

## Head 33 — CIVIL ENGINEERING AND DEVELOPMENT DEPARTMENT

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

**Estimate 2017–18** ..... **\$2,845.5m**

**Establishment ceiling 2017–18** (notional annual mid-point salary value) representing an estimated 1 841 non-directorate posts as at 31 March 2017 rising by six posts to 1 847 posts as at 31 March 2018..... **\$989.8m**

In addition, there will be an estimated 62 directorate posts as at 31 March 2017 and as at 31 March 2018.

**Commitment balance**..... **\$1.1m**

### Controlling Officer's Report

#### Programmes

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

#### Detail

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

	2015–16 (Actual)	2016–17 (Original)	2016–17 (Revised)	<b>2017–18 (Estimate)</b>
Financial provision (\$m)	46.8	47.7	49.3 (+3.4%)	<b>49.4</b> (+0.2%)
				(or +3.6% on 2016–17 Original)

#### Aim

2 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.

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### *Brief Description*

3 To strengthen the position of Hong Kong as a premier destination for visitors in the region, the Department continued to provide engineering advice to Tourism Commission on the development plans of the Ocean Park and Hong Kong Disneyland Resort, the development of Kai Tak Tourism Node, 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 design of a public landing facility and related marine works in the Lei Yue Mun area to facilitate visitors' access by sea.

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

#### *Indicators*

	2015 (Actual)	2016 (Actual)	2017 (Estimate)
value of projects under planning and design (\$m) .....	1,520.7	1,608.6	<b>1,608.6</b>
expenditure on works under construction (\$m) .....	31.5	11.6	<b>0.2</b>

### *Matters Requiring Special Attention in 2017–18*

6 During 2017–18, the Department will continue:

- the monitoring, co-ordination and liaison work on the development plans of the Ocean Park and Hong Kong Disneyland Resort, and the development of Kai Tak Tourism Node; and
- the planning and detailed design for the proposed public landing facility and related marine works in Lei Yue Mun.

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

	2015–16 (Actual)	2016–17 (Original)	2016–17 (Revised)	2017–18 (Estimate)
Financial provision (\$m)	226.6	221.4	259.8 (+17.3%)	<b>244.7</b> (–5.8%)
				(or +10.5% on 2016–17 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 2016, the Department continued the planning, design and construction of various projects for improving port and marine facilities. The Department completed the dredging works at the Kwai Tsing Container Basin and its approach channel substantially, and completed the improvement works to Sai Kung Public Pier.

9 The Department maintained 127 kilometres of seawalls, 317 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	2015 (Actual)	2016 (Actual)	2017 (Plan)
inspecting each pier (urban: twice a year; rural: once a year) (%) .....	100	100	100	<b>100</b>
responding to enquiries on information about marine structures and facilities within seven days (%) .....	100	100	100	<b>100</b>

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### Indicators

	2015 (Actual)	2016 (Actual)	2017 (Estimate)
expenditure on maintenance works and maintenance dredging (\$m) .....	95.5	125.9	<b>123.0</b>
submissions processed and advice provided .....	2 072	2 076	<b>2 050</b>
length of seawalls maintained (km) .....	127	127	<b>127</b>
piers maintained .....	318	317	<b>319</b>
value of marine facilities and port projects under planning and design (\$m) .....	10.4	68.8	<b>61.9</b>
expenditure on marine facilities and port construction works (\$m) .....	168.0	134.2	<b>107.6</b>

### Matters Requiring Special Attention in 2017–18

12 During 2017–18, the Department will continue upgrading the marine facilities and planning to improve the marine structures.

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

	2015–16 (Actual)	2016–17 (Original)	2016–17 (Revised)	2017–18 (Estimate)
Financial provision (\$m)	479.1	553.1	524.9 (–5.1%)	<b>592.1</b> (+12.8%)
				(or +7.1% on 2016–17 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 the 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. In 2016, the Department continued the land formation and engineering infrastructure works of the Wan Chai Development Phase II. As for Kai Tak Development (KTD), the Department continued to co-ordinate the overall implementation whilst pressing ahead the staged design and construction of engineering infrastructure, including the detailed design of Trunk Road T2.

15 To commission a new boundary control point (BCP) at Liantang/Heung Yuen Wai by 2018, the Department completed the site formation and continued the associated infrastructure works for the BCP. The Department also continued a planning, engineering and architectural study for topside development at the Hong Kong Boundary Crossing Facilities Island of the Hong Kong-Zhuhai-Macao Bridge.

16 To take forward the proposed reclamation outside Victoria Harbour, the Department continued the technical studies on the reclamations at Siu Ho Wan, Lung Kwu Tan and Ma Liu Shui.

