# ITEM FOR PUBLIC WORKS SUBCOMMITTEE OF FINANCE COMMITTEE

#### HEAD 707 – NEW TOWNS AND URBAN AREA DEVELOPMENT Civil Engineering – Land development

747CL – Advance site formation and engineering infrastructure works at Kwu Tung North new development area and Fanling North new development area

Members are invited to recommend to the Finance Committee –

- (a) the upgrading of part of 747CL, entitled "Advance site formation and engineering infrastructure works at Kwu Tung North new development area and Fanling North new development area – detailed design and site investigation", to Category A at an estimated cost of \$340.8 million in money-of-the-day prices; and
- (b) the retention of the remainder of **747CL** in Category B.

#### PROBLEM

We need to carry out detailed design and site investigation for the advance site formation and engineering infrastructure works at Kwu Tung North (KTN) New Development Area (NDA) and Fanling North (FLN) NDA (the Advance Works), to enable construction of housing and community facilities for the first population intake by 2023.

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# PROPOSAL

2. The Director of Civil Engineering and Development, with the support of the Secretary for Development, proposes to upgrade part of **747CL** to Category A at an estimated cost of \$340.8 million in money-of-the-day (MOD) prices to undertake detailed design and site investigation for the advance site formation and engineering infrastructure works at the KTN and FLN NDAs.

### PROJECT SCOPE AND NATURE

- 3. We propose to upgrade part of **747CL** to Category A, comprising
  - (a) detailed design of the works described in paragraph 5(a) to (g) below;
  - (b) associated site investigation works and supervision;
  - (c) preparation of tender documents and assessment of tenders for the works described in paragraph 5 (a) to (g) below; and
  - (d) investigation study for the district cooling system (DCS).

Two layout plans showing the proposed Advance Works are at Enclosures 1 and 2.

4. Subject to funding approval of the Finance Committee (FC), we plan to commence the proposed detailed design and associated site investigation works in August 2014, with a view to enabling construction of housing and community facilities for the first population intake by 2023.

5. We will retain the remainder of **747CL** in Category B, for which we will seek funding in phases to dovetail with the implementation programme of the project. The scope of the remainder mainly comprises –

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- (a) site formation of about 62 hectares of land at the KTN and FLN NDAs for housing and local rehousing<sup>1</sup>, and community facilities;
- (b) engineering infrastructure works including roads, drainage, sewerage, waterworks, pumping stations, fresh water and flushing water service reservoirs;
- (c) upgrading and expansion of Shek Wu Hui Sewage Treatment Works;
- (d) provision of resite area for the Home of Loving Faithfulness (HOLF) and reprovisioning of North District Temporary Wholesale Market;
- (e) soil remediation;
- (f) landscaping works; and
- (g) implementing the environmental mitigation measures for the works mentioned in (a) to (f) above.

# JUSTIFICATION

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### Need for North East New Territories (NENT) NDAs

6. We are facing a tight housing and land supply situation. We need to boost land supply for accommodating various land uses to meet Hong Kong's medium to long-term housing, economic and social needs. The 2014 Policy Address put forward initiatives to increase the supply of housing land for the growing population. Amongst these initiatives, the NENT NDAs is essential to Hong Kong's medium and long-term land supply.

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To help maintain the social fabric of the existing communities, two sites in the KTN and FLN NDAs have been reserved for local rehousing purpose to accommodate eligible households affected by the NDAs development.

7. The Planning and Development Study on NENT (NENT Study) back in 2003 identified KTN, FLN and Ping Che/Ta Kwu Ling (PC/TKL) as suitable areas for the development of NDAs. The NENT Study also confirmed the preliminary planning and engineering feasibility of these NDAs. The Hong Kong 2030: Planning Vision and Strategy (HK2030 Study) promulgated in 2007 further recommended proceeding with these NDAs to address the long-term housing demand and to provide employment opportunities.

