RURAL AND NEW TOWN PLANNING COMMITTEE OF THE TOWN PLANNING BOARD

RNTPC Paper No. 11/14

for Consideration by the Rural and New Town Planning Committee on 26.9.2014

PROPOSED AMENDMENTS TO THE APPROVED TUNG CHUNG TOWN CENTRE AREA OUTLINE ZONING PLAN NO. S/I-TCTC/18

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1. Introduction

The purpose of this paper is to seek Members' agreement that:

- (a) the proposed amendments to the approved Tung Chung Town Centre Area Outline Zoning Plan (OZP) No. S/I-TCTC/18 (Appendix II) and its Notes (Appendix III) are suitable for exhibition for public inspection under section 5 of the Town Planning Ordinance (the Ordinance); and
- (b) the revised Explanatory Statement (ES) of the OZP (**Appendix IV**) is an expression of the Town Planning Board (the Board)'s planning intention and objectives for various land uses of the OZP.

2. <u>Status of the current Approved Tung Chung Town Centre Area Outline Zoning Plan</u> <u>No. S/I-TCTC/18</u>

- 2.1 The OZP was last approved by the Chief Executive in Council (CE in C) under section 9(1)(a) of the Ordinance on 1.6.2010 and exhibited for public inspection under section 9(5) of the Ordinance on 11.6.2010. A copy of the approved OZP is attached at **Appendix I** for Members' reference.
- 2.2 On 2.9.2014, the CE in C referred the approved Tung Chung Town Centre Area OZP to the Board for amendment under section 12(1)(b)(ii) of the Ordinance. The reference of the OZP was notified in the Gazette on 19.9.2014.

3. <u>Background</u>

3.1 The Government is committed to expanding land resources for Hong Kong through a multi-pronged approach to build up land reserve with a view to meeting housing, social and economic development needs. The 2013 Policy Address has announced various measures to increase the housing land supply in the short, medium and long terms. One of the measures is to convert land, where the originally intended use is not required, for housing development or other uses that meet the more pressing needs in the community as soon as possible.

- 3.2 Against the above initiative, a site (about 0.88 ha) zoned "Government, Institution, or Community" ("G/IC") in Tung Chung Area 27 is identified for potential Home Ownership Scheme (HOS) development by the Housing Department (HD). The site is at present partly occupied by a temporary 5-a-side soccer pitch and partly vacant (**Plans 1 to 4**). The site is originally reserved for the development of school and church cum kindergarten. As replacement sites for school and church have been reserved in other parts of Tung Chung, and no other government, institution or community (GIC) facilities are required at the site by concerned government departments, the site could be released for housing development. HD has undertaken to relocate the existing temporary soccer pitch to Tung Chung Area 39 (about 700m to the west of the site).
- 3.3 HD has conducted preliminary technical assessments on traffic, environmental (air and noise), sewerage, drainage, natural terrain hazard and quantitative risk aspects. Based on the preliminary findings, HD does not anticipate that there are insurmountable technical problems pertaining to the HOS development.
- 3.4 HD has consulted the Islands District Council (IsDC) on the proposed HOS development with a notional scheme on 1.9.2014¹. Members generally support the proposed HOS development. The latest development parameters of the notional HOS scheme (**Plan 5a**) provided by HD are summarised in the following table:

Site Area of proposed HOS Development	About 0.88 ha
Maximum Domestic Plot Ratio (PR)	6.0
Maximum Building Height (BH)	135mPD / 41 storeys
No. of Blocks	2
Maximum No. of Flats	About 1,100
Anticipated Population	About 3,400 persons

The notional scheme is subject to detailed design to be carried out by HD. The future development of the site would be guided by planning brief.

3.5 To facilitate the proposed HOS development, the site is proposed to be rezoned from "G/IC" to "Residential (Group A) 1" ("R(A)1") with development parameters incorporated into the Notes as appropriate.

4. <u>The site and its surrounding areas (Appendix I and Plans 2 to 4c)</u>

- 4.1 The site is located at the southwest of Tung Chung New Town. It is at present partly occupied by a temporary 5-a-side soccer pitch and partly vacant. The site is originally reserved for the development of school and church cum kindergarten.
- 4.2 Existing developments in the vicinity of the site mainly comprise the North Lantau Hospital (about 57mPD) to the north at the opposite side of Yu Tung Road and Public Rental Housing (PRH) Estate / HOS developments (Yat Tung Estate, Fu Tung Estate and Yu Tung Court, with building heights ranging from about 125mPD to 117mPD)

¹ The minutes of the IsDC meeting is not yet available for the time being.

to the northwest and northeast. An existing liquefied petroleum gas (LPG) cum petrol filling station and a temporary open space are located to the west at the opposite side of Chung Yan Road. Ma Wan New Village which comprises 3-storey village houses zoned "Village Type Development" ("V") is located to the immediate south.

5. <u>The Rezoning Proposal</u>

5.1 The "G/IC" site in Area 27 (about 1.08 ha) is proposed to be rezoned to "R(A)1" on the OZP (**Plan 1**) to facilitate the HOS development. The following factors have been taken into account in the proposed zonings and development restrictions:

5.1.1 <u>Rezoning of the site from "G/IC" to "R(A)1"</u>

Planning Intention / Land Use Compatibility

- (a) The planning intention of the "R(A)1" zone is primarily for high-density residential developments. Commercial uses are always permitted on the lowest three floors of a building or in the purpose-designed non-residential portion of an existing building.
- (b) The site is located in the southwestern part of Tung Chung New Town. The North Lantau Hospital of about 57 mPD is to the north at the opposite side of Yu Tung Road, Yat Tung Estate of about 125 mPD to the northwest and Fu Tung Estate / Yu Tung Court of about 117mPD to 125mPD to the northeast. To the south are existing village developments including Ma Wan New Village and Shan Ha (Pa Mei) Village (**Plans 1** to 3). Residential use at the site is considered compatible with the land use character of the surrounding area.

Proposed Development Parameters

- (c) The existing residential developments within Tung Chung New Town are subject to a maximum domestic PR of 5. A maximum PR of 6 is proposed for the HOS development at the site in accordance with the 2014 Policy Address to increase the development density by around 20% for new housing sites. A maximum BH restriction of 135 mPD / 41 storeys is generally compatible with that of Yat Tung Estate (with maximum BH of 125 mPD) to the northwest of the site. The future development of the site would be guided by a planning brief.
- (d) Based on the proposed development parameters, HD has prepared a notional scheme for the site (Plan 5a). It is estimated that the proposed HOS development could provide about 1,100 flats with an estimated population of about 3,400. The development is scheduled for completion in 2019/20.

Visual and Air Ventilation Aspects

- (e) The nearest high-rise development in the vicinity is Yat Tung Estate (with a maximum BH of 125 mPD) to the northwest of the site (**Plans 2** to 4c). The proposed BH of about 135 mPD is generally in line with that of Yat Tung Estate. The village developments to the south and southwest provide visual relief in the locality.
- (f) A visual appraisal has been conducted by HD to illustrate the possible visual impact of the proposed HOS development on the surrounding areas (Appendix II and Plans 5a to 5c). According to the visual appraisal, the proposed development is generally acceptable in view of their visual compatibility with the built environment shown in the photomontages in terms of their building form, scale and masses. The proposed HOS blocks in the site would be seen as part of the building group and would generally not be incompatible with the existing developments in visual terms. Although the proposed development would slightly reduce the visual openness with blockage to the view in some view points, and impose an overshadowing effect on Ma Wan New Village in view of the close distance and contrast in building height, the development would not create visual incompatibility with the surrounding areas. In order to mitigate its visual impacts, HD would explore various design measures, such as façade treatment and stepped height building profile, in the detailed design stage. In view of the site configuration, location and proposed development parameters to meet housing needs, some visual impact is unavoidable and has been reflected in the visual appraisal. The Chief Town Planner/Urban Design and Landscape (CTP/UD&L) has no adverse comment on the visual appraisal.
- (g) According to the expert evaluation of air ventilation assessment report prepared by HD, the winds could easily reach the site without much obstruction. In consideration of its small development scale (about 0.88 ha) and with provision of design features in respect to air ventilation, significant impacts on air ventilation to its surrounding are not expected. Furthermore, the efficacy of the design features and room for further enhancement shall be reviewed in later design stage.
- (h) CTP/UD&L has no objection to the proposed amendments and the development restrictions for the site from urban design perspectives.

Landscape Aspect

(i) There are two large mature trees, Ficus Microcarpal (細葉榕), located at the southern corner within the proposed "R(A)1" site, of high amenity value which should be preserved in-situ (Plan 4b). The two mature trees will be excluded from the HOS development area and HD will take into account the existing landscape features within and adjacent to the site in their detailed design stage. Subject to a detailed tree survey, trees affected by the proposed HOS development will be transplanted or felled upon formal approval by relevant authorities. Existing trees to be removed will be adequately compensated. Tree preservation clause will also be stipulated in the land grant to HD. CTP/UD&L have no objection to the proposed amendments from the landscape perspective.

Risk Hazard

(j) There is an existing LPG cum petrol filling station to the west of the site outside the Plan Area. HD has conducted a preliminary Quantitative Risk Assessment (QRA) study with risk impact evaluation on the proposed HOS development and submitted report to the Director of Electrical and Mechanical Services (DEMS). No insurmountable problem from the risk perspective would be anticipated. Finalization of the report will be prepared by HD for DEMS' endorsement subject to the detailed design of the HOS scheme. For the natural terrain hazard to the east of the site, a preliminary review has been conducted and further hazard assessment is required. The assessment and proposed mitigation measures will be prepared by HD for Consideration by the Head of Geotechnical Engineering (H of GEO).

Environment and Infrastructure

(k) HD has conducted preliminary broad technical assessments for the proposed HOS development on environmental (air and noise), sewerage, drainage and water supplies, etc. aspects. No insurmountable problems are anticipated as confirmed by government departments concerned including Drainage Services Department, Environmental Protection Department and Water Supplies Department. Appropriate improvement works to the existing/planned sewage capacities would be carried out by HD. HD will finalize the technical assessments subject to the detailed design of the HOS scheme.

Traffic and Accessibility

- (1) The site is currently accessible via Tung Chung Road. It is served by franchised bus services along Tung Chung Road, Chung Yan Road and Yu Tung Road. It is also connected by an existing footbridge leading to the North Lantau Hospital and Yat Tung Estate to the north and northwest.
- (m) HD has undertaken a preliminary Traffic Impact Assessment (TIA) (Appendix III) for the proposed development at Tung Chung Area 27. The traffic impacts arising from the proposed development and other adjacent committed developments have been assessed and the results

indicate that most of the concerned junctions can be operated at a satisfactory level. However, some road improvement works are required for some junctions in the vicinity. The TIA also reviews that the existing public transport services will be able to cater for the passengers from the proposed development. HD will work closely with the Transport Department to ensure that the existing road network and public transport services will not be affected. C for T has no objection to the proposed amendments.

GIC Facilities and Open Space Provision

- (n) The proposed rezoning would not have any adverse impact on the GIC facilities and open space provision in Tung Chung. Although the site is originally reserved for the development of school and church cum kindergarten, replacement sites for school and church have been reserved in other parts of Tung Chung. EDB confirmed on 21.2.2014 that they have no objection to releasing the reserved school site to HD for development. As demonstrated in the table on the provision of major GIC facilities in Tung Chung (Appendix VII), the existing and planned provision of GIC facilities and open space could generally meet the demand of the planned population of about 78,000² in the Area.
- (o) As to the overall provision of Open Space and other GIC facilities in the whole Tung Chung, the on-going Tung Chung New Town Extension Study will review and take into account the existing surplus / deficit of provisions.
- 5.1.2 <u>Rezoning of the site to "Green Belt" ("GB"), "Village Type Development"</u> ("V") and area shown as 'Road'

A strip of land will be rezoned from "G/IC" to "GB" and "V" to realign the zoning boundaries due to proposed amendments for the HOS development as stated in paragraph 5.1.1 above. Opportunity has also been taken to rezone a strip of land from "G/IC" to area shown as 'Road' to reflect the existing condition.

6. <u>Proposed Amendments to Matters shown on the OZP</u> (Appendix IV and Plan 1)

6.1 Amendment Items A1 and A2 (rezoning to "R(A)1") (about 0.92 ha)

- (a) Rezoning of an area from "G/IC" to "R(A)1" for the proposed HOS development; and
- (b) Rezoning of two strips of land from area shown as 'Road' to "R(A)1" for the proposed HOS development.

 $^{^{2}}$ The planned population of 78,000 has included the proposed HOS development in Area 27 which is estimated to provide about 1,100 flats.

6.2 Amendment Item B (rezoning to 'Road') (about 0.14 ha)

Rezoning of a strip of land from "G/IC" to an area shown as 'Road' to reflect the existing condition.

6.3 <u>Amendment Items C and D (rezoning to "GB" and "V") (about 0.08 ha)</u> Rezoning of a strip of land from "G/IC" to "GB" and "V" to realign the zoning boundaries due to Amendment Item A1.

7. <u>Proposed Amendments to the Notes of the OZP</u>

- 7.1 In relation to **Amendments Items A1 and A2** mentioned in paragraph 6 above, the Notes of the OZP will be amended to incorporate the development restrictions for the proposed "R(A)1" zone with the stipulation of a maximum plot ratio of 6 and a maximum building height of 135 mPD in the Remarks for the "R(A)" zone.
- 7.2 The above proposed amendments have been incorporated in the draft Notes at **Appendix V** with addition in *bold and italic* and deletion in single crossed out for Members' consideration.

8. <u>Revision to the Explanatory Statement (ES) of the OZP</u>

- 8.1 The ES of the Tung Chung Town Centre Area OZP has been revised to reflect the above amendments and to update the general information of various land use zones where appropriate.
- 8.2 The updated ES (with additions in *bold and italics* and deletion in single crossed out) is attached at **Appendix VI** for Members' consideration.

9. <u>Plan Number</u>

9.1 Upon gazette, the OZP will be renumbered as S/I-TCTC/19.

10. <u>Consultation</u>

- 10.1 The rezoning proposal has been circulated to the following government departments and their comments (if any) have been incorporated into the proposed amendments to the OZP as appropriate:
 - (a) Secretary for Education;
 - (b) Chief Architect/Central Management Division 2, Architectural Services Department;
 - (c) Chief Engineer/Development(2), Water Supplies Department;
 - (d) Chief Engineer/Hong Kong Island & Islands, Drainage Services Department;

- (e) Chief Highway Engineer/New Territories East, Highways Department;
- (f) Chief Town Planner/Urban Design and Landscape, Planning Department
- (g) Commissioner for Transport;
- (h) Commissioner of Police;
- (i) Director of Electrical and Mechanical Services;
- (j) Director of Environmental Protection;
- (k) Director of Food and Environmental Hygiene;
- (l) Director of Fire Services;
- (m) Director of Housing;
- (n) Director of Leisure and Cultural Services;
- (o) District Lands Officer/Islands, Lands Department;
- (p) District Officer/Islands, Home Affairs Department;
- (q) Government Property Administrator;
- (r) Head of Geotechnical Engineering Office, Civil Engineering and Development Department; and
- (s) Project Manager/Hong Kong Island & Islands, Civil Engineering and Development Department.
- 10.2 The IsDC and Tung Chung Rural Committee will be consulted during the exhibition period of the draft Tung Chung Town Centre Area OZP No. S/I-TCTC/19 for public inspection under section 5 of the Ordinance.

11. Decision Sought

Members are invited to:

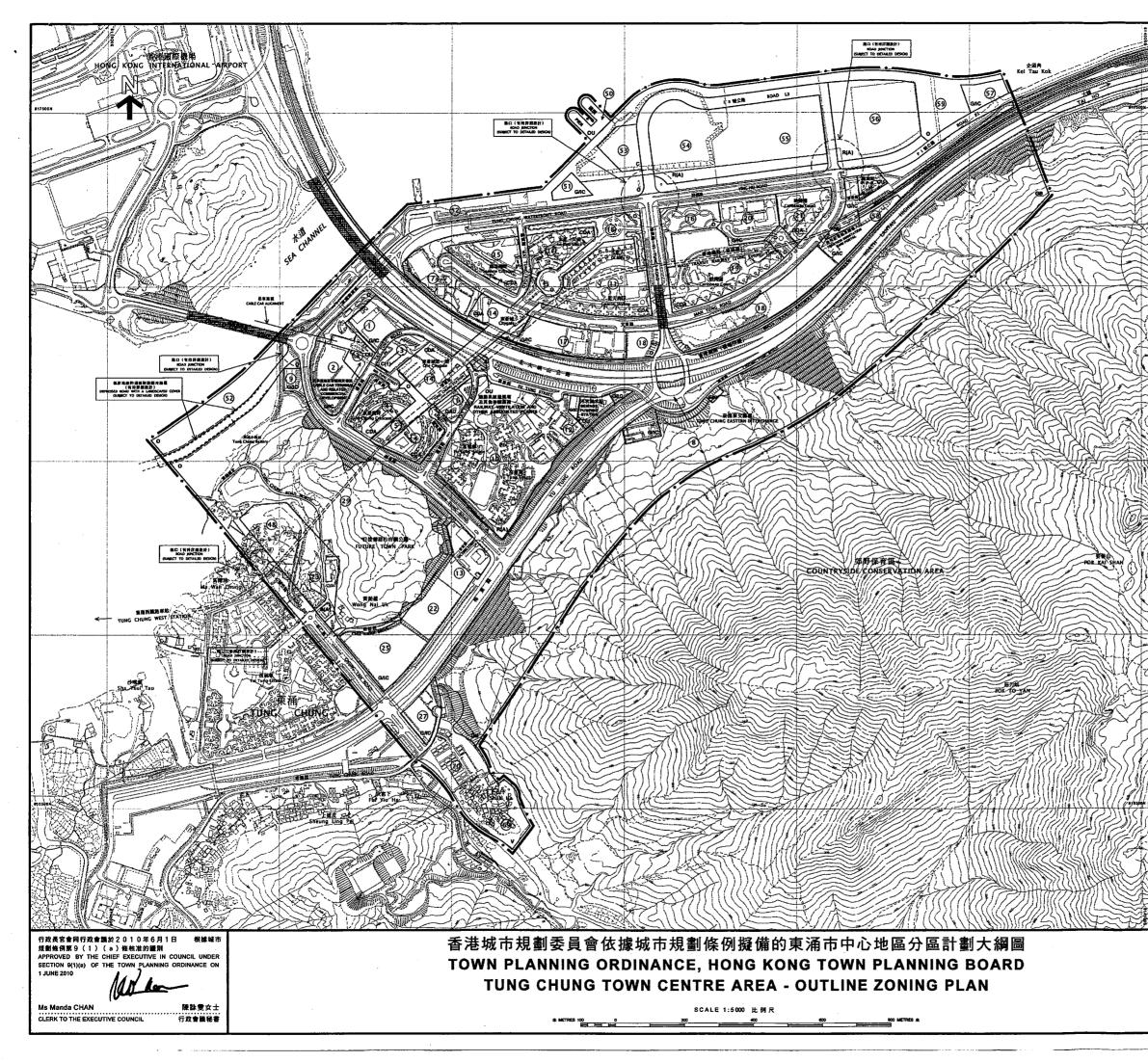
- (a) <u>agree</u> that the proposed amendments to the approved Tung Chung Town Centre Area OZP No. S/I-TCTC/18 as shown on the draft Tung Chung Town Centre Area OZP No. S/I-TCTC/18C (to be renumbered as S/I-TCTC/19) at **Appendix IV** and the draft Notes at **Appendix V** are suitable for exhibition for public inspection under section 5 of the Ordinance; and
- (b) <u>adopt</u> the revised ES at **Appendix VI** for the draft Tung Chung Town Centre Area OZP No. S/I-TCTC/18C (to be renumbered as S/I-TCTC/19) as an expression of the planning intention and objectives of the Board for various land use zonings on the OZP and the revised ES will be published together with the draft OZP.

12. <u>Attachments</u>

Appendix I	Approved Tung Chung Town Centre Area OZP No. S/I-TCTC/18
	(reduced scale)
Appendix II	Visual Appraisal Conducted by Housing Department
Appendix III	Preliminary Traffic Impact Assessment Provided by Housing
	Department
Appendix IV	Draft Tung Chung Town Centre Area OZP No. S/I-TCTC/18C

Schedule of Amendments and revised Notes of Draft Tung Chung Town Centre Area OZP No. S/I-TCTC/18C
Revised Explanatory Statement of Draft Tung Chung Town Centre Area OZP No. S/I-TCTC/18C
Provision of major community facilities in Tung Chung
Location Plan
Aerial Photo
Site Plan
Site Photos
Conceptual Layout and Photomontages of the notional HOS Scheme

PLANNING DEPARTMENT SEPTEMBER 2014



		Appendix
	圖例 NOTATION	
ZONES		地帶
COMMERCIAL	c	百葉
COMPREHENSIVE DEVELOPMENT AREA	CDA	綜合發展區
RESIDENTIAL (GROUP A)	_R(A)	住宅(甲顎)
VILLAGE TYPE DEVELOPMENT	V	攀村式餐房
GOVERNMENT, INSTITUTION OR COMMUNITY	GAC	政府、機構或社區
OPEN SPACE	0	休慧用地
OTHER SPECIFIED USES	ou	其他报定用建
GREEN BELT	GB	華化地帶
COMMUNICATIONS		交通
RAILWAY AND STATION	STATION	鐵路及車站
RAILWAY AND STATION (UNDERGROUND)		鐵路及車站(地下)
MAJOR ROAD AND JUNCTION		主要道路及訪口
ELEVATED ROAD		高架道路
MISCELLANEOUS	• .	其他
BOUNDARY OF PLANNING SCHEME	·	規劃範圍界線
PLANNING AREA NUMBER	(6)	規劃區攝號
PETROL FILLING STATION	PFS	加油站
	14	

土地用途及面積一覽表 SCHEDULE OF USES AND AREAS

USES	大約菌糖及百分率 APPROXIMATE AREA & %		用涂
	소네 HECTARES	% 百分率	H Z
COMMERCIAL	2.14	0.85	萬意
COMPREHENSIVE DEVELOPMENT AREA	22.98	9.09	維合發展區
RESIDENTIAL (GROUP A)	31.03	12.27	住宅(甲粟)
VILLAGE TYPE DEVELOPMENT	5.43	2.15	鄉村式發展
GOVERNMENT, INSTITUTION OR COMMUNITY	22.32	8.83	政府、機構或壯區
OPEN SPACE	55.70	22.03	、 休憩用地
OTHER SPECIFIED USES	2.86	1.13	其他指定用途
GREEN BELT	47.10	18.63	装化地理
MAJOR ROAD ETC.	63.25	25.02	主要道路等
TOTAL PLANNING SCHEME AREA	252.61	100.00	规剖靴国藏画積

夾附的《註釋》屬這份圖則的一部分 THE ATTACHED NOTES ALSO FORM PART OF THIS PLAN



圖則編號 PLAN No.

S/I-TCTC/18

Appendix II

Visual Appraisal Conducted by Housing Department Home Ownership Scheme Development in Tung Chung Area 27

1. <u>Purpose</u>

- 1.1 To meet the pressing need for housing, an amendment to the approved Tung Chung Town Centre Area Outline Zoning Plan (OZP) No. S/I-TCTC/18 is proposed.
- 1.2 In view of the plot ratio (PR) increase and the building height proposed, the proposed housing site under zoning amendment would have visual impact on the surrounding areas in terms of the development scale, form, massing, and its spatial relationship with the overall townscape or surrounding landscape. The purpose of this appraisal is to assess the potential visual impact. The appraisal could facilitate the Rural and New Town Planning Committee of the Town Planning Board to visualise the three-dimensional relationship of the development in the proposed housing site with the surrounding context.

2. <u>Methodology</u>

The visual impact of the proposed housing sites will be assessed by adopting the following methodology:

- (a) Identification of the visual context and character within the wider contexts of Tung Chung West.
- (b) Illustration of the visual impact of the proposed housing site in the respective Areas by using computer-generated photomontages with indicated layout of the development in the proposed housing site.
- (c) Identification and selection of the vantage points in allowing visual impact to be assessed locally for the respective housing site. The vantage points should be easily accessible and popular to the public and/or tourists and be able to demonstrate the visual impact of the proposed housing site on the adjacent neighbourhood areas. Important views from special landmarks, valued landscape features, the harbour, ridgelines, etc should be assessed where possible.
- (d) Identification of the scale of the development in the proposed housing site. Using computer-generated photomontages to illustrate the visual impact and their significance from the vantage points. Providing visual appraisal by evaluating the overall visual impact of the proposed housing development.

3. <u>The Proposed Development</u>

3.1. The proposed housing site in Tung Chung is currently zoned Government, Institution or Community" ("G/IC"). The site is proposed for public housing development. The west and northeast of the proposed housing site is occupied by the existing Public Housing Estates, Yat Tung Estate, Fu Tung Estate and Yu Tung Court, with building heights ranging from about 125mPD to 117mPD, while the south mainly comprise number of exempted low-rise house villages, including Ma Wan New Village, Sheung Ling Pei, Ha Ling Pei, Wong Ka Wai, Shan Ha and Fui Yiu Ha (**Plans 1 - 3**) and hills including Lin Fa Shan (766 m) and Yi Tung Shan (747 m) to the southeast, Sunset Peak (also named as Tai Tung Shan, 869 m) to the south-southeast, Lantau Peak (also named as Fung Wong Shan, 934 m) to the south-southwest and Nei Nak Shan (751 m) to the southwest.

3.2. The site is located on a flat land to the south of North Lantau Hospital and Yat Tung Estate in Tung Chung Area 27. It is proposed to rezone the site to "R(A)1". The proposed development parameters are as follows:

Zoning Area :	About 0.88 ha
Development Site Area :	About 0.84 ha
Maximum PR :	6/0.03 (domestic/non-domestic)
Maximum Building Height :	135mPD

3.3. The site is at present partly occupied by a temporary 5-a-side soccer pitch (Tung Chung Road Soccer Pitch) and partly vacant. The surrounding area of the site is occupied by future town park with hill top at about 75mPD, buildings of North Lantau Hospital with building height of about 57mPD, a natural terrain, village settlements, a bus depot and a petrol/gas fuel station (**Plans 4.1 & 4.2**).

Visual Appraisal

- 3.4. A total of 13 local vantage points (**Plan 4.3**) have been selected for assessing the visual impact of the proposed HOS development as below:
 - (a) <u>VP 1 Ma Wan New Village</u>

This viewpoint is at Ma Wan New Village which is easily accessible and is one of the key local vantage points. Photomontage to illustrate the possible visual impact of the proposed HOS development is at **Plan 5.1**. When viewed from this vantage point, the proposed developments located at a relatively natural setting with scattered low-rise development, would alter the existing visual context. The proposed development would inevitably add more visual bulk to the locality and reduce visual openness. The proposed high-rise building blocks would also impose an overshadowing impact on the village. To mitigate the visual impact, adoption of building height variations, façade treatment and building gaps within the site will be adopted as far as practicable at detailed design stage.

(b) <u>VP 2 – Tin Hau Temple</u>

This viewpoint is at Tin Hau Temple which is easily accessible and is popular to the local villagers and tourists. Photomontage to illustrate the possible visual impact of the proposed HOS development is at **Plan 5.2**. When viewed from the Tin Hau Temple, the proposed HOS development would be totally screened off by the existing vegetation and it would not create any visual incompatibility with the surroundings.

(c) <u>VP 3 – Tung Chung Fort</u>

This viewpoint is at Tung Chung Fort which is easily accessible and is popular

to the local villagers and tourists. Photomontage to illustrate the possible visual impact of the proposed HOS development is at **Plan 5.3**. When viewed from Tung Chung Fort, the proposed HOS development would be largely screened off by the existing vegetation and stonewall. It has an insignificant visual impact when compared with the existing developments nearby. It would not cause any visual incompatibility with the surroundings.

(d) VP 4 – Ha Ling Pei Bus Stop

This viewpoint is at Ha Ling Pei Bus Stop which is easily accessible and frequently visited by the locals. Photomontage to illustrate the possible visual impact of the proposed HOS development is at **Plan 5.4**. When viewed from the Ha Ling Pei Bus Stop, the proposed HOS development would be partially screened off by the existing vegetation. It has relatively small visual impact when compared with the existing developments nearby. Although the proposed development would slightly block the view of the ridgeline, it would not cause any significant visual incompatibility with the surroundings.

(e) <u>VP 5 – Wong Ka Wai Village Bus Stop</u>

This viewpoint is at Wong Ka Wai Village Bus Stop which is easily accessible and frequently visited by the locals. Photomontage to illustrate the possible visual impact of the proposed HOS development is at **Plan 5.5**. When viewed from the Wong Ka Wai Village Bus Stop, the proposed HOS development would be partially screened off by Sheung Lei Pei Village. Although there is a slight reduction in visual openness, the proposed development would be viewed as an extension of the existing developments. It would not cause any visual incompatibility with the surroundings.

(f) $\underline{VP6} - \underline{YatTungEstate}$

This viewpoint is at Yat Tung Estate which is easily accessible. Photomontage to illustrate the possible visual impact of the proposed HOS development is at **Plan 5.6**. When viewed from Yat Tung Estate, the proposed HOS development would be totally screened off by the existing vegetation. It has no visual impact when compared with the existing developments nearby and would not create any visual incompatibility with the surroundings.

(g) <u>VP 7a – North Lantau Hospital Rehabilitation Garden and VP7b – North Lantau Hospital</u>

These viewpoints are at North Lantau Hospital (NLH) Rehabilitation Garden and North Lantau Hospital respectively which are easily accessible. The NLH Rehabilitation Garden is yet to be open to the general public. Photomontages to illustrate the possible visual impact of the proposed HOS development are at **Plans 5.7a and 5.7b**. When viewed from the NLH Rehabilitation Garden, the proposed HOS development would alter the existing visual contextand would inevitably add more visual bulk to the locality. However, it is likely that only the public visiting the hospital would use the garden when it is open. The number of sensitive receivers affected would be limited

When viewed from the North Lantau Hospital, the proposed HOS development would partially block the public view towards the existing mountain backdrop. Nonetheless, most of the ridgeline could be maintained.

In order to mitigate the visual impact, adoption of building height variations, façade treatment and building gaps within the site will be adopted as far as practicable at detailed design stage.

(h) <u>VP 8 – Tung Chung Ma Wan Chung Pier</u>

This viewpoint is at Tung Chung Ma Wan Chung Pier which is easily accessible and popular with the locals and tourists. Photomontage to illustrate the possible visual impact of the proposed HOS development is at **Plan 5.8**. When viewed from the Ma Wan Chung Pier, the proposed HOS development would be partially screened off by the existing buildings in Ma Wan Chung. It has relatively small visual impact. The existing visual character with the high-rise housing blocks of Yat Tung Estate would not be affected. The proposed development would blend into the overall environment and would not cause any visual incompatibility with the surroundings.

(i) <u>VP 9a and VP 9b – Tung Chung Battery</u>

These viewpoints are at Tung Chung Battery which are easily accessible and popular with the local and the tourists for outdoor activities. Photomontage to illustrate the possible visual impact of the proposed HOS development is at **Plan 5.9a and Plan 5.9b**. When viewed from VP 9a, the proposed HOS development would be partially screened off by the existing buildings of the North Lantau Hospital. While it would add more visual bulk to the locality, the view would be dominated by the existing Yat Tung Estate. Also the proposed development would not block the public view towards the existing mountain backdrop. It would not cause any visual incompatibility to the surroundings. When viewed from VP 9b, the proposed HOS development would be totally screened off by the existing vegetation and it would not create any visual incompatibility with the surroundings.

(j) VP 10 – Hill Top of the Future Town Park

This viewpoint is at hill top of the future town park.At present, it is relatively difficult to access for the general public and it may take at least a 20-minute walk as there is no proper footpath leading to that area at the moment. Photomontage to illustrate the possible visual impact of the proposed HOS development is at **Plan 5.10**. When viewed from the hill top, the proposed HOS development would be partially screened off by the existing vegetation. It would add visual bulk and partially block the public view towards the existing mountain backdrop. However, it would not block the ridgeline.

In order to mitigate the visual impact, adoption of building height variations, façade treatment and building gaps within the site will be adopted as far as practicable at detailed design stage.

(k) <u>VP 11 – Yu Tung Court</u>

This viewpoint is at Yu Tung Court which is easily accessible and popular with the locals. Photomontage to illustrate the possible visual impact of the proposed HOS development is at **Plan 5.11**. When viewed from Yu Tung Court, the proposed HOS development would be partially screened off by the existing building of the Tung Chung Police Station. While it would slightly reduce the visual openness, the visual impact is not significant. It would not

cause any visual incompatibility with the surroundings.

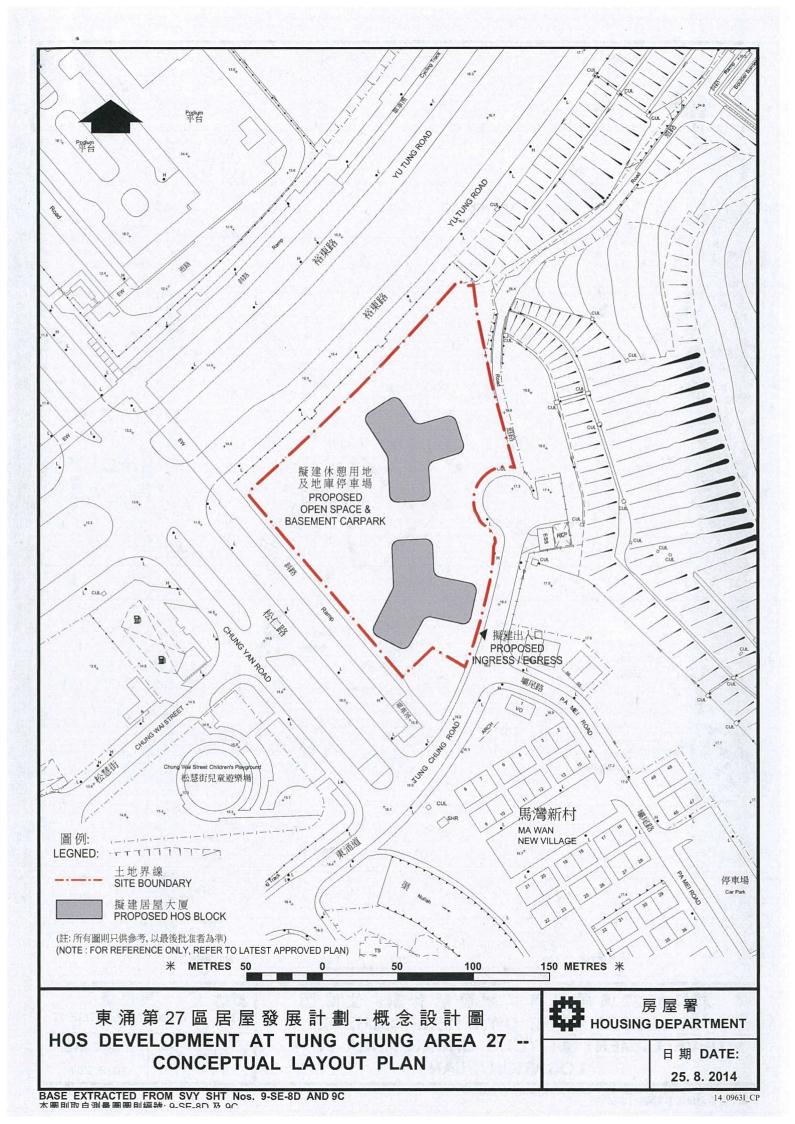
3.5. The proposed development would reduce the visual openness with blockage to the view at some viewpoints. However, the development would not overall create visual incompatibility with the surrounding public housing areas. Visual enhancement measures to minimise the residual visual impact, such as building set-back and façade treatment etc., should be explored at the detailed design stage.

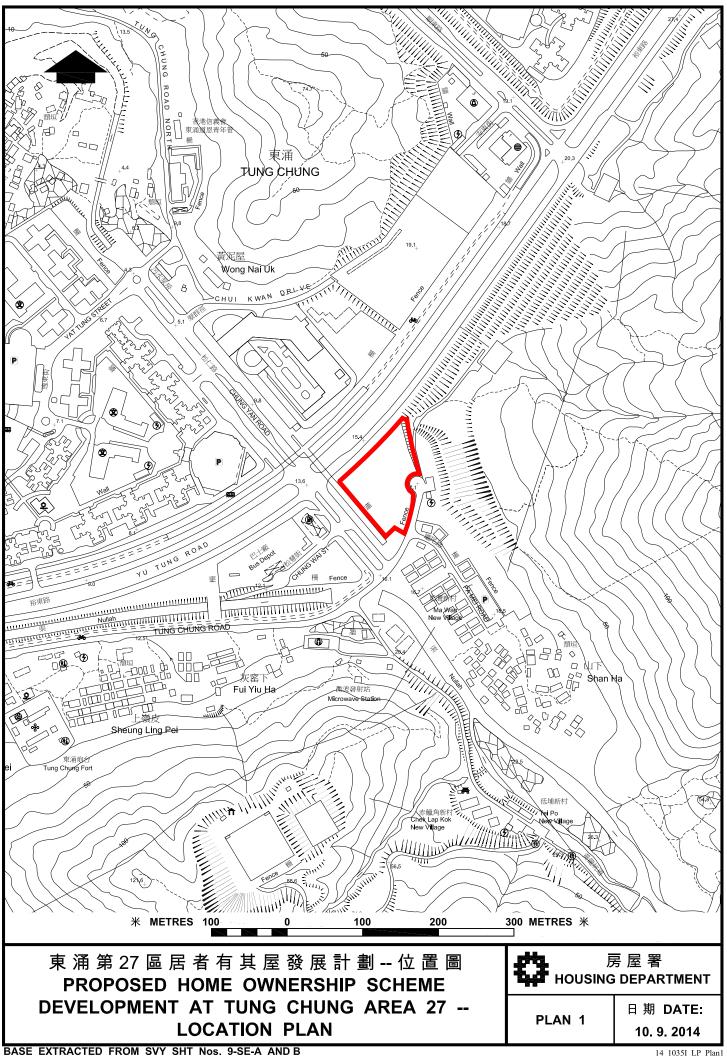
4. <u>Conclusion</u>

- 4.1 Photomontages to illustrate the possible visual impact of the proposed HOS development are shown in **Plan 5.1 to Plan 5.11**. The proposed maximum building height of the site is about 135mPD and the adjoining Yat Tung Estate to its west is 125mPD. When viewed from some of the viewpoints, part of the proposed development at the subject site would be screened off and some may be seen as an extension of the existing public housing development with similar development intensity. The proposed public housing blocks in the site would be seen as part of the building group and would generally not be incompatible with the existing developments in visual terms.
- 4.2 Based on the visual appraisal, the proposed HOS development would generally not create visual incompatibility with the surroundings. For the viewpoints VP 1, VP7a and VP 10, the visual openness would be reduced with view blockage. The proposed development would also impose an overshadowing effect on Ma Wan New Village considering the close distance and contrast in building height with the proposed development.
- 4.3 In view of the irregular site configuration and the proposed development parameters, high-rise housing blocks are inevitably necessary to optimize its development intensity. The scope for rearranging the disposition of the residential blocks is also relatively limited. However, in order to mitigate its visual impacts, HD would explore various design measures, such as façade treatment and stepped height building profile, in the detailed design stage. In short, visual interest will be considered to be incorporated into the new building outlook to enhance the visual quality of the proposed HOS development as far as practicable during the detailed design stage.