17 The Department completed the study on long-term strategy for cavern development and formulated a set of initiatives to facilitate wider application of cavern development in Hong Kong. The Department also continued the pilot study on underground space development in selected strategic urban areas including seeking stakeholders' views on preliminary planning concepts.

18 The Department continued the site formation and infrastructure works for public housing development in Tuen Mun Area 54 and the development at Anderson Road, and substantially completed the works for housing development sites adjacent to Lung Ping Road at Tai Wo Ping, and commenced the site formation and infrastructure works for development of Anderson Road Quarry site in phases. To address housing, social, economic and environmental needs, the Department continued the design for various infrastructure projects covering the phased development of ex-Cha Kwo Ling Kaolin Mine Site, the advance works and first stage works of the Kwu Tung North and Fanling North New Development Areas (NDAs), the development of public housing sites at Ka Wai Man Road and proceeded with the phase 1 demolition and ground decontamination works for the development at North West Kowloon Reclamation Site 1 and infrastructure works for the development at Queen's Hill in Fanling and at the Lin Cheung Road site, Sham Shui Po. The Department is finalising the preliminary feasibility studies on developing the New Territories North and the planning and engineering study for Kwu Tung South, and engineering feasibility study on potential public housing sites in Tseung Kwan O. The Department continued the planning and engineering studies on the future land use at ex-Lamma Quarry Area at Sok Kwu Wan, the Hung Shui Kiu NDA, Yuen Long South, Tuen Mun Areas 40 and 46 and the adjoining areas, the engineering feasibility studies on potential public housing and development sites in Ma On Shan and Yuen Long, and the investigation of site formation and infrastructure works for the Initial Sites at Kam Tin South and at San Hing Road of Tuen Mun for housing development, the preliminary development review of

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public housing sites in Tuen Mun Central and the study on land requirements for the construction industry. The Department also commenced the preliminary land use study for Lam Tei Quarry and the adjoining areas, the feasibility studies on proposed multi-storey buildings for brownfield operations, the detailed design of Hung Shui Kiu NDA advance works phases 1 and 2 and stage 1 works, the investigation of site formation and infrastructure works on potential public housing and development sites at Pok Fu Lam South, and the feasibility study on environmentally friendly transport services in Hung Shui Kiu NDA and adjacent areas, the planning and engineering study for re-planning of Tseung Kwan O Area 137 and the detailed design of the Tung Chung New Town Extension.

**19** To capitalise on the strategic location of Lok Ma Chau Loop at the boundary district to meet future development needs, the Department continued the detailed design for the advance works so as to pave way for the development of Lok Ma Chau Loop.

**20** The Department continued the construction of the new cycle track between Tuen Mun and Sheung Shui and the investigation and design for the Tuen Mun to Tsuen Wan section of the comprehensive cycle track network in the New Territories.

**21** The Department commenced the construction of the Tseung Kwan O – Lam Tin Tunnel and continued the detailed design of Cross Bay Link.

**22** To enhance the waterfront and accessibility of the public to the waterfront of Yung Shue Wan, the Department continued the planning and preliminary design of the land formation and engineering infrastructure works for phase 2 development at Yung Shue Wan.

**23** The Department is pursuing the staged implementation of public infrastructure works and integrated basement to support the West Kowloon Cultural District (WKCD) development.

**24** The Department engaged the public and stakeholders on the proposed development strategy for Lantau and formulated the Lantau blueprint which sets out the development and conservation framework for Lantau. In this connection, the Department commenced 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.

**25** The key performance measures relating to provision of land and infrastructure are:

### *Indicators*

	2015 (Actual)	2016 (Actual)	2017 (Estimate)
area of land formed (hectares).....	26.3	10.8	7.7
road constructed/widened for development (m) .....	3 768	4 177	<b>11 100</b>
value of land formation and infrastructure projects under planning, design and construction (\$m) .....	164,570.1	176,841.9	<b>196,007.3</b>
expenditure on construction for land formation and infrastructure (\$m).....	5,380.3	7,744.4	<b>10,580.3</b>
no. of land formation and infrastructure projects under planning, design and construction .....	192	190	<b>196</b>

### *Matters Requiring Special Attention in 2017–18*

**26** During 2017–18, the Department will:

- continue to ensure that all land and infrastructure required to meet development targets are delivered on time and cost-effectively;
- continue the construction works of the Wan Chai Development Phase II;
- continue the staged implementation of KTD, covering the design and construction of engineering infrastructure including the detailed design of Trunk Road T2;
- continue the design for phase 2 works on improving the water quality at Kai Tak Approach Channel and Kwun Tong Typhoon Shelter;
- continue the detailed feasibility study for the Environmentally Friendly Linkage System for Kowloon East;
- continue the staged implementation of public infrastructure works and integrated basement to support the early development of facilities in WKCD in co-ordination with the WKCD Authority and relevant government bureaux and departments;
- proceed with the phase 1 demolition and ground decontamination works for the development at North West Kowloon Reclamation Site 1;
- continue the detailed design of site formation and infrastructure works for ex-Cha Kwo Ling Kaolin Mine Site phase 2 development;
- commence the ground decontamination works at the site of ex-Kennedy Town incineration plant/abattoir and adjoining area;