8. In 2008, the NENT NDAs Planning and Engineering Study (NENT NDAs Study) was commissioned to establish a planning and development framework for the KTN, FLN and PC/TKL NDAs. Following a three-stage public engagement process, we reviewed the scope and planning of these NDAs. We looked into the feasibility of adjusting development intensity and increased the public housing proportion while maintaining quality living environment in the KTN and FLN NDAs. The PC/TKL NDA was originally planned for low density residential and special industrial developments, and would now be re-planned in the context of identifying further development opportunities in New Territories North<sup>2</sup>.

9. The final development proposals of the KTN and FLN NDAs were promulgated in July 2013. The KTN and FLN NDAs will provide about 60 000 new flats for an additional population of about 173 000. These NDAs will also offer work places for about 37 000 new jobs.

### **Proposed Advance Works**

10. The NENT NDAs development will be implemented in phases for full completion by 2031. The Government has prioritised the works packages so that major housing sites, in particular public housing sites, can be formed first with population intake by 2023 to meet the acute housing demand. The Advance Works are the first phase of the NDAs development, involving site formation and associated engineering infrastructure for about 16 000 housing flats to accommodate a total population of about 46 500. Engineering infrastructure

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<sup>2</sup> As an on-going initiative under the 2014 Policy Address, the Government has commissioned the Preliminary Feasibility Study on Developing the New Territories North in January 2014 with a view to exploring scope for developing a new town of similar scale as Fanling/Sheung Shui.

includes the eastern section of Fanling Bypass, which is a 5-kilometre long dual two-lane carriageway, and a new interchange at Pak Shek Au for road connection to Fanling Highway. The other phases comprise the First Stage Works and remaining packages<sup>3</sup>.

11. The existing Shek Wu Hui Sewage Treatment Works is anticipated to fully reach its design capacity of 93 000 cubic metres  $(m^3)$  per day by 2018 and the Drainage Services Department (DSD) has planned for upgrading and expansion works by stages by increasing its capacity by 40 000 m<sup>3</sup> per day to cater for development and village sewerage connection in North District. It is expected that the works will commence in 2016 for completion in 2022. We propose to further upgrade and expand the plant with an additional capacity of 20 000 m<sup>3</sup> per day to tertiary treatment level under the Advance Works to cater for sewage from all future developments in the NDAs under the Advance Works and the First Stage Works, and carry out the proposed upgrading and expansion works with those of DSD concurrently. It is expected that the works to be funded under the Advance Works will commence in 2021 for completion in 2023. To mitigate the odour impact, we plan to improve existing facilities by providing covers and deodorisation measures where required.

12. The HOLF is a non-profit-making social welfare facility for severely handicapped/disabled persons, and its site will be affected by the KTN NDA development. With the support of the Labour and Welfare Bureau, the proposed resite area will be at A Kung Kok Shan Road, Sha Tin. The existing North District Temporary Wholesale Market for agricultural products is proposed to be relocated to facilitate the construction of the proposed Fanling Bypass.

13. The Advance Works also include ground remediation prior to development at KTN. Our preliminary estimate indicates that about 700 000  $m^3$  of contaminated soil will require remediation. We will undertake a detailed survey to ascertain the profile of contamination and formulate suitable soil remediation plan. We will strictly comply with the approval conditions of the Environmental Impact Assessment (EIA) report in carrying out the remediation works.

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<sup>&</sup>lt;sup>3</sup> The First Stage Works comprises environmental mitigation measures, which are pre-requisites for the remaining packages, and the relocation sites for police facilities. The remaining packages would be developed in phases for subsequent population intake, with the works starting after the Advance Works.

14. To promote green living environment, we have completed a preliminary assessment on use of  $DCS^4$ . The findings initially indicated that the cooling load of offices and other non-domestic developments in the KTN NDA might warrant the provision of a  $DCS^5$ . We propose to examine the case for using DCS in the KTN NDA in greater detail and map out the way forward.

15. To ensure timely provision of adequate infrastructure, we need to start the detailed design and site investigation for the Advance Works in August 2014. In line with the usual arrangements for works projects, these technical preparations would be proceeded in parallel with other implementation steps, including statutory planning process and land clearance preparation. It is also necessary to proceed with the technical preparations while the Government continues to communicate with the affected local stakeholders regarding the project. During the detailed design stage, community liaison teams will be set up to assist in communication and handling of issues arising from the project. Taking these steps in parallel would save implementation time, while taking them sequentially would imply a much more prolonged timeframe for implementation and delivery.

