

For Information

**LEGISLATIVE COUNCIL
PANEL ON DEVELOPMENT**

681CL - Formation, Roads and Drains in Area 54, Tuen Mun – Phase 2

PURPOSE

This paper informs Members of the proposal to part-upgrade **681CL** “Formation, Roads and Drains in Area 54, Tuen Mun – Phase 2” to Category A at an estimated cost of about \$56.2 million in money-of-the-day (MOD) prices to carry out infrastructure works for the improvement of the northern section of Tsing Lun Road between Tsing Lun Road roundabout and Siu Hong Road.

PROJECT SCOPE

2. The scope of **681CL** comprises formation of land for housing and school development; construction of roads, drainage, sewerage, slope and landscaping works; provision of noise mitigation measures; and other ancillary works in Area 54, Tuen Mun.

3. The part of **681CL** which we propose to upgrade to Category A comprises –

- (a) widening of the northern section of Tsing Lun Road of about 145 metres (m) long between Tsing Lun Road roundabout and Siu Hong Road from a single two-lane carriageway to a single four-lane carriageway of 13.5m wide;
- (b) construction of associated footpaths, cycle tracks, drainage, sewerage and landscaping works;
- (c) construction of approximately 200m long 4m to 5.5m high noise barriers; and

- (d) implementation of environmental mitigation measures and an environmental monitoring and audit (EM&A) programme for the works mentioned in (a) to (c) above.

4. The site plan of the proposed works is at **Enclosure 1**.

5. We plan to commence the construction works in December 2009 for completion in February 2012.

JUSTIFICATION

6. Tuen Mun Area 54 has been identified for public housing development in order to maintain a steady and sufficient supply of land to meet housing demand in the long term. The first public housing site to be developed in Area 54 is Site 2 near Tsing Lun Road and Tsz Tin Road. The Director of Housing aims at making available about 5 000 public housing flats at the site in 2016. The proposed development is expected to generate about 725 pcu¹/hr during morning peak hours. To cater for anticipated traffic increase, it is necessary to widen a section of Tsing Lun Road and a section of Tsz Tin Road to increase their capacity. A site plan showing the proposed site formation works at Site 2 and the proposed roadworks is at **Enclosure 2**.

7. We plan to improve the sections of Tsing Lun Road and Tsz Tin Road in two stages. The first stage comprises the widening of the northern section of Tsing Lun Road between Tsing Lun Road roundabout and Siu Hong Road, which is the subject of this paper. Apart from meeting future traffic needs, the proposed road widening works to be constructed under the first stage will also serve the existing developments such as Siu Hong Court in the vicinity through improvement in traffic circulation. The second stage comprises improvement works to the remaining sections of Tsing Lun Road and Tsz Tin Road. The proposed site formation works at Site 2 is planned to be carried out in conjunction with the second stage.

¹ Passenger car unit (pcu) is a unit for measuring traffic flow in equivalent number of private cars. For example, a pcu value of 1.0 is assigned to private cars and taxis. Heavy vehicles such as goods vehicles or buses which usually travel at a lower speed are assigned higher pcu values.

FINANCIAL IMPLICATIONS

8. We estimate the cost of the project to be \$56.2 million in MOD prices, made up as follows -

		\$ million	
(a)	Road works	8.9	
(b)	Drainage and sewerage works	9.6	
(c)	Noise barriers	24.0	
	(i) Structural frames and panels	10.6	
	(ii) Foundation works	13.4	
(d)	Waterworks	1.0	
(e)	Landscaping works	2.5	
(f)	Environmental mitigation measures and EM&A Programme	1.2	
(g)	Contingencies	4.7	
	Sub-total	51.9	(in September 2008 prices)
(h)	Provision for price adjustment	4.3	
	Total	56.2	(in MOD prices)

9. We estimate that the proposed works will create about 54 jobs (47 for labourers and another 7 for professional/technical staff), providing a total employment of 1 280 man-months.

