

# **TOWN PLANNING BOARD**

**TPB Paper No. 10183  
For Consideration by the  
Town Planning Board on 7.10.2016**

**SUBMISSION OF THE DRAFT URBAN RENEWAL AUTHORITY  
CHUN TIN STREET/SUNG CHI STREET  
DEVELOPMENT SCHEME PLAN NO. S/K9/URA1/A  
PREPARED UNDER SECTION 25 OF  
THE URBAN RENEWAL AUTHORITY ORDINANCE**



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<b><u>Development Scheme Area</u></b>	2-24 Chun Tin Street (even nos.), 2-4 Hok Yuen Street (even nos.), Chun Tin Street, a portion of Sung Chi Street and pavement of Hok Yuen Street
<b><u>Area</u></b>	2,475m <sup>2</sup>
<b><u>Lease</u></b>	Private land (2-24 Chun Tin Street, 2-4 Hok Yuen Street) and Government land (Chun Tin Street, portions of Sung Chi Street and pavement of Hok Yuen Street)
<b><u>OZP</u></b>	Approved Hung Hom Outline Zoning Plan (OZP) No. S/K9/24
<b><u>Zoning</u></b>	“Residential (Group A)” (“R(A)”) and area shown as ‘Road’
<b><u>Proponent</u></b>	Urban Renewal Authority (URA)
<b><u>Proposed Amendments</u></b>	<p>(a) To rezone Chun Tin Street from area shown as ‘Road’ and incorporate it with an area zoned “R(A)” into a “R(A)7” zone</p> <p>(b) To increase building height (BH) restriction from 120mPD to 130mPD</p> <p>(c) Stipulate maximum domestic GFA : 12,270m<sup>2</sup></p> <p>(d) Stipulate Maximum non-domestic GFA : 2,454m<sup>2</sup></p>

**1. The Proposal**

Urban Renewal in Kowloon City

- 1.1 According to the Urban Renewal Plan for Kowloon City recommended under the District Urban Renewal Forum (DURF) study, an area bounded by Ngan Hon Street, Ma Tau Wai Road, Bailey Street and Sung On Street was identified as a ‘proposed redevelopment priority area’ where urban renewal in the form of redevelopments led by URA or privately-led should be given priority in view of the poor building and environmental conditions in the area. The Hung Fook Street/Ngan Hon Street Development Scheme (DS) being considered at the same meeting under TPB Paper No. 10184 is located within this area (**Plan 1**).
- 1.2 An area further south bounded by Bailey Street, Ma Tau Wai Road, Hok Yuen Street and Sung Chi Street, where the subject DS is located, was identified as a ‘proposed

mixed redevelopment and rehabilitation area' where redevelopment and / or rehabilitation works are to be carried out at suitable locations having regard to the conditions of individual buildings (**Plan 1**).

- 1.3 Based on the DURF Study, the URA has undertaken a community planning study in Kowloon City/To Kwa Wan district which aims to improve living environment of an old urban district through holistic master planning. Specifically, two DSs and three development projects (DPs) were commenced by URA in the area between March and June 2016 and two earlier projects were authorised in 2010 and 2014 as set out below and shown on **Plan 2**.

<b>Project Name</b>	<b>URA Project Code</b>	<b>Commencement/Authorisation</b>
<i>URA Project Commenced between March and June 2016</i>		
Bailey Street/Wing Kwong Street DP <sup>1</sup>	KC-009	4.3.2016
<b>Chun Tin Street/Sung Chi Street DS<sup>2</sup></b> (subject of the paper)	<b>KC-008A</b>	<b>6.5.2016</b>
Hung Fook Street/Ngan Hon Street DS (subject of the TPB Paper No. 10184)	KC-010	3.6.2016
Hung Fook Street/Kai Ming Street DP	KC-011	3.6.2016
Wing Kwong Street DP	KC-012	3.6.2016
<i>URA Projects Authorised before 2016</i>		
Ma Tau Wai Road/Chun Tin Street DP	TKW/1/002	17.12.2010
Kai Ming Street DP	DL-8:KC	30.5.2014
Notes: <sup>1</sup> DP are projects implemented under section 26 of the URA Ordinance, such projects conform to the zoning and planning controls under the extant OZP. <sup>2</sup> DS are projects implemented under section 25 of the URA Ordinance, such projects require submission to the Town Planning Board for their agreement to gazette as a DS Plan (involving new zonings and/or planning controls) under the Town Planning Ordinance.		

- 1.4 All these URA projects are for residential developments with commercial uses on lower floors. According to URA's notional schemes, the above seven project sites covered a total land area of 2.3 ha and would yield a total GFA of about 183,800 m<sup>2</sup> and some 3,380 flats. Of the total GFA, there would be some 28,900 m<sup>2</sup> of commercial GFA in the seven projects, 1,450 m<sup>2</sup> of GFA for GIC facilities in the two projects authorised in 2010 and 2014, and 500 m<sup>2</sup> of public open space in the project authorised in 2010. The projects were targeted for completion in 2019, 2021 and 2026.
- 1.5 Through the community planning study and the opportunities offered by the redevelopment projects, URA also proposed to redesign the local transport and road networks of the area (**Drawing 1**).

#### Chun Tin Street Development Scheme (the DS)

- 1.6 On 13.5.2016, the URA submitted the draft Chun Tin Street/Sung Chi Street DS Plan (DSP) No. S/K9/URA1/A for the consideration of Town Planning Board (the Board) in accordance with section 25(5) of the URA Ordinance (URAO). The submission comprises the draft DSP with its Notes and the Explanatory Statements (ES); and a planning report with technical assessments and social impact assessment

(SIA) (Stage 1) report (**Annex B**). On 22.6.2016, URA further submitted the SIA (Stage 2) report to the Board (**Annex D**).

- 1.7 The DS is to incorporate Chun Tin Street with an area zoned “R(A)” for a residential development with a commercial podium. As ‘flat’ use is not permitted within area shown as ‘Road’ on the current OZP, the project has to be implemented by way of a DS under section 25 of the URAO that involved rezoning of the DS area. The DS also involved the proposed relaxation of BH restriction of 120mPD for the original “R(A)” zone to 130mPD to cover the DS area.
- 1.8 In support of the DS, the proponent has submitted the following documents:
- (a) Letter dated 13.5.2016 (**Annex A**)
  - (b) Planning Report (**Annex B**)
  - (c) Letter dated 22.6.2016 (**Annex C**)
  - (d) SIA (Stage 2) Report (**Annex D**)
  - (e) Letter dated 15.7.2016 providing responses to comments of Government departments and public comments with revised technical assessments (**Annex E-1**)
  - (f) Letter dated 29.7.2016 providing responses to comments of Government departments and public comments (**Annex E-2**)
  - (g) Letter dated 12.8.2016 providing responses to comments of Government departments with a CD containing a computer-generated animation for the DS (**Annex E-3**)
  - (h) Letter dated 6.9.2016 providing responses to comments of Government departments and public comments with revised technical assessments (**Annex E-4**)
  - (i) Letter dated 15.9.2016 providing revised DSP, Notes and ES (**Annex E-5**)
- 1.9 The purpose of this paper is to invite the Board to consider the draft DSP together with the Notes and ES as submitted by URA as suitable for gazetting under section 5 of the Town Planning Ordinance (TPO) (**Annex E-5**).
- 1.10 The area proposed to be rezoned “R(A)” on the DSP covers private lots currently zoned “R(A)” and Chun Tin Street that is shown as ‘Road’ on the approved Hung Hom OZP No. S/K9/24 (the Area) (**Plan 3**). The private lots currently zoned “R(A)” within the Area was previously covered by the Chun Tin Street/Sung Chi Street DP, and URA has notified in gazette on 5.6.2016 that it had decided not to proceed with that DP (the withdrawn DP). On the same day, URA notified in gazette the commencement of the subject DS. Chun Tin Street, which is a dead-end street, is proposed to be permanently closed and incorporated into the DS for development. URA has included a portion of Sung Chi Street for carrying out the road widening works and the pavement of Hok Yuen Street where tenement building overhang above within the boundary of the DS, to facilitate its implementation of the project.

- 1.11 According to URA's notional scheme, one residential tower over a commercial podium with basement car park is proposed. The preliminary design drawings are in Appendix 1 of **Annex B (Drawings 3 to 12)** and the development parameters are set out in the table below.

Gross site area	2,475m <sup>2</sup>
Net site area <sup>1</sup>	1,636m <sup>2</sup>
Proposed zoning	"R(A)7"
Total GFA	14,724m <sup>2</sup>
- maximum domestic GFA	- 12,270m <sup>2</sup> (PR of 7.5)
- maximum non- domestic GFA	- 2,454m <sup>2</sup> (PR of 1.5)
Maximum building height	130mPD
No. of block	1
No. of floors	
- domestic floor	34
- clubhouse floor	1
- commercial podium	3
- basement car park	1
No. of Flats	about 310
Car parking spaces	
- basement level	19 car parking spaces
- at-grade level	2 to 3 light goods vehicle (LGV) bays at kerb side on Sung Chi Street within the DS
<b>Notes:</b> <sup>1</sup> Net site area is the area adopted for calculation of GFA, subject to survey and detailed design	

#### Development Intensity

- 1.12 The gross site area of the DS, including the area zoned "R(A)" and the road area of Chun Tin Street, is 2,475m<sup>2</sup>. In deriving the net site area (1,636m<sup>2</sup>) for GFA calculation, an area of Chun Tin Street that will remain as the vehicular turning area (grey hatched area shown in **Drawing 2**) has been excluded. The proposed domestic GFA of 12,270m<sup>2</sup> and non-domestic GFA of 2,454m<sup>2</sup> conforms to the restrictions for the original "R(A)" zone in the DS, i.e. equivalent to maximum PR of 9 for a building that is partly domestic and partly non-domestic and with the PR of the domestic part not exceeding 7.5.

#### Relaxation of Building Height Restriction

- 1.13 The area currently zoned "R(A)" on the OZP is subject to BH restriction of 120mPD. URA proposed to relax the BH restriction for the DSP to 130mPD.

#### Transport Arrangements

- 1.14 Chun Tin Street currently served the land lots within URA's Ma Tau Wai Road/Chun Tin Street DP (the adjoining DP) to its west, the area zoned "R(A)" to be incorporated into the DS to its east and Fook Wan Mansion to its north. Sung Chi Street is currently a one-way street (northbound) of about 4.3m wide connecting Hok Yuen Street in the south with Bailey Street in the north.

- 1.15 To maintain vehicular access after the closure of Chun Tin Street, URA proposed to widen the section of Sung Chi Street to the south of Fook Wan Mansion to allow for a two-lane carriageway of about 7.3m. The podium will be setback by 5m to 6m at ground floor level from the road kerb of the widened Sung Chi Street for provision of LGV bays and widened pavement (**Drawings 4 and 5**). The LGV bays will only serve the development in the DS and will not be for public use.
- 1.16 To allow vehicles to turn back after accessing the widened section of Sung Chi Street, the northern portion of the DS will be dedicated for a vehicular turning area with pavement for public use. The turning area will serve as both vehicular and pedestrian access to the DS, the adjoining DP and Fook Wan Mansion. The vehicular turning area will provide a 26m separation between the podium in the DS and Fook Wan Mansion (**Drawing 4**). URA will take up the management and maintenance of the vehicular turning area, its adjoining pavement and the LGV bays on the site along the widened Sung Chi Street.
- 1.17 URA also proposed to enhance pedestrian connection of the DS by integrating with the design of the pedestrian passageways in the adjoining DP to allow for direct access from the DS to Ma Tau Wai Road (**Drawing 5**).
- 1.18 The above road improvement works are always permitted in the DS and their implementation including resumption of private land under Lands Resumption Ordinance (Cap 124) and relevant gazettals under Roads (Works, Use and Compensation) Ordinance (Cap 370) will be taken forward by URA upon completion of the statutory procedures under the TPO.

## **2. Justifications provided by URA**

### General

- 2.1 The DS will replace the old buildings of over 50 years in deteriorating conditions to new modern residential development with commercial facilities. The living conditions of the existing over-crowded and sharing households in sub-divided flats will be improved. There will be provision of more small to medium-sized flats in the urban area.

### Inclusion of Chun Tin Street for Development

- 2.2 Enlarging the DS area by closure of Chun Tin Street and including the land for redevelopment allow for better utilisation of the land to increase flat supply, improve traffic network and provide a safer environment for pedestrian and vehicular traffic. The enlarged DS area will also facilitate better integration with the adjoining DP with better urban design and planning merits.

### Relaxation of Building Height Restriction

- 2.3 URA proposed to relax the BH restriction from 120mPD to 130mPD. The justifications provided by URA are to provide more design flexibility; to allow a slimmer building to reduce overlooking with residential towers in the adjoining DP and reduce visual obstruction for Fook Wan Mansion; and to provide a 10 to 15m-separation with the buildings in the adjoining DP for better air ventilation. A

visual appraisal was submitted to demonstrate that the visual impact of relaxing the BH by 10m is minimal and the 130mPD scheme will be compatible with the surrounding developments (Appendix 2 of **Annex B** and **Annex E-3**).

- 2.4 URA indicated that if the BH restriction is capped at 120mPD, the number of residential floors will be reduced from about 34 to 31. This will result in a wider and bulkier building form that will extend towards the adjoining DP and reduce the building separation and visual corridor between the DS and the adjacent DP site, create overcast and reduce ground floor space. A comparison of the 120mPD and 130mPD scheme is provided in Appendix 2 of **Annex B (Drawings 13 and 14)**.

#### Technical Assessments

- 2.5 Technical assessments, including visual appraisal and traffic impact assessment (TIA) (Appendices 2 and 3 of **Annex B**), revised drainage and sewerage impact assessments, computer animation of the proposed development and revised environmental assessment (EA) (**Annex E-1, E-3 and E-4**) are submitted by URA to demonstrate that the proposed DS would not cause adverse visual, traffic, environmental, drainage and sewerage impacts.

### **3. Background**

- 3.1 The DS is included in the approved URA's 15<sup>th</sup> business plan (2016/17). On 6.5.2016, the URA published the notification of commencement of the Chun Tin Street/Sung Chi Street DS in Government gazette under section 23(1) of the URAO. On the same day, the URA also published the notification of withdrawal of the previous Chun Tin Street/Sung Chi Street DP (that only covered the area currently zoned "R(A)" within the DS). On 13.5.2016, URA submitted the draft DSP to the Board for consideration.
- 3.2 According to section 25(6) of the URAO, the Board may deem the draft DSP as suitable for publication, or being suitable for publication subject to such amendments as the Board shall specify, or refuse to deem the DSP as being suitable for publication. If the Board deems the draft DSP suitable for publication under section 25(7) of the URAO, the DSP shall be deemed to be a draft plan prepared by the Board for the purposes of the TPO and the provisions of the TPO shall apply accordingly. These include exhibition for public inspection, consideration of representations and comments, and submission of the draft DSP to the Chief Executive in Council for approval.

### **4. Development Scheme Boundary**

- 4.1 According to URA, the scheme boundary was delineated based on several factors, including building conditions (building structure, fire safety and building services), building height, building age, local environmental conditions, size of site, development potential, planning gain, ownership distribution, financial viability as well as possibility to achieve better planning design merits through inclusion of area with inefficient land use such as dead-end street for more comprehensive redevelopment.

- 4.2 According to URA, the tenement buildings within the DS are 4 to 6 storeys that were built between 1955 and 1957. The buildings are pre-dominantly residential with commercial/retail shops and some workshops for car repair services, metal hardware processing and recycling activities at ground floor. Based on URA's building condition survey updated in May 2015, the buildings are in deteriorating conditions; and spalling concrete and cracks are found at the back of the buildings. There are sub-divided units in the buildings and unauthorized building structures on the roofs and backyards of many buildings. The living condition in the DS is considered crowded and not satisfactory. Environmental condition is exacerbated by the large number of workshop activities on the ground floor of the buildings which created noise and environmental nuisance to residents. The workshop activities also occupied most of the pavement and street areas of Chun Tin Street and Sung Chi Street for parking and loading/unloading of goods especially during day times.

## 5. Social Impact Assessment

- 5.1 According to section 25(3) of the URAO, an assessment of the likely effect of the implementation of the DS should be prepared by the URA. In accordance with the guidelines stipulated in the Urban Renewal Strategy, the URA should undertake a Stage 1 SIA before publication of the DS and a Stage 2 SIA after the freezing survey to fully assess the social impact of the proposed project and the social re-housing needs of the residents affected. From 6.5.2016 to 8.5.2016, a SIA survey for the Chun Tin Street/Sung Chi Street redevelopment project was conducted by URA to survey the opinions of people for planning purposes together with the freezing survey. The SIA (Stage 1) report is in Appendix 6 of **Annex B** and the SIA (Stage 2) report is in **Annex D**.
- 5.2 A brief summary of the findings of the two stages SIA is as follows:

	<u>Development Scheme Area<sup>1</sup></u>	<u>Territorial Level<sup>2</sup></u>
Total population	188	7,071,576
Average household size	2.44	2.9
Degree of sharing <sup>3</sup>		
Household (77)/ Original units (68)	1.13	1
Household (30)/ units with Sub-divided flats (15)	2	--
Age group		
0-14	10%	11.6%
15-24	12%	12.4%
25-64	65%	62.7%
65 & above	13%	13.3%
<b>Socio-economic Characteristics</b>		
Monthly income (per month/household)		
below HK\$10,000/month	11%	24%
below HK\$4,000/month	1%	9%

Unemployed	5%	3.3% (January 2016 – March 2016)
% of households receiving comprehensive social security assistance (CSSA)	2% (1 household)	6.3% (as at end of 2011)
Residing in Hong Kong for less than 7 years	8%	-
<b>Household Type</b>		
Owner-occupiers	48% (37 household)	52%
Tenants (including principal tenants and sub-tenants)	47% (36 household)	
Licensee	5% (4 household)	
<b>Group with Special Needs</b>		
Persons with disability	3% (5 residents)	-
No. of single-parent families	2 (with 6 children)	-

1 Based on the 77 successfully interviewed households living in the project area

2 Based on the 2011 Population By-census (except CSSA and unemployed population which is based on statistics from the Census and Statistics Department)

3 The original number of domestic units in approved general building plans/occupation permits are 68. Of these, 15 units were found to be sub-divided.

5.3 The findings of the survey for the redevelopment project also indicated the following:

- (a) impact on employment - the majority (61%) of owner-occupiers and half of the tenants (50%) considered that the project would have positive impact or no impact; whilst 7% of owner-occupiers and 32% of tenants considered that there would be negative impact;
- (b) impact on economic conditions - 46% of owner-occupiers and 41% tenants considered that there would be positive impact or no impact; whilst 29% owner-occupiers and 47% tenants considered that there would be negative impact;
- (c) impact on social network - 47% owner-occupiers and 32% tenants considered that their current social networks would not be affected; whilst 39% of owner-occupiers and 53% of tenants considered that social network would be affected;

5.4 In terms of business impact, 20 non-domestic premises were identified (including 15 ground floor premises, 2 staircase premises, one cockloft premises and 2 upper floor premises). Among 9 non-domestic business operators who answered both freezing survey and SIA forms, 78% of them either strongly supported or supported the proposed redevelopment while 22% had no comment.

5.5 According to the SIA (Stage 2) report, the Social Service Team (SST) has successfully contacted 53 households and 9 business operators with problem or enquiry related to compensation, rehousing and tenancy being identified. Immediately after the SIA survey, URA had arranged 2 public briefing sessions for



all the stakeholders and URA has also attended public briefings arranged by Kowloon City District Council (KCDC) member, the SST and a concern group named “Hok Yuen Chun Tin Alliance” with questions on freezing survey, planning, acquisition and compensation and rehousing issues being addressed. The URA answered questions related to concerns on potential impacts of the Scheme to residents living in the adjoining developments, including Fook Wan Mansion which covers aspects of new road arrangement, programme and implementation arrangement and plan on adverse impacts mitigation. The URA also answered enquires and provides hotline services to residents with matters of enquiry covering project information, acquisition compensation and rehousing as well as household survey.

- 5.6 The URA is confident that the prevailing compensation and rehousing policies and arrangements, coupled with the services offered by the SST, will be sufficient to reasonably mitigate the impact on majority of the residents/business operators arising from the proposed redevelopment. The major mitigation measures being pursued include, inter alia, organizing outreach activities, offering assistance in finding public rental housing for eligible persons in need, conducting initial assessment of elderly, disability and other vulnerable groups for eligibility of compassionate housing, providing orientation assistance for those in need after moving home and providing assistance to identify suitable replacement premises for affected businesses.
- 5.7 The SIA (Stage 1) and SIA (Stage 2) reports were circulated and no adverse comments were received from concerned government departments.

## **6. Implementation**

- 6.1 The tentative implementation programme is in Appendix 7 of **Annex B**. Road closure is estimated to take place in end 2019 to 2020. Construction of the project will commence around 2021 for completion around 2025.
- 6.2 The URA does not own or lease any land within the boundary of the DS and will acquire the properties within the DS by purchase. Documents detailing URA’s principles for acquisition and resumption of affected properties as well as URA’s rehousing and ex-gratia payment packages for domestic and non-domestic tenants are in Appendices 8 and 9 of **Annex B**.
- 6.3 According to URA, due to the unique situation that the DS has included the properties in the withdrawn DP which is discontinued, the URA will provide a series of special measures in addition to the prevailing compensation policies to address the potential needs of the affected owners and tenants within the DS (Appendix 10 of **Annex B**).

## **7. The Development Scheme and its Surrounding Areas (Plans 1 to 4, and photos on Plans 5 to 8 )**

- 7.1 The DS is:
- (a) located in the northern part of Hung Hom;

- (b) bounded by Sung Chi Street to the east, Hok Yuen Street to the south, the adjoining DP to the west and Fook Wan Mansion to the north;
- (c) Chun Tin Street within the DS is a dead-end road and Sung Chi Street is a one-way north-bound road connecting Hok Yuen Street in the south and Bailey Street in the north; and
- (d) characterised by 4 to 6-storey tenement buildings built between 1955 and 1957. The existing building conditions are detailed in paragraph 4.2 above.

7.2 The surrounding areas have the following characteristics:

- (a) to the north is the 16-storey Fook Wan Mansion that was built in 1975. Further north are the 17-storey Bowie Mansion and 16-storey Ming Wah Court that were built in 1988 and 1973 respectively. Further north along Bailey Street is a street block of tenement buildings built in 1958;
- (b) to the east and southeast are industrial buildings with commercial activities on ground floor, this area is zoned “Other Specified Uses” annotated “Business” on the OZP;
- (c) to the north east are residential buildings along Sung Kit Street and Sunshine Plaza that have eating places and shops on the ground floor;
- (d) to the south is the Hung Hom Commercial Centre that is zoned “Commercial” on the OZP. Further south along Fat Kwong Street is another street block of residential buildings; and
- (e) further west of Ma Tau Wai Road is an area with mixed residential, ground floor shops and Government, institution and community uses.

## **8. Planning Intention**

The DS area is currently zoned “R(A)” with the Chun Tin Street shown as ‘Road’. The planning intention of the “R(A)” 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. The area zoned “R(A)” in the DS and Chun Tin Street are proposed to be rezoned to “R(A)7” with the same planning intention as the current “R(A)” zone.

## **9. Comments from Relevant Government Departments**

9.1 The following Government departments have been consulted and their comments on the draft DSP and URA’s responses are at **Annexes E-1 to E-4**. The major departmental comments are summarised below :

- 9.2 Comments of the District Lands Officer/Kowloon West (DLO/KW) and Chief Estate Surveyor/Urban Renewal (CES/UR), Lands Department (LandsD):
- (a) URA should in future clearly delineate the land grant boundary and the various formation area that would be formed and maintained by URA;
  - (b) URA advises that she would only maintain and manage the pedestrian footpath of Sung Chi Street but not the carriageway. URA also quotes Transport Department (TD)'s no adverse comment on the proposed arrangement. TD and Highways Department (HyD) would have to take note of such intention and make necessary arrangement with URA without relying the lease provisions to enforce;
  - (c) if the proposed road works are not authorised under Cap 370, fall-back option should be explored before land resumption;
  - (d) it is noted from URA that the intention of the at-grade open space and passageway will be stipulated in the deed of mutual covenant (DMC) of the project in the adjoining DP and URA will manage and maintain at-grade area and open for public use in future. The DMC arrangement should be brought to the attention of DLO/KW; and
  - (e) as URA has indicated lot boundary and land grant conditions would only be dealt with at land grant stage, CES/UR has to reiterate that the whole development proposal should be reconsidered by LandsD and the approving authority of land grant shall not be pre-empted by the subject DS.
- 9.3 Comments of the Commissioner for Transport (C for T):
- (a) no adverse comment on URA's proposed DSP, road improvement proposals, TIA and proposal for reprovisioning of on-street car parking spaces;
  - (b) proposed traffic impact mitigation measures, including provision of pedestrian crossing facilities at Sung Chi Street/Hok Yuen Street junction, modification of lay-by at Hok Yuen Street and provision of associated traffic sign and road markings at Sung Chi Street and Hok Yuen Street, should be implemented by URA before intake of residents;
  - (c) the proposed L/UL bays is a requirement under the Hong Kong Planning Standards and Guidelines (HKPSG) for the development's internal transport facilities. The overall intention of HKPSG is to ensure that sufficient parking spaces and L/UL facilities would be provided to meet the development's own demand. Hence, the proposed 3 L/UL bays should form part of the internal facilities and should not be opened for public use; and
  - (d) according to a survey conducted by URA, about 5 out of 12 on-street parking spaces and existing L/UL bays at Chun Tin Street are used by the residents, visitors and local shop owners of the existing buildings at the DS site, while the remaining 7 on-street parking spaces are used by other general public. As the proponent will provide a total of 19 private car parking spaces and 3 L/UL bays within the DS for residents, visitors and retail shops to meet the parking demand, C for T has no adverse comment on deletion of 5 existing

on-street parking spaces and all the existing L/UL bays on Chun Tin Street. The other 7 on-street parking spaces will be reprovisioned in the vicinity (Bailey Street to the north and Hok Yuen Street and Gillies Avenue North further west of Ma Tau Wai Road) as shown in Figures 3.7 to 3.10 of the TIA in Appendix 3 of **Annex B**.

9.4 Comments of the Chief Building Surveyor/Kowloon, Buildings Department (CBS/K, BD)

- (a) the proposed extinguishment and inclusion of Chun Tin Street for site area and PR calculations will contravene the Buildings Ordinance (BO). Submissions are required to be made to the Building Authority for exemptions and modifications under the BO;
- (b) Chun Tin Street is being used for one of the means of escape for Fook Wan Mansion and a specified street for site classification to assess PR and site coverage for the adjoining DP, extinguishing of Chun Tin Street might cause contraventions under the Building (Planning) Regulations (B(P)R);
- (c) unless the proposed vehicular turning area from Sung Chi Street and the proposed area for widening the existing Sung Chi Street abutting the site are specified streets satisfying the requirements stipulated under the B(P)R, the site should be regarded as a Class B site;
- (d) if the proposed vehicular turning area from Sung Chi Street and the proposed area for widening the existing Sung Chi Street are regarded as specified streets for site classification, their area should not be included in the site area under the B(P)R;
- (e) sustainable building design (SBD) requirements should be incorporated in the DS; and
- (f) detailed comments under the BO can only be formulated at the building plan submission stage.

9.5 Comments of the Director of Environmental Protection (DEP):

URA has conducted EA for the URA DS project at Chun Tin Street/Sung Chi Street. According to the EA, insurmountable environmental impacts are not anticipated from the URA project with implementation of recommended mitigation measures. DEP has no adverse comment on the Sewerage Impact Assessment and EA. Other minor amendments on individual assessments are subject to acceptance of DEP after detailed checking.

9.6 Comments of the Chief Town Planner/Urban Design & Landscape, Planning Department (CTP/UD&L, PlanD):

Urban Design

- (a) URA considers that keeping the BH of 120mPD by extending the tower footprint southwards towards Hok Yuen Street would not improve the views

of residents in both Fook Wan Mansion and the adjoining DP nor enhance the visual relief offered by the passageway reserved between the DS and the adjoining DP. In that case, the proposed tower will span a longer facade length following the linear site configuration. URA argues that a relaxation of BH to 130mPD would facilitate a slimmer building block design for visual relief and enhance local air ventilation. Based on the information provided so far, such improvements and their significance have not been demonstrated. Approval of an increase in BH for the site may set a precedent giving rise to similar applications which would gradually undermine the BH profile intended for the area. Hence, in the absence of strong and convincing justifications, CTP/UD&L considers that the current BH of 120mPD should be maintained; and

#### Air Ventilation

- (b) in terms of air ventilation impact, it does not appear that there will be any significant improvement to the pedestrian wind environment due to an increase in BH for the proposed development.

#### 9.7 Comments of the Director of Social Welfare (DSW):

A 'wish list' of social welfare facilities (including residential care home and activity centres for the elderly; integrated vocational rehabilitation service centre, care and attention home/hostels for persons with various physical and mental disabilities; hostel for single persons; integrated family service centre etc.) is suggested for inclusion in the various URA projects in the area.

#### 9.8 Comments of the Chief Highways Engineer/Kowloon, HyD (CHE/K, HyD):

All relevant road improvement works in the vicinity shall be carried out by URA in association with the redevelopment. Suitable lease conditions may also be required for utilities diversion works, if necessary, due to the proposed road closure. URA is responsible for the road gazettal procedures.

#### 9.9 URA's responses to the above departmental comments on the draft DSP are at **Annexes E-1 to E-4** and briefly highlighted below:

- (a) URA maintains its view that relaxation of the BH restriction to 130mPD will provide visual relief as well as provide urban design and air ventilation benefits;
- (b) URA will liaise with LandsD and TD regarding appropriate lease conditions for management and maintenance of the proposed transport facilities including the vehicular turning area, pavement at Sung Chi Street and LGV bays and other traffic impact mitigation measures;
- (c) URA will liaise with TD and HyD regarding the future management and maintenance of the widened Sung Chi Street and the pavement;
- (d) URA will handle matters relating to BO at a later stage and will incorporate SBD requirements;

- (e) the intention for at grade open space and passageway within the adjoining DP will be stipulated in the DMC of the adjoining DP and URA will manage and maintain the at grade area and open it for public use; and
- (f) regarding SWD's requirements for social welfare facilities, URA responded that due to site constraint and the provision of community space in the adjoining DP, no GFA for social welfare facilities will be reserved in the subject DS site.

## 10. **Public Consultation**

- 10.1 Under the administrative arrangements to enhance transparency in the processing of draft DSP submitted after the commencement of the Town Planning Amendment Ordinance, the draft DSP (including the SIA (Stage 1) report) and the SIA (Stage 2) report were made available for public inspection/comment in the Planning Enquiry Counters of PlanD starting from 17.5.2016 to 7.6.2016 and from 27.6.2016 to 11.7.2016 respectively.
- 10.2 During the two inspection periods of the draft DSP and SIA (Stage 2) Report, a total of 1,181 comments were received. One additional objecting comment was received from the Owners Corporation of Fook Wan Mansion on 5.8.2016 after the periods. Among these 1,182 comments, 1,166 comments objected/had adverse comments, 4 supported/had positive comments, and 12 expressed views. Among the public comments received, 1,178 are from general public, two from local concern groups and two from KCDC Members. Of the 689 comments that had provided addresses, 555 (i.e. 80%) were submitted by individuals with addresses at Fook Wan Mansion and 3 were submitted by individuals with addresses within the DS area.

Public Comments	URA's responses
<i>Planning and Design Concerns</i>	
(a) The permanent closure of Chun Tin Street is objected. Including a public street for private development is overriding public interest for revenue gain. Shop businesses and Fook Wan Mansion residents will be adversely affected. Street closure is unnecessary and will increase population density and traffic flow and cause traffic congestion. The current street condition could be solved by slightly changing the withdrawn DP or by proper government management of the street.	<p>Inclusion of Chun Tin Street into the DS can extinguish the problems associated with a dead-end street. The enlarged site area could allow for better utilisation of the area to improve traffic and pedestrian network and increase flat supply to meet the housing demand. TD has no adverse comment on the TIA report.</p> <p>The proposed development intention is similar to the "R(A)" zone of the OZP. The site can be redeveloped for high density residential use as permitted in the OZP and traffic condition will be worst without the DS.</p>

<p>(b) Object to removal of existing on-street car parking spaces and the re-provisioned spaces being largely reduced, dispersed, far away and not restricted for Chun Tin Street residents' use.</p>	<p>Ancillary parking spaces will be provided at the basement of the development for residents and users of the commercial podium.</p> <p>In addition, some on-street metered parking spaces will be re-provisioned in the vicinity within walking distance (Figures 3.8 to 3.10 in TIA in Appendix 3 of <b>Annex B</b>).</p> <p>TD has no adverse comment on the car parking provision within the development and the proposed on-street car parking space re-provisioning.</p>
<p>(c) Fook Wan Mansion residents had not been consulted about the DS.</p>	<p>URA will conduct public consultations before project implementation and respond to public comments.</p> <p>URA has arranged/attended 5 public briefings on the DS. Views and comments were collected.</p>
<p>(d) The vehicular turning area should be a road managed by HyD instead of being a private road and should provide equal or better traffic benefits than the original Chun Tin Street.</p>	<p>The land status and management of the vehicular turning area will be subject to discussion with government departments. It is proposed for permanent road use to meet HyD's standard, that is managed and maintained by URA.</p>
<p><i>Requesting for Inclusion into the DS Boundary</i></p>	
<p>(e) Requested inclusion of Fook Wan Mansion, Ming Wah Court and Bowie Mansion into the DS.</p>	<p>The URA considers different factors such as, building condition, allocation of resources, building age (normally over 50 years), planning gain, etc. for determining the suitability of a site for redevelopment. Fook Wan Mansion, Ming Wah Court and Bowie Mansion are built in the 70's and 80's, these buildings are in better conditions than those within the DS.</p> <p>Considering the above factors, URA currently has no intention to cover these buildings in redevelopment.</p>

<i>Environmental Impacts and Technical Concerns</i>	
(f) The redevelopment will increase the development scale and the proposed BH relaxation will bring adverse impact on air ventilation, visual and natural lighting.	<p>The proposed BH relaxation can facilitate a slimmer building block design.</p> <p>High density residential development is permitted under the existing OZP and visual impact would be worse off without the DS.</p>
(g) The redevelopment will bring environmental nuisance and mitigation measures are required.	<p>The URA would closely monitor and request the contractor to minimize construction noise and fulfill the requirements for noise mitigation measures.</p> <p>The EA concluded that there will be no insurmountable environmental impacts.</p>
(h) Object to the proposed vehicular turning area which will create nuisance and fire safety concerns and affect emergency vehicle access.	The vehicular turning area aims to improve traffic safety and can provide adequate access for emergency vehicles. Director of Fire Services and TD have no adverse comment in this regard.
(i) Fook Wan Mansion will be affected structurally.	The URA and BD have inspected Fook Wan Mansion and BD considered that Fook Wan Mansion has no structural danger. URA will request the contractor of the adjoining DP to closely monitor any impact on Fook Wan Mansion.
<i>URA's Acquisition and Re-housing Policies</i>	
(j) Local re-housing and 'flat for flat', 'shop for shop' at the same district are requested. Public rental housing or subsidized housing should be provided in the DS.	URA has prevailing compensation and rehousing policies to the affected owners and tenants if the projects are authorized / approved by the Government for implementation. The URA has no plans to provide subsidized housing in the DS.
(k) URA restarted the project and lowered the acquisition cost in face of downward trend in the real estate market.	URA has devised a series of one-off special measures for owners and tenants (Appendix 10 in <b>Annex B</b> ). There is no gain to URA in delaying the acquisition.



(l) URA should explain the reasons for withdrawing the previous Chun Tin Street/Sung Chi Street DP and to re-activate it.	The inclusion of Chun Tin Street would result in a greater degree of planning and community benefits.
<i>Alternative Proposals and Comments from Concerned Groups – Community Cultural Concern (社區文化關注) and Hung To Community(紅土社區達人)</i>	
The submission of the two concern groups are the same and they considered that the DS will create problems for the local community and urged URA to adopt their alternative proposal. Their main comments are as follows:	
(m) Problems with the DS: <ul style="list-style-type: none"> <li>• will cause traffic congestion in the surrounding streets due to increase in car trips;</li> <li>• doubts on validity of submitted TIA (e.g. whether traffic generated by the adjoining DP has been taken into account);</li> <li>• use of car lift in both the DS and the adjoining DP to serve the 77 car parking spaces will create tail back onto Sung Chi Street and/or Hok Yuen Street;</li> <li>• ignore local parking demand by not re-provisioning all on-street car parking spaces and lay-bys on Chun Tin Street;</li> <li>• increased traffic flow on Sung Chi Street will cause safety concerns for pedestrian, and</li> <li>• relaxation of BH is not justified and will cause adverse visual, air ventilation and daylight impacts.</li> </ul>	See responses to (a), (b), (f) and (h) above.  The TIA has taken into account traffic generated by the adjoining DP.
(n) URA delayed the redevelopment so as to close Chun Tin Street and include it for redevelopment, this is only for URA's own gain. The redevelopment time and compensation should be expedited.	See responses to (a) and (k) above.
(o) The proposed alternative proposal that retains Chun Tin Street, advocates for 'flat for flat' (including provision of subsidized housing and public rental housing in the DS) and 'shop for shop' in the same	See responses to (a) and (j) above.  The alternative proposal of the concern groups do not have the support of comprehensive data and technical assessments and have not received local support. On the other

district and retention of existing businesses (such as recycling businesses) can realize the vision of creating a livable community by local re-housing, preservation of social network and social economy.	hand, URA has conducted various technical assessments and SIA to support the DS and ascertain the social impact of the project.
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- 10.3 On 23.6.2016, URA consulted the Housing and Infrastructure Committee (HIC) of KCDC on the draft DSP. The minutes of the meeting are in **Annex F** and the main comments of members and URA's responses made at the meeting are summarised below. The responses in paragraph 10.2 above are also relevant:

<b>HIC KCDC Members' comments</b>	<b>URA's responses</b>
(a) To withdraw the DS project and re-activate the withdrawn DP. In order to improve the local transport network, Chun Tin Street and Sung Chi Street should be cleared for through traffic.	URA will consider all public comments received within the inspection period of the DSP and submit them to the Board for consideration.
(b) No fire services vehicles and ambulance could enter the area when Chun Tin Street is closed.	The proposed 26m-wide vehicular turning area will be adequate for fire services vehicles, ambulance and lorries. The vehicular turning area will be opened for public use including those from Fook Wan Mansion.
(c) To explain how the project would benefit the community especially for residents of Fook Wan Mansion, who would be subject to noise impact during construction of the project.	Chun Tin Street is a dead-end road and is not ideal for traffic flow and pedestrian safety. The rationale to include Chin Tin Street in the DS and provision of 26m-wide vehicular turning area is to improve the local road arrangement and pedestrian environment. The proposal will benefit the redevelopment in the DS as well as the local community. Besides, it will integrate with the adjoining DP.
(d) To compensate for the removal of the existing car parking spaces at Chin Tin Street.	The DS project will have an underground car park. Re-provisioning of the on-street car parking spaces are proposed in the TIA.

## **11. Consultation**

- 11.1 Relevant Government bureaux and departments have been consulted and their comments have been incorporated in the above paragraphs.

11.2 The following Government departments have no objection to / no comment on the draft DSP/URA's responses to departmental comments (**Annexes E-1 to E-4**):

- (a) Secretary for Development;
- (b) Chief Engineer/Constructions, Water Supplies Department;
- (c) Director of Fire Services;
- (d) Chief Engineer/Mainland South, Drainage Services Department;
- (e) Director of Leisure and Cultural Services; and
- (f) District Officer (Kowloon City), Home Affairs Department.

## **12. Planning Department's Views**

12.1 For the following reasons, the PlanD has no objection to the draft DSP in general. Notwithstanding, PlanD considered that it is more appropriate to retain the BH restriction of 120mPD for reasons explained in paragraph 12.2 below.

### Development Intensity

- (a) the gross site area of the DS, including the area zoned "R(A)" and the road area of Chun Tin Street, is 2,475m<sup>2</sup>. While the whole site is proposed to be rezoned to "R(A)7", in deriving the net site area (1,636m<sup>2</sup>) for GFA calculation, URA has excluded an area of Chun Tin Street that will remain as the vehicular turning area (grey hatched area shown in **Drawing 2**). The net site area adopted by URA is considered acceptable;
- (b) the GFA restrictions proposed to be stipulated in the Notes are in line with the PR restrictions for the original "R(A)" zone, that is, equivalent to a maximum PR of 9 for a development that is partly domestic and partly non-domestic and with the maximum PR for the domestic part not exceeding 7.5;

### Inclusion of Chun Tin Street in DS

- (c) the expanded site area would offer opportunity to improve the traffic network and facilitate better environment for pedestrian and integration with the adjoining DP. New transport arrangements as explained in the following section have been provided to accommodate the closure of Chun Tin Street. In addition, the proposed inclusion of Chun Tin Street for development would allow for better utilisation of land resources to provide more small to medium sized flats to address the housing demand. According to URA's information, there would be about 150 flats in the withdrawn DP whereas there will be about 310 flats in the subject DSP;

### New Transport Arrangements

- (d) Chun Tin Street is a dead end street and there are pedestrian/vehicular conflict and safety concerns relating to vehicles manoeuvring into and out of the street. URA has proposed traffic improvement measures following the closure of Chun Tin Street. The section of Sung Chi Street south of Fook Wan Mansion will be widened to a two-lane carriageway and a

vehicular turning area will be provided at the northern portion of the DS to allow vehicles to turn around. The vehicular turning area will serve the DS, the adjoining DP as well as Fook Wan Mansion. The vehicular turning area has sufficient turning radius for emergency vehicles and heavy vehicles and is open for public use;

- (e) ancillary car parking spaces will be provided at the basement floor of the development within the DS and two to three LGV bays will be provided along the kerb side of the widened Sung Chi Street within the boundary of the DS. The LGV bays are for use by the DS only;
- (f) URA has indicated that it will manage and maintain the vehicular turning area, the pavement and LGV bays at Sung Chi Street;
- (g) the 12 existing metered car park spaces and 2 on-street L/UL lay-bys on Chun Tin Street will be discontinued after the closure of the street. URA proposed to partially re-provide 7 metered car parking spaces in the vicinity (Bailey Street to the north and Hok Yuen Street and Gillies Avenue North further west of Ma Tau Wai Road). URA considered that the number of re-provided on-street parking spaces are sufficient based on their survey of usage of the existing metered car parking spaces. URA considered that the 2 existing lay-bys need not be re-provided as they are currently being used by residents and operators of the existing buildings in the DS and the workers in the adjacent DP, these users will no longer need to use these lay-bys upon completion of the DS;
- (h) C for T has no adverse comment on the proposed new transport arrangements as well as the re-provisioning proposal for on-street parking spaces as detailed in the TIA in Appendix 3 of **Annex B** from traffic planning perspective;
- (i) URA also proposed to improve pedestrian connection of the DS by integrating the design of the pedestrian passageways on the site with those in the adjoining DP. This will allow more direct access to Ma Tau Wai Road. In addition, proper pavement will be provided along the vehicular turning area, the widening Sung Chi Street and along Hok Yuen Street to enhance the pedestrian environment; and

#### Other Technical Matters

- (j) the submissions from URA has been circulated to relevant departments for comments and their comments are highlighted in paragraph 9 above. In gist, comments from Government departments have been addressed by URA in **Annexes E-1 to E-4** and they have no adverse comment on the DS from environmental, traffic, drainage and sewerage impact perspectives. Where appropriate, comments from relevant Government department have been incorporated in the revised Notes and ES in **Annexes G-2 and G-3**. The comments from CBS/K, BD and LandsD relating to matters pertaining to general building plan submission and land grant may be dealt with at a later stage. The proposed additional social welfare facilities, that are uses always permitted under the DSP, are subject to further discussion between SWD and URA at a later stage and if required, can be stipulated under

relevant lease conditions. URA has undertaken to implement all traffic impact mitigation measures as proposed in the TIA.

### Building Height Restriction

- 12.2 URA has proposed to relax the BH restriction of the DSP from 120mPD (currently stipulated for the “R(A)” zone) to 130mPD for reasons highlighted in paragraphs 2.3 and 2.4 above. For the following reasons, PlanD considered that it is more appropriate to retain the BH restriction at 120mPD:
- (a) the “R(A)” zones in the same street block, covering the adjoining DP as well as the “R(A)” and “Other Specified Uses” annotated “Business” zones in the abutting street blocks, are all subject to maximum BH of 120mPD (**Plan 2**). In fact, the “R(A)” zones in the entire Hung Hom OZP are subject to maximum BH of 80mPD, 100mPD and 120mPD (except for Chatham Gate that is at a distance from the site<sup>1</sup>). Hence, the proposed relaxation of maximum BH of 120mPD, which is the tallest BH band in the area, will have undesirable precedent effect and its merits have to be carefully considered;
  - (b) according to URA, schemes at both 120mPD and 130mPD will accommodate the GFA proposed to be stipulated in the Notes of the DP and the number of flats to be developed will be similar for both BH schemes respectively (**Drawings 13** and **14**). Hence, retaining the BH restriction of 120mPD will not affect the development potential of the DS;
  - (c) URA submitted a visual appraisal to demonstrate that the BH of 130mPD will create minimal visual impact compared to a 120mPD scheme (Appendix 2 of **Annex B**). Notional schemes for the two BHs were provided in the visual appraisal, and it was indicated that the 120mPD scheme will have a wider footprint that will block the building separation/visual corridor between the DS and the adjoining DP. As referred in the notional schemes in **Drawings 13** and **14**, URA only extended the tower westward towards the adjoining DP but there should be options to extend the tower southward towards Hok Yuen Street without narrowing the building gap;
  - (d) URA indicated that the 130mPD scheme would facilitate better air ventilation. In this regard, PlanD is of the view that it does not appear that there will be any significant improvement to the pedestrian wind environment due to an increase in BH; and
  - (e) in view of the above, PlanD’s view is that URA has not convincingly demonstrated that there are design merits not otherwise achievable without the proposed relaxation of BH. Without strong justifications provided, allowing the proposed relaxation of the BH restriction will create undesirable precedent effect and cumulative impacts on the overall BH profile adopted in the OZP.

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<sup>1</sup> In 2008, when BHRs were incorporated into the Hung Hom OZP, the Chatham Gate was a committed development (as the lease already stipulated a BH restriction of 150mPD). The site is zoned “R(A)6” with BH restriction of 150mPD.

- 12.3 In respect of the public comments and comments of HIC KCDC members on the draft DSP mentioned in paragraphs 10.2 and 10.3 above, the above responses are applicable. Regarding the request to include Fook Wan Mansion into the DS as well as disturbance to the residents during the construction period, URA has explained its rationale for defining the site boundary and has committed to minimise impacts on Fook Wan Mansion during the construction period. Other issues on acquisition, compensation and re-housing would be dealt with by URA according to the established policies.

### **13. Proposed Amendments to the Approved Hung Hom OZP No. S/K9/24**

#### Proposed Amendments to Matters Shown on the OZP (Annex H-1)

- 13.1 If the Board decides to deem the draft DSP as being suitable for publication, in accordance with section 25(9) of the URAO, the draft DSP shall, from the date that the exhibition of the DSP is first notified in the Gazette, replace or amend according to their tenor the OZP relating to the site. In addition to the rezoning of a site at Lee Kung Street for Hong Kong Housing Society's Senior Citizen Housing project (**Item A** and other technical amendments) agreed by the Metro Planning Committee (MPC) at its meeting on 14.9.2016, the following amendments will also be made to the approved Hung Hom OZP No. S/K9/24:

#### **Chun Tin Street/Sung Chi Street DS (about 1,636 m<sup>2</sup>)**

- 13.2 To excise the area covered by the Chun Tin Street/Sung Chi Street DSP from the OZP (the subject DSP).

#### **Hung Fook Street/Ngan Hon Street DS (about 4,562 m<sup>2</sup>)**

- 13.3 To excise the area covered by the Hung Fook Street/Ngan Hon Street DSP from the OZP (subject to the Board's consideration of that DSP under TPB Paper No. 10184 at the same meeting).

#### Proposed Amendments to the Notes of the OZP

- 13.4 There is no need to make amendments to the Notes of the OZP in relation to the two DSPs mentioned above.

#### Revision to the Explanatory Statement of the OZP

- 13.5 The revised ES of the OZP agreed by the MPC at its meeting on 14.9.2016 is further revised to take into account the two DSPs mentioned above as well as corresponding amendments to the planning scheme area of the OZP and area of land under the "R(A)" zoning in the OZP. An extract of the relevant pages of the revised ES (with proposed additions highlighted in bold and italics and deletions ~~crossed-out~~) is at **Annex H-2**.

#### Plan Number

- 13.6 Upon exhibition for public inspection, the OZP will be renumbered as S/K9/25.

## 14. Decision Sought

### Draft DSP

- 14.1 The Board is invited to consider whether to retain the BH restriction for the “R(A)7” zone as 120mPD or to accede to URA’s proposed relaxation of BH restriction to 130mPD. Should the Board agree to retain the BH restriction to 120mPD, the draft DSP, Notes and ES in **Annexes G-1 to G-3** will be amended accordingly before gazettal.
- 14.2 If the Board agrees with the DSP approach for the Chun Tin Street/Sung Chi Street site and agree that the BH restriction be retained as 120mPD, the Board is invited to consider the draft DSP with amendments mentioned in paragraph 14.1 and to:
- (a) deem the draft Chun Tin Street/Sung Chi Street DSP No. S/K9/URA1/A (to be renumbered No. S/K9/URA1/1 upon exhibition for public inspection) and the Notes at **Annexes G-1 and G-2**, with BH restriction amended to 120mPD, as being suitable for publication as provided for under section 25(6) of the URAO, so that the draft DSP shall be exhibited for public inspection under section 5 of the TPO;
  - (b) endorse the ES of the draft DSP at **Annex G-3**, with BH restriction amended to 120mPD, and adopt it as an expression of the Board's planning intention and objectives of the Plan, and agree that the ES as being suitable for public inspection together with the draft DSP;
  - (c) agree that the draft DSP, its Notes and ES, with BH restriction amended to 120mPD, are suitable for submission to the KCDC for consultation/information upon exhibition of the draft DSP; and
  - (d) note the Social Impact Assessment (Stages 1 and 2) reports of the DSP.
- 14.3 Alternatively, in relation to para. 14.2 above, the Board may decide to deem the draft DSP, submitted without any amendment (i.e. retaining the BH restriction of 130mPD proposed by URA) as being suitable for publication. If so, the draft DSP, Notes and ES in **Annex G-1 to G-3** will be gazetted without any amendment. Alternatively, the Board may also refuse to deem the DSP, as being suitable for publication.
- 14.4 If the Board does not agree with the DSP stated in para 14.2 above, the Notes and ES of the draft DSP will be revised by URA for the Board’s consideration.

### Proposed Amendments to OZP

- 14.5 If the Board decides to deem the draft DSP, with or without amendment under paragraphs 14.2 and 14.3 above respectively, as being suitable for publication, Members are invited to consider the related amendments to the OZP and to:
- (a) agree to the proposed amendments to the approved Hung Hom OZP and that the draft Hung Hom OZP No. S/K9/24B at **Annex H-1** (to be renumbered as S/K9/25 upon exhibition) and its Notes agreed by MPC at its meeting dated 14.9.2016 are suitable for exhibition under section 5 of

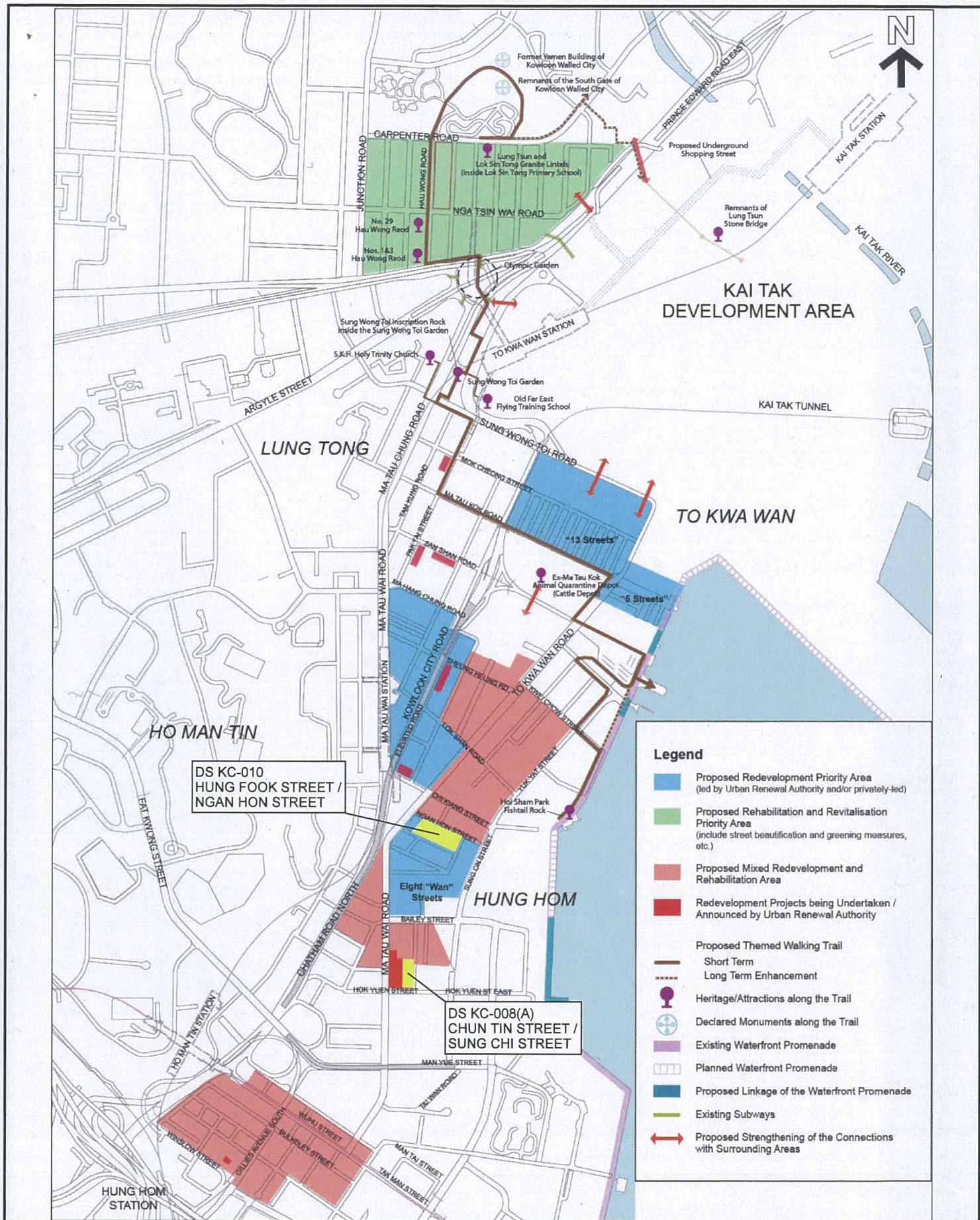
the TPO;

- (b) adopt the revised ES at **Annex H-2** for the draft Hung Hom OZP No. S/K9/24B as an expression of the Board's planning intention and objectives for the various land use zones of the OZP, and agree that the revised ES as being suitable for public inspection together with the draft OZP.

## 15. Attachments

<b>Annex A</b>	Letter dated 13.5.2016
<b>Annex B</b>	Planning Report
<b>Annex C</b>	Letter dated 22.6.2016
<b>Annex D</b>	SIA Stage 2 Report
<b>Annex E-1</b>	Letter dated 15.7.2016 providing responses to comments of Government departments and public comments with revised EA and revised Drainage and Sewerage Impact Assessment
<b>Annex E-2</b>	Letter dated 29.7.2016 providing responses to comments of Government departments and public comments
<b>Annex E-3</b>	Letter dated 12.8.2016 providing responses to comments of Government departments with a CD containing a computer-generated animation for the DS
<b>Annex E-4</b>	Letter dated 6.9.2016 providing responses to comments of Government departments and public comments with revised sections of EA
<b>Annex E-5</b>	E-mail dated 15.9.2016 providing revised DSP, Notes and ES
<b>Annex F</b>	Extracts of Minutes of HIC KCDC Meeting held on 23.6.2016
<b>Annex G-1</b>	Draft URA Chun Tin Street/Sung Chi Street DSP No. S/K9/URA1/A
<b>Annex G-2</b>	Notes of the Draft URA Chun Tin Street/Sung Chi Street DSP No. S/K9/URA1/A
<b>Annex G-3</b>	ES of the Draft URA Chun Tin Street/Sung Chi Street DSP No. S/K9/URA1/A
<b>Annex H-1</b>	Draft Hung Hom OZP No. S/K9/24B
<b>Annex H-2</b>	Extract of ES of the Draft Hung Hom OZP No. S/K9/24B
<b>Drawing 1</b>	URA's Proposed Traffic Network
<b>Drawing 2</b>	Net Site Area Plan
<b>Drawings 3 to 12</b>	Notional Scheme
<b>Drawings 13 to 14</b>	Comparison of 120mPD and 130mPD Scheme
<b>Plan 1</b>	Urban Renewal Plan for Kowloon City
<b>Plan 2</b>	Location Plan (Projects Commenced by URA in the Vicinity of the DS)
<b>Plan 3</b>	Site Plan (Land Ownership)
<b>Plan 4</b>	Site Plan (Building Age and Building Height Plan)
<b>Plans 5 to 8</b>	Site Photos
<b>Plan 9</b>	Proposed Amendments to OZP to excise the areas covered by the DSPs





本圖於2016年9月14日擬備  
PLAN PREPARED ON 14.9.2016

RECOMMENDATION OF URBAN RENEWAL PLAN  
FOR KOWLOON CITY

SCALE 1 : 13 000 比例尺  
METRES 250 0 250 500 METRES

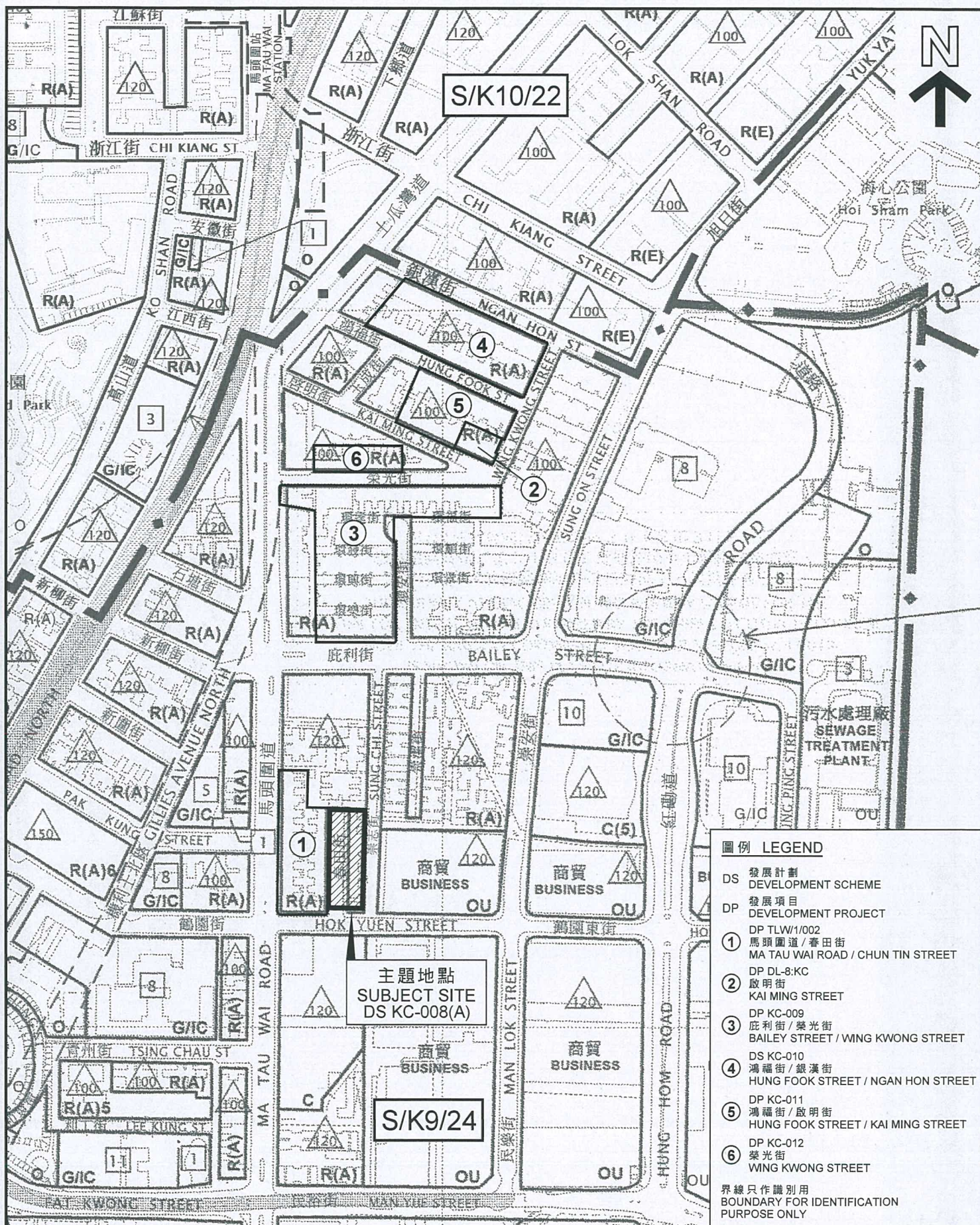
規劃署  
PLANNING  
DEPARTMENT



參考編號  
REFERENCE No.  
M/K9/16/54

圖 PLAN  
1





### 位置圖 LOCATION PLAN

市區重建局春田街 / 崇志街發展計劃  
URBAN RENEWAL AUTHORITY  
CHUN TIN STREET / SUNG CHI STREET  
DEVELOPMENT SCHEME

SCALE 1 : 3 500 比例尺  
METRES 50 0 50 100 150 METRES

規劃署  
PLANNING  
DEPARTMENT

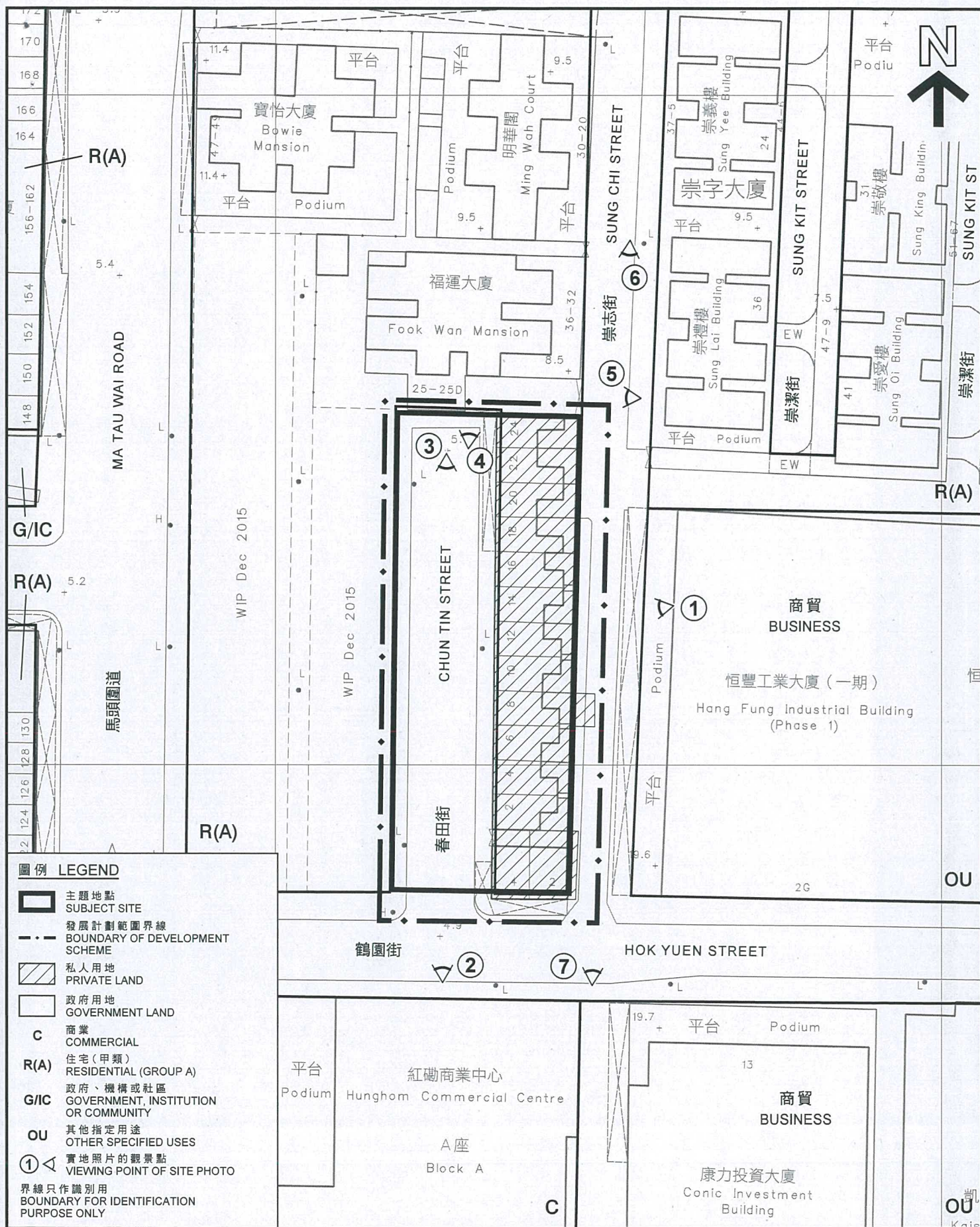


參考編號  
REFERENCE No.  
M/K9/16/54

圖 PLAN  
2

本摘要圖於2016年9月14日擬備，  
所根據的資料為：  
於2010年10月5日核准的分區計劃  
大綱圖編號S/K9/24，以及於2016年4月5日  
核准的分區計劃大綱圖編號S/K10/22  
EXTRACT PLAN PREPARED ON 14.9.2016  
BASED ON OUTLINE ZONING PLANS No.  
S/K9/24 APPROVED ON 5.10.2010 AND  
S/K10/22 APPROVED ON 5.4.2016





# 圖例 LEGEND

- 主題地點  
SUBJECT SITE
  - 發展計劃範圍界線  
BOUNDARY OF DEVELOPMENT SCHEME
  - 私人用地  
PRIVATE LAND
  - 政府用地  
GOVERNMENT LAND
  - C** 商業  
COMMERCIAL
  - R(A)** 住宅(甲類)  
RESIDENTIAL (GROUP A)
  - G/IC** 政府、機構或社區  
GOVERNMENT, INSTITUTION OR COMMUNITY
  - OU** 其他指定用途  
OTHER SPECIFIED USES
  - 1 實地照片的觀景點  
VIEWING POINT OF SITE PHOTO
- 界線只作識別用  
BOUNDARY FOR IDENTIFICATION PURPOSE ONLY

## 平面圖 SITE PLAN

市區重建局春田街/崇志街發展計劃  
URBAN RENEWAL AUTHORITY  
CHUN TIN STREET / SUNG CHI STREET  
DEVELOPMENT SCHEME

本摘要圖於2016年9月9日擬備，  
所根據的資料為測量圖編號  
11-NE-16C、21A、11-NW-20D和25B  
EXTRACT PLAN PREPARED ON 9.9.2016  
BASED ON SURVEY SHEETS No.  
11-NE-16C, 21A, 11-NW-20D & 25B

SCALE 1 : 750 比例尺

米 METRES 15 0 15 30 米 METRES

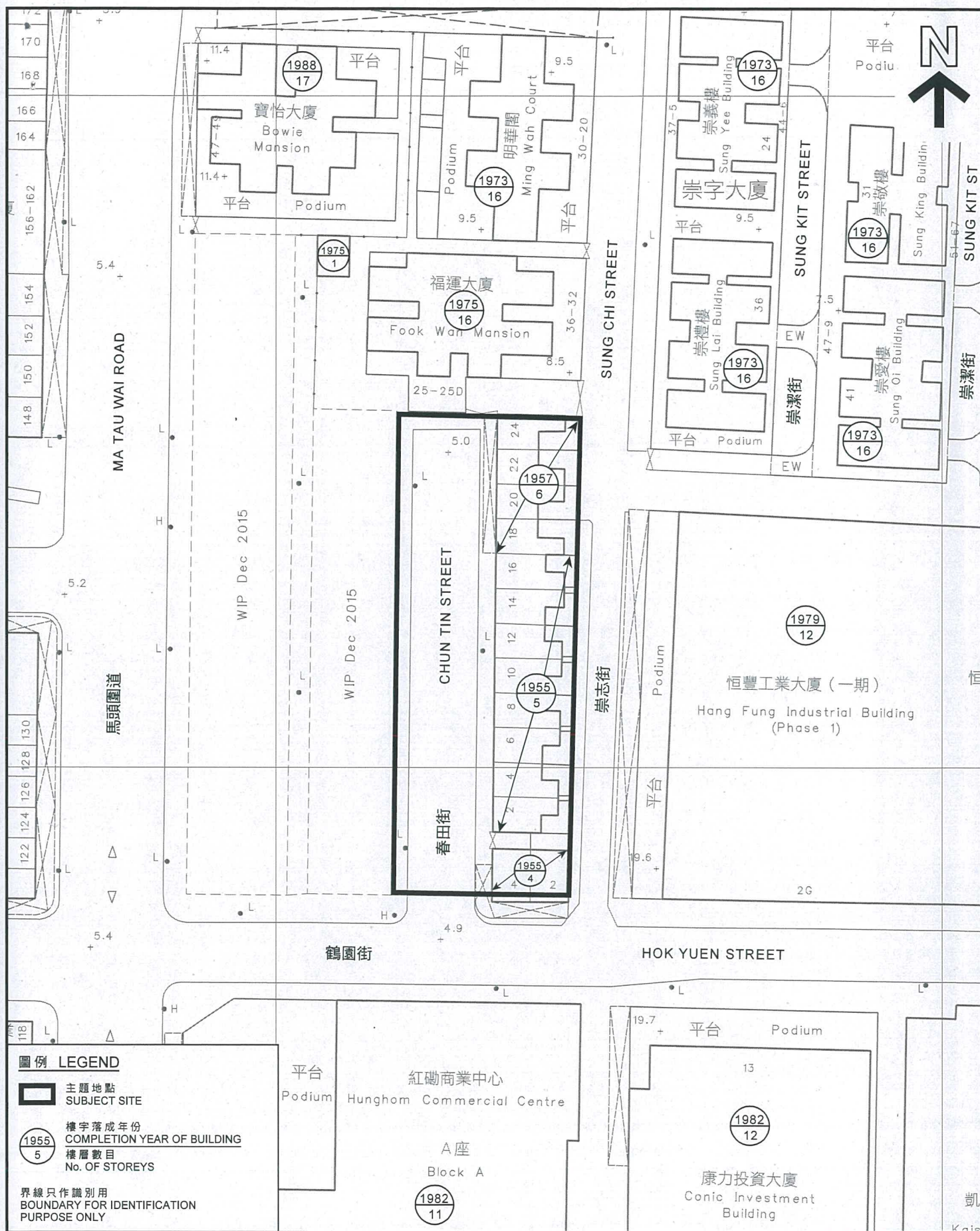
規劃署  
PLANNING  
DEPARTMENT



參考編號  
REFERENCE No.  
M/K9/16/54

圖 PLAN  
3





本摘要圖於2016年9月9日擬備，  
所根據的資料為測量圖編號  
11-NE-16C、21A、11-NW-20D和25B  
EXTRACT PLAN PREPARED ON 9.9.2016  
BASED ON SURVEY SHEETS No.  
11-NE-16C, 21A, 11-NW-20D & 25B

市區重建局春田街/崇志街發展計劃  
URBAN RENEWAL AUTHORITY  
CHUN TIN STREET / SUNG CHI STREET  
DEVELOPMENT SCHEME

規劃署  
PLANNING  
DEPARTMENT

參考編號  
REFERENCE No.  
M/K9/16/54

圖 PLAN  
4





主題地點  
SUBJECT SITE

界線只作識別用  
BOUNDARY FOR IDENTIFICATION PURPOSE ONLY

本圖於2016年9月12日擬備，  
所根據的資料為攝於  
2016年9月1日的實地照片  
PLAN PREPARED ON 12.9.2016  
BASED ON SITE PHOTO  
TAKEN ON 1.9.2016

### 實地照片 SITE PHOTO

市區重建局春田街/崇志街發展計劃  
URBAN RENEWAL AUTHORITY  
CHUN TIN STREET / SUNG CHI STREET  
DEVELOPMENT SCHEME

規劃署  
PLANNING  
DEPARTMENT



參考編號  
REFERENCE No.

M/K9/16/54

圖 PLAN

5





### 實地照片 SITE PHOTOS

市區重建局春田街/崇志街發展計劃  
URBAN RENEWAL AUTHORITY  
CHUN TIN STREET / SUNG CHI STREET  
DEVELOPMENT SCHEME

規劃署  
PLANNING  
DEPARTMENT



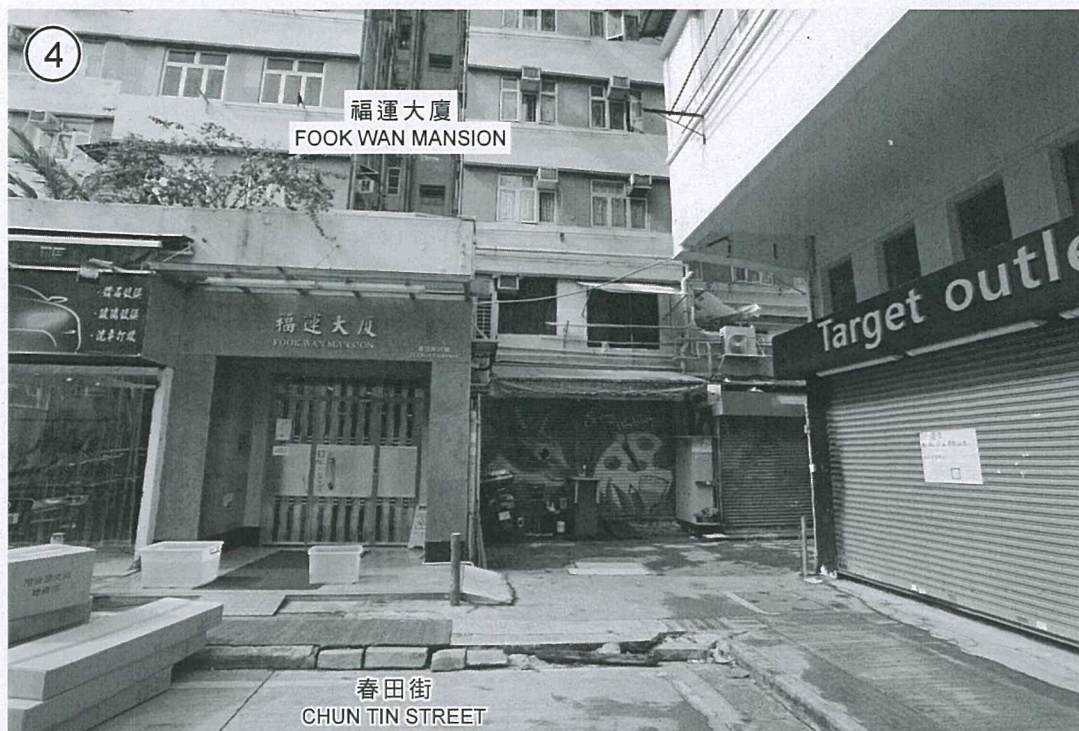
參考編號  
REFERENCE No.  
M/K9/16/54

圖 PLAN  
6

本圖於2016年9月12日擬備，  
所根據的資料為攝於  
2016年9月1日及2016年8月29日  
的實地照片

PLAN PREPARED ON 12.9.2016  
BASED ON SITE PHOTOS  
TAKEN ON 1.9.2016 AND 29.8.2016





# 實地照片 SITE PHOTOS

市區重建局春田街/崇志街發展計劃  
URBAN RENEWAL AUTHORITY  
CHUN TIN STREET / SUNG CHI STREET  
DEVELOPMENT SCHEME

規劃署  
PLANNING  
DEPARTMENT



參考編號  
REFERENCE No.  
M/K9/16/54

圖 PLAN  
7

本圖於2016年9月12日擬備，  
所根據的資料為攝於  
2016年9月1日的實地照片  
PLAN PREPARED ON 12.9.2016  
BASED ON SITE PHOTOS  
TAKEN ON 1.9.2016





本圖於2016年9月12日擬備，  
所根據的資料為攝於  
2016年9月1日的實地照片  
PLAN PREPARED ON 12.9.2016  
BASED ON SITE PHOTOS  
TAKEN ON 1.9.2016

### 實地照片 SITE PHOTOS

市區重建局春田街／崇志街發展計劃  
URBAN RENEWAL AUTHORITY  
CHUN TIN STREET / SUNG CHI STREET  
DEVELOPMENT SCHEME

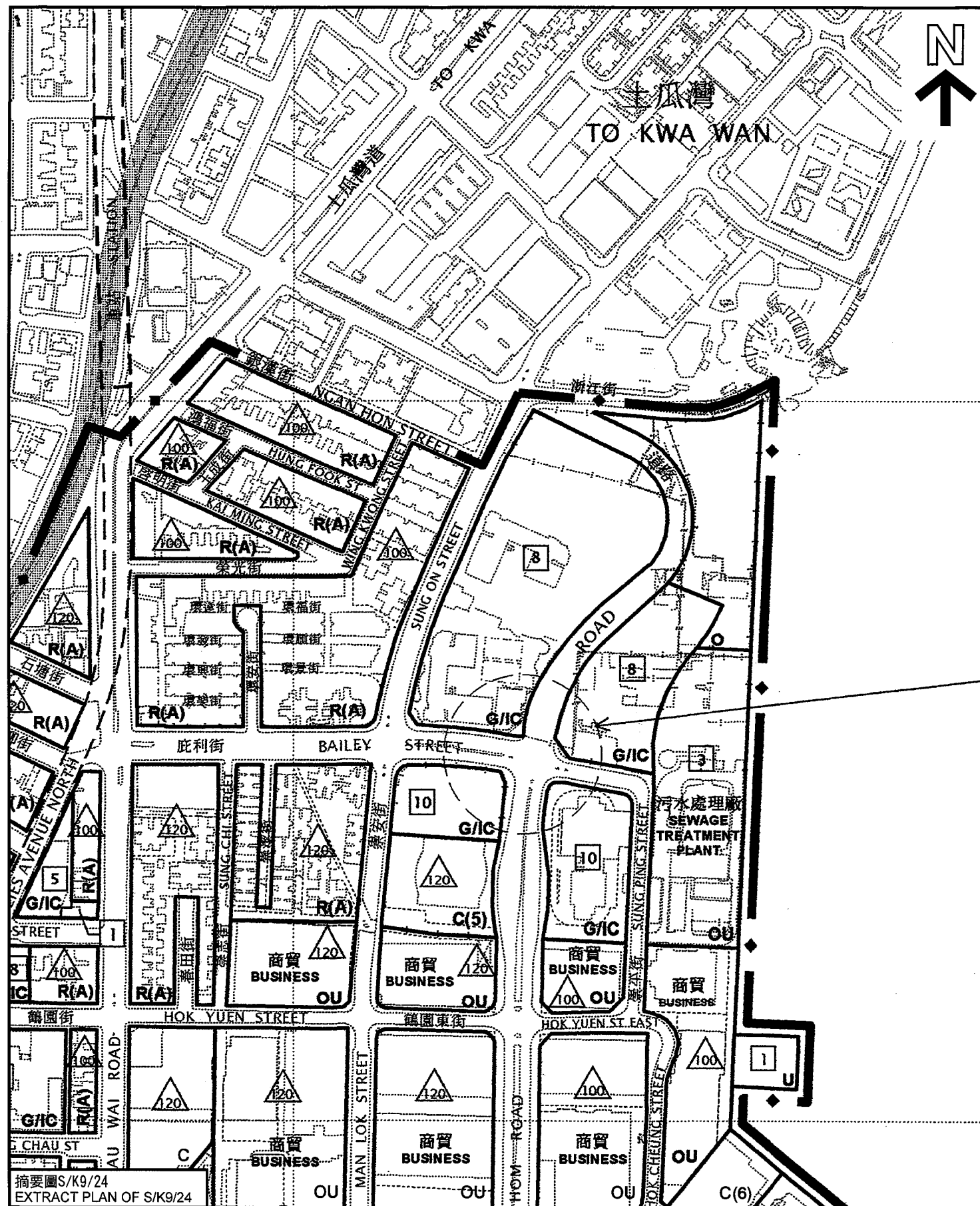
規劃署  
PLANNING  
DEPARTMENT



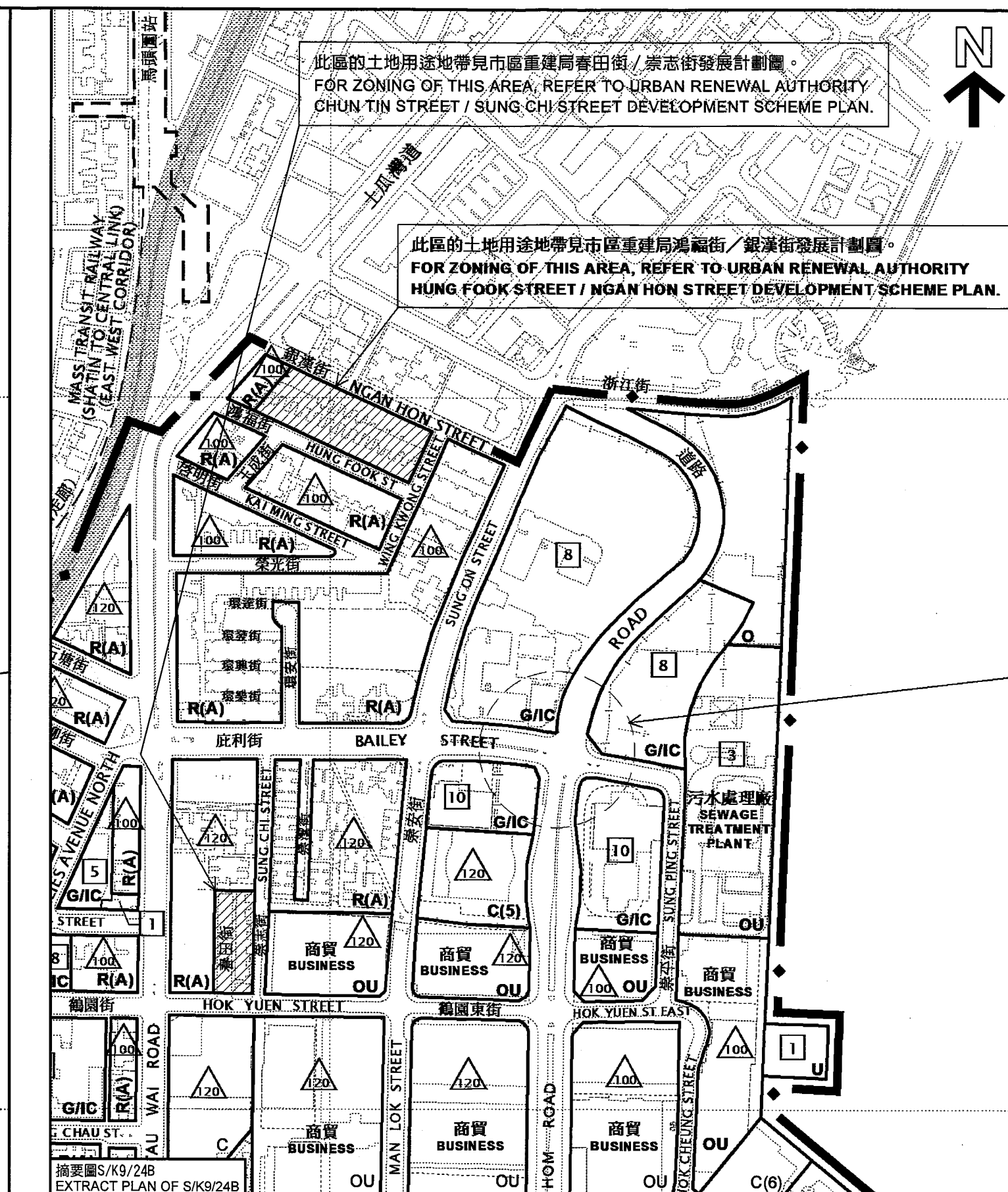
參考編號  
REFERENCE No.  
M/K9/16/54

圖 PLAN  
8





摘要圖S/K9/24  
EXTRACT PLAN OF S/K9/24



摘要圖S/K9/24B  
EXTRACT PLAN OF S/K9/24B

# 位置圖 LOCATION PLAN

紅磡分區計劃大綱核准圖編號S/K9/24及紅磡分區計劃大綱草圖編號S/K9/24B之比較  
COMPARISON OF THE APPROVED HUNG HOM OUTLINE ZONING PLAN No. S/K9/24  
AND THE DRAFT HUNG HOM OUTLINE ZONING PLAN No. S/K9/24B

SCALE 1:3 500 比例尺  
METRES 100 0 100 200 300 METRES

本摘要圖於2016年9月13日擬備，  
所根據的資料為於2010年10月5日  
核准的分區計劃大綱圖編號S/K9/24  
EXTRACT PLAN PREPARED ON 13.9.2016  
BASED ON OUTLINE ZONING PLAN No.  
S/K9/24 APPROVED ON 5.10.2010

規劃署  
PLANNING DEPARTMENT



參考編號  
REFERENCE No.  
M/K9/16/54

圖 PLAN  
9

Our File Ref: PDP/KC-008(A)

13 May 2016

By Hand

Secretary,  
Town Planning Board,  
15/F, North Point Government Offices,  
333 Java Road,  
North Point,  
Hong Kong

Dear Sir/Madam,

**Submission of the Draft Development Scheme Plan**  
**for the Urban Renewal Authority**  
**Chun Tin Street / Sung Chi Street Development Scheme (KC-008(A))**

I am pleased to submit 90 copies of the draft Development Scheme Plan (DSP) for the Urban Renewal Authority Chun Tin Street / Sung Chi Street Development Scheme (KC-008(A)) (the Scheme) for Town Planning Board's consideration in accordance with section 25(5) of the URA Ordinance (URAO).

The Scheme was included in the Urban Renewal Authority (URA)'s 15<sup>th</sup> Business Plan (2016/17) approved by the Financial Secretary for implementation in the year of 2016/17. On 6 May 2016, the URA has published the commencement date of the implementation of the Scheme in the Government Gazette under section 23 of the URAO and subsequently in local newspapers.

The submission booklet for the draft DSP of KC-008(A) includes the Planning Report as Part 1 to summarize the planning proposals; the draft DSP, its Notes and Explanatory Statement as Part 2; the supplementary information to support the DSP submission as Part 3, which includes Preliminary Design, Traffic Impact Assessment (TIA), Environment Assessment (EA), Drainage and Sewerage Impact Assessment (DSIA), Stage 1 Social Impact Assessment (SIA) Report and the tentative implementation programme, URA's compensation policies, etc. For your information, we have already submitted the TIA Report to the Transport Department (TD) and TD indicated no adverse comment to the proposal via his letter dated 18 March 2016.

In accordance with the Urban Renewal Strategy, the Stage 2 SIA Report will be included as part of the DSP submission. Based on the working agreement between the Planning Department and URA, we will submit the report to the TPB on 22 June 2016 for TPB's consideration.

.....P.2




Our File Ref: PDP/KC-008(A)

Date: 13 May 2016

To facilitate the inspection of the draft DSP by the general public, 10 copies of the Chinese version of the Notes and the Explanatory Statement of the draft DSP, and the Stage 1 SIA Report are also submitted for your use and consideration.

Should you have any enquiry on the draft DSP submission, please feel free to contact our Mr. Christopher Wong at 2588 2658. Thank you very much.

Yours sincerely,



Wilfred Au  
General Manager,  
Planning and Design Division

Encl.

c.c. (w/o - by fax)

S for Dev

AD/M, PlanD

DPO/Kln, PlanD

(Attn: Mr. Raymond Sy)

(Attn: Mr. Michael Chan)

(Attn: Mr. Tom Ip)

(Fax No.: 2905 1002)

(Fax No.: 2576 3266)

(Fax No.: 2894 9502)

Our Ref: PDP/KC-008(A)

22 June 2016

By Hand

Secretary to the Town Planning Board  
15/F North Point Government Offices  
333 Java Road, North Point,  
Hong Kong.



Dear Sir/ Madam,

**Submission of Stage 2 Social Impact Assessment Report  
for the Urban Renewal Authority  
Chun Tin Street / Sung Chi Street Development Scheme (KC-008(A))**

We refer to the captioned Development Scheme which was commenced on 6 May 2016 and the draft Development Scheme Plan submission (DSP) was made to Town Planning Board (TPB) on 13 May 2016.

In accordance with the Gazette Notice published on 6 May 2016, the URA will submit a Stage 2 Social Impact Assessment (SIA) Report to the TPB as part of the submission.

We enclose a total of 10 English copies and 10 Chinese copies of the Stage 2 SIA report for your use and consideration. As stated in the Gazette Notice, the Stage 2 SIA Report shall be made for public inspection at the two Planning Enquiry Counters from 27 June 2016.

Should you have any enquiry on the submission, please feel free to contact our Mr. Christopher Wong at 2588 2658. Thank you very much.

Yours sincerely,

  
Wilfred Au  
General Manager,  
Planning and Design Division

Encl.

c.c. (w/o – by fax)

S for Dev	(Attn: Mr. Raymond Sy)	(Fax No.: 2905 1002)
AD/M, PlanD	(Attn: Mr. Michael Chan)	(Fax No.: 2576 3266)
DPO/Kln, PlanD	(Attn: Mr. Tom Ip)	(Fax No.: 2894 9502)



Our Ref: PDP/KC-008(A)

29 July 2016



By Fax (letter only) & By Hand  
Fax No. 2894 9502

District Planning Officer/ Kowloon  
14/F North Point Government Offices  
333 Java Road, North Point,  
Hong Kong.

(Attn.: Ms. Johanna CHENG)

Dear Johanna,

~~CONFIDENTIAL~~

*downgraded  
1.8.2016 JV.*

**Social Impact Assessment (Stage 2) Report**

**Submission of the Draft Development Scheme Plan (DSP)  
for the Urban Renewal Authority  
Chun Tin Street / Sung Chi Street Development Scheme (KC-008(A))**

I refer to your letter dated 19 July 2016 enclosing with the 723 public comments and departmental comments received during the 2-week inspection period of the Social Impact Assessment (Stage 2) Report for the captioned Development Scheme.

We are pleased to enclose our consolidated responses to comments (R to C) on those public comments for your necessary action (see Attachment 1). The full set of the public comments (Nos. 1 to 723) is hereby returned in the enclosure (see Attachment 2). -

We would also like to enclose our R to C to the Departmental comments received via your Department's emails dated 14 July 2016 (from Mr. Barry Yan) and 28 July 2016 (from your good self) respectively for your necessary action (see Attachment 3).

Please note that the information as contained in the R to C is mainly clarification on planning and design intentions and elaboration of the Scheme to address Departmental comments and public concerns. There is no fundamental change proposed to the submitted draft DSP under URAO s.25. We look forward to your prompt processing and consideration on the R to C along with your ongoing preparation work for TPB's consideration.





Thank you for your assistance on the matter.

Yours sincerely,

Christopher Wong  
Assistant General Manager  
Planning & Design Division

Encl.

## Attachment 1

R to C on public comments

春田街/崇志街發展計劃 KC-008(A)

城規會於 2016 年 6 月 27 至 7 月 11 日期間，就 KC-008(A)發展計劃(本計劃)的第二階段社會影響評估報告作公眾諮詢，共收到 723 份意見書。在 723 份意見書中，約 290 份意見書的意見與第一次公眾諮詢期間(即 2016 年 5 月 17 日至 6 月 7 日的發展計劃草圖諮詢期)收到的意見相近；其餘約 430 份意見書內既有舊的意見，亦有新的意見。

在 723 份意見書中與第一次公眾諮詢期間相近的意見列於表一，市建局對有關意見的回應不作重覆。對於新的意見，當中有很大部份認為“市建局未有諮詢福運大廈住戶”及認為“市建局吞併街道作私人發展是凌駕公共利益，使原來屬於公眾享用路段重建後由私人地產商及市建局賺取收入”。市建局對有關意見於表二作出回應。

表一：相近意見

意見編號:	綜合意見種類及原因:	市建局回應:
1-3, 5-10, 12-374, 380-389, 391-460, 462-578, 580, 582-631, 633-654, 656, 664-692, 694-718	反對封閉春田街，歸還全部居民道路使用權	請參考第一次諮詢期間“意見類別一：規劃及設計方面”的回應。
1-3, 5-10, 12-13, 15-328, 435-460, 462-517, 522, 528-536, 566, 640, 648, 668, 682, 688	春田街附近居住環境非常密集，如果將春田街永久封閉，並加建 3 棟高樓層大型住宅，不但未能改善環境，而且增加大量人流，只會令春田街附近的環境更加密集	
15-328 397, 435-460, 462-517, 522, 528-536, 625, 640, 649, 650, 670, 674, 677	新項目會令車輪流量大大增加，造成交通混亂，阻塞崇志街行人通道，威脅行人安全	



意見編號:	綜合意見種類及原因:	市建局回應:
360, 376-379 394-396 398, 403-405, 413, 418-420, 428-432, 461, 537-541, 543, 545, 546, 549, 550, 556, 559, 565-572, 574, 576-579, 596, 597, 599, 601, 602, 608, 625, 630, 633-637, 643, 651-655, 657-665, 672, 673, 680, 687, 692, 702, 703, 710, 712, 713, 715, 716, 718, 723	<p>要求將福運大廈一併納入 KC-008A 項目內收購及重建，原因:</p> <ul style="list-style-type: none"> <li>市建局在鄰近進行工程已對福運大廈有結構性影響;</li> <li>市建局工程嚴重影響居民安全及生活;</li> <li>市建局在鄰近地盤施工對福運大廈造成滋擾，包括蚊患及鼠患。</li> </ul>	請參考第一次諮詢期間“意見類別二：要求將福運大廈一併納入 KC-008A 項目內收購及重建範圍”的回應。
1-3, 5-10, 12-13, 15-328, 378-383, 435-460, 462-517, 522, 528-536, 640, 648, 649, 650, 666-669, 690, 711, 714	反對在春田街 25 號前建立迴旋處，引致福運大廈居民出入危險及造成滋擾。	請參考第一次諮詢期間“意見類別三：環境影響及技術問題”的回應。
15-328, 378, 389 393, 394, 397, 435-460, 462-517, 522, 528-536, 639-641, 674, 676, 682, 723	吞併街道增加地積比率及放寬高限，會影響日照、通風及景觀	

意見編號:	綜合意見種類及原因:	市建局回應:
15-328, 435, 640, 723	新規劃下春田街成窄巷，行人通道環境受損。新規劃下馬頭圍道/春田街項目與春田街/崇志街項目之間只有 9.5 米，其中 4 米會被 1 樓平台覆蓋，實際只餘 5 米不見天日的窄巷，與道路兩邊 15 米高的平台基座形成密不透風的圍牆	
1-3, 5-10, 13, 14 397, 403-405, 461, 544, 547, 548, 566, 649, 675, 682, 689, 712	KC-008(A)方案會影響火災救援	
609-611, 711	要求市建局在鄰近施工地盤加設大型隔音布和杜絕蚊患	
15-328, 435-460, 462-517, 522, 528-536, 640	應在重建地區推出資助房屋或公屋	請參考第一次諮詢期間“意見類別四：關注團體提出替代方案及”意見類別五：有關市建局的收購及安置政策”內的回應。
1-3, 5-10, 13, 329-358 391, 397, 411, 418- 420, 429, 430, 433, 538-541, 543, 549, 553, 555, 563, 567-572, 576-579, 605, 625, 671, 681, 700, 701	重啟 KC-008 方案	

表二: 對新收到的意見的回應

Ref. Nos:	綜合意見種類及原因:	市建局回應:
1-3, 5-10, 13, 14, 403, 405, 644, 645, 647, 652, 674, 684- 686	KC-008(A)未有諮詢福運大廈住戶	<p>基於市建局開展的重建項目涉及運用公帑作收購物業及重建等利益關係，在重建項目未公布開展前，資料必須保密及不能向公眾透露。然而，市建局在開展項目後，會根據《市區重建局條例》(《條例》)的既定程序作出公眾諮詢，最後須要得到政府的批准，才可落實進行項目。</p> <p>本計劃根據《條例》第 25 條開展，並須要將本計劃的發展計劃草圖提交城市規劃委員會(城規會)審批，而城規會會就本計劃作出公眾諮詢期以收集公眾意見，市建局亦會回應有關意見並交由城規會作出考慮及審批。</p> <p>在本計劃開展後，市建局分別於 2016 年 5 月 7 日及 2016 年 5 月 11 日舉行了公眾簡報會，向受影響住戶及持份者講解計劃及聽取公眾的意見，當中亦有福運大廈的居民的參與。</p> <p>此外，市建局在 2016 年 5 月 12 日出席由九龍城區議會議員余志榮先生為本計劃內居民舉辦的諮詢會，講解本計劃內容及解答居民對本計劃的問題及關注。</p> <p>2016 年 5 月 19 日，市建局出席由九龍城區議會議員余志榮先生為福運大廈居民舉辦的諮詢會，講解本計劃內容及解答福運大廈居民對本計劃的問題及關注。</p> <p>2016 年 5 月 25 日，市建局出席了由基督教家庭服務中心社區服務隊及一個名為「鶴園/春田商住大聯盟」的關注團體，並聯同立法會議員黃碧雲議員及毛孟靜議員舉辦的諮詢會，市建局於諮詢會上收集了受計劃影響的居民及福運大廈住戶及商戶的提問及意見，並即場解答了部份福運大廈居民的問題及關注。</p> <p>城規會在兩段公眾諮詢期間已收集了公眾意見，當中包括由福運大廈居民及商戶所提出的意見，市建局已就福運大廈居民的意見向城規會作出回應。</p>
15-328, 435-460, 462-517, 522, 528-536,	吞併街道作私人發展是凌駕公共利益，使原來是屬於公眾享用的路段重建後由私人地產商及市建局賺取收入	KC-008(A)發展計劃旨在利用重建舊樓群的契機，整合未有善用的土地資源，提高土地的發展效益，以改善社區的整體環境及交通網絡，為社區帶來規劃的裨益。

Ref. Nos:	綜合意見種類及原因:	市建局回應:
640		<p>本計劃建議在重建範圍內闢出土地作道路改善用途,包括建議開闢一段約 26 米闊的新道路路面作迴旋處用途,提供本計劃及毗連樓宇的車輛出入口,同時給予公眾車輛及行人使用;在計劃範圍內擴闊崇志街一段成雙線行車道,讓所有車輛可利用擴闊的崇志街進入該範圍後由新增的迴旋處離開。有關道路改善建議將來會提供新的道路給予公眾使用,並可消除了現時春田街掘頭路須要倒車離開及崇志街只可單線行車的不理想情況,以改善小區內的整體交通流暢度。</p>
1-3, 5-10, 12-13, 397	KC-008(A)會建屏風樓,嚴重阻擋福運大廈之景觀	<p>根據現有的規劃大綱圖,本計劃範圍的地盤為住宅(甲類)地帶。住宅(甲類)地帶的規劃意向是用作高密度住宅發展。如根據原有的規劃大綱圖內的規劃意向及 KC-008 的原有地盤而不包括春田街,地盤仍可發展為一個約 31 高的住宅樓宇連 3 層高的商業平台。而 KC-008 地盤與福運大廈之間亦不須要保留任何空間距離,在該情況下,福運大廈的景觀會更受阻礙。</p> <p>而市建局就規劃 KC-008(A)發展計劃的時候,已考慮到福運大廈與本計劃範圍很接近,因此建議在福運大廈前方興建一段闊度約 26 米的新道路路面作車輛迴旋處,使計劃內的樓宇與福運大廈保留一定空間距離,增加這個高密度發展小區內的空間感及改善福運大廈居民的景觀。</p>
390	建議將福運大廈,明華閣,寶怡大廈納入計劃範圍,配合已收購的馬頭圍大廈,重建一個以綠化、環保、太陽能等全港獨特的示範小區。	<p>市建局重建項目大多是 50 年樓齡以上,樓宇狀況較差及失修的樓宇。而市建局在制定重建計劃時,需要考慮不同的因素,包括樓齡、樓宇狀況、資源分配及重建對社區帶來的裨益等。福運大廈,明華閣及寶怡大廈分別屬七十及八十年代興建、樓齡不超過 50 年的大廈,樓宇狀況相對較一些屬於失修或嚴重失修為佳。市建局基於以上各個考慮因素,現時不會考慮包括有關大廈作重建。</p>
717	<p>i. 市建局立下隨時改動重建範圍之壞先例</p> <p>ii. 城規會通過 KC-008 項目,反映城規會認為 KC-008 項目無嚴重的規劃問題。而如今該項目卻被中止及撤回,使城規會變成橡皮</p>	<p>KC-008 項目是根據《市區重建局條例》第 26 條開展。根據《條例》第 26 條開展的項目,市建局須要將項目的資料提交發展局局長考慮及授權進行,而不需要交予城規會審批。因此市建局並沒有曾經將 KC-008 項目交予城規會審批或建議城規會通過。</p> <p>由於近年社會有聲音希望重建可以較大範圍的小區</p>

Ref. Nos:	綜合意見種類及原因:	市建局回應:
	<p>圖章</p> <p>iii. 市建局看見樓市下滑，乘機把項目推倒重來，延後估價日期，壓低收購成本</p>	<p>形式進行以增加規劃裨益，市建局在考慮了 KC-008 項目在納入春田街作整體重建可為社區帶來較大的規劃裨益後，決定開展本計劃以納入春田街作整體的小區重建，同時撤回 KC-008 項目。因此，市建局決定開展本計劃及撤回 KC-008 項目是基於規劃及設計上對社區的整體裨益等考慮，與樓市狀況或收購政策並無關係。</p> <p>市建局在考慮到本計劃的獨特情況，以及計劃的規劃及審批時間需時，因此市建局特別為本計劃內受影響居民提供一次性特別補償安排，包括在計劃得到政府授權進行前評估物業價值，並提前向受影響住宅物業業主提出收購建議。並且會在本計劃得到政府授權進行後，再次評估物業價值，如物業升值，會向受影響業主支付差額。因此，本計劃並沒有延後估價日期以壓低收購成本的情況，受影響業主亦不會因為計劃審批需時而要承受樓市波動的影響。</p>
719-720	<p>回收生意已於本區營運超過 30 年。雖市建局可提供特惠津貼作為補償，但若收購後找不到合適位置再營運，便需結業，由於已經營回收生意長達 40 年，生意結束後亦無法轉營其他行業。</p>	<p>市建局根據市區重建局條例開展的重建項目，如得到政府授權進行，會有既定的收購補償及安置政策處理受影響的業主及租客。對於就本計劃提出對市建收購補償及安置問題的意見，市建局已有相應的政策及措施處理。</p> <p>就受影響的商舖營運者，市建局除了有既定的收購補償外，根據新《市區重建策略》，若有受影響的商舖營運者提出相關請求，市建局會盡量協助他們在重建項目同區物色合適地方以作搬遷並繼續經營。</p>

## Attachment 3

### R to C on Departmental Comments

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Attachment 3 -

URA Chun Tin Street/ Sung Chi Street Development Scheme (KC-008(A))

Responses to Comments from Government Departments on Stage 2 Social Impact Assessment (SIA2) Report

Government Departments	Comments	Responses
<p>Development Bureau via PlanD's email dated 14 July 2016, Mr. Barry Yan, tel: 2231 4978)</p>	<p>The subject report generally covers the main elements of the Stage 2 social impact assessments mentioned in the Urban Renewal Strategy (2011). I have no comment on the subject report except:</p> <p>1) Para. 12.4 and 12.5 - URA may wish to update the details about the public briefing held on 12 Jul 2016 regarding the latest compensation/rehousing arrangement, as well as the recent views of the residents of Fook Wan Mansion on their requests for inclusion of Fook Wan Mansion in the redevelopment project and URA's response to the request. Please also consult DO(KC) on the local views of the redevelopment project.</p>	<p>Noted with thanks.</p> <p>1) As stated in paragraph 12. 4 and 12.5 of the SIA Stage 2 Report, the URA held two public briefings on 7 May 2016 and 11 May 2016 respectively to inform affected residents and stakeholders on the details of the KC-008(A) Development Scheme (the Project), obtained public views and answered enquiries of the Project, including concerns on planning and intention matters, compensation and rehousing issues.</p> <p>The URA has also attended briefings organized by DC member for residents of Fook Wan Mansion, and residents' briefings by Social Service Team and local concerned party respectively in May 2016 to provide information and answer enquiries regarding the Project. The attendants of these residents' briefings also included residents of Fook Wan Mansion. The URA has consulted the Kowloon City District Council on 23 June 2016 to explain about the Scheme and answered enquiries and collect views from DC members.</p>

Government Departments	Comments	Responses
	<p>2) Para. 12.24 - Based on the Press Release issued by URA on 29 Jun 2016, URA may wish to supplement that the market value of the property and the HPA would be assessed at the commencement date and the approval date of the project, and that URA would pay the difference to the affected owners if the market value assessed at the approval date is higher than the market value assessed at the commencement date.</p> <p>3) Appendix 2 should refer to the information pamphlet on special compensation measures and the enhanced measures. For Appendix 3, the special rehabilitation measures instead of the press release should be included."</p>	<p>During the 3-week public inspection period of the draft DSP and the 2-week public inspection period of the SIA Stage 2 Report published by TPB, the TPB received public comments including comments from residents of Fook Wan Mansion. The URA's responses to public comments have been provided to Planning Department via URA's letters dated 15 July 2016 and 29 July 2016 respectively. The URA has also received DO(KC)'s comments reflecting the local views on the draft DSP. The URA's responses to the comments have been provided to Planning Department via URA's letters dated 15 July 2016.</p> <p>2) On 29 June 2016, the URA announced an enhanced measure to issue advance payment of acquisition offers for the property owners of KC-008(A). The details of the enhanced measure on advance payment are explained in the attached press release (Appendix 1).</p> <p>3) Given that the SIA Stage 2 Report was published on June 27, 2016, the Report only included the information as of that date as provided in Appendices 2 and 3. Further details of the URA's compensation policies are explained in the R to C on Departmental Comments and public comments received during the public inspection period of the draft DSP and the SIA Stage 2</p>



Government Departments	Comments	Responses
		Report.
Transport Department's comment via PlanD's email dated 28 July 2016 (Ms. Johanna Cheng, Tel: 2231 4965)	<p>Please be advised that we have no adverse comments on the TIA Report provided that the following proposed traffic impact mitigation measures as addressed/responded in the report will be implemented by URA, before intake of residents</p> <ul style="list-style-type: none"> <li>a) Provision of pedestrian crossing facilities at the junction of Sung Chi Street and Hok Yuen Street;</li> <li>b) Modification of layby at Hok Yuen Street; and</li> <li>c) Provision of associated traffic sign and road markings at Sung Chi Street and Hok Yuen Street.</li> </ul>	<p>Noted.</p> <p>The proposed traffic impact mitigation measures will be addressed and agreed with TD and relevant government departments at the detailed design stage should the Draft DSP be approved.</p>
PlanD's email dated 14 July 2016.	<p>The following parties have no comment on the SIA2 report:</p> <ul style="list-style-type: none"> <li>- DO(KC), Homes Affair Department</li> <li>- CES/UR, Lands Department</li> <li>- DLO/KW, Lands Department</li> <li>- Water Supplies Department</li> <li>- Environmental Protection Department</li> <li>- Drainage Services Department</li> <li>- Highways Department</li> <li>- Buildings Department</li> </ul>	Noted with thanks.



## 新聞稿

## PRESS RELEASE

**市建局即將向春田街／崇志街發展計劃業主  
提出預支收購款項**

市區重建局（市建局）將於下星期向九龍城春田街／崇志街發展計劃（KC-008(A)）的物業業主提出收購建議。市建局的土地、安置及補償委員會於今日（星期三）通過有關收購建議。

受 KC-008(A)項目影響的合資格自住住宅物業業主，可透過預支的方式獲得按項目開展日（即 2016 年 5 月 6 日）評估的住宅物業市值交吉價和自置居所津貼。評估的「七年樓」呎價為每平方呎實用面積\$11,349 元，相等於類似地區一個大約七年樓齡而面積相若的假設重置單位的實用面積呎價。

KC-008(A) 項目範圍覆蓋早前開展的KC-008項目內的樓宇及春田街。KC-008項目於2016年5月6日被撤回及即時中止。市建局考慮到KC-008(A)項目的獨特情況，為受影響的業主及租戶提供一次性特別補償安排。該項一次性特別補償安排，並不會成為市建局已開展或未來項目的先例。

根據該一次性特別補償安排，市建局會向自住住宅物業業主提出以項目開展日評估的住宅物業市值交吉價和自置居所津貼的收購建議，作為項目獲批准日所評估的市值交吉價和自置居所津貼的預支款項。當 KC-008(A) 項目獲行政長官會同行政會議批准後，市建局會再次於批准日評估住宅物業市值交吉價和自置居所津貼。倘若按項目批准日評估的市值交吉價和自置居所津貼高於項目開展日評估的水平，市建局將向受影響的業主支付差額。

市建局按一向沿用的機制委託七間獨立測量師行評估「七年樓」呎價。

春田街／崇志街（KC-008(A)）發展計劃涉及約 70 個業權，業主將有 60 日的時間考慮是否接納市建局的收購建議。

該項一次性特別補償安排亦包括租客。當物業收購手續完成後，有關物業內合資格的住宅租客可選擇現金補償，或選擇繼續以原定的租金居住在原有的物業內，直至 KC-008(A)項目獲行政長官會同行政會議批准。屆時，合資格租戶可獲公屋安置安排。

新聞稿  
PRESS RELEASE



另外，市建局亦向選擇繼續居住在 KC-008(A) 項目的業主和租戶提供一項一次性特別維修方案，透過技術和財政支援，為他們的單位及樓宇進行維修工程。

市建局將於發出收購建議後舉行簡介會，向受影響的業主及租戶解釋收購、補償及安置政策。

市建局初步建議在 KC-008(A) 項目提供約 12,270 平方米的住宅樓面面積，可建約 310 個住宅單位（主要為中小型單位），包括一些預留作「樓換樓」選擇之用的低層單位。項目亦會提供約 2,454 平方米的商業／零售樓面面積。項目預計可在 2025/2026 年完成。

（完）

2016 年 6 月 29 日

新聞稿

PRESS RELEASE



29 June 2016

**URA to issue advance payment of acquisition offers for  
URA's Chun Tin Street/Sung Chi Street Development Scheme soon**

The Urban Renewal Authority (URA) will issue acquisition offers to the property owners affected by the Chun Tin Street/Sung Chi Street (KC-008(A)) development scheme in Kowloon City next week, following the approval by the Land, Rehousing and Compensation Committee of the URA today (Wednesday).

Eligible owner-occupiers of domestic properties will be offered the market value of their domestic properties and the Home Purchase Allowance (HPA), both of which were assessed at the commencement date of the project on 6 May 2016 by way of advance payment. The offer is \$11,349 per square foot of saleable area, which is equivalent to the unit rate of a notional replacement flat of seven-year-old situated in similar locality and of similar size.

The KC-008(A) development scheme includes the same buildings of a previous KC-008 development project and Chun Tin Street. The KC-008 project was withdrawn and discontinued immediately on 6 May 2016. Taking into consideration of the unique circumstances of KC-008(A) project, the URA introduces a one-off special compensation package to the affected owners and tenants of the development scheme. The one-off special compensation measure will not set a precedent for other existing or future projects of the URA.

Under the one-off special compensation package, the URA will make offers to owner-occupiers the market values of their domestic properties and the HPA assessed at the commencement date by way of advance payment of the market values and the HPA to be assessed at the date of approval of the KC-008(A) project. When the KC-008(A) project is approved by the Chief Executive in Council, the URA will assess the market value of the properties and HPA at the date of approval. Should the assessed market value and HPA at the date of approval be higher than the market value and HPA assessed at the commencement date, affected owners will be paid the difference by the URA.

In line with the established mechanism, the URA has appointed seven independent valuation firms for the valuation of the unit rate of the seven-year-old notional replacement flat.

The Chun Tin Street/Sung Chi Street (KC-008(A)) development scheme affects about 70 property interests. Property owners will have 60 days to consider the URA's offers.

The one-off special compensation package also covers tenants. Upon completion of the property acquisition, domestic tenants residing in the acquired properties can elect either accepting ex-gratia payments from the URA or continuing their current tenancy agreements at the existing rent until the KC-008(A) project is approved by the Chief Executive in Council, by which time public housing can then be offered to the eligible tenants.

In addition, there is also a special one-off rehabilitation package offered to affected owners and tenants of KC-008(A) project who elect to stay to provide technical and financial assistance to them for the carrying out of rehabilitation works to their units and building.

The URA will organise briefings for the affected owners and tenants to explain to them the acquisition and compensation and rehousing arrangements.

The URA's initial proposal is to redevelop the site to provide about 12,270 square metres of residential floor area for about 310 flats (mainly small to medium sizes), including some units of lower levels to be reserved for flat-for-flat option. Some 2,454 square metres of commercial/retail floor area will also be provided in the new development. The project is tentatively scheduled for completion by 2025/2026.

(ENDS)



Our Ref: PDP/KC-008(A)

12 August 2016

By Fax (letter only) & By Hand  
Fax No. 2894 9502

District Planning Officer/ Kowloon  
14/F North Point Government Offices  
333 Java Road, North Point,  
Hong Kong.

(Attn.: Ms. Johanna CHENG)

Dear Johanna,

~~CONFIDENTIAL~~

*downgrade  
15.8.2016*

Submission of the Draft Development Scheme Plan (DSP)  
for the Urban Renewal Authority  
Chun Tin Street / Sung Chi Street Development Scheme (KC-008(A))

I refer to your email dated 8 August 2016 requesting for supplementary responses to the concerns raised in the public comments and an English version of the previous submitted responses to comments (R to C) on the public comments; and your email dated 11 August 2016 informing the departmental comments on the draft DSP and the Stage 2 Social Impact Assessment Report.

In response to the highlighted concerns of public comments in your email on 8 August 2016 and the department comments referred in your email on 11 August 2016, we are pleased to enclose our further elaboration on the responses to public comments (Attachment 1) and the revised R to C on departmental comments (Attachment 2) for your information and the Town Planning Board (TPB)'s consideration.

As per your request, please find an English version of our R to C on public comments we submitted on 15 July 2016 and 29 July 2016 respectively (Attachment 3). Please note that the English version is for TPB's reference only. In case there are discrepancies, the original submissions we made on 15 July 2016 and 29 July 2016 shall prevail.

In response to public comments received, URA identified that a major portion of comments were related to visual aspect and traffic arrangement of the KC-008(A) that may affect the adjoining Fook Wan Mansion. To better illustrate the merits of KC-008(A) over the withdrawn KC-008 project as explained in the draft DSP submission and to better respond to those comments, we would like to enclose 3 copies of CDs containing a computer-generated animation to demonstrate the development proposals of KC-008(A), as compared to the likely redevelopment scenario of the withdrawn KC-008 project, which was in accordance to the existing OZP for TPB's information and consideration (Attachment 4).





