

**For discussion
on 11 May 2016**

PWSC(2016-17)19

ITEM FOR PUBLIC WORKS SUBCOMMITTEE OF FINANCE COMMITTEE

HEAD 707 – NEW TOWNS AND URBAN AREA DEVELOPMENT

Civil Engineering – Land development

**765CL – Development of Anderson Road Quarry Site – Site Formation and
Associated Infrastructure Works**

Members are invited to recommend to Finance
Committee –

- (a) the upgrading of part of **765CL**, entitled
“Development of Anderson Road Quarry site –
site formation and associated infrastructure
works”, to Category A at an estimated cost of
\$7,693.4 million in money-of-the-day prices;
and
- (b) the retention of the remainder of **765CL** in
Category B.

PROBLEM

We need to develop the Anderson Road Quarry (ARQ) site as soon
as possible to address the current shortage of housing supply.

/PROPOSAL

PROPOSAL

2. The Director of Civil Engineering and Development, with the support of the Secretary for Development, proposes to upgrade part of **765CL** to Category (Cat) A at an estimated cost of \$7,693.4 million in money-of-the-day (MOD) prices for the site formation and associated infrastructure works for the proposed development at the ARQ site.

PROJECT SCOPE AND NATURE

3. The part of **765CL** which we propose to upgrade to Category A comprises –

- (a) formation of about 40 hectares (ha) of land platforms at the ARQ site and the associated geotechnical works;
- (b) road works including construction of approximately 3-kilometre long vehicular roads, footpaths, cycle tracks, an approximately 130-metre long underpass at the southern end and a public transport terminus at the northern end of the ARQ site;
- (c) provision of and improvement to water supply, drainage and sewerage systems as well as landscaping works;
- (d) construction of phase 1 of the off-site pedestrian connectivity facilities including seven footbridges, 11 lift towers, two escalators and two subways near On Tat Estate, Hiu Lai Court and Hiu Wah Building, as well as the proposed bus-to-bus interchange (BBI) at the toll plaza of Tseung Kwan O Tunnel; and
- (e) implementation of environmental mitigation measures and an environmental monitoring and audit (EM&A) programme for the works mentioned in (a) to (d) above.

———— A layout plan showing the proposed works is at Enclosure 1.

4. Subject to Finance Committee (FC)'s funding approval, we plan to commence the proposed works by phases starting from November 2016 for completion in February 2022.

5. We will retain the remainder of **765CL** in Cat B, the funding of which would be sought from FC in early 2017 tentatively to tie in with the progress of the statutory procedures. The scope of the remaining works mainly comprises off-site road improvement works, provision of phase 2 off-site pedestrian connectivity facilities including footbridges, lift towers and escalators near Po Tat Estate, Sau Mau Ping (South) Estate, Sau Ming House of Sau Mau Ping Estate and Hiu Ming Street Playground, as well as landscaping and other ancillary works for the open space at the ARQ site. A layout plan showing the remaining works is at Enclosure 2.

JUSTIFICATION

6. To meet the housing and other development needs of the community, we seek to increase land supply in the short, medium and long term. As set out in previous Policy Addresses, development of the ARQ site is one of the major initiatives to increase land supply in the short and medium term.

7. The ARQ site is an existing quarry with no infrastructure. The development of the ARQ site will provide about 12 ha of land for development of about 9 400 private and subsidised housing flats for a planned population of about 25 000. The population intake will start from 2023-24 onwards. Land will also be provided at the ARQ site for commercial uses, government, institution or community facilities, open space and amenity areas, etc.

8. In addition to the site formation and infrastructure works within the ARQ site, a new BBI is proposed to be constructed at the toll plaza of Tseung Kwan O Tunnel to reduce the public transport demand at the Sau Mau Ping, Po Tat and Hing Tin areas and to mitigate the traffic impact generated from the proposed ARQ development. A series of associated off-site road improvement works and pedestrian connectivity facilities is also proposed to enhance the pedestrian connectivity between the ARQ site and housing estates in the vicinity, the Kwun Tong town centre and the proposed BBI, as well as to mitigate the potential cumulative traffic impact arising from the proposed ARQ development.