PUBLIC CONSULTATION

10. We consulted the Tuen Mun Rural Committee and the Environment, Hygiene and District Development Committee (EHDDC) of the Tuen Mun District Council on 23 October 2006 and 17 November 2006 respectively on the proposed public housing development at Site 2 and the associated infrastructure works at Tsing Lun Road and Tsz Tin Road. Both committees supported the proposed works. Some EHDDC members were concerned about the anticipated

transport needs of the proposed housing development. In response, we explained to them the proposed additional vehicular access at Hong Po Road and the signalized pedestrian crossing at the junction of Tsing Lun Road and Siu Hong Road would enhance traffic and pedestrian flow respectively.

11. In respect of the proposed widening of Tsing Lun Road, we received request from some members of the Traffic and Transport Committee of the Tuen Mun District Council at its meeting on 10 November 2006 to advance the implementation of the roadworks for early improvement of the existing traffic conditions in the area.

12. We also consulted the Advisory Committee on Appearance of Bridges and Associated Structures² on the aesthetic design of the noise barriers on Tsing Lun Road and Tsz Tin Road on 16 December 2008. The Committee accepted the proposed aesthetic design.

13. We gazetted the proposed road improvement works to Tsing Lun Road and Tsz Tin Road under the Roads (Works, Use and Compensation) Ordinance (Cap 370) (R(WU&C)O) on 14 December 2007. We received five objections. Four objections were against the compensation and re-housing arrangement for resuming their lots. We explained to the objectors the prevailing land resumption and re-housing policy, and their statutory rights. For the remaining one objection, the objector requested the relocation of a proposed footbridge at Tsing Lun Road, provision of sufficient transport, retailing and market facilities for the public housing development at Site 2, and an increase in compensation to the residents affected by the land clearance. We explained to the objector that the proposed footbridge was considered appropriate in order to enhance traffic condition at the road junction and to serve the nearby residents. We also provided details of the planned facilities within the future public housing development at Site 2 and the prevailing land resumption policy. Notwithstanding our explanations, all the five objectors maintained their objections. On 21 October 2008, the Chief Executive in Council overruled these five objections and authorised the proposed road works without modification. The objectors were notified of the decision on 18 November 2008.

² The Advisory Committee on the Appearance of Bridges and Associated Structures (ACABAS), which comprises representatives of the Hong Kong Institute of Architects, the Hong Kong Institution of Engineers, Architectural Services Department, Highways Department, Housing Department, Planning Department and Civil Engineering and Development Department, is responsible for vetting the design of bridges and other structures associated with the public highway system, including noise barriers and semi-enclosures, from the aesthetic and visual impact points of view.

14. We gazetted the proposed sewerage works at Tsing Lun Road and Tsz Tin Road under the R(WU&C)O as applied by the Water Pollution Control (Sewerage) Regulations on 14 December 2007. We received two objections. Both objections were against the compensation and re-housing arrangement for resuming their lots. We explained to the objectors the prevailing land resumption and re-housing policy, and their statutory rights. Notwithstanding our explanations, the two objectors maintained their objections. On 21 October 2008, the Chief Executive in Council overruled these two objections and authorised the proposed sewerage works without modification. The objectors were notified of the decision on 26 November 2008.

ENVIRONMENTAL IMPLICATIONS

15. The proposed widening of Tsing Lun Road between Tsing Lun Road roundabout and Tsz Tin Road is a Designated Project (DP) under Schedule 2 of the Environmental Impact Assessment Ordinance (Cap 499) (EIAO). The Environmental Impact Assessment (EIA) report was approved by the Director of Environmental Protection (DEP) under the EIAO on 3 September 1999. We commenced a review to update the recommendations of the EIA report in October 2005. The findings of the review were endorsed by DEP on 28 March 2008. We obtained an Environmental Permit (EP) required for the construction and operation of the DP on 17 March 2009. The EP has taken into account the recommendations of the EIA report and EIA review. With the implementation of the recommended mitigation measures and EM&A programme, the environmental impacts will be controlled to ensure compliance with the statutory requirements.

16. We will incorporate the recommended mitigation measures for the proposed road improvement works into the works contract to control the environmental impact to within established standard and guidelines. These measures include frequent watering of the site, provision of wheel-washing facilities, covering of materials on trucks, use of silenced construction plant, and provision of mobile noise barriers. We will also implement the EM&A programme recommended in the EIA report and EIA review. We have included \$1.2 million in the project estimate for the implementation of environmental mitigation measures and the EM&A programme.