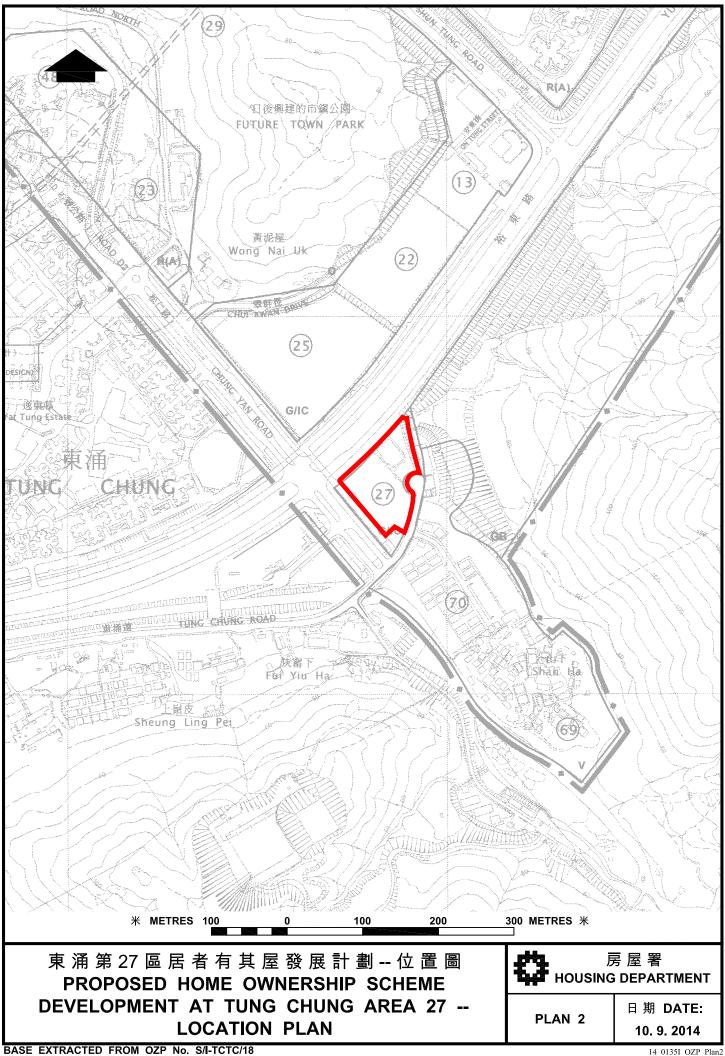
Attachments

Plan 1	Location Plan
Plan 2	Site Plan
Plan 3	Aerial Photo
Plans 4.1 to 4.2	Site Photo
Plan 4.3	Viewpoints Location Plan
Plans 5.1 to 5.11	Photomontages



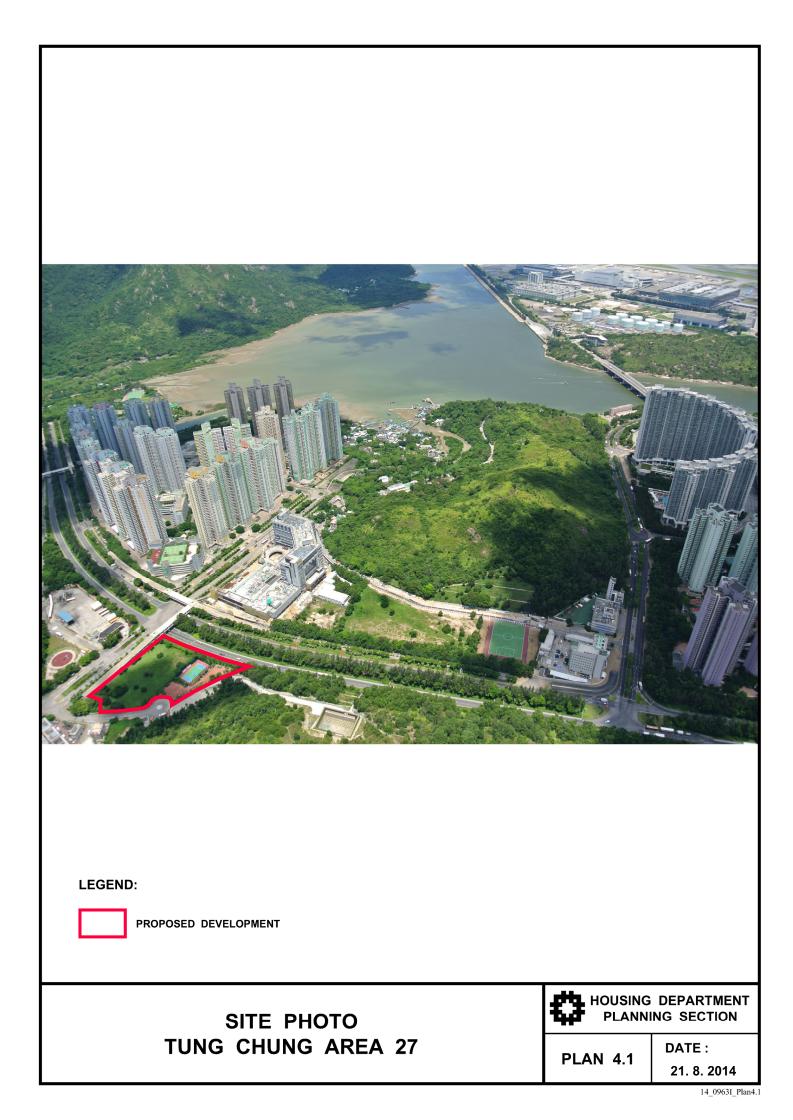


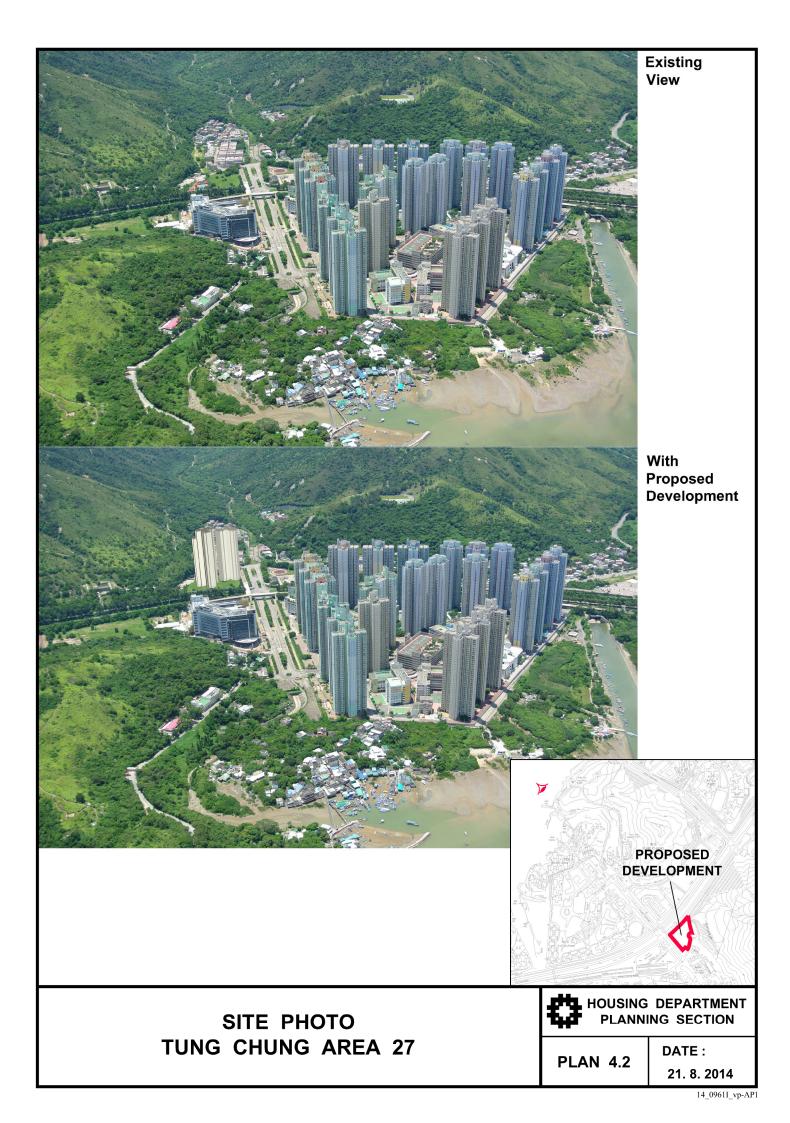
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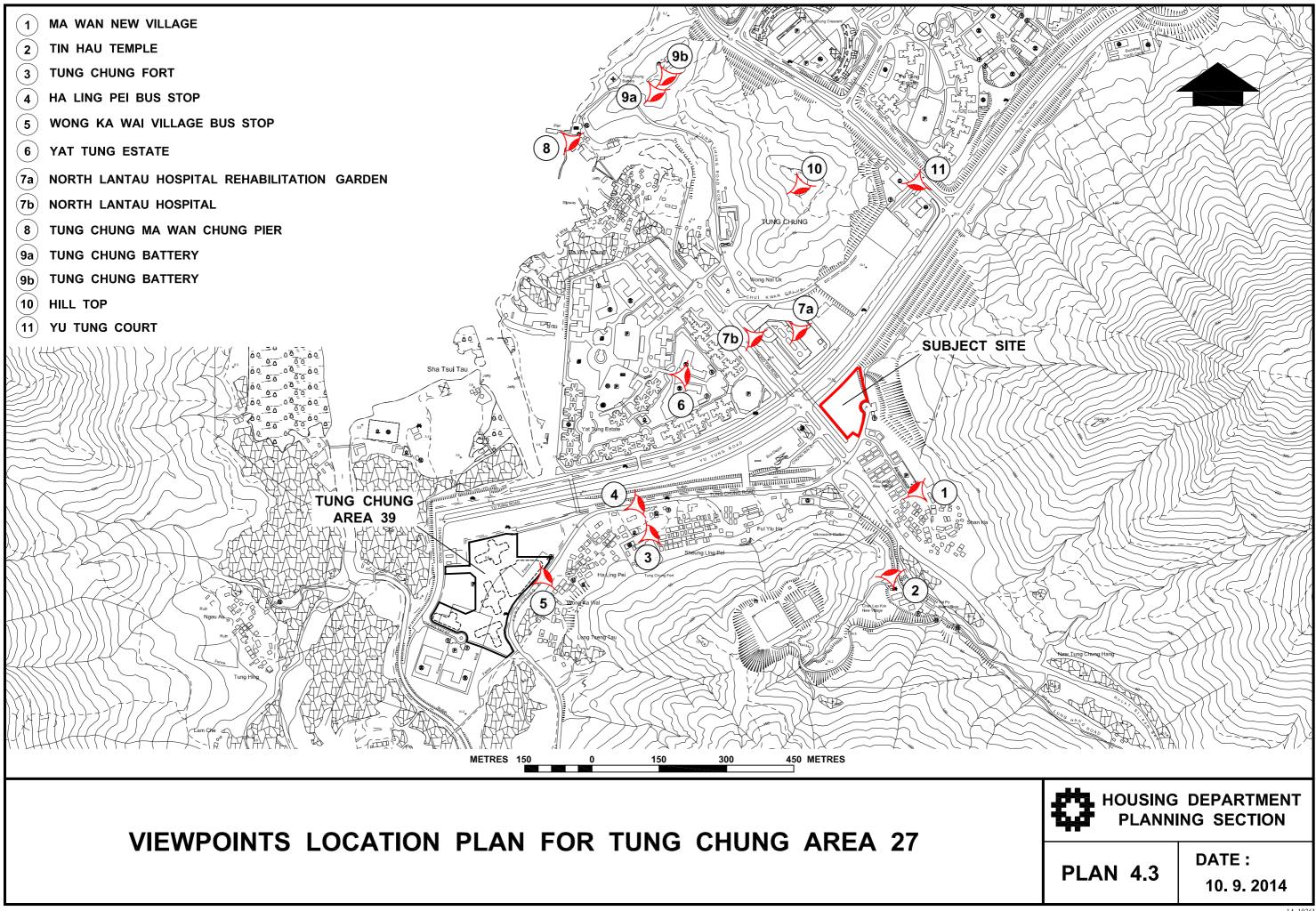


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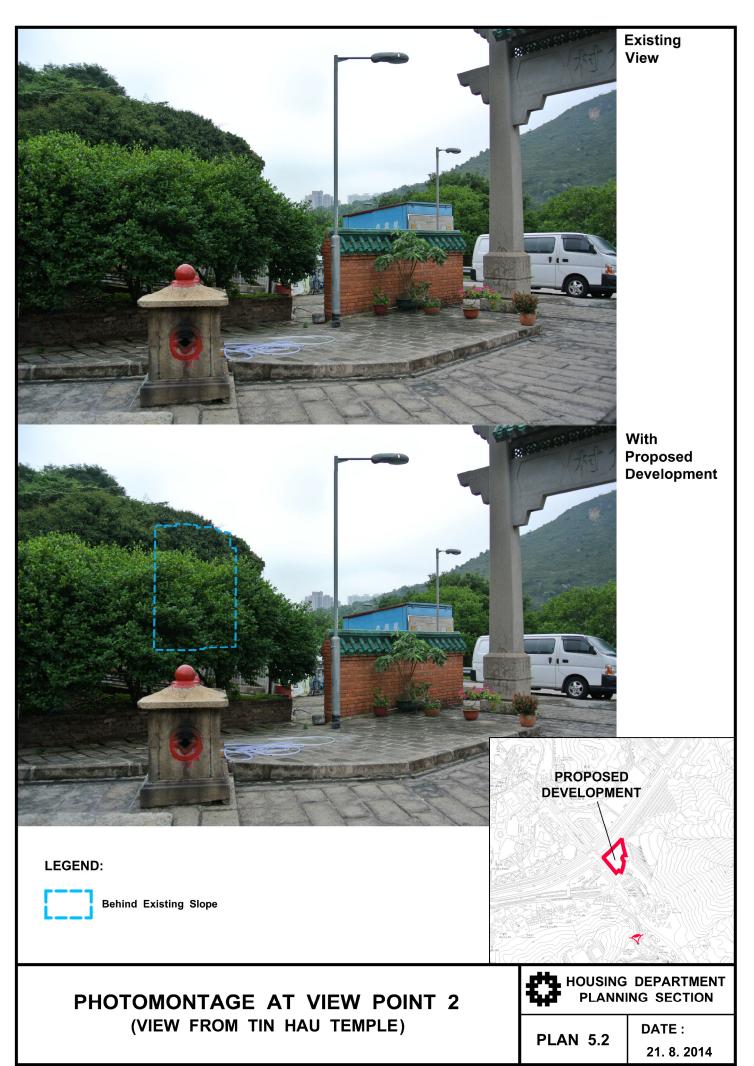




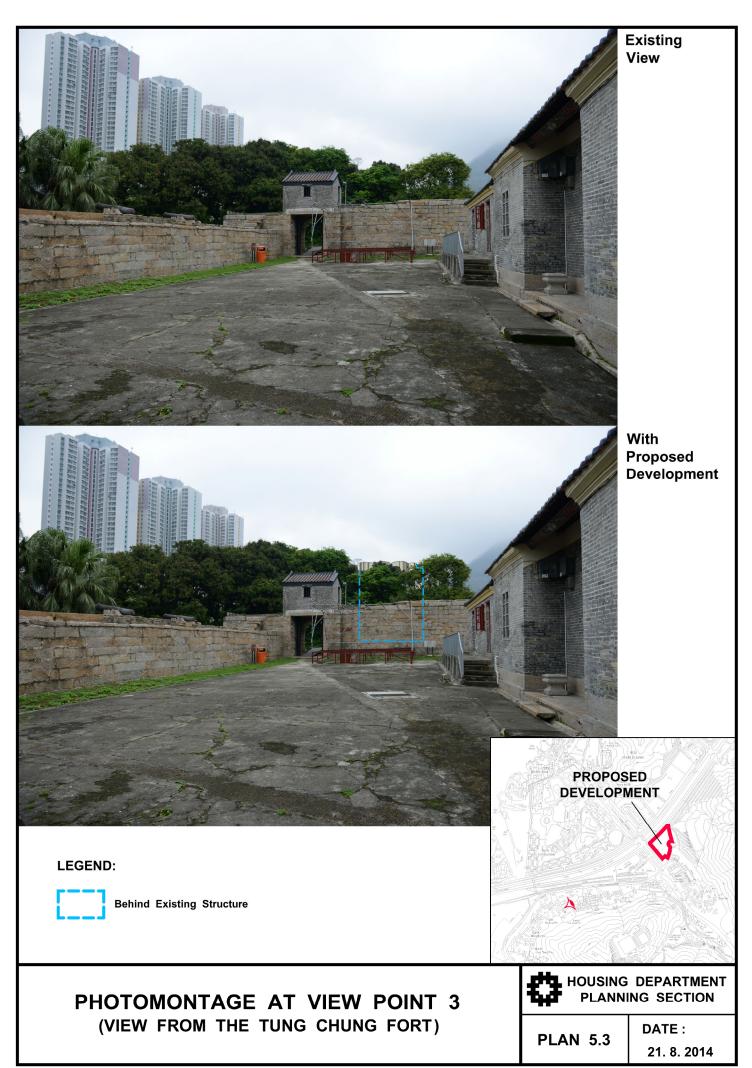


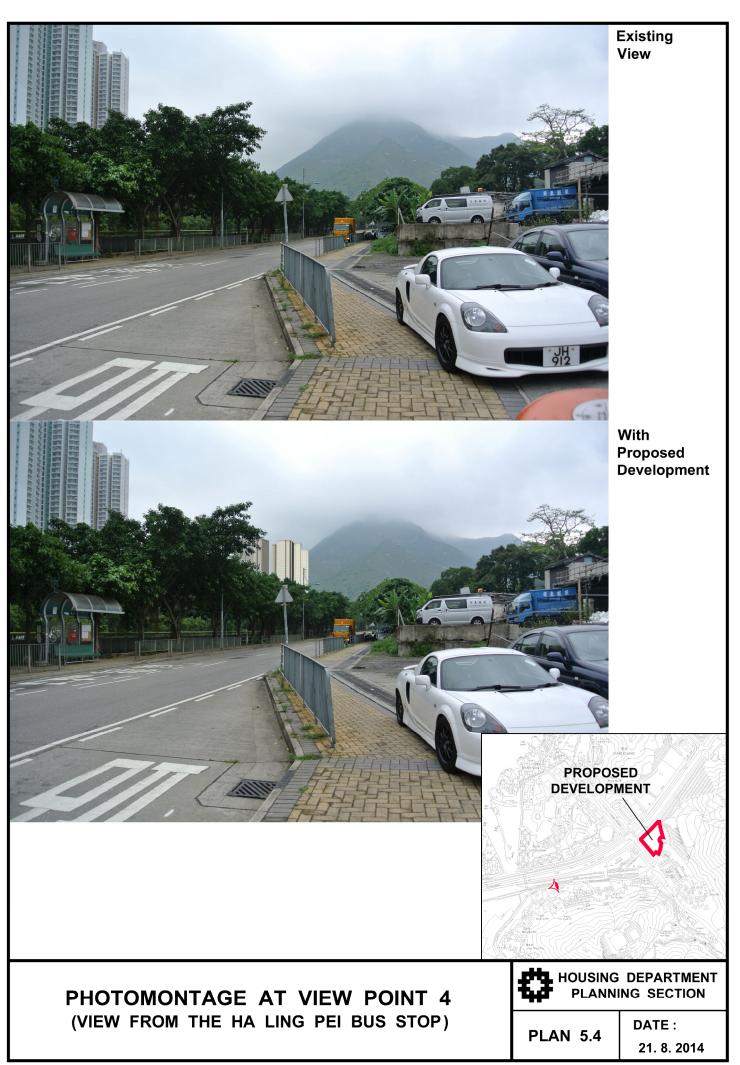


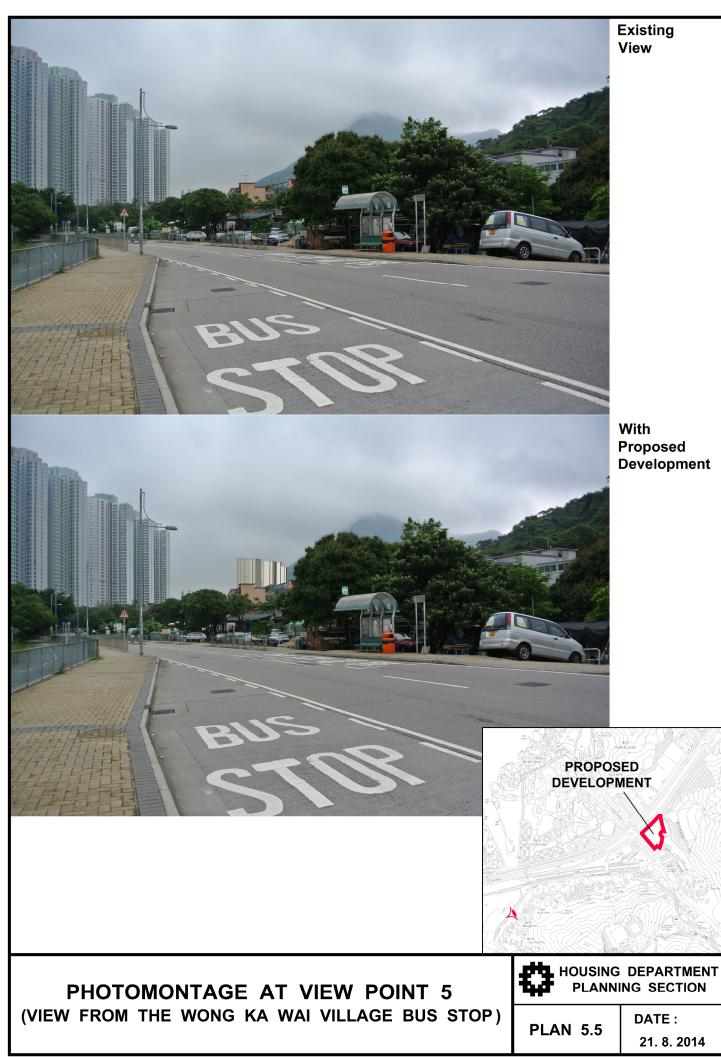


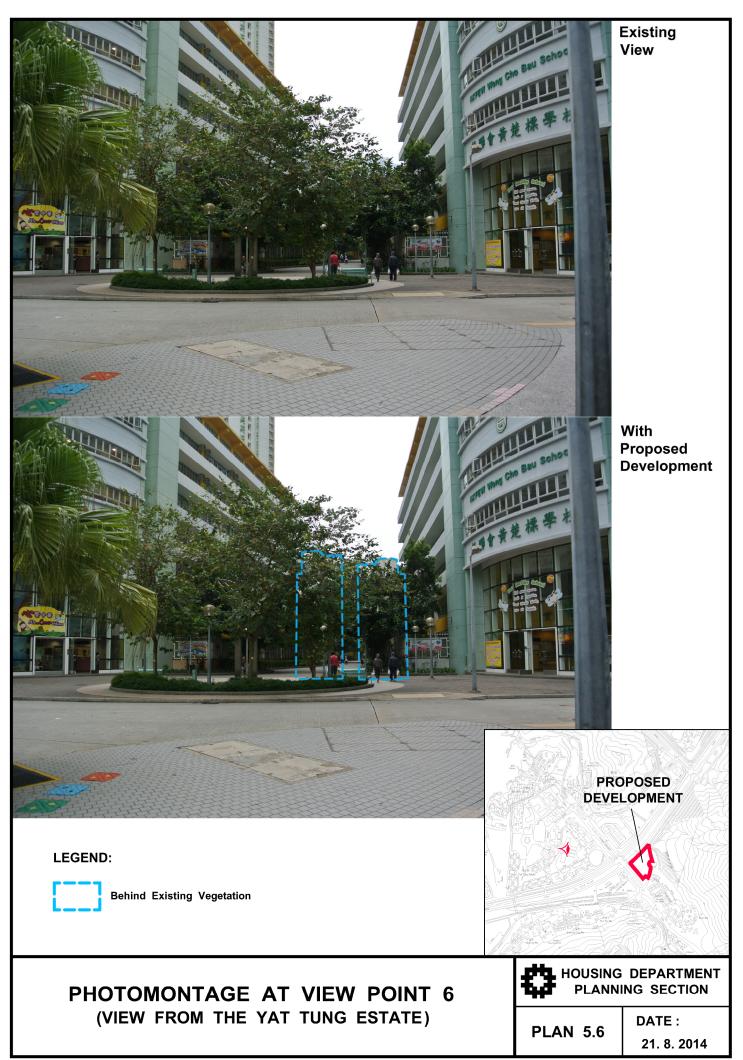


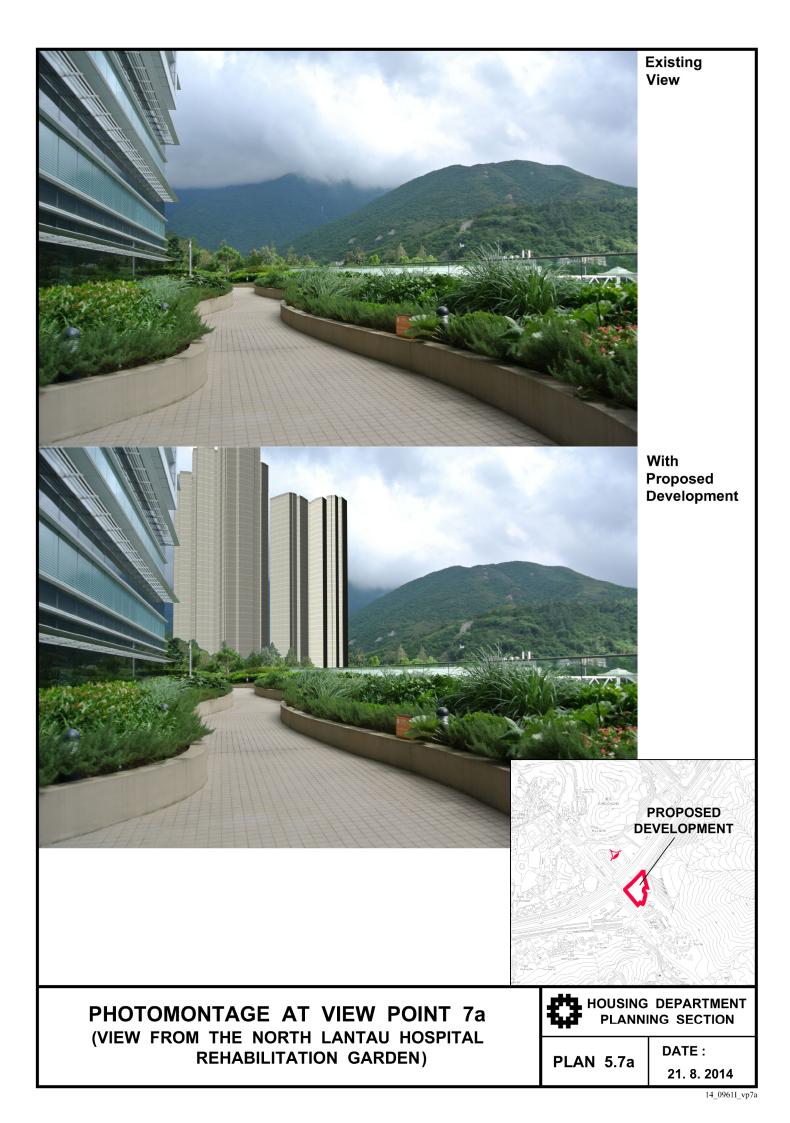
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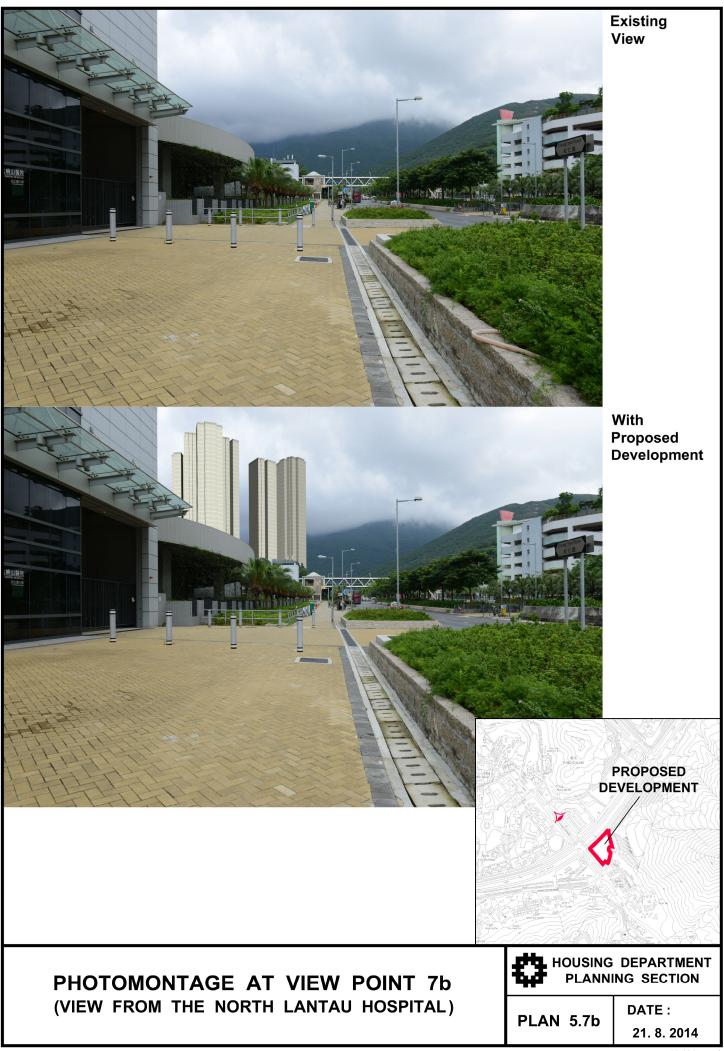


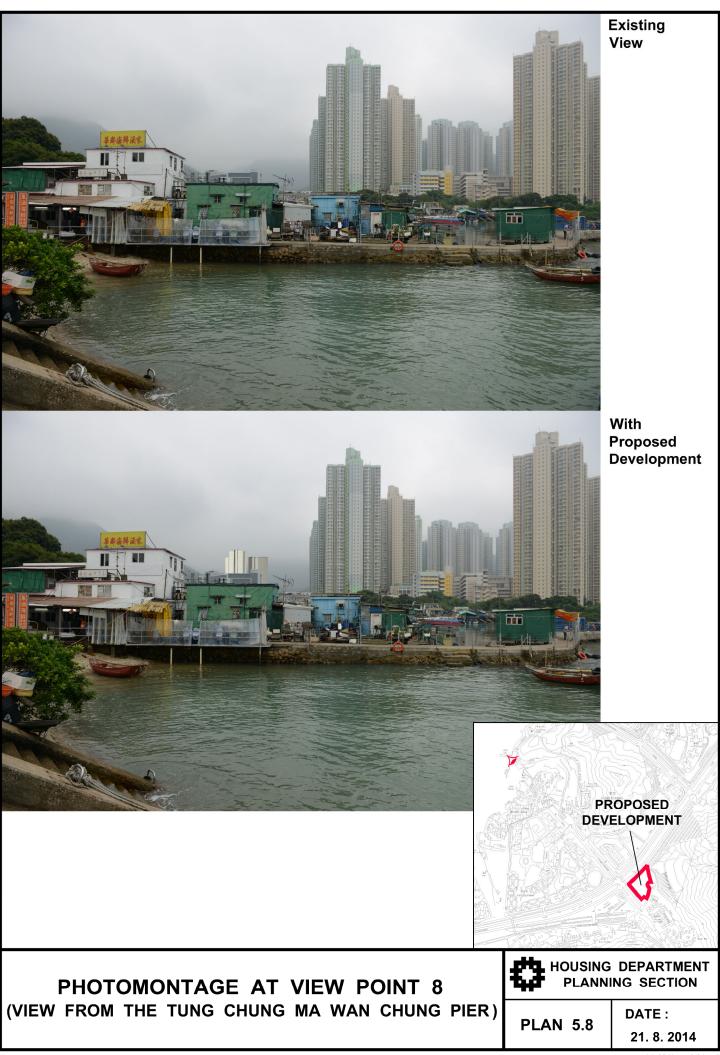








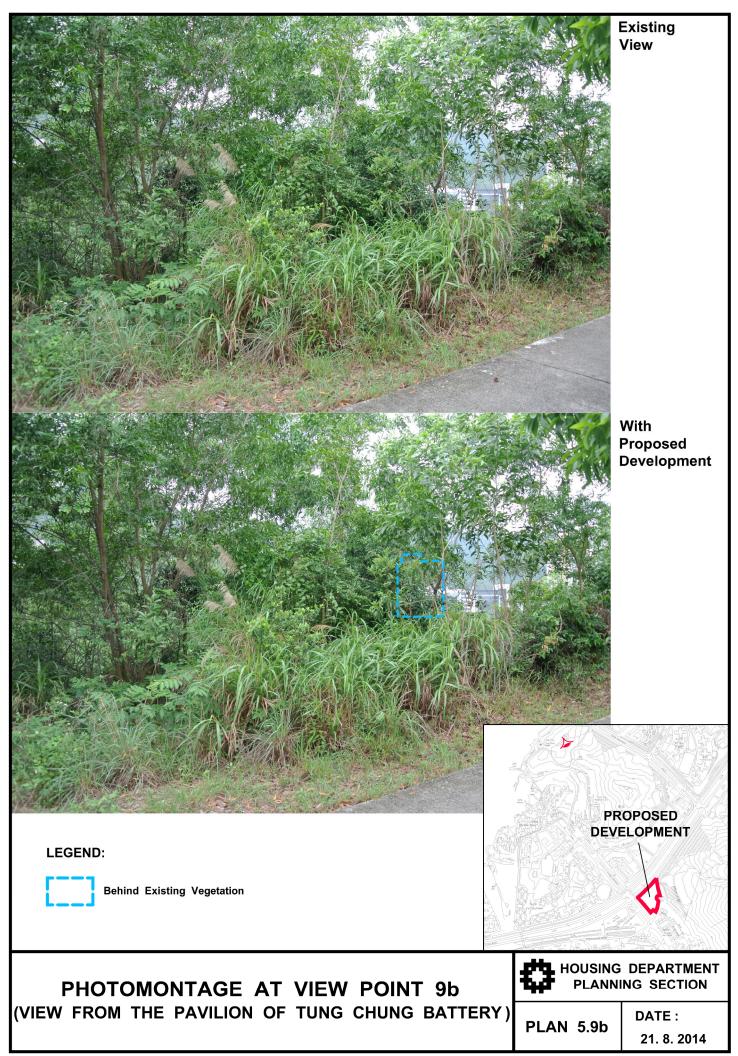


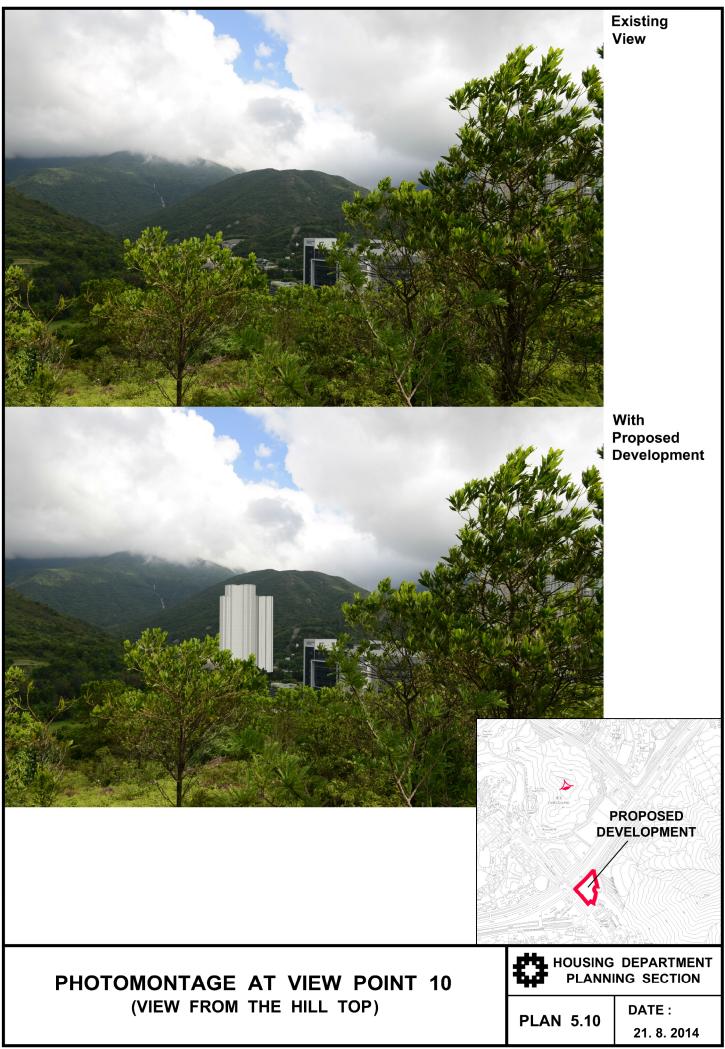


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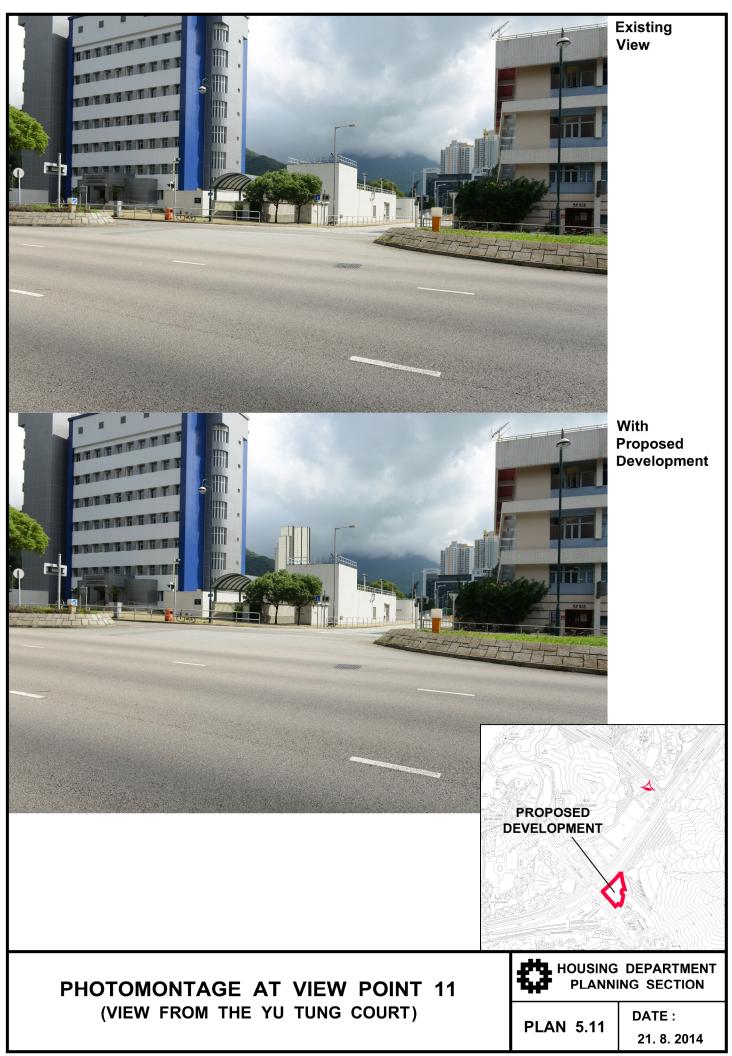
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Hong Kong Housing Authority

Agreement No. CB20130134 HKHA Term Engineering Consultancy Services 2013-2015 For Kowloon Central & West and Islands Region Tung Chung Area 27

Preliminary Traffic Impact Assessment



Document No. H1098/T008/001 Issue 4

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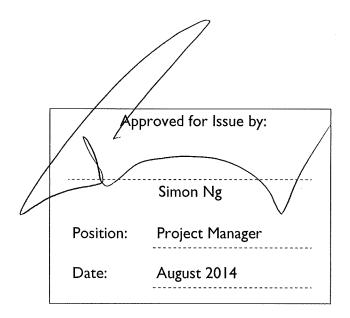


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Tung Chung Area 27

Preliminary Traffic Impact Assessment



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Tung Chung Area 27

Preliminary Traffic Impact Assessment

Issue	Prepared by	Reviewed by	Date
I	KW	SN	JAN 2014
2	KW	SN	FEB 2014
3	KW	SN	MAR 2014
4	KW	SN	AUG 2014

CB20130134 HKHA Term Engineering Consultancy Services 2013-2015

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Appendix B	Traffic Analysis
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- Appendix C Estimation of traffic split
- Appendix D Assumption of Lot II Tung Chung Town Centre Development

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I.0 Introduction

1.1 The Hong Kong Housing Authority (HKHA) intends to develop a Home Ownership Scheme (HOS) development in Tung Chung Area 27. Mannings (Asia) Consultants Ltd has been commissioned by HKHA under the Agreement No. CB20130134 HKHA Term Engineering Consultancy Services 2013-2015 for Kowloon Central & West and Islands Region to undertake the Traffic Impact Assessment (TIA) for the proposed development of Tung Chung Area 27.

2.0 Background

- 2.1 The subject site is bounded by Yu Tung Road to the north, Chung Yan Road to the west Tung Chung Road to the south and east. The location of the proposed development is shown in **Figure I Location Plan** of **Appendix A**.
- 2.2 Development Parameters
- 2.2.1 The subject site will be developed into HOS with a maximum domestic plot ratio of 6.0. It will provide about 1004 flats to accommodate a design population of approx. 3,092.
- 2.2.2 The anticipated completion of the proposed development would be in year 2019.

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- 2.3 Provision of Parking Facilities
- 2.3.1 The proposed provisions have taken into considerations the type of development and accessibility. Table 2.2 shows the provision of parking based on the flat number of 1004.

Parking/ Lay-by Area	Provision in accordance with standard (nos.)	Proposed Standard	Current Proposal
Private Car Parking	53-77	I space per 13 to 19 flats for new HOS outside 500m rail station. ^{Note I}	60 (including 2 accessible car park spaces)
Motorcycle Parking	9	I space per 110 flats ^{Note I}	9
Visitor Parking	4-6	2 to 3 visitor parking space per resident block ^{Note I}	4
Bicycle Parking	67	I space per 15 flats for new HOS within 2km to existing or planned cycle tracks ^{Note 2}	67
Loading/ Unloading	2	2 residential blocks; I bay per residential block ^{Note I}	2

Note:

- Note I Based on TD's Circular No. 2/2012 Interim Paring Standards for the New Home Ownership Scheme Projects
- Note 2 Based on the agreement between HD and TD in the HD-TD Liaison Meeting to follow HKPSG held on 27 May 2014

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- 2.4 Vehicular/Pedestrian Access Arrangement
- 2.4.1 The development site is abutted by a natural terrain along its eastern boundary with an angular elevation of 20° or more from the site and with ground sloping at more than 15° within 50 m horizontally upslope of the site. Based on the GEO report 138, the site falls within the "Alert criteria", therefore Natural terrain hazard study (NTHS) is required to study the hazards. Based on our preliminary NTHS assessment, the length of the rigid barrier along the perimeter of our site to protect the pedestrian and vehicles from the possible landslide danger in the 50m area is required as shown in Figure 2 Vehicular/Pedestrian Access proposal of Appendix A.
- 2.4.2 It is noted that there are four existing trees at the south corner are "Fung Shui" trees to the villagers and not to be fell/relocated and these will be excluded from our site, we have no choice but to allocate the run-in opposite to Pa Mei Road.
- 2.4.3 Because of the above constriants, the vehicular and pedestrian access of the proposed development would be located at Tung Chung Road near its junction with Pa Mei Road as shown in **Figure 2 Vehicular/Pedestrian Access proposal** of **Appendix A**. Tung Chung Road will be on the south of the subject site leading to Chung Yan Road.
- 2.4.4 Vehicles can access the proposed development either from the north via Yu Tung Road and then Chung Yan Road or form the west via Tung Chung Road. It is noted the proposed site access is subject to the constraints of the building general plan. Consequently, the access is located as far as possibly away from the hammer head calde-sac. Moreover, swept path analysis has been carried out. The results shown in **Figure 2** have revealed that a vehicle of 12m length can manoeuvre in/out of the proposed site access satisfactorily.