Please feel free to contact our Miss. Mable Kwan at 2588 2752 if you have enquiry on the submission. Thank you for your attention.

Christopher Wong  
General Manager  
Planning & Design Division

Encl.

RT/CW/mk

Attachment 1



Attachment 1

Chun Tin Street/ Sung Chi Street Development Scheme KC-008(A)

Elaboration of URA's responses to public comments nos. 9, 721 and 722 in response to Planning Department's email dated 8 August, 2016:

意見編號:	綜合意見種類及原因:	市建局回應:
9	<p>反對 KC008A 停車位補償方案，春田街被封閉後的停車位不但銳減，而補償車位分散及遠離原址，而且還未得到運輸處作實，更不是原春田街居民專用。</p> <p>Object to the reprovisioning proposal of the public parking spaces in KC-008(A). With the closure of Chun Tin Street, the public parking spaces will be largely reduced and the reprovisioned spaces are disperse and far from the Project. The proposal has not confirmed by TD. The re-provisioned public parking spaces can no longer be restricted for the own use by residents at Chun Tin Street.</p>	<p>春田街現有 12 個公眾泊車位，本計劃的交通影響評估報告分析後指出，這些公眾泊車位現時有大約一半由春田街兩旁的店舖及住戶所用，由於市建局的馬頭圍道重建項目及本計劃重建後將提供地庫停車場，因此這些泊車需求將會被吸納。</p> <p>馬頭圍道重建項目及本計劃將會提供約 15 個商用泊車位，方便鄰近到來購物的居民使用。此外，因應市建局的馬頭圍道重建項目的車輛出入口位置，3 個現有的公眾泊車位須要移除。</p> <p>基於以上原因及分析，報告建議重置 7 個公眾泊車位供公眾使用，包括福運大廈或其他鄰近樓宇的居民。建議重置的泊車位位置分別位於庇利街，鶴園街及機利士北路，這些重置的位置是在本計劃步行而至的範圍。</p> <p>就上述的交通影響評估報告內的分析與建議已提交運輸署，運輸署對補償車位建議在現規劃階段沒有反對意見。</p> <p>There are 12 existing on-street metered parking spaces at Chun Tin Street. The Traffic Impact Assessment report of the Project has conducted analysis and found that almost half of the usage of these metered parking spaces are used by the residents and operators at the old buildings on the side of Chun Tin Street. In view that the buildings on both sides of the Chun Tin Street will be redeveloped by URA and parking spaces will be provided within site, nearly half of the demand on these metered parking spaces will be absorbed by the two developments in future.</p> <p>Besides, about 15 parking spaces will be</p>

意見編號:	綜合意見種類及原因:	市建局回應:
		<p>provided in the two future developments for retail use, which can serve the demand of the local neighbourhood in future. In order to provide run in/out for the Ma Tau Wai Road Development, 3 nos. of on-street metered parking spaces will need to be removed.</p> <p>Given the above analysis and situation, the TIA recommended to re-provide 7 on-street metered parking spaces and the relocation spaces were identified at Bailey Street, Hok Yuen Street and Gillies Avenue North Road respectively. These areas are in walking distance from the Project.</p> <p>The mentioned TIA report has submitted to TD and TD had no adverse comment on the proposed re-provisioning.</p>
721-722	<ul style="list-style-type: none"> <li>• The closure of Chun Tin Street cannot be implemented unless the proposed new north road provided for Fook Wan Mansion is permanently provided to the acceptance of Highways Department.</li> <li>• We strongly require the road to be a Highways road, not a private road under KC-008(A) management."</li> <li>• the re-provision of the new north road for Fook Wan Mansion should be equal to or better than the</li> </ul>	<ul style="list-style-type: none"> <li>• The new north road, i.e. the proposed vehicle turning area, is proposed to be provided for vehicular access for the Project and the adjoining developments including Fook Wan Mansion. Subject to liaison with Government Departments at the detailed design stage including Highways Department (HyD), TD and Lands Department (LandsD), the new turning area is proposed to be for permanent road use and to meet HyD's standard.</li> </ul> <p>Noted. The land status and management of the new turning area will be subject to liaison and agreement with relevant Government Departments including LandsD at the detailed design and land grant stage, should the Project be approved for implementation.</p> <ul style="list-style-type: none"> <li>• Noted. The existing Chun Tin Street is a dead-end road which adds to the local traffic problems. Vehicles need to</li> </ul>

意見編號:	綜合意見種類及原因:	市建局回應:
	<p>original Chun Tin Street.</p> <p>• A turn around facility is appreciated</p>	<p>manoeuvre to turn backward to leave the street. With the provision of the new turning area to the north of the Site for public use, vehicles can manoeuvre smoothly at the new roundabout to leave the area from the widened Sung Chi Street without turning backward. It can largely improve the traffic flow and safety. URA also proposed to take up the management and maintenance of the new turning area to provide proper greening and landscaping to enhance the environment of the new turning area.</p> <p>Noted. A new turning area of about 26m width is proposed at the north of the Project to connect to a widened Sung Chi Street to enhance local traffic movement.</p>

## Attachment 2

Attachment 2 -

URA Chun Tin Street/ Sung Chi Street Development Scheme (KC-008(A))

Responses to Comments from Government Departments on Draft DSP submission

Government Departments	Comments	Responses
<p>Transport Department's comment via PlanD's email dated 28 July 2016 (Ms. Johanna Cheng, Tel: 2231 4965)</p>	<p>Please be advised that we have no adverse comments on the TIA Report provided that the following proposed traffic impact mitigation measures as addressed/responded in the report will be implemented by URA, before intake of residents</p> <ul style="list-style-type: none"> <li>a) Provision of pedestrian crossing facilities at the junction of Sung Chi Street and Hok Yuen Street;</li> <li>b) Modification of layby at Hok Yuen Street; and</li> <li>c) Provision of associated traffic sign and road markings at Sung Chi Street and Hok Yuen Street.</li> </ul>	<p>Noted.</p> <p>The proposed traffic impact mitigation measures will be addressed and agreed with TD and relevant government departments at the detailed design stage should the Draft DSP be approved.</p>

Attachment 3 -

URA Chun Tin Street/ Sung Chi Street Development Scheme (KC-008(A))

Responses to Comments from Government Departments on Stage 2 Social Impact Assessment (SIA2) Report

Government Departments	Comments	Responses
<p>Development Bureau via PlanD's email dated 14 July 2016, Mr. Barry Yan, tel: 2231 4978)</p>	<p>The subject report generally covers the main elements of the Stage 2 social impact assessments mentioned in the Urban Renewal Strategy (2011). I have no comment on the subject report except:</p> <p>1) Para. 12.4 and 12.5 - URA may wish to update the details about the public briefing held on 12 Jul 2016 regarding the latest compensation/rehousing arrangement, as well as the recent views of the residents of Fook Wan Mansion on their requests for inclusion of Fook Wan Mansion in the redevelopment project and URA's response to the request. Please also consult DO(KC) on the local views of the redevelopment project.</p>	<p>Noted with thanks.</p> <p>1) As stated in paragraph 12. 4 and 12.5 of the SIA Stage 2 Report, the URA held two public briefings on 7 May 2016 and 11 May 2016 respectively to inform affected residents and stakeholders on the details of the KC-008(A) Development Scheme (the Project), obtained public views and answered enquiries of the Project, including concerns on planning and intention matters, compensation and rehousing issues.</p> <p>The URA has also attended briefings organized by DC member for residents of Fook Wan Mansion, and residents' briefings by Social Service Team and local concerned party respectively in May 2016 to provide information and answer enquiries regarding the Project. The attendants of these residents' briefings also included residents of Fook Wan Mansion. The URA has consulted the Kowloon City District Council on 23 June 2016 to explain about the Scheme and answered enquiries and collect views from DC members.</p>

Government Departments	Comments	Responses
	<p>2) Para. 12.24 - Based on the Press Release issued by URA on 29 Jun 2016, URA may wish to supplement that the market value of the property and the HPA would be assessed at the commencement date and the approval date of the project, and that URA would pay the difference to the affected owners if the market value assessed at the approval date is higher than the market value assessed at the commencement date.</p> <p>3) Appendix 2 should refer to the information pamphlet on special compensation measures and the enhanced measures. For Appendix 3, the special rehabilitation measures instead of the press release should be included."</p>	<p>During the 3-week public inspection period of the draft DSP and the 2-week public inspection period of the SIA Stage 2 Report published by TPB, the TPB received public comments including comments from residents of Fook Wan Mansion. The URA's responses to public comments have been provided to Planning Department via URA's letters dated 15 July 2016 and 29 July 2016 respectively. The URA has also received DO(KC)'s comments reflecting the local views on the draft DSP. The URA's responses to the comments have been provided to Planning Department via URA's letters dated 15 July 2016.</p> <p>2) On 29 June 2016, the URA announced an enhanced measure to issue advance payment of acquisition offers for the property owners of KC-008(A). The details of the enhanced measure on advance payment are explained in the attached press release (Appendix 1).</p> <p>3) Given that the SIA Stage 2 Report was published on June 27, 2016, the Report only included the information as of that date as provided in Appendices 2 and 3. Further details of the URA's compensation policies are explained in the R to C on Departmental Comments and public comments received during the public inspection period of the draft DSP and the SIA Stage 2</p>

Government Departments	Comments	Responses
		Report.
PlanD's email dated 14 July 2016 and 11 August 2016 respectively.	<p>The following parties have no comment on the SIA2 report:</p> <ul style="list-style-type: none"> <li>- DO(KC), Homes Affair Department</li> <li>- CES/UR, Lands Department</li> <li>- DLO/KW, Lands Department</li> <li>- Water Supplies Department</li> <li>- Environmental Protection Department</li> <li>- Drainage Services Department</li> <li>- Highways Department</li> <li>- Buildings Department</li> <li>- Transport Department</li> <li>- Leisure and Cultural Services Department</li> <li>- Fire Services Department</li> <li>- Urban Design &amp; Landscape Unit, Planning Department</li> </ul>	Noted with thanks.



**Attachment 3**

(English version of URA's Responses to Comments on public comments provided to Planning Department via URA's letter dated 15 July 2016.)

### Attachment 3 -

URA's responses to comments received during public consultation period (17/5/2016 – 7/6/2016) for the KC-008(A) Development Scheme:

Ref. Nos:	Consolidated comments and justifications:	URA's response :
<b>*Comment Category 1: Planning and Design Concerns</b>		
001-043 228-245, 251-266.	<p>Object the permanent closure of Chun Tin Street, the original state of Chun Tin Street is demanded.</p> <p>The surrounding area of Chun Tin Street is overcrowded. The closure of Chun Tin Street, and the addition of 3 residential towers will not improve the environment, rather, there would be an increase of pedestrian traffic flow and further increase the population density of the area</p> <p>The existing Chun Tin Street configuration is proposed to be retained and redeveloped for low density residential development arrangement.</p>	<p>The KC-008(A) (the Project) aims to adopt an 'area based' redevelopment concept to comprehensively redevelop the area for better environment. The Scheme proposed to include the dead-end street for redevelopment with a view to have more efficient use of land and to improve local road access and pedestrian safety.</p> <p>The living environment of the existing buildings in the Scheme is crowded and unsatisfactory. The Chun Tin Street is a dead-end road which is a cause of environmental nuisance and creates traffic and safety problems.</p> <p>The Scheme proposed to redevelop the existing old buildings to modern and up to standard new residential development to improve the overall building safety and living environment. With the inclusion of the dead-end road for redevelopment, it will result in a greater degree of planning and community benefits, including re-design of the local area to improve the overall living environment, better pedestrian walking network, sustainable living environment with enhanced greenery and air ventilation, etc., as a result of following the Sustainable Building Design Guidelines.</p> <p>The Scheme site is zoned R(A) in the existing OZP, of which the planning intention is for high density residential development. The DSP of the Scheme proposed the site to be zoned as R(A)7, to provide a residential tower of about 34 storeys on a 3-level commercial podium. The proposed development intention of the DSP is similar to the R(A) zoning of the existing OZP, with the proposed</p>

Ref. Nos:	Consolidated comments and justifications:	URA's response :
		<p>total permissible GFA and site coverage as permitted under Buildings Ordinance.</p> <p>URA procured an environmental consultant to conduct environment assessment (EA) of the Project. The EA report concluded that the impact on various aspects, including air quality, waste management, drainage and sewerage and air ventilation are not insurmountable.</p>
	<p>The closure of Chun Tin Street is only for Plot Ratio gain.</p>	<p>Chun Tin Street is a dead-end road, which incurs vehicular manoeuvring and creates traffic and safety problems. The dead-end street nature has not fully utilised the scarce land resource in the urban area.</p> <p>With the inclusion of the dead-end Chun Tin Street, the Scheme proposed to re-organise the traffic and pedestrian network with the new space to provide a new turning area and to provide more at grade pedestrian walkway. The Sung Chi Street can also be widened to a 2-way road by building setback from the Scheme boundary. With the re-organisation of land uses and space, vehicles can manoeuvre smoothly at the new turning area and leave the area from the widened Sung Chi Street. It can improve the overall traffic network and traffic flow in the area.</p> <p>In addition, the inclusion of the dead-end street for redevelopment can better utilise the scarce urban land to provide more flats to meet the mass market demand.</p>
<p>208-209, 267-279, 244</p>	<p>The road and traffic network is not fully optimized to improve traffic. The closure of Chun Tin Street will worsen the local traffic.</p> <p>The new project would increase the vehicular traffic flow, resulting in traffic chaos, congesting the pedestrian path at Sung Chi Street, jeopardizing pedestrian safety</p> <p>The current subpar safety and traffic situation at Chun Tin Street is the result of bad management on government's part. There is no need for closure of workshops,</p>	<p>With the inclusion of the dead-end road for redevelopment, it will result in a greater degree of planning and community benefits, including re-design of the local area to improve the overall living environment, to provide a new turning area and more at-grade space for pedestrian walking network. The Sung Chi Street can also be widened to a 2-way road by building setback from the Scheme boundary. The inclusion of Chun Tin Street can bring the following benefits:</p> <p>i) vehicles can manoeuvre smoothly at the new turning area and leave the area from the widened Sung Chi Street. It can improve the</p>

## ( FOR REFERENCE ONLY )

Ref. Nos:	Consolidated comments and justifications:	URA's response :
	the situation in Chun Tin Street could be improved with proper management.	<p>overall traffic network and traffic flow in the area;</p> <p>ii) By diverting the traffic to the new turning area and the widened Sung Chi Street, it can reduce one vehicular access at Hok Yuen Street to improve the traffic flow and safety;</p> <p>iii) By using the space from closing Chun Tin Street to improve the pedestrian network through integrated planning of pedestrian walkway between the Scheme and the adjoining Ma Tau Wai Road development TKW/1/002 site to provide a safe and comprehensive pedestrian walking environment; and</p> <p>iv) To widen Sung Chi Street to a 2-way driveway with about 5m width pedestrian walking adjoining the Project. As compared to the existing poor condition at Sung Chi Street with narrow driveway and dis-continued pavement, the proposal can improve traffic flow and provide a comfortable and safe walking environment</p> <p>Under the existing OZP, the Scheme site is zoned R(A) for high density residential development uses. In the scenario that the Scheme does not proceed, the site can be redeveloped for high density residential use as permitted in the OZP. The resultant traffic flow will increase and the traffic condition at the dead-end Chun Tin Street cannot be improved but worsened. The URA's proposal in the DSP can at the same time improve the traffic and pedestrian environment through the proposed redevelopment.</p> <p>The traffic consultant of the Scheme has conducted the TIA report which concluded that the DSP would not bring any adverse impact to the local traffic. The proposed road improvement works can improve the local traffic network and pedestrian environment. TD has no adverse comment on the TIA report.</p>
244	The dead-end road street situation on Chun Tin Street could be solved by slightly changing KC-008 project. The closure of Chun Tin Street is unnecessary.	The URA proposed to close Chun Tin Street aiming to extinguish the problems generated from the dead-end street. Through the extinguishment of dead-end street to enlarge the land into redevelopment, it allows better utilisation of the area to improve traffic and pedestrian network

Ref. Nos:	Consolidated comments and justifications:	URA's response :
		and environment, and increase flat supply to meet the housing demand and improvement of overall living environment.
135	Objection to the removal of existing car parking spaces.	TIA report explained that off-site parking spaces will be provided at the basement of the Scheme to meet the demand from the residents and operators and local neighbourhood. With the closure of Chun Tin Street, the Report proposed to reprovide some metered parking spaces in the vicinity of the Project. The proposal was submitted to TD and TD had no adverse comment at this planning stage.
<b>*Comment Category 2: Requesting the inclusion of Fook Wan Mansion into KC-008(A) acquisition and redevelopment</b>		
044-086, 092-227  246-250,  440-442	<p>Request the inclusion of Fook Wan Mansion into KC-008(A) into acquisition and redevelopment for the following reasons:</p> <ul style="list-style-type: none"> <li>- The construction of URA project nearby jeopardized the structure of Fook Wan Mansion</li> <li>- KC-008 will negatively affect Fook Wan Mansion's traffic and fire safety.</li> <li>- URA's construction work greatly affected resident's safety and livelihood.</li> <li>- URA's construction site created nuisances to Fook Wan Mansion, including mosquito and rodent infestation.</li> </ul>	<p>URA's redevelopment projects will normally cover buildings of over 50 years old with poor and deteriorating condition. URA will have various considerations when making up redevelopment plans, including building condition allocation of resources, building ages, the planning merits/gains to the local community from redevelopment, etc. Fook Wan Mansion was built in 1975, a 40years old building. The building has lifts. URA has observed its building condition from its public area and considered its building condition as satisfactory. Therefore URA has not considered to include the building into KC-008(A) redevelopment.</p> <p>According to s. 25 of URAO, URA needs to submit a draft DSP to the Town Planning Board (TPB) to consider. If TPB deems the draft DSP suitable for publication, TPB will exhibit the draft DSP for public inspection; or TPB can request URA to amend the draft DSP to meet certain comments received, including the DSP boundary, development parameters, etc. URA will consider whether amendments can be adopted for implementation. If TPB deems the draft DSP suitable for publication, TPB will exhibit the draft DSP under s. 5 of Town Planning Ordinance (TPO) for public consultation. The draft DSP will need to be approved by CE in C before URA can implement the DSP.</p>

Ref. Nos:	Consolidated comments and justifications:	URA's response :
<b>* Comment Category 3: Environmental Impacts and Technical concerns</b>		
279, 282- 439, 443- 458	The Scheme will have visual impact to the Fook Wan Mansion residents.	<p>URA has considered the close proximity between KC-008(A) and Fook Wan Mansion during the planning and design of KC-008(A). URA has therefore proposed to dedicate the portion of land to the north of the Scheme (i.e. in front of Fook Wan Mansion) to create about 26m width new turning area, so that it can create a wide distance between the proposed development in the Scheme and Fook Wan Mansion. Besides, the podium of the proposed development in the Scheme will maintain about 6 – 7m distance from the adjoining TKW/1/002 development, so as to maintain a spatial distance and reduce its visual impact to the Fook Wan Mansion.</p> <p>To minimise the visual impact to Fook Wan Mansion, the DSP proposed to relax the maximum building height to 130mPD, in order to facilitate a slimmer building block design for better distance between buildings.</p>
	Chun Tin Street will be redeveloped to 130m in height which will adversely affect Fook Wan Mansion's air ventilation, visual and natural lighting	<p>The proposed relaxation of building height to 130mPD can facilitate a slimmer building block design with reduced building bulk to enable more space between buildings, better air ventilation and penetration of sunlight. The proposed development in the DSP has met the requirements on building separation, prescribed window requirements of Buildings Ordinance. The proposed developments has also taken into consideration of the SBD Guidelines and incorporated design elements such as stepping design of the podium, building setback, etc, to improve air ventilation of the proposed development.</p> <p>Compared to the scenario of no building relaxation to 130mPD, the site can also be redeveloped for a new residential development with a maximum building height of 120mPD as permitted in the existing OZP. The impact will still be different from the existing situation with 4-6 storeys old buildings. Therefore, the URA believes that the proposed development in the DSP can balance the redevelopment need while minimising the environmental impact to the locals.</p>

Ref. Nos:	Consolidated comments and justifications:	URA's response :
	Fook Wan Mansion residents commented that the Scheme will have noise nuisance.	<p>The URA would request the contractor to minimise the noise generated during the construction of the KC-008(A) and to follow and fulfil the noise mitigation measures as stipulated by EPD for construction site. The URA will closely monitor any impact to Fook Wan Mansion to minimise the environmental nuisance to the residents of Fook Wan Mansion during construction.</p> <p>The EA report conducted by the environmental consultant for the Scheme concluded that the potential environmental impacts of the Scheme are not insurmountable. It is therefore believed that the impacts of the Scheme to the local residents are acceptable.</p>
	<p>Object the proposed vehicle turning area in front of 25 Chun Tin Street, jeopardizing safety and create nuisance to Fook Wan Mansion residents.</p> <p>The closure of Chun Tin Street will affect emergency vehicle access, result in fire safety concerns.</p> <p>Traffic will be affected.</p>	<p>The Scheme proposed to dedicate a portion of land in front of Fook Wan Mansion for a new turning area, aiming to improve the traffic and pedestrian safety at the dead-end road. Pavement and road crossing island will be provided at the new turning area for pedestrian crossing, which will be a safer for pedestrian as compared to the current situation that vehicles need to manoeuvre at the dead-end street.</p> <p>The proposed new turning area can allow emergency vehicles including fire engines to enter and arrive Fook Wan Mansion and the adjoining buildings. The Fire Services Department has no comment to the proposed road design in the Project.</p> <p>URA has procured traffic consultant to conduct the road improvement proposal and TIA report. The TIA report concluded that the proposed development would not bring any adverse impact to the local traffic and the proposed road improvement works can improve the local traffic network and pedestrian environment. TD has no adverse comment on the TIA report. The TIA report is also included in the draft DSP submission to TPB and for public inspection.</p>
	Fook Wan Mansion's building structures will be affected by the Scheme.	The URA and BD inspected Fook Wan Mansion and BD considered that Fook Wan Mansion has no

Ref. Nos:	Consolidated comments and justifications:	URA's response :
		structural danger. Nevertheless, the URA will request the contractor of the TKW/1/002 development to closely monitor any impact to Fook Wan Mansion to ensure minimal disturbance.
208-209, 267-279, 244	<p>URA's construction site has created nuisance to Fook Wan Mansion, including mosquito and rodent infestation. The URA should:</p> <ul style="list-style-type: none"> <li>- Enforce the working hour from 9am – 6pm.</li> <li>- Install noise barrier or services.</li> <li>- Exterminate the mosquito and rodent infestation and make regular report to Fook Wan Mansion Incorporated Owners.</li> <li>- Coordinate with District Council and relevant Government Departments.</li> </ul>	Considering the TKW/1/002 construction work might cause some environmental nuisance to the residents of Fook Wan Mansion during construction, the URA would request the contractor to minimise the noise generated during the construction of the KC-008(A) and to follow and fulfil the noise mitigation measures as stipulated by EPD for construction site. The URA will closely monitor any impact to Fook Wan Mansion to minimise the construction nuisance.
<b>* Comment Category 4: URA's acquisition and re-housing policies</b>		
267 268, 458,	<p>We concur that it is necessary for urban redevelopment, though, the URA has a due diligent to engage with the local, strive for local re-housing and improve the whole community.</p> <p>Request for 'flat for flat' at the same district.</p>	<p>For URA's redevelopment commenced under URAO, the URA will have the prevailing compensation and rehousing policies to the affected owners and tenants if the projects are authorized / approved by the Government for implementation. Regarding comments relating to compensation and rehousing issues, the URA will have corresponding policies and measures to address.</p> <p><u>Compensation Policies to affected domestic owners</u></p> <p>If the Scheme is to be authorised for implementation by the Government, the URA will offer an affected owner-occupiers of domestic property the market value (valued on vacant possession basis) of his property plus an ex-gratia allowance, namely Home Purchase Allowance (HPA), for purchase of the property. The assessment of HPA is based on the value of a notional flat, which defined as a seven year old flat in a building of comparable quality, situated in a similar locality in terms of characteristics and</p>



Ref. Nos:	Consolidated comments and justifications:	URA's response :
		<p>accessibility, and located at the middle floors with average orientation. The URA will also offer "Flat for Flat" (FFF) as an additional choice to cash compensation to the owner-occupiers. Therefore, URA considered that with the prevailing compensation policies, the affected owners can buy a newer flat in the same district to maintain his social network in the district.</p> <p><u>Rehousing Policies to affected tenants</u> Affected eligible domestic tenants will be rehoused in units provided by the HKHA or the HKHS. Subject to availability of public rental housing resource, the URA will arrange with HKHA and HKHS to arrange rehousing within the same district as far as practicable.</p>
452, 454	Request for 'Shop for Shop' at the same district.	<p>For URA's redevelopment commenced under URAO, the URA will have the prevailing compensation and rehousing policies to the affected owners and tenants if the projects are authorized / approved by the Government for implementation. Regarding comments relating to compensation and rehousing issues, the URA will have corresponding policies and measures to address.</p> <p><u>Compensation Policies to affected business operators</u> For owner-occupied non-domestic properties, the URA will offer the market value of the affected property plus an ex-gratia allowance or the claim of business loss. It is believed that the affected business operators can use the compensation cash flexibly to buy or rent another property to continue their businesses.</p> <p>According to Urban Renewal Strategy (URS), if the business operators requested, the URA will help identify suitable premises in the district of the Scheme to enable the affected operators to relocate and continue operation in the same district as far as practicable.</p>
247	URA should explain the reasons for withdrawal of KC-008 and compensate affected Chun Tin Street residents accordingly.	The URA has considered the inclusion of Chun Tin Street into redevelopment scheme would result in a greater degree of planning and community benefits. Besides, there is more and more desire from the community in the recent years to carry

Ref. Nos:	Consolidated comments and justifications:	URA's response :
		<p>out larger scale and area-based redevelopment to increase the planning merits to the community. In view of such, the URA has decided to commence the KC-008(A) to include Chun Tin Street in the KC-008(A) and concurrently withdraw the KC-008 project which covers the same row of old buildings.</p> <p>In view that the KC-008(A) covers the same row of old buildings of KC-008 project and the KC-008(A) involves a longer time for obtaining planning approval from TPB, the URA decided to adopt a one-off special measures for the Project, including to issue acquisition offers to property owners in advance before the Scheme is approved by the Government. Affected owners can choose to accept the offers and sell their properties before the Scheme is approved by the Government. And upon completion of the property transaction, domestic tenants can elect either accepting ex-gratia payments from URA or continue their current tenancy agreement at existing rent until the Scheme is approved by the Government.</p>
<b>*Comment Category 5: Alternative proposals from concerned parties</b>		
280 – 281, 457	<p>Community Cultural Concern (Chan Chor See):</p> <p>Study from HKU:</p> <p>The Report explored and concluded the following findings and recommendation:</p> <p>1/ The impact of redevelopment on the local and surrounding development residents</p> <p>2/ The demand for 'flat for flat' and rehousing in the same district</p> <p>3/ Provide subsidized housing in the redevelopment</p>	<p>According to the URS, the URA shall carry out Stage 1 Social Impact Assessment (SIA) to initially assess the potential social impacts of the Project. Upon commencement of the Project, the URA shall base on the factual data collected from the Freezing Survey (FS) to conduct the Stage 2 SIA, to provide detailed assessment of the potential social impact of the Scheme and propose mitigation measures.</p> <p>The two SIA reports has already included the aspects of analysis as required in the URS, and used the factual data and information from the FS of the affected residents and operators in the Scheme to conduct the Stage 2 SIA. It is considered it has effectively covered the anticipated potential impacts and proposed appropriate mitigation measures to address the impacts.</p> <p>As compared to the study provided in the Comment without the data and information from</p>

Ref. Nos:	Consolidated comments and justifications:	URA's response :
		<p>FS, it is believed that the findings and recommendations in the URA's SIA report is more representative to reflect the information of the affected residents in the Project.</p> <p>As refer to the request for rehousing In-situ or in the same district, for URA's redevelopment commenced under URAO, the URA will have the prevailing compensation and rehousing policies to the affected owners and tenants if the projects are authorized / approved by the Government for implementation. Regarding comments relating to compensation and rehousing issues, the URA will have corresponding policies and measures to address.</p> <p>Regarding the comment on using the site for providing subsidised housing, it is related to the Government policies on subsidised housing. The URA has no plan to provide subsidised housing in the site.</p>
280 - 281	<p>Community Cultural Concern (Chan Chor See) and Hungto Community (Chan Chor See)'s comment has 3 major comments on the Scheme:</p> <p>1/ the Project would need to traffic congestion.</p>	<p>The traffic consultant of the Scheme has conducted the TIA report which concluded that the DSP would not bring any adverse impact to the local traffic. The proposed road improvement works can improve the local traffic network and pedestrian environment. TD has no adverse comment on the TIA report.</p> <p>The TIA has assessed the traffic flow and traffic forecast of the area based on the forecast data provided by TD. The forecast has already covered the traffic generated from the TKW/1/002 development. The TIA concluded that the DSP would not bring any adverse impact to the local traffic.</p>
	<p>2/ The delay in redevelopment were in fact to annex Chun Tin Street for URA's own gain. The redevelopment time and compensation should be expedited.</p>	<p>The URA proposed to close Chun Tin Street aiming to extinguish the problems generated from the dead-end street. Through the extinguishment of dead-end street to enlarge the land into redevelopment, it allows better utilisation of the area to improve traffic and pedestrian network and environment, and increase flat supply to meet the housing demand and improvement of overall living environment.</p> <p>For URA's redevelopment commenced under</p>

Ref. Nos:	Consolidated comments and justifications:	URA's response :
		<p>URAO, the URA will have the prevailing compensation and rehousing policies to the affected owners and tenants if the projects are authorized / approved by the Government for implementation. In view of the unique nature of the KC-008(A) and the URA considering that the affected residents will need to wait for about 2 years more for the completion of planning procedures, the URA has decided to adopt a one-off special measures for the Project, including to issue acquisition offers to property owners in advance before the Scheme is approved by the Government. Affected owners can choose to accept the offers and sell their properties before the Scheme is approved by the Government. And upon completion of the property transaction, domestic tenants can elect either accepting ex-gratia payments from URA or continue their current tenancy agreement at existing rent until the Scheme is approved by the Government.</p>
	<p>3/ The proposed alternative proposal can realise the vision of creating a liveable community: local re-housing, preservation of social network social economy</p>	<p>It is considered that the proposals provided in the Comment do not have comprehensive data and technical assessments to support the proposals. And it has not gone through public consultation to collect comments and views. It cannot reflect its feasibility and local support.</p> <p>For the proposal of the Project, the URA has carried out preliminary technical assessments and feasibility studies. The DSP is now under public consultation to obtain Departmental comments and public comments. It has to go through the whole planning process and TPB's approval before obtaining CE in C's approval for implementation, which is more comprehensive and thorough consideration and planning process as compared to the proposal from the Comment.</p>

( FOR REFERENCE ONLY )

(English version of URA's Responses to Comments on public comments provided to Planning Department via URA's letter dated 29 July 2016.)

Attachment 1

Chun Tin Street/Sung Chi Street Development Scheme KC-008(A)

The Town Planning Board (TPB) received 723 public comments during the public consultation period between 27 June 2016 and 11 July 2016 for the Stage 2 Social Impact Assessment (SIA) Report. Out of the 723 public comments, about 290 public comments were similar to those received during the first public consultation period (i.e. between 17 May 2016 and 7 June 2016 for the draft DSP public consultation period), the remaining 430 public comments include both old and new comments.

Out of the 723 public comments, the comments similar to the first round public consultation period are listed at Table 1 and URA's responses shall be referred to the previous responses. Among the new comments received, most of the comments are related to the concerns that "URA had not consulted Fook Wan Mansion residents" and "URA annexing the public street for private development is overriding public interest, benefiting only private developers and URA". URA's responses to these comments are provided in Table 2.

Table 1: Similar comments

Ref. Nos:	Consolidated comments and justifications (translated):	URA's response:
1-3, 5-10, 12-374, 380-389, 391-460, 462-578, 580, 582-631, 633-654, 656, 664-692, 694-718	Object the closure of Chun Tin Street, the right of street usage should be returned to the residents.	Please refer to URA's responses in the first public consultation period under "Comment Category 1: Planning and Design Concerns"

Note: \*The comments are categorized by URA for reference only, in efforts to efficiently response to similar comments. The comments are not categorized by commenters.

( FOR REFERENCE ONLY )

Ref. Nos:	Consolidated comments and justifications (translated):	URA's response:
1-3, 5-10, 12-13, 15-328, 435-460, 462-517, 522, 528-536, 566, 640, 648, 668, 682, 688	The surrounding area of Chun Tin Street is overcrowded. The closure of Chun Tin Street, and the addition of 3 residential towers will not improve the environment, rather, there would be an increase of pedestrian traffic flow and further increase the population density of the area	
15-328 397, 435-460, 462-517, 522, 528-536, 625, 640, 649, 650, 670, 674, 677	The new project would increase the vehicular traffic flow, resulting in traffic chaos, congesting the pedestrian path at Sung Chi Street, jeopardizing pedestrian safety	

Note: \*The comments are categorized by URA for reference only, in efforts to efficiently response to similar comments. The comments are not categorized by commenters.

( FOR REFERENCE ONLY )

Ref. Nos:	Consolidated comments and justifications (translated):	URA's response:
360, 376-379 394-396 398, 403-405, 413, 418-420, 428-432, 461, 537-541, 543, 545, 546, 549, 550, 556, 559, 565-572, 574, 576-579, 596, 597, 599, 601, 602, 608, 625, 630, 633-637, 643, 651-655, 657-665, 672, 673, 680, 687, 692, 702, 703, 710, 712, 713, 715, 716, 718, 723	<p>Request the inclusion of Fook Wan Mansion into KC-008(A) into acquisition and redevelopment for the following reasons:</p> <ul style="list-style-type: none"> <li>• The construction of URA project nearby jeopardized the structure of Fook Wan Mansion</li> <li>• URA's construction work greatly affected resident's safety and livelihood.</li> <li>• URA's construction site created nuisances to Fook Wan Mansion, including mosquito and rodent infestation.</li> </ul>	<p>Please refer to URA's responses in the first public consultation period under "Comment Category 2: Requesting the inclusion of Fook Wan Mansion into KC-008(A) for acquisition and redevelopment"</p>
1-3, 5-10, 12-13,	<p>Object the proposed vehicle turning area in front of Fook Wan Mansion, jeopardizing Fook Wan Mansion resident's safety and created nuisance</p>	<p>Please refer to URA's responses in the first public consultation period under "Comment Category 3: Environmental Impacts and Technical concerns"</p>

Note: \*The comments are categorized by URA for reference only, in efforts to efficiently response to similar comments. The comments are not categorized by commenters.

( FOR REFERENCE ONLY )

Ref. Nos:	Consolidated comments and justifications (translated):	URA's response:
15-328, 378-383, 435-460, 462-517, 522, 528-536, 640, 648, 649, 650, 666-669, 690, 711, 714		
15-328, 378, 389 393, 394, 397, 435-460, 462-517, 522, 528-536, 639-641, 674, 676, 682, 723	Increase in plot ration and height relaxation would affect natural lighting, air ventilation and visual	
15-328, 435, 640, 723	Chun Tin Street would become a narrow alley under the Scheme. There would be only 9.5m between Ma Tau Wai Road/Chun Tin Street development and Chun Tin Street/Sung Chi Street development, including 4m covered by podium. There would be only 5m uncovered area, creating a wall effect and enclosed area with no air ventilation.	

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( FOR REFERENCE ONLY )

Ref. Nos:	Consolidated comments and justifications (translated):	URA's response:
1-3, 5-10, 13, 14 397, 403-405, 461, 544, 547, 548, 566, 649, 675, 682, 689, 712	KC-008(A) proposal would jeopardize fire safety.	
609-611, 711	Request URA to install noise barrier and mosquito infestation dealt with.	
15-328, 435-460, 462-517, 522, 528-536, 640	Public Rental Housing or Subsidized Housing should be launched.	Please refer to URA's responses in the first public consultation period under "Comment Category 4: URA's acquisition and re-housing policies" and "Comment Category 5: Alternative proposals from concerned parties"
1-3, 5-10, 13, 329-358 391, 397, 411, 418- 420, 429, 430, 433, 538-541, 543, 549,	Reboot the original KC-008.	

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( FOR REFERENCE ONLY )

Ref. Nos:	Consolidated comments and justifications (translated):	URA's response:
553, 555, 563, 567-572, 576-579, 605, 625, 671, 681, 700, 701		

Note: \*The comments are categorized by URA for reference only, in efforts to efficiently response to similar comments. The comments are not categorized by commenters.

( FOR REFERENCE ONLY )

Table 2: Response to new comments

Ref. Nos:	Consolidated comments and justifications (translated):	URA's response:
1-3, 5-10, 13, 14, 403, 405, 644, 645, 647, 652, 674, 684- 686	KC-008(A) had not consulted Fook Wan Mansion residents	<p>URA development projects involve spending of public funding for acquisition and redevelopment. The projects have high degree of confidentiality and should not be disclosed to the public before project commencement. After the projects are announced for commencement, the URA will conduct public consultations according to established procedures and need to obtain relevant government approval before implementation of projects according to Urban Renewal Authority Ordinance (URAO),</p> <p>The project is implemented by way of a Development Scheme under s.25 URAO, which would be submitted to the Town Planning Board (TPB) for consideration. TPB would collect public comments during the publication period and URA would respond to the public comments.</p> <p>The URA arranged two public briefings on 7 May 2016 and 11 May 2016 respectively to explain the details of the Scheme to all the stakeholders, and to obtain public views on the Scheme. There were residents of Fook Wan Mansion attended the public briefings.</p> <p>In addition, the URA attended a public briefing sessions arranged by DC member Mr. Yue Chee-wing on 12.5.2016 and 5.19.2016 (this briefing was solely for residents of Fook Wan Mansion). Details of the Scheme were also informed in the public briefing.</p> <p>On 25.5.2016, the URA attended a public briefing session jointly arranged by Social Service Team, concern group, LegCo member Ms. Wong Pik-wan and Ms. Claudia Mo. Fook Wan Mansion's concern</p>

Note: \*The comments are categorized by URA for reference only, in efforts to efficiently response to similar comments. The comments are not categorized by commenters.

( FOR REFERENCE ONLY )

Ref. Nos:	Consolidated comments and justifications (translated):	URA's response:
		<p>and comments were collected at the briefing and some concerns and questions from Fook Wan Mansion residents were addressed.</p> <p>Public comments, including comments from Fook Wan Mansion residents, were collected by TPB during the two public consultation periods. The comments were addressed by URA and submitted to TPB for consideration.</p>
15-328, 435-460, 462-517, 522, 528-536, 640	Annexing a public street for private development is overriding the public interest, benefiting only private developer and URA	<p>KC-008(A) Development Scheme is an opportunity to improve local environment and traffic network, creating planning gain and improve land use efficiency by redeveloping the old dilapidated buildings and integrate under-utilized land resources.</p> <p>The Scheme proposed a vehicle turning area of about 26 wide, serving the Scheme, adjoining development and the public. Sung Chi Street will be widened to a two-way street within the Scheme area, allowing vehicles entering Sung Chi Street to use the proposed vehicle turning area to exist the area. This new arrangement could improve the existing dead-end road situation at Chun Tin Street where vehicles entered must exit by reversing and via the one-way Sung Chi Street.</p>
1-3, 5-10, 12-13, 397	KC-008(A) has development that creates wall affect, which has a negative visual impact on Fook Wan Mansion.	According to the existing OZP, the Scheme area is within an area zoned "Residential (Group A)" ("R(A)"). The planning intention of R(A) site is primarily for high-density residential development. The site, albeit not including Chun Tin Street, could still have high-density residential development with

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( FOR REFERENCE ONLY )

Ref. Nos:	Consolidated comments and justifications (translated):	URA's response:
		<p>about 31 storeys including 3 storey podiums for commercial use following the prevailing planning intention, there is also no requirement for any setback area between KC-008 site and Fook Wan Mansion. In terms of visual impact, the original development proposal would be worse off.</p> <p>When planning for KC-008(A) Development Scheme, the URA has considered the fact that the close proximity of Fook Wan Mansion and the Scheme area. Hence a 26m wide new road area for vehicle turning is proposed so as to provide a wide space between the development within Scheme area and Fook Wan Mansion. With this design, Fook Wan Mansion's visual and sense of space is significantly improved.</p>
390	<p>Propose to include Fook Wan Mansion, Ming Wah Court and Bowie Mansion into the Scheme area, together with the Ma Tau Wai/Chun Tin Street development, the whole area could be redeveloped as a unique site showcasing greening, environmental sustainability and solar energy use.</p>	<p>URA's redevelopment projects will normally select buildings of over 50 years old with poor and deteriorating condition. URA will have various considerations when making up redevelopment plans, including building condition, building ages, allocation of resources, etc. Fook Wan Mansion, Ming Wah Court and Bowie Mansion were built in the 70s or 80s. These buildings are in better conditions than those older, dilapidated buildings. Considering the above factors, the URA has currently no intention to carry out redevelopment projects to cover these buildings.</p>
717	<p>i. The URA established an undesirable precedent to change redevelopment area whenever desires.</p> <p>ii. The TPB approved KC-008</p>	<p>KC-008 project was implemented under s.26 URAO. According to the s.26 URAO, URA project will be submitted to SDEV for consideration and approval, rather than to TPB. As such, the KC-008 project has not been submitted to TPB for</p>

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( FOR REFERENCE ONLY )

Ref. Nos:	Consolidated comments and justifications (translated):	URA's response:
	<p>project, asserting that there is no major planning problem in KC-008. With its termination and withdrawal, the TPB has become a rubber stamp</p> <p>iii. AS there is a downward trend in the recent real estate market, the URA restarted the project, delaying the valuation, lowering the cost of acquisition</p>	<p>consideration or approval.</p> <p>In view of the recent public opinion, URA adopted an area-based redevelopment approach to increase planning gains in redevelopment projects. URA considered the inclusion of Chun Tin Street to enlarge the redevelopment site would have a greater degree of planning gain and community benefits. In view of such, the URA has decided to commence the KC-008(A) to include Chun Tin Street in the KC-008(A) and concurrently withdraw the KC-008 project which covers the same row of old buildings. Therefore the commencement of KC-008(A) and withdrawal of KC-008 are based on the consideration of planning merits and community benefits, but not related to market condition nor acquisition concerns.</p> <p>Considering the unique circumstance of the Scheme and the time required for planning and acquisition procedures, URA has devised a series of one-off special measures ("the Special Measures") for owners and tenants affected by the implementation of KC-008(A). URA will make early property valuation and acquisition offer before government approval of the Scheme is obtained. If the approval is obtained, the URA will again make property valuation and pay the difference between the two valuations if there is an increase in valuation. As such, there is no gain in delaying the acquisition date for lowering the cost of acquisition. The owners will not be negatively affected by market trend.</p>
719-720	The local recycling business has been in operation for over 30 years.	There are prevailing acquisition, compensation and re-housing policies for the affected owners of

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( FOR REFERENCE ONLY )

Ref. Nos:	Consolidated comments and justifications (translated):	URA's response:
	Although there is Ex-gratia Allowance, the business will be closed down if the property is acquired and there is not a suitable site for relocation. Since the commenter has been in the recycling business for over 40 years, it is nearly impossible for him to change industry.	<p>URA's development projects commenced under URAO. There are corresponding policies to address.</p> <p>Apart from prevailing acquisition and compensation policies, according to URS, upon the request from business operator, the URA will help identify suitable premises in the district of the redevelopment projects to enable the affected shop operators to relocate and continue operation in the same district as far as practicable.</p>

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( FOR REFERENCE ONLY )

**Table 2: Response to new comments (Cont.)**

The following comments are received in English and the URA's responses as follow: -

Ref. Nos:	Consolidated Comments / views	URA's responses:
693	Object the closure of Chun Tin Street and EVA concerns	<p>The KC-008(A) Development Scheme (the Project) aims to include the Chun Tin Street into the redevelopment scheme to achieve a greater degree of planning and community benefits. The existing dead-end Chun Tin Street is a cause of environmental nuisance and creates traffic and safety problems. The Project will provide an up-to standard vehicular turning area dedicated for public use, the nearby Sung Chi Street will also be widened to provide a two-lane carriageway to enhance traffic flow and pedestrian safety. The Project will also integrate with the adjoining URA Ma Tau Wai Road Project and bring an overall environmental improvement and planning merits to the local community.</p> <p>The URA also submitted Traffic Impact Assessment for the proposed closure of Chun Tin Street and the new road arrangement to the Transport Department (TD) for their consideration. TD indicated no objection to the proposal and no adverse comment on the TIA report at this stage.</p> <p>The proposed vehicular turning area together with the widened Sung Chi Street will serve as emergency vehicular access to ensure emergency vehicles including fire engines with adequate access to the adjoining developments when necessary.</p> <p>Fire Services Department and Transport</p>

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( FOR REFERENCE ONLY )

Ref. Nos:	Consolidated Comments / views	URA's responses:
		Department have expressed no adverse comment on the traffic arrangement in the proposal and traffic impact assessment of the Project.
4	Owners and tenants of KC-008(A) do not have extra incentives from this revision (from KC-008 to KC-008(A)). The compensation package remains the same.	For URA's redevelopment projects commenced under the Urban Renewal Authority Ordinance (URAO), the URA will have the prevailing acquisition, compensation and rehousing policies to handle the affected owners and tenants in the projects upon Government's authorization of the projects. Comments on compensation package shall be considered under URAO's policies.
721-722	<p>The closure of Chun Tin Street adversely affect the business and livelihood of the shop owners and the residents of Fook Wan Mansion, the following is requested:</p> <ul style="list-style-type: none"> <li>• A decent access to Fook Wan Mansion with quality equal to or better than the original Chun Tin Street.</li> <li>• The new road provided for Fook Wan Mansion is of Highway Department standard under KC-008(A) management.</li> <li>• The acquisition of Fook Wan Mansion for redevelopment should be considered.</li> </ul>	<p>The Project proposed to dedicate a portion of land at the north of the Project (i.e. in front of Fook Wan Mansion) for a new vehicular turning area to provide for vehicular access for the Project and the adjoining developments (including Fook Wan Mansion), as well as for public use. The overall aim of the proposed vehicular arrangement is to improve the overall traffic flow and pedestrian safety from its existing dead-end condition. Vehicles will no longer need to manoeuvre back and forth at the dead-end street but can drive directly via the roundabout to leave the area. Pavement will be provided alongside of the new vehicular turning area for pedestrian from adjoining developments to have a safe walking environment.</p> <p>The new vehicular turning area will have about 26m distance between Fook Wan Mansion and the</p>

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( FOR REFERENCE ONLY )

Ref. Nos:	Consolidated Comments / views	URA's responses:
		<p>proposed development of KC-008(A). It creates a buffer distance between Fook Wan Mansion and the future development in the Project, and can bring a visual relief and spatial feeling among the high rise buildings in the area.</p> <p>The proposed new turning area is included in the Project and the proposal has been circulated for departmental comment. Highways Department has no adverse comment on the proposal at this stage. Should the Project be approved by the Government for implementation, the URA will carry out detailed design of the Project including the design of the new turning area for TD and HyD for comment and approval to meet HyD's standard.</p>

Note: \*The comments are categorized by URA for reference only, in efforts to efficiently response to similar comments. The comments are not categorized by commenters.

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**RE: URA KC008(A) Chin Tin Street = Outstanding Tasks**  
15/09/2016 16:15

MMPKwan@ura.org.hk to: bysyan@pland.gov.hk  
Cc: jwycheng@pland.gov.hk, CCMWong@ura.org.hk, EYFChoy@ura.org.hk

From: "Kwan, Mable" <MMPKwan@ura.org.hk>  
To: "bysyan@pland.gov.hk" <bysyan@pland.gov.hk>,  
Cc: "jwycheng@pland.gov.hk" <jwycheng@pland.gov.hk>, "Wong, Christopher" <CCMWong@ura.org.hk>, "Choy, Edwin" <EYFChoy@ura.org.hk>

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History: This message has been forwarded.

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Dear Barry,

As discussed, please find the revised DSP, Notes and ES that have incorporated your comments provided in below email. The word files are provided for your use. I understand from Johanna that after this round of revision, the documents shall be incorporated into the TPB paper and there shall be no more revision until they are to be considered by TPB.

Nevertheless, please feel free to contact me if you have questions on the revised doc. Thanks very much.

Regards,

Mable Kwan  
Senior Manager, Planning & Design Division  
Urban Renewal Authority  
Tel: 2588 2752  
Email: mmpkwan@ura.org.hk

**From:** bysyan@pland.gov.hk [mailto:bysyan@pland.gov.hk]  
**Sent:** Friday, September 09, 2016 3:28 PM  
**To:** Kwan, Mable  
**Cc:** jwycheng@pland.gov.hk  
**Subject:** URA KC008(A) Chin Tin Street = Outstanding Tasks  
**Importance:** High

Dear Mabel,

For para (c) in my previous mail dated 5/9/2016, please find our comments on the DSP, Notes and ES for your follow-up action. Please replace the amended pages in the enclosure under your letter 15.7.2016. Thanks.

Regards  
Barry Yan  
for DPO/K  
Planning Department

-----  
GR (bcc), please file

----- Forwarded by Barry YS YAN/PLAND/HKSARG on 09/09/2016 15:20 -----

From:	Barry YS YAN/PLAND/HKSARG
To:	"Kwan, Mable" <MMPKwan@ura.org.hk>,
Date:	05/09/2016 18:18
Subject:	URA KC008(A) Chin Tin Street = Outstanding Tasks

Dear Mabel,

- (a) For the further departmental comments on the R-to-C, please forward your responses by 7.9.2016.
- (b) For the SWD's comments (1st round), please also forward your responses by 7.9.2016.
- (c) We are considering the revised DSP, Notes and ES, and will pass the comments to you, if any, ASAP. Thanks.


Regards  
Barry  
for DPO/K  
Planning Department

-----  
GR (bcc), please file

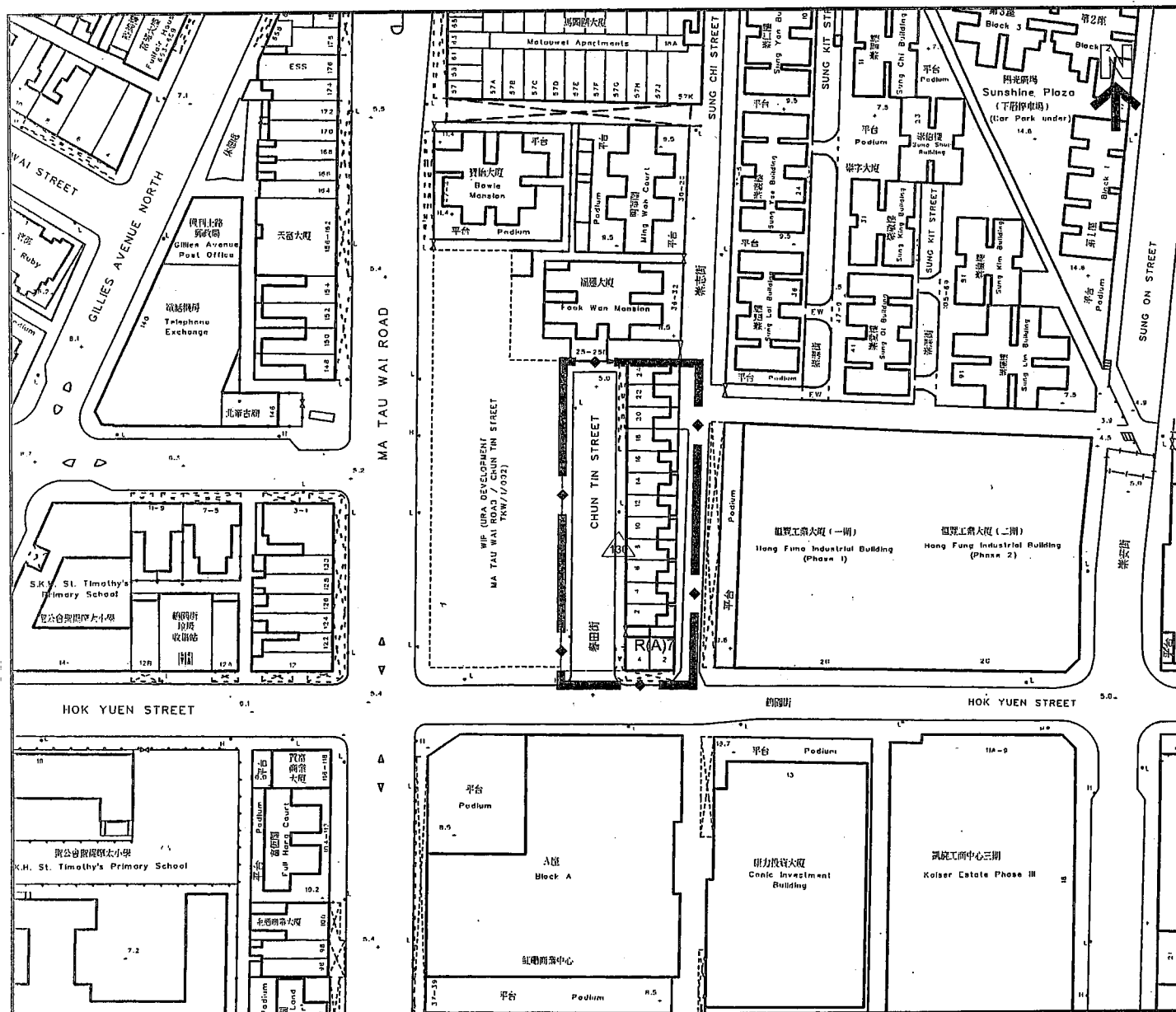
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 Explanatory Statement (Eng)\_DRAFT w PlanD comments\_V5.doc





圖例  
NOTATION

- BOUNDARY OF DEVELOPMENT SCHEME ..... 發展計劃範圍界線
- RESIDENTIAL (GROUP A)7 ..... 住宅(甲類)7
- MAXIMUM BUILDING HEIGHT (130 METRES ABOVE PRINCIPAL DATUM) ..... 最高建築物高度 (在主要平基準上130米)

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

2016年 月 日城市規劃委員會根據城市規劃條例第25(6)(a)條認為圖則適宜公布，並於2016年 月 日按照城市規劃條例第5條展示。  
FOR PLAN DEEMED SUITABLE BY THE TOWN PLANNING BOARD FOR PUBLICATION UNDER SECTION 25(6)(a) OF THE URBAN RENEWAL AUTHORITY ORDINANCE ON 2016 AND EXHIBITED UNDER SECTION 5 OF THE TOWN PLANNING ORDINANCE ON 2016.

香港城市規劃委員會依據城市規劃條例擬備的市區重建局春田街/崇志街發展計劃圖則  
TOWN PLANNING ORDINANCE, HONG KONG TOWN PLANNING BOARD  
URBAN RENEWAL AUTHORITY CHUN TIN STREET / SUNG CHI STREET  
DEVELOPMENT SCHEME PLAN

SCALE 1:1000 比例尺  
米 METRES 10 0 10 20 30 40 50 METRES 米

SECRETARY, TOWN PLANNING BOARD 城市規劃委員會秘書

依據市區重建局條例第25(3)(a)條擬備  
PREPARED UNDER SECTION 25(3)(a) OF THE URBAN RENEWAL AUTHORITY ORDINANCE

圖則編號  
PLAN No. S/K9/URA1/A

**DRAFT URBAN RENEWAL AUTHORITY**  
**CHUN TIN STREET/SUNG CHI STREET**  
**DEVELOPMENT SCHEME PLAN NO. S/K9/URA1/A**

(Being a Draft Plan for the Purposes of the Town Planning Ordinance prepared by the Urban Renewal Authority under section 25 of the Urban Renewal Authority 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 widths, road junctions and alignments of roads 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 Schedule of Uses:
- (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; and
  - (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.
- (8) 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 permission is required.

- (9) 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.
- (10) Any development not compatible with the Urban Renewal Authority's Development Scheme for the area is prohibited by virtue of section 25(4) of the Urban Renewal Authority Ordinance.

**DRAFT URBAN RENEWAL AUTHORITY**  
**CHUN TIN STREET / SUNG CHI STREET**  
**DEVELOPMENT SCHEME PLAN NO. S/K9/URA1/A**

Schedule of Uses

Page

RESIDENTIAL (GROUP A) 7.

1

**RESIDENTIAL (GROUP A) 7**

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	Commercial Bathhouse/Massage Establishment
Flat	Eating Place
Government Use (not elsewhere specified)	Education Institution
House	Exhibition or Convention Hall
Library	Government Refuse Collection Point
Market	Hospital
Place of Recreation, Sports or Culture	Hotel
Public Clinic	Institutional Use (not elsewhere specified)
Public Transport Terminus or Station (excluding open-air terminus or station)	Mass Transit Railway Vent Shaft and/or Other Structure above Ground Level other than Entrances
Residential Institution	Office
School (in free-standing purpose-designed building only)	Petrol Filling Station
Social Welfare Facility	Place of Entertainment
Utility Installation for Private Project	Private Club
	Public Convenience
	Public Transport Terminus or Station (not elsewhere specified)
	Public Utility Installation
	Public Vehicle Park (excluding container vehicle)
	Religious Institution
	School (not elsewhere specified)
	Shop and Services
	Training Centre

(Please see next page)



**RESIDENTIAL (GROUP A) 7 (Cont'd)**

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 bay 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

**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.

**Remarks**

- (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 gross floor area (GFA) of 12,270m<sup>2</sup> and a maximum non-domestic GFA of 2,454m<sup>2</sup>.
- (2) In determining the relevant maximum GFA for the purposes of paragraph (1) above, any floor space that is constructed or intended for use solely as carpark, loading/unloading bay, plant room, 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.

(Please see next page)

RESIDENTIAL (GROUP A) 7 (Cont'd)

Remarks (Cont'd)

- (3) 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 the maximum building height in terms of metres above Principal Datum (mPD) as stipulated on the Plan, or the height of the existing building, whichever is the greater.
- (4) Where the permitted plot ratio as defined in Building (Planning) Regulations is permitted to be exceeded in circumstances as set out in Regulation 22(1) or (2) of the said Regulations, the GFA for the building on land to which paragraph (1) above applies may be increased by the additional plot ratio by which the permitted plot ratio is permitted to be exceeded under and in accordance with the said Regulation 22(1) or (2), notwithstanding that the relevant maximum GFA specified in paragraph (1) above may thereby be exceeded.
- (5) Based on the individual merits of a development or redevelopment proposal, minor relaxation of the GFA and building height restrictions as stated in paragraphs (1) and (3) above may be considered by the Town Planning Board on application under section 16 of the Town Planning Ordinance.

**DRAFT URBAN RENEWAL AUTHORITY**  
**CHUN TIN STREET/SUNG CHI STREET**  
**DEVELOPMENT SCHEME PLAN NO. S/K9/URA1/A**

**EXPLANATORY STATEMENT**

**DRAFT URBAN RENEWAL AUTHORITY**  
**CHUN TIN STREET/SUNG CHI STREET**  
**DEVELOPMENT SCHEME PLAN NO. S/K9/URA1/A**

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**DRAFT URBAN RENEWAL AUTHORITY  
CHUN TIN STREET/SUNG CHI STREET  
DEVELOPMENT SCHEME PLAN NO. S/K9/URA1/A**

(Being a Draft Plan for the Purpose of the Town Planning Ordinance prepared by the Urban Renewal Authority under section 25 of the Urban Renewal Authority 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. INTRODUCTION**

This Explanatory Statement is intended to assist an understanding of the draft Urban Renewal Authority (URA) Chun Tin Street/Sung Chi Street Development Scheme Plan No. S/K9/URA1/A. It reflects the planning intention and objectives of the Town Planning Board (the Board) for the area covered by the Plan.

**2. AUTHORITY FOR THE PLAN AND PROCEDURES**

- 2.1 In the URA's 15<sup>th</sup> Business Plan (2016/17) approved by the Financial Secretary in early 2016, Chun Tin Street/Sung Chi Street Development Scheme (KC-008(A)) was proposed to be processed as a Development Scheme under section 25 of the URA Ordinance (URAO).
- 2.2 On 6 May 2016, pursuant to section 23(1) of the URAO, the URA notified in the Government Gazette the commencement of implementation of the Chun Tin Street/Sung Chi Street Development Scheme.
- 2.3 On 13 May 2016, the URA submitted the draft URA Chun Tin Street/Sung Chi Street Development Scheme Plan for the Development Scheme to the Board under section 25(5) of the URAO.
- 2.4 On xxx, the Board, under section 25(6)(a) of the URAO, deemed the draft URA Chun Tin Street/Sung Chi Street Development Scheme Plan as being suitable for publication. Under section 25(7) of the URAO, the draft Development Scheme Plan, which the Board has deemed suitable for publication under section 25(6)(a) of the URAO, is deemed to be a

draft plan prepared by the Board for the purposes of the Town Planning Ordinance (the Ordinance).

- 2.5 On xx xx, the draft URA Chun Tin Street/Sung Chi Street Development Scheme Plan No. S/K9/URA1/1 (the Plan) was exhibited under section 5 of the Ordinance. By virtue of section 25(9) of the URAO, the Plan has from that date replaced the draft Hung Hom Outline Zoning Plan (OZP) No. S/K9/25 in respect of the area delineated and described herein.

### **3. OBJECT OF THE PLAN**

The Plan illustrates that the Development Scheme Area (the Area) is designated as "Residential (Group A)7" ("R(A)7") primarily for high density residential developments with commercial uses being always permitted on the lowest three floors of a building or in the purpose-designed non-residential portion of an existing building. The Scheme also aims to enhance local traffic and pedestrian environment via closure of Chun Tin Street for better site utilisation and road improvement works at Sung Chi Street. It is planned to be developed by means of the Development Scheme prepared under section 25 of the URAO. The Development Scheme intends to achieve environmental improvement through redevelopment and promoting efficient land use.

### **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 in this zone 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. AREA COVERED BY THE PLAN**

- 5.1 The Development Scheme boundary, which is shown in heavy broken line on the Plan, covers a total area of about 2,475m<sup>2</sup>.
- 5.2 The Area covers a whole row of old and dilapidated tenement buildings bounded by Chun Tin Street, Hok Yuen Street and Sung Chi Street. The Area also covers Chun Tin Street which is a dead-end road that is proposed to be closed and integrated into the Area for



redevelopment to achieve better site utilisation, increase redevelopment potential and enhance local traffic and pedestrian environment. The Area also includes part of Sung Chi Street adjoining the Area to carry out road improvement works and the adjoining pavement of Hok Yuen Street of which the tenement buildings overhang above.

- 5.3 The Area has excluded the lots to the immediate west of Chun Tin Street which is the site of URA Ma Tau Wai Road/Chun Tin Street Development Project (TKW/1/002) currently under redevelopment. The lots to the immediate north are occupied by Fook Wan Mansion, which is relatively new and in better building condition. It is also excluded from the Development Scheme boundary.
- 5.4 On the approved Hung Hom OZP No. S/K9/24, the Area was primarily zoned "Residential (Group A)" and with an area shown as 'Road' before the exhibition of the Plan.

## 6. **EXISTING CONDITIONS**

- 6.1 The buildings within the Area are between four to six storeys and predominantly residential in nature with commercial/retail shops and some workshops for car repair services, metal hardware processing and recycling activities at ground floor. Most of the existing buildings are in deteriorating condition.
- 6.2 The poor housing condition, the presence of sub-divided units, unauthorised building structures on the roofs and backyards of many of the buildings, and a number of ground floor workshops are sources of environmental nuisance in the area.
- 6.3 Buildings facing Chun Tin Street are affected by noise and environmental nuisance generated from the workshop activities at the ground floor of Chun Tin Street.
- 6.4 The existing Chun Tin Street in the Area is a dead-end road only serving as vehicular access to the old tenement buildings in the Area as well as the adjoining Fook Wan Mansion and the URA Ma Tau Wai Road/Chun Tin Street Development Project (TKW/1/002). Vehicles will use Hok Yuen Street to enter Chun Tin Street; and manoeuvre and turn around at the dead-end of Chun Tin Street to leave via Hok Yuen Street. The workshop activities at the ground floor of the tenement buildings in the Area often occupy the pavement and Chun Tin Street for parking and loading/unloading of goods especially during day time. There are conflicts of usage among pedestrian, workshop activities and vehicular traffic at Chun Tin Street.

- 6.5 The URA Ma Tau Wai Road/Chun Tin Street Development Project (TKW/1/002) is located to the immediate west of the Area. It is currently a construction site. URA will redevelop the site for residential and commercial uses. The redevelopment will comprise two residential towers on top of a podium with commercial and community uses on the lower floors, with at-grade open space provided for public use in the redevelopment site. The TKW/1/002 project is anticipated to be completed by 2018/2019.

## **7. PLANNING AND LAND USE PROPOSALS**

- 7.1 On the Plan, the Area is zoned "R(A)7" and the Notes of the Plan indicated broadly the intended land use within the Area.

### **Uses**

- 7.2 The "R(A)7" 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.
- 7.3 Development or redevelopment within the "R(A)7" zone is restricted to a maximum domestic GFA of 12,270m<sup>2</sup> and a maximum non-domestic GFA of 2,454m<sup>2</sup>, and a maximum building height of 130 metres above Principal Datum (mPD). The proposed development within the Area will provide about 310 residential units in a residential tower on top of a 3-level podium with commercial/retail uses. Ancillary car park will be provided in a basement floor to serve the development.
- 7.4 A maximum building height of 130mPD for the Area is proposed in consideration of the elongated shape of the site which has imposed constraints in maximising the site development potential. With the more relaxed building height of 130mPD, a slimmer building block and more design flexibility can be provided in the Area to accommodate the permissible GFA of the Area to provide more flat supply to the market. The reduced building bulk of the residential tower can also enhance local air ventilation and permeability to bring improvement to the local environment in this part of the dense urban context. Visual appraisal has been carried out and the proposed development with 130mPD in the Area is considered compatible with the surrounding developments without obstructing the mountain ridgeline in Kowloon.
- 7.5 To provide design flexibility, minor relaxation of the GFA and building height restrictions may be considered by the Board on

application under section 16 of the Ordinance taking into account its individual planning and design merits.

#### **Internal Transport Facilities**

- 7.6 Ancillary car parking spaces will be provided in a basement car park to serve the development in order to minimise the impact on the local traffic flow. Loading/unloading bays for the development will be provided at the roadside of the widened Sung Chi Street along the Area.

#### **Vehicular Circulation**

- 7.7 To improve the local traffic arrangement and circulation, the existing dead-end street at Chun Tin Street will be permanently closed. A portion of land at the north of the Area will be dedicated for a new road as a vehicular turning area connecting from Sung Chi Street. The dedicated area will be for public use and will serve as vehicular access for the proposed development of the Area, Fook Wan Mansion to the north and the future development at URA Ma Tau Wai Road / Chun Tin Street Development Project (TKW/1/002) to the west.
- 7.8 Widening of Sung Chi Street to a two-lane carriageway with pavement is proposed to enhance the traffic and pedestrian flow. A further building setback at ground floor level of about 5m to 6m from road kerb of Sung Chi Street will create a wider passageway for pedestrians and provide loading/unloading bays for the development.
- 7.9 URA will take up the management and maintenance of the new vehicular turning area, its adjoining pavement in the Area, and loading/unloading bays along Sung Chi Street within the Scheme boundary.
- 7.10 An indicative plan showing the proposed road arrangement of the Area is attached in **Annex 1**.

#### **Pedestrian Circulation**

- 7.11 Taking the opportunity of redevelopment, the Development Scheme aims to rationalise the local pedestrian circulation to improve the safety and pedestrian walking environment within the Area. Continuous pavement will be provided along the new vehicular turning road, Sung Chi Street and Hok Yuen Street adjoining the proposed development in the Area. It will provide safe pedestrian walking environment and direct pavement network from Sung Chi Street towards Ma Tau Wai Road via the future at-grade open space provided within the adjoining URA development (TKW/1/002) or via the pavement surrounding the proposed development in the Area.

- 7.12 With the closure of Chun Tin Street for integration into the Area for redevelopment, it offers the opportunity to provide more space for road widening of Sung Chi Street and pedestrian passageway at grade within the Area to provide a pleasant and safer pedestrian walking environment separated from the traffic road.
- 7.13 The ground floor of the proposed development will be setback by about 5m to 6m from road kerb of Sung Chi Street and about 5m from road kerb of Hok Yuen Street for provision of a wider pavement along both streets.

#### **Open Space and Greening**

- 7.14 Private open space will be provided on the podium for the enjoyment of the residents of the proposed development. To enhance pedestrian circulation between Sung Chi Street and Ma Tau Wai Road, at-grade open space or pedestrian passage will be provided in the design to provide better pedestrian linkage with the at-grade open space at the adjoining URA development (TKW/1/002).
- 7.15 Greening at podium edge and pedestrian level of the proposed development within the Area will be provided as far as practicable and optimised to meet the Sustainable Building Design (SBD) Guidelines and to enhance the local streetscape.
- 7.16 Landscaping including road paving and roadside greening will be provided at the new turning area and its adjoining pavement, and the corner area at the junction of Sung Chi Street and Hok Yuen Street to create a pleasant and comfortable streetscape.

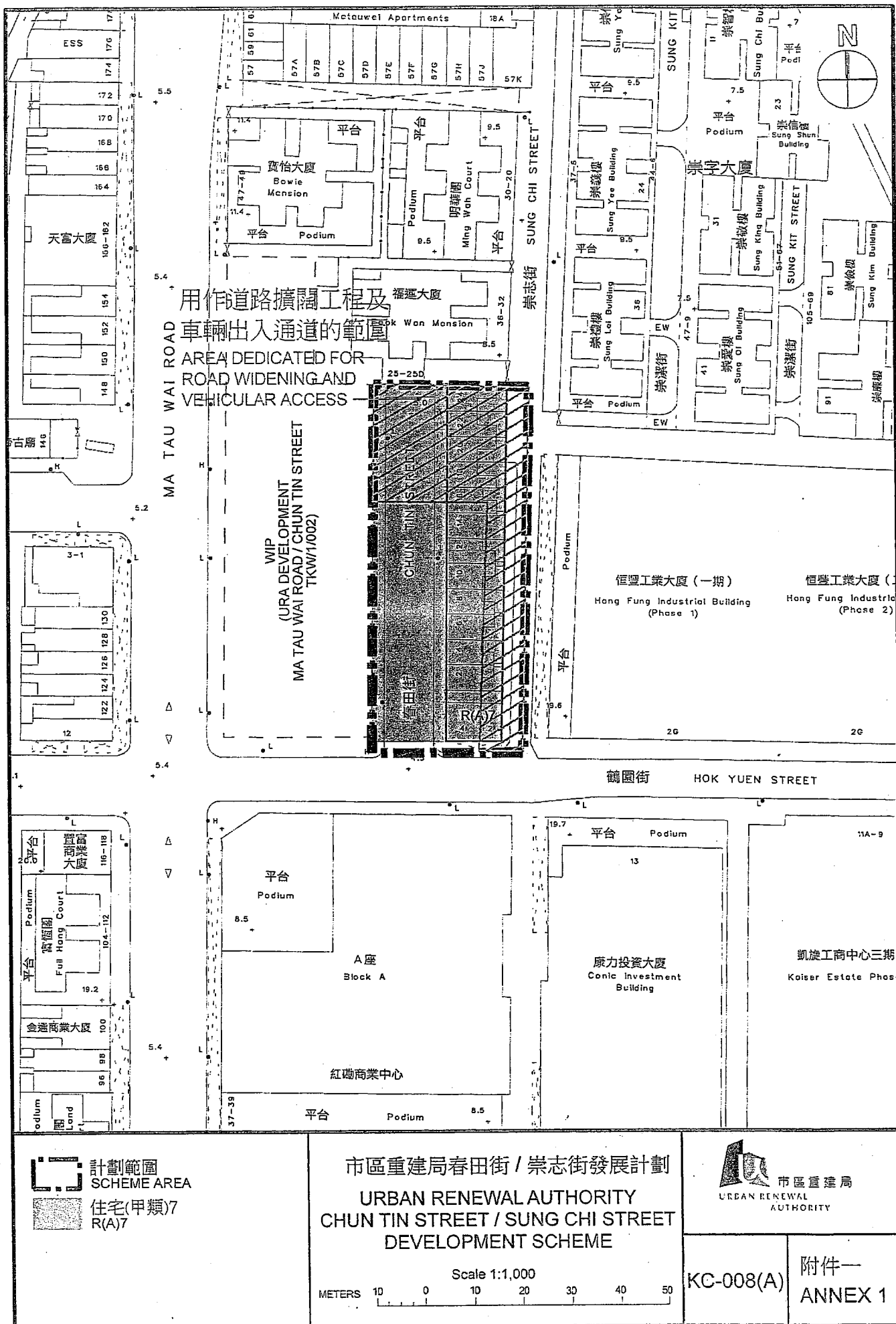
### **8. IMPLEMENTATION OF THE SCHEME**

- 8.1 The proposals set out in the Plan form an integral part of the Development Scheme for the Area.
- 8.2 The URA does not own or lease any land within the boundaries of the Development Scheme. The URA intends to acquire the properties within the Area of the Scheme. With respect to any of such properties which cannot be acquired by purchase, the Secretary for Development would consider, upon the application of the URA, recommending to the Chief Executive in Council the resumption of properties under the Lands Resumption Ordinance, if necessary.
- 8.3 All eligible tenants will be offered an ex-gratia payment package in accordance with URA's policy. The URA has already entered into agreement with the Hong Kong Housing Society (HKHS) and the Hong Kong Housing Authority (HKHA) for the purpose of making

available rehousing units by HKHS or HKHA to rehouse affected tenants who satisfy the eligibility criteria of HKHS or HKHA.

- 8.4 Non-domestic tenants of properties acquired by URA whose tenancies are terminated by URA due to implementation of the Development Scheme may be offered an ex-gratia allowance to assist in their business relocation.
- 8.5 The URA may implement the Development Scheme on its own or in association with one or more joint venture partners.

TOWN PLANNING BOARD  
MAY 2016



## Extract of the Minutes of HIC KCDC Meeting on 23.06.2016

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### 市區重建局發展項目 春田街／崇志街發展計劃 (KC-008(A))

(九龍城房建會文件第47/16號)

### 關注春田街收購計劃

(九龍城房建會文件第48/16號)

22. 市區重建局規劃及設計高級經理關美寶女士向委員介紹文件第47/16號。

23. 余志榮議員對市建局就KC-008(A)項目提出的一次性特別措施表示讚賞，惟指出居民仍非常關注該特別措施的條款及細則，希望與局方盡快舉行居民會，解答各項細節。此外，他提出以下意見/查詢：(一) 上述項目規模較小，涉及約44個租客，希



望局方放寬公屋安置的門檻或給予他們特惠金；(二) KC-008(A)項目需時長達10年，而距離上述項目僅5米的福運大廈樓齡亦已達41年，樓宇結構因附近地盤的施工出現大幅度沉降，故希望局方將福運大廈一併納入KC-008(A)項目，完善社區的發展；(三) 嚴格規管局方轄下地盤工程的施工安排，包括限制大型機器作業時間於上午9時至下午6時、加設隔音布，及杜絕地盤蚊患及鼠患等，以確保附近樓宇的安全及福運大廈住戶的權益；(四) 局若落實封閉春田街及增設迴旋處，將如何安置現時設於春田街路旁的咪錶停車位；以及(五) 福運大廈住戶普遍支持KC-008項目及反對KC-008(A)項目，希望局方考慮居民的意見。

24. 楊永杰議員表示一直支持原有的KC-008項目，希望局方從善如流，撤回KC-008(A)項目並重啟KC-008項目。他又垂詢局方合共收到多少份要求將春田街納入收購範圍的意見。他又認為局方應該打通春田街及崇志街，以徹底改善區內交通。

25. 鄭葆賢議員提出以下意見/查詢：(一) 市建局無法清楚交代以KC-008(A)替代KC-008項目的原因，有關居民因此需重新經歷長達2年的審批時間；(二) 福運大廈未被納入KC-008(A)項目，卻面對兩項市建局工程同時於毗鄰進行，地盤施工亦對福運大廈居民帶來長時間滋擾及安全問題，而新建的樓宇對福運大廈亦會造成屏風樓效應；(三) 局方應關注於重建項目附近受影響的居民；(四) 可透過加強管理，以改善春田街的環保回收問題及崇志街的泊車問題，而無須封閉春田街及增設不必要的迴旋處。擬建的迴旋處亦無實際改善交通作用，駕駛者其實可選擇於前一條街道轉向；以及(五) KC-008項目的樓宇狀況日益惡化，區內住宅租金亦不斷上升，故希望局方盡快諮詢福運大廈及於崇志街樓宇的住戶，以免重覆更改KC-008項目的情況，對住戶帶來長遠的負面影響。

26. 李慧琼議員提出以下意見/查詢：(一) KC-008(A)項目極具爭議及引發居民作多次請願，希望局方接納民意，減少社區上的爭議；(二) 若福運大廈住戶希望被納入KC-008(A)項目範圍，是否可依循合法程序向城規會申述，並由行政長官會同行政會議決定；(三) 唯獨將福運大廈剔除於局方的重建項目範圍，只會引發居民的擔憂；(四) 若居民反對KC-008(A)項目，將有何合法途徑提出意見；以及(五) 「鶴園春田商戶大聯盟」致函提出3點要求，包括：(1) 因應事件的特殊性，立即安排出租公屋或單位安置受影響的租戶；(2) 當市建局成為項目的業主後，非住宅物業的租戶是否可以同樣提早領取特惠金；以及(3) 業主認為無需透過申請程序提早領取應得的津貼，有關津貼的發放方式及時間應以市建局以往一貫的方式處理。她希望市建局及相關部門作出回應。

27. 林博議員提出以下意見/查詢：(一) 春田街/崇志街發展規劃已經歷長時間討論，相關樓宇亦已嚴重失修，希望KC-008(A)項目無需再作修改，並由局方協助調解業主及租戶之間因重建引起的爭拗；(二) 福運大廈深受附近地盤施工的滋擾，故樓宇結構已有惡化趨勢，希望屋宇署及市建局協助檢察樓宇，並將其納入重建範圍；以及(三) 擬建的迴旋處能否容納大型車輛包括消防及救護車輛駛入成疑，建議將重建範圍擴大。

28. 張仁康議員表示局方並無考慮KC-008(A)項目對福運大廈住戶的影響，該大廈因附近地盤的工程引致外牆剝落及出現裂縫。此外，若封閉春田街，消防及救護車輛將無法進入該地段，他要求局方解釋將來的車輛將如何從擬建的迴旋處駛入福運大廈。

29. 勞超傑議員表示居民普遍要求重啟KC-008項目，並查詢局方是否已獲得足夠的民意，支持以KC-008(A)項目替代KC-008項目及相關原因。此外，他認為局方的零碎收購方式並不理想，而KC-008(A)項目並無顧及對福運大廈住戶的影響，希望局方在諮詢期間多與各持分者溝通，平衡各方的利益，並重新考慮是否應該開展KC-008(A)項目。他又希望相關部門回應地盤工程對春田街的雙號唐樓及福運大廈造成的結構性影響。

30. 市區重建局收購及遷置高級經理吳寶珊女士表示，市建局於2016年5月6日公佈KC-008(A)項目，並希望於3個月內向業主提出收購建議及舉辦居民會，屆時會向業主及租戶解釋一次性特別措施的具體細節，並解答他們的查詢。

31. 市區重建局規劃及設計高級經理關美寶女士作綜合回覆，重點如下：

— KC-008(A)項目在規劃程序上，需向城規會呈交發展計劃草圖作考慮，公眾可向城規會提出意見。城規會在考慮公眾的意見後，有權批准、不批准或要求市建局修改該項目。市建局亦會詳細考慮諮詢期內居民所提出的各項意見，包括將福運大廈納入重建範圍及有關春田街改道等建議的理據，並向城規會作出回應，讓城規會考慮。

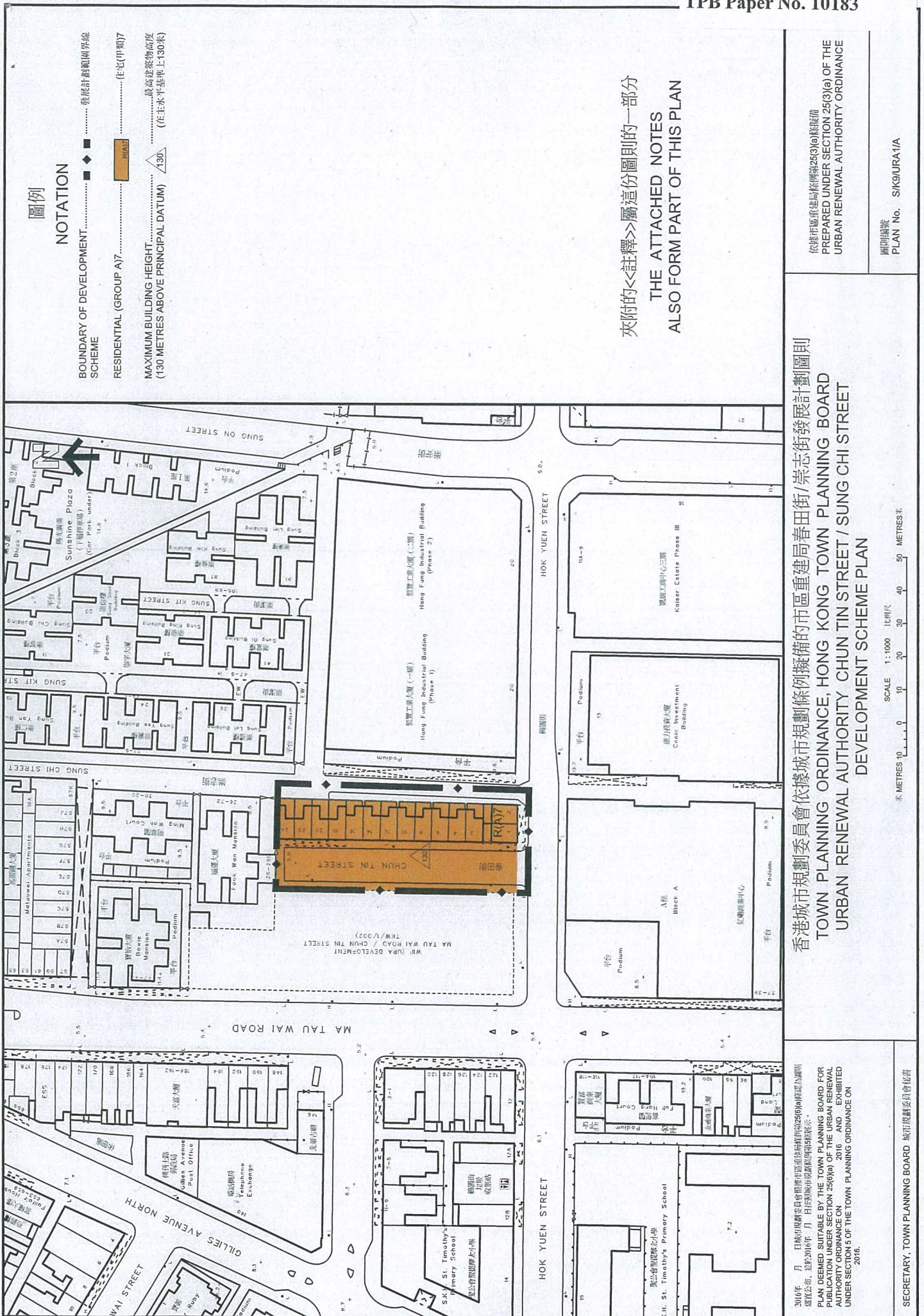
— 市建局一直聯同交通顧問公司與運輸署聯繫，並已就項目進行了交通影響評估研究報告提交予政府部門，運輸署及消防署亦初步同意報告內的交通建議及評估研究。擬建的迴旋處闊26米，道路的設計足以容納消防及救護車等大型車輛出入及通往福運大廈。擬建的迴旋處除了供KC-008(A)項目住戶使用外，亦會提供給公眾使用，包括福運大廈的車輛。市民亦可就迴旋處的設計向城規會反映意見。

- 一 春田街現為掘頭路，就交通流及行人安全方面並不理想。市建局希望以小區發展模式，將春田街掘頭路納入重建範圍一併發展，並建議開闢一條26米闊的新路面作迴旋處用途，目的是改善當區道路安排和行人環境，以提升重建的規劃及社區裨益，同時可與毗鄰的市建局馬頭圍道的項目在整體設計上融合以達致更佳效果。
- 一 有關春田街現有10個咪錶停泊位的安排，KC-008(A)項目將設有地庫停車場，供私家車及商業車輛使用。交通影響評估報告亦已建議於附近地方增加咪錶停泊位。

32. 屋宇署嚴婉玲女士回覆，屋宇署的職員及地盤的註冊結構工程師已視察福運大廈，除了存在失修情況外，樓宇整體結構並無明顯危險，有關地盤的負責人將採取適當的改善及補救措施，包括為受影響的大廈外牆及行人路進行修葺，增加對建築物及行人路的監察點，及減少工程對樓宇的影響。屋宇署在工程進行期間，亦會加強巡查地盤及其周邊環境，確保工程符合標準。此外，署方備悉委員的關注及意見。

33. 市區重建局社區發展高級經理殷倩華女士亦表示市建局備悉委員的意見。







**DRAFT URBAN RENEWAL AUTHORITY**  
**CHUN TIN STREET/SUNG CHI STREET**  
**DEVELOPMENT SCHEME PLAN NO. S/K9/URA1/A**

(Being a Draft Plan for the Purposes of the Town Planning Ordinance prepared by the Urban Renewal Authority under section 25 of the Urban Renewal Authority 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 widths, road junctions and alignments of roads 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 Schedule of Uses:
- (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; and
  - (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.
- (8) 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 permission is required.

- (9) 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.
- (10) Any development not compatible with the Urban Renewal Authority's Development Scheme for the area is prohibited by virtue of section 25(4) of the Urban Renewal Authority Ordinance.



**DRAFT URBAN RENEWAL AUTHORITY**  
**CHUN TIN STREET / SUNG CHI STREET**  
**DEVELOPMENT SCHEME PLAN NO. S/K9/URA1/A**

Schedule of Uses

	<u>Page</u>
RESIDENTIAL (GROUP A) 7	1

**RESIDENTIAL (GROUP A) 7**

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	Commercial Bathhouse/Massage Establishment
Flat	Eating Place
Government Use (not elsewhere specified)	Education Institution
House	Exhibition or Convention Hall
Library	Government Refuse Collection Point
Market	Hospital
Place of Recreation, Sports or Culture	Hotel
Public Clinic	Institutional Use (not elsewhere specified)
Public Transport Terminus or Station (excluding open-air terminus or station)	Mass Transit Railway Vent Shaft and/or Other Structure above Ground Level other than Entrances
Residential Institution	Office
School (in free-standing purpose-designed building only)	Petrol Filling Station
Social Welfare Facility	Place of Entertainment
Utility Installation for Private Project	Private Club
	Public Convenience
	Public Transport Terminus or Station (not elsewhere specified)
	Public Utility Installation
	Public Vehicle Park (excluding container vehicle)
	Religious Institution
	School (not elsewhere specified)
	Shop and Services
	Training Centre

(Please see next page)

**RESIDENTIAL (GROUP A) 7 (Cont'd)**

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 bay 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

**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.

**Remarks**

- (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 gross floor area (GFA) of 12,270m<sup>2</sup> and a maximum non-domestic GFA of 2,454m<sup>2</sup>.
- (2) In determining the relevant maximum GFA for the purposes of paragraph (1) above, any floor space that is constructed or intended for use solely as carpark, loading/unloading bay, plant room, 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.

(Please see next page)

RESIDENTIAL (GROUP A) 7 (Cont'd)

Remarks (Cont'd)

- (3) 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 the maximum building height in terms of metres above Principal Datum (mPD) as stipulated on the Plan, or the height of the existing building, whichever is the greater.
- (4) Where the permitted plot ratio as defined in Building (Planning) Regulations is permitted to be exceeded in circumstances as set out in Regulation 22(1) or (2) of the said Regulations, the GFA for the building on land to which paragraph (1) above applies may be increased by the additional plot ratio by which the permitted plot ratio is permitted to be exceeded under and in accordance with the said Regulation 22(1) or (2), notwithstanding that the relevant maximum GFA specified in paragraph (1) above may thereby be exceeded.
- (5) Based on the individual merits of a development or redevelopment proposal, minor relaxation of the GFA and building height restrictions as stated in paragraphs (1) and (3) above may be considered by the Town Planning Board on application under section 16 of the Town Planning Ordinance.

**DRAFT URBAN RENEWAL AUTHORITY**  
**CHUN TIN STREET/SUNG CHI STREET**  
**DEVELOPMENT SCHEME PLAN NO. S/K9/URA1/A**

**EXPLANATORY STATEMENT**

**DRAFT URBAN RENEWAL AUTHORITY**

**CHUN TIN STREET/SUNG CHI STREET**

**DEVELOPMENT SCHEME PLAN NO. S/K9/URA1/A**

	<u>Contents</u>	<u>Page</u>
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2.	AUTHORITY FOR THE PLAN AND PROCEDURES	1
3.	OBJECT OF THE PLAN	2
4.	NOTES OF THE PLAN	2
5.	AREA COVERED BY THE PLAN	2
6.	EXISTING CONDITIONS	3
7.	PLANNING AND LAND USE PROPOSALS	4
8.	IMPLEMENTATION OF THE SCHEME	6

**DRAFT URBAN RENEWAL AUTHORITY  
CHUN TIN STREET/SUNG CHI STREET  
DEVELOPMENT SCHEME PLAN NO. S/K9/URA1/A**

(Being a Draft Plan for the Purpose of the Town Planning Ordinance prepared by the Urban Renewal Authority under section 25 of the Urban Renewal Authority 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. INTRODUCTION**

This Explanatory Statement is intended to assist an understanding of the draft Urban Renewal Authority (URA) Chun Tin Street/Sung Chi Street Development Scheme Plan No. S/K9/URA1/A. It reflects the planning intention and objectives of the Town Planning Board (the Board) for the area covered by the Plan.

**2. AUTHORITY FOR THE PLAN AND PROCEDURES**

- 2.1 In the URA's 15<sup>th</sup> Business Plan (2016/17) approved by the Financial Secretary in early 2016, Chun Tin Street/Sung Chi Street Development Scheme (KC-008(A)) was proposed to be processed as a Development Scheme under section 25 of the URA Ordinance (URAO).
- 2.2 On 6 May 2016, pursuant to section 23(1) of the URAO, the URA notified in the Government Gazette the commencement of implementation of the Chun Tin Street/Sung Chi Street Development Scheme.
- 2.3 On 13 May 2016, the URA submitted the draft URA Chun Tin Street/Sung Chi Street Development Scheme Plan for the Development Scheme to the Board under section 25(5) of the URAO.
- 2.4 On xxx, the Board, under section 25(6)(a) of the URAO, deemed the draft URA Chun Tin Street/Sung Chi Street Development Scheme Plan as being suitable for publication. Under section 25(7) of the URAO, the draft Development Scheme Plan, which the Board has deemed suitable for publication under section 25(6)(a) of the URAO, is deemed to be a



draft plan prepared by the Board for the purposes of the Town Planning Ordinance (the Ordinance).

- 2.5 On xx xx, the draft URA Chun Tin Street/Sung Chi Street Development Scheme Plan No. S/K9/URA1/1 (the Plan) was exhibited under section 5 of the Ordinance. By virtue of section 25(9) of the URAO, the Plan has from that date replaced the draft Hung Hom Outline Zoning Plan (OZP) No. S/K9/25 in respect of the area delineated and described herein.

### **3. OBJECT OF THE PLAN**

The Plan illustrates that the Development Scheme Area (the Area) is designated as "Residential (Group A)7" ("R(A)7") primarily for high density residential developments with commercial uses being always permitted on the lowest three floors of a building or in the purpose-designed non-residential portion of an existing building. The Scheme also aims to enhance local traffic and pedestrian environment via closure of Chun Tin Street for better site utilisation and road improvement works at Sung Chi Street. It is planned to be developed by means of the Development Scheme prepared under section 25 of the URAO. The Development Scheme intends to achieve environmental improvement through redevelopment and promoting efficient land use.

### **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 in this zone 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. AREA COVERED BY THE PLAN**

- 5.1 The Development Scheme boundary, which is shown in heavy broken line on the Plan, covers a total area of about 2,475m<sup>2</sup>.
- 5.2 The Area covers a whole row of old and dilapidated tenement buildings bounded by Chun Tin Street, Hok Yuen Street and Sung Chi Street. The Area also covers Chun Tin Street which is a dead-end road that is proposed to be closed and integrated into the Area for

redevelopment to achieve better site utilisation, increase redevelopment potential and enhance local traffic and pedestrian environment. The Area also includes part of Sung Chi Street adjoining the Area to carry out road improvement works and the adjoining pavement of Hok Yuen Street of which the tenement buildings overhang above.

- 5.3 The Area has excluded the lots to the immediate west of Chun Tin Street which is the site of URA Ma Tau Wai Road/Chun Tin Street Development Project (TKW/1/002) currently under redevelopment. The lots to the immediate north are occupied by Fook Wan Mansion, which is relatively new and in better building condition. It is also excluded from the Development Scheme boundary.
- 5.4 On the approved Hung Hom OZP No. S/K9/24, the Area was primarily zoned "Residential (Group A)" and with an area shown as 'Road' before the exhibition of the Plan.

## **6. EXISTING CONDITIONS**

- 6.1 The buildings within the Area are between four to six storeys and predominantly residential in nature with commercial/retail shops and some workshops for car repair services, metal hardware processing and recycling activities at ground floor. Most of the existing buildings are in deteriorating condition.
- 6.2 The poor housing condition, the presence of sub-divided units, unauthorised building structures on the roofs and backyards of many of the buildings, and a number of ground floor workshops are sources of environmental nuisance in the area.
- 6.3 Buildings facing Chun Tin Street are affected by noise and environmental nuisance generated from the workshop activities at the ground floor of Chun Tin Street.
- 6.4 The existing Chun Tin Street in the Area is a dead-end road only serving as vehicular access to the old tenement buildings in the Area as well as the adjoining Fook Wan Mansion and the URA Ma Tau Wai Road/Chun Tin Street Development Project (TKW/1/002). Vehicles will use Hok Yuen Street to enter Chun Tin Street; and manoeuvre and turn around at the dead-end of Chun Tin Street to leave via Hok Yuen Street. The workshop activities at the ground floor of the tenement buildings in the Area often occupy the pavement and Chun Tin Street for parking and loading/unloading of goods especially during day time. There are conflicts of usage among pedestrian, workshop activities and vehicular traffic at Chun Tin Street.

- 6.5 The URA Ma Tau Wai Road/Chun Tin Street Development Project (TKW/1/002) is located to the immediate west of the Area. It is currently a construction site. URA will redevelop the site for residential and commercial uses. The redevelopment will comprise two residential towers on top of a podium with commercial and community uses on the lower floors, with at-grade open space provided for public use in the redevelopment site. The TKW/1/002 project is anticipated to be completed by 2018/2019.

## **7. PLANNING AND LAND USE PROPOSALS**

- 7.1 On the Plan, the Area is zoned "R(A)7" and the Notes of the Plan indicated broadly the intended land use within the Area.

### **Uses**

- 7.2 The "R(A)7" 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.
- 7.3 Development or redevelopment within the "R(A)7" zone is restricted to a maximum domestic GFA of 12,270m<sup>2</sup> and a maximum non-domestic GFA of 2,454m<sup>2</sup>, and a maximum building height of 130 metres above Principal Datum (mPD). The proposed development within the Area will provide about 310 residential units in a residential tower on top of a 3-level podium with commercial/retail uses. Ancillary car park will be provided in a basement floor to serve the development.
- 7.4 A maximum building height of 130mPD for the Area is proposed in consideration of the elongated shape of the site which has imposed constraints in maximising the site development potential. With the more relaxed building height of 130mPD, a slimmer building block and more design flexibility can be provided in the Area to accommodate the permissible GFA of the Area to provide more flat supply to the market. The reduced building bulk of the residential tower can also enhance local air ventilation and permeability to bring improvement to the local environment in this part of the dense urban context. Visual appraisal has been carried out and the proposed development with 130mPD in the Area is considered compatible with the surrounding developments without obstructing the mountain ridgeline in Kowloon.
- 7.5 To provide design flexibility, minor relaxation of the GFA and building height restrictions may be considered by the Board on

application under section 16 of the Ordinance taking into account its individual planning and design merits.

#### **Internal Transport Facilities**

- 7.6 Ancillary car parking spaces will be provided in a basement car park to serve the development in order to minimise the impact on the local traffic flow. Loading/unloading bays for the development will be provided at the roadside of the widened Sung Chi Street along the Area.

#### **Vehicular Circulation**

- 7.7 To improve the local traffic arrangement and circulation, the existing dead-end street at Chun Tin Street will be permanently closed. A portion of land at the north of the Area will be dedicated for a new road as a vehicular turning area connecting from Sung Chi Street. The dedicated area will be for public use and will serve as vehicular access for the proposed development of the Area, Fook Wan Mansion to the north and the future development at URA Ma Tau Wai Road / Chun Tin Street Development Project (TKW/1/002) to the west.
- 7.8 Widening of Sung Chi Street to a two-lane carriageway with pavement is proposed to enhance the traffic and pedestrian flow. A further building setback at ground floor level of about 5m to 6m from road kerb of Sung Chi Street will create a wider passageway for pedestrians and provide loading/unloading bays for the development.
- 7.9 URA will take up the management and maintenance of the new vehicular turning area, its adjoining pavement in the Area, and loading/unloading bays along Sung Chi Street within the Scheme boundary.
- 7.10 An indicative plan showing the proposed road arrangement of the Area is attached in **Annex 1**.

#### **Pedestrian Circulation**

- 7.11 Taking the opportunity of redevelopment, the Development Scheme aims to rationalise the local pedestrian circulation to improve the safety and pedestrian walking environment within the Area. Continuous pavement will be provided along the new vehicular turning road, Sung Chi Street and Hok Yuen Street adjoining the proposed development in the Area. It will provide safe pedestrian walking environment and direct pavement network from Sung Chi Street towards Ma Tau Wai Road via the future at-grade open space provided within the adjoining URA development (TKW/1/002) or via the pavement surrounding the proposed development in the Area.

- 7.12 With the closure of Chun Tin Street for integration into the Area for redevelopment, it offers the opportunity to provide more space for road widening of Sung Chi Street and pedestrian passageway at grade within the Area to provide a pleasant and safer pedestrian walking environment separated from the traffic road.
- 7.13 The ground floor of the proposed development will be setback by about 5m to 6m from road kerb of Sung Chi Street and about 5m from road kerb of Hok Yuen Street for provision of a wider pavement along both streets.

#### **Open Space and Greening**

- 7.14 Private open space will be provided on the podium for the enjoyment of the residents of the proposed development. To enhance pedestrian circulation between Sung Chi Street and Ma Tau Wai Road, at-grade open space or pedestrian passage will be provided in the design to provide better pedestrian linkage with the at-grade open space at the adjoining URA development (TKW/1/002).
- 7.15 Greening at podium edge and pedestrian level of the proposed development within the Area will be provided as far as practicable and optimised to meet the Sustainable Building Design (SBD) Guidelines and to enhance the local streetscape.
- 7.16 Landscaping including road paving and roadside greening will be provided at the new turning area and its adjoining pavement, and the corner area at the junction of Sung Chi Street and Hok Yuen Street to create a pleasant and comfortable streetscape.

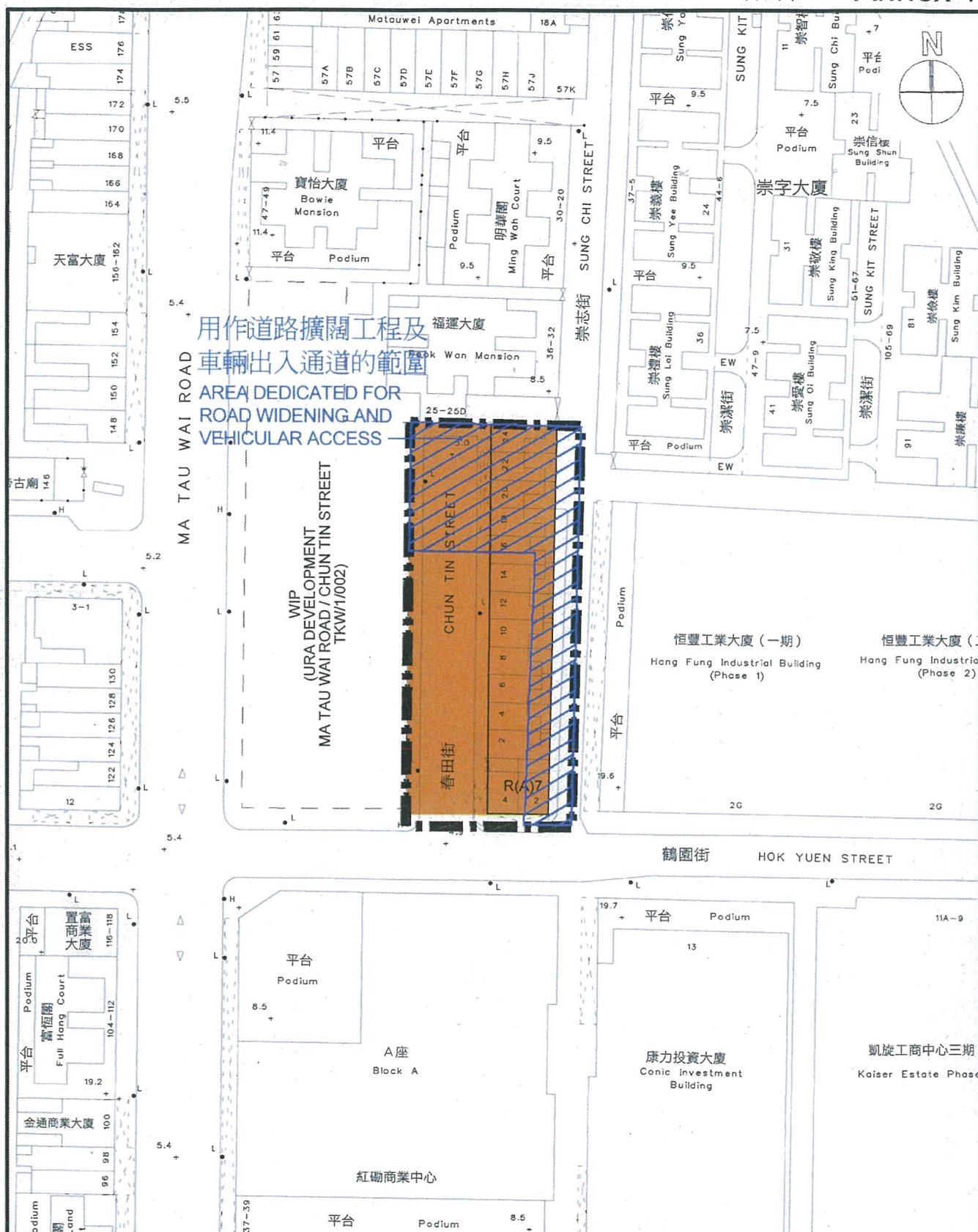
### **8. IMPLEMENTATION OF THE SCHEME**

- 8.1 The proposals set out in the Plan form an integral part of the Development Scheme for the Area.
- 8.2 The URA does not own or lease any land within the boundaries of the Development Scheme. The URA intends to acquire the properties within the Area of the Scheme. With respect to any of such properties which cannot be acquired by purchase, the Secretary for Development would consider, upon the application of the URA, recommending to the Chief Executive in Council the resumption of properties under the Lands Resumption Ordinance, if necessary.
- 8.3 All eligible tenants will be offered an ex-gratia payment package in accordance with URA's policy. The URA has already entered into agreement with the Hong Kong Housing Society (HKHS) and the Hong Kong Housing Authority (HKHA) for the purpose of making

available rehousing units by HKHS or HKHA to rehouse affected tenants who satisfy the eligibility criteria of HKHS or HKHA.

- 8.4 Non-domestic tenants of properties acquired by URA whose tenancies are terminated by URA due to implementation of the Development Scheme may be offered an ex-gratia allowance to assist in their business relocation.
- 8.5 The URA may implement the Development Scheme on its own or in association with one or more joint venture partners.

TOWN PLANNING BOARD  
MAY 2016



用作道路擴闊工程及  
車輛出入通道的範圍  
AREA DEDICATED FOR  
ROAD WIDENING AND  
VEHICULAR ACCESS

計劃範圍  
SCHEME AREA  
住宅(甲類)7  
R(A)7

市區重建局春田街 / 崇志街發展計劃  
URBAN RENEWAL AUTHORITY  
CHUN TIN STREET / SUNG CHI STREET  
DEVELOPMENT SCHEME

市區重建局  
URBAN RENEWAL  
AUTHORITY

Scale 1:1,000  
METERS 10 0 10 20 30 40 50

KC-008(A)

附件一  
ANNEX 1



圖例  
NOTATION

ZONES		地帶
COMMERCIAL	C	商業
COMPREHENSIVE DEVELOPMENT AREA	CDA	綜合發展區
RESIDENTIAL (GROUP A)	R(A)	住宅（甲類）
RESIDENTIAL (GROUP B)	R(B)	住宅（乙類）
GOVERNMENT, INSTITUTION OR COMMUNITY	G/C	政府、機構或社區
OPEN SPACE	O	休憩用地
OTHER SPECIFIED USES	OU	其他指定用途
UNDETERMINED	U	未決定用途

COMMUNICATIONS		交通
RAILWAY AND STATION (UNDERGROUND)	STATION	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
URBAN RENEWAL AUTHORITY DEVELOPMENT SCHEME PLAN AREA		市區重建局發展計劃範圍
BUILDING HEIGHT CONTROL ZONE BOUNDARY		建築物高度管制區界線
MAXIMUM BUILDING HEIGHT (IN METRES ABOVE PRINCIPAL DATUM)	80	最高建築物高度（在主水平基準上若干米）
MAXIMUM BUILDING HEIGHT RESTRICTION AS STIPULATED ON THE NOTES	8	《註釋》內訂明最高建築物高度限制
MAXIMUM BUILDING HEIGHT (IN NUMBER OF STOREYS)		最高建築物高度（樓層數目）

土地用途及面積一覽表  
SCHEDULE OF USES AND AREAS

USES	大約面積及百分比 APPROXIMATE AREA & %		用途
	公頃 HECTARES	% 百分比	
COMMERCIAL	6.39	4.40	商業
COMPREHENSIVE DEVELOPMENT AREA	22.08	15.19	綜合發展區
RESIDENTIAL (GROUP A)	26.75	18.40	住宅（甲類）
RESIDENTIAL (GROUP B)	6.63	4.56	住宅（乙類）
GOVERNMENT, INSTITUTION OR COMMUNITY	12.58	8.65	政府、機構或社區
OPEN SPACE	13.40	9.22	休憩用地
OTHER SPECIFIED USES	15.23	10.48	其他指定用途
UNDETERMINED	0.17	0.12	未決定用途
MAJOR ROAD ETC.	41.48	28.53	主要道路等
URBAN RENEWAL AUTHORITY DEVELOPMENT SCHEME PLAN AREA	0.65	0.45	市區重建局發展計劃範圍
TOTAL PLANNING SCHEME AREA	145.36	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 / K 9 / 2 4 的修訂  
AMENDMENT TO APPROVED PLAN No. S/K9/24

AMENDMENT EXHIBITED UNDER SECTION 5  
OF THE TOWN PLANNING ORDINANCE

按照城市規劃條例第 5 條  
展示的修訂

AMENDMENT ITEM A

（參看附表）  
(SEE ATTACHED SCHEDULE)

香港城市規劃委員會依據城市規劃條例擬備的紅磡（九龍規劃區第 9 區）分區計劃大綱圖  
TOWN PLANNING ORDINANCE, HONG KONG TOWN PLANNING BOARD  
KOWLOON PLANNING AREA No. 9 - HUNG HOM - OUTLINE ZONING PLAN

SCALE 1:5000 比例尺  
METRES 100 0 200 400 600 800 METRES 米

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/K9/24B



*CE in C referred the approved Hung Hom OZP No. S/K9/22 to the Board for amendment under section 12(1)(b)(ii) of the Ordinance. Since then, the OZP was amended once and exhibited for public inspection under section 5 of the Ordinance.*

~~2.13 On 30 June 2009, the CE in C referred the approved Hung Hom OZP No. S/K9/22 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 10 July 2009 under section 12(2) of the Ordinance.~~

~~2.14 On 11 September 2009, the draft Hung Hom OZP No. S/K9/23, incorporating amendments to rezone a site at Wuhu Street from "Residential (Group A)4" to "Other Specified Uses" annotated "Hotel" was exhibited for public inspection under section 5 of the Ordinance. During the two month exhibition period, no representation was received.~~

~~2.151 On 5 October 2010, the CE in C, under section 9(1)(a) of the Ordinance, approved the draft Hung Hom OZP, which was subsequently renumbered as S/K9/24. On 15 October 2010, the approved Hung Hom OZP No. S/K9/24 (the Plan) was exhibited under section 9(5) of the Ordinance.~~

*2.12 On 6 October 2015, the CE in C referred the approved Hung Hom OZP No. S/K9/24 to the Board for amendment under section 12(1)(b)(ii) of the Ordinance. The reference back of the OZP was notified in the Gazette on 16 October 2015 under section 12(2) of the Ordinance.*

*2.13 On \_\_\_\_\_ 2016, the draft Hung Hom OZP No. S/K9/25 (the Plan), incorporating amendments including (i) the rezoning of a site at Lee Kung Street from "Government, Institution or Community" ("G/IC") to "Residential (Group A)" ("R(A)"); (ii) inclusion of 'Art Studio (excluding those involving direct provision of services or goods)' as a Column 1 use in Schedule II for industrial or I-O building of the "Other Specified Uses" annotated "Business" ("OU(B)") zone; and (iii) excising the two areas designated as Urban Renewal Authority (URA) Chin Tin Street/ Sung Chi Street Development Scheme Plan (DSP) and URA Hung Fook Street/ Ngan Hon Street DSP from the OZP boundary; was exhibited for public inspection under section 5 of the Ordinance. In addition, the alignments of the Mass Transit Railway (MTR) Kwun Tong Line Extension (KTE) and Shatin to Central Link (SCL) authorised by the CE in C under the Railways Ordinance (Chapter 519) on 30.11.2010 and 27.3.2012 respectively are shown on the OZP for information.*

### 3. OBJECT OF THE PLAN

- 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.
- 3.2 The Plan is to illustrate the broad principles of development. It is a small-scale plan and the transport alignments and boundaries between the land use zones may be subject to minor alterations as detailed planning proceeds.

- 8.2.8 ~~A minor relaxation clause in respect of site coverage has been incorporated into the Notes of the Plan for sites with site coverage restriction in order to cater for development with special design merits. To provide design/architectural flexibility, minor relaxation of the plot ratio/GFA/site coverage restrictions may be considered by the Board on application under section 16 of the Ordinance taking into account its own merits.~~

8.3 "Residential (Group A)" ("R(A)") – Total Area ~~27.12~~ **27.29** ~~26.75~~ha

- 8.3.1 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. Considering the traffic impact of office development, there is a general presumption against office use in "R(A)" zone. Thus, office development other than those along major transport route would not be supported.
- 8.3.2 Developments within this zone include private residential developments at Shun Yung Street and Ko Shan Road; on both sides of Ma Tau Wai Road and Gillies Avenue; and to the south of Fat Kwong Street/Man Yue Street; Ka Wai Chuen, a large public housing estate at Ma Tau Wai Road; and Hung Hom Estate ~~under redevelopment~~ at Man Yue Street.
- 8.3.3 In the consideration of the overall transport, environmental and infrastructural constraints, as well as the adequacy in the provision of community facilities envisioned in the Kowloon Density Study Review, completed in early 2002, developments or redevelopments within the "R(A)" zone and its sub-zones are subject to specific control on plot ratios except otherwise specified in the Notes, i.e. a maximum plot ratio of 7.5 for a domestic building or a maximum plot ratio of 9.0 for a partly domestic and partly non-domestic building. In calculating the GFA for these developments/redevelopments, the lands for free-standing purpose-designed buildings that are solely used for accommodating school or other GIC facilities, including those located on ground and on building podium, are not to be taken as parts of the site.
- 8.3.4 Development and redevelopment within the "R(A)", "R(A)3", "R(A)4" and "R(A)5" zones are covered by the building height bands of 80mPD, 100mPD, **110mPD** and 120mPD as stipulated on the Plan according to the overall building height concept of the Area as specified in paragraph 7 above.
- 8.3.5 A site zoned "R(A)1" near the junction of Hung Hom South Road and Hung Hom By-pass (HHBP) on the Reclamation Area has been developed for residential development, the Harbour Place, providing about 2,470 flats. The development includes a deck over the HHBP to mitigate the potential noise pollution problems arising from the HHBP. Taking into account the traffic capacity constraints identified by the Central Kowloon Traffic Study, the residential development on this site is restricted to a maximum domestic GFA of 144,300m<sup>2</sup> and a maximum non-domestic GFA of 4,500m<sup>2</sup>. This site is also subject to a maximum building height of 105mPD to reflect the major building heights of the development.

### 9.3 Ferries

Two ferry piers are located at the waterfront of the Reclamation Area to provide passenger ferry services to Central, Wanchai and North Point.

### 9.4 Other Public Transport Facilities

The Area is well served by buses and green minibuses. A public transport interchange for bus, green minibus and taxi is proposed to be incorporated into the "CDA(1)" site south of Hung Luen Road to replace the existing temporary bus/coach terminus adjacent to the Hung Hom Ferry Pier.

### 9.5 Pedestrian Circulation

The Reclamation Area will be served by a comprehensive network of footbridges. Pedestrian links across the Princess Margaret Road Link are mainly through footbridges connecting from the "G/IC" site to the south of the "C(3)" site to the podium of the Metropolis. Pedestrian links across the Hung Hom By-pass are provided by the podium deck as part of the residential development above it. A grade separated walkway to the north of Royal Peninsula along Hung Ling Street links the MTR Hung Hom Station and bus terminus to the residential development in the existing built-up area in Hung Hom. Continuous public pedestrian access is provided along the waterfront promenade from Laguna Verde via the planned promenade at the Reclamation Area to Tsim Sha Tsui East.

## 10. URBAN RENEWAL AUTHORITY DEVELOPMENT SCHEME PLAN AREA

*10.1 Two areas have been designated as "URA DSP Areas". The land use zonings of the areas are depicted on the relevant URA DSPs and they will be implemented by the URA.*

*10.2 The DSP for Chun Tin Street/Sung Chi Street covers an area of about 0.16ha. The site is intended for accommodating one residential tower over a commercial podium with basement car park. The DSP for Hung Fook Street/Ngan Hon Street Site covers an area of about 0.45ha. The site is intended for accommodating three residential towers over two 3-storey commercial podia with a basement car park.*

### 10.11. UTILITY SERVICES

The Area is well served with piped water supply, drainage and sewerage systems, as well as gas, electricity and telephone services. No difficulties are anticipated in meeting the future requirements.