# FINANCIAL IMPLICATIONS

16. We estimate the cost of the proposed detailed design and associated site investigation works to be \$340.8 million in MOD prices (please see paragraph 17 below), broken down as follows –

(a)	Con	sultants' fees for	<b>\$ million</b> 216.9		
	(i) (ii)	detailed design preparation of tender documents and assessment of tenders	183.0 18.2		

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<sup>&</sup>lt;sup>4</sup> DCS is a system in which chilled water is distributed in pipes from a central cooling plant to different buildings through a network of underground pipes for space cooling. The cooling and heat rejection are provided from a central plant thereby achieving higher energy efficiency as compared with conventional local systems.

<sup>&</sup>lt;sup>5</sup> The total estimated cooling load for the DCS in KTN NDA is about 200 megawatts, which is comparable with that of Kai Tak Development.

					\$ million			
	(iii)	management site staff investigation v	for	dent site		0.2		
	(iv)	investigation DCS	study	for		15.5		
(b)		uneration of re stigation works	sident s	site staf	f for site		3.8	
(c)	Site i	investigation we	orks				41.0	
(d)	Cont	ingencies					26.1	
					Sub-total	2	287.8	(in September 2013 prices)
(e)	Provi	ision for price a	djustme	ent			53.0	
					Total		340.8	(in MOD prices)

Due to insufficient in-house resources, we propose to engage consultants to undertake the detailed design and supervision of the associated site investigation works for the project. A breakdown of the estimates for consultants' fees and resident site staff costs by man-months is at Enclosure 3.

17. Subject to funding approval, we will phase the expenditure as follows –

Year	\$ million (Sept 2013)	Price adjustment factor	\$ million (MOD)
2014 - 2015	28.4	1.05450	29.9
2015 - 2016	60.3	1.11777	67.4
2016 - 2017	121.2	1.18484	143.6

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Year	\$ million (Sept 2013)	Price adjustment factor	\$ million (MOD)	
2017 - 2018	60.3	1.25593	75.7	
2018 - 2019	8.9	1.33128	11.8	
2019 - 2020	5.3	1.40117	7.4	
2020 - 2021	3.4	1.47123	5.0	
	287.8		340.8	

18. We have derived the MOD estimates on the basis of the Government's latest set of assumptions on the trend rate of change in the prices of public sector building and construction output for the period from 2014 to 2021. We will tender the detailed design on a lump sum basis with provision for price adjustment. We will tender the site investigation works under a standard re-measurement contract because the quantity of works involved may vary depending on the actual ground conditions. The contract for site investigation works will provide for price adjustment.

19. The proposed detailed design and associated site investigation works will not give rise to any recurrent expenditure.

#### PUBLIC CONSULTATION

20. We consulted the North District Council on 12 December 2013 on the proposed detailed design and site investigation works and circulated a paper to the Sheung Shui District Rural Committee and Fanling District Rural Committee for their reference and views. While they generally supported the proposal, they requested that reasonable compensation and rehousing arrangements be made available to affectees, including residents in the areas earmarked for the implementation of the NDAs, the elderly at Dills Corner Garden, farmers and other types of business undertakings. We have also consulted the Development and Housing Committee of the Sha Tin District Council (STDC DHC) on 2 January and 27 February 2014 on the relocation of the HOLF to Sha Tin. While the STDC DHC did not raise objection to the proposed relocation, some members suggested strengthening the service of the reprovisioned facility and enhancing the related transport service. We shall further consider their views and consult the relevant District Councils during the detailed design stage.

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21. We consulted the Legislative Council Panel on Development on the proposed detailed design and site investigation works on 25 February 2014. Members generally supported the proposal but expressed concerns over the rehousing arrangement for the elderly at Dills Corner Garden. We shall continue to liaise with affected parties and explore viable options in consultation with concerned policy bureaux.