3.0 Study Objective

- 3.1 The objective of the study is identifying the potential traffic impact to the surrounding road network due to the proposed development of Tung Chung Area 27 associated with the other planned development of Tung Chung. Proposed mitigation measure should be made to alleviate the adverse traffic impact due to the other proposed developments.
- 3.2 The major tasks to achieve this objective include:
 - Assess the existing and future traffic conditions within the area of influence;
 - Forecast the future year traffic flows;
 - Estimate the volume of traffic likely to be generated by the proposed development;
 - Assess the traffic impact of the proposed development on the adjacent road network using the forecast background flows and the traffic generated by the proposed development; and
 - Propose traffic improvement or traffic management measure as necessary.



4.0 Existing Site Description and Traffic Condition

- 4.1 Site Description and Road Network
- 4.1.1 The subject site is located in Tung Chung south which is bounded by Yu Tung Road to the north, Chung Yan Road to the west and Tung Chung Road to the south and east. The location of proposed development Tung Chung Area 27 is shown in Figure I Location Plan of Appendix A.
- 4.1.2 The road network in the vicinity of the site, as shown in **Figure I Location Plan** comprising the following:
 - Chung Yan Road
 - Tung Chung Road
 - Yu Tung Road
 - Shun Tung Road
 - Tat Tung Road
- 4.1.3 Chung Yan Road, Yu Tung Road and Shun Tung Road are dual two-lane local distributors. Yu Tung Road serves as a district distributor connecting to Tung Chung Town Centre via Shun Tung Road and to North Lantau Highway. North Lantau Highway is an expressway serves as a major external corridor heading to the urban area.



Existing Public Transport Services

4.2.1 Currently, the near bus stops located at both side of Chung Yan Road and Yu Tung Road which are about 200m and 170m walking distance from the proposed development. The bus stops in the vicinity of the site, as shown in **Figure 3** and the bus route details of the bus stops are given in Table 4.1, 4.2 and 4.3.

Route No.		Origin and Destination	Frequency (minutes)	Remark
Long Win Bus	E21	Tsuen Wan (discovery Park) – Yat Tung Estate	10-20 (from 05:30 to 00:00)	Daily
Citybus	E21A	Ho Man Tin (Oi Man Estate) <->Tung Chung (Yat Tung Estate)	12-30 (from 06:10 to 23:50)	Daily
Citybus	EIIS	Tung Chung (Yat Tung Estate) <->Tin Hau Station	2 trips/ day (07:30 & 07:45)	Mon-Fri
Citybus	E21X	Tung Chung (Yat Tung Estate) <-> Hung Hom Station	3 trips/ day (07:20; 07:40 & 08:00))	Mon-Sat
Citybus	E22S	Tung Chung (Yat Tung Estate) <-> Tseung Kwan O (Po Lam)	l trip/ day (07:35)	Mon-Fri
Citybus	S52	Tung Chung (Yat Tung Estate) <->Aircraft Maintenance Area	18-22 (from 05:28 to 23:52)	Daily
Citybus	S52P	Tung Chung (Yat Tung Estate) <-> Chun Ping Road	6 trips/ day (07:18; 07:58; 08:18; 08:38 & 08:58)	Mon-Sat
Citybus	N2IA	Tsim Sha Tsui (Star Ferry) to Airport (via Yat Tung Estate	4 trips/day Airport Direction (00:10; 00:30; 00:50; 01:10) I trip/day Tsim Sha Tsui Direction: 05:00	
Long Win Bus	E3 I	Tung Chung (Yat Tung) <->Discovery park B/T	10-20 (from 05:30 to 00:00)	Daily
Long Win Bus	N31	Tsuen Wan Discovery Park Terminus – Airport via Yat Tung Estate	I trip /30 min Airport Direction (from 00:30 to 05:00)	Daily
Long Win Bus	E34	Tin Shui Wai Town Centre B/T to Airport	2 trips/day (06:10 & 07:15)	From Mon – Sat except public Holiday
Long Win Bus	E42	Pok Hong B/T to Tung Chung Station	2 trips/day (06:45 & 07:45)	From Mon – Sat except public Holiday

Table 4.1: Bus Stop at Chung Yan Road South Bound



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Long Win Bus	S64	Airport – Yat Tung Estate (Circular)	6-15 from 05:24 to 00:00	Daily
New Lantau Bus	34	Tung Chung Town Centre to Shek Mun Kap	25 trips/day (Mon – Sat from 07:00 to 22:15) 32 trips/day (Sunday & Public Holiday from 07:30 to 22:15)	
New Lantau Bus	37	Yat Tung Estate to Caribbean Coast	5-20 (from 06:40 to 00:15)	Daily
New Lantau Bus	38	Yat Tung Estate to Tung Chung Station	2-6 (from 05:30 to 00:24)	Daily
New Lantau Bus	38X	Yat Tung Estate to Tung Chung Station	5-6 (from 07:00 to 08:30)	Mon-Fri (except for school and public holiday)
New Lantau Bus	N38	Yat Tung Estate (Yu Tung Road) <->MTR Tung Chung Station	15-30 from 0:30 to 05:10	Daily

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Route No.		Origin and Destination	Frequency (minutes)	Remark
Citybus	E21A	Tung Chung (Yat Tung Estate) <-> Ho Man Tin (Oi Man Estate)	12-30 (from 06:10 to 23:50)	Daily, Express
Citybus	N2IA	Tsim Sha Tsui (Star Ferry) <-> Airport (via Yat Tung Estate)	5 trips/ day (0:10; 0:30; 0:50;1:10 & 5:00)	Mid-night only
Citybus	S52	Aircraft Maintenance Area	18-22 (from 05:28 to 23:52)	Daily
Citybus	S52P	Chun Ping Road (Asia Airfreight Terminal) <-> Tung Chung (Yat Tung Estate) (Circular)	6 trips/ day (07:18; 07:58; 08:18; 08:38 & 08:58))	Mon -Sat
Long Win Bus	E31	Discovery park B/T <->Tung Chung (Yat Tung)	10-20 (from 05:30 to 0:0)	Daily
Long Win Bus	N31	Discovery park B/T <->Tung Chung (Yat Tung)	30 mins (from 0:30 to 5:00)	Mid-night only
Long Win Bus	E34	Tin Shui Wai Town Centre B/T to Airport	2 trips/day (06:10 & 07:15)	From Mon –Sat except public Holiday
Long Win Bus	E42	Pok Hong B/T to Tung Chung Station	2 trips/day (06:45 & 07:45)	From Mon –Sat except public Holiday
Long Win Bus	S64	Airport ->Tung Chung (Yat Tung) (Circular)	6-15 (from 05;24 to 00:00)	Daily
Long Win Bus	S64P	Tung Chung Railway Station <->Tung Chung (Yat Tung)	4 trips/ day (Mon-Fri), 3 trips/ day (Sat) and 2 trips/ day (Sunday and Public Holiday)	
Long Win Bus	N64	Airport to Yat Tung Estate	2 trips/day (00:45 & 01:15)	Daily
New Lantau Bus	37	Yat Tung Estate to Caribbean Coast	5-20 (from 06:40 to 00:15)	Daily
New Lantau Bus	N38	Yat Tung Estate (Yu Tung Road) <->MTR Tung Chung Station	15-30 from 0:30 to 05:10	Daily

Table 4.2: Bus S	Stop at Chung	Yan Road	North Bound
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New Lantau Bus	38	Yat Tung Estate to Tung Chung Station	2-6 (from 05:30 to 00:24)	Daily
New Lantau Bus	38X	Yat Tung Estate to Tung Chung Station	5-6 (from 07:00 to 08:30)	Mon-Fri (except for school and public holiday)
New Lantau Bus	34	Tung Chung Town Centre to Shek Mun Kap	25 trips/day (Mon – Sat from 07:00 to 22:15) 32 trips/day (Sunday & Public Holiday from 07:30 to 22:15)	

Table 4.3: Bus Stop at Yiu Tung Road Eastbound

Route No.	•	Origin and Destination	Frequency (minutes)	Remark
New				Mon-Fri
Lantau Bus	37P	Yat Tung Estate -	3-5	(except for
	571	Caribbean Coast	(from 07:35 to 08:15)	school and
				public holiday)
New				Mon-Fri
Lantau Bus	38X	Yat Tung Estate to	5-6	(except for
	307	Tung Chung Station	(from 07:00 to 08:30)	school and
				public holiday)

- 4.2.2 In the vicinity of study area, there are not less than 10 bus routes serving the Chun Yan Road southbound and there are 8 bus routes serving the Chun Yan Road northbound. Furthermore, there is a bus route in Yu Tung Road eastbound to MTR Station. All of these bus stops are about 200m perimeter from the subject site. It is noted that the study area is well served by bus services to Tung Chung MTR Station, Hong Kong Island, Kowloon, Tseung Kwan O, the Chek Lap Kok Airport and Discovery Bay. Because of the frequent services of these bus services and the destination coverage provided by these transport services, this would allow the local residents to enjoy an efficient public transport provision. Moreover, it was observed that the existing public transport service would still have spare capacity to cope with additional traffic generated from the Tung Chung Area 27 as it is a relatively small scale development. Details of the public transport assessment for the subject site are detailed in the subsequent section. The bus schedule was also used for the determination for traffic split for long distance and short distance to Tung Chung Station. The analysis is detailed in Appendix C.
- 4.2.3 There is an existing footbridge which is about 100m from the development. The existing footbridge is served as a pedestrian link getting across Yu Tung Road and Chung Yan Road respectively. The pedestrian routing between the subject site and nearby bus stops is shown in **Figure 3** of **Appendix A**. Since, there is no cycling provision observed in



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the study area. Therefore, it is not decided to consider cycling facilities in this study report.

4.2.4 Regarding the pedestrian trip rates for this development during AM peak, reference is made to the Redevelopment of Shek Kip Mei Estate Phase 3, 6 & 7 Preliminary Traffic Impact Assessment. The estimated generated pedestrian trip rates are adopted for residential and shown in Table 4.4.

Table 4.4 Pedestrian Trip Rate during AM peak

Development Type	Unit	Generation
Residential	Person/hr/flat	0.734

Although the proposed flat number is 1004, a total flat number of 1070 is adopted in this traffic impact assessment as a conservative approach. It is therefore the estimated generated pedestrian trip from the proposed development in Area 27 would be 786 person/hr (1070 flats \times 0.734 person/hr/flat) during AM peak. 60% of the total number of generated pedestrian trips from Area 27 is assumed using the public transport services to the Tung Chung MTR station during AM peak. The remaining 40% is assumed using other transportation to their destinations (e.g. by buses to town centre, by private car to town centre, GMB to other Tung Chung area, on foot to other Tung Chung area, etc.) The generated pedestrian trip are shown in Table 4.5

Table 4.5 Pedestriar	n Trip to Tung	Chung MTR station	during AM peak
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Location	Total Generated Pedestrian Trip	Estimated % of Pedestrian Trip to Tung Chung MTR station	Generated Pedestrian Trip to Tung Chung MTR station
Area 27	786 person/hr	60%	472 person/hr

Refer to the Table 4.1, New Lantau Bus Route No.34 is one of the en-route public transport services from Area 27 to the Tung Chung MTR station. Its frequency is from 6 minutes to 15 minutes and provides 10 to 4 trips per hour. In addition, there are other public transport services especially for morning peak hour which can serve the residents of Area 27 to the Tung Chung MTR station, such as Citybus S52 & S52P and New Lantau Bus 38P. CityBus S52 provides 3 trips per hour, Citybus S52P (special services for morning peak only) provides 6 trips per hour and New Lantau Bus 38P (special services for morning peak only) provides 17 trips per hour. Thus, the number of passengers using the public transport services from Area 27 will be only 14 (472/36) per trip. In conclusion, the abovementioned public transport services will still be able to cater for the passengers from the subject development. The remaining 40% of pedestrians would be either travelling on long distance buses, coaches or using private cars. This result would further support the abovementioned trip distribution for the proposed development.

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4.3 Future Road Network

- 4.3.1 A planned single two-lane two ways carriageway, Tuen Mun Chek Lap Kok Link (TM-CLKL) connecting the Tuen Mun Western Bypass will provide an alternative land access for the Airport. It will release some capacity of the North Lantau Highway for urban bound traffic. Another planned dual three-lane carriageway, Hong Kong Link Road (HKLR), will be constructed to connect the main body of the planned Hong Kong Zhui Hai Macao Bridge (HZMB). The anticipated completion date of both proposed link roads is to be in year 2016.
- 4.3.2 With reference to Annual Transport Digest 2010 published by Transport Department, there is also a planned new primary distributor, Lantau Road PI between Tung Chung and Sham Shui Kok. At Tung Chung East, the planned Road L16 and Lantau Road PI will form a junction with the planned Road L16, Ying Hei Road and Man Tung Road. It is expected to serve the traffic generated from the further Tung Chung New Town Development subject to further review of PlanD.
- 4.3.3 However, according to Annual Transport Digest 2010, the start date and completion date of Lantau Road PI are under review and there is no programme for the construction of Lantau Road PI. Moreover, Lantau Road PI is not assumed in the road network in both years 2016 and 2021 in the 2008-based Base District Traffic Models (BDTM) provided by TO. Therefore, Lantau Road PI will not be taken into account in this TIA Study.

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5.0 Traffic Forecast

- 5.1 Traffic Survey
- 5.1.1 Manual classified traffic count surveys were conducted to identify the existing traffic flows and distribution patterns for the local road network from 07:00 to 19:00 on a typical weekday and weekend on 6 January 2014 (Monday) and 26 July 2014 (Saturday) respectively. The location of the survey of affected junctions in the vicinity of the proposed development are listed in Table 5.1 and shown in **Figure I** of **Appendix A**.

Table 5.1: Location of Affected Junctions

Index	Junction	Junction Type
JI	Tung Chung Road/ Chung Yan Road	Priority Junction
J2	Yu Tung Road/ Chung Yan Road	Signalized Junction
J3	Yu Tung Road/Shun Tung Road	Signalized Junction
J4	Tat Tung Road/Shun Tung Road (E)	Signalized Junction
J5	Tat Tung Road/Shun Tung Road (W)	Signalized Junction
J6	Tung Chung Eastern Interchange	Roundabout

- 5.1.2 Based on the survey results on 6 January 2014 (Monday), the morning and evening peak hours of a typical weekday were identified as 07:30 08:30 and 17:45 18:45 respectively. The observed traffic flows in the morning and evening peak hours are presented in **Figure 4** of **Appendix A**.
- 5.1.3 Based on the 12 hours (07:00 to 19:00) survey results on the 26 July 2014 (Saturday), the morning and evening peak hours of typical weekend were identified as 08:00 09:00 and 17:00 18:00 respectively. The observed traffic flows in the morning and evening peak hours are presented in **Figure 4-1** of **Appendix A**.
- 5.1.4 Compared with the peak hours between weekday and weekend, we found that the morning and evening peak hours during weekday are relatively higher than those during the weekend. Therefore, we will adopt the traffic volume at peak hour on a normal weekday in the following assessment.

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5.2 Methodology

- 5.2.1 According to the development programme for the Project, the completion year is in year 2019, therefore, the design years for the traffic impact assessment area set to five year after completion, i.e. year 2024. The future scenarios are then designed based on the these design scenarios, they are
- 5.2.2 Year 2024 Reference Scenarios = 2021 traffic flow (obtained by latest version of BDTM NTW-3) x growth factor to 2024 + additional traffic from other development.
- 5.2.3 Year 2024 Design Scenarios = 2024 reference flow + additional traffic from the Project
- 5.2.4 The traffic flows of these two scenarios i.e. 2024 reference flow and 2024 design flow are presented in Figure 5 and Figure 5-1 of Appendix A.
- 5.3 Growth Factor Adoption
- 5.3.1 Reference to be made from the latest version of TPEDM, BDTM and AADT within concerned area, the growth factor, therefore can be estimated as shown in table 5.2 below.

Table 5.2 Summary of population and employment data		
	Growth Growth	
	Factor	Factor
	AM Peak	PM Peak
TPEDM	+3%	+3%
BDTM	+3.49%	+1.25%
AADT	+3.42%	+3.42%

Table 5.2 Summary of population and employment data

Therefore, the growth factor of AM peak is adopted the growth factor from BDTM and the growth factor of PM peak is adopted the growth factor from AADT in preparing the 2024 traffic forecasts of the affected roads for Reference Scenarios.

5.3.2 According to the latest development information in vicinity of the other projects, the corresponding trip generation and attraction are calculated as shown in table 5.3 below.

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Area	Development				
	Content	AM	PM	AM	PM
		Gen	ATT	Gen	ATT
Area 89 – Primary School	30 Classrooms (1)	40	42	18	18
Area 89 – Secondary School	30 Classrooms (1)	75	79	45	45
Area 55a – Residential	2,020 flats (I)	145	86	58	75
Area 55b – Residential	1,692 flats (1)	179	102	72	100
Area 54 – Residential	3,240 flats (2)	343	196	138	191
Area 53 – Hotel	500 rooms (I)	66	73	65	77
Area 56 – PRH	3,520 flats (I)	152	115	83	106
Area 56 – Retail	3,525 m ² (I)	8	9	11	13
North Lantau Hospital	350 beds (3)	116	142	111	91
Planned School next to Tung Chung Area 39	5,800 m ² (4)	14	14	9	9
Area 39 – PRH	3,300 flats (6)	143	108	79	99
Area 39 – HOS	500 flats (6)	31	21	15	20
Area 39 – Retail	5,600 m ² (6)	13	14	17	20
Area 39 – Kindergartens	7 classrooms (6)	17	22	19	5
Area 39 - Social Welfare Facilities	2,224 m ² (6)	5	5	3	3
Area 39 – Recreational Facilities	1,634 m ² (6)	11	11	11	11
Lot 11 Tung Chung Town Center	895 rooms (5)	119	130	115	138

Table 5.3 Summar	y of Trip Generation and Attraction
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Source:

- (1) Assumptions from Traffic Impact Assessment Study of Tung Chung Area 56 in 2012
- (2) Assumption by HKHA in January 2013
- (3) Assumption from public domains
- (4) There is no information available for the planned special school next to Tung Chung Area
 39. However, Education Development Bureau has able to offer the development
 parameters for a planned special school in Area 27 in Tung Chung as a basis for estimation
- (5) The proposed development in Tung Chung Lot I I in Tung Chung Town Centre is a private development possibly for retail/office/hotel. Due to the limited information for the planning parameter at Lot II Tung Chung Town Centre development, it is therefore decided to adopt he most conservative hotel development scenario for the assessment purpose of this TIA Report. Details of assumption is presented in Appendix D
- (6) Assumptions from Traffic Impact Assessment Study of Tung Chung Area 39 in 2013

HKHA Term Engineering Consultancy Services 2013-2015

6.0 Traffic Impact Assessment

- 6.1 Junction Assessment
- 6.1.1 Junction capacity analysis was carried out for the junctions which are likely to be affected by the proposed development. The affected junction locations are shown in **Figure I** of **Appendix A**.
- 6.1.2 Capacity analysis was carried out in accordance with the procedures outlined in the TPDM based on the observed traffic flows and traffic forecasts for the design years 2024 under the Reference scenario (without proposed development) and Design scenario (with proposed development).
- 6.1.3 The results of the junction capacity analysis under the existing year 2014, design year 2024 Reference and Design scenarios are summarised in Table 6.1. The junction calculation sheets are attached in Appendix B.

Junction ^(I)	Year 2014		Year 2024			
	Observ	/ed	Refere	nce	Design	
	AM	PM	AM	PM	AM	PM
JI	0.17	0.13	0.31	0.24	0.34	0.24
J2	92%	178%	49%	84%	42%	78%
J3	80%	120%	9%	60%	6%	56%
J4	38%	53%	13%	26%	12%	25%
J5	36%	53%	-16%	-14%	-18%	-15%
J6	0.25	0.24	0.75	0.65	0.76	0.66

 Table 6.1: Summary of Junction Performance

Remarks: (1) Junction performance is expressed in RC for signal controlled junctions and DFC for priority junctions and roundabouts.

6.1.4 As shown in Table 6.1, all junctions assessed will be operated within capacity under both the Reference Scenario year 2024 and Design Scenario year 2024 except J3, J4 and J5. J3 and J4 will be operated close to its capacity especially during AM peak under the Design Scenario year 2024. On the other hand, junctions J5 will be operated oversaturated under both Reference Scenario year 2024 and Design Scenario year 2024. Therefore, junctions' improvement for J3, J4 and J5 are required as a mitigation measure.

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7.0 Traffic Management and Mitigation Measure

- 7.1 Refer on the junction assessment results, the signalized junctions J3 and J4 will operate close to its capacity under the anticipated traffic flow in year 2024 with the proposed development.
- 7.2 In order to alleviate the potential traffic impact arising from the proposed development, modifications to the road layout is proposed at the junctions J3 and J4. The junction improvement proposal at the abovementioned junctions are described below and presented in the corresponding figures.
- 7.3 J3 Yu Tung Road / Shun Tung Road Junction (Figure 6)
- 7.3.1 In order to increase the junction reserved capacity to accommodate the anticipated traffic, it is recommended to introduce one more traffic lane at Yu Tung Road southbound by removal of the central green area for the high volume of right turn traffic movement to Shun Tung Road. The junction performance will be increased from 6% (56%) to 36% (61%) which is within capacity under the Design Scenario year 2024 during AM (PM) peak hour respectively. The details of the junction improvement are shown in Figure 6 of Appendix A.
- 7.4 J4 Shun Tung Road / Tat Tung Road (East) Junction (Figure 7)
- 7.4.1 Refer to the junction performance under Design scenario year 2024, we would like to enhance the junction performance by introducing one more traffic lane at Shun Tung Road westbound by removal of the central green area for the high volume of right turn traffic movement to Tat Tung Road. In conjunction with the proposed increases in number of traffic lane, Shun Tung Road eastbound will be shifted northward by removal of the planter at northern kerbside of Shun Tung Street in order to maintain sufficient storage area for the pedestrian crossing across Shun Tung Road. Tree transplanting or tree felling may require for the road improvement works since there are numerous trees located at the central greening area and the planter at the northern kerbside may affected. The junction performance will be increased from 12% (25%) to 17% (31%) which is within capacity under the Design Scenario year 2024 during AM(PM) peak hour respectively. The details of the junction improvement are shown in **Figure 7** of **Appendix A**.
- 7.5 Refer on the junction assessment results, signalized junctions J5 will be oversaturated in year 2024.
- 7.6 In order to alleviate the potential traffic impact arising from the proposed development, modifications to the road layout is proposed at the junction J5. The junction improvement proposal at the abovementioned junction is described below and presented in the corresponding figures.
- 7.7 J5 Shun Tung Road / Tat Tung Road (West) Junction (Figure 8)
- 7.7.1 Refer to the junction performance under Design scenario year 2024, we would like to enhance the junction performance by introducing one more traffic lane for right turn



traffic movement at Shun Tung Road westbound by converting the road marking of middle lane from straight ahead to optional straight ahead and right turn for the high volume of right turn traffic movement to Tat Tung Road. Moreover, we would like to modify the road marking of Shun Tung Road eastbound in order to provide two traffic lanes to cater the left turn traffic movement in heavy volume. The west-north corner of footpath is required to set back in order to provide sufficient room for two left turn traffic movements from Shun Tung Road eastbound to Tat Tung Road. Part of the planter inside the central divider is proposed to remove in order to provide sufficient storage area for the vehicles at Shun Tung Road westbound right turn to Tat Tung Road. Tree transplanting or tree felling may required for the road improvement works since there are numerous trees located at the central greening area. The junction performance will be increased from -18%(-15%) to 11% (29%) which is within capacity under the Design Scenario year 2024 during AM (PM) peak hour respectively. The details of the junction improvement are shown in **Figure 8** of **Appendix A**.

8.0 Summary & Conclusion

- 8.1 Hong Kong Housing Authority intends to develop a potential HOS development in Tung Chung Area 27. The subject development will provide about 1,004 residential flats by year 2019. Traffic Impact Assessment (TIA) has been carried out for design year 2024.
- 8.2 The provision of parking for the proposed development will be provided according to the planning assumptions advised by HKHA.
- 8.3 Internal road arrangement within the proposed development will meet the requirements in Transport Planning and Design Manual and Emergency Vehicular Access. The development access will be located at Tung Chung Road near its junction with PA Mei Road, linking to the external roads Chung Yan Road.
- 8.4 The results of the junction capacity analysis indicated that most of the concerned junctions can be operated at a satisfactory level when the additional traffic generated from the development had been added to the road networks. The junction of Yu Tung Road with Shun Tung Road (J3) and the junction of Shun Tung Road with Tat Tung Road (East) (J4) will be operated close to its capacity during AM peak under the Design Scenario year 2024. Moreover, the junction of Shun Tung Road with Tat Tung Road (West) (J5) will be oversaturated under the Design Scenario year 2024. Mitigation measure had been proposed in order to improve the junction capacity of the captioned junctions
- 8.5 The junction performance of the abovementioned junctions will be improved to operate at a satisfactory level after the implementation of the junction improvement proposal.
- 8.6 Based on the above discussion, it is concluded that the proposed development in Tung Chung Area 27 would not induce adverse traffic impact on the surrounding road network upon completion in year 2024 (five years after completion). The proposed development in Tung Chung Area 27 is considered acceptable from traffic point of view.



9.0 Response to Comments

Comments from TE/NTE Transport Department under Ref_ in NR	182/90- I (C) dated 9 June 2014
Comments	Responses
I refer to your memo dated 23.4.2014 regarding the above subject and have the following comments:	
(1) Table 2.1 – It is noted that your proposed flat number is 1070. With +/- 10% variation allowance. Please revise your Table 2.1 based on the upper limit of flat number, i.e. 1177, unless you could confirm additional parking provision could be provided when there is an increase in flat number.	The flat number is 1004. Table 2.1 is based on this flat number. We confirm the additional parking provision will be provided when there is an increase in flat number.
(2) Table 2.1 – It is observed that a lower limit, i.e. I space per 19 flats, has been adopted for private car parking, while it is considered I space per 16.7 flats shall be adopted based on the our Departmental Circular 3/2014.	Table 2.1 is revised to provide a private parking ratio of 1:16.7
(3) Table 2.1 – The number of visitor parking and loading/unloading spaces are subject to your confirmation of number of residential block.	HA has intended for 2 residential blocks and there would be a provision of one parking space for loading/unloading.
(4) Table 2.1 – In view of public demand, please consider providing goods parking space for public use.	The proposed car parking provisions in Tung Chung Area 27 are solely for Home Ownership Scheme (HOS) residents. HA therefore should not be responsible for addressing the public demand in goods vehicle parking facility.
(5) Para 4.2.3 Please clarify the proposed flat number. Unless, a revised TIA report will be submitted when there is an increase of flat number, a flat number of 1177 shall be adopted.	The proposed flat number is 1004. However, as a conservative approach a flat number of 1070 is adopted in this traffic impact assessment.
(6) Para 4.2.2 – Please provide justification on the proposed 60% of pedestrian trip to Tung Chung MTR.	Based on the current bus schedule, the frequency of bus services for long distance and local commuting services during AM Peak were used to determine the proposed traffic split. The details are shown in the Appendix C of this TIA Report.

(7) Table 6.1 – It is noted that the reserved capacities of Junction J3 and J4 fall below 15%. Junction Improvement measures shall also be provided.	Junction Improvement measures for Junction J3 and J4 are shown in the Appendix A as in Figure 6 and Figure 7 respectively.
(8) Table 4.1 – Table 4.1 shall be revised with reference to Appendix A.	Noted. Table 4.1 shall be revised accordingly.
(9) Table 4.2 – Table 4.2 should be revised with reference to Appendix B.	Noted. Table 4.2 shall be revised accordingly.
(10) Table 4.3 – Table 4.3 should be revised with reference to Appendix C.	Noted. Table 4.3 shall be revised accordingly.
(11) There is no KMB bus route in Tung Chung. Therefore," KMB" should be replaced by "Long Win Bus" in the report.	Noted. "KMB" are replaced in by "Long Win Bus" in the report.

Comments	Responses
Further to my memo dated 9.6.2014in the same file series regarding the captioned subject, I have the following further comments:	
 Para 4.3.2 – Please clarify whether the mentioned planned Road L16 is the one proposed to be connected to J/O Man Tung Road and Ying Hei Road. 	It is clarified that the Road L16 is connected to J/O Man Tung Road and Ying Hei Road for the completeness of road network. Paragraph 4.3.2 is revised.

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 (2) Para 5.1 – Survey shall also be carried out on typical weekend and public holiday (3) Para 5.2 – Please advice whether the followings have been included into the traffic model. 	 A 12 hours (07:00 – 19:00) traffic survey on typical weekend would be carried out on 26 July 2014. The finding is presented in paragraph. 5.1.3 Because the completion dates of items (a), (c), (d), (e) are far beyond our development, it is therefore decided not to consider these items in this assessment.
 a) On-going Tung Chung Extension Study b) Several potential housing sites to be developed at the slope along Yu Tung Road. c) Proposed three run-way system in Hong Kong International Airport. d) Proposed North Commercial District in Hong Kong International Airport. e) Boundary crossing Facilities under Hong Kong – Zhuhai-Macau Bridge and its proposed commercial development. 	 a) Please note that the Tung Chung Extension Study is not included. b) The proposed developments for Tung Chung Areas 53, 54, 55a, 55b, 56 and Tung Chung Area 39 are under the consideration of this TIA. c) Please note that the proposed three run-way system in Hong Kong International Airport is not included. d) Please note that the proposed North Commercial District in Hong Kong International Airport. e) Please note that the Boundary crossing Facilities under Hong Kong – Zhuhai-Macau Bridge and its proposed commercial development is not included.
(4) Table 5.3 – Please confirm the number of beds for full in-take at North Lantau Hospital and whether it has been taken into account in the TIA.	Please note that there would be 350 beds for the full in-take at North Lantau Hospital. It has been taken into account in this TIA.
(5) Table 5.4 – Please confirm the number of rooms for the hotel development and the GFA for retail development of Tung Chung Town Lot 11 for the assessment	Please note that the proposed development in Tung Chung Lot I I in Tung Chung Town Centre is a private development possibly for retail/office/hotel. Due to the limited information for the planning parameter at Lot I I Tung Chung Town Centre development, it is therefore decided to adopt he most conservative hotel development scenario for the assessment purpose of this TIA Report. A detail of assumption is presented in Appendix D of this TIA Report.
(6) Assessment shall also be carried out on road capacity, public transport, cycling and pedestrian facilities.	Please note that assessment on road capacity in paragraph 6.0, public transport in paragraph 4.2.2 and pedestrian routing in paragraph 4.2.3 are under considerations in this TIA. However, there is no cycling provision observed in the study area. It is therefore decided not to include cycling facility in this TIA.



(7) Junction assessment shall also be carried out at J/O Shung Tung Road, Tung Chung Waterfront Road and Chek Lap Kok Road, as well as J/O Tung Chung Waterfront Road and North Lantau Highways slip roads.	With reference to Figure 5 Tung Chung Area 27 Traffic Flow 2024 Reference and Figure 5-I Tung Chung Area 27 Traffic Flow 2024 Design, it is noted that both J/O Shung Tung Road, Tung Chung Waterfront Road and Chek Lap Kok Road and J/O Tung Chung Waterfront Road and North Lantau Highways slip roads are not affected by the proposed development. It is therefore no assessment shall be carried out for these junctions.
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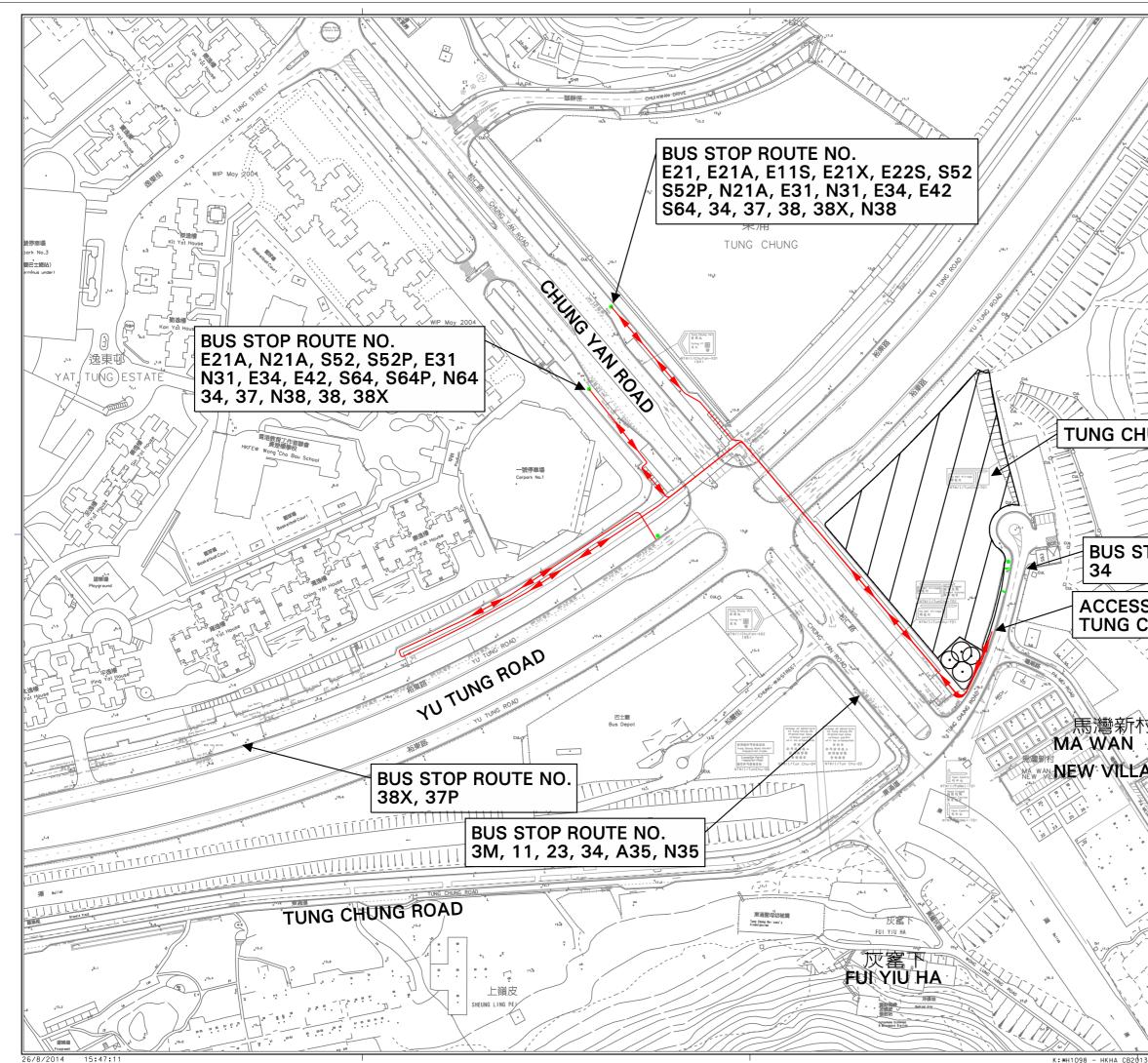


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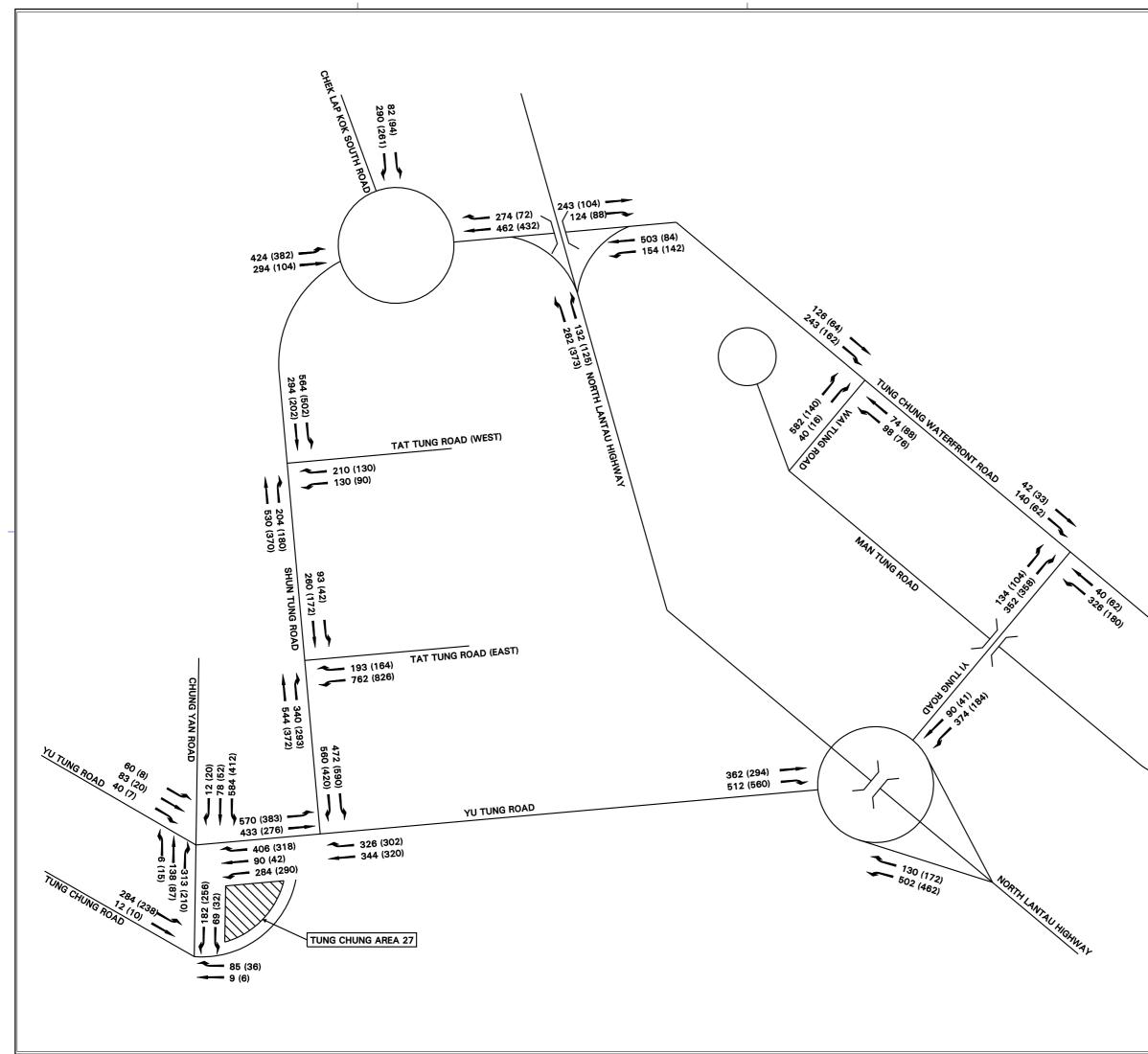
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APPENDIX A

