

ITEM FOR PUBLIC WORKS SUBCOMMITTEE OF FINANCE COMMITTEE

HEAD 707 – NEW TOWNS AND URBAN AREA DEVELOPMENT Civil Engineering – Land Development 763CL – Integrated Basement for West Kowloon Cultural District

Members are invited to recommend to the Finance Committee -

- (a) the upgrading of part of **763CL**, entitled “Integrated Basement for West Kowloon Cultural District – first stage of design and advance works”, to Category A at an estimated cost of \$304.5 million in money-of-the-day prices; and
- (b) the retention of the remainder of **763CL** in Category B.

PROBLEM

We need to carry out the first stage of design and advance works of the integrated basement to suit the phased development of the West Kowloon Cultural District (WKCD).

/ **PROPOSAL**

PROPOSAL

2. The Director of Civil Engineering and Development, with the support of the Secretary for Home Affairs, proposes to upgrade part of **763CL** to Category A, at an estimated cost of \$304.5 million in money-of-the-day (MOD) prices, for implementing the first stage of design and advance works of the integrated basement in WKCD.

PROJECT SCOPE AND NATURE

3. The part of the project which we propose to upgrade to Category A (the proposed works) comprises –

- (a) the construction of the advance works for Zone 3A of the integrated basement in WKCD, comprising the following major items –
 - (i) foundations for an underground road¹;
 - (ii) foundations for the protection works for the existing Airport Express tunnels;
 - (iii) necessary environmental mitigation measures and related monitoring and audit; and
- (b) the design of essential basement structure and associated works for Zone 3B of the integrated basement in the WKCD, including preparation of tender documents and assessment of tenders for the construction works.

—— Plans showing the proposed works are at Enclosure 1.

4. We will retain the remainder of the project in Category B, with scope covering the design, site investigation and construction of the remaining works of the integrated basement to be implemented in phases to suit the WKCD development.

/ 5.

¹ The design and site investigation of the underground road within the integrated basement form part of **753CL** “Infrastructure Works for West Kowloon Cultural District Phase 1 – Design and Site Investigation” which was approved by the Finance Committee in January 2013.

5. Subject to funding approval of the Finance Committee (FC), we plan to commence the construction of advance works for Zone 3A and the design for Zone 3B of the integrated basement in January 2015 for substantial completion in April 2016 .

JUSTIFICATION

6. The WKCD development is one of the ten major infrastructure projects included in the Chief Executive's 2007-08 Policy Address for promoting long-term development of arts and culture, and supporting Hong Kong as a creative economy and Asia's world city.

7. In July 2008, FC approved a one-off upfront endowment of \$21.6 billion in 2008 Net Present Value to the West Kowloon Cultural District Authority (WKCD) to implement the WKCD project, covering core arts and cultural facilities (CACF), other arts and cultural facilities (OACF), retail, dining and entertainment (RDE) facilities, public open space and some transport facilities (hereafter as WKCD Facilities). Other communal and government facilities and related engineering works (such as roads, drainage, fire station and public pier), which are designed to support the whole WKCD including hotel, office and residential (HOR) developments, would be undertaken by the Government.

8. In January 2013, FC approved the upgrading of **753CL** "Infrastructure Works for West Kowloon Cultural District Phase 1 – Design and Site Investigation" to Category A for the design and site investigation of government infrastructure works for the WKCD, phase 1. We entrusted the part of the works in **753CL** that are closely integrated with the early batches of WKCD Facilities to WKCD.

Integrated Basement

9. The WKCD selected the conceptual plan prepared by Foster + Partners (F+P) in March 2011 as the preferred option for developing into a Development Plan (DP) for the WKCD. According to F+P's concept, the WKCD will feature a great waterfront park (the Park) and an integrated basement. Integrated with arts and cultural facilities, the WKCD will include a rich mix of RDE facilities and HOR developments to enrich visitors' experience and to bring vibrancy to the district. The DP for the WKCD, which is based on F+P's concept, was approved by the Chief Executive-in-Council in January 2013.

10. The integrated basement proposed by F+P is an integral part of the DP, and an essential design feature to meet the statutory minimum requirement for 23 hectares of public open space as specified in the South West Kowloon Outline Zoning Plan (OZP). It will enable traffic to be put underground to free up the site for cultural use and public enjoyment and for enhancing the walking environment at-grade. However, there will be complicated technical and interfacing issues in the design and construction as well as management, operation and maintenance of different types of facilities, viz. government infrastructure works (including public roads, water supply system, sewage system etc.), WKCDA Facilities, and facilities for the topside HOR developments. Acknowledging that this integrated basement is one of the major factors for the project cost escalation of the WKCD, the Administration announced in June 2013 that the Government would be prepared to fully fund the capital works of the main integrated basement as general enabling works to facilitate the development of the whole WKCD project. This would allow the WKCDA to focus on delivering the arts and cultural facilities.