22. The exhibition of the draft Outline Zoning Plans for the two NDAs for public inspection under the Town Planning Ordinance (Cap.131) ended on 20 February 2014. We are processing the representations received in accordance with the Town Planning Ordinance.

#### ENVIRONMENTAL IMPLICATIONS

23. The proposed detailed design and site investigation works are not designated projects under the EIA Ordinance and should not generate adverse environmental impacts. An EIA on the NENT NDAs was conducted under the NENT NDAs Study and was approved with conditions under the EIA Ordinance in October 2013. We will comply with the approval conditions and implement relevant recommendations in the EIA report during the detailed design stage.

24. The proposed site investigation works will only generate minimal construction waste. We will fully consider measures to minimise the generation of construction waste and reuse/recycle construction waste during construction stage.

# HERITAGE IMPLICATIONS

25. The proposed detailed design and site investigation works will not affect any declared monuments, proposed monuments, graded historic sites/buildings and Government historic sites as identified by the Antiquities and Monuments Office. As the site investigation works may affect the Sheung Shui Wa Shan Site of Archaeological Interest and archaeological potential areas, we will implement appropriate mitigation measures in accordance with the recommendations of the EIA report.

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# LAND ACQUISITION

26. The proposed detailed design and site investigation works do not require any land acquisition. The details and scope of the land acquisition required will be ascertained in the detailed design stage.

## **BACKGROUND INFORMATION**

27. The NENT Study was commissioned in January 1998 and completed in 2003 under **559CL** "Planning and development studies on North East New Territories: consultants' fees and site investigation" at an approved project estimate of \$56.9 million in MOD prices. It identified the areas at KTN, FLN and PC/TKL as suitable for the development of NDAs in the NENT. However, in light of a slower population growth, the proposals were shelved in 2003. The HK2030 Study promulgated in 2007 has revisited the NDAs identified in the NENT Study and proposed to proceed with the NDAs.

28. On 9 May 2008, the FC approved upgrading of **726CL** "Review studies on North East New Territories new development areas – consultants' fees and site investigation" to Category A at an approved project estimate of \$54.2 million in MOD prices for engaging consultants to undertake the NENT NDAs Study. The Study was substantially completed in December 2013.