### 10.12. CULTURAL HERITAGE

*Two historic structures including the The Kwun Yum Temple at Station Lane (Grade I) and the Pak Tai Temple at Ma Tau Wai Road are located within the Area are Grade II and Grade III historic buildings respectively. Prior consultation with the Antiquities and Monuments Office of the Leisure and Cultural Services Department should be made if any development or re-zoning proposals might affect these buildings and*

~~structures, and their immediate environs.~~ *In 2009, the Antiquities Advisory Board (AAB) released the list of 1,444 historic buildings, in which some buildings/structures within the Area have been accorded gradings. The AAB also released a number of new items which are subject to grading assessment by AAB. Details of the list of 1,444 historic buildings/structures have been uploaded onto the official website of the AAB at <http://www.aab.gov.hk>. Prior consultation with the Antiquities and Monuments Office of the Leisure and Cultural Services Department should be made if any development, redevelopment or rezoning proposals might affect the above graded/proposed historic buildings/structures, and their immediate environs.*

#### **12.13. IMPLEMENTATION**

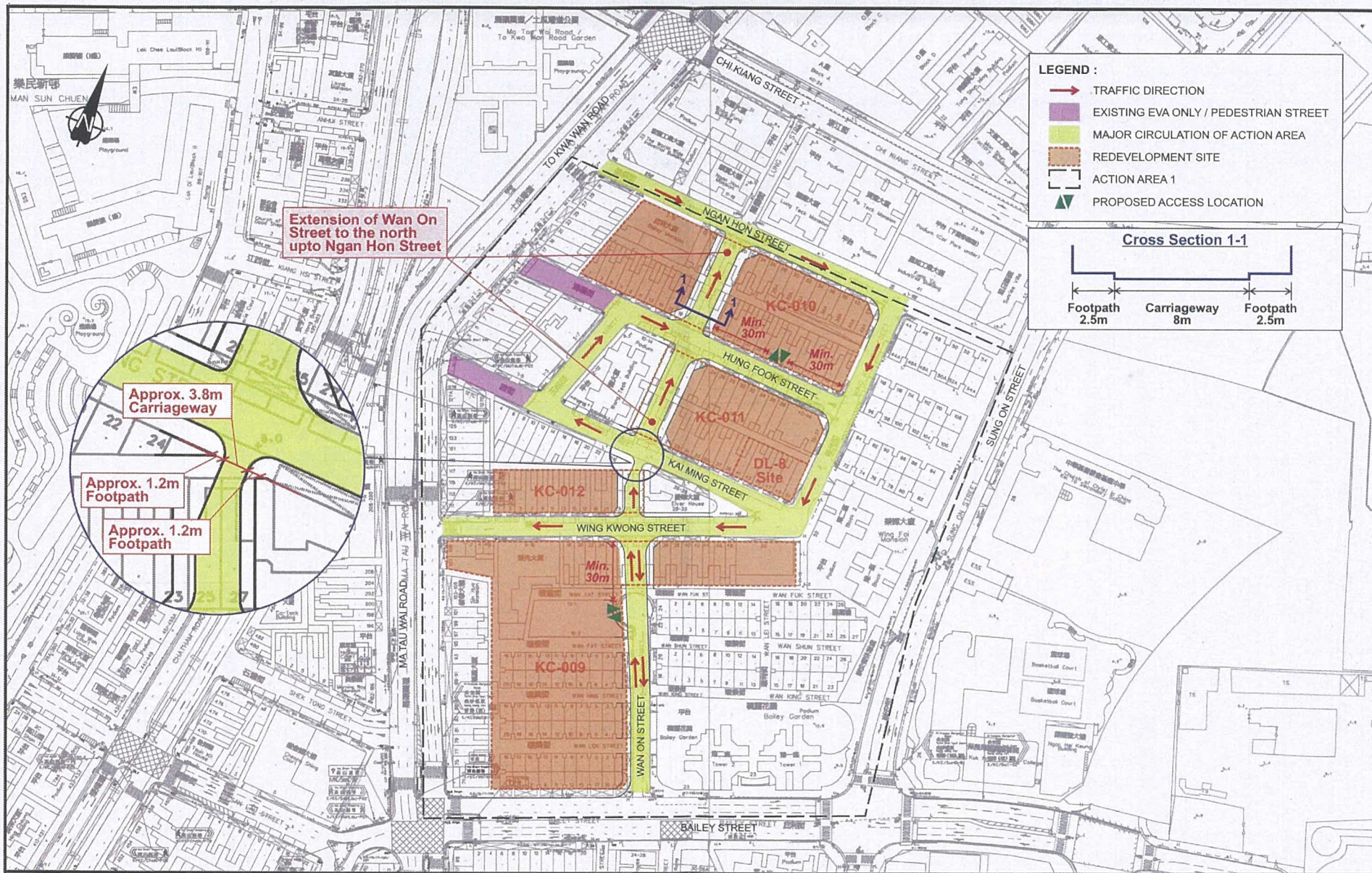
- 123.2 Although existing uses non-conforming to the statutory zonings are tolerated, any material change of use and any other development/redevelopment must be always permitted in terms of the Plan or, if permission is required, in accordance with the permission granted by the Board. The Board has published 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 zonings mainly rests with the Buildings Department, the Lands Department and the various licensing authorities.
- 123.2 The Plan provides a broad land use framework within which more detailed non-statutory plans for the Area are prepared by the Planning Department. These detailed plans are used as the basis for public works planning and site reservation within the Government. Disposal of sites is undertaken by the Lands Department. Public works projects are co-ordinated by the Civil Engineering and Development Department in conjunction with the client departments and the works departments, such as the Highways Department and the Architectural Services Department. In the course of implementation of the Plan, the Kowloon City and Yau Tsim Mong District Councils would also be consulted as appropriate.
- 123.3 Planning applications to the Board will be assessed on individual merits. In general, the Board, in considering the planning applications, will take into account all relevant planning considerations which may include the departmental outline development plan and the guidelines published by the Board. The outline development plan is 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.

TOWN PLANNING BOARD

OCTOBER 2010

\*\*\*\*\* 2016





Rev.	Description	Checked	Date
C	REVISED BASED ON TD'S COMMENT	KSC	24MAY16
B	REVISED BASED ON TD'S COMMENT	KSC	19MAY16
A	REVISED BASED ON TD'S COMMENT	KSC	11MAY16

Project Title	Drawing Title
TRAFFIC IMPACT ASSESSMENT FOR REDEVELOPMENT OF A+B SITE AT SECTION AREA 1	MASTER LAYOUT PLAN FOR ACTION AREA 1

Designed	Checked	Scale	Date	Drawing No.	Rev.
WHY	KSC	NTS	APR 2016	2.1	C



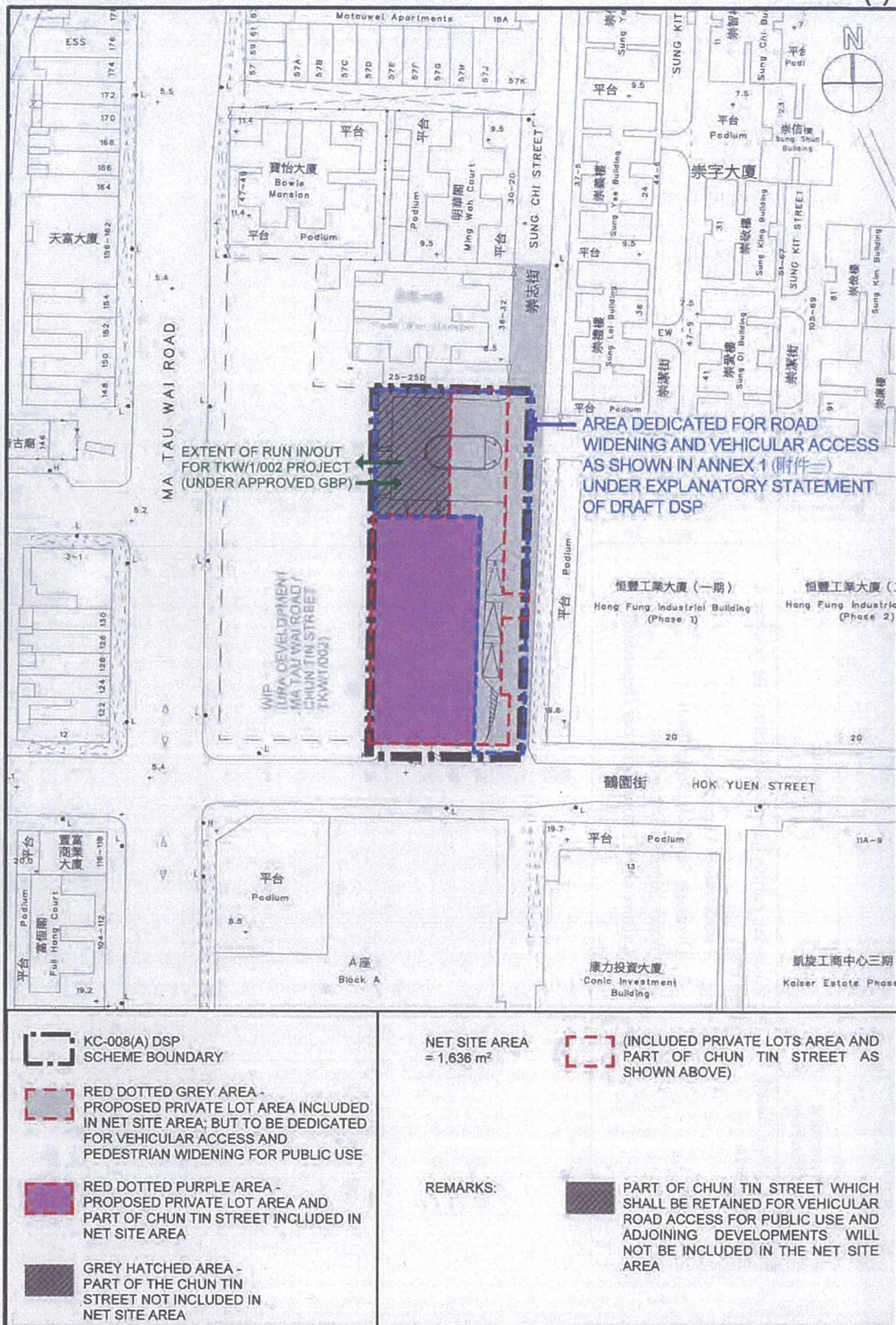
CHK50143110AA1-A+B/F21-C CDR/LLH/24MAY16

(資料來源：由市區重建局提交)  
(Source: Submitted by Urban Renewal Authority)

參考編號 REFERENCE No. M/K9/16/54	繪圖 DRAWING 1
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### PLAN (I)



參考編號

REFERENCE No.

M/K9/16/54

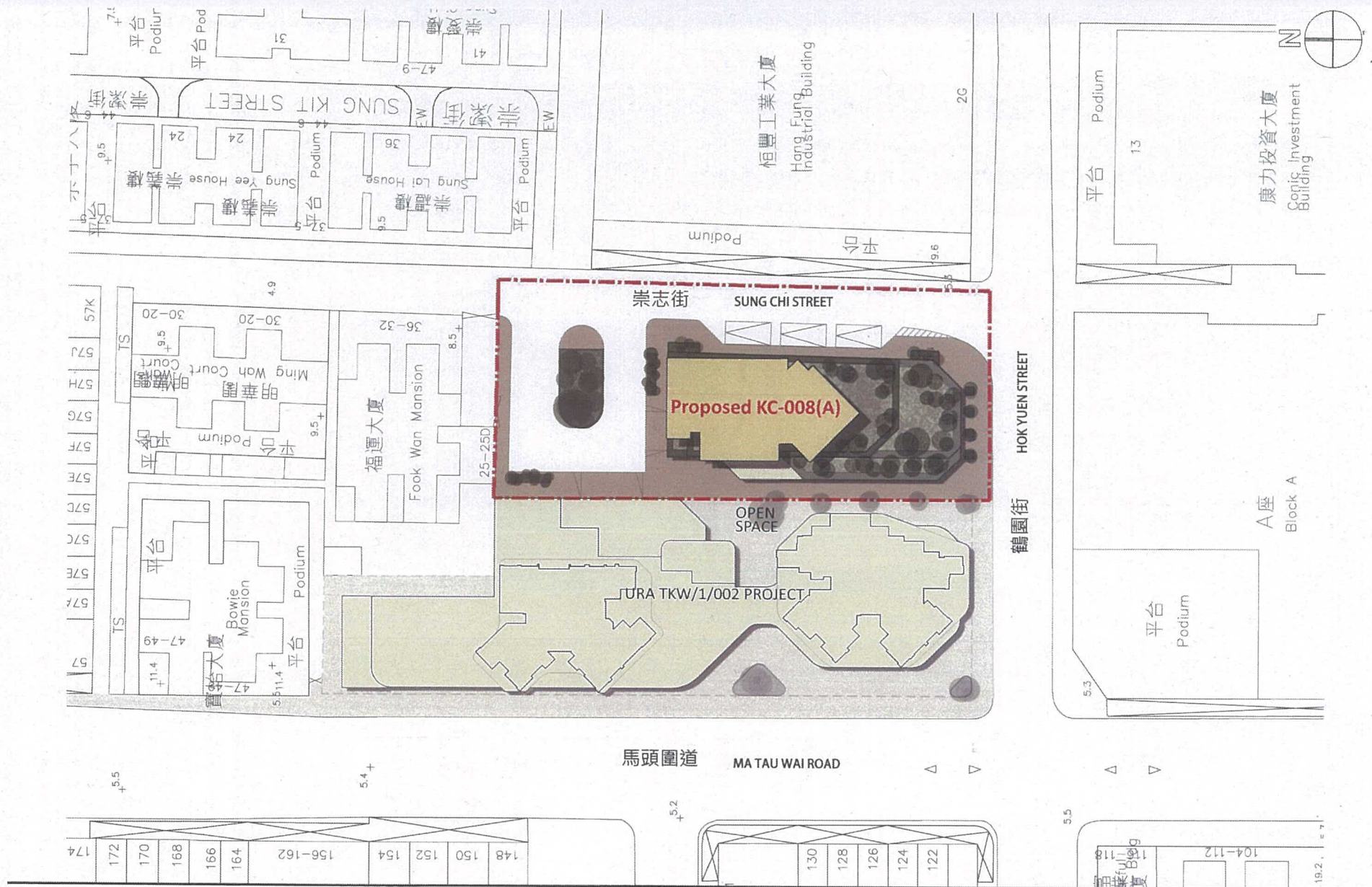
繪圖

DRAWING

2

(資料來源：由市區重建局提交)  
(Source: Submitted by Urban Renewal Authority)





URA Chun Tin Street / Sung Chi Street  
Development Scheme (KC-008(A))

Block Plan

Figure 1.1

(資料來源：由市區重建局提交)  
(Source: Submitted by Urban Renewal Authority)

參考編號  
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M/K9/16/54

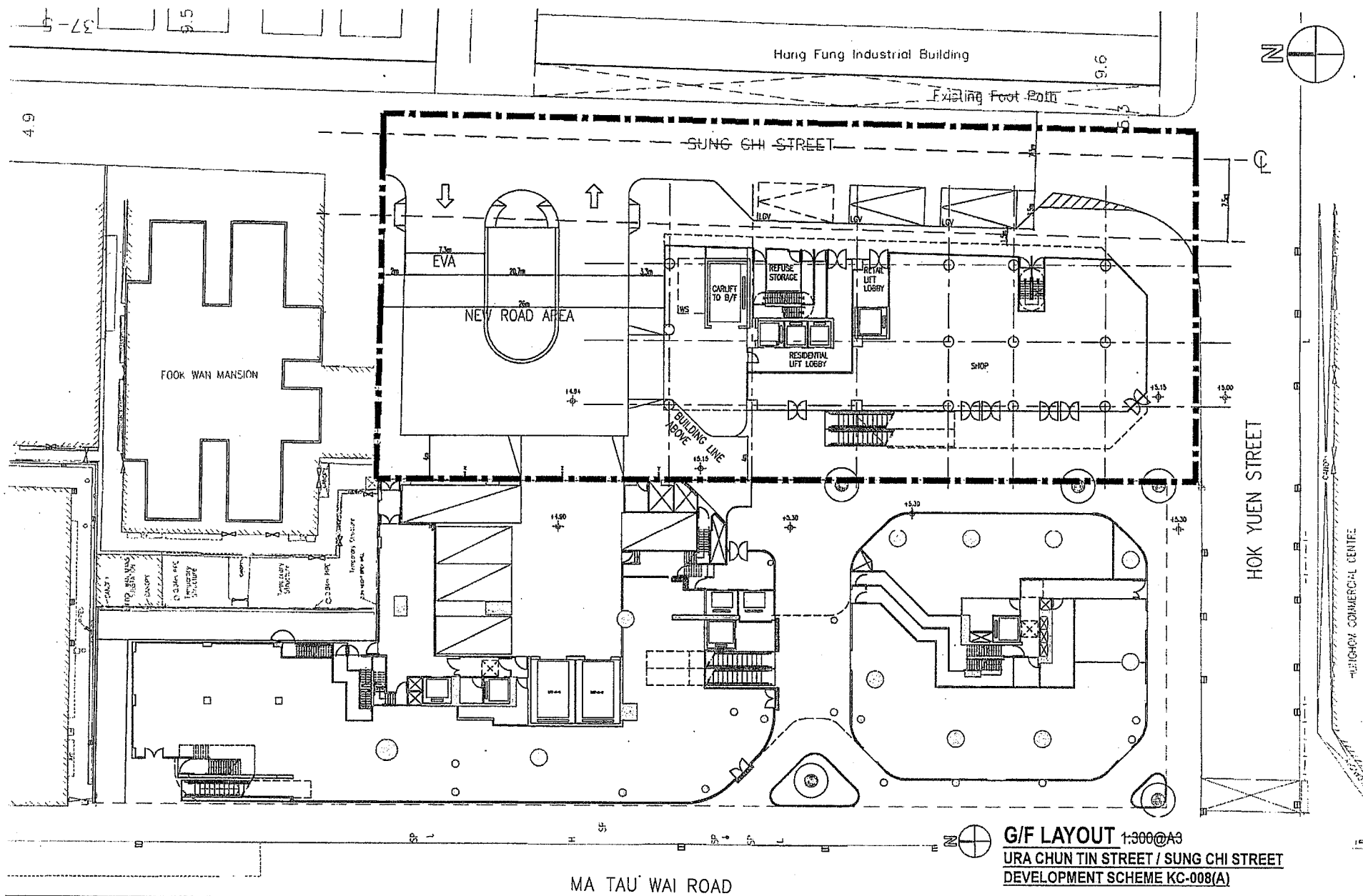
繪圖  
DRAWING  
3











URA Chun Tin Street / Sung Chi Street  
Development Scheme (KC-008(A))

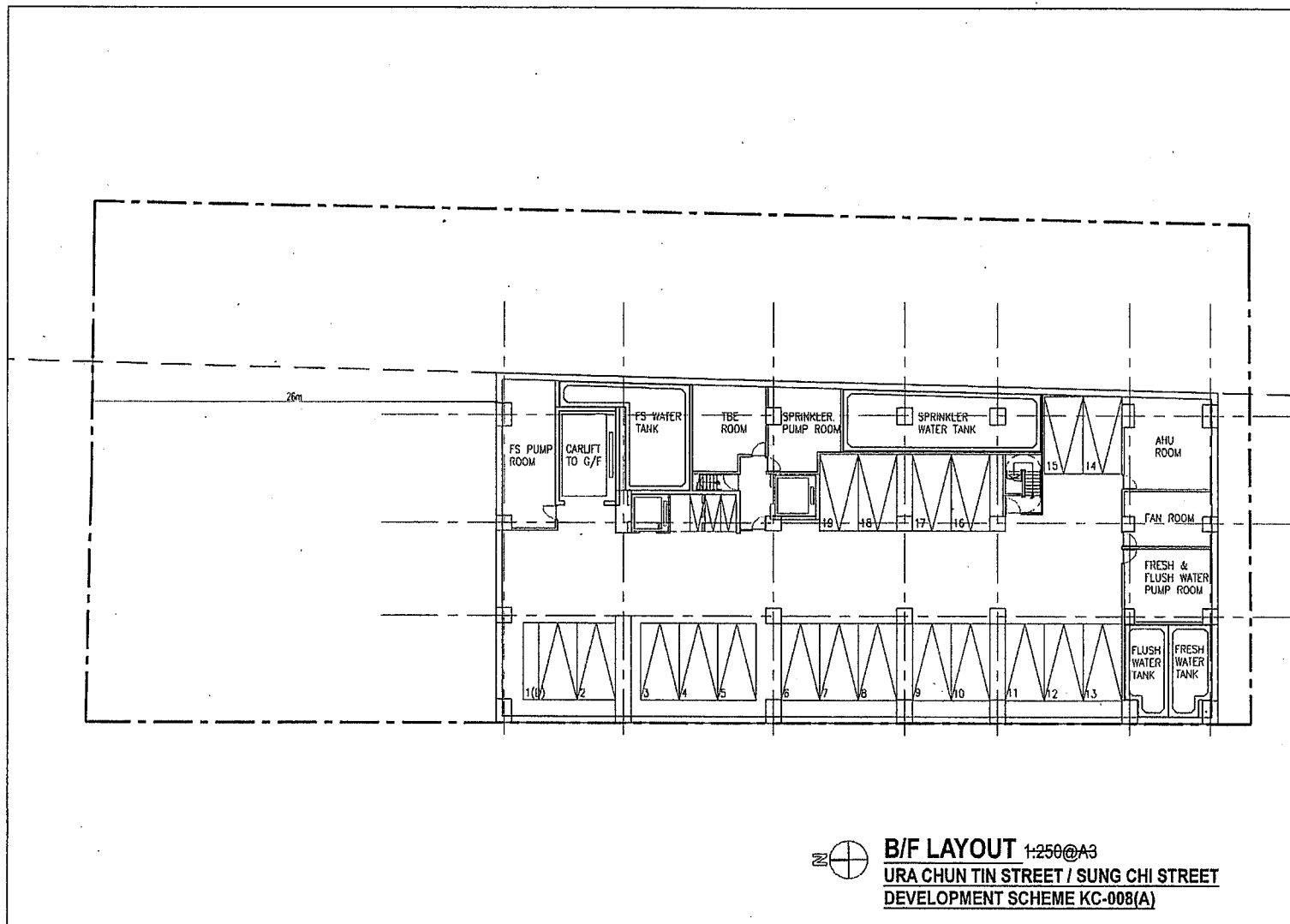
Notional Plan - Ground Floor

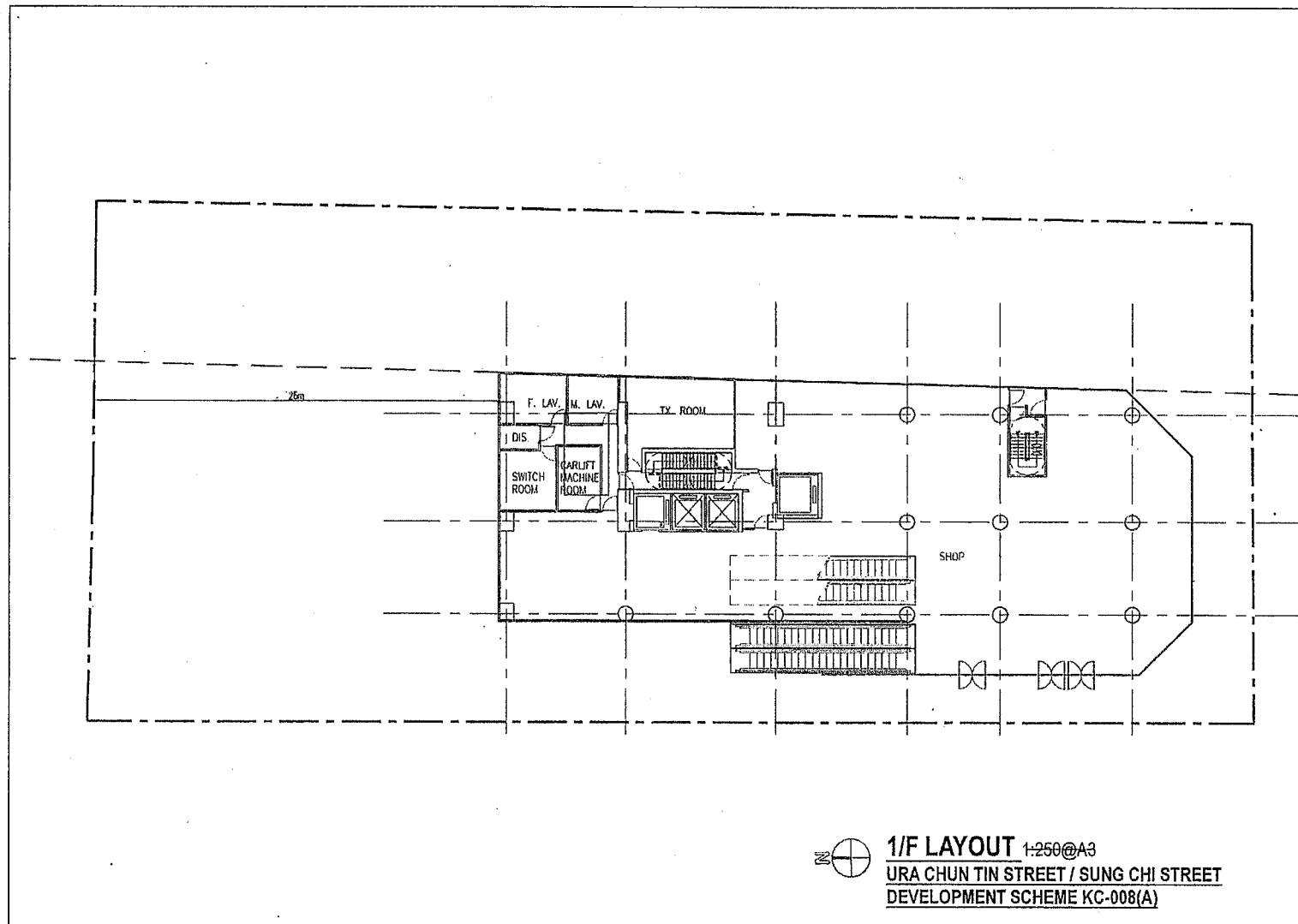
Figure 1.9

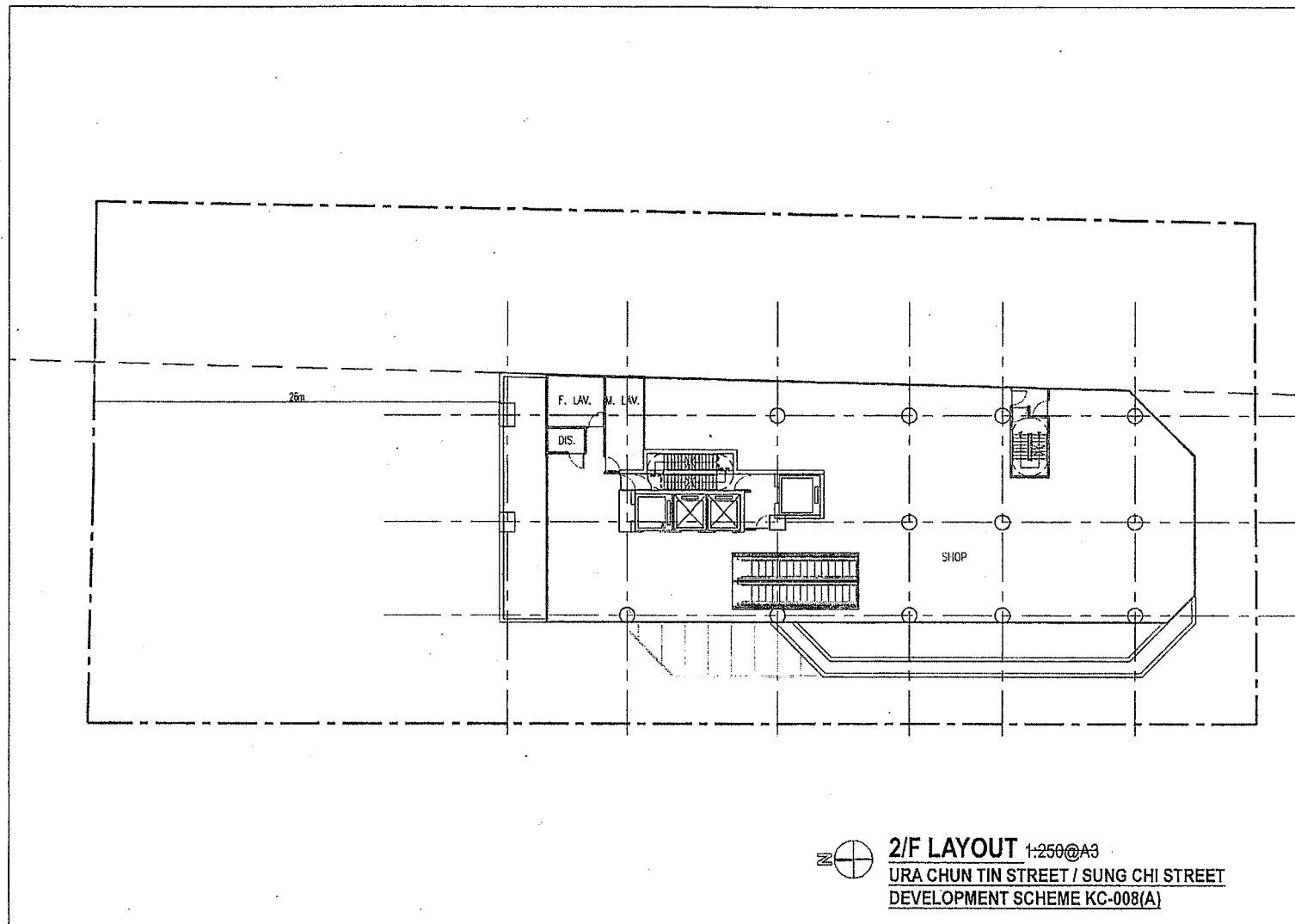
(資料來源：由市區重建局提交)  
(Source: Submitted by Urban Renewal Authority)

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M/K9/16/54

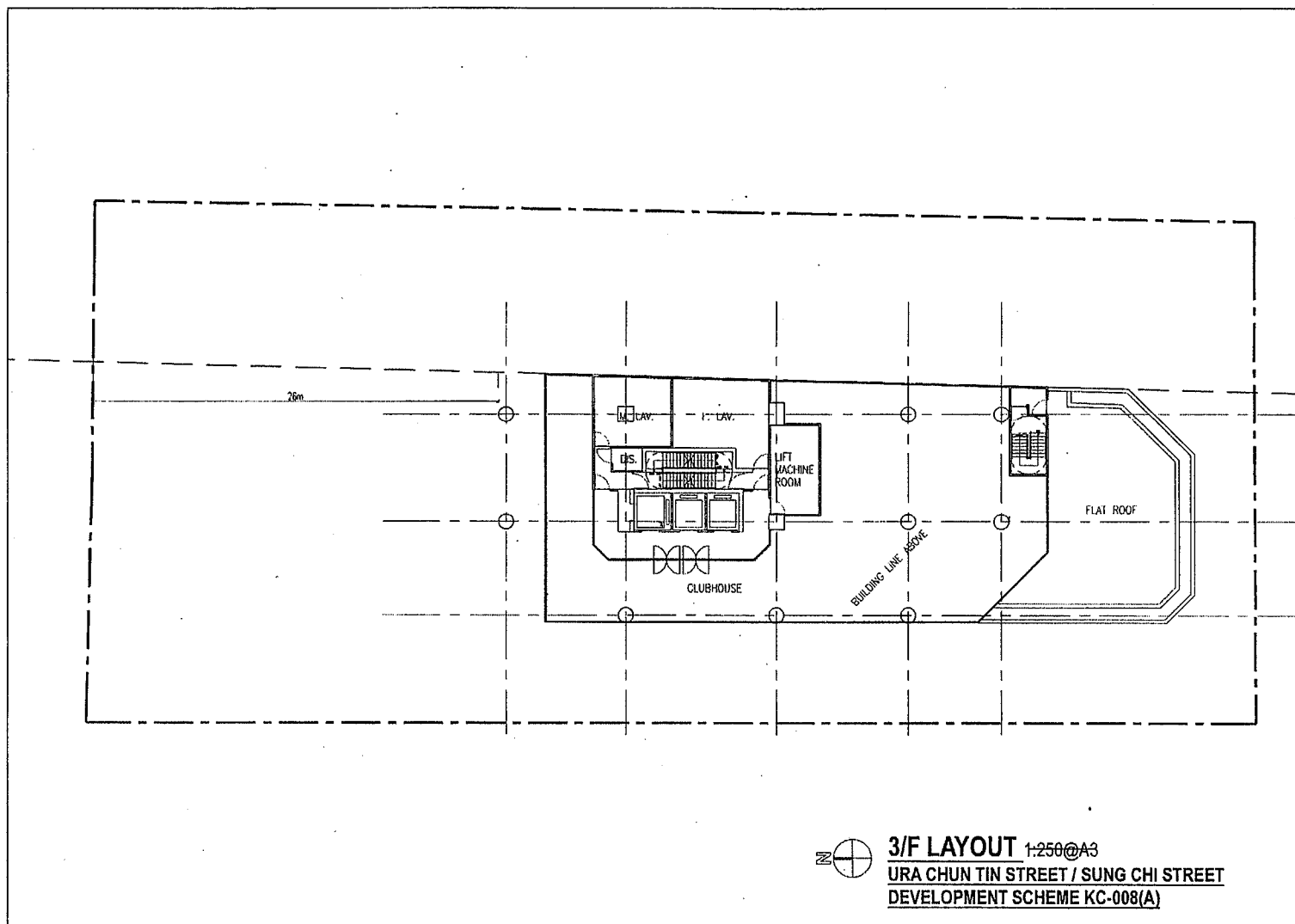
繪圖  
DRAWING  
6

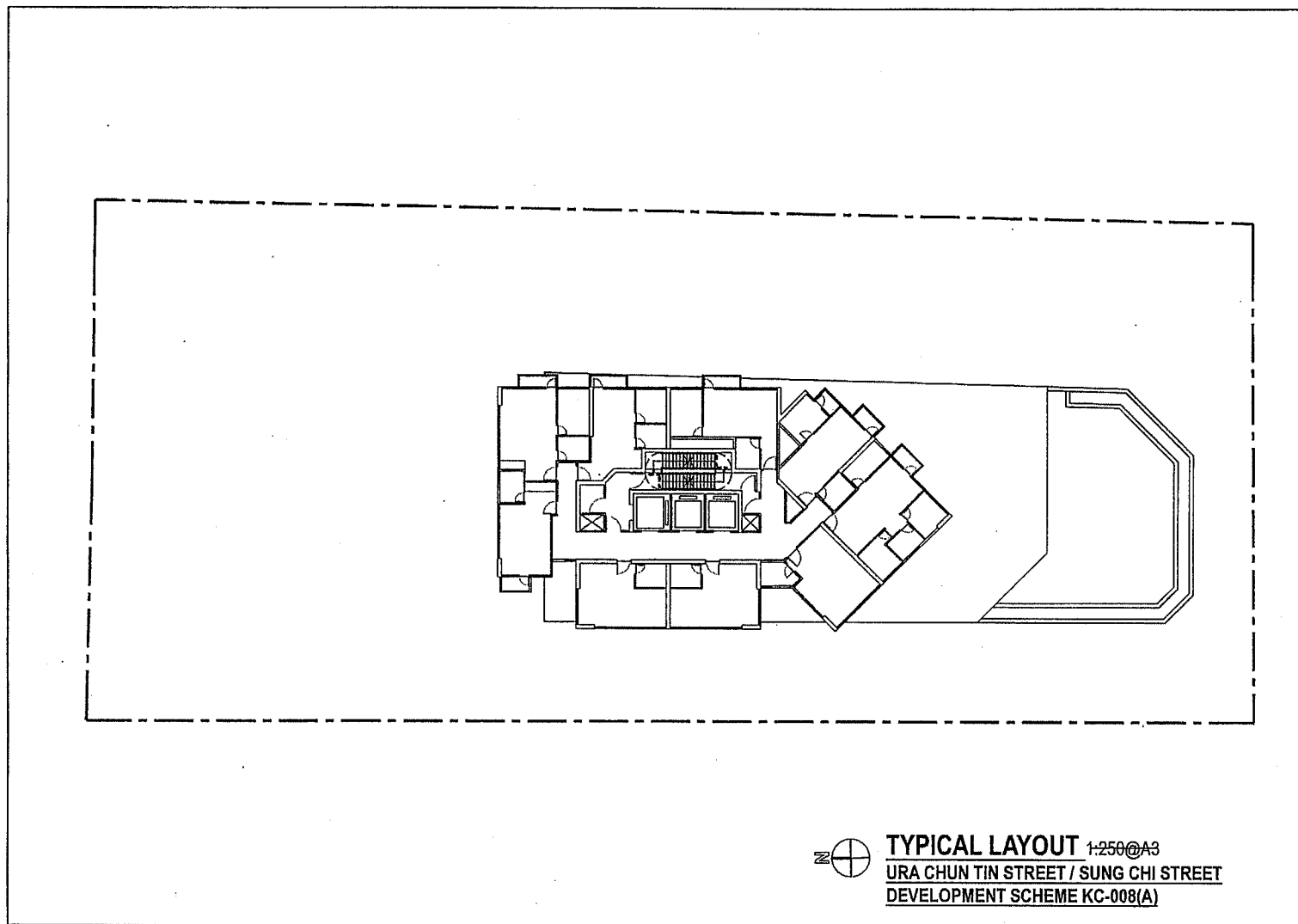


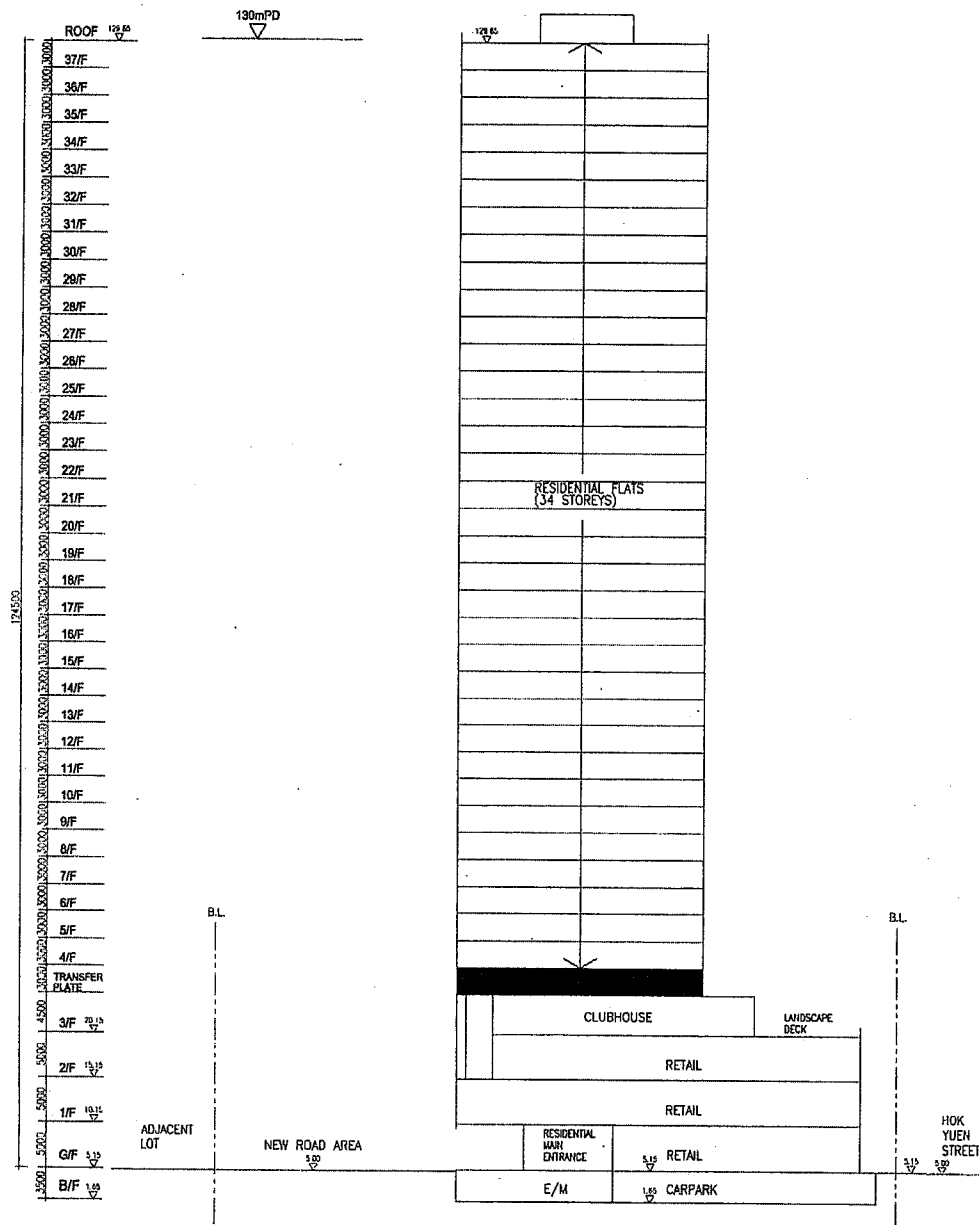












**SCHEMATIC SECTION 1:500@A3**  
**URA CHUN TIN STREET / SUNG CHI STREET**  
**DEVELOPMENT SCHEME KC-008(A)**



URA Chun Tin Street / Sung Chi Street  
 Development Scheme (KC-008(A))

Notional Plan - Schematic Section

Figure 1.15

(資料來源：由市區重建局提交)  
 (Source: Submitted by Urban Renewal Authority)

參考編號  
 REFERENCE No.  
**M/K9/16/54**

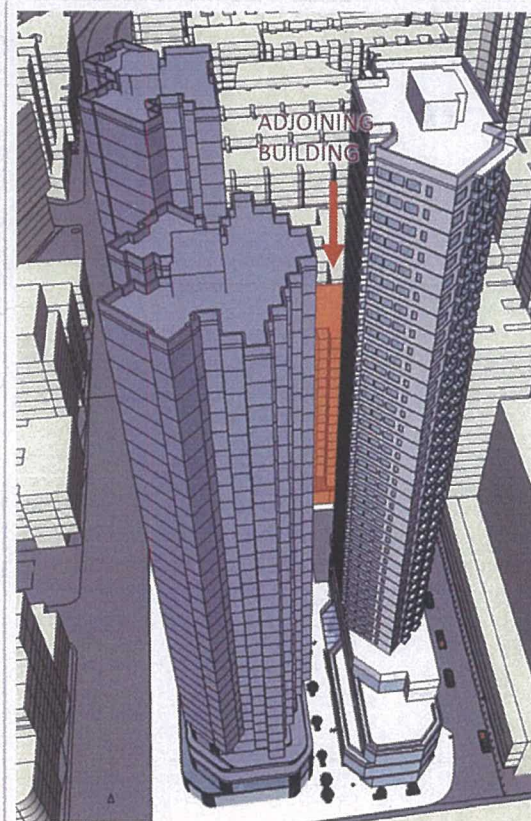
繪圖  
**DRAWING**  
**12**





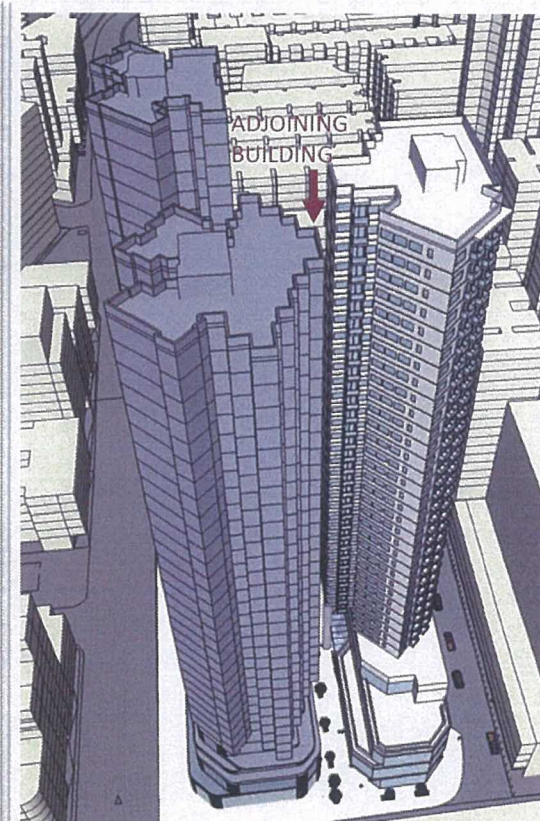
### 130mPD

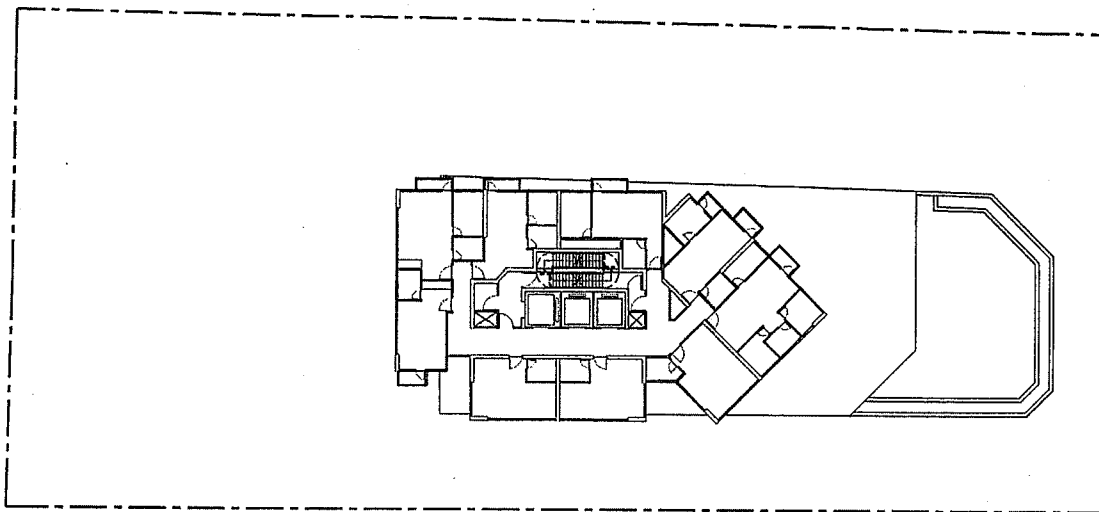
- Slimmer building block
- Facilitate visual & ventilation corridor between towers
- Enhance at grade passageway



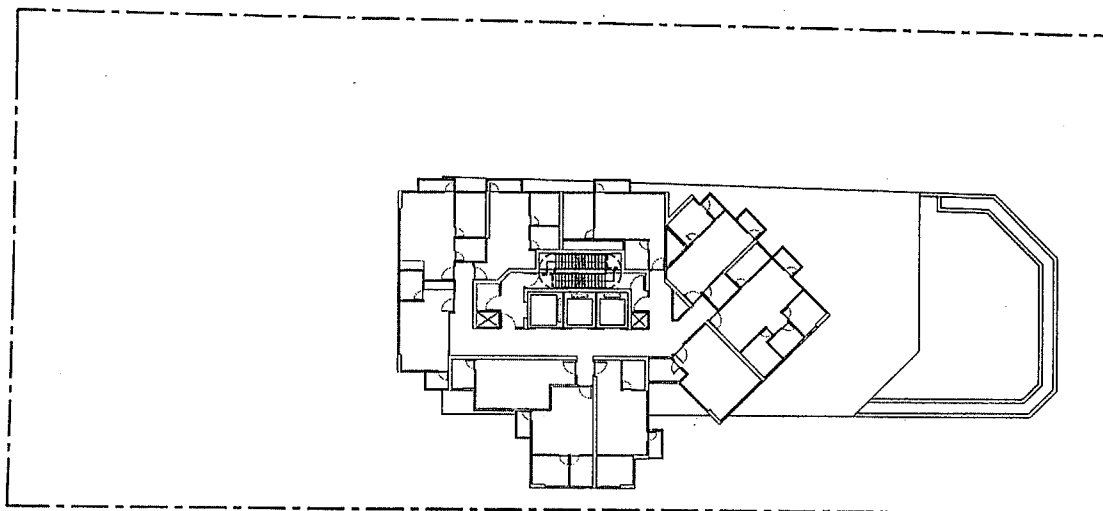
### 120mPD

- Building block closer to adjacent towers reduced the separation gap between towers
- Building block will overcast and reduce ground floor space for passageway





**Notional layout for 130mPD option**  
**(9 units per floor, 34 storeys)**



**Notional layout for 120mPD option**  
**(10 units per floor, 31 storeys)**



**Urban Renewal Authority**  
**CHUN TIN STREET / SUNG CHI STREET DEVELOPMENT SCHEME**  
**KC-008(A)**

**PLANNING REPORT**

Prepared under section 25 (3)  
of the Urban Renewal Authority Ordinance



May 2016



## EXECUTIVE SUMMARY

- E1 The Urban Renewal Authority (URA) will implement Chun Tin Street / Sung Chi Street Development Scheme (the Scheme) (KC-008(A)) by way of development scheme in accordance with s. 25 of the URA Ordinance (URAO). The commencement of the Scheme was notified on 6 May 2016 in the Government Gazette No. 2552. The purpose of this planning report is to summarize the planning proposal to facilitate the Town Planning Board to consider the draft Development Scheme Plan (DSP) of the Scheme.
- E2 The Scheme covers a total area of about 2,475 sq.m and involves a row of old tenement buildings at Nos. 2 – 24 Chun Tin Street (even nos.) and Nos. 2 – 4 Hok Yuen Street (even nos.), the whole Chun Tin Street and part of Sung Chi Street. The buildings in the scheme are 4 to 6 storeys, with some buildings having cocklofts in the ground floor units. All buildings were built between 1955 and 1957 and are mainly residential with commercial premises occupying the ground floor units.
- E3 The Scheme covers the same buildings in the previous URA Chun Tin Street / Sung Chi Street Development Project (KC-008) commenced in January 2015 under s.26 of URAO. In view of the significant planning and community benefits of enlarging the KC-008 project to include Chun Tin Street for redevelopment, the URA commenced the Scheme under s. 25 of URAO to include Chun Tin Street into the current scheme area on 6 May 2016. The URA has decided not to proceed further with the KC-008 project and the withdrawal of KC-008 project was notified on the same day, i.e. 6 May 2016, in the Government Gazette No. 2553.
- E4 The living condition in the Scheme is considered crowded and not satisfactory. The buildings are in deteriorating condition; spalling concrete and cracks are found at the back of the buildings. There are sub-divided units in the buildings and unauthorized building structures on the roofs and backyards of many buildings. Environmental condition in the Scheme is exacerbated by the workshop activities on the ground floor of the buildings which bring noise and environmental nuisance to the residents on upper floors. The workshop activities also occupied the pavement and street area on Chun Tin Street and Sung Chi Street for parking and loading/unloading (L/UL) of goods especially during day time.
- E5 The existing Chun Tin Street is a dead-end street, which serves only the Fook Wan Mansion at its end and the old buildings located alongside. Since it is a dead-end street, vehicles need to manoeuvre and turn around at the end of the street. It creates safety and congestion problem at Chun Tin Street. Besides, the existing on-street parking and L/UL activities have worsened the existing congestion problem and safety concern. Furthermore, the workshop activities at the ground floor occupy most of the Chun Tin Street space make further congestion to the street and creates nuisance to the adjoining residential developments.
- E6 The existing Sung Chi Street is a sub-standard one-way street with only about 5m wide and is often occupied by illegal vehicle parking and street hawker activities. The street is of low efficiency and cannot serve as a good vehicular connection for the neighbourhood.
- E7 The Scheme is proposed to be zoned as “Residential (Group A)7”, which is primarily for residential use with commercial/retail uses on the lowest three floors. One residential tower is proposed on top of a three storey commercial podium with private residential clubhouse and podium garden on the podium roof. The proposed total Gross Floor Area (GFA) of the Scheme is 14,724 sq.m., which comprises of domestic GFA of 12,270 sq.m. and non-domestic GFA of about 2,454 sq.m. Internal parking facilities will be provided at the basement. The proposed uses and development intensity are conformed to such as permitted in a R(A) zoning. To accommodate the permissible GFA within the Scheme and the proposed number of flats (about 310 units), a maximum building height of 130mPD for the R(A)7 zoning is proposed. The proposed minor increment of maximum building height would bring design merits and flexibility while enabling to maximise the development potential of the site for more flat supply to meet the mass market demand. Visual appraisal also indicated that the 130mPD building height of the Scheme would be compatible with the surrounding building context and would not block the mountain ridgeline in Kowloon.
- E8 To improve traffic circulation and pedestrian environment, it is proposed to permanently close the existing Chun Tin Street to remove the undesirable dead-end street condition. A portion of land at the north of the Scheme will be dedicated for a new road arrangement as a vehicular turning area for public use and will serve as both vehicular and pedestrian access to the proposed development in the Scheme as well as the adjoining developments. At the same time Sung Chi Street will be proposed to be widened to about 12.3m, including a two-lane carriageway of about 7.3m and a widened pavement, to enhance traffic and pedestrian flow. Continuous pavement at the sides of the new vehicular turning area and along the scheme boundary will be provided for safe and comfortable pedestrian circulation.
- E9 A podium setback at ground floor level of about 5m to 6m from road kerb of Sung Chi Street and about 5m from road kerb of Hok Yuen Street will be allowed in the Scheme to create a wider passageway for pedestrian; and provide L/UL bays along Sung Chi Street for the proposed development with sharing use by public. The URA intends to take up the management and maintenance of the new vehicular turning area, its adjoining pavement and the L/UL bays on Sung Chi Street.
- E10 The Scheme adjoins to the URA Ma Tau Wai Road / Chun Tin Street Development Project (TKW/1/002) which is an URA’s self-initiated and self-developed project. With the inclusion of Chun Tin Street as an enlarged site for redevelopment, the Scheme allows better utilisation of land and enables the proposed development of the Scheme to be better integrated with the adjoining TKW/1/002 development in terms of urban design and planning merits.
- E11 Environmental assessment was conducted to envisage any potential environmental impact for the implementation of the Scheme and it is concluded that the impact on air quality, noise, waste management, sewerage and drainage system was insignificant. Given the site specific building design and incorporation of urban design elements in the Scheme, no significant adverse air ventilation impact due to the Scheme is envisaged. Due to the existence of a vehicle repairing workshop in the site, contamination assessment plan will be carried out for further investigation in the detailed design stage to assess any land contamination and propose mitigation measures if necessary.
- E12 In summary, the Scheme will provide the following benefits:
- replace the old buildings of over 50 years in deteriorating condition and demolition of sub-divided units to new modern residential development and commercial facilities;
  - the living conditions of the existing over-crowding and sharing households will be improved
  - provision of more small to medium-sized flats in the urban area;

- more efficient use of land through extinguishment of dead-end Chun Tin Street for redevelopment and re-arrangement of safer vehicular and pedestrian network via the provision of a new vehicular turning area and road widening along Sung Chi Street;
- improve pedestrian circulation and environment by building setback from scheme boundary, pavement widening, and landscaping;
- better utilization of land by integrating all traffic servicing area and back-of-house facilities to the north of the scheme area to open-up the foreground area for better building disposition and vibrant retail street frontage;
- enhance urban design by a more integrated planning and design with adjoining URA's TKW/1/002 development at Ma Tau Wai Road; and
- slimmer building design to enhance local air ventilation and visual relief; and
- meet SBD Guidelines and enhance urban design by creating a new vehicular turning area to allow more building separation and visual relief for the Scheme and adjoining development.

## 行政摘要

- E1 市區重建局(下稱「市建局」)根據《市區重建局條例》(下稱《條例》)第25條，以發展計劃形式實施春田街/崇志街發展計劃(KC-008(A))(本計劃)。本計劃的開展公告已於2016年5月6日的政府憲報編號2552刊登。本規劃報告旨在概括地介紹本計劃的建議，協助城市規劃委員會考慮本計劃的發展計劃草圖。
- E2 本計劃涉及位於春田街2 - 24 號(雙號)和鶴園街2 - 4 號(雙號)的一列舊樓，整條春田街和部份崇志街，總地盤面積約為2,475平方米。本計劃內的樓宇樓高4至6層，部分地下單位設有閣樓。全部樓宇均於1955至1957年間落成，主要用作住宅用途，而地面單位則用作商業用途。
- E3 本計劃範圍內包括了市建局於2015年1月根據《條例》第26條開展的市建局春田街/崇志街發展項目(KC-008) 內的樓宇。市建局在考慮了擴大KC-008項目的範圍以包括春田街作重建可帶來顯著的規劃和社會效益後，決定於2016年5月6日根據《條例》第25條開展本計劃，將春田街納入在本計劃範圍內。市建局同時決定不會進一步推行KC-008項目，撤回KC-008項目的公告已於同日(即2016年5月6日)的憲報編號2553刊登。
- E4 本計劃範圍內的居住環境擠迫及不理想。樓宇狀況亦不斷惡化，樓宇背面的石屎有裂縫、剝落的跡象。樓宇的天台及後院存有僭建物，亦有單位被分拆成多個小型分間單位(劏房)。一些地舖的工場活動為樓上居民帶來噪音和環境滋擾，使本計劃範圍內的環境更為惡劣。本計劃範圍內的地舖工場活動亦經常佔用春田街及崇志街的行人路面及行車道作泊車及上落貨用途，情況於日間尤為明顯。
- E5 現時春田街為一條掘頭路，只用作通往位於春田街盡頭的福運大廈及毗鄰春田街的舊樓群。由於春田街是一條掘頭路，車輛駛入春田街後若須要離開，必須於街尾倒車及掉頭離開。這樣的交通運作會造成安全及交通擠塞的問題。此外，春田街現有的路面泊車及上落貨活動令該段路面的交通擠塞及安全問題更加惡化。而本計劃範圍內的地舖工場活動亦經常佔用了春田街的行人路面，進一步堵塞街道及對鄰近的住宅造成滋擾。
- E6 現時崇志街是一條不符合道路標準的單程路，其路面只有約5米闊，並且經常被違例泊車及小販活動等情況佔用路面，使崇志街的道路效益不大，並且不是一條可完善連接鄰近樓宇的車輛通道。
- E7 本計劃擬議規劃為「住宅(甲類)7」地帶，主要用作住宅用途並於最低三層用作商業／零售用途。擬議發展計劃會有一座住宅樓宇座落於用作商業用途的3層基座上，基座頂層有私人住宅會所及平台花園。擬議發展計劃的總樓面面積約為14,724平方米，其中12,270平方米為住用總樓面面積，2,454平方米為非住用總樓面面積。地庫內會提供停車位設施。擬議發展計劃的用途及發展密度均符合「住宅(甲類)」地帶的限制。為容納本計劃範圍內可准許的總樓面面積及在計劃內擬議提供的住宅單位數目(約310個)，「住宅(甲類)7」的最高建築物高度限制建議為主水平基準上130米。此建築物高度限制的輕微增幅能帶來更大的樓宇設計優勢與彈性，並可盡用地盤的發展潛力，為市場增加房屋供應。有關景觀評估亦證明擬議發展高度限制在主水平基準上130米並不會阻礙到九龍山脊線，且能融入周邊的建築群。
- E8 為改善車輛流通度及行人環境，本計劃建議將現時春田街掘頭路永久封閉，以消除掘頭路這種不理想的街道狀況。本計劃的北面部分將會預留空間提供一個全新的行車路面作車輛迴旋處，作為本計劃的擬議發展及毗鄰樓宇的車輛出入口及提供行人通道，同時供公眾使用。與此同時，崇志街將擴闊為一條約12.3米的道路，包括約7.3米闊的雙線行車道及擴闊的行人路，以改善交通及行人流暢度。本計劃亦會於全新的車輛迴旋處及沿計劃範圍提供安全、舒適的行人通道。
- E9 本計劃的基座的地面樓層會後移至距離崇志街路旁約5至6米及距離鶴園街路旁約5米，以提供更寬敞的行人通路；及於崇志街路旁提供上落客停車處供擬議發展及公眾使用。市建局有意負責管理及保養該新的車輛迴旋處，其旁邊的行人通道及沿崇志街的上落客停車處。
- E10 本計劃毗鄰為市建局主導開展及自行發展的市建局馬頭圍道/春田街發展項目(TKW/1/002)。由於本計劃已將春田街納入重建範圍內，本計劃可藉此在規劃及設計上令本計劃和毗鄰的TKW/1/002發展項目互相融合，以達至更有效的土地利用，優化城市設計，提供更大的規劃裨益。
- E11 本計劃已就擬議發展對鄰近環境可能造成的潛在影響進行環境評估，評估結果認為擬議發展對鄰近的空氣質量、噪音、廢物管理、污水處理和排水系統的影響均甚為輕微。而本計劃的擬議發展是採用了因應地盤特點的建築設計和融入了城市設計元素，因此相信本計劃對空氣流通方面的影響甚為輕微。由於現時本計劃範圍內有車輛修理工場，污染評估報告將於詳細設計階段進一步調查土地污染的情況，並在有需要時建議紓緩措施。
- E12 總括而言，本計劃將會帶來以下的裨益：
- 以新及現代的住宅樓宇及商業設施取代樓宇狀況日漸惡化、樓齡50年以上的老舊建築物及劏房；
  - 改善現時擁擠的居住環境和同屋共住的情況；
  - 於市區提供更多中小型住宅單位；
  - 透過永久封閉春田街掘頭路並將其納入重建範圍以更有效益地運用土地，及在本計劃內提供一個全新的車輛迴旋處及擴闊崇志街，以重組交通及行人網絡，達至更安全的車輛及行人環境；
  - 透過建築物從地盤界線後移、擴闊行人路面及綠化，改善行人流暢度及環境；
  - 透過將交通運輸設施及樓宇設備整合及集中在本計劃範圍的北面，使地盤前方有更大空間作樓宇布局及提供空間打造一條有零售店鋪的街道；
  - 與毗鄰的市建局馬頭圍道/春田街發展項目TKW/1/002的規劃與設計上互相融合，優化城市設計；
  - 利用減少樓宇體積的樓宇設計改善空氣流通及視覺效果；及
  - 全新的車輛迴旋處令本計劃和毗鄰發展建築物之間的樓宇距離增加及改善樓宇間的視覺效果，同時可滿足可持續建築設計指引的要求及優化城市設計。

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# **PART 1      PLANNING REPORT**

## 1. INTRODUCTION

- 1.1 The Development Scheme (the Scheme) involves the row of old tenement buildings at Nos. 2 – 24 Chun Tin Street (even nos.) and Nos. 2 – 4 Hok Yuen Street (even nos.) and the Chun Tin Street. The total area of the Scheme is about 2,475 sq.m.
- 1.2 The Scheme is included in the URA's 15<sup>th</sup> Business Plan (2016/17) approved by Financial Secretary. The Scheme is proposed to be processed as a Development Scheme under section 25 of the URA Ordinance (URAO). The URA's Board on 26 January 2016 approved the submission of the Scheme under section 25(5) of the URAO to the Town Planning Board (TPB). The draft Development Scheme Plan (DSP) No. S/K9/URA1/A is prepared for submission to the TPB.
- 1.3 Pursuant to section 23(1) of the URAO, the URA notified the public in the Government Gazette (GN 2552) about the commencement of the Scheme on 6 May 2016. The draft DSP is now submitted under section 25(5) of the URAO to the TPB for consideration.
- 1.4 This planning report (being **Part 1** of the whole report) is prepared to provide the TPB with the necessary background information and the planning proposal to facilitate its consideration of the draft DSP, as contained in **Part 2**, submitted under section 25 of the URAO. Supplementary information, including the preliminary design of the proposed development, key technical assessments and social impact assessment, and implementation approach are enclosed in **Part 3** for reference.

## 2. THE SCHEME AREA

- 2.1 The scheme area is bounded by Sung Chi Street to the east, Hok Yuen Street to the south, the adjoining URA development site (URA Ma Tau Wai Road / Chun Tin Street Development Project (TKW/1/002)) to the west and Fook Wan Mansion to the north. The Chun Tin Street, which is a dead-end road, is included in the Scheme area and will be permanently closed for redevelopment.
- 2.2 **Plan 1** shows the broad location of the Scheme while the scheme area, information on the adjoining properties and streets are shown in **Plan 2**. As shown in **Plan 2**, the URA Ma Tau Wai Road / Chun Tin Street Development Project (TKW/1/002) is located immediately to the west of the Scheme.
- 2.3 The Scheme is currently zoned "Residential (Group A)" ("R(A)"), with Chun Tin Street and Sung Chi Street being shown as Road on the approved Hung Hom Outline Zoning Plan (OZP) No. S/K9/24. An extract of the OZP is shown on **Plan 3**.
- 2.4 The scheme boundaries have been delineated based on several factors, including building conditions (building structure, fire safety and building services), building height, building age, local environmental conditions (**Plans 4, 5 and 6**), and the desire to achieve better planning and design merits through inclusion of inefficient land use such as the dead-end street for more comprehensive scale redevelopment.

- 2.5 Fook Wan Mansion, which was built in 1975 and is relatively newer building in good building condition is excluded from the scheme boundary. The URA Ma Tau Wai Road / Chun Tin Street Development Project (TKW/1/002) is situated to the immediately west of Chun Tin Street. Being a URA redevelopment project where the old tenement buildings have already been demolished and construction of new modern residential development is being carried out by URA as a self-development project without joint-venture partner. (**Plan 7**).

## 3. BACKGROUND AND EXISTING CONDITIONS

- 3.1 The Scheme commenced under s. 25 of URAO covers the same buildings in the original URA Chun Tin Street / Sung Chi Street Development Project (KC-008) which was a URA project commenced in January 2015 under s. 26 of URAO. In view of the significant planning and community benefits of enlarging the KC-008 project to include Chun Tin Street, the URA commenced the Scheme under s. 25 of URAO to include Chun Tin Street into the current scheme area on 6 May 2016. The URA has decided not to proceed further to the KC-008 project and the withdrawal of KC-008 was notified on the same day, i.e. 6 May 2016, in the Government Gazette No. 2553.
- 3.2 On 6 May 2016, the URA published the Gazette Notice for the commencement of the Scheme under s. 23 of URAO in the Government Gazette (GN 2552). On the same date, the URA has published the Gazette Notice to withdraw the KC-008 project (GN 2553).

### Historical Background

- 3.3 Historical map records indicate that the Scheme area was probably situated near the coastline before 1890s. There were village settlements and agricultural activities in that area in 1870s. Several rounds of reclamation had been undertaken in Ma Tau Kok Bay, To Kwa Wan Bay and Hung Hom since 1890s till 1960s to increase land at the coastline for expansion of population.
- 3.4 The surrounding of the Scheme area have been predominantly residential developments with neighbourhood retail activities on the ground floors. In the 1960s and 1970s, the area in To Kwa Wan and Hung Hom has been developed as industrial area with establishment of many industrial buildings along the coastal area. The new reclaimed land was designated for more residential developments and industrial uses, such as manufacturing, weaving, bleaching and dyeing, printing and electroplating and car-repairing activities.

### Existing Uses, Building and Living Conditions

- 3.5 As indicated in freezing survey conducted for URA Chun Tin Street project (KC-008) in January 2015 and recent site observations, the tenement buildings within the Scheme are mainly residential on the upper floors with commercial premises occupying the ground floor units and some cocklofts of the ground floor units. A large number of these commercial premises are occupied by workshops for car repair, recycling and metal hardware businesses. The rest are general retail/commercial activities including retail clothing, eateries and offices.
- 3.6 The tenement buildings in the Scheme are 4 to 6 storeys in height, with some buildings having cocklofts in the ground floor units. All the buildings were built between 1955 and 1957. None is



served by lift. Based on the URA's building condition survey updated in May 2015, the buildings are in deteriorating condition; spalling concrete and cracks are found at the back of the buildings. There are sub-divided units in the buildings and unauthorized building structures on the roofs and backyards of many buildings (**Plans 9 to 11**). The living condition in the Scheme is considered crowded and not satisfactory.

- 3.7 Environmental condition in the Scheme is exacerbated by the large number of workshop activities on the ground floor of the buildings which bring noise and environmental nuisance to the residents on upper floors. The workshop activities also occupied most of the pavement and street area on Chun Tin Street and Sung Chi Street for parking and loading/unloading of goods especially during daytimes. **Plan 12** shows the surrounding street environment of the Scheme. Photographs in **Plan 13** show the workshop activities at Chun Tin Street.

#### **Surrounding Land Uses**

- 3.8 The street blocks adjacent to the Scheme are a mix of residential and commercial uses to the north and west. Industrial uses including factory buildings / commercial buildings are mainly concentrated to the east and south, along Hok Yuen Street East, Man Yue Street and Hung Hom Road. Some of the industrial buildings appear not to be engaged in manufacturing activities but mainly office, storage, workshop/ showroom uses. In particular, jewellery and watches shops and workshops / showrooms are concentrated in this area. A lot of coach parking bays and drop-off area for visitors/ tour groups to visit these workshops/ showrooms at Hok Yuen Street and Hok Yuen East Street.
- 3.9 To the immediate east of the Scheme is Sung Chi Street which is a one-way street with dis-continued pavement. There are workshops and light engineering shops found on the ground floor of both sides of Sung Chi Street. These shop activities have occupied most of the pavement and street space for storage, loading / unloading of goods and parking on Sung Chi Street. There are also hawker activities occupying the street in the daytime.
- 3.10 To the west of the scheme boundary is the URA Ma Tau Wai Road/ Chun Tin Street Development Project (TKW/1/002). It is an URA self-developed project commenced in 2010 and target for completion in 2018/19. The site is currently a construction site and will be redeveloped for two residential towers of about 30 floors each, on top of a 3-level commercial podium. There will be about 1,000sq.m. gross floor area (GFA) for community facility use and about 500sq.m. at-grade open space to improve streetscape and for public enjoyment within the TKW/1/002 development. Though the TKW/1/002 development is not under the scope of this Scheme, the design of the Scheme has taken care of this adjoining development developed also by URA to create a better integration of the two developments to improve the overall design and planning to the local environment.
- 3.11 A significant number of light engineering workshops and car repair services and trades are found in the To Kwa Wan area, such as in Chun Tin Street, Sung Chi Street, Wing Kwong Street, etc.
- #### **Existing Traffic Network**
- 3.12 The Scheme is bounded by Sung Chi Street to the east and Hok Yuen Street to the south. The existing Chun Tin Street in the scheme area is a dead-end road serving as vehicular access to the

old tenement buildings in the Scheme as well as the Fook Wan Mansion and the URA TKW/1/002 site but nowhere else. Vehicles will use Hok Yuen Street to enter Chun Tin Street; and manoeuvre and turn around at the dead-end of Chun Tin Street to leave to Hok Yuen Street. Sung Chi Street to the east of the scheme boundary is a sub-standard street with one-way traffic (northbound). Vehicles entering from Hok Yuen Street can turn into Sung Chi Street towards Bailey Street to the north. The detail of the existing traffic flow is described in the TIA report in **Appendix 2**.

- 3.13 The existing Chun Tin Street serves only the Fook Wan Mansion at its northern end and the old buildings located alongside, i.e. the existing tenement buildings within the Scheme, and the future development in TKW/1/002. Since it is a dead-end road and vehicles need to manoeuvre and turn around at the end of the road, it creates safety and congestion problem within the Chun Tin Street. Besides, there are 12 existing metered parking spaces and 2 nos. of 10m-long (approximate) loading/ unloading (L/UL) lay-bys on both sides of Chun Tin Street. The parking and L/UL activities have worsened the existing congestion problem and safety concern to both vehicular traffic and pedestrian passer-by. Furthermore, the workshop activities found at the ground floor of the old buildings in Chun Tin Street occupy most of the Chun Tin Street space for their loading/unloading activities and goods movement make further congestion to the street and creates nuisance to the adjoining residential developments.
- 3.14 The existing Sung Chi Street is a sub-standard one-way street with narrow width of about 5m. There is dis-continued pavement on both sides of the street. The street is often occupied by illegal vehicle parking and street hawker activities. Due to the narrow road width and occupancy of street activities, the street is of low efficiency and cannot serve as a good vehicular connection for the Fook Wan Mansion.

#### **Demographic Background**

- 3.15 Based on the freezing survey conducted for the URA Chun Tin Street Project (KC-008) earlier in January 2015 and an updated estimate in the Scheme, the population of the Scheme is estimated to be 200 persons in around 83 households giving an average household size of 2.4. The majority of the population (66%) is in the 25 - 64 economically active age group, while about 15% are aged over 60.
- 3.16 With 88 living quarters identified in the freezing survey of KC-008 project, the household sharing ratio is 0.94 (83 households/ 88 surveyed units). However, the figure does not truly reflect the overcrowded situation as about 22% of the original units in the buildings (i.e. 15 units of 68 domestic units) were found to be sub-divided during the freezing survey at the commencement of KC-008 project. More social-economic information is given in the Social Impact Assessment (SIA) Stage 1 Report in **Appendix 6**.

#### **Ownership Pattern**

- 3.17 All the buildings within the Scheme are under multiple ownerships, except No. 8 Chun Tin Street which is solely owned by one company (**Plan 8**). According to the information of the Home Affairs Department, only No. 10 – 12 Chun Tin Street has an Owners' Corporation (OCs). Other blocks in the scheme area do not have OC.

4. PLANNING & LAND USE PROPOSALS

Objectives of the Scheme

- 4.1 The Scheme seeks to improve the living and environmental conditions, building condition and fire safety in the scheme area, through redeveloping the existing dilapidated tenement blocks on the site to a quality residential development with modest commercial provisions on the lower floors.
- 4.2 The Scheme proposes to extinguish the Chun Tin Street, which is a dead-end street, and include the land into redevelopment. The enlarged scheme area allows for better utilisation of the land to increase flat supply, improve traffic network and provide a safer environment for pedestrian and vehicular traffic. The enlarged scheme area can also facilitate better integration with the URA’s self-developed project TKW/1/002 redevelopment for better urban design and planning merits.
- 4.3 Prior to the extinguishment of Chun Tin Street as proposed in the Scheme, a new road arrangement as a new vehicular turning area with connection via the widened Sung Chi Road will be provided in order to maintain the proper vehicular access for both the Fook Wan Mansion and the URA TKW/1/002 site to-and-fro Hok Yuen Street.

Development Intensity

- 4.4 The Scheme proposes to be zoned as “Residential (Group A)7” (“R(A)7”), which is primarily for residential use with commercial/retail uses on the lowest three floors. Given the size and configuration of the site, one residential tower is proposed on top of a three storey commercial podium with private residential clubhouse and podium garden on the podium roof. The proposed total Gross Floor Area (GFA) of the scheme area is 14,724sq.m., which comprises of domestic GFA of 12,270sq.m. and non-domestic GFA of about 2,454sq.m. The proposed uses and development intensity are conformed to such as permitted in a R(A) zoning. To accommodate the permissible GFA within the Scheme and the proposed number of flats (about 310 units), a maximum building height of 130mPD for the R(A)7 zoning is proposed.
- 4.5 A portion of land at the north of the scheme area will be dedicated for a new road arrangement as a new vehicular turning area for public use and will serve as both vehicular and pedestrian access to the proposed development in the Scheme as well as the adjoining developments. The new vehicular turning area will have about 26m distance from the adjoining Fook Wan Mansion which will be adequately served as a buffer zone between the three neighbouring developments. No residential or commercial development will be built underneath, on and/or above the portion of land dedicated for the new vehicular turning area.

Conceptual Layout

- 4.6 Appendix 1 shows the preliminary design of the Scheme. Figure 1.1 of Appendix 1 shows the block plan of the Scheme. A residential tower of about 310 units on a 3-level commercial / retail podium is proposed based on the proposed development parameters for the Scheme. The proposed development parameters are set out in Table 4.1 which is subject to minor adjustments in the detailed design stage:

Table 4.1: Proposed Development Parameters of the Scheme

Parameters	Details
Net Site Area:	1,636sq.m. * (Subject to survey and detailed design.)
Proposed Zoning:	“R(A)7”
Maximum Domestic GFA:	12,270sq.m. (PR = 7.5)
Maximum Non-domestic GFA:	2,454sq.m. (PR = 1.5)
Maximum Building Height:	130mPD
No. of Residential Tower	1 residential tower
No. of Residential Floors	About 34 floors
No. of Flats	About 310 flats
No. of Storeys of the Commercial Podium:	3 storeys
Other Proposals in the Scheme	
Road Closure:	Chun Tin Street is proposed to be closed permanently for redevelopment, to facilitate better building layout/increase in flat supply as well as to provide a safer environment for pedestrian and vehicular traffic.
New Road Arrangement:	A new vehicular turning area of about 26m width entering from Sung Chi Street will be created for public use. It will serve as vehicular access to the Scheme, TKW/1/002 and the adjacent Fook Wan Mansion.
Road Widening Works:	The current one-way Sung Chi Street will be widened to about 12.3m width, including a 2-way carriageway of about 7.3m with passageway for public use, by building setback and ground floor podium setback of the proposed development in the Scheme.
Vehicular Ingress/Egress:	Vehicular ingress/egress for the scheme area will be at the northern part of the Scheme fronting the new vehicular turning area.
Pavement Network:	Comprehensive pavement network will be provided along the new vehicular turning area and along the

	proposed redevelopment. The pavement network will connect with the pavement of the adjacent TKW/1/002 development and their at-grade open space.
Internal Transport Facilities:	<p>A 1-level basement car park with car lift to provide about 19 private car parking spaces for the proposed development within the Scheme.</p> <p>2 to 3 LGV bays are proposed to be provided at-grade at the kerb-side on Sung Chi Street within the Scheme.</p>

\* Net Site Area includes all private lots within the Scheme and part of Chun Tin Street which will be used for built over and underneath for redevelopment and plot ratio calculation purpose.

#### **Internal Parking Provision and Vehicular Access**

- 4.7 Due to the site constraints and the convenience of the extensive public transport services in the vicinity, the Scheme is proposed to adopt a relaxed ratio of parking space provision. Loading / Unloading (L/UL) bays to serve the future development of the Scheme will be provided along Sung Chi Street within the widened area of the Scheme for share use to benefit both the residents and retail users of the proposed development and the public but under the management of the URA (or its future Joint Venture Partner (JVP)). In view of the site constraints and the demand for heavy goods vehicle bay is negligible due to the small scale retail activities, only light goods vehicle bays will be provided. Vehicular ingress/egress of the site will be provided at the north side in front of a new vehicular turning area entering from Sung Chi Street.
- 4.8 The proposal on parking provision and layout as stated in the TIA Report (**Appendix 3**) have been submitted to Transport Department (TD) for their consideration of the proposed internal transport facilities, the related ingress/egress, the proposed road improvement works and the traffic impact of the Scheme. TD indicated no objection to the proposal and no adverse comment to the TIA Report. The URA will liaise with relevant government departments for the statutory requirements concerning the permanent closure of Chun Tin Street and the details of the road improvement works in the Scheme during the detailed design stage of the Scheme.

#### **Vehicular Circulation**

- 4.9 In order to improve traffic and walking environment, it is proposed to permanently close and extinguish the existing Chun Tin Street to achieve the following goals:
- Remove dead-end condition for safer traffic and pedestrian environment;
  - More integrated design of the proposed development to group all traffic servicing area towards back of the site along Sung Chi Street, such that more foreground area towards major streets can be opened-up for pedestrian flow and vibrant retail frontage;
  - More flexible building design and layout; and
  - More space for road widening and enhancement of pedestrian passageways.

- 4.10 In association with the closure of Chun Tin Street, it is proposed to dedicate a portion of land at the north of the scheme area for a new road arrangement as a new vehicular turning area connecting from Sung Chi Street. The dedicated area will be for public use and will serve as vehicular access for the proposed development of the Scheme, Fook Wan Mansion and the future development at URA Ma Tau Wai Road / Chun Tin Street Development Project (TKW/1/002). The design and extent of the new vehicular turning area is initially agreed with TD via the TIA Report. The new vehicular turning area will have about 26m width to facilitate manoeuvring of different types of vehicles. Actual design and details shall be formulated with the relevant Government Departments during the detailed design.
- 4.11 Road widening of Sung Chi Street to about 12.3m, including a two-lane carriageway of about 7.3m and widened pavement is proposed to enhance the traffic and pedestrian flow. A podium setback at ground floor level of about 5m to 6m from road kerb of Sung Chi Street will be allowed in the Scheme to create a wider passageway for pedestrians and provide L/UL bays as abovementioned.
- 4.12 URA intends to take up the management and maintenance of the new vehicular turning area, and any L/UL bays with shared use to the public at Sung Chi Street. URA will liaise with relevant Government Departments on the future arrangement upon approval of the Scheme.
- 4.13 The proposed road and traffic arrangement in the Scheme is shown in **Figure 1.2 of Appendix 1**.

#### **Pedestrian Circulation**

- 4.14 Taken the opportunity of redevelopment, it is proposed to rationalise the local pedestrian circulation within the Scheme as well as better integration with the adjoining URA development (TKW/1/002) to improve the safety and pedestrian walking environment. Continuous pavement will be provided along the new vehicular turning road towards the at-grade passageways within the Scheme as well as the at-grade open space in the adjoining URA development (TKW/1/002). It will serve a more comprehensive pavement network between Sung Chi Street and Ma Tau Wai Road, via the scheme area and the future at-grade open space provided within the adjoining URA development (TKW/1/002). **Figure 1.3 of Appendix 1** shows the pavement and pedestrian circulation of the Scheme.
- 4.15 With the closure of Chun Tin Street for integration into the scheme area, it offers the opportunity to provide more ground floor space for road widening and pedestrian passageways at grade within the Scheme to provide a pleasant and safer pedestrian walking environment separating from vehicular roads.
- 4.16 Podium setback at ground floor level of about 5m to 6m from road kerb of Sung Chi Street and Hok Yuen Street will be provided to create a wider and continuous passageway along both streets. Through redevelopment and building setback of the proposed development within the Scheme, Sung Chi Street will be widened to a two-lane carriageway with continuous pavement along the scheme boundary and temporary/illegal street activities spreading from the existing ground floor shops and roadside parking can be regulated. A modern commercial podium with street front shops and landscaping will be provided along Sung Chi Street and Hok Yuen Street.

### Urban Design Consideration

- 4.17 Located within the densely developed district with concentration of high rise buildings and mix of land uses, the design of the proposed development in the Scheme has taken into account of the urban design principles to enhance the living environment and quality. The design will aim to meet the design guidelines stipulated in the Sustainable Building Design (SBD) Guidelines by providing the requisite building separation, building setback and greenery in the Scheme to enhance the environmental sustainability of the Scheme. The design on tower disposition, building layout and massing is in response to the urban design objectives and aims to create well integration with the adjoining developments, including the URA development at Ma Tau Wai Road TKW/1/1002.
- 4.18 The Scheme is of elongated shape located within high rise buildings in the surroundings. From urban design consideration, the layout and disposition of the residential tower in the Scheme is carefully designed to locate at the more centre location of the site to avoid direct blockage of views to the residential towers at TKW/1/002 site, and at the same time maintain a sensible distance/gap with the Fook Wan Mansion. A building separation distance of about 10 to 15m between the proposed development in the Scheme and the residential towers at the adjoining TKW/1/002 site will be created to maintain an air breezeway between the two developments. A new vehicular turning area is proposed at the north of the site, which will allow a buffer distance of about 30m between the proposed development and the adjacent residential tower block of Fook Wan Mansion. The gap will create a visual relief and spatial feeling among the high rise buildings in this area and provide air breezeway to enhance the air ventilation particularly to pedestrian level. (see **Figure 1.4 of Appendix 1**)
- 4.19 By taking the advantage that both the Scheme and the adjoining TKW/1/002 development being URA projects and in particularly TKW/1/002 is an URA's self-developed project, the design of the Scheme has duly considered the building and landscape layout of the TKW/1/002 site to develop a more integrated design approach for the Scheme. Meanwhile, coordinated efforts have been made to ensure for both sites are in compliance with the relevant building and planning ordinances and regulations, such as Buildings Ordinance and Building (Planning) Regulations. The notional building layout of the proposed development in the Scheme has considered sufficient building separation distance with the adjoining TKW/1/002 site to fulfil the prescribed window requirements. The extent and design of the proposed new vehicular turning area has accommodated the requirements for the ingress/egress requirement for the proposed development in the Scheme but also the ingress/egress of the TKW/1/002 development as in its approved General Building Plans (GBPs). The proposed Scheme shall pose no adverse effect to the attainable development parameters of the URA's TKW/1/002 site.
- 4.20 The design has met the building separation and the building permeability requirements of the SBD Guidelines (see **Figure 1.5 of Appendix 1**). A slimmer residential tower is designed to reduce the building mass to further enhance the air ventilation and visual relief in the area. To further enhance the permeability and comfortable visual environment particularly at the pedestrian level, terraced podium level with 2/F podium setting back is designed to reduce the building bulk of the podium.
- 4.21 To echo with the future at-grade open space provided at the TKW/1/002 site, a barrier-free well-paved pedestrian walkway with landscaping will be created at ground floor between the podium of the Scheme and the adjacent TKW/1/002 site for pedestrian to walk to-and-fro the said

open space and Hok Yuen Street via the walkway. The corner of the podium facing Hok Yuen Street will be chamfered to further facilitate pedestrian flow. Opportunity will be made to create more street frontage for retails in front of Hok Yuen Street and Sung Chi Street, and potentially some outdoor alfresco/sitting out area at the corner to create an interesting street frontage and a sense of node for the pedestrian.

- 4.22 The inclusion of Chun Tin Street to enlarge the scheme area for redevelopment provided the opportunity to utilise the enlarged site for building design and more greening coverage. Under the current notional design, at-grade passageway is designed around the podium and along the new vehicular turning area of the Scheme. Landscaping and greening will be provided as far as practicable in these areas to enhance the walking environment. While terraced podium is proposed in the Scheme to enhance visual relief and air ventilation, greening at the podium edge and flat roofs of 1/F and 2/F of the podium is designed to echo with the greenery at-grade and in the adjoining TKW/1/002 development. The proposed greenery coverage in the Scheme will be much improved up to about 30% of the net site area. **Figure 1.4 of Appendix 1** demonstrates the proposed greening and landscaping in the Scheme. The design of the greenery and landscaping will be integrated with the adjoining URA TKW/1/002 development which will also have about 30% greenery coverage in its development. Compared to the existing condition where Chun Tin Street is a carriageway with no greenery and the existing tenement buildings have no green podium, the accumulative greenery effect from the Scheme and the adjoining TKW/1/002 development will bring a substantial improvement in streetscape and greening of the local area. Not only can the overall configuration benefit the residents of the future URA developments and the Fook Wan Mansion, but also other public users within the district. **Figures 1.6 – 1.8 of Appendix 1** demonstrates the illustrations of the Scheme from different view angles at street level.

### Proposed Building Height

- 4.23 With the due consideration of urban design principles in the densely developed area and the constraints of the subject site, in particularly the elongated shape of this R(A)7 site, while optimising the development potential of the site, a residential tower of about 34 storeys is required to accommodate the permissible domestic GFA. A minor relaxation of the 120mPD to 130mPD is required for the "R(A)7" zone to accommodate the proposed development in the Scheme. The minor relaxation of the building height can facilitate a slimmer design of the building block to enhance local ventilation and allow more design flexibility; while accommodating the permissible GFA of the site. It will bring the merits of providing more flat supply (about 310 flats) to the market and enhance the local environment in this part of the dense urban context. Visual appraisal is carried out in **Appendix 2** to demonstrate that the proposed building height is compatible with the surrounding developments as viewed from main street angles in vicinity, and also without jeopardising the urban design principles of maintaining a stepping height profile towards the waterfront and without obstructing the mountain ridgeline.
- 4.24 Alternatively, should the maximum building height is capped at 120mPD under the existing OZP, the number of residential floors for the proposed development would inevitably be reduced from about 34 floors to about 31 floors due to the lower building height. As a result, a wider and bulkier building form would be required to accommodate the permissible domestic GFA and necessary E/M facilities and circulation space within a lower tower. Due to narrow width of the site and its close proximity to the adjoining buildings, a wider residential building block is required which would extend towards the site boundary adjoining URA TKW/1/002 development, resulting in a

reduction of separation gap originally created between the proposed development in 130mPD and the TKW/1/002 development. The result will diminish the planning gain of the Scheme as it will jeopardise the opportunity to create a wider visual corridor and ventilation gap between the tower buildings in the original design with 130mPD. The bulkier residential building will also overcast and reduce the ground floor space for providing a wide and well paved at-grade passageway between the Scheme and the TKW/1/002 development. **Figure 2.9 and 2.10 of Appendix 2** demonstrate the different layouts and visual effects of the two scenarios, i.e. the proposed development in 120mPD scenario and 130mPD scenario respectively. It shows that gap between the proposed development and TKW/1/002 buildings are largely reduced under the scenario of 120mPD, which results in a much narrower visual and ventilation corridor and at-grade passageway.

4.25 In summary, the minor relaxation of BHR to 130mPD for the Scheme is proposed with the following justifications and merits:

- Maximise the development potential of the scarce urban land to accommodate the permissible GFA for more flat supply to meet the mass market demand;
- Enhance air ventilation and permeability in the dense urban context of the local area by reducing the building bulk of the residential tower with a slight increase of the maximum building height for about 8% (less than 10%) to the original BHR;
- Allow more design flexibility for a better building layout and to accommodate better ground floor layout for pedestrian passageway; and
- The proposed increase of building height is compatible with surrounding developments without obstructing the mountain ridgeline in Kowloon.

#### **Visual Appraisal**

4.26 The Scheme falls within the view-fan for protection of the ridgeline as viewed from the Wan Chai vantage point, however, the proposed development upon completion will be completely blocked by the buildings in front of the Scheme and will not have any visual impact from the Wan Chai view point from the opposite side of the Victoria Harbour. The visual appraisal from the Wan Chai vantage point showed that the ridgeline protection is not interrupted by this Scheme. Visual appraisal is also carried out in the local context by selecting several vantage points from the nearby view corridors to assess any visual impact of the proposed development (see **Appendix 2**). The several views showed that the proposed development with 130mPD in height are blended in with the surrounding high-rise developments and do not create any significant blockage of views in the area.

#### **Air Ventilation**

4.27 Based on the available wind data from PlanD – RAMS wind data and vicinity AVA Study Reports, the annual prevailing winds within Study Area are mainly from northerly-east to southerly-east whereas summer prevailing winds are from easterly to southerly-west. Hok Yuen Street serves as a major wind corridor along west-east direction whereas Ma Tau Wai Road serves as major wind corridor along north-south direction especially during summer season. The Scheme would maintain existing wind movement along these two wind corridors and would not induce problematic area with specific consideration of both developments at Chun Tin Street / Sung Chi Street and the adjoining URA development site.

4.28 Referring to Term Consultancy for AVA Services - Expert Evaluation on Air Ventilation Assessment of Hung Hom Area (AVR/G/22), the surrounding buildings of the Site are in high building volume density (BVD) and high ground coverage ratio (GCR) especially under east to south sectors, the existing wind conditions at the pedestrian level along Hok Yuen Street East, Chun Tin Street and Sung Chi Street is anticipated to be relatively low in this area. In this regard, the Scheme incorporates the design of adjoining URA TKW/1/002 development in order to allow the following air ventilation improvement features for enhancement of local air ventilation performance around the Site (see **Figure 1.3 and 1.4 of Appendix 1**):

- Reduce the building bulk of the residential tower with a minor increase of the maximum building height from 120mPD to 130mPD. The slimmer residential tower increases building separation between surrounding building blocks thus enhancing wind penetration across the Site. No adverse impact on air ventilation performance at pedestrian level is anticipated;
- Incorporate Chun Tin Street as a scheme area so that the Scheme could integrate with the adjoining URA development. As a result, at-grade open space area and pedestrian walking area have been enlarged and connected to Ma Tau Wai Road, Sung Chi Street and Hok Yuen Street. It is envisaged that air circulation and permeability in this region at pedestrian level around the Site would be enhanced;
- Minimise the footprint of the podium at ground floor level by further setback from widened Sung Chi Street and Hok Yuen Street to enhance probability of air movement around the pedestrian level of the site. It is expected that wind directions from eastern wind and southerly winds along Sung Chi Street and Hok Yuen Street would be improved;
- Stepped design of the podium floors for the side facing Hok Yuen Street would also facilitate southerly wind across the podium of the Scheme; and
- Increase greenery by adoption of landscape area and green roof of the podium in the Scheme to increase greenery and open space in the vicinity of the Site.

4.29 The Scheme only has a gross site area of about 2,745sq.m. and only one single residential tower is proposed in the Scheme. With the adoption of urban design elements and site-specific building design measures to enhance the local air ventilation and ascertained by detailed checking with regard to the SBD Guidelines currently applicable, no significant adverse air ventilation impact due to the Scheme is envisaged. Furthermore, considering that the proposal does not fall within the categories for an AVA as set out in the joint HPLB-ETWB Technical Circular No. 1/06 on AVA (2006), an AVA is not required for this application.

#### **Technical Assessments**

##### **Traffic Impact**

4.30 A TIA (see **Appendix 3**) was conducted to assess the traffic impact of the implementation of the proposed development and the proposed road improvement works in the Scheme. The study demonstrates that the Scheme would have no adverse traffic impact to the local traffic network. The proposed road improvement work can improve the local traffic network and pedestrian



walking environment. The TIA Report was submitted to TD for consideration. TD indicated no objection to the proposal and no adverse comment to the TIA Report. The URA will liaise with relevant government departments for the statutory requirements concerning the permanent closure of Chun Tin Street and the details of the road improvement works in the Scheme during the detailed design stage of the Scheme.

#### Environmental Impact

- 4.31 An Environmental Assessment (EA) (see **Appendix 4**) was conducted to study any potential environmental impact / benefit associated with the implementation of the Scheme. The study concluded that the impact on air quality, noise, waste management was insurmountable. The URA will ensure the compliance of environmental standards and requirements during detailed design and construction stages.
- 4.32 It is identified that there may potentially be land contamination in the Scheme area due to the existence of a vehicle repairing workshop. Contamination Assessment Plan will be prepared for further investigation and assessment of land contamination issue when the Scheme is approved and the subject site is granted to URA for redevelopment.

#### Drainage and Sewerage Impact

- 4.33 A Drainage and Sewerage Impact Assessment (DSIA) was conducted (see **Appendix 5**). The DSIA report concluded that the drainage and sewerage impacts from the proposed development in the Scheme to the existing drainage and sewerage system are considered insignificant.

#### Social Impact

- 4.34 In accordance with the Urban Renewal Strategy (URS), a non-obtrusive Social Impact Assessment (SIA) (Stage 1) has been conducted and the report is included as **Appendix 6**. The report highlights characteristics of the local population which will need to be prepared for and borne in mind during the implementation of the Scheme. A Stage 2 SIA Report is under preparation based on factual data and opinions collected as part of the freezing survey, which has been conducted on the commencement of the Scheme in accordance to the section 23(1) of the URAO. The Stage 2 SIA Report will be submitted to the TPB separately. The SIA reports are to assess the likely effect of the implementation of the Scheme and to propose mitigation measures to minimise any social impact.

### **5. PLANNING MERITS**

- 5.1 The Scheme will provide the following planning and environmental benefits:-
- replace the old buildings of over 50 years in deteriorating condition and demolition of sub-divided units to new modern residential development and commercial facilities;
  - the existing over-crowding and sharing households will be able to improve the living conditions through redevelopment;
  - provision of more small to medium-sized flats in the urban area;
  - more efficient use of land through extinguishment of dead-end Chun Tin Street for

redevelopment and re-arrangement of safer vehicular and pedestrian network via the provision of a new vehicular turning area and road widening along Sung Chi Street;

- improve pedestrian circulation and environment by podium setback from scheme boundary, pavement widening, and landscaping.
- enhance urban design by a more integrated planning and design with the adjoining URA development (TKW/1/002) to enhance local environment;
- enhance urban design and to meet SBD Guidelines by slimmer building design and creating a new vehicular turning area to allow more building separation and visual relief between the Scheme and adjoining developments such as Fook Wan Mansion;
- better utilization of land by integrating all traffic servicing area and back-of-house facilities to the north of the scheme area to open-up the foreground area for better building disposition and vibrant retail street frontage.

### **6. IMPLEMENTATION OF THE SCHEME**

- 6.1 The URA does not own or lease any land within the boundaries of the Scheme and will acquire all the private lots within the Scheme. The URA intends to acquire the property within the Scheme boundary by purchase. Those properties which cannot be acquired by purchase will need to be resumed. An owner of domestic and non-domestic property will receive the market value of his property (valued on vacant possession basis). As for the owner-occupier of domestic property, the URA will pay a Home Purchase Allowance so as to assist the owner to purchase a 7-year old (notional) domestic flat of similar size within the same locality.
- 6.2 All eligible tenants who are affected by URA redevelopment projects, and whose landlords sell the property to URA subject to existing tenancies will be offered rehousing. Tenants, who are not allocated rehousing units due to various reasons, may receive ex-gratia payment.
- 6.3 Eligible domestic tenants required to move from properties affected by URA redevelopment projects will be rehoused in units provided by the Hong Kong Housing Authority or the Hong Kong Housing Society. Tenants who are rehoused as a result of a URA project will be offered an ex-gratia removal allowance. Non-domestic tenants whose tenancies are terminated by their landlords are not entitled to any compensation or other payments. However, URA is prepared to pay 3 times the rateable value of the affected premises as an ex-gratia allowance for non-domestic tenants if such premises are purchased by the URA subject to existing tenancies.
- 6.4 Due to the unique situation that this Scheme has included the properties in the previous URA Chun Tin Street/ Sung Chi Street Development Project (KC-008) which is discontinued, the URA will provide a series of special measures ("Special Measures") in addition to the prevailing compensation policies to address the potential needs of the affected owners and tenants within the Scheme. The Special Measures will only be applied to this Scheme. Supplementary documents detailing the implementation programme for the Scheme, the prevailing rehousing, compensation, acquisition and resumption principles and an Information Pamphlet on Special Measures for Owners and Tenants are attached in **Appendices 7, 8, 9 and 10**.

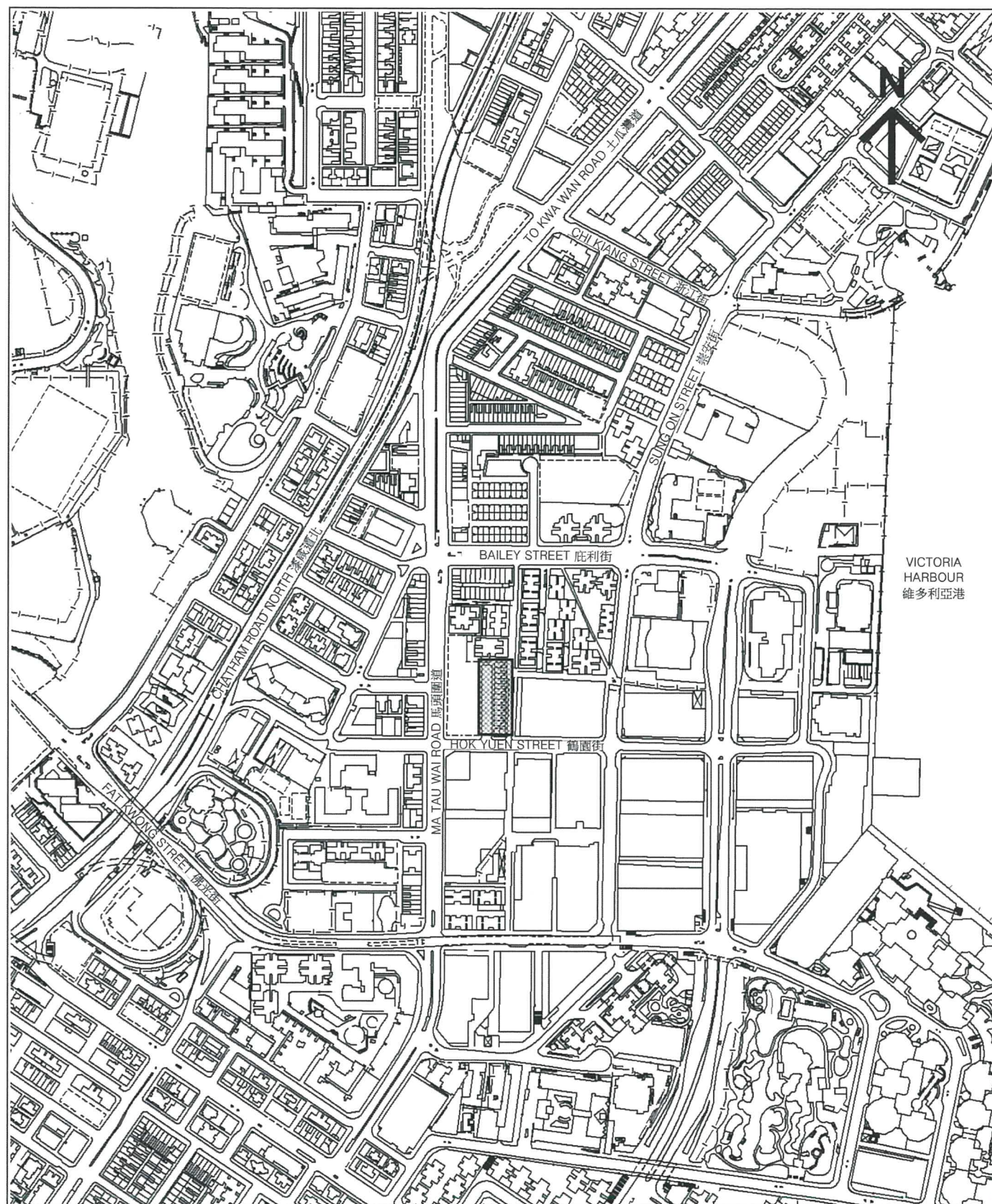


- 6.5 With the commencement of the Scheme on 6 May 2016, there are news and media reporting about the Scheme. Some news clippings are included in **Appendix 11**.
- 6.6 The URA may implement the Scheme in association with another person/party or implementing the Scheme by itself alone.
- 6.7 Any information contained in this document relating to compensation and re-housing benefits are with reference to Special Measures solely applied for this Scheme and the prevailing policies on compensation and re-housing benefits (comprehensively called "Compensation Package") offered by URA to owners/tenants at the time of issue of this document. The Compensation Package may be subject to change from time to time upon any review carried out by the URA. The Compensation Package to be offered by the URA shall be that Compensation Package prevailing at the time where purchase offers are made. Nothing contained in this document shall constitute any representation or warranty on the part of the URA or give rise to any expectation that the Compensation Package contained in this document will not be changed at the time of implementation of project.

URBAN RENEWAL AUTHORITY  
MAY 2016







VICTORIA  
HARBOUR  
維多利亞港

THE SCHEME

EXTRACT PLAN PREPARED ON 03.03.16  
BASED ON SURVEY SHEET No.11-NW-20D,  
11-NW-25B, 11-NE-16C, 11-NE-21A.

LOCATION PLAN

DEVELOPMENT SCHEME  
AT CHUN TIN STREET/SUNG CHI STREET

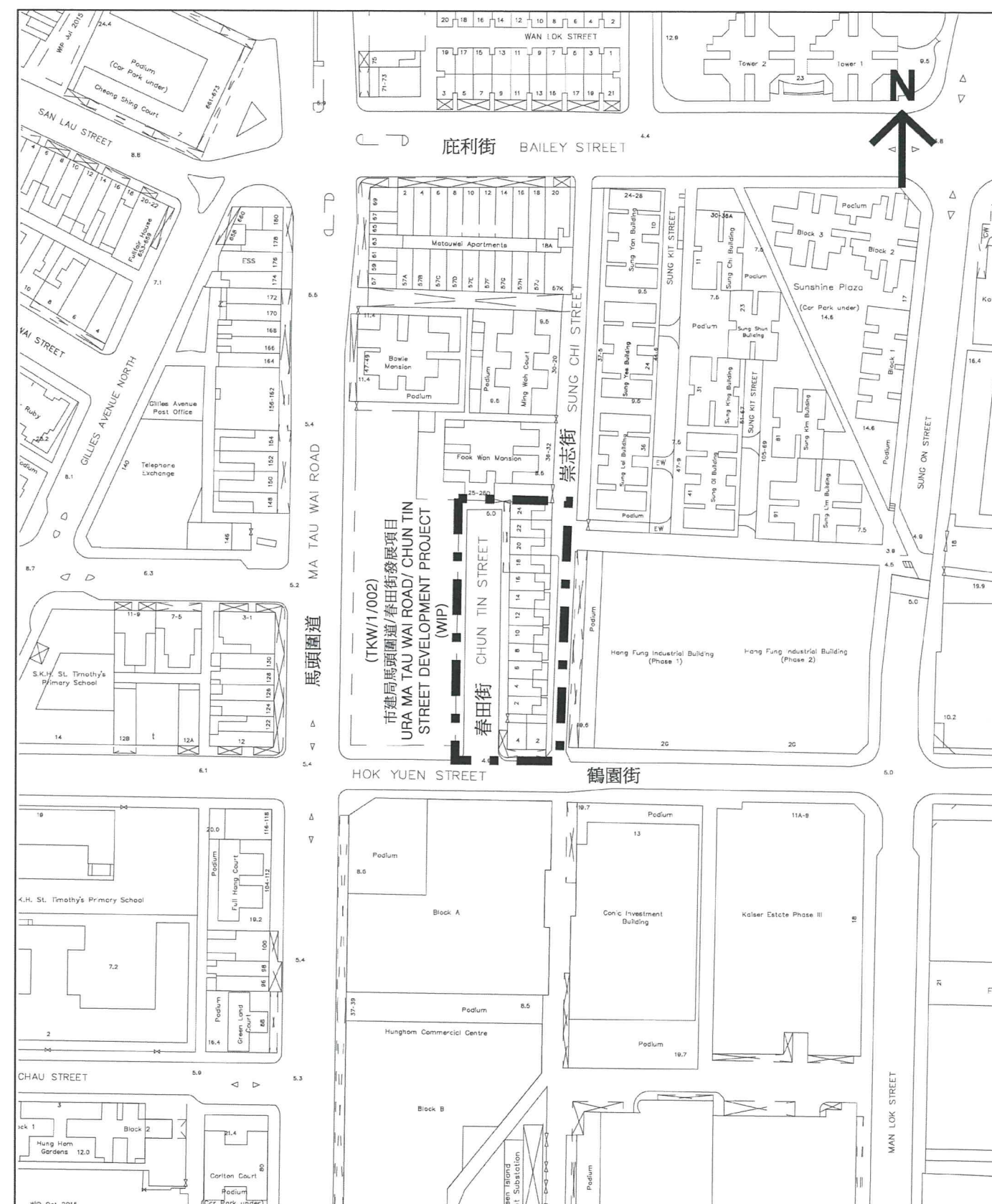
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KC-008(A)

PLAN  
1



THE SCHEME

EXTRACT PLAN PREPARED ON 03.03.16  
BASED ON SURVEY SHEET No.11-NW-20D,  
11-NW-25B, 11-NE-16C, 11-NE-21A.

SCHEME AREA

DEVELOPMENT SCHEME  
AT CHUN TIN STREET / SUNG CHI STREET

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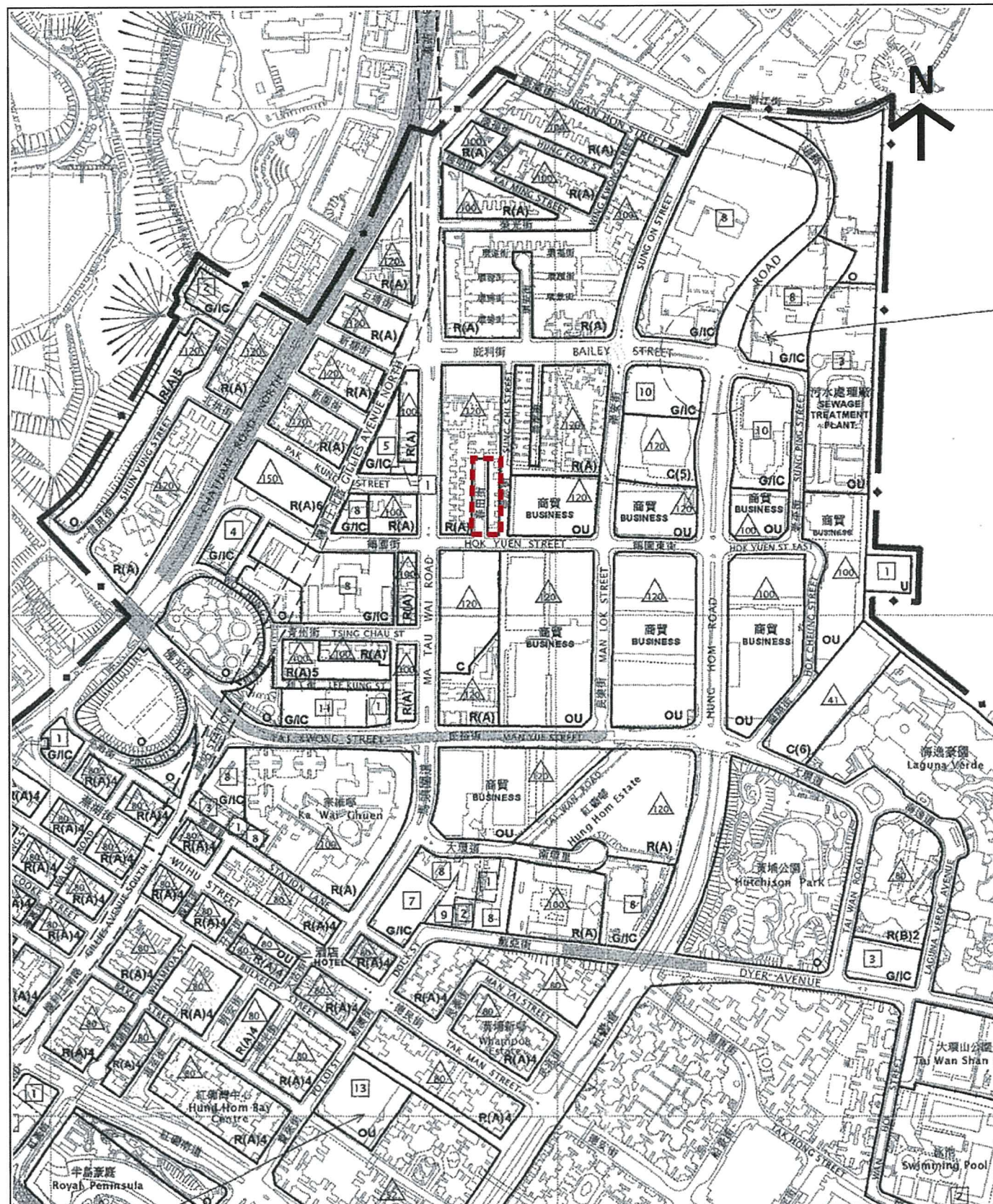
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KC-008(A)

PLAN  
2





THE SCHEME

EXTRACT PLAN BASED ON  
HUNG HOM OUTLINE ZONING PLAN  
No.S/K9/24

# EXISTING ZONING OF DEVELOPMENT SCHEME

DEVELOPMENT SCHEME  
AT CHUN TIN STREET / SUNG CHI STREET

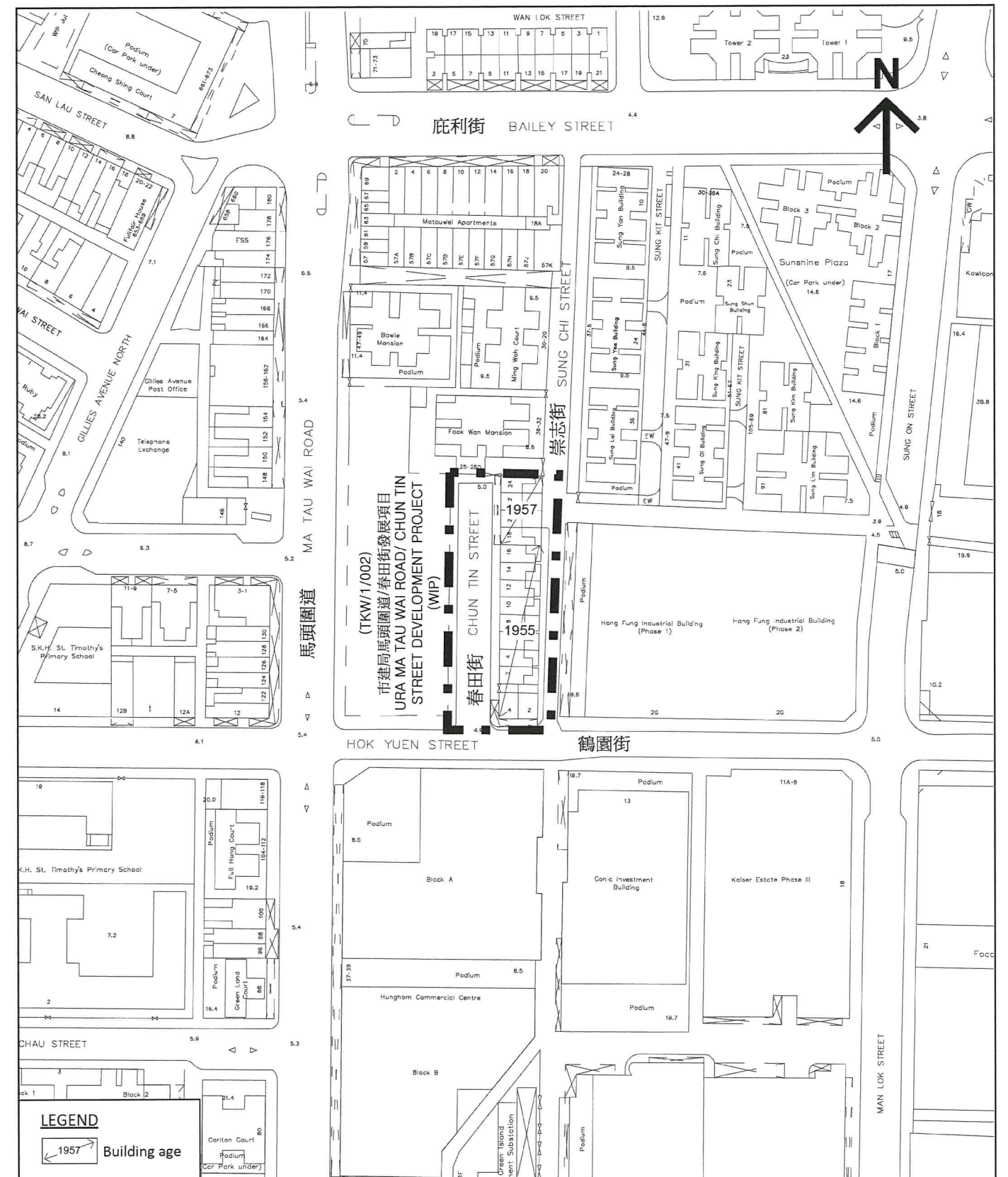
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KC-008(A)

PLAN  
3



## LEGEND

1957 Building age



THE SCHEME

EXTRACT PLAN PREPARED ON 03.03.16  
BASED ON SURVEY SHEET No.11-NW-20D,  
11-NW-25B, 11-NE-16C, 11-NE-21A.

