

## ITEM FOR PUBLIC WORKS SUBCOMMITTEE OF FINANCE COMMITTEE

### HEAD 707 – NEW TOWNS AND URBAN AREA DEVELOPMENT

#### Civil Engineering – Land development

**666CL – Formation, roads and drains in Area 54, Tuen Mun – phase 1**

**681CL – Formation, roads and drains in Area 54, Tuen Mun – phase 2**

Members are invited to recommend to Finance Committee –

- (a) the upgrading of part of **666CL**, entitled “Formation, roads and drains in Area 54, Tuen Mun – phase 1 stage 1 works”, to Category A at an estimated cost of \$493.4 million in money-of-the-day prices;
- (b) the upgrading of part of **681CL**, entitled “Formation, roads and drains in Area 54, Tuen Mun – phase 2 stages 3 and 4A works”, to Category A at an estimated cost of \$553.1 million in money-of-the-day prices; and
- (c) the retention of the remainders of **666CL** and **681CL** in Category B.

**/PROBLEM .....**

## PROBLEM

We need to carry out site formation and associated infrastructure works to serve the planned public housing and government, institution or community (G/IC) developments in Area 54 of Tuen Mun.

## PROPOSAL

2. The Director of Civil Engineering and Development, with the support of the Secretary for Development, proposes to upgrade part of **666CL** and part of **681CL** to Category A at an estimated cost of \$493.4 million and \$553.1 million respectively in money-of-the-day (MOD) prices respectively to carry out site formation and associated infrastructure works in Area 54 of Tuen Mun.

## PROJECT SCOPE AND NATURE

3. The part of **666CL** which we propose to upgrade to Category A as phase 1 stage 1 works comprises

- (a) formation of about 2.9 hectares (ha) of land for a public housing development (Site 1&1A);
- (b) construction of the following road works –
  - (i) a new local distributor road, Road L54D, comprising a section of dual two-lane carriageway and a section of single three-lane carriageway, with a total length of about 450 metres (m); and
  - (ii) widening of a section of Hing Fu Street;
- (c) construction of cantilevered noise barriers of about 250 m long and about 5 m to 5.5 m high;
- (d) construction of associated footpaths, cycle tracks, slopes, retaining walls, drainage, sewerage, landscaping works and other ancillary works; and

/(e) .....

- (e) implementation of environmental mitigation measures and an Environmental Monitoring and Audit (EM&A) programme for the works mentioned in paragraphs 3(a) to (d) above.

4. The part of **681CL** which we propose to upgrade to Category A as phase 2 stages 3 and 4A works comprises

- (a) formation of about 4.5 ha of land in total for a public housing development (Site 3/4 (East)) and a G/IC site (Site 4A (West));
- (b) construction of the following road works –
  - (i) a new local distributor road, Road L54A, comprising a section of dual two-lane carriageway and a section of single four-lane carriageway, with a total length of about 700 m;
  - (ii) widening of a section of Tsz Tin Road;
  - (iii) re-provisioning of a section of Tong Hang Road for connection to Road L54A; and
  - (iv) a public transport interchange;
- (c) construction of the following –
  - (i) foundation of noise barriers<sup>1</sup> of about 155 m long; and
  - (ii) vertical noise barriers of about 640 m long and 1 m to 5 m high;

/(d) .....

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<sup>1</sup> Noise barriers under item c(i) of paragraph 4 are recommended along a section of Road L54A adjacent to a planned school site under the approved Environmental Impact Assessment Review (the EIA Review) as part of the reviews of the Study mentioned in paragraph 7 of this paper. As the development programme of the school site is uncertain but to avoid repeated road opening, we propose to complete the foundation of the noise barriers first under phase 2 stages 3 and 4A works and install the noise barrier panels later to tie in with the school site development programme.

- (d) construction of associated footpaths, cycle tracks, slopes, retaining walls, drainage, sewerage, landscaping works and other ancillary works; and
- (e) implementation of environmental mitigation measures and an EM&A programme for the works mentioned in paragraphs 4(a) to (d) above.

5. Layout plans showing the proposed works are at Enclosures 1 to 4. Subject to funding approval of the Finance Committee, we plan to commence the construction in 2015 for completion in 2019.

6. After upgrading part of **666CL** and part of **681CL** as mentioned in paragraphs 3 and 4 above, we will retain the remainders of **666CL** and **681CL** in Category B, which comprise the remaining site formation for public housing and school development sites, construction of roads, drainage, sewerage, slopes, landscaping works and other ancillary works, and provision of noise mitigation measures in Area 54 of Tuen Mun. Funding for the remainders of **666CL** and **681CL** will be sought to dovetail with the implementation programme of the overall development in Area 54, Tuen Mun.

## JUSTIFICATION

7. Area 54 of Tuen Mun is situated at the north western part of Tuen Mun between Po Tin Estate and Siu Hong Court, which has been identified mainly for public housing development. In 1999, the then Territory Development Department (TDD) completed a “Planning and development study of potential housing site in Area 54, Tuen Mun” (the Study). The Study recommended a development proposal in Area 54 of Tuen Mun, which included public housing, schools, G/IC facilities and the associated infrastructure works.

8. In 2005 and 2012, the Civil Engineering and Development Department (CEDD) conducted two reviews to update the recommendations of the Study taking into account changes in the development layout and parameters in Area 54 of Tuen Mun since the completion of the Study. The reviews confirmed the feasibility of the latest development proposal in Area 54 of Tuen Mun.

9. Two public housing sites, Site 1&1A and Site 3/4 (East) under **666CL** and **681CL** respectively, are proposed to be formed in Area 54 of Tuen Mun. The Housing Department aims at providing at these sites about 4 000 and 3 000 public housing flats for population intake in 2020-21 and 2021-22 respectively. A site for development of a community hall and sports centre will also be formed at Site 4A (West). To cater for the anticipated traffic increase arising from the development proposal, we need to construct Roads L54A and L54D as well as to widen the existing Hing Fu Street and Tsz Tin Road.

## FINANCIAL IMPLICATIONS

10. We estimate the capital cost of the proposed works under **666CL** and **681CL** to be \$493.4 million and \$553.1 million respectively in MOD prices (see paragraph 12 below), broken down as follows –

	<b>\$ million</b>	
	<b>666CL (Part)</b>	<b>681CL (Part)</b>
(a) Site formation works	114.9	72.9
(b) Road works	108.1	89.8
(c) Noise barriers	52.0	58.6
(d) Ancillary works	77.1	178.5
(i) Drainage and sewerage works	56.5	156.3
(ii) Landscaping and irrigation works	19.9	21.1
(iii) Electrical and mechanical works for roads	0.7	1.1
(e) Environmental mitigation measures	2.2	2.4

/(f) .....