FIGURES



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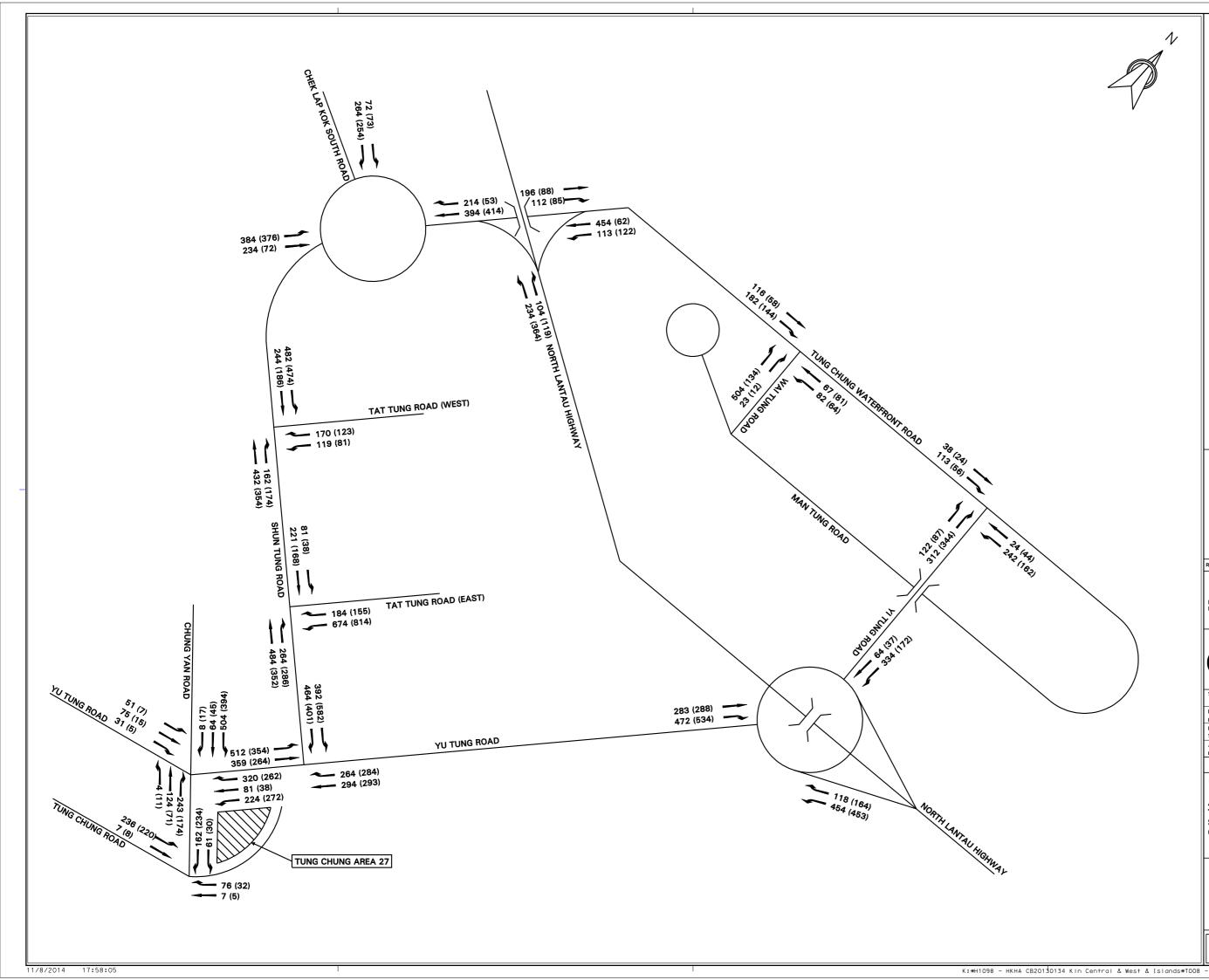
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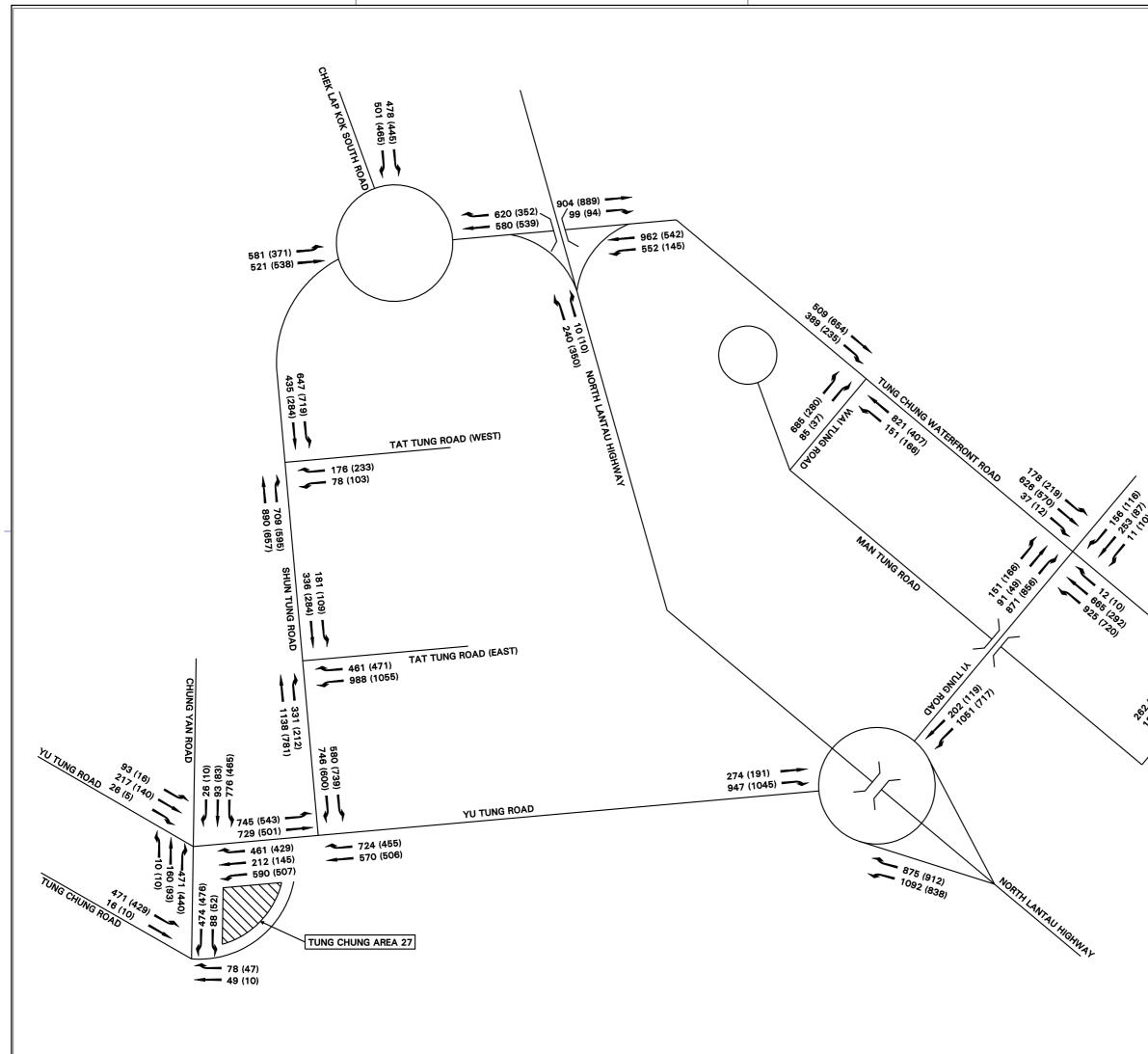
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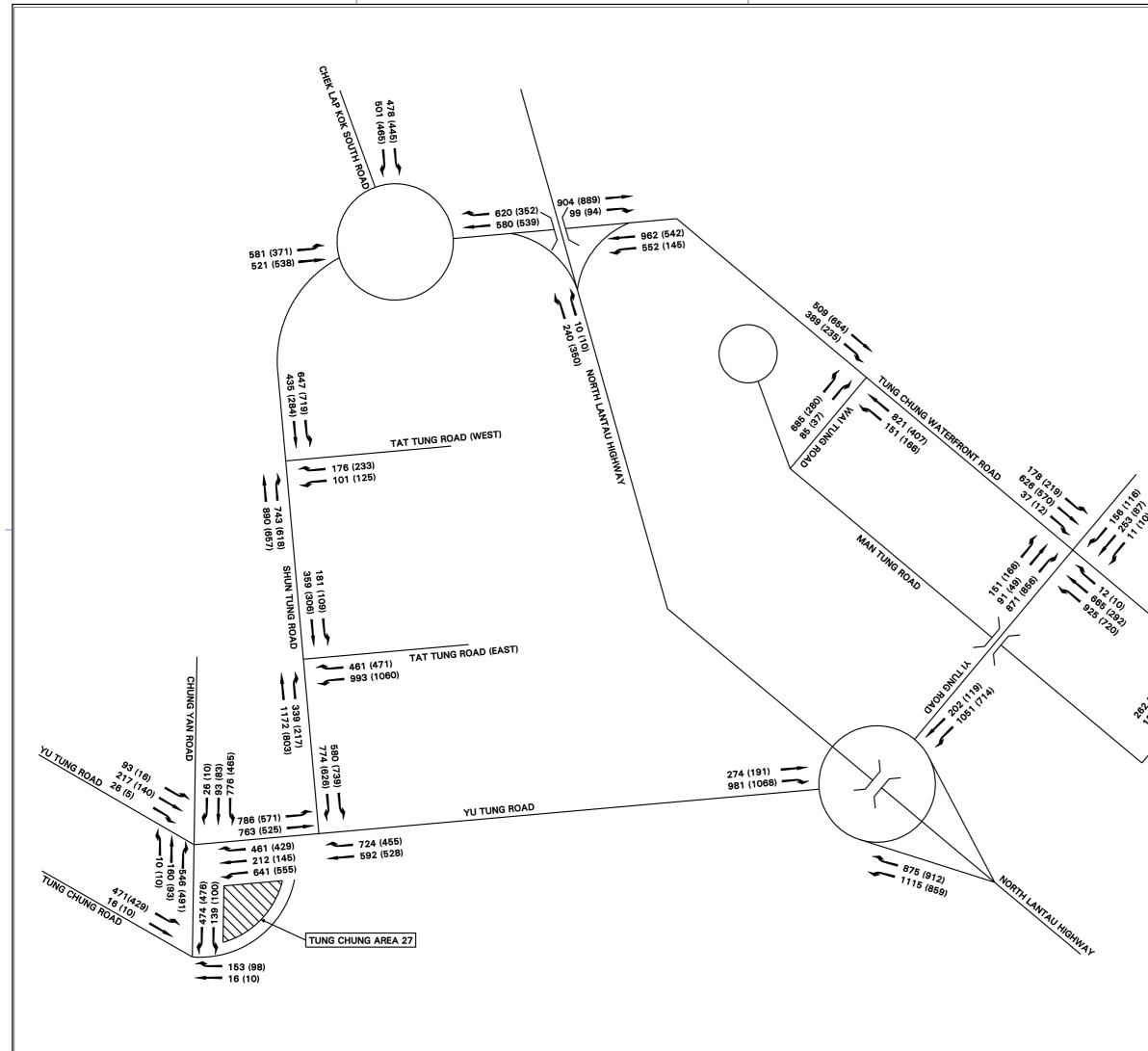


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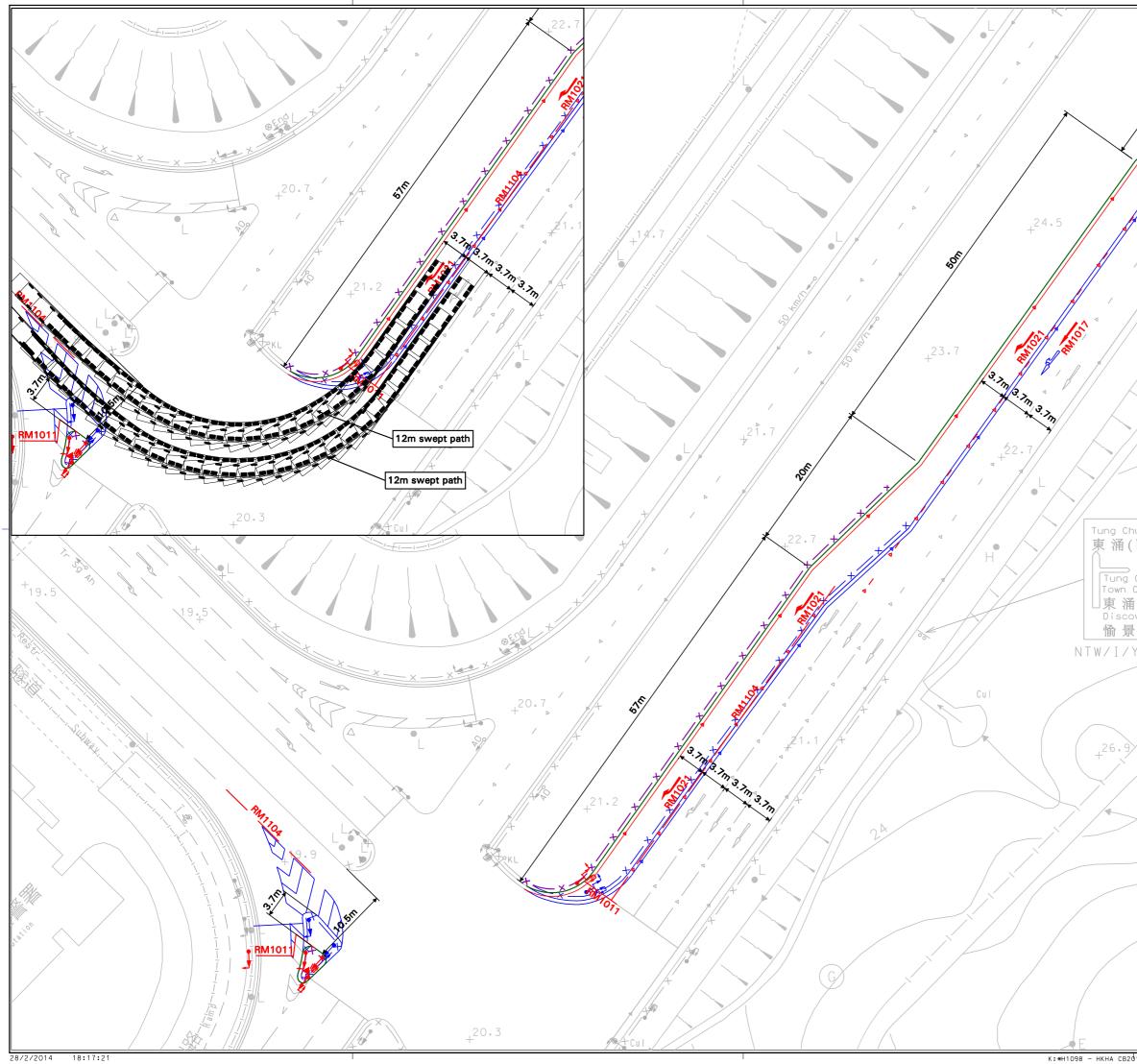
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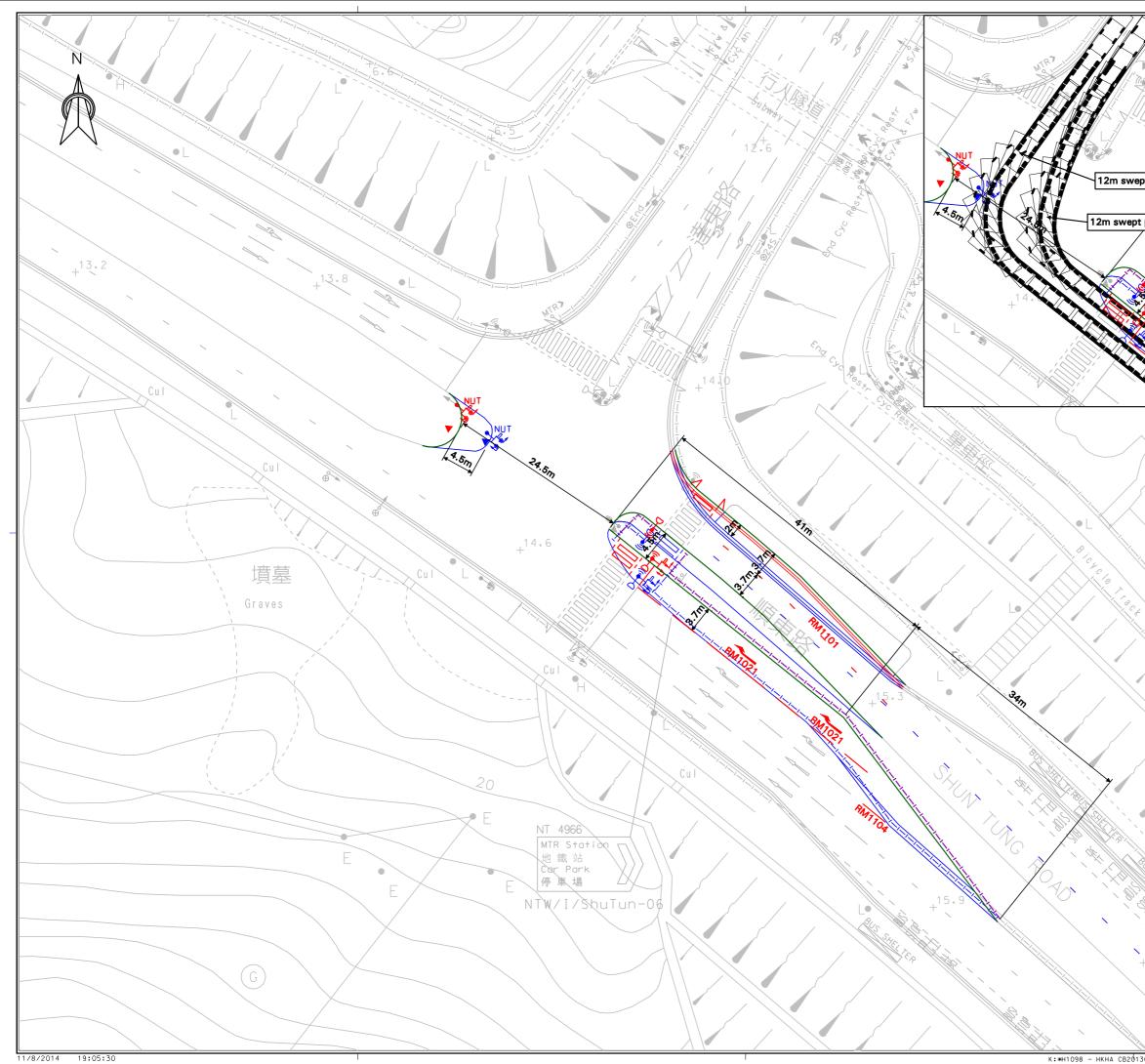
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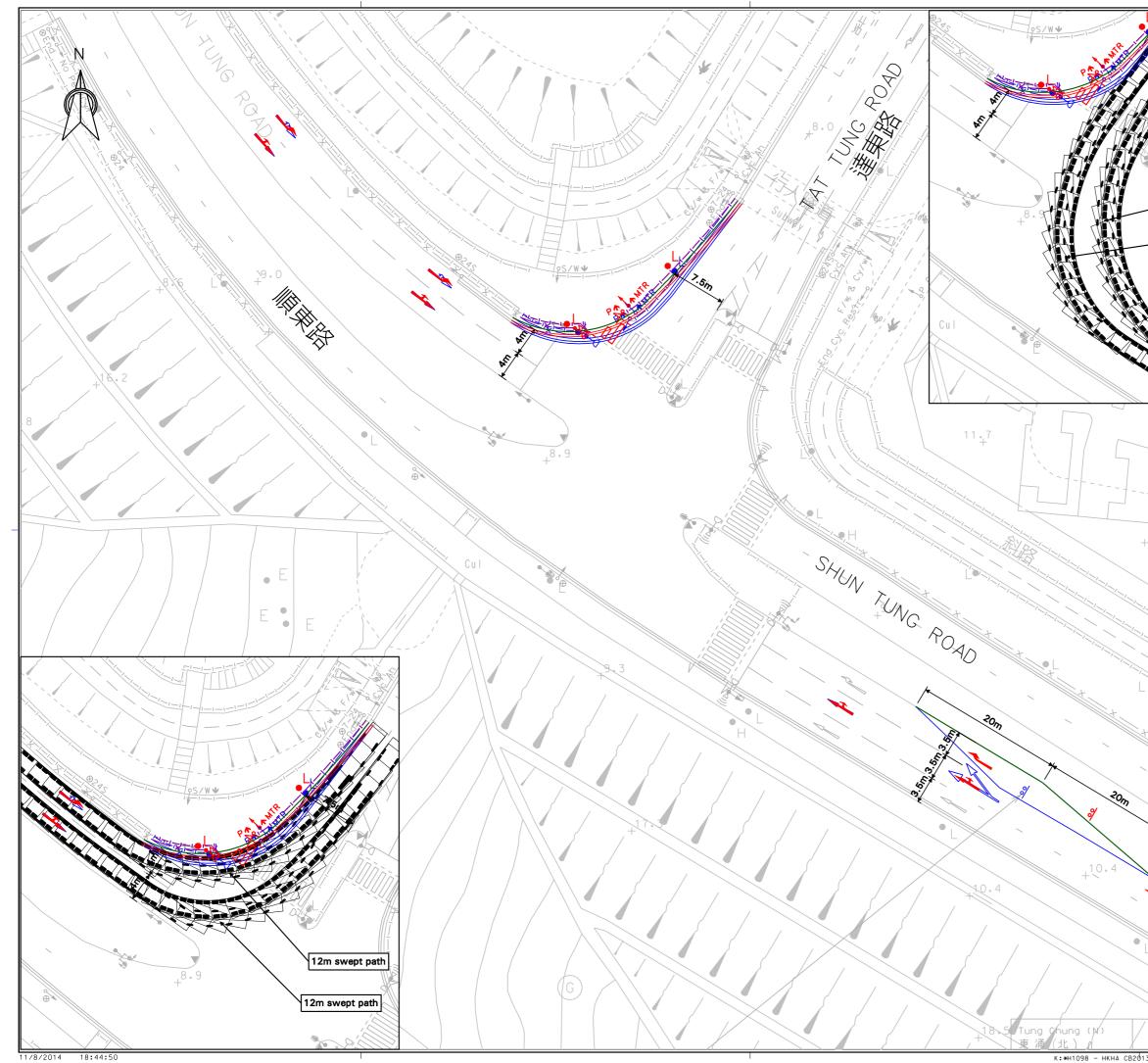
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	HONG KONG
	Consultants
	MANNINGS
	(Asia) Consultants Limited
	Scale in A1 Date AS SHDWN SEP 2013
	AS SHDWN SEP 2013 Designed Drawn Checked
	BF WTL WS
	Design Team Leader Date SNG SEP 2013
	Approved Date
	KTC SEP 2013
	Project
	AGREEMENT NO. CB20130134 HKHA TERM ENGINEERING CONSULTANCY
	SERVICES 2013-2015 FOR KOWLOON
	CENTRAL WEST AND ISLANDS REGION
	Title
$+^{16\cdot4}$	
	TUNG CHUNG AREA 27
	JUNCTION IMPROVEMENT
, <u>()</u> / <u>)</u> ()	PROPOSAL
	Drawing No. Stage Rev.
	FIGURE 7
K:#H1098 - HKHA CB20130134 KIn Central & West & Islands#TOC	B - Tung Chung Area 27*Ustation*Figure 7.dgn



12m swept path	LEGEND : Proposed Road Marking Proposed Kerbline X Proposed Type 2 Railing Removed Road Marking Removed Kerbline X Removed Type 2 Railing
9.4	
	Rev. Description of Revision Date Ckd.
	Client HONG KONG HOUSING AUTHORITY Consultants Consul
	Project AGREEMENT NO. CB20130134 HKHA TERM ENGINEERING CONSULTANCY SERVICES 2013-2015 FOR KOWLOON CENTRAL WEST AND ISLANDS REGION
	TITLE TUNG CHUNG AREA 27 JUNCTION IMPROVEMENT PROPOSAL
	Image: Since I x dr. x) Drawing No. FIGURE 8

K:#H1098 - HKHA CB20130134 KIn Central & West & Islands#T008 - Tung Chung Area 27#Ustation#Figure 8.dgn



Hong Kong Housing Authority

CB20130134 HKHA Term Engineering Consultancy Services 2013-2015

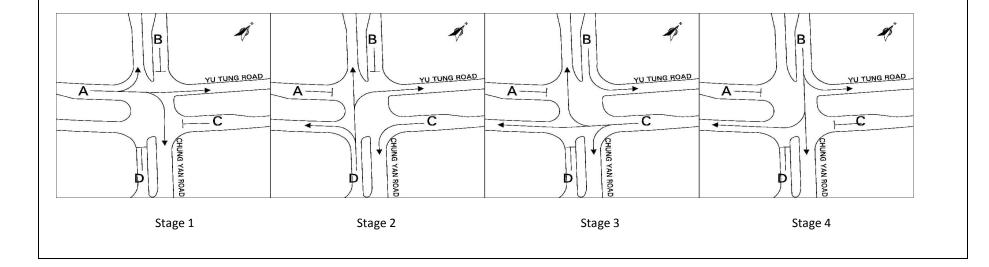
APPENDIX B

TRAFFIC ANALYSIS

Job No.	H1098	File Name	cyr-ytr	Page	
Client	Housing Department	Calculated	BC	Date	19-Feb-14
Subject	Signal Calculation of Chung Yan Road with Yu Tung Road (J2)	Checked		Date	
	(Existing Traffic Flow 2014)	Drg. Ref.		Cal. Rev.	

AM Peak

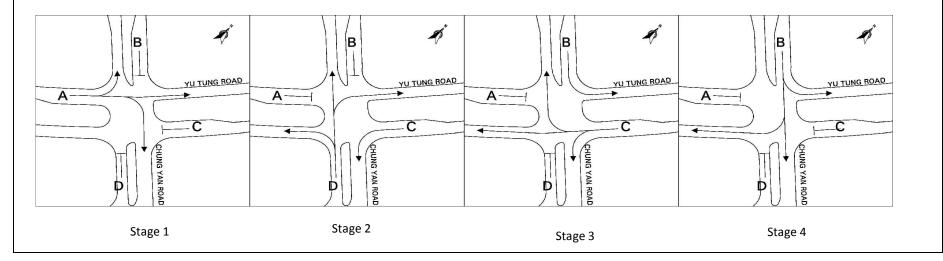
Movement	Width	Radius	Sat. Flow	Grad.	Actual Flow	7	Rev. Sat.	у	Critical y	Time Lost	Cycle	Proposed
			(No Turning)		Prop. of Turning	Flow			-	L	Time	Green Time
					Vehicles							
	m	m	pcu/h	%	%	pcu/h	pcu/h			sec.	sec.	sec.
A1	4.40	10.00	2055		65.93	91	1,870	0.046	0.046	19	95	
A2	4.40	15.00	2195		43.48	92	2,104					
B1	3.40	10.00	1955		100.00	292	1,700	0.160				
B2	3.80	15.00	2135		100.00	292	1,941					
B3	3.50	18.00	2105		13.33	90	2,082	0.043	0.043			
C1	3.90	10.00	2005		100.00	304	1,743	0.174				
C2	4.30	20.00	2185		6.29	286	2,175	0.137	0.137			
С3	4.10	18.00	2165		100.00	286	1,998					
D1	4.30	20.00	2045		18.22	269	1,614	0.149	0.149			
D2	4.10	18.00	2165		100.00	270	1,998					
	•				•			Y =	0.376		Ymax =	0.80
											Resv. cap. =	92 %



Job No.	H1098	File Name	cyr-ytr	Page	
Client	Housing Department	Calculated	BC	Date	19-Feb-14
Subject	Signal Calculation of Chung Yan Road with Yu Tung Road (J2)	Checked		Date	
	(Existing Traffic flow 2014)	Drg. Ref.		Cal. Rev.	

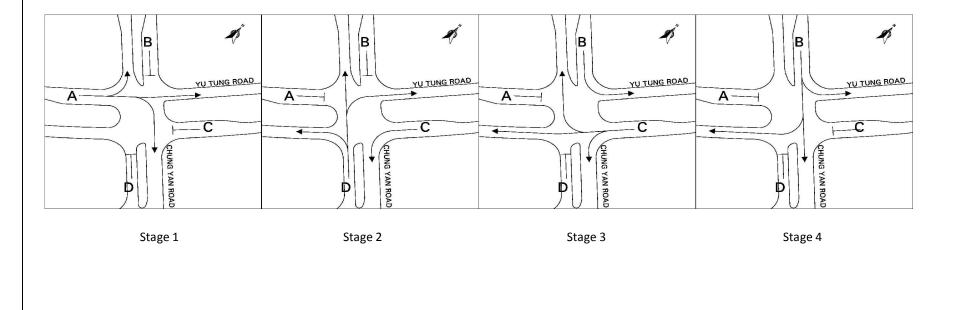
Movement	Width	Radius	Sat. Flow	Grad.	Actual Flow		Rev. Sat.	у	Critical y	Time Lost	Cycle	Proposed
			(No Turning)		Prop. of Turning	Flow		-	-	L	Time	Green Time
					Vehicles							
	m	m	pcu/h	%	%	pcu/h	pcu/h			sec.	sec.	sec.
A1	4.40	10.00	2055		44.44	18	1,927	0.009	0.009	19	95	
A2	4.40	15.00	2195		41.18	17	2,108					
B1	3.40	10.00	1955		100.00	206	1,700	0.113				
B2	3.80	15.00	2135		100.00	206	1,941					
B3	3.50	18.00	2105		27.78	72	2,057	0.035	0.035			
C1	3.90	10.00	2005		100.00	290	1,743	0.166				
C2	4.30	20.00	2185		80.19	212	2,061	0.116	0.116			
C3	4.10	18.00	2165		100.00	213	1,599					
D1	4.30	20.00	2045		25.84	178	1,605	0.099	0.099			
D2	4.10	18.00	2165		100.00	179	1,998					
	•							Y =	0.259		Ymax =	0.80
											Resv. cap. =	178 %

82.00



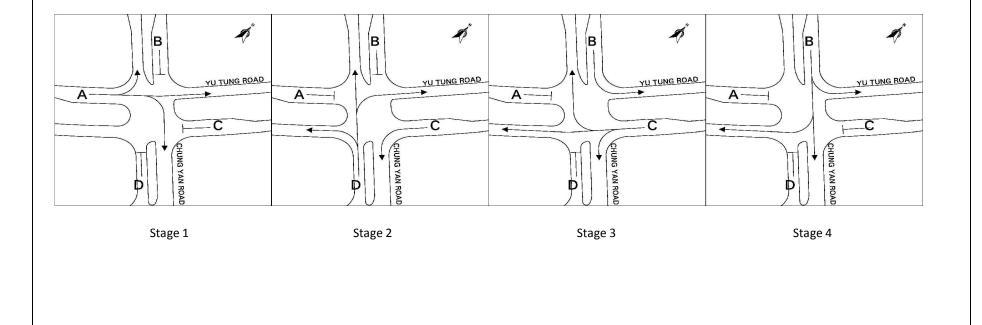
Job No.	H1098	File Name	cyr-ytr	Page	
Client	Housing Department	Calculated	BC	Date	19-Feb-14
Subject	Signal Calculation of Chung Yan Road with Yu Tung Road (J2)	Checked		Date	
	(Forcasting Traffic flow 2024 with development)	Drg. Ref.		Cal. Rev.	

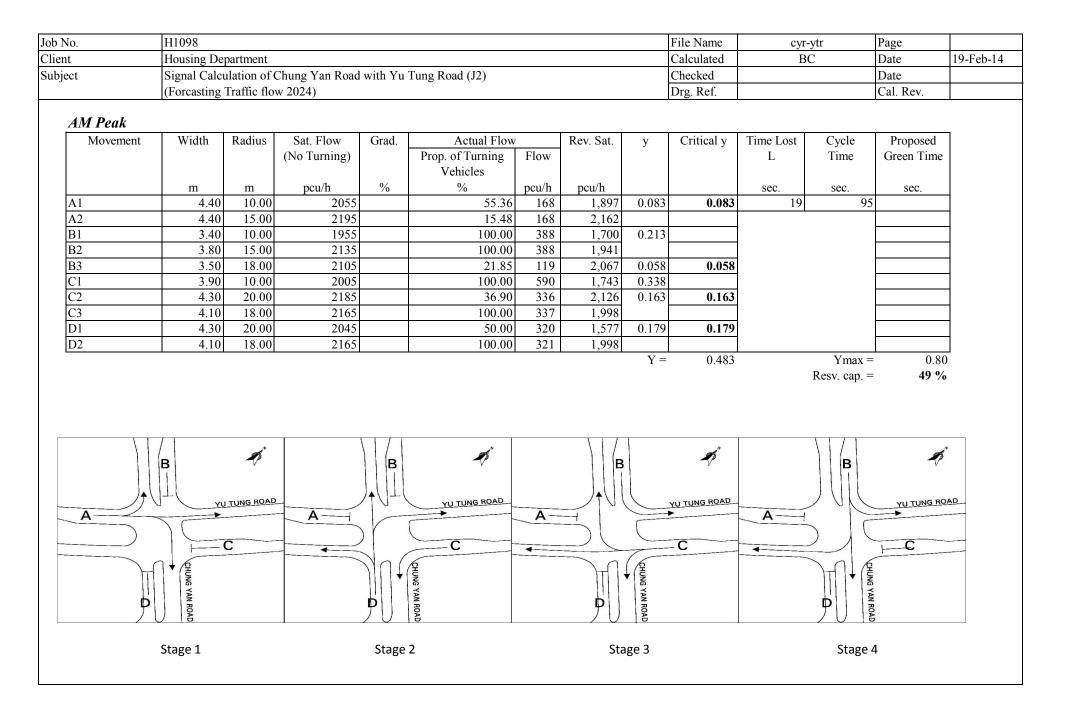
Movement	Width	Radius	Sat. Flow	Grad.	Actual Flow		Rev. Sat.	у	Critical y	Time Lost	Cycle	Proposed
			(No Turning)		Prop. of Turning	Flow		-	-	L	Time	Green Time
					Vehicles							
	m	m	pcu/h	%	%	pcu/h	pcu/h			sec.	sec.	sec.
A1	4.40	10.00	2055		55.36	168	1,897	0.083	0.083	19	95	
42	4.40	15.00	2195		15.48	168	2,162			<u>.</u>		
B1	3.40	10.00	1955		100.00	388	1,700	0.213				
B2	3.80	15.00	2135		100.00	388	1,941					
B3	3.50	18.00	2105		21.85	119	2,067	0.058	0.058			
C1	3.90	10.00	2005		100.00	641	1,743	0.368	0.368			
C2	4.30	20.00	2185		36.90	336	2,126	0.163				
C3	4.10	18.00	2165		100.00	337	1,998					
D1	4.30	20.00	2045		55.31	358	1,571	0.201				
D2	4.10	18.00	2165		100.00	358	1,998					
								Y =	0.508		Ymax =	0.80
											Resv. cap. =	42 %



Job No.	H1098	File Name	cyr-ytr	Page	
Client	Housing Department	Calculated	JC	Date	2-Jan-14
Subject	Signal Calculation of Chung Yan Road with Yu Tung Road (J2)	Checked	BC	Date	13-Jan-14
	(Forcasting Traffic flow 2024 with development)	Drg. Ref.		Cal. Rev.	

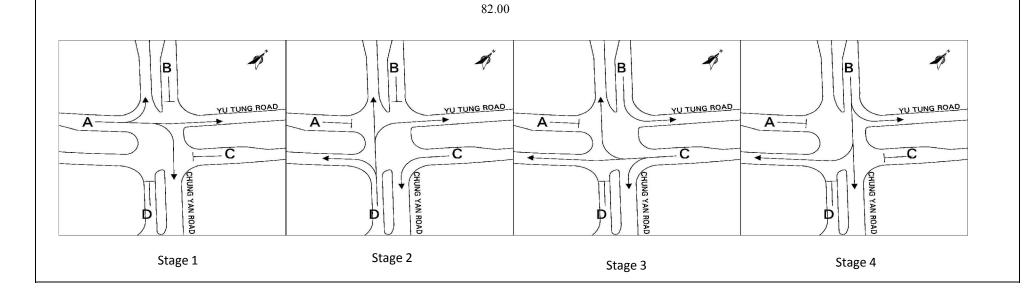
Movement	Width	Radius	Sat. Flow	Grad.	Actual Flow	r	Rev. Sat.	у	Critical y	Time Lost	Cycle	Proposed
			(No Turning)		Prop. of Turning	Flow			-	L	Time	Green Time
					Vehicles							
	m	m	pcu/h	%	%	pcu/h	pcu/h			sec.	sec.	sec.
A1	4.40	10.00	2055		20.00	80	1,995	0.039	0.039	19	95	
A2	4.40	15.00	2195		6.17	81	2,182					
B1	3.40	10.00	1955		100.00	232	1,700	0.128				
B2	3.80	15.00	2135		100.00	233	1,941					
B3	3.50	18.00	2105		10.75	93	2,086	0.045	0.045			
C1	3.90	10.00	2005		100.00	555	1,743	0.318				
C2	4.30	20.00	2185		49.48	287	2,107	0.155	0.155			
C3	4.10	18.00	2165		100.00	287	1,599					
D1	4.30	20.00	2045		68.69	297	1,556	0.167	0.167			
D2	4.10	18.00	2165		100.00	297	1,998					
								Y =	0.405		Ymax =	0.80
											Resv. cap. =	78 %





Job No.	H1098	File Name	cyr-ytr	Page	
Client	Housing Department	Calculated	BC	Date	19-Feb-14
Subject	Signal Calculation of Chung Yan Road with Yu Tung Road (J2)	Checked		Date	
	(Forcasting Traffic flow 2024)	Drg. Ref.		Cal. Rev.	

Movement	Width	Radius	Sat. Flow	Grad.	Actual Flow		Rev. Sat.	у	Critical y	Time Lost	Cycle	Proposed
			(No Turning)		Prop. of Turning	Flow		-	-	L	Time	Green Time
					Vehicles							
	m	m	pcu/h	%	%	pcu/h	pcu/h			sec.	sec.	sec.
A1	4.40	10.00	2055		20.00	80	1,995	0.039	0.039	19	95	
A2	4.40	15.00	2195		6.17	81	2,182					
B1	3.40	10.00	1955		100.00	232	1,700	0.128				
B2	3.80	15.00	2135		100.00	233	1,941					
B3	3.50	18.00	2105		10.75	93	2,086	0.045	0.045			
C1	3.90	10.00	2005		100.00	507	1,743	0.291				
C2	4.30	20.00	2185		49.48	287	2,107	0.155	0.155			
C3	4.10	18.00	2165		100.00	287	1,599					
D1	4.30	20.00	2045		65.68	271	1,559	0.153	0.153			
D2	4.10	18.00	2165		100.00	272	1,998					
	•							Y =	0.391		Ymax =	0.80



84 %

Resv. cap. =

No.	H1098					File Name	cyr-tcr	Page	1 of 2				
ent		Department				Calculated	BC	Date	19-Feb-1				
oject		Analysis of the priority junc		with Tung Chung	g Road (J1)	Checked		Date					
	(Existing	Traffic flow 2014 - AM Pea	k)			Drg. Ref.		Cal. Rev.					
		Chung Yan Road				w —	Major road width						
		Arm A				Wcr — Central reserve width							
			Ν			Wc-a — Lane width available to veh. waiting in stream c-a							
			<i>1</i>					ble to veh. waiting in					
	Arm C ——							ght for veh. waiting in					
	-	↓	Tung Arm B		Vl b-a—	Visibility to the le	eft for veh. waiting in	stream b-a					
GEOMETRIC	DETAILS.												
W	=	7.3 m											
Wcr	=	0 m											
q a-b	=	69 pcu/hr											
q a-c	=	182 pcu/hr											
q c-a	=	284 pcu/hr	Wc-a	=	3.6 m	Vr b-a	=	75 m					
q c-b	=	12 pcu/hr	Wc-b	=	3.6 m	Vr b-c	=	75 m					
q b-a	=	85 pcu/hr	Wb-a	=	2.2 m	Vr c-b	=	70 m					
q b-c	=	9 pcu/hr	Wb-c	=	2.2 m	Vl b-a	=	30 m					
<u>GEOMETRIC</u>	PARAMETEI	<u>RS:</u>											
D	=	0.7691 pcu/hr											
Е	=	0.8287 pcu/hr											
F	=	0.9505 pcu/hr											
Y	=	0.7482 pcu/hr											
<u>CAPACITY O</u>	F MOVEMEN	<u>VT:</u>											
Q b-a	=	397											
Q b-c	=	570											
Q b-ac	=	547											
Q c-a	=	1766											
Q c-b	=	643											
RATIO OF DE	ESIGN FLOW	TO CAPACITY FOR EAC	H APPROACH:										
R b-ac	=	0.17											
R c-a	=	0.16											
R c-b	=	0.02											

b No.	H1098					File Name	cyr-tcr	Page	2 of 2
ient		Department				Calculated	BC	Date	19-Feb-1
bject	Capacity A	Analysis of the priority junc	tion of Chung Yan Road	with Tung Chung	g Road (J1)	Checked		Date	
	(Existing	Traffic flow 2014 - PM Pea	k)			Drg. Ref.		Cal. Rev.	
	Arm C ——	Chung Yan Road Arm A	—— \checkmark^{N} —— Arm B	Chung Road		Wcr — Wc-a — Wc-b — Vr c-a—	Lane width availa Visibility to the ri	idth ble to veh. waiting in ble to veh. waiting in ght for veh. waiting in ft for veh. waiting in	stream c-b 1 stream c-a
GEOMETR	IC DETAILS:								
W	=	7.3 m							
Wcr	=	0 m							
q a-b	=	32 pcu/hr							
q a-c	=	256 pcu/hr							
q c-a	=	238 pcu/hr	Wc-a	=	3.6 m	Vr b-a	=	75 m	
q c-b	=	10 pcu/hr	Wc-b	=	3.6 m	Vr b-c	=	75 m	
q b-a	=	36 pcu/hr	Wb-a	=	2.2 m	Vr c-b	=	70 m	
q b-c	=	6 pcu/hr	Wb-c	=	2.2 m	Vl b-a	=	30 m	
GEOMETR	IC PARAMETEI	<u>RS:</u>							
D	=	0.7691 pcu/hr							
Е	=	0.8287 pcu/hr							
F	=	0.9505 pcu/hr							
Y	=	0.7482 pcu/hr							
CAPACITY	OF MOVEMEN	<u>VT:</u>							
Q b-a	=	392							
Q b-c	=	557							
Q b-ac	=	525							
Q c-a	=	1772							
Q c-b	=	634							
RATIO OF 1	DESIGN FLOW	TO CAPACITY FOR EAC	H APPROACH:						
R b-ac	=	0.08							
R c-a	=	0.13							
R c-b	=	0.02							

No.	H1098					File Name	cyr-tcr	Page	1 of 2				
ent		Department				Calculated	BC	Date	3-Mar-1				
ject		Analysis of the priority junc		with Tung Chung	g Road (J1)	Checked		Date					
	(Forecasti	ng Traffic flow 2024 with D	Development- AM Peak)			Drg. Ref.		Cal. Rev.					
		Chung Yan Road				w — M	Major road width						
		Arm A				Wcr — Central reserve width							
			Ν			Wc-a — Lane width available to veh. waiting in stream c-a							
		↓	\$``					ble to veh. waiting in					
	A C	<u>†</u> .	<i>★</i>					ght for veh. waiting in					
	Arm C —		Tung Arm B	Chung Road				off for veh. waiting in					
<u>GEOMETRIC</u>		7.2											
W Wcr	=	7.3 m 0 m											
q a-b	=	139 pcu/hr											
q a-c	=	474 pcu/hr 471 pcu/hr	Wc-a	=	3.6 m	Vr b-a	=	75 m					
q c-a q c-b	=	16 pcu/hr	Wc-a Wc-b	=	3.6 m	Vr b-c	=	75 m					
q b-a	=	153 pcu/hr	Wb-a	=	2.2 m	Vr c-b	=	73 m 70 m					
q b-c	=	10 pcu/hr	Wb-c	=	2.2 m	VI b-a	=	30 m					
ч 0-с	_	To peu/m	W 0-C	—	2.2 111	v10-a	—	50 m					
<u>GEOMETRIC</u>	PARAMETE	<u>RS:</u>											
D	=	0.7691 pcu/hr											
Е	=	0.8287 pcu/hr											
F	=	0.9505 pcu/hr											
Y	=	0.7482 pcu/hr											
CAPACITY O	F MOVEMEN	<u>VT:</u>											
Q b-a	=	305											
Q b-c	=	498											
Q b-ac	=	479											
Q c-a	=	1748											
Q c-b	=	549											
RATIO OF DE	ESIGN FLOW	TO CAPACITY FOR EAC	H APPROACH:										
R b-ac	=	0.34											
R c-a	=	0.27											
R c-b	=	0.03											

No.	H1098					File Name	cyr-tcr	Page	2 of 2
ent		Department				Calculated	BC	Date	3-Mar-14
oject	Capacity A	Analysis of the priority junc	tion of Chung Yan Road	with Tung Chung	g Road (J1)	Checked		Date	
	(Forecasti	ng Traffic flow 2024 with I	Development- PM Peak)			Drg. Ref.		Cal. Rev.	
	Arm C ———	Chung Yan Road Arm A	<i>↑ ↑ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓</i>	Chung Road		Wcr — Wc-a — Wc-b — Vr c-a—	Lane width availa Visibility to the ri	idth ble to veh. waiting in ble to veh. waiting in ght for veh. waiting in ft for veh. waiting in	stream c-b n stream c-a
GEOMETRIC	DETAILS:								
W	=	7.3 m							
Wcr	=	0 m							
q a-b	=	100 pcu/hr							
q a-c	=	476 pcu/hr							
q c-a	=	429 pcu/hr	Wc-a	=	3.6 m	Vr b-a	=	75 m	
q c-b	=	10 pcu/hr	Wc-b	=	3.6 m	Vr b-c	=	75 m	
q b-a	=	98 pcu/hr	Wb-a	=	2.2 m	Vr c-b	=	70 m	
q b-c	=	10 pcu/hr	Wb-c	=	2.2 m	Vl b-a	=	30 m	
GEOMETRIC	PARAMETER	<u> </u>							
D	=	0.7691 pcu/hr							
Е	=	0.8287 pcu/hr							
F	=	0.9505 pcu/hr							
Y	=	0.7482 pcu/hr							
CAPACITY O	F MOVEMEN	<u>IT:</u>							
Q b-a	=	315							
Q b-c	=	501							
Q b-ac	=	475							
Q c-a	=	1768							
Q c-b	=	559							
RATIO OF DE	ESIGN FLOW	TO CAPACITY FOR EAC	H APPROACH:						
R b-ac	=	0.23							
R c-a	=	0.24							

No.	H1098					File Name	cyr-tcr	Page	1 of 2					
ent		Department				Calculated	BC	Date	3-Mar-14					
ject		Analysis of the priority junct		with Tung Chung	g Road (J1)	Checked		Date						
	(Forecasti	ng Traffic flow 2024 - AM	Peak)			Drg. Ref.		Cal. Rev.						
		Chung Yan Road				W — Major road width								
		Arm A					Central reserve w							
			Ν			Wc-a — Lane width available to veh. waiting in stream								
		• <u> </u>	\$					ble to veh. waiting in						
	Arm C ——	<u>† </u>	*					ght for veh. waiting in						
	Aime	, 1	Tung Arm B	Chung Road		Vl b-a—	Visibility to the le	eft for veh. waiting in	stream b-a					
GEOMETRIC														
W	<u>DETAILS.</u> =	7.3 m												
Wcr	=	0 m												
q a-b	=	88 pcu/hr												
q a-c	=	474 pcu/hr												
q c-a	=	471 pcu/hr	Wc-a	=	3.6 m	Vr b-a	=	75 m						
q c-b	=	16 pcu/hr	Wc-b	=	3.6 m	Vr b-c	=	75 m						
q b-a	=	78 pcu/hr	Wb-a	=	2.2 m	Vr c-b	=	70 m						
q b-c	=	49 pcu/hr	Wb-c	=	2.2 m	Vl b-a	=	30 m						
GEOMETRIC	PARAMETE	<u>RS:</u>												
D	=	0.7691 pcu/hr												
Е	=	0.8287 pcu/hr												
F	=	0.9505 pcu/hr												
Y	=	0.7482 pcu/hr												
CAPACITY O	F MOVEMEN	<u>VT:</u>												
Q b-a	=	309												
Q b-c	=	503												
Q b-ac	=	405												
Q c-a	=	1749												
Q c-b	=	563												
	ESIGN FLOW	TO CAPACITY FOR EAC	H APPROACH:											
R b-ac	=	0.31												
R c-a	=	0.27												
R c-b	=	0.03												

o No.	H1098					File Name	cyr-tcr	Page	2 of 2
ent		Department				Calculated	BC	Date	3-Mar-1-
oject	Capacity A	Analysis of the priority junc	tion of Chung Yan Road	with Tung Chung	g Road (J1)	Checked		Date	
	(Forecasti	ng Traffic flow 2024 - PM I	Peak)			Drg. Ref.		Cal. Rev.	
	Arm C ——	Chung Yan Road Arm A	→ Arm B	Chung Road		Wcr — Wc-a — Wc-b — Vr c-a—	Lane width availa Visibility to the ri	idth ble to veh. waiting in ble to veh. waiting in ght for veh. waiting in ft for veh. waiting in	stream c-b 1 stream c-a
GEOMETRI	C DETAILS:								
W	=	7.3 m							
Wcr	=	0 m							
q a-b	=	52 pcu/hr							
q a-c	=	476 pcu/hr							
q c-a	=	429 pcu/hr	Wc-a	=	3.6 m	Vr b-a	=	75 m	
q c-b	=	10 pcu/hr	Wc-b	=	3.6 m	Vr b-c	=	75 m	
q b-a	=	47 pcu/hr	Wb-a	=	2.2 m	Vr c-b	=	70 m	
q b-c	=	10 pcu/hr	Wb-c	=	2.2 m	Vl b-a	=	30 m	
<u>GEOMETRIC</u>	C PARAMETEI	<u> </u>							
D	=	0.7691 pcu/hr							
Е	=	0.8287 pcu/hr							
F	=	0.9505 pcu/hr							
Y	=	0.7482 pcu/hr							
CAPACITY (OF MOVEMEN	<u>IT:</u>							
Q b-a	=	319							
Q b-c	=	505							
Q b-ac	=	458							
Q c-a	=	1769							
Q c-b	=	571							
	ESIGN FLOW	TO CAPACITY FOR EAC	H APPROACH:						
R b-ac	=	0.12							
R c-a	=	0.24							
R c-b	=	0.02							

Job No.	H1098	File Name	str-ytr	Page	
Client	Housing Department	Calculated	BC	Date	19-Feb-14
Subject	Signal Calculation of Yu Tung Road with Shun Tung Road (J3)	Checked		Date	
	(Existing Traffic flow 2014)	Drg. Ref.		Cal. Rev.	