Implementation Programme of the WKCD

11. At the meeting of the Joint Subcommittee to Monitor the Implementation of the West Kowloon Cultural District Project (Joint Subcommittee) of the Legislative Council (LegCo) held on 3 July 2013, Members were informed that the WKCDA would, in view of its latest financial situation, adopt a pragmatic approach to implement the WKCD project in a timely and cost-effective manner with its facilities to be delivered in three batches along the following principles –

- (a) rigorous cost containment of individual facilities to a level as close to the recommendations of the Consultative Committee on Core Arts and Cultural Facilities of the WKCD² as possible;
- (b) emphasis on content rather than form of these facilities; and
- (c) early delivery of the Park as well as some arts and cultural facilities for public enjoyment.

The development arrangement of major WKCDA Facilities is at Enclosure 2.

/ 12.

² The Consultative Committee was appointed by the Chief Executive in 2006 to re-examine and re-confirm if appropriate the need for core arts and cultural facilities for WKCD, following the Government's decision to explore an alternative route to develop WKCD in 2005.

12. The early batches of WKCDA Facilities include the Park, the Xiqu Centre, the M+ and the Lyric Theatre. The early phase of the Park is scheduled to commence construction in 2014 with target completion in 2015. The Xiqu Centre, with foundation works commenced on site in September 2013, is targeted for completion in 2016/17. The design of the M+ has commenced, with construction targeted to be completed by 2018. The design of the Lyric Theatre has also commenced in May 2014, with construction targeted to be completed by around 2020.

Advance Works for Zone 3A of the Integrated Basement

13. WKCDA has accorded top priority to the implementation of M+ and Lyric Theatre, which are highly integrated with the integrated basement in Zones 3A and 3B. The design of the advance works of the integrated basement in Zone 3A has been completed. WKCDA has commenced the piling works for M+ in August 2014. To dovetail with the urgent implementation timeframe of M+, we plan to entrust to WKCDA the construction of the advance works for Zone 3A of the integrated basement (as mentioned in paragraph 3(a) above) for construction in parallel with M+.

Design for Zone 3B of the Integrated Basement

14. WKCDA has commenced the design of the basement levels and topside structure of Lyric Theatre, which are connected with the integrated basement in Zone 3B in early October 2014. To align with the urgent design timeframe of Lyric Theatre, we plan to entrust to WKCDA the design of the essential basement structure and associated works for Zone 3B of the integrated basement (as mentioned in paragraph 3(b) above) as soon as possible.

Proposed Entrustment to WKCDA

15. In view of the exceptionally high degree of integration amongst various facilities in the integrated basement, it would be impractical for WKCDA to design and construct M+ and Lyric Theatre, and for Government to separately undertake the design and construction of the proposed works located within the same site. Due to significant interfacing issues, a segregated approach will not only increase the costs and time required for the design and construction of the integrated basement, but will also incur delay to the implementation programmes for both M+ and Lyric Theatre. To avoid the above potential problems, we consider it necessary and cost-effective to entrust to WKCDA the design and construction of the proposed works to be undertaken in conjunction with the implementation of M+ and Lyric Theatre.

16. As the proposed works will be carried out in conjunction with WKCDA's consultancy agreements and works contracts for M+ and Lyric Theatre respectively, we consider that the additional direct resources by WKCDA to manage the proposed works would be minimal. WKCDA has agreed not to seek reimbursement for their in-house management cost in relation to the proposed works, but will be reimbursed for the actual costs incurred in relation to management and supervision of the proposed works provided by their consultants/contractors (i.e. third party costs).

FINANCIAL IMPLICATIONS

17. We estimate the cost of the proposed works to be \$304.5 million in MOD prices (please see paragraph 18 below), broken down as follows –

		\$ million
(a)	Construction of advance works for Zone 3A of the integrated basement	221.7
	(i) foundations for an underground road	30.7
	(ii) foundations for the protection works for the existing Airport Express tunnels	164.9
	(iii) necessary environmental mitigation measures and related monitoring and audit	2.8
	(iv) consultants' fees for supervision of advance works for Zone 3A of the integrated basement	7.0
	(v) remuneration of resident site staff	16.3
(b)	Consultants' fees of design for Zone 3B of the integrated basement	29.7
	(i) detailed design	26.9
	(ii) preparation of tender documents and assessment of tenders for the construction works	2.8
(c)	Contingency	25.1
	Sub-total	276.5 (in September 2014 prices)

/ (d)

(d)	Provision for price adjustment	28.0
	Total	<u>304.5</u> (in MOD prices)

— A detailed breakdown of the estimate for consultants' fees by man-months is at Enclosure 3.