17. We have considered the design of the proposed road improvement works and the construction sequence in the planning and design stages 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) on site or in other suitable construction sites as far as possible, in order to minimize the

disposal of inert construction waste to public fill reception facilities³. We will encourage the contractor to maximize the use of recycled or recyclable inert construction waste, as well as the use of non-timber formwork to further minimize the generation of construction waste.

18. We will also 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 to public fill reception facilities and landfills respectively through a trip-ticket system.

19. We estimate that the proposed road improvement works will generate in total about 22 200 tonnes of construction waste. Of these, we will reuse about 13 800 tonnes (62.2%) of the inert construction waste on site and deliver 6 200 tonnes (27.9%) of inert construction waste to public fill reception facilities for subsequent reuse. In addition, we will dispose of 2 200 tonnes (9.9%) of 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 \$442,400 for the proposed road improvement works (based on a unit cost of \$27/tonne for disposal at public fill reception facilities and \$125/tonne⁴ at landfills).

HERITAGE IMPLICATIONS

20. The proposed road improvement works will not affect any heritage site, i.e. all declared monuments, proposed monuments, graded historic sites/buildings, and Government historic sites identified by the Antiquities and Monuments Office (AMO). Part of the proposed works will slightly encroach upon the Kei Lun Wai Archaeological Site. As this part of the archaeological site

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 filling reception facilities requires a licence issued by the Director of Civil Engineering and Development.

⁴ This estimate has taken into account the cost for developing, operating and restoring the landfills after they are filled and the aftercare required. It does not include the land opportunity cost for existing landfill sites (which is estimated at \$90/m³), nor the cost to provide new landfills (which is likely to be more expensive) when the existing ones are filled.

is already a built-up area, AMO advised that the proposed works do not have heritage implications and that further archaeological survey is not necessary.

LAND ACQUISITION

21. The first stage of the proposed road improvement works does not require any land acquisition.

BACKGROUND

22. In 1999, we completed a “Planning and development study of potential housing sites in Area 54, Tuen Mun” (the Study). The land use proposals recommended in the Study were subsequently incorporated into the Tuen Mun Outline Zoning Plan, which was approved by the Chief Executive in Council on 30 September 2003. In October 2005, we commenced a review to update the recommendations of the Study taking into account changes in development layout and parameters in Area 54 since completion of the Study. The review, completed in March 2008, confirmed the feasibility of the development of the proposed public housing sites in phases.

23. The project **681CL** was included in Category B in September 2000.

24. On 25 May 2001, the Finance Committee approved the upgrading of part of **681CL** as **686CL** – “Consultants’ fees and site investigation for site formation, roads and drains in Area 54, Tuen Mun – phase 2”, for site investigation and engagement of consultants to undertake detailed design of the site formation and infrastructure works for the phase 2 development in Area 54, Tuen Mun. We have completed the detailed design of the proposed works in paragraph 3 above.

25. Of the 162 trees within the boundary of the proposed road improvement works, 12 trees will be preserved. The proposed works will involve the removal of 150 trees including 134 trees to be felled and 16 trees to be transplanted within the site as far as possible. All trees to be removed or

transplanted are not important trees⁵. We will incorporate planting proposals as part of the proposed road improvement works, including estimated quantities of 171 trees and 15 900 shrubs.