		<b>\$ million</b>		
		<b>666CL (Part)</b>	<b>681CL (Part)</b>	
(f)	Consultants' fees	11.7	11.7	
	(i) Advisory services for New Engineering Contract (NEC) <sup>2</sup> administration	10.7	10.7	
	(ii) EM&A programme	1.0	1.0	
(g)	Contingencies	31.1	32.5	
	Sub-total	397.1	446.4	(in September 2014 prices)
(h)	Provision for price adjustment	96.3	106.7	
	Total	493.4	553.1	(in MOD prices)

11. While the construction of the proposed works will be supervised by in-house staff, we plan to engage consultants to provide advisory services for NEC administration and to implement the EM&A programme for the projects. A breakdown of the consultants' fee based on the estimated man-months for each of the projects is at Enclosures 5 and 6 respectively.

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

/2015 – 2016 .....

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<sup>2</sup> 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.

Year	\$ million (Sept 2014)		Price adjustment factor	\$ million (MOD)	
	666CL (Part)	681CL (Part)		666CL (Part)	681CL (Part)
2015 – 2016	9.3	11.2	1.05725	9.8	11.8
2016 – 2017	93.3	105.6	1.12069	104.6	118.3
2017 – 2018	111.2	126.9	1.18793	132.1	150.7
2018 – 2019	63.4	74.7	1.25920	79.8	94.1
2019 – 2020	48.7	53.8	1.33475	65.0	71.8
2020 – 2021	40.6	44.6	1.40483	57.0	62.7
2021 – 2022	30.6	29.6	1.47507	45.1	43.7
	<hr/> 397.1	<hr/> 446.4		<hr/> 493.4	<hr/> 553.1

13. 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 for public sector building and construction output from 2015 to 2022. Subject to funding approval, we will invite tenders for the proposed works under a NEC with provision for price adjustment.

14. We estimate the annual recurrent expenditure arising from the proposed works to be about \$1.3 million for the part of **666CL** and \$1.7 million for the part of **681CL** respectively. The recurrent expenditure attributable to the provision of sewage services will be taken into consideration when determining the sewage charge and trade effluent surcharge rates in future.

## PUBLIC CONSULTATION

15. We consulted the Tuen Mun Rural Committee and the Environment, Hygiene and District Development Committee (EHDDC) of the Tuen Mun District Council (TMDC) on 30 June and 23 November 2012 respectively on the proposed development in Area 54 of Tuen Mun. Whilst both committees had no objection in-principle to the proposed housing development, some members expressed concerns on the sufficiency of the ancillary facilities for the housing

/development .....

development including the designed road capacities, anticipated traffic flows and junction improvement works. We have also reported to the Working Group on the Development and Complementary Facilities in Area 54 formed under the EHDDC of TMDC for monitoring progress of the development proposal on a regular basis.

16. We consulted the Advisory Committee on the Appearance of Bridges and Associated Structures (ACABAS)<sup>3</sup> on the aesthetic design of the noise barriers and retaining wall of the development proposal on 19 November 2013. The Committee accepted the proposed aesthetic design.

17. The road works were divided into two parts for gazetting under the Roads (Works, Use and Compensation) Ordinance (Cap. 370). The first part<sup>4</sup> was gazetted on 28 March and 5 April 2013 while the second part<sup>5</sup> was gazetted on 26 April and 3 May 2013. For the first part, no objection was received and the road scheme was authorized by the Secretary for Transport and Housing on 18 September 2013. For the second part, we received eleven objections during the objection-lodging period. Four out of the eleven objections were unconditionally withdrawn and one was conditionally withdrawn. The remaining six objections concerned compensation and re-housing arrangement for resumption of lots, the extent of resumption and potential environmental impact etc. We clarified that resumption of private land for public works project would be kept to a minimum and explained to the objectors the prevailing land resumption and re-housing policy and their statutory rights. In respect of the potential environmental impact, we explained that appropriate environmental mitigation measures would be implemented to mitigate possible environmental nuisance during construction. Notwithstanding our explanations, the remaining six objectors maintained their objections. On 11 March 2014, the Chief Executive-in-Council authorized the proposed works under Cap. 370 without modification, which was gazetted on 31 March 2014.

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<sup>3</sup> The ACABAS, which comprises representatives of the Hong Kong Institute of Architects, the Hong Kong Institution of Engineers, the Hong Kong Institute of Planners, an academic institution, Architectural Services Department, Highways Department, Housing Department and CEDD, is responsible for vetting the design of bridges and other structures associated with the highway system, including noise barriers and enclosures, from the aesthetic and visual impact points of view.

<sup>4</sup> The road scheme in this gazette relates to the construction of part of Road L54D near Site 1&1A under **666CL**.

<sup>5</sup> The road scheme in this gazette relates to the construction of part of Road L54D near Hing Fu Street and the widening of Hing Fu Street under **666CL** as well as the construction of Road L54A, widening of Tsz Tin Road and re-provisioning of Tong Hang Road under **681CL**.



18. The sewerage works were divided into two parts for gazetting under the Water Pollution Control (Sewerage) Regulation (Cap. 358AL). The first part<sup>6</sup> was gazetted on 28 March and 5 April 2013 while the second part<sup>7</sup> was gazetted on 26 April and 3 May 2013. For the first part, no objection was received and the sewerage scheme was authorized by the Director of Environmental Protection (DEP) on 27 September 2013. For the second part, one objection was received during the objection-lodging period. The objector requested for reduction in the resumption limit to exclude part of the objector's lots. The objector also raised concern on the potential environmental impact due to the proposed works. We informed the objector that the part of objector's lots to be resumed was essential for the project and the resumption of private land for the project was already kept to a minimum. In respect of the potential environmental impact, we also explained that appropriate environmental mitigation measures would be implemented to mitigate possible environmental nuisance during construction. Notwithstanding our explanations, the objector maintained his objection. On 11 March 2014, the Chief Executive-in-Council authorized the sewerage scheme under Cap. 358AL without modification, which was gazetted on 11 April 2014.

19. We consulted the Legislative Council Panel on Development on 24 February 2015 and Members supported the proposed works. As regards Members' request for supplementary information about adoption of NEC for the projects and whether there would be bicycle parking facilities provided in Area 54 of Tuen Mun, an information note was submitted to the Panel on 1 April 2015.

## ENVIRONMENTAL IMPLICATIONS

20. The proposed works fall within the study area of the Study as mentioned in paragraph 7 above. The Study is a Designated Project under Schedule 3 of the Environmental Impact Assessment (EIA) Ordinance.

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<sup>6</sup> The sewerage scheme in this gazette relates to the sewerage works at part of Road L54D near Site 1&1A under **666CL**.

<sup>7</sup> The sewerage scheme in this gazette relates to (i) the sewerage works at part of Road L54D near Hing Fu Street and Hing Fu Street to be widened under **666CL**; and (ii) the sewerage works at Road L54A, Tsz Tin Road to be widened and Tong Hang Road to be re-provisioned under **681CL**.