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

Year	\$ million (Sept 2014)	Price adjustment factor	\$ million (MOD)
2014 – 2015	5.2	1.00000	5.2
2015 – 2016	112.8	1.06000	119.6
2016 – 2017	134.5	1.12360	151.1
2017 - 2018	<u>24.0</u>	1.19102	<u>28.6</u>
	<u>276.5</u>		<u>304.5</u>

19. We have derived the MOD estimates on the basis of the Government's latest forecast of trend rate of change in the prices of public sector building and construction output from 2014 to 2018.

20. The proposed works will give rise to negligible recurrent expenditure.

PUBLIC CONSULTATION

21. We consulted the Yau Tsim Mong District Council on the proposed works on 24 April 2014. Members generally supported the proposal.

22. We consulted the Joint Subcommittee of LegCo on 28 May 2014 on the implementation of WKCD integrated basement including the proposed works. Members raised no objection to the proposal at the meeting.

ENVIRONMENTAL IMPLICATIONS

23. The engineering feasibility study of the whole WKCD development is a Schedule 3 designated project under the Environmental Impact Assessment Ordinance (EIAO). The proposed underground road serving WKCD is a designated project under Schedule 2 of EIAO and an environmental permit is required for its construction and operation. In November 2013, the EIA report for the WKCD development was approved with conditions under EIAO and an environmental permit was obtained for the construction and operation of the underground road. The EIA report concluded that the environmental impact of the project can be controlled to within the criteria under EIAO and the Technical Memorandum on EIA process. We shall implement the mitigation measures as recommended in the approved EIA report. The mitigation measures recommended for the construction phase mainly include adoption of quieter equipment and movable noise barriers or noise insulating fabric to minimize construction noise impact, and regular watering of the site and provision of wheel-washing facilities for dust control. We have allowed \$2.8 million (in September 2014 prices) in the project estimate for implementing the necessary environmental mitigation measures and related monitoring and audit.

24. The proposed design for Zone 3B of the integrated basement in WKCD is not a designated project under EIAO.

25. We have considered at the planning and design stages the design level and construction method of the proposed advance works to reduce the generation of construction waste where possible. In addition, we will require the contractor to reuse inert construction waste (e.g. excavated soil and broken concrete) on site or in other suitable construction sites as far as possible, in order to minimise the disposal of inert construction waste at public fill reception facilities³. We will encourage the contractor to maximise the use of recycled / recyclable inert construction waste and the use of non-timber formwork to further reduce the generation of construction waste.

26. At the construction stage, 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 require the contractor to separate the inert portion from non-inert construction waste on site for disposal at appropriate facilities. We will control the disposal of inert construction waste and non-inert construction waste at public fill reception facilities and landfills respectively through a trip-ticket system.

/ 27.

³ Public fill reception facilities are specified in Schedule 4 of the Waste Disposal (Charges for Disposal of Construction Waste) Regulation. Disposal of inert construction waste in public fill reception facilities requires a licence issued by the Director of Civil Engineering and Development.

27. We estimate that the proposed works will generate in total of about 14 800 tonnes of construction waste. Of these, we will reuse about 9 500 tonnes (64%) of inert construction waste on-site and reuse about 4 700 tonnes (32%) of inert construction waste on other construction sites. We will dispose of the remaining 600 tonnes (4%) of non-inert construction waste at landfills. The total cost for accommodating construction waste at landfill sites is estimated to be about \$0.08 million for this project (based on a unit charge rate of \$125 per tonne for disposal at Landfills as stipulated in the Waste Disposal (Charge for Disposal of Construction Waste) Regulation.

HERITAGE IMPLICATIONS

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

LAND ACQUISITION

29. The proposed works do not require any land acquisition.

BACKGROUND INFORMATION

30. We upgraded the project to Category B on 28 June 2013.

31. In January 2013, FC approved the upgrading of **753CL** to Category A at an estimated cost of \$478 million in MOD prices for the design and site investigation of government infrastructure works for supporting phase 1 of WKCD development. In March 2014, we created a Category D item to fund the site investigation works for Zone 3B, as well as the design of the advance works for Zone 3B⁴ of the integrated basement at an estimated cost of \$27.3 million under **Subhead 7100CX** “New towns and urban area works, studies and investigations for items in Category D of the Public Works Programme”. We have entrusted the design and site investigation of government infrastructure works for Zones 3A and 3B and advance works for Zone 3B of the integrated basement to WKCDA.