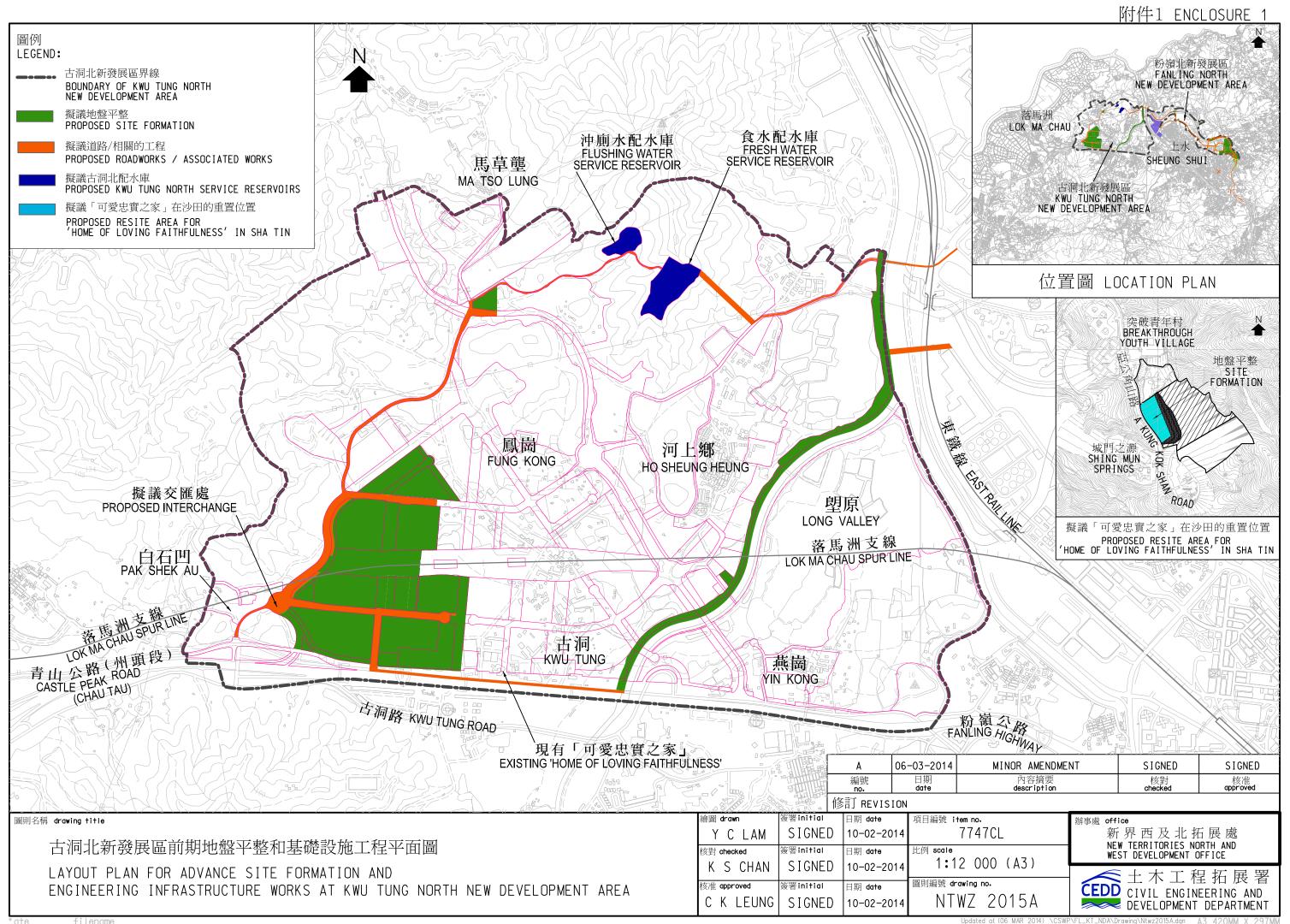
29. We upgraded **747CL** to Category B in September 2010.

30. Five old and valuable trees have been identified at Castle Peak Road Kwu Tung Section. Although these trees fall within the boundary of the NENT NDAs, they will be preserved and will not be affected. The proposed site investigation works will not involve any tree removal or planting proposals. We will take into consideration the need for tree preservation, and formulate tree preservation, removal, compensatory and new planting proposals during the detailed design stage. Such proposals will be implemented in the construction phase.