Movement	Width	Radius	Sat. Flow	Grad.	Actual Flow	1	Rev. Sat.	у	Critical y	Time Lost	Cycle	Proposed
			(No Turning)		Prop. of Turning	Flow				L	Time	Green Time
					Vehicles							
	m	m	pcu/h	%	%	pcu/h	pcu/h			sec.	sec.	sec.
A1	4.00		2015		100.00		1,932	0.295		12	108	
A2	3.50		2105			216	2,105	0.103	0.103			
A3	3.50		2105			217	2,105					
B1	4.00		2015			172	1,209	0.102				
B2	4.00		2155			172	2,155					
B3	4.00		2155		100.00	326	1,626	0.200	0.200			
C1	4.50		2065		100.00	472	1,980	0.238				
C2	3.50		2105		100.00	280	1,986	0.140	0.140			
C3	3.50	30.00	2105		100.00	280	2,005					
PM Peak								Y =	0.444		Ymax = Resv. cap. =	
Movement	Width	Radius	Sat. Flow	Grad.	Actual Flow	7	Rev. Sat.	у	Critical y	Time Lost	Cycle	Proposed
			(No Turning)		Prop. of Turning	Flow		-	-	L	Time	Green Tim
					Vehicles							
	m	m	pcu/h	%	%	pcu/h	pcu/h			sec.	sec.	sec.
A1	4.00		2015		100.00	383	1,932	0.198		12	108	
A2	3.50		2105			138	2,105	0.066	0.066			
A3	3.50		2105			138	2,105					
B1	4.00		2015			160	1,209	0.095				
B2	4.00		2155			160	2,155					
B3	4.00		2155		100.00	302	1,626	0.186				
C1	4.50		2065		100.00	590	1,980	0.298	0.298			
C2	3.50				100.00	210	1,986	0.105				
C3	3.50	30.00	2105		100.00	210	2,005					
								Y =	0.364		Ymax =	
											Resv. cap. =	120 %
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亡	STAGE 1	F	B	STAGE	2 F 🐳 🖪		STAGE	3	B			
METHOD OF CONTROL					ng Ang Anna ang A			CALL)	D			
2												

Job No.	H1098	File Name	str-ytr	Page	
Client	Housing Department	Calculated	BC	Date	19-Feb-14
Subject	Signal Calculation of Yu Tung Road with Shun Tung Road (J3)	Checked		Date	
	(Forcasting Traffic flow 2024 with development)	Drg. Ref.		Cal. Rev.	

Movement	Width	Radius	Sat. Flow	Grad.	Actual Flow		Rev. Sat.	У	Critical y	Time Lost	Cycle	Proposed
			(No Turning)		Prop. of Turning	Flow				L	Time	Green Time
					Vehicles							
	m	m	pcu/h	%	%	pcu/h	pcu/h			sec.	sec.	sec.
A1	4.00	35.00	2015		100.00	786	1,932	0.407	0.407	12	120	
A2	3.50		2105			381	2,105	0.181				
A3	3.50		2105			382	2,105					
B1	4.00		2015			296	1,209	0.176				
B2	4.00		2155			296	2,155					
B3	4.00	25.00	2155		100.00	724	2,033		0.356			
C1	4.50	35.00	2065		100.00	580	1,980					
C2	3.50	25.00	2105		100.00	387	1,986	0.194				
C3	3.50	30.00	2105		100.00	387	2,005					
								Y =	0.763		Ymax =	0.90
PM Peak							-				Resv. cap. =	
Movement	Width	Radius	Sat. Flow	Grad.	Actual Flow		Rev. Sat.	У	Critical y	Time Lost	Cycle	Proposed
			(No Turning)		Prop. of Turning	Flow				L	Time	Green Time
					Vehicles							
	m	m	pcu/h	%	%	pcu/h	pcu/h			sec.	sec.	sec.
A1	4.00	35.00	2015		100.00	571	1,932		0.296	12	120	
A2	3.50		2105			262	2,105	0.125				
A3	3.50		2105			263	2,105					
B1	4.00		2015			264	1,209	0.157				
B2	4.00		2155			264	2,155					
B3	4.00	25.00	2155		100.00	455	2,033		0.224			
C1	4.50	35.00	2065		100.00	739	1,980					
C2	3.50	25.00	2105		100.00	313	1,986	0.157				
C3	3.50	30.00	2105		100.00	313	2,005					
								Y =	0.519		Ymax =	0.90
METHOD OF CONTROL	SIAC	GE1 F°		A		B		LAGE 3 RY CAL		В	Resv. cap. =	56 %

Job No.	H1098	File Name	str-ytr	Page	
Client	Housing Department	Calculated	BC	Date	20-Aug-14
Subject	Signal Calculation of Yu Tung Road with Shun Tung Road (J3)	Checked		Date	
	(Forcasting Traffic flow 2019 with development)	Drg. Ref.		Cal. Rev.	

Movement	Width	Radius	Sat. Flow	Grad.	Actual Flow		Rev. Sat.	У	Critical y	Time Lost	Cycle	Proposed
			(No Turning)		Prop. of Turning	Flow				L	Time	Green Time
					Vehicles							
	m	m	pcu/h	%	%	pcu/h	pcu/h			sec.	sec.	sec.
A1	4.00	35.00	2015		100.00	669	1,932	0.346	0.346	12	120	
A2	3.50		2105			324	2,105	0.154				
A3	3.50		2105			324	2,105					
B1	4.00		2015			252	1,209	0.150				
B2	4.00		2155			252	2,155					
B3	4.00	25.00	2155		100.00	610	2,033	0.300	0.300			
C1	4.50	35.00	2065		100.00	489	1,980	0.247				
C2	3.50	25.00	2105		100.00	328	1,986	0.164				
С3	3.50	30.00	2105		100.00	328	2,005					
								Y =	0.646		Ymax =	0.90
PM Peak											Resv. cap. =	25 %
Movement	Width	Radius	Sat. Flow	Grad.	Actual Flow		Rev. Sat.	у	Critical y	Time Lost	Cycle	Proposed
			(No Turning)		Prop. of Turning	Flow				L	Time	Green Time
					Vehicles							
	m	m	pcu/h	%	%	pcu/h	pcu/h			sec.	sec.	sec.
A1	4.00	35.00	2015		100.00	485	1,932	0.251	0.251	12	120	
A2	3.50		2105			223	2,105	0.106				
A3	3.50		2105			223	2,105					
B1	4.00		2015			224	1,209	0.133				
B2	4.00		2155			224	2,155					
B3	4.00	25.00	2155		100.00	383	2,033	0.188	0.188			
C1	4.50	35.00	2065		100.00	623	1,980	0.315				
C2	3.50	25.00	2105		100.00	266	1,986	0.133				
C3	3.50	30.00	2105		100.00	266	2,005					
								Y =	0.439		Ymax =	0.90
											Resv. cap. =	84 %
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	1		C					1111	C			
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DD OF C			· · ·	À	↓E		A					
				Å		р ^В	A			D		
ETHOD OF C	SIAC	JE_1 F		A	TAGE 2 F	B				В		
METHOD OF CONTROL	SIAC	JEL F		A S		B		LAGE 3 RY CAL		В		

Job No.	H1098	File Name	str-ytr	Page	
Client	Housing Department	Calculated	BC	Date	19-Feb-14
Subject	Signal Calculation of Yu Tung Road with Shun Tung Road (J3)	Checked		Date	
	(Forcasting Traffic flow 2024 with development) With Junction Improvement	Drg. Ref.		Cal. Rev.	
				•	

Movement	Width	Radius	Sat. Flow	Grad.	Actual Flow	r	Rev. Sat.	У	Critical y	Time Lost	Cycle	Proposed
			(No Turning)		Prop. of Turning	Flow				L	Time	Green Time
					Vehicles							
	m	m	pcu/h	%	%	pcu/h	pcu/h			sec.	sec.	sec.
.1	4.00	35.00	2015		100.00	786	1,932	0.407	0.407	12	108	
.2	3.50		2105			381	2,105	0.181				
3	3.50		2105			382	2,105					
81	3.70		1985			296	1,191	0.179				
32	3.70		2125			296	2,125					
33	3.70	25.00	2125		100.00	362	2,005	0.182	0.182			
34	3.70	20.00	2125		100.00	362	1,977					
21	4.50				100.00	580	1,980	0.293				
22	3.50	25.00	2105		100.00	387	1,986	0.194				
23	3.50	30.00	2105		100.00	387	2,005					1
								Y =	0.589		Ymax =	
											Resv. cap. =	36 %
HOD OF CONTROL	Beel Contraction of the second		C	A			A					
METHOD	STA	<u>ge 1</u> f°	→ B	5	TAGE 2 F	B	<u>s</u> (hur)	TAGE <u>3</u> RY CAL	L) C	B		

No.	H1098								File Name	str-	ytr	Page	
ent	Housing De	epartment							Calculated	В	С	Date	19-Feb-1
ject	Signal Calo	culation of	Yu Tung Road	with Shu	n Tung Road (J3)				Checked			Date	
	(Forcasting	Traffic fl	ow 2024 with de	velopmer	t) With Junction Im	proveme	nt		Drg. Ref.			Cal. Rev.	
PM Peak													
Movement	Width	Radius	Sat. Flow	Grad.	Actual Flow	T	Rev. Sat.	У	Critical y	Time Lost	Cycle	Proposed	
			(No Turning)		Prop. of Turning	Flow		-	-	L	Time	Green Time	
					Vehicles								
	m	m	pcu/h	%	%	pcu/h	pcu/h			sec.	sec.	sec.	
A1	4.00	35.00	2015		100.00	571	1,932	0.296		12	108		
A2	3.50		2105			262	2,105	0.125	0.125				
A3	3.50		2105			263	2,105						
B1	3.70		1985			264	1,191	0.159					
B2	3.70		2125			264	2,125						
B3	3.70		2125		100.00	227	2,005	0.114					
B4	3.70		2125		100.00	228	1,977						
C1	4.50		2065		100.00	739	1,980	0.373	0.373				
C2	3.50		2105		100.00	313	1,986	0.157					
C3	3.50	30.00	2105		100.00	313	2,005						
								Y =	0.498		Ymax =		
	1	111						1 1 1	T		Resv. cap. =	61 %	
Ř	/							111	/				
E	/	$ _{I}$	С					$///_{1}$	- C				
8	* 2/4			15			B		18				
<u> </u>			·	4				0/15	54				
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METHOD OF CONTROL	STA	<u>GE 1</u> F		5	TAGE 2 F	B	<u></u> <u>S</u>	TAGE 3		B			
F						ν	(HUR)				
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Job No.	H1098	File Name	str-ytr	Page	
Client	Housing Department	Calculated	BC	Date	19-Feb-14
Subject	Signal Calculation of Yu Tung Road with Shun Tung Road (J3)	Checked		Date	
	(Forcasting Traffic flow 2024)	Drg. Ref.		Cal. Rev.	

Movement	Width	Radius	Sat. Flow	Grad.	Actual Flow		Rev. Sat.	у	Critical y	Time Lost	Cycle	Proposed
			(No Turning)		Prop. of Turning	Flow				L	Time	Green Time
					Vehicles							
	m	m	pcu/h	%	%	pcu/h	pcu/h			sec.	sec.	sec.
A1	4.00		2015		100.00	745	1,932	0.386	0.386	12	120	
A2	3.50		2105			364	2,105	0.173				
A3	3.50		2105			365	2,105					
B1	4.00		2015			285	1,209	0.169				
B2	4.00		2155		100.00	285	2,155	0.054	0.05			
B3	4.00		2155		100.00	724	2,033	0.356	0.356			
C1	4.50		2065		100.00	580	1,980	0.293				
C2	3.50		2105		100.00	373	1,986	0.187				
C3	3.50	30.00	2105		100.00	373	2,005	Y =	0.742		Ymax =	0.9
PM Peak								Y =	0.742		r max = Resv. cap. =	0.9 9 %
Movement	Width	Radius	Sat. Flow	Grad.	Actual Flow	7	Rev. Sat.	у	Critical y	Time Lost	Cycle	Proposed
Wovement	width	Raulus	(No Turning)	Ulau.	Prop. of Turning	Flow	Kev. Sal.	у	Critical y	L L	Time	Green Time
			(No runnig)		Vehicles	110w				L	Time	
	m	m	pcu/h	%	%	pcu/h	pcu/h			sec.	sec.	sec.
A1	4.00	35.00	2015	70	100.00	543	1,932	0.281	0.281	12	120	500.
A2	3.50		2105		100.00	250	2,105	0.119	0.201	12	120	
A3	3.50		2105			251	2,105	0.117				
B1	4.00		2015			253	1,209	0.150				
B2	4.00		2155			253	2,155					
B3	4.00	25.00	2155		100.00	455	2,033	0.224	0.224			
C1	4.50	35.00	2065		100.00	739	1,980	0.373				
C2	3.50	25.00	2105		100.00	300	1,986	0.150				
C3	3.50	30.00	2105		100.00	300	2,005					
METHOD OF CONTROL		C		A			B a a a a a a a a a a a a a a a a a a a	Y =	0.505		Ymax = Resv. cap. =	0.9 60 %

b No.	H1098								File Name		tr(e)	Page	
ient	Housing De								Calculated	В	C	Date	19-Feb-1
bject	-			d with Ta	nt Tung Road (East) (J4)			Checked			Date	
	(Existing T	raffic flow	/ 2014)						Drg. Ref.			Cal. Rev.	
AM Peak													
Movement	Width	Radius	Sat. Flow	Grad.	Actual Flow	7	Rev. Sat.	у	Critical y	Time Lost	Cycle	Proposed]
			(No Turning)		Prop. of Turning Vehicles	Flow				L	Time	Green Time	
	m	m	pcu/h	%	%	pcu/h	pcu/h			sec.	sec.	sec.	
Al	3.50				52.84	176	1,843	0.089	0.089	14	108	ļ	
A2	3.50		2105			177	2,105						-
B1	3.50		1965			272	1,179	0.166				-	
B2	3.50		2105			272	2,105						
B3	3.50				100.00	340	1,554	0.219					
C1	3.50				100.00	477	1,747	0.259	0.259			ł	
C2	3.50	18.00	2105		100.00	478	1,943	17	0.5(7		37	0.07	
								Y =	0.567		Ymax =		
PM Peak											Resv. cap. =	38 %	
Movement	Width	Radius	Sat. Flow	Grad.	Actual Flow	7	Rev. Sat.	у	Critical y	Time Lost	Cycle	Proposed]
			(No Turning)		Prop. of Turning	Flow		2	2	L	Time	Green Time	
			Č,		Vehicles								
	m	m	pcu/h	%	%	pcu/h	pcu/h			sec.	sec.	sec.	
A1	3.50				46.73	107	1,857	0.054	0.054	14	108		
A2	3.50		2105			107	2,105						
B1	3.50		1965			186	1,179	0.113				ļ	
B2	3.50		2105			186	2,105						
B3	3.50				100.00	293	1,554	0.188	0.188				
C1	3.50				100.00	495	1,747	0.268	0.268			1	
C2	3.50	18.00	2105		100.00	495	1,943						
								Y =	0.511		Ymax =		
											Resv. cap. =	53 %	
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5			The D				• \$ B	D				<u> </u>	
			and the second se										
					-		<u>~_</u>		·				
		AGE 1			STAG	E 2	(Hurry C	Call)		STA	AGE 3		

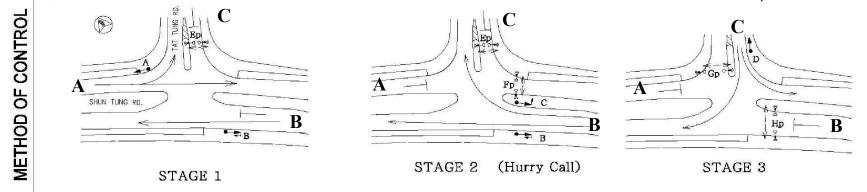
Job No.	H1098	File Name	str-ttr(e)	Page	
Client	Housing Department	Calculated	BC	Date	19-Feb-14
Subject	Signal Calculation of ShungTung Road with Tat Tung Road (East) (J4)	Checked		Date	
	(Forcasting Traffic flow 2024 with development)	Drg. Ref.		Cal. Rev.	

Movement	Width	Radius	Sat. Flow	Grad.	Actual Flow	T	Rev. Sat.	у	Critical y	Time Lost	Cycle	Proposed
			(No Turning)		Prop. of Turning	Flow				L	Time	Green Time
					Vehicles							
	m	m	pcu/h	%	%	pcu/h	pcu/h			sec.	sec.	sec.
A1	3.50	12.00	1965		70.16	258	1,807	0.132	0.132	14	108	
A2	3.50		2105			259	2,105					
B1	3.50		1965			586	1,965	0.288				
B2	3.50		2105			586	2,105					
B3	3.50	18.00	2105		100.00	339	1,943	0.174	0.174			
C1	3.50	12.00	1965		100.00	727	1,747	0.394	0.394			
C2	3.50	18.00	2105		100.00	727	1,943					
								Y =	0.701		Ymax =	0.87
											Resv. cap. =	12 %

PM Peak

Movement	Width	Radius	Sat. Flow	Grad.	Actual Flow	7	Rev. Sat.	у	Critical y	Time Lost	Cycle	Proposed
			(No Turning)		Prop. of Turning	Flow				L	Time	Green Time
					Vehicles							
	m	m	pcu/h	%	%	pcu/h	pcu/h			sec.	sec.	sec.
A1	3.50	12.00	1965		55.61	196	1,837	0.100	0.100	14	108	
A2	3.50		2105			197	2,105					
B1	3.50		1965			401	1,965	0.197				
B2	3.50		2105			402	2,105					
B3	3.50	18.00	2105		100.00	217	1,943	0.112	0.112			
C1	3.50	12.00	1965		100.00	765	1,747	0.415	0.415			
C2	3.50	18.00	2105		100.00	766	1,943					
								Y =	0.626	-	Ymax =	0.87

Resv. cap. = 25 %



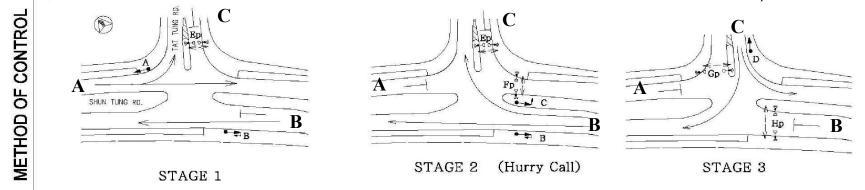
Job No.	H1098	File Name	str-ttr(e)	Page	
Client	Housing Department	Calculated	BC	Date	20-Aug-14
Subject	Signal Calculation of ShungTung Road with Tat Tung Road (East) (J4)	Checked		Date	
	(Forcasting Traffic flow 2019 with development)	Drg. Ref.		Cal. Rev.	

Movement	Width	Radius	Sat. Flow	Grad.	Actual Flow		Rev. Sat.	у	Critical y	Time Lost	Cycle	Proposed
			(No Turning)		Prop. of Turning	Flow				L	Time	Green Time
					Vehicles							
	m	m	pcu/h	%	%	pcu/h	pcu/h			sec.	sec.	sec.
A1	3.50	12.00	1965		66.38	229	1,814	0.117	0.117	14	108	
A2	3.50		2105			229	2,105					
B1	3.50		1965			496	1,965	0.244				
B2	3.50		2105			496	2,105					
B3	3.50	18.00	2105		100.00	286	1,943	0.147	0.147			
C1	3.50	12.00	1965		100.00	613	1,747	0.332	0.332			
C2	3.50	18.00	2105		100.00	613	1,943					
								Y =	0.596		Ymax =	0.87
											Resv. cap. =	31 %

PM Peak

Movement	Width	Radius	Sat. Flow	Grad.	Actual Flow	7	Rev. Sat.	у	Critical y	Time Lost	Cycle	Proposed
			(No Turning)		Prop. of Turning	Flow				L	Time	Green Time
					Vehicles							
	m	m	pcu/h	%	%	pcu/h	pcu/h			sec.	sec.	sec.
A1	3.50	12.00	1965		52.27	176	1,844	0.089	0.089	14	108	
A2	3.50		2105			176	2,105					
B1	3.50		1965			340	1,965	0.167				
B2	3.50		2105			340	2,105					
B3	3.50	18.00	2105		100.00	184	1,943	0.095	0.095			
C1	3.50	12.00	1965		100.00	645	1,747	0.350	0.350			
C2	3.50	18.00	2105		100.00	646	1,943					
								Y =	0.534		Ymax =	0.87

0.87 **47 %** Resv. cap. =



Job No.	H1098	File Name	str-ttr(e)	Page	
Client	Housing Department	Calculated	BC	Date	11-Aug-14
Subject	Signal Calculation of ShungTung Road with Tat Tung Road (East) (J4)	Checked		Date	
	(Forcasting Traffic flow 2024 with development) With junction improvement	Drg. Ref.		Cal. Rev.	

Movement	Width	Radius	Sat. Flow	Grad.	Actual Flow		Rev. Sat.	v	Critical y	Time Lost	Cycle	Proposed
wovement	width	Radius	(No Turning)	Orad.	Prop. of Turning	Flow	Rev. Sut.	у	Critical y	L	Time	Green Time
			(ito runnig)		Vehicles	1100				L	Thile	Green Thile
	m	m	pcu/h	%	%	pcu/h	pcu/h			sec.	sec.	sec.
A1	3.50	12.00	1965		70.16	258	1,807	0.132		12	108	
A2	3.50		2105			259	2,105					
B1	3.50		1965			586	1,965	0.288	0.288			
B2	3.50		2105			586	2,105					
B3	3.50	22.00	2105		100.00	169	1,971	0.087				
B4	3.50	18.00	2105		100.00	170	1,943					
C1	3.50	12.00	1965		100.00	727	1,747	0.394	0.394			
C2	3.50	18.00	2105		100.00	727	1,943					
PM Peak								Y =	0.682		Ymax = Resv. cap. =	0.8 17 %
Movement	Width	Radius	Sat. Flow	Grad.	Actual Flow		Rev. Sat.	у	Critical y	Time Lost	Cycle	Proposed
			(No Turning)		Prop. of Turning	Flow				L	Time	Green Time
					Vehicles							
	m	m	pcu/h	%	%	pcu/h	pcu/h			sec.	sec.	sec.
A1	3.50	12.00	1965		55.61	196	1,837	0.100		12	108	
A2	3.50		2105			197	2,105					
B1	3.50		1965			401	1,965	0.197	0.197			
B2	3.50	22.00	2105		100.00	402	2,105	0.055				
B3 B4	3.50 3.50	22.00	2105 2105		100.00	108 109	1,971 1,943	0.055	-			
C1	3.50	18.00 12.00	1965		100.00 100.00	765	1,943	0.415	0.415			
C1 C2	3.50	12.00	2105		100.00	765	1,747	0.413	0.415			
C2	5.50	18.00	2105		100.00	700	1,945	Y =	0.612		Ymax =	0.8
T	E		r			3		•	0.012		Resv. cap. =	31 %
	A	Epp and Epp	B PB			F		B	A	C		B
Σ	ST	AGE 1			STAGE	2 (I	Hurry Cal	1)		STAG	23	

ject Sigr (For AM Peak Movement W A1 A2 B1 B2 B3 C1 C2 C2 C1 C2 C2 C1 C2 C1 C2 C1 C2 C1 C1 C2 C1 C1 <th>Width m 3.50 3.50 3.50 3.50 3.50 3.50 3.50 3.50 3.50 3.50 3.50 Width m</th> <th>ulation of</th> <th></th> <th>d with Ta Grad. % Grad.</th> <th>Actual Flow Prop. of Turning Vehicles % 70.16 100.00 100.00 100.00 100.00 Vehicles</th> <th>Flow pcu/h 258 259 569 569 331 724 725</th> <th>Rev. Sat. pcu/h 1,807 2,105 1,965 2,105 1,943 1,747 1,943 Rev. Sat.</th> <th></th> <th>Calculated Checked Drg. Ref. Critical y 0.132 0.132 0.695 Critical y</th> <th>Time Lost L sec. 14 Time Lost L</th> <th></th> <th>0.87</th> <th></th>	Width m 3.50 3.50 3.50 3.50 3.50 3.50 3.50 3.50 3.50 3.50 3.50 Width m	ulation of		d with Ta Grad. % Grad.	Actual Flow Prop. of Turning Vehicles % 70.16 100.00 100.00 100.00 100.00 Vehicles	Flow pcu/h 258 259 569 569 331 724 725	Rev. Sat. pcu/h 1,807 2,105 1,965 2,105 1,943 1,747 1,943 Rev. Sat.		Calculated Checked Drg. Ref. Critical y 0.132 0.132 0.695 Critical y	Time Lost L sec. 14 Time Lost L		0.87	
AM Peak Movement W A1 A2 B1 B2 B3 C1 C2 C2 PM Peak W A1 A2 B3 C1 C2 C2 B3 C1 C2 C2 B1 B2 B3 C1 C2 C2	Width m 3.50 3.50 3.50 3.50 3.50 3.50 3.50 3.50 3.50 3.50 3.50 Width m	Traffic flo Radius m 12.00 18.00 18.00 18.00 Radius	Sat. Flow (No Turning) pcu/h 1965 2105 2105 2105 2105 2105 2105 2105 210	Grad.	Actual Flow Prop. of Turning Vehicles % 70.16 100.00 100.00 100.00 100.00	Flow pcu/h 258 259 569 569 331 724 725	pcu/h 1,807 2,105 1,965 2,105 1,943 1,747 1,943	y 0.132 0.280 0.170 0.393 Y =	Drg. Ref. Critical y 0.132 0.170 0.393 0.695	L sec. 14	Cycle Time sec. 108 Ymax = Resv. cap. = Cycle	Cal. Rev. Proposed Green Time sec. 0.87 13 % Proposed	
AM Peak Movement W A1 A2 B1 B2 B3 C1 C2 C2 PM Peak W A1 A2 B3 C1 C2 C2 B3 C1 C2 C2 B1 B2 B3 C1 C2 C2	Width m 3.50 3.50 3.50 3.50 3.50 3.50 3.50 3.50 3.50 Width m	Radius m 12.00 12.00 18.00 18.00 Radius	Sat. Flow (No Turning) pcu/h 1965 2105 2105 2105 2105 2105 2105 2105 210	% Grad.	Prop. of Turning Vehicles % 70.16 100.00 100.00 100.00 Actual Flow Prop. of Turning	Flow pcu/h 258 259 569 569 331 724 725	pcu/h 1,807 2,105 1,965 2,105 1,943 1,747 1,943	y 0.132 0.280 0.170 0.393 Y =	Critical y 0.132 0.170 0.393 0.695	L sec. 14	Time sec. 108 Ymax = Resv. cap. = Cycle	Proposed Green Time sec. 0.87 13 % Proposed	
Movement W A1 A2 B1 B2 B3 C1 C2 C2 PM Peak W A1 A2 B3 C1 C2 C2 B1 B2 B3 C1 C2 C2	m 3.50 3.50 3.50 3.50 3.50 3.50 3.50 Width m	m 12.00 18.00 12.00 18.00 Radius	(No Turning) pcu/h 1965 2105 2105 2105 2105 2105 2105 2105 210	% Grad.	Prop. of Turning Vehicles % 70.16 100.00 100.00 100.00 Actual Flow Prop. of Turning	Flow pcu/h 258 259 569 569 331 724 725	pcu/h 1,807 2,105 1,965 2,105 1,943 1,747 1,943	0.132 0.280 0.170 0.393 Y =	0.132 0.170 0.393 0.695	L sec. 14	Time sec. 108 Ymax = Resv. cap. = Cycle	Green Time sec. 0.87 13 % Proposed	
A1 A2 B1 B2 B3 C1 C2 PM Peak Movement Main A1 A2 B1 B2 B3	m 3.50 3.50 3.50 3.50 3.50 3.50 3.50 Width m	m 12.00 18.00 12.00 18.00 Radius	(No Turning) pcu/h 1965 2105 2105 2105 2105 2105 2105 2105 210	% Grad.	Prop. of Turning Vehicles % 70.16 100.00 100.00 100.00 Actual Flow Prop. of Turning	Flow pcu/h 258 259 569 569 331 724 725	pcu/h 1,807 2,105 1,965 2,105 1,943 1,747 1,943	0.132 0.280 0.170 0.393 Y =	0.132 0.170 0.393 0.695	L sec. 14	Time sec. 108 Ymax = Resv. cap. = Cycle	Green Time sec. 0.87 13 % Proposed	
A1 A2 B1 B2 B3 C1 C2 PM Peak Movement Main A1 A2 B1 B2 B3 A1 B2 B3	3.50 3.50 3.50 3.50 3.50 3.50 3.50 3.50	12.00 18.00 12.00 18.00 Radius	pcu/h 1965 2105 2105 2105 2105 2105 2105 2105 210	Grad.	Vehicles % 70.16 100.00 100.00 100.00 Actual Flow Prop. of Turning	pcu/h 258 259 569 331 724 725	1,807 2,105 1,965 2,105 1,943 1,747 1,943	0.280 0.170 0.393 Y =	0.170 0.393 0.695	sec. 14	sec. 108 Ymax = Resv. cap. = Cycle	sec. 0.87 13 % Proposed	
A1 A2 B1 B2 B3 C1 C2 PM Peak Movement Movement A1 A2 B1 B2 B3	3.50 3.50 3.50 3.50 3.50 3.50 3.50 3.50	12.00 18.00 12.00 18.00 Radius	1965 2105 2105 2105 2105 2105 2105 2105 Sat. Flow (No Turning)	Grad.	% 70.16 100.00 100.00 100.00 Actual Flow Prop. of Turning	258 259 569 569 331 724 725	1,807 2,105 1,965 2,105 1,943 1,747 1,943	0.280 0.170 0.393 Y =	0.170 0.393 0.695	14 Time Lost	108 Ymax = Resv. cap. = Cycle	0.87 13 % Proposed	
A1 A2 B1 B2 B3 C1 C2 PM Peak Movement Movement A1 A2 B1 B2 B3	3.50 3.50 3.50 3.50 3.50 3.50 3.50 3.50	12.00 18.00 12.00 18.00 Radius	1965 2105 2105 2105 2105 2105 2105 2105 Sat. Flow (No Turning)	Grad.	70.16 100.00 100.00 100.00 Actual Flow Prop. of Turning	258 259 569 569 331 724 725	1,807 2,105 1,965 2,105 1,943 1,747 1,943	0.280 0.170 0.393 Y =	0.170 0.393 0.695	14 Time Lost	108 Ymax = Resv. cap. = Cycle	0.87 13 % Proposed	
A2 B1 B2 B3 C1 C2 PM Peak Movement W A1 A2 B1 B2 B3	3.50 3.50 3.50 3.50 3.50 3.50 3.50	18.00 12.00 18.00 Radius	2105 1965 2105 2105 1965 2105 Sat. Flow (No Turning)		100.00 100.00 100.00 Actual Flow Prop. of Turning	259 569 331 724 725	2,105 1,965 2,105 1,943 1,747 1,943	0.280 0.170 0.393 Y =	0.170 0.393 0.695	Time Lost	Ymax = Resv. cap. = Cycle	0.87 13 % Proposed	
B1 B2 B2 B3 C1 C2 PM Peak Movement Movement W A1 A2 B1 B2 B3 B3	3.50 3.50 3.50 3.50 3.50 Width	12.00 18.00 Radius	1965 2105 2105 1965 2105 Sat. Flow (No Turning)		100.00 100.00 Actual Flow Prop. of Turning	569 569 331 724 725	1,965 2,105 1,943 1,747 1,943	0.170 0.393 Y =	0.393 0.695		Resv. cap. =	13 % Proposed	
B2 B3 C1 C2 PM Peak Movement W A1 A2 B1 B2 B3	3.50 3.50 3.50 3.50 Width	12.00 18.00 Radius	2105 2105 1965 2105 Sat. Flow (No Turning)		100.00 100.00 Actual Flow Prop. of Turning	569 331 724 725	2,105 1,943 1,747 1,943	0.170 0.393 Y =	0.393 0.695		Resv. cap. =	13 % Proposed	
B3 C1 C2 C2 PM Peak Movement Movement W A1 A2 B1 B2 B3 B3	3.50 3.50 3.50 Width	12.00 18.00 Radius	2105 1965 2105 Sat. Flow (No Turning)		100.00 100.00 Actual Flow Prop. of Turning	331 724 725	1,943 1,747 1,943	0.393 Y =	0.393 0.695		Resv. cap. =	13 % Proposed	
C1 C2 PM Peak W Movement W A1 A2 B1 B2 B3 B3	3.50 3.50 Width m	12.00 18.00 Radius	1965 2105 Sat. Flow (No Turning)		100.00 100.00 Actual Flow Prop. of Turning	724 725	1,747 1,943	0.393 Y =	0.393 0.695		Resv. cap. =	13 % Proposed	
C2 PM Peak Movement W A1 A2 B1 B2 B3 A	3.50 Width m	18.00 Radius	2105 Sat. Flow (No Turning)		Actual Flow Prop. of Turning	725	1,943	Y =	0.695		Resv. cap. =	13 % Proposed	
PM Peak Movement W A1 A2 B1 B2 B3 A	Width	Radius	Sat. Flow (No Turning)		Actual Flow Prop. of Turning						Resv. cap. =	13 % Proposed	
MovementWA1A2B1B2B3	m		(No Turning)		Prop. of Turning		Rev. Sat.				Resv. cap. =	13 % Proposed	
MovementWA1A2B1B2B3	m		(No Turning)		Prop. of Turning		Rev. Sat.	у	Critical y		Cycle	Proposed]
MovementWA1A2B1B2B3	m		(No Turning)		Prop. of Turning		Rev. Sat.	у	Critical y		-]
A1 A2 B1 B2 B3	m		(No Turning)		Prop. of Turning			5	- · · · · · · · · · · · · · · · · · · ·		-		
A1 A2 B1 B2 B3		m		0/2									
A1 A2 B1 B2 B3		m	ncu/h	0/2									
A1 A2 B1 B2 B3			DCu/II	/0	%	pcu/h	pcu/h			sec.	sec.		
B1 B2 B3	3.50	12.00	1965		55.61	196	1,837	0.100	0.100	14	108		-
B2 B3	3.50		2105			197	2,105					Ī	
B3	3.50		1965			390	1,965	0.192					
	3.50		2105			391	2,105						
	3.50	18.00	2105		100.00	212	1,943	0.109	0.109				
C1	3.50	12.00	1965		100.00	763	1,747	0.414	0.414				
C2	3.50	18.00	2105		100.00	763	1,943						
								Y =	0.622		Ymax =		
											Resv. cap. =	26 %	
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					STAG	EZ	(Hurry C	all)		STA	AGE 3		

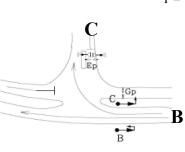
Job No.	H1098	File Name	str-ttr(w)	Page	
Client	Housing Department	Calculated	BC	Date	19-Feb-14
Subject	Signal Calculation of ShungTung Road with Tat Tung Road (East) (J5)	Checked		Date	
	(Existing Traffic Flow 2014)	Drg. Ref.		Cal. Rev.	