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- continue the construction of a footbridge system at Sham Mong Road in West Kowloon and continue the detailed design of the remaining two footbridges;
- continue the design of a footbridge system across Hip Wo Street at the junction with Mut Wah Street for Kwun Tong Town Centre redevelopment;
- continue the site formation and infrastructure works in Tuen Mun Area 54 and the development at Anderson Road;
- continue the construction works for the development of Anderson Road Quarry site;
- continue the construction works for the Tseung Kwan O – Lam Tin Tunnel;
- continue the construction of infrastructure projects, including road and drainage works in Sha Tin and Tseung Kwan O;
- continue the construction works for the cycle track network between Tuen Mun and Sheung Shui, and the investigation and design for the Tuen Mun to Tsuen Wan section of the comprehensive cycle track network in the New Territories;
- continue the design of the advance works and first stage works for the Kwu Tung North and Fanling North NDAs;
- continue the detailed design of the advance works for development of Lok Ma Chau Loop;
- continue the planning and engineering studies on the Hung Shui Kiu NDA, Yuen Long South and Tuen Mun Areas 40 and 46 and the adjoining areas;
- continue the detailed design of Hung Shui Kiu NDA advance works phases 1 and 2 and stage 1 works;
- continue the feasibility studies on proposed multi-storey buildings for brownfield operations;
- continue the feasibility study on environmentally friendly transport services in Hung Shui Kiu NDA and adjacent areas;
- commence the technical study on potential sites for relocation of wholesale markets and other industrial uses in North West Tsing Yi;
- commence the feasibility study on proposed multi-storey buildings for port back-up and modern logistics facilities in Kwai Chung and continue the feasibility study on proposed multi-storey complex for container storage and cargo handling in Tsing Yi;
- commence the design of the site formation works for police facilities in Kong Nga Po;
- continue the preliminary land use study for Lam Tei Quarry site and the adjoining areas;
- commence the investigation and detailed design for the development of potential public housing and development sites at Pik Wan Road, Yau Tong;
- continue the investigation and detailed design for the development of public housing and development sites at Chung Nga Road West in Tai Po, Wang Chau in Yuen Long, Area 48 in Fanling and Pok Fu Lam South;
- continue the construction of road and infrastructural works at the Lin Cheung Road site, Sham Shui Po and that for Queen's Hill in Fanling;
- commence the site formation works at Area 9 in Tai Po and infrastructural works at Chung Nga Road;
- continue the detailed design of Cross Bay Link;
- continue the detailed design and site investigation for the widening of Tai Po Road (Sha Tin Section);
- continue the detailed design of the Tung Chung New Town Extension and commence the reclamation and advance works;
- continue the study on the future land use at ex-Lamma Quarry Area at Sok Kwu Wan, Lamma Island;
- continue the construction of phase 2 stage 1 improvement works and the detailed design for the remaining improvement works at Tai O;
- continue the construction of phase 2 stage 1 improvement works and the detailed design for the remaining improvement works at Mui Wo;
- continue the planning and preliminary design of the land formation and engineering infrastructure works for phase 2 development at Yung Shue Wan;
- continue the infrastructure works for the Liantang/Heung Yuen Wai BCP;
- commence the strategic studies for artificial islands in the central waters;
- commence the planning and engineering study for nearshore reclamation at Sunny Bay;



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- commence the preparatory work on the planning and engineering study for nearshore reclamation at Lung Kwu Tan with a view to conducting the study as soon as possible;
- complete the technical studies for nearshore reclamation at Lung Kwu Tan, Siu Ho Wan and Ma Liu Shui;
- commence the planning and engineering study for nearshore reclamation at Ma Liu Shui, and will also consider the future planning of the adjoining site vacated after relocation of the Sha Tin sewage treatment works into caverns;
- continue the preliminary integrated development study on reclamation in association with relocation of Sai Kung sewage treatment works;
- continue the planning, engineering and architectural study for topside development at the Hong Kong Boundary Crossing Facilities Island of the Hong Kong-Zhuhai-Macao Bridge;
- commence the technical study on underground quarrying-cum-cavern development;
- continue the pilot study on underground space development in selected strategic urban areas including formulation of preliminary conceptual schemes;
- continue the detailed design of the site formation and infrastructure works for development site at Ka Wai Man Road and the Initial Sites at Kam Tin South;
- complete the engineering feasibility studies/preliminary development review for potential public housing sites at Tseung Kwan O, Ma On Shan, Tuen Mun Central and complete the engineering feasibility studies for sites in Yuen Long;
- continue the planning and engineering study for re-planning of Tseung Kwan O Area 137;
- continue construction works and handle matters relating to Lung Mei Beach;
- continue the study on land requirements for the construction industry;
- commence to take forward the Lantau blueprint including the development and conservation projects and initiatives for Lantau; and
- continue the construction of the expansion of mountain bike trail networks in south Lantau.