21. The then TDD completed the EIA report for the development in Area 54 of Tuen Mun, which covers the proposed works. The EIA report was approved by the DEP on 3 September 1999. The report concluded that there would not be any significant residual environmental impacts upon implementation of the recommended mitigation measures. The EIA recommendations were further reviewed and agreed by the DEP in September 2013 taking into account information on the latest development proposal. The EIA report, together with its review findings, concluded that with the implementation of the recommended mitigation measures and EM&A programme, the environmental impacts arising from the proposed works will be mitigated to ensure compliance with the statutory requirements.

22. We will incorporate the recommended mitigation measures into the works contract to control the environmental impact arising from the construction of the works 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 the EIA review. We have included in paragraph 10(e) above a sum of \$2.2 million and \$2.4 million (in September 2014 prices) in the project estimates of the proposed works under **666CL** and **681CL** respectively for the implementation of environmental mitigation measures and the EM&A programme.

23. At the planning and design stages, we have designed the levels and layout of the proposed site formation and road works to minimize 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 avoid the disposal of inert construction waste to public fill reception facilities<sup>8</sup>. We will encourage the contractor to maximise the use of recycled or recyclable inert construction waste, as well as the use of non-timber formwork to further reduce the generation of construction waste.

/24. ....

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<sup>8</sup> 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 CEDD.

24. 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 inert portion from non-inert construction waste on site for disposal at appropriate facilities. We will control the disposal of non-inert construction waste at landfills through a trip-ticket system.

25. We estimate that the proposed works will generate in total about 322 278 tonnes of construction waste which will be disposed of as shown below –

	<b>666CL (Part) Tonnes</b>	<b>681CL (Part) Tonnes</b>	<b>Total Tonnes</b>
Inert construction waste to be reused on site	158 440	131 611	290 051 (90%)
Non-inert construction waste to be disposed of at landfills	17 604	14 623	32 227 (10%)
Total construction waste generated	176 044	146 234	322 278 (100%)

26. The total cost for accommodating construction waste at landfill sites is estimated to be \$4.03 million for the proposed works (based on a unit charge rate of \$125 per tonne at landfills as stipulated in the Waste Disposal (Charges for Disposal of Construction Waste) Regulation).

**/HERITAGE .....**

## HERITAGE IMPLICATIONS

27. The proposed works will not affect any heritage site, i.e. all declared monuments, proposed monuments, graded historic sites or buildings, and Government historic sites identified by the Antiquities and Monuments Office (AMO). Part of the proposed works are within the Siu Hang Tsuen and Kei Lun Wai Sites of Archaeological Interest (see Enclosures 1 and 3). We have conducted archaeological investigation at the proposed works site and no significant archaeological remains have been discovered. As a precautionary measure, the AMO should be informed immediately in case of discovery of antiquities or supposed antiquities during the course of construction works. Agreement from the AMO would be sought on the follow-up actions if required.

## LAND ACQUISITION

28. We have reviewed the design of the proposed site formation and road works to minimise the extent of land acquisition. All necessary land resumption for the proposed works was completed in July 2014 and clearance is ongoing. We have resumed about 92 011 square metres (m<sup>2</sup>) of private land (about 30 203 m<sup>2</sup> for **666CL** and 61 808 m<sup>2</sup> for **681CL**) and cleared 57 758 m<sup>2</sup> of government land (about 33 306 m<sup>2</sup> for **666CL** and 24 452 m<sup>2</sup> for **681CL**) for the proposed site formation and road works. The cost of land resumption and clearance estimated at \$1,178.89 million is charged to **Head 701 – Land Acquisition**. The land resumption and clearance affects 120 land owners and 231 households involving 432 persons. The affected land owners or eligible households have been offered ex-gratia allowances and/or, where eligible, accommodation in public housing in accordance with the established rehousing policy. A breakdown of the land resumption and clearance costs for each project is at Enclosures 7 and 8 respectively.

## BACKGROUND INFORMATION

29. **666CL** and **681CL** were included in Category B in January 2000 and September 2000 respectively.

30. In February 2000, we included an item under the block allocation Subhead **7100CX** “New towns and urban area works, studies and investigations for items in Category D of the Public Works Programme” at an estimated cost of \$9.4 million for carrying out site investigation and engagement of consultants to undertake detailed design of the site formation and infrastructure works for the phase 1 development in Area 54 of Tuen Mun.

31. On 25 May 2001, we upgraded part of **681CL** as **686CL** “Consultants’ fees and site investigation for site formation, roads and drains in Area 54, Tuen Mun – phase 2” to Category A, at an estimated cost of \$25.9 million for carrying out 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 of Tuen Mun.

32. In 2005, we reviewed the implementation approach of **666CL** and **681CL** and decided to deploy in-house resources to undertake the projects. We have substantially completed the detailed design of the proposed works mentioned in paragraphs 3 and 4 above.

33. We have employed consultants to undertake archaeological survey and land contamination assessment, and provide advisory services for preparation of NEC, and engaged contractors to undertake site investigation works. The costs of consultancy agreements and site investigation attributable to **666CL** and **681CL** are charged to the projects mentioned in paragraphs 30 and 31 above respectively.

34. On 15 April 2011, we upgraded part of **681CL** as **744CL** “Formation, roads and drains in Area 54, Tuen Mun – phase 2 stage 1 works” to Category A, at an estimated cost of \$325.2 million for carrying out site formation works at Site 2 for public rental housing development and associated infrastructure works. The site formation works and associated infrastructure works commenced in September 2011 for completion in April 2015.

35. On 11 May 2012, we upgraded part of **681CL** as **755CL** “Formation, roads and drains in Area 54, Tuen Mun – phase 2 stage 2 works” to Category A, at an estimated cost of \$178.9 million for construction of the Tuen Mun Area 54 sewage pumping station. Construction of the sewage pumping station commenced in October 2012 for completion in March 2016.

36. Of the 2 219 trees within the project boundary, 1 887 trees will be felled and 331 trees preserved. Besides, one important tree<sup>9</sup> will be affected during the implementation of the proposed works. Details of the important tree affected are provided at Enclosure 9. We will incorporate planting proposals as part of the proposed works, including estimated quantities of 1 641 trees (including trees to be planted in housing Sites 1&1A and 3/4 (East) by Housing Department) and 76 193 shrubs.

37. We estimate that the proposed works under **666CL** and **681CL** will create about 150 jobs (125 for labourers and another 25 for professional/technical staff) and 170 jobs (140 for labourers and another 30 for professional/technical staff), providing a total employment of 6 400 and 7 240 man-months respectively.