## BUILDING AGE

DEVELOPMENT SCHEME  
AT CHUN TIN STREET / SUNG CHI STREET

SCALE 1: 1500

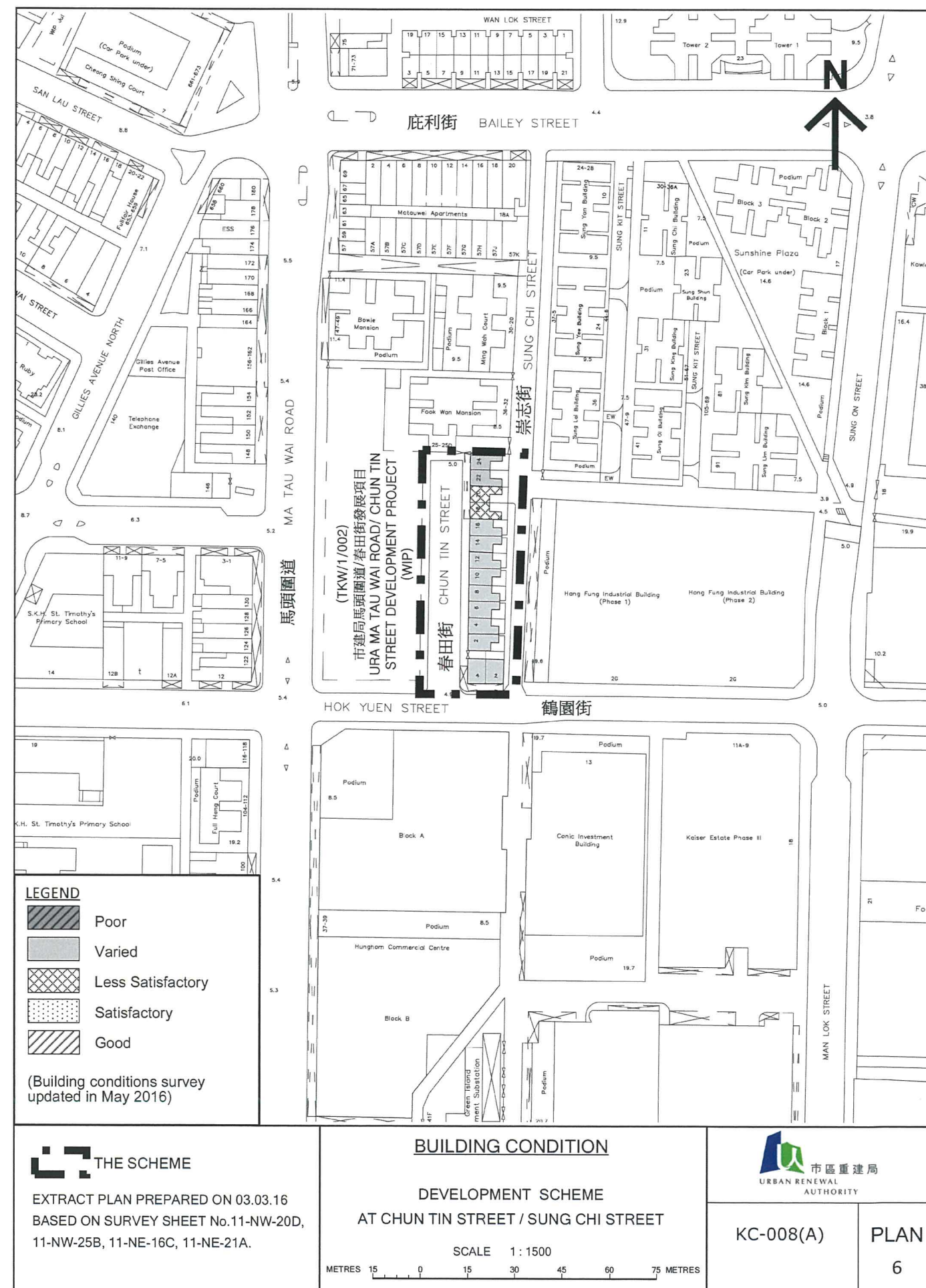
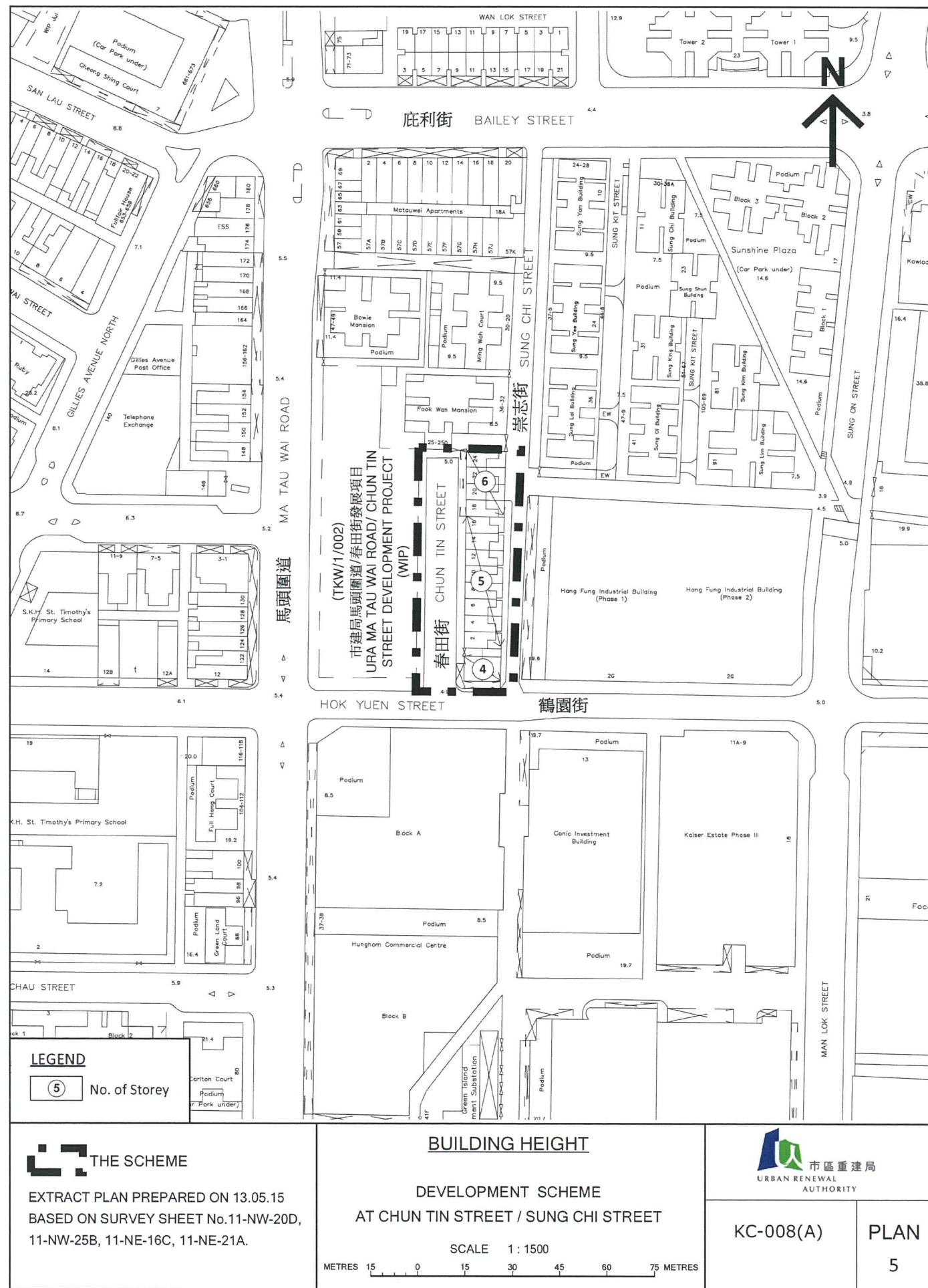
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KC-008(A)

PLAN  
4







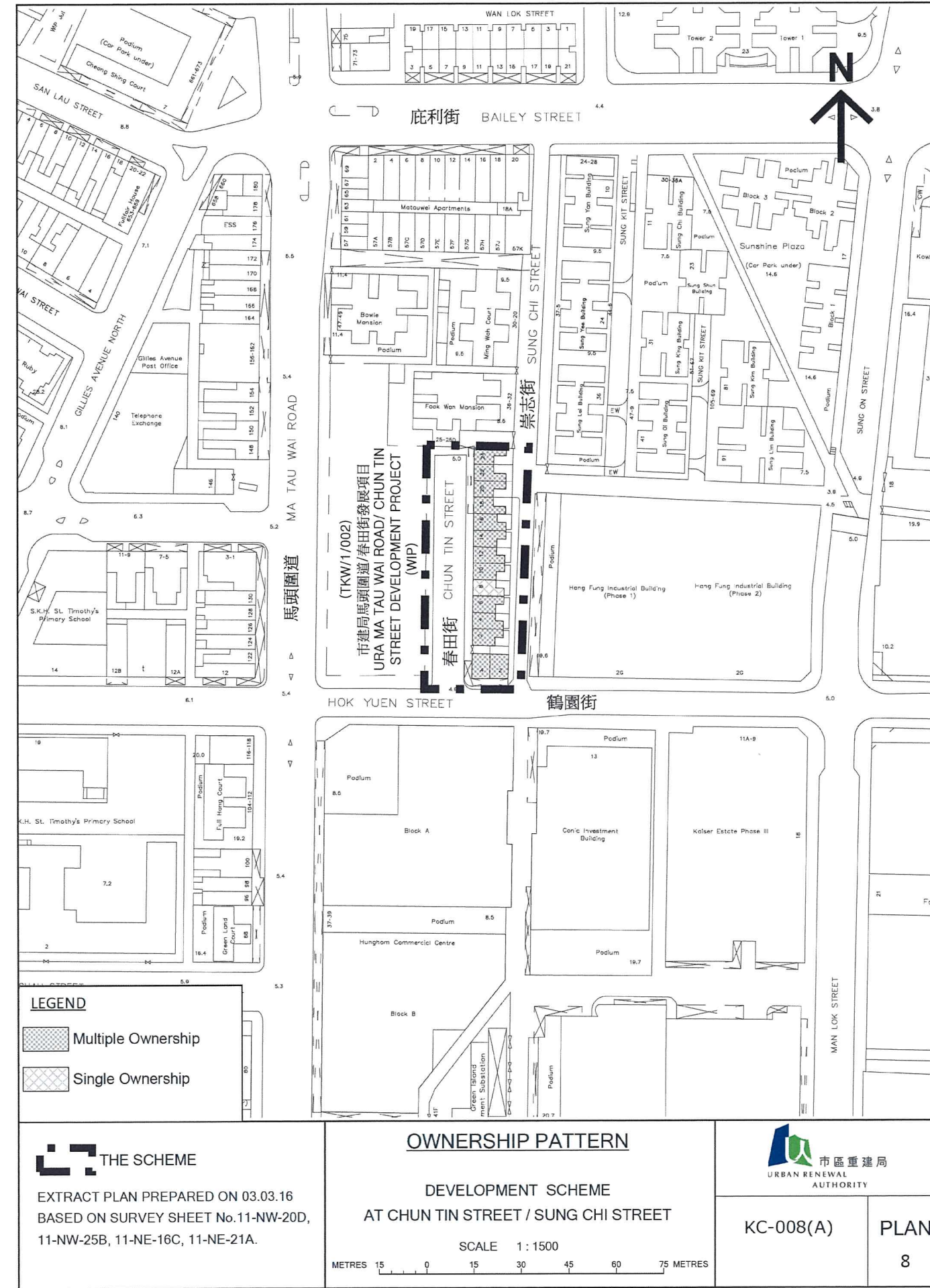
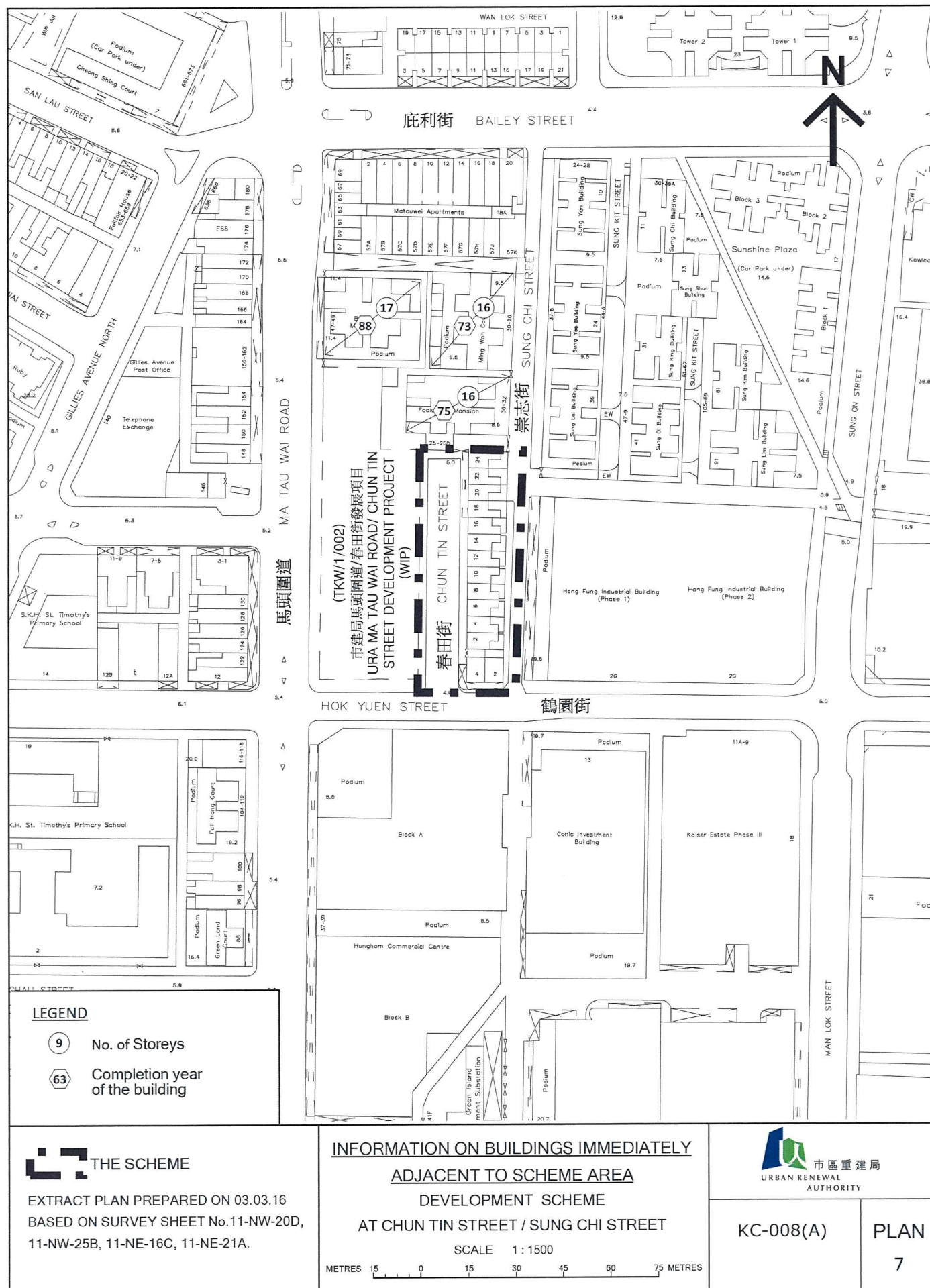






Photo 1



Photo 2

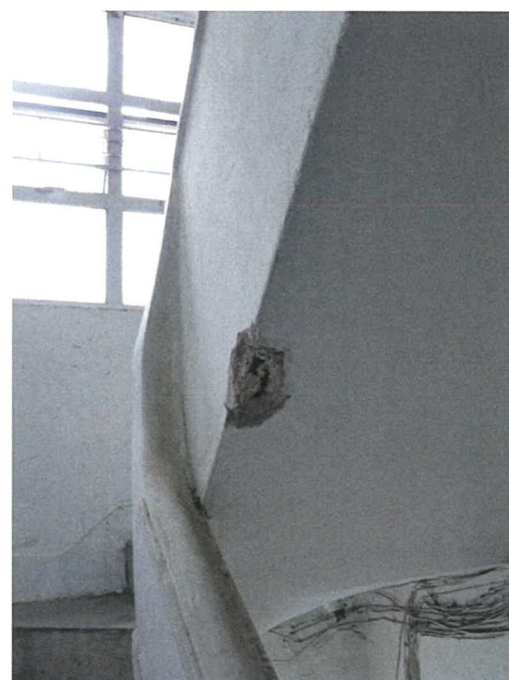


Photo 3

Photos 1-3: Concrete spalling, cracks and exposed of steel bars in common areas

PHOTOS TAKEN IN MAY 2016	SITE PHOTOS OF EXISTING BUILDINGS  DEVELOPMENT SCHEME AT CHUN TIN STREET / SUNG CHI STREET	 市區重建局 URBAN RENEWAL AUTHORITY	
		KC-008(A)	PLAN 9



Photo 4



Photo 5

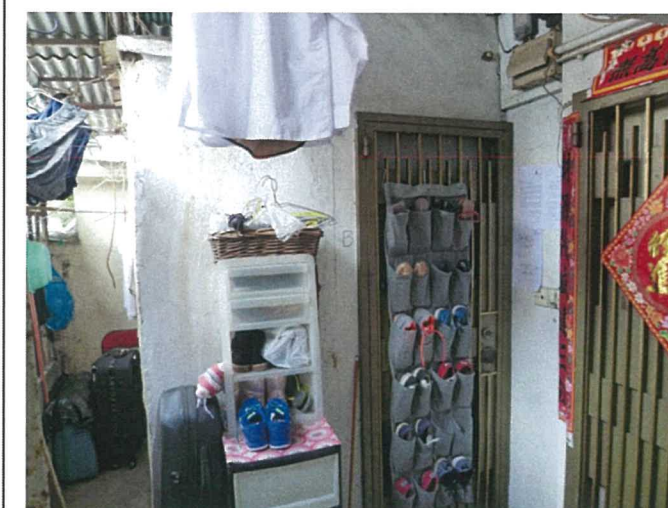


Photo 6



Photo 7

Photos 4-7:  
Unauthorized structures are found at rooftops and backyards of buildings in the Site.

PHOTOS TAKEN IN MAY 2016	SITE PHOTOS OF EXISTING BUILDINGS  DEVELOPMENT SCHEME AT CHUN TIN STREET / SUNG CHI STREET	 市區重建局 URBAN RENEWAL AUTHORITY	
		KC-008(A)	PLAN 10



Photo 8



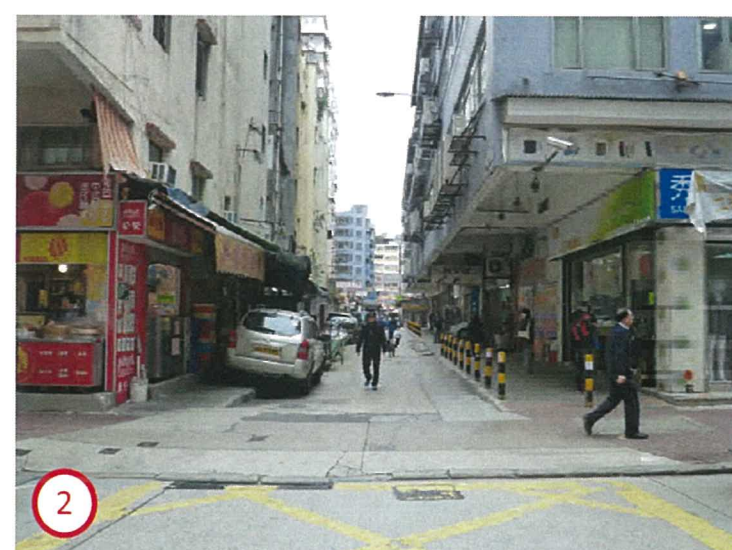
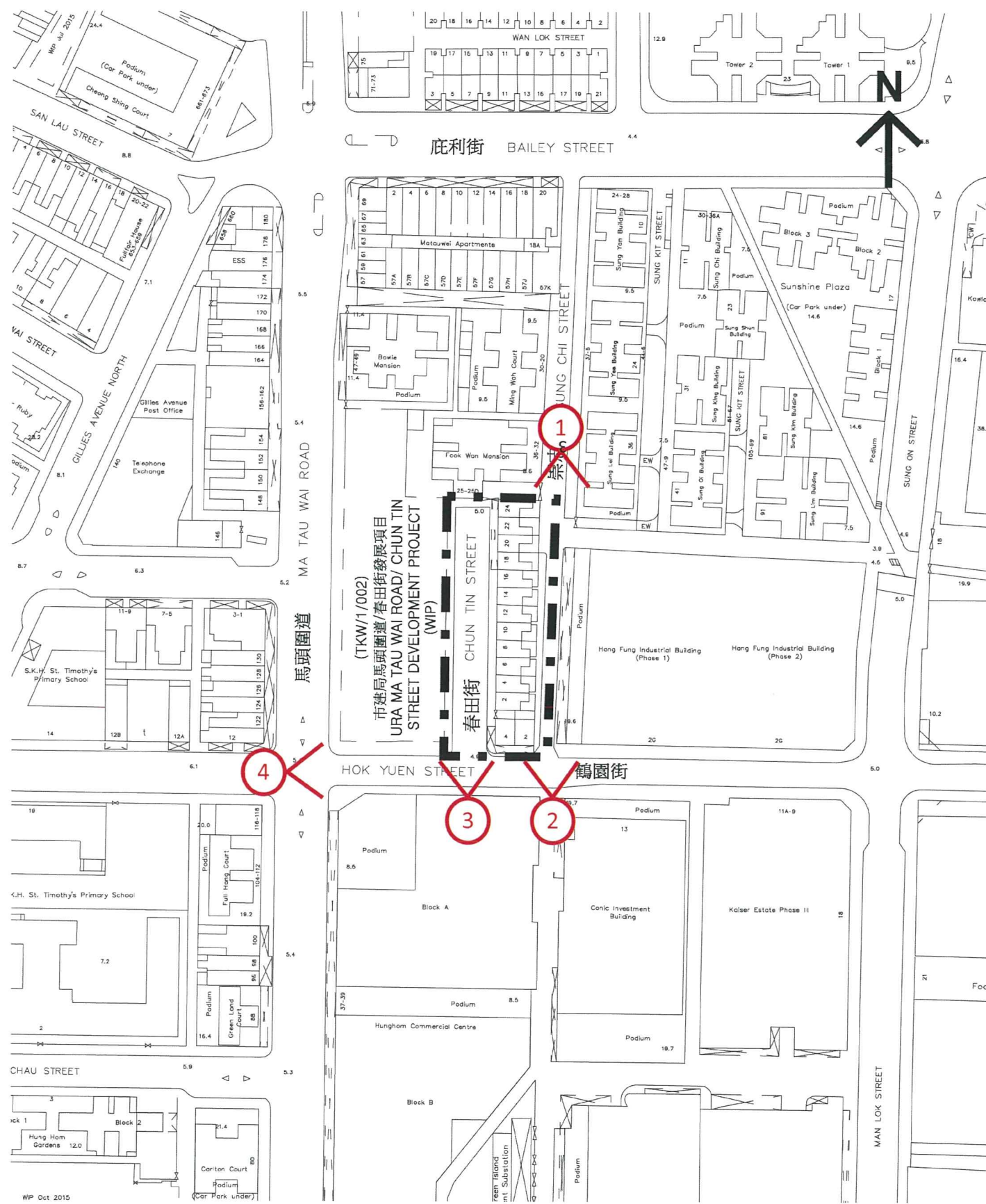
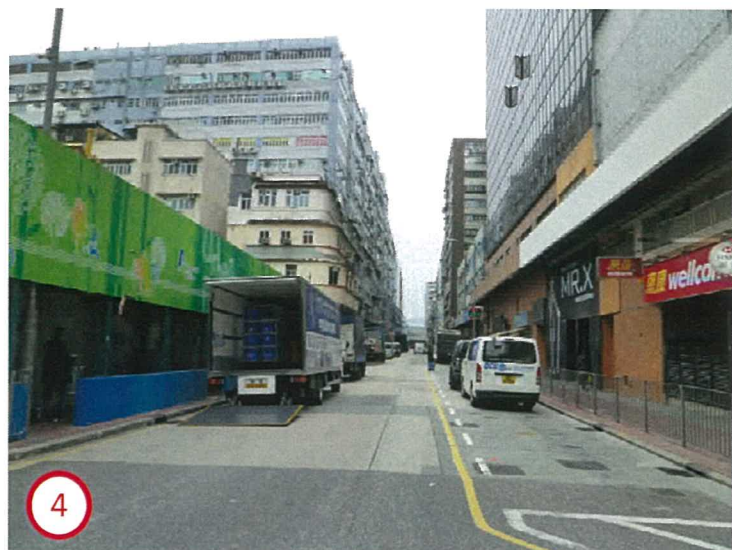
Photo 9



Photos 8-9:  
Sub-division of residential units

PHOTOS TAKEN IN MAY 2016	<u>SITE PHOTOS OF EXISTING BUILDINGS</u>  DEVELOPMENT SCHEME AT CHUN TIN STREET / SUNG CHI STREET	 市區重建局 URBAN RENEWAL AUTHORITY	
		KC-008(A)	PLAN 11





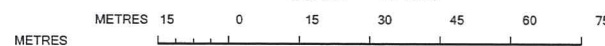
THE SCHEME

EXTRACT PLAN PREPARED ON 03.03.16  
BASED ON SURVEY SHEET No.11-NW-20D, 11-NW-25B,  
11-NE-16C, 11-NE-21A.

# THE SCHEME AND ITS SURROUNDING AREA

## DEVELOPMENT SCHEME AT CHUN TIN STREET/SUNG CHI STREET

SCALE 1:1500



KC-008(A)

PLAN  
12





Photo 10

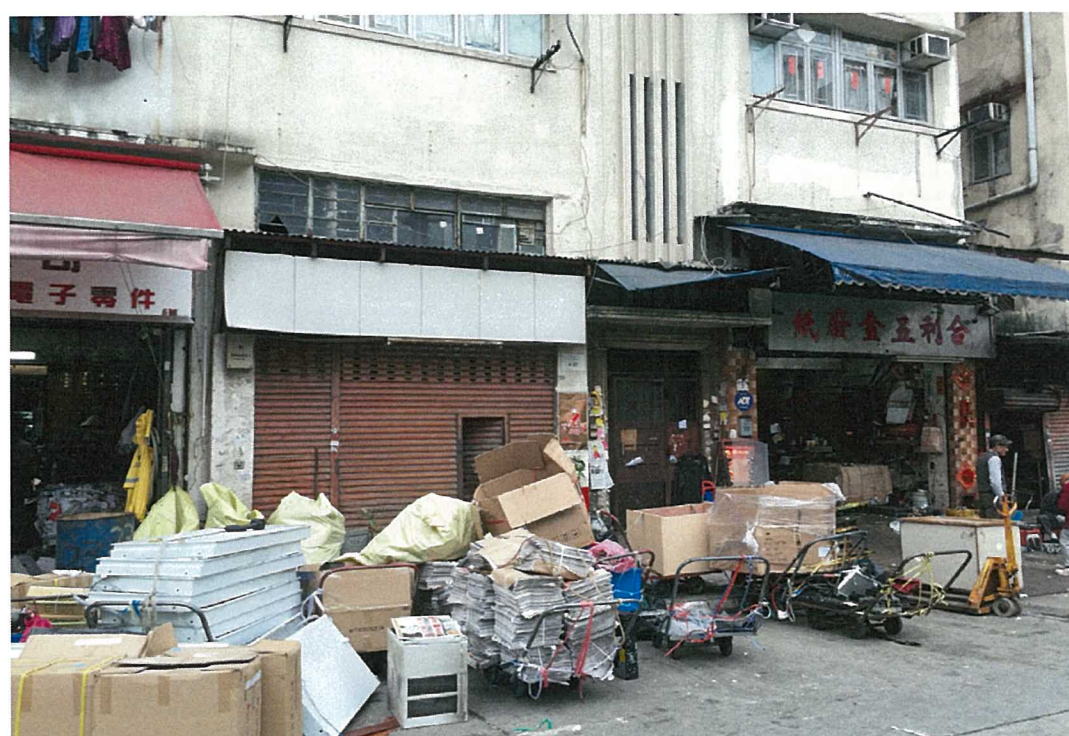


Photo 11

PHOTOS TAKEN IN  
FEBRUARY 2016

WORKSHOP ACTIVITIES  
AT CHUN TIN STREET

DEVELOPMENT SCHEME  
AT CHUN TIN STREET / SUNG CHI STREET



KC-008(A)

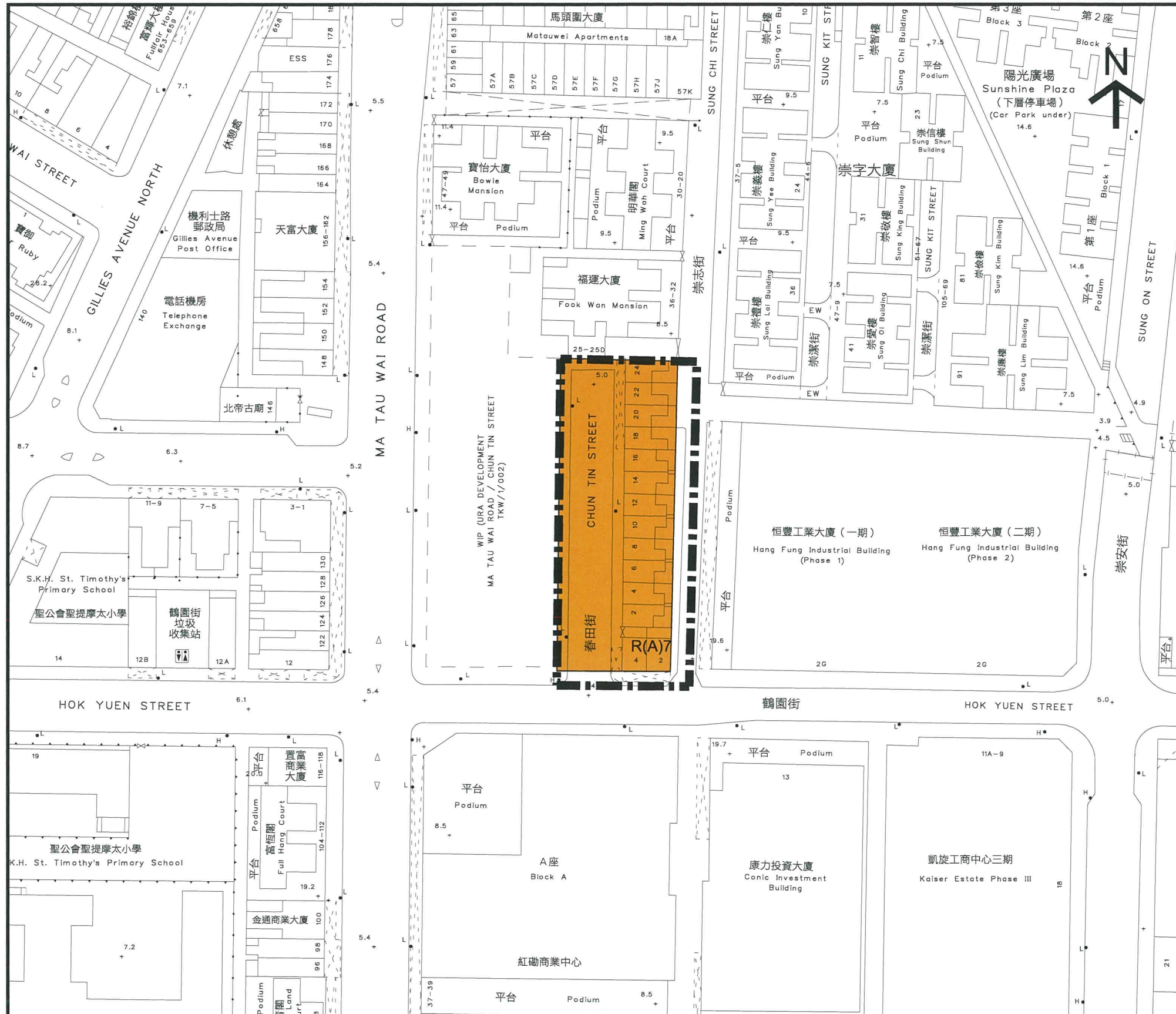
PLAN  
13



## **PART 2      THE DRAFT PLAN**

### **1              Draft Development Scheme Plan**





NOTATION

BOUNDARY OF DEVELOPMENT.....發展計劃範圍界線  
SCHEME

RESIDENTIAL (GROUP A)7.....住宅(甲類)7

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

2016年 月 日城市規劃委員會根據市區重建局條例第25條(6)(a)認為該圖則適宜公布，並於2016年 月 日按照城市規劃條例第5條公開展示的圖則。  
PLAN DEEMED SUITABLE BY THE TOWN PLANNING BOARD FOR PUBLICATION UNDER S.25(6) (a) OF THE URBAN RENEWAL AUTHORITY ORDINANCE ON THE DAY OF 2016 AND EXHIBITED UNDER SECTION 5 OF THE TOWN PLANNING ORDINANCE ON THE DAY OF 2016.

香港城市規劃委員會依據城市規劃條例擬備的市區重建局春田街/崇志街發展計劃圖則  
TOWN PLANNING ORDINANCE, HONG KONG TOWN PLANNING BOARD  
URBAN RENEWAL AUTHORITY CHUN TIN STREET / SUNG CHI STREET  
DEVELOPMENT SCHEME PLAN

依據市區重建局條例第25(3)(a)條擬備  
PREPARED UNDER SECTION 25(3)(a) OF THE URBAN RENEWAL AUTHORITY ORDINANCE

圖則編號  
PLAN No. S/K9/URA1/A

SECRETARY, TOWN PLANNING BOARD 城市規劃委員會秘書

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## **PART 2      THE DRAFT PLAN**

2                Notes of the Plan



**DRAFT URBAN RENEWAL AUTHORITY**  
**CHUN TIN STREET / SUNG CHI STREET**  
**DEVELOPMENT SCHEME PLAN NO. S/K9/URA1/A**

(Being a Draft Plan for the Purposes of the Town Planning Ordinance prepared by the Urban Renewal Authority under section 25 of the Urban Renewal Authority 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

S/K9/URA1/A

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 widths, road junctions and alignments of roads 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 Schedule of Uses:
  - (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; and
  - (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.
- (8) 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 permission is required.

- (9) 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.
- (10) Any development not compatible with the Urban Renewal Authority’s Development Scheme for the area is prohibited by virtue of section 25(4) of the Urban Renewal Authority Ordinance.

S/K9/URA1/A

**DRAFT URBAN RENEWAL AUTHORITY**  
**CHUN TIN STREET / SUNG CHI STREET**  
**DEVELOPMENT SCHEME PLAN NO. S/K9/URA1/A**

Schedule of Uses

Page

RESIDENTIAL (GROUP A) 7

1



**RESIDENTIAL (GROUP A) 7**

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	Commercial Bathhouse/ Massage Establishment
Flat	Eating Place
Government Use (not elsewhere specified)	Education Institution
House	Exhibition or Convention Hall
Library	Government Refuse Collection Point
Market	Hospital
Place of Recreation, Sports or Culture	Hotel
Public Clinic	Institutional Use (not elsewhere specified)
Public Transport Terminus or Station (excluding open-air terminus or station)	Mass Transit Railway Vent Shaft and/or Other Structure above Ground Level other than Entrances
Residential Institution	Office
School (in free-standing purpose-designed building only)	Petrol Filling Station
Social Welfare Facility	Place of Entertainment
Utility Installation for Private Project	Private Club
	Public Convenience
	Public Transport Terminus or Station (not elsewhere specified)
	Public Utility Installation
	Public Vehicle Park (excluding container vehicle)
	Religious Institution
	School (not elsewhere specified)
	Shop and Services
	Training Centre

(Please see next page)

**RESIDENTIAL (GROUP A) 7 (Cont'd)**

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 bay 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

**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.

**Remarks**

- (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 gross floor area (GFA) of 12,270m<sup>2</sup> and a maximum non-domestic GFA of 2,454m<sup>2</sup>; and a maximum building height of 130 metres above Principal Datum.
- (2) In determining the relevant maximum GFA for the purposes of paragraph (1) above, any floor space that is constructed or intended for use solely as carpark, loading/unloading bay, plant room, 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.
- (3) Where the permitted plot ratio as defined in Building (Planning) Regulations is permitted to be exceeded in circumstances as set out in Regulation 22(1) or (2) of the said Regulations, the GFA for the building on land to which paragraph (1) applies may be increased by the additional plot ratio by which the

permitted plot ratio is permitted to be exceeded under and in accordance with the said Regulation 22(1) or (2), notwithstanding that the relevant maximum GFA specified in paragraph (1) above may thereby be exceeded.

- (4) Based on the individual merits of a development or redevelopment proposal, minor relaxation of the GFA and building height restrictions as stated in paragraph (1) above may be considered by the Town Planning Board on application under section 16 of the Town Planning Ordinance.



## **PART 2      THE DRAFT PLAN**

3                      Explanatory Statement



DRAFT URBAN RENEWAL AUTHORITY  
CHUN TIN STREET / SUNG CHI STREET  
DEVELOPMENT SCHEME PLAN NO. S/K9/URA1/A

EXPLANATORY STATEMENT

DRAFT URBAN RENEWAL AUTHORITY  
CHUN TIN STREET / SUNG CHI STREET  
DEVELOPMENT SCHEME PLAN NO. S/K9/URA1/A

	<u>Contents</u>	<u>Page</u>
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3.	OBJECT OF THE PLAN	2
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5.	AREA COVERED BY THE PLAN	2
6.	EXISTING CONDITIONS	3
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8.	IMPLEMENTATION OF THE SCHEME	4

**DRAFT URBAN RENEWAL AUTHORITY  
CHUN TIN STREET / SUNG CHI STREET  
DEVELOPMENT SCHEME PLAN NO. S/K9/URA1/A**

(Being a Draft Plan for the purpose of the Town Planning Ordinance prepared by the Urban Renewal Authority under section 25 of the Urban Renewal Authority Ordinance)

**EXPLANATORY STATEMENT**

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

**1. INTRODUCTION**

This Explanatory Statement is intended to assist an understanding of the draft Urban Renewal Authority (URA) Chun Tin Street / Sung Chi Street Development Scheme Plan No. S/K9/URA1/A. It reflects the planning intention and objectives of the Town Planning Board (the Board) for the area covered by the Plan.

**2. AUTHORITY FOR THE PLAN AND PROCEDURES**

- 2.1 In the URA's 15<sup>th</sup> Business Plan (2016/17) approved by the Financial Secretary, Chun Tin Street / Sung Chi Street Development Scheme (KC-008(A)) was proposed to be processed as a Development Scheme under section 25 of the URA Ordinance (URAO).
- 2.2 On 6 May 2016, pursuant to section 23(1) of the URAO, the URA notified in the Government Gazette the commencement of implementation of the Chun Tin Street / Sung Chi Street Development Scheme.
- 2.3 On 13 May 2016, the URA submitted the draft URA Chun Tin Street / Sung Chi Street Development Scheme Plan for the Development Scheme to the Board under section 25(5) of the URAO.
- 2.4 On xxx, the Board, under section 25(6)(a) of the URAO, deemed the draft URA Chun Tin Street / Sung Chi Street Development Scheme Plan as being suitable for publication. Under section 25(7) of the URAO, the draft Development Scheme Plan, which the Board has deemed suitable for publication under section 25(6)(a) of the URAO, is deemed to be a

draft plan prepared by the Board for the purposes of the Town Planning Ordinance (the Ordinance).

- 2.5 On xx xx, the draft URA Chun Tin Street / Sung Chi Street Development Scheme Plan No. S/K9/URA1/1 (the Plan) was exhibited under section 5 of the Ordinance. By virtue of section 25(9) of the URAO, the Plan has from that date replaced the draft Hung Hom Outline Zoning Plan (OZP) No. S/K9/25 in respect of the area delineated and described herein.

**3. OBJECT OF THE PLAN**

The Plan illustrates that the Development Scheme Area (the Area) is designated as "Residential (Group A)7" ("R(A)7") primarily for high density residential developments with commercial uses being always permitted on the lowest three floors of a building or in the purpose-designed non-residential portion of an existing building. The Scheme also aims to enhance local traffic and pedestrian environment via closure of Chun Tin Street for better site utilisation and road improvement works at Sung Chi Street. It is planned to be developed by means of the Development Scheme prepared under section 25 of the URAO. The Development Scheme intends to achieve environmental improvement through redevelopment and promoting efficient land use.

**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 in this zone 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. AREA COVERED BY THE PLAN**

- 5.1 The Development Scheme boundary, which is shown in heavy broken line on the Plan, covers a total area of about 2,475m<sup>2</sup>.
- 5.2 The Area covers a whole row of old and dilapidated tenement buildings bounded by Chun Tin Street, Hok Yuen Street and Sung Chi Street. The Area also covers Chun Tin Street which is a dead-end road that is proposed to be closed and integrated into the Area for redevelopment to achieve better site utilisation, increase



redevelopment potential and enhance local traffic and pedestrian environment. The Area also includes part of Sung Chi Street adjoining the Area to carry out road improvement works and the adjoining pavement of Hok Yuen Street of which the tenement buildings overhang above.

5.3 The Area has excluded the lots to the immediate west of Chun Tin Street which is the site of URA Ma Tau Wai Road / Chun Tin Street Development Project (TKW/1/002) currently under redevelopment. The lots to the immediate north are occupied by Fook Wan Mansion, which is relatively new and in better building condition. It is also excluded from the Scheme boundary.

5.4 On the approved Hung Hom OZP No. S/K9/24, the Area was primarily zoned "Residential (Group A)" and with an area shown as Road before the exhibition of the Plan.

## **6. EXISTING CONDITIONS**

6.1 The buildings within the Area are between four to six storeys and predominantly residential in nature with commercial / retail shops and some workshops for car repair services, metal hardware processing and recycling activities at ground floor. Most of the existing buildings are in deteriorating condition.

6.2 The poor housing condition, the presence of sub-divided units, unauthorised building structures on the roofs and backyards of many of the buildings, and a number of ground floor workshops are sources of environmental nuisance in the area.

6.3 Buildings facing Chun Tin Street are affected by noise and environmental nuisance generated from the workshop activities at the ground floor of Chun Tin Street.

6.4 The existing Chun Tin Street in the Area is a dead-end road only serving as vehicular access to the old tenement buildings in the Area as well as the adjoining Fook Wan Mansion and the URA Ma Tau Wai Road / Chun Tin Street Development Project (TKW/1/002). Vehicles will use Hok Yuen Street to enter Chun Tin Street; and manoeuvre and turn around at the dead-end of Chun Tin Street to leave via Hok Yuen Street. The workshop activities at the ground floor of the tenement buildings in the Area often occupy the pavement and Chun Tin Street for parking and loading/unloading of goods especially during day time. There are conflicts of usage among pedestrian, workshop activities and vehicular traffic at Chun Tin Street.

6.5 The URA Ma Tau Wai Road/ Chun Tin Street Development Project (TKW/1/002) is located to the immediate west of the Area. It is

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currently a construction site. URA will redevelop the site for residential and commercial uses. The redevelopment will comprise two residential towers on top of a podium with commercial and community uses on the lower floors, with at-grade open space provided for public use in the redevelopment site. The TKW/1/002 project is anticipated to be completed by 2018/2019.

## **7. PLANNING AND LAND USE PROPOSALS**

7.1 On the Plan, the Area is zoned "R(A)7" and the Notes of the Plan indicated broadly the intended land use within the Area.

### **Uses**

7.2 Development or redevelopment within the "R(A)7" zone is restricted to a maximum domestic GFA of 12,270sq.m. and a maximum non-domestic GFA of 2,454sq.m., and a maximum building height of 130 metres above Principal Datum (mPD). The proposed development within the Area will provide about 310 residential units in a residential tower on top of a 3-level podium with commercial / retail uses. Ancillary car park will be provided in a basement floor to serve the development.

7.3 A maximum building height of 130mPD for the Area is proposed in consideration of the elongated shape of the site which has imposed constraints in maximising the site development potential. With the more relaxed building height of 130mPD, a slimmer building block and more design flexibility can be provided in the Area to accommodate the permissible GFA of the Area to provide more flat supply to the market. The reduced building bulk of the residential tower can also enhance local air ventilation and permeability to bring improvement to the local environment in this part of the dense urban context. Visual appraisal has been carried out and the proposed development with 130mPD in the Area is considered compatible with the surrounding developments without obstructing the mountain ridgeline in Kowloon.

7.4 To allow flexibility for special design merit, minor relaxation of the GFA and building height restrictions may be considered by the Board on application under section 16 of the Ordinance taking into account its individual planning and design merits.

### **Internal Transport Facilities**

7.5 Off-street car parking spaces will be provided in a basement car park to serve the development in order to minimise the impact on the local traffic flow. Loading / unloading bays will be provided at the roadside of the widened Sung Chi Street along the Area. The loading /

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unloading bays will be for share use to benefit both the residents and retail users of the proposed development and the public.

**Vehicular Circulation**

- 7.6 To improve the local traffic arrangement and circulation, the existing dead-end street at Chun Tin Street will be permanently closed. A portion of land at the north of the Area will be dedicated for a new road as a vehicular turning area connecting from Sung Chi Street. The dedicated area will be for public use and will serve as vehicular access for the proposed development of the Area, Fook Wan Mansion to the north and the future development at URA Ma Tau Wai Road / Chun Tin Street Development Project (TKW/1/002) to the west.
- 7.7 Widening of Sung Chi Street to a two-lane carriageway with pavement is proposed to enhance the traffic and pedestrian flow. A further building setback at ground floor level of about 5m to 6m from road kerb of Sung Chi Street will be allowed to create a wider passageway for pedestrians and provide loading/unloading bays for shared use with the public.
- 7.8 URA will take up the management and maintenance of the new vehicular turning area, its adjoining pavement in the Area, and loading/unloading bays along Sung Chi Street.
- 7.9 An indicative plan showing the proposed road arrangement of the Area is attached in **Annex 1**.

**Pedestrian Circulation**

- 7.10 Taking the opportunity of redevelopment, the Development Scheme aims to rationalise the local pedestrian circulation to improve the safety and pedestrian walking environment within the Area. Continuous pavement will be provided along the new vehicular turning road, Sung Chi Street and Hok Yuen Street adjoining the proposed development in the Area. It will provide safe pedestrian walking environment and direct pavement network from Sung Chi Street towards Ma Tau Wai Road via the future at-grade open space provided within the adjoining URA development (TKW/1/002) or via the pavement surrounding the proposed development in the Area.
- 7.11 With the closure of Chun Tin Street for integration into the Area for redevelopment, it offers the opportunity to provide more ground floor space for road widening of Sung Chi Street and pedestrian passageway at grade within the Area to provide a pleasant and safer pedestrian walking environment separated from the traffic road.
- 7.12 The ground floor podium of the proposed development will be setback by about 5m to 6m from road kerb of Sung Chi Street and about 5m

from road kerb of Hok Yuen Street for provision of a wider pavement along both streets.

**Open Space and Greening**

- 7.13 Private open space will be provided on the podium for the enjoyment of the residents of the proposed development. To enhance pedestrian circulation between Sung Chi Street and Ma Tau Wai Road, at-grade open space or pedestrian passage will be provided in the design to provide better pedestrian linkage with the at-grade open space at the adjoining URA development (TKW/1/002).
- 7.14 Greening at podium edge and pedestrian level of the proposed development within the Area will be provided as far as practicable and optimised to meet the Sustainable Building Design (SBD) Guidelines and to enhance the local streetscape.
- 7.15 The URA will take up the management and maintenance of the new vehicular turning area and its adjoining pavement, and loading/unloading bays with shared use at Sung Chi Street. Landscaping including road paving and roadside greening will be provided at the new turning area and the corner area at the junction of Sung Chi Street and Hok Yuen Street to create a pleasant and comfortable streetscape.

**8. IMPLEMENTATION OF THE SCHEME**

- 8.1 The proposals set out in the Plan form an integral part of the Development Scheme for the Area.
- 8.2 The URA does not own or lease any land within the boundaries of the Development Scheme. The URA intends to acquire the properties within the Area of the Scheme. With respect to any of such properties which cannot be acquired by purchase, the Secretary for Development would consider, upon the application of the URA, recommending to the Chief Executive in Council the resumption of properties under the Lands Resumption Ordinance, if necessary.
- 8.3 All eligible tenants will be offered an ex-gratia payment package in accordance with URA's policy. The URA has already entered into agreement with the Hong Kong Housing Society (HKHS) and the Hong Kong Housing Authority (HKHA) for the purpose of making available rehousing units by HKHS or HKHA to rehouse affected tenants who satisfy the eligibility criteria of HKHS or HKHA.
- 8.4 Non-domestic tenants of properties acquired by URA whose tenancies are terminated by URA due to implementation of the Development

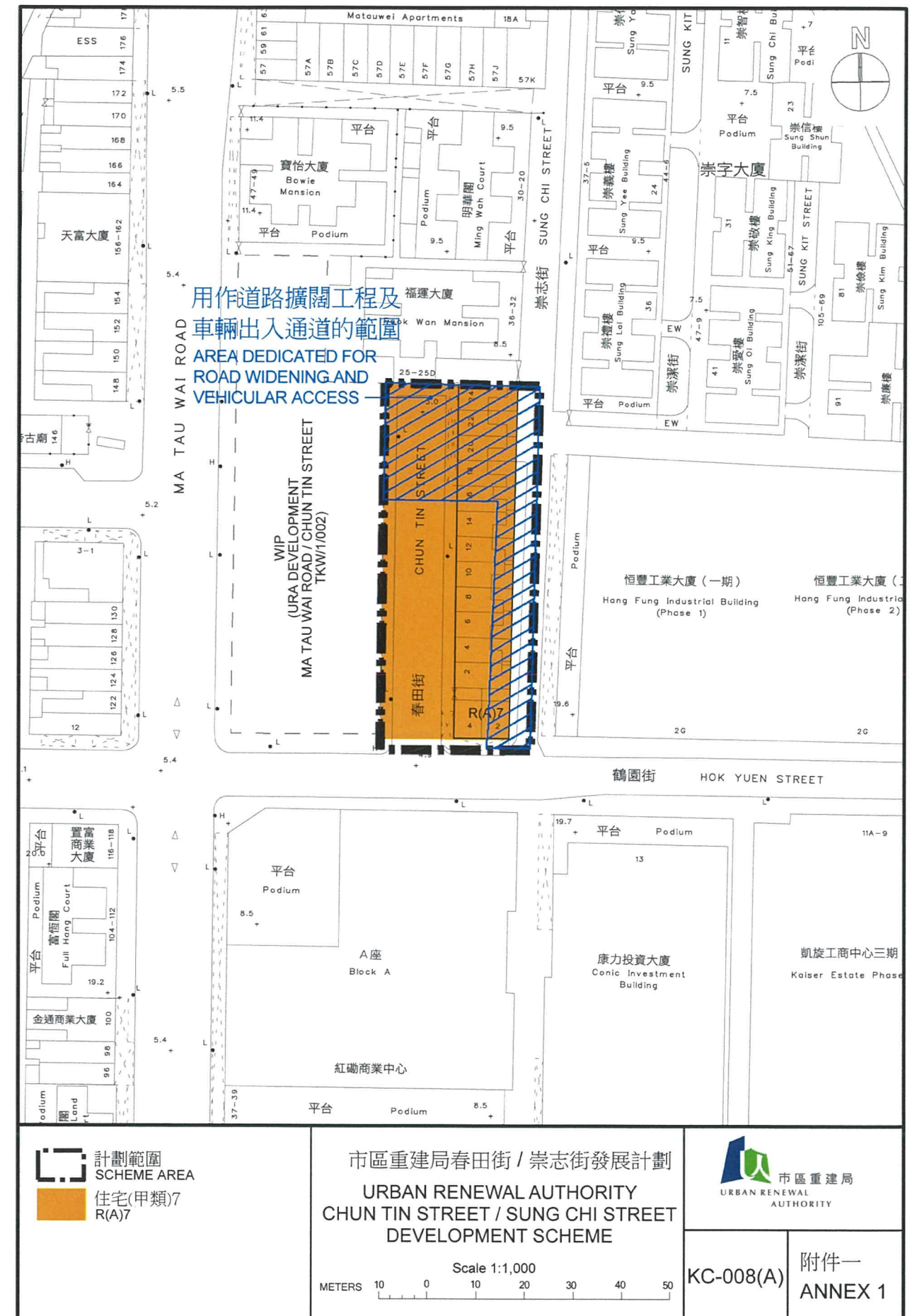


Scheme may be offered an ex-gratia allowance to assist in their business relocation.

- 8.5 The URA may implement the Development Scheme on its own or in association with one or more joint venture partners.

TOWN PLANNING BOARD  
MAY 2016

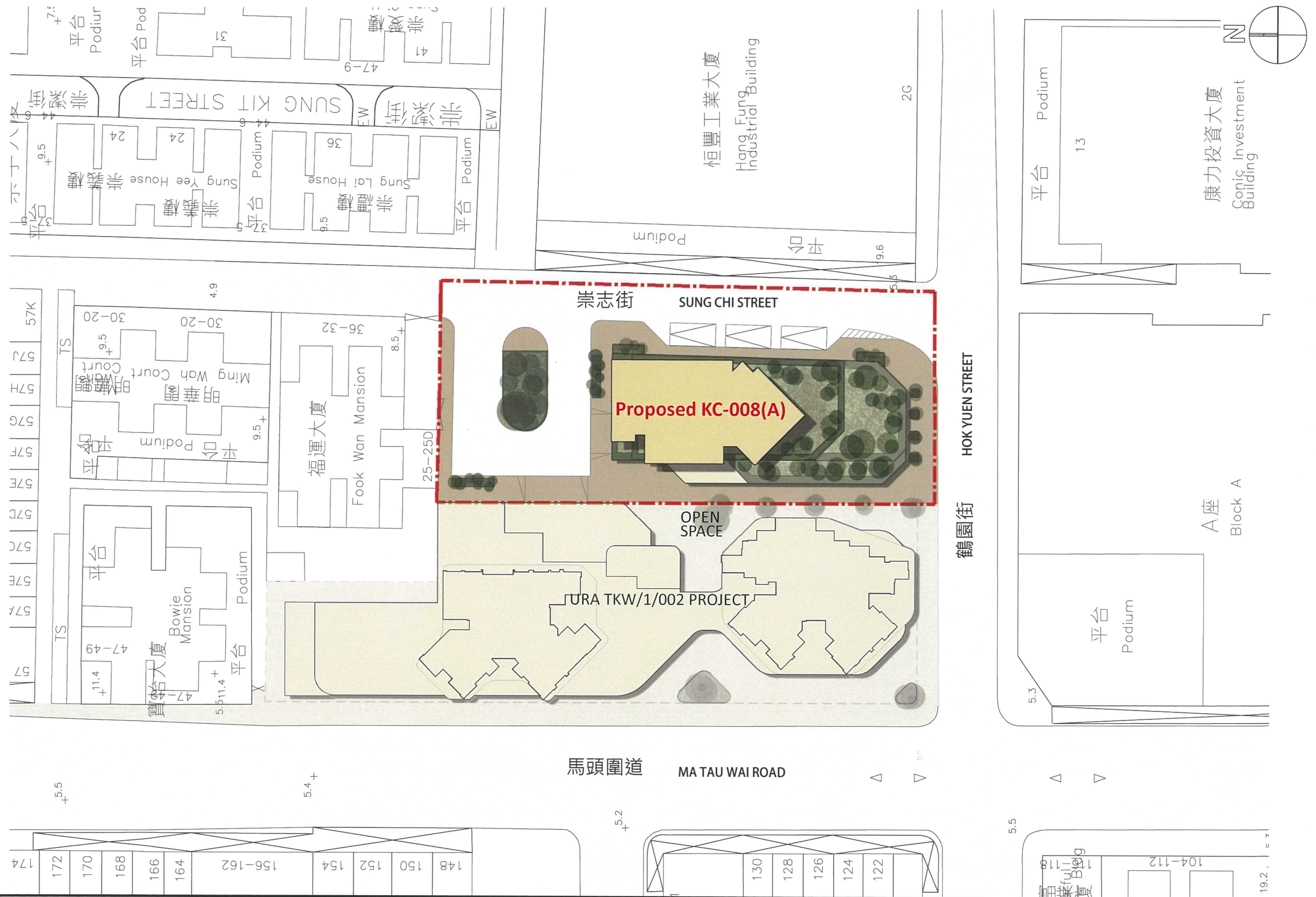
# 附件一 Annex 1



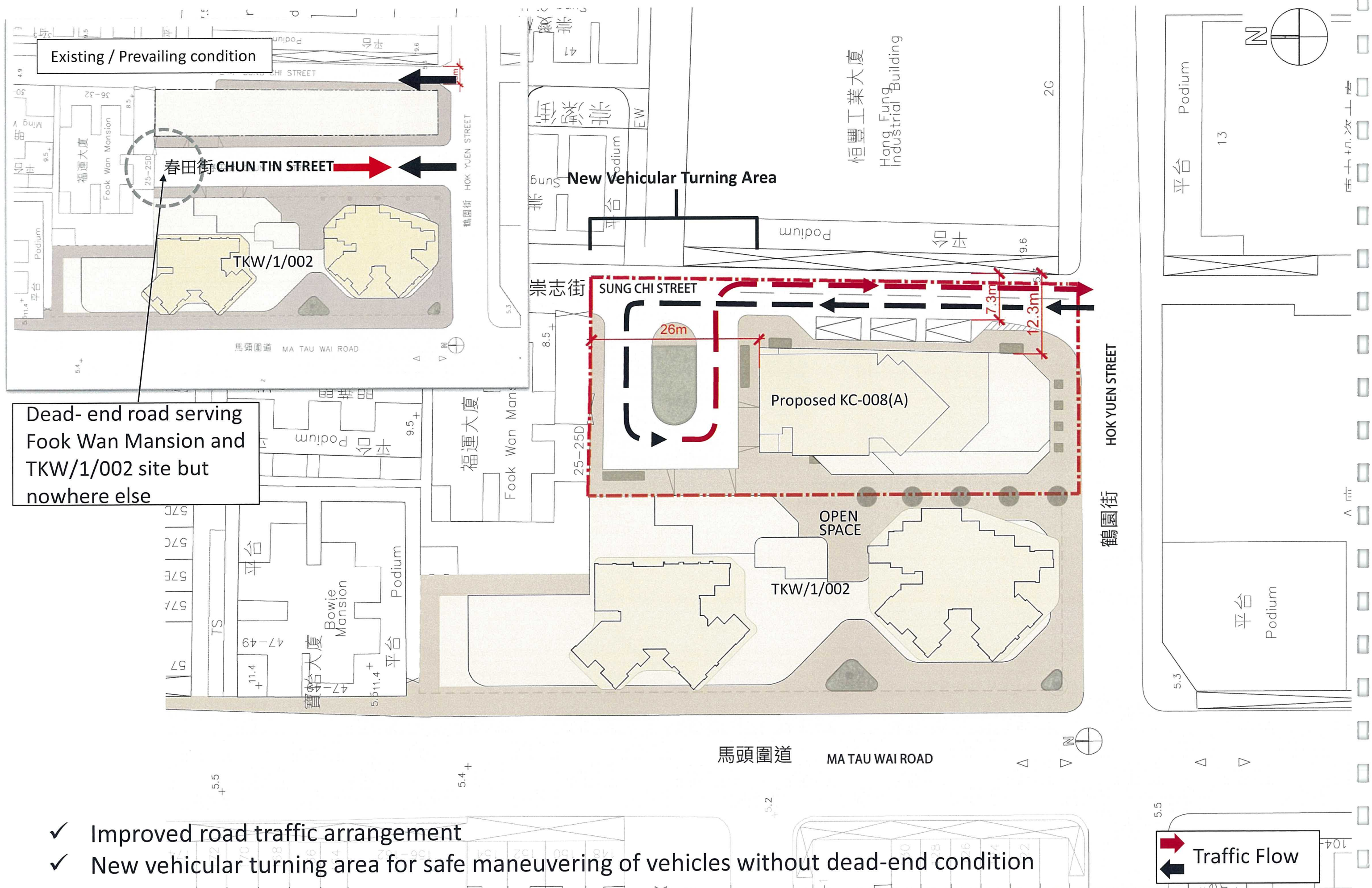
## **PART 3      SUPPLEMENTARY INFORMATION**

Appendix 1      Preliminary Design







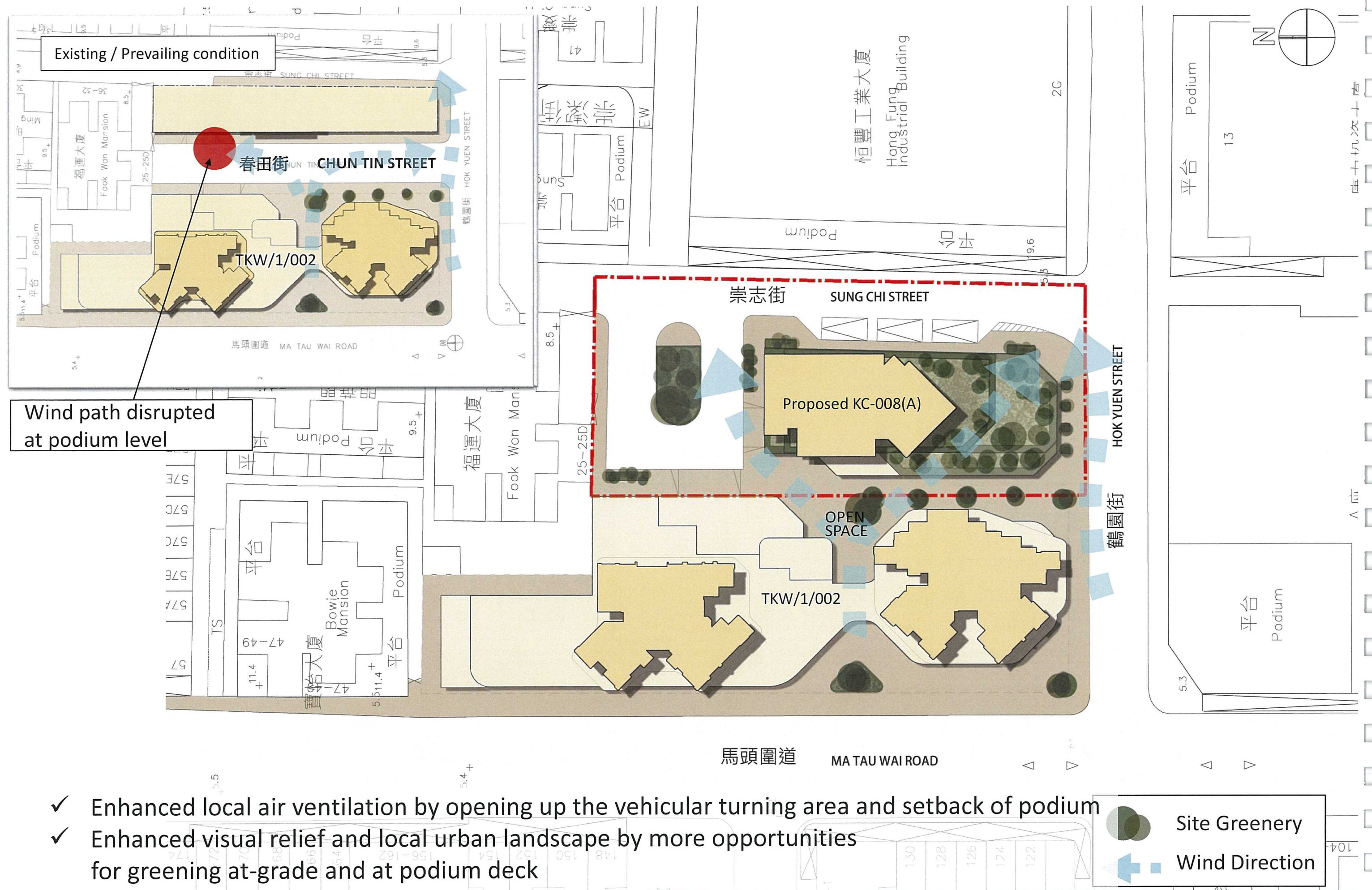


- ✓ Improved road traffic arrangement
- ✓ New vehicular turning area for safe maneuvering of vehicles without dead-end condition



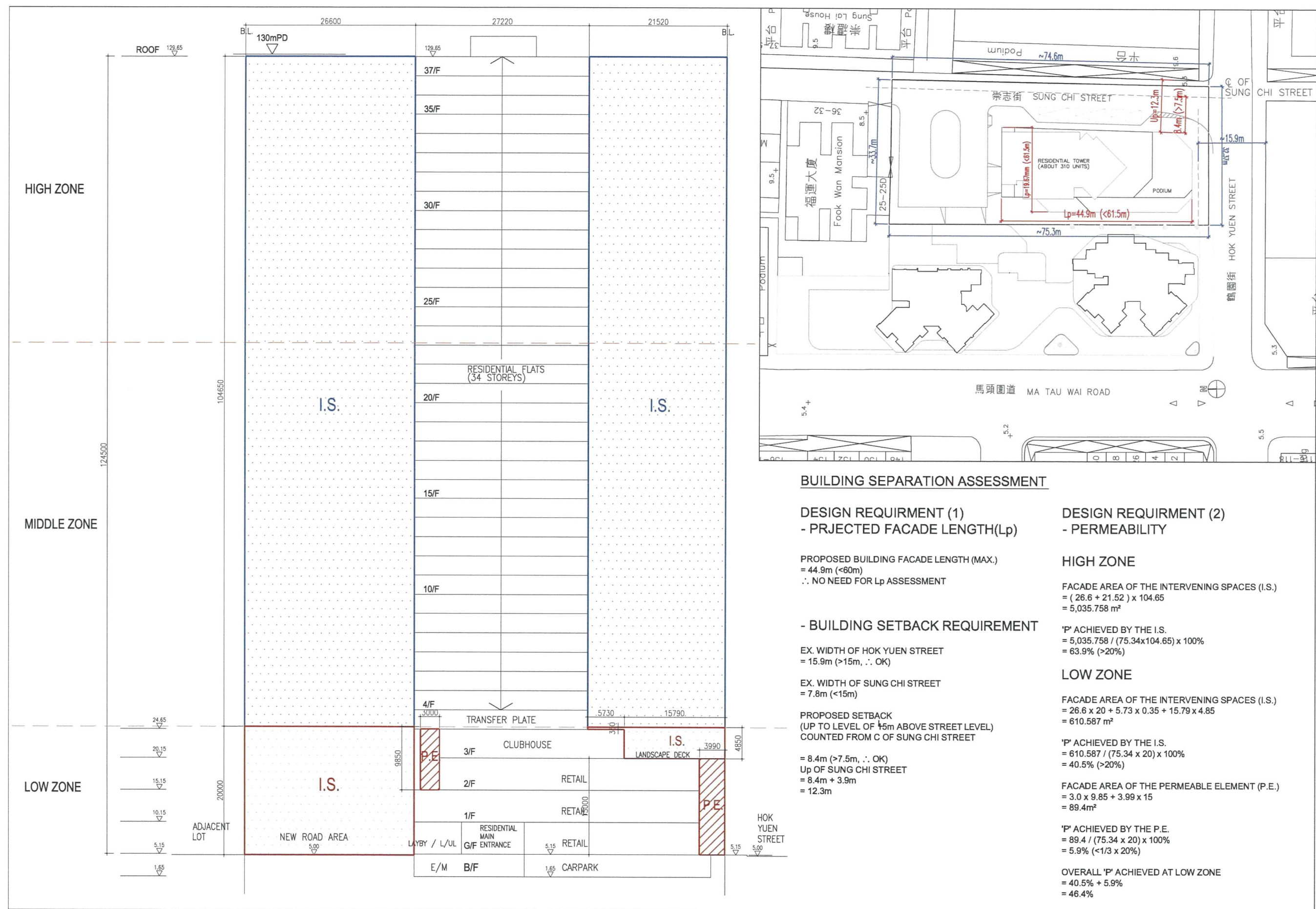




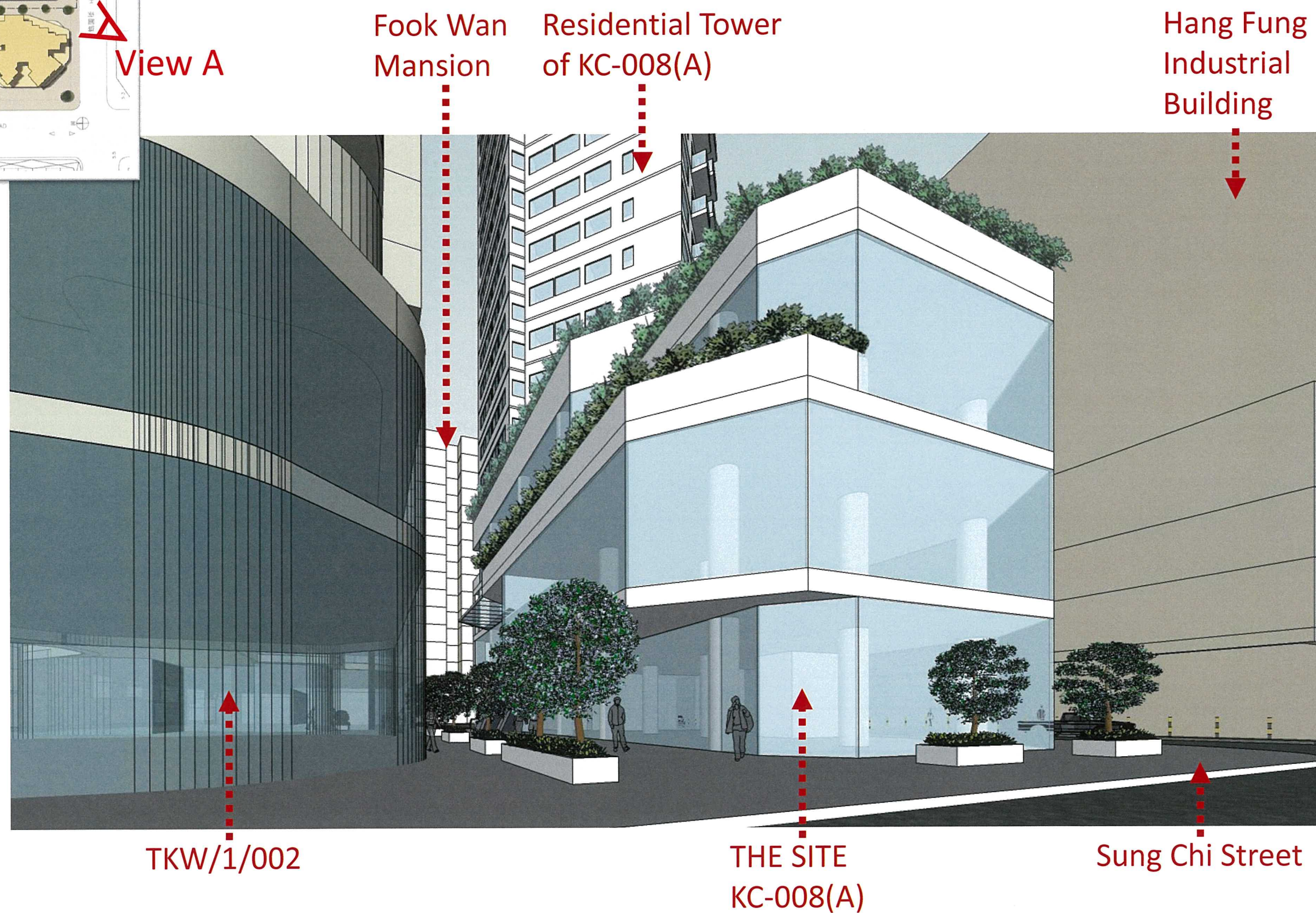


- ✓ Enhanced local air ventilation by opening up the vehicular turning area and setback of podium
- ✓ Enhanced visual relief and local urban landscape by more opportunities for greening at-grade and at podium deck











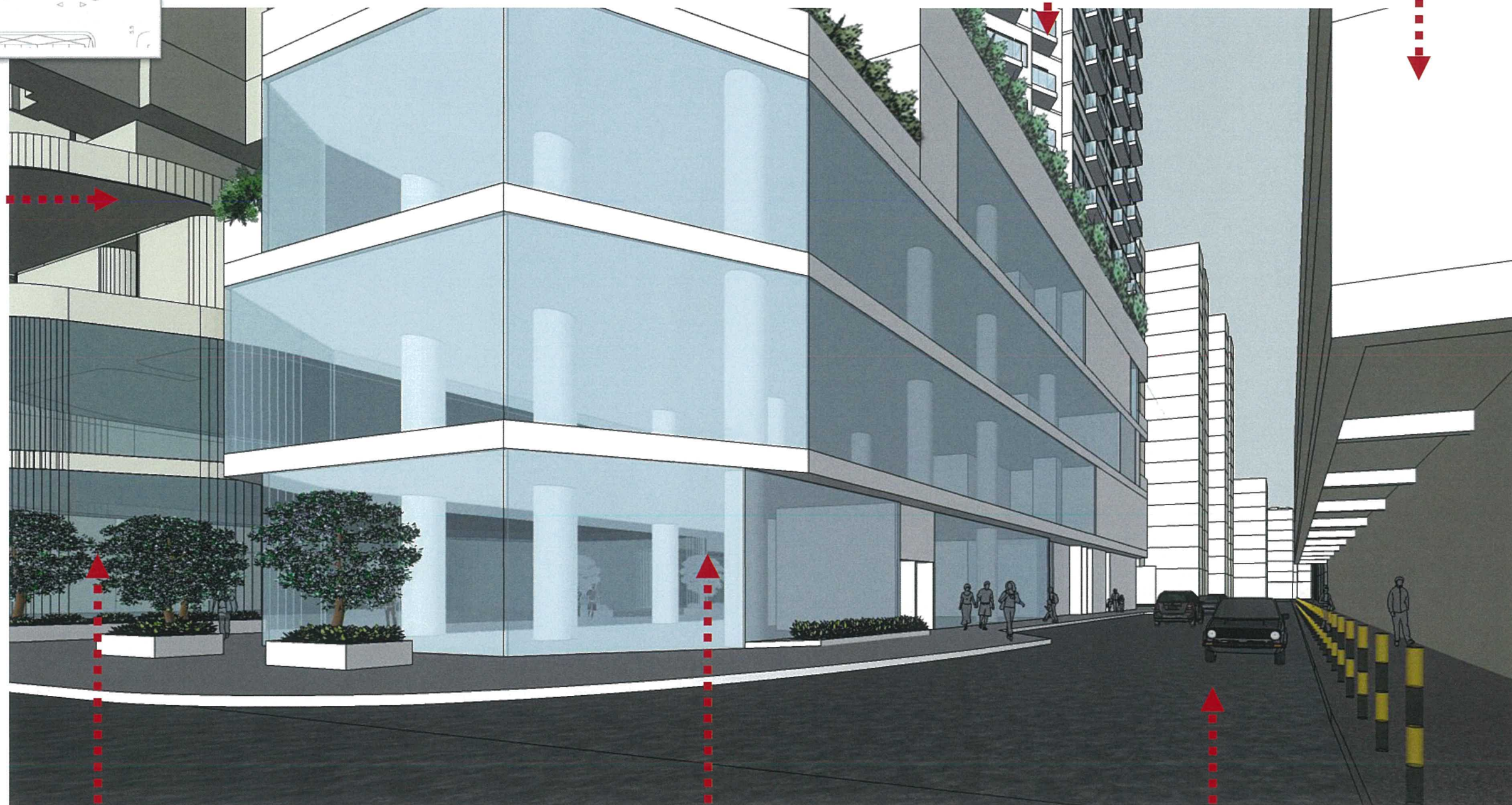


View B

Residential Tower  
of TKW/1/002

Residential Tower  
of KC-008(A)

Hang Fung  
Industrial  
Building

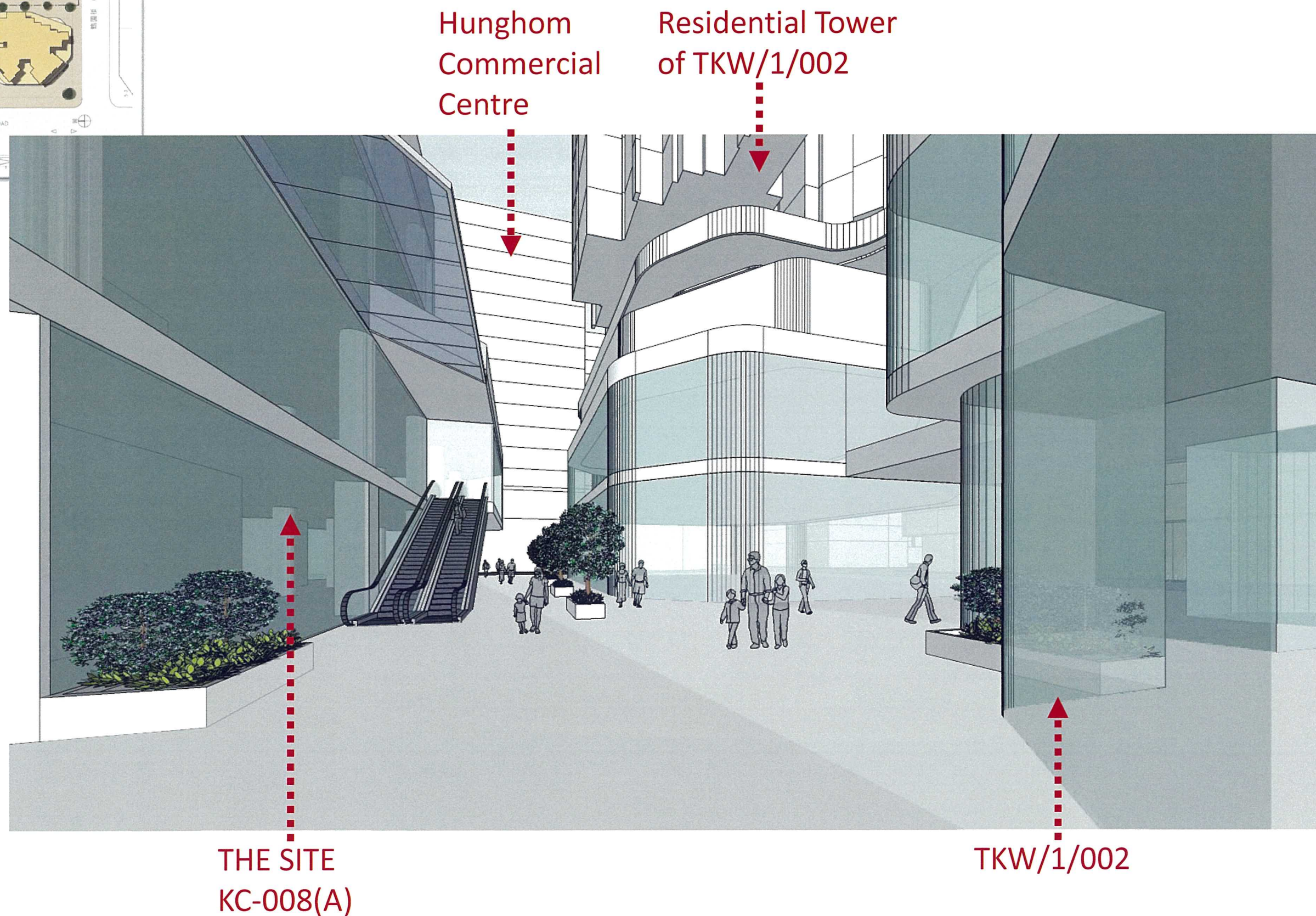
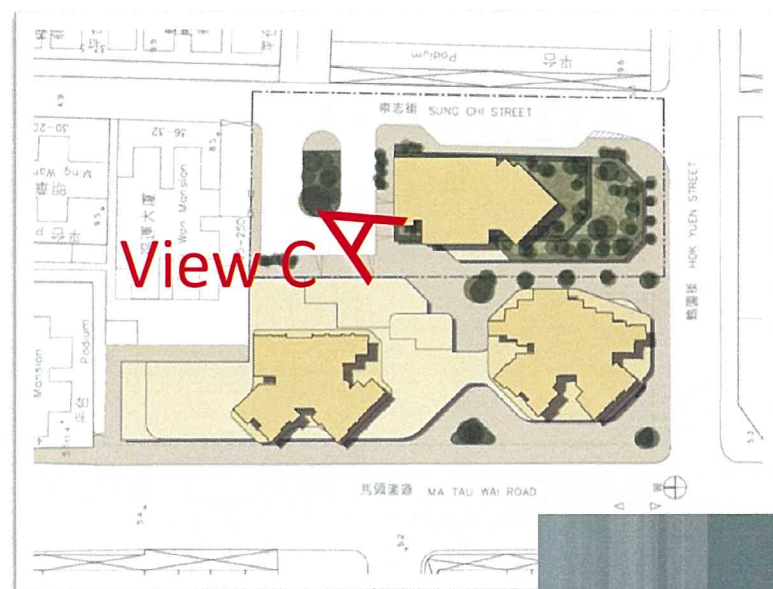


TKW/1/002

THE SITE  
KC-008(A)

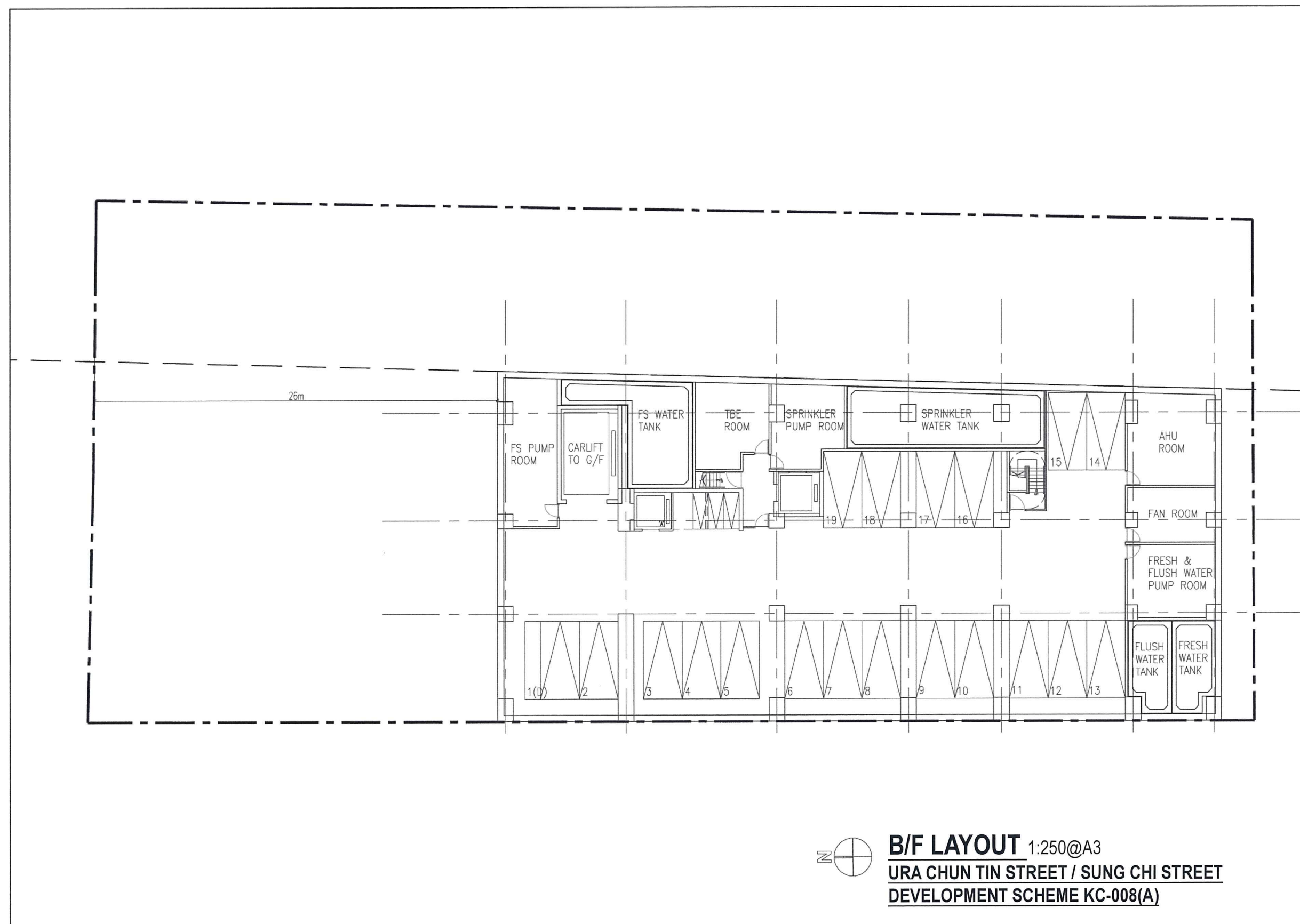
Sung Chi Street



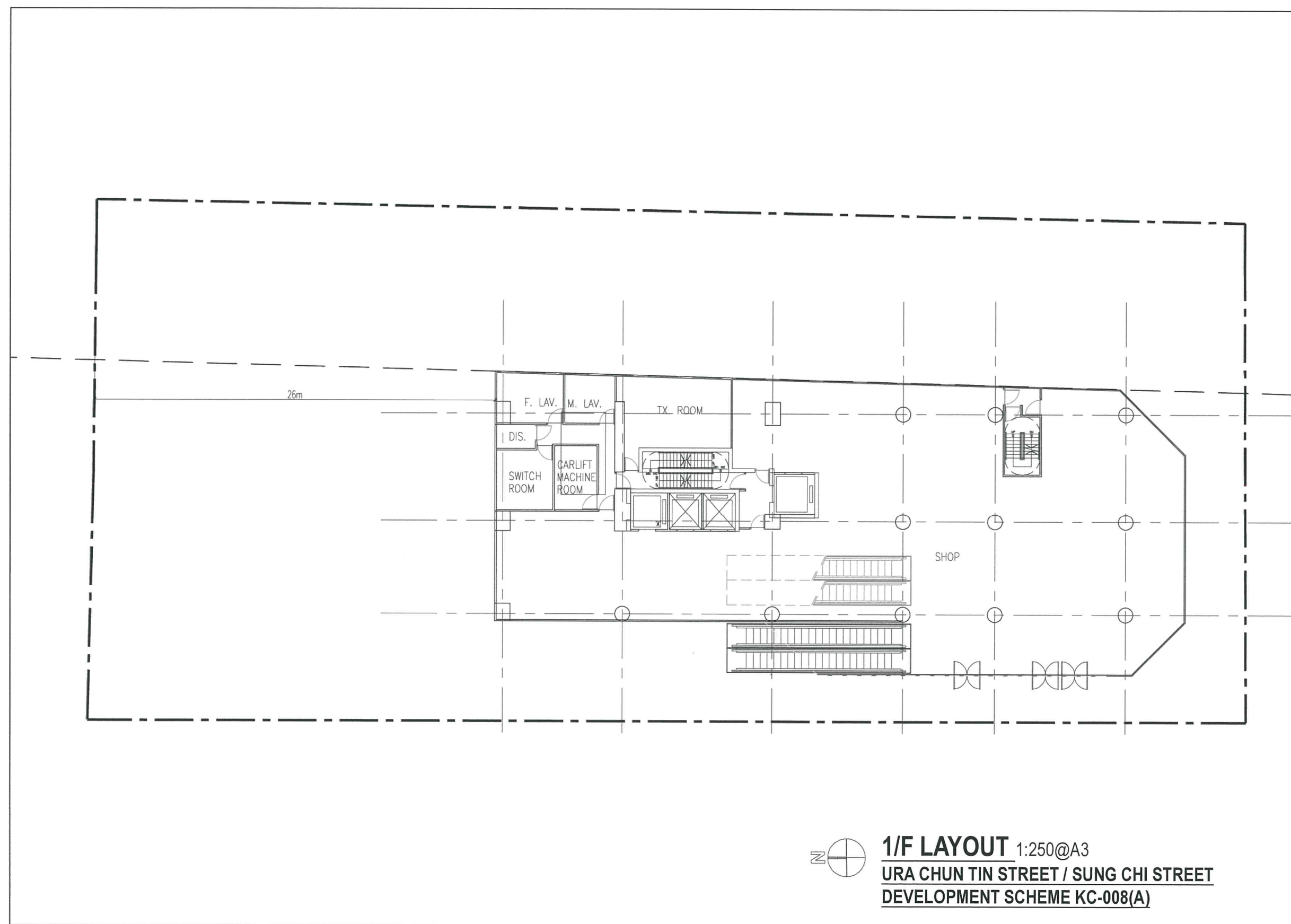


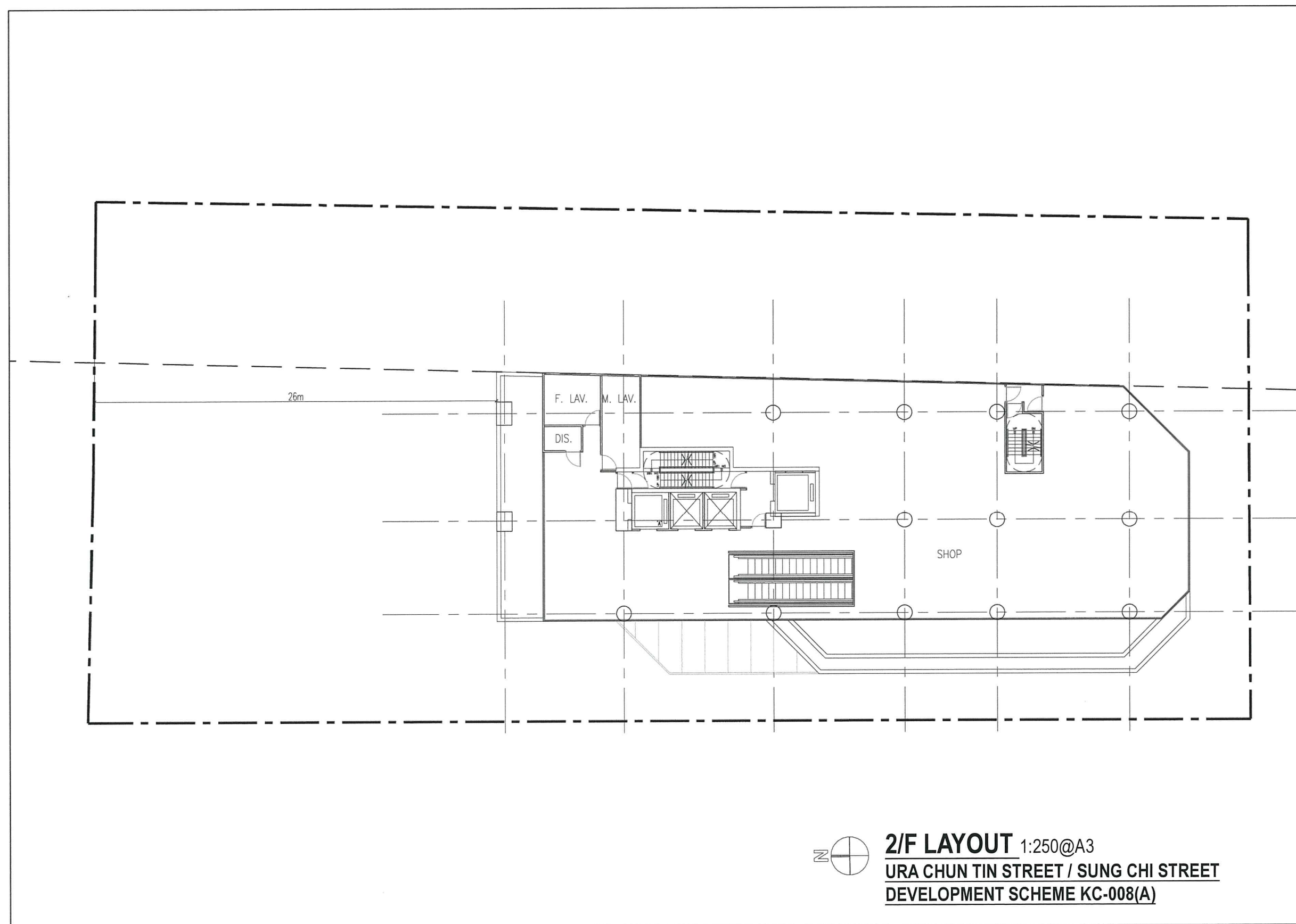


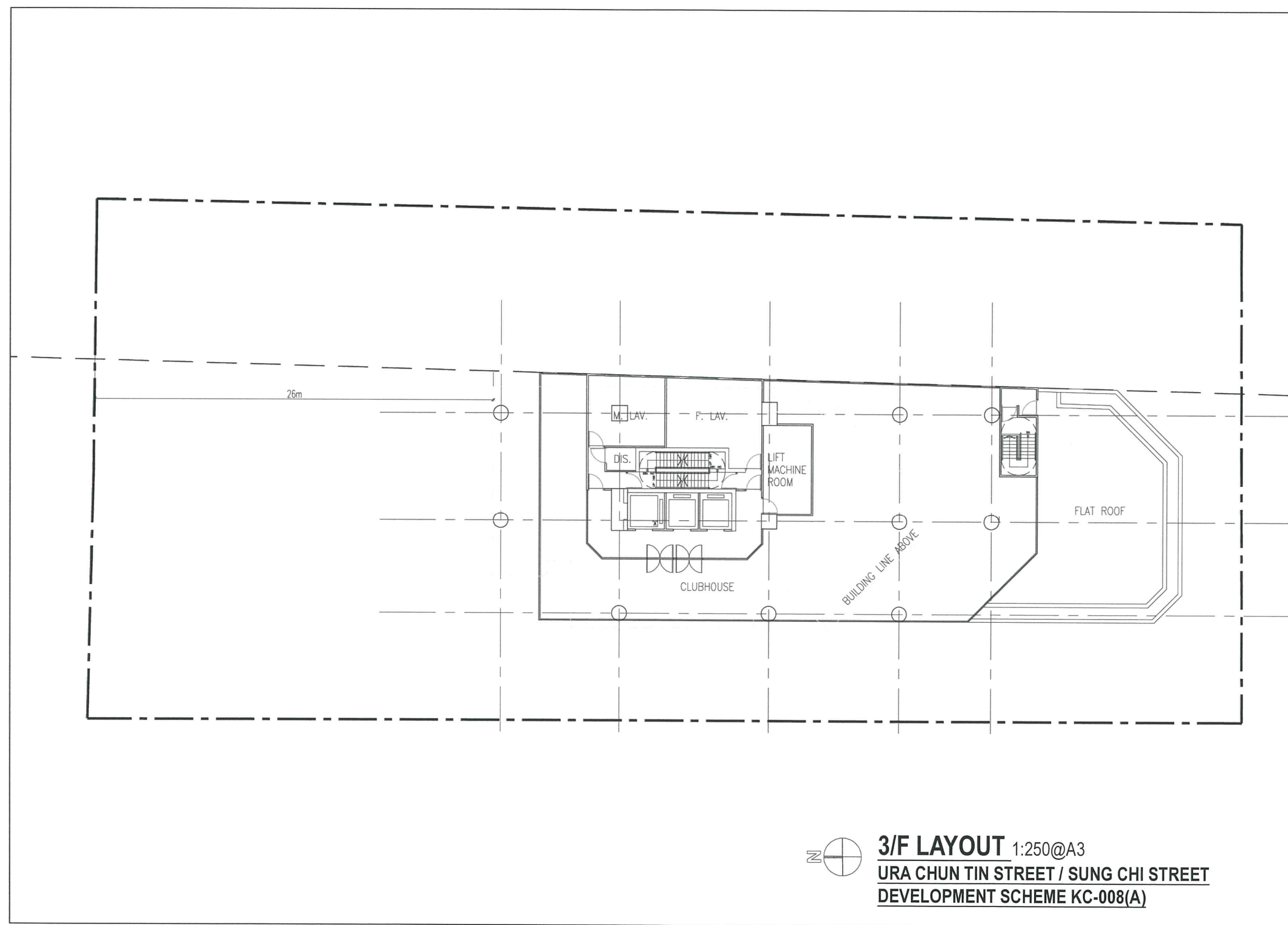


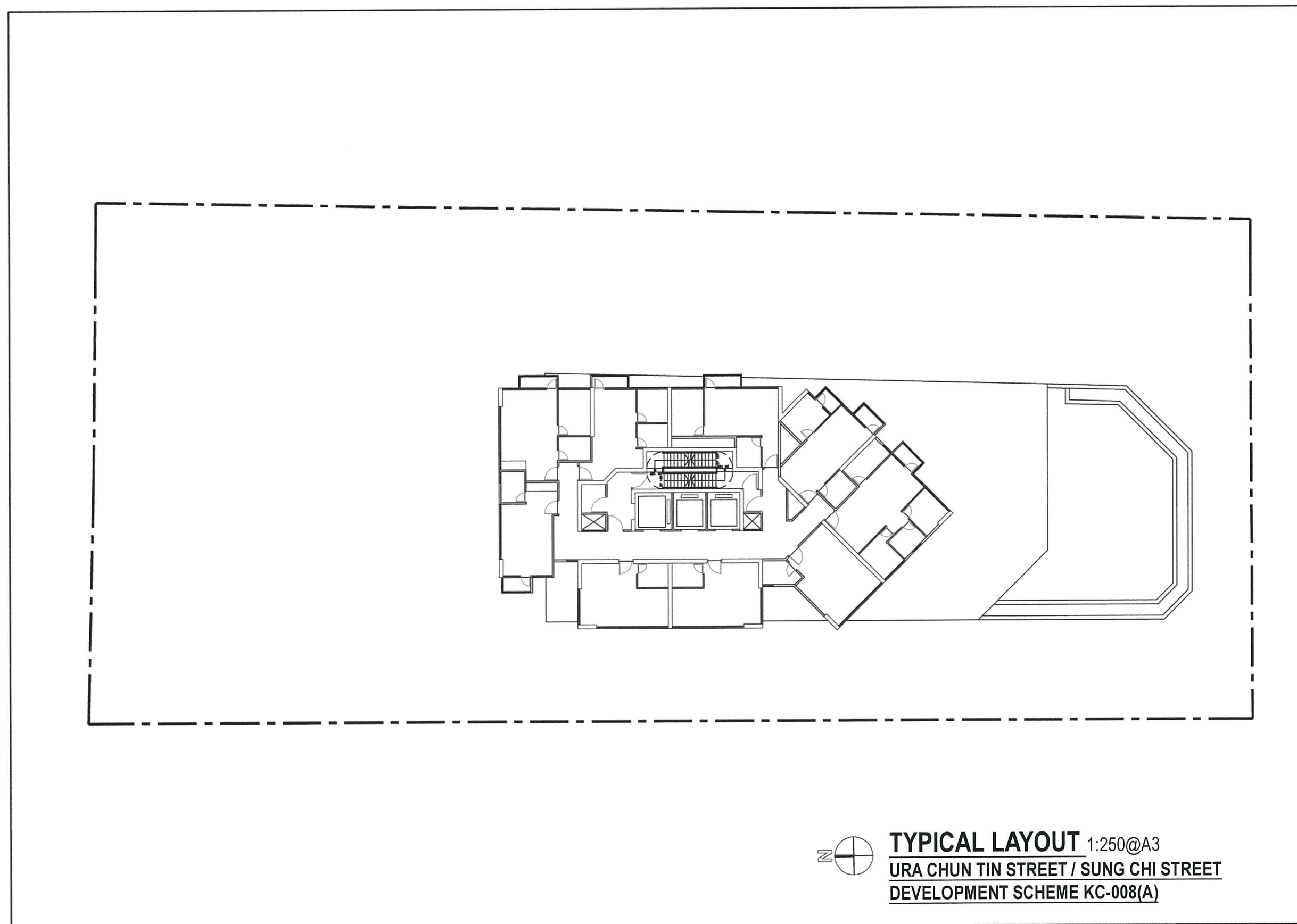




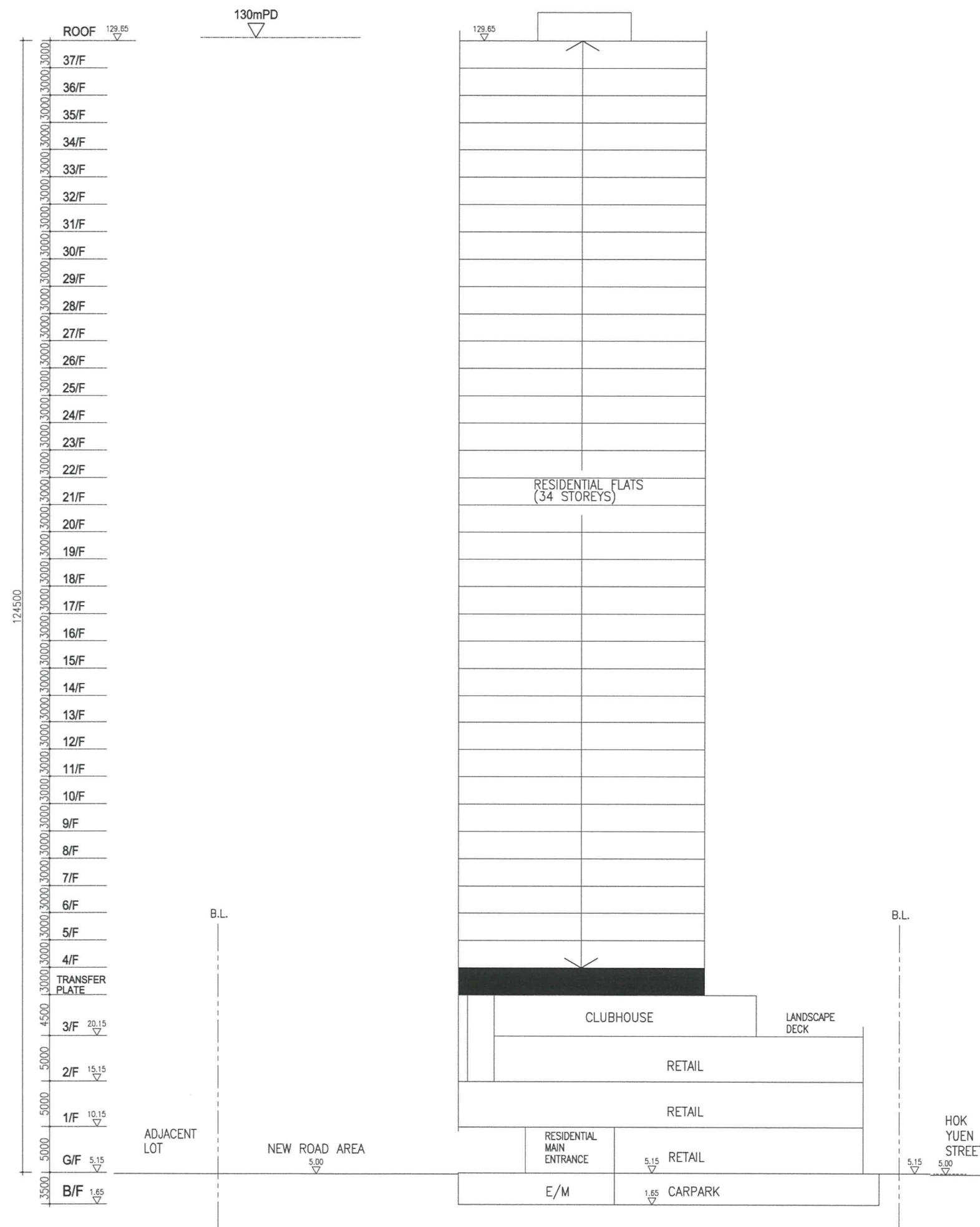












**SCHEMATIC SECTION** 1:500@A3  
**URA CHUN TIN STREET / SUNG CHI STREET**  
**DEVELOPMENT SCHEME KC-008(A)**

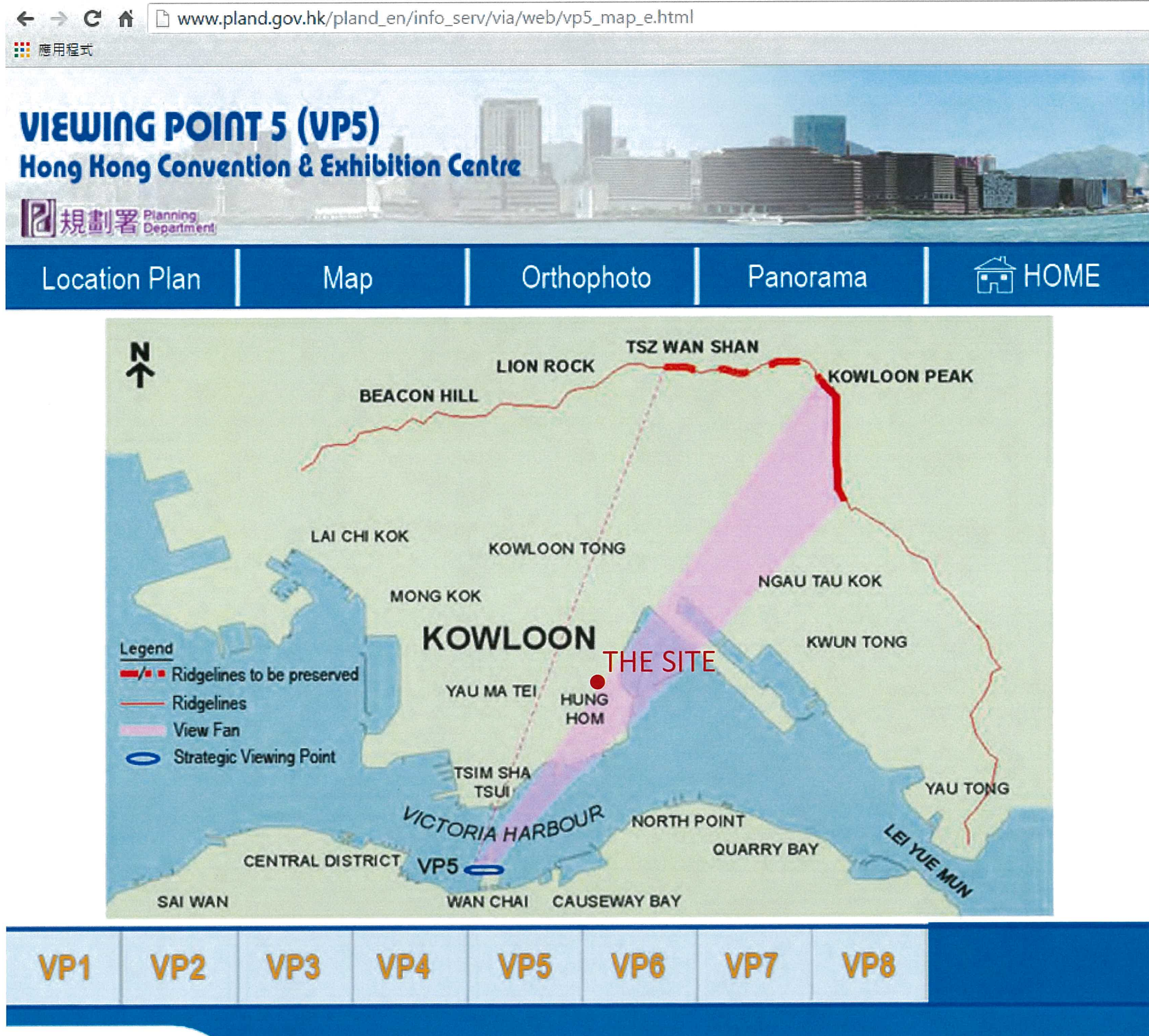
## **PART 3      SUPPLEMENTARY INFORMATION**

Appendix 2      Visual Appraisal





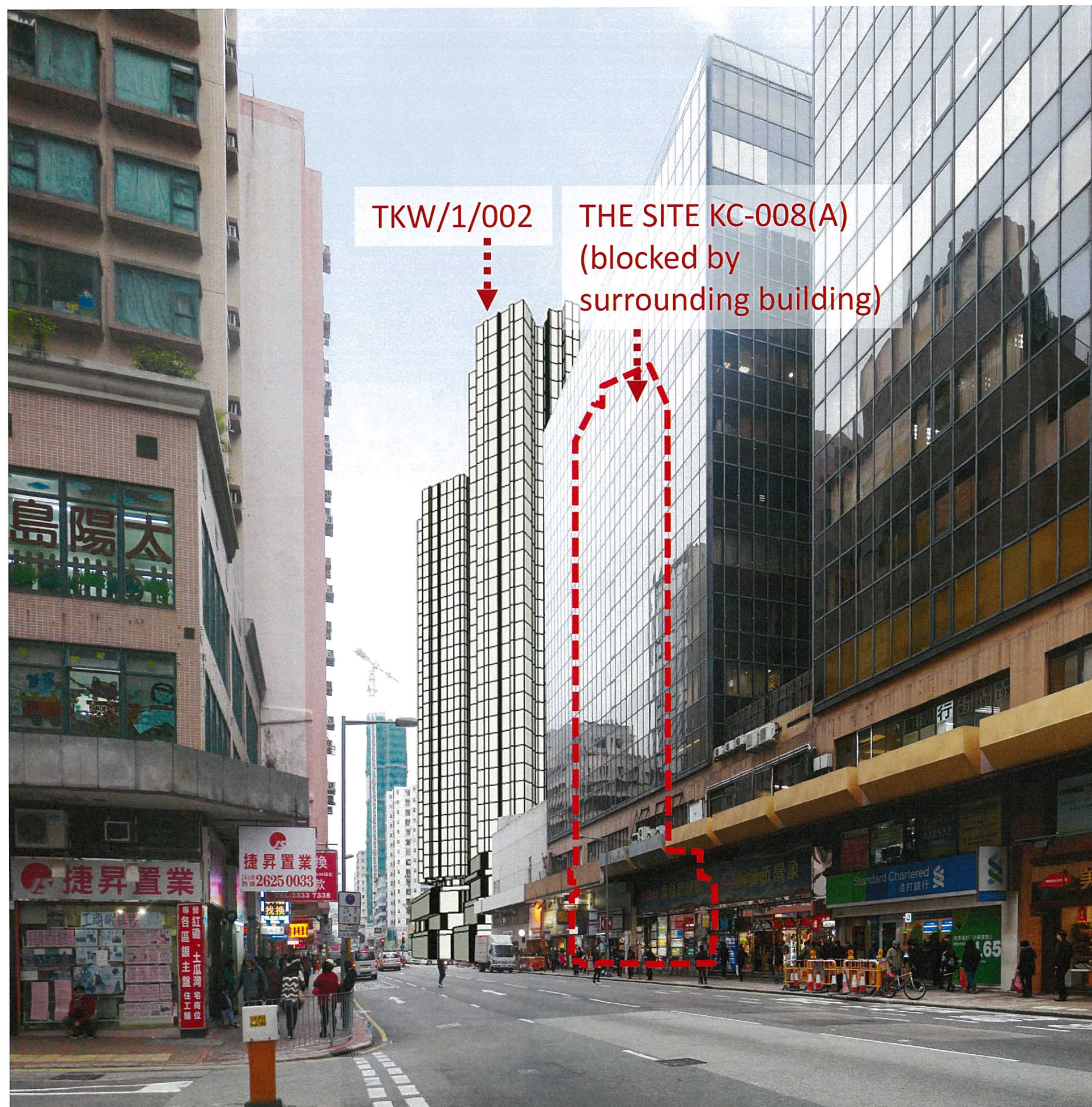
















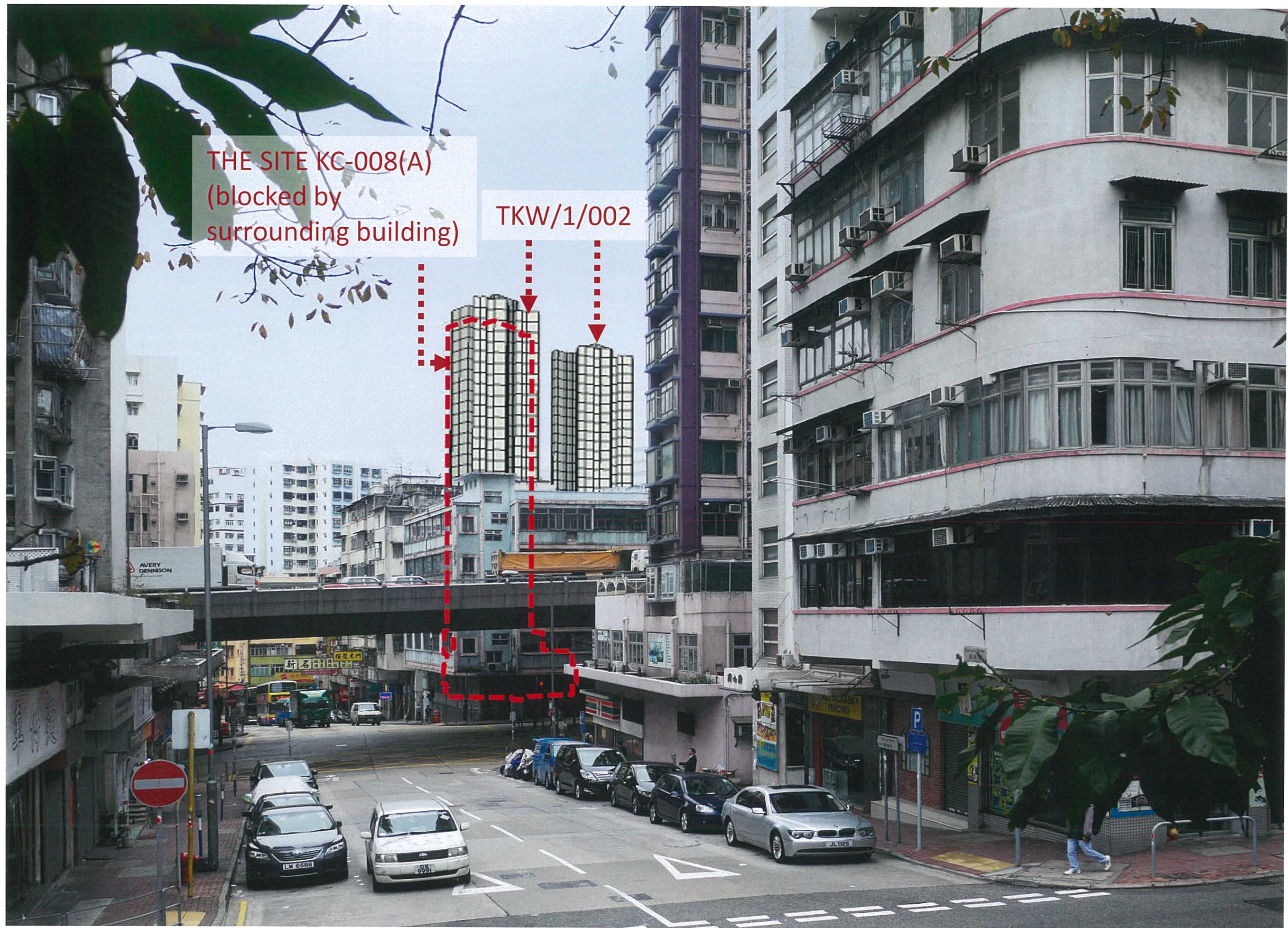




THE SITE KC-008(A)  
(blocked by  
surrounding building)

TKW/1/002







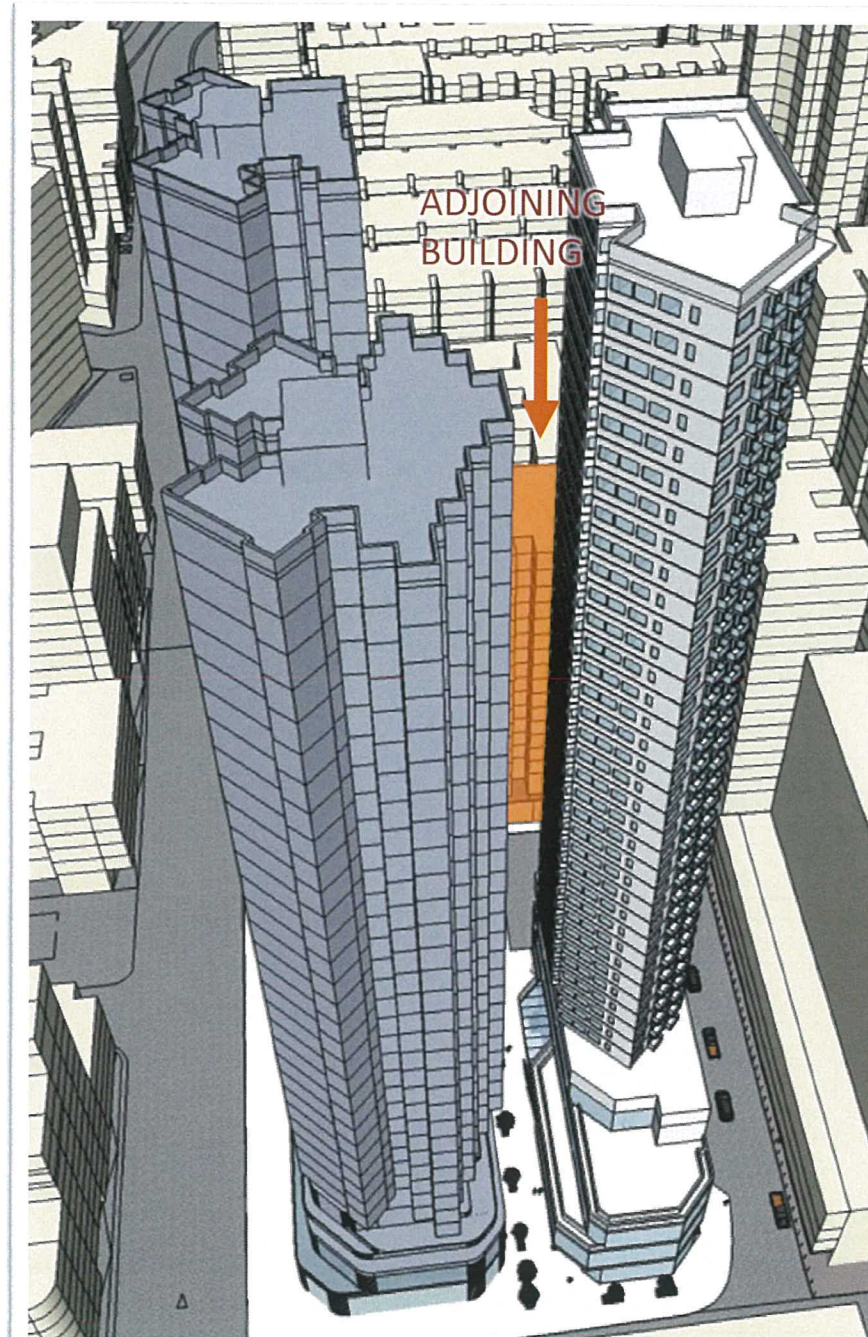






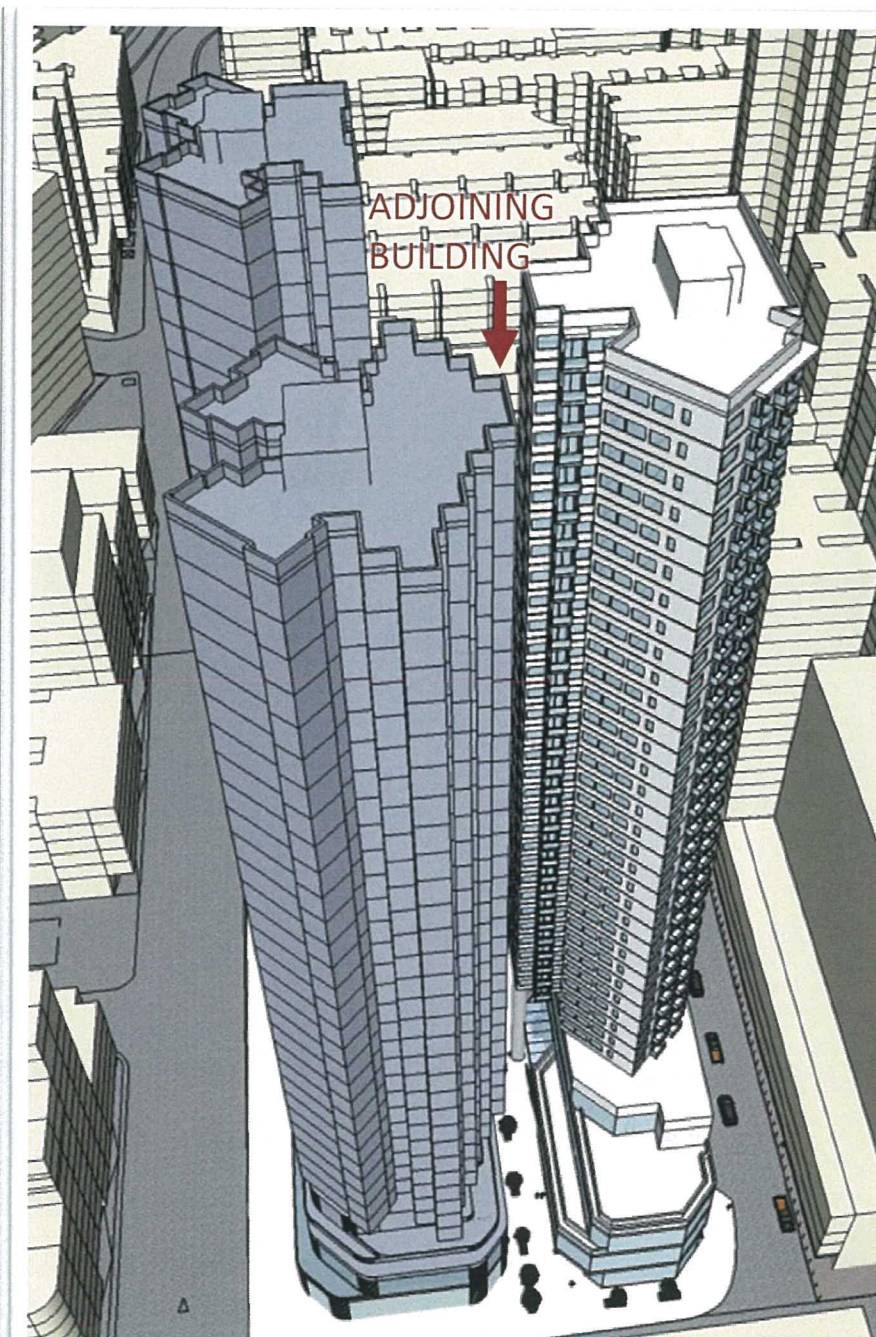
## 130mPD

- Slimmer building block
- Facilitate visual & ventilation corridor between towers
- Enhance at grade passageway

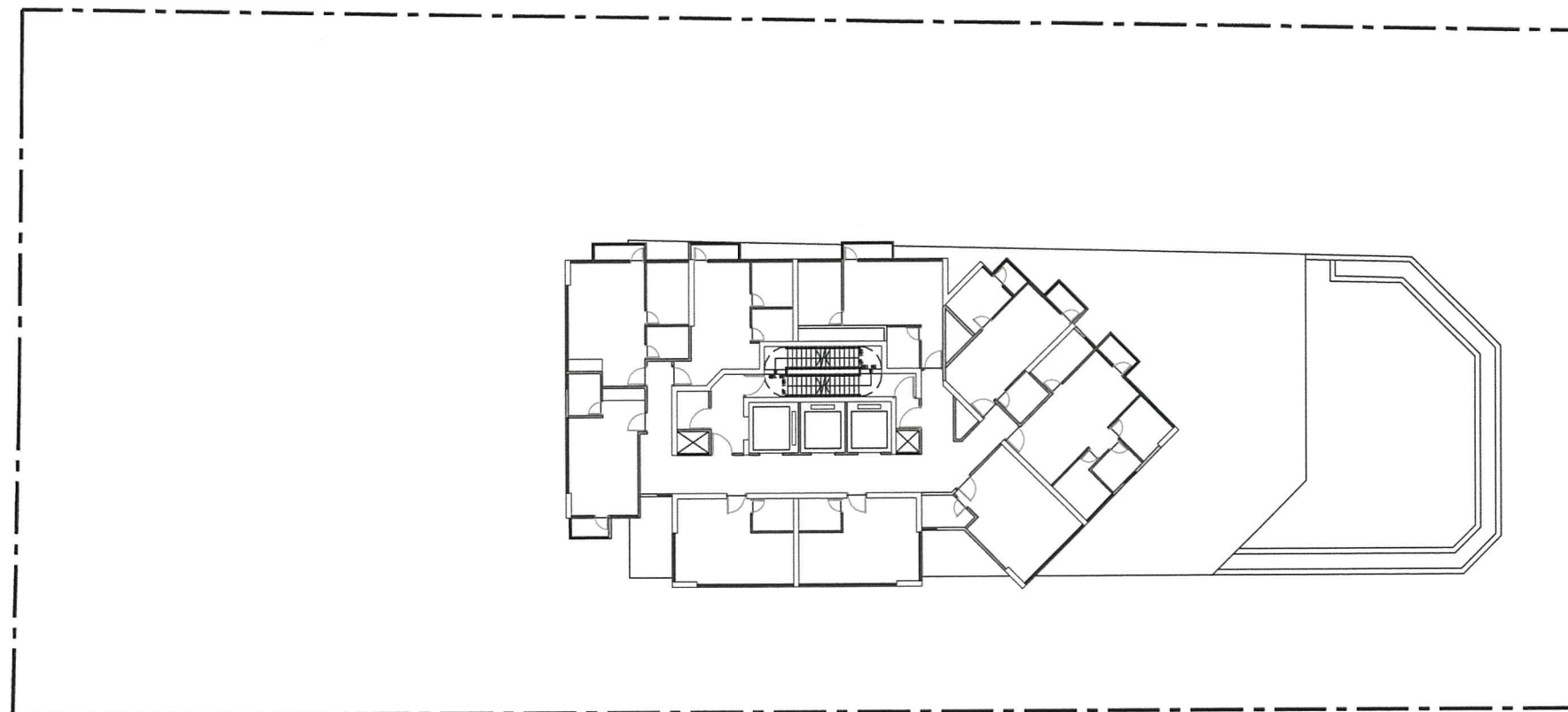


## 120mPD

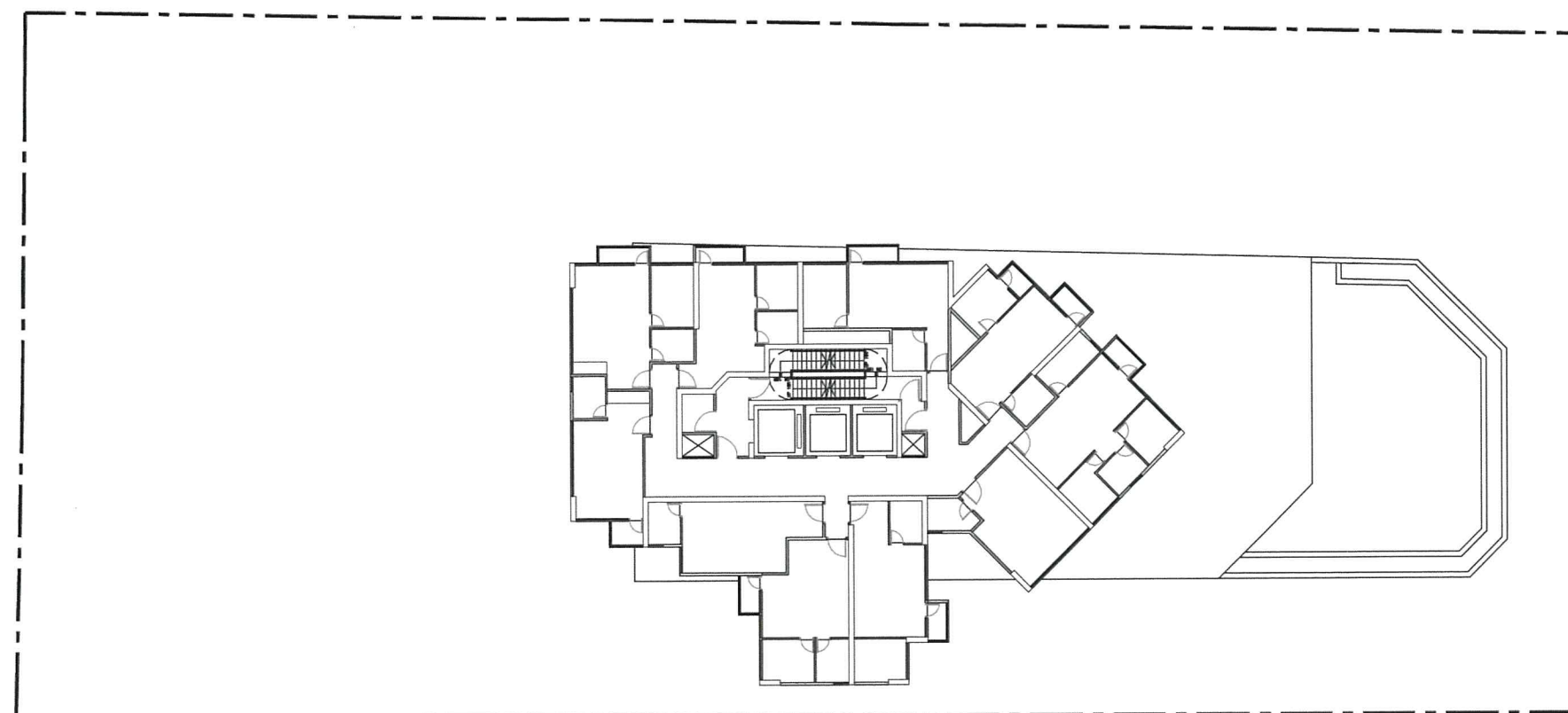
- Building block closer to adjacent towers reduced the separation gap between towers
- Building block will overcast and reduce ground floor space for passageway







**Notional layout for 130mPD option  
(9 units per floor, 34 storeys)**



**Notional layout for 120mPD option  
(10 units per floor, 31 storeys)**



## **PART 3      SUPPLEMENTARY INFORMATION**

Appendix 3      Traffic Impact Assessment Report



**CKM ASIA LIMITED 陳錦敏亞洲有限公司**

Traffic and Transportation Planning Consultants 交通及運輸策劃顧問

Our Ref: J6473/4

24 March 2016

Transport Department  
Urban Regional Office  
Traffic Engineering (Kln.) Division  
Kln. District Central Section  
8/F, Mongkok Government Offices  
30 Luen Wan Street, Kowloon

Attn: Ms. LEE Wing Chee, Joyce (Engr/Hung Hom)  
(BY POST)

Dear Ms. Lee,

**密 件**  
**CONFIDENTIAL**

**URA Chun Tin Street / Sung Chi Street Development Scheme (KC-008(A))**  
**Kowloon City, Kowloon**  
**Final Traffic Impact Assessment Report**

We refer to the captioned project and thank you for your comments via your letter dated 18 March 2016 on the Revised Draft Traffic Impact Assessment (TIA) Report we submitted earlier.