WAY FORWARD

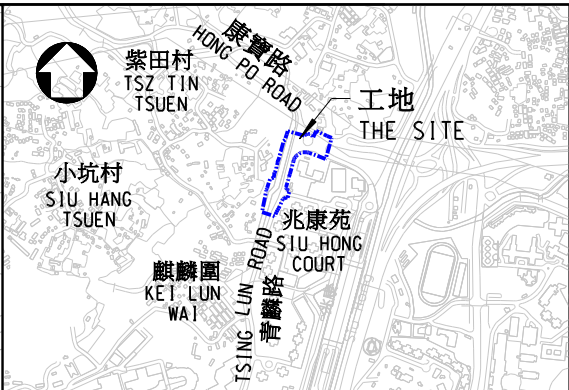
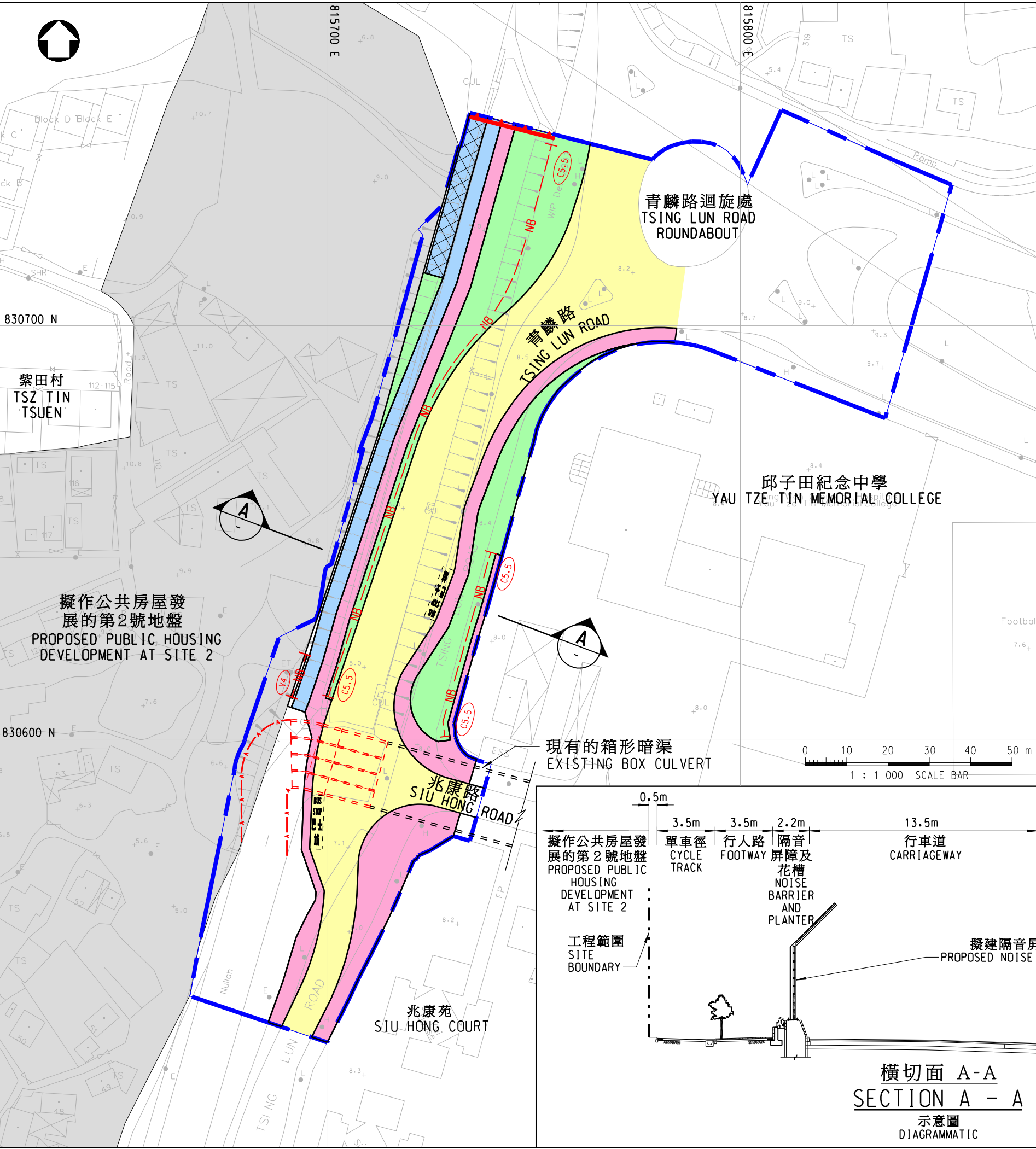
26. We plan to seek the Public Works Sub-committee's endorsement for part-upgrading the works of **681CL** to Category A in October 2009.

Development Bureau
June 2009

⁵ "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 m (measured at 1.3 m above ground level), or with a height/canopy spread equal to or exceeding 25 m.