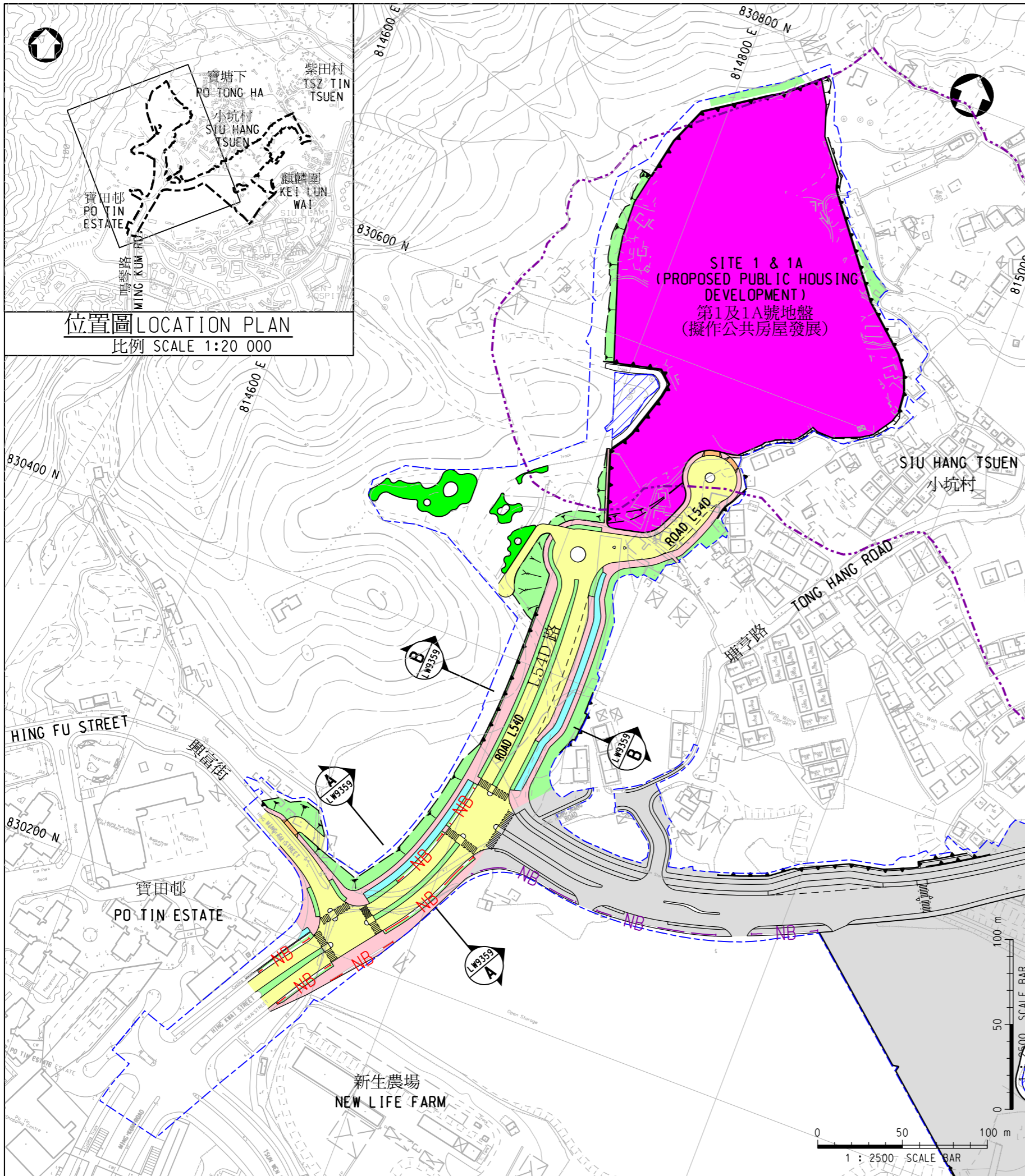
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Development Bureau  
April 2015

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<sup>9</sup> “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 or canopy spread equal to or exceeding 25 m.



圖例 LEGEND :

- 擬建工地範圍  
PROPOSED SITE LIMIT
- 工地範圍外的土地  
LAND EXCLUDED FROM SITE LIMIT
- 小坑村考古遺址  
SIU HANG TSUEN  
SITE OF ARCHAEOLOGICAL  
INTEREST
- 擬建土地平整工地  
PROPOSED SITE FORMATION WORKS  
AREA
- 擬建新建及擴闊行車道  
PROPOSED NEW OR WIDENED  
CARRIAGEWAY
- 擬建行人路  
PROPOSED FOOTWAY
- 擬建單車徑  
PROPOSED CYCLE TRACK
- 擬建花槽/種植地帶  
PROPOSED PLANTER /  
LANDSCAPING AREA
- 擬建林地補償種植地帶  
PROPOSED COMPENSATORY  
WOODLAND PLANTING AREA
- 於工務計劃7681CL下  
建造的工程  
WORKS TO BE CARRIED OUT  
UNDER PWP ITEM 7681CL
- 擬建斜坡  
PROPOSED SLOPE
- 擬建護土牆  
PROPOSED RETAINING WALL
- NB - 擬建5米至5.5米懸臂式  
隔音屏障  
PROPOSED CANTILEVERED NOISE  
BARRIERS OF 5m TO 5.5m HIGH
- NB - 擬建5米垂直式隔音屏障  
(於工務計劃7681CL下  
建造)  
PROPOSED VERTICAL NOISE  
BARRIERS OF 5m HIGH  
(TO BE CARRIED OUT UNDER PWP  
ITEM 7681CL)
- 擬建車輛出入通道  
PROPOSED RUN-IN
- 擬建行人過路處  
PROPOSED PEDESTRIAN CROSSING

註釋  
NOTES :

1. 本圖應與圖則編號LW9359  
一起閱讀  
THIS DRAWING SHALL BE READ  
IN CONJUNCTION WITH DRAWING  
No. LW9359.

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	S C FUNG	SIGNED	08/04/2015
繪圖 drawn	L T LAW	SIGNED	08/04/2015
描摹 traced			
核對 checked	W K YUEN	SIGNED	08/04/2015

核准 approved  
 ORIGINAL SIGNED  
 ( WOO Tai-on, Gabriel )  
 Chief Engineer  
 日期 date : 08/04/2015