To address your comments, we provided supplementary information to your good self via our e-mails dated 18 and 21 March 2016 respectively. We noted via our subsequent phone conversation that you have no comment on our responses initially.

In view of that, we are pleased to submit herewith the Final TIA Report (March 2016) (Ref.: J6473\_TIA\_FR\_R1), which has incorporated your comments and our responses, for your retention. For your information, the said Final TIA Report will form part of the draft Development Scheme Plan submission of the captioned project by Urban Renewal Authority to the Town Planning Board for consideration later.

Should you have any queries, please do not hesitate to contact the undersigned.

Thank you for your attention.

Yours sincerely,

CHIN Kim Meng  
Director

Encl. 1 report  
cc: URA – (w/e by post, w/o encl. by e-mails)

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P.001/001



**運輸署**  
**Transport Department**

**CONFIDENTIAL**

By Fax 2528 6343

本署檔號 Our Ref.: ( ) in TD KR 182/111-1C  
來函檔號 Your Ref.: J6473/3  
電話 Tel.: 2399 2504

18 March 2016

CKM Asia Limited  
21st Floor, Methodist House  
36 Hennessy Road  
Wanchai  
Hong Kong  
(Attn: Mr. Chin Kim Meng)

Dear Mr. Chin,

**URA Chun Tin Street/Sung Chi Street Development Scheme (KC-008A)**  
**Draft Traffic Impact Assessment Report**

I have no adverse comment on the draft traffic impact assessment report. I understand that the adequacy of the turning area for HGV has been checked. Please ensure that the swept path analysis is included in the report.

Yours faithfully

(Joyce W. C. LEE)  
for Commissioner for Transport

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TOTAL P.001

URA Chun Tin Street / Sung Chi Street  
Development Scheme (KC-008(A))  
Kowloon City, Kowloon

Traffic Impact Assessment  
Final Report  
(March 2016)

密 件  
CONFIDENTIAL

Prepared by: CKM Asia Limited  
Prepared for: Urban Renewal Authority

URA Chun Tin Street / Sung Chi Street Development Scheme (KC-008(A))		
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URA Chun Tin Street / Sung Chi Street Development Scheme  
(KC-008(A))

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**URA Chun Tin Street / Sung Chi Street Development Scheme  
(KC-008(A))**

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## 1.0 INTRODUCTION

### Background

- 1.1 The subject site comprises the buildings located at 2-4 Hok Yuen Street and 2-24 Chun Tin Street (even numbers) and the existing Chun Tin Street in Kowloon City. The site is zoned "Residential (Group A)" and "Road" in the Outline Zoning Plan ("OZP"). Figure 1.1 shows the location of the subject site.
- 1.2 In order to improve the living environment, the Urban Renewal Authority ("URA") has the intention to commence the Chun Tin Street / Sung Chi Street Development Scheme (the "Project") under section 25 of the Urban Renewal Authority Ordinance ("URAO") to:
- redevelop the subject site into residential development with some retail use;
  - close Chun Tin Street and provide a new turning area; and
  - widen Sung Chi Street.
- 1.3 CKM Asia Limited, a traffic and transportation planning consultancy firm (the "Traffic Consultant"), was commissioned by the URA to conduct a traffic impact assessment ("TIA") to support the submission of a draft Development Scheme Plan ("DSP") of the Project to the Town Planning Board ("TPB") for approval as required under section 25 of the URAO. This report describes the TIA undertaken.
- 1.4 With respect to the traffic considerations, a meeting was held among Transport Department ("TD"), URA and CKM on 21 December 2015. Based on the notional design of the development, the draft version of the TIA report (which demonstrated the technical concerns, requirements for the development on the subject site, proposed provision of internal transport facilities and traffic arrangement of the Project) was submitted to TD for initial comment on 17 February 2016. It is noted that TD has no adverse comment on the draft TIA report (refer to TD's letter dated 18 March 2016 (Ref.: TD KR 182/111-1C)). The correspondences of the discussion with TD, submission of draft TIA report and follow-up materials are enclosed in Appendix 1.

### Scope of Study

- 1.5 The main objectives of this TIA are as follows:
- to assess the existing traffic issues in the vicinity of the Project;
  - to quantify the amount of traffic generated by the Project;
  - to ensure adequate provision and geometry for the internal transport facilities; and
  - to examine the traffic impact of the Project on the local road network.

### Structure of the Report

- 1.6 After this introduction, the remaining chapters contain the followings:
- |               |   |   |
|---------------|---|---|
| Chapter Two   | - | Describes the existing situation;         |
| Chapter Three | - | Outlines the Project;                     |
| Chapter Four  | - | Presents the traffic impact analysis; and |
| Chapter Five  | - | Gives the overall conclusion.             |

## 2.0 THE EXISTING SITUATION

### The Subject Site

- 2.1 The subject site (including both the old residential buildings and Chun Tin Street) fronts onto Hok Yuen Street to the south and Sung Chi Street to the east. To the north is a residential building, which is known as the Fook Wan Mansion. The old residential building within the subject site are mainly residential use on the upper floors with shops on the ground floor (with re-cycle material collection shop, vehicle repairing workshop, etc.), and no parking facility. The condition of the existing building is poor and exhibits signs of lacking proper maintenance.
- 2.2 The old buildings of the approved URA Ma Tau Wai Road Project (TKW/1/002), which is located to the west of the subject site, have been demolished and redevelopment is on-going for residential development on top of a 3-storey commercial podium.

### Road Network

- 2.3 Ma Tau Wai Road is a district distributor; which is of single carriageway standard with 4 – 6 lanes. It is a major road in the area and provides easy access to the rest of Hong Kong.
- 2.4 Hok Yuen Street is a local distributor, which connects Chatham Road North to the west and its junction with Hok Yuen Street East / Man Lok Street / Sung On Street to the east. The section of this road along the south boundary of the subject site is one-way eastbound. On-street lay-bys are provided at the northern and southern side of this road.
- 2.5 Chun Tin Street is a cul-de-sac, which serves only Fook Wan Mansion at its end and the old buildings located alongside including those within the subject site and the old residential buildings on the west side which are already demolished for redevelopment. There are 12 on-street metered car parking spaces and 2 nos. 10m-long (approximate) loading/unloading lay-bys. A 10m long section (approximate) of Chun Tin Street at its junction with Hok Yuen Street is two-way. Due to provision of the metered car parking spaces and loading/unloading lay-bys, the remaining section of this road operates as a one-lane 2-way road. Such setting has incurred congestion and safety problems affecting not only the buildings alongside but also other passers-by.
- 2.6 Sung Chi Street is around 5m wide and is a one-way northbound road, which connects Hok Yuen Street to the south and Bailey Street to the north. Vehicle parking is often found along this road.

- 2.7 Details of the road network in vicinity of the subject site are presented in Figure 2.1.

### Existing Traffic Flows

- 2.8 To quantify the existing traffic flows in the study area, manual classified counts were conducted during the AM and PM peak periods on Wednesday, 9 September 2015 at the junctions which are located in vicinity of the subject site. The surveyed junctions include:
- Ma Tau Wai Road / Bailey Street / Gilles Avenue North;
  - Ma Tau Wai Road / Hok Yuen Street;



3. Hok Yuen Street / Chun Tin Street;
4. Hok Yuen Street / Hok Yuen Street East / Man Lok Street / Sung On Street;
5. Bailey Street / Sung Chi Street / Wan On Street; and
6. Bailey Street / Sung On Street.

2.9 The locations of these junctions are shown in Figure 2.2; and their layouts are shown in Figures 2.3 - 2.8 respectively.

2.10 The traffic counts are classified by vehicle type to enable traffic flows in passenger car units (pcu) be calculated. The AM and PM peak hours identified from the surveys are found to be between 0800 - 0900 hours and 1700 - 1800 hours respectively, and the observed AM and PM peak hour traffic flows in pcu/hour are presented in Figure 2.9.

#### Performance of the Surveyed Junctions

2.11 The existing junction performance of the surveyed junctions are calculated based on the observed traffic counts, and the analysis was undertaken using the methods outlined in Volume 2 of Transport Planning and Design Manual ("TPDM") and the signal information obtained from the Traffic Control Division ("TCD") of TD. The results are summarised in Table 2.1 and the detailed calculations are found in Appendix 2.

TABLE 2.1 EXISTING JUNCTION PERFORMANCE

Ref.	Junction	Type of Junction	Parameter	Peak Hour	
				AM	PM
1	Ma Tau Wai Road / Bailey Street / Gilles Avenue North	Signal	RC	47%	69%
2	Ma Tau Wai Road / Hok Yuen Street	Signal	RC	69%	93%
3	Hok Yuen Street / Chun Tin Street	Priority	RFC	0.021	0.031
4	Hok Yuen Street / Hok Yuen Street East / Man Lok Street / Sung On Street	Priority	RFC	0.424	0.332
5	Bailey Street / Sung Chi Street / Wan On Street	Priority	RFC	0.151	0.153
6	Bailey Street / Sung On Street	Signal	RC	73%	89%

Note: RC – Reserve Capacity  
RFC – Ratio-of-Flow to Capacity

2.12 The results in Table 2.1 indicate that these junctions now operate with capacities.

#### Future Major Developments in the Vicinity of the Subject Site

2.13 The committed and planned developments which are located in the vicinity of the subject site (the "Future Major Developments") are shown in Figure 2.10. The details of these developments are presented in Table 2.2.

TABLE 2.2 FUTURE MAJOR DEVELOPMENTS

Ref	Development	Use	No. of Flat / Retail Size	Average Residential Flat Size (m <sup>2</sup> ) (approximate)
1	Approved URA Ma Tau Wai Road Project (TKW/1/002)	Residential	493 flats	41
		Retail	3,045m <sup>2</sup> GFA	-
		GIC	1,000m <sup>2</sup> GFA	-
2	Homantin Hillside	Residential	173 flats	69
3	Ultima	Residential	256 flats	128
4	La Lumiere	Residential	216 flats	40
5	Upper East	Residential	1008 flats	24
6	URA Bailey Street / Wing Kwong Street Development Project (KC-009) <sup>(1)</sup>	Residential	About 1,150 flats	48
		Retail	11,100m <sup>2</sup> GFA	-
7	Hong Kong Housing Society Senior Citizen Residences Scheme at Lee Kung Street	Residential	300 flats	32

Note: <sup>(1)</sup> This project has just commenced and is subject to Development for Secretary's authorization to URA to implement the project.

#### Pedestrian Facilities

2.14 Pedestrian facilities are provided in the vicinity of the subject site. Footpaths, which are provided alongside roads and the at-grade pedestrian crossings at signalised road junctions.

#### Public Transport Services

2.15 The subject site is well-served by public transport facilities. Numerous franchised bus routes operate along Ma Tau Wai Road, Chatham Road, Hung Hom Road, which are close to the subject site. Access to road-based public transport services is very convenient, even without the MTR.

2.16 There are 3 RMB routes, 12 GMB routes and some 60 franchised bus routes operating close to the subject site. Details of these road-based public transport services are presented in Table 2.3.

TABLE 2.3 ROAD-BASED PUBLIC TRANSPORT SERVICES OPERATING CLOSE TO THE SUBJECT SITE

Route	Routing	Frequency (min)
RMB	Station Lane ⇌ Kwun Tong	-
RMB	Pak Kung Street ⇌ Kwun Tong	-
RMB	Pak Kung Street ⇌ Tsuen Wan	-
GMB 2	Whampoa Garden ⇌ Tat Chee Avenue	10-15
GMB 2A	Whampoa Garden ⇌ Tat Chee Avenue	10-15
GMB 6	Whampoa Garden ⇌ Tsim Sha Tsui (Hankow Road)	3-5
GMB 7	Kowloon City (Wyler Gardens) ⇌ Tsim Sha Tsui East (Science Museum Road) (Circular)	10-30
GMB 8	Tsim Sha Tsui (Hankow Road) ⇌ Ho Man Tin Estate	4-10
GMB 8S	Tsim Sha Tsui (Hankow Road) ⇌ Ho Man Tin Public Transport Interchange	8-11
GMB 13	Hung Hom Ferry Concourse ⇌ Kowloon Tong (Broadcast Drive)	10-15
GMB 26	To Kwa Wan (Chi Kiang Street) ⇌ Kowloon Station	8-12
GMB 26X	Laguna Verde ⇌ Jordan (Ferry Street) (Circular)	20

TABLE 2.3 ROAD-BASED PUBLIC TRANSPORT SERVICES OPERATING CLOSE TO THE SUBJECT SITE (CONT'D)

Route	Routing	Frequency (min)
KMB/NWFB 109	Ho Man Tin ⇄ Central (Macau Ferry)	8-25
KMB/NWFB 111	Ping Shek ⇄ Central (Macau Ferry)	3-12
KMB/NWFB 111P	Choi Fook ⇄ Central (Macau Ferry)	4 per day
KMB/NWFB 115	Kowloon City Ferry ⇄ Central (Macau Ferry)	4-20
KMB/NWFB 116	Tsz Wan Shan (Central) ⇄ Quarry Bay	3-12
KMB/NWFB N121	Ngau Tau Kok ⇄ Central (Macau Ferry)	15

2.17 The future MTR Ho Man Tin Station is located near the junction of Chatham Road North / Fat Kwong Street. Several planned entrances of this station are located within 500m or about 7 minutes walk from the subject site. This station serves as an interchange for the Kwun Tong Line Extension (KTE) and the Shatin-to-Central Link (SCL). In addition, the future MTR Ma Tau Wai Station is located some 600m from the subject site.

J6473 TIA FR R1, 23 March 2016

### 3.0 THE PROJECT

#### Development Parameters of the Project

3.1 The development parameters are presented in Table 3.1.

TABLE 3.1 DEVELOPMENT PARAMETERS OF THE PROJECT

Item		Parameter <sup>(1)</sup>
Site Area		around 2,475 m <sup>2</sup>
Net Site Area (for Plot Ratio Calculation)		around 1,636 m <sup>2</sup>
Proposed Plot Ratio	Domestic	7.5
	Non-Domestic	1.5
No. of Residential Block		1
No. of Flats	40m <sup>2</sup> GFA ≤ flat size	217
	40m <sup>2</sup> GFA < flat size ≤ 70m <sup>2</sup> GFA	93
	Total	310
Retail GFA	G/F	683 m <sup>2</sup>
	1/F & 2/F	1,771 m <sup>2</sup>
	Total	2,454 m <sup>2</sup>

Note: <sup>(1)</sup> Subject to changes at detailed design stage.

#### Proposed Relaxation from the HKPSG Recommendation

3.2 Table 11 of the Hong Kong Planning Standards and Guidelines (the "HKPSG") states "...In all cases, the level of provision in a development is to be decided by the Authority. The standards serve to provide a guideline on which the Authority will base the decision."

3.3 URA's objectives are to facilitate the Project to incorporate Government's guidelines and the HKPSG requirements as far as practicable, while achieving the urban renewal objectives of improve the urban living environment and efficient use of land through redevelopment. Given the following consideration and justification, it is proposed to adopt a relaxed provision of the internal transport facilities of the Project:

#### 1 – Site Constraint

3.4 To improve the dead-end street pattern of Chun Tin Street and for improvement of local traffic circulation, Chun Tin Street is proposed to be closed permanently in the Project. On the other hand, about 30% of the site area in the Project will be dedicated as a new vehicular turning area for public use. Those dedicated area, as mainly reserved for public road improvement purpose, will be maintained as non-building area both at, above and below ground. Besides, there will be podium setback for road widening of Sung Chi Street on the east side boundary of the Project. In order to ensure adequate road improvement can be brought about by those dedicated site area, the available area at grade and below ground for accommodating internal transport facilities is further limited.

3.5 Given the Project is located in a densely built urban context with tall buildings surrounding on all sides of the site, the building disposition has to be carefully designed to meet the current building codes and regulations, such as prescribed window requirement, and to observe the sustainable building design guidelines,

e.g. building separation requirement. It is also necessary for the design to accommodate all essential building facilities such as a reasonable size lobby, lifts, entrance, staircases, structural walls, E/M facilities, etc. Given the limited site area and site constraints on building disposition, it has physical constraints to provide all internal transport facilities recommended by the HKPSG within the site.

#### 2 – Low Parking Demand Generated from the Project

3.6 The subject site is not located in the high class residential areas, but in an area with concentration of more low to middle level income households. In response to the demand in the mass housing market, the URA will provide small to medium size flats in the Project, which is considered suitable to meet the socio-economic need from this district. URA's proposal is to build a residential block with a total of about 310 flats, comprising of 70% (about 217 flats) with size 40m<sup>2</sup> GFA or less, and 30% (about 93 flats) with size in the range larger than 40 but less than or equal to 70m<sup>2</sup> GFA, including a high portion towards the low-end size. In view of the smaller sized flats to be provided on the site and the economic characteristics of the households in the locality, the level of car ownership and parking demand for this type of flats and households are anticipated to be low.

3.7 The Project is intended to provide only neighbourhood-type shops selling daily necessities, convenience goods, household retail services and dining services, etc. These neighbourhood-type shops will not attract shoppers from other districts but only local residents largely travelled by walking or public transport to the shops; hence, parking demand generated from these local shops is envisaged to be very low.

#### 3 – The Availability of Road-based Public Transport and MTR Infrastructure

3.8 The subject site is conveniently located with the support of comprehensive public transport network services. There are numerous public light bus and franchised bus routes operating within 500m distance from the subject site. In addition, the future MTR SCL will further strengthen the transport network and enhance the accessibility to different modes of public transport from the subject site. The close proximity to the two future MTR stations and comprehensive land-based public transport network services would bring great convenience to the residents in the Project and will largely reduce the reliance on using private car for daily travelling.

#### 4 – Discourage the Use of Private Car

3.9 The subject site is located within the busy urban context in To Kwa Wan. In view of the high accessibility of the subject site, the provision of car parking spaces will inevitably attract more private vehicles to the area. This will generate more traffic in the surrounding as well as more conflicts between road users. The provision of less car parking spaces could help address this concern.

#### 5 – Environmental Concern and Cost-Effectiveness

3.10 In view of the site constraint, car lift instead of car ramp is proposed to access a 1-level basement level car park to accommodate the parking spaces for the proposed development within the site. Provision of more than 1-level basement level is not proposed given that further excavation for basement car park is not



favourable in terms of environmental friendly and cost effectiveness in using the public resource for redevelopment project.

- 3.11 Based on the above justifications and concerns, the proposed levels of provision of internal transport facilities for the Project are as below:

**Proposed Level of Car Parking Space for Residential Use**

**Global Parking Standard (GPS)**

- 3.12 The Global Parking Standard (GPS) for the residential car parking spaces for the Project with 310 flats will be taken as 1 car space per 9 flats, i.e., GPS = 9, which comply with the low-end provision of the HKPSG recommendation.

**Accessibility Adjustment Ratio (R2)**

- 3.13 The subject site is located very close to the "500m-radius circle" of the future MTR Ho Man Tin Station, with several of the planned entrances of this MTR station some 500m from the subject site. Hence, the residents and visitors of the Project can conveniently access the MTR station. Therefore, the factor of 0.75 for the Accessibility Adjustment Ratio (R2) is adopted.

**Proposed Level of Visitor Car Parking Space for Residential Use**

- 3.14 HKPSG states "...Visitor car parking for private residential developments with more than 75 units per block should include 1-5 visitor spaces per block in addition to the recommendations, or as determined by the Authority. For other private residential developments, the visitor car parking provision will be advised by Transport Department on a case-by-case basis."

- 3.15 In view that the subject site is located at a very convenient location with the support of comprehensive public transport network services and there are metered car parking spaces in the vicinity of the subject site for public use, 2 visitor car parking spaces (including 1 space for persons with disabilities) are proposed for the Project.

**Proposed Level of Car Parking Space for Retail Use**

- 3.16 HKPSG states "... Generally nil provision is permitted for small road-side retail shops which mainly serve local residents."

- 3.17 In view that the locational character of vibrant retail street front shops in this part of To Kwa Wan, the design intention for the Project is to re-create the existing street frontage by providing more on-street retail facilities, in a form of small local neighbouring shops. Therefore, no parking space is proposed for the ground floor retail shops at the Project, which are small-scale retail shops serving local residents.

**Proposed Level of Loading/unloading Bay and Motorcycle Parking Space for Residential and Retail Use**

- 3.18 The goods vehicle loading / unloading bay and motorcycle parking spaces provided for the residential and retail uses comply with the minimum recommendation of the current HKPSG. Considering the nature of the proposed retail use is to serve the local residential, all goods vehicle loading / unloading bays are LGV type. The reasons for not providing HGV loading / unloading bays are described in Paragraphs 3.25 – 3.26.

**Provision of Internal Transport Facilities**

- 3.19 The internal transport facilities provided for the Project are compared with the HKPSG recommendation and is presented in Table 3.2.

TABLE 3.2 COMPARISON OF INTERNAL TRANSPORT FACILITIES

1 residential block with 310 flats: Plot Ratio = 7.5 310 flats (include 217 with 40m <sup>2</sup> GFA ≤ flat size; and 93 flats with 40m <sup>2</sup> GFA < flat size ≤ 70m <sup>2</sup> GFA) Retail GFA = 2,454m <sup>2</sup> (G/F shop = 683m <sup>2</sup> GFA; and 1/F & 2/F = 1,771m <sup>2</sup> GFA)			
Item	HKPSG Recommendations	HKPSG Recommendations (Low-end Provision)	Proposed Provision
<b>Private Car Parking Space:</b>			
(i)	<ul style="list-style-type: none"><li>Parking Requirement = GPS x R1 x R2 x R3</li><li>Global Parking Standard (GPS): 1 car parking space per 6-9 flats</li><li>Demand Adjustment Ratio (R1): 0.4 for ≤ 40 m<sup>2</sup> GFA</li><li>Demand Adjustment Ratio (R1): 0.7 for 40 m<sup>2</sup> GFA &lt; flat size ≤ 70m<sup>2</sup> GFA</li><li>Accessibility Adjustment Ratio (R2): 1 for outside a 500m-radius of rail station (For several planned entrances of the future MTR Ho Man Tin Station are located within 500m of the KC-008(A), it is proposed to adopt an adjusted R2 = 0.75)</li><li>Development Intensity Adjustment Ratio (R3): 0.90 for plot ratio = 7.5</li></ul>	<p>For 217 flats (flat size ≤ 40m<sup>2</sup> GFA): 217/9 x 0.4 x 0.75 x 0.9 = 6.51</p> <p>For 93 flats (40m<sup>2</sup> GFA &lt; flat size ≤ 70m<sup>2</sup> GFA): 93/9 x 0.7 x 0.75 x 0.9 = 4.88</p> <p><b>Total: 6.51 + 4.88 = 11.39 = 11 nos.</b></p>	<b>11 nos.</b>
(ii)	Visitors: 1-5 nos. per residential block with more than 75 units, or as determined by the Authority.	For 1 block with 310 flats: <b>Total: 1 no.</b>	<b>2 nos.</b> (include 1 no. for persons with disabilities)
(iii)	Retail: 1 no. per 200 - 300m <sup>2</sup> GFA & generally nil car park provision is permitted for road-side retail shops.	For 2,454m <sup>2</sup> retail:  G/F shops: Nil (General nil provision is permitted for small road-side retail shops which are mainly serving local residents.)  1/F & 2/F shops: 1,771/300 = 5.90 = 6 nos.  <b>Total: 6 nos.</b>	<b>6 nos.</b>

TABLE 3.2 COMPARISON OF INTERNAL TRANSPORT FACILITIES  
(CONT'D)

1 residential block with 310 flats: Plot Ratio = 7.5 310 flats (include 217 with 40m <sup>2</sup> GFA ≤ flat size; and 93 flats with 40m <sup>2</sup> GFA < flat size ≤ 70m <sup>2</sup> GFA) Retail GFA = 2,454m <sup>2</sup> (G/F shop = 683m <sup>2</sup> GFA; and 1/F & 2/F = 1,771m <sup>2</sup> GFA)			
Item	HKPSG Recommendations	HKPSG Recommendations (Low-end Provision)	Proposed Provision
Total:	For total no. of car parking space in the Lot (a) = 1 - 50, required no. of accessible car parking space = 1 no.	(i) + (ii) + (iii): 11 + 1 + 6 = <b>18 nos.</b> (include 1 no. of car parking spaces for persons with disabilities)	(i) + (ii) + (iii): 10 + 2 + 6 = <b>19 nos.</b> (include 1 no. for persons with disabilities)
<b>Motorcycle Parking Space:</b>			
(iv)	Residential: At the rate of 1 motorcycle parking space per 100-150 flats	310/150 = 2.07 = <b>2 nos.</b>	<b>2 nos.</b>
(v)	Non-residential: At the rate of 5-10% of the total provision for private cars	6 x 0.05 = 0.3 = <b>1 no.</b>	<b>1 no.</b>
Total:		(iv) + (v): 2 + 1 = <b>3 nos.</b>	(iv) + (v): 2 + 1 = <b>3 nos.</b>
<b>Goods Vehicle Loading / Unloading Bay:</b>			
(vi)	Residential: minimum 1 no. per 800 flats or part thereof; subject to a minimum of 1 bay for each housing block or as determined by the Authority. For other private residential developments, the visitor car parking provision will be advised by Transport Department on a case-by-case basis.	For 1 block with 310 flats: <b>1 no.</b>	<b>1 no. (LGV)</b>
(vii)	Retail: 1 no. per 800-1200m <sup>2</sup> GFA (with 65% for LGV & 35% for HGV)	2,454/1,200 = 2.05 = <b>2 nos.</b> (1 LGV + 1 HGV)	<b>2 nos. (LGV)</b>  Considering the nature of the proposed retail use is to serve the local residential, all goods vehicle loading / unloading bays are LGV type.
Total:		(vi) + (vii): 1 + 2 = <b>3 nos.</b> (2 LGV + 1 HGV)	(vi) + (vii): <b>3 nos. (LGV)</b>  Remark: Details of proposal for providing such LGVs shall refer to Paragraphs 3.24 – 3.26.

### Proposed Layout Plans

- 3.20 The ground floor and basement floor layout plans of the Project with the proposed internal transport facilities are shown in Figures 3.1 and 3.2 respectively.

### Proposed Road Improvement Measures

- 3.21 Arrangement on the proposed closure of Chun Tin Street and widening of Sung Chi Street is presented in Figure 3.1 and detailed in paragraphs 3.23 – 3.28 below.

- 3.22 Since the Project is at draft and notional design stage, subject to approval by TPB, URA will liaise with Lands Department ("LandsD"), Highways Department ("HyD") and Transport and Housing Bureau ("THB") for the statutory requirements concerning the permanent closure of Chun Tin Street and proposed widening of Sung Chi Street upon approval by TPB.

### Proposed Closure of Chun Tin Street

- 3.23 In order to improve traffic and walking environment, it is proposed to close Chun Tin Street for redevelopment in the Project to achieve the following goals:
- (i) Remove cul-de-sac condition for safer pedestrian environment;
  - (ii) More efficient land use by an integrated design in the Project to group all traffic servicing area towards back of the site to open-up foreground area for comprehensive redevelopment with modern commercial podium and residential tower. More integrated at-grade area for fronting the major streets for convenient and safe pedestrian flow with vibrant retail frontage; and
  - (iii) Better utilisation of land for more flat supply to meet the mass market demand.

### Proposed Widening of Sung Chi Street

- 3.24 In association with the closure of Chun Tin Street, it is proposed to setting back the eastern boundary of the subject site and widen Sung Chi Street to provide a 7.3m wide 2-way road between Hok Yuen Street and Fook Wan Mansion. In addition, further podium setback from the Project along Sung Chi Street is proposed to:
- (i) Allow for a wider passageway to enhance pedestrian walking environment;
  - (ii) Cater for 3 LGV loading / unloading bays, which are proposed to be primarily used by the Project in achieving the HKPSG recommendation (incl. 1 no. for residential and 2 nos. for retail), and to be shared with the public for similar use when vacancy is available; and
  - (iii) Subject to agreement with the Transport Department and the relevant Government Departments, it is URA's intention to take up the management and maintenance responsibilities and dedicate the said area for pavement and laybys free-of-charge for public use.

- 3.25 The reasons for not providing HGV loading / unloading bays are as follows:
- (i) Provision of HGV loading / unloading bay has been considered, however, given the limited site area and site constraints on building disposition, there is physical constraints to provide HGV loading / unloading bay. Figure 3.3 shows that HGV has manoeuvring problem within the building. The case with providing a turntable for HGV manoeuvring, as

- shown in Figure 3.4, was considered. However, due to the need to provide the columns, structures and building facilities, etc., provision of a turntable is not possible. Hence, this is also not a feasible scenario;
- (ii) Figures 3.5 and 3.6 show that 1 HGV and 2 LGV bays cannot be accommodated at Sung Chi Street. Figure 3.5 shows the HGV would encroach to the opposite lane when manoeuvring into the loading / unloading bay, hence, traffic safety is of concern. Figure 3.6 shows that if HGV do not encroach to the opposite lane when manoeuvre into the loading / unloading bay, it will jeopardize the proposed passageway and threaten the safety of pedestrian using the crossings at the new turning area with the HGV manoeuvring there, which is aimed to enhance the walking environment and ensure pedestrian safety. Hence, the provision of 1 HGV and 2 LGV bays at Sung Chi Street is infeasible;
- (iii) In view that there is no existing HGV bays in the existing building sites and in future, and the nature of the proposed retail uses in the new proposed development is mainly to serve the local neighbourhood, no provision of HGV loading / unloading bay is not anticipated to have any adverse effect;
- (iv) The provision of HGV bay in the area will attract HGVs from other areas to Sung Chi Street which will bring undesirable traffic to the local street; and
- (v) It is URA's intention to take up the management and maintenance of the 3 LGV bays and the 3 LGV bays shall be provided in the land grant of the Site for the proposed development and for sharing use with the public to benefit the public. In special circumstances where it is necessary to accommodate a HGV and if the 2 LGV bays are unoccupied, the URA will manage the area to meet operational needs and to arrange HGV to manoeuvre into the available space without problem. Such situation is demonstrated in Figure 3.7.

- 3.26 Taking into account the site constraints and nature of the Project, it is recommended to provide the 3 LGV bays to comply with the number of goods loading / unloading bays recommended by the HKPSG, rather than provide 1 HGV and 1 LGV bays, i.e., provide less number of loading / unloading bay. Since the current scheme is a notional design and the draft DSP is subject to TPB's approval, the proposed layout of L/UL bays will seek agreement with other relevant government departments on its feasibility when it comes to detailed design stage.

#### Proposed New Vehicular Turning Area

- 3.27 A new vehicular turning area will be provided from the widened Sung Chi Street, fronting Fook Wan Mansion, to ensure the residents / visitors of Fook Wan Mansion can maintain their accessibility to / from Sung Chi Street and Hok Yuen Street. The new turning area will allow adequate manoeuvring space for vehicles including HGV without encroaching onto the proposed pavement area. The run-in/outs of the Project and the adjacent URA Ma Tau Wai Road Project (TKW/1/002) are provided at the new turning area.
- 3.28 To enhance the pedestrian walking environment, a continuous pavement network surrounding the Project and a widened pavement of about 4m is proposed fronting the approved URA Ma Tau Wai Road Project (TKW/1/002), extending to the pedestrian corridor between these 2 sites. Besides, a new 2m

wide pavement will be provided at the interface with the adjacent Fook Wan Mansion to enable the residents living there to safely walk onto main streets via the improved network.

#### Comparison of the Proposed Improvement Measures and the Existing Condition

- 3.29 A comparison of the Proposed Improvement Measures and the existing condition is presented in Table 3.3.

TABLE 3.3 COMPARISON OF THE PROPOSED IMPROVEMENT MEASURES WITH THE EXISTING CONDITION

Item	Existing Condition	Proposed Improvement Measure
(i)	Junction of Hok Yuen Street / Chun Tin Street is less than 40m from the Junction of Ma Tau Wai Road / Hok Yuen Street.	Reduce the number of road junction along Hok Yuen Street by deleting the Junction of Hok Yuen Street / Chun Tin Street to minimize conflict point. The Junction of Hok Yuen Street / Sung Chi Street is 60m away from the Junction of Ma Tau Wai Road / Hok Yuen Street.
(ii)	Sung Chi Street is around 5m wide and is one-way northbound. The condition of this street is poor.	Widen the street to provide a 7.3m carriageway for 2-way traffic for the section between Fook Wan Mansion and Hok Yuen Street to improve the traffic circulation and its role as an EVA.  Further podium setback of the Project to provide a wider and safer passageway along this part of Sung Chi Street.
(iii)	Poor walking environment with discontinued pavement in conflict with road traffic.	Improve walking environment by providing a continuous pavement network surrounding the Project, re-provision of a pavement portion abutting Fook Wan Mansion and a widened pavement fronting the approved URA Ma Tau Wai Road Project (TKW/1/002), extending to the corridor between these 2 sites.
(iv)	No formal footpath connection between Chun Tin Street and Sung Chi Street, except along Hok Yuen Street.	Improved pedestrian accessibility in the area, i.e., direct pedestrian connection among Ma Tau Wai Road, new turning area and Sung Chi Street via at grade open space, pavement and pedestrian walkway.



TABLE 3.3 COMPARISON OF THE PROPOSED IMPROVEMENT MEASURES WITH THE EXISTING CONDITION (CONT'D)

Item	Existing Condition	Proposed Improvement Measure
(v)	Chun Tin Street is a cul-de-sac. Due to the existence of the metered car parking spaces and loading / unloading lay-bys, the remaining section of this road operates as one-lane 2-way road and goods vehicle manoeuvring is difficult. This street has vehicle length restriction of 10m, i.e., HGV is prohibited from entering Chun Tin Street. However, due to the on-street facilities and activities, even LGV (7m long) has to leave Chun Tin Street to Hoi Yuen Street in reverse movement.	Create a proper turning area at the road end for maneuvering of goods vehicles and ingress/ egress of those to-and-fro the approved URA Ma Tau Wai Road Project (TKW/1/002). 10m-long HGV can use the new turning area without difficulty.  Fire engine can manoeuvre without difficulty at Junction of Sung Chi Street / new turning area.

**Management of Sung Chi Street and the New Turning Area**

- 3.30 Given that the Project is in a draft DSP stage and it is subject to approval by TPB for implementation, the URA will liaise and confirm with relevant government departments upon the Project is approved by TPB and when there is detailed design for departments to comment. The area for proposed new turning area and road widening at Sung Chi Street will be indicated in a plan in the draft DSP document for departmental comment and for TPB's consideration.
- 3.31 Subject to the approval on the Project, URA intends to take up the management and maintenance responsibilities of Sung Chi Street and the new turning area. In view of the status of Sung Chi Street and the new turning area, the Project will deploy sufficient staff members to manage Sung Chi Street to ensure no illegal parking, no obstruction at Sung Chi Street and smooth operation of the street. For example, the Project would provide appropriate signs indicating that parking along Sung Chi Street without permission is not allowed; the staff would alert those drivers, who intend to illegally park at this street, to leave.

**Proposed Run-In/Out of the Project**

- 3.32 To minimize traffic impact, the run-in/out of the Project is located at the new turning area, which is far away from the Junction of Hok Yuen Street / Sung Chi Street. Vehicular access to-and-fro the project site can make use of and manoeuvre within the new turning area without difficulty. Therefore, the location of the proposed run-in / out is considered acceptable.

**Utilisation of the On-Street Transport Facilities at Chun Tin Street**

- 3.33 At present, Chun Tin Street has 12 metered car parking spaces and 2 on-street loading/unloading lay-bys. Utilisation surveys for the on-street metered car parking spaces and loading / unloading lay-bys provided alongside Chun Tin Street was conducted on Thursday, 7 January 2016, to identify their existing demand. The surveys recorded: (i) the time when each vehicle entered / left the on-street car parking spaces and lay-bys; (ii) the type of vehicle; and (iii) the parties using these facilities.

- 3.34 The parties using these facilities are categorised as follows:
- (i) Existing buildings at the subject site and construction site of the approved URA Ma Tau Wai Road Project (TKW/1/002);
  - (ii) Fook Wan Mansion; and
  - (iii) Others.

**Utilisation of the On-Street Metered Car Parking Spaces**

- 3.35 The survey results for the on-street car parking spaces are summarized in Table 3.4.

TABLE 3.4 SURVEY RESULT ON THE UTILIZATIONS OF THE ON-STREET CAR PARKING SPACES

Time (hours)	Utilisation of the On-street Parking Spaces by User Group											
	Existing buildings at the subject site and construction site of the approved URA Ma Tau Wai Road Project (TKW/1/002)			Fook Wan Mansion			Others			Total		
	Min	Max	Ave	Min	Max	Ave	Min	Max	Ave	Min	Max	Ave
0600 – 0659	10%	9%	9%	0%	0%	0%	90%	91%	91%	100%	100%	100%
0700 – 0759	10%	17%	10%	0%	0%	0%	90%	83%	90%	100%	100%	100%
0800 – 0859	18%	25%	25%	0%	0%	0%	82%	75%	75%	100%	100%	100%
0900 – 0959	27%	36%	32%	0%	0%	0%	73%	64%	68%	100%	100%	100%
1000 – 1059	33%	50%	41%	0%	0%	0%	67%	50%	59%	100%	100%	100%
1100 – 1159	40%	50%	47%	0%	0%	0%	60%	50%	53%	100%	100%	100%
1200 – 1259	33%	27%	27%	0%	7%	5%	67%	67%	68%	100%	100%	100%
1300 – 1359	29%	35%	37%	0%	5%	3%	71%	60%	60%	100%	100%	100%
1400 – 1459	41%	45%	45%	0%	5%	1%	59%	50%	54%	100%	100%	100%
1500 – 1559	50%	50%	50%	0%	0%	0%	50%	50%	50%	100%	100%	100%
1600 – 1659	50%	53%	50%	0%	0%	0%	50%	47%	50%	100%	100%	100%
1700 – 1759	57%	62%	61%	0%	0%	0%	43%	38%	39%	100%	100%	100%
1800 – 1859	56%	62%	59%	0%	0%	0%	44%	38%	41%	100%	100%	100%
1900 – 1959	50%	50%	57%	0%	0%	0%	50%	50%	43%	100%	100%	100%
2000 – 2059	44%	47%	45%	0%	0%	0%	56%	53%	55%	100%	100%	100%
2100 – 2159	47%	47%	45%	0%	0%	0%	53%	53%	55%	100%	100%	100%
2200 – 2259	47%	50%	50%	0%	0%	0%	53%	50%	50%	100%	100%	100%
2300 – 2359	54%	50%	52%	0%	0%	0%	46%	50%	48%	100%	100%	100%
Overall	41%	45%	43%	0%	1%	1%	59%	54%	56%	100%	100%	100%

Note: Min – minimum; Max – maximum; and Ave – average

- 3.36 Based on Table 3.4, the followings are observed:
- (i) The on-street metered car parking spaces are 100% occupied throughout the day; and
  - (ii) The overall proportion of the parties using the metered car parking spaces, on average, are:
    - Existing building at the subject site and the construction site of the approved URA Ma Tau Wai Road Project (TKW/1/002) = 43%
    - Fook Wan Mansion = 1%
    - Others = 54%

**Utilisation of the On-Street Lay-bys**

- 3.37 The survey results the on-street lay-bys are summarized in Table 3.5.

TABLE 3.5 SURVEY RESULT ON THE UTILIZATIONS OF THE ON-STREET LAY-BYS

Time (hours)	Utilisation of the On-street Lay-bys by User Group											
	Existing buildings at the subject site and construction site of the approved URA Ma Tau Wai Road Project (TKW/1/002)			Fook Wan Mansion			Others			Total		
	Min	Max	Ave	Min	Max	Ave	Min	Max	Ave	Min	Max	Ave
0600 – 0659	100%	100%	100%	0%	0%	0%	0%	0%	0%	100%	100%	100%
0700 – 0759	100%	100%	100%	0%	0%	0%	0%	0%	0%	100%	100%	100%
0800 – 0859	100%	100%	100%	0%	0%	0%	0%	0%	0%	100%	100%	100%
0900 – 0959	100%	100%	100%	0%	0%	0%	0%	0%	0%	100%	100%	100%
1000 – 1059	100%	100%	100%	0%	0%	0%	0%	0%	0%	100%	100%	100%
1100 – 1159	100%	100%	100%	0%	0%	0%	0%	0%	0%	100%	100%	100%
1200 – 1259	100%	100%	100%	0%	0%	0%	0%	0%	0%	100%	100%	100%
1300 – 1359	100%	100%	100%	0%	0%	0%	0%	0%	0%	100%	100%	100%
1400 – 1459	100%	100%	100%	0%	0%	0%	0%	0%	0%	100%	100%	100%
1500 – 1559	100%	100%	100%	0%	0%	0%	0%	0%	0%	100%	100%	100%
1600 – 1659	100%	100%	100%	0%	0%	0%	0%	0%	0%	100%	100%	100%
1700 – 1759	100%	100%	100%	0%	0%	0%	0%	0%	0%	100%	100%	100%
1800 – 1859	100%	100%	100%	0%	0%	0%	0%	0%	0%	100%	100%	100%
1900 – 1959	100%	100%	100%	0%	0%	0%	0%	0%	0%	100%	100%	100%
2000 – 2059	100%	100%	100%	0%	0%	0%	0%	0%	0%	100%	100%	100%
2100 – 2159	100%	100%	100%	0%	0%	0%	0%	0%	0%	100%	100%	100%
2200 – 2259	100%	100%	100%	0%	0%	0%	0%	0%	0%	100%	100%	100%
2300 – 2359	100%	100%	100%	0%	0%	0%	0%	0%	0%	100%	100%	100%
Overall	100%	100%	100%	0%	0%	0%	0%	0%	0%	100%	100%	100%

Note: Min – minimum; Max – maximum; and Ave – average

3.38 Based on Table 3.5, it is found that the on-street lay-bys are only occupied by the existing building at the subject site and the construction site of the approved URA Ma Tau Wai Road Project (TKW/1/002).

#### Proposed Arrangements of the On-street Transport Facilities at Chun Tin Street

3.39 The following justification and arrangements on the 12 existing on-street metered car parking spaces and 2 on-street loading / unloading lay-bys are proposed:

#### On-street metered car parking spaces

3.40 The justification and arrangements on the 12 existing on-street metered car parking spaces are as follows:

- As found in the utilisation survey, about 43% of the on-street metered car parking spaces are used by the existing buildings within the subject site (from observation, especially the workshop activities on its ground floor) and the construction site of the approved Ma Tau Wai Road Project (TKW/1/002) (i.e. the people working at the construction site). With the redevelopment of the subject site and completion of the approved Ma Tau Wai Road Project (TKW/1/002), there will be no demand from these users and the two new redevelopments would provide off-street parking spaces to meet the demand of the new residents in the developments. Therefore, nearly half of the demand on the on-street metered car parking spaces (i.e. about 43% as reflected by the survey) should be absorbed by the two new redevelopment in future;

- The Project and the approved URA Ma Tau Wai Road Project (TKW/1/002) will provide a total of 15 (approximately 7 from the Project and 8 from the approved URA Ma Tau Wai Road Project (TKW/1/002)) car parking spaces for retail uses. In view that the future retail uses in the two redevelopments are expected to serve the local neighbourhood during business in day time, these 15 (approximate) car parking spaces could be used by others especially outside the business hours, hence, could help to accommodate the overnight car parking demand in the area;
- 3 nos. (out of the existing 12 nos.) on-street metered car parking spaces will need to be removed to accommodate the run-in/out of the approved URA Ma Tau Wai Road Project (TKW/1/002); and
- The utilization survey shows about 43% users of the 12 existing metered car parking spaces are the existing building at the subject site and the construction site of the approved URA Ma Tau Wai Road Project (TKW/1/002). With the redevelopment of the subject site and completion of the approved URA Ma Tau Wai Road Project (TKW/1/002), these parties will be relocated and no longer use the metered car parking spaces. Hence, it is considered adequate to re-provide 7 nos.  $(12 \times (1 - 0.43) = 6.84 = 7)$  on-street metered car parking spaces in the vicinity for the other users, i.e., Fook Wan Mansion and others. The proposal of possible re-provision of 7 metered car parking spaces are presented in Figures 3.8 – 3.10.

#### On-street loading / unloading lay-bys

3.41 The on-street loading / unloading lay-bys at Chun Tin Street are currently occupied by residents and operators of the existing buildings at the subject site (especially the recycle material collection and car repair workshops) and workers at the construction site of the approved URA Ma Tau Wai Road Project (TKW/1/002). With the redevelopment of the subject site and completion of the approved URA Ma Tau Wai Road Project (TKW/1/002), these parties will be relocated and no longer use the on-street loading / unloading bays at Chun Tin Street. Therefore, the proposed removal of the loading / unloading areas at Chun Tin Street will not have any adverse effect.

#### Swept Path Analysis

3.42 Swept path analysis using CAD-based program AutoTRACK was carried out to ensure ease of vehicle manoeuvring at the new turning area and within the parking and loading / unloading areas of the Project. Testing based on the proposed layout demonstrated that vehicles have no manoeuvring problem. The results of the swept paths are found in the Appendix 3.

## 4.0 TRAFFIC IMPACT

### Design Year

- 4.1 The expected completion year of the Project is 2025, and the design year adopted for the traffic assessment is: (i) at least 3 years after the planned completion of the Project, i.e. 2028, or (ii) 5 years from the date of this application, i.e., 2016, whichever is the later. Based on these criteria, the design year adopted for junction capacity analysis is 2028.

### Traffic Generated by the Project

- 4.2 The trips generation rates found in the TPDM are used to estimate the traffic generation associated with the Project. To be conservative, the corresponding TPDM mean limit trip rates for "private housing: high-density / R(A) with average flat size of (i) 60m<sup>2</sup> are adopted for the residential flats with 40m<sup>2</sup> GFA ≤ flat size; and (ii) 70m<sup>2</sup> for residential flats with 40m<sup>2</sup> GFA < flat size ≤ 70m<sup>2</sup> GFA.
- 4.3 The adopted trip rates and the estimated traffic generation are presented in Tables 4.1 and 4.2 respectively.

TABLE 4.1 ADOPTED TPDM TRIP RATES FOR THE PROJECT

Use		Parameter	Trip Rate			
			AM Peak Hour		PM Peak Hour	
			GEN	ATT	GEN	ATT
Private Housing with average flat size	60m <sup>2</sup> <sup>(1)</sup>	pcu / flat / hr	0.0718	0.0425	0.0286	0.0370
	70m <sup>2</sup> <sup>(2)</sup>	pcu / flat / hr	0.0888	0.0515	0.0356	0.048
Retail <sup>(3)</sup>		pcu / 100m <sup>2</sup> GFA / hr	0.2296	0.2434	0.3100	0.3563

Note: <sup>(1)</sup> TPDM mean rates for private housing: high-density / R(A), average flat size of 60m<sup>2</sup>.  
<sup>(2)</sup> TPDM mean rates for private housing: high-density / R(A), average flat size of 70m<sup>2</sup>.  
<sup>(3)</sup> TPDM mean rates for Retail / Shopping Complex.  
 GEN. – generation; and ATT. - attraction

TABLE 4.2 ESTIMATED TRAFFIC GENERATION OF THE PROJECT

Use		Parameter	Traffic Generation (pcu/hr)			
			AM Peak Hour		PM Peak Hour	
			GEN	ATT	GEN	ATT
Private Housing	40m <sup>2</sup> GFA < flat size	217 flats	16	10	7	9
	40m <sup>2</sup> GFA < flat size ≤ 70m <sup>2</sup> GFA	93 flats	9	5	4	5
Retail		2,454m <sup>2</sup> GFA	6	6	8	9
Total			31	21	19	23

Note: GEN. – generation; and ATT. - attraction

### Estimated Traffic Generation of the Future Major Developments

- 4.4 The TPDM has no trip rates for Senior Citizen Residences Scheme. To adopt a conservative approach, it is assumed that the traffic generation of the Senior Citizen Residences Scheme is similar to "HOS / PSPS". In addition, the corresponding TPDM trip rates for "private housing" and "retail" are used to estimate the traffic generation associated with the other developments of the Future Major Developments. The adopted trip rates and estimated traffic generations for the Future Major Developments are presented in Revised Tables 4.3 and 4.4 respectively.

TABLE 4.3 ADOPTED TPDM TRIP RATES FOR THE FUTURE MAJOR DEVELOPMENTS

Use		Parameter	AM Peak Hour		PM Peak Hour	
			GEN	ATT	GEN	ATT
Residential (private housing) with average flat size	60m <sup>2</sup> <sup>(1)</sup>	pcu / flat / hr	0.0718	0.0425	0.0286	0.037
	70m <sup>2</sup> <sup>(2)</sup>		0.0888	0.0515	0.0356	0.048
	140m <sup>2</sup> <sup>(3)</sup>		0.2689	0.1805	0.1725	0.2004
HOS / PSPS <sup>(4)</sup>		pcu / flat / hr	0.0622	0.0426	0.0297	0.0401
Retail <sup>(5)</sup>		pcu / 100m <sup>2</sup> GFA / hr	0.2296	0.2434	0.31	0.3563
Community hall and social welfare facilities <sup>(6)</sup>		pcu / 100m <sup>2</sup> GFA / hr	0.0300	0.0070	0.0410	0.0510

Note: <sup>(1)</sup> TPDM mean rates for private housing: high-density / R(A), average flat size of 60m<sup>2</sup>.  
<sup>(2)</sup> TPDM mean rates for private housing: high-density / R(A), average flat size of 70m<sup>2</sup>.  
<sup>(3)</sup> TPDM mean rates for private housing: high-density / R(A), average flat size of 140m<sup>2</sup>.  
<sup>(4)</sup> TPDM mean rates for HOS / PSPS  
<sup>(5)</sup> TPDM mean rates for Retail / Shopping Complex.  
<sup>(6)</sup> Trip rates taken from the Agreement No. TD 44/2008 – 2016 and 2021 Base District Traffic Models for Urban Area – 2009 Updated, Final Report - October 2010 for Community Facilities.  
 GEN. – generation; and ATT. - attraction

TABLE 4.4 ESTIMATED TRAFFIC GENERATION OF THE FUTURE MAJOR DEVELOPMENTS

Ref.	Development	Parameter	Traffic Generation (pcu/hr)			
			AM Peak Hour		PM Peak Hour	
			GEN	ATT	GEN	ATT
1	Approved URA Ma Tau Wai Road Project (TKW/1/002)	493 flats @ average size of 41m <sup>2</sup>	36	21	15	19
		Retail @ 3,045m <sup>2</sup> GFA	7	8	10	11
		GIC @ 1,000m <sup>2</sup> GFA	1	1	1	1
		Total	44	30	26	31
2	Homantin Hillside	173 flats @ average size of 69m <sup>2</sup>	16	9	7	9
3	Ultima	256 flats @ average size of 128m <sup>2</sup>	69	47	45	52
4	La Lumiere	216 flats @ average size of 40m <sup>2</sup>	16	10	7	8
5	Upper East	1,008 flats @ average size of 24m <sup>2</sup>	73	43	29	38
6	URA Bailey Street / Wing Kwong Street Development Project (KC-009)	1,150 flats @ average size of 41m <sup>2</sup>	83	49	33	43
		Retail @ 11,100m <sup>2</sup> GFA	26	28	35	40
		Total	109	77	68	83
7	Hong Kong Housing Society Senior Citizen Residences Scheme at Lee Kung Street	300 flats @ average size of 32m <sup>2</sup>	20	14	10	13

GEN. – generation; and ATT. - attraction

### Traffic Forecasting

- 4.5 The 2028 reference traffic flows, i.e., without the Project, used for the junction analysis are produced with reference to (i) the 2021 K2 Base District Traffic Model (BDTM); (ii) the estimated traffic growths from 2021 to 2028; (iii) the expected traffic generation of the Future Major Developments in the vicinity.



Traffic Growth

- 4.6 The Study Area is located within the K2 BDTM. The traffic growths from 2021 to 2028 are calculated using the following equations, with  $X_1$  and  $X_2$  being the annual growth rates of vehicle trips produced / attracted by the CTS-3 zones within the K2 BDTM for 2021 – 2026 and 2026 – 2031 respectively.

$$\begin{aligned} 2021 \text{ to } 2026 \text{ traffic growth factor} &= (1 + X_1)^5 \\ 2026 \text{ to } 2028 \text{ traffic growth factor} &= (1 + X_2)^2 \end{aligned}$$

The 2021 to 2028 traffic growths are calculated as such:  $(1 + X_1)^5 \times (1 + X_2)^2$

- 4.7 These traffic growths are applied to the trips ends of the 2021 K2 BDTM model to develop district traffic model and then to derive the 2028 traffic flows.

2028 Traffic Flows

- 4.8 Year 2028 traffic flows for the following cases are derived:

$$\begin{aligned} 2028 \text{ Without the Project} &= \text{Traffic flows derived referring to 2021 BDTM} + \\ [A] \text{ (Reference Traffic Flows)} &\quad \text{estimated total growth from 2021 to 2028} + \text{Estimated} \\ &\quad \text{traffic generations of the Future Major Developments} \end{aligned}$$

$$2028 \text{ With the Project [B]} = [A] + \text{Expected traffic generation associated to the Project} + \text{Modification on the road network}$$

- 4.9 The year 2028 peak hour traffic flows for the above two cases are shown in Figures 4.1 and 4.2 respectively.

2028 Junction Capacity Analysis

- 4.10 The proposed modification on road network mentioned in Paragraphs 3.19 – 3.21 have been incorporated in the analysis for the 2028 case with the Project. Year 2028 junction capacity analysis are summarised in Table 4.5 and detailed calculations are found in Appendix 2.

TABLE 4.5 2028 JUNCTION PERFORMANCE

Ref.	Junction	Type of Junction	Parameter	Without the Project		With the Project	
				AM	PM	AM	PM
1	Ma Tau Wai Road / Bailey Street / Gilles Avenue North	Signal	RC	25%	48%	23%	47%
2	Ma Tau Wai Road / Hok Yuen Street	Signal	RC	48%	48%	41%	47%
3A	Hok Yuen Street / Chun Tin Street	Priority	RFC	0.109	0.075	N/A	N/A
3B	Hok Yuen Street / Sung Chi Street (with the modification of Sung Chi Street to 2-way road between Hok Yuen Street and Fook Wan Mansion)	Priority	RFC	N/A	N/A	0.033	0.025
4	Hok Yuen Street / Hok Yuen Street East / Man Lok Street / Sung On Street	Priority	RFC	0.493	0.391	0.497	0.397
5	Bailey Street / Sung Chi Street / Wan On Street	Priority	RFC	0.428	0.284	0.429	0.284
6	Bailey Street / Sung On Street	Signal	RC	37%	54%	37%	54%

Note: RC – Reserve Capacity RFC – Ratio-of-Flow to Capacity

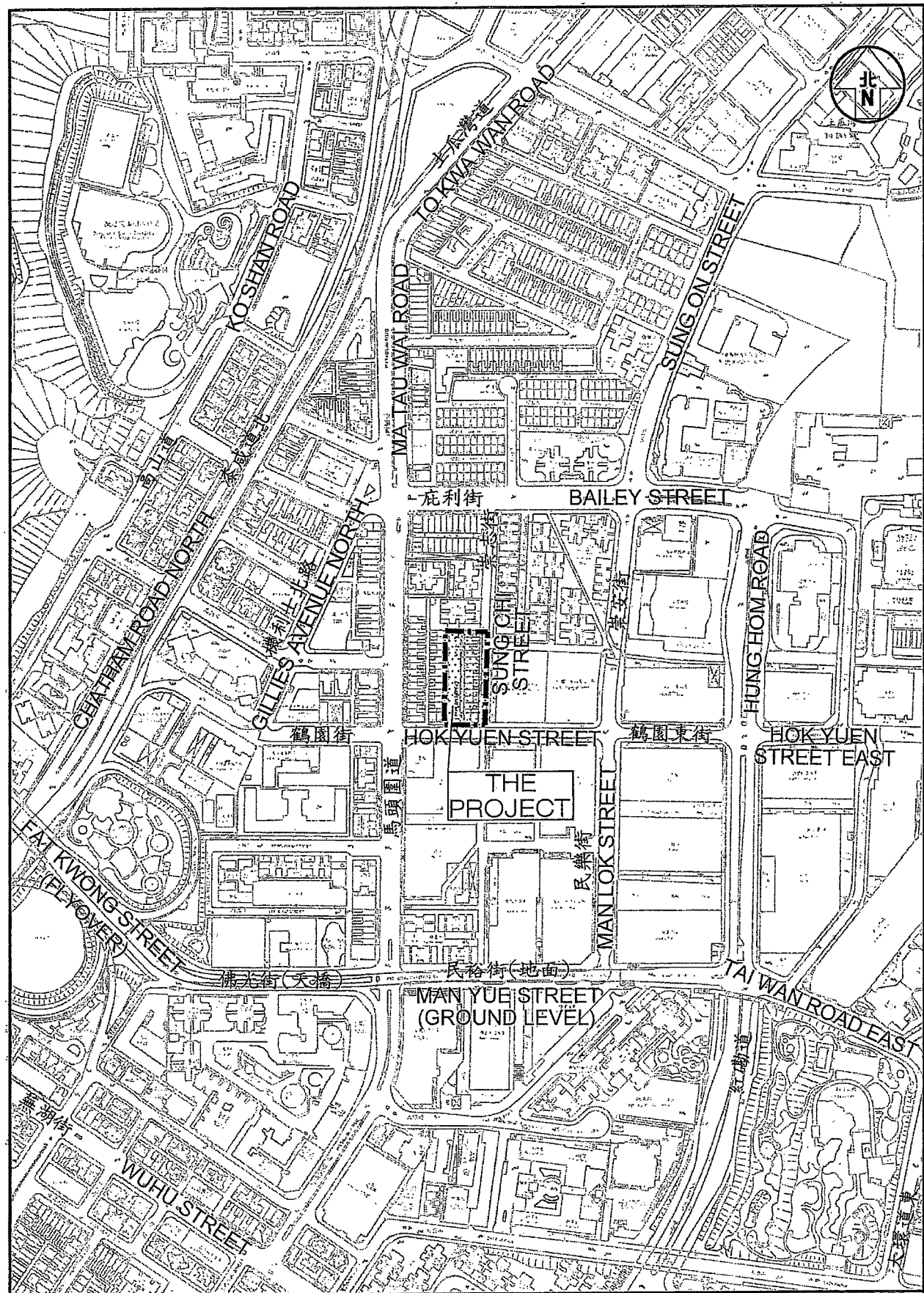
Conclusion

- 4.11 Table 4.5 shows that the junctions analysed have capacity to accommodate the expected traffic growth to 2028, and the traffic generated by the Project. It can be concluded that the Project will not have adverse traffic impact to the surrounding road network.

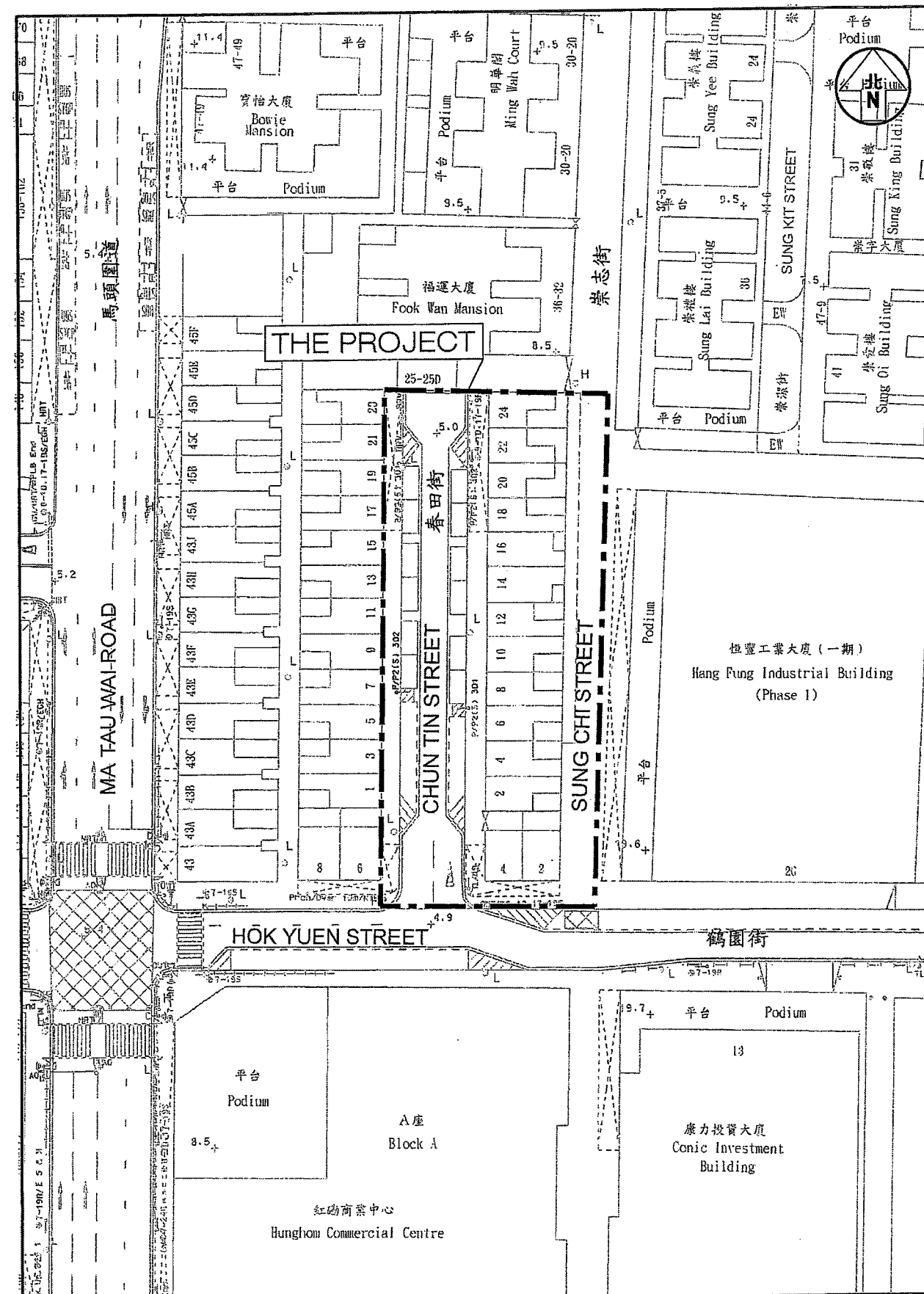
## 5.0 SUMMARY AND CONCLUSION

- 5.1 The subject site is located at 2-4 Hok Yuen Street and 2-24 Chun Tin Street (even numbers), Kowloon City, Kowloon. URA intends to commence the Chun Tin Street / Sung Chi Street Development Scheme under section 25 of URAO to carry out a redevelopment of the area, to provide a residential development with some retail use, together with the closure of the existing Chun Tin Street, provision of a new turning area, and widening of Sung Chi Street to improve the overall environment of the area.
- 5.2 Since the Project is at draft and notional design stage and is subject to approval by TPB, the URA will liaise with LandsD, HyD and THB on the statutory requirements concerning the permanent closure of Chun Tin Street and proposed widening at Sung Chi Street upon approval by TPB.
- 5.3 The subject site is well-served by convenient and comprehensive land-based public transport services, including franchised bus and public light bus. Some planned entrances of the future MTR Ho Man Tin Station are located some 500m from the subject site.
- 5.4 To facilitate the redevelopment for a better living environment and efficient land use, it is proposed to adopt a relaxed provision of internal transport facilities from the HKPSG recommendation for the Project after considering the followings:
- (i) Site constraint;
  - (ii) Low parking demand generated from the Project;
  - (iii) The availability of road-based public transport and MTR;
  - (iv) Discourage the use of Private Car; and
  - (v) Environmental and cost-effectiveness concern.
- 5.5 The proposed closure of Chun Tin Street and widening of Sung Chi Street can improve the traffic and walking environment. Sung Chi Street between Hok Yuen Street and Fook Wan Mansion, would be converted to 7.3m wide 2-way road. A new turning area will be provided at the widened Sung Chi Street, fronting Fook Wan Mansion, and the run-in/outs of the Project and the approved URA Ma Tau Wai Road Project (TKW/1/002) are provided at this new turning area. A continuous pavement network surrounding the Project and a widened pavement fronting the approved URA Ma Tau Wai Road Project (TKW/1/002), extending to the corridor between these 2 sites, are provided.
- 5.6 It is proposed to provide 3 LGV loading / unloading bays, which are to be used by the Project in achieving the HKPSG recommendation, at the western side of the widened Sung Chi Street. In view of the limited site area and site constraints on building disposition, as well as the unavailability of manoeuvring space and safety concern, no HGV loading / unloading bay is provided. The proposed LGV loading / unloading bays would also be shared use with the public. Subject to the Authority and relevant government departments' agreement, which will be sought at later design stage, it is URA's initial intention to take up the management and maintenance responsibilities of the LGV laybys at Sung Chi Street free-of-charge for public use. The area for proposed new turning area and road widening at Sung Chi Street will be indicated in a plan in the draft DSP

- document for departmental comment and for TPB's consideration. In view of the status of Sung Chi Street and the new turning area, the Project will deploy sufficient staff members to manage Sung Chi Street to ensure no illegal parking, no obstruction at Sung Chi Street and smooth operation of the street.
- 5.7 With the closure of Chun Tin Street, it is proposed to re-provide 7 metered car parking spaces in the vicinity and remove the existing loading / unloading laybys at this road. This provision is considered sufficient based on the findings of the utilisation survey.
- 5.8 Manual classified counts were conducted at the key junctions to establish the existing traffic flows during the AM and PM peak hours. The future year traffic flows for the junction analysis were estimated with reference to the BDTM, the expected traffic generation of the future major developments in the vicinity and the Project.
- 5.9 The results of the junction capacity analysis concluded that the junctions and analysed have sufficient capacities to accommodate the expected 2028 traffic flows and the traffic generated by the Project. It can be concluded that the Project would not have adverse traffic impacts to the surrounding road network.
- 5.10 In summary, the proposed development in the Project is considered to have no adverse impact to the local traffic network. The proposed road improvement works can improve the local traffic network and pedestrian walking environment and thus bring benefits to the local community. The proposed level of internal parking facilities and layout within the development of the project is considered acceptable from traffic engineering point of view.



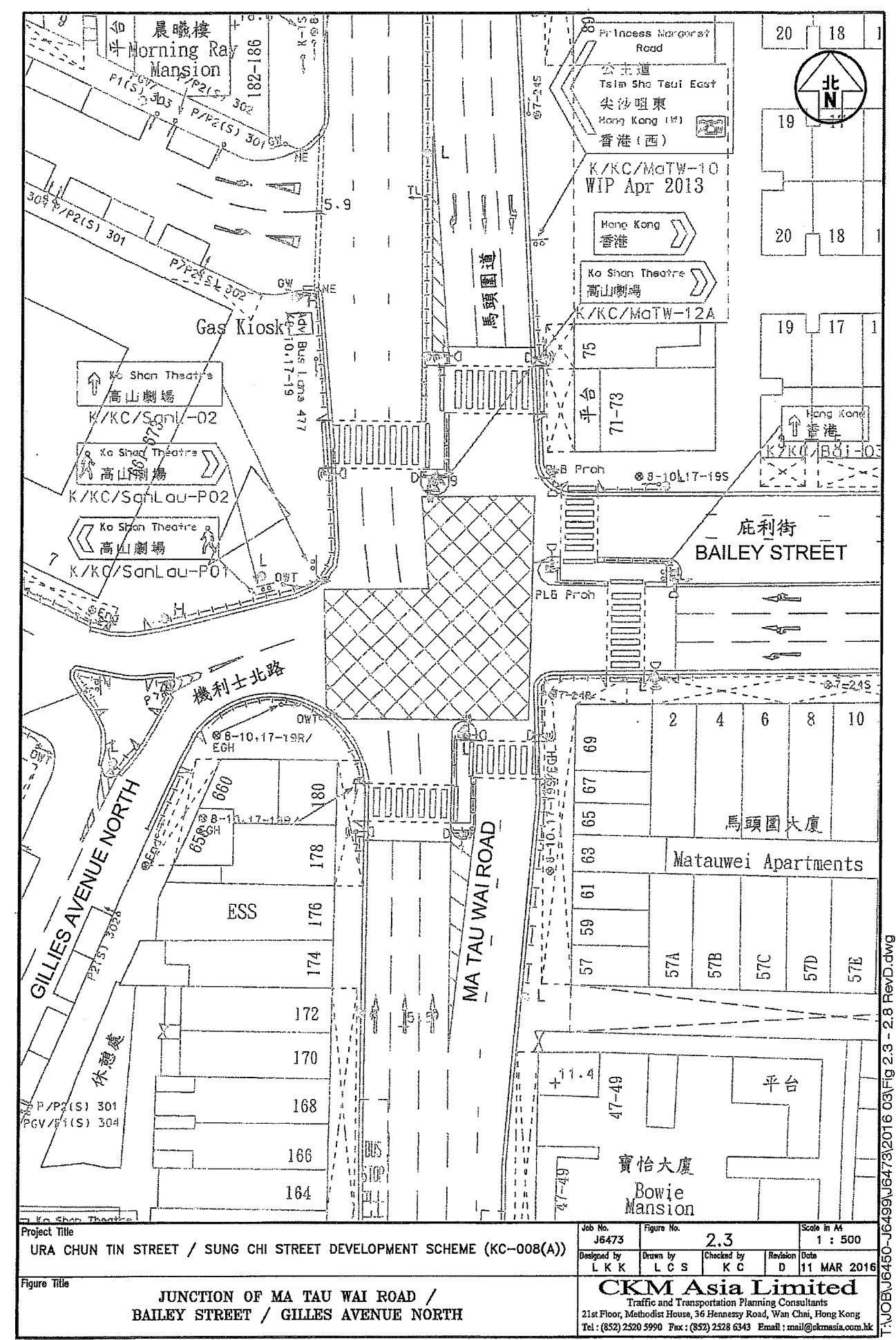
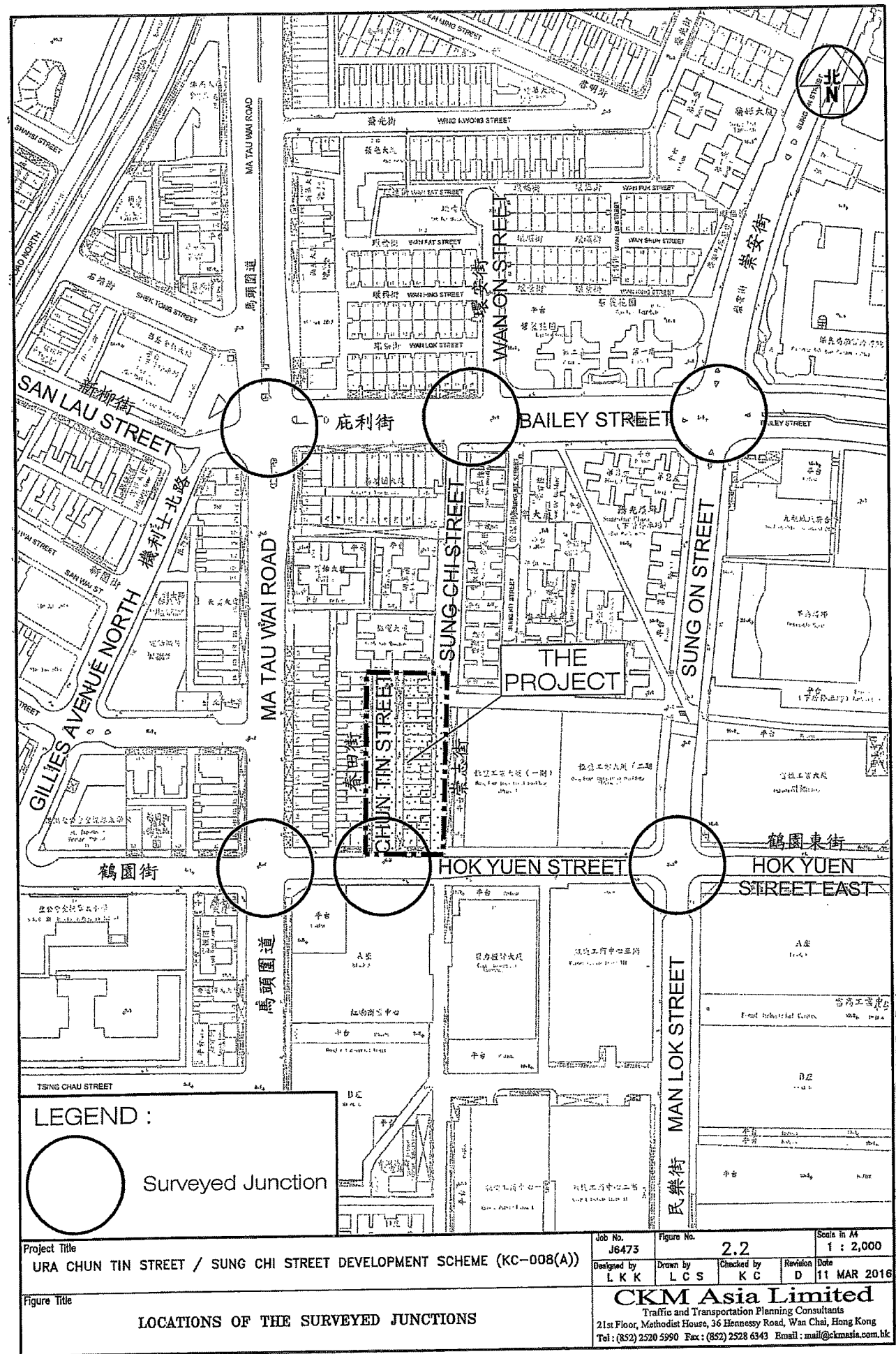
<b>Project Title</b> URA CHUN TIN STREET / SUNG CHI STREET DEVELOPMENT SCHEME (KC-008(A))	<b>Job No.</b> J6473	<b>Figure No.</b> 1.1	<b>Scale in A4</b> 1 : 4,000
<b>Designed by</b> L K K	<b>Drawn by</b> L C S	<b>Checked by</b> K C	<b>Revision</b> D
<b>Date</b> 11 MAR 2016	<b>CKM Asia Limited</b> Traffic and Transportation Planning Consultants 21st Floor, Methodist House, 36 Hennessy Road, Wan Chai, Hong Kong Tel: (852) 2520 5990 Fax: (852) 2528 6343 Email: mail@ckmasia.com.hk	<b>Figure Title</b> LOCATION OF THE SUBJECT SITE	

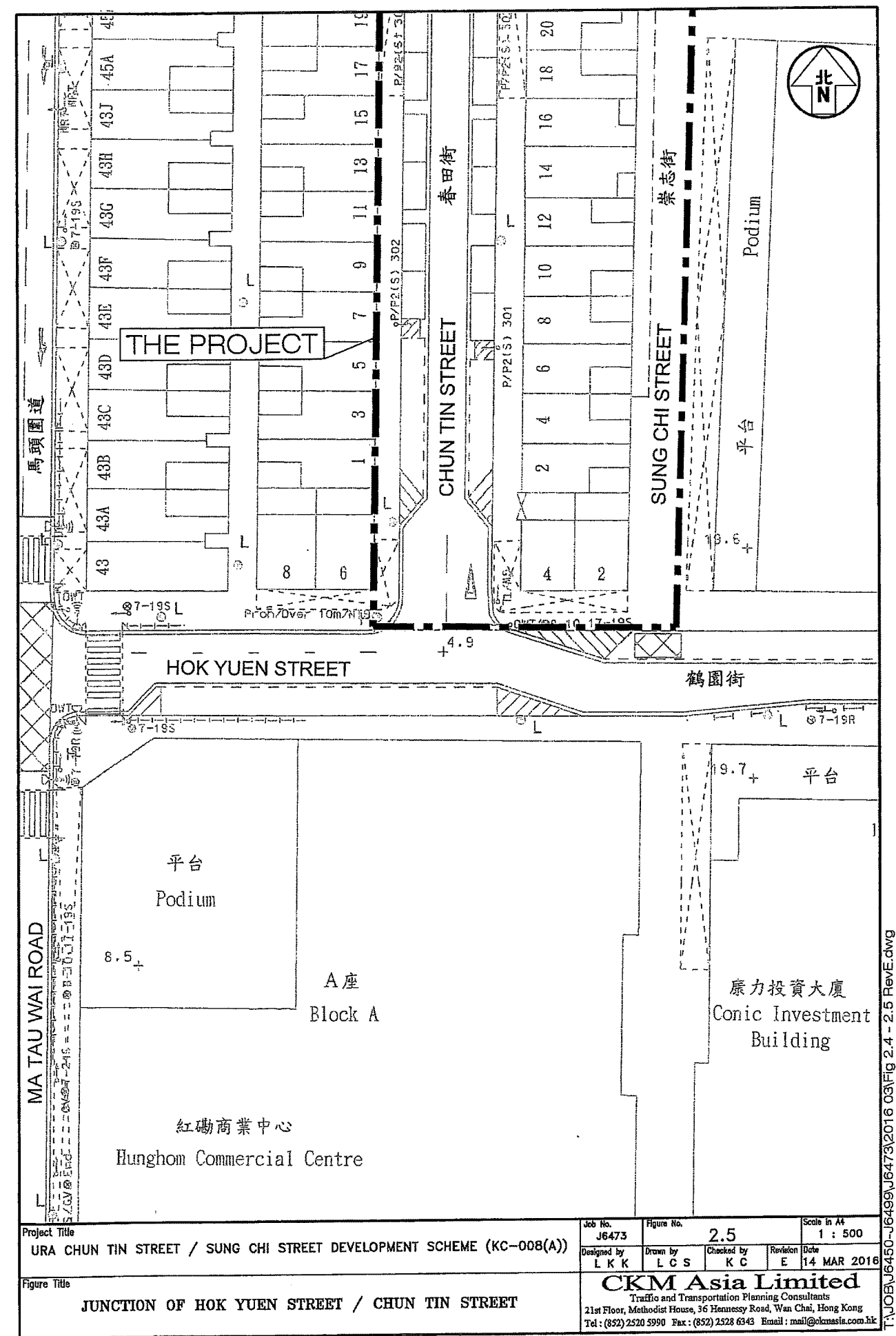
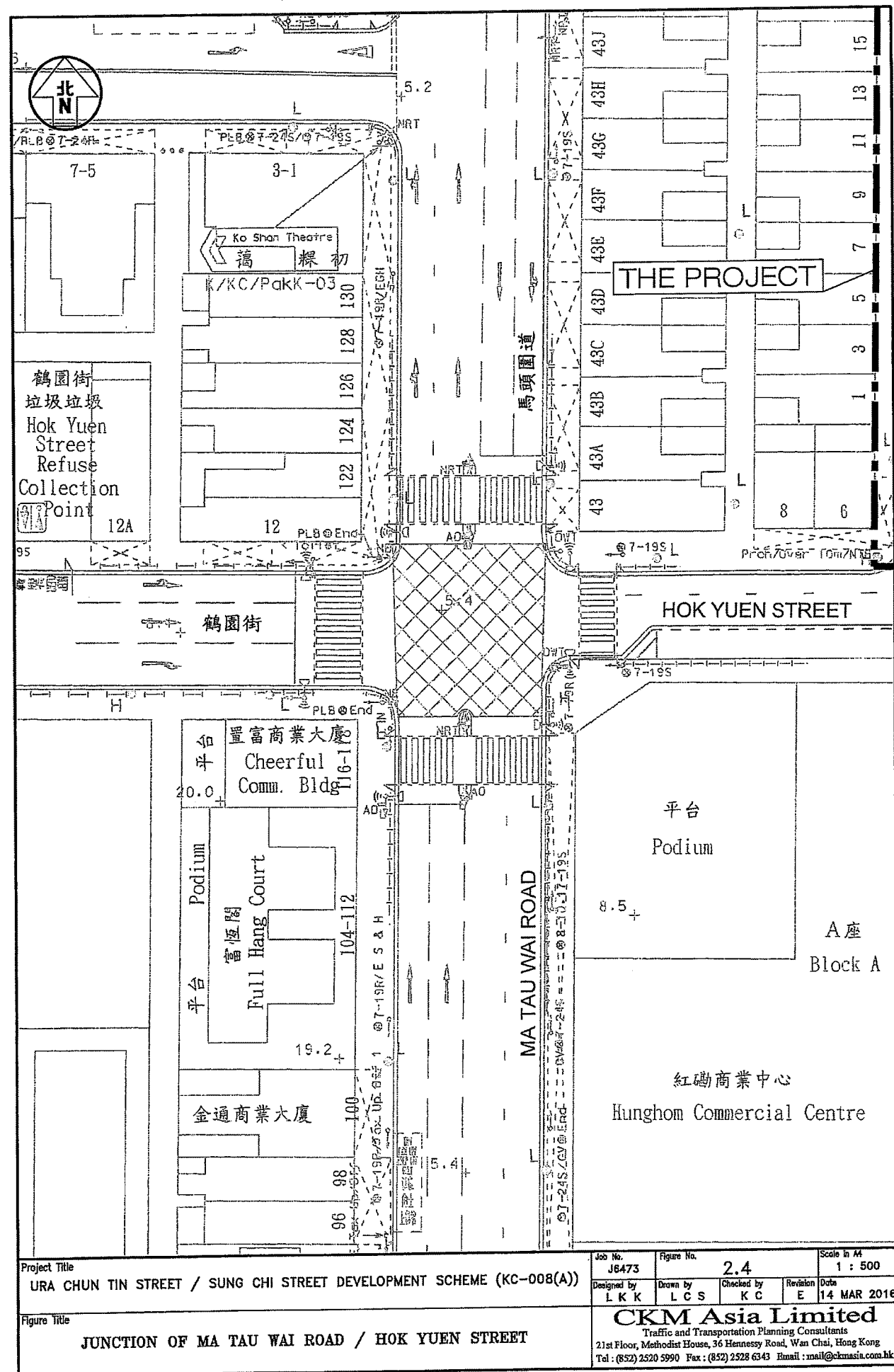


<b>Project Title</b> URA CHUN TIN STREET / SUNG CHI STREET DEVELOPMENT SCHEME (KC-008(A))	<b>Job No.</b> J6473	<b>Figure No.</b> 2.1	<b>Scale in A4</b> 1 : 750
<b>Designed by</b> L K K	<b>Drawn by</b> L C S	<b>Checked by</b> K C	<b>Revision</b> D
<b>Date</b> 11 MAR 2016	<b>CKM Asia Limited</b> Traffic and Transportation Planning Consultants 21st Floor, Methodist House, 36 Hennessy Road, Wan Chai, Hong Kong Tel: (852) 2520 5990 Fax: (852) 2528 6343 Email: mail@ckmasia.com.hk	<b>Figure Title</b> ROAD NETWORK IN THE VICINITY OF THE SUBJECT SITE	

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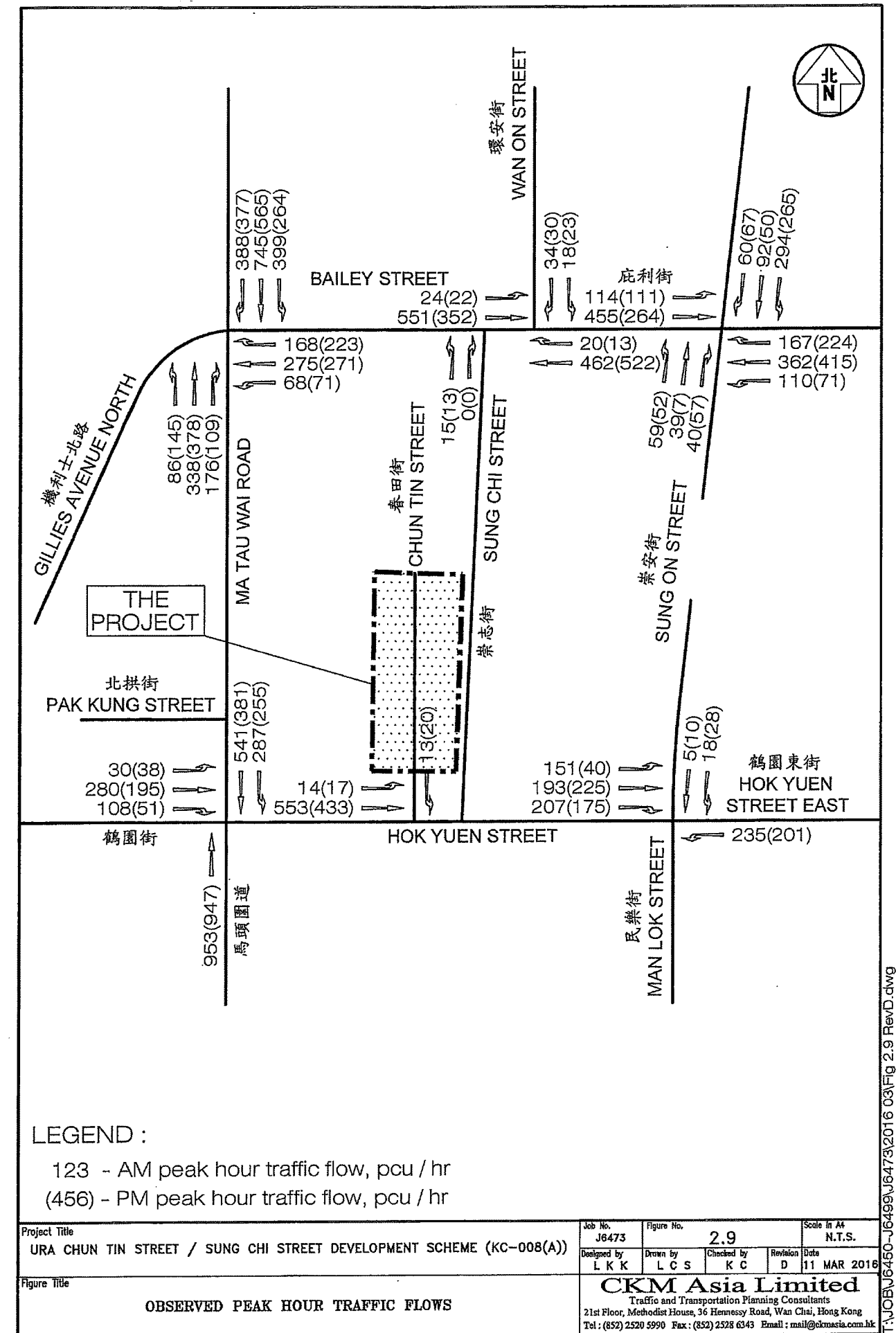
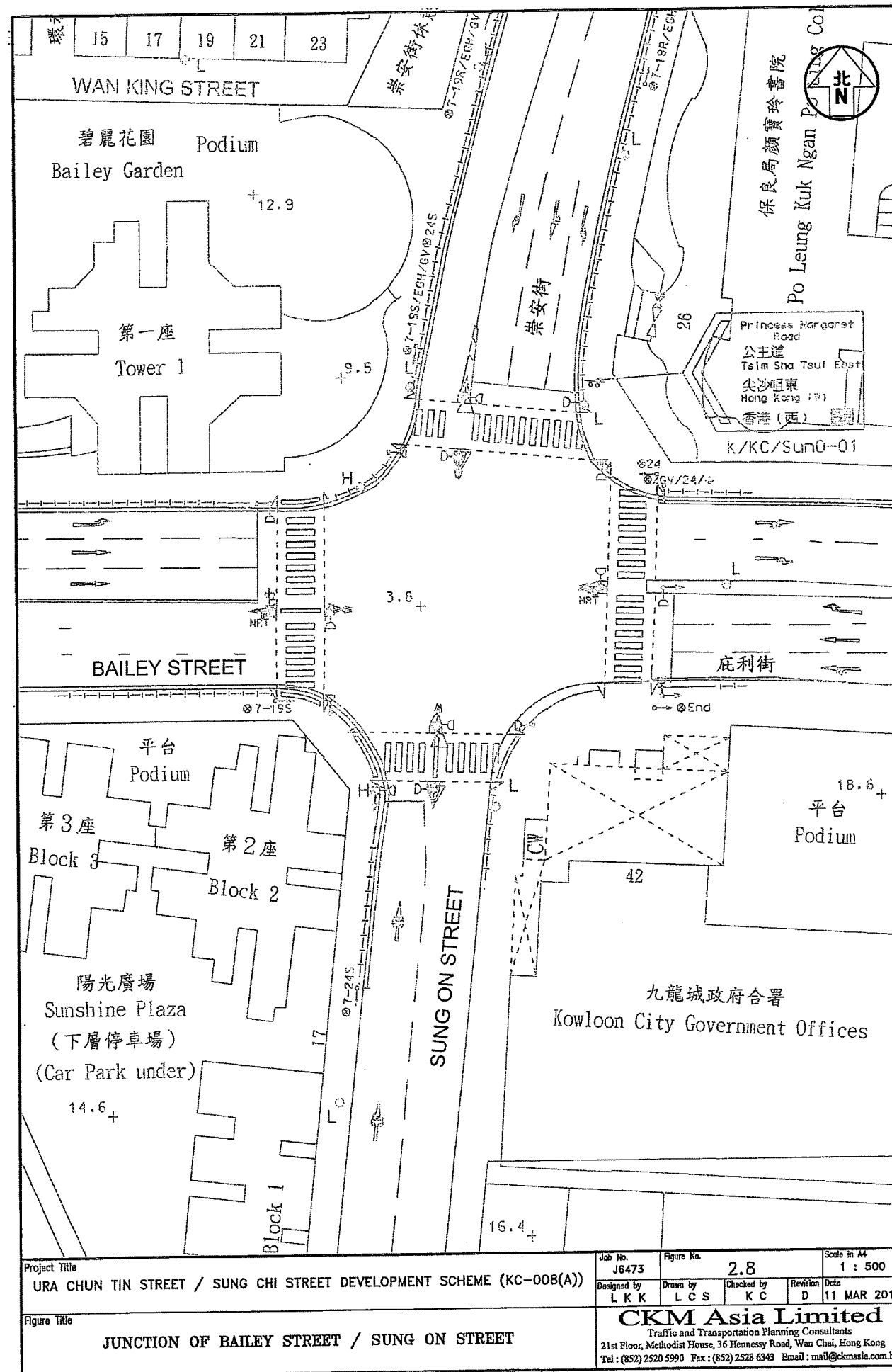


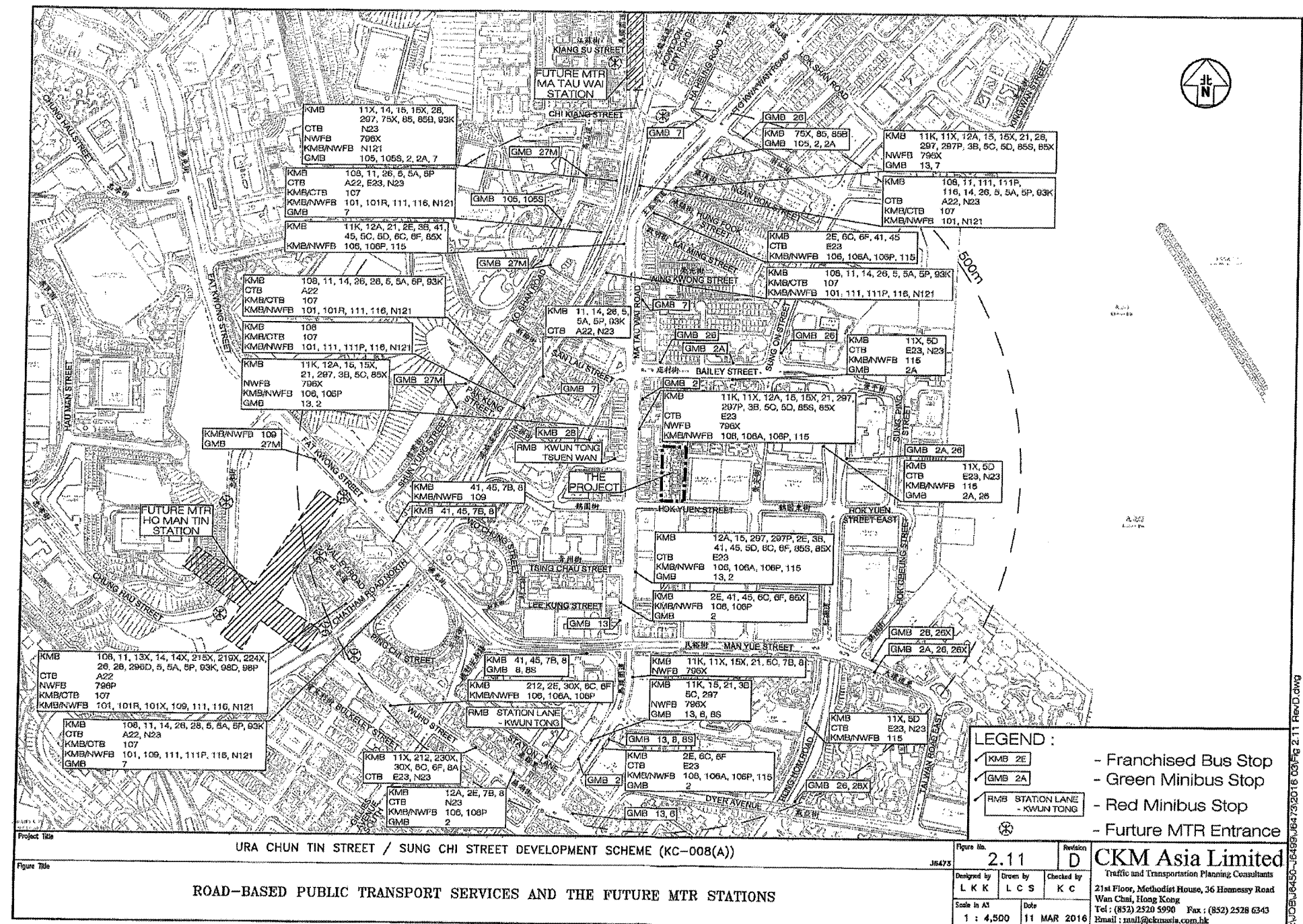
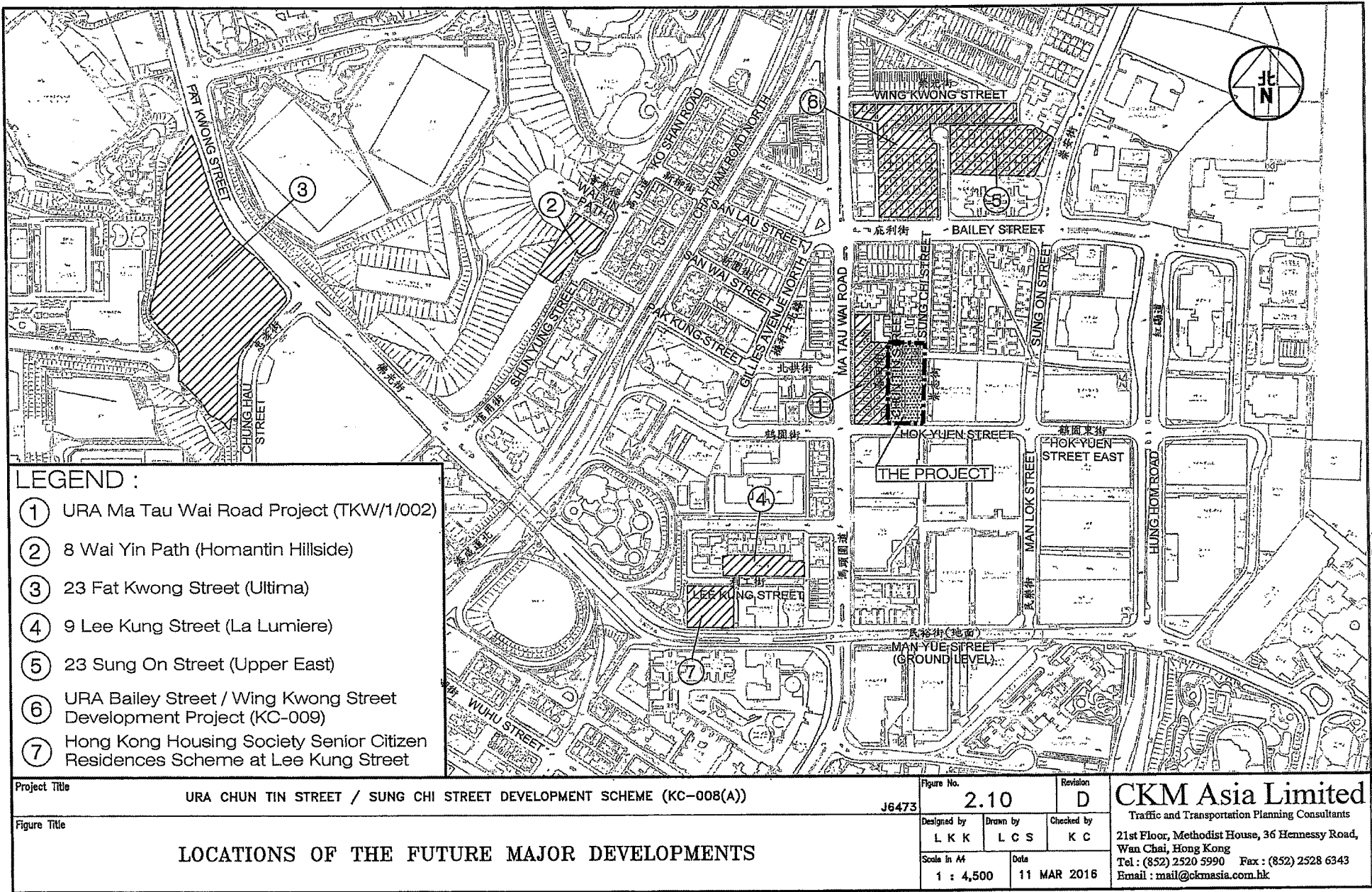