9. The pedestrian connectivity facilities will be implemented in two phases. Phase 1 includes facilities that are ready for implementation, while phase 2 includes facilities involving issues such as potential land resumption or creation of easement, hence necessitating a longer time for preparation and consultation before construction. Our tentative plan is to seek FC's funding approval for the remainder works in early 2017.

FINANCIAL IMPLICATIONS

10. We estimate the capital cost of the proposed works to be \$7,693.4 million in MOD prices (please see paragraph 11 below). The breakdown is as follows –

	\$ million	
(a) Site formation and geotechnical works	1,702.0	
(b) Road works	402.8	
(c) Water supply, drainage, sewerage and landscaping works	1,338.3	
(d) Phase 1 pedestrian connectivity facilities and BBI	943.3	
(e) Environmental mitigation measures and EM&A programme for the works in (a) to (d) above	511.4	
(f) Consultants' fees for	77.1	
(i) contract administration	15.9	
(ii) management of resident site staff (RSS)	47.1	
(iii) EM&A programme	14.1	
(g) Remuneration of RSS	488.1	
(h) Contingencies	533.3	
	Sub-total	5,996.3
		(in September 2015 prices)
(i) Provision for price adjustment	1,697.1	
	Total	7,693.4
		(in MOD prices)

———— A breakdown of the estimates for the consultants' fees and RSS costs by man-months is at Enclosure 3.

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

Year	\$ million (Sept 2015)	Price adjustment factor	\$ million (MOD)
2016 – 2017	64.5	1.05775	68.2
2017 – 2018	738.7	1.12122	828.2
2018 – 2019	1,080.3	1.18849	1,283.9
2019 – 2020	1,507.8	1.25980	1,899.5
2020 – 2021	1,390.2	1.33539	1,856.5
2021 – 2022	712.9	1.40549	1,002.0
2022 – 2023	306.8	1.47577	452.8
2023 – 2024	195.1	1.54956	302.3
	<u>5,996.3</u>		<u>7,693.4</u>

12. We have derived the MOD estimate 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 2016 to 2024. Subject to funding approval, we will deliver the works through several contracts with provision for price adjustments using conventional re-measurement contract form and New Engineering Contract (NEC)¹ form.

13. We estimate the annual recurrent expenditure arising from the proposed works to be \$47.2 million. The capital and recurrent costs arising from the proposed works would be taken into consideration when determining the relevant fees and charges in future.

/PUBLIC

¹ NEC is a suite of contracts developed by the Institution of Civil Engineers, United Kingdom. It is a contract form that emphasises cooperation, mutual trust and collaborative risk management between contracting parties.

PUBLIC CONSULTATION

14. In September 2013, we consulted the Traffic and Transport Committees of the Kwun Tong District Council (KTDC) and Sai Kung District Council (SKDC) on the proposed ARQ site development. Members of both district councils supported the proposal.

15. Two public forums were held on 10 and 13 January 2015 at the Kwun Tong Community Hall for collecting views from members of the public on the proposed pedestrian connectivity facilities. The attendees generally supported the proposed facilities.

16. We consulted the KTDC Traffic and Transport Committee on the proposed pedestrian connectivity facilities and BBI on 29 January 2015, the SKDC Traffic & Transport Committee on the proposed road works within the ARQ site and the BBI on 19 March 2015, and the KTDC Traffic & Transport Committee on the proposed road works within the ARQ site on 24 March 2015. Members of these committees supported the project, and members of SKDC requested for an early implementation of the BBI.

17. We gazetted the proposed road works and sewerage works for the ARQ site under the Roads (Works, Use and Compensation) Ordinance (RO) (Cap. 370) and the Water Pollution Control (Sewerage) Regulation (WPC(S)R) (Cap. 358AL) respectively on 26 June 2015. No objection was received. The works were subsequently authorised on 20 November 2015.

18. We also gazetted phase 1 of the proposed pedestrian connectivity facilities under RO (Cap. 370) in two packages on 28 August and 2 October 2015, as well as the proposed sewerage works associated with the pedestrian connectivity facilities under WPC(S)R (Cap. 358AL) on 2 October 2015. No objection was received. The works were authorised on 29 January 2016.