圖則名稱 drawing title

工務工程計劃 - 7666CL  
 屯門第54區土地平整、道路  
 及渠務工程第1期第1階段  
 平面圖

PWP ITEM - 7666CL  
 FORMATION, ROADS AND  
 DRAINS IN AREA 54,  
 TUEN MUN - PHASE 1 STAGE 1  
 LAYOUT PLAN

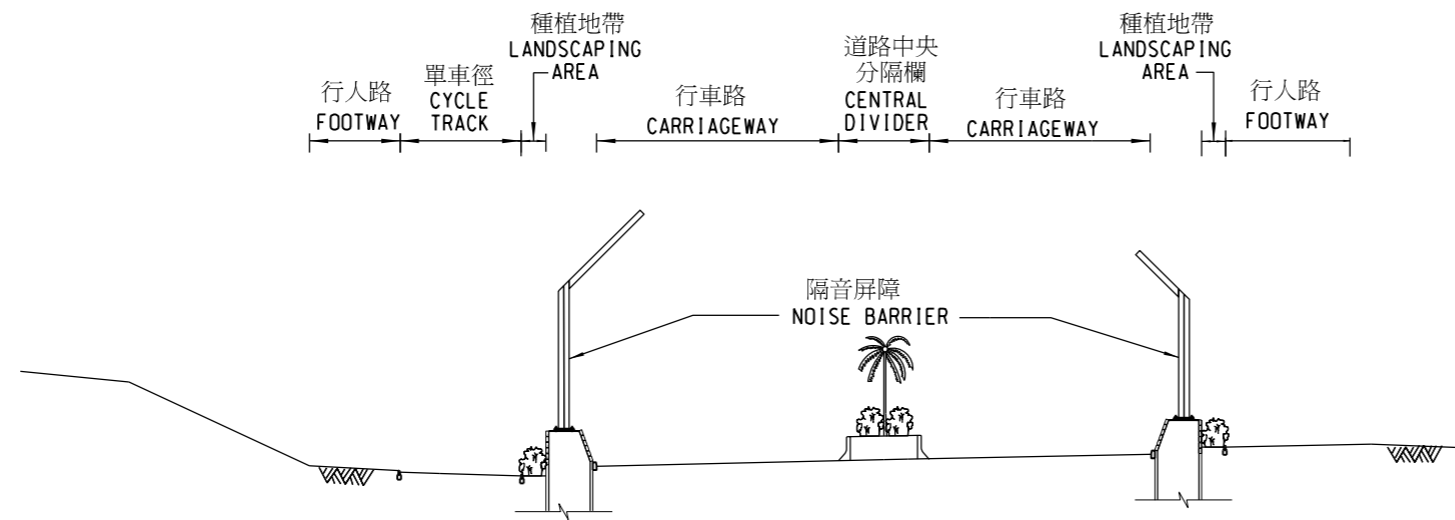
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 或 OR  
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 土木工程處 土地工程部  
 LAND WORKS DIVISION  
 CIVIL ENGINEERING OFFICE

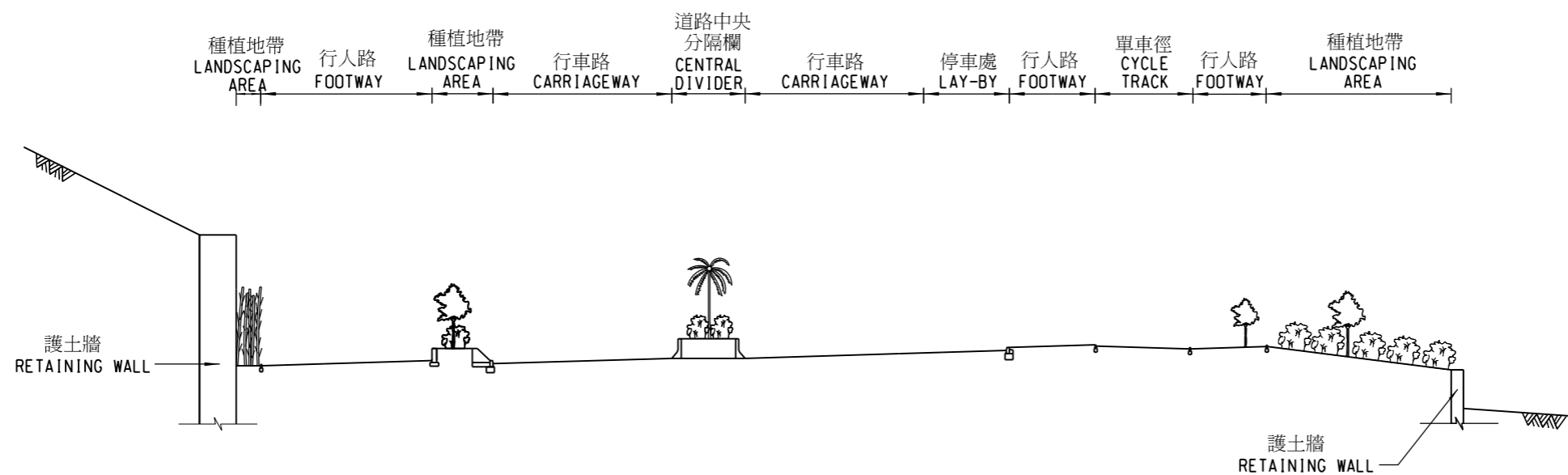
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 DEVELOPMENT DEPARTMENT

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註釋  
NOTES :  
1. 本圖應與圖則編號LW9358  
一起閱讀  
THIS DRAWING SHALL BE READ  
IN CONJUNCTION WITH DRAWING  
No. LW9358.



切面 A - A  
SECTION A-A



切面 B - B  
SECTION B-B

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	S C FUNG	SIGNED	08/04/2015	
繪圖 drawn	L T LAW	SIGNED	08/04/2015	
描摹 traced				
核對 checked	W K YUEN	SIGNED	08/04/2015	

核准 approved  
ORIGINAL SIGNED  
( WOO Tai-on, Gabriel )  
Chief Engineer  
日期 date : 08/04/2015

圖則名稱 drawing title  
工務工程計劃 - 7666CL  
屯門第54區土地平整、道路  
及渠務工程第1期第1階段  
切面圖  
PWP ITEM - 7666CL  
FORMATION, ROADS AND  
DRAINS IN AREA 54,  
TUEN MUN - PHASE 1 STAGE 1  
CROSS SECTION