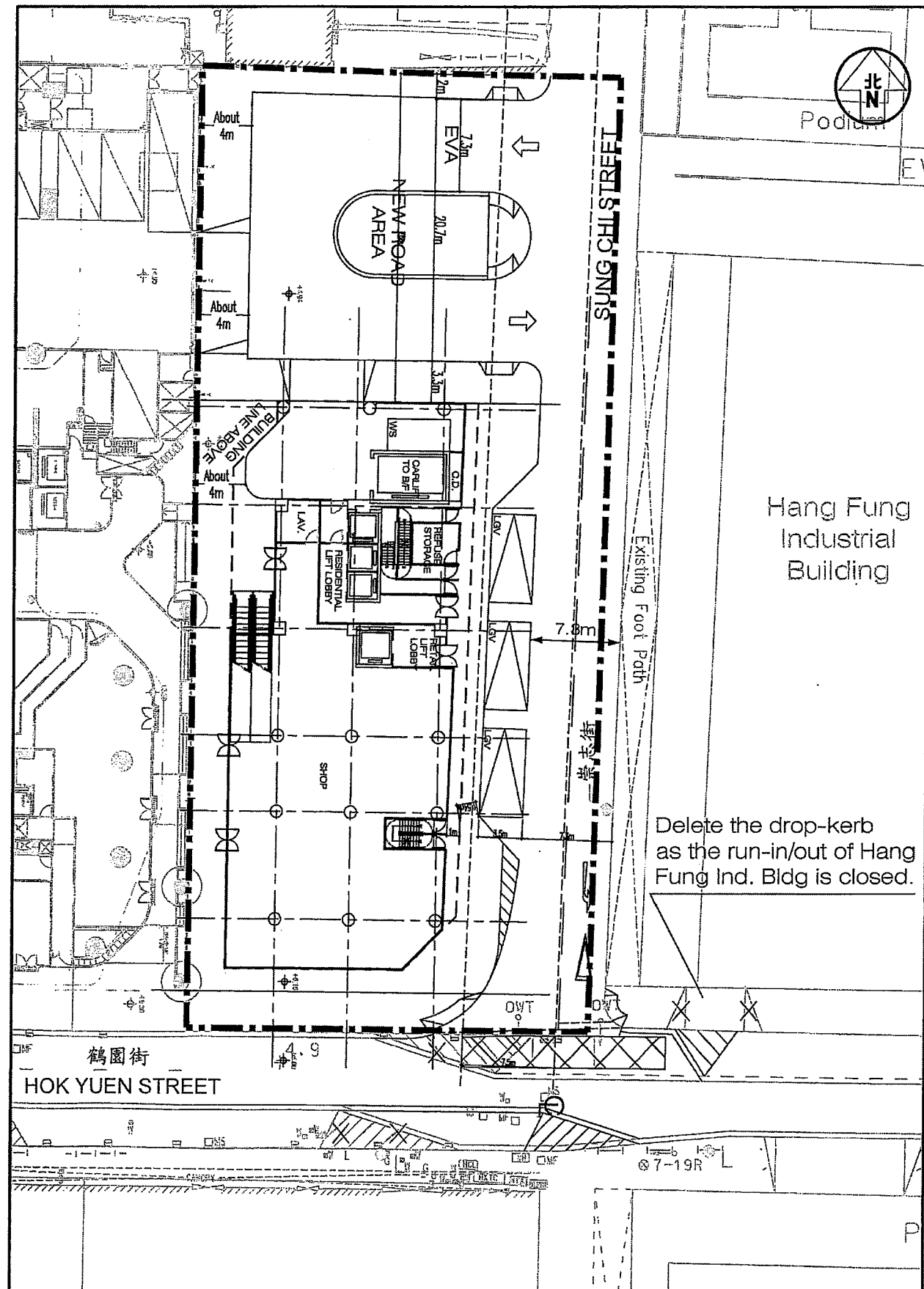






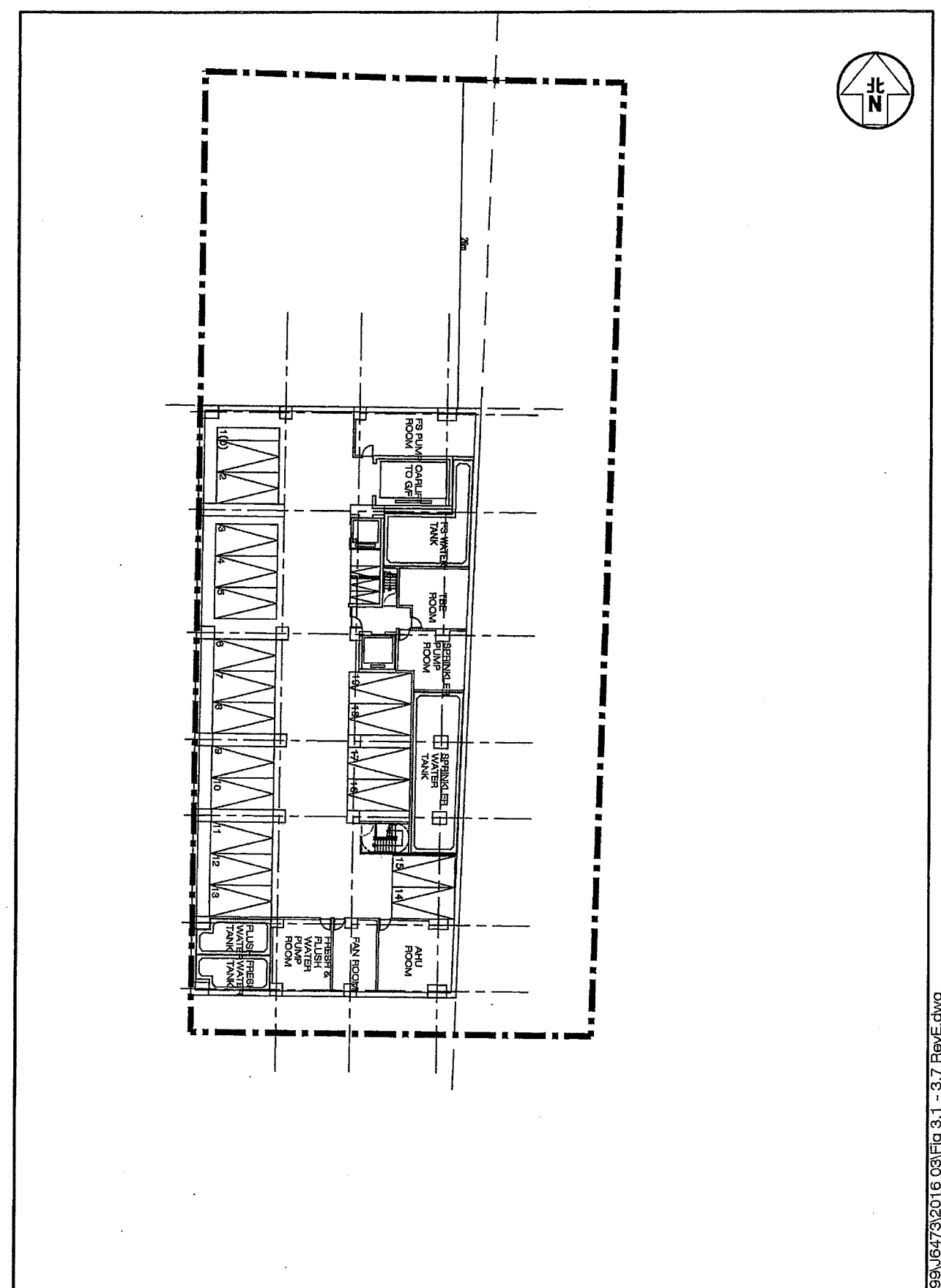






Project Title URA CHUN TIN STREET / SUNG CHI STREET DEVELOPMENT SCHEME (KC-008(A))	Job No. J6473	Figure No. 3.1	Scale in A4 1 : 400
Figure Title PROPOSED GROUND FLOOR PLAN	Designed by L K K		
		Drawn by L C S	Checked by K C
		Revision E	Date 14 MAR 2016
<b>CKM Asia Limited</b> Traffic and Transportation Planning Consultants 21st Floor, Methodist House, 36 Hennessy Road, Wan Chai, Hong Kong Tel : (852) 2520 5990 Fax : (852) 2528 6343 Email : mail@ckmasia.com.hk			

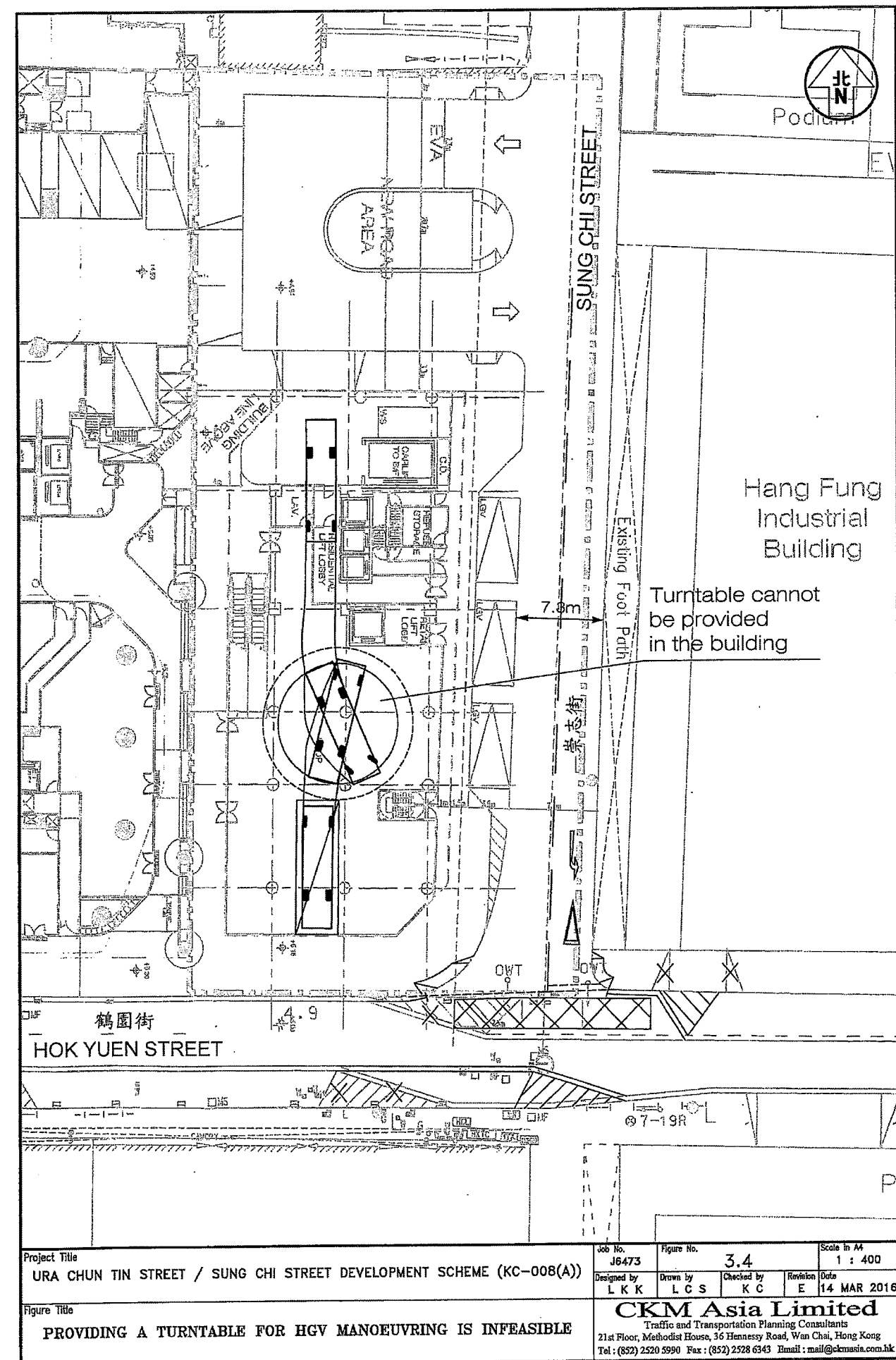
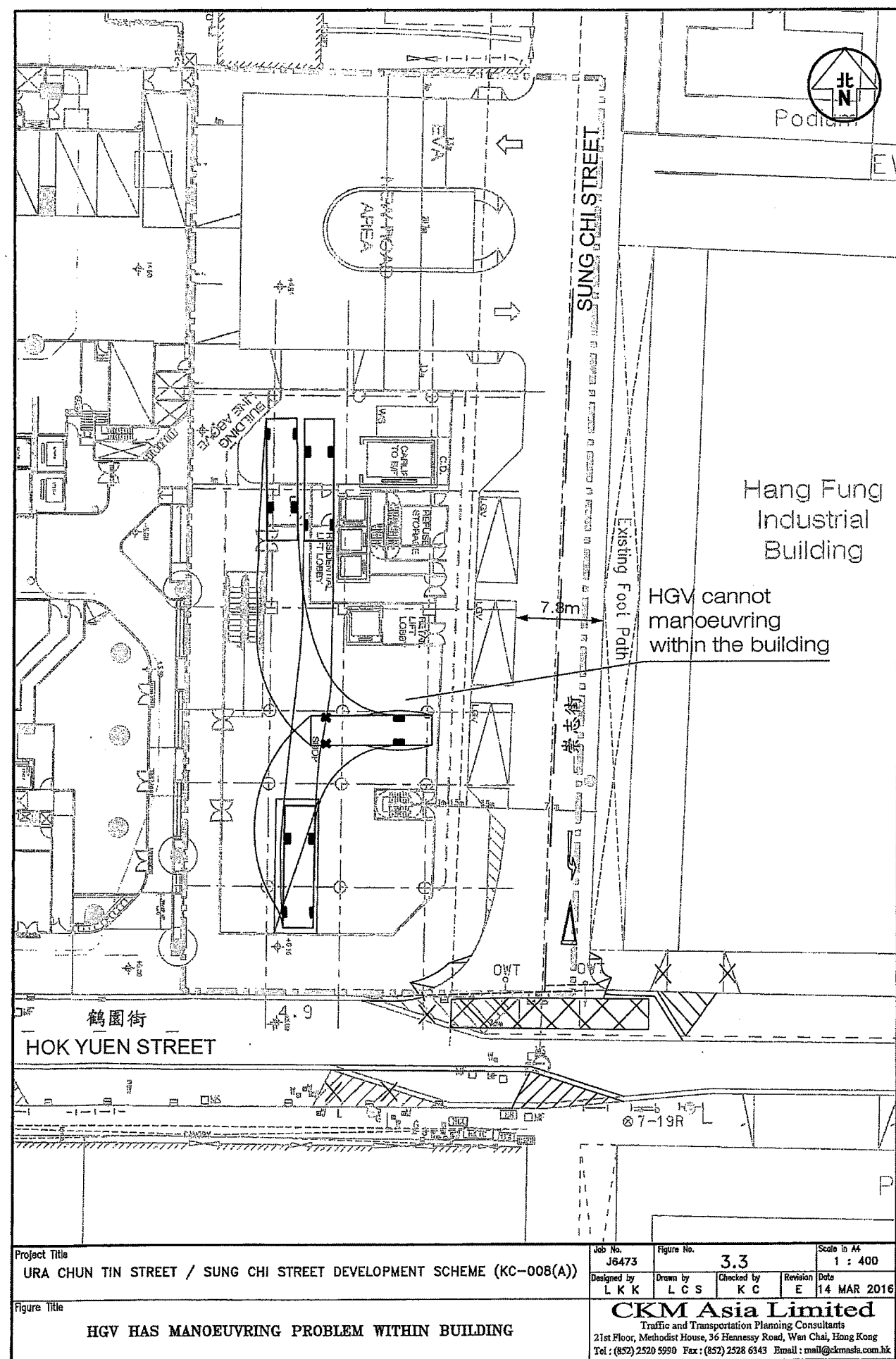
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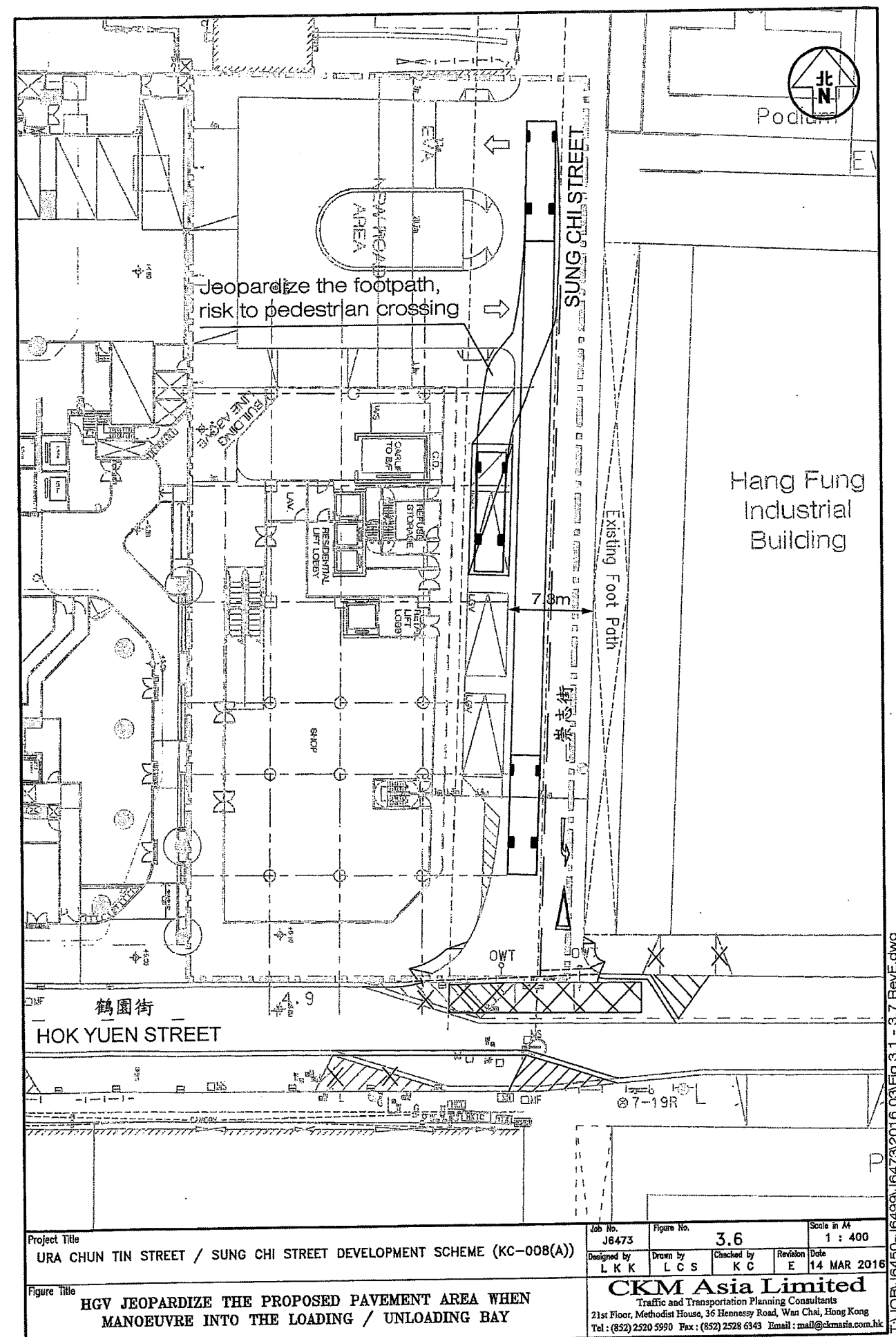
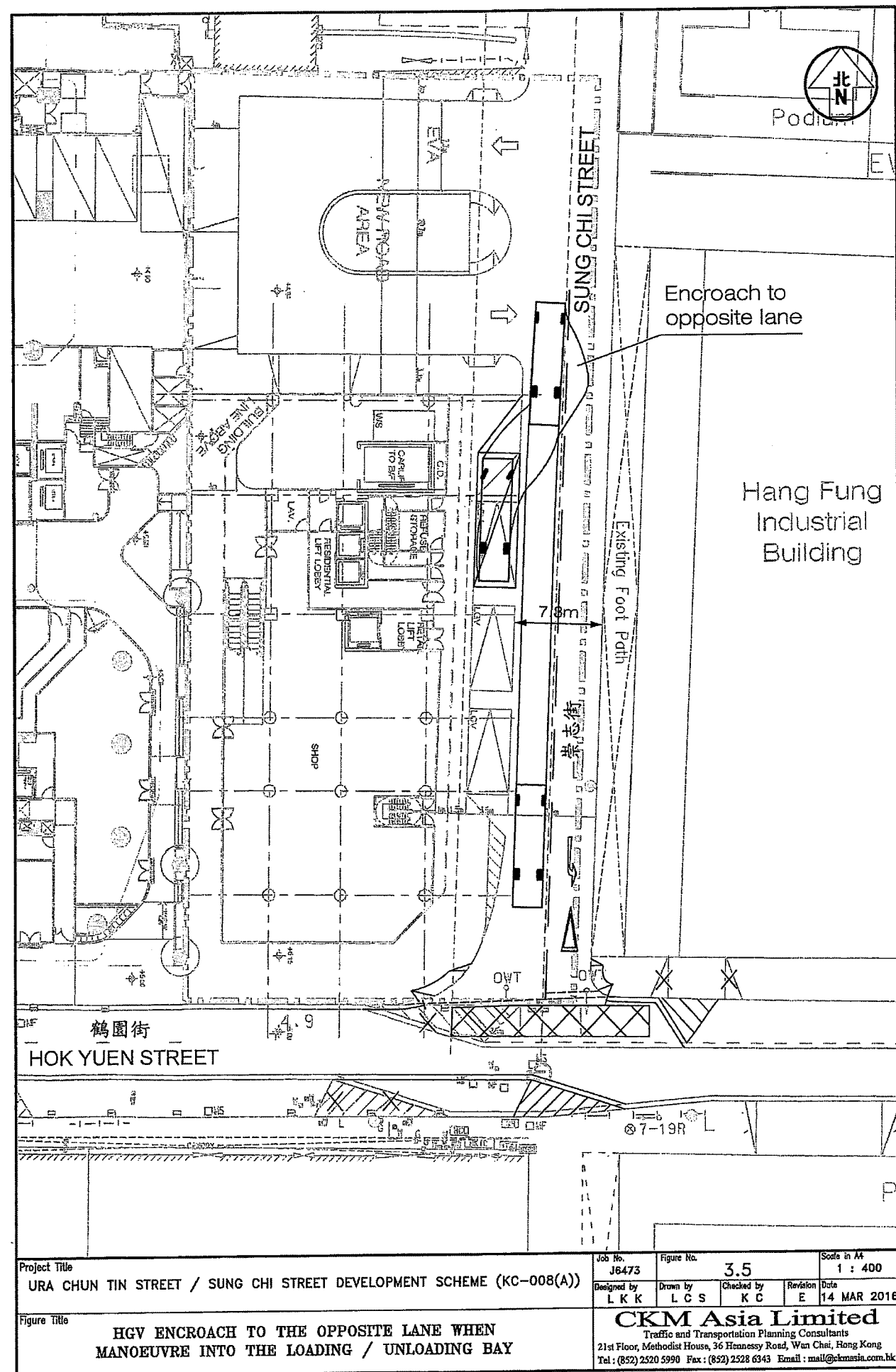


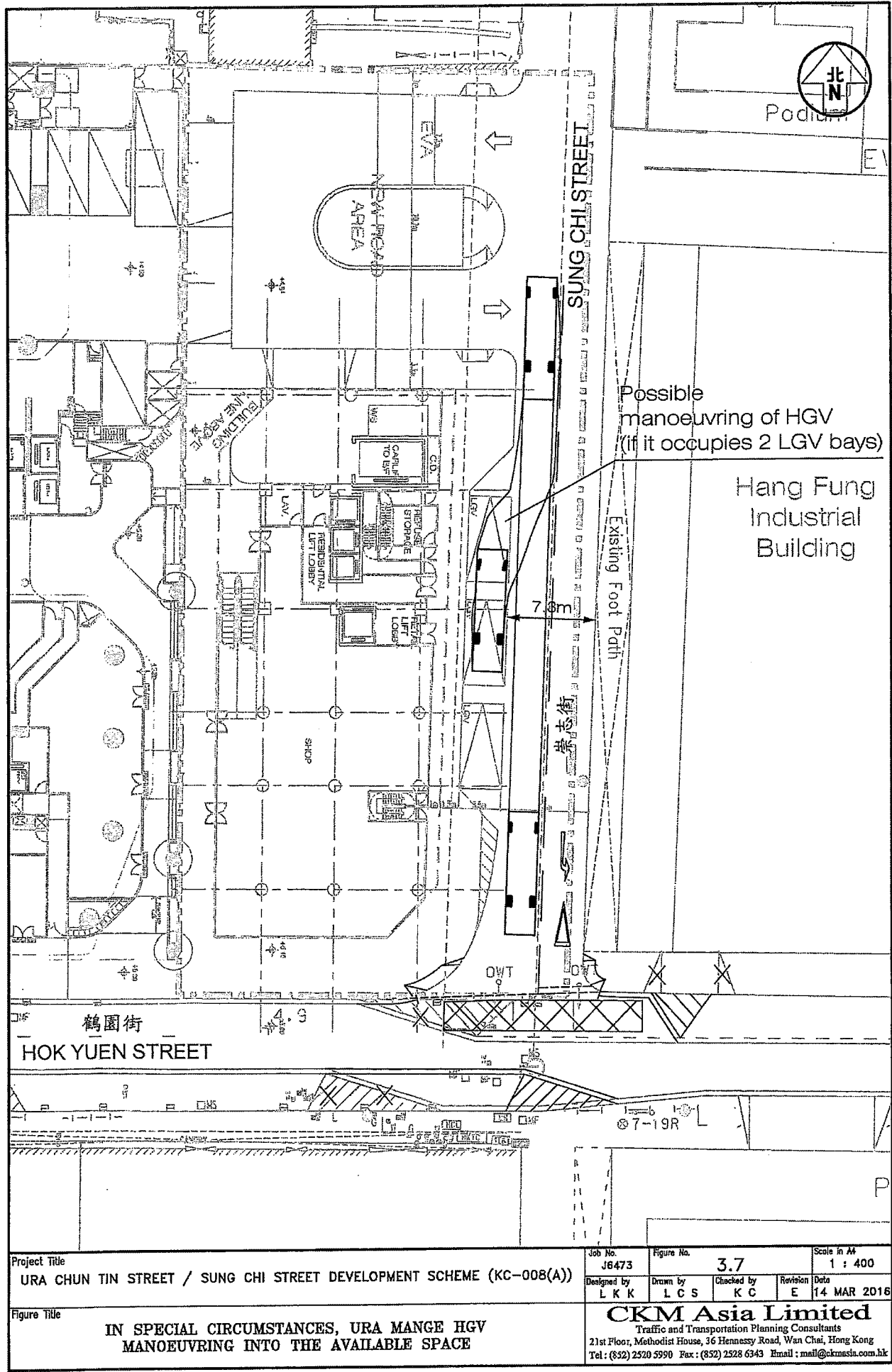
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Figure Title PROPOSED BASEMENT FLOOR PLAN	Designed by L K K		
		Drawn by L C S	Checked by K C
		Revision E	Date 14 MAR 2016
<b>CKM Asia Limited</b> Traffic and Transportation Planning Consultants 21st Floor, Methodist House, 36 Hennessy Road, Wan Chai, Hong Kong Tel : (852) 2520 5990 Fax : (852) 2528 6343 Email : mail@ckmasia.com.hk			

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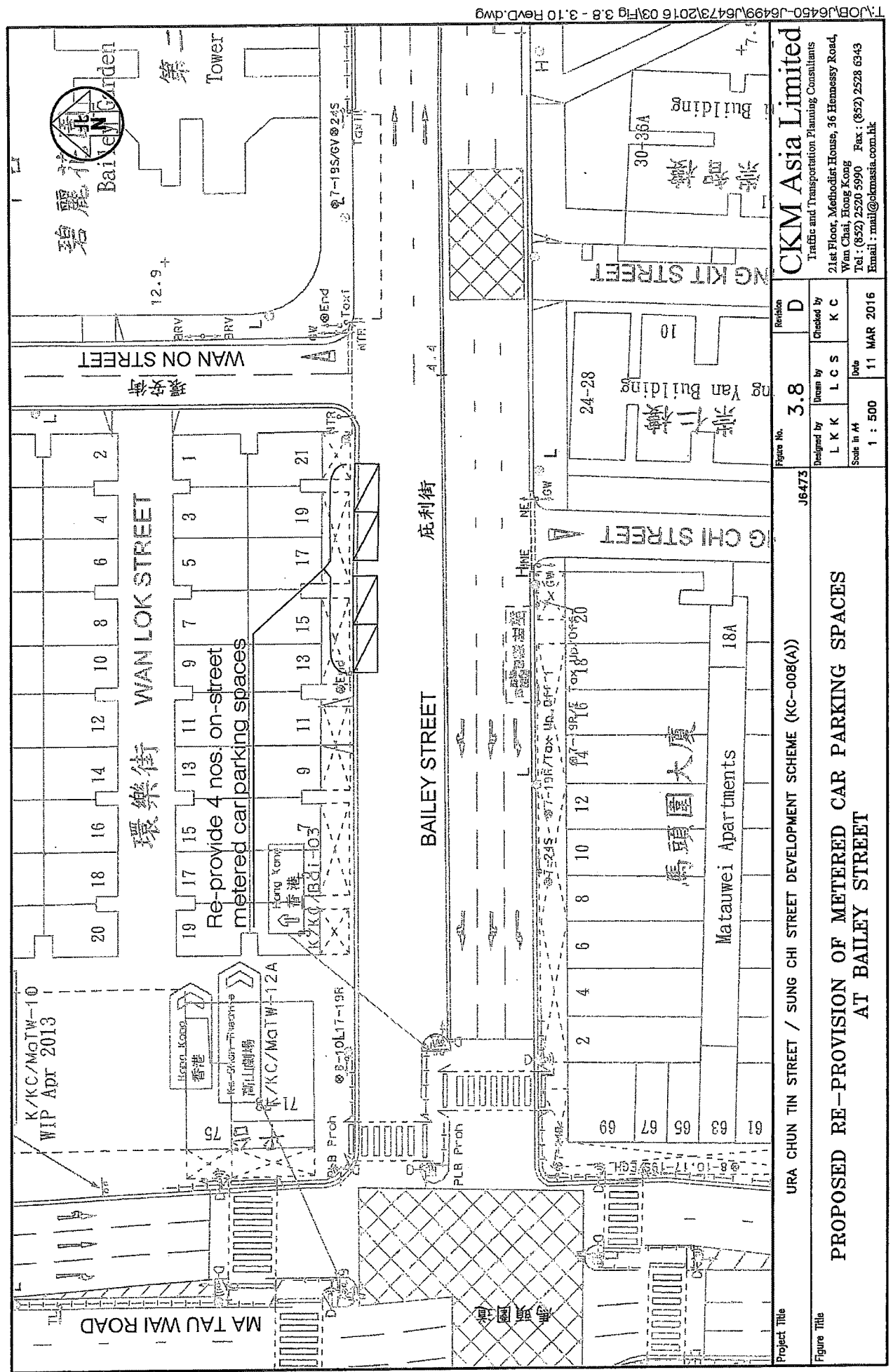







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URA CHUN TIN STREET / SUNG CHI STREET DEVELOPMENT SCHEME (KC-008(A))		J6473		3.7		1 : 400	
Figure Title		Designed by	Drawn by	Checked by	Revision	Date	
IN SPECIAL CIRCUMSTANCES, URA MANGE HGV MANOEUVRING INTO THE AVAILABLE SPACE		L K K	L C S	K C	E	14 MAR 2016	
		CKM Asia Limited					
		Traffic and Transportation Planning Consultants					
		21st Floor, Methodist House, 36 Hennessy Road, Wan Chai, Hong Kong					
		Tel: (852) 2520 5990 Fax: (852) 2528 6343 Email: mail@ckmasia.com.hk					

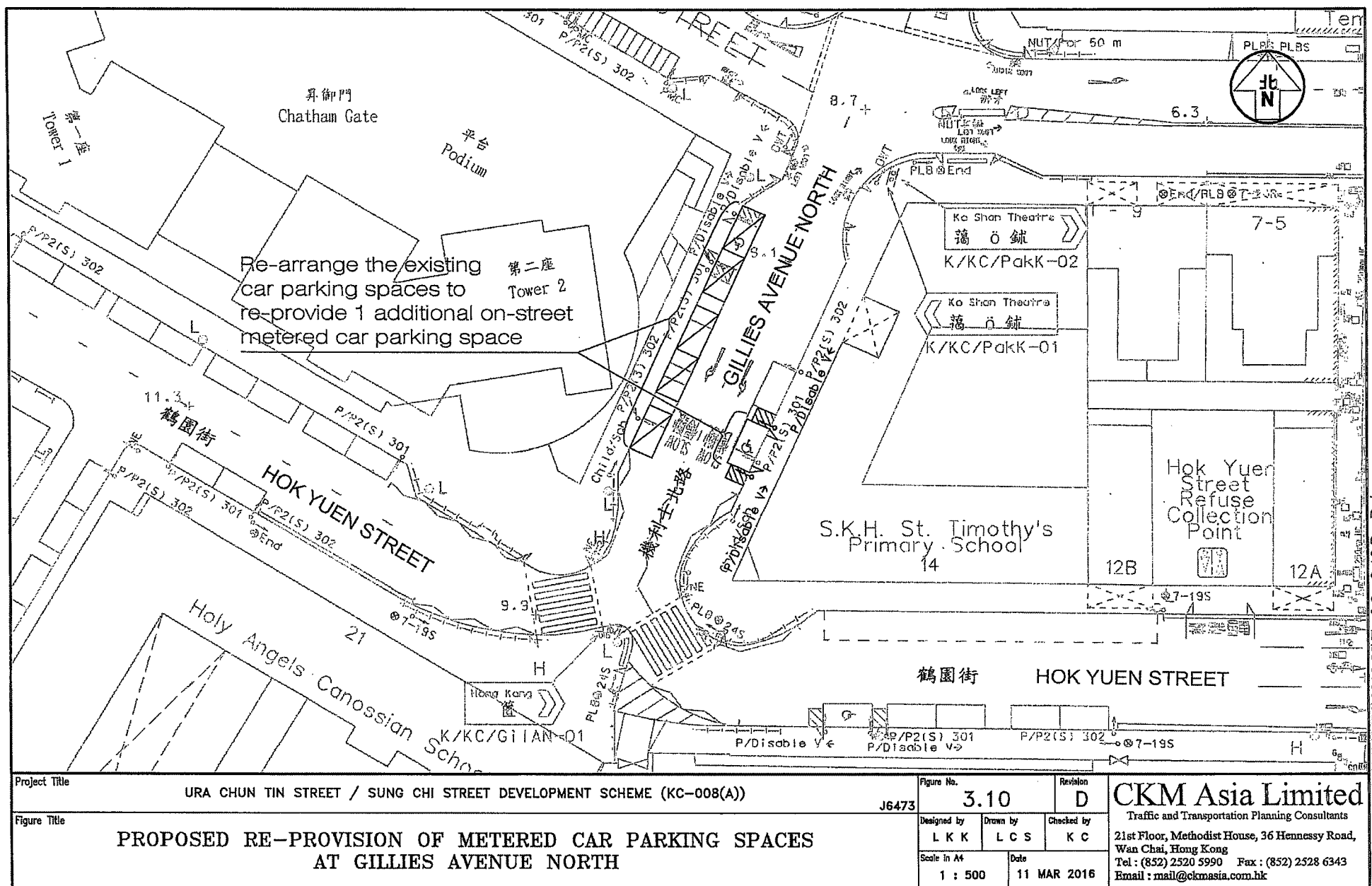
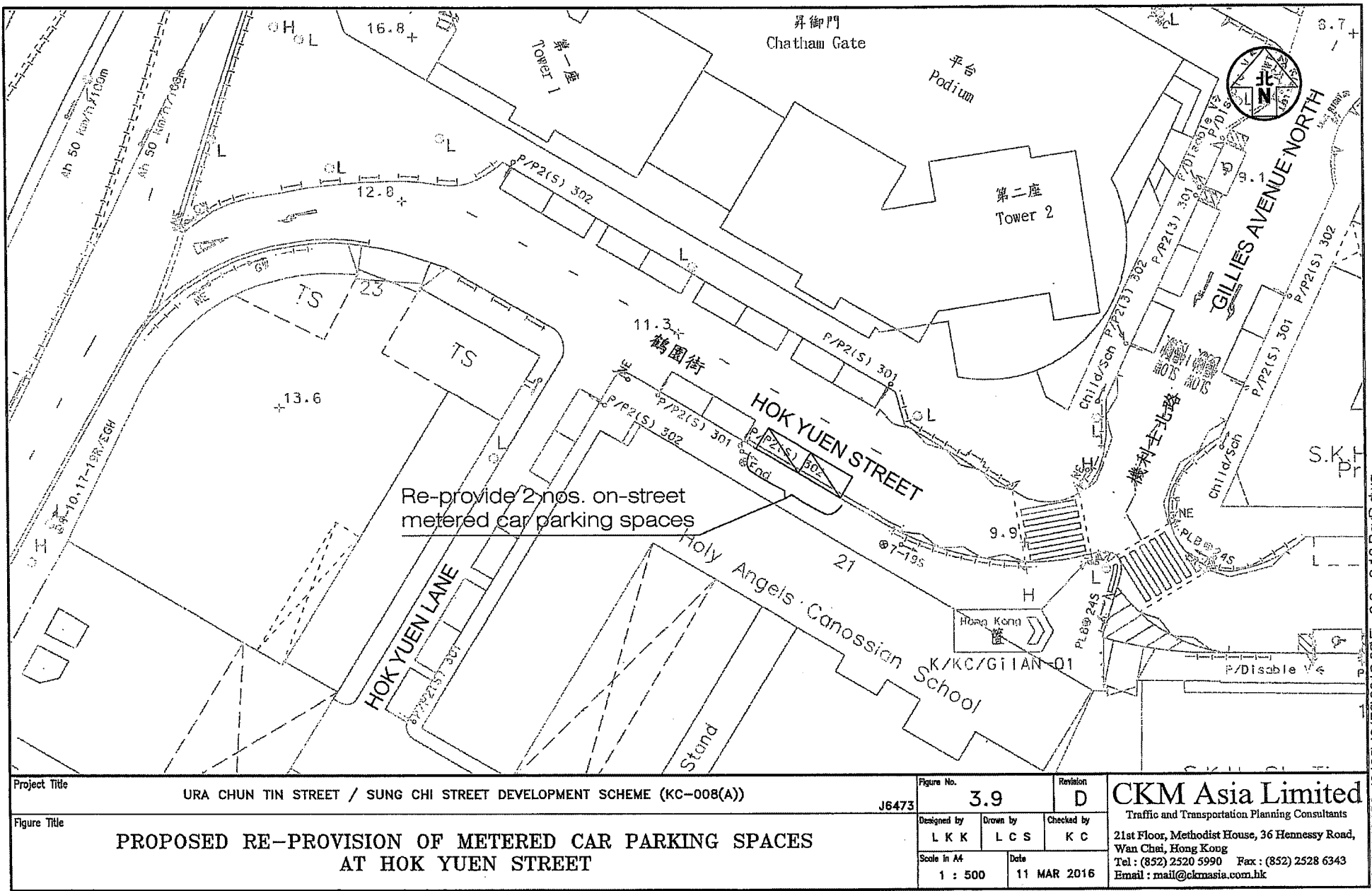
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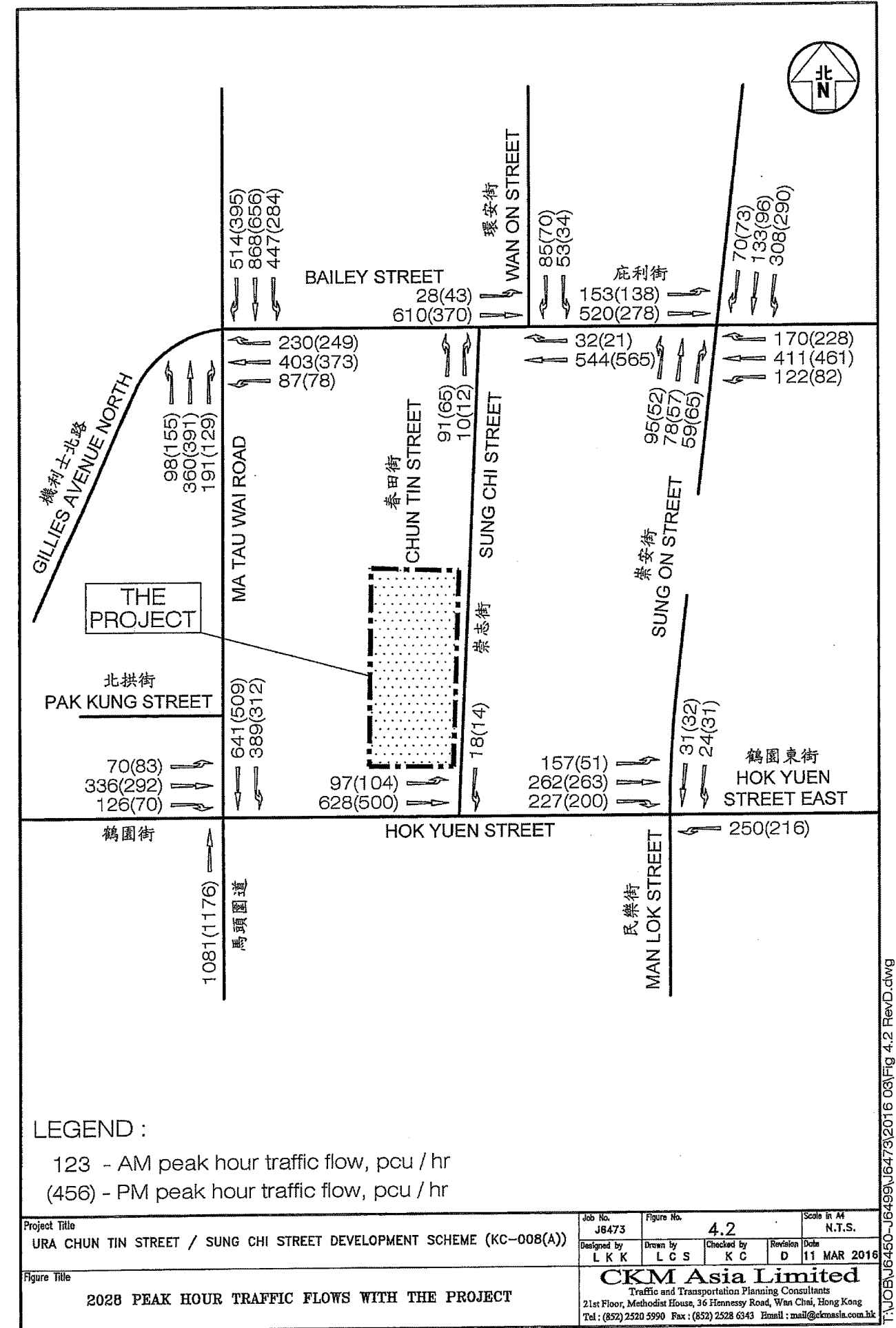
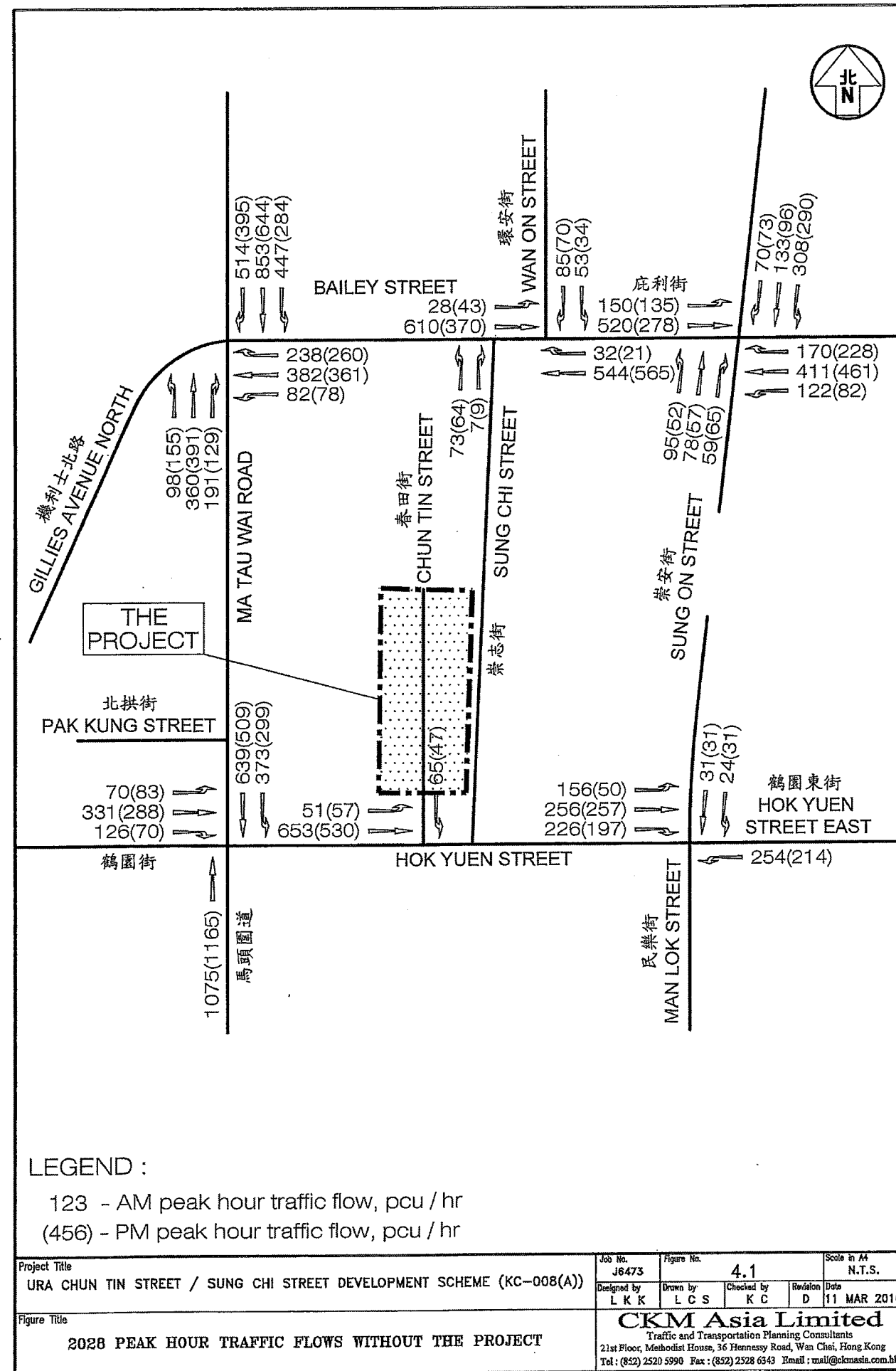


		Project Title
馬頭圍道		Figure Title
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**Appendix 1**  
**Correspondence of the Discussion with Transport**  
**Department, Submission of Draft TIA Report**  
**and Follow-up Materials**

---

**From:** CKM Asia Ltd <mail@ckmasia.com.hk>  
**Sent:** Monday, December 28, 2015 4:42 PM  
**To:** 'cheungmunkit@td.gov.hk'  
**Cc:** 'Wong, Christopher'; 'Ho, Ray'; 'Kwan, Mable';  
'joycewcleee@td.gov.hk'  
**Subject:** URA Chun Tin Street Development Scheme (KC-008A), Ma Tau Wai,  
Kowloon  
**Attachments:** J6473 Layout & Swept Path 20151228.pdf; J6473 Parking Provision  
20151228.pdf

Dear Mr. Cheung,

Further to the meeting between your goodself, the URA and us on 21 December 2015 on the captioned, we would like to provide a summary of the discussion for your comment:

**(a) New Turning Area**

Further to our discussion at the meeting, a new turning area would allow adequate manoeuvring space for vehicles including HGV without encroaching onto the proposed pavement area. To enhance the pedestrian walking environment, a widened pavement of about 4m is proposed fronting TKW/1/002 site. The ground floor layout plan, with the new turning area is attached for your comment. The swept path analysis of HGV (SP1 – SP3) at the new turning area is attached for your information.

**(b) Internal parking provision**

Based on the current notional design, it is proposed to provide some 18 private car parking spaces in a basement car park which is served by car lift. The comparison of the proposed parking provision and the HKPSG recommendation is enclosed for your information.

The basement layout plan with the parking facilities, is attached for your comment.

**(c) On-street metered L/UL bays and car parking spaces**

On-street metered L/UL bays

- The on-street loading / unloading bays at Chun Tin Street are currently occupied by the recycle material collection shops/workshops located at the subject site. With the redevelopment of the subject site, these shops will be removed and there will be no demand on these on-street loading / unloading bays.

On-street metered car parking spaces

- 3 nos. out of the existing 12 on-street metered car parking spaces will be removed due to the provision of run-in/out of the URA Ma Tau Wai Project (TKW/1/002).
- The on-street metered car parking spaces are mainly used by the existing old buildings within the subject site, especially the local shops on its ground floor. With the redevelopment of the subject site, demand for the metered car parking spaces will significantly decrease.



- A total of 15 (approximate) car parking spaces will be provided by the subject site and the TKW/1/002 site for retail uses. In view that the future retail uses are expected to serve the local neighbourhood, these 15 (approximate) car parking spaces will have no demand outside the business hours, hence, these can cater for overnight car parking demand in the area.
- It is proposed to re-provide some on-street metered car parking spaces in the vicinity.

A detailed study on the on-street loading / unloading bays and on-street metered car parking spaces alongside Chun Tin Street will be conducted, where possible, to identify the utilization and the parties using these facilities.

**(d) Sung Chi Street Widening and Road-side LGV laybys**

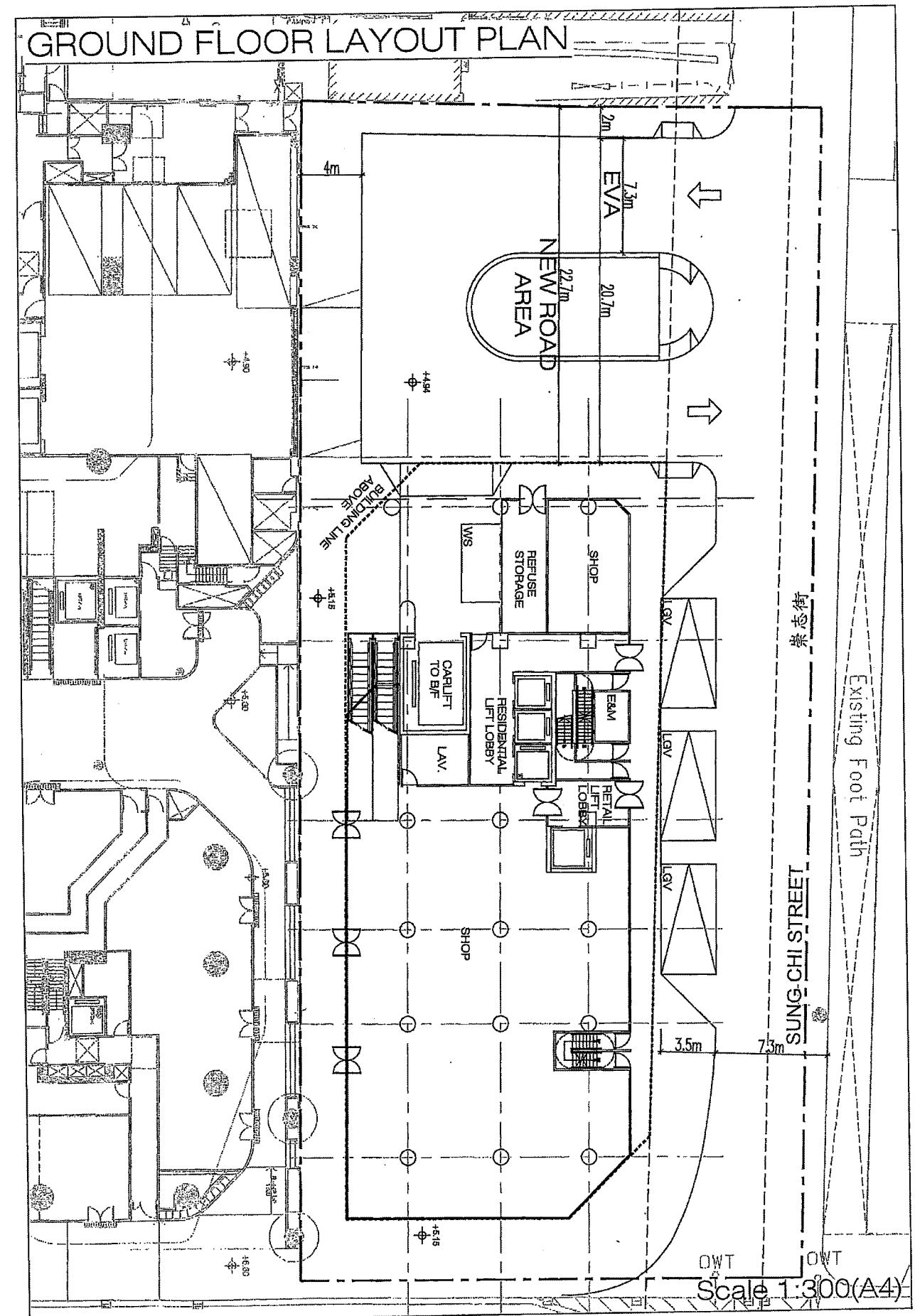
- Sung Chi Street (area adjoining KC-008A site) is proposed to be widened for 2-way traffic, with provision of proper pavement to enhance pedestrian walking environment.
- Podium setback from the KC-008A site boundary along Sung Chi Street is proposed to allow for a wider pavement area and to cater for 3 LGV laybys which are proposed to be used by the subject site in achieving the HKPSG standard and will be shared with the public. Subject to government department's agreement which will later be sought, it is URA's initial intention to take up the management and maintenance responsibility and dedicate the said area for pavement and laybys free-of-charge for public use, both under the future land grant of the project.

Should you have any queries, please do not hesitate to contact the undersigned.

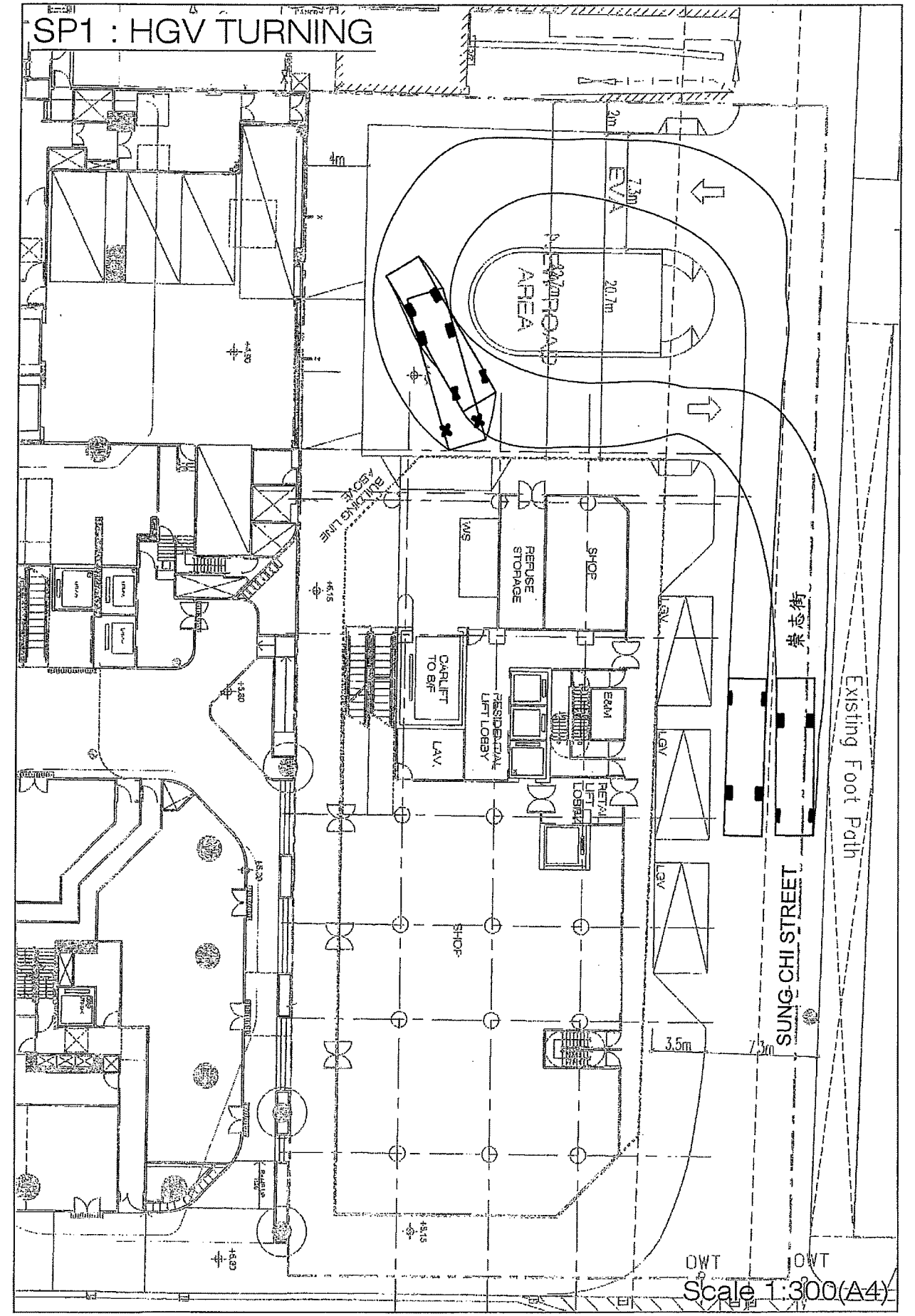
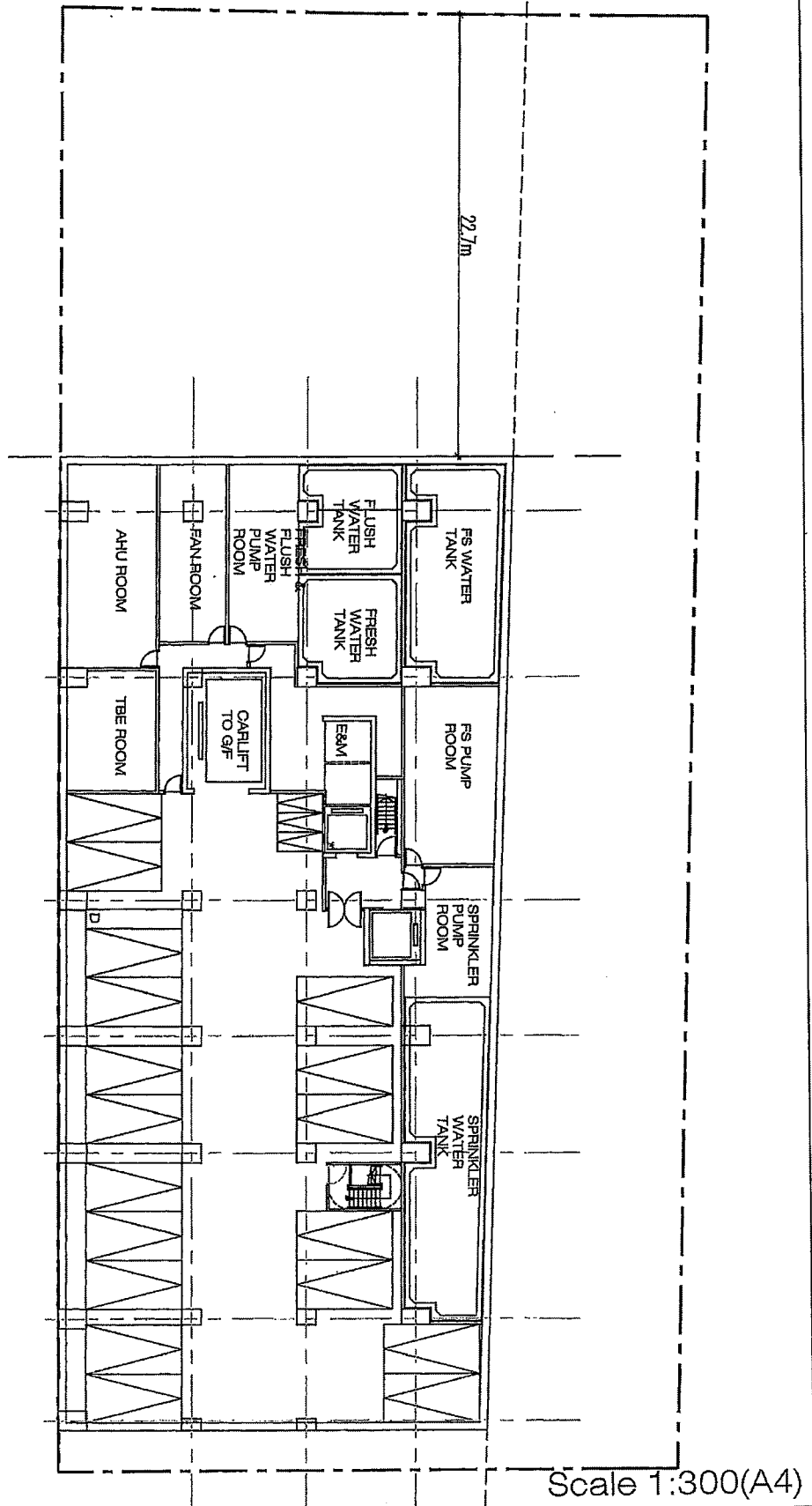
Thank you for your attention.

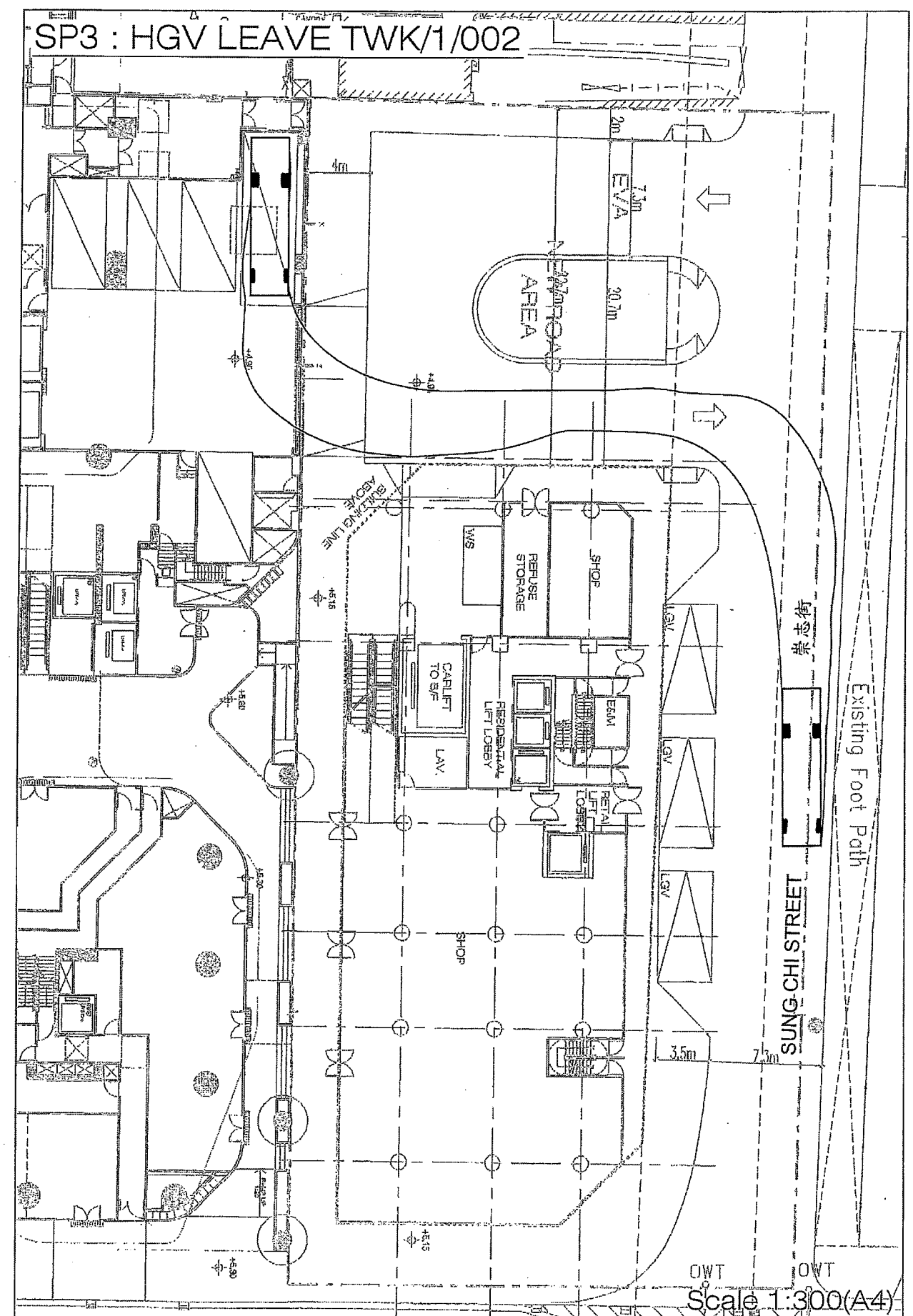
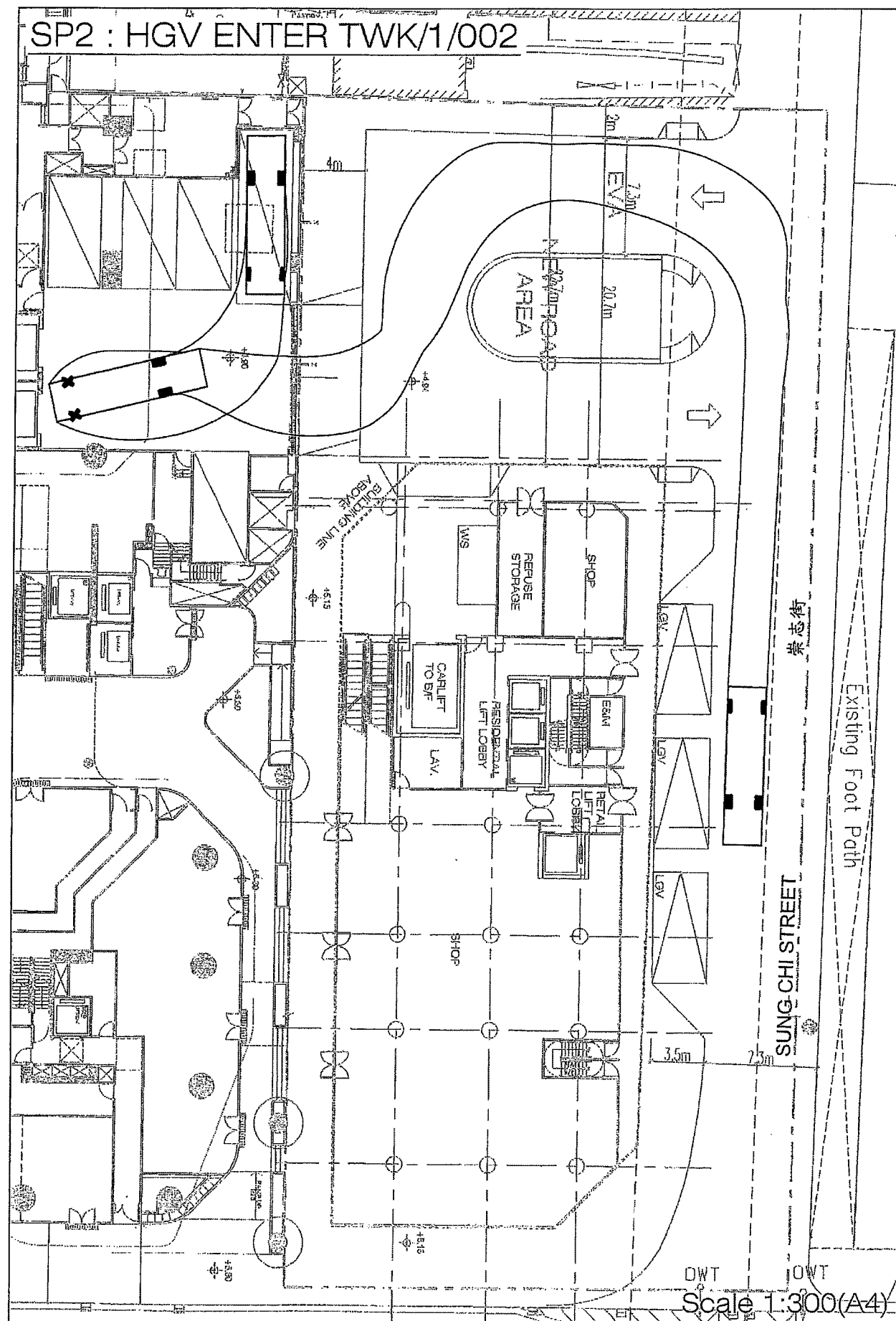
Best Regards,  
Kim CHIN

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Traffic and Transportation Planning Consultants  
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36 Hennessy Road, Wan Chai, Hong Kong  
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Email: [mail@ckmasia.com.hk](mailto:mail@ckmasia.com.hk)  
Website: [www.ckmasia.com.hk](http://www.ckmasia.com.hk)



## BASEMENT FLOOR LAYOUT PLAN







# URA Chun Tin Street Development Scheme (KC-008A) (P.1/2)

1 residential block with 310 flats: Plot Ratio = 7.5 310 flats (include 217 with 40m <sup>2</sup> GFA ≤ flat size; and 93 flats 310 flats with 40m <sup>2</sup> GFA < flat size ≤ 70m <sup>2</sup> GFA) Retail GFA = 2,612m <sup>2</sup> (G/F shop = 683m <sup>2</sup> GFA; and 1/F & 2/F = 1,929m <sup>2</sup> GFA)			
Item	HKPSG Recommendations	HKPSG Recommendations (Low-end Provision)	Proposed Provision
<b>Private Car Parking Space:</b>			
(i)	<ul style="list-style-type: none"> <li>Parking Requirement = GPS x R1 x R2 x R3</li> <li>Global Parking Standard (GPS): 1 car parking space per 6-9 flats</li> <li>Demand Adjustment Ratio (R1): 0.4 for ≤ 40 m<sup>2</sup> GFA</li> <li>Demand Adjustment Ratio (R1): 0.7 for 40 m<sup>2</sup> GFA &lt; flat size ≤ 70m<sup>2</sup> GFA</li> <li>Accessibility Adjustment Ratio (R2): 1 for outside a 500m-radius of rail station <u>(For several planned entrances of the future MTR Ho Man Tin Station are located within 500m of the KC-008A, it is proposed to adopt an adjusted R2 = 0.75)</u></li> <li>Development Intensity Adjustment Ratio (R3): 0.90 for plot ratio = 7.5</li> </ul>	<p>For 217 flats (flat size ≤ 40m<sup>2</sup> GFA): 217/9 x 0.4 x 0.75 x 0.9 = 6.51 = 6 nos. (round down)</p> <p>For 93 flats (40m<sup>2</sup> GFA &lt; flat size ≤ 70m<sup>2</sup> GFA): 93/9 x 0.7 x 0.75 x 0.9 = 4.88 = 4 nos. (round down)</p> <p><b>Total: 10 nos.</b></p>	<b>10 nos.</b>
(ii)	Visitors: 1-5 nos. per residential block with more than 75 units, or as determined by the Authority.	For 1 block with 310 flats: <b>Total: 1 no.</b>	<b>2 nos.</b> (include 1 no. for persons with disabilities)
(iii)	Retail: 1 no. per 200 - 300m <sup>2</sup> GFA & generally nil car park provision is permitted for road-side retail shops.	For 2,612m <sup>2</sup> retail:  G/F shops: Nil (General nil provision is permitted for small road-side retail shops which are mainly serving local residents.)  1/F & 2/F shops: 1,929/300 = 6.43 = 6 nos. (round down)  <b>Total: 6 nos.</b>	<b>6 nos.</b>
Total:	For total no. of car parking space in the Lot (a) = 1 - 50, required no. of accessible car parking space = 1 no.	(i) + (ii) + (iii): 10+1+6 = <b>17 nos.</b> (include 1 no. of car parking spaces for persons with disabilities)	(i)+(ii)+(iii): 10+2+6 = <b>18 nos.</b> (include 1 no. for persons with disabilities)

# URA Chun Tin Street Development Scheme (KC-008A) (P.2/2)

1 residential block with 310 flats: Plot Ratio = 7.5 310 flats (include 217 with 40m <sup>2</sup> GFA ≤ flat size; and 93 flats 310 flats with 40m <sup>2</sup> GFA < flat size ≤ 70m <sup>2</sup> GFA) Retail GFA = 2,612m <sup>2</sup> (G/F shop = 683m <sup>2</sup> GFA; and 1/F & 2/F = 1,929m <sup>2</sup> GFA)			
Item	HKPSG Recommendations	HKPSG Recommendations (Low-end Provision)	Proposed Provision
<b>Motorcycle Parking Space:</b>			
(iv)	Residential: At the rate of 1 motorcycle parking space per 100-150 flats	310/150 = 2.07 = <b>2 nos.</b>	<b>2 nos.</b>
(v)	Non-residential: At the rate of 5-10% of the total provision for private cars	6 x 0.05 = 0.3 = <b>1 no.</b>	<b>1 no.</b>
Total:		(iv) + (v): 2 + 1 = <b>3 nos.</b>	(iv) + (v): 2 + 1 = <b>3 nos.</b>
<b>Goods Vehicle Loading / Unloading Bay:</b>			
(vi)	Residential: minimum 1 no. per 800 flats or part thereof; subject to a minimum of 1 bay for each housing block or as determined by the Authority.	For 1 block with 310 flats: <b>1 no.</b>	<b>1 no. (LGV)</b>
(vii)	Retail: 1 no. per 800-1200m <sup>2</sup> GFA (with 65% for LGV & 35% for HGV)	2,612/1,200 = 2.18 = <b>2 nos.</b> (1 LGV + 1 HGV)	<b>2 nos. (LGV)</b>  Considering the nature of the proposed retail use is to serve the local residential, all goods vehicle loading / unloading bays are LGV type.
Total:		(vi) + (vii): 1+2 = <b>3 nos.</b> (2 LGV + 1 HGV)	(vi) + (vii): <b>3 nos. (LGV)</b>

**From:** Mun Kit CHEUNG <cheungmunkit@td.gov.hk>  
**Sent:** Monday, January 11, 2016 5:12 PM  
**To:** mail@ckmasia.com.hk  
**Cc:** 'Wong, Christopher'; joycewlee@td.gov.hk; 'Kwan, Mable'; 'Ho, Ray'; Wilson Wai Shing PANG  
**Subject:** Re: URA Chun Tin Street Development Scheme (KC-008A), Ma Tau Wai, Kowloon

Dear Kim,

I refer to you e-mail below and have the following comments on your proposal:

- (i) For the residential car parking provision, it should be  $6.51 + 4.88 = 11.39$ , i.e. 11 at least. Please note that the Building Department would advise how many accessible parking spaces are required in the subject development, hence you are not required to designate them at the moment.
- (ii) I have no objection to your proposal to let the future owner to manage and maintain the proposed GV laybys, however, please confirm with relevant departments on its feasibility.
- (iii) Please submit the survey results detailing the current parking space and L/UL bay usage for our vetting in due course.

Regards,

MK Cheung, SEK/C, TD, 2399 2523

From: "CKM Asia Ltd" <mail@ckmasia.com.hk>  
To: <cheungmunkit@td.gov.hk>  
Cc: "Wong, Christopher" <CCMWong@ura.org.hk>, "Ho, Ray" <RWHHo@ura.org.hk>, "Kwan, Mable" <MMPKwan@ura.org.hk>, <joycewlee@td.gov.hk>  
Date: 28/12/2015 18:46  
Subject: URA Chun Tin Street Development Scheme (KC-008A), Ma Tau Wai, Kowloon

Dear Mr. Cheung,

Further to the meeting between your goodself, the URA and us on 21 December 2015 on the captioned, we would like to provide a summary of the discussion for your comment:

**(a) New Turning Area**

Further to our discussion at the meeting, a new turning area would allow adequate manoeuvring space for vehicles including HGV without encroaching onto the proposed pavement area. To enhance the pedestrian walking environment, a widened pavement of about 4m is proposed fronting TKW/1/002 site. The ground floor layout plan, with the new turning area is attached for your comment. The swept



**CKM ASIA LIMITED 陳錦敏亞洲有限公司**

Traffic and Transportation Planning Consultants 交通及運輸策劃顧問

Our Ref: J6473/1

17 February 2016

Transport Department  
Urban Regional Office  
Traffic Engineering (Kln.) Division  
Kln. District Central Section  
8/F, Mongkok Government Offices  
30 Luen Wan Street, Kowloon

**密件  
CONFIDENTIAL**

Attn: Mr. CHEUNG Mun Kit (Sr Engr/Kln District Central)  
(BY POST)

Dear Mr. Cheung,

**URA Chun Tin Street / Sung Chi Street Development Scheme (KC-008(A))**  
**Kowloon City, Kowloon**

**Draft Traffic Impact Assessment Report**

We are commissioned by URA to undertake the traffic impact assessment for the captioned project.

We refer to our earlier discussion and correspondence as below:

- (i) Meeting between your department, URA and our company on 21 December 2015;
- (ii) Our e-mail to your department dated 28 December 2015; and
- (iii) Your department's e-mail dated 11 January 2016.

To address the issues discussed, we have prepared the draft traffic impact assessment report and we are pleased to submit herewith for your department's consideration.

Should you have any queries, please do not hesitate to contact the undersigned.

Thank you for your attention.

Yours sincerely,

  
CHIN Kim Meng  
Director

Encl. 1 report

cc: URA – w/e by emails

KIMLKH/ikh

21st Floor, Methodist House, 36 Hennessy Road, Wanchai, Hong Kong  
香港灣仔軒尼詩道 36 號循道衛理大廈 21 樓

Tel 電話: (852) 2520 5990 Fax 傳真: (852) 2528 6343  
Email 電郵: mail@ckmasia.com.hk Website 網址: www.ckmasia.com.hk



運輸署

Transport Department

本署檔案 Our Ref.: (K1PVE) in TD KR146/193/C-51  
來函編號 Your Ref.: J6473/1  
電話 Tel.: 2399 2504  
圖文傳真 Fax: 2397 8046  
電郵 Email: joycewlee@td.gov.hk

By Fax  
2528 6343

25 February 2016

CKM Asia Limited  
21st Floor, Methodist House  
36 Hennessy Road  
Wanchai  
Hong Kong  
(Attn: Mr. Chin Kim Meng)

Dear Mr. Chin,

**URA Chun Tin Street/Sung Chi Street Development Scheme (KC-008A)**  
**Draft Traffic Impact Assessment Report**

I refer to your letter of the above reference dated 17 February 2016. Please find below our comments for your consideration:

General comments

- Pedestrian crossing facilities at the junction of Sung Chi Street and Hok Yuen Street should be provided.
- The widening of Sung Chi Street would affect the existing layby along Hok Yuen Street. Please propose traffic improvement measures.
- Please liaise with LandsD, HyD and THB for the statutory requirements concerning the permanent closure of Chun Tin Street.

Specific comments

- Section 2.13 – there are other planned developments in the vicinity of the site, including one at Wan On Street and the other at Lee Kung Street next to the Hung Hom Fire Station. Please liaise with PlanD for details of the developments.
- Section 3.19 – it is anticipated that there would be operational needs for loading/unloading bay for HGV. Please advise the reason for not including such provision.
- Section 3.22 – for the loading/unloading bay along the roadside, please propose traffic management measures to deter illegal parking and prevent vehicle obstruction at Sung Chi Street.

市區(九龍)及新界分區辦事處  
Urban (Kln.) & NT Regional Office  
九龍聯運街三十號旺角政府合署七樓及八樓  
7th & 8th Floors, Mong Kok Government Offices, 30 Luch Wan Street, Kowloon.  
圖文傳真 Fax No.: 2381 3799 (新界區) (NTRO) 2397 8046 (九龍市區) (U(K)RO)  
網址 Web Site: <http://www.td.gov.hk>

We have no objection to your proposal to let the future owner to manage and maintain the proposed GV laybys, however, please confirm with relevant departments on its feasibility. The concerned area should also be clearly indicated on the plan.

- Figure 4.2 shows that there were no traffic flows identified from Sung Chi Street to Bailey Street eastbound. Please advise whether right turn movement at Bailey Street is expected. If affirmative, please assess the performance of the junction of Bailey Street and Sung On Street.

Yours faithfully,

(Joyce W. C. LEE)  
for Commissioner for Transport

市區(九龍)及新界分區辦事處  
Urban (Kln.) & NT Regional Office  
九龍聯運街三十號旺角政府合署七樓及八樓  
7th & 8th Floors, Mong Kok Government Offices, 30 Luch Wan Street, Kowloon.  
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網址 Web Site: <http://www.td.gov.hk>





Our Ref: J6473/3

14 March 2016

Transport Department  
Urban Regional Office  
Traffic Engineering (Kln.) Division  
Kln. District Central Section  
8/F, Mongkok Government Offices  
30 Luen Wan Street, Kowloon

Attn: Mr. CHEUNG Mun Kit (Sr Engr/Kln District Central)  
(BY POST)

Dear Mr. Cheung,

密件  
CONFIDENTIAL

URA Chun Tin Street / Sung Chi Street Development Scheme (KC-008(A))  
Kowloon City, Kowloon

Revised Draft Traffic Impact Assessment Report

We refer to your department's letter dated 25 February 2016 (Ref.: (K1PVE) in TD KR146/193/C-51) for your captioned.

The draft traffic impact assessment report has been revised to address your department's comment.

We are pleased to submit herewith the revised draft traffic impact assessment report and the responses to comments for your department's further consideration.

Should you have any queries, please do not hesitate to contact the undersigned.

Thank you for your attention.

Yours sincerely,

CHIN Kim Meng  
Director

Encl. 1 report + 10 pages

cc: URA – w/e by emails

KIM/LKH/lkh

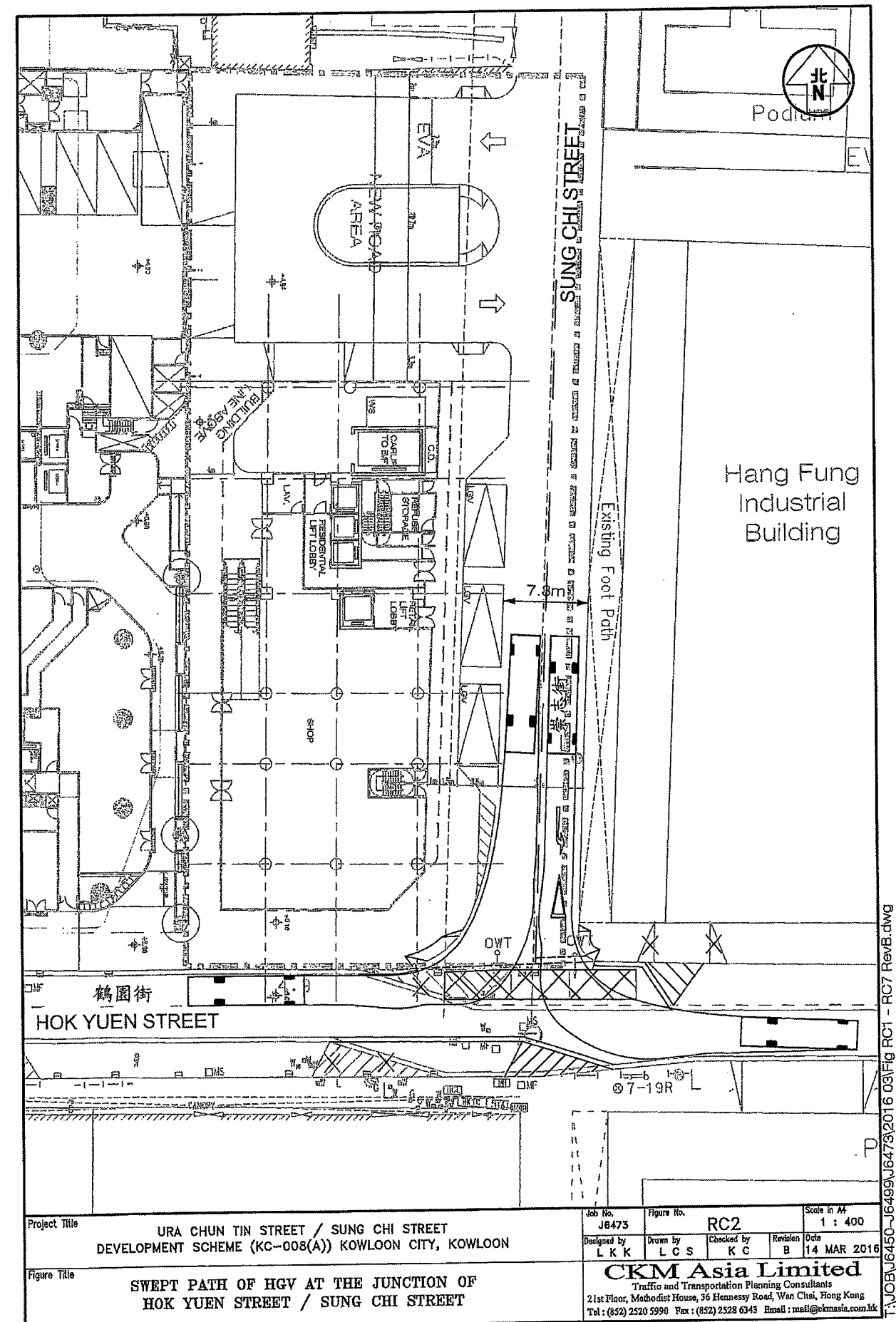
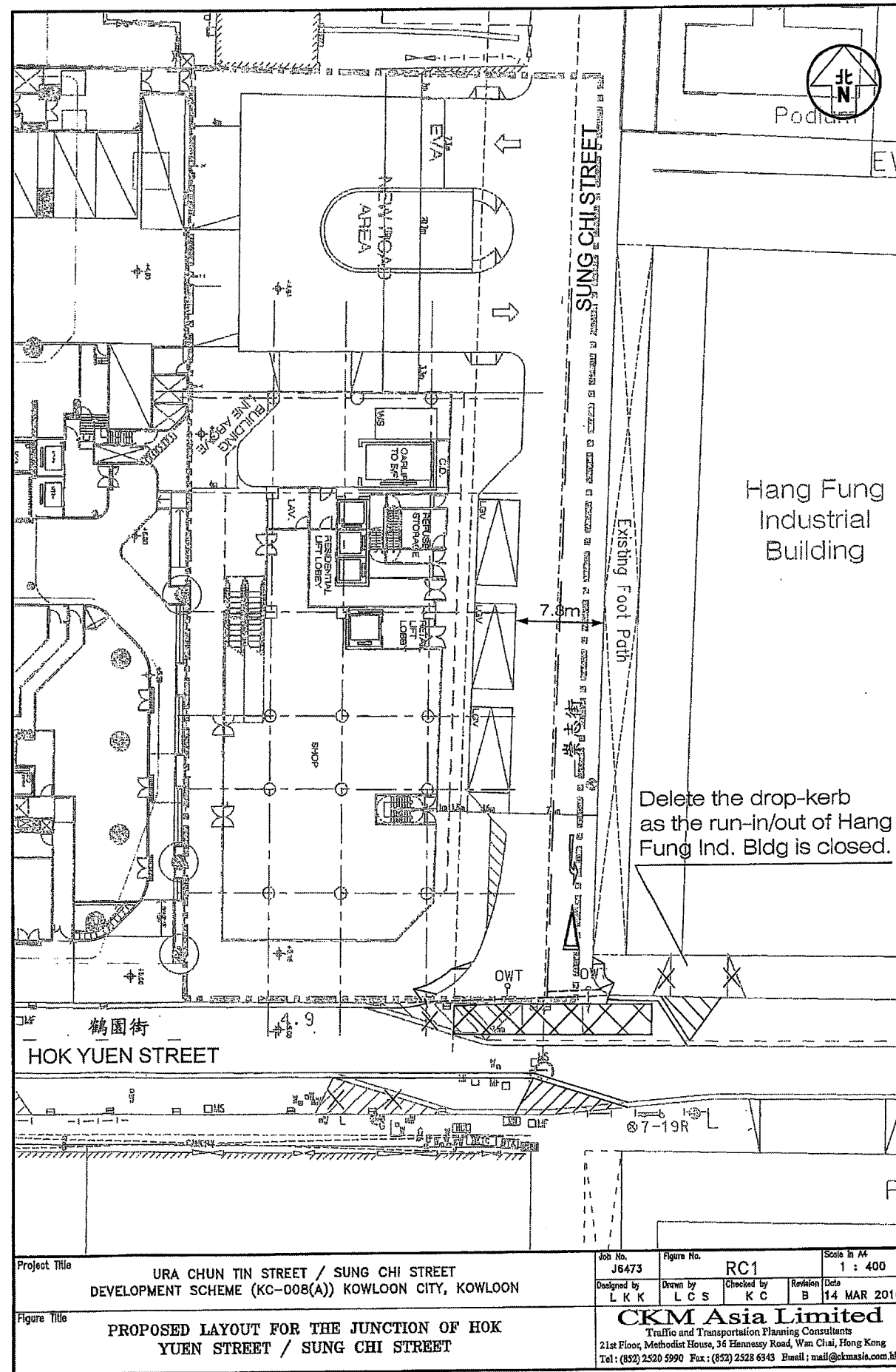
Responses to Comments

URA Chun Tin Street / Sung Chi Street Development Scheme (KC-008(A)), Kowloon City, Kowloon

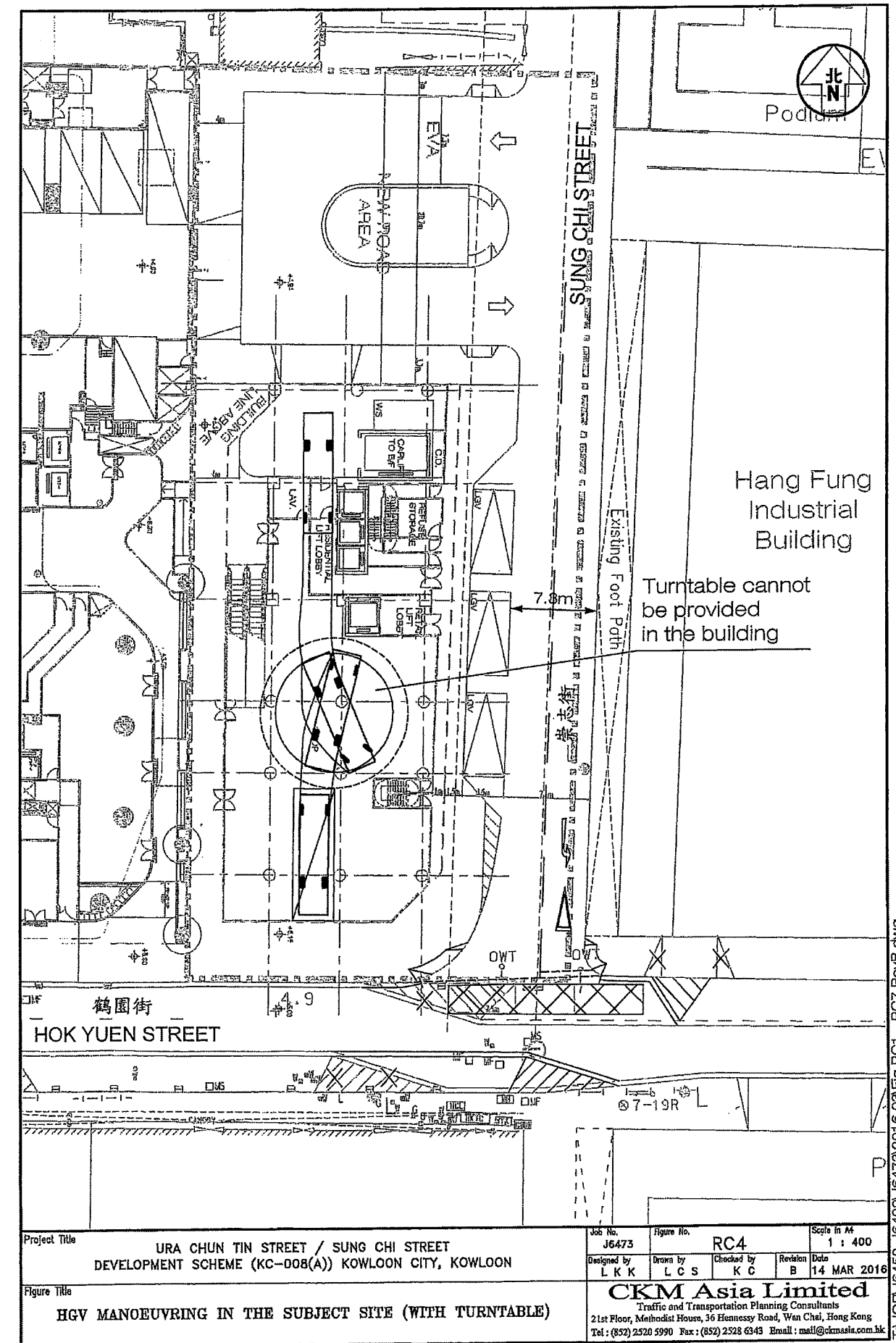
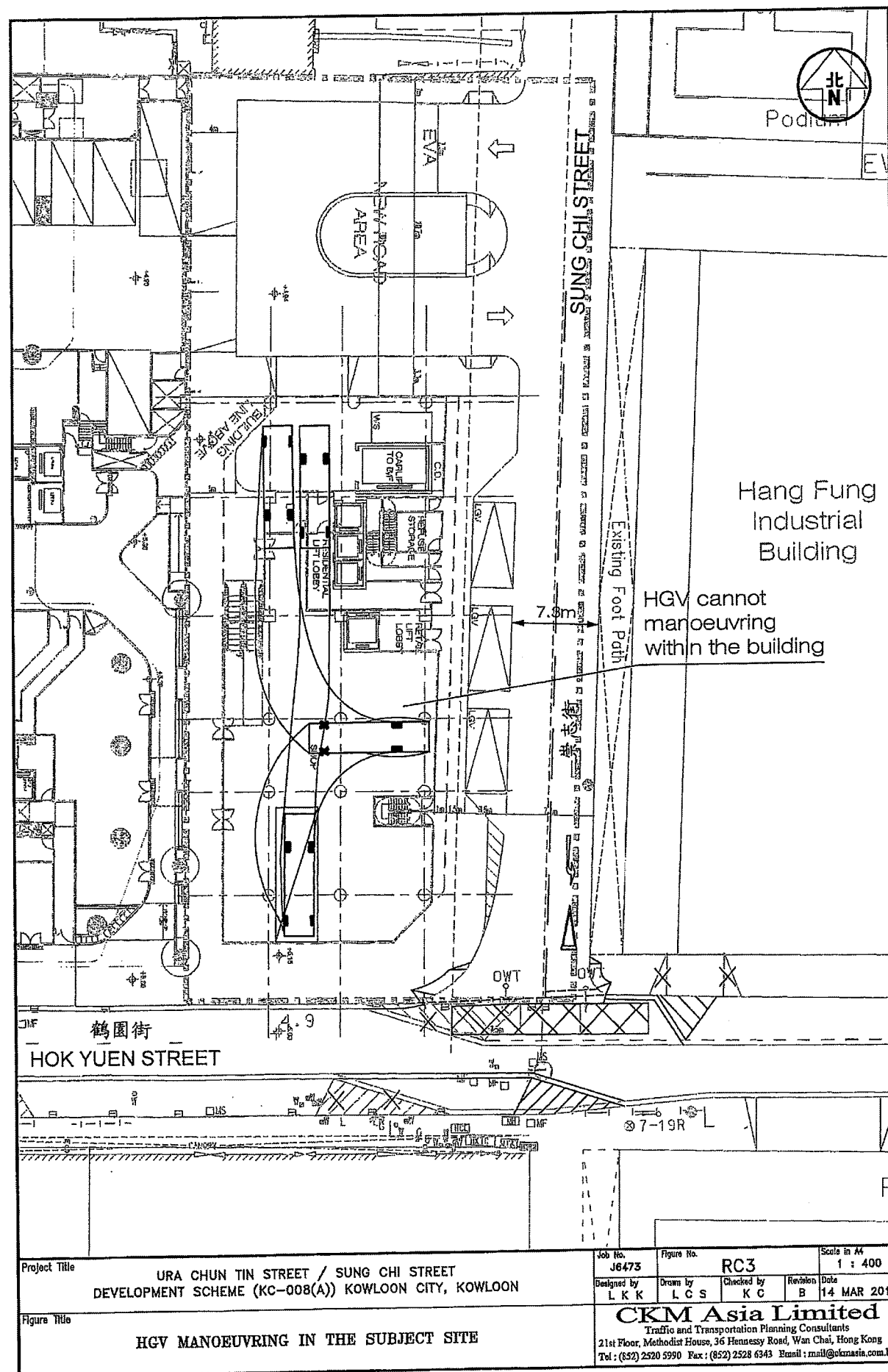
Comments from Transport Department - Letter dated 25 February 2016 (Ref.: (K1PVE) in TD KR146/193/C-51)		密件 CONFIDENTIAL
Comments	Responses	
General comment		
▲ Pedestrian crossing facilities at the junction of Sung Chi Street and Hok Yuen Street should be provided.	The proposed pedestrian facilities at the Junction of Sung Chi Street / Hok Yuen Street are shown in Figure RC1.	
▲ The widening of Sung Chi Street would affect the existing layby along Hok Yuen Street. Please propose traffic improvement measures.	The modification on the existing lay-bys along Hok Yuen Street is shown in Figure RC1. The result of swept path analysis of HGV is presented in Figure RC2.	
▲ Please liaise with LandsD, HyD and THB for the statutory requirements concerning the permanent closure of Chun Tin Street.	Noted. Since the current scheme is a notional design and the draft DSP is subject to Town Planning Board's approval, URA will liaise with LandsD, HyD and THB for the statutory requirements concerning the permanent closure of Chun Tin Street and proposed widening at Sung Chi Street upon approval by TPB.	
Specific comments		
▲ Section 2.13 – there are other planned developments in the vicinity of the site, including one at Wan On Street and the other at Lee Kung Street next to the Hung Hom Fire Station. Please liaise with PlanD for details of the developments.	Noted. The two planned developments will be included in the assessment of the revised TIA Report.	
▲ Section 3.19 – it is anticipated that there would be operational needs for loading / unloading bay for HGV. Please advise the reasons for not including such provision.	The reasons for not providing HGV loading / unloading bays are as follows: (i) Provision of HGV loading / unloading bay has been considered, however, given the limited site area and site constraints on building disposition, there is physical constraints to provide HGV loading / unloading bay. Figure RC3 shows that HGV has manoeuvring problem within the building. The case with providing a turntable for HGV manoeuvring, as shown in Figure RC4, was considered. However, due to the need to provide the columns, structures and building facilities, etc., provision of a turntable is not possible. Hence, this is also not a feasible scenario;	

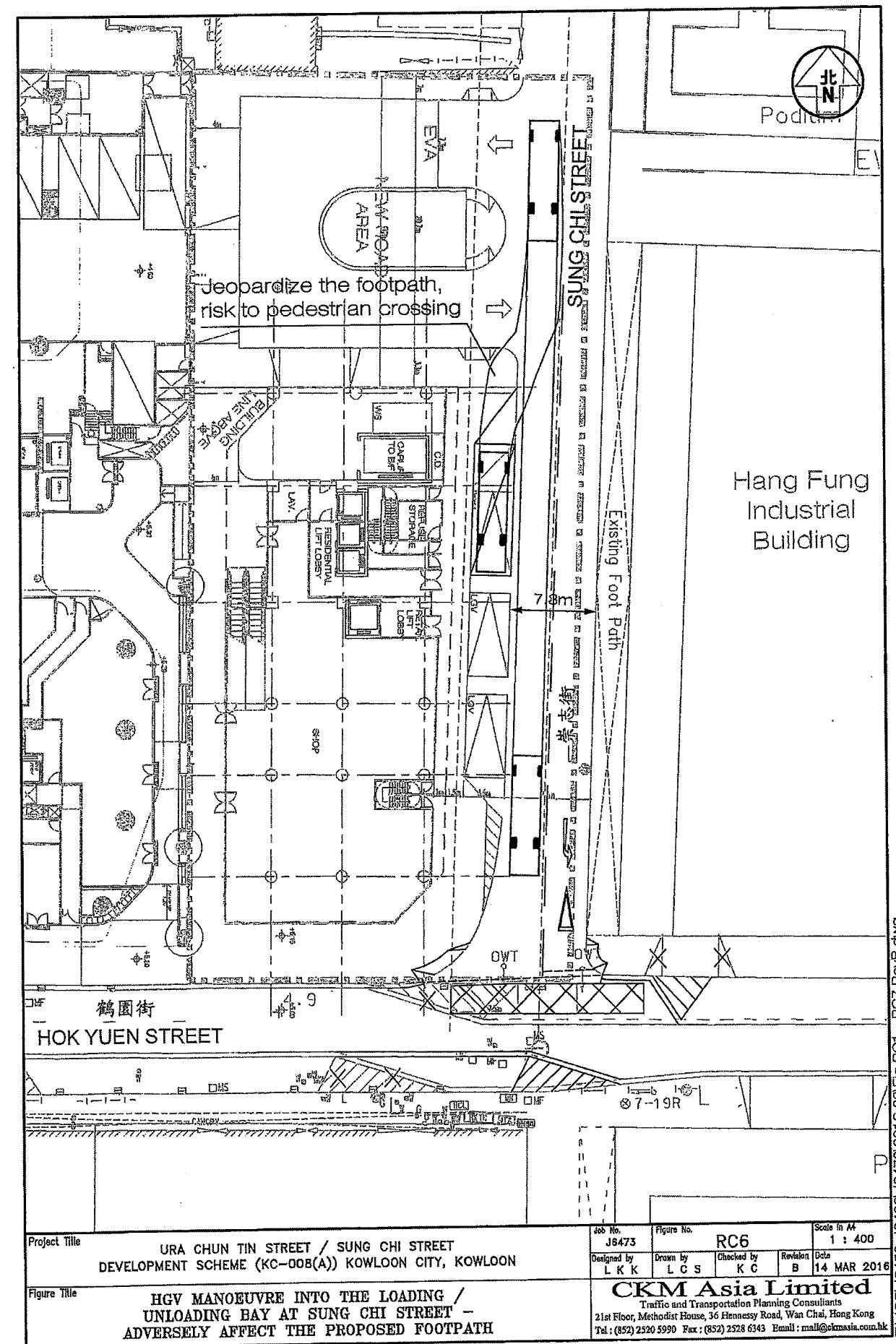
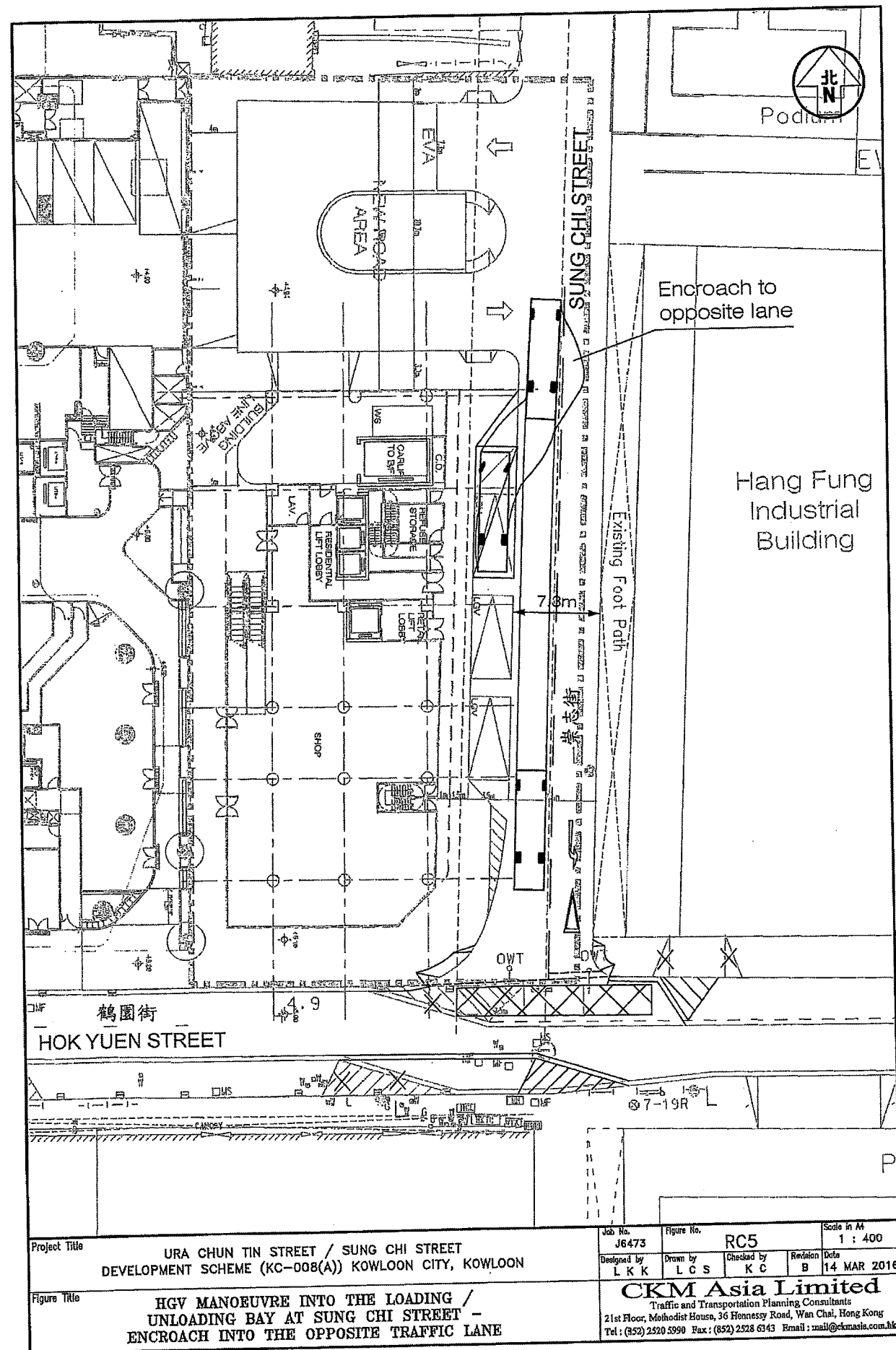
Comments	Responses
	<p>(ii) Figures RC5 and RC6 show that 1 HGV and 2 LGV bays cannot be accommodated at Sung Chi Street. Figure RC5 shows the HGV would encroach to the opposite lane when manoeuvring into the loading / unloading bay, hence, traffic safety is of concern. Figure RC6 shows that if HGV do not encroach to the opposite lane when manoeuvre into the loading / unloading bay, it will jeopardize the proposed passageway and threaten the safety of pedestrian using the crossings at the new turning area with the HGV manoeuvring there, which is aimed to enhance the walking environment and ensure pedestrian safety. Hence, the provision of 1 HGV and 2 LGV bays at Sung Chi Street is infeasible.</p> <p>(iii) In view that there is no existing HGV bays in the existing building sites and in future, and the nature of the proposed retail uses in the new proposed development is mainly to serve the local neighborhood, no provision of HGV loading / unloading bay is not anticipated to have any adverse effect.</p> <p>(iv) The provision of HGV bay in the area will attract HGVs from other areas to Sung Chi Street which will bring undesirable traffic to the local street.</p> <p>(v) It is URA's intention to take up the management and maintenance of the 3 LGV bays and the 3 LGV bays shall be provided in the land grant of the Site for the proposed development and for sharing use with the public to benefit the public. In special circumstances where it is necessary to accommodate a HGV and if the 2 LGV bays are unoccupied, the URA will manage the area to meet operational needs and to arrange HGV to manoeuvre into the available space without problem. Such situation is demonstrated in Figure RC7.</p>

Comments	Responses
	<p>Taking into account the site constraints and nature of the Project, it is recommended to provide the 3 LGV bays to comply with the no. of goods loading / unloading bays recommended by the HKPSG, rather than provide 1 HGV and 1 LGV bays, i.e., provide less number of loading / unloading bay.</p>
<p>➤ Section 3.22 – for the loading / unloading bay along the roadside, please proposed traffic management measures to deter illegal parking and prevent vehicle obstruction at Sung Chi Street.</p> <p>We have no objection to your proposal to let the future owner to manage and maintain the proposed LGV laybys, however, please confirm with relevant departments on its feasibility. The concerned area should be clearly indicated on the plan.</p>	<p>Subject to the approval on the Project, URA intends to take up the management and maintenance responsibilities of Sung Chi Street and the new turning area. In view of the status of Sung Chi Street and the new turning area, the Project will deploy sufficient staff members to manage Sung Chi Street to ensure no illegal parking, no obstruction at Sung Chi Street and smooth operation of the street. For example, the Project would provide appropriate signs indicating that parking along Sung Chi Street without permission, is not allowed; the staff would alert those drivers, who intend to illegally park at this street, to leave.</p> <p>Noted. Given the current scheme is a notional design and the draft DSP is subject to Town Planning Board's approval for implementation, the URA will liaise and confirm with relevant Government Departments upon the Scheme is approved by TPB and when there is detailed design for departments to comment. The area for proposed new turning area and road widening at Sung Chi Street will be indicated in a plan in the draft DSP document for departmental comment and for TPB's consideration.</p>
<p>➤ Figure 4.2 shows that there were no traffic flows identified from Sung Chi Street to Bailey Street eastbound. Please advise whether right turn movement at Bailey Street is expected. If affirmative, please assess the performance of the junction of Bailey Street and Sung On Street.</p>	<p>Noted. The traffic distributions have been reviewed and the revised peak hour traffic flows and junction performance, with incorporation of the Junction of Bailey Street / Sung On Street, are presented in the revised TIA Report.</p>











**運輸署**  
Transport Department

CONFIDENTIAL

By Fax 2528 6343

本署檔號 Our Ref.: ( ) in TD KR 182/111-1C

來函檔號 Your Ref.: J6473/3

電話 Tel.: 2399 2504

18 March 2016

CKM Asia Limited  
21st Floor, Methodist House  
36 Hennessy Road  
Wanchai  
Hong Kong  
(Attn: Mr. Chin Kim Meng)

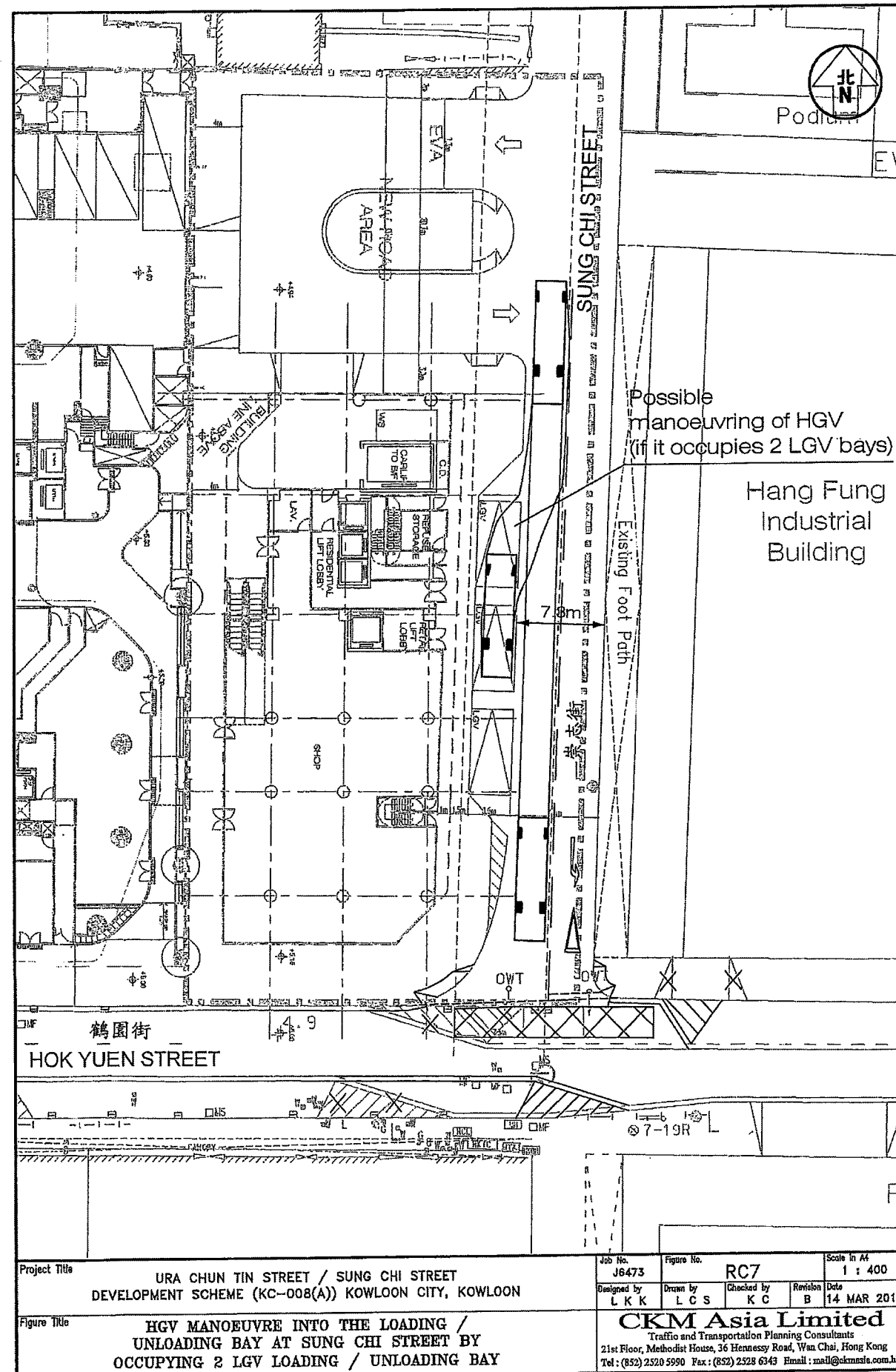
Dear Mr. Chin,

**URA Chun Tin Street/Sung Chi Street Development Scheme (KC-008A)**  
**Draft Traffic Impact Assessment Report**

I have no adverse comment on the draft traffic impact assessment report. I understand that the adequacy of the turning area for HGV has been checked. Please ensure that the swept path analysis is included in the report.

Yours faithfully

(Joyce W. C. LEE)  
for Commissioner for Transport



Project Title  
URA CHUN TIN STREET / SUNG CHI STREET  
DEVELOPMENT SCHEME (KC-008(A)) KOWLOON CITY, KOWLOON

Figure Title  
HGV MANOEUVRE INTO THE LOADING /  
UNLOADING BAY AT SUNG CHI STREET BY  
OCCUPYING 2 LGV LOADING / UNLOADING BAY

Job No. J6473 Figure No. RC7 Scale 1 : 400  
Designed by L K K Drawn by L C S Checked by K C Revision B Date 14 MAR 2016  
**CKM Asia Limited**  
Traffic and Transportation Planning Consultants  
21st Floor, Methodist House, 36 Hennessy Road, Wan Chai, Hong Kong  
Tel : (852) 2520 5990 Fax : (852) 2528 6343 Email : mail@ckmasia.com.hk

市區(九龍)及新界分區辦事處  
Urban (Kln.) & NT Regional Offices  
九龍聯煙街三十號旺角政府合署七樓及八樓  
7th & 8th Floors, Mong Kok Government Offices, 30 Luen Wan Street, Kowloon.  
圖文傳真 Fax No.: 2381 3799 (新界區) (NTRO) 2397 8046 (九龍市區) (U(K)RO)  
網址 Web Site: <http://www.td.gov.hk>



**From:** CKM Asia Ltd <mail@ckmasia.com.hk>  
**Sent:** Friday, March 18, 2016 6:21 PM  
**To:** 'joycewcleee@td.gov.hk'  
**Cc:** 'cheungmunkit@td.gov.hk'  
**Subject:** URA - Chun Tin Street / Sung Chi Street (KC008A) - Draft TIA Report  
**Attachments:** J6473 Swept Path 20130318.pdf

Dear Joyce,

We just spoke for the captioned.

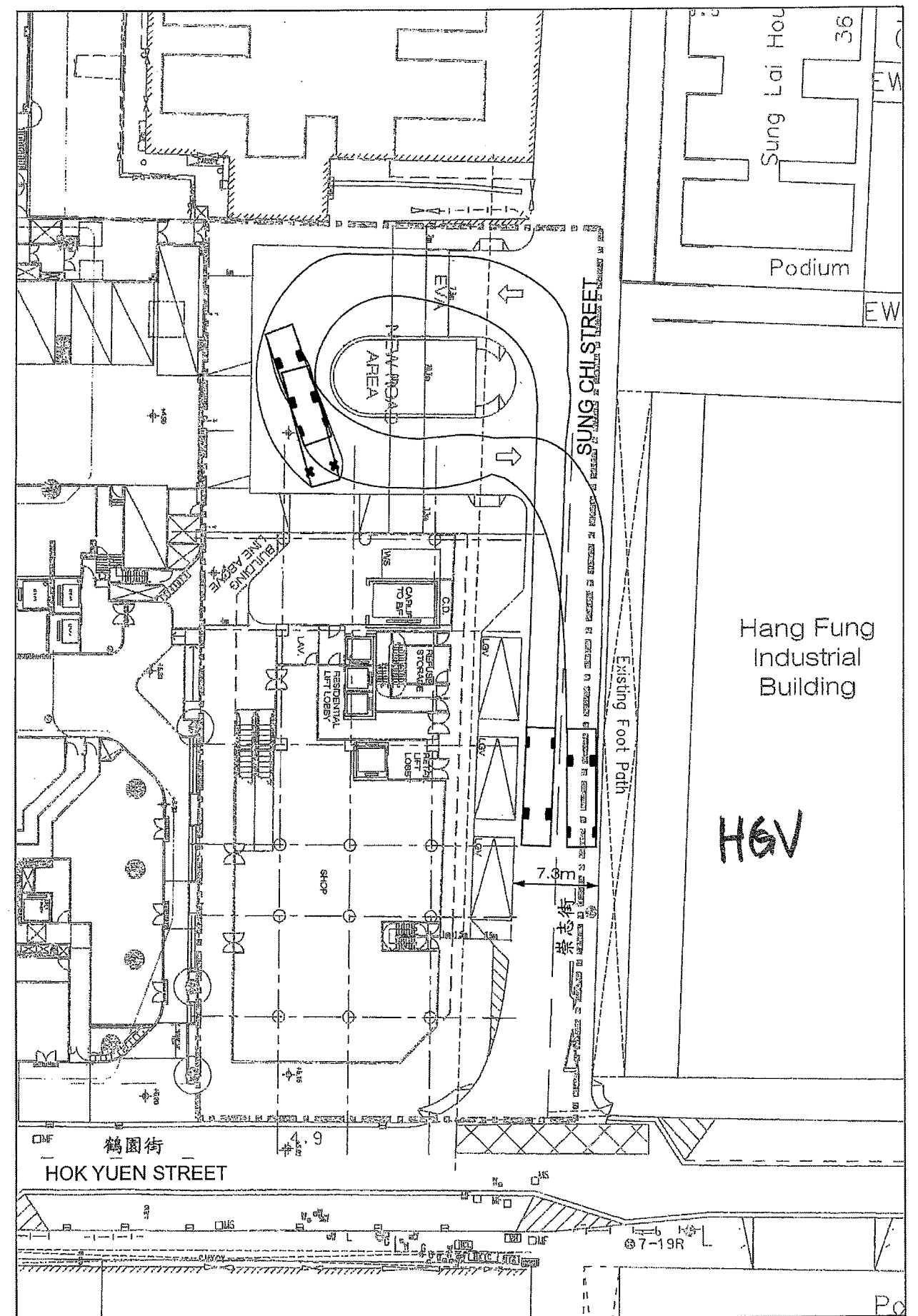
Please see attached the swept paths.