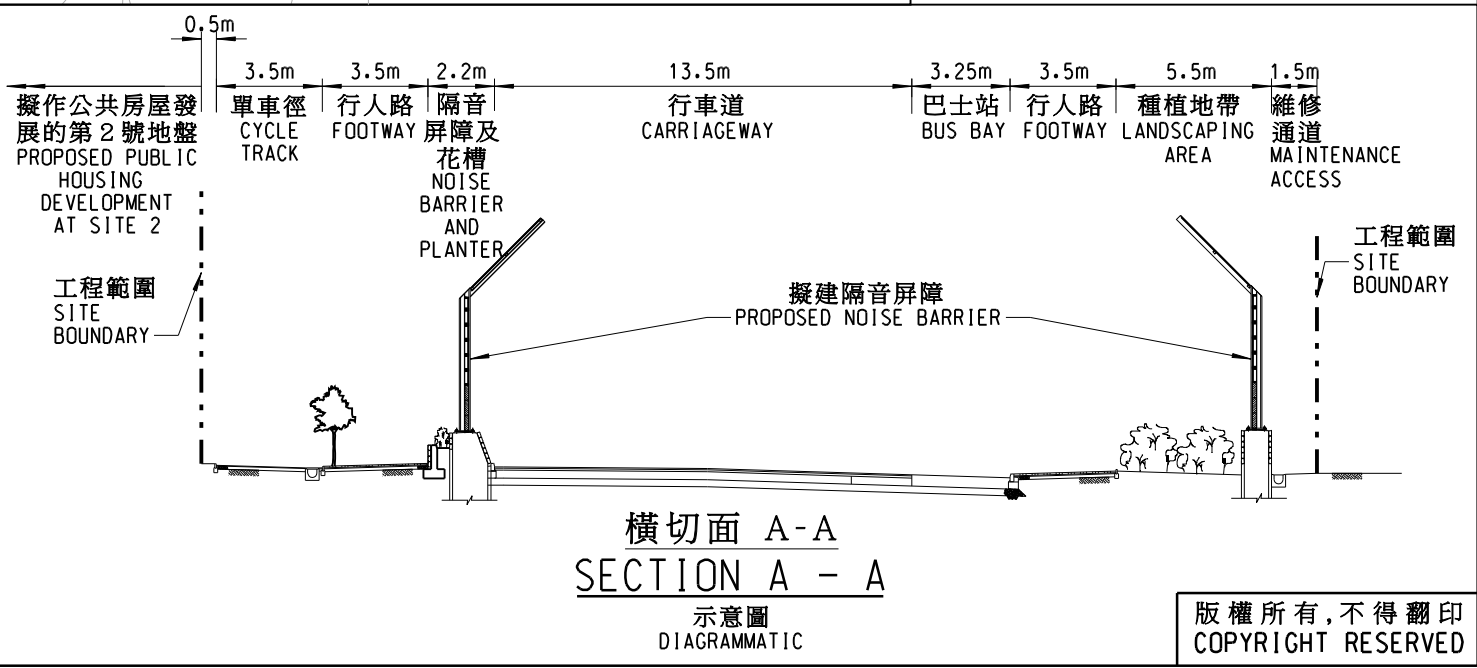
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15/6/2009 R:\#PEN_TABLE\#FILENAME\DATE.TBL



位置圖 LOCATION PLAN
比例 SCALE 1:20 000

圖例 LEGEND :