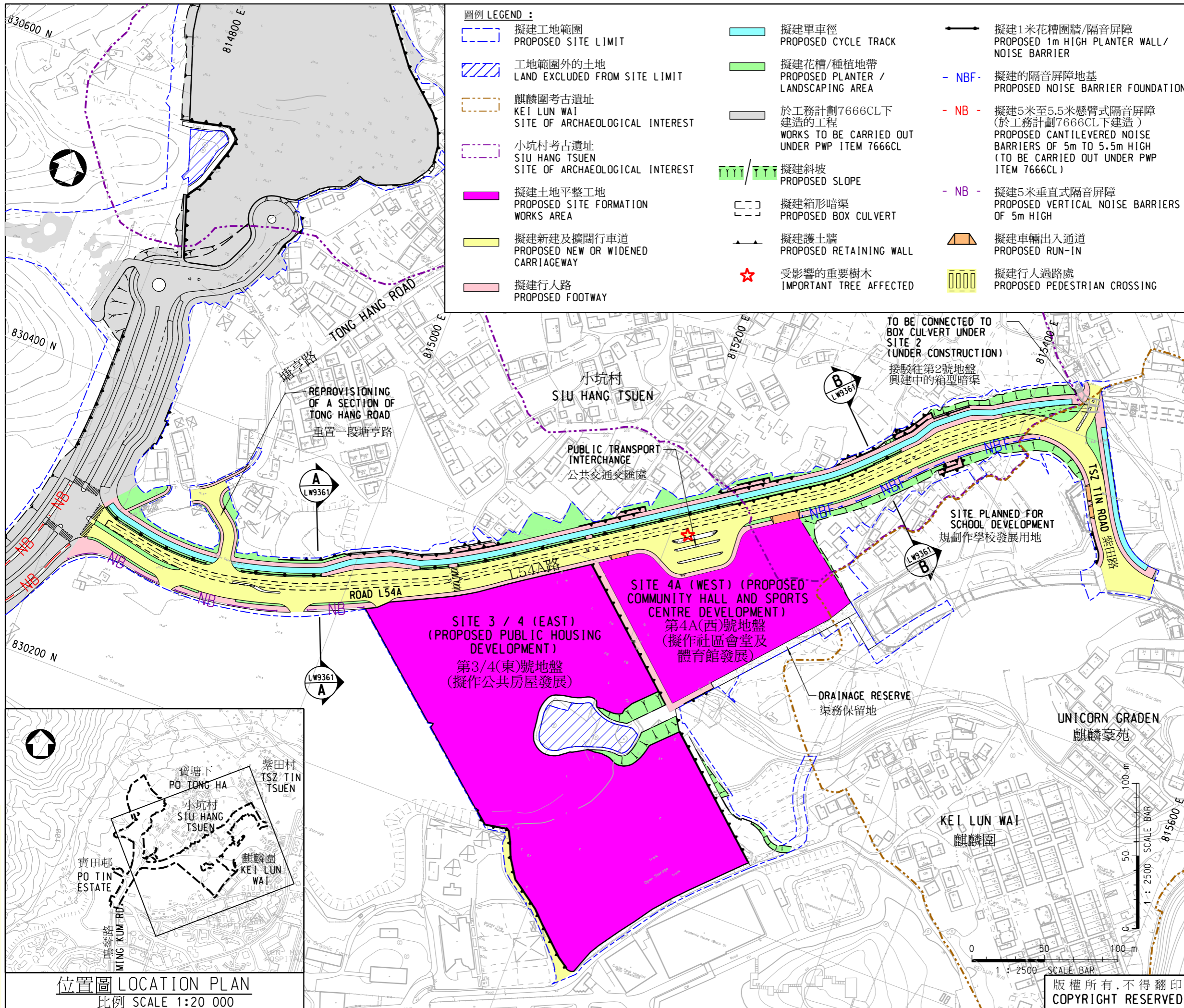
圖則編號 drawing no. <b>LW 9359</b>	比例 scale DIAGRAMMATIC 示意圖
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註釋 NOTES :

1. 本圖應與圖則編號LW9361一起閱讀  
THIS DRAWING SHALL BE READ IN CONJUNCTION WITH DRAWING No. LW9361.

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		S C FUNG	SIGNED	08/04/2015
繪圖 drawn		L T LAW	SIGNED	08/04/2015
描摹 traced				
核對 checked		W K YUEN	SIGNED	08/04/2015

核准 approved

ORIGINAL SIGNED  
( WOO Tai-on, Gabriel )  
Chief Engineer  
日期 date : 08/04/2015

圖則名稱 drawing title

工務工程計劃 - 7681CL  
屯門第54區土地平整、道路及渠務工程第2期第3及第4A階段平面圖

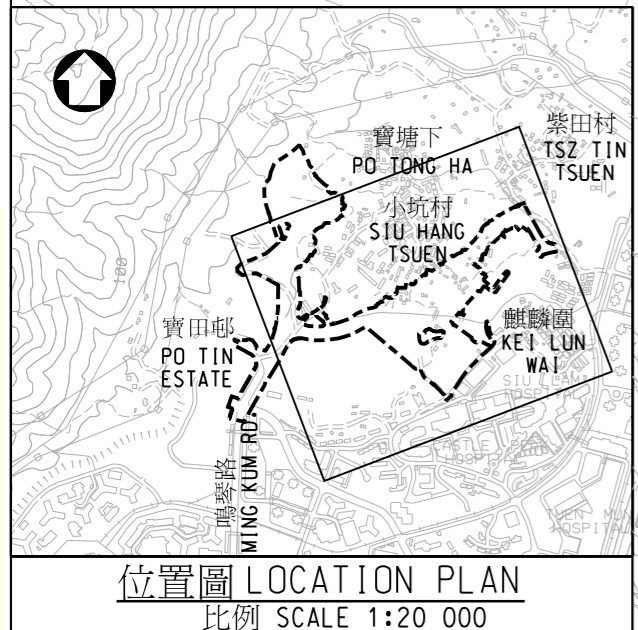
PWP ITEM - 7681CL  
FORMATION, ROADS AND DRAINS IN AREA 54, TUEN MUN - PHASE 2 STAGES 3&4A LAYOUT PLAN