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

	2015–16 (Actual)	2016–17 (Original)	2016–17 (Revised)	2017–18 (Estimate)
Financial provision (\$m)	359.1	364.3	372.7 (+2.3%)	377.6 (+1.3%)
				(or +3.7% on 2016–17 Original)

### Aim

27 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

28 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.

29 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.

30 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.

31 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 provide advice to private slope owners on slope maintenance and improvement. In addition, 21 guidance documents were produced on slope safety and other geotechnical topics, including reports on lessons learnt from landslides.

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32 The key performance measures relating to slope safety and geotechnical standards are:

### *Target*

	Target	2015 (Actual)	2016 (Actual)	2017 (Plan)
providing information about a slope within five days of an application (%) .....	100	100	100	100

### *Indicators*

	2015 (Actual)	2016 (Actual)	2017 (Estimate)
new slope features registered .....	350	460	500
detailed stability studies completed on government man-made slopes .....	165	165	160
slope features upgraded and landscaped .....	155	165	155
natural hillside catchments with mitigation measures implemented .....	33	49	49
safety screening studies of private man-made slopes completed .....	102	102	100
expenditure for landslip prevention and mitigation (\$m) .....	1,155.0	1,300.0	1,050.0
geotechnical submissions checked .....	22 388	21 549	21 500
active construction sites inspected .....	3 310	3 284	3 300
guidance documents produced .....	22	21	22

### *Matters Requiring Special Attention in 2017–18*

33 During 2017–18, 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;
- continue to implement the public education campaign to raise public awareness of landslide danger arising from man-made slopes and natural hillsides; and
- continue to provide advisory services to private slope owners on slope maintenance, safety improvement works and aesthetic improvement.

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

	2015–16 (Actual)	2016–17 (Original)	2016–17 (Revised)	2017–18 (Estimate)
Financial provision (\$m)	130.4	131.3	135.9 (+3.5%)	136.6 (+0.5%)
				(or +4.0% on 2016–17 Original)

### *Aim*

34 The aim is to develop greening master plans and implement other greening 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.

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### *Brief Description*

35 The Department continued the implementation of the recommended greening measures in 2016.

36 The Department operates contracts for ground investigation and laboratory testing. In 2016, the Public Works Laboratories (PWLs) continued to serve public works projects by undertaking some 746 000 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 10 000 users in 2016.

37 Through the Marine Fill Committee, the Department continued to manage the supply and demand of 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.

38 The key performance measures relating to greening and technical services are:

#### *Targets*

	Target	2015 (Actual)	2016 (Actual)	2017 (Plan)
providing assistance at the registration counter of the Civil Engineering Library within ten minutes (%).....	100	100	100	100
providing information about geology and natural resources within 4.5 days upon request (%).....	100	100	100	100

#### *Indicators*

	2015 (Actual)	2016 (Actual)	2017 (Estimate)
no. of greening master plans under planning¶.....	8	0	—
cumulative total of greening master plans formulated.....	34	42	42
expenditure on greening works implemented under greening master plans (\$m).....	43.5	64.1	55.2
ground investigation and laboratory soil and rock testing term contracts:			
trial pits excavated.....	423	302	420
length of drilling carried out in soil (m).....	8 004	8 625	10 000
length of drilling carried out in rock (m).....	3 989	6 073	6 000
triaxial tests on soil specimens.....	2 667	2 712	3 000
material tests conducted in the PWLs and in contract laboratories managed by the PWLs (thousand).....	695	746	600
advisory cases handled in respect of land-use planning and engineering feasibility studies.....	1 979	1 950	1 900
geotechnical engineering advisory cases handled.....	766	787	780
value of fill management investigations and studies (\$m).....	3.8	5.4	9.1
fill management reports and major papers issued.....	9	9	9

¶ Indicator to be removed as from 2017.

### *Matters Requiring Special Attention in 2017–18*

39 During 2017–18, the Department will continue:

- the implementation of the recommended greening works,
- to implement the monitoring and management scheme of sediment disposal facilities,
- to provide technical advice and support for maritime projects to minimise dredging and disposal, and
- to provide reliable and efficient construction material testing and ground investigation services to public works projects.