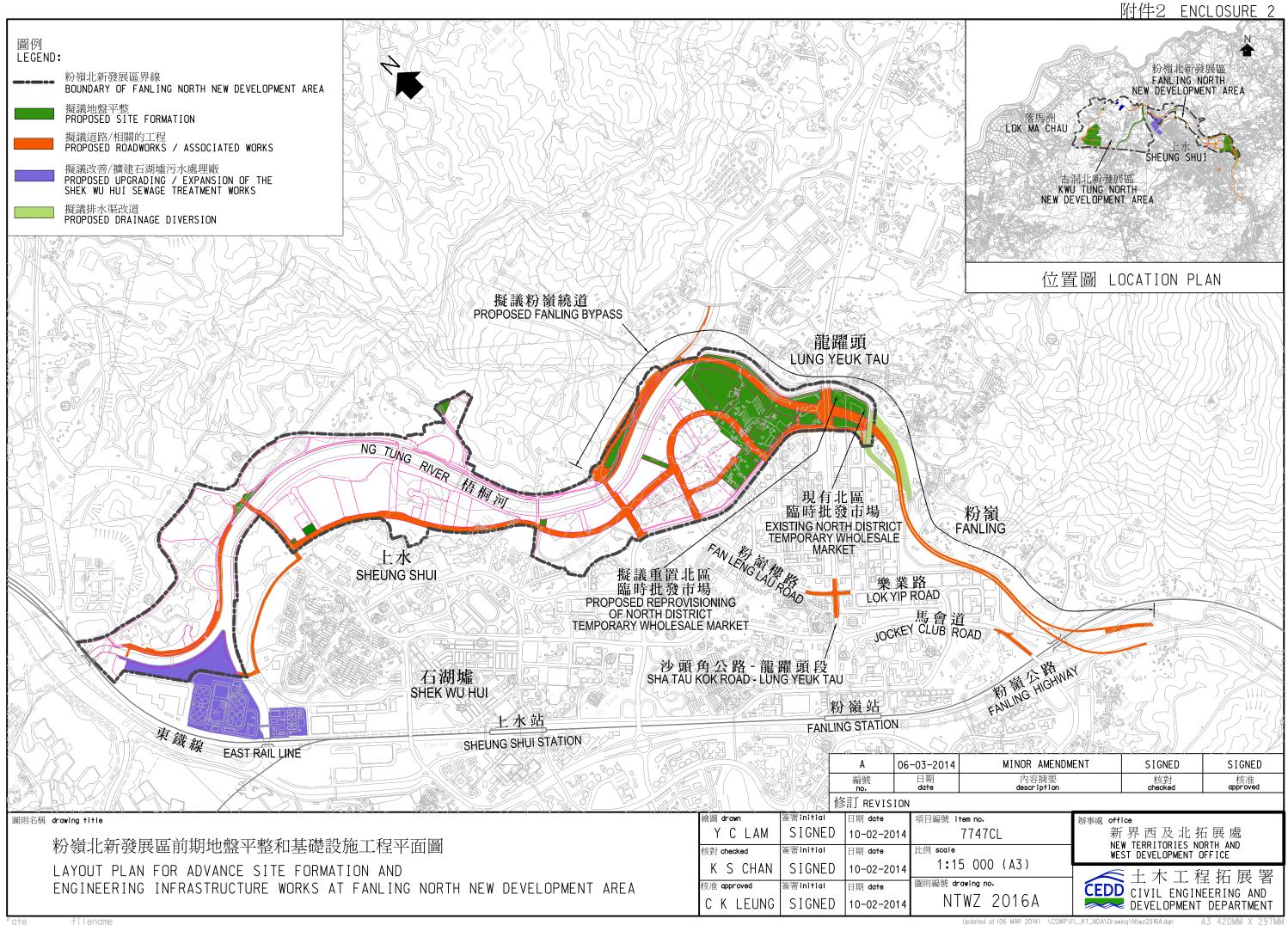
31. We estimate that the proposed detailed design and associated site investigation works will create about 73 jobs (12 for labourers and another 61 for professional/technical staff), providing a total employment of 2 060 man-months.

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Development Bureau March 2014



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#### 747CL (Part) – Advance site formation and engineering infrastructure works at Kwu Tung North new development area and Fanling North new development area

# Breakdown of the estimates for consultants' fees and resident site staff costs (in September 2013 prices)

		Estimated man- months	Average MPS* salary point	Multiplier (Note 1)	Estimated fees (\$ million)
(a) Consultants' staff costs <sup>(Note 2)</sup>					
	Professional Technical	1 250 314	38 14	2.0 2.0	168.4 14.6
	Professional Technical	104 32	38 14	2.0 2.0	14.0 1.5
	Professional Technical	124 32	38 14	2.0 2.0 Sub-total	16.7 1.5 
	Professional Technical	27 29	38 14	1.6 1.6	2.9 1.1
Comprising – (i) Consultants' fees management of R investigation wor			Sub-total	4.0	
(ii) Remuneration of responsible for signification work				3.8	
investigation wo				Total	220.7

\* MPS = Master Pay Scale

#### Notes

- 1. A multiplier of 2.0 is applied to the average MPS salary point to estimate the full staff costs including the consultants' overheads and profits as the staff will be employed in the consultants' offices. A multiplier of 1.6 is applied to the average MPS salary point to estimate the cost of RSS supplied by the consultants. (As at now, MPS salary point 38 = 67,370 per month and MPS salary point 14 = 23,285 per month.)
- 2. The actual man-months and fees will only be known after we have selected the consultants through the usual competitive fee bidding system.
- 3. The actual man-months and fees will only be known after completion of the site investigation works.