19. On 26 June 2015, amendments to the approved Kwun Tong (North) OZP were exhibited for public inspection under the Town Planning Ordinance (Cap. 131). Information paper for the OZP amendments was submitted to the KTDC and SKDC. No comments were received during the exhibition period of the draft OZP. The Chief Executive in Council approved the draft OZP on 5 January 2016.

20. We consulted the Legislative Council Panel on Development on 15 March and 26 April 2016 regarding our plan to submit the funding application for the proposed site formation and associated infrastructure works. Members supported the funding application.

ENVIRONMENTAL IMPLICATIONS

21. The engineering feasibility study of the ARQ site development is a designated project under Schedule 3 to the Environmental Impact Assessment (EIA) Ordinance (Cap. 499). The EIA report was approved on 28 July 2014. The report concludes that the environmental impact of the ARQ site development, including the proposed works, could be controlled to within the criteria under the EIA Ordinance and the Technical Memorandum on EIA Process.

22. We will implement the mitigation measures and an EM&A programme as recommended in the approved EIA report. The recommended mitigation measures mainly include installation of noise barriers at the vehicular road and public transport terminus cover. For short-term impacts caused by the proposed works during construction, we will control the construction dust, noise and surface run-off by mitigation measures including watering at site, use of quiet plant and working methods and close liaison with the nearby schools to avoid noisy construction works to be carried out during examination period, and the use of temporary drains to discharge the surface run-off. We estimate the cost of implementing the environmental mitigation measures and EM&A programme to be \$511.4 million as stated in paragraph 10(e) above. We have included this cost in the overall estimate of the proposed works.

23. At the planning and design stages, we have considered the design to optimise the site formation profile to reduce construction waste where possible. In addition, we will require the contractor to reuse inert construction waste (e.g. excavated materials) on site or in other suitable construction sites as far as possible, in order to minimise the disposal of inert construction waste to public fill reception facilities². We will encourage the contractor to maximise the use of recycled and recyclable inert construction waste, and the use of non-timber formwork to further minimise the generation of construction waste.

/24.

² Public fill reception facilities are specified in Schedule 4 of the Waste Disposal (Charges for Disposal of Construction Waste) Regulation (Cap. 354N). Disposal of inert construction waste at public fill reception facilities requires a license issued by the Director of Civil Engineering and Development.

24. At the construction stage for the proposed works, we will require the contractor to submit for approval a plan setting out the waste management measures, which will include appropriate mitigation means to avoid, reduce, reuse and recycle inert construction waste. We will ensure that the day-to-day operations on site comply with the approved plan. We will also require the contractor to separate the inert portion from non-inert construction waste on site for disposal at appropriate facilities. Besides, we will control the disposal of inert construction waste and non-inert construction waste to public fill reception facilities and landfills respectively through a trip-ticket system.

25. We estimate that the proposed works will generate in total 1.43 million tonnes of construction waste. Of these, we will reuse 1.20 million tonnes (84%) on site and 0.20 million tonnes (14%) on other construction sites, deliver 0.01 million tonnes (1%) inert construction waste to public fill reception facilities for subsequent reuse. We will dispose of the remaining 0.02 million tonnes (1%) non-inert construction waste at landfills. The total cost for accommodating construction waste at public fill reception facilities and landfill sites is estimated to be \$2.8 million for the proposed works (based on a unit charge rate of \$27 per tonne for disposal at public fill reception facilities, and \$125 per tonne for disposal at landfills stipulated in the Waste Disposal (Charges for Disposal of Construction Waste) Regulation) (Cap. 354N).

HERITAGE IMPLICATIONS

26. The proposed works will not affect any heritage site, i.e. all declared monuments, proposed monuments, graded historic sites and buildings, sites of archaeological interest and government historic sites identified by the Antiquities and Monuments Office.

TRAFFIC IMPLICATIONS

27. The proposed works will not cause any significant traffic impact during the construction stage. Temporary traffic arrangements will be implemented to facilitate the construction works. We will display publicity boards on site giving details of the temporary traffic arrangements, and the anticipated completion dates of individual sections of works. In addition, we will set up a telephone hotline to respond to public enquiries or complaints.