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

	2015–16 (Actual)	2016–17 (Original)	2016–17 (Revised)	2017–18 (Estimate)
Financial provision (\$m)	78.1	75.7	79.5 (+5.0%)	75.9 (–4.5%)
				(or +0.3% on 2016–17 Original)

#### *Aim*

40 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*

41 The Department made satisfactory progress in respect of supervision of quarrying in 2016. The Department continued to supervise the rehabilitation contracts for Lam Tei Quarry and Anderson Road 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 quarry sites were conducted to enforce safety regulations. The Department is also undertaking studies on identification of new quarry sites in Hong Kong in order to dovetail with the closure of the existing quarries.

42 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 their manufacture or importation to their firing on construction sites.

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

#### *Targets*

	Target	2015 (Actual)	2016 (Actual)	2017 (Plan)
issuing a Sand Removal Permit within two days of an application which has satisfied government requirements (%)...	100	100	100	100
issuing a Licence to Manufacture Explosives within two days of an application, where pre-licensing requirements have been satisfied (%).....	100	100	100	100
issuing a Permit to Remove Explosives within one day of an application (%).....	100	100	100	100
issuing a Licence to Store Explosives where pre-licensing requirements have been satisfied				
within two days of an application (%) .....	90	100	100	97
within three days of an application (%) .....	100	100	100	100
issuing a Licence to Use Explosives where pre-licensing requirements have been satisfied				
within two days of an application (%) .....	90	100	100	97
within three days of an application (%) .....	100	100	100	100
endorsing a Licence to Import or Export Explosives within one day of an application (%)φ .....	—	100	—	—
issuing a Mine Blasting Certificate within one day of an applicant passing an examination (%) .....	100	100	100	100

φ Target removed as from 2016. To streamline processing of import/export licences, Trade and Industry Department has accepted the Department's list of approved explosives for use in Hong Kong in lieu of seeking its endorsement of licence applications.

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### Indicators

	2015 (Actual)	2016 (Actual)	2017 (Estimate)
aggregates processed by contract quarries (million tonnes) ....	2.0	1.4	0.9
revenue from royalty and rental payments (\$m) .....	41.2	110.0	109.5
Sand Removal Permits issued .....	2 794	892	1 200
quarrying and rock crushing contracts supervised .....	2	2	2
safety inspections of quarries conducted .....	24	24	19
tonnes of explosives consumed .....	899	685	1 200
no. of blasting activities .....	1 814	1 149	1 400
inspections of blasting sites conducted .....	988	626	830
inspections of pre-licensed sites, magazines, manufacturing plants and stores conducted .....	491	435	420
warnings issued .....	0	0	1
licences and permits granted <sup>β</sup> .....	7 193	6 430	6 350
licences and permits renewed <sup>β</sup> .....	143	157	170
tonnes of explosives delivered from government explosives depots .....	78	28	35
no. of deliveries of explosives .....	1 052	456	1 100

<sup>β</sup> These include all licences and permits except Sand Removal Permits.

### Matters Requiring Special Attention in 2017–18

44 During 2017–18, the Department will continue to work together 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 complete the study on identification of new quarry sites in Hong Kong.

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

	2015–16 (Actual)	2016–17 (Original)	2016–17 (Revised)	2017–18 (Estimate)
Financial provision (\$m)	918.4	1,178.0	1,180.0 (+0.2%)	1,332.1 (+12.9%)
				(or +13.1% on 2016–17 Original)

### Aim

45 The aim is to ensure good management and utilisation of inert construction and demolition materials.

### Brief Description

46 In 2016, the Department, on behalf of the Public Fill Committee, continued to scrutinise submissions from proponents of public works projects with a view to maximising the re-use of public fill in various projects. For daily receipt of public fill, the Department continued to liaise with stakeholders concerned such as dump truck drivers and members of the District Councils. To tackle the shortfall in public filling capacity and minimise the disposal of public fill at landfills, the Department continued the operation of the fill banks and the temporary construction waste sorting facilities at Tuen Mun Area 38 and Tseung Kwan O Area 137.

47 The Department continued to enhance the scrutiny of public works projects for reducing the generation of public fill, and provide proponents of public works projects with guidelines to formulate a construction and demolition materials management plan at an early design stage of the projects, so as to minimise the generation of construction and demolition materials at source and maximise their re-use. The Department continued to recycle inert hard construction and demolition materials at Tseung Kwan O Area 137.

48 The Department continued to maintain adequate outlets at strategic locations for inert construction and demolition materials. A short-term barging facility at Mui Wo and a long-term barging point at Chai Wan were being operated.

49 The Department continued to deliver surplus public fill for beneficial re-use in the Mainland and to liaise with the Mainland authority to ensure smooth operation.