/ 32.

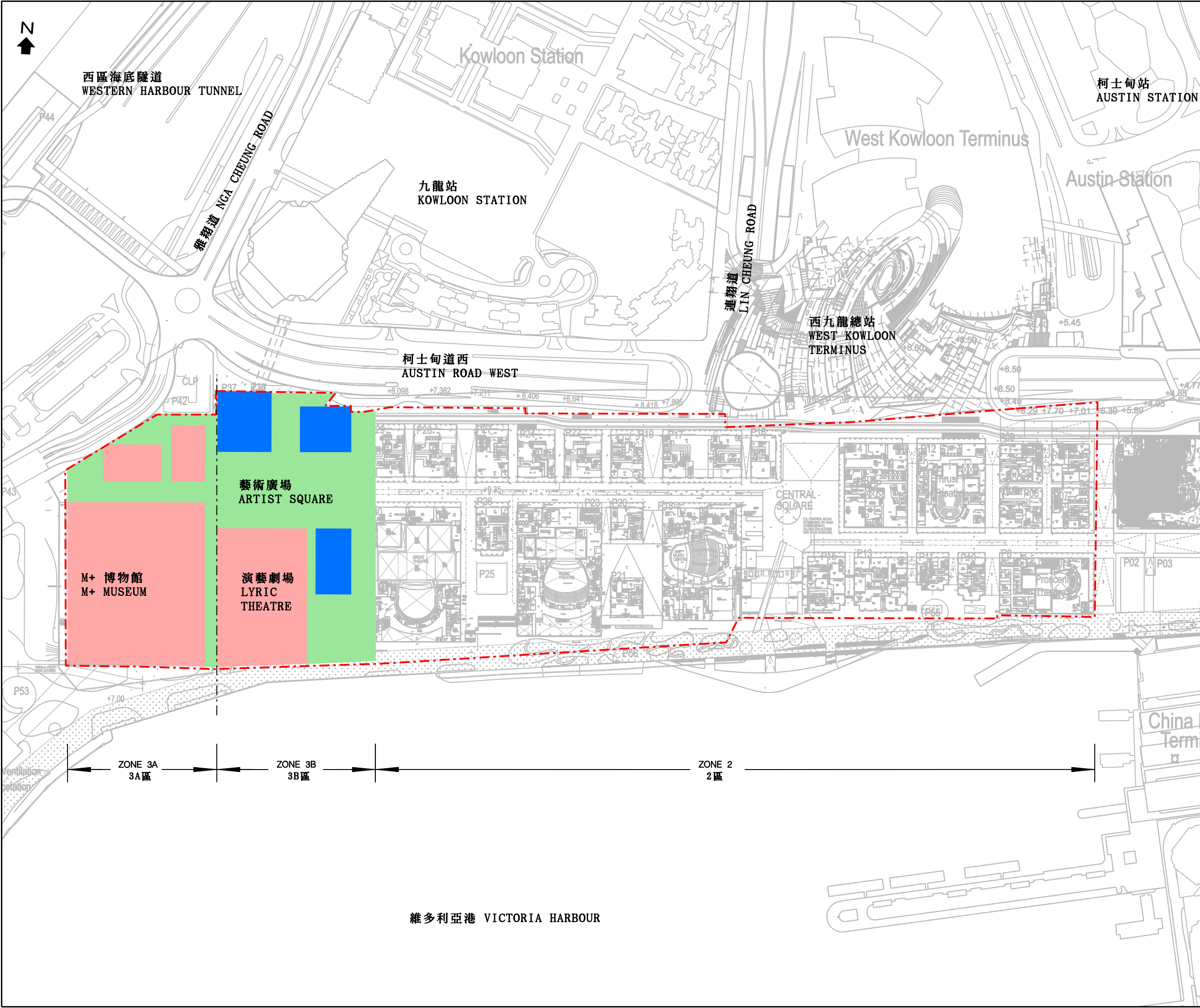
⁴ Advance works of Zone 3B comprises: (a) foundations; (b) protection works for the Airport Express tunnels, and (c) essential enabling works for supporting the topside developments. These do not form part of the current funding application.

32. The proposed advance works described in paragraph 3(a) above will not involve any tree removal or planting proposals. The proposed design described in paragraph 3(b) above will not directly involve any tree removal or planting proposals. We will take into consideration the need for tree preservation during the planning and design stages of the project. We will also incorporate tree planting proposals, where possible, in the construction phase in the future.

33. We estimate that the proposed works will create about 163 jobs (134 for labourers and another 29 for professional/technical staff) providing a total employment of 1 770 man-months.