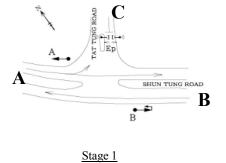
Movement	Width	Radius	Sat. Flow	Grad.	Actual Flow	,	Rev. Sat.	у	Critical y	Time Lost	Cycle	Proposed
			(No Turning)		Prop. of Turning	Flow				L	Time	Green Time
					Vehicles							
	m	m	pcu/h	%	%	pcu/h	pcu/h			sec.	sec.	sec.
A1	3.50	12.00	1965		100.00	564	1,747	0.323	0.323	37	118	
A2	3.50		2105			294	2,105	0.140				
B1	3.50		1965			265	1,965	0.130				
B2	3.50		2105			265	2,105					
B3	3.50	18.00	2105		100.00	204	1,554	0.131	0.131			
C1	3.50	12.00	1965		100.00	130	1,747	0.074				
C2	3.50	18.00	2105		100.00	210	1,943	0.108				
								Y =	0.454		Ymax =	0.69

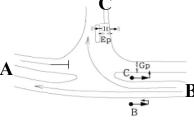
Resv. cap. = 36 %

PM Peak

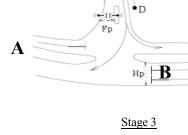
Movement	Width	Radius	Sat. Flow	Grad.	Actual Flow		Rev. Sat.	у	Critical y	Time Lost	Cycle	Proposed
			(No Turning)		Prop. of Turning	Flow		-		L	Time	Green Time
					Vehicles							
	m	m	pcu/h	%	%	pcu/h	pcu/h			sec.	sec.	sec.
Al	3.50	12.00	1965		100.00	502	1,747	0.287	0.287	37	118	
A2	3.50		2105			202	2,105	0.096				
B1	3.50		1965			185	1,965	0.091				
B2	3.50		2105			185	2,105					
B3	3.50	18.00	2105		100.00	180	1,554	0.116	0.116			
C1	3.50	12.00	1965		100.00	90	1,747	0.052				
C2	3.50	18.00	2105		100.00	130	1,943	0.067				
								Y =	0.403		Ymax =	0.69







Stage 2



С

Resv. cap. =

53 %

B

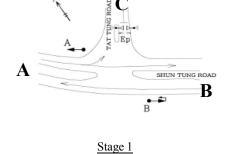
Job No.	H1098	File Name	str-ttr(w)	Page	
Client	Housing Department	Calculated	BC	Date	19-Feb-14
Subject	Signal Calculation of ShungTung Road with Tat Tung Road (East) (J5)	Checked		Date	
	(Forcasting Traffic flow 2024 with development)	Drg. Ref.		Cal. Rev.	

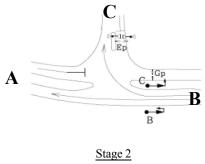
Movement	Width	Radius	Sat. Flow	Grad.	Actual Flow		Rev. Sat.	у	Critical y	Time Lost	Cycle	Proposed
			(No Turning)		Prop. of Turning	Flow				L	Time	Green Time
					Vehicles							
	m	m	pcu/h	%	%	pcu/h	pcu/h			sec.	sec.	sec.
A1	3.50	12.00	1965		100.00	647	1,747	0.370	0.370	37	118	
A2	3.50		2105			435	2,105	0.207				
B1	3.50		1965			445	1,965	0.219				
B2	3.50		2105			445	2,105					
B3	3.50	18.00	2105		100.00	743	1,943	0.382	0.382			
C1	3.50	12.00	1965		100.00	101	1,747	0.058				
C2	3.50	18.00	2105		100.00	176	1,943	0.091				
								Y =	0.753		Ymax =	0.69

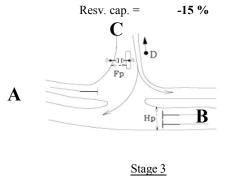
Resv. cap. = -18 %

Movement	Width	Radius	Sat. Flow	Grad.	Actual Flow	,	Rev. Sat.	у	Critical y	Time Lost	Cycle	Proposed
			(No Turning)		Prop. of Turning	Flow				L	Time	Green Time
					Vehicles							
	m	m	pcu/h	%	%	pcu/h	pcu/h			sec.	sec.	sec.
Al	3.50	12.00	1965		100.00	719	1,747	0.412	0.412	37	118	
A2	3.50		2105			284	2,105	0.135				
B1	3.50		1965			328	1,965	0.161				
B2	3.50		2105			329	2,105					
B3	3.50	18.00	2105		100.00	615	1,943	0.317	0.317			
C1	3.50	12.00	1965		100.00	125	1,747	0.072				
C2	3.50	18.00	2105		100.00	233	1,943	0.120				
					-			Y =	0.728		Ymax =	0.69







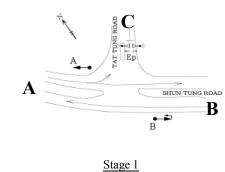


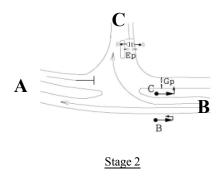
Job No.	H1098	File Name	str-ttr(w)	Page	
Client	Housing Department	Calculated	BC	Date	20-Aug-14
Subject	Signal Calculation of ShungTung Road with Tat Tung Road (East) (J5)	Checked		Date	
	(Forcasting Traffic flow 2019 with development)	Drg. Ref.		Cal. Rev.	

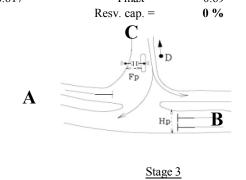
Movement	Width	Radius	Sat. Flow	Grad.	Actual Flow		Rev. Sat.	у	Critical y	Time Lost	Cycle	Proposed
			(No Turning)		Prop. of Turning	Flow				L	Time	Green Time
					Vehicles							
	m	m	pcu/h	%	%	pcu/h	pcu/h			sec.	sec.	sec.
A1	3.50	12.00	1965		100.00	545	1,747	0.312	0.312	37	118	
A2	3.50		2105			367	2,105	0.174				
B1	3.50		1965			375	1,965	0.184				
B2	3.50		2105			375	2,105					
B3	3.50	18.00	2105		100.00	631	1,943	0.325	0.325			
C1	3.50	12.00	1965		100.00	89	1,747	0.051				
C2	3.50	18.00	2105		100.00	148	1,943	0.076				
								Y =	0.637		Ymax =	0.69

Resv. cap. = -3 %

Movement	Width	Radius	Sat. Flow	Grad.	Actual Flow	7	Rev. Sat.	у	Critical y	Time Lost	Cycle	Proposed
			(No Turning)		Prop. of Turning	Flow				L	Time	Green Time
					Vehicles							
	m	m	pcu/h	%	%	pcu/h	pcu/h			sec.	sec.	sec.
Al	3.50	12.00	1965		100.00	606	1,747	0.347	0.347	37	118	
A2	3.50		2105			240	2,105	0.114				
B1	3.50		1965			276	1,965	0.136				
B2	3.50		2105			277	2,105					
B3	3.50	18.00	2105		100.00	524	1,943	0.270	0.270			
C1	3.50	12.00	1965		100.00	109	1,747	0.062				
C2	3.50	18.00	2105		100.00	196	1,943	0.101				
								Y =	0.617		Ymax =	0.69







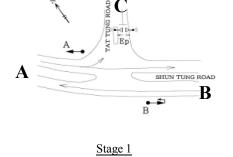
Job No.	H1098	File Name	str-ttr(w)	Page	
Client	Housing Department	Calculated	BC	Date	19-Feb-14
Subject	Signal Calculation of ShungTung Road with Tat Tung Road (East) (J5)	Checked		Date	
	(Forcasting Traffic flow 2024 with development) With junction improvement	Drg. Ref.		Cal. Rev.	

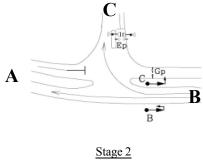
Movement	Width	Radius	Sat. Flow	Grad.	Actual Flow		Rev. Sat.	у	Critical y	Time Lost	Cycle	Proposed
			(No Turning)		Prop. of Turning	Flow				L	Time	Green Time
					Vehicles							
	m	m	pcu/h	%	%	pcu/h	pcu/h			sec.	sec.	sec.
A1	3.50	12.00	1965		100.00	541	1,747	0.283	0.283	37	118	
A2	3.50	18.00	2105		19.59	541	2,071					
B1	3.50		1965			544	1,965	0.274	0.274			
B2	3.50	22.00	2105		36.40	544	2,054					
B3	3.50	18.00	2105		100.00	545	1,943					
C1	3.50	12.00	1965		100.00	101	1,747	0.058				
C2	3.50	18.00	2105		100.00	176	1,943	0.091				
								Y =	0.557		Ymax =	0.69

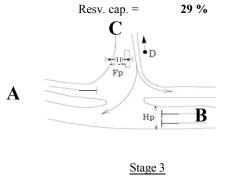
Resv. cap. = 11 %

Movement	Width	Radius	Sat. Flow	Grad.	Actual Flow	/	Rev. Sat.	у	Critical y	Time Lost	Cycle	Proposed
			(No Turning)		Prop. of Turning	Flow				L	Time	Green Time
					Vehicles							
	m	m	pcu/h	%	%	pcu/h	pcu/h			sec.	sec.	sec.
A1	3.50	12.00	1965		100.00	501	1,747	0.265	0.265	37	118	
A2	3.50	18.00	2105		43.43	502	2,031					
B1	3.50		1965			425	1,965	0.214	0.214			
B2	3.50	22.00	2105		45.41	425	2,042					
B3	3.50	18.00	2105		100.00	425	1,943					
C1	3.50	12.00	1965		100.00	125	1,747	0.072				
C2	3.50	18.00	2105		100.00	233	1,943	0.120				
								Y =	0.480		Ymax =	0.69









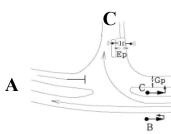
Job No.	H1098	File Name	str-ttr(w)	Page	
Client	Housing Department	Calculated	BC	Date	19-Feb-14
Subject	Signal Calculation of ShungTung Road with Tat Tung Road (East) (J5)	Checked		Date	
	(Forcasting Traffic flow 2024)	Drg. Ref.		Cal. Rev.	

Movement	Width	Radius	Sat. Flow	Grad.	Actual Flow		Rev. Sat.	у	Critical y	Time Lost	Cycle	Proposed
			(No Turning)		Prop. of Turning	Flow				L	Time	Green Time
					Vehicles							
	m	m	pcu/h	%	%	pcu/h	pcu/h			sec.	sec.	sec.
A1	3.50	12.00	1965		100.00	647	1,747	0.370	0.370	37	118	
A2	3.50		2105			435	2,105	0.207				
B1	3.50		1965			445	1,965	0.219				
B2	3.50		2105			445	2,105					
B3	3.50	18.00	2105		100.00	709	1,943	0.365	0.365			
C1	3.50	12.00	1965		100.00	78	1,747	0.045				
C2	3.50	18.00	2105		100.00	176	1,943	0.091				
								Y =	0.735		Ymax =	0.69

Resv. cap. = -16 %

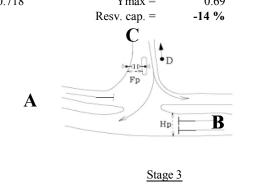
PM Peak

Movement	Width	Radius	Sat. Flow	Grad.	Actual Flow	,	Rev. Sat.	у	Critical y	Time Lost	Cycle	Proposed
			(No Turning)		Prop. of Turning	Flow				L	Time	Green Time
					Vehicles							
	m	m	pcu/h	%	%	pcu/h	pcu/h			sec.	sec.	sec.
Al	3.50	12.00	1965		100.00	719	1,747	0.412	0.412	37	118	
A2	3.50		2105			284	2,105	0.135				
B1	3.50		1965			328	1,965	0.161				
B2	3.50		2105			329	2,105					
B3	3.50	18.00	2105		100.00	595	1,943	0.306	0.306			
C1	3.50	12.00	1965		100.00	103	1,747	0.059				
C2	3.50	18.00	2105		100.00	233	1,943	0.120				
								Y =	0.718		Ymax =	0.69



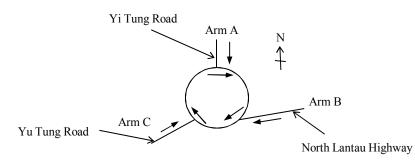
Stage 2

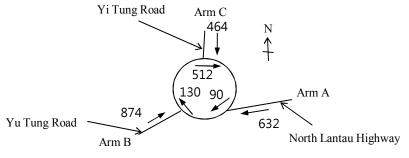
B



A Stage 1

Job No.	H1098	File Name	ytr-ytr-nlh-r	Page	1 of 2
Client	Housing Department	Calculated	BC	Date	19-Feb-14
Subject	Signal Calculation of Yu Tung Road, Yi Tung Road and North Lantau Highway (J6)	Checked			
	(Existing Traffic Condition 2014)	Drg. Ref.		Cal. Rev.	



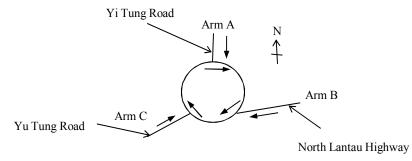


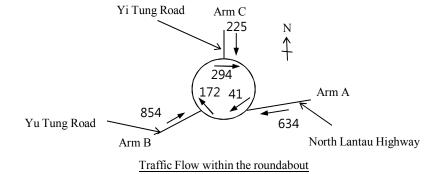
Junction Layout

Traffic Flow within the roundabout

-	-		Arm A	Arm B	Arm C
e	= entry width (m)	=	15	14	10
v	= approach half width (m)	=	8	7.5	8
L	= effective length of flare (m)	=	30	20	25
S	= sharpness of flare	=	0.37	0.52	0.13
φ	= entry angle (°)	=	30	20	40
D	= inscribed circle diameter (m)	=	80	80	80
r	= entry radius (m)	=	20	15	15
Calcı	ulation:		Arm A	Arm B	Arm C
q_c	= circulating flow across entry	=	130	512	90
Κ	= 1-0.00347(f-30)-0.978(1/r-0.05)	=	1.00	1.02	0.95
x ₂	= v+((e-v)/(1+2s))	=	12.01	10.69	9.59
Μ	$= \exp((D-60)/10)$	=	7.39	7.39	7.39
F	$= 303x_2$	=	3638.31	3237.94	2906.48
t _D	= 1+0.5/(1+M)	=	1.06	1.06	1.06
f_c	$= 0.21t_{\rm D}(1+0.2x_2)$	=	0.76	0.70	0.65
$Q_{\rm E}$	$= K(F-f_cq_c)$	=	3540	2934	2703
DFC	= traffic flow into the roundabout/ Q_E	=	0.25	0.16	0.23

Job No.	H1098	File Name	ytr-ytr-nlh-r	Page	2 of 2
Client	Housing Department	Calculated	BC	Date	19-Feb-14
Subject	Signal Calculation of Yu Tung Road, Yi Tung Road and North Lantau Highway (J6)	Checked			
	(Existing Traffic Condition 2014)	Drg. Ref.		Cal. Rev.	

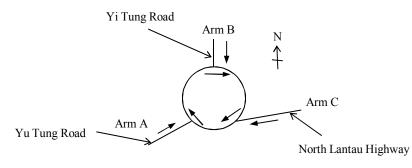


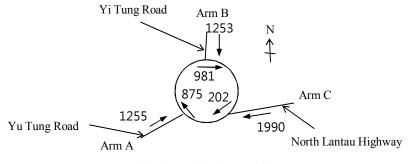


Junction Layout

		Arm A	Arm B	Arm C
e = entry width (m)	=	15	14	10
v = approach half width (m)	=	8	7.5	8
L = effective length of flare (m)	=	30	20	25
s = sharpness of flare	=	0.37	0.52	0.13
ϕ = entry angle (°)	=	30	20	40
D = inscribed circle diameter (m)	=	80	80	80
r = entry radius (m)	=	20	15	15
Calculation:		Arm A	Arm B	Arm C
q_c = circulating flow across entry	=	172	294	41
K = 1-0.00347(f-30)-0.978(1/r-0.05)	=	1.00	1.02	0.95
$x_2 = v+((e-v)/(1+2s))$	=	12.01	10.69	9.59
$M = \exp((D-60)/10)$	=	7.39	7.39	7.39
$F = 303x_2$	=	3638.31	3237.94	2906.48
$t_D = 1+0.5/(1+M)$	=	1.06	1.06	1.06
$f_c = 0.21t_D(1+0.2x_2)$	=	0.76	0.70	0.65
$Q_E = K(F-f_cq_c)$	=	3508	3089	2733
DFC = traffic flow into the roundabout/ Q_E	=	0.24	0.07	0.23

Job No.	H1098	File Name	ytr-ytr-nlh-r	Page	1 of 2
Client	Housing Department	Calculated	BC	Date	19-Feb-14
Subject	Signal Calculation of Yu Tung Road, Yi Tung Road and North Lantau Highway (J6)	Checked			
	(Forcasting Traffic flow 2024 with development)	Drg. Ref.		Cal. Rev.	



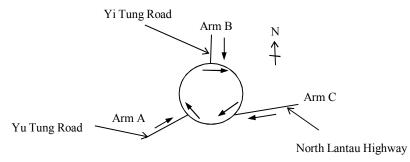


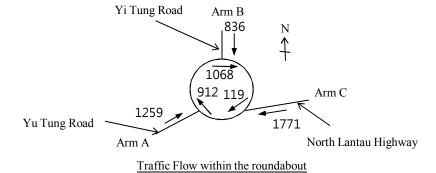
Junction Layout

Traffic Flow within the roundabout

e = entry width (m) = 15 14	10
$c = c_{\text{III}} y \text{ with (III)} = 13 14$	10
v = approach half width (m) = 8 7.5	8
L = effective length of flare (m) = 30 20	25
s = sharpness of flare = 0.37 0.52	0.13
$\phi = \text{entry angle } (^{\circ}) = 30 \qquad 20$	40
D = inscribed circle diameter (m) = 80 80	80
r = entry radius (m) = 20 15	15
Calculation: Arm A Arm B	Arm C
$q_c = circulating flow across entry = 875 981$	202
$K = 1-0.00347(f-30)-0.978(1/r-0.05) = 1.00 \qquad 1.02$	0.95
$x_2 = v+((e-v)/(1+2s)) = 12.01 10.69$	9.59
$M = \exp((D-60)/10) = 7.39 7.39$	7.39
$F = 303x_2 = 3638.31 3237.94$	2906.48
$t_D = 1+0.5/(1+M) = 1.06$ 1.06	1.06
$f_c = 0.21t_D(1+0.2x_2) = 0.76 \qquad 0.70$	0.65
$Q_E = K(F-f_cq_c) = 2976 2600$	2634
DFC = traffic flow into the roundabout/ Q_E = 0.42 0.48	0.76

Job No.	H1098	File Name	ytr-ytr-nlh-r	Page	2 of 2
Client	Housing Department	Calculated	BC	Date	19-Feb-14
Subject	Signal Calculation of Yu Tung Road, Yi Tung Road and North Lantau Highway (J6)	Checked			
	(Forcasting Traffic flow 2024 with development)	Drg. Ref.		Cal. Rev.	

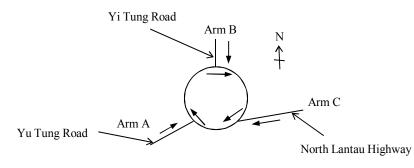


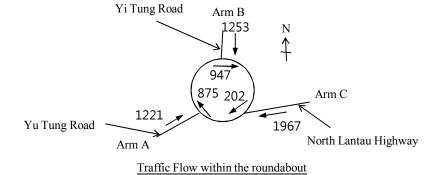


Junction Layout

v= approach half width (m)=87.58L= effective length of flare (m)=302025s= sharpness of flare= 0.37 0.52 0.1 ϕ = entry angle (°)= 30 2040	n B Arm C	Arm A			
L=effective length of flare (m)=302023s=sharpness of flare= 0.37 0.52 0.1 ϕ =entry angle (°)= 30 20 40	4 10	15	=	e = entry width (m)	e
s=sharpness of flare=0.370.520.1 ϕ =entry angle (°)=302040	5 8	8	=	v = approach half width (m)	v
$\phi = \text{entry angle } (^{\circ}) = 30 20 40$	0 25	30	=	L = effective length of flare (m)	L
	52 0.13	0.37	=	s = sharpness of flare	S
D = inscribed circle diameter (m) = 80 80 80	0 40	30	=	$\phi = \text{entry angle } (^{\circ})$	ø
	0 80	80	=	D = inscribed circle diameter (m)	D
$\mathbf{r} = \text{entry radius (m)} = 20 15 13$	5 15	20	=	r = entry radius (m)	r
Calculation: Arm A Arm B Arm	n B Arm C	Arm A		Calculation:	Calc
$q_c = circulating flow across entry = 912$ 1068 11	58 119	912	=	q_c = circulating flow across entry	q_c
$K = 1-0.00347(f-30)-0.978(1/r-0.05) = 1.00 \qquad 1.02 \qquad 0.9$	0.95	1.00	=	K = 1-0.00347(f-30)-0.978(1/r-0.05)	Κ
$x_2 = v+((e-v)/(1+2s)) = 12.01 10.69 9.5$	69 9.59	12.01	=	$x_2 = v+((e-v)/(1+2s))$	x ₂
$M = \exp((D-60)/10) = 7.39 7.39 7.39$	39 7.39	7.39	=	$M = \exp((D-60)/10)$	М
$F = 303x_2 = 3638.31 3237.94 2906$	2906.48	3638.31	=	$F = 303x_2$	F
$t_D = 1+0.5/(1+M) = 1.06 1.06 1.06$	1.06	1.06	=	$t_D = 1+0.5/(1+M)$	t _D
$f_c = 0.21t_D(1+0.2x_2) = 0.76 0.70 0.60$	0.65	0.76	=	$f_c = 0.21t_D(1+0.2x_2)$	f_c
$Q_E = K(F-f_cq_c) = 2948 2538 268$	38 2685	2948	=	$Q_E = K(F-f_cq_c)$	Q_E
DFC = traffic flow into the roundabout/ Q_E = 0.43 0.33 0.66	0.66	0.43	=	DFC = traffic flow into the roundabout/ Q_E	DFC

Job No.	H1098	File Name	ytr-ytr-nlh-r	Page	1 of 2
Client	Housing Department	Calculated	BC	Date	19-Feb-14
Subject	Signal Calculation of Yu Tung Road, Yi Tung Road and North Lantau Highway (J6)	Checked			
	(Forcasting Traffic flow 2024)	Drg. Ref.		Cal. Rev.	

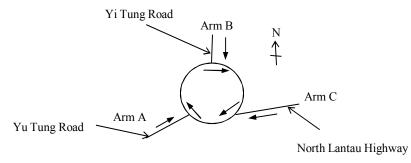


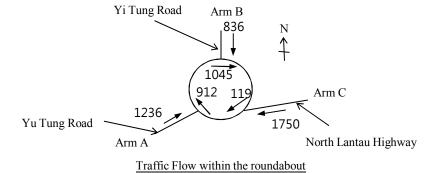


Junction Layout

Desi	gn Parameters:				
			Arm A	Arm B	Arm C
e	= entry width (m)	=	15	14	10
v	= approach half width (m)	=	8	7.5	8
L	= effective length of flare (m)	=	30	20	25
S	= sharpness of flare	=	0.37	0.52	0.13
ø	= entry angle (°)	=	30	20	40
D	= inscribed circle diameter (m)	=	80	80	80
r	= entry radius (m)	=	20	15	15
Calc	ulation:		Arm A	Arm B	Arm C
q_c	= circulating flow across entry	=	875	847	202
Κ	= 1-0.00347(f-30)-0.978(1/r-0.05)	=	1.00	1.02	0.95
x ₂	= v+((e-v)/(1+2s))	=	12.01	10.69	9.59
М	$= \exp((D-60)/10)$	=	7.39	7.39	7.39
F	$= 303x_2$	=	3638.31	3237.94	2906.48
t _D	= 1+0.5/(1+M)	=	1.06	1.06	1.06
f_c	$= 0.21t_{\rm D}(1+0.2x_2)$	=	0.76	0.70	0.65
$Q_{\rm E}$	$= K(F-f_cq_c)$	=	2976	2695	2634
DFC	= traffic flow into the roundabout/ Q_E	=	0.41	0.46	0.75

Job No.	H1098	File Name	ytr-ytr-nlh-r	Page	2 of 2
Client	Housing Department	Calculated	BC	Date	19-Feb-14
Subject	Signal Calculation of Yu Tung Road, Yi Tung Road and North Lantau Highway (J6)	Checked			
	(Forcasting Traffic flow 2024)	Drg. Ref.		Cal. Rev.	





Junction Layout

v= approach half width (m)=87.58L= effective length of flare (m)=302025s= sharpness of flare= 0.37 0.52 0.1 ϕ = entry angle (°)=302040	Arm A Arm B Arm	Arm				
L=effective length of flare (m)=302023s=sharpness of flare= 0.37 0.52 0.1 ϕ =entry angle (°)= 30 20 40	= 15 14 10	= 15	=	ry width (m)	= entry wid	e
s=sharpness of flare=0.370.520.1 ϕ =entry angle (°)=302040	= 8 7.5 8	= 8	=	proach half width (m)	= approach	v
$\phi = \text{entry angle } (^{\circ}) = 30 20 40$	= 30 20 25	= 30	=	ective length of flare (m)	= effective	L
	= 0.37 0.52 0.13	= 0.37	=	arpness of flare	= sharpnes	S
D = inscribed circle diameter (m) = 80 80 80	= 30 20 40	= 30	=	ry angle (°)	= entry ang	ø
	= 80 80 80	= 80	=	cribed circle diameter (m)	= inscribed	D
$\mathbf{r} = \text{entry radius (m)} = 20 15 15$	= 20 15 15	= 20	=	ry radius (m)	= entry rad	r
Calculation: Arm A Arm B Arm	Arm A Arm B Arm	Arm			alculation:	Cal
$q_c = circulating flow across entry = 912 1045 11$	= 912 1045 119	= 912	=	culating flow across entry	= circulatir	q_c
$K = 1-0.00347(f-30)-0.978(1/r-0.05) = 1.00 \qquad 1.02 \qquad 0.9$	= 1.00 1.02 0.93	= 1.00	=).00347(f-30)-0.978(1/r-0.05)	= 1-0.0034	Κ
$x_2 = v+((e-v)/(1+2s)) = 12.01 10.69 9.5$	= 12.01 10.69 9.59	= 12.0	=	((e-v)/(1+2s))	$= v + ((e-v)/e^{-v})/e^{-v}$	\mathbf{x}_2
$M = \exp((D-60)/10) = 7.39 7.39 7.39$	= 7.39 7.39 7.39	= 7.39	=	p((D-60)/10)	$= \exp((D-6)$	Μ
$F = 303x_2 = 3638.31 3237.94 2906$	= 3638.31 3237.94 2906.	= 3638.	=	3x ₂	$= 303x_2$	F
$t_D = 1+0.5/(1+M) = 1.06 1.06 1.06$	= 1.06 1.06 1.00	= 1.06	=	0.5/(1+M)	= 1+0.5/(1-	t _D
$f_c = 0.21t_D(1+0.2x_2) = 0.76 0.70 0.60$	= 0.76 0.70 0.65	= 0.76	=	$21t_{\rm D}(1+0.2x_2)$	$= 0.21t_{\rm D}(1+$	f_c
$Q_E = K(F-f_cq_c) = 2948 2555 268$	= 2948 2555 268	= 2948	=	F-f _c q _c)	$_{\rm E}$ = K(F-f _c q _c)	Q_E
DFC = traffic flow into the roundabout/ Q_E = 0.42 0.33 0.6	= 0.42 0.33 0.63	= 0.42	=	ffic flow into the roundabout/ Q_E	FC = traffic flc	DFC



Hong Kong Housing Authority

CB20130134 HKHA Term Engineering Consultancy Services 2013-2015

APPENDIX C

ESTIMATION OF TRAFFIC SPLIT

Long distance AM Peak Bus services

Route No.	Destination	Operating hours	Frequency of busees	Esttimated No. of buses in AM Peak
E31	Tsuen Wan	530	10-20	4
E21A	Homantin	6:10-23:50	12-30	3
E11S	Tain Hau	7:30-7:45	2/AM	2
E21X	Homhum	7:20-7:40 & Eight	3?AM	3
E22S	ТКО	7:35	1/AM	1
E42	Shtain	6:45	2/AM	2
E34	Tin Shui Wai	6:10	2/AM	2

Estimated total no. of long distances buses operating in AM Peal 17

Short distance bus services

Route No.	Destination	Operating hours	Frequency of busees	Esttimated No. of buses in AM Peak
34	Tung Chung	7-10:15	25/day	8
37	Tung Chung north	6:40-0015	5-20 min	2
38	Tung Chung Bus Terminus	5:30:00-0024	2-6 min	10
38x	Tung Chung Bus Terminus	7:30:00-8:30	5-6 min	5

Extimated total no. of short distance buses operating in AM Peal 25

The estimated % of splits are:		
% of long distance =	17/42	40%
% of Short distance =	25/42	60%



Hong Kong Housing Authority

CB20130134 HKHA Term Engineering Consultancy Services 2013-2015

APPENDIX D

ASSUMPTION OF LOT II

TUNG CHUNG TOWN CENTRE DEVELOPMENT

Tung Chung Town Lot No. 11 Intended Land use: Hotel GFA used for the assessment: 50130

Assumed no. of Hotel rooms: 850

(Based on the average size of 56 m2 for a Grade 4/5 hotel with reference to the hotel room assumption given in the "Agreement for CE160/2009 TIA for Proposed Development at Ex-North Point Estate Site)

Assumed Trip Rates as shown below are based on Table 2 of Annex D, Appendix 1 of TPDM Traffic Rates for Non-Residential Development.

		AM Gen	AM Att	PM Gen	PM Att
pcu/hr/guest room	Hotel	0.1329	0.1457	0.129	0.1546
(pcu/hr/100 sqm GFA)	Office	0.1073	0.2452	0.1573	0.1175
(pcu/hr/100 sqm GFA)	Retail	0.2296	0.2434	0.31	0.3563

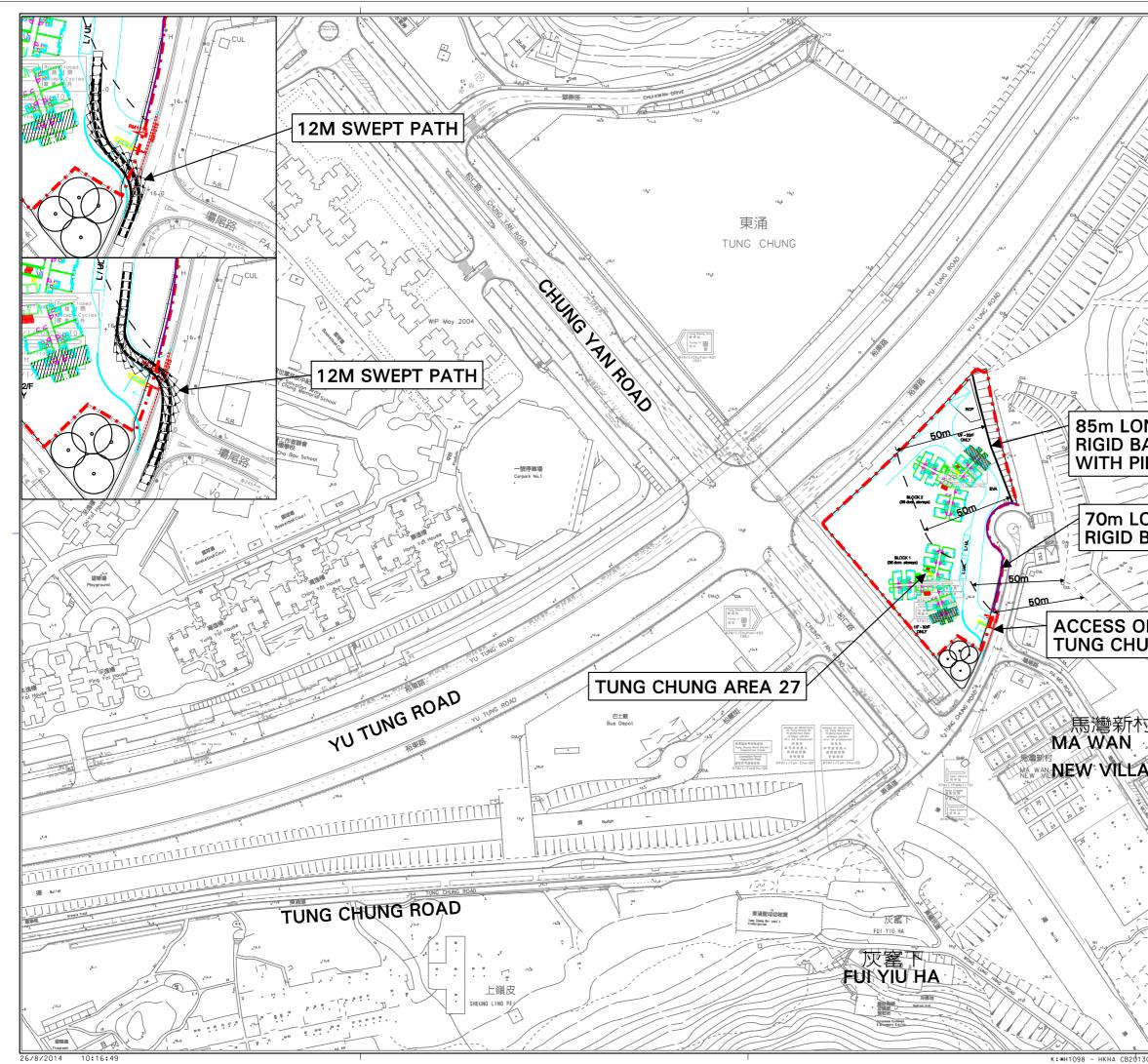
The estimated trips

	AM Gen	AM Att	PM Gen	PM Att	Total AM	Total PAM
Hotel	119	130	115	138	249	254
Office	85	129	79	59	214	138
Retail	115	112	155	179	227	334

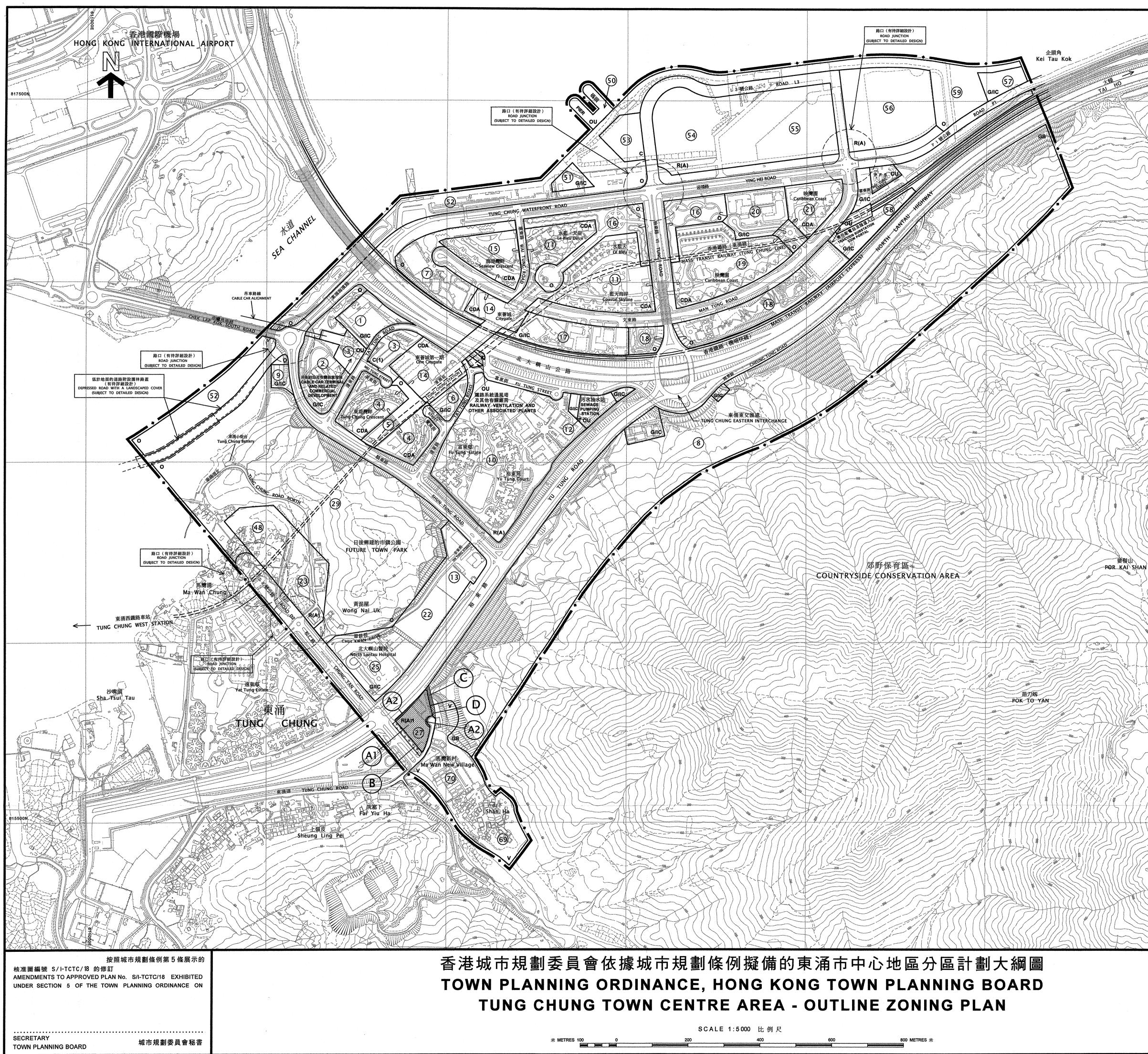
From the results of above analyses, it is decided to adopt hotel as a conservative approach for assessment purpose in this TIA Report.



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,18-0 / (壩尾)	CENTRAL WEST AND ISLANDS REGION	
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	Title	
	VEHICULAR / PEDESTRIAN	
	ACCESS PROPOSAL	
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**** METRES 1 : 1000	FIGURE 2	



Appendix IV of RNTPC Paper No. 11/14

交通

圖例 NOTATION

ZONES		地帶
COMMERCIAL	С	商業
COMPREHENSIVE DEVELOPMENT AREA	CDA	綜合發展區
RESIDENTIAL (GROUP A)	R(A)	住宅(甲類)
VILLAGE TYPE DEVELOPMENT	v	鄉村式發展
GOVERNMENT, INSTITUTION OR COMMUNITY	G/IC	政 府 丶 機 構 或 社 區
OPEN SPACE	0	休憩用地
OTHER SPECIFIED USES	OU	其他指定用途
GREEN BELT	GB	綠化地帶

COMMUNICATIONS

815500

RAILWAY AND STATION	章法 STATION	鐵路及車站
RAILWAY AND STATION (UNDERGROUND)		鐵路及車站(地下)
MAJOR ROAD AND JUNCTION		主要道路及路口
ELEVATED ROAD		高架道路

MISCELLANEOUS		其他
BOUNDARY OF PLANNING SCHEME		規 劃 範 圍 界 線
PLANNING AREA NUMBER	1	規 劃 區 編 號
PETROL FILLING STATION	PFS	加油站

土地用途及面積一覽表 SCHEDULE OF USES AND AREAS

		及百分率 TE AREA & %	田、谷
USES	公頃 HECTARES	% 百分率	用途
		0.05	
COMMERCIAL	2.14	0.85	商業
COMPREHENSIVE DEVELOPMENT AREA	22.98	9.09	綜合發展區
RESIDENTIAL (GROUP A)	31.94	12.63	住宅(甲類)
VILLAGE TYPE DEVELOPMENT	5.46	2.16	鄉村式發展
GOVERNMENT, INSTITUTION OR COMMUNITY	21.24	8.40	政 府 、 機 構 或 社 區
OPEN SPACE	55.70	22.03	休憩用地
OTHER SPECIFIED USES	2.86	1,13	其他指定用途
GREEN BELT	47.15	18.65	綠化地帶
MAJOR ROAD ETC.	63.34	25.06	主要道路等
TOTAL PLANNING SCHEME AREA	252.81	100.00	規劃範圍總面積

夾附的《註釋》屬這份圖則的一部分, 現經修訂並按照城市規劃條例第5條展示。

THE ATTACHED NOTES ALSO FORM PART OF THIS PLAN AND HAVE BEEN AMENDED FOR EXHIBITION UNDER SECTION 5 OF THE TOWN PLANNING ORDINANCE

核准圖編號 S/I-TCTC/18 的修訂 AMENDMENTS TO APPROVED PLAN No. S/I-TCTC/18

AMENDMENTS EXHIBITED UNDER SE OF THE TOWN PLANNING ORDINANC	ΓION 5 按照城市規劃條例第 5 條 展示的修訂
AMENDMENT ITEM A1	修訂項目A1項
AMENDMENT ITEM A2	修訂項目A2項
AMENDMENT ITEM B	《×××××××× <××××××××××××××××××××××××××××
AMENDMENT ITEM C	修訂項目C項
AMENDMENT ITEM D	修訂項目D項
	(參看附表)
(8	EE ATTACHED SCHEDULE)
	規劃署遵照城市規劃委員會指示擬備 PREPARED BY THE PLANNING DEPARTMENT UNDER THE DIRECTION OF THE TOWN PLANNING BOARD

圖則編號 PLAN No.

S/I-TCTC/18C

SCHEDULE OF AMENDMENTS TO THE APPROVED TUNG CHUNG TOWN CENTRE AREA OUTLINE ZONING PLAN NO. S/I-TCTC/18 MADE BY THE TOWN PLANNING BOARD UNDER THE TOWN PLANNING ORDINANCE (Chapter 131)

I. <u>Amendments to Matters shown on the Plan</u>

- Item A1 Rezoning of an area from "Government, Institution or Community" ("G/IC") to "Residential (Group A) 1" ("R(A)1").
- Item A2 Rezoning of two strips of land from area shown as 'Road' to "R(A)1".
- Item B Rezoning of a strip of land from "G/IC" to an area shown as 'Road'.
- Item C Rezoning of a strip of land from "G/IC" to "Green Belt".
- Item D Rezoning of a strip of land from "G/IC" to "Village Type Development".

II. <u>Amendment to the Notes of the Plan</u>

Incorporation of the development restrictions for the "R(A)1" zone with the stipulation of a maximum domestic plot ratio of 6 and a maximum building height of 135 metres above Principal Datum in the Remarks for the zone.