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50 The key performance measures relating to management of construction and demolition materials are:

### *Targets*

	Target	2015 (Actual)	2016 (Actual)	2017 (Plan)
issuing dumping licences within three days (%).....	100	100	100	100
issuing dumping licences within half day for applications submitted in person (%) .....	100	100	100	100

### *Indicators*

	2015 (Actual)	2016 (Actual)	2017 (Estimate)
public fill received at public fill reception facilities (million tonnes).....	16.0#	15.0^	15.8
public fill delivered to the Mainland for beneficial re-use (million tonnes).....	13.0	13.6^	14.0
public fill supplied to local projects for beneficial re-use (million tonnes).....	0.7	0.1^	0.7
public fill stockpiled at public fill reception facilities as at year end (million tonnes).....	17.5#	18.8^	19.9
recycling inert hard construction and demolition materials (million tonnes).....	0.03	0.02	0.09
submissions processed on behalf of the Public Fill Committee .....	143	140	142
no. of assignment of public fill outlets through trip ticket system .....	355	350	356

# Adjusted from the actual figure shown in the 2016–17 Estimates.

^ Provisional actual subject to adjustment.

### *Matters Requiring Special Attention in 2017–18*

51 During 2017–18, the Department will continue:

- the cross-boundary delivery of surplus public fill for beneficial re-use in the Mainland and review the scheme in the light of experience gained;
- to handle public fill to be generated from major infrastructure projects, as well as to identify alternative outlets for handling the surplus public fill;
- to operate the temporary construction waste sorting facilities at Tuen Mun and Tseung Kwan O; and
- to formulate a long-term strategy to handle inert construction and demolition materials.

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

	2015–16 (Actual)	2016–17 (Original)	2016–17 (Revised)	2017–18 (Estimate)
Financial provision (\$m)	35.1	35.7	36.4 (+2.0%)	37.1 (+1.9%)
				(or +3.9% on 2016–17 Original)

### *Aim*

52 The aim is to advise on development proposals.

### *Brief Description*

53 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.

**Head 33 — CIVIL ENGINEERING AND DEVELOPMENT DEPARTMENT**

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54 The key performance measures relating to advice on development proposals are:

*Indicators*

	2015 (Actual)	2016 (Actual)	<b>2017 (Estimate)</b>
town plans and planning briefs on which advice and comments are given .....	160	146	<b>144</b>
public and private development proposals and planning applications examined .....	2 947	2 892	<b>2 668</b>
town plans, planning briefs, public and private development proposals and planning applications dealt with per post .....	74.0	72.3	<b>67.0</b>

*Matters Requiring Special Attention in 2017–18*

55 During 2017–18, 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 the impact of engineering works and enhancing the quality of the landscape; and
- technical advice and support to the WKCD Authority on the phased implementation of WKCD development.

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### ANALYSIS OF FINANCIAL PROVISION

Programme	2015–16 (Actual) (\$m)	2016–17 (Original) (\$m)	2016–17 (Revised) (\$m)	2017–18 (Estimate) (\$m)
(1) Tourism and Recreational Development .....	46.8	47.7	49.3	49.4
(2) Port and Marine Facilities .....	226.6	221.4	259.8	244.7
(3) Provision of Land and Infrastructure .....	479.1	553.1	524.9	592.1
(4) Slope Safety and Geotechnical Standards .....	359.1	364.3	372.7	377.6
(5) Greening and Technical Services .....	130.4	131.3	135.9	136.6
(6) Supervision of Mining, Quarrying and Explosives .....	78.1	75.7	79.5	75.9
(7) Management of Construction and Demolition Materials .....	918.4	1,178.0	1,180.0	1,332.1
(8) Advice on Development Proposals .....	35.1	35.7	36.4	37.1
	2,273.6	2,607.2	2,638.5 (+1.2%)	2,845.5 (+7.8%)
				<b>(or +9.1% on 2016–17 Original)</b>

#### Analysis of Financial and Staffing Provision

##### Programme (1)

Provision for 2017–18 is \$0.1 million (0.2%) higher than the revised estimate for 2016–17. This is mainly due to the increased provision for salary increments, partly offset by reduced cash flow requirement for other operating expenses.

##### Programme (2)

Provision for 2017–18 is \$15.1 million (5.8%) lower than the revised estimate for 2016–17. This is mainly due to the reduced cash flow requirement for contract maintenance expenses, partly offset by increased provision for salary increments.

##### Programme (3)

Provision for 2017–18 is \$67.2 million (12.8%) higher than the revised estimate for 2016–17. This is mainly due to the increased provision for filling of vacancies, salary increments and the net increase of 11 posts, partly offset by reduced cash flow requirement for other operating expenses.

