works				
603	Plant, vehicles and equipment	_	_	_	4,560
661	Minor plant, vehicles and equipment (block vote)	9,114		_	5,707
	Total, Plant, Equipment and Works	9,114			10,267
	Total, Capital Account	9,114			10,267
	Total Expenditure	2,542,264	2,979,134	2,599,913	3,040,354

### **Details of Expenditure by Subhead**

The estimate of the amount required in 2019–20 for the salaries and expenses of the Civil Engineering and Development Department is \$3,040,354,000. This represents an increase of \$440,441,000 over the revised estimate for 2018–19 and \$498,090,000 over the actual expenditure in 2017–18.

## Operating Account

### Recurrent

- 2 Provision of \$3,030,052,000 under *Subhead 000 Operational expenses* is for the salaries, allowances and other operating expenses of the Civil Engineering and Development Department. The increase of \$430,189,000 (16.5%) over the revised estimate for 2018–19 is mainly due to the increased provision for the net increase of 69 posts and handling surplus public fill.
- 3 The establishment as at 31 March 2019 will be 1 997 posts including 11 supernumerary posts. It is expected that there will be a net increase of 69 posts in 2019–20. Subject to certain conditions, the controlling officer may under delegated power create or delete non-directorate posts during 2019–20, but the notional annual mid-point salary value of all such posts must not exceed \$1,161,452,000.
  - 4 An analysis of the financial provision under Subhead 000 Operational expenses is as follows:

	2017–18 (Actual) (\$'000)	2018–19 (Original) (\$'000)	2018–19 (Revised) (\$'000)	2019–20 (Estimate) (\$'000)
Personal Emoluments				
- Salaries	1,215,060 16,349 906	1,341,461 19,515 929	1,297,935 21,441 957	1,396,054 22,980 949
Mandatory Provident Fund     contribution  - Civil Service Provident Fund	3,574	5,419	4,674	6,100
contribution	54,272	71,174	63,818	80,868
- Contract maintenance - General departmental expenses	1,067,522 175,453	1,400,126 140,410	1,004,955 206,083	1,287,467 235,634
	2,533,136	2,979,034	2,599,863	3,030,052

### Capital Account

### Plant, Equipment and Works

**5** Provision of \$5,707,000 under *Subhead 661 Minor plant, vehicles and equipment (block vote)* is for the requirement for replacement of minor plant and equipment.

## Commitments

Sub- head Item (Code) (Code)	Ambit	Approved commitment	Accumulated expenditure to 31.3.2018	Revised estimated expenditure for 2018–19	Balance
		\$'000	\$'000	\$'000	\$'000
Operating Ac	count				
700	General non-recurrent				
528	Provision of warning signs in squatter areas	5,000	3,893	50	1,057
		5,000	3,893	50	1,057
Capital Accou	unt				
603	Plant, vehicles and equipment				
802	Replacement of the hydrographic survey vessel "Port Works 5"δ	35,120δ	_		35,120
		35,120	_	<del></del>	35,120
	Total	40,120	3,893	50	36,177

 $<sup>\</sup>delta$  This is a new item, funding for which is sought in the context of the Appropriation Bill 2019.