APPROVED-DRAFT TUNG CHUNG TOWN CENTRE AREA OUTLINE ZONING PLAN NO. S/I-TCTC/18C

(Being *a* an *Draft* Approved Plan for the Purposes of the Town Planning Ordinance)

NOTES

(N.B. These form part of the Plan)

- (1) These Notes show the uses or developments on land falling within the boundaries of the Plan which are always permitted and which may be permitted by the Town Planning Board, with or without conditions, on application. Where permission from the Town Planning Board for a use or development is required, the application for such permission should be made in a prescribed form. The application shall be addressed to the Secretary of the Town Planning Board, from whom the prescribed application form may be obtained.
- (2) Any use or development which is always permitted or may be permitted in accordance with these Notes must also conform to any other relevant legislation, the conditions of the Government lease concerned, and any other Government requirements, as may be applicable.
- (3) (a) No action is required to make the existing use of any land or building conform to this Plan until there is a material change of use or the building is redeveloped.
 - (b) Any material change of use or any other development (except minor alteration and/or modification to the development of the land or building in respect of the existing use which is always permitted) or redevelopment must be always permitted in terms of the Plan or, if permission is required, in accordance with the permission granted by the Town Planning Board.
 - (c) For the purposes of subparagraph (a) above, "existing use of any land or building" means -
 - (i) before the publication in the Gazette of the notice of the first statutory plan covering the land or building (hereafter referred as 'the first plan'),
 - a use in existence before the publication of the first plan which has continued since it came into existence; or
 - a use or a change of use approved under the Buildings Ordinance which relates to an existing building; and
 - (ii) after the publication of the first plan,

- a use permitted under a plan which was effected during the effective period of that plan and has continued since it was effected; or
- a use or a change of use approved under the Buildings Ordinance which relates to an existing building and permitted under a plan prevailing at the time when the use or change of use was approved.
- (4) Except as otherwise specified by the Town Planning Board, when a use or material change of use is effected or a development or redevelopment is undertaken, as always permitted in terms of the Plan or in accordance with a permission granted by the Town Planning Board, all permissions granted by the Town Planning Board in respect of the site of the use or material change of use or development or redevelopment shall lapse.
- (5) Road junctions, alignments of roads and railway tracks, and boundaries between zones may be subject to minor adjustments as detailed planning proceeds.
- (6) Temporary uses (expected to be 5 years or less) of any land or building are always permitted as long as they comply with any other relevant legislation, the conditions of the Government lease concerned, and any other Government requirements, and there is no need for these to conform to the zoned use or these Notes. For temporary uses expected to be over 5 years, the uses must conform to the zoned use or these Notes.
- (7) The following uses or developments are always permitted on land falling within the boundaries of the Plan except where the uses or developments are specified in Column 2 of the Notes of individual zones:
 - (a) provision, maintenance or repair of plant nursery, amenity planting, open space, rain shelter, refreshment kiosk, road, bus/public light bus stop or lay-by, cycle track, Mass Transit Railway station entrance, Mass Transit Railway structure below ground level, taxi rank, nullah, public utility pipeline, electricity mast, lamp pole, telephone booth, telecommunications radio base station, automatic teller machine and shrine;
 - (b) geotechnical works, local public works, road works, sewerage works, drainage works, environmental improvement works, marine related facilities, waterworks (excluding works on service reservoir) and such other public works co-ordinated or implemented by Government; and
 - (c) maintenance or repair of watercourse and grave.
- (8) In any area shown as 'Road', all uses or developments except those specified in paragraph (7) above and those specified below require permission from the Town Planning Board:

on-street vehicle park and railway track.

(9) Unless otherwise specified, all building, engineering and other operations incidental to and all uses directly related and ancillary to the permitted uses and developments within the same zone are always permitted and no separate planning permission is required.

(10) In these Notes,

"existing building" means a building, including a structure, which is physically existing and is in compliance with any relevant legislation and the conditions of the Government lease concerned.

"New Territories Exempted House" means a domestic building other than a guesthouse or a hotel; or a building primarily used for habitation, other than a guesthouse or a hotel, the ground floor of which may be used as 'Shop and Services' or 'Eating Place', the building works in respect of which are exempted by a certificate of exemption under Part III of the Buildings Ordinance (Application to the New Territories) Ordinance (Cap. 121).

APPROVEDDRAFT TUNG CHUNG TOWN CENTRE AREA OUTLINE ZONING PLAN NO. S/I-TCTC/18C

Schedule of Uses

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RESIDENTIAL (GROUP A)	6
VILLAGE TYPE DEVELOPMENT	8
GOVERNMENT, INSTITUTION OR COMMUNITY	10
OPEN SPACE	11
OTHER SPECIFIED USES	12
GREEN BELT	17

COMMERCIAL

Ambulance Depot Commercial Bathhouse/Massage Establishment Eating Place **Educational Institution** Exhibition or Convention Hall Government Use (not elsewhere specified) Hotel Information Technology and Telecommunications Industries Institutional Use (not elsewhere specified) Library Off-course Betting Centre Office Place of Entertainment Place of Recreation, Sports or Culture Private Club Public Clinic **Public Convenience** Public Transport Terminus or Station Public Utility Installation Public Vehicle Park (excluding container vehicle) **Recyclable Collection Centre Religious Institution** School Shop and Services Social Welfare Facility **Training Centre** Utility Installation for Private Project Wholesale Trade

Column 1

Uses always permitted

Column 2 Uses that may be permitted with or without conditions on application to the Town Planning Board

Broadcasting, Television and/or Film Studio Flat Government Refuse Collection Point Mass Transit Railway Vent Shaft and/or Other Structure above Ground Level other than Entrances Petrol Filling Station Residential Institution

Planning Intention

This zone is intended primarily for commercial developments, which may include uses such as office, shop and services, place of entertainment, eating place and hotel, functioning as the commercial centre in the Town Centre.

COMMERCIAL (Cont'd)

<u>Remarks</u>

- (a) On land designated "Commercial (1)", no new development, or addition, alteration and/or modification to or redevelopment of an existing building shall result in a total development and/or redevelopment in excess of a maximum plot ratio of 5 and a maximum building height of 70 metres above Principal Datum, or the plot ratio and height of the existing building, whichever is the greater.
- (b) In determining the maximum plot ratio for the purposes of paragraph (a) above,
 - (i) any floor space that is constructed or intended for use solely as car park, loading/unloading bay, plant room and caretaker's office, provided such uses and facilities are ancillary and directly related to the development or redevelopment, may be disregarded; and
 - (ii) any floor space that is constructed or intended for use solely as public transport terminus shall be included for calculation.
- (c) Based on the individual merits of a development or redevelopment proposal, minor relaxation of the plot ratio and/or building height restrictions stated in paragraph (a) above may be considered by the Town Planning Board on application under section 16 of the Town Planning Ordinance.

COMPREHENSIVE DEVELOPMENT AREA

Column 1 Uses always permitted	Column 2 Uses that may be permitted with or without conditions on application to the Town Planning Board
	Commercial Bathhouse/Massage Establishment Eating Place Educational Institution Exhibition or Convention Hall Flat Government Refuse Collection Point Government Use (not elsewhere specified) Hotel House Information Technology and Telecommunications Industries Institutional Use (not elsewhere specified) Library Market Mass Transit Railway Vent Shaft and/or Other Structure above Ground Level other than Entrances Off-course Betting Centre Office Petrol Filling Station Place of Entertainment Place of Recreation, Sports or Culture Private Club Public Convenience Public Transport Terminus or Station Public Utility Installation Public Vehicle Park (excluding container vehicle) Railway Station Recyclable Collection Centre Religious Institution Residential Institution School Shop and Services Social Welfare Facility Training Centre Utility Installation for Private Project

COMPREHENSIVE DEVELOPMENT AREA (Cont'd)

Planning Intention

This zone is intended for comprehensive development/redevelopment of the area for residential and commercial uses with the provision of open space and other supporting facilities. The commercial developments may include uses such as office, shop and services, place of entertainment, eating place and hotel, functioning as the commercial centre in the Town Centre. The zoning is to facilitate appropriate planning control over the development mix, scale, design and layout of development, taking account of various environmental, traffic, infrastructure and other constraints.

Remarks

- (a) Pursuant to section 4A(2) of the Town Planning Ordinance, and except as otherwise expressly provided that it is not required by the Town Planning Board, an applicant for permission for development on land designated "Comprehensive Development Area" shall prepare a Master Layout Plan for the approval of the Town Planning Board and include therein the following information:
 - (i) the area of the proposed land uses, the nature, position, dimensions, and heights of all buildings to be erected in the area;
 - (ii) the proposed total site area and gross floor area (GFA) for various uses, total number of flats and flat size, where applicable;
 - (iii) the details and extent of Government, institution or community (GIC) and recreational facilities, public transport and parking facilities, and open space to be provided within the area;
 - (iv) the alignment, widths and levels of any roads proposed to be constructed within the area;
 - (v) the landscape and urban design proposals within the area;
 - (vi) programmes of development in detail;
 - (vii) an environmental assessment report to examine any possible environmental problems that may be caused to or by the proposed development during and after construction and the proposed mitigation measures to tackle them;

COMPREHENSIVE DEVELOPMENT AREA (Cont'd)

Remarks (Cont'd)

- (viii) a drainage and sewerage impact assessment report to examine any possible drainage and sewerage problems that may be caused by the proposed development and the proposed mitigation measures to tackle them;
- (ix) a traffic impact assessment report to examine any possible traffic problems that may be caused by the proposed development and the proposed mitigation measures to tackle them; and
- (x) such other information as may be required by the Town Planning Board.
- (b) The Master Layout Plan should be supported by an explanatory statement which contains an adequate explanation of the development proposal, including such information as land tenure, relevant lease conditions, existing conditions of the site, the character of the site in relation to the surrounding areas, principles of layout design, major development parameters, design population, types of GIC facilities, and recreational and open space facilities.
- (c) No new development, or addition, alteration and/or modification to or redevelopment of an existing building shall result in a total development and/or redevelopment in excess of a maximum GFA of 750,120 m² for residential use and a maximum GFA of 93,000 m² for commercial use including hotel, or the GFA of the existing building, whichever is the greater.
- (d) In determining the maximum GFA for the purposes of paragraph (c) above, any floor space that is constructed or intended for use solely as car park, loading/unloading bay, plant room, caretaker's office and caretaker's quarters, or recreational facilities for the use and benefit of all the owners or occupiers of the domestic building or domestic part of the building, provided such uses and facilities are ancillary and directly related to the development or redevelopment, may be disregarded. Any floor space that is constructed or intended for use solely as public transport facilities, railway station development or GIC facilities, as required by the Government, may also be disregarded.
- (e) Based on the individual merits of a development or redevelopment proposal, minor relaxation of the GFA restriction stated in paragraph (c) above may be considered by the Town Planning Board on application under section 16 of the Town Planning Ordinance.

RESIDENTIAL (GROUP A)

Column 1 Uses always permitted	Column 2 Uses that may be permitted with or without conditions on application to the Town Planning Board
Ambulance Depot Flat Government Use (not elsewhere specified) House Library Market Place of Recreation, Sports or Culture Public Clinic Public Vehicle Park (for cycles only) Public Transport Terminus or Station (excluding open-air terminus or station) Residential Institution School (in free-standing purpose-designed building only) Social Welfare Facility Utility Installation for Private Project	Commercial Bathhouse/Massage Establishment Eating Place Educational Institution Exhibition or Convention Hall Government Refuse Collection Point Hospital Hotel Institutional Use (not elsewhere specified) Mass Transit Railway Vent Shaft and/or Other Structure above Ground Level other than Entrances Office Petrol Filling Station Place of Entertainment Private Club Public Convenience Public Transport Terminus or Station (not elsewhere specified) Public Utility Installation Public Vehicle Park (not elsewhere specified, excluding container vehicle) Religious Institution School (not elsewhere specified) Shop and Services Training Centre

In addition, the following uses are always permitted (a) on the lowest three floors of a building, taken to include basements; or (b) in the purpose-designed non-residential portion of an existing building, both excluding floors containing wholly or mainly car parking, loading/unloading bays and/or plant room:

Eating Place Educational Institution Institutional Use (not elsewhere specified) Off-course Betting Centre Office Place of Entertainment Private Club Public Convenience Recyclable Collection Centre School Shop and Services Training Centre

RESIDENTIAL (GROUP A) (Cont'd)

Planning Intention

This zone is intended primarily for high-density residential developments. Commercial uses are always permitted on the lowest three floors of a building or in the purpose-designed non-residential portion of an existing building.

<u>Remarks</u>

- (a) No new development, or addition, alteration and/or modification to or redevelopment of an existing building shall result in a total development and/or redevelopment in excess of a maximum domestic plot ratio of 5, or the plot ratio of the existing building, whichever is the greater.
- (b) On land designated "R(A)1", no new development, or addition, alteration and/or modification to or redevelopment of an existing building shall result in a total development and/or redevelopment in excess of a maximum domestic plot ratio of 6 and a maximum building height of 135 metres above Principal Datum, or the plot ratio and height of the existing building, whichever is the greater.
- (c) In determining the relevant maximum plot ratio for the purposes of paragraph (a) above, area of any part of the site that is occupied or intended to be occupied by free-standing purpose-designed buildings (including both developed on ground and on podium level) solely for accommodating Government, institution or community facilities including school(s) as may be required by Government shall be deducted in calculating the relevant site area.
- (d) In determining the relevant maximum plot ratio for the purposes of paragraphs (a) and (b) above, any floor space that is constructed or intended for use solely as car park, loading/unloading bay, plant room and caretaker's office, or caretaker's quarters and recreational facilities for the use and benefit of all the owners or occupiers of the domestic building or domestic part of the building, provided such uses and facilities are ancillary and directly related to the development or redevelopment, may be disregarded.
- (e) Based on the individual merits of a development or redevelopment proposal, minor relaxation of the plot ratio *and/or building height* restriction stated in paragraphs (a) *and* (b) above may be considered by the Town Planning Board on application under section 16 of the Town Planning Ordinance.

VILLAGE TYPE DEVELOPMENT

Column 1 Uses always permitted	Column 2 Uses that may be permitted with or without conditions on application to the Town Planning Board
Agricultural Use Government Use (Police Reporting Centre, Post Office only) House (New Territories Exempted House only) On-Farm Domestic Structure Public Vehicle Park (for cycles only) Religious Institution (Ancestral Hall only) Rural Committee/Village Office	Eating Place Government Refuse Collection Point Government Use (not elsewhere specified) # House (not elsewhere specified) # Market Petrol Filling Station Place of Recreation, Sports or Culture Public Clinic Public Convenience Public Transport Terminus or Station Public Utility Installation # Public Vehicle Park (not elsewhere specified, excluding container vehicle) Religious Institution (not elsewhere specified) # Residential Institution School # Shop and Services Social Welfare Facility # Utility Installation for Private Project

In addition, the following uses are always permitted on the ground floor of a New Territories Exempted House:

Eating Place Library School Shop and Services

Planning Intention

The planning intention of this zone is to reflect existing recognized and other villages, and to provide land considered suitable for village expansion and reprovisioning of village houses affected by Government projects. Land within this zone is primarily intended for development of Small Houses by indigenous villagers. It is also intended to concentrate village type development within this zone for a more orderly development pattern, efficient use of land and provision of infrastructures and services. Selected commercial and community uses serving the needs of the villagers and in support of the village development are always permitted on the ground floor of a New Territories Exempted House. Other commercial, community and recreational uses may be permitted on application to the Town Planning Board.

VILLAGE TYPE DEVELOPMENT (Cont'd)

Remarks

- (a) No new development, or addition, alteration and/or modification to or redevelopment of an existing building (except development or redevelopment to those annotated with #) shall result in a total development and/or redevelopment in excess of a maximum building height of 3 storeys (8.23m) or the height of the existing building, whichever is the greater.
- (b) Based on the individual merits of a development or redevelopment proposal, minor relaxation of the building height restriction stated in paragraph (a) above may be considered by the Town Planning Board on application under section 16 of the Town Planning Ordinance.

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GOVERNMENT, INSTITUTION OR COMMUNITY

Column 1 Uses always permitted	Column 2 Uses that may be permitted with or without conditions on application to the Town Planning Board	
Ambulance Depot Broadcasting, Television and/or Film Studio Cable Car Route and Terminal Building Eating Place (Canteen, Cooked Food Centre only) Educational Institution Exhibition or Convention Hall Field Study/Education/Visitor Centre Flat (Government Staff Quarters only) Government Refuse Collection Point Government Use (not elsewhere specified) Hospital Institutional Use (not elsewhere specified) Library Market Place of Recreation, Sports or Culture Public Clinic Public Convenience Public Transport Terminus or Station Public Utility Installation Public Vehicle Park (excluding container vehicle) Recyclable Collection Centre Religious Institution Research, Design and Development Centre Rural Committee/Village Office School Service Reservoir Social Welfare Facility Training Centre Wholesale Trade	Columbarium Correctional Institution Crematorium Driving School Eating Place (not elsewhere specified) Funeral Facility Holiday Camp Mass Transit Railway Vent Shaft and/or Other Structure above Ground Level other than Entrances Off-course Betting Centre Office Petrol Filling Station Place of Entertainment Private Club Radar, Telecommunications Electronic Microwave Repeater, Television and/or Radio Transmitter Installation Residential Institution Sewage Treatment/Screening Plant Shop and Services Utility Installation for Private Project	

Planning Intention

This zone is intended primarily for the provision of Government, institution or community facilities serving the needs of the local residents and/or a wider district, region or the territory. It is also intended to provide land for uses directly related to or in support of the work of the Government, organizations providing social services to meet community needs, and other institutional establishments.

Column 1 Uses always permitted	Column 2 Uses that may be permitted with or without conditions on application to the Town Planning Board
Aviary Barbecue Spot Field Study/Education/Visitor Centre Park and Garden Pavilion Pedestrian Area Picnic Area Playground/Playing Field Promenade Public Convenience Public Vehicle Park (for cycles only) Sitting Out Area Zoo	Cable Car Route and Terminal Building Eating Place Government Refuse Collection Point Government Use (not elsewhere specified) Holiday Camp Mass Transit Railway Vent Shaft and/or Other Structure above Ground Level other than Entrances Pier Place of Entertainment Place of Recreation, Sports or Culture Private Club Public Transport Terminus or Station Public Utility Installation Public Vehicle Park (not elsewhere specified, excluding container vehicle) Religious Institution Service Reservoir Shop and Services Tent Camping Ground Utility Installation for Private Project

Planning Intention

This zone is intended primarily for the provision of outdoor open-air public space for active and/or passive recreational uses serving the needs of local residents as well as the general public.

OTHER SPECIFIED USES

Column 1 Uses always permitted Column 2 Uses that may be permitted with or without conditions on application to the Town Planning Board

For "Railway Ventilation and Other Associated Plants" Only

Railway Ventilation and Other Associated Plants

Planning Intention

This zone is intended for the development of railway ventilation and other associated plants.

For "Sewage Pumping Station" Only

Sewage Pumping Station

Planning Intention

This zone is intended for the development of a sewage pumping station.

For "Pier" Only

Pier Public Convenience Eating Place Government Use Marine Fuelling Station Public Utility Installation Shop and Services (not elsewhere specified)

Planning Intention

This zone is intended to designate land for piers to facilitate marine access to Tung Chung.

Remarks

Kiosks not greater than 10m² each in area and not more than 10 in number for use as Shop and Services are considered as ancillary to "Pier" use.

Column 1 Uses always permitted Column 2 Uses that may be permitted with or without conditions on application to the Town Planning Board

For "Petrol Filling Station" Only

Petrol Filling Station

Planning Intention

This zone is intended for the development of petrol filling stations.

For "Traction Substation cum Portal" Only

Traction Substation cum Portal

Planning Intention

This zone is intended for the development of a traction substation cum portal.

Column 1	Column 2
Uses always permitted	Uses that may be permitted with or
	without conditions on application
	to the Town Planning Board
	-

For "Cable Car Terminal and related Commercial Development" Only

Cable Car Route and Terminal Building Commercial Bathhouse/Massage Establishment Eating Place Exhibition or Convention Hall Field Study/Education/Visitor Centre Government Refuse Collection Point Government Use (not elsewhere specified) Mass Transit Railway Vent Shaft and/or Other Structure above Ground Level other than Entrances Office Place of Entertainment Place of Recreation, Sports or Culture **Public Convenience** Public Transport Terminus or Station Public Vehicle Park (excluding container vehicle) Public Utility Installation Radar, Telecommunications Electronic Microwave Repeater, Television and/or Radio Transmitter Installation Shop and Services Utility Installation for Private Project

Planning Intention

This zone is intended for the development of cable car terminal cum related commercial developments and supporting facilities, including a transport interchange, coach parking and ancillary car parking to serve the terminal and the commercial floor space.

For "Cable Car Terminal and related Commercial Development" Only (Cont'd)

<u>Remarks</u>

- (a) An applicant for permission for development on land designated "Other Specified Uses" annotated "Cable Car Terminal and related Commercial Development" shall prepare a layout plan for the approval of the Town Planning Board and include therein the following information:
 - (i) the area of the proposed land uses, the nature, position, dimensions, and heights of all buildings, including structures, to be erected on the site;
 - (ii) the proposed total gross floor area (GFA) for various uses and facilities;
 - (iii) the details and extent of the cable car terminal facilities, parking and loading/unloading spaces and open space to be provided within the site;
 - (iv) the alignment, widths and levels of any footpaths and roads proposed to be constructed within the site;
 - (v) the landscape and urban design proposals within the site;
 - (vi) programmes of development in detail;
 - (vii) the details of supply of utilities and infrastructure to meet the needs of the proposed development;
 - (viii) an environmental assessment report to examine any possible environmental problems that may be caused to or by the proposed development during and after construction and the proposed mitigation measures to tackle them;
 - (ix) a traffic impact assessment report to examine any possible traffic problems that may be caused by the proposed development and the proposed mitigation measures to tackle them; and
 - (x) such other information as may be required by the Town Planning Board.
- (b) No new development, or addition, alteration and/or modification to or redevelopment of an existing building including structure, shall result in a total development or redevelopment in excess of a maximum building height of 35 metres above Principal Datum and a maximum commercial GFA of 308 m², or the height and commercial GFA of the existing building including structure, whichever is the greater.

For "Cable Car Terminal and related Commercial Development" Only (Cont'd)

Remarks (Cont'd)

- (c) In determining the maximum GFA for the purposes of paragraph (b) above, any floor space that is constructed or intended for use solely as car park, loading/unloading bay, plant room and caretakers' office, provided such uses and facilities are ancillary and directly related to the development or redevelopment, may be disregarded. Any floor space that is constructed or intended for use solely as cable car terminal facility, transport interchange and coach park, as required by the Government, may also be disregarded.
- (d) Based on the individual merits of a development or redevelopment proposal, minor relaxation of the GFA and/or building height restrictions stated in paragraph (b) above may be considered by the Town Planning Board on application under section 16 of the Town Planning Ordinance.

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GREEN BELT

Column 1 Uses always permitted	Column 2 Uses that may be permitted with or without conditions on application to the Town Planning Board
Agricultural Use Barbecue Spot Government Use (Police Reporting Centre only) Nature Reserve Nature Trail On-Farm Domestic Structure Picnic Area Public Convenience Tent Camping Ground Wild Animals Protection Area	 Broadcasting, Television and/or Film Studio Cable Car Route and Terminal Building Columbarium (within a Religious Institution or extension of existing Columbarium only) Crematorium (within a Religious Institution or extension of existing Crematorium only) Field Study/Education/Visitor Centre Government Refuse Collection Point Government Use (not elsewhere specified) Holiday Camp Mass Transit Railway Vent Shaft and/or Other Structure above Ground Level other than Entrances Petrol Filling Station Place of Recreation, Sports or Culture Public Transport Terminus or Station Public Utility Installation Public Vehicle Park (excluding container vehicle) Radar, Telecommunications Electronic Microwave Repeater, Television and/or Radio Transmitter Installation Religious Institution School Service Reservoir Social Welfare Facility Utility Installation for Private Project

Planning Intention

The planning intention of this zone is primarily for defining the limits of urban and sub-urban development areas by natural features and to preserve the existing topography and natural vegetation at the fringe of the new town as well as to provide passive recreational outlets. There is a general presumption against development within this zone.

Appendix VI

APPROVED DRAFT TUNG CHUNG TOWN CENTRE AREA OUTLINE ZONING PLAN NO. S/I-TCTC/18C

EXPLANATORY STATEMENT

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(Being an Approveda Draft Plan for the Purposes of the Town Planning Ordinance)

EXPLANATORY STATEMENT

Note: For the purposes of the Town Planning Ordinance, this Statement shall not be deemed to constitute a part of the Plan.

1. <u>INTRODUCTION</u>

This Explanatory Statement is intended to assist an understanding of the approved approved draft Tung Chung Town Centre Area Outline Zoning Plan (OZP) No. S/I-TCTC/18C. It reflects the planning intention and objectives of the Town Planning Board (the Board) for various land use zonings on the Plan.

2. <u>AUTHORITY FOR THE PLAN AND PROCEDURE</u>

- 2.1 On 27 May 1993, under the power delegated by the then Governor, the then Secretary for Planning, Environment and Lands (SPEL), directed the Board, under section 3(1)(a) of the Town Planning Ordinance (the Ordinance), to prepare an OZP for the Tung Chung Town Centre area. On 14 January 1994, the draft Tung Chung Town Centre Area OZP No. S/I-TCTC/1 was exhibited for public inspection under section 5 of the Ordinance. On 28 July 1995, the then Governor in Council approved the draft Tung Chung Town Centre Area OZP, which was subsequently renumbered as S/I-TCTC/2.
- 2.2 On 25 September 1997, under the power delegated by the then Governor which was deemed to have been made by the Chief Executive, the then SPEL directed the Board, under section 3(1)(a) of the Ordinance, to extend the planning scheme boundary of the approved OZP to the west to include Areas 22 and 25 and the future town park. On 10 March 1998, the Chief Executive in Council (CE in C) referred the approved OZP to the Board for amendment under section 12(1)(b)(ii) of the Ordinance.
- 2.3 On 24 July 1998, the draft Tung Chung Town Centre Area OZP No. S/I-TCTC/3 extending the plan boundary to the west and incorporating the land use proposals for the western extension of the Town Centre area was exhibited for public inspection under section 5 of the Ordinance. On 22 June 1999, the CE in C, under section 9(1)(a) of the Ordinance, approved the draft Tung Chung Town Centre Area OZP, which was subsequently renumbered as S/I-TCTC/4. On 10 October 2000, the CE in C referred the approved OZP to the Board for amendment under section 12(1)(b)(ii) of the Ordinance. Since then, the OZP was amended three times and exhibited under section 5 or 7 of the Ordinance for public inspection.

- 2.4 On 30 April 2002, the CE in C, under section 9(1)(a) of the Ordinance, approved the draft Tung Chung Town Centre Area OZP, which was subsequently renumbered as S/I-TCTC/8. On 8 October 2002, the CE in C referred the approved OZP to the Board for amendment under section 12(1)(b)(ii) of the Ordinance. The OZP was subsequently amended and exhibited for public inspection under section 5 of the Ordinance.
- 2.5 On 1 April 2003, the CE in C, under section 9(1)(a) of the Ordinance, approved the draft Tung Chung Town Centre Area OZP, which was subsequently renumbered as S/I-TCTC/10. On 8 July 2003, the CE in C referred the approved OZP to the Board for amendment under section 12(1)(b)(ii) of the Ordinance. Since then, the OZP was amended three times and exhibited for public inspection under section 5 or 7 of the Ordinance.
- 2.6 On 3 January 2006, the CE in C, under section 9(1)(a) of the Ordinance, approved the draft Tung Chung Town Centre Area OZP, which was subsequently renumbered as S/I-TCTC/14. On 30 January 2007, the CE in C referred the approved OZP to the Board for amendment under section 12(1)(b)(ii) of the Ordinance. The OZP was subsequently amended and exhibited for public inspection under section 5 of the Ordinance.
- 2.7 On 31 March 2009, the CE in C, under section 9(1)(a) of the Ordinance, approved the draft Tung Chung Town Centre Area OZP, which was subsequently renumbered as S/I-TCTC/16. On 24 April 2009, the approved Tung Chung Town Centre Area OZP No. S/I-TCTC/16 was exhibited for public inspection under section 9(5) of the Ordinance.
- 2.8 On 3 November 2009, the CE in C referred the approved OZP No. S/I-TCTC/16 to the Board for amendment under section 12(1)(b)(ii) of the Ordinance. The reference back of the OZP for amendment was notified in the Gazette on 13 November 2009 under section 12(2) of the Ordinance.
- 2.9 On 11 December 2009, the draft OZP No. S/I-TCTC/17 incorporating the amendments to rezone a site to the east of Tat Tung Road in Area 3 from "Commercial" to "Commercial(1)" and to adjust the zoning boundaries of *the* "Other Specified Uses" annotated "Cable Car Terminal and related Commercial Development", "Comprehensive Development Area", "Open Space", "Government, Institution or Community" *zones* and areas shown as 'Road' was exhibited for public inspection under section 5 of the Ordinance. During the two-month exhibition period, no representation was received.
- 2.10 On 1 June 2010, the CE in C, under section 9(1)(a) of the Ordinance, approved the draft Tung Chung Town Centre Area OZP, which was subsequently renumbered as S/I-TCTC/18. On 11 June 2010, the approved Tung Chung Town Centre Area OZP No. S/I-TCTC/18 (the Plan) was exhibited for public inspection under section 9(5) of the Ordinance.
- 2.11 On 2.9.2014, the CE in C referred the approved OZP No. S/I-TCTC/18 to the Board for amendment under section 12(1)(b)(ii) of the Ordinance. The

reference back of the OZP for amendment was notified in the Gazette on 19.9.2014 under section 12(2) of the Ordinance.

2.12 On XX, the draft OZP No. S/I-TCTC/XX (the Plan) incorporating the amendments to rezone a site in Area 27 from "Government, Institution or Community" to "Residential (Group A) 1" and adjust the adjoining zoning boundaries of "Green Belt", "Village Type Development" and areas shown as 'Road' was exhibited for public inspection under section 5 of the Ordinance.

3. <u>OBJECT OF THE PLAN</u>

- 3.1 The object of the Plan is to indicate the broad land use zonings and major transport networks so that development and redevelopment within the Planning Scheme Area (the Area) can be put under statutory planning control. Such control is necessary to develop Tung Chung into a balanced community in support of the Hong Kong International Airport.
- 3.2 The Plan is to illustrate the broad principles of development within the Area. As it is a small-scale plan, the alignments of the roads and railways and boundaries between the land use zones may be subject to minor adjustments as detailed planning and development proceed.
- 3.3 Since the Plan is to show broad land use zonings, there would be situations in which small strips of land not intended for building development purposes and carry no development right under the lease, such as the areas restricted as non-building area or for garden, slope maintenance and access road purposes, are included in the zones. The general principle is that such areas should not be taken into account in plot ratio and site coverage calculation. Development within zones should be restricted to building lots carrying development right in order to maintain the character and amenity of the Tung Chung area and not to overload the road network in this area.

4. NOTES OF THE PLAN

- 4.1 Attached to the Plan is a set of Notes which shows the types of uses or developments which are always permitted within the Area and in particular zones and which may be permitted by the Board, with or without conditions, on application. The provision for application for planning permission under section 16 of the Ordinance allows greater flexibility in land use planning and control of development to meet changing needs.
- 4.2 For the guidance of the general public, a set of definitions that explains some of the terms used in the Notes may be obtained from the Technical Services Division of the Planning Department and can be downloaded from the Board's website at http://www.info.gov.hk/tpb.

5. <u>THE PLANNING SCHEME AREA</u>

- 5.1 The Area is located on the northshore of Lantau Island to the southeast of the Hong Kong International Airport at Chek Lap Kok. The total area covered by the Plan is approximately 253 hectares (ha), including about 127 ha of reclaimed land.
- 5.2 The Area extends from Kei Tau Kok on the northern coast of Lantau Island in the east to Ma Wan Chung in the west. In the north, the Area is bounded by the reclamation limit, while in the south it is enclosed by a series of mountain slopes as the backdrop. It is planned as the Town Centre of the North Lantau New Town.
- 5.3 The Area is separated from the airport island of Chek Lap Kok by a 200m wide water channel. The North Lantau Highway (NLH) and the Mass Transit Railway (MTR) Airport Express (AE) pass through the Area to link with the airport island. The railway alignment bifurcates near the eastern edge of the Area where the MTR Tung Chung Line extends westwards to the Tung Chung MTR Station at the Town Centre. The Tung Chung Cable Car system links up Tung Chung with Ngong Ping via the angle stations at Airport Island and Nei Lak Shan. Starting from the Tung Chung Terminal in Tung Chung Town Centre, the cable car route runs above the open space along Tung Chung Waterfront Road and then along the northern side of Chek Lap Kok South Road to the angle station on the Airport Island. It then turns an angle and ascends to Ngong Ping and terminates at Ngong Ping Terminal.
- 5.4 Complex geological conditions are known to exist within the Northshore Lantau Area, which can have significant effects on foundation design and construction in terms of both development costs and construction programme. The affected area is referred to as "the Designated Area of Northshore Lantau". Information on the geology of Tung Chung and technical guidance on foundation works are available from the Civil Engineering and Development Department.
- 5.5 The boundary of the Area is shown in a heavy broken line on the Plan. For planning and reference purposes, the Area has been divided into a number of smaller planning areas as shown on the Plan.

6. <u>POPULATION</u>

According to the 20062011 By-cCensus, the total population in the Area was about 34,00038,000, made up mainly of residents of Fu Tung Estate, Yu Tung Court, Tung Chung Crescent, Seaview Crescent, Coastal Skyline, Caribbean Coast, Shan Ha Village and the existing settlement in Ma Wan Chung. Ma Wan Chung will be cleared for the construction of Road D2 and the Town Park. It is expected that the population in 2021 and the planned population in the Area would be in the region of 54,000 and 71,000 respectively. The planned population in the Area is about 78,000.

7. <u>LAND USE ZONINGS</u>

- 7.1 <u>"Commercial" ("C")</u> : Total Area 2.14 ha
 - 7.1.1 This zone is intended primarily for commercial developments, which may include uses such as office, shop and services, place of entertainment, eating place and hotel, functioning as the commercial centre in the Town Centre.
 - 7.1.2 Being in close proximity to the Tung Chung MTR Station and with good linkages to other areas of the New Town, a site in Area 3 is zoned as "C(1)". The ground level of the "C(1)" site nearer to the MTR station will accommodate an extension of the existing public transport interchange to be designed in integration with the commercial development within the "C(1)" site and the "CDA" site next to the MTR station. Developments and redevelopments in the "C(1)" site are subject to a maximum plot ratio of 5 and a maximum building height of 70 metres above Principal Datum.
 - 7.1.3 In determining the maximum plot ratio, any floor space that is constructed or intended for use solely as car park, loading/unloading bay, plant room and caretaker's office, provided such uses and facilities are ancillary and directly related to the development or redevelopment, may be disregarded. Any floor space that is constructed or intended for use solely as public transport terminus shall be included for calculation.
 - 7.1.4 In order to provide flexibility for innovative design adapted to the characteristics of the "C(1)" site, minor relaxation of the plot ratio and/or building height restrictions as mentioned above may be considered by the Board through the planning permission system. Each proposal will be considered on its individual merits.
 - 7.1.5 Another site in Area 53 adjacent to the proposed pier at the waterfront is reserved for hotel development in the longer term to take advantage of the scenic views of Tung Chung Bay. The hotel development may include a public transport interchange at ground level.
- 7.2 <u>"Comprehensive Development Area"("CDA")</u> : Total Area 22.98 ha
 - 7.2.1 This zone is intended for comprehensive development/redevelopment of the area for residential and commercial uses with the provision of open space and other supporting facilities. The commercial developments may include uses such as office, shop and services, place of entertainment, eating place and hotel, functioning as the commercial centre in the Town Centre. The zoning is to facilitate appropriate planning control over the development mix, scale, design and layout of development, taking account of various environmental, traffic, infrastructure and other constraints. This zone covers parcels of land intended for comprehensive development in conjunction with the construction of the AE and the MTR Tung Chung Line. The development within the "CDA" will be integrated with the Tung Chung

MTR Station and designed in a comprehensive manner. The development will include residential, retail, office and hotel uses together with public transport interchange and other supporting facilities such as post office, day nursery, kindergartens and market. Adequate vehicle parking spaces and local open spaces will also be provided within the "CDA".

- 7.2.2 In accordance with the recommendations of the Tung Chung Town Centre Study approved by the Government, development and redevelopment within the "CDA" are restricted to a maximum total GFA of 750,120m² for residential uses and 93,000m² for commercial uses including hotel, or the GFA of the existing building, whichever is the greater. The 93,000m² of commercial GFA is planned to comprise 56,000m² of retail/commercial GFA, 22,000m² of hotel GFA and 15,000m² of office GFA.
- 7.2.3 Pursuant to section 4A(1) of the Ordinance, any development on land designated "CDA" would require planning approval of the Board by way of a planning application under section 16 of the Ordinance. A Master Layout Plan (MLP) should be submitted together with the relevant assessment reports and other materials as specified in the Notes of the Plan for the approval of the Board pursuant to section 4A(2) of the Ordinance. This is to ensure proper planning control of the planning design, layout, building heights and the provision of facilities within the sites. A copy of the approved MLP should be made available for public inspection in the Land Registry pursuant to section 4A(3) of the Ordinance.
- 7.2.4 On 24 October 1997, the Board approved with conditions an application for increasing the residential GFA to 968,280m² for the "CDA". On 8 December 2000, the Board approved an application for deletion of one of the residential towers on geotechnical grounds, resulting in a reduced residential GFA of 935,910m². The proposed development would accommodate a population of about 32,000. Several applications on the amendments to the approved MLP were approved by the Board. Subsequently, the revision 20 of the approved MLP was deposited on 7.1.2011 at Land Registrar for public inspection under Section 4A(3) of the Ordinance.
- 7.2.5 To provide flexibility for innovative design adapted to the characteristics of particular sites, minor relaxation of the GFA restriction may be considered by the Board through the planning permission system. Each proposal will be considered on its individual planning merits.
- 7.3 <u>"Residential (Group A)" ("R(A)")</u> : Total Area 31.0331.94 ha
 - 7.3.1 This zone is intended primarily for high-density residential developments. Commercial uses are always permitted on the lowest three floors of a building or in the purpose-designed non-residential portion of an existing building. It covers land reserved for public rental

housing estates, Home Ownership Schemes (HOS) and private residential developments. Commercial uses such as banks, offices, restaurants and retail shops are permitted on the lowest three floors (taken to include basements) or in the purpose-designed non-residential portion of an existing building. Other commercial uses will require planning permission from the Board. Development and redevelopment within the "R(A)" zone are restricted to a maximum domestic plot ratio of 5.0, or the plot ratio of the existing building, whichever is the greater, in accordance with the planning and design principles for Tung Chung as recommended in North Lantau Development Study (NLDS).

- 7.3.2 To the south of Fu Tung Street, a site in Area 10 is zoned "R(A)" for public rental housing estate and HOS developments. The developments, namely Fu Tung Estate and Yu Tung Court, were completed in 1997. Adequate commercial, educational, community and recreational facilities have been included in the development in accordance with the Hong Kong Planning Standards and Guidelines (HKPSG). These include two primary schools, two secondary schools, a clinic, local open spaces and other community facilities.
- 7.3.3 To the west of the future Town Park, two sites in Areas 23 and 48 are zoned "R(A)" for private residential developments. Setting against the backdrop of the Town Park the tallest point of which is about 75mPD, the future developments within the sites should pay due regard to the knolls of the park in terms of design, height and scale. Also, the area may be subject to traffic noise impact from Road D2., Careful detailed design should be adopted to mitigate the traffic noise impact. These two sites fall within the extension areas of the Tung Chung New Town Extension Study. Future detailed land uses are subject to further assessment under the Study.
- 7.3.4 Adjacent to the proposed pier at the waterfront in Areas 54, 55 and 56 are three "R(A)" sites, the former two are intended for medium-rise private residential developments and the latter for public housing. This is primarily to conform to the urban design principles set out in NLDS, which recommends, inter alia, descending heights of building blocks approaching the coast. In addition, the sites abut the major road of Road P1 and may be subject to traffic noise impact. Careful detailed design should be adopted to mitigate the traffic noise impact.
- 7.3.5 A site in Area 27 is zoned "R(A)1" for HOS development. Development and redevelopment in the "R(A)1" zone are subject to a maximum domestic plot ratio of 6 and a maximum building height of 135mPD, or the plot ratio and height of the existing building, whichever is the greater.
- 7.3.6 To provide flexibility for innovative design adapted to the characteristics of particular sites, minor relaxation of the plot ratio *and building height* restrictions may be considered by the Board through the planning permission system. Each proposal will be considered on its

individual planning merits.

- 7.4 "Village Type Development" ("V") : Total Area 5.435.46 ha
 - 7.4.1 The planning intention of this zone is to reflect existing recognized and other villages, and to provide land considered suitable for village expansion and reprovisioning of village houses affected by Government projects. Land within this zone is primarily intended for development of Small Houses by indigenous villagers. It is also intended to concentrate village type development within this zone for a more orderly development pattern, efficient use of land and provision of infrastructures and services. Selected commercial and community uses serving the needs of the villagers and in support of the village development are always permitted on the ground floor of a New Territories Exempted House. Other commercial, community and recreational uses may be permitted on application to the Town Planning Board.
 - 7.4.2 Shan Ha Village together with the expansion area in Area 69 is zoned "V". The boundaries of the "V" zone are drawn with regard to the existing village 'environs', topography, site constraints and the estimated Small House demand. The village resite area at Pa Mei North in Area 70 is also zoned "V". It is intended for rehousing the indigenous villagers of Ma Wan and Ma Wan Chung affected by the Tung Chung development.
 - 7.4.3 On land designated "V", no new development, or addition, alteration and/or modification to or redevelopment of an existing building shall result in a total development and/or redevelopment in excess of a maximum building height of 3 storeys (8.23m), or the height of the existing building, whichever is the greater.
 - 7.4.4 The village expansion and village resite areas will be guided by more detailed layout plans.
 - 7.4.5 To provide flexibility for innovative design adapted to the characteristics of particular sites, minor relaxation of the building height restriction may be considered by the Board through the planning permission system. Each proposal will be considered on its individual planning merits.

7.5 <u>"Government, Institution or Community" ("G/IC")</u> : Total Area 22.3221.24 ha

7.5.1 This zone is intended primarily for the provision of Government, institution or community (GIC) facilities serving the needs of the local residents and/or a wider district, region or the territory. It is also intended to provide land for uses directly related to or in support of the work of the Government, organizations providing social services to meet community needs, and other institutional establishments. The overall GIC facility provision within the Plan Areain the Plan, which

has been planned on the basis of the HKPSG, is considered adequate to serve the population of the Area.