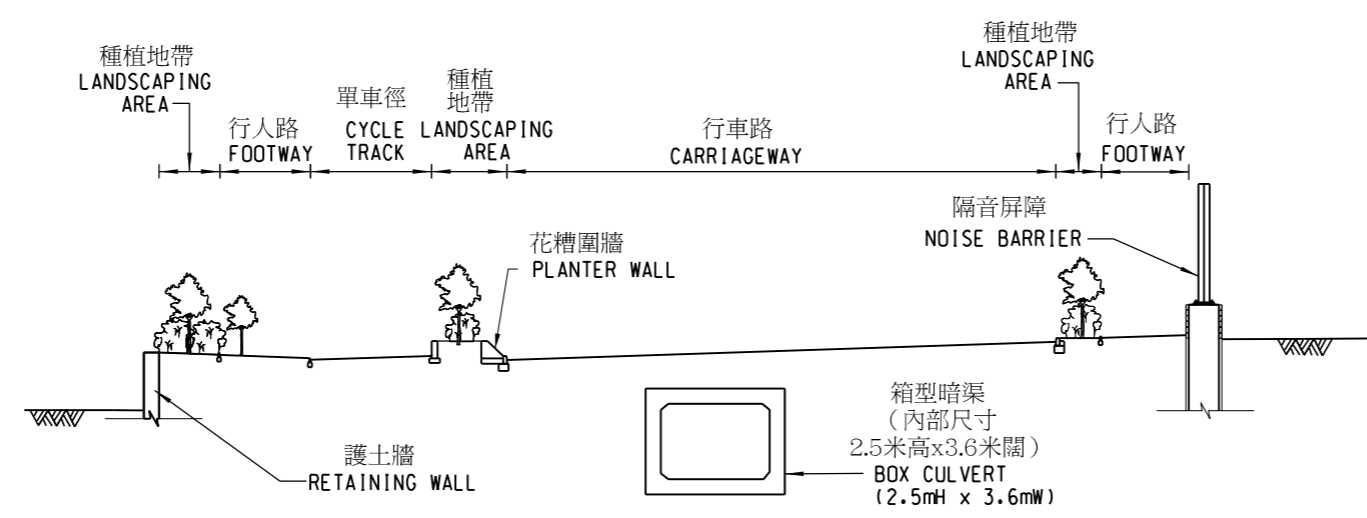
圖則編號 drawing no. **LW 9360**

比例 scale 1 : 2500 或 OR 圖示 AS SHOWN

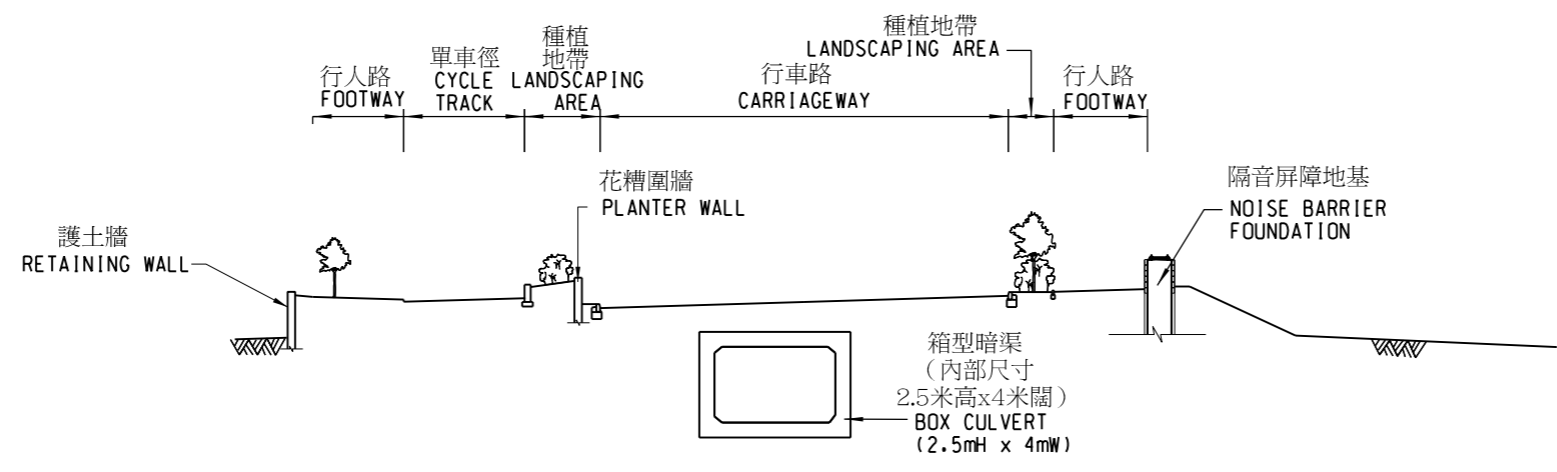
辦事處 office  
土木工程處 土地工程部  
LAND WORKS DIVISION  
CIVIL ENGINEERING OFFICE

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





切面 A - A  
SECTION A-A



切面 B - B  
SECTION B-B

註釋  
NOTES :  
1. 本圖應與圖則編號LW9360  
一起閱讀  
THIS DRAWING SHALL BE READ  
IN CONJUNCTION WITH DRAWING  
No. LW9360.

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		S C FUNG	SIGNED	08/04/2015
繪圖 drawn		L T LAW	SIGNED	08/04/2015
描摹 traced				
核對 checked		W K YUEN	SIGNED	08/04/2015

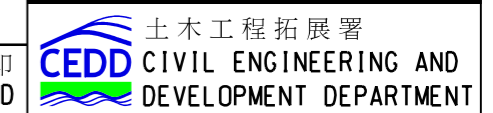
核准 approved  
ORIGINAL SIGNED  
( WOO Tai-on, Gabriel )  
Chief Engineer  
日期 date : 08/04/2015

圖則名稱 drawing title  
工務工程計劃 - 7681CL  
屯門第54區土地平整、道路  
及渠務工程第2期第3及第4A階段  
切面圖  
PWP ITEM - 7681CL  
FORMATION, ROADS AND  
DRAINS IN AREA 54, TUEN MUN  
- PHASE 2 STAGES 3&4A  
CROSS SECTION

圖則編號 drawing no.	比例 scale
LW 9361	DIAGRAMMATIC 示意圖

辦事處 office  
土木工程處 土地工程處  
LAND WORKS DIVISION  
CIVIL ENGINEERING OFFICE

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**Enclosure 5 to PWSC(2015-16)10**

**666CL (Part) – Formation, road and drains in Area 54, Tuen Mun – phase 1**

**Breakdown of estimate for consultants' fees (in September 2014 prices)**

			<b>Estimated man- months</b>	<b>Average MPS* salary point</b>	<b>Multiplier (Note 1)</b>	<b>Estimated fee (\$ million)</b>
Consultants' staff costs						
(a)	Consultants' fees for advisory services for New Engineering Contract (NEC) administration <sup>(Note 2 &amp; 3)</sup>	Professional	68	38	2.0	9.7
		Technical	21	14	2.0	1.0
(b)	Consultants' fees for Environmental Monitoring and Audit (EM&A) programme <sup>(Note 2)</sup>	Professional	6	38	2.0	0.9
		Technical	3	14	2.0	0.1
<b>Total consultants' staff costs</b>						<hr/> <b>11.7</b> <hr/>

\* MPS = Master Pay Scale

**Notes**

1. A multiplier of 2.0 is applied to the average MPS salary point to arrive at the full staff costs including the consultants' overheads and profit, as the staff will be employed in the consultants' offices. (As at now, MPS point 38 = \$71,385 per month and MPS point 14 = \$24,380 per month)
2. The consultants' staff costs for advisory services for NEC administration and EM&A programme are based on the estimates prepared by the Director of CEDD. The actual man-months and fees will only be known when we have selected the consultants through the usual competitive fee bidding system.
3. CEDD will deploy in-house staff to supervise the construction of the proposed works. The fees in (a) above will be used for engaging consultants to provide professional advisory services for CEDD's detailed arrangements for NEC administration.

**Enclosure 6 to PWSC(2015-16)10**

**681CL (Part) – Formation, road and drains in Area 54, Tuen Mun – phase 2**

**Breakdown of estimate for consultants' fees (in September 2014 prices)**

			<b>Estimated man- months</b>	<b>Average MPS* salary point</b>	<b>Multiplier (Note 1)</b>	<b>Estimated fee (\$ million)</b>
Consultants' staff costs						
(a)	Consultants' fees for advisory services for New Engineering Contract (NEC) administration <sup>(Note 2 &amp; 3)</sup>	Professional	68	38	2.0	9.7
		Technical	21	14	2.0	1.0
(b)	Consultants' fees for Environmental Monitoring and Audit (EM&A) programme <sup>(Note 2)</sup>	Professional	6	38	2.0	0.9
		Technical	3	14	2.0	0.1
<b>Total consultants' staff costs</b>						<hr/> <b>11.7</b> <hr/>

\* MPS = Master Pay Scale

**Notes**

1. A multiplier of 2.0 is applied to the average MPS salary point to arrive at the full staff costs including the consultants' overheads and profit, as the staff will be employed in the consultants' offices. (As at now, MPS point 38 = \$71,385 per month and MPS point 14 = \$24,380 per month)
2. The consultants' staff costs for advisory services for NEC administration and EM&A programme are based on the estimates prepared by the Director of CEDD. The actual man-months and fees will only be known when we have selected the consultants through the usual competitive fee bidding system.
3. CEDD will deploy in-house staff to supervise the construction of the proposed works. The fees in (a) above will be used for engaging consultants to provide professional advisory services for CEDD's detailed arrangements for NEC administration.