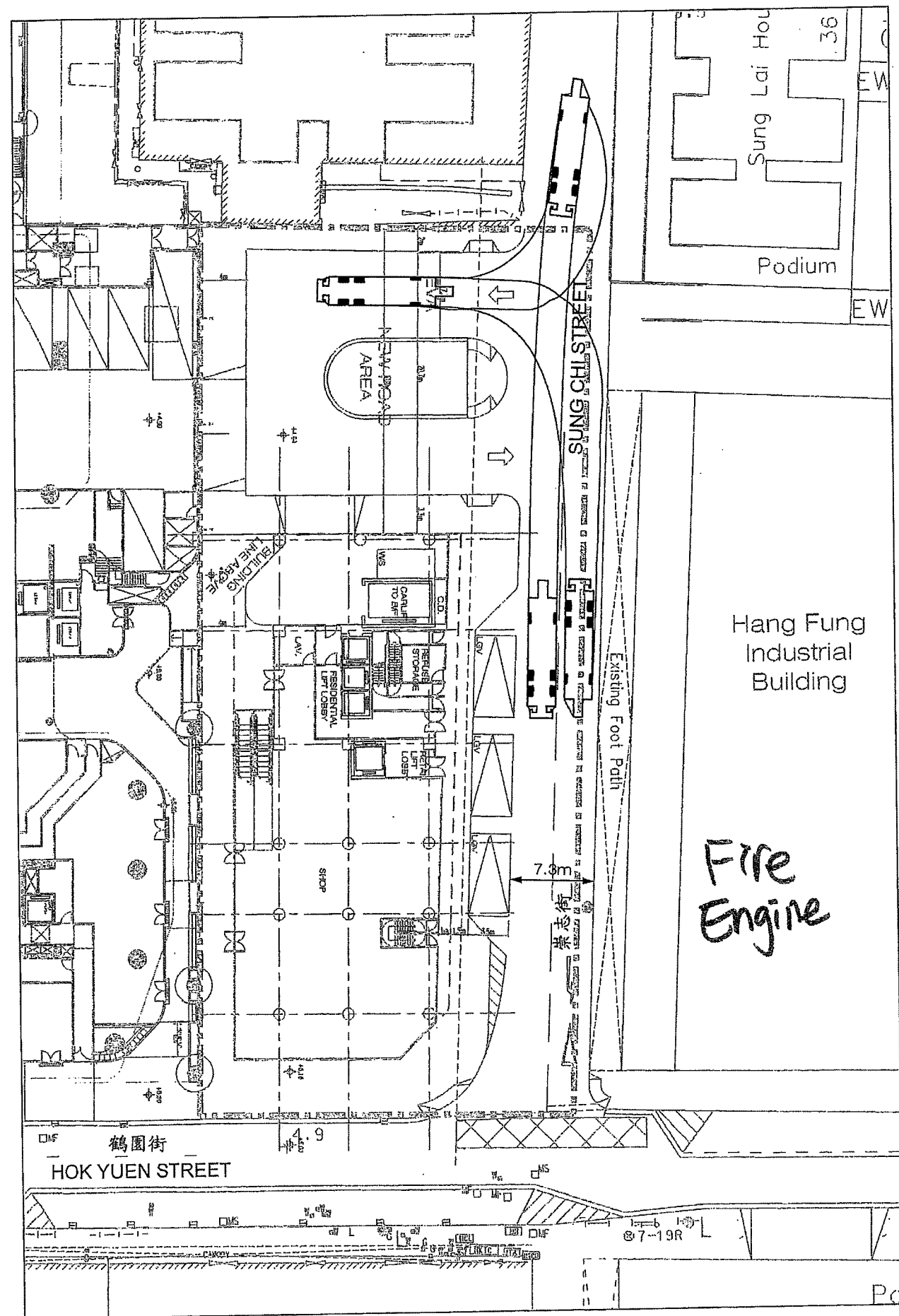
We will contact you for discussion.

Thank you for your attention.

Regards,  
Lai Ka Hung

CKM Asia Limited  
Traffic and Transportation Planning Consultants  
21st Floor, Methodist House,  
36 Hennessy Road, Wan Chai, Hong Kong  
Phone: (852) 2520 5990  
Fax: (852) 2528 6343  
Email: mail@ckmasia.com.hk  
Website: [www.ckmasia.com.hk](http://www.ckmasia.com.hk)





## Signal Junction Analysis

Junction: Ma Tau Wai Road / Bailey Street / Gilles Avenue North Job Number: J6473  
 Scenario: Existing Condition Page 1  
 Design Year: 2015 Designed By: LKK Checked By: \_\_\_\_\_ Date: 11 March 2016

[illegible]

**AM Traffic Flow (pcu/hr)**

**PM Traffic Flow (pcu/hr)**

**AM Traffic Flow (pcu/hr)**

**PM Traffic Flow (pcu/hr)**

	AM Peak	Check Pedestrian Phase	PM Peak	Check Pedestrian Phase
Sum y	0.532		0.463	
L (s)	17		17	
C (s)	130		130	
practical y	0.782		0.782	
R.C. (%)	47%		69%	

	1	2	3	4	5
AM	$G =$ $G =$	$1/G = 8$ $1/G =$	$G =$ $1/G =$	$G =$ $1/G =$	$G =$ $1/G =$
PM	$G =$ $G =$	$1/G = 8$ $1/G =$	$G =$ $1/G =$	$G =$ $1/G =$	$G =$ $1/G =$

## Appendix 2

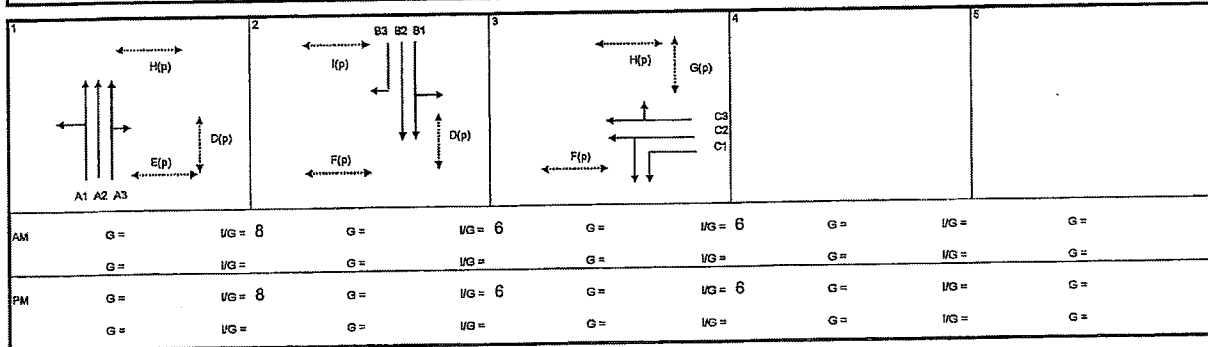
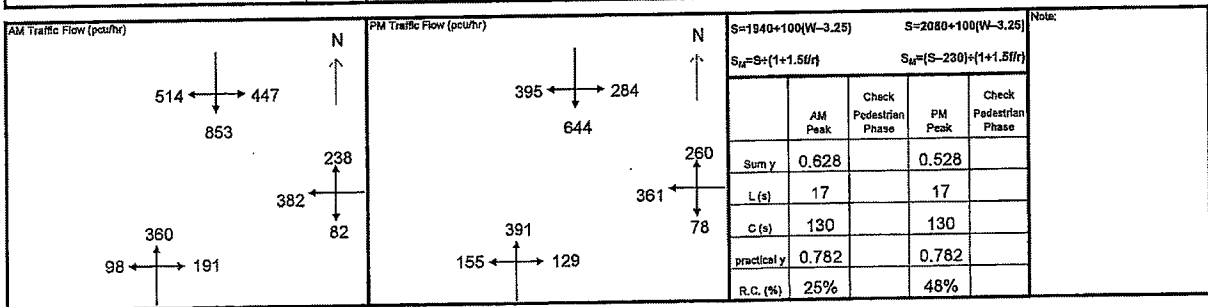
### Junction Capacity Analysis



Signal Junction Analysis

Junction: Ma Tau Wai Road / Bailey Street / Gilles Avenue North  
Scenario: Future Condition WITHOUT the Project  
Design Year: 2028  
Designed By: LKK  
Checked By:  
Date: 11 March 2016  
Job Number: J6473  
Page 2

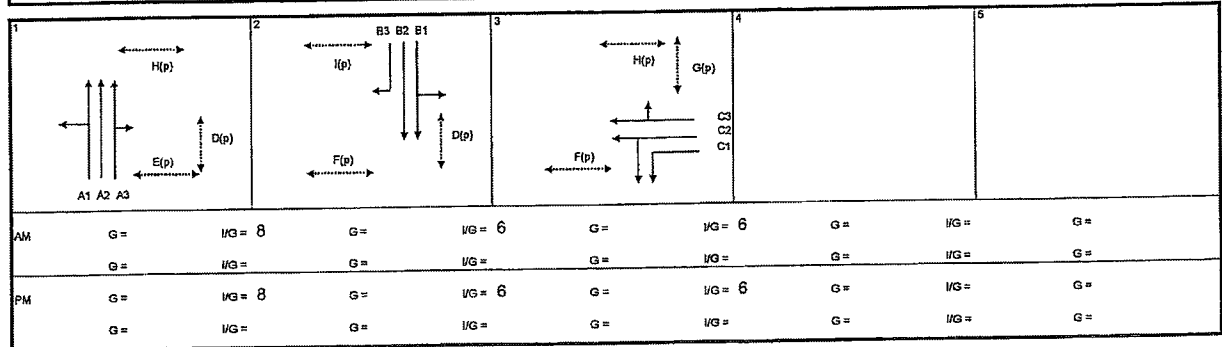
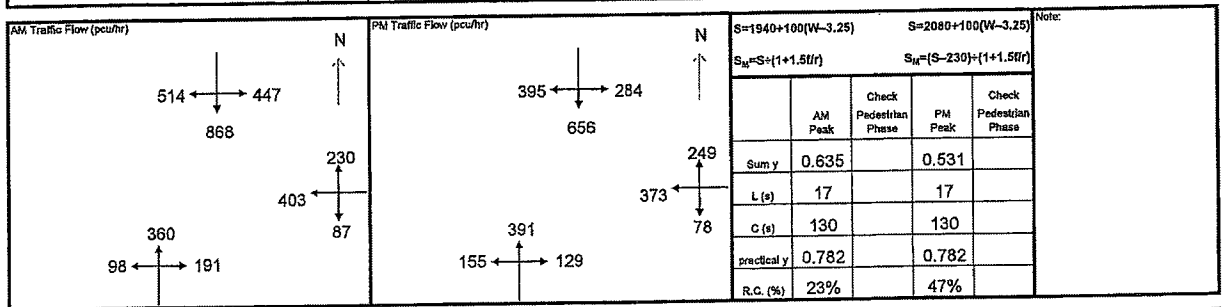
Approach	Phase	Stage	Width (m)	Radius (m)	% Up-Hill Gradient	Turning %	AM Peak				Turning %	PM Peak			
							Sat. Flow (pcu/hr)	Flow (pcu/hr)	y value	Critical y		Sat. Flow (pcu/hr)	Flow (pcu/hr)	y value	Critical y
Ma Tau Wai Road SB	LT+SA	A1	1	3.00	12.0	48	1807	203	0.112		76	1749	204	0.117	0.117
	SA	A2	1	3.00	0.0	0	2055	230	0.112		0	2055	240	0.117	
	SA+RT	A3	1	3.00	20.0	88	1928	216	0.112	0.112	56	1972	231	0.117	
Ma Tau Wai Road NB	LT+SA	B1	2	3.00	5.0	80	1544	558	0.361		70	1583	404	0.255	0.255
	SA	B2	2	3.00	0.0	0	2055	742	0.361	0.361	0	2055	524	0.255	
	RT	B3	2	3.00	20.0	100	1912	514	0.269		100	1912	395	0.207	
Bailey Street WB	LT	C1	3	3.00	5.0	100	1473	82	0.056		100	1473	78	0.053	
	LT+SA	C2	3	3.00	10.0	0	2055	319	0.155		0	2055	320	0.156	
	SA+RT	C3	3	3.00	20.0	79	1940	301	0.155	0.155	86	1930	301	0.156	0.156
pedestrian phase						D <sub>(p)</sub>	1,2	min crossing time =	5	sec GM +	8	sec FGM =	13	sec	
						E <sub>(p)</sub>	1	min crossing time =	5	sec GM +	6	sec FGM =	11	sec	
						F <sub>(p)</sub>	2,3	min crossing time =	5	sec GM +	8	sec FGM =	13	sec	
						G <sub>(p)</sub>	3	min crossing time =	5	sec GM +	7	sec FGM =	12	sec	
						H <sub>(p)</sub>	1,3	min crossing time =	5	sec GM +	9	sec FGM =	14	sec	
						I <sub>(p)</sub>	2	min crossing time =	5	sec GM +	9	sec FGM =	14	sec	



Signal Junction Analysis

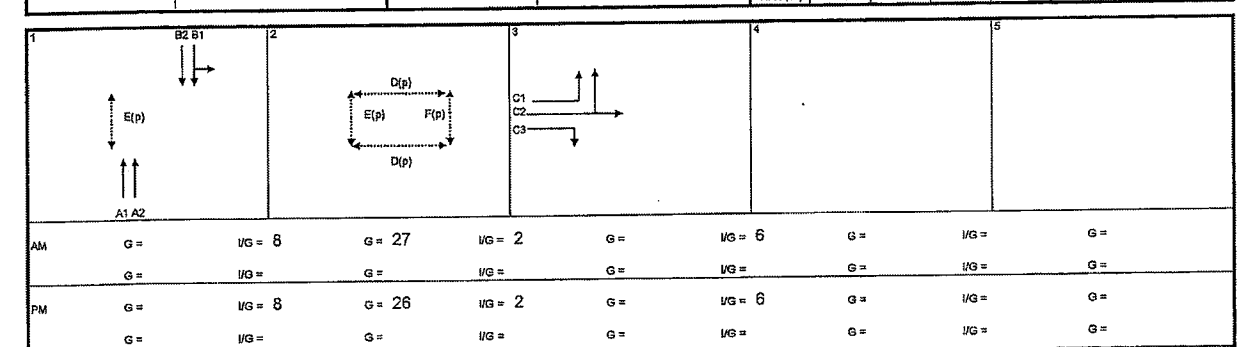
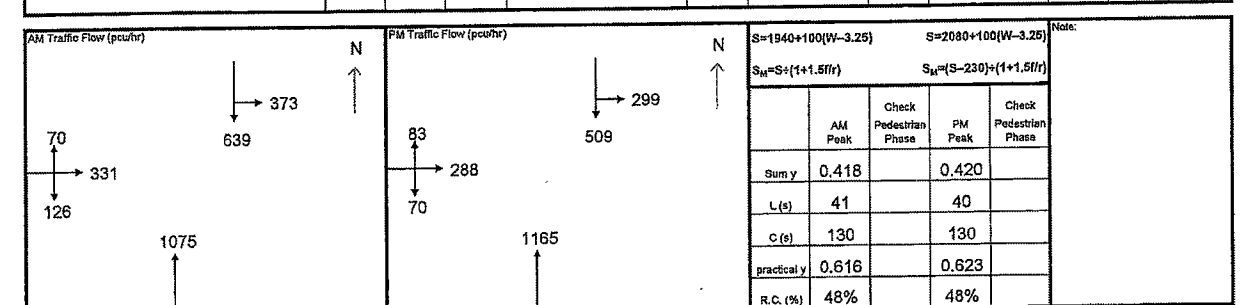
Junction: Ma Tau Wai Road / Bailey Street / Gilles Avenue North  
Scenario: Future Condition WITH the Project  
Design Year: 2028  
Designed By: LKK  
Checked By:  
Date: 11 March 2016  
Job Number: J6473  
Page 3

Approach	Phase	Stage	Width (m)	Radius (m)	% Up-Hill Gradient	Turning %	AM Peak				Turning %	PM Peak			
							Sat. Flow (pcu/hr)	Flow (pcu/hr)	y value	Critical y		Sat. Flow (pcu/hr)	Flow (pcu/hr)	y value	Critical y
Ma Tau Wai Road SB	LT+SA	A1	1	3.00	12.0	48	1807	203	0.112		76	1749	204	0.117	0.117
	SA	A2	1	3.00	0.0	0	2055	230	0.112		0	2055	240	0.117	
	SA+RT	A3	1	3.00	20.0	88	1928	216	0.112	0.112	56	1972	231	0.117	
Ma Tau Wai Road NB	LT+SA	B1	2	3.00	5.0	79	1548	565	0.365	0.365	69	1587	410	0.258	0.258
	SA	B2	2	3.00	0.0	0	2055	750	0.365		0	2055	530	0.258	
	RT	B3	2	3.00	20.0	100	1912	514	0.269		100	1912	395	0.207	
Bailey Street WB	LT	C1	3	3.00	5.0	100	1473	87	0.059		100	1473	78	0.053	
	LT+SA	C2	3	3.00	10.0	0	2055	325	0.158		0	2055	320	0.156	0.156
	SA+RT	C3	3	3.00	20.0	75	1946	308	0.158	0.158	82	1936	302	0.156	
pedestrian phase						D <sub>(p)</sub>	1,2	min crossing time =	5	sec GM +	8	sec FGM =	13	sec	
						E <sub>(p)</sub>	1	min crossing time =	5	sec GM +	6	sec FGM =	11	sec	
						F <sub>(p)</sub>	2,3	min crossing time =	5	sec GM +	8	sec FGM =	13	sec	
						G <sub>(p)</sub>	3	min crossing time =	5	sec GM +	7	sec FGM =	12	sec	
						H <sub>(p)</sub>	1,3	min crossing time =	5	sec GM +	9	sec FGM =	14	sec	
						I <sub>(p)</sub>	2	min crossing time =	5	sec GM +	9	sec FGM =	14	sec	



### Signal Junction Analysis

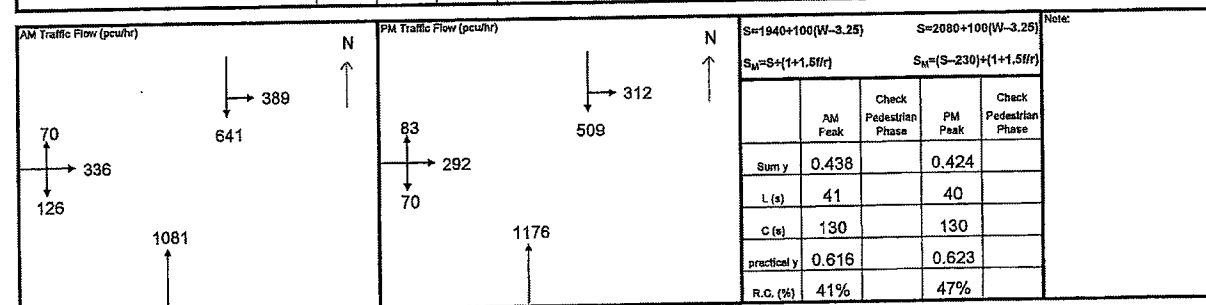
Junction: Ma Tau Wai Road / Hok Yuen Street Job Number: J6473  
 Scenario: Future Condition WITHOUT the Project Page 5  
 Design Year: 2028 Designed By: LKK Checked By: \_\_\_\_\_ Date: 11 March 2016

[illegible]

## Signal Junction Analysis

Junction: Ma Tau Wai Road / Hok Yuen Street  
 Scenario: Future Condition WITH the Project  
 Design Year: 2028 Designed By: LKK Checked By: Date: 11 March 2016  
 Job Number: J6473 Page 6

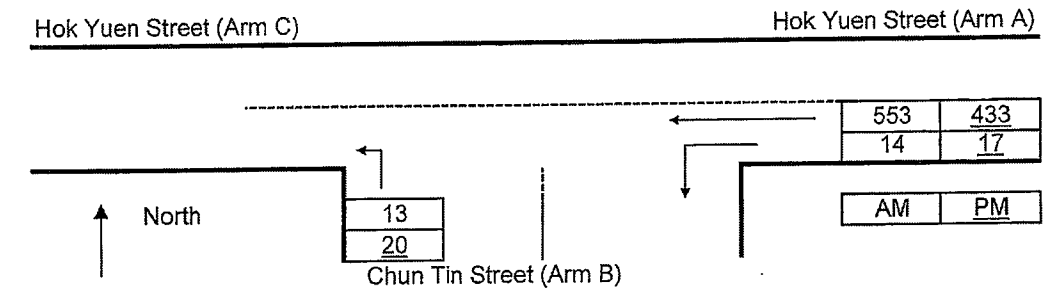
Approach	Phase	Stage	Width (m)	Radius (m)	% Up-hill Gradient	Turning %	Sat. Flow (pcu/hr)	Flow (pcu/hr)	y value	Critical y	Turning %	Sat. Flow (pcu/hr)	Flow (pcu/hr)	y value	Critical y
Ma Tau Wai Road NB	SA	A1	1	3.50	0.0	0	1985	522	0.256		0	1965	568	0.289	
	SA	A2	1	3.50	0.0	0	2105	559	0.266		0	2105	608	0.289	0.289
Ma Tau Wai Road SB	LT+SA	B1	1	3.50	5.0	89	1551	437	0.282	0.282	90	1547	348	0.225	
	SA	B2	1	3.50	0.0	0	2105	593	0.282		0	2105	473	0.225	
Hok Yuen Road EB	LT	C1	3	4.00	5.0	100	1550	70	0.045		100	1550	83	0.054	
	LT+SA	C2	3	4.00	10.0	0	2155	336	0.156	0.156	0	2155	292	0.135	0.135
	RT	C3	3	4.00	10.0	100	1752	126	0.072		100	1752	70	0.040	
pedestrian phase	D <sub>(p)</sub>	2													
	E <sub>(p)</sub>	1,2													
	F <sub>(p)</sub>	2													



1	2	3	4	5
AM	G = 8 I/G = 8	G = 27 I/G = 2	G = 6 I/G = 6	G = 6 I/G = 6
PM	G = 8 I/G = 8	G = 26 I/G = 2	G = 6 I/G = 6	G = 6 I/G = 6

## Priority Junction Analysis

Junction: Hok Yuen Street / Chun Tin Street  
 Design Year: 2015 Job Number: J6473 Date: 11 March 2016  
 Scenario: Existing Condition Page 7



The predictive equations of capacity of movement are:

$$Q-BA = D[627 + 14W-CR - Y(0.364q-AC + 0.144q-AB + 0.229q-CA + 0.52q-CB)]$$

$$Q-BC = E[745 - Y(0.364q-AC + 0.144q-AB)]$$

$$Q-CB = F[745 - 0.364Y(q-AC + q-AB)]$$

The geometric parameters represented by D, E, F are:

$$D = [1 + 0.094(w-BA - 3.65)][1 + 0.0009(V-rBA - 120)][1 + 0.0006(V-IBA - 150)]$$

$$E = [1 + 0.094(w-BC - 3.65)][1 + 0.0009(V-rBC - 120)]$$

$$F = [1 + 0.094(w-CB - 3.65)][1 + 0.0009(V-rCB - 120)]$$

where  $Y = 1 - 0.0345W$

q-AB, etc = the design flow of movement AB, etc

W = major road width

W-CR = central reserve width

w-BA, etc = lane width to vehicle

v-rBA, etc = visibility to the right for waiting vehicles in stream BA, etc

v-IBA, etc = visibility to the left for waiting vehicles in stream BA, etc

Geometry :	Input		Input		Input		Calculated	
	W*	11.00	V-rBA	0	w-BA	0.00	D	0.5332
	W-CR	0.00	V-IBA	0	w-BC	4.70	E	1.0048
			V-rBC	25	w-CB	0.00	F	0.5860
			V-rCB	0			Y	0.6205

Analysis :

Traffic Flows, pcu/hr	AM	PM	Capacity, pcu/hr	AM	PM
q-CA	0	0	Q-BA	267	281
q-CB	0	0	Q-BC	622	649
q-AB	14	17	Q-CB	362	377
q-AC	553	433	Q-BAC	622	649
q-BA	0	0			
q-BC	13	20			
f	1.000	1.000			

Ratio-of-flow to Capacity	AM	PM
B-A	0.000	0.000
B-C	0.021	0.031
C-B	0.000	0.000
B-AC	0.021	0.031

Note: \* One-way major road



## Priority Junction Analysis

Junction:	Hok Yuen Street / Chun Tin Street		
Design Year:	2028	Job Number:	J6473
Scenario:	Future Condition Without the Project		
Date:	11 March 2016		
Page	8		

The predictive equations of capacity of movement are:

$$Q-BA = D[627 + 14W-CR - Y(0.364q-AC + 0.144q-AB + 0.229q-CA + 0.52q-CB)]$$

$$Q-BC = E[745 - Y(0.364q-AC + 0.144q-AB)]$$

$$Q-CB = F[745 - 0.364Y(q-AC + q-AB)]$$

The geometric parameters represented by D, E, F are:

$$D = [1 + 0.094(w-BA - 3.65)][1 + 0.0009(V-rBA - 120)][1 + 0.0006(V-IBA - 150)]$$

$$E = [1 + 0.094(w-BC - 3.65)][1 + 0.0009(V-rBC - 120)]$$

$$F = [1 + 0.094(w-CB - 3.65)][1 + 0.0009(V-rCB - 120)]$$

where  $Y = 1 - 0.0345W$   
 $q-AB$ , etc = the design flow of movement AB, etc  
 $W$  = major road width  
 $W-CR$  = central reserve width  
 $w-BA$ , etc = lane width to vehicle  
 $v-rBA$ , etc = visibility to the right for waiting vehicles in stream BA, etc  
 $v-IBA$ , etc = visibility to the left for waiting vehicles in stream BA, etc

Geometry :	Input	Input	Input	Calculated
$W^*$	11.00	$V-rBA$	0	$D$ 0.5332
$W-CR$	0.00	$V-IBA$	0	$E$ 1.0048
		$V-rBC$	25	$F$ 0.5860
		$V-rCB$	0	$Y$ 0.6205

Analysis :	AM	PM	Capacity, pcu/hr	AM	PM
Traffic Flows, pcu/hr					
$q-CA$	0	0	$Q-BA$	253	268
$q-CB$	0	0	$Q-BC$	596	623
$q-AB$	51	57	$Q-CB$	343	359
$q-AC$	653	530	$Q-BAC$	596	623
$q-BA$	0	0			
$q-BC$	65	47			
$f$	1.000	1.000			

Ratio-of-flow to Capacity	AM	PM	Note: * One-way major road
B-A	0.000	0.000	
B-C	0.109	0.075	
C-B	0.000	0.000	
B-AC	0.109	0.075	

## Priority Junction Analysis

Junction:	Hok Yuen Street / Sung Chi Street		
Design Year:	2028	Job Number:	J6473
Scenario:	Future Condition WITH the Project		
Date:	11 March 2016		
Page	9		

The predictive equations of capacity of movement are:

$$Q-BA = D[627 + 14W-CR - Y(0.364q-AC + 0.144q-AB + 0.229q-CA + 0.52q-CB)]$$

$$Q-BC = E[745 - Y(0.364q-AC + 0.144q-AB)]$$

$$Q-CB = F[745 - 0.364Y(q-AC + q-AB)]$$

The geometric parameters represented by D, E, F are:

$$D = [1 + 0.094(w-BA - 3.65)][1 + 0.0009(V-rBA - 120)][1 + 0.0006(V-IBA - 150)]$$

$$E = [1 + 0.094(w-BC - 3.65)][1 + 0.0009(V-rBC - 120)]$$

$$F = [1 + 0.094(w-CB - 3.65)][1 + 0.0009(V-rCB - 120)]$$

where  $Y = 1 - 0.0345W$   
 $q-AB$ , etc = the design flow of movement AB, etc  
 $W$  = major road width  
 $W-CR$  = central reserve width  
 $w-BA$ , etc = lane width to vehicle  
 $v-rBA$ , etc = visibility to the right for waiting vehicles in stream BA, etc  
 $v-IBA$ , etc = visibility to the left for waiting vehicles in stream BA, etc

Geometry :	Input	Input	Input	Calculated
$W^*$	11.00	$V-rBA$	0	$D$ 0.5332
$W-CR$	0.00	$V-IBA$	0	$E$ 0.9145
		$V-rBC$	25	$F$ 0.5860
		$V-rCB$	0	$Y$ 0.6205

Analysis :	AM	PM	Capacity, pcu/hr	AM	PM
Traffic Flows, pcu/hr					
$q-CA$	0	0	$Q-BA$	254	269
$q-CB$	0	0	$Q-BC$	544	570
$q-AB$	97	104	$Q-CB$	341	357
$q-AC$	628	500	$Q-BAC$	544	570
$q-BA$	0	0			
$q-BC$	18	14			
$f$	1.000	1.000			

Ratio-of-flow to Capacity	AM	PM	Note: * One-way major road
B-A	0.000	0.000	
B-C	0.033	0.025	
C-B	0.000	0.000	
B-AC	0.033	0.025	

## Priority Junction Analysis

Junction:	Hok Yuen Street / Hok Yuen Street East / Man Lok Street / Sung On Street		
Design Year:	2015	Job Number:	J6473
		Date:	11 March 2016
Scheme:	Existing Condition		Page 10

Diagram showing the junction layout and traffic flow data for the Existing Condition (2015).

**Arm A: Hok Yuen Street East(N) - Arm A**

10	28
5	18

**Arm B: Man Lok Street (E) - Arm B**

235	201
AM	PM

**Arm C: Hok Yuen Street (S) - Arm C**

40	151
225	193
175	207

**Arm D: Sung On Street (W) - Arm D**

31	31
31	24

where

$Y = 1 - 0.0345W$   
 $q$ -AB, etc = the design flow of movement AB, etc  
 $W$  = major road width  
 $W$ -CR = central reserve width  
 $w$ -BA, etc = lane width to vehicle  
 $v$ -rBA, etc = visibility to the right for waiting vehicles in stream BA, etc  
 $v$ -lBA, etc = visibility to the left for waiting vehicles in stream BA, etc

Geometry :

Input	W	6.00	Input	V-CB	32	Input	V-AD	0	Input	w-BA	0.00
	W-CR	0.00		V-IBC	0		V-IDA	40		w-BC	0.00
	W-CB	4.70		V-rBA	0		V-rDC	0		w-DA	5.00
	W-AD	0.00								w-DC	0.00

Traffic Flows, pcu/min

	AM	PM	Capacity, pcu/min	AM	PM
Analysis q-B-ACD	0.00	0.00	Q-B-ACD	6.14	6.22
q-A-BCD	4.30	3.67	Q-A-BCD	0.00	0.00
q-A-B	0.00	0.00	Q-A-B	0.00	0.00
q-A-C	0.00	0.00	Q-A-C	6.32	6.79
q-D-ABC	0.42	0.69	Q-D-ABC	9.78	9.73
q-C-ABD	6.46	4.80	Q-C-ABD	15.24	14.48
q-C-D	1.59	0.49	Q-C-D	0.00	0.00
q-C-A	2.03	2.76	Q-C-A	0.00	0.00

Ratio-of-flow to Capacity

	AM	PM
B-ACD	0.000	0.000
A-D	0.000	0.000
D-ABC	0.043	0.071
C-ABD	0.424	0.332

## Priority Junction Analysis

Junction:	Hok Yuen Street / Hok Yuen Street East / Man Lok Street / Sung On Street		
Design Year:	2028	Job Number:	J6473
		Date:	11 March 2016
Scheme:	Future Condition WITHOUT the Project		Page 11

Diagram showing the junction layout and traffic flow data for the Future Condition WITHOUT the Project (2028).

**Arm A: Hok Yuen Street East(N) - Arm A**

31	31
31	24

**Arm B: Man Lok Street (E) - Arm B**

254	214
AM	PM

**Arm C: Hok Yuen Street (S) - Arm C**

50	156
257	256
197	226

**Arm D: Sung On Street (W) - Arm D**

31	31
31	24

where

$Y = 1 - 0.0345W$   
 $q$ -AB, etc = the design flow of movement AB, etc  
 $W$  = major road width  
 $W$ -CR = central reserve width  
 $w$ -BA, etc = lane width to vehicle  
 $v$ -rBA, etc = visibility to the right for waiting vehicles in stream BA, etc  
 $v$ -lBA, etc = visibility to the left for waiting vehicles in stream BA, etc

Geometry :

Input	W	6.00	Input	V-CB	32	Input	V-AD	0	Input	w-BA	0.00
	W-CR	0.00		V-IBC	0		V-IDA	40		w-BC	0.00
	W-CB	4.70		V-rBA	0		V-rDC	0		w-DA	5.00
	W-AD	0.00								w-DC	0.00

Traffic Flows, pcu/min

	AM	PM	Capacity, pcu/min	AM	PM
Analysis q-B-ACD	0.00	0.00	Q-B-ACD	5.84	5.99
q-A-BCD	4.64	3.91	Q-A-BCD	0.00	0.00
q-A-B	0.00	0.00	Q-A-B	0.00	0.00
q-A-C	0.00	0.00	Q-A-C	5.97	6.50
q-D-ABC	1.01	1.13	Q-D-ABC	7.71	8.39
q-C-ABD	7.85	5.83	Q-C-ABD	15.94	14.92
q-C-D	1.45	0.57	Q-C-D	0.00	0.00
q-C-A	2.38	2.86	Q-C-A	0.00	0.00

Ratio-of-flow to Capacity

	AM	PM
B-ACD	0.000	0.000
A-D	0.000	0.000
D-ABC	0.131	0.135
C-ABD	0.493	0.391

## Priority Junction Analysis

Junction:	Hok Yuen Street / Hok Yuen Street East / Man Lok Street / Sung On Street				
Design Year:	2028	Job Number:	J6473	Date:	11 March 2016
Scheme:	Future Condition WITH the Project				Page 12

where

$Y = 1 - 0.0345W$   
 $q$ -AB, etc = the design flow of movement AB, etc  
 $W$  = major road width  
 $W$ -CR = central reserve width  
 $w$ -BA, etc = lane width to vehicle  
 $v$ -rBA, etc = visibility to the right for waiting vehicles in stream BA, etc  
 $v$ -lBA, etc = visibility to the left for waiting vehicles in stream BA, etc

Geometry :	Input	W	6.00	Input	V-CB	32	Input	V-AD	0	Input	w-BA	0.00
	W-CR	0.00	Input	V-IBC	0	Input	V-IDA	40	Input	w-BC	0.00	
	W-CB	4.70	Input	V-rBA	0	Input	V-rDC	0	Input	w-DA	5.00	
	W-AD	0.00							Input	w-DC	0.00	

Traffic Flows, pcu/min	AM	PM	Capacity, pcu/min	AM	PM
Analysis q-B-ACD	0.00	0.00	Q-B-ACD	5.83	5.97
q-A-BCD	4.57	3.95	Q-A-BCD	0.00	0.00
q-A-B	0.00	0.00	Q-A-B	0.00	0.00
q-A-C	0.00	0.00	Q-A-C	5.94	6.47
q-D-ABC	1.01	1.15	Q-D-ABC	7.68	8.32
q-C-ABD	7.96	5.95	Q-C-ABD	16.03	14.98
q-C-D	1.45	0.56	Q-C-D	0.00	0.00
q-C-A	2.42	2.90	Q-C-A	0.00	0.00

Ratio-of-flow to Capacity	AM	PM
B-ACD	0.000	0.000
A-D	0.000	0.000
D-ABC	0.131	0.139
C-ABD	0.497	0.397

## Priority Junction Analysis

Junction:	Bailey Street / Sung Chi Street / Wan On Street				
Design Year:	2015	Job Number:	J6473	Date:	11 March 2016
Scheme:	Existing Condition				Page 13

where

$Y = 1 - 0.0345W$   
 $q$ -AB, etc = the design flow of movement AB, etc  
 $W$  = major road width  
 $W$ -CR = central reserve width  
 $w$ -BA, etc = lane width to vehicle  
 $v$ -rBA, etc = visibility to the right for waiting vehicles in stream BA, etc  
 $v$ -lBA, etc = visibility to the left for waiting vehicles in stream BA, etc

Geometry :	Input	W	18.00	Input	V-CB	0	Input	V-AD	100	Input	w-BA	4.50
	W-CR	0.00	Input	V-IBC	26	Input	V-IDA	25	Input	w-BC	0.00	
	W-CB	0.00	Input	V-rBA	30	Input	V-rDC	42	Input	w-DA	3.50	
	W-AD	3.00							Input	w-DC	0.00	

Traffic Flows, pcu/min	AM	PM	Capacity, pcu/min	AM	PM
Analysis q-B-ACD	0.27	0.27	Q-B-ACD	10.06	9.79
q-A-BCD	0.82	0.53	Q-A-BCD	14.83	15.22
q-A-B	0.00	0.00	Q-A-B	0.00	0.00
q-A-C	7.99	9.25	Q-A-C	0.00	0.00
q-D-ABC	0.95	0.95	Q-D-ABC	6.31	6.21
q-C-ABD	0.44	0.44	Q-C-ABD	0.00	0.00
q-C-D	10.07	####	Q-C-D	0.00	0.00
q-C-A	0.00	0.00	Q-C-A	7.10	6.91

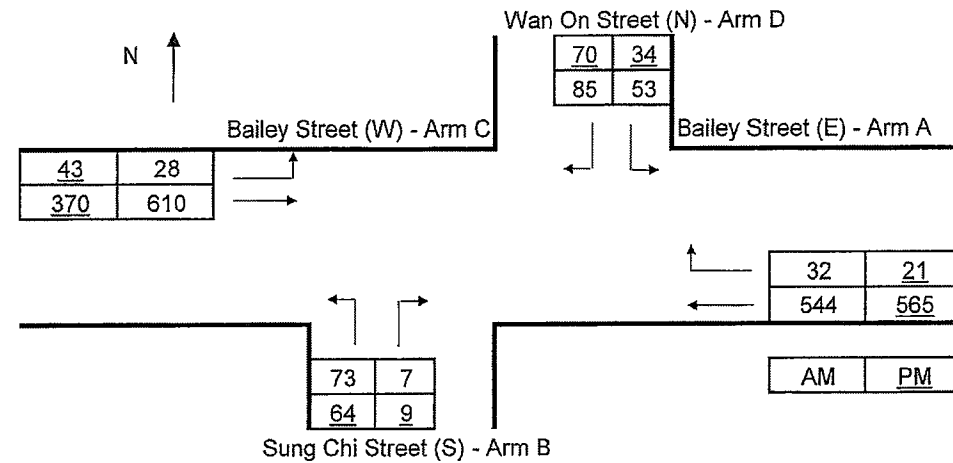
  

Ratio-of-flow to Capacity	AM	PM
B-ACD	0.027	0.028
A-BCD	0.055	0.035
D-ABC	0.151	0.153
C-B	0.000	0.000



### Priority Junction Analysis

Junction: Bailey Street / Sung Chi Street / Wan On Street  
 Design Year: 2028 Job Number: J6473 Date: 11 March 2016  
 Scheme: Future Condition WITHOUT the Project Page 14



$$Y = 1 - 0.0345W$$

where  
 q-AB, etc = the design flow of movement AB, etc  
 W = major road width  
 W-CR = central reserve width  
 w-BA, etc = lane width to vehicle  
 v-rBA, etc = visibility to the right for waiting vehicles in stream BA, etc  
 v-lBA, etc = visibility to the left for waiting vehicles in stream BA, etc

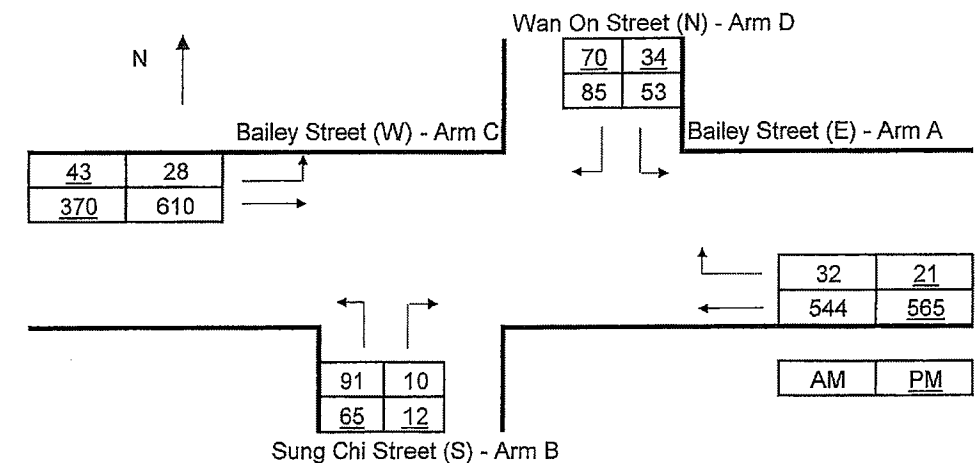
Geometry :	Input		Input		Input		Input	
	W	18.00	V-CB	0	V-AD	100	w-BA	4.50
	W-CR	0.00	V-IBC	26	V-IDA	25	w-BC	0.00
	W-CB	0.00	V-rBA	30	V-rDC	42	w-DA	3.50
	W-AD	3.00					w-DC	0.00

Traffic Flows, pcu/min	AM	PM	Capacity, pcu/min	AM	PM
Analysis q-B-ACD	1.46	1.33	Q-B-ACD	8.83	8.76
q-A-BCD	1.52	0.96	Q-A-BCD	15.61	16.48
q-A-B	0.00	0.00	Q-A-B	0.00	0.00
q-A-C	9.02	9.75	Q-A-C	0.00	0.00
q-D-ABC	2.52	1.90	Q-D-ABC	5.90	6.70
q-C-ABD	0.51	0.79	Q-C-ABD	0.00	0.00
q-C-D	11.15	6.76	Q-C-D	0.00	0.00
q-C-A	0.00	0.00	Q-C-A	6.67	6.65

Ratio-of-flow to Capacity	AM	PM
B-ACD	0.166	0.152
A-D	0.097	0.058
D-ABC	0.428	0.284
C-ABD	0.000	0.000

### Priority Junction Analysis

Junction: Bailey Street / Sung Chi Street / Wan On Street  
 Design Year: 2028 Job Number: J6473 Date: 11 March 2016  
 Scheme: Future Condition WITH the Project Page 15



$$Y = 1 - 0.0345W$$

where  
 q-AB, etc = the design flow of movement AB, etc  
 W = major road width  
 W-CR = central reserve width  
 w-BA, etc = lane width to vehicle  
 v-rBA, etc = visibility to the right for waiting vehicles in stream BA, etc  
 v-lBA, etc = visibility to the left for waiting vehicles in stream BA, etc

	Input		Input		Input		Input	
	W	18.00	V-CB	0	V-AD	100	w-BA	4.50
Geometry :	W-CR	0.00	V-IBC	26	V-IDA	25	w-BC	0.00
	W-CB	0.00	V-rBA	30	V-rDC	42	w-DA	3.50
	W-AD	3.00					w-DC	0.00

Traffic Flows, pcu/min	AM	PM	Capacity, pcu/min	AM	PM
Analysis q-B-ACD	1.85	1.41	Q-B-ACD	8.76	8.60
q-A-BCD	1.52	0.96	Q-A-BCD	15.60	16.47
q-A-B	0.00	0.00	Q-A-B	0.00	0.00
q-A-C	9.01	9.75	Q-A-C	0.00	0.00
q-D-ABC	2.52	1.90	Q-D-ABC	5.89	6.69
q-C-ABD	0.51	0.79	Q-C-ABD	0.00	0.00
q-C-D	11.15	6.76	Q-C-D	0.00	0.00
q-C-A	0.00	0.00	Q-C-A	6.67	6.65

Ratio-of-flow to Capacity	AM	PM
B-ACD	0.211	0.164
A-D	0.097	0.058
D-ABC	0.429	0.284
C-ABD	0.000	0.000

## Signal Junction Analysis

Junction: Bailey Street / Sung On Street Job Number: J6473  
 Scenario: Existing Condition Page 16  
 Design Year: 2015 Designed By: LKK Checked By: \_\_\_\_\_ Date: 11 March 2016

[illegible]

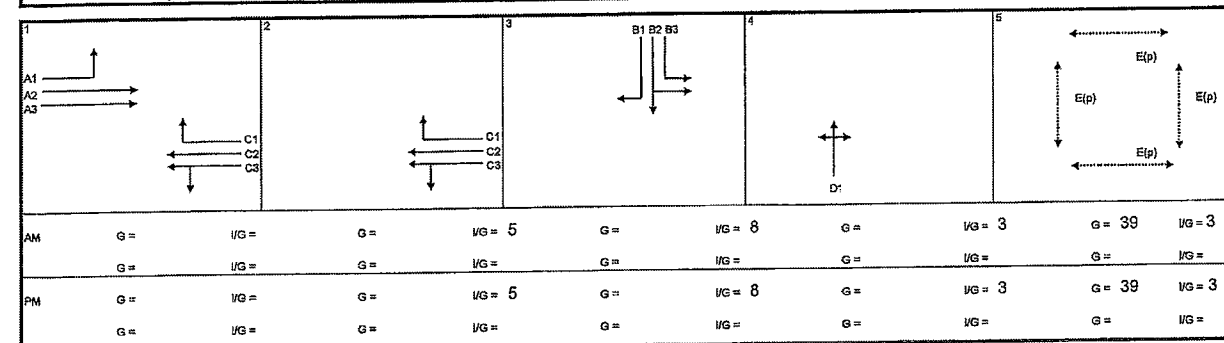
AM Traffic Flow (pcu/hr)

PM Traffic Flow (pcu/hr)

$S = 1940 + 100(W - 3.25)$        $S = 2050 + 100(W - 3.25)$   
 $S_{AM} = S \times \{1 + 1.5fr\}$        $S_{PM} = \{S - 230\} \times \{1 + 1.5fr\}$

	AM Peak	Check Pedestrian Phase	PM Peak	Check Pedestrian Phase
Sum y	0.301		0.274	
L (s)	55		55	
C (s)	130		130	
practical y	0.519		0.519	
R.C. (%)	73%		89%	

Note:



## Signal Junction Analysis

Junction: Bailey Street / Sung On Street Job Number: J6473  
 Scenario: Future Condition WITHOUT the Project Page 17  
 Design Year: 2028 Designed By: LKK Checked By: \_\_\_\_\_ Date: 11 March 2016

[illegible]

AM Traffic Flow (pcu/hr)

PM Traffic Flow (pcu/hr)

AM Peak

Check Pedestrian Phase

PM Peak

Check Pedestrian Phase

Sum y

L (s)

C (s)

practical y

R.C. (%)

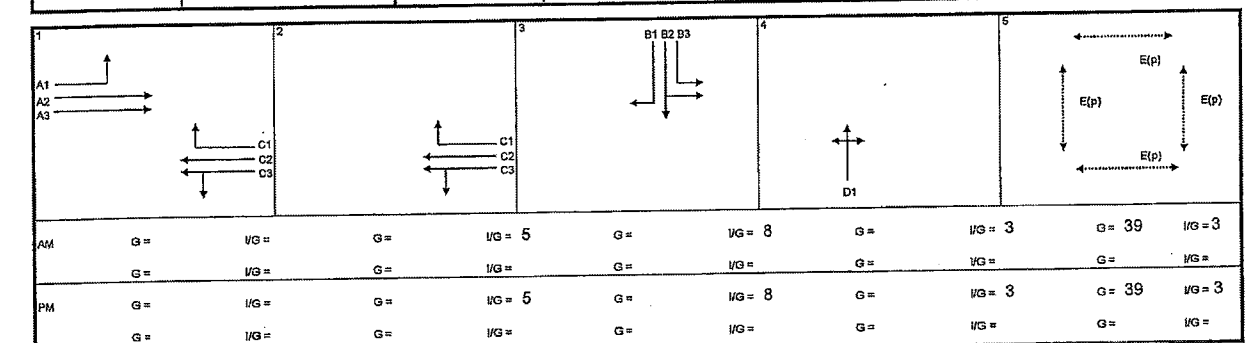
$S = 1940 + 100(W - 3.25)$

$S_M = S + (1 + 1.5fr)$

$S = 2080 + 100(W - 3.25)$

$S_M = (S - 230) + (1 + 1.5fr)$

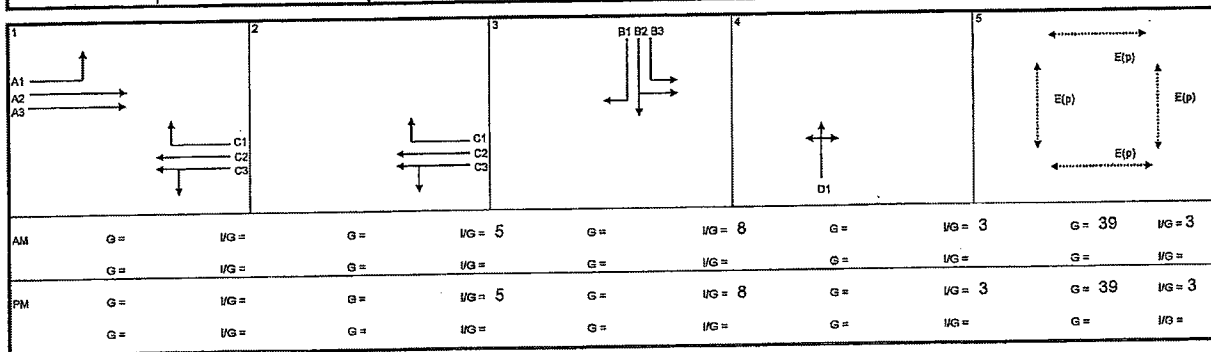
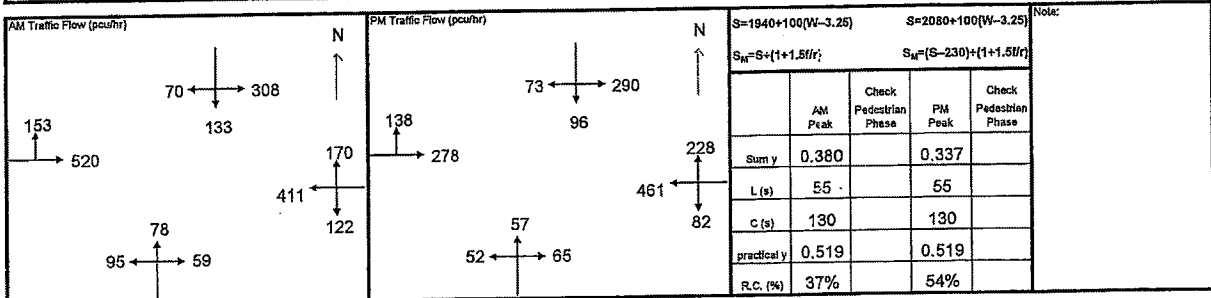
Note:



Signal Junction Analysis

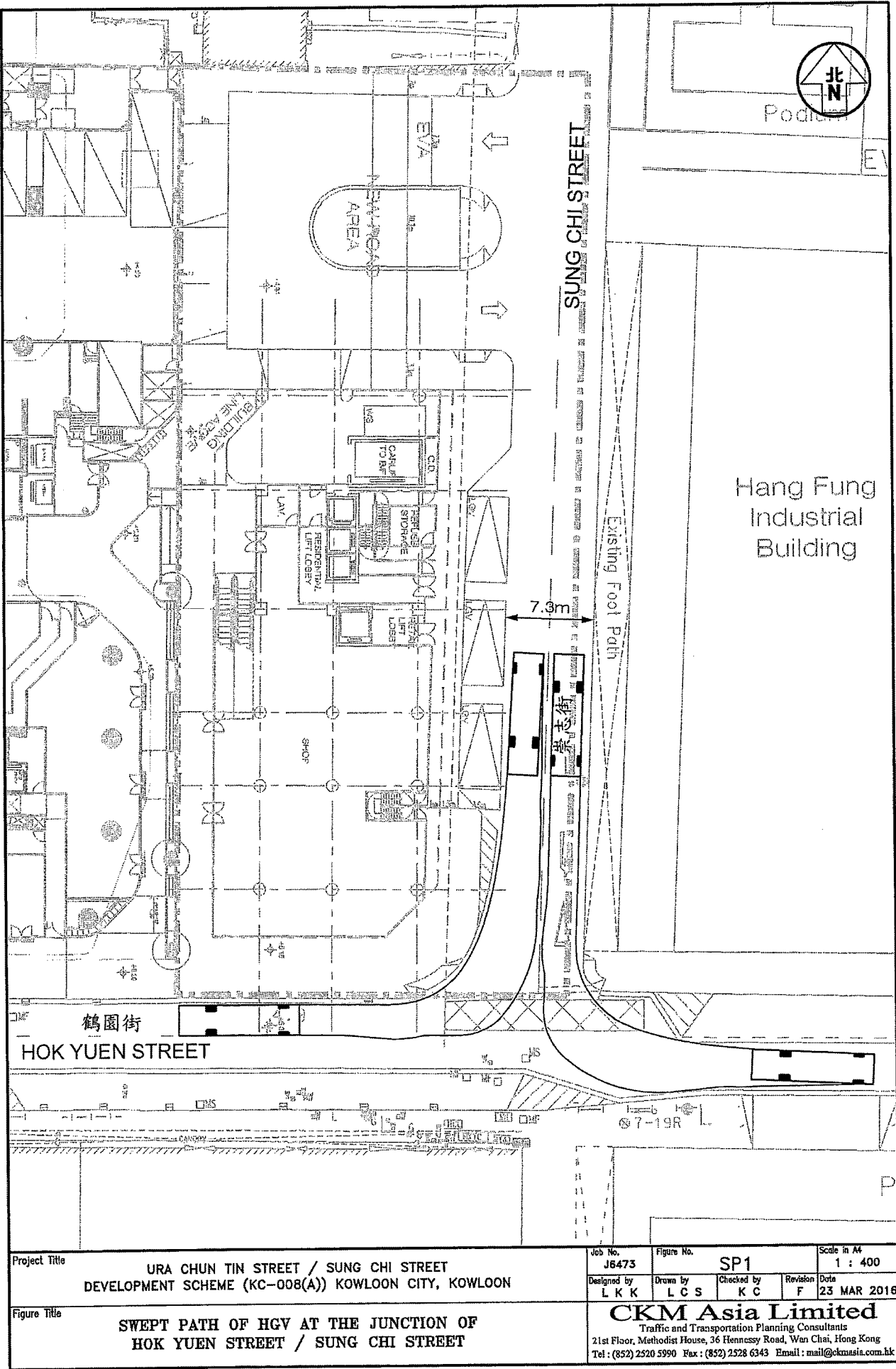
Junction: Bailey Street / Sung On Street  
Scenario: Future Condition WITH the Project  
Design Year: 2028      Designed By: LKK      Checked By:      Date: 11 March 2016  
Job Number: J6473  
Page 18

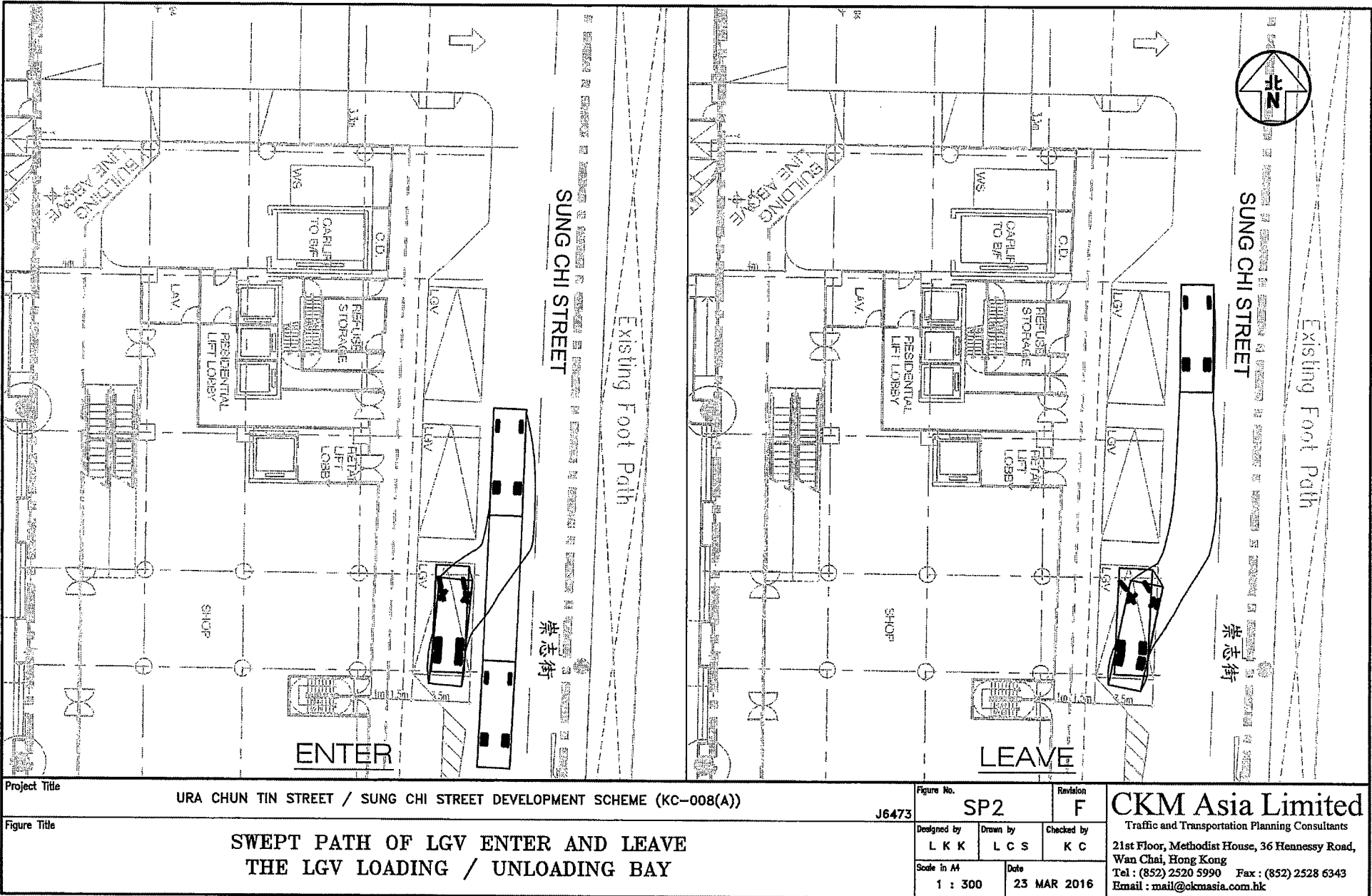
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						Turning %	Sat. Flow (pcu/hr)	Flow (pcu/hr)	y value	Critical y	Turning %	Sat. Flow (pcu/hr)	Flow (pcu/hr)	y value	Critical y	
Bailey Street EB	LT	A1	1	3.00	15.0		100	1741	153	0.088		100	1741	138	0.079	
	SA	A2	1	3.00	0.0		0	2055	260	0.127		0	2055	139	0.068	
	SA	A3	1	3.00	0.0		0	2055	260	0.127		0	2055	139	0.068	
Sung On Street SB	LT	B1	3	3.30	13.0		100	1744	206	0.118	0.118	100	1744	182	0.104	0.104
	LT+SA	B2	3	3.30	13.0		43	1986	235	0.118		53	1965	204	0.104	
	RT	B3	3	3.30	20.0		100	1940	70	0.036		100	1940	73	0.038	
Bailey Street WB	LT+SA	C1	1,2	3.00	13.0		49	1813	250	0.138		32	1847	257	0.139	
	SA	C2	1,2	3.00	0.0		0	2055	283	0.138	0.138	0	2055	286	0.139	0.139
	RT	C3	1,2	3.00	20.0		100	1912	170	0.089		100	1912	228	0.119	
	LT+SA+RT	D1	4	4.00	13.0		66	1872	232	0.124	0.124	67	1870	174	0.093	0.093
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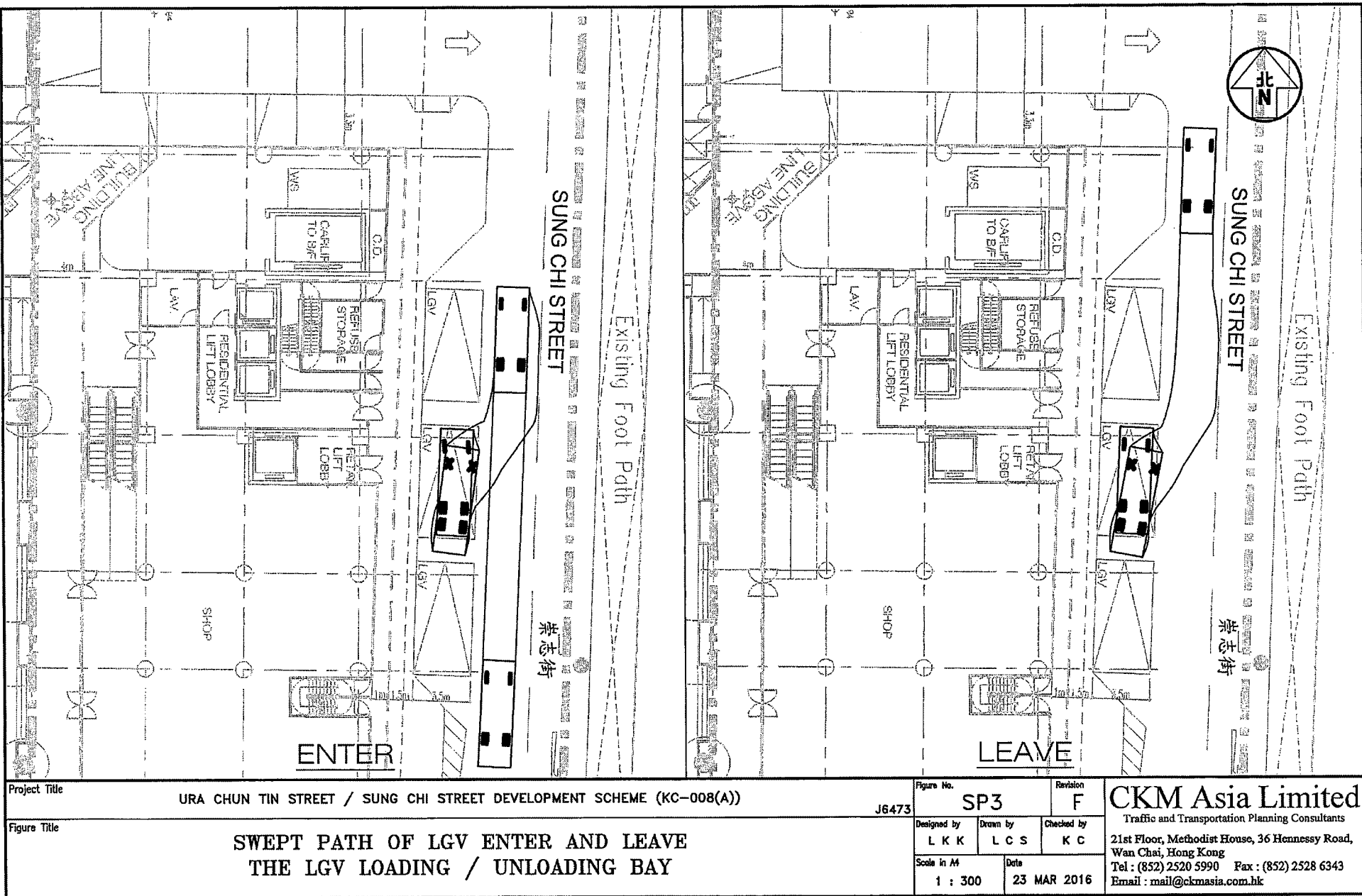


Appendix 3  
Swept Path Analysis

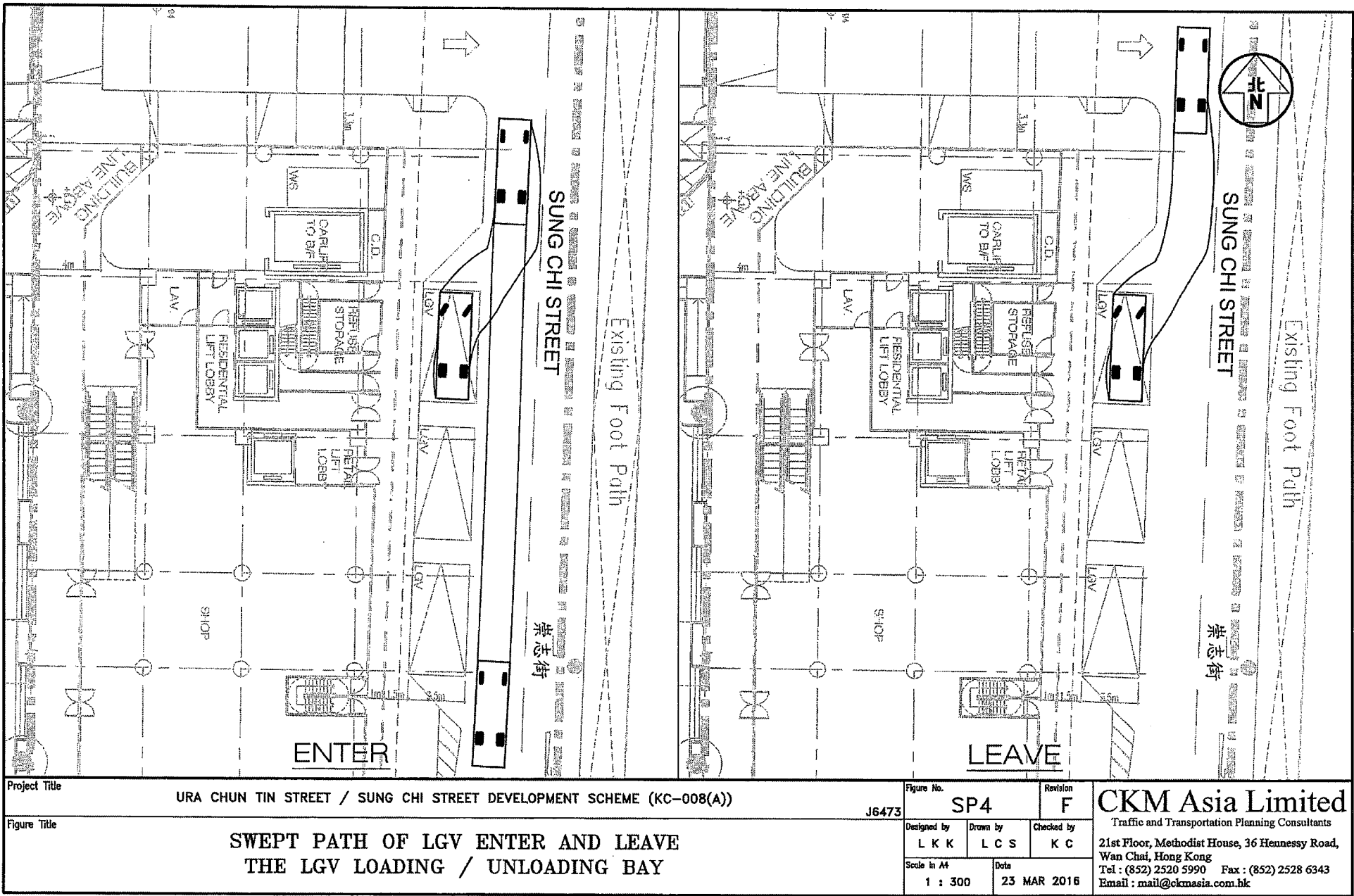




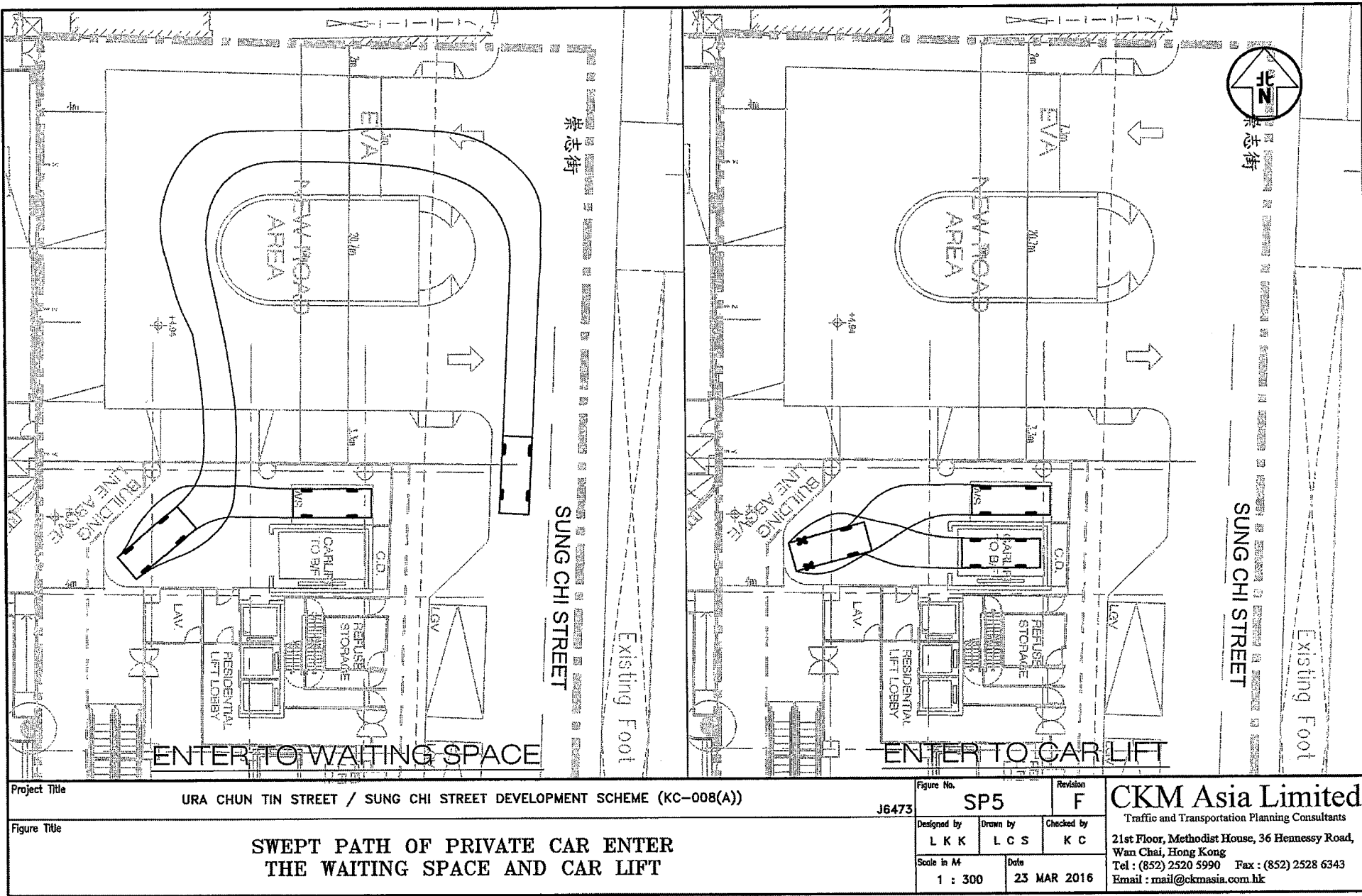
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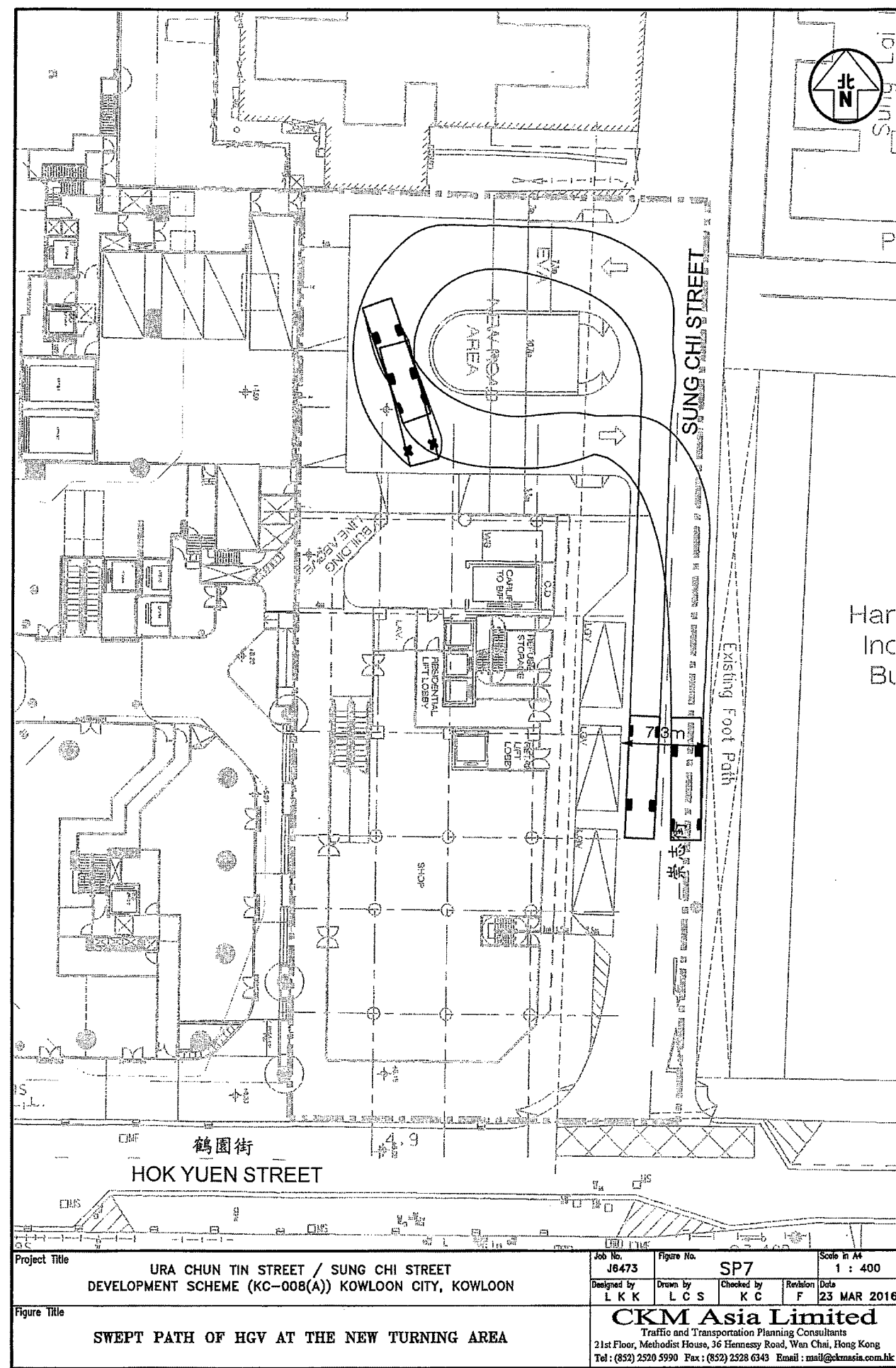
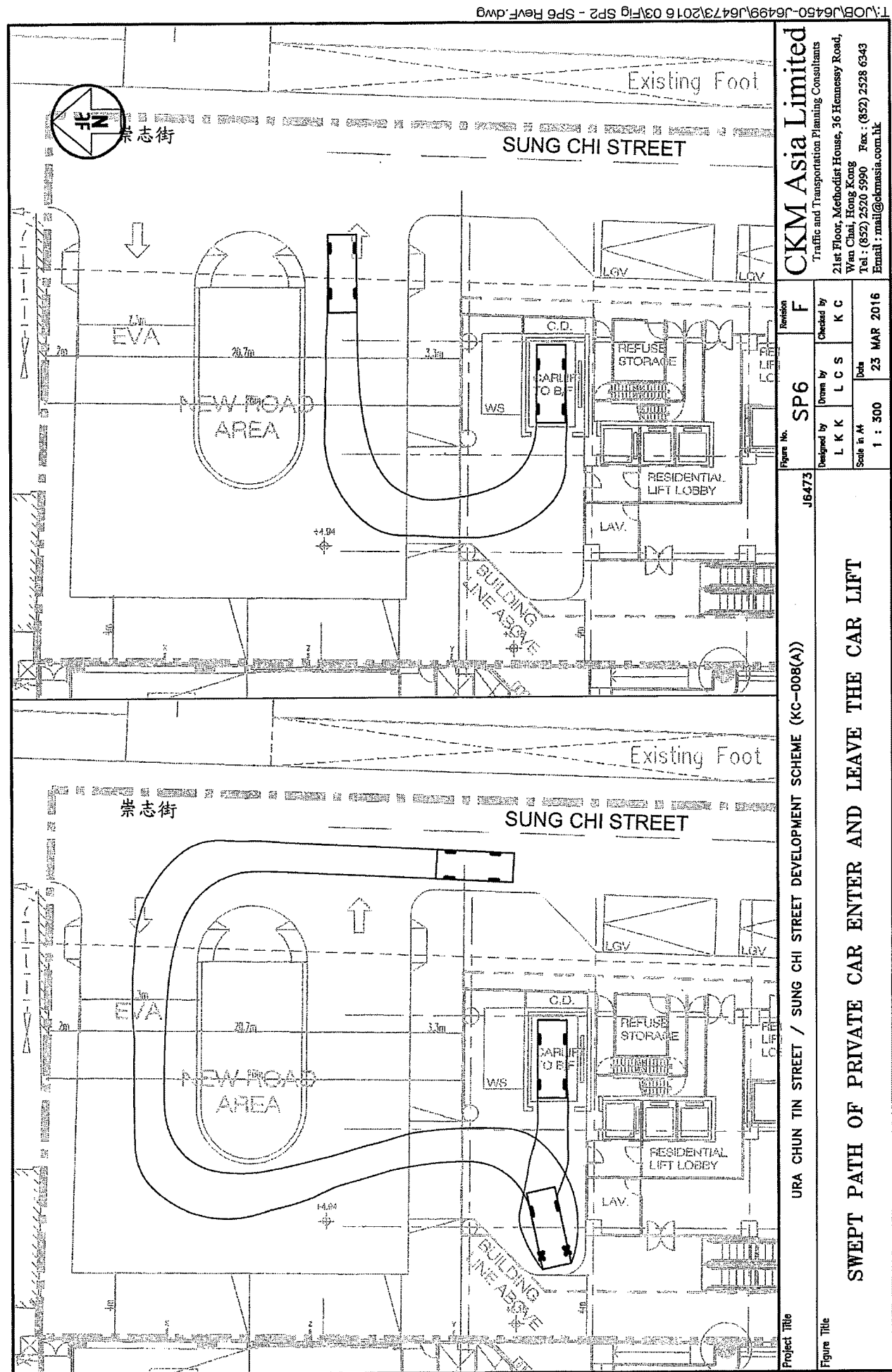


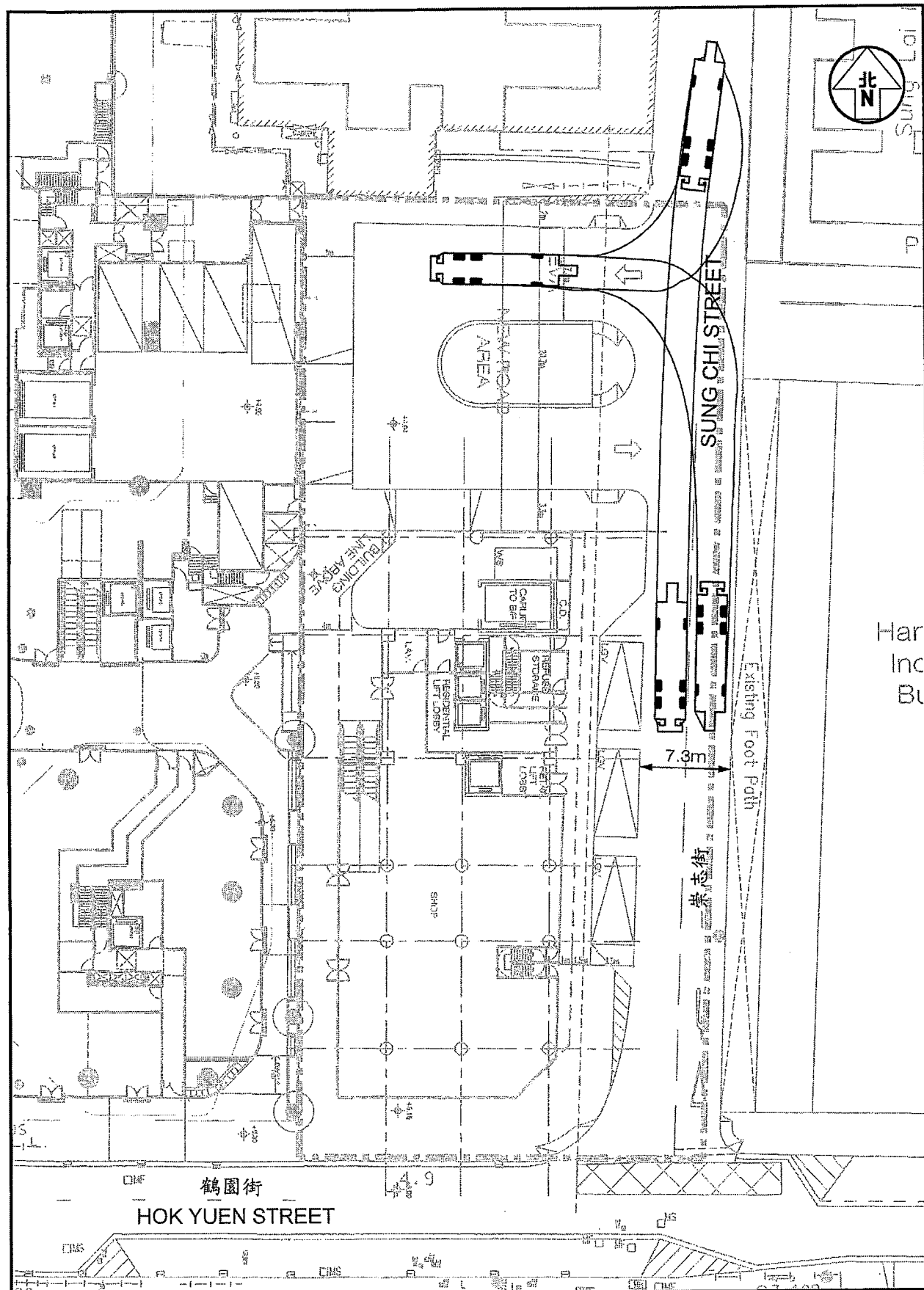
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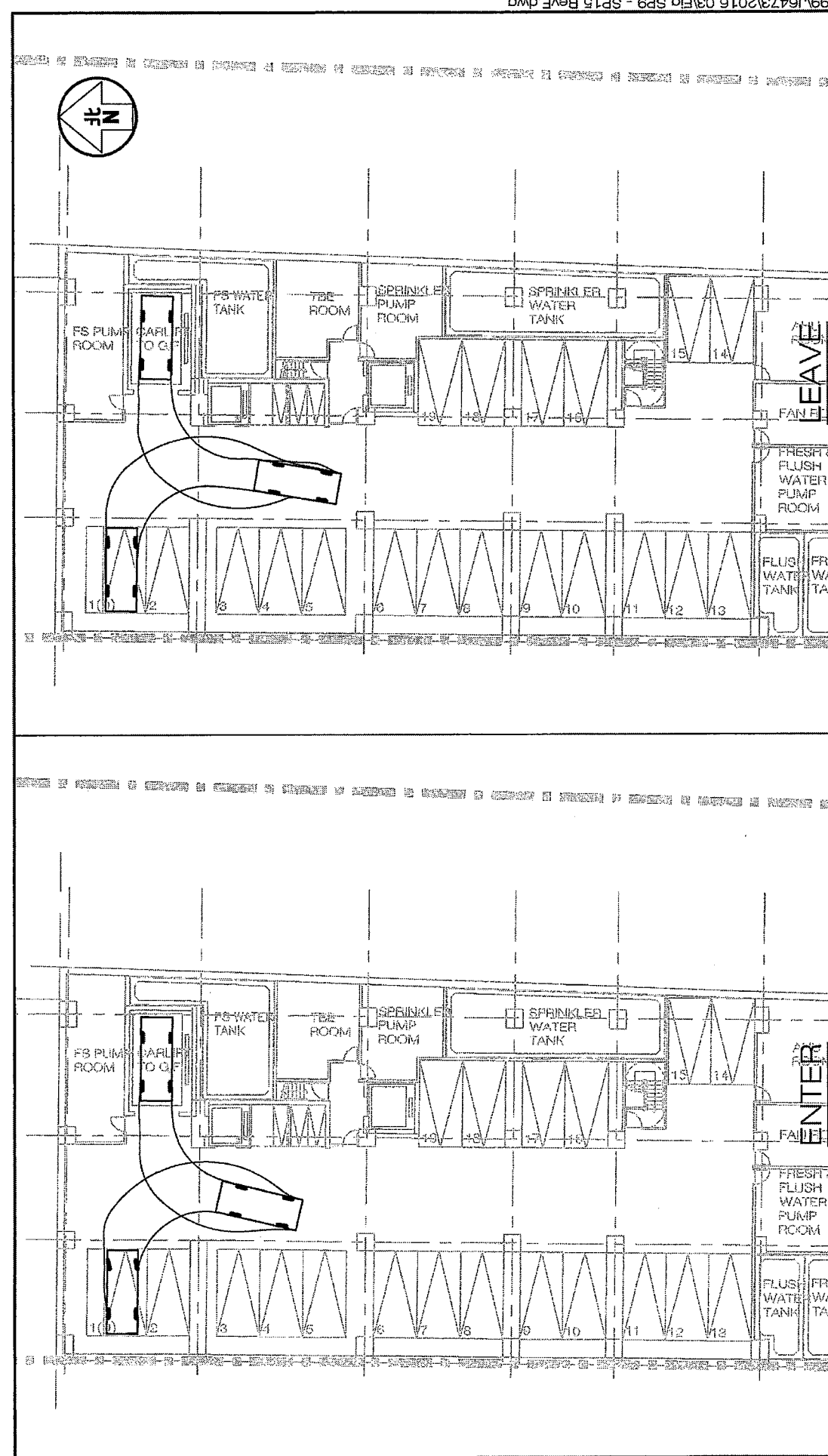






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	Job No. J6473	Figure No. SP8	Scale in A4 1 : 400	
Figure Title	Designed by L K K	Drawn by L C S	Checked by K C	Revision Date F 23 MAR 2016
	<b>CKM Asia Limited</b> Traffic and Transportation Planning Consultants 21st Floor, Methodist House, 36 Hennessy Road, Wan Chai, Hong Kong Tel : (852) 2520 5990 Fax : (852) 2528 6343 Email : mail@ckmasia.com.hk			

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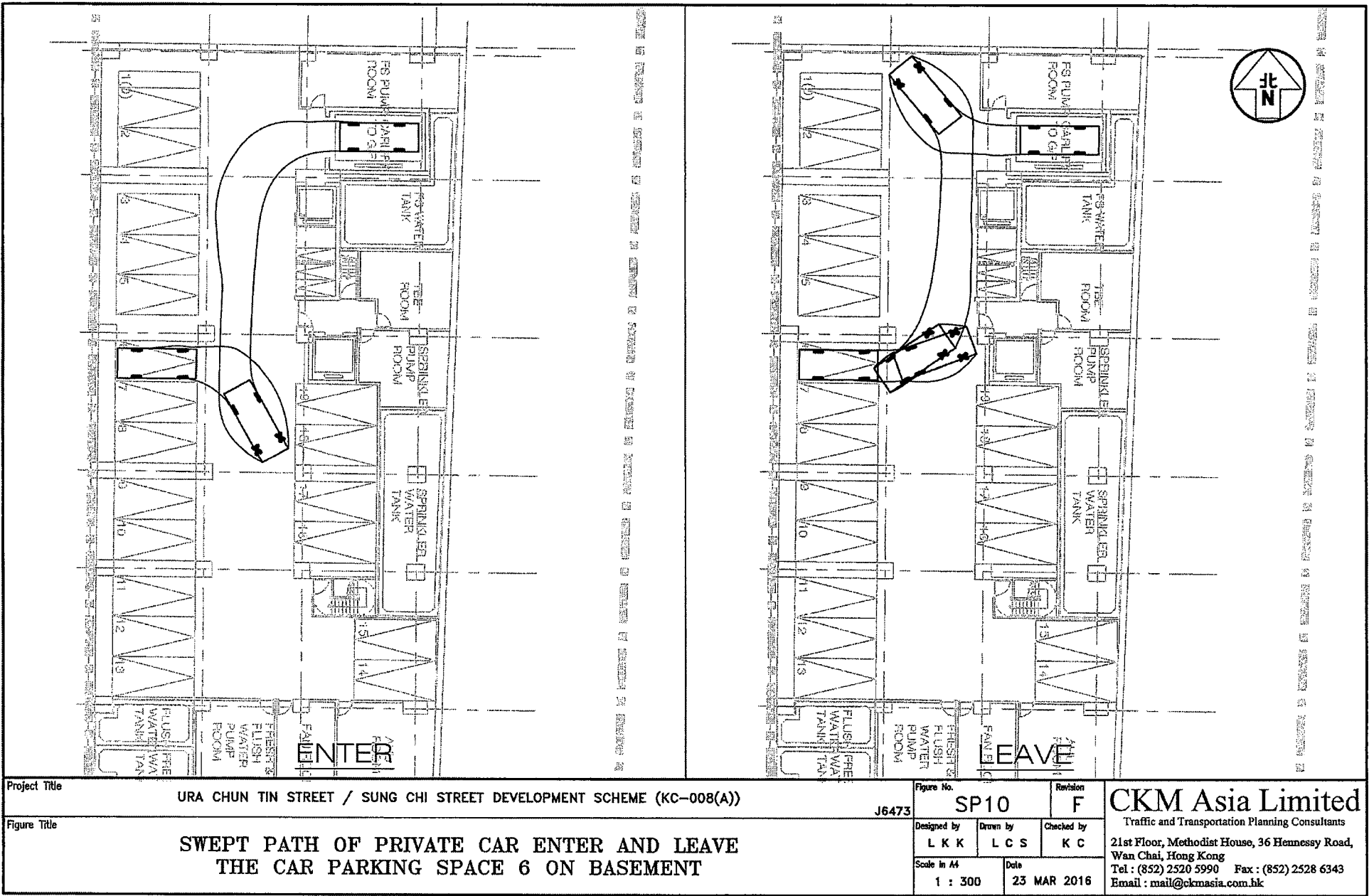


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	Figure No. J6473	Revision SP9	F	
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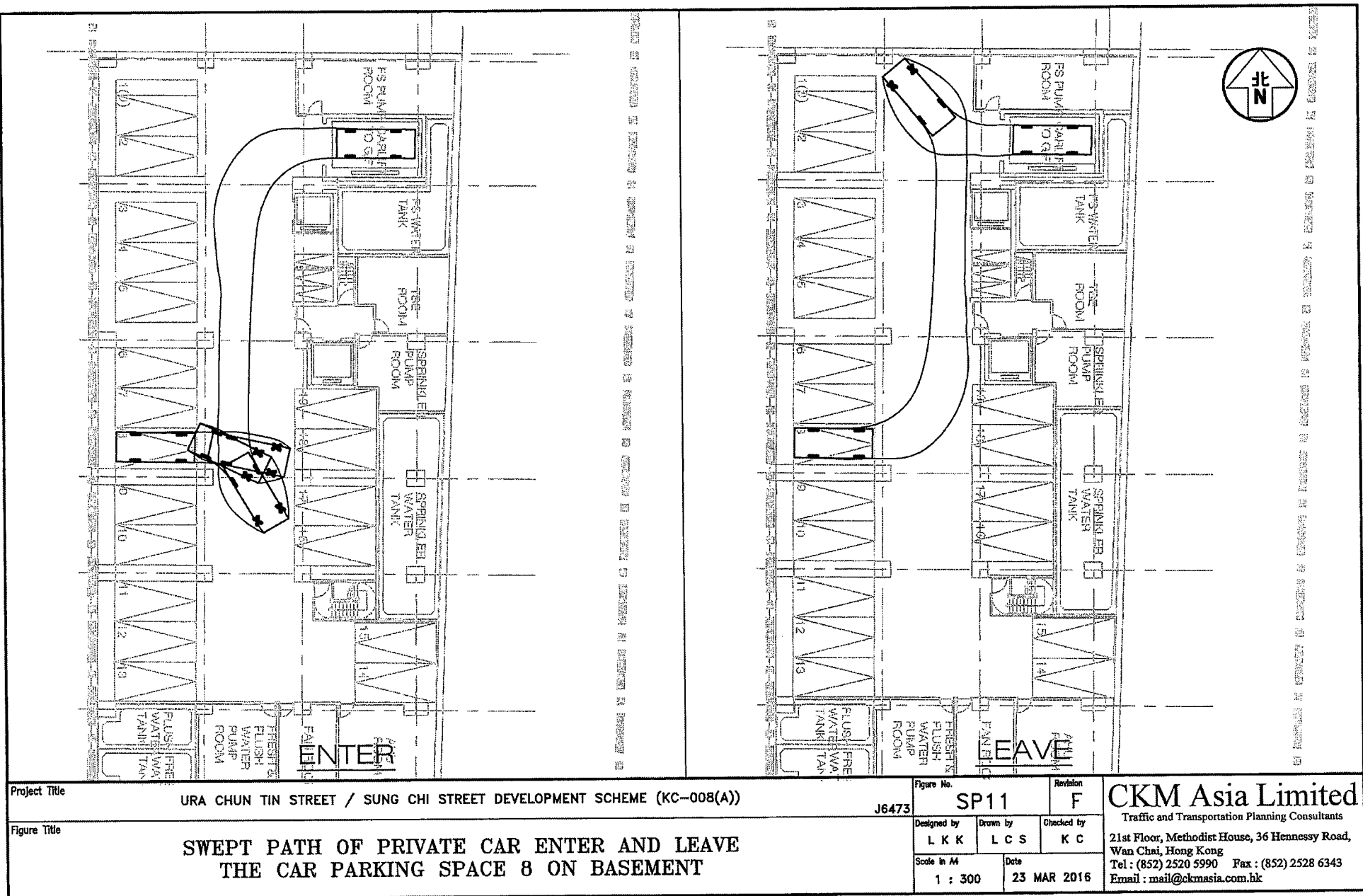
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**SWEPT PATH OF PRIVATE CAR ENTER AND LEAVE  
THE CAR PARKING SPACE 1 ON BASEMENT**

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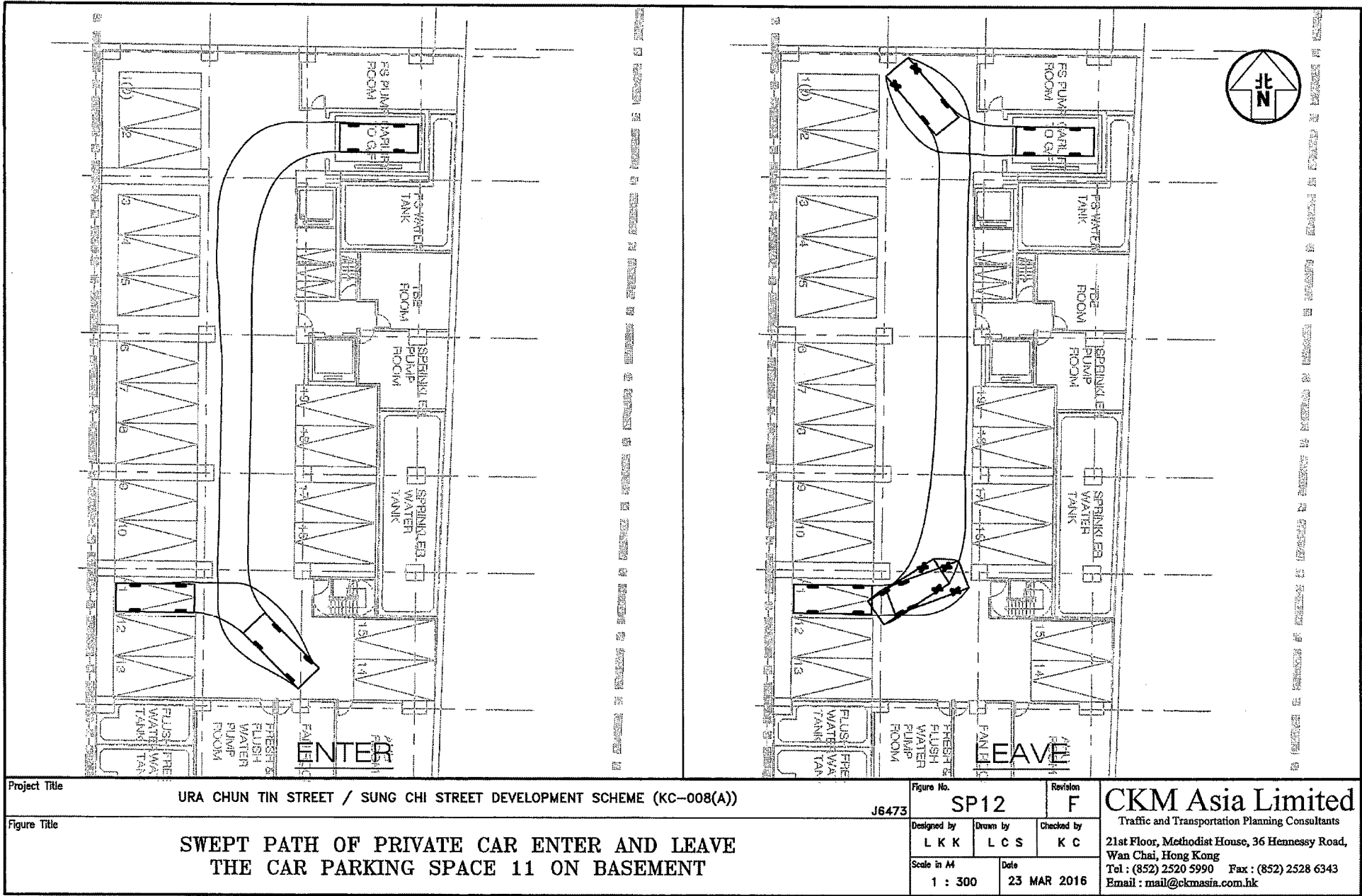


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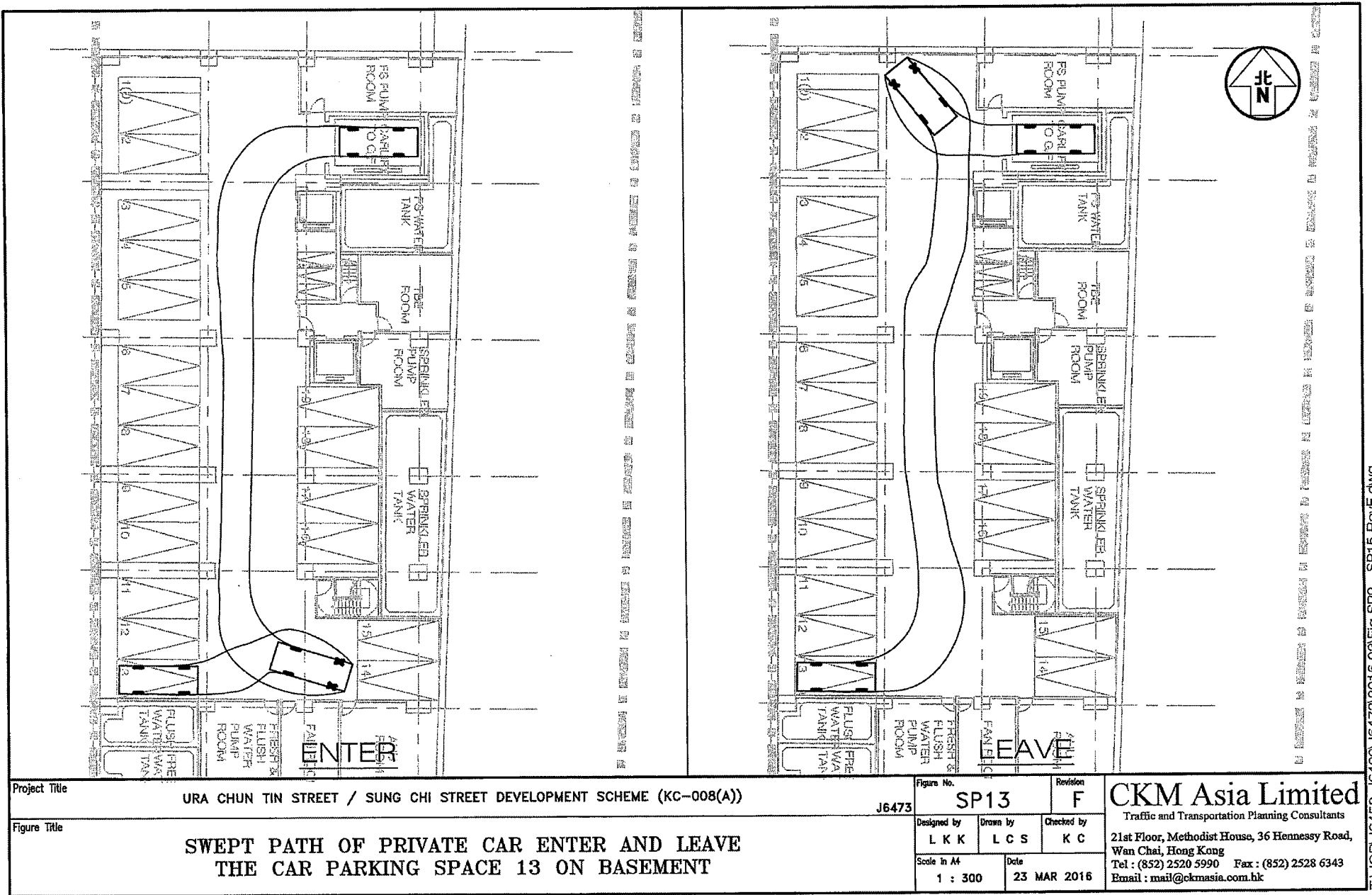


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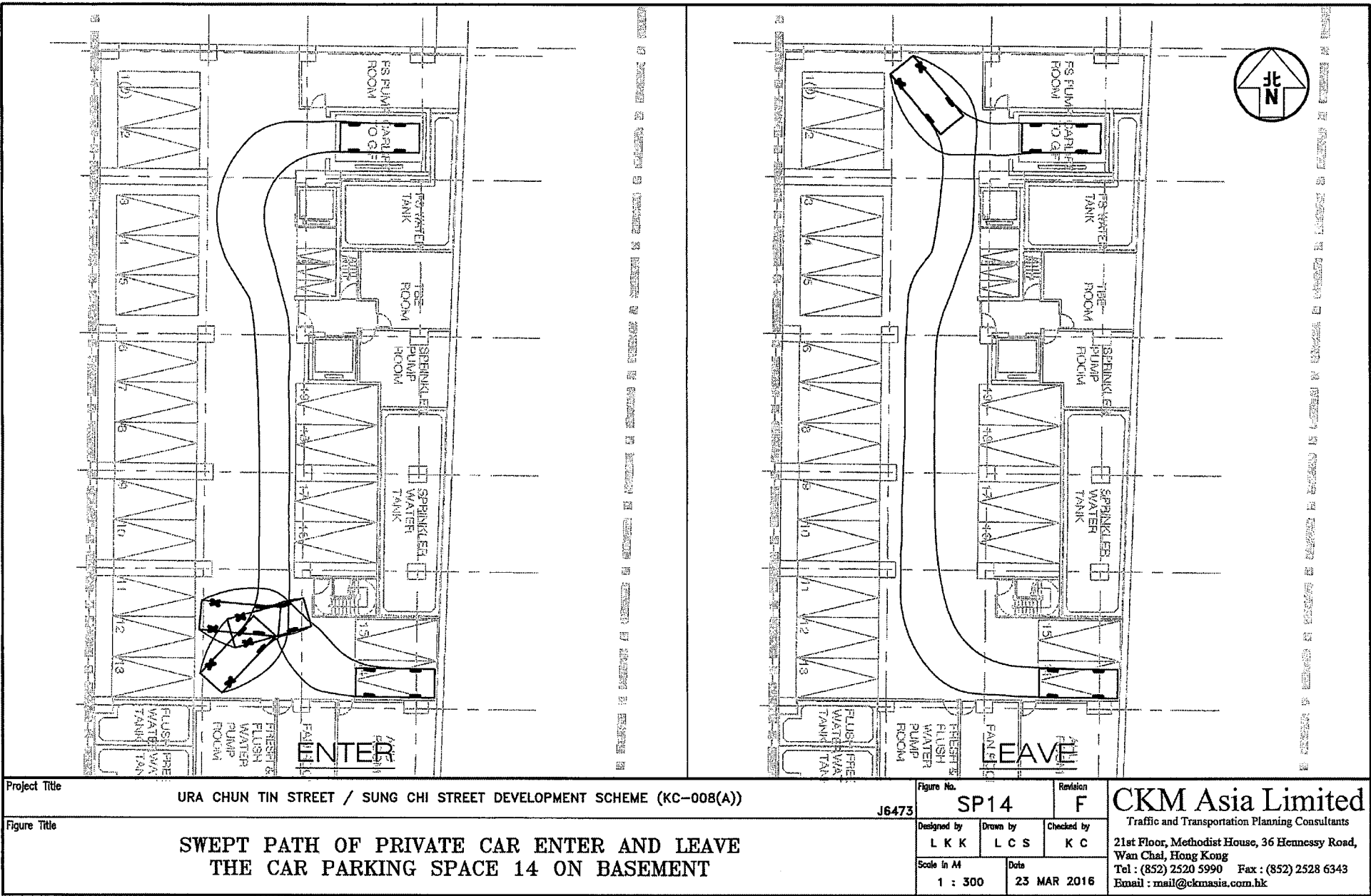




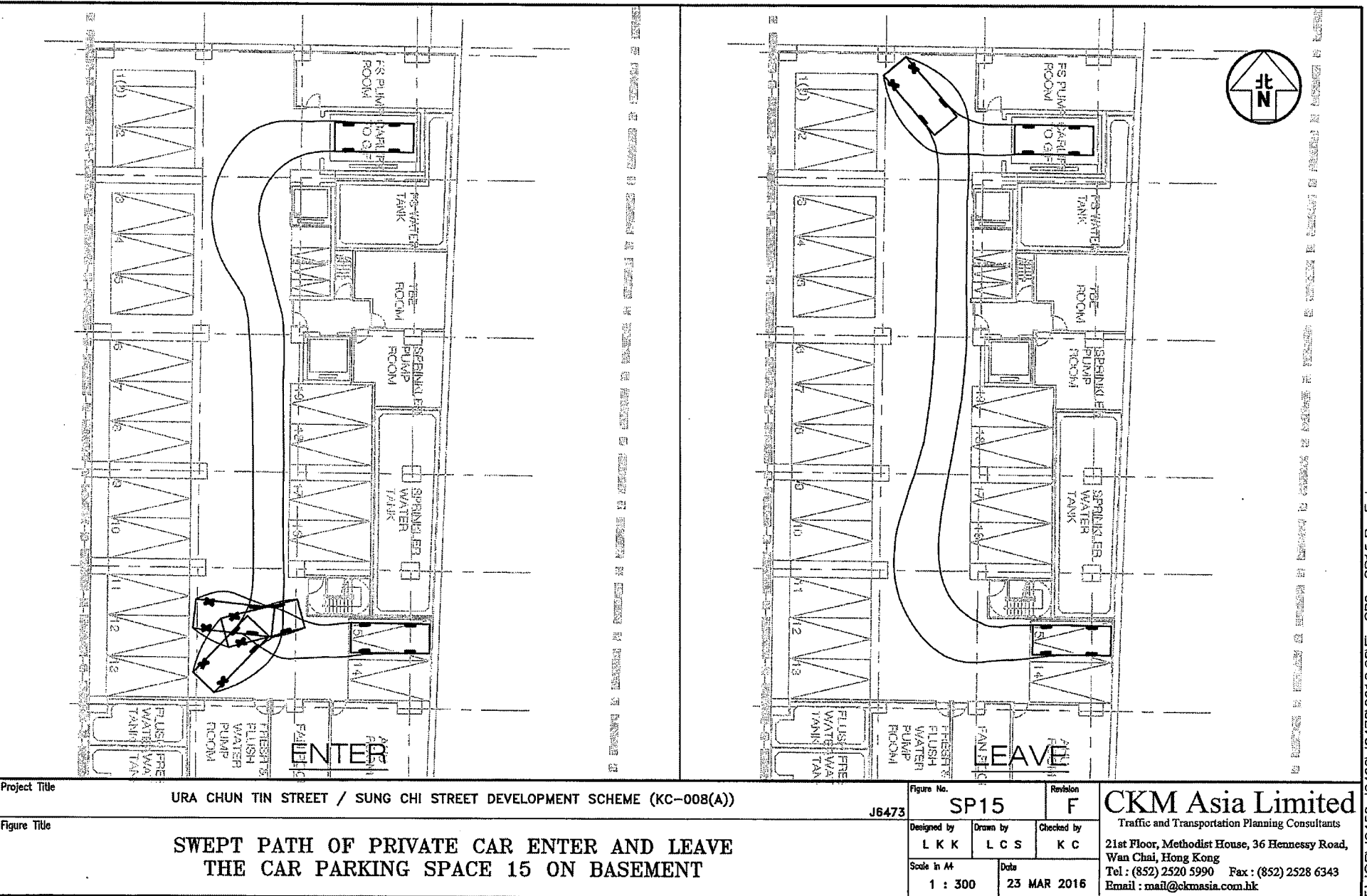
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## **PART 3      SUPPLEMENTARY INFORMATION**

Appendix 4      Environmental Assessment Report



Urban Renewal Authority

Term Environmental Consultancy Services  
Service Order No.002

**Chun Tin Street / Sung Chi Street  
Development Scheme (KC-008(A))**

**Environmental Assessment Report**

April 2016

	Name	Signature
Prepared:	S.P. Ma / Hazel Cheng	
Checked:	Angela Tong	
Approved:	Y.T. Tang	

Version: Draft

Date: 27 April 2016

**Disclaimer**

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**Environmental Assessment Report**

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## 1 INTRODUCTION

### 1.1 Background

- 1.1.1 The Urban Renewal Authority ("URA") intends to commence the Chun Tin Street / Sung Chi Street Development Scheme (KC-008(A)) ("the Scheme") under section 25 of the Urban Renewal Authority Ordinance ("URAO"). Under section 25 of URAO, a draft URA Development Scheme Plan ("DSP") of KC-008(A) with its planning proposal is required to submit to the Town Planning Board ("TPB") for approval. This Environmental Assessment (EA) is prepared to review and assess the potential environmental impact / benefit associated with the implementation of the Scheme in supporting the submission of the draft DSP to TPB for approval.
- 1.1.2 The URA has appointed AECOM Consulting Services Limited (ACSL), to carry out this EA for the Scheme.
- 1.1.3 The Development Scheme site ("the Site") is located at the junction of Hok Yuen Street and Sung Chi Street. The Site is zoned as "Residential (Group A)" ("R(A)") and Chun Tin Street is shown as "Road" on the approved Hung Hom Outline Zoning Plan ("OZP") No. S/K9/24. Adjacent to the site on the west is another URA redevelopment project at Ma Tau Wai Road (TKW/1/002, or namely MTW Project).
- 1.1.4 The gross site area of the Scheme is about 2,745 m<sup>2</sup>, with a net site area of about 1,636 m<sup>2</sup>. The Scheme intends to demolish the existing old tenement buildings on Nos. 2-24 Chun Tin Street and Nos. 2-4 Hok Yuen Street (even numbers) and include the existing Chun Tin Street for redevelopment. The Site is proposed to be zoned as "R(A)7", with the proposed total Gross Floor Area ("GFA") is of around 14,724 m<sup>2</sup>. It will be redeveloped for mainly residential with commercial uses at lower levels, as well as to enhance the existing traffic and pedestrian environment via road improvement works in the Scheme area.
- 1.1.5 In the Scheme, a single residential tower of about 34 residential storeys is proposed on a 3-level commercial / retail podium with private residential clubhouse and podium garden on the podium roof. Such a podium design would create more set-back from adjacent roads emission and noise sources as possible when compared with the existing residential developments in the Site. The proposed building height is 130mPD to accommodate the permissible GFA of the Site. In order to enhance pedestrian connectivity at ground level and more efficient land use, the existing Chun Tin Street, which is a dead-end road, will be permanently closed and extinguished for redevelopment. A new vehicular turning area leading from the existing Sung Chi Street will be provided at the north of the Scheme to provide vehicular access to the Site and the adjoining development including MTW Project and Fook Wan Mansion. The enlarged site area will facilitate a more flexible and better building disposition and layout. The Scheme will also provide carriageway and pavement widening of Sung Chi Street to enhance the traffic condition and pedestrian environment.
- 1.1.6 This EA has been undertaken with reference to the guidance for environmental considerations provided in Chapter 9 "Environment" of the Hong Kong Planning Standards and Guidelines ("HKPSG"). This EA presents a qualitative study of the potential environmental impacts, including air quality, noise, waste management and land contamination, while sewage impact assessment (SIA) is presented separately from this EA report.



## 2 SITE LOCATION AND BUILDING DESIGN

### 2.1 Site location and Existing Land Use

- 2.1.1 The Chun Tin Street Development (CTS) Site is bounded by the MTW Project to the west, Hok Yuen Street to the south, Sung Chi Street to the east and Fook Wan Mansion to the north. Existing buildings in the vicinity include low-rise residential buildings with commercial activities on the ground floor and industrial buildings. Site location plan, photos and conditions of the Site, as well as the concerned Chun Tin Street and Sung Chi Street, are shown in below **Figures 2.1 to 2.5**.