28. We have conducted the traffic impact assessment and reviewed the traffic impact of the ARQ site development on the existing and planned transport system, taking into account the additional planned population. The result demonstrated that with the completion of all planned road improvement works in connection with the development of ARQ site, the traffic could be alleviated to an acceptable condition. These road improvement works will be carried out and completed before the population intake of the ARQ site development.

LAND ACQUISITION

29. The proposed works do not require resumption of any private land.

BACKGROUND INFORMATION

30. We upgraded **765CL** to Cat B in September 2013.

31. On 21 February 2014, the FC approved the upgrading of part of **765CL** to Cat A as **774CL** “Development of Anderson Road Quarry site – detailed design and site investigations” at an approved project estimate of \$187.2 million in MOD prices for engaging consultants to undertake the detailed design and site investigation works of the site formation and associated infrastructure works, off-site road improvement works, as well as pedestrian connectivity facilities for the proposed development at the ARQ site. The site investigation for the above works as well as the detailed design for the works in paragraph 3(a) to (e) above have been completed in February 2016, while the detailed design for the remaining works is on-going.

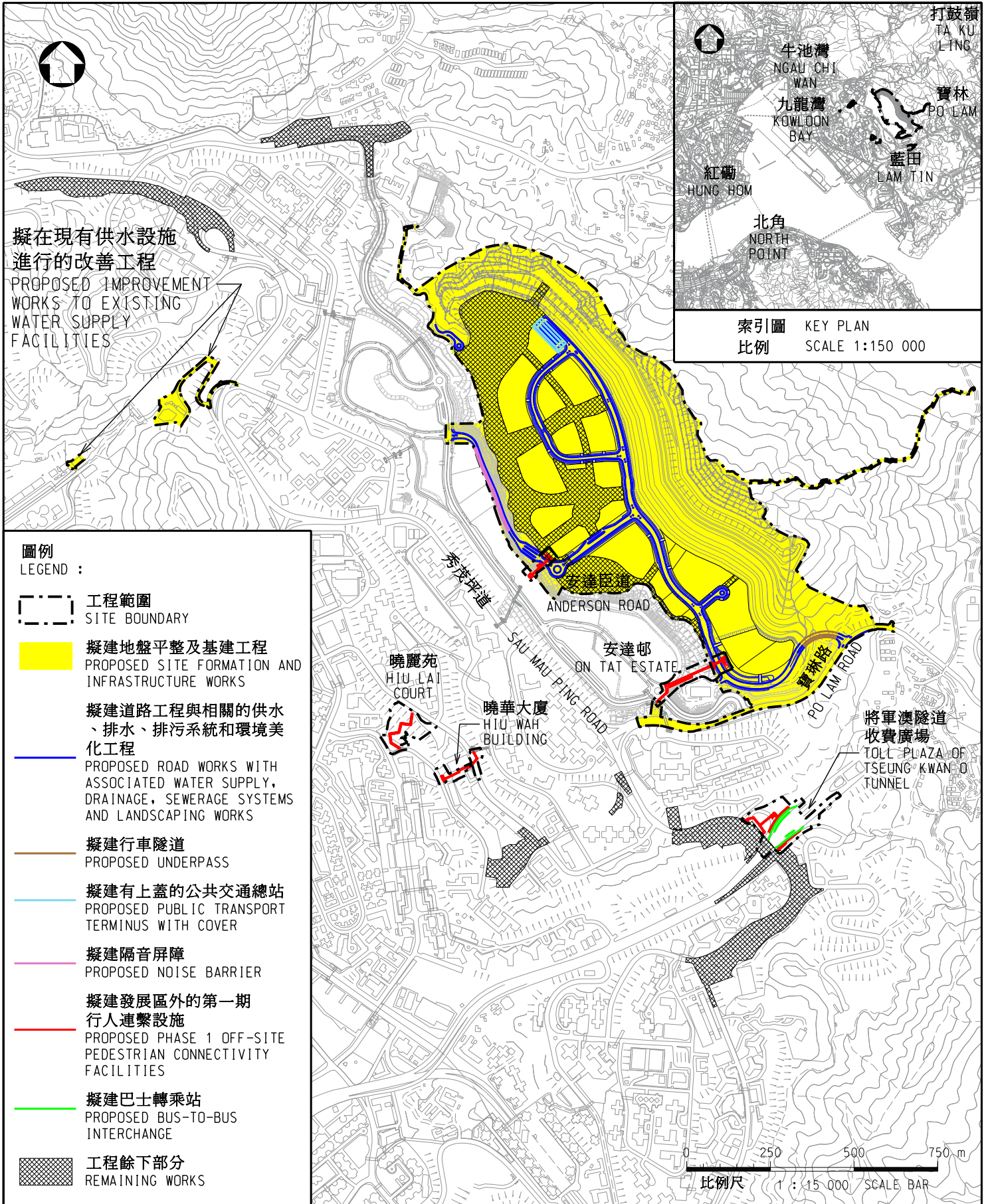
32. Out of the about 7 358 trees within the proposed works boundary, about 5 386 trees will be preserved. The proposed construction works will involve the removal of about 1 972 trees, including about 1 954 trees to be felled and 18 trees to be transplanted within the proposed work site. All the trees to be removed and transplanted are not important trees³. We will incorporate planting proposals as part of the works for landscape enhancement, including estimated quantities of 999 trees, around 5 500 woodland mix plantings, around 550 000 shrubs or ground cover and around 1 500m² of grassed area.