**666CL (Part) – Formation, roads and drains in Area 54, Tuen Mun – phase 1****Breakdown of the land resumption and clearance costs**

	<b>\$ million</b>
<b>(I) Estimated resumption cost</b>	315.22
(a) Agricultural land ex-gratia compensation	315.22
54 agricultural lots (with a total area of 30 203 square metres (m <sup>2</sup> ) were resumed)	
30 203 m <sup>2</sup> x \$10,436.69 per m <sup>2</sup> (please see Notes below)	
<b>(II) Estimated clearance cost</b>	34.93
(a) Ex-gratia allowance of crop compensation	3.40
(b) Ex-gratia allowance for farm structures and miscellaneous permanent improvements to farms	0.59
(c) Ex-gratia allowances for miscellaneous indigenous villager matters, e.g. Tun Fu ceremonial fees, removal of graves and shrines.	0.13
(d) Ex-gratia allowance for domestic occupiers	30.81
<b>(III) Interest and Contingency Payment</b>	35.02
(a) The interest payment on various ex-gratia compensations for private land	0.01
(b) Contingency on the above costs	35.01
Total	385.17

## Notes

1. There are four ex-gratia compensation zones, namely Zones A, B, C and D, for land resumption in the New Territories as approved by Executive Council in 1985 and 1996. The boundaries of these zones are shown on the Zonal Plan for Calculation of Compensation Rates. All the land resumed in the project 666CL is agricultural land currently within Zone A.

2. In accordance with G.N. 1816 dated 20 March 2014 on the revised ex-gratia compensation rates for resumed land, the ex-gratia compensation rate of agricultural land for Zone A is 120% of the Basic Rate at \$808 per square foot, i.e. \$969.6 per square foot (or \$10,436.69 per m<sup>2</sup>).

**681CL (Part) – Formation, roads and drains in Area 54, Tuen Mun – phase 2****Breakdown of the land resumption and clearance costs**

	<b>\$ million</b>
<b>(I) Estimated resumption cost</b>	645.07
(a) Agricultural land ex-gratia compensation	645.07
177 agricultural lots (with a total area of 61 808 square metres (m <sup>2</sup> ) were resumed )	
61 808 m <sup>2</sup> x \$10,436.69 per m <sup>2</sup> (please see Notes below)	
<b>(II) Estimated clearance cost</b>	76.48
(a) Ex-gratia allowance of crop compensation	6.39
(b) Ex-gratia allowance for farm structures and miscellaneous permanent improvements to farms	10.57
(c) Ex-gratia allowances for miscellaneous indigenous villager matters, e.g. Tun Fu ceremonial fees, removal of graves and shrines.	0.12
(d) Ex-gratia allowance for domestic occupiers	59.40
<b>(III) Interest and Contingency Payment</b>	72.17
(a) The interest payment on various ex-gratia compensations for private land	0.01
(b) Contingency on the above costs	72.16
	_____
Total	793.72
	_____

## Notes

1. There are four ex-gratia compensation zones, namely Zones A, B, C and D, for land resumption in the New Territories as approved by Executive Council in 1985 and 1996. The boundaries of these zones are shown on the Zonal Plan for Calculation of Compensation Rates. All the land resumed in the project **681CL** is agricultural land currently within Zone A.

2. In accordance with G.N. 1816 dated 20 March 2014 on the revised ex-gratia compensation rates for resumed land, the ex-gratia compensation rate of agricultural land for Zone A is 120% of the Basic Rate at \$808 per square foot, i.e. \$969.6 per square foot (or \$10,436.69 per m<sup>2</sup>).

## 681CL (Part) – Formation, road and drains in Area 54, Tuen Mun – phase 2

Tree no. <sup>(1)</sup>	Species		Measurements			Amenity value <sup>(3)</sup>	Form	Health condition	Structural condition	Suitability for transplanting <sup>(4)</sup>		Conservation status <sup>(5)</sup>	Recommendation	Department to provide expert advice to LandsD	Additional Remarks
	Scientific name	Chinese name	height (m)	DBH <sup>(2)</sup> (mm)	crown spread (m)	(good/fair/poor)			(high/medium/low)	Remarks	(Retain/transplant/fell)				
A128	<i>Delonix regia</i>	鳳凰木	13	1335	10	Poor	Fair	Poor	Poor	Low	<ul style="list-style-type: none"> <li>● The tree belongs to species with brittle wood structure, and is prone to branch or trunk failure.</li> <li>● Due to poor health with large cavities, serious decays, peeled off barks and broken main limb, the tree is not suitable for transplanting.</li> <li>● Due to old age, large size and declining health condition, the tree is not likely to recover from significant crown and root pruning if it is to be transplanted.</li> </ul>	No	Fell	AFCDD	<ul style="list-style-type: none"> <li>● The tree is in conflict with the proposed road alignment.</li> <li>● If the proposed road is to be realigned in order to avoid affecting the tree, much more land resumption is required which is not cost effective.</li> <li>● Even if the tree could be retained in-situ, it will be very close to the future road and sidewalk and will impose high risk to the safety of pedestrians/motorists.</li> <li>● Since retention of the tree is considered impracticable and the survival rate after transplanting is low, the tree is proposed to be felled.</li> </ul>

<sup>(1)</sup> The subject tree is not in the Register of Old and Valuable Trees.

<sup>(2)</sup> Diameter at Breast Height (DBH) of a tree refers to its trunk diameter at breast height (i.e. measured at 1.3 m above ground level).

<sup>(3)</sup> Amenity value of the tree is assessed by its functional values for shade, shelter, screening, reduction of pollution and noise and also its fung shui significance, and classified into the following categories.

Good : important trees which should be retained by adjusting the design layout accordingly.

Fair : trees that are desirable to be retained in order to create a pleasant environment, which includes healthy specimens of lesser importance than “Good” trees.

Poor : trees that are dead, dying or potentially hazardous and should be removed.

<sup>(4)</sup> Assessment has taken into account conditions of the tree at the time of survey (including health, structure, age and root conditions), site conditions (including topography and accessibility), and intrinsic characters of tree species (survival rate after transplanting).

<sup>(5)</sup> Conservation status is based on the rarity and protection status of the species under relevant ordinances in Hong Kong, such as Rare and Precious Plants of Hong Kong, the International Union for Conservation of Nature Red List of Threatened Species and the Forests and Countryside Ordinance.