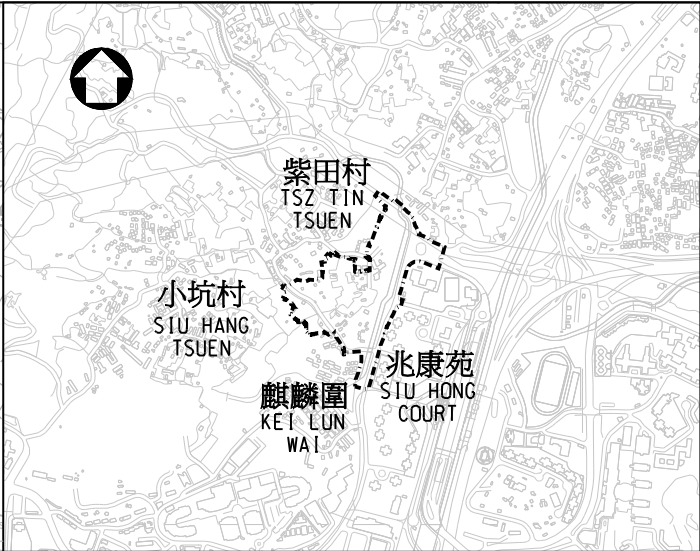
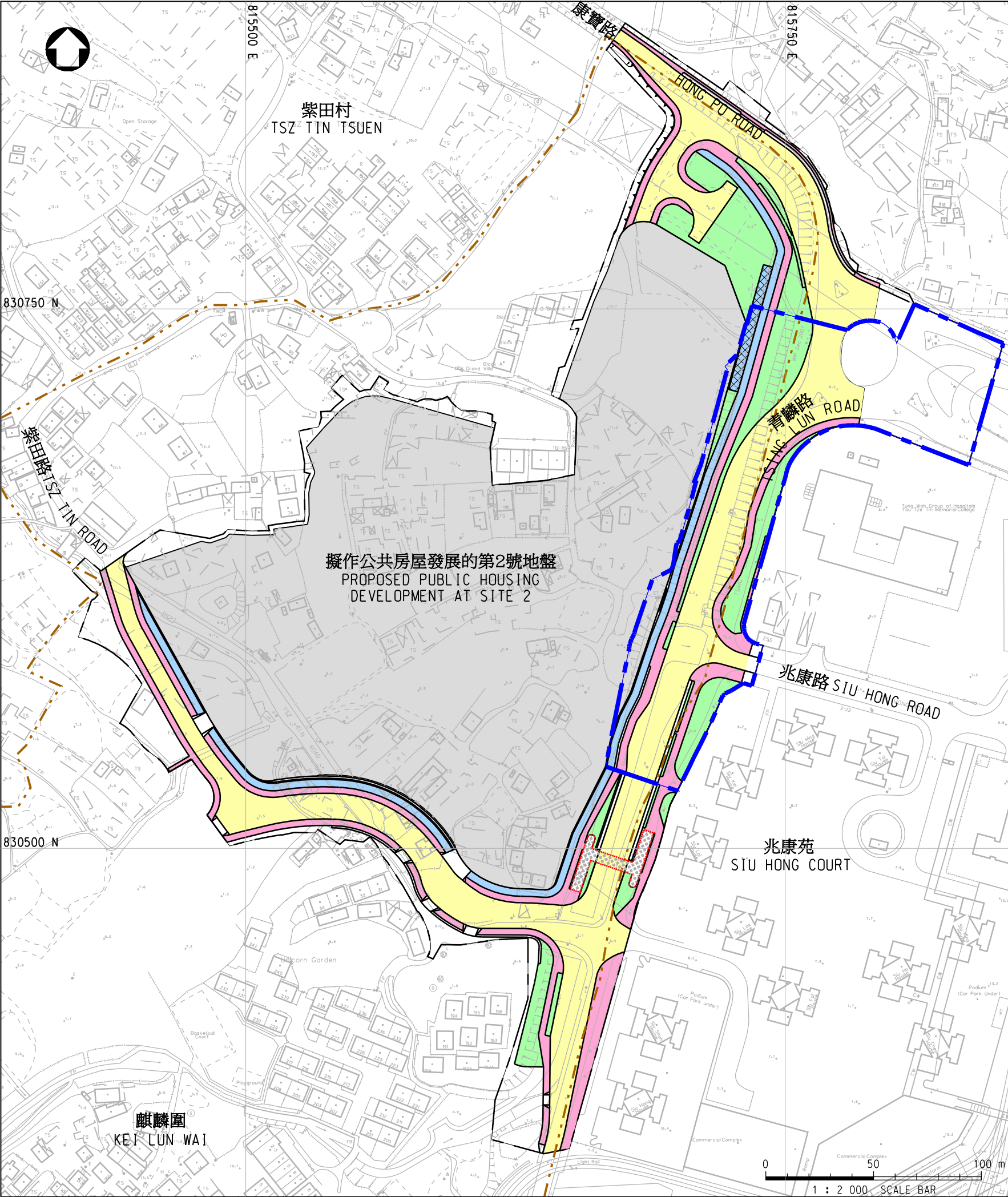
- 工地範圍
SITE BOUNDARY
- 擬建的行車道
PROPOSED CARRIAGEWAY
- 擬建的行人路
PROPOSED FOOTWAY
- 擬建的單車徑
PROPOSED CYCLE TRACK
- 擬建的單車停泊位
PROPOSED CYCLE PARKING SPACES
- 擬建的花槽/種植地帶
PROPOSED PLANTER /
LANDSCAPING AREA
- 擬建的箱形暗渠
PROPOSED BOX CULVERT
- 擬建的擋土牆
PROPOSED RETAINING WALL
- 現有明渠重新定線
RE-ALIGNMENT OF EXISTING
NULLAH
- 擬建的四米高垂直隔音屏障
PROPOSED 4m HIGH VERTICAL
NOISE BARRIER
- 擬建的五米半高兼有
三米半懸臂式隔音屏障
PROPOSED 5.5m HIGH WITH
3.5m CANTILEVER NOISE BARRIER