34. This paper supersedes PWSC(2014-15)24 which was not discussed by the PWSC during the 2013-14 legislative session. The programme, phasing of expenditure and estimated cost of the project have been updated due to the lapse of time.

Home Affairs Bureau
October 2014



Enclosure 1 - Sheet 1 of 3
附件1 - 3頁之1

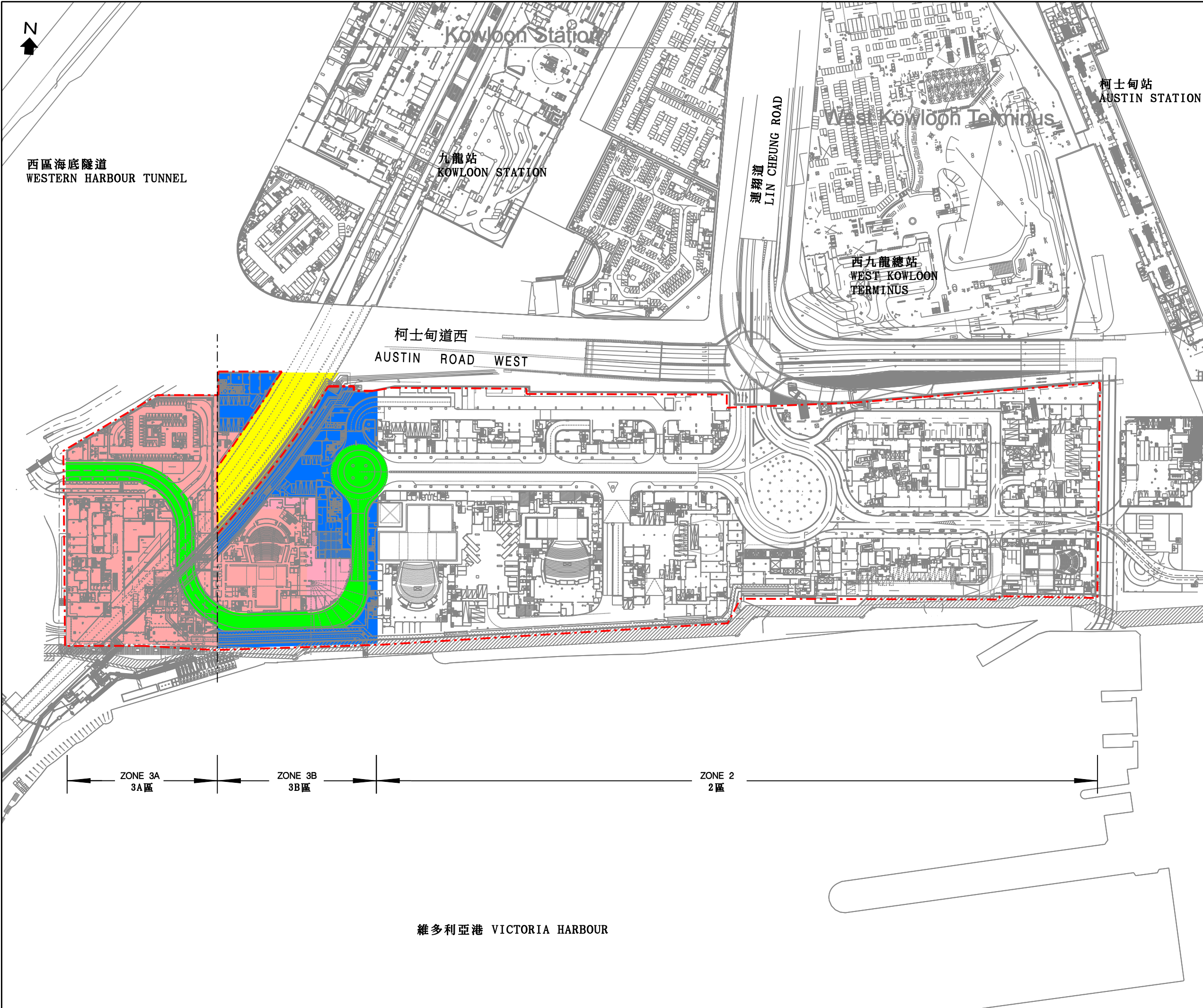
LEGEND: 圖例:

- BOUNDARY WALL OF INTEGRATED BASEMENT
綜合地庫外牆界線
- ARTS AND CULTURAL FACILITIES
文化藝術設施
- HOTEL, OFFICE AND RESIDENTIAL DEVELOPMENT
酒店、辦公室及住宅發展
- OPEN SPACE
休憩用地

NOTE: 註釋:

GENERAL ARRANGEMENT OF INTEGRATED BASEMENT SUBJECT TO DETAILED DESIGN
綜合地庫的佈局有待詳細設計確定

編號 no.	日期 date	內容摘要 description	核對 checked	核准 approved
		姓名 Name	簽署 initial	日期 date
繪圖 drawn		H.L. Lai	Signed	16 June 2014
核對 checked		Felix Poon	Signed	16 June 2014
核准 approved		David Leung	Signed	16 June 2014
項目名稱 project title				
Integrated Basement for West Kowloon Cultural District - First Stage of Design and Advance Works 西九文化區綜合地庫 -首階段的设计及前期工程				
圖則名稱 drawing title				
General Arrangement Plan of Ground Level 地庫的地面佈局圖				
圖則編號 drawing no.			比例 scale	
KZ792			Not to scale 不按比例	
辦事處 office				
九龍拓展處				
KOWLOON DEVELOPMENT OFFICE				
土木工程拓展署 CIVIL ENGINEERING AND DEVELOPMENT DEPARTMENT				



Enclosure 1 - Sheet 2 of 3
附件1 - 3頁之2

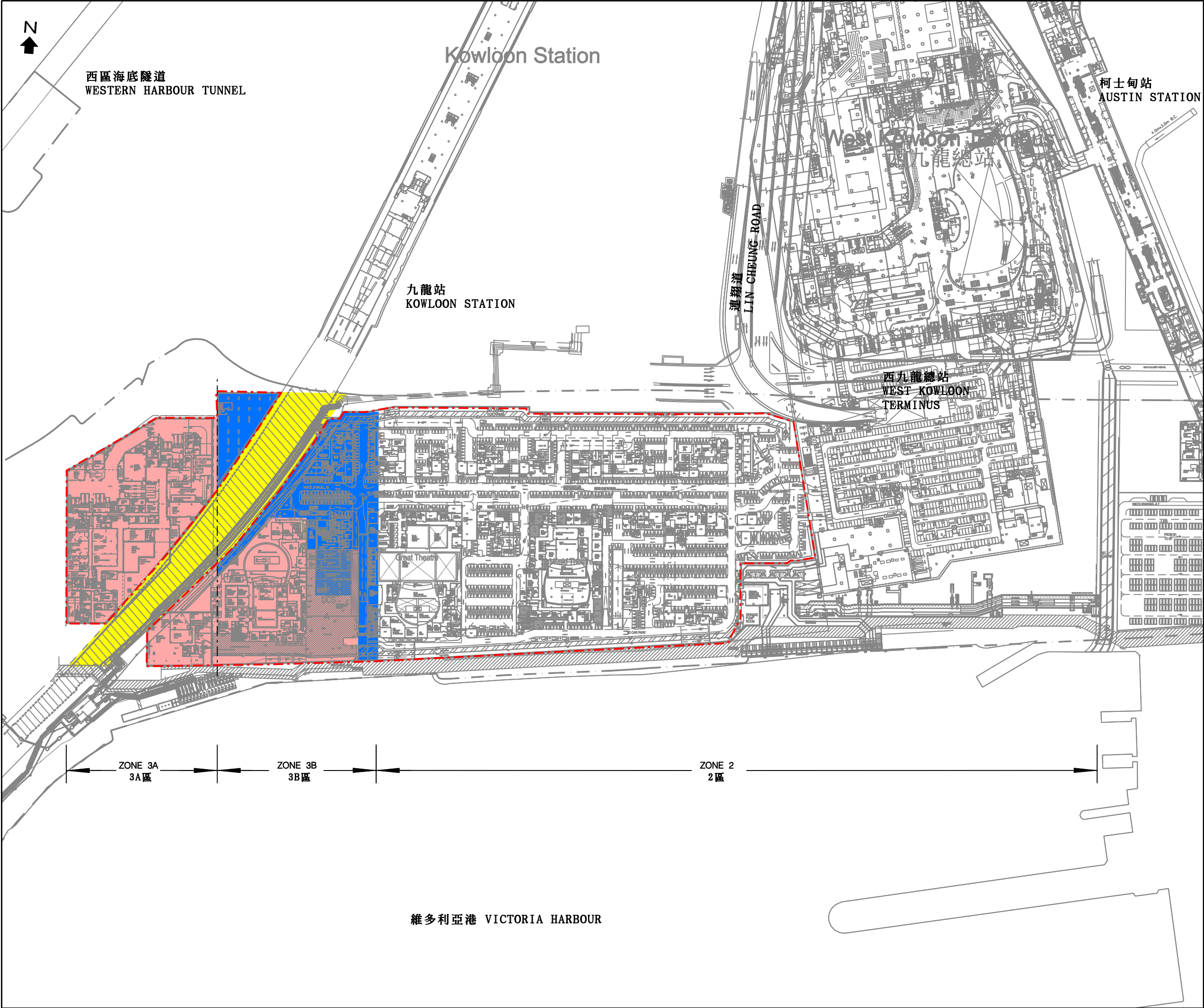
LEGEND: 圖例:

- BOUNDARY WALL OF INTEGRATED BASEMENT
綜合地庫外牆界線
- ARTS AND CULTURAL FACILITIES
文化藝術設施
- HOTEL, OFFICE AND RESIDENTIAL DEVELOPMENT, CAR PARK AND OTHER COMMUNAL FACILITIES
酒店、辦公室及住宅發展、停車場及其它公共設施
- AIRPORT EXPRESS TUNNELS
機場快線隧道
- UNDERGROUND ROAD
地下行車路

NOTE: 註釋:

GENERAL ARRANGEMENT OF INTEGRATED BASEMENT SUBJECT TO DETAILED DESIGN
綜合地庫的佈局有待詳細設計確定

編號 no.	日期 date	內容摘要 description	核對 checked	核准 approved
		姓名 Name	簽署 initial	日期 date
繪圖 drawn		H.L. Lai	Signed	16 June 2014
核對 checked		Felix Poon	Signed	16 June 2014
核准 approved		David Leung	Signed	16 June 2014
項 目 名 稱 project title				
Integrated Basement for West Kowloon Cultural District - First Stage of Design and Advance Works				
西九文化區綜合地庫 -首階段的設計及前期工程				
圖 則 名 稱 drawing title				
General Arrangement Plan of B1 Level 地庫第一層佈局圖				
圖 則 編 號 drawing no.			比 例 scale	
KZ793			Not to scale 不按比例	
辦 事 處 office				
九 龍 拓 展 處				
KOWLOON DEVELOPMENT OFFICE				
土木工程拓展署				
CIVIL ENGINEERING				
AND DEVELOPMENT DEPARTMENT				



Enclosure 1 - Sheet 3 of 3
附件1 - 3頁之3

LEGEND: 圖例:

- BOUNDARY WALL OF INTEGRATED BASEMENT
綜合地庫外牆界線
- ARTS AND CULTURAL FACILITIES
文化藝術設施
- HOTEL, OFFICE AND RESIDENTIAL DEVELOPMENT, CAR PARK AND OTHER COMMUNAL FACILITIES
酒店、辦公室及住宅發展、停車場及其它公共設施
- AIRPORT EXPRESS TUNNELS
機場快線隧道

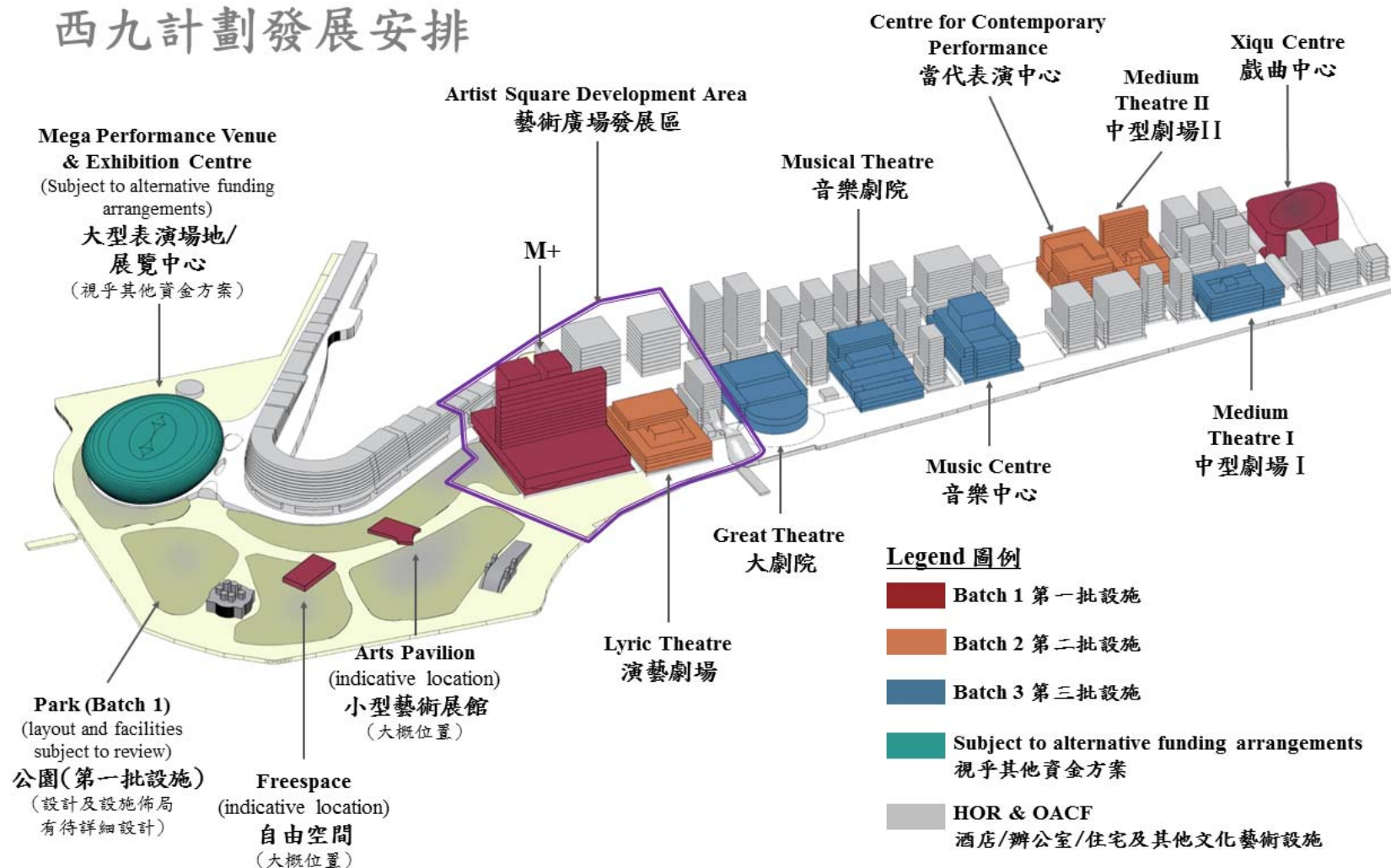
NOTE: 註釋:

GENERAL ARRANGEMENT OF INTEGRATED BASEMENT SUBJECT TO DETAILED DESIGN
綜合地庫的佈局有待詳細設計確定

編號 no.	日期 date	內容摘要 description	核對 checked	核准 approved
		姓名 Name	簽署 initial	日期 date
繪圖 drawn		K.Y. Lam	Signed	16 June 2014
核對 checked		Felix Poon	Signed	16 June 2014
核准 approved		David Leung	Signed	16 June 2014
項 目 名 稱 project title				
Integrated Basement for West Kowloon Cultural District - First Stage of Design and Advance Works				
西九文化區綜合地庫 -首階段的設計及前期工程				
圖 則 名 稱 drawing title				
General Arrangement Plan of B2 Level 地庫第二層佈局圖				
圖 則 編 號 drawing no.			比 例 scale	
KZ794			Not to scale 不按比例	
辦 事 處 office				
九 龍 拓 展 處				
KOWLOON DEVELOPMENT OFFICE				
土木工程拓展署 CIVIL ENGINEERING AND DEVELOPMENT DEPARTMENT				

WKCD Development Arrangement

西九計劃發展安排



**763CL (part) – Integrated Basement for West Kowloon Cultural District
– first stage of design and advance works**

Breakdown of the estimates for consultants' fees (in September 2014 prices)

			Estimated man-months	Average MPS* salary point	Multiplier (Note 1)	Estimated fees (\$ million)
(a) Construction of advance works for Zone 3A of the integrated basement						
(i)	Consultants' fee for supervision of advance works for Zone 3A of the integrated basement (Note 2)	Professional	42	38	2.0	6.0
		Technical	20	14	2.0	1.0
(ii)	Remuneration of resident site staff costs (Note 3)	Professional	85	38	1.6	9.7
		Technical	170	14	1.6	6.6
					Sub-total	23.3
(b) Consultants' fees of design for Zone 3B of the integrated basement						
(i)	Detailed design (Note 2)	Professional	118	38	2.0	16.8
		Technical	208	14	2.0	10.1
(ii)	Preparation of tender documents and assessment of tenders for the construction works (Note 2)	Professional	12	38	2.0	1.7
		Technical	22	14	2.0	1.1
					Sub-total	29.7
					Total	53.0

* MPS = Master Pay Scale

Notes

1. 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 staff employed in the consultants' offices. A multiplier of 1.6 is applied to the average MPS point to estimate the cost of resident site staff supplied by the consultants (Subject to approval of the Finance Committee, MPS salary point 38 = \$71,385 per month and MPS salary point 14 = \$24,380 per month.)
2. The actual man-months and fees will only be known after the consultants have been selected.
3. The actual man-months and fees will only be known after the completion of the construction works.