- 7.5.2 Major existing facilities under this zoning include a swimming pool complex in Area 2, a youth camp in Area 8, an electric substation in Area 9, a telephone exchange and a refuse collection point in Area 12, a fire station cum ambulance depot and a police station in Area 13, an indoor recreation centre cum library, a community hall and a residential care home for the elderly in Area 17, the North Lantau Hospital (Phase I) in Area 25 (Part) a youth camp in Area 8, a telephone exchange and a refuse collection point in Area 12, an electric substation in Area 9, as well as primary and secondary schools in various Planning Areas.
- 7.5.3 Major proposed facilities include an indoor recreation centre cum library, a community hall and a residential care home for the elderly in Area 17, a town hall in Area 1 *and*, a swimming pool complex in Area 2, the proposed North Lantau Hhospital *extension* in Areas 13(part), 22 and 25 (*Part*)., etc. As the hospital site is close to the future Town Park, the tallest point of which is about 75mPD, a maximum building height of 65mPD should be adopted for the proposed North Lantau Hospital-to commensurate with the surrounding environment and reduce the possible visual impacts. Compatibility with the knolls of the park in design and scale is also required for the proposed North Lantau Hospital. Besides, as the area may be subject to traffic noise impact from Yu Tung Road and Chung Yan Road, mitigation measures against the traffic noise should be adopted.
- 7.5.4 GIC uses not requiring free-standing sites such as nursery and kindergarten will be provided within the public housing estates and the large private residential developments within the "CDA" and "R(A)" zones.
- 7.6 <u>"Open Space" ("O")</u> : Total Area 55.70 ha
 - 7.6.1 This zone is intended primarily for the provision of outdoor open-air public space for active and/or passive recreational uses serving the needs of local residents as well as the general public.
 - 7.6.2 Behind the existing settlement at Ma Wan Chung in Area 29 stand three knolls. They together with the adjacent land to be reclaimed *The knolls in Area 29 to the northeast of Yat Tung Estate* are zoned "O" for the development of a Town Park. The knolls present a special natural landscape feature constituting an important part of the townscape. On the northwestern slope of the knolls lie the remnants of Tung Chung Battery, which is a Declared Monument, Game Board Carving and a temporary storage area for Fu Tei Wan lime kilns. They will be integrated with the design of the Town Park.
 - 7.6.3 The "O" zone also covers the waterfront open spaces in Areas 52 and 59 *which may include* including a prestigious waterfront promenade *to*

which will be extended to the east to Tai Ho and to the west to Tung Chung West in future. It also covers the open space links and other open spaces *inat* Areas 7, 16 and 18 which serve as environmental buffers for the NLH and the major roads.

- 7.6.4 Areas 29 and part of 52 fall within the extension areas of the Tung Chung New Town Extension Study. Future detailed land uses are subject to further assessment under the Study.
- 7.6.5 The provision of open spaces has been planned according to the HKPSG. The level of provision provided for in the Plan is adequate to serve the Area. Additional local open spaces will be provided within the public housing estates and the "CDA" and "R(A)" sites for the enjoyment of the local residents.
- 7.7 <u>"Other Specified Uses" ("OU")</u> : Total Area 2.86 ha
 - 7.7.1 This zone denotes land allocated or reserved for specified uses including the following:
 - (a) railway ventilation and other associated plants to the northeast of the Tung Chung MTR Station;
 - (b) a sewage pumping station in Area 12;
 - (c) proposed ferry pier use in Area 50;
 - (d) twoproposed petrol filling stations in Area 58;
 - (e) a traction substation cum portal in Area 58; and
 - (f) cable car terminal and related commercial development in Area 2.
 - 7.7.2 Statutory planning control is required for the cable car terminal and related commercial development as it is located in a prominent location of the Town Centre and will become one of the landmarks of and a major tourist node in Tung Chung. The "OU (Cable Car Terminal and related Commercial Development)" zone accommodates the cable car terminal, the cable car related commercial development and supporting facilities, including a transport interchange, coach parking and ancillary parking to serve the terminal and commercial floor space. Development within the zone is restricted to a maximum height of 35 metres above Principal Datum and a maximum commercial GFA of 308m² for building(s) including structure(s) or the height and the commercial GFA of the existing building including the structure, whichever is the greater.
 - 7.7.3 To provide flexibility for innovative design adapted to the characteristics of particular sites, minor relaxation of the commercial GFA and/or building height restrictions for the "OU (Cable Car Terminal and related Commercial Development)" may be considered by the Board through the planning permission system. Each proposal will

be considered on its individual planning merits.

7.8 <u>"Green Belt" ("GB")</u> : Total Area 47.1047.15 ha

The planning intention of this zone is primarily for defining the limits of urban and sub-urban development areas by natural features and to preserve the existing topography and natural vegetation at the fringe of the new town as well as to provide passive recreational outlets. *There is a general presumption against development in the "GB" zone.* The southern fringe of the Area covering the foothills of Pok To Yan and Por Kai Shan is zoned for this purpose. <u>There is a general presumption against development in the "GB" zone.</u> Development within this zone will be strictly controlled and development proposals will be considered on individual merits taking into account relevant Town Planning Board Guidelines.

8. <u>COMMUNICATIONS</u>

- 8.1 <u>Roads</u>
 - 8.1.1 Only the major road network including trunk, primary and district distributor roads is indicated on the Plan. As the Plan is drawn *inat* a small scale, details of major road junctions, local roads, the utility service road, cycle tracks and footpaths will be subject to detailed design.
 - 8.1.2 The NLH running in an east-west direction in the Area provides the strategic link between the Hong Kong International Airport and other areas in the Territory.
 - 8.1.3 External access to and from the Area is mainly via NLH through Tung Chung Eastern Interchange and Tung Chung Waterfront Road.
 - 8.1.4 Connection between the airport island and the Area is via Chek Lap Kok South Road, which bridges over the sea channel and serves as the secondary linkage to the airport from the Area.
 - 8.1.5 Within the Area, a hierarchy of primary and district distributors and local roads is planned to provide convenient connection between various development areas and activity nodes. The Tung Chung Waterfront Road Extension to the north of the Town Park at Area 29 is proposed to be depressed with a 250m long landscaped cover to provide physical and visual connectivity between the Town Park and the waterfront promenade to its north. The cover of the road will be designed in conjunction with the design for the Town Park and the waterfront promenade.
 - 8.1.6 Roadside amenity areas to be integrated with pedestrian footpaths and cycle tracks are provided along major roads. These areas are broadly shown as part of the overall road network on the Plan.

8.2 <u>Pier</u>

Land for ferry pier is reserved at the waterfront in Area 50 to cater for demand of ferry services between Tung Chung and other areas in the Territory.

8.3 <u>Railways</u>

The Plan makes provision for two railway lines, namely MTR AE providing express services between the airport and Hong Kong Island, and MTR Tung Chung Line providing local domestic services between Tung Chung and Hong Kong Island. The Area is served by Tung Chung MTR Station.

8.4 <u>Public Transport</u>

Franchised buses and ferries are the main modes of public transport in addition to the railway services. Public transport interchange facilities have been provided close to Tung Chung MTR Station-and may be provided at Area 53.

8.5 <u>Cable Car</u>

The cable car system between Tung Chung and Ngong Ping has commenced operation in September 2006.

8.6 <u>Pedestrian and Cycle Network</u>

A network of cycle tracks and pedestrian walkways will be designed to promote convenient cycle and pedestrian movements within the Area. Grade-separated crossings will be provided at major junctions between roads and pedestrian/cycle crossing points at the detailed design stage.

9. <u>UTILITY SERVICES</u>

9.1 <u>Water Supply</u>

- 9.1.1 Fresh water supply to Tung Chung is obtained from the Tung Chung fresh water service reservoir (outside the Area) via the associated distribution mains which are laid in phases together with the road works.
- 9.1.2 A salt water supply system will be provided for flushing. Temporary supply of fresh water will be used for flushing until the salt water supply system is made available.

9.2 <u>Electricity</u>

Electricity is supplied to the Area through a new distribution network. Adequate sites have been reserved for electric substations to meet the demand in the short and long terms.

9.3 <u>Telephone</u>

Telephone services are made available through the telephone exchange in Area 12 to provide the essential service to the Area.

9.4 <u>Gas</u>

Gas supply is extended from its existing network in the New Territories to the Area via submarine pipelines. The gas pipeline lands at Ta Pang Po (outside the Area) and routes to the Area via the pigging/offtake station at Tai Ho (outside the Area).

9.5 <u>Sewerage and Drainage</u>

Sewage is collected and conveyed via a network of sewer reticulation system and transferred via a sewage pumping station in the Area to the sewage treatment works at Siu Ho Wan (outside the Area) for treatment.

10. <u>CULTURAL HERITAGE</u>

- 10.1 Several sites which are of historical significance and archaeological interest are located within the Area. Situated on the knolls in the west of the Area are *Tung* Chung Game Board Carving Site of Archaeological Interest and the remains of Tung Chung Battery which is a Declared Monument under the Antiquities and Monuments Ordinance. Game Board Carving and the remains of Tung Chung Battery. The battery, which is a Declared Monument under the Antiquities and Monuments Ordinance, is believed to be one of the two military forts of Tung Chung built in 1817. Adjacent to Tung Chung Battery, is the Fu Tei Wan Kiln Site of Archaeological Interest. Design of the future Town Park is required to pay special attention to these heritage sitesthere is a temporary storage area for Fu Tei Wan lime kilns. Design of the future Town Park is required to pay special attention to these monuments. Development in the western part of the Area should also have regard to the Ma Wan Chung Site of Aarchaeological Interestsite. These heritage sites are worthy of preservation and the Antiquities and Monuments Office (AMO) of the Leisure and Cultural Services Department (LCSD) should be consulted well in advance on any development or redevelopment affecting these sites and their immediate environs.
- 10.2 A detailed archaeological impact assessment (AIA) shall be conducted to evaluate the archaeological impact imposed by the proposed works if there is any development within the site of archaeological interest. If necessary, a qualified archaeologist shall apply for a licence under the Antiquities and Monuments Ordinance (Cap. 53) for an archaeological investigation. Subject to the findings of the AIA, appropriate mitigation measures shall be fully implemented by the project proponent in consultation with the AMO of LCSD.

11. <u>IMPLEMENTATION</u>

- 11.1 Although existing uses non-conforming to the statutory zonings are tolerated, any material change of use and any other development/redevelopment must be always permitted in terms of the plan, or if permission is required, in accordance with the permission granted by the Board. The Board has published a set of guidelines for the interpretation of existing use in the urban and new town areas. Any person who intends to claim an "existing use right" should refer to the guidelines and will need to provide sufficient evidence to support his claim. The enforcement of the zonings mainly rests with the Buildings Department, the Lands Department and the various licensing authorities.
- 11.2 The Plan provides a broad land use framework within which more detailed non-statutory plans are prepared. These detailed plans are used as the basis for planning of public works and reservation of sites. As in other new towns, the implementation of the development projects such as formation of sites and provision of services within the Area involves concerted efforts from various Government departments which will be co-ordinated by the Civil Engineering and Development Department.
- 11.3 The development of the Town Centre area is implemented in phases. The strategic transport links and infrastructures for development of the Phase I of the Town Centre area are components of the Airport Core Programme projects.
- 11.4 Development at the "R(A)" site in Area 10 for public rental housing (Fu Tung Estate) and HOS (Yu Tung Court) has been completed by the Housing Department. For the "CDA" sites, the Mass Transit Railway Corporation Limited has been granted the land for comprehensive development together with the construction of the railway links and station. Development is taking place in phases. Tung Chung Crescent in Area 4, Citygate in Area 14, Seaview Crescent in Area 15, Coastal Skyline Phase 1 in Area 11 and Caribbean Coast Phase 1 in Area 21 have been completed.
- 11.5 Reclamation works covering Areas 50, 52(part), 53 to 56 under Phase 3A of the New Town development *were*have been completed in 2003.
- 11.6 Planning applications to the Board will be assessed on individual merits. In general, the Board, in considering planning applications, will take into account all relevant planning considerations which may include the departmental outline development plan/layout plans, and the Guidelines published by the Board. The outline development plan and the layout plans are available for public inspection at the Planning Department. Guidelines published by the Board are available from the Board's website, the Secretariat of the Board and the Technical Services Division of the Planning Department. Application forms and guidance notes for planning applications can be downloaded from the Board's website and are available from the Secretariat of the Board, the Technical Services Division and the relevant District Planning Office of the Planning Department. Applications should be supported by such materials as the Board thinks appropriate to enable it to consider the applications.

<u>S/I-TCTC/18</u>*C*

TOWN PLANNING BOARD OCTOBER 2014JUNE 2010

Type of	Hong Kong Planning Standards and Guidelines (HKPSG)	HKPSG Requirement (about) (for Planned Population: About 78,000 ⁽²⁾)	Total Provision (b) = (c) + (d)		Surplus/ Shortfall
Facilities					
			Existing	Planned (not yet provided)	(against planned provision)
		(a)	(c)	(d)	(e) = (b) - (a)
Secondary	1 whole day	80	116	30	$+66 \text{ classrooms}^{(1)}$
School	classroom for 40 persons aged 12-17	Classrooms			
Primary School	1 whole day classroom for 25.5 persons aged 6-11	115 classrooms	120	30	+35 classrooms ⁽¹⁾
Kindergarten	26 classrooms for 1,000 children aged 3 to under 6	35 classroom	37	16	+18 classroom ⁽¹⁾
District Police Station	1 per 200,000 to 500,000 persons	0	0	0	0
Divisional Police Station	1 per 100,000 to 200,000 persons	0	1	. 0	+ 1
Hospital	5.5 beds per 1,000 persons	429 beds	180	170	-79 beds ⁽³⁾
Clinic/ Health Centre	1 per 100,000 persons	1	1	0	0
Post Office	1 per 30,000 persons	2	1	1	0
Magistracy (with 8 courtrooms)	1 per 660,000 persons	0	0	0	0
Market	No set standard	0	1	1	$+ 2^{(4)}$
Integrated Children and Youth Services Centres	1 for 12,000 persons aged 6-24	1	1	0	0
Integrated Family Services Centres	1 per 100,000 to 150,000 persons	0	1	0	+ 1
Library	1 district library for every 200,000 persons	0	1	0	+ 1
Sports Centre	1 per 50,000 to 65,000 persons	1	1	0	. 0
Sports Ground/ Sports Complex	1 per 200,000 to 250,000 persons	0	0	0	0
Swimming Pool Complex - standard	1 complex per 287,000 persons	0	. 0	0	0
Swimming Pool Complex - Leisure	1 per district	1	1	0	0

Provision of Major Community Facilities in Tung Chung Town Centre Area⁽¹⁾

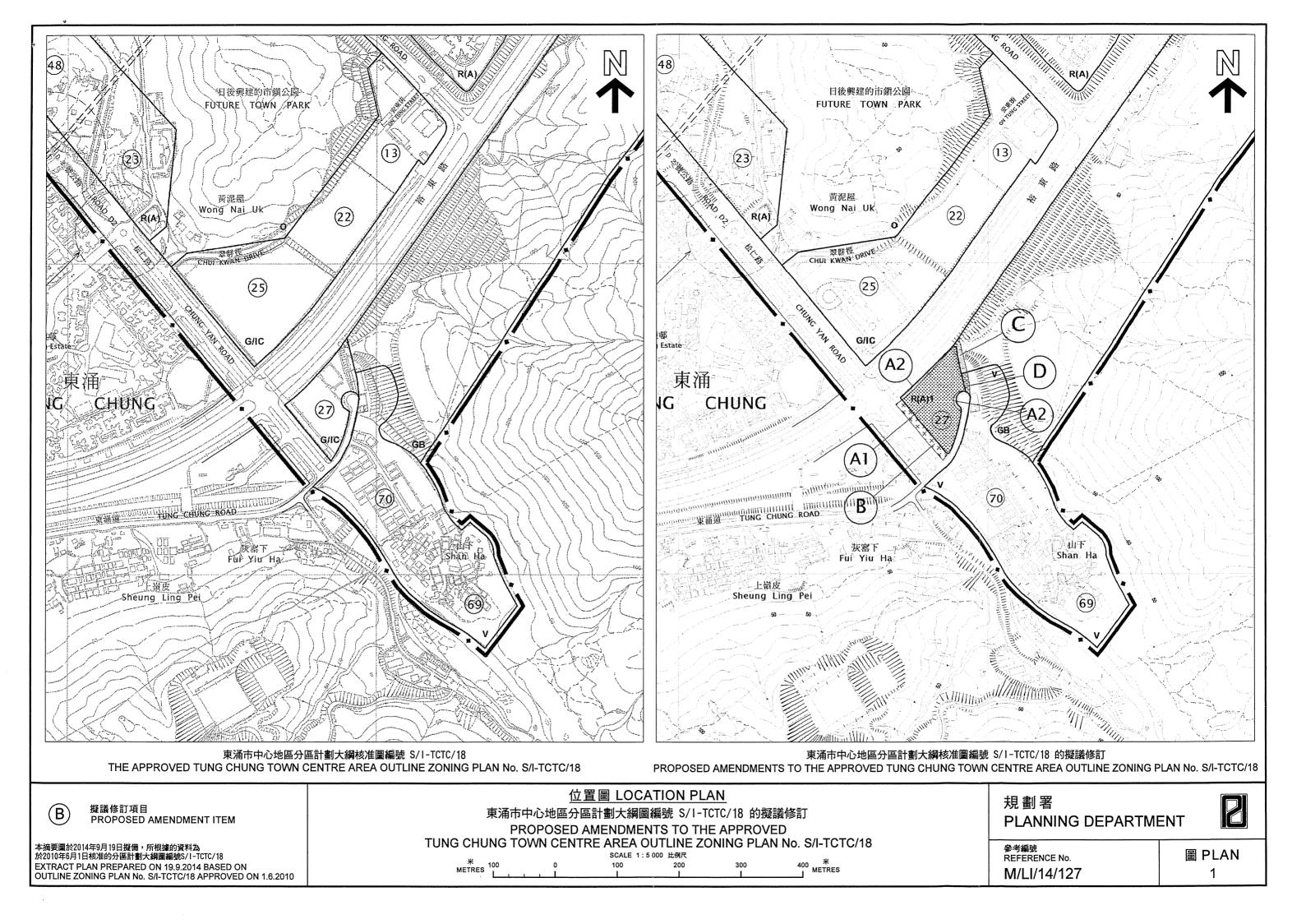
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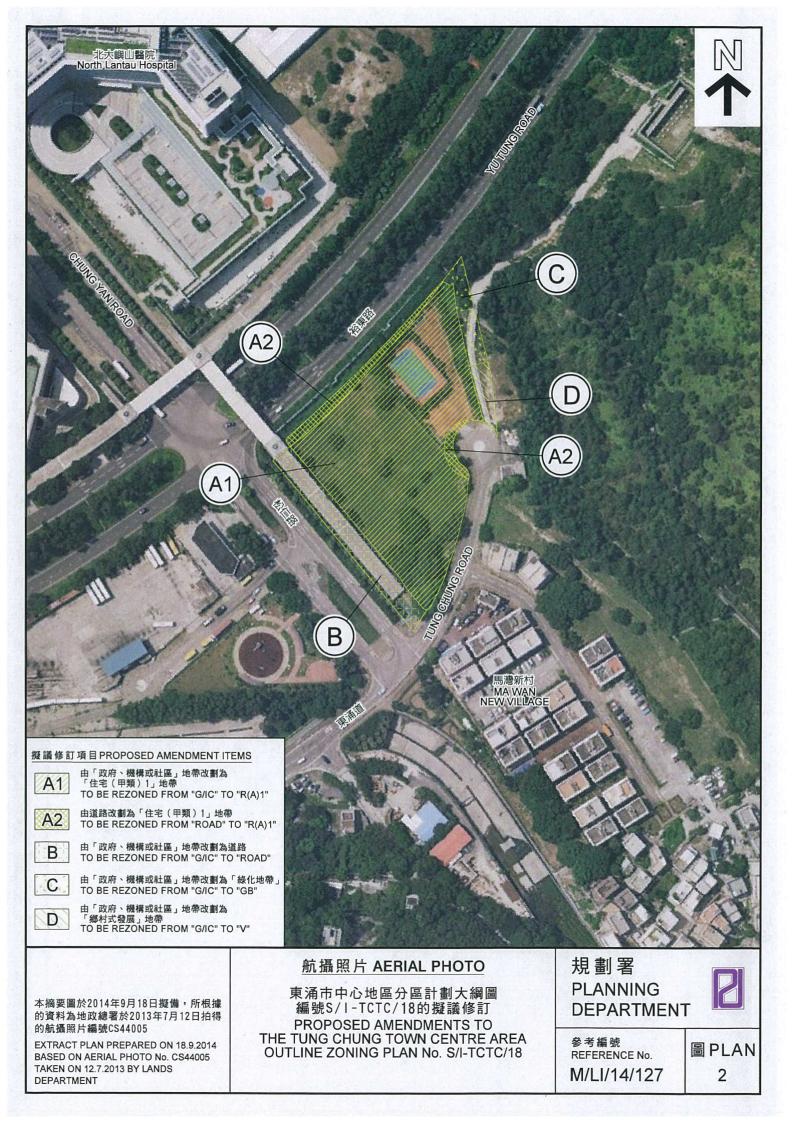
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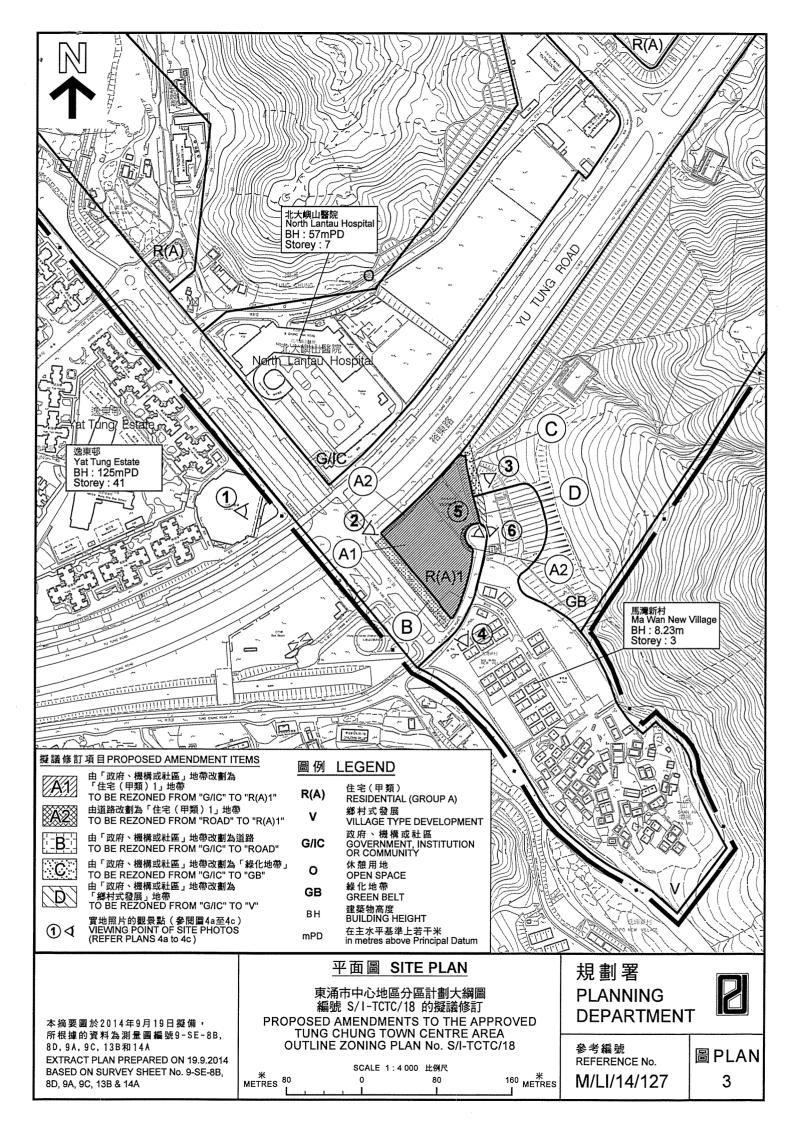
Type of Facilities	Hong Kong Planning Standards and Guidelines (HKPSG)	HKPSG Requirement (about) (for Planned Population: About 78,000 ⁽²⁾)	Total Provision(b) = (c) + (d)ExistingPlanned (not yet provided)		Surplus/ Shortfall (against planned provision)
		(a)	(c)	(d)	(e) = (b) - (a)
Local Open Space	10 ha per 100,000 persons	7 ha	14 ha	2 ha	+9 ha ⁽¹⁾
District Open Space	10 ha per 100,000 persons	7 ha	7 ha	8 ha	+8 ha ⁽¹⁾

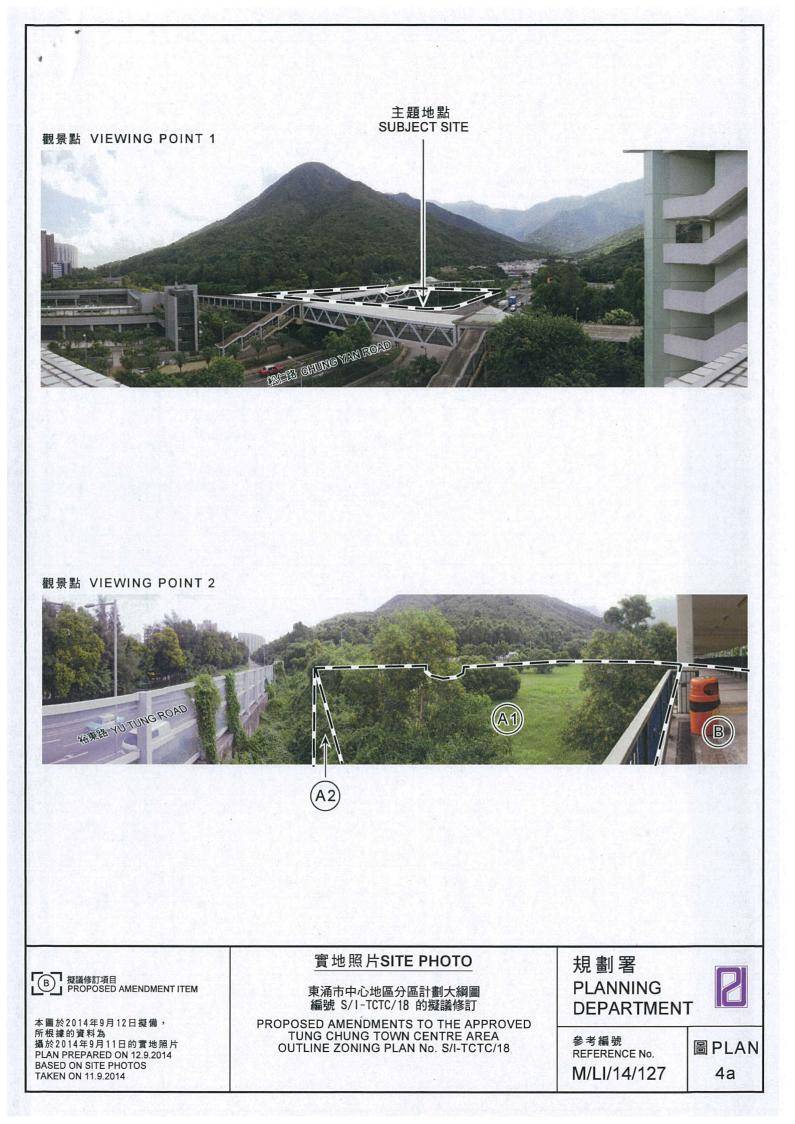
Notes:

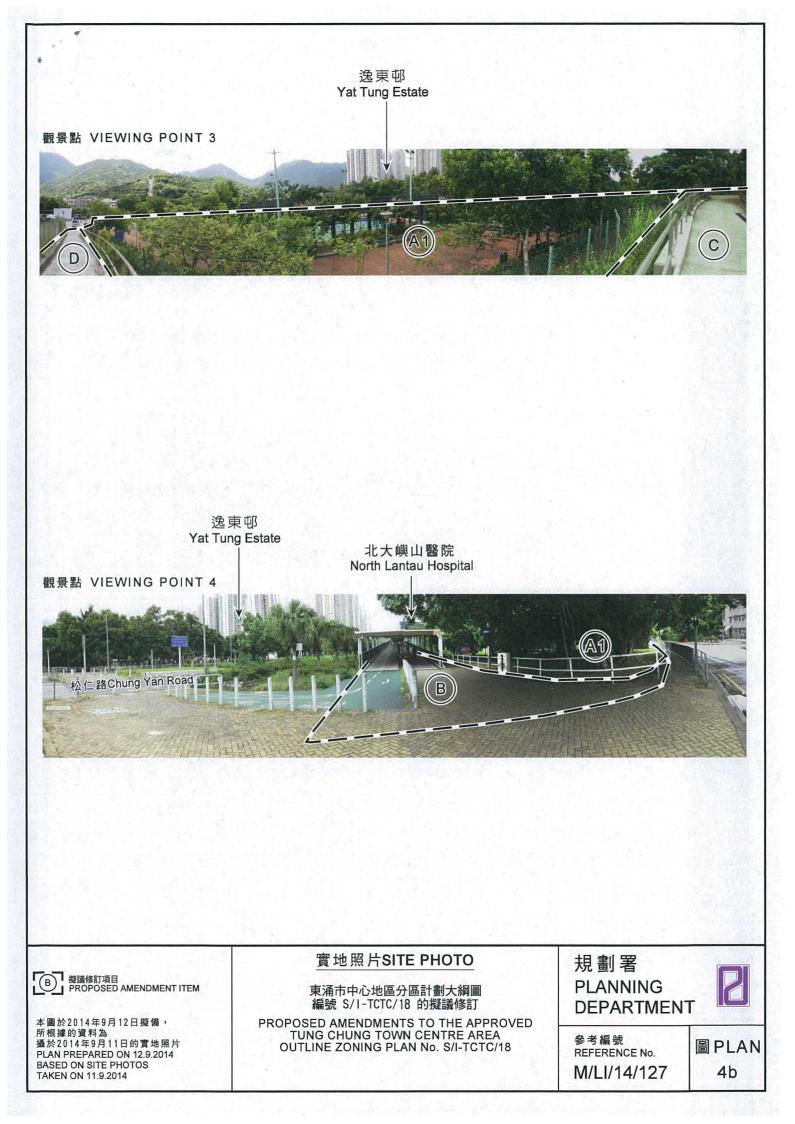
- (1) The provision requirements are based on the population within the Plan Area of the OZP only. Not all the developed areas of Tung Chung New Town are within the Plan Area (e.g. Yat Tung Estate with population of more than 40,000 falls outside the Plan Area and not covered by any statutory plan). As to the provision of Open Space and other GIC facilities, Tung Chung New Town Extension Study will review and take into account the existing surplus / deficit of provision of open space and GIC facilities. It is expected that the demand for Open Space and GIC facilities induced by the population arising from the proposed zoning amendment from "G/IC" to "R(A)1" (which would allow the development of about 1,100 domestic units) could be met in Tung Chung.
- (2) The planned population of 78,000 has included the proposed HOS development in Area 27 which is estimated to provide about 1,100 flats. Depends on the nature of the facilities, "Planned Population" may include Usual Residents and/or Mobile Residents and/or Transients.
- (3) Future provision of hospital beds will be reviewed in the context of hospital development in Tung Chung Areas 13 and 22 with a view to meeting the shortfall.
- (4) Wet markets are provided by Housing Department in public rental estates.

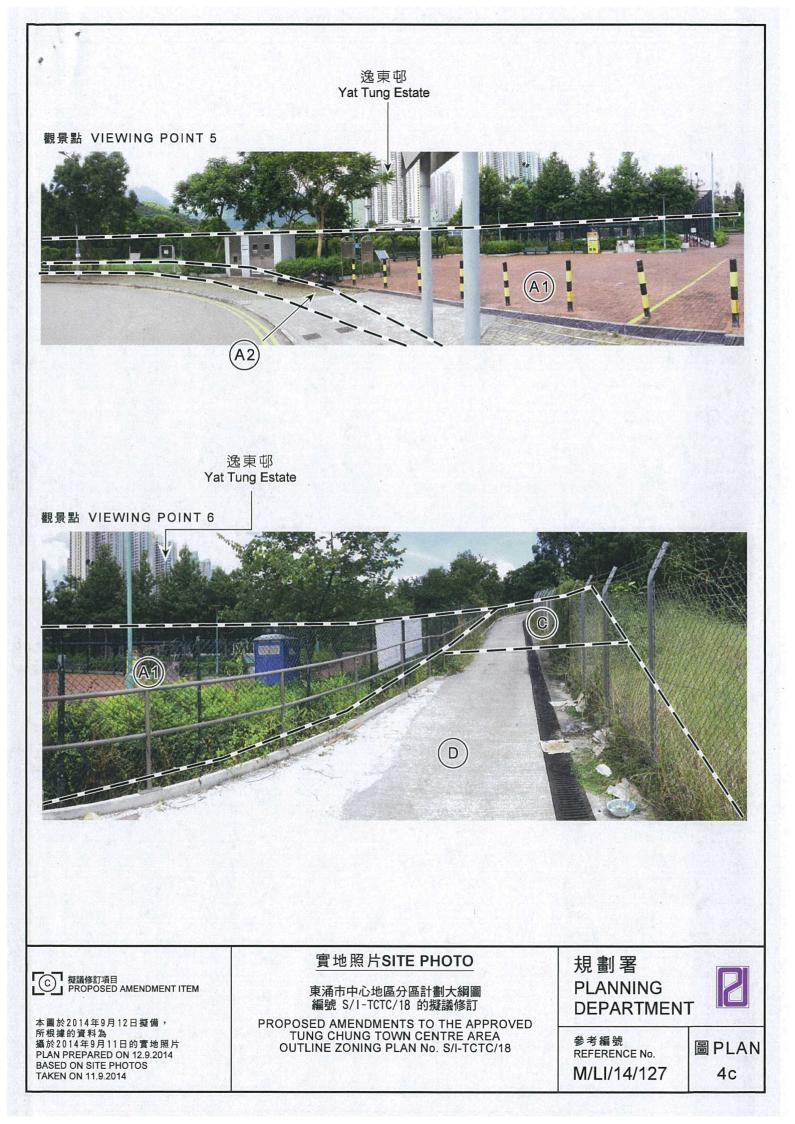


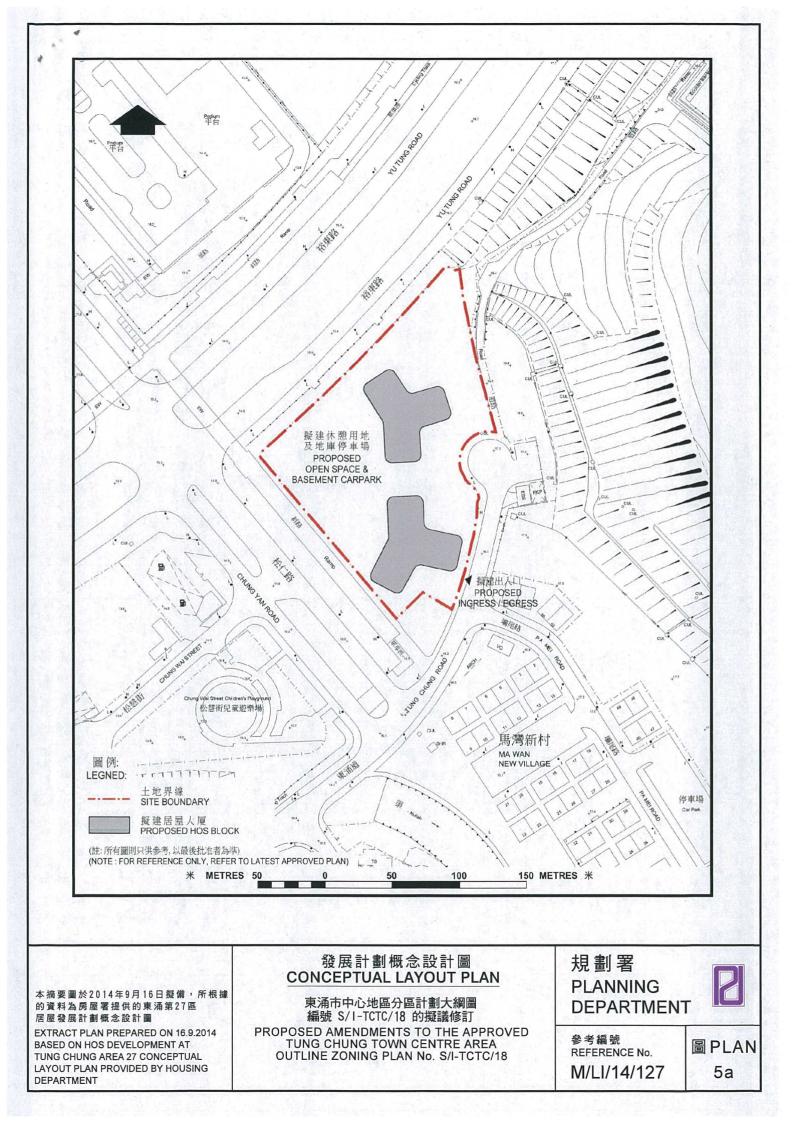


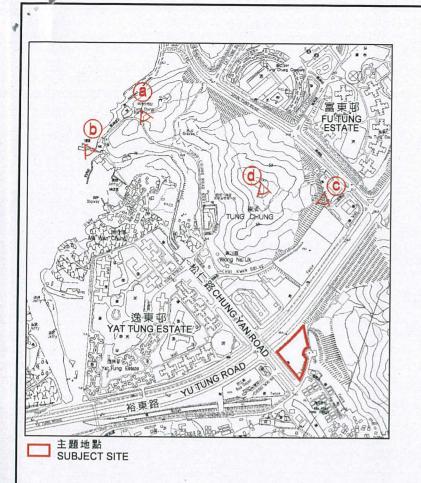












觀景點 VIEWING POINT:

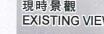
- (a) 東涌小炮台 TUNG CHUNG BATTERY
- (b) 東涌馬灣涌碼頭 TUNG CHUNG MA WAN CHUNG PIER
- (c) 裕東苑 YU TUNG COURT
- d 山頂(日後興建的市鎮公園) HILL TOP (FUTURE TOWN PARK)















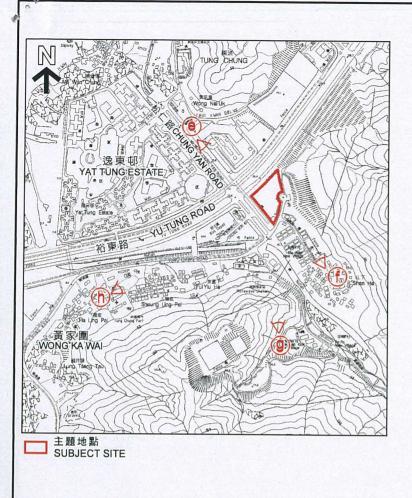




合成照片 PHOTOMONTAGE

東涌市中心地區分區計劃大綱圖編號 S/I-TCTC/18 的擬議修訂 PROPOSED AMENDMENTS TO THE APPROVED TUNG CHUNG TOWN CENTRE AREA OUTLINE ZONING PLAN No. S/I-TCTC/18

本摘要圖於2014年9月22日擬備,所根據的資料為 房屋署提供的東涌第27區居屋發展計劃概念設計圖 EXTRACT PLAN PREPARED ON 22.9.2014 BASED ON HOS DEVELOPMENT AT TUNG CHUNG AREA 27 CONCEPTUAL LAYOUT PLAN PROVIDED BY HOUSING DEPARTMENT



觀景點 VIEWING POINT:

(e) 北大嶼山醫院 NORTH LANTAU HOSPITAL

(f) 馬灣新村 MA WAN NEW VILLAGE

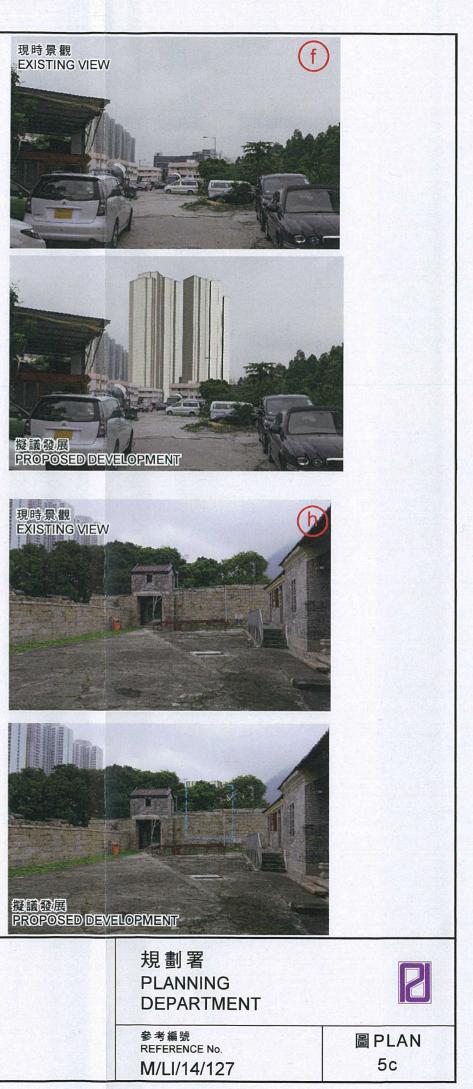
(g) 天后廟 **TIN HAU TEMPLE**

(h) 東涌炮台 **TUNG CHUNG FORT**













合成照片 PHOTOMONTAGE

東涌市中心地區分區計劃大綱圖編號 S/I-TCTC/18 的擬議修訂 PROPOSED AMENDMENTS TO THE APPROVED TUNG CHUNG TOWN CENTRE AREA OUTLINE ZONING PLAN No. S/I-TCTC/18

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