註釋
NOTES :

- 所有水平均指水平基準,並以米為單位。
ALL LEVELS REFER TO PRINCIPAL
DATUM (P.D.) AND ARE IN METRES.
- 所有量度皆以米為單位。
ALL DIMENSIONS ARE IN METRES.

編號 no.	日期 date	內容摘要 description	核對 checked	核准 approved
修訂 REVISION				
		姓名 name	簽署 initial	日期 date
設計 designed		K.M.LAM	SIGNED	15/06/09
繪圖 drawn		C.H.HO	SIGNED	15/06/09
描摹 traced				
核對 checked		C.T.LAU	SIGNED	15/06/09
核准 approved				
SIGNED (YUNG Cho-leung) 總工程師 Chief Engineer 日期 date : 15/06/09				
圖則名稱 drawing title				
青麟路北段改善工程 - 平面圖 IMPROVEMENT TO NORTHERN SECTION OF TSING LUN ROAD - LAYOUT PLAN				
圖則編號 drawing no.				比例 scale
LW 7938				1 : 1000 OR AS SHOWN
辦事處 office				
土木工程處 土地工程部 LAND WORKS DIVISION CIVIL ENGINEERING OFFICE				
土木工程拓展署 CEDD CIVIL ENGINEERING AND DEVELOPMENT DEPARTMENT				
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位置圖 LOCATION PLAN
比例 SCALE 1:20 000

圖例 LEGEND :

- 第2號地盤的土地平整及基礎建設工程範圍
SITE BOUNDARY OF SITE FORMATION AT SITE 2 AND ASSOCIATED INFRASTRUCTURE WORKS
- 青麟路北段改善工程範圍
SITE BOUNDARY OF IMPROVEMENT TO NORTHERN SECTION OF TSING LUN ROAD
- 麒麟圍考古遺址
KEI LUN WAI ARCHAEOLOGICAL SITE
- 擬建的行車道
PROPOSED CARRIAGEWAY
- 擬建的行人路
PROPOSED FOOTWAY
- 擬建的單車徑
PROPOSED CYCLE TRACK
- 擬建的單車停泊位
PROPOSED CYCLE PARKING SPACES
- 擬建的花槽/種植地帶
PROPOSED PLANTER / LANDSCAPING AREA
- 擬建的行人天橋
PROPOSED FOOTBRIDGE

註釋 NOTES :

編號 no.	日期 date	內容摘要 description	核對 checked	核准 approved
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修訂 REVISION

	姓名 name	簽署 initial	日期 date
設計 designed	K.M.LAM	SIGNED	15/06/09
繪圖 drawn	C.H.HO	SIGNED	15/06/09
描摹 traced			
核對 checked	C.T.LAU	SIGNED	15/06/09

核准 approved

SIGNED
(YUNG Cho-leung)
總工程師 Chief Engineer
日期 date : 15/06/09

圖則名稱 drawing title

第2號地盤的土地平整及
相關基礎建設工程
-平面圖
SITE FORMATION AT
SITE 2 AND ASSOCIATED
INFRASTRUCTURE WORKS
-LAYOUT PLAN

圖則編號 drawing no.

LW 7939

比例 scale

1 : 2000
OR
AS SHOWN

辦事處 office

土木工程處 土地工程部
LAND WORKS DIVISION
CIVIL ENGINEERING OFFICE

土木工程拓展署
CEDD CIVIL ENGINEERING AND
DEVELOPMENT DEPARTMENT

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