33. We estimate that the proposed works will create 1 700 jobs (1 360 for labourers and another 340 for professional or technical staff) providing a total employment of 83 530 man-months.

Development Bureau
May 2016

³ “Important trees” refers to trees in the Register of Old and Valuable Trees, or any other trees that meet one or more of the following criteria –

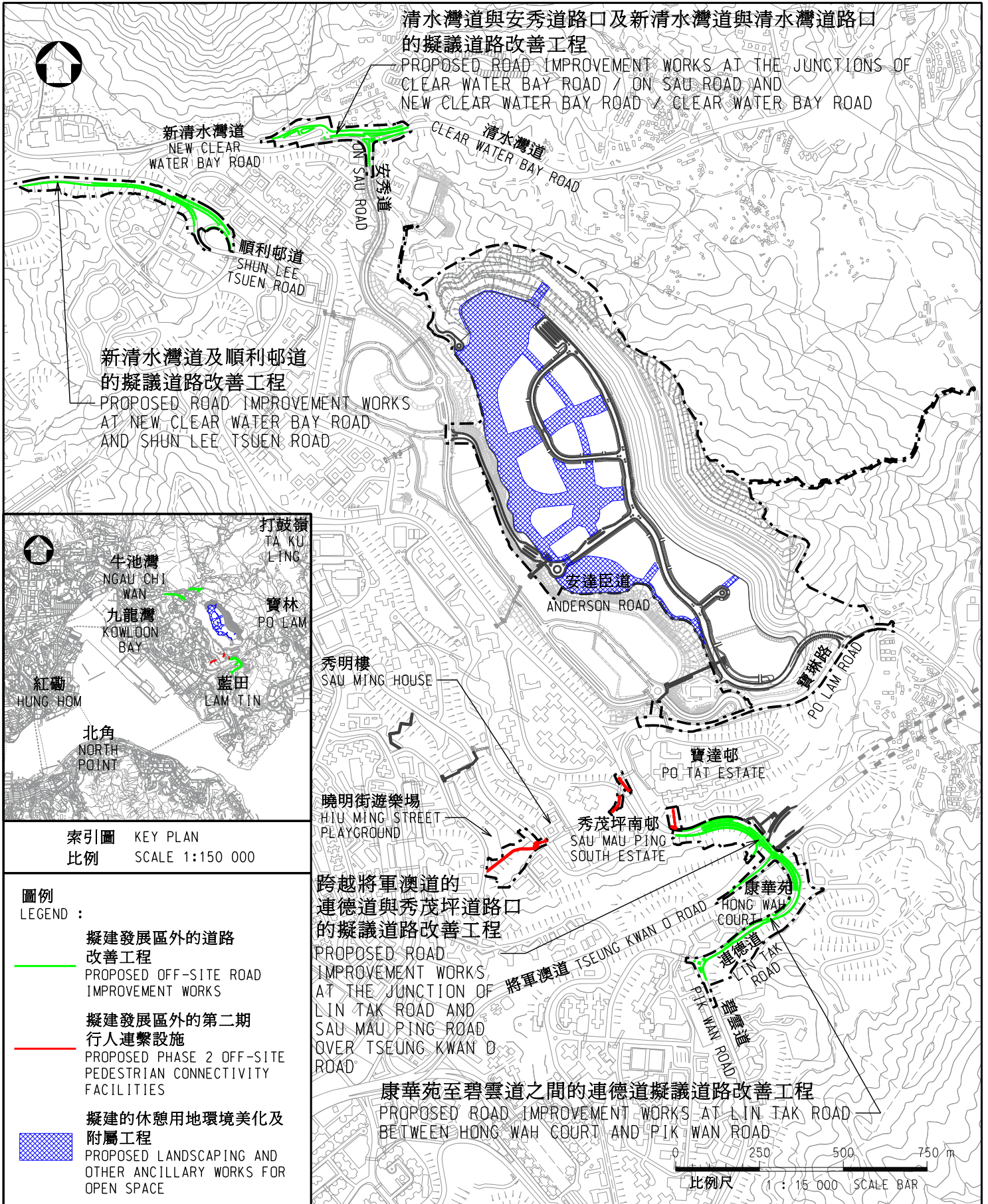
- (a) trees of 100 years old or above;
- (b) trees of cultural, historical or memorable significance, e.g. Fung Shui trees, trees as landmark of monastery or heritage monument, and trees in memory of an important person or event;
- (c) trees of precious or rare species;
- (d) trees of outstanding form (taking account of the overall tree sizes, shape and any special features) e.g. trees with curtain like aerial roots, trees growing in unusual habitat; or
- (e) trees with a trunk diameter equal to or exceeding 1.0 metre (m) (measured at 1.3 m above ground level), or with a height or canopy spread equal to or exceeding 25 m.