##### Programme (4)

Provision for 2017–18 is \$4.9 million (1.3%) higher than the revised estimate for 2016–17. This is mainly due to the increased provision for salary increments, partly offset by the reduced cash flow requirement for other operating expenses.

##### Programme (5)

Provision for 2017–18 is \$0.7 million (0.5%) higher than the revised estimate for 2016–17. This is mainly due to the increased provision for filling of vacancies and salary increments, partly offset by the reduced cash flow requirement for other operating expenses and the deletion of two posts.

##### Programme (6)

Provision for 2017–18 is \$3.6 million (4.5%) lower than the revised estimate for 2016–17. This is mainly due to the deletion of three posts and the reduced cash flow requirement for other operating expenses, partly offset by the increased provision for salary increments.

##### Programme (7)

Provision for 2017–18 is \$152.1 million (12.9%) higher than the revised estimate for 2016–17. This is mainly due to the increased provision for handling surplus public fill.

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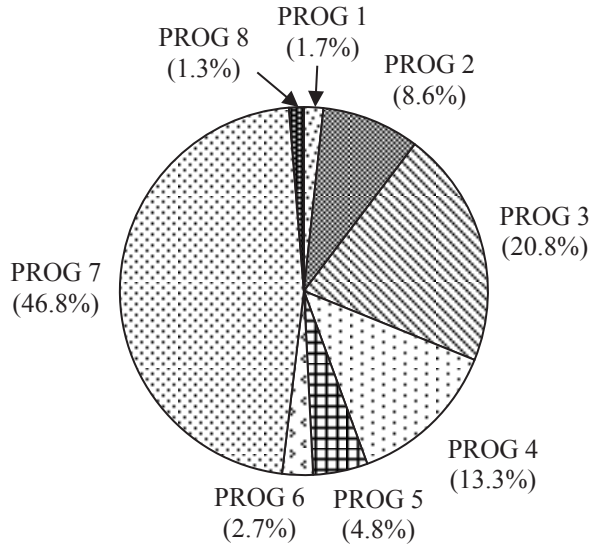
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### **Programme (8)**

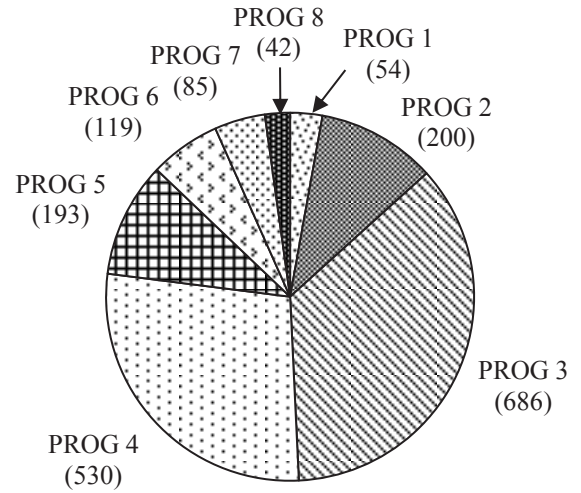
Provision for 2017–18 is \$0.7 million (1.9%) higher than the revised estimate for 2016–17. This is mainly due to increased provision for salary increments.



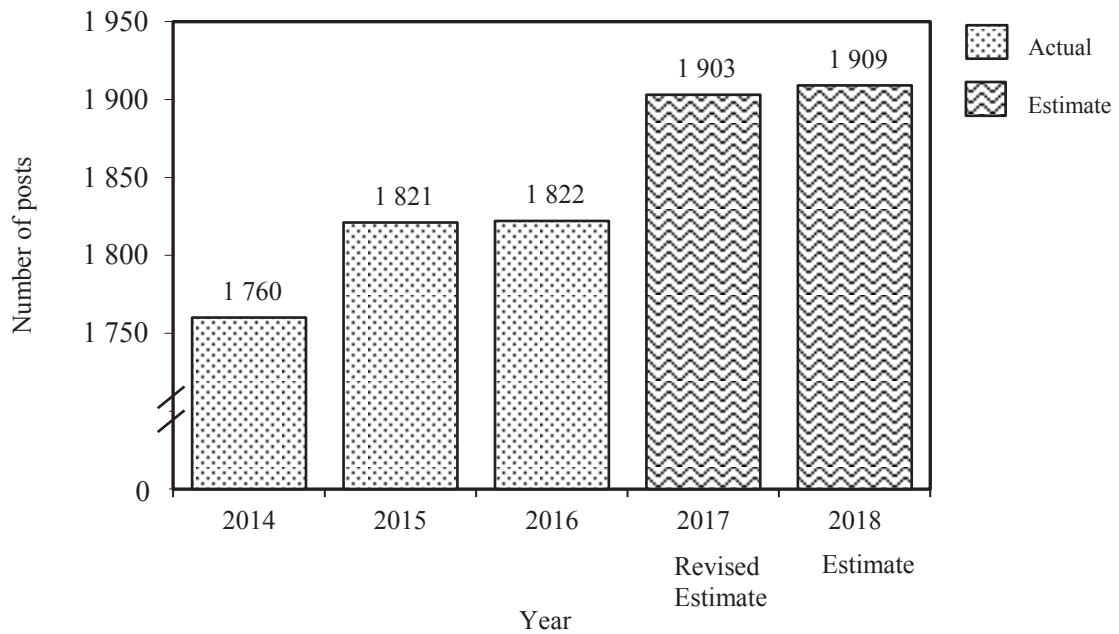
*Allocation of provision to programmes (2017-18)*



*Staff by programme (as at 31 March 2018)*



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



## Head 33 — CIVIL ENGINEERING AND DEVELOPMENT DEPARTMENT

Sub-head (Code)	Actual expenditure 2015-16	Approved estimate 2016-17	Revised estimate 2016-17	<b>Estimate 2017-18</b>	
	\$'000	\$'000	\$'000	<b>\$'000</b>	
<b>Operating Account</b>					
Recurrent					
000	Operational expenses .....	2,269,740	2,603,589	2,633,594	<b>2,840,492</b>
	Total, Recurrent.....	2,269,740	2,603,589	2,633,594	<b>2,840,492</b>
Non-Recurrent					
700	General non-recurrent .....	3	150	65	<b>150</b>
	Total, Non-Recurrent.....	3	150	65	<b>150</b>
	Total, Operating Account .....	2,269,743	2,603,739	2,633,659	<b>2,840,642</b>
<b>Capital Account</b>					
Plant, Equipment and Works					
661	Minor plant, vehicles and equipment (block vote).....	3,829	3,476	4,857	<b>4,837</b>
	Total, Plant, Equipment and Works.....	3,829	3,476	4,857	<b>4,837</b>
	Total, Capital Account.....	3,829	3,476	4,857	<b>4,837</b>
	Total Expenditure .....	2,273,572	2,607,215	2,638,516	<b>2,845,479</b>

## Head 33 — CIVIL ENGINEERING AND DEVELOPMENT DEPARTMENT

### Details of Expenditure by Subhead

The estimate of the amount required in 2017–18 for the salaries and expenses of the Civil Engineering and Development Department is \$2,845,479,000. This represents an increase of \$206,963,000 over the revised estimate for 2016–17 and \$571,907,000 over the actual expenditure in 2015–16.

#### *Operating Account*

#### Recurrent

**2** Provision of \$2,840,492,000 under *Subhead 000 Operational expenses* is for the salaries, allowances and other operating expenses of the Civil Engineering and Development Department.

**3** The establishment as at 31 March 2017 will be 1 903 posts including 11 supernumerary posts. It is expected that there will be a net increase of six posts in 2017–18. Subject to certain conditions, the controlling officer may under delegated power create or delete non-directorate posts during 2017–18, but the notional annual mid-point salary value of all such posts must not exceed \$989,795,000.

**4** An analysis of the financial provision under *Subhead 000 Operational expenses* is as follows:

	2015–16 (Actual) (\$'000)	2016–17 (Original) (\$'000)	2016–17 (Revised) (\$'000)	2017–18 (Estimate) (\$'000)
Personal Emoluments				
- Salaries.....	1,115,699	1,206,482	1,167,742	<b>1,251,924</b>
- Allowances.....	13,685	14,757	15,846	<b>18,161</b>
- Job-related allowances.....	816	970	876	<b>931</b>
Personnel Related Expenses				
- Mandatory Provident Fund contribution.....	3,109	3,602	3,893	<b>4,970</b>
- Civil Service Provident Fund contribution.....	36,036	46,914	44,283	<b>57,452</b>
Departmental Expenses				
- Contract maintenance .....	964,835	1,215,617	1,249,896	<b>1,384,960</b>
- General departmental expenses .....	135,560	115,247	151,058	<b>122,094</b>
	2,269,740	2,603,589	2,633,594	<b>2,840,492</b>

## Head 33 — CIVIL ENGINEERING AND DEVELOPMENT DEPARTMENT

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### Commitments

Sub-head (Code)	Item (Code)	Ambit	Approved commitment	Accumulated expenditure to 31.3.2016	Revised estimated expenditure for 2016–17	Balance
			\$'000	\$'000	\$'000	\$'000
<b><i>Operating Account</i></b>						
700		<i>General non-recurrent</i>				
	528	Provision of warning signs in squatter areas .....	5,000	3,837	65	1,098
		Total .....	<u>5,000</u>	<u>3,837</u>	<u>65</u>	<u>1,098</u>