圖則名稱 drawing title

安達臣道石礦場用地發展－擬建工程分布圖

DEVELOPMENT OF ANDERSON ROAD QUARRY SITE - PROJECT LAYOUT PLAN OF THE PROPOSED WORKS



圖則名稱 drawing title

安達臣道石礦場用地發展－工程餘下部分分布圖

DEVELOPMENT OF ANDERSON ROAD QUARRY SITE - PROJECT LAYOUT PLAN OF THE REMAINING WORKS

765CL (Part) – Development of Anderson Road Quarry site

**Breakdown of the estimates for consultants' fees and resident site staff costs
(in September 2015 prices)**

			Estimated man- months	Average MPS* salary point	Multiplier (Note 1)	Estimated fees (\$million)
(a)	Consultants' fees for contract administration (Note 2)	Professional	–	–	–	14.2
		Technical	–	–	–	1.7
					Sub-total	15.9
(b)	Consultants' fees for environmental monitoring and audit (EM&A) programme (Note 3)	Professional	63	38	2.0	9.4
		Technical	93	14	2.0	4.7
					Sub-total	14.1
(c)	Resident site staff (RSS) costs (Note 3)	Professional	2 191	38	1.6	260.2
		Technical	6 739	14	1.6	275.0
					Sub-total	535.2
Comprising –						
	(i) Consultants' fees for management of RSS					47.1
	(ii) Remuneration of RSS					488.1
					Total	565.2

* MPS = Master Pay Scale

Notes

1. A multiplier of 1.6 is applied to the average MPS salary point to estimate the cost of RSS supplied by the consultants. A multiplier of 2.0 is applied to the average MPS salary point to estimate the full staff cost including the consultants' overheads and profit for the staff employed in the consultants' offices (as at now, MPS salary point 38 = \$74,210 per month and MPS salary point 14 = \$25,505 per month).
2. The consultants' staff cost for contract administration is calculated in accordance with an existing consultancy agreement for the provision of contract administration of 765CL. The construction phase of the assignment will only be executed subject to Finance Committee's approval to upgrade the Project to Category A.
3. The consultant's staff costs for EM&A programme and site supervision are based on the estimates prepared by the Director of Civil Engineering and Development. The actual man-months and actual costs will only be known after completion of the construction works.