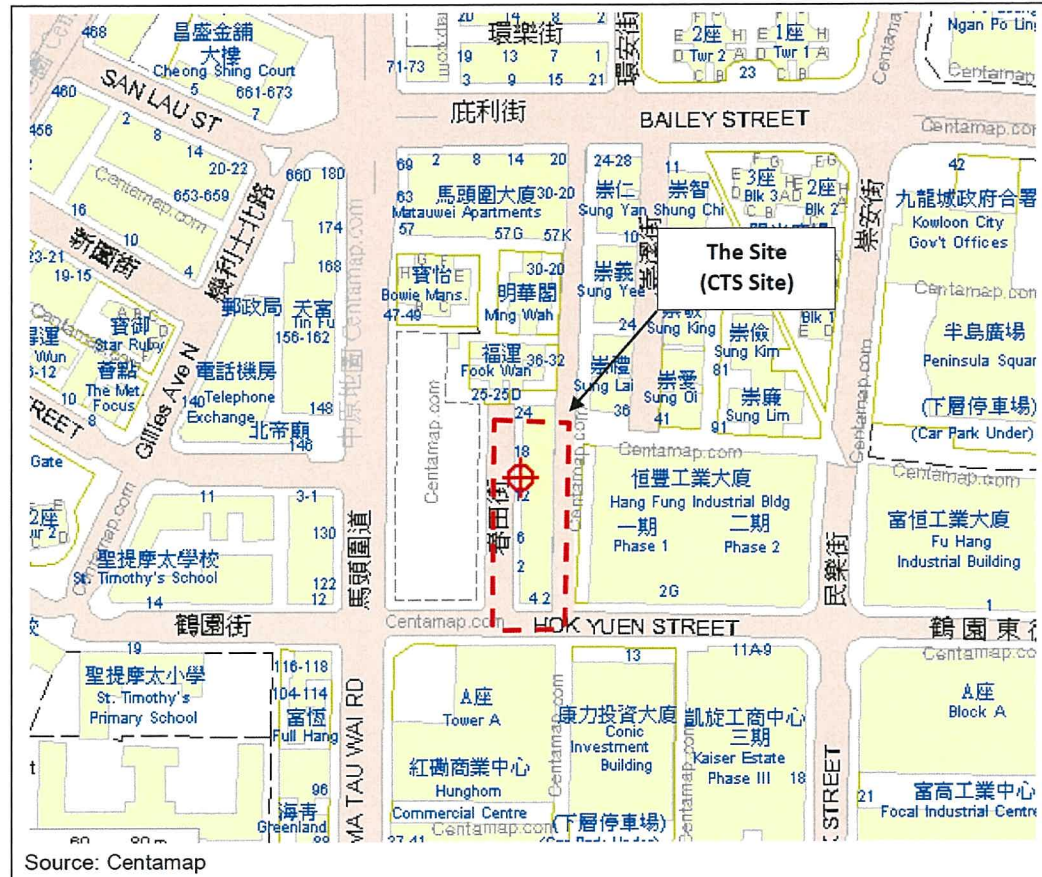


Figure 2.1 Site Location Plan



Figure 2.2 Overview of the Site and nearby URA Development from Hung Fung Industrial Building – Ma Tau Wai Project (MTW) Under Foundation Work and Chun Tin Street (CTS) Development Scheme with Existing Old Buildings Still In Place

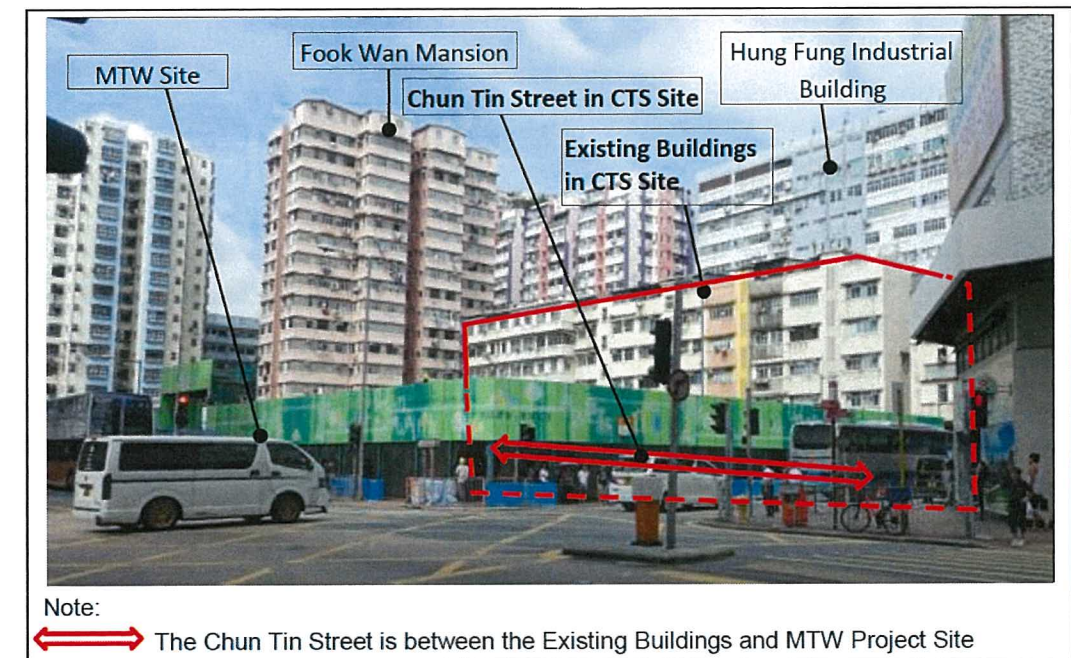


Figure 2.3 Ma Tau Wai Project (MTW) and Existing Old Buildings on Chun Tin Street (CTS) Still In Place, View From Ma Tau Wai Road / Hok Yuen Street Junction



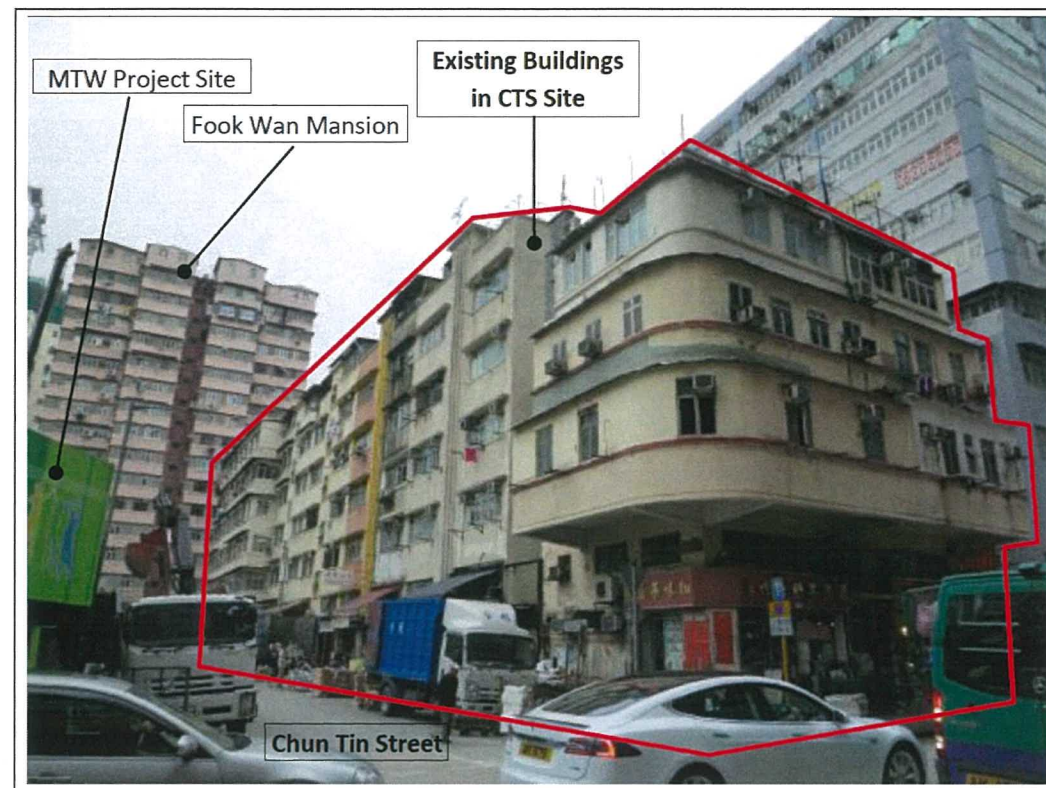


Figure 2.4 Ma Tau Wai Project (MTW), Existing Old Buildings on Chun Tin Street (CTS), Fook Wan Mansion and Chun Tin Street, View From Hok Yuen Street

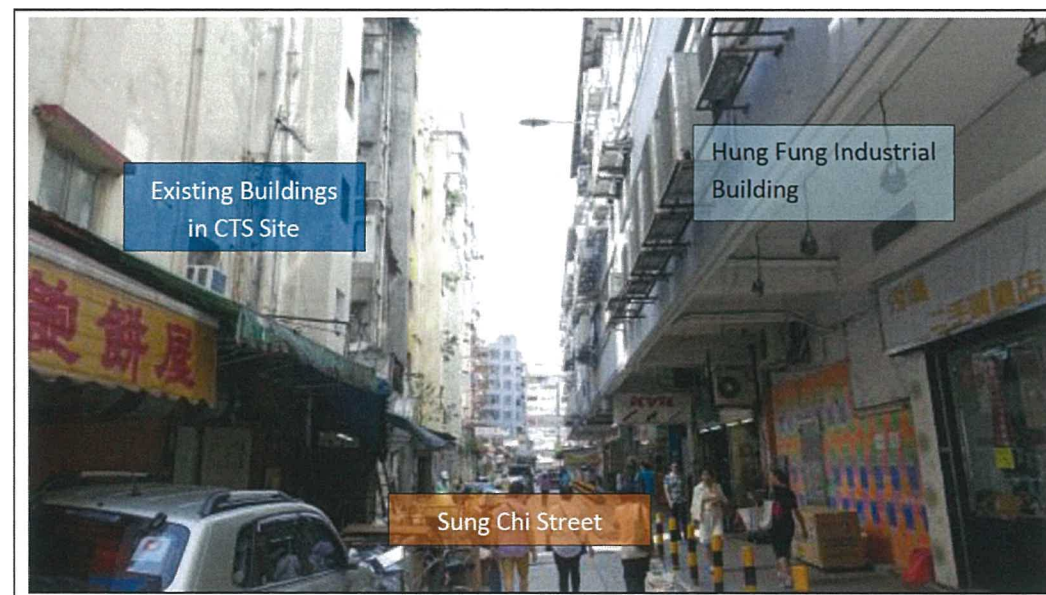


Figure 2.5 Currently Sub-standard Sung Chi Street Between Existing Buildings on Chun Tin Street (CTS) and Hung Fung Industrial Building, View From Hok Yuen Street

## 2.2 Proposed Development

2.2.1 The conceptual block layout of the Site and the notional ground floor and basement layout plans are shown in Figures 2.6, 2.7 and 2.8 respectively. Figure 2.9 shows the indicative section of the development.

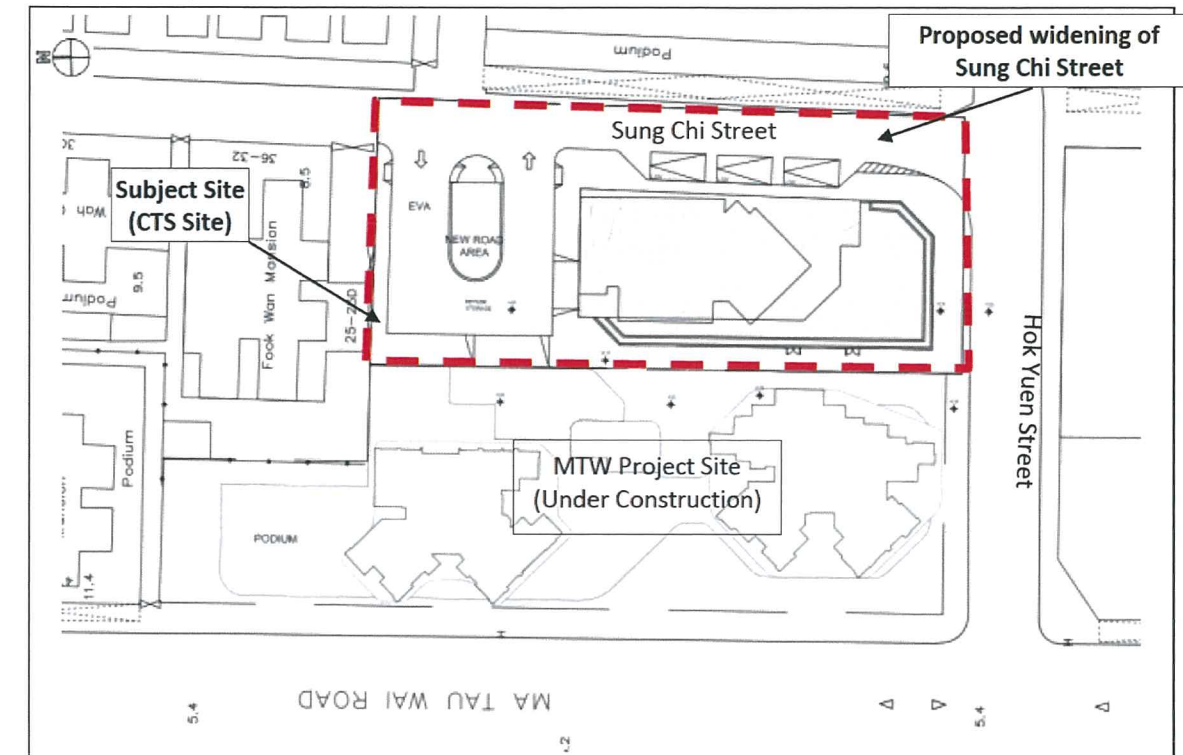


Figure 2.6 Conceptual Plan for the Subject Site

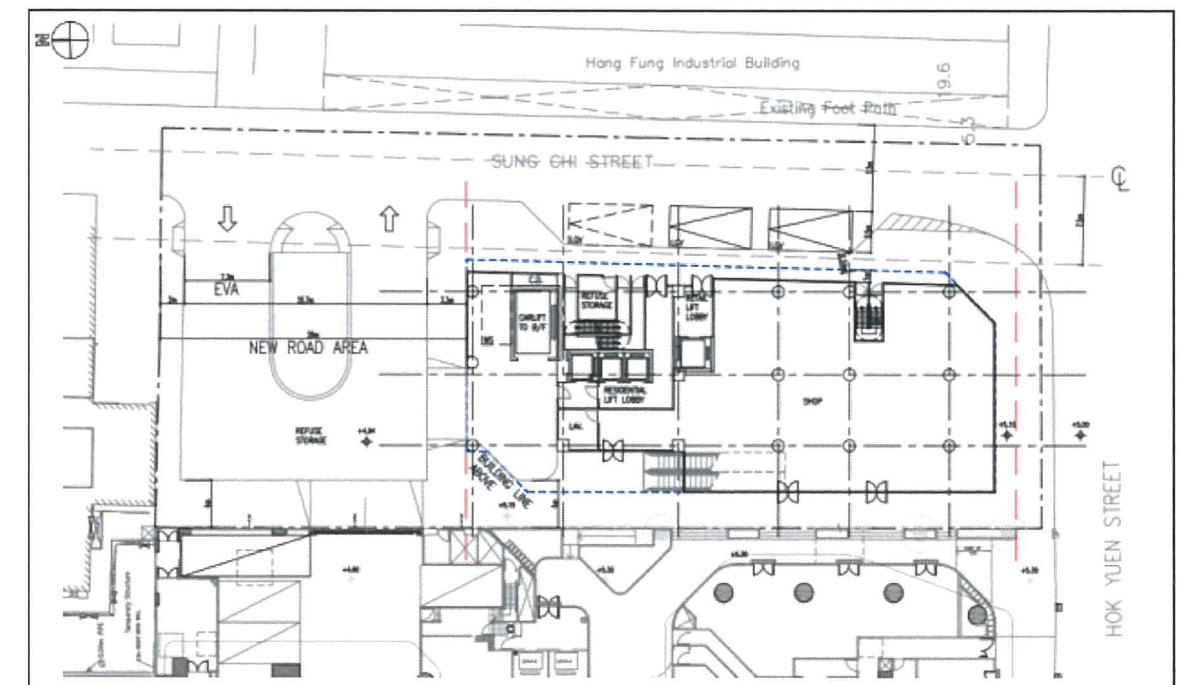
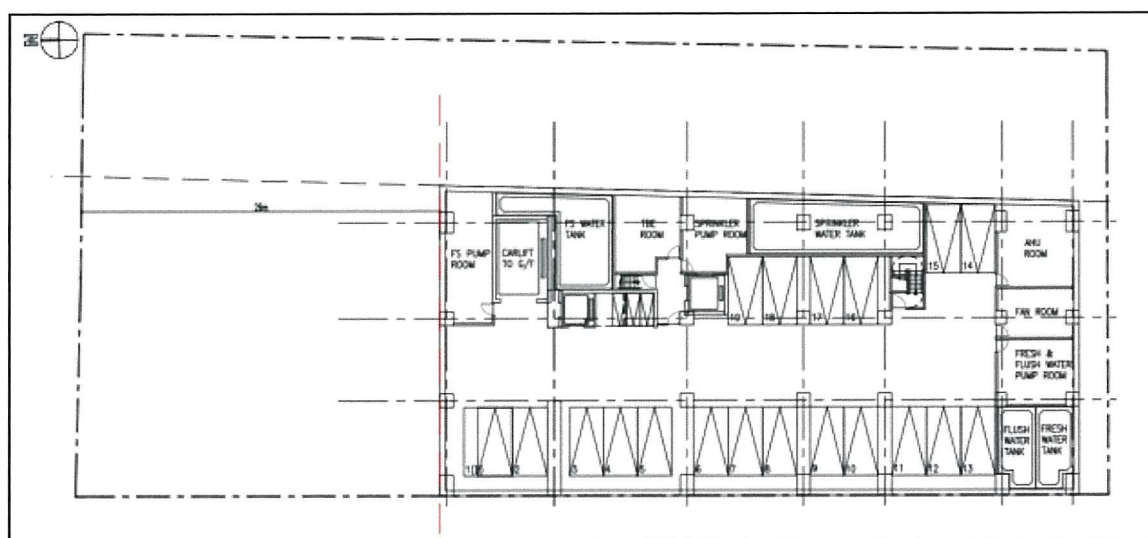
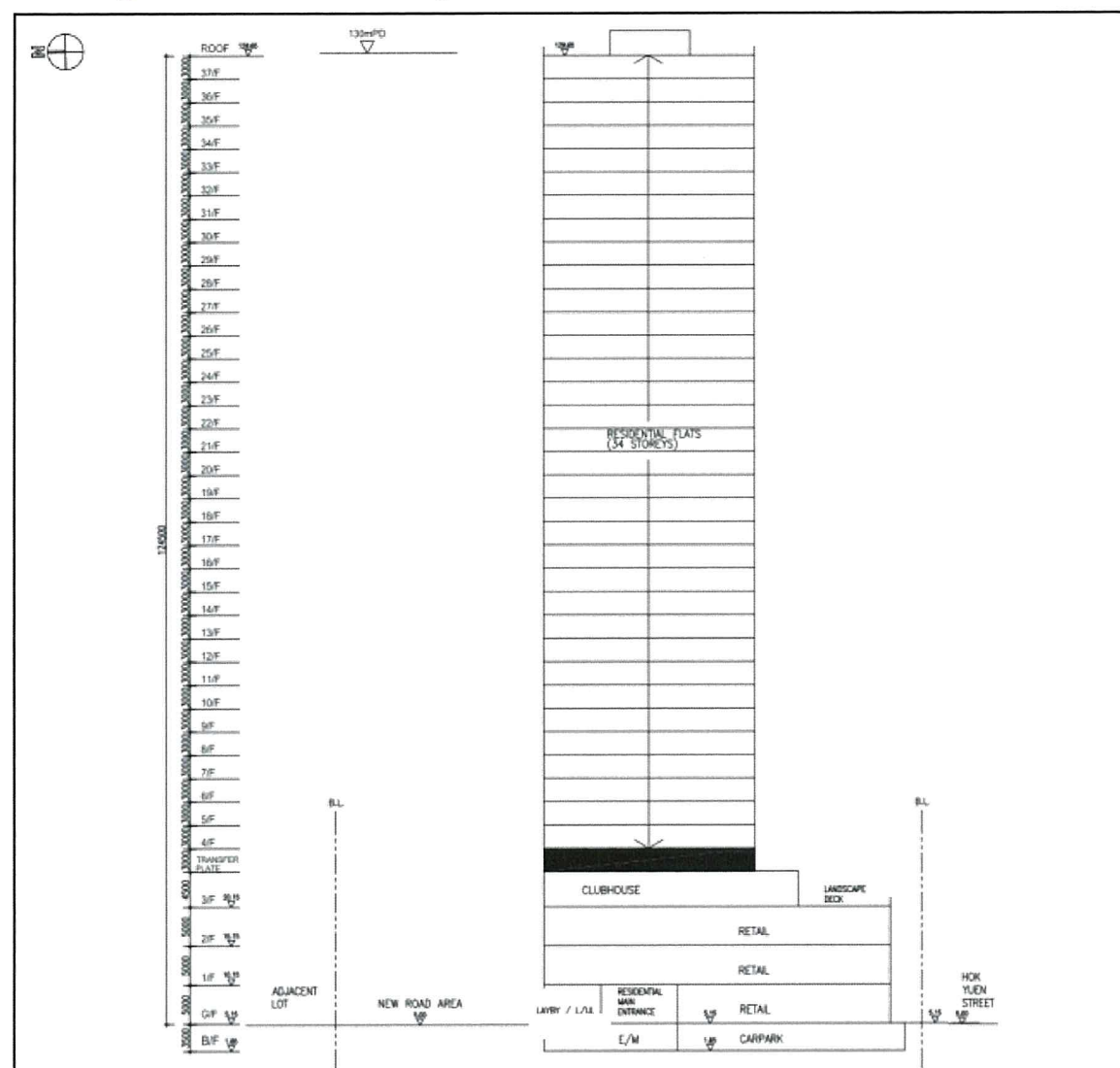


Figure 2.7 Notional G/F Layout





**Figure 2.8**      **Notional B/F Layout**



**Figure 2.9** Indicative Section of the Proposed Development in the Scheme

2.2.2 Major development parameters of the proposed development are tabulated in **Table 2-1** while associated proposals have been presented in **Table 2-2**.

### Table 2-1 Major Development Parameters

Parameters	The Project Site
Proposed Zoning	"R(A)7"
Net Site area for Plot Ratio Calculation	1,636sq.m.
Domestic GFA	12,270sq.m. (PR= 7.5)
Non-domestic GFA	2,454sq.m. (PR= 1.5)
No. of residential floors	34 floors (1 Tower)
Units per floor	1 Tower Total: 310 flats
Building height	130 mPD
Car parking	A 1-level basement car park with car lift to provide about 19 private car parking spaces for the proposed development within the Scheme.  2 to 3 LGV bays are proposed to be provided at-grade at the podium setback area on Sung Chi Street within the Scheme.
Occupation Year	2025

Table 2-2 Associated Works under the Scheme

Associated Works	Description
Road Closure	Chun Tin Street is proposed to be closed and extinguished permanently for redevelopment, to facilitate better building layout/ increase in flat supply as well as to provide a safer environment for pedestrian and vehicular traffic.
New Vehicular Turning Area	A new vehicular turning area entering from Sung Chi Street will be created for public use. It will serve as vehicular access to the Scheme, TKW/1/002 and the adjacent Fook Wan Mansion.
Road Widening Works	The current one-way Sung Chi Street will be widened to a 2-way street with pavement for public use, by setting back of the podium of the proposed development in the Scheme.
Vehicular Ingress/Egress	Vehicular ingress/egress for the Scheme area will be at the northern part of the Scheme fronting the new vehicular turning area.

2.2.3 The proposed zoning / use of the Scheme area is for R(A)7 (i.e. residential development use), with such land use already permitted as of right in part of the Scheme area covering the building lots at Chun Tin Street (even nos.). The planning intent under the Scheme will involve mainly the utilisation of Chun Tin Street through closing the street to increase development potential of residential use and maximise flat gain.

2.2.4 In order to evaluate the potential environmental impact associated with the Scheme, below environmental parameters have been discussed in the following chapters.

- (a) Air quality impact due to vehicular emissions and industrial emissions
- (b) Noise impact due to road traffic and industrial fixed plant noise emissions
- (c) Waste Management
- (d) Land contamination issue

2.2.5 Potential drainage and sewage issues due to the proposed design have been assessed in separate SIA Report.



### 3 AIR QUALITY IMPACT ASSESSMENT

#### 3.1 Introduction

3.1.1 This section addresses the potential air quality impact associated with construction activities, road traffic emission from the roads and industrial emissions from the industrial uses in the vicinity.

#### 3.2 Environmental Legislation and Guidelines

3.2.1 The air quality impact assessment criteria shall follow the Air Pollution Control Ordinance (APCO) and make reference to the Hong Kong Planning Standards and Guidelines (HKPSG).

3.2.2 Notifiable and regulatory construction works are under the control of Air Pollution Control (Construction Dust) Regulation. Notifiable works are site formation, reclamation, demolition, foundation and superstructure construction for buildings and road construction. Regulatory works are building renovation, road opening and resurfacing slope stabilization, and other activities including stockpiling, dusty material handling, excavation, concrete works, stockpiling, dusty material handling etc. Contractors and site agents are required to inform the Environmental Protection Department ("EPD") on carrying out construction works and to adopt dust reduction measures to reduce dust emission to the acceptable level.

3.2.3 The APCO also provides the statutory authority for controlling air pollutants from a variety of sources. The Hong Kong Air Quality Objectives (AQOs) stipulate the maximum allowable concentrations over specific periods for the pollutants. The prevailing AQOs of concerned pollutants are shown in **Table 3-1**.

**Table 3-1 Hong Kong Air Quality Objectives**

Pollutant	Concentration (µg/m <sup>3</sup> ) Averaging Time <sup>(i)</sup>				
	10 Minutes	1 Hour	24 Hours	3 Months	1 Year <sup>(v)</sup>
Sulphur Dioxide (SO <sub>2</sub> )	500 <sup>(iii)</sup>	–	125 <sup>(ii)</sup>	–	–
Respirable Suspended Particulates (PM <sub>10</sub> ) <sup>(vi)</sup>	–	–	100 <sup>(iii)</sup>	–	50
Fine Suspended Particulates (PM <sub>2.5</sub> ) <sup>(vii)</sup>	–	–	75 <sup>(iii)</sup>	–	35
Nitrogen Dioxide (NO <sub>2</sub> )	–	200 <sup>(iv)</sup>	–	–	40

Notes:

(i) Measured at 293K (20°C) and 101.325 kPa (one atmosphere)

(ii) Not to be exceeded more than 3 times per year

(iii) Not to be exceeded more than 9 times per year

(iv) Not to be exceeded more than 18 times per year

(v) Arithmetic means

(vi) PM<sub>10</sub> means suspended particulates in air with a nominal aerodynamic diameter of 10µm or smaller

(vii) PM<sub>2.5</sub> means suspended particulates in air with a nominal aerodynamic diameter of 2.5µm or smaller

3.2.4 Chapter 9 Environment Guidelines of the HKPSG provides a non-statutory guidelines for potential polluting uses specify buffer distances between sources of pollution and sensitive uses. In terms of vehicular emission, buffer distances set in the HKPSG refers to the site nature and the road types of the adjacent roads. However, the specific buffer distance requirement is a guideline for "Open Space Site" instead of "domestic premises". The following buffer distances for active and passive recreational uses are recommended in the HKPSG:

- (i) at least 20m to trunk roads and primary distributors;
- (ii) at least 10m to district distributors; and
- (iii) at least 5m to local distributors.

#### Ambient Air Quality

3.2.5 EPD's Kwun Tong Air Quality Monitoring Station (AQMS) is the nearest monitoring station to the Site. Existing ambient air quality of the subject site has been made reference to this monitoring station and the relevant PATH-2016 data (updated in December 2015) as provided on EPD's website. **Table**

**3-2** summarizes the annual averaged concentrations of key air pollutants due to vehicle emission recorded at Kwun Tong AQMS from 2010 to 2014. The 5-year average of NO<sub>2</sub> annual averaged concentration exceeds the prevailing statutory AQOs at the Kwun Tong AQMS.

**Table 3-2 Annual Average Concentrations of Pollutions from 2010 to 2014 at EPD's Kwun Tong Monitoring Station**

Pollutant	AQO of Annual Averaged Concentration (µg/m <sup>3</sup> )		Annual Averaged Concentration at Kwun Tong AQMS (µg/m <sup>3</sup> )					
	Before 2014	Since 2014 <sup>[1]</sup>	2010	2011	2012	2013	2014	5-year Average
Sulphur Dioxide (SO <sub>2</sub> )	80	–	10	12	11	12	11	11.2
Respirable Suspended Particulates (PM <sub>10</sub> )	55	50	47	49	43	52	<u>51</u>	48.4
Fine Suspended Particulates (PM <sub>2.5</sub> )	–	35	–	–	28	33	31	30.7 <sup>[2]</sup>
Nitrogen Dioxide (NO <sub>2</sub> )	80	40	59	63	59	59	<u>54</u>	<u>58.8</u>

Notes:

Monitoring results exceeded the AQO are underlined.

<sup>[1]</sup> New AQOs is effective from 1 January 2014.

<sup>[2]</sup> Only three years data available for PM<sub>2.5</sub>.

3.2.6 Since the Site is located away from the Kwun Tong AQMS, further review on PATH-2016 data under EPD website has been conducted to investigate the future air quality background concentration at the Site. As shown in **Figure 3-1**, the Site is located at Grids [41,32] and [42,32] while 500m study area are within Grids [41,33] and [42,33].

3.2.7 Hourly data of PATH model at Level 1 in Year 2020 has been extracted and averaged annual concentrations at each grid have been summarized in **Table 3-3**. It predicts that annual averaged concentrations of all concerned air pollutants would comply with the statutory AQOs in corresponding grids.



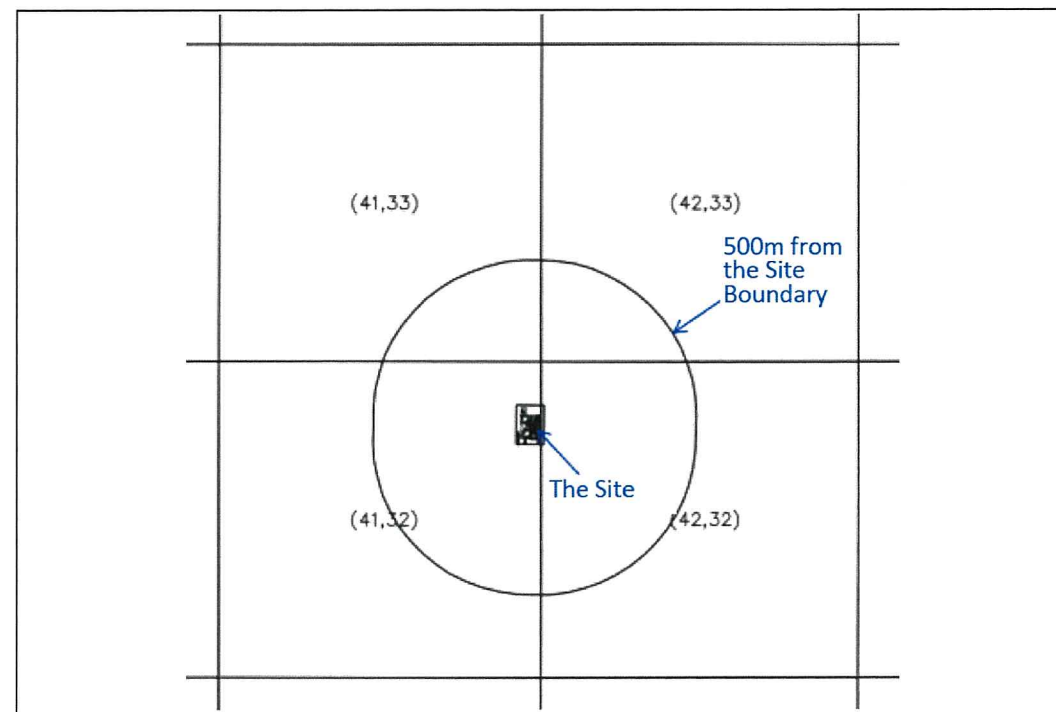


Figure 3.1 Project Site Location and Corresponding Grids under PATH-2016

Table 3-3 Annual Averaged Air Pollutants Concentrations in 2020 from PATH Model

Pollutants	Annual AQO	Annual Averaged Concentration per Grid, $\mu\text{g}/\text{m}^3$			
		[41,32]	[42,32]	[41,33]	[42,33]
Sulphur Dioxide ( $\text{SO}_2$ )	- [1]	9.7	10.2	8.5	8.4
Respirable Suspended Particulates ( $\text{PM}_{10}$ ) [2]	50	41.4	41.8	41.7	40.9
Fine Suspended Particulates ( $\text{PM}_{2.5}$ ) [3]	35	29.4	29.7	29.6	29.0
Nitrogen Dioxide ( $\text{NO}_2$ )	40	30.0	29.0	31.6	28.4

Notes:

[1] No annual AQO for  $\text{SO}_2$ .[2] Adjustment has been added to the Annual RSP ( $\text{PM}_{10}$ ) concentration with reference to EPD's "Guidelines on Choice of Models and Model Parameters".[3] Since  $\text{PM}_{2.5}$  data is not available in PATH model results, a recommended  $\text{PM}_{2.5}$  to  $\text{PM}_{10}$  ratio of 0.71 has been applied for the estimation of annual  $\text{PM}_{2.5}$  with reference to EPD's "Guidelines on the Estimation of  $\text{PM}_{2.5}$  for Air Quality Assessment in Hong Kong".

### 3.3 Fugitive Dust Emission during Construction Phase

#### Impact Assessment

- 3.3.1 At this preliminary stage, detailed information on the construction activities of the Scheme is not yet available. Construction phase air quality impact will be therefore addressed qualitatively.
- 3.3.2 Construction of the proposed development would commence at the fourth quarter of 2020 tentatively, and to be completed by 2025. The potentially most affected ASRs in the vicinity of the proposed development include the adjacent URA Ma Tau Wei development, Fook Wan Mansion, Sung Lai Building, Hang Fung Industrial Building, Conic Investment Building and Hunghom Commercial Centre.

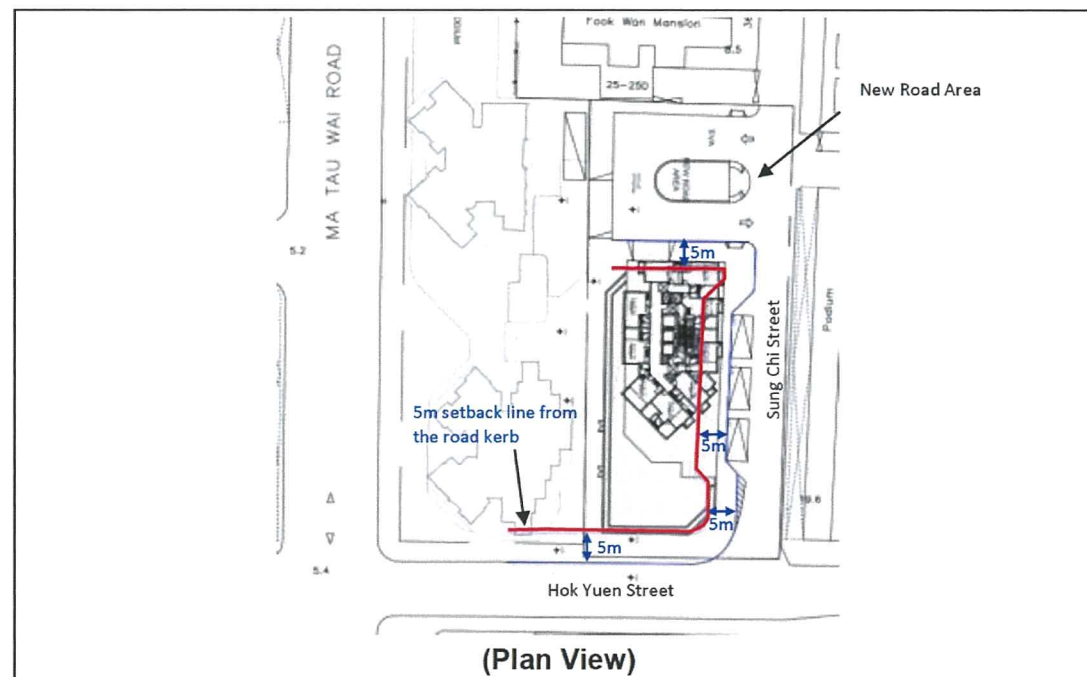
- 3.3.3 During demolition of the existing buildings at the Site, as well as the construction phase of the Scheme, dust emissions generated during construction activities would be the major source of air quality impact. Typically, dust would be generated from scope work, vehicles movement on haul roads, excavation, loading or unloading stockpile material, stockpiling of material and wind erosion of exposed areas.
- 3.3.4 Although the abovementioned ASRs locate in the proximity to the Site, potential construction dust impact could be minimised with implementation of dust suppression measures stipulated in the Air Pollution Control (Construction Dust) Regulation.

#### Mitigation Measures

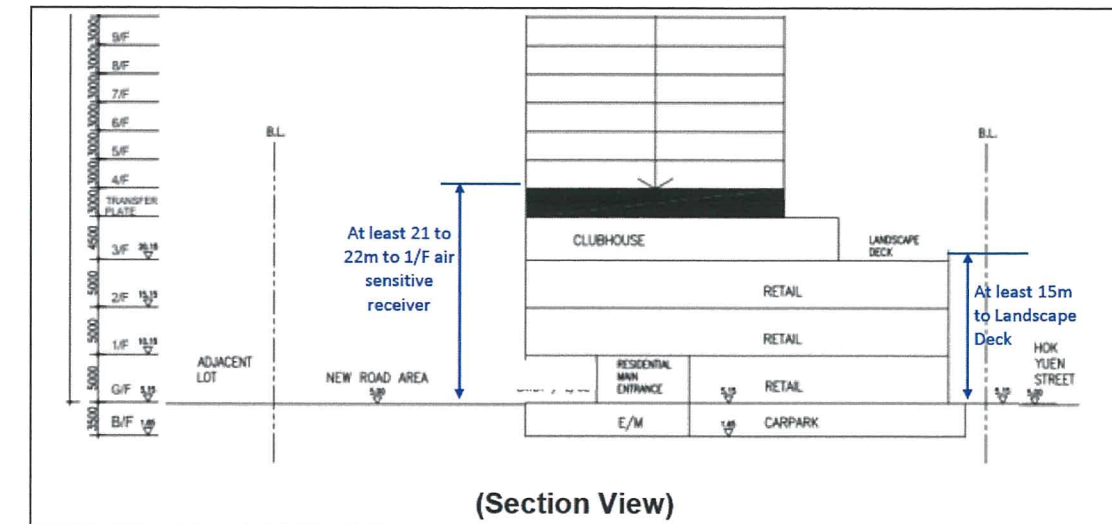
- 3.3.5 To minimise the impact to the surrounding ASRs, dust suppression measures stipulated in the Air Pollution Control (Construction Dust) Regulation should be incorporated to control dust emission from the Site. Major control measures relevant to this project are listed below, and they are recommended to be included in relevant contract documents:
- Restricting heights from which materials are to be dropped, as far as practicable, to minimise the fugitive dust arising from unloading / loading;
  - A vehicle wheel and body washing facility shall be installed at the site exit to remove any dusty materials from wheels before leaving the Site;
  - Where applicable, vehicles arriving / leaving the site loaded with dusty materials shall be covered entirely by clean impervious sheeting to ensure that the dusty materials remain within the vehicles;
  - Water spraying demolition wastes generated to prevent dust generation or covering with tarpaulin sheet;
  - All dusty activities shall be sprayed with water to dampen dust, or otherwise an impermeable barrier shall be established around specific dusty activities;
  - Works area for site clearance shall be sprayed with water before, during and after the clearance so as to maintain the entire surface wet;
  - Open temporary stockpiles should be avoided. Any stockpile of dusty materials shall be covered entirely by impervious sheeting, and / or placed in an area sheltered on the top and 4 sides;
  - All dusty materials shall be sprayed with water immediately prior to any loading, unloading or transfer operation so as to keep the dusty materials wet; and
  - All spraying of materials and surfaces should avoid excessive water usage.
- 3.3.6 In addition, all PME should be regularly maintained to minimise gaseous emissions. Vehicle engines and plant not in use or idling should be switched off.
- 3.3.7 Wherever possible, prefabrication of materials (e.g. concrete) off-site should be encouraged, if necessary.
- 3.3.8 With the implementation of the dust suppression measures, unacceptable construction dust impact would not be anticipated.
- ### 3.4 Vehicular Emission Impact
- 3.4.1 Given that the Government's policy intends to improve air quality in the territory, the air quality condition in general is anticipated to be further improved with the implementation of Government's air quality improvement policies/programmes in the coming years.
- 3.4.2 The predicted future background concentration of all concerned air quality parameters in 2020, as shown in Table 3-3, would comply with the prevailing AQO. The planned occupation year of the Scheme is in Year 2025 and it is expected that the Scheme would not be subject to unacceptable air quality impact.
- 3.4.3 At the local level, the Site adjoins Sung Chi Street and Hok Yuen Street, which are classified as local distributors with reference to the Annual Traffic Census 2014 issued by Transport Department (TD). The proposed new vehicular turning area, which is connected from Sung Chi Street, is expected to be classified as local distributor taking consideration of its same usage and nature as Sung Chi Street, as advised by the traffic consultant.



- 3.4.4 As shown in **Figure 2.6** above, the Site is a redevelopment site located within a densely built area. With its elongated shaped, there is large site constraint in the building disposition and layout of the Scheme for fulfilling the requirements in the relevant building ordinance and regulations, including prescribed window requirements under Building Ordinance. Given the narrow width of the Site and the site immediately adjoins to streets on three sides, the proposed residential development in the Scheme inevitably falls within the 5m distance from the adjoining streets, i.e. Sung Chi Street and the new vehicular turning area (**Figure 3.2**). However, since the residential tower will be built on top of a 3-level commercial podium, the first sensitive domestic units will have about 22m vertical distance away from the street level (**Figure 3.3**). In addition, traffic forecast study, with no adverse comment from TD (**Appendix 3.1**), concluded that Sung Chi Street and the new vehicular turning area will have a relatively low traffic flow. In view of the above considerations, it is therefore considered that the domestic units of the proposed development would not be subject to unacceptable vehicular emission impact.
- 3.4.5 Three loading/unloading bays for light goods vehicles will be provided at the roadside of the widened Sung Chi Street for shared use with the public. Since the L/UL bays are only for LGVs with far vertical distance with the residential towers on top of the podium and car idling at the bays are not allowed according to the Motor Vehicle Idling (Fixed Penalty) Ordinance (Cap.611), the provision of L/UL bays shall not induce a major source nor create unacceptable vehicular emission to the domestic units in the Scheme.



**Figure 3.2** Reference of Buffer Distance Requirement for Vehicular Emission Impact for "Open Space Site" in HKPSG



**Figure 3.3** Vertical Distance of Sensitive Domestic Units from Street Level

#### Mitigation Measures

- 3.4.6 Since only minimal additional vehicular emission would be created in relation to the proposed widening of Sung Chi Street, it is anticipated that the future air quality conditions shall be of similar magnitude as that of the PATH model, and thus no mitigation measures are considered necessary.
- 3.4.7 For fresh air intake of the central air conditioning system of the future retails and club house, it is recommended to allow at least a 5m buffer distance from Sung Chi Street and the new vehicular turning area. Similar buffer distance is also recommended for the future sitting out areas.

#### 3.5 Industrial Emission Impact

##### Desktop Review

- 3.5.1 Desktop review of relevant nearby environmental reports <sup>[1]</sup> identified a number of chimneys in Ma Tau Wai yet they are all outside 500m study boundary of proposed development. According to these environmental reports, the nearest chimneys (KTEIA-2060, KTEIA-2079) are located at about 523m and 561m away from site boundary of proposed development along Yut Yat Street, as shown in **Figure 3.3** below. As such, these chimneys (KTEIA-2060, KTEIA-2079) would not be included in this study.

##### Site Visit/Site Observation

- 3.5.2 Site visits were conducted in September 2015 to identify and investigate any potential environmental polluting industrial sources affecting the proposed residential development within 500m study area from the Project.
- 3.5.3 Within 500m study area from the Site, 2 nos. of chimneys were identified, as indicated in **Figure 3.4** at around 110m from proposed site boundary (PCCW-01 and PCCW-02). The photos of identified chimneys PCCW-01 and PCCW-02 are shown in **Figure 3.5**.

<sup>[1]</sup> Reference reports with relevant information included the Approved EIA report of Kai Tak Development (EIA-157/2008) and Environmental Assessment for "Proposed Residential Development in "Residential (Group E)" zone, 18 Chi Kiang Street To Kwa Wan" of Planning Study A/K10/237.



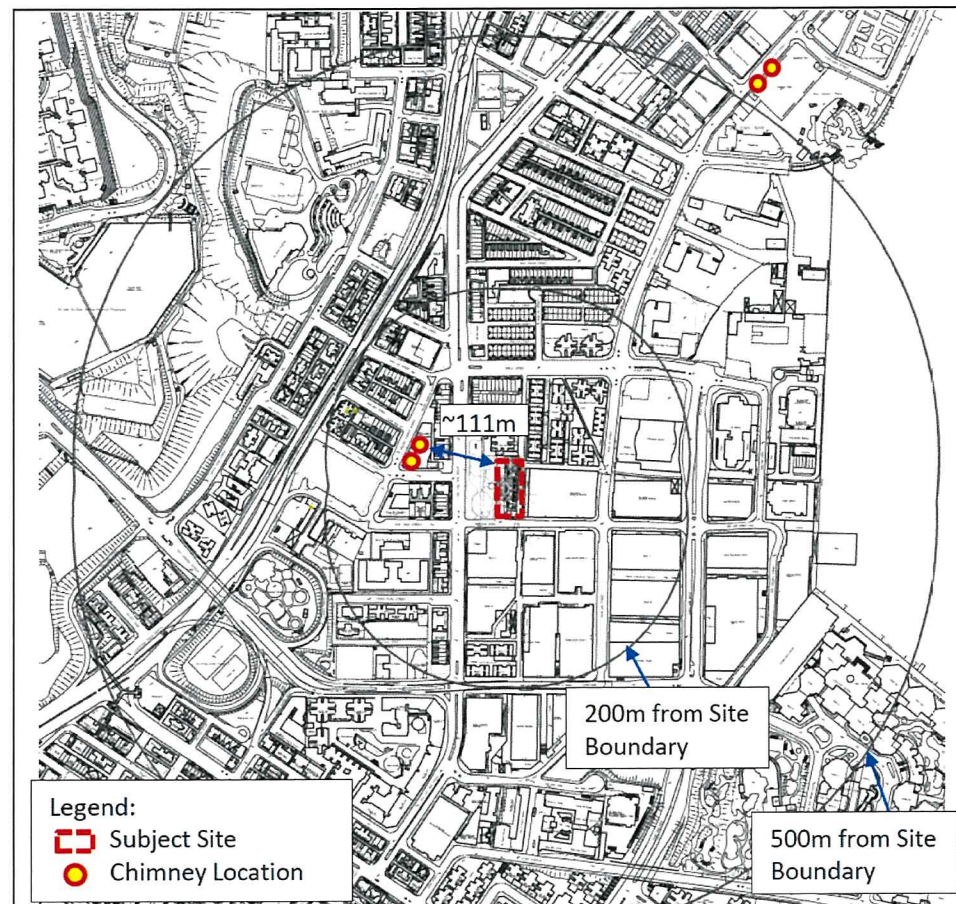


Figure 3.4 Chimneys Identified near the Project Site

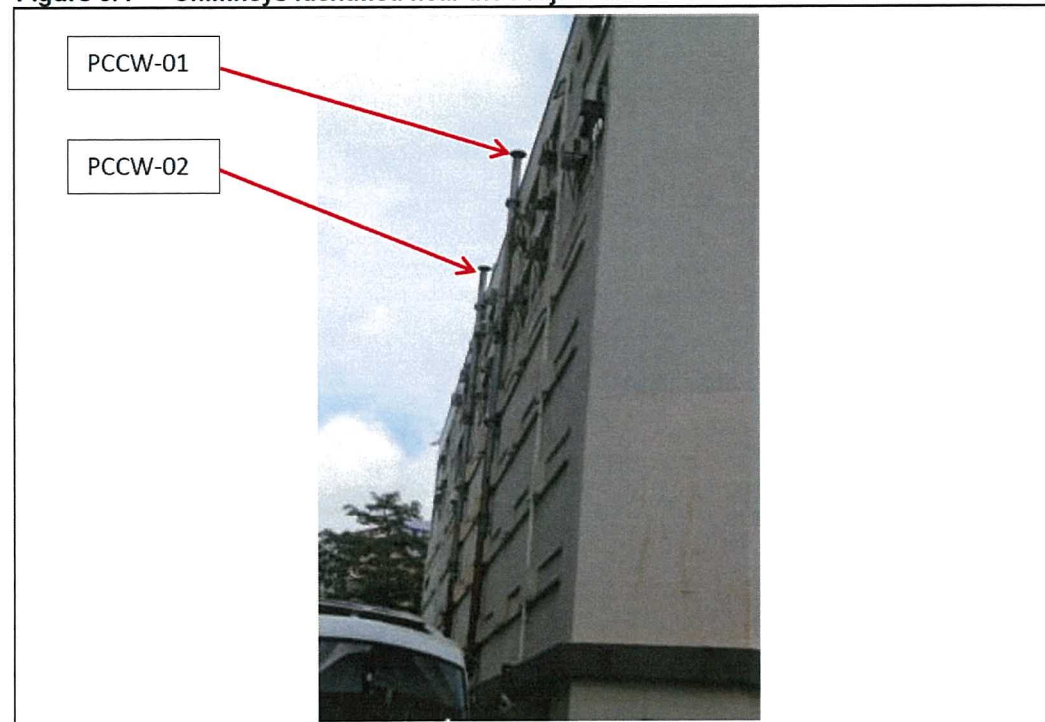


Figure 3.5 Chimney PCCW-01 and PCCW-02

**Impact Evaluation**

3.5.4 As shown in **Figure 3.4**, only two chimneys are located within 500m study area and are located at telephone exchange building (PCCW) on Gillies Avenue North. These chimneys are connected to emergency generator room (see **Appendix 3.2**) which are not of industrial use and will not be frequently operated during normal days. Other identified chimneys are also located outside 500m from Site boundary. Hence, quantitative assessment due to industrial emission is considered not necessary. It is also concluded that no adverse industrial emission impact on the Site is anticipated.

**3.6 Conclusion**

3.6.1 Fugitive dust impacts to the nearby air sensitive receivers due to demolition and construction works are expected to be insignificant with the implementation of dust suppression measures as well as good site practice as stipulated under the Air Pollution Control (Construction Dust) Regulation.

3.6.2 Based on the future air quality conditions as predicted in PATH model, local air quality would comply with the statutory AQOs. In addition to the low traffic flow of the local distributors and the vertical separation of the domestic units from the local road, it is anticipated that the Scheme will not be adversely affected by vehicular emission.

3.6.3 In view of considerable separation between the non-industrial chimneys and the proposed residential development, no adverse industrial emission impact on the proposed development is anticipated.



## 4 NOISE IMPACT ASSESSMENT

### 4.1 Introduction

- 4.1.1 This section presents an assessment on the noise impact from construction works during construction phase, road traffic and industrial uses during the occupation of the proposed development.

### 4.2 Construction Noise

#### General

- 4.2.1 Detailed information on demolition and construction activities of the proposed development has not been available yet at this preliminary stage, the demolition and construction noise impact was addressed qualitatively.

#### Environmental Legislation and Guidance

- 4.2.2 Construction works within restricted hours (public holidays and Sundays, and from 19:00 to 07:00 hours on other days) are not anticipated in general and would be controlled under Noise Control Ordinance (CAP 400, NCO) as required.
- 4.2.3 Construction noise for works during non-restricted hours should reference to the assessment criteria stipulated under *ProPECC PN 2/93 "Noise from Construction Activities – Non-statutory Controls"*, where recommended construction noise criteria for dwellings are  $L_{Aeq,30min}$  of 75 dB(A); while that for school are 70 dB(A) and 65dB(A) during normal school days and examination periods respectively.

#### Impact Assessment

- 4.2.4 Major construction activities would involve demolition of existing buildings at the Site, as well as construction activities related to site clearance, site formation, excavation, foundation, building and road widening works of Sung Chi Street. The use of PME for the demolition and construction works of the proposed development would likely be the major source of noise impact potentially affecting the NSRs located in the vicinity of the Site.
- 4.2.5 Provided that adequate demolition and construction noise mitigation measures are implemented, together with appropriate construction work programme planning, and avoidance of unnecessary concurrent operation of the noisy PME, it is expected that the construction noise impact would be minimised.

#### Mitigation Measures

- 4.2.6 In order to alleviate the potential construction noise impacts on the nearby NSRs, the following mitigation measures are suggested:
- Implementation of good site practices to limit noise emissions at source, and avoid unnecessary concurrent operation of noisy PME;
  - Use of quieter PMEs and avoid unnecessary PME idling;
  - Use of quieter alternative construction method; and
  - Use of noise barriers/enclosure, if appropriate.

#### Conclusion

- 4.2.7 Provided that adequate construction noise mitigation measures are implemented, together with appropriate construction work programme planning, and avoidance of unnecessary concurrent operation of the noisy PME, minimised or limited construction noise impact on the nearby NSRs is expected during construction phase.

### 4.3 Operation Phase - Road Traffic Noise Impact

#### Assessment Criterion

- 4.3.1 According to the HKPSG, road traffic noise impact has been assessed against the noise limit of  $L_{10}$  (1-hr) 70 dB(A) for domestic premises/offices. The standard applies to the uses which rely on opened windows for ventilation.

#### Assessment Methodology

- 4.3.2 According to the HKPSG, predictions can be readily based on the procedures given in the UK Department of Transport "Calculation of Road Traffic Noise" 1988 (CRTN). For application in Hong Kong, the road traffic noise is represented in terms of  $L_{10}$  (1-hr) dB(A). The predicted noise levels at the building facades include 2.5 dB(A) facade reflection and correction factors for effects due to gradient, distance, view angle, road surface and barriers.
- 4.3.3 For planning purpose, road traffic noise should be predicted based on the maximum traffic forecast within 15 years upon the occupation of the proposed development. In this connection, the assessment is conducted based on the peak hour traffic flow predictions in Year 2040, as the operation of the proposed development would be commenced in Year 2025 tentatively. Traffic flows and heavy vehicle percentages are given in **Appendix 4.1**, provided by the project traffic consultant. Letter of no comment from TD on the Year 2040 traffic forecast is presented in **Appendix 3.1**.
- 4.3.4 To evaluate the initial traffic noise prediction of the development, an indicative traffic noise prediction has been conducted by employing commercial computer software. The computer plot of the road scheme is shown in **Appendix 4.3**.

#### Impact Assessment

- 4.3.5 Preliminary traffic noise study evaluated that the predicted traffic noise levels at the proposed development during peak hours of Year 2040 would range from 57 dB(A) to 69 dB(A). Based on the ament notional design in the Scheme, a preliminary road traffic noise assessment is carried out and the assessment points of the notional design are shown in **Figure 4.1**; while predicted road traffic noise levels at each assessment point are presented in **Appendix 4.4**.
- 4.3.6 In addition, considering that only minimal traffic flow would be generated on the New Road Area and the proposed widening of Sung Chi Street (**Appendix 3.1**), traffic noise impact generated from the New Road Area and the widened Sung Chi Street on the surrounding noise sensitive receivers (NSRs) is anticipated to be insignificant, while the traffic noise climate shall be prevailed by the existing adjacent road network.
- 4.3.7 Based on the current notional layout and its noise modelling results as shown in **Appendix 4.4**, all proposed residential units in this layout would comply with the assessment criterion. Since the surrounding NSRs, particularly Fook Wan Mansion which situates at the immediate north of the Scheme, shares similar environmental context with the proposed development, the predicted future road traffic noise generated from the widened Sung Chi Street and the New Road Area, as well as that perceived from the existing road network, would also comply with the 70dB(A) traffic noise criterion stipulated in the HKPSG.

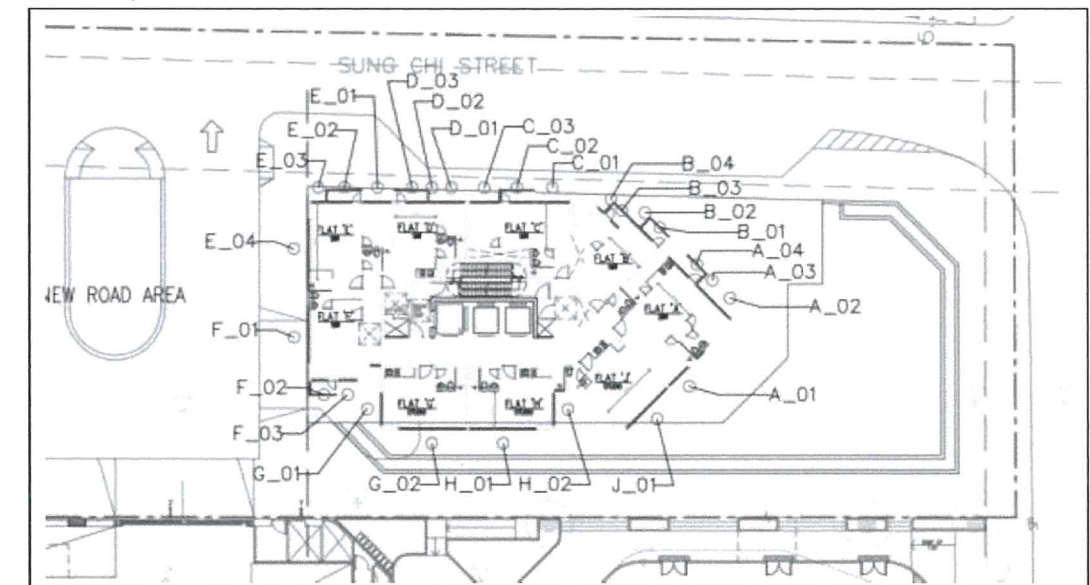


Figure 4.1 Assessment Points for Road Traffic Noise Assessment based on the notional layout of the Scheme



# Conclusion

- 4.3.8 Based on the notional design of the Scheme, 100% of the proposed residential units (i.e. 306 units) of the development would comply with the 70dB(A) assessment criteria.
- 4.3.9 Although the study is based on a notional layout in the Scheme, which will be subject to detailed design and changes, it is anticipated that the proposed development in the Scheme will not face adverse traffic noise impact in view of road traffic noise level of the surrounding context.

## 4.4 Fixed Plant Noise Impact

### Environmental Legislation and Guidance

- 4.4.1 Fixed plant noise impact is controlled under Noise Control Ordinance (NCO). In accordance with the Technical Memorandum for the Assessment of Noise from Places other than Domestic Premises, Public Places or Construction Sites (TM-Places), the Area Sensitivity Rating (ASR) of the Site is considered as "B" as the Site is located in urban area and is not affected by the Influencing Factor. The Acceptable Noise Levels (ANLs) therefore refer to be  $L_{eq(30min)}$  65 dB(A) for daytime / evening (from 07:00 to 23:00) and 55 dB(A) for night-time (from 23:00 to 07:00) respectively.

### Site Observation

- 4.4.2 As observed during site inspection, potential fixed plant noise sources located in the vicinity of the Site would include mechanical ventilation units, mechanical workshop and car maintenance workshop, which are located mainly along Hok Yuen Street and Sung Chi Street (**Table 4-1**). Site photos taken at the roof floor of Hang Fung Industrial Building and on the surrounding pedestrians are shown in **Figure 4.2**, while locations of those sources are indicated in **Figure 4.3**. Fixed plant noise has not been noticeable at the roof of the Hang Fung Industrial Building during the daytime site visit.

**Table 4-1 Potential Fixed Plant Noise Sources near the Site**

Building	Source Type	Source ID
PCCW Telephone Exchange Building (PCCW)	Three Cooling Towers on roof floor of PCCW	PCCW_01 to PCCW_03
Cheerful Commercial Building (CCB)	A cooling tower on podium of CCB	CCB_CT_01
Conic Investment Building (CIB)	Two Cooling Towers on 4/F Podium and one at the roof of CIB	CIB_CT_01 to 02, CIB_CT_03
Hang Fung Industrial Building (HFIB)	Mechanical workshop and car maintenance workshop on ground floor of HFIB	HFIB_MW_01 and HFIB_MW_02



**Figure 4.2 Site Photos of Potential Fixed Plant Noise Sources**



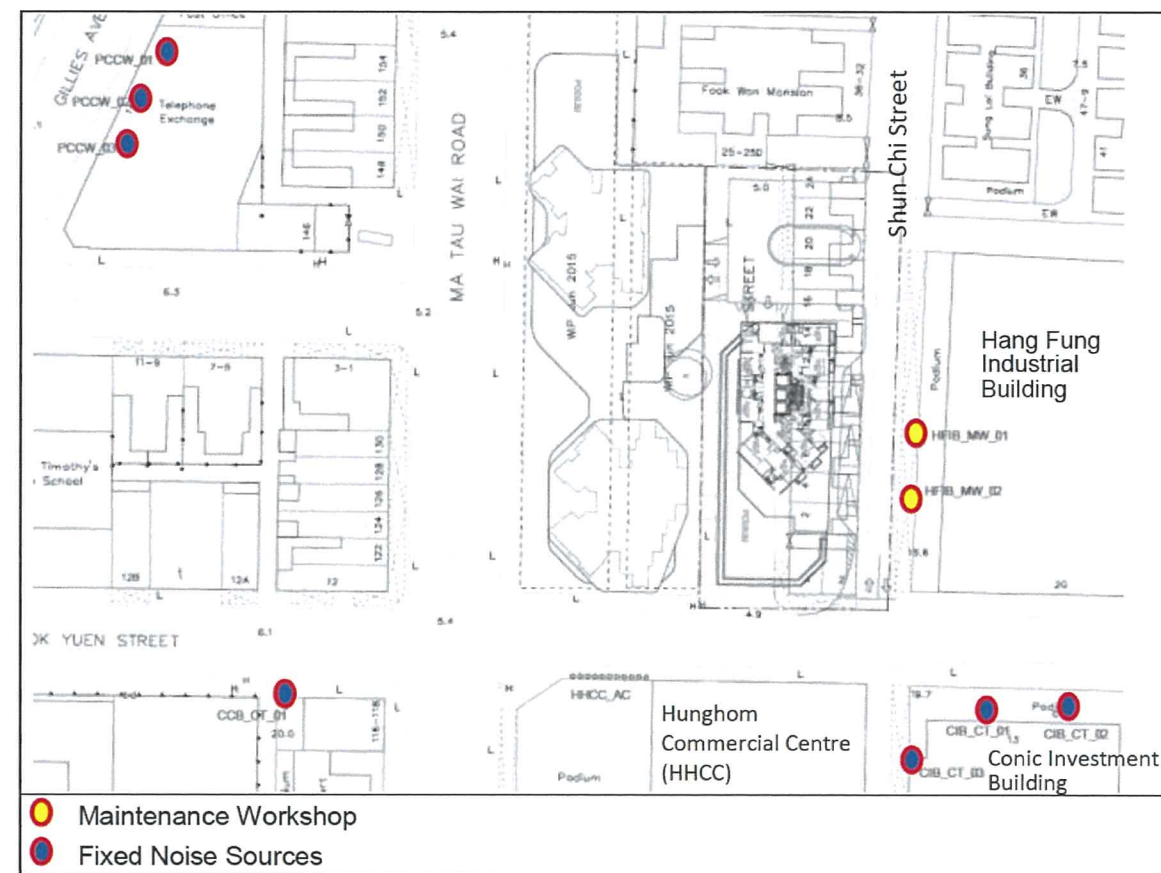


Figure 4.3 Location of Potential Fixed Noise Sources

#### Impact Assessment

- 4.4.3 As mentioned in **Section 4.4.1**, potential fixed plant noise sources adjacent to the Site includes mechanical ventilation, mechanical workshop and car maintenance workshop. Comparison on the horizontal distance from the building envelope of existing buildings (i.e. the prevailing situation) and proposed development (the Scheme) are shown in **Table 4-2**.

Table 4-2 Horizontal Distance from Building Envelope to Noise Sources

Source ID	Horizontal Distance from Building Envelope (m)	
	Prevailing Situation	Proposed Development
PCCW_01 to PCCW_03	110m to 115m	111m to 112m
CCB_CT_01	88m	90m
CIB_CT_01 to CIB_CT_02	29m to 40m	50m to 60m
CIB_CT_03	31m	52m
HFIB_MW_01 and HFIB_MW_02	12m	16m

- 4.4.4 As shown in **Table 4.2** and **Figure 4.3**, the fixed noise sources at PCCW and CCB would be at least 111m and 90m respectively away from the Site, which are also separated by Ma Tau Wai Road and partially screened by the surrounding buildings. Fixed plant noise impact due to these sources is considered negligible.
- 4.4.5 For fixed plant noise from CIB and HFIB, a weekday daytime survey at the roof of HFIB, which is of similar height as the CIB, has been conducted. No noticeable fixed plant noise was identified at the roof of the HFIB facing HHCC and CIB. Considering that the Scheme would be further setback comparing to the prevailing situation as shown in **Table 4.2**, environment performance in terms of fixed plant noise issue to residents would be improved with the proposed development.

- 4.4.6 A night time site survey (11:30pm to 12:30am) was also conducted on 2 Mar 2016 (weekday) to investigate the night time operating situation with respect to the identified fixed plant noise sources at the surroundings. It was observed during site inspection that surrounding industrial/commercial buildings were closed at the night time and no noticeable fixed plant noise was identified at Chun Tin Street and Sung Chi Street near the position of future residential block of the Scheme. Details of site observations and findings are provided in **Appendix 4.5**. Site observation reveals that unacceptable fixed plant noise impact is not expected.

#### 4.5 Conclusion

- 4.5.1 There are some potential fixed plant noise sources in the vicinity of the Site. For daytime and evening, the background noise is dominated by the on-road traffic on the adjacent road network. Fixed plant noise impact is insignificant as compared with the high background noise level. During night time, the surrounding industrial buildings, commercial buildings, ground level shops/retails along streets were closed or not in operation. In this regards, no adverse fixed plant noise impact on the proposed residential units are anticipated.



**5 WASTE MANAGEMENT****5.1 Legislation and Requirement**

- 5.1.1 In general, sustainable approaches to waste management should be adopted to produce less waste and reuse or recover value from waste.
- 5.1.2 Waste collection and disposal is covered by the Waste Disposal Ordinance (Cap. 354) (WDO). This provides a licensing system for the disposal of certain wastes and for the control of certain wastes by regulation. All wastes should be properly stored and disposed in accordance with relevant waste management regulations and guidelines.

**5.2 Construction Phase****Waste Types**

- 5.2.1 During construction phase, the following types of waste are likely to be generated:

- Surplus excavated materials;
- Inert Construction and demolition (C&D) materials;
- C&D waste;
- Chemical waste; and
- General refuse.

Surplus Excavated Materials

- 5.2.2 Handling, storage and transportation of surplus excavated materials might create air and noise impact to nearby sensitive receivers. As the redevelopment is largely located at existing building footprint, minimal excavated materials will be generated during demolition and site formation and thus the environmental nuisance associated with surplus excavated materials is insignificant.

Inert C&D Materials

- 5.2.3 As the Scheme involves demolition of existing buildings and construction of one floor of basement, there will be generation of inert C&D materials during construction. It is estimated that around 7,435m<sup>3</sup> excavated materials would be generated and around 1,164m<sup>3</sup> would be suitable for backfilling during site formation stage.

- 5.2.4 Detailed design of the foundation works and building construction is not yet available at this stage. A preliminary estimation of the amount of inert C&D materials arising from the Scheme should be reviewed in the Environmental Management Plan (EMP) and should be submitted by the Contractor prior to the commencement of construction works.

C&D Waste

- 5.2.5 C&D Waste is not suitable for reuse and requires disposal to licensed landfill facilities. This kind of waste generated from construction activities include:

- Cleared vegetation;
- Wood from formwork;
- Damaged or contaminated construction materials;
- Equipment and vehicle maintenance parts; and
- Materials and equipment wrappings etc.

- 5.2.6 The volume of C&D Waste, such as maintenance and packaging waste being generated by the Project will be subject to specific construction procedures and site practices. The estimated amount of C&D wastes generated during site clearance and construction of superstructure works would be minimal with careful design, planning, good site management and control of ordering procedures etc.

Chemical Waste

- 5.2.7 Chemical waste, such as spent lubricants for equipment or waste battery, may be generated. As far as the scale of the works is small, the quantity of chemical waste generated would be minimal. A licensed collector should be employed to handle and dispose of the chemical waste. Furthermore,

the chemical waste should be handled in accordance with the Code of Practice on the Packaging, Labelling and Storage of Chemical Waste. The Works Contractor should register as a Chemical Waste Producer under the WDO.

- 5.2.8 No hazardous materials or hazardous wastes are expected to be generated during the construction of the Site.

General Refuse

- 5.2.9 General refuse such as food scraps, waste paper, empty containers, etc would be generated from construction workforce during construction phase. Such refuse should be properly managed so intentional or accidental release to the surrounding environment does not occur. Effective collection of site wastes would be required to prevent waste materials being blown around by wind, flushed or leached into nearby waters, or creating an odour nuisance or pest and vermin problem. Waste storage areas should be well maintained and cleaned regularly.

- 5.2.10 With the implementation of good waste management practices at the site, adverse environmental impacts are not expected to arise from the storage, handling and transportation of general refuse generated by construction workers.

- 5.2.11 A tentative estimated timing of waste arising from construction phase is shown in **Table 5-1**.

**Table 5-1 Tentative Estimated Timing of Waste Arising from Construction Phase**

Type of Waste	Timing
C&D Material	2 <sup>nd</sup> Quarter 2021 to 4 <sup>th</sup> Quarter 2024
C&D Waste	2 <sup>nd</sup> Quarter 2021 to 4 <sup>th</sup> Quarter 2024
Chemical Waste	2 <sup>nd</sup> Quarter 2021 to 2 <sup>nd</sup> Quarter 2025
General Refuse	(Entire construction phase)

**Mitigation Measures**

- 5.2.12 To clearly identify the types and amount of waste generated and its associated mitigation measures, an EMP should be submitted by the Contractor prior to the commencement of the construction works according to the requirements as stipulated in ETWB TCW No. 19/2005.

- 5.2.13 The Contractor should adopt good housekeeping practices such as waste segregation prior to disposal. Stockpiling and segregating areas should be provided at site. Effective collection of site wastes would be required to prevent waste materials being blown around by wind, flushed or leached into nearby waters, or creating an odour nuisance or pest and vermin problems. Waste storage areas should be well maintained and cleaned regularly.

- 5.2.14 Whenever there are excess recyclable construction materials, including bricks, plastics and metals, re-use and recycling should be carried out as far as practicable for waste minimisation. Other inert non-recyclable materials such as concrete, asphalt, etc. should be treated as public fill. Non-inert and non-recyclable wastes should be disposed at designated landfill site.

- 5.2.15 General refuse should be stored in enclosed bins or compaction units separate from C&D materials. A reputable waste collector should be employed by the Contractor to remove general refuse from the Site, separately from C&D materials. Preferably an enclosed and covered area should be provided to reduce the occurrence of "wind-blown" light materials.

- 5.2.16 Provided that good site practices are strictly followed, there would be no adverse impacts related to waste management during construction phase.

**5.3 Waste Management Implications**

- 5.3.1 Domestic wastes will be expected as the major type of waste from the redevelopment, including food residues, plastic and metal products, and paper. No chemical or hazardous waste is anticipated. Wastes generated will be collected and disposed of on a regular basis. Wastes generated from the Site will also include recyclable wastes such as paper, plastics and metals. Reuse and recycling of such wastes is encouraged in line with Government policy in view of clear environmental benefits. The volumes of wastes likely to be generated by the proposed development are considered to be insignificant.

- 5.3.2 Domestic waste that cannot be reused or recycled is disposed of as general refuse. It is proposed to be taken to the collection point near the Site, however, where necessary appropriately licensed and



respectable waste collectors should be employed to collect the various waste types generated at the development. With strict implementation of good site practices, good management and controls to reduce the generation of waste amounts, adverse impacts due to waste management will not be anticipated.

- 5.3.3 Provided that all recommended measures and legislations are strictly followed, there would be no adverse impacts related to waste management during operation phase.

#### 5.4 Conclusions

- 5.4.1 A variety of wastes including inert C&D material, C&D waste, chemical waste and general refuse would be generated during the construction phase and domestic waste during occupation phase. Provided that the wastes generated would be managed with appropriate measures, no unacceptable adverse environmental impacts arising from the handling, storage, transportation or disposal of the wastes generated during the occupation of the Scheme would be envisaged.

## 6 LAND CONTAMINATION

### 6.1 General

- 6.1.1 This section presents the potential land contamination issues within the Site. The purpose of this preliminary contamination assessment is to identify any need for detailed land contamination assessment to avoid any exposures of risk due to land contamination on the future occupants of the Site.

### 6.2 Environmental Legislation, Standards and Criteria

- 6.2.1 The relevant environmental legislation guidelines and standards related to land contamination aspect include the followings:
- Practice Guide for Investigation and Remediation of Contaminated Land, August 2011 (Practice Guide);
  - Guidance Note for Contamination Land Assessment and Remediation, August 2007 (Guidance Note); and
  - Guidance Manual for Use of Risk-Based Remediation Goals (RBRGs) for Contaminated Land Management, December 2007 (Guidance Manual).

### 6.3 Preliminary Review

#### Site History

- 6.3.1 Referring to aerial photos from 1945 to 2015 under **Appendix 6.1**, no land contamination issue was identified. The Site was bare land without settlements in 1945. Buildings and settlements were established in 1950s, although the earliest aerial photo could be retrieved from the LandsD Data was in 1959. No significant change was recognized on the Site since then. The Site is being occupied by the existing tenement buildings. Summary of site history is presented in **Table 6-1**.

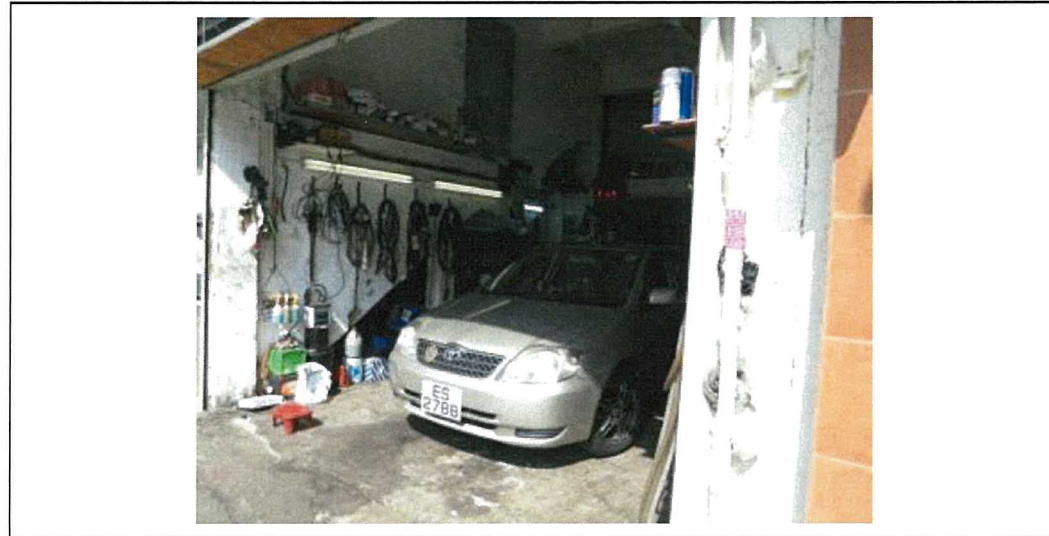
**Table 6-1 Summary of Site History**

Year	Site Description
1945	The Site was found to be bare land with no buildings and settlements.
1949	No significant changes in land uses were observed
1959	The Site was observed to be occupied with buildings and settlements
1963	No significant changes in land uses were observed
2009	No significant changes in land uses were observed
2014	No significant changes in land uses were observed
Up-to-dated	No significant changes in land uses were observed



### Preliminary Site Walkover

- 6.3.2 Preliminary site walkover was conducted in late 2015 to identify potential contamination within the Site. Site walkover photos have been depicted in **Appendix 6.2**.
- 6.3.3 A list of existing tenants of the Site is presented in **Appendix 6.3**. During the site walkover, a motor vehicle workshop, that is located at No. 18 Chun Tin Street as shown in **Figure 6-1**, was identified as a potential land contaminated area. Potential land contamination sources including release of oils, fuels, and lubricants from vehicles, and use of chemicals and solvents in maintenance activities. Key chemical of concerns (COCs) include metals, petroleum carbon ranges (PCRs), volatile organic chemicals (VOCs) and polycyclic aromatic hydrocarbons (PAHs). Further supplementary site appraisal is suggested when the site is available to access.



**Figure 6.1** Identified Potential Contaminated Area during the Site Walkover

### 6.4 Summary and Conclusion

- 6.4.1 Upon the preliminary review of the historical land use of the Site, as well as the observations of site walkover, a potential land contamination issue arising from the operation of motor vehicle workshop at No. 18 Chun Tin Street is anticipated. Further supplementary site appraisal is suggested when this area is accessible to URA and a Contamination Assessment Plan (CAP) should be prepared accordingly.

### 7 SEWAGE IMPACT ASSESSMENT

- 7.1.1 Proper collection and treatment of sewage is a basic sanitation requirement to safeguard public health and environmental hygiene. Sewage disposal is therefore a major factor influencing water quality.
- 7.1.2 The aim of the Sewage Impact Assessment (SIA) is to assess potential impacts on the existing sewerage system that may arise from the proposed development of the Scheme and, if necessary, to recommend a scheme and improvement or upgrading works to alleviate the impacts that may be required on the existing sewerage network to the satisfaction of EPD and Drainage Services Department (DSD).
- 7.1.3 Detailed discussion on sewerage connection is provided in the separated "Sewerage Impact Assessment" Report.

## 8 CONCLUSION

### 8.1 Introduction

- 8.1.1 In order to evaluate the potential environmental impact / benefit associated with the prevailing situation, against the proposed Scheme, this EA has been undertaken with reference to the relevant environmental related ordinances and regulations, as well as the guidance for environmental considerations provided in Chapter 9 "Environment" of the HKPSG.
- 8.1.2 This EA presents a qualitative study of the potential environmental impacts, including air quality, noise, waste management and land contamination. Sewage impact assessment is presented separately from this EA report.
- 8.1.3 Key findings of this study are summarised in the following paragraphs.

### 8.2 Air Quality

- 8.2.1 During construction phase, unacceptable air quality impacts on the ASRs in the vicinity is not anticipated provided that mitigation measures stipulated in the Air Pollution Control (Construction Dust) Regulation are followed.
- 8.2.2 Based on the ambient air quality statistics, the predicted future background concentration of concerned parameters in Year 2025 (i.e. the planned occupation year of the Scheme) would comply with the AQO and is likely to be further improved due to government policy in improving air quality in the territory. In the local level, no unacceptable air quality impact on the Scheme is also expected considering that the redevelopment nature is similar to the prevailing condition and the Scheme adopts commercial podium creating adequate separation of about 20m between the sensitive floor and street level. Besides, the surrounding streets of the Scheme are only local distributors which will have relatively low traffic flow, and thus it is anticipated that the vehicular emission from these street is insignificant.
- 8.2.3 Industrial chimneys are located more than 500m from the Site and only two non-industrial use chimneys within the study boundary. With no industrial chimneys within 200m from the Site, no adverse industrial emission impact on the proposed development is anticipated.

### 8.3 Noise

- 8.3.1 During demolition and construction phase, unacceptable construction noise impact on nearby NSRs would not be anticipated with the implementation of adequate construction noise mitigation measures.
- 8.3.2 Based on the notional design of the Scheme, it is estimated to meet 100% compliance rate with the highest predicted road traffic noise level up to 69 dB(A), complying with the noise criterion of 70dB(A). It is anticipated that the Scheme would not face adverse traffic noise impact.
- 8.3.3 In terms of fixed plant noise impact, the domestic units of the proposed development, comparing with the prevailing situation, is further separated from noise sources by incorporation of commercial podium and pavement widening, the fixed plant noise impact is anticipated to be less significant than existing situation. According to night time site observation, it is revealed that surrounding industrial/commercial buildings were closed at night time, and therefore fixed plant noise impact is not expected during night time.

### 8.1 Waste Management

- 8.1.1 With the implementation of proper handling and storage of wastes generated during the occupation of the Scheme, no unacceptable adverse environmental impacts arising from the handling, storage, transportation or disposal of the wastes generated during the construction and occupation phase of the Scheme is envisaged.

### 8.2 Land Contamination

- 8.2.1 Upon the preliminary review of the historical land use of the Site, as well as the observations of site walkover, a potential land contamination issue arising from the operation of motor vehicle workshop at No. 18 Chun Tin Street is anticipated. Further supplementary site appraisal is suggested when this area is accessible to URA and a Contamination Assessment Plan (CAP) should be prepared accordingly.

## 8.3 Sewage Impact

- 8.3.1 The individual SIA report is provided separately to address the potential sewage impact and necessary mitigation measures as needed.

## 8.4 Summary

- 8.4.1 The Scheme is aimed to bring about better planning gain and overall improvement in building environment in Chun Tin Street / Sung Chi Street. Based on the assessment findings, the Scheme is considered to be environmentally acceptable and feasible, as well as beneficial to the prevailing situation.

**APPENDICES**



By Fax  
2528 6343



本署檔案 Our Ref. : TD KR 182/111-1C  
來函檔號 Your Ref. : J6473/2  
電話 Tel. : 2399 2504  
圖文傳真 Fax : 2397 8046  
電郵 Email : joycewlee@td.gov.hk

密件  
CONFIDENTIAL

25 February 2016

**Appendix 3.1**  
**Letter of No Comment from Transport Department on the**  
**Traffic Forecast**

CKM Asia Limited  
21st Floor, Methodist House  
36 Hennessy Road  
Wanchai  
Hong Kong  
(Attn: Mr. Chin Kim Meng)

Dear Mr. Chin,

**URA Chun Tin Street/Sung Chi Street Development Scheme (KC-008A)**  
**Traffic Forecast for Environmental Assessment**

I refer to your letter of the above reference dated 23 February 2016. I have no adverse comment on the methodology adopted for estimating year 2040 traffic data for Environmental Impact Assessment.

Yours faithfully,

(Joyce W. C. LEE)  
for Commissioner for Transport

市區(九龍)及新界分區辦事處  
Urban (Kln.) & NT Regional Office  
九龍聯運街三十一號旺角政府合署七樓及八樓  
7th & 8th Floors, Mong Kok Government Offices, 30 Luen Wan Street, Kowloon.  
圖文傳真 Fax No.: 2381 3799 (新界區) (NTRO) 2397 8046 (九龍市區) (U(K)RO)  
網址 Web Site: <http://www.td.gov.hk>

Mr. Rodney Ip  
AECOM Consulting Service Ltd.  
8/F, Grand Central Plaza Tower 2,  
138 Shatin Rural Committee Road,  
Shatin, Hong Kong

Your ref: 40033291/449445  
Our ref: FM/L0085/16/CT  
Our tel: 2883 3577  
Our fax: 2304 6314

February 12, 2016



Dear Mr. Ip,

**Request of Information – Hung Hom Exchange**

Thank you for your letter of January 27, 2016 regarding the exhaust stacks and mechanical ventilation and air conditioning equipment at the exchange building at 140 Gillies Avenue.

We are pleased to provide you with the following information.

1. The 2 exhaust stacks are the exhaust chimneys of standby generators of the exchange which will be used in the event of city main power outages.
2. The 3 sets of cooling towers are part of the air conditioning system and they are operated continuously. Please refer to the attached product specification with sound power level for reference.

HKT is committed to protecting the environment when we conduct our business. In October 2015, we installed air hoods for the cooling towers and variable speed control for the air fans to further bring down noise levels. Photos of the air hoods are attached for your reference.

Should you have any queries, please do not hesitate to contact us.

Yours faithfully,

  
Chris T.K. Ting  
General Manager, Operations  
Facilities Management  
HKT Limited

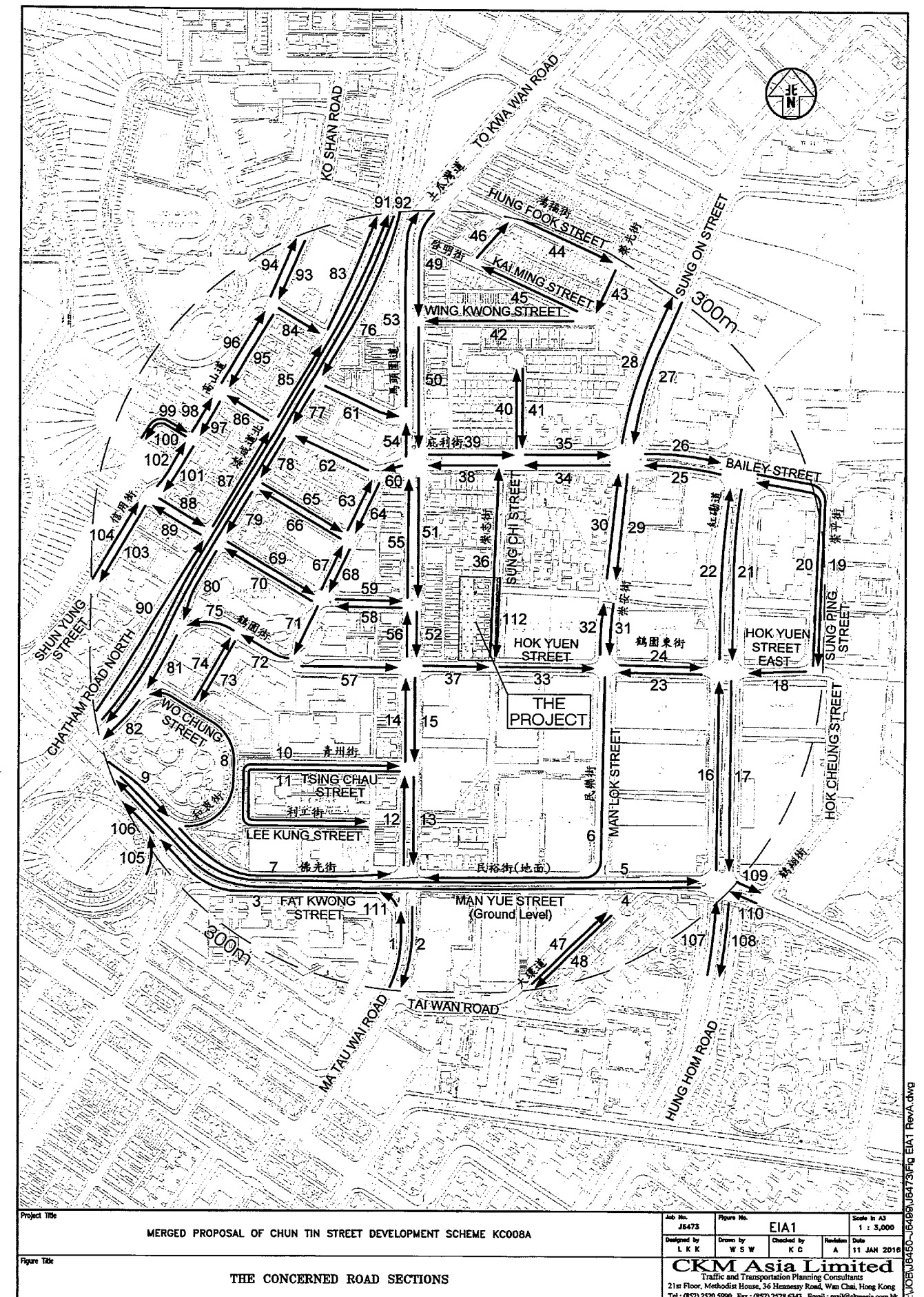
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40033291

PM	40033291
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<input type="checkbox"/> Ready <input type="checkbox"/> Not Scanned	
<input type="checkbox"/> X	<input type="checkbox"/> A <input type="checkbox"/> B <input type="checkbox"/> C

**Appendix 3.2**  
**Letter from PCCW for Identified Chimneys**

**Appendix 4.1**  
**Traffic Flow Data**





Estimated Year 2040 Traffic Data

No.	Road	From	To	2040 AM Peak Hour Traffic Flows			
				Veh/hr	Vehicle Type for Noise Assessment (%)		
					PV	HV	Total
1	Ma Tau Wai Road	Tai Wan Road	Fat Kwong Street	700	55%	45%	100%
2	Ma Tau Wai Road	Fat Kwong Street	Tai Wan Road	850	56%	44%	100%
3	Fat Kwong Street	Ma Tau Wai Road	Slip Road to Fat Kwong Street	200	63%	37%	100%
4	Fat Kwong Street Flyover	Hung Hom Road	Chatham Road North	250	81%	19%	100%
5	Fat Kwong Street Flyover	Chatham Road North	Hung Hom Road	700	79%	21%	100%
6	Man Lok Street & Man Yue Street	Hok Yuen Street	Ma Tau Wai Road	350	59%	41%	100%
7	Fat Kwong Street	Wo Chung Street	Ma Tau Wai Road	450	74%	26%	100%
8	Wo Chung Street	Fat Kwong Street	Chatham Road North	250	76%	24%	100%
9	Fat Kwong Street	Chatham Road North	Wo Chung Street	650	74%	26%	100%
10	Tsing Chau Street & Lee Kung Street	Cul-sac end	Ma Tau Wai Road	100	80%	20%	100%
11	Tsing Chau Street & Lee Kung Street	Ma Tau Wai Road	Cul-sac end	100	90%	10%	100%
12	Ma Tau Wai Road	Fat Kwong Street	Tsing Chau Street	800	57%	43%	100%
13	Ma Tau Wai Road	Tsing Chau Street	Fat Kwong Street	450	47%	53%	100%
14	Ma Tau Wai Road	Tsing Chau Street	Hok Yuen Street	800	56%	44%	100%
15	Ma Tau Wai Road	Hok Yuen Street	Tsing Chau Street	500	48%	52%	100%
16	Hung Hom Road	Fat Kwong Street flyover	Hok Yuen Street East	600	67%	33%	100%
17	Hung Hom Road	Hok Yuen Street East	Fat Kwong Street flyover	1000	75%	25%	100%
18	Hok Yuen Street East	Sung Ping Street	Hung Hom Road	400	79%	21%	100%
19	Sung Ping Street	Hung Hom Road	Hok Yuen Street East	250	77%	23%	100%
20	Sung Ping Street	Hok Yuen Street East	Hung Hom Road	100	92%	8%	100%
21	Hung Hom Road	Bailey Street	Hok Yuen Street East	700	72%	28%	100%
22	Hung Hom Road	Hok Yuen Street East	Bailey Street	650	69%	31%	100%
23	Hok Yuen Street East	Sung On Street	Hung Hom Road	200	66%	34%	100%
24	Hok Yuen Street East	Hung Hom Road	Sung On Street	250	74%	26%	100%
25	Bailey Street	Hung Hom Road	Sung On Street	500	68%	32%	100%
26	Bailey Street	Sung On Street	Hung Hom Road	700	72%	28%	100%
27	Sung On Street	Chi Kiang Street	Bailey Street	400	65%	35%	100%
28	Sung On Street	Bailey Street	Chi Kiang Street	250	54%	46%	100%
29	Sung On Street	Bailey Street	Cul-sac end	200	64%	36%	100%
30	Sung On Street	Cul-sac end	Bailey Street	200	59%	41%	100%
31	Sung On Street	Cul-sac end	Hok Yuen Street	50	82%	18%	100%
32	Sung On Street	Hok Yuen Street	Cul-sac end	150	75%	25%	100%
33	Hok Yuen Street East	Sung Chi Street	Sung On Street	500	67%	33%	100%
34	Bailey Street	Sung On Street	Wan On Street	500	70%	30%	100%
35	Bailey Street	Wan On Street	Sung On Street	550	73%	27%	100%
36	Sung Chi Street	Hok Yuen Street	Bailey Street	100	86%	14%	100%
37	Hok Yuen Street	Ma Tau Wai Road	Sung Chi Street	550	68%	32%	100%
38	Bailey Street	Sung Chi Street	Ma Tau Wai Road	600	73%	27%	100%
39	Bailey Street	Ma Tau Wai Road	Sung Chi Street	600	74%	26%	100%
40	Wan On Street	Bailey Street	Cul-sac end	100	80%	20%	100%
41	Wan On Street	Cul-sac end	Bailey Street	150	82%	18%	100%
42	Wing Kwong Street	Kai Ming Street	Ma Tau Wai Road	250	75%	25%	100%
43	Wing Kwong Street	Hung Fook Street	Kai Ming Street	350	76%	24%	100%
44	Hung Fook Street	Yuk Shing Street	Wing Kwong Street	50	81%	19%	100%
45	Kai Ming Street	Wing Kwong Street	Yuk Shing Street	100	77%	23%	100%
46	Yuk Shing Street	Kai Ming Street	Hung Fook Street	100	79%	21%	100%
47	Tai Wan Road	Wai Wan Lane	Cul-sac end	50	79%	21%	100%
48	Tai Wan Road	Cul-sac end	Wai Wan Lane	50	81%	19%	100%
49	Ma Tau Wai Road	Chi Kiang Street	Wing Kwong Street	1100	58%	42%	100%
50	Ma Tau Wai Road	Wing Kwong Street	Bailey Street	1250	60%	40%	100%
51	Ma Tau Wai Road	Bailey Street	Pak Kung Street	600	48%	52%	100%
52	Ma Tau Wai Road	Pak Kung Street	Hok Yuen Street	650	53%	47%	100%
53	Ma Tau Wai Road	Shek Tong Street	Chi Kiang Street	400	36%	64%	100%
54	Ma Tau Wai Road	San Lau Street	Shek Tong Street	350	29%	71%	100%
55	Ma Tau Wai Road	Pak Kung Street	Bailey Street	400	41%	59%	100%

56	Ma Tau Wai Road	Hok Yuen Street	Pak Kung Street	850	57%	43%	100%
57	Hok Yuen Street	Gillies Avenue North	Ma Tau Wai Road	450	71%	29%	100%
58	Pak Kung Street	Ma Tau Wai Road	Gillies Avenue North	500	75%	25%	100%
59	Pak Kung Street	Gillies Avenue North	Ma Tau Wai Road	100	86%	14%	100%
60	San Lau Street	Ma Tau Wai Road	Gillies Avenue North	800	71%	29%	100%
61	Shek Tong Street	Chatham Road North	Ma Tau Wai Road	100	85%	15%	100%
62	San Lau Street	Gillies Avenue North	Chatham Road North	750	75%	25%	100%
63	Gillies Avenue North	San Wai Street	San Lau Street	200	72%	28%	100%
64	Gillies Avenue North	San Lau Street	San Wai Street	300	67%	33%	100%
65	San Wai Street	Chatham Road North	Gillies Avenue North	200	82%	18%	100%
66	San Wai Street	Gillies Avenue North	Chatham Road North	100	87%	13%	100%
67	Gillies Avenue North	Pak Kung Street	San Wai Street	200	73%	27%	100%
68	Gillies Avenue North	San Wai Street	Pak Kung Street	350	70%	30%	100%
69	Pak Kung Street	Chatham Road North	Gillies Avenue North	150	76%	24%	100%
70	Pak Kung Street	Gillies Avenue North	Chatham Road North	100	57%	43%	100%
71	Gillies Avenue North	Pak Kung Street	Hok Yuen Street	600	71%	29%	100%
72	Hok Yuen Street	Gillies Avenue North	Hok Yuen Lane	200	69%	31%	100%
73	Hok Yuen Lane	Hok Yuen Street	Cul-sac end	50	94%	6%	100%
74	Hok Yuen Lane	Cul-sac end	Hok Yuen Street	50	100%	0%	100%
75	Hok Yuen Street	Hok Yuen Lane	Chatham Road North	200	68%	32%	100%
76	Chatham Road North	Kiang Hsi Street	Shek Tong Street	1100	63%	37%	100%
77	Chatham Road North	Shek Tong Street	San Lau Street	1100	63%	37%	100%
78	Chatham Road North	San Lau Street	San Wai Street	1100	63%	37%	100%
79	Chatham Road North	San Wai Street	Pak Kung Street	1000	61%	39%	100%
80	Chatham Road North	Pak Kung Street	Hok Yuen Street	900	60%	40%	100%
81	Chatham Road North	Hok Yuen Street	Wo Chung Street	1050	61%	39%	100%
82	Chatham Road North	Wo Chung Street	Fat Kwong Street	1300	63%	37%	100%
83	Chatham Road North	Shansi Street	Kiang Hsi Street	1500	66%	34%	100%
84	Shansi Street	Ko Shan Road	Chatham Road North	250	78%	22%	100%
85	Chatham Road North	San Lau Street	Shansi Street	1300	64%	36%	100%
86	San Lau Street	Chatham Road North	Ko Shan Road	300	74%	26%	100%
87	Chatham Road North	Pak Kung Street	San Lau Street	800	56%	44%	100%
88	Pak Kung Street	Ko Shan Road	Chatham Road North	250	86%	14%	100%
89	Pak Kung Street	Chatham Road North	Ko Shan Road	300	82%	18%	100%
90	Chatham Road North	Fat Kwong Street	Pak Kung Street	850	57%	43%	100%
91	Chatham Road North flyover	Fat Kwong Street	Kiang Hsi Street	3050	80%	20%	100%
92	Chatham Road North flyover	Kiang Hsi Street	Fat Kwong Street	2250	77%	23%	100%
93	Ko Shan Road	Kiang Hsi Street	Shansi Street	300	75%	25%	100%
94	Ko Shan Road	Shansi Street	Kiang Hsi Street	400	77%	23%	100%
95	Ko Shan Road	Shansi Street	San Lau Street	300	76%	24%	100%
96	Ko Shan Road	San Lau Street	Shansi Street	600	77%	23%	100%
97	Ko Shan Road	San Lau Street	Wai Yin Path	450	78%	22%	100%
98	San Lau Road	Wai Yin Path	San Lau Street	450	81%	19%	100%
99	Wai Yin Path	Cul-sac end	Ko Shan Road	50	79%	21%	100%
100	Wai Yin Path	Ko Shan Road	Cul-sac end	100	92%	8%	100%
101	Ko Shan Road	Wai Yin Path	Pak Kung Street	400	78%	22%	100%
102	Ko Shan Road	Pak Kung Street	Wai Yin Path	500	82%	18%	100%
103	Shun Yung Street	Pak Kung Street	Fat Kwong Street	650	79%	21%	100%
104	Shun Yung Street	Fat Kwong Street	Pak Kung Street	700	84%	16%	100%
105	Ping Chi Street	Chatham Road North	Fat Kwong Street	300	86%	14%	100%
106	Fat Kwong Street	Ping Chi Street	Chatham Road North	400	75%	25%	100%
107	Hung Hom Road	Tak Hong Street	Fat Kwong Street flyover	750	75%	25%	100%
108	Hung Hom Road	Fat Kwong Street flyover	Tak Hong Street	1050	75%	25%	100%
109	Tai Wan Road East	Hung Hom Road	Hok Cheung Street	850	81%	19%	100%
110	Tai Wan Road East	Hok Cheung Street	Hung Hom Road	400	74%	26%	100%
111	Slip Road of Ma Tau Wai Road	Ma Tau Wai Road	Fat Kwong Street	200	63%	37%	100%
112	Sung Chi Street	Access Road	Hok Yuen Street	50	88%	13%	100%

No.	Road	From	To	2040 PM Peak Hour Traffic Flows			
				Veh/hr	Vehicle Type for Noise Assessment (%)		
					PV	HV	Total
1	Ma Tau Wai Road	Tai Wan Road	Fat Kwong Street	850	59%	41%	100%
2	Ma Tau Wai Road	Fat Kwong Street	Tai Wan Road	750	61%	39%	100%
3	Fat Kwong Street	Ma Tau Wai Road	Slip Road to Fat Kwong Street	250	69%	31%	100%
4	Fat Kwong Street Flyover	Hung Hom Road	Chatham Road North	300	84%	16%	100%
5	Fat Kwong Street Flyover	Chatham Road North	Hung Hom Road	600	84%	16%	100%
6	Man Lok Street & Man Yue Street	Hok Yuen Street	Ma Tau Wai Road	400	83%	17%	100%
7	Fat Kwong Street	Wo Chung Street	Ma Tau Wai Road	350	71%	29%	100%
8	Wo Chung Street	Fat Kwong Street	Chatham Road North	250	81%	19%	100%
9	Fat Kwong Street	Chatham Road North	Wo Chung Street	550	75%	25%	100%
10	Tsing Chau Street & Lee Kung Street	Cul-sac end	Ma Tau Wai Road	100	91%	9%	100%
11	Tsing Chau Street & Lee Kung Street	Ma Tau Wai Road	Cul-sac end	100	83%	17%	100%
12	Ma Tau Wai Road	Fat Kwong Street	Tsing Chau Street	900	65%	35%	100%
13	Ma Tau Wai Road	Tsing Chau Street	Fat Kwong Street	350	47%	53%	100%
14	Ma Tau Wai Road	Tsing Chau Street	Hok Yuen Street	950	66%	34%	100%
15	Ma Tau Wai Road	Hok Yuen Street	Tsing Chau Street	400	51%	49%	100%
16	Hung Hom Road	Fat Kwong Street flyover	Hok Yuen Street East	550	71%	29%	100%
17	Hung Hom Road	Hok Yuen Street East	Fat Kwong Street flyover	900	78%	22%	100%
18	Hok Yuen Street East	Sung Ping Street	Hung Hom Road	450	86%	14%	100%
19	Sung Ping Street	Hung Hom Road	Hok Yuen Street East	150	85%	15%	100%
20	Sung Ping Street	Hok Yuen Street East	Hung Hom Road	100	92%	8%	100%
21	Hung Hom Road	Bailey Street	Hok Yuen Street East	500	71%	29%	100%
22	Hung Hom Road	Hok Yuen Street East	Bailey Street	650	72%	28%	100%
23	Hok Yuen Street East	Sung On Street	Hung Hom Road	200	84%	16%	100%
24	Hok Yuen Street East	Hung Hom Road	Sung On Street	300	87%	13%	100%
25	Bailey Street	Hung Hom Road	Sung On Street	600	72%	28%	100%
26	Bailey Street	Sung On Street	Hung Hom Road	500	72%	28%	100%
27	Sung On Street	Chi Kiang Street	Bailey Street	350	69%	31%	100%
28	Sung On Street	Bailey Street	Chi Kiang Street	300	70%	30%	100%
29	Sung On Street	Bailey Street	Cul-sac end	150	57%	43%	100%
30	Sung On Street	Cul-sac end	Bailey Street	200	82%	18%	100%
31	Sung On Street	Cul-sac end	Hok Yuen Street	100	88%	12%	100%
32	Sung On Street	Hok Yuen Street	Cul-sac end	50	83%	17%	100%
33	Hok Yuen Street East	Sung Chi Street	Sung On Street	450	82%	18%	100%
34	Bailey Street	Sung On Street	Wan On Street	500	74%	26%	100%
35	Bailey Street	Wan On Street	Sung On Street	350	71%	29%	100%
36	Sung Chi Street	Hok Yuen Street	Bailey Street	100	84%	16%	100%
37	Hok Yuen Street	Ma Tau Wai Road	Sung Chi Street	550	83%	17%	100%
38	Bailey Street	Sung Chi Street	Ma Tau Wai Road	600	76%	24%	100%
39	Bailey Street	Ma Tau Wai Road	Sung Chi Street	400	72%	28%	100%
40	Wan On Street	Bailey Street	Cul-sac end	100	80%	20%	100%
41	Wan On Street	Cul-sac end	Bailey Street	150	83%	17%	100%
42	Wing Kwong Street	Kai Ming Street	Ma Tau Wai Road	250	79%	21%	100%
43	Wing Kwong Street	Hung Fook Street	Kai Ming Street	350	78%	22%	100%
44	Hung Fook Street	Yuk Shing Street	Wing Kwong Street	50	84%	16%	100%
45	Kai Ming Street	Wing Kwong Street	Yuk Shing Street	100	76%	24%	100%
46	Yuk Shing Street	Kai Ming Street	Hung Fook Street	100	79%	21%	100%
47	Tai Wan Road	Wai Wan Lane	Cul-sac end	100	92%	8%	100%
48	Tai Wan Road	Cul-sac end	Wai Wan Lane	50	82%	18%	100%
49	Ma Tau Wai Road	Chi Kiang Street	Wing Kwong Street	850	62%	38%	100%
50	Ma Tau Wai Road	Wing Kwong Street	Bailey Street	1050	66%	34%	100%
51	Ma Tau Wai Road	Bailey Street	Pak Kung Street	500	59%	41%	100%
52	Ma Tau Wai Road	Pak Kung Street	Hok Yuen Street	600	62%	38%	100%
53	Ma Tau Wai Road	Shek Tong Street	Chi Kiang Street	550	53%	47%	100%
54	Ma Tau Wai Road	San Lau Street	Shek Tong Street	450	50%	50%	100%
55	Ma Tau Wai Road	Pak Kung Street	Bailey Street	500	51%	49%	100%
56	Ma Tau Wai Road	Hok Yuen Street	Pak Kung Street	1000	67%	33%	100%
57	Hok Yuen Street	Gillies Avenue North	Ma Tau Wai Road	400	79%	21%	100%

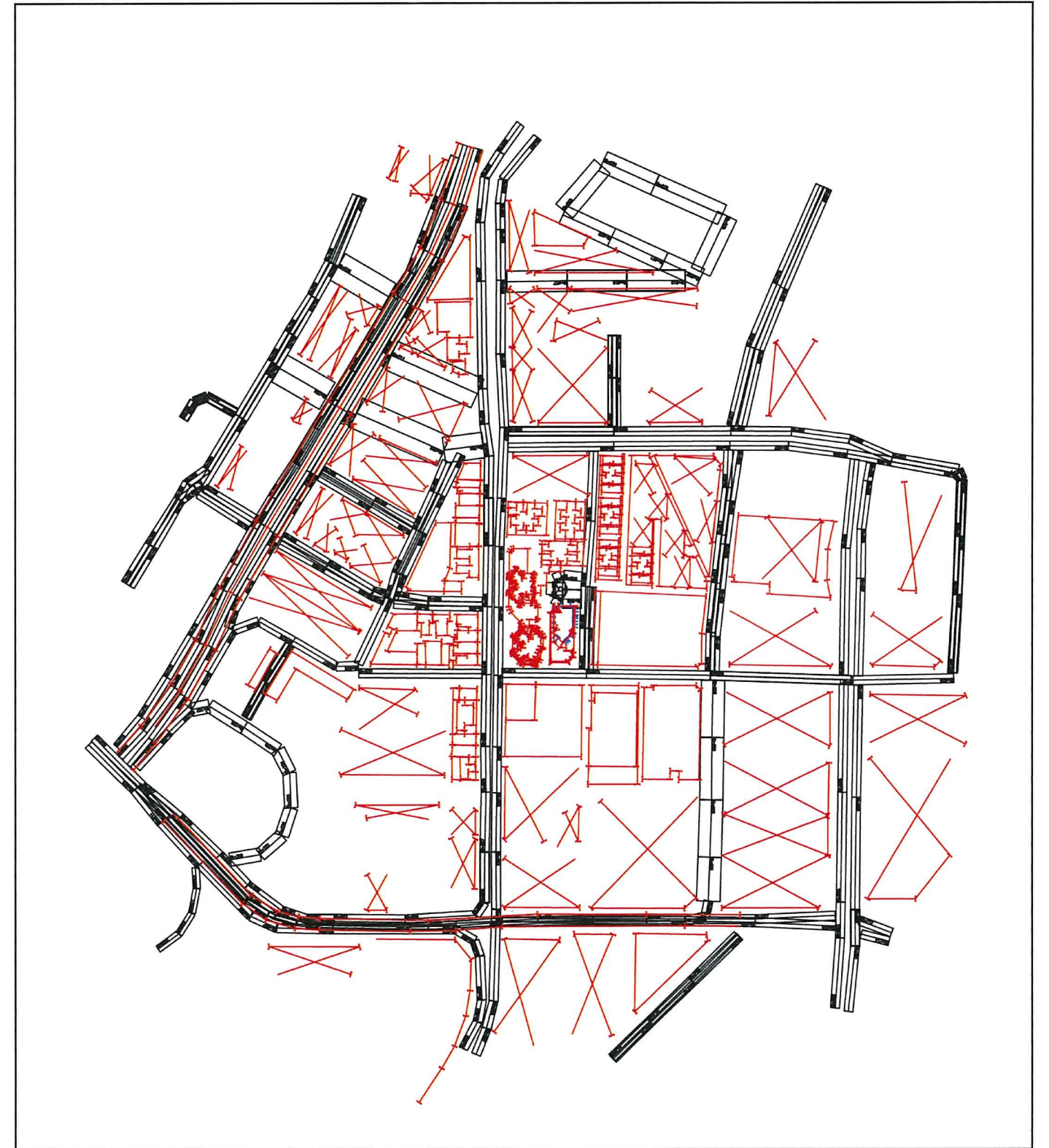
58	Pak Kung Street	Ma Tau Wai Road	Gillies Avenue North	550	81%	19%	100%
59	Pak Kung Street	Gillies Avenue North	Ma Tau Wai Road	100	87%	13%	100%
60	San Lau Street	Ma Tau Wai Road	Gillies Avenue North	800	74%	26%	100%
61	Shek Tong Street	Chatham Road North	Ma Tau Wai Road	100	78%	22%	100%
62	San Lau Street	Gillies Avenue North	Chatham Road North	850	78%	22%	100%
63	Gillies Avenue North	San Wai Street	San Lau Street	350	88%	12%	100%
64	Gillies Avenue North	San Lau Street	San Wai Street	350	82%	18%	100%
65	San Wai Street	Chatham Road North	Gillies Avenue North	100	82%	18%	100%
66	San Wai Street	Gillies Avenue North	Chatham Road North	100	62%	38%	100%
67	Gillies Avenue North	Pak Kung Street	San Wai Street	350	90%	10%	100%
68	Gillies Avenue North	San Wai Street	Pak Kung Street	400	86%	14%	100%
69	Pak Kung Street	Chatham Road North	Gillies Avenue North	250	77%	23%	100%
70	Pak Kung Street	Gillies Avenue North	Chatham Road North	150	89%	11%	100%
71	Gillies Avenue North	Pak Kung Street	Hok Yuen Street	650	79%	21%	100%
72	Hok Yuen Street	Gillies Avenue North	Hok Yuen Lane	300	79%	21%	100%
73	Hok Yuen Lane	Hok Yuen Street	Cul-sac end	50	100%	0%	100%
74	Hok Yuen Lane	Cul-sac end	Hok Yuen Street	100	92%	8%	100%
75	Hok Yuen Street	Hok Yuen Lane	Chatham Road North	300	81%	19%	100%
76	Chatham Road North	Kiang Hsi Street	Shek Tong Street	1000	73%	27%	100%
77	Chatham Road North	Shek Tong Street	San Lau Street	950	72%	28%	100%
78	Chatham Road North	San Lau Street	San Wai Street	950	72%	28%	100%
79	Chatham Road North	San Wai Street	Pak Kung Street	900	71%	29%	100%
80	Chatham Road North	Pak Kung Street	Hok Yuen Street	800	73%	27%	100%
81	Chatham Road North	Hok Yuen Street	Wo Chung Street	1100	74%	26%	100%
82	Chatham Road North	Wo Chung Street	Fat Kwong Street	1300	75%	25%	100%
83	Chatham Road North	Shansi Street	Kiang Hsi Street	1450	60%	40%	100%
84	Shansi Street	Ko Shan Road	Chatham Road North	150	64%	36%	100%
85	Chatham Road North	San Lau Street	Shansi Street	1350	59%	41%	100%
86	San Lau Street	Chatham Road North	Ko Shan Road	300	78%	22%	100%
87	Chatham Road North	Pak Kung Street	San Lau Street	850	48%	52%	100%
88	Pak Kung Street	Ko Shan Road	Chatham Road North	150	84%	16%	100%
89	Pak Kung Street	Chatham Road North	Ko Shan Road	350	72%	28%	100%
90	Chatham Road North	Fat Kwong Street	Pak Kung Street	1050	52%	48%	100%
91	Chatham Road North flyover	Fat Kwong Street	Kiang Hsi Street	3250	75%	25%	100%
92	Chatham Road North flyover	Kiang Hsi Street	Fat Kwong Street	2050	80%	20%	100%
93	Ko Shan Road	Kiang Hsi Street	Shansi Street	350	90%	10%	100%
94	Ko Shan Road	Shansi Street	Kiang Hsi Street	550	83%	17%	100%
95	Ko Shan Road	Shansi Street	San Lau Street	350	90%	10%	100%
96	Ko Shan Road	San Lau Street	Shansi Street	650	80%	20%	100%
97	Ko Shan Road	San Lau Street	Wai Yin Path	500	88%	12%	100%
98	Ko Shan Road	Wai Yin Path	San Lau Street	500	81%	19%	100%
99	Wai Yin Path	Cul-sac end	Ko Shan Road	50	83%	17%	100%
100	Wai Yin Path	Ko Shan Road	Cul-sac end	50	77%	23%	100%
101	Ko Shan Road	Wai Yin Path	Pak Kung Street	500	88%	12%	100%
102	Ko Shan Road	Pak Kung Street	Wai Yin Path	500	82%	18%	100%
103	Shun Yung Street	Pak Kung Street	Fat Kwong Street	600	81%	19%	100%
104	Shun Yung Street	Fat Kwong Street	Pak Kung Street	400	81%	19%	100%
105	Ping Chi Street	Chatham Road North	Fat Kwong Street	400	91%	9%	100%
106	Fat Kwong Street	Ping Chi Street	Chatham Road North	500	81%	19%	100%
107	Hung Hom Road	Tak Hong Street	Fat Kwong Street flyover	600	77%	23%	100%
108	Hung Hom Road	Fat Kwong Street flyover	Tak Hong Street	1000	78%	22%	100%
109	Tai Wan Road East	Hung Hom Road	Hok Cheung Street	600	84%	16%	100%
110	Tai Wan Road East	Hok Cheung Street	Hung Hom Road	350	71%	29%	100%
111	Slip Road of Ma Tau Wai Road	Ma Tau Wai Road	Fat Kwong Street	250	69%	31%	100%
112	Sung Chi Street	Access Road	Hok Yuen Street	50	85%	15%	100%

Vehicle Type for Noise Assessment

PV: Motorcycle, Private Car, Taxi

HV: Light Goods Vehicle, Heavy Goods Vehicle, Minibus, Franchise Bus

**Appendix 4.3**  
Computer Plot of Road Traffic Noise Model





Appendix 4.4  
Predicted Road Traffic Noise Level

Appendix 4.4 Predicted Road Traffic Noise Level under Year 2040 AM Peak

Floor	A_01	A_02	A_03	A_04	B_01	B_02	B_03	B_04	C_01	C_02	C_03	D_01	D_02	D_03	E_01	E_02	E_03	E_04	F_01	F_02	F_03	G_01	G_02	H_01	H_02	J_01
37	67	67	67	67	67	67	66	66	65	64	64	64	63	63	63	63	64	66	66	67	68	68	68	68	66	67
36	67	67	67	67	67	67	66	66	64	64	64	63	63	63	63	63	64	66	66	67	68	68	68	68	65	67
35	67	67	67	67	67	67	66	66	64	64	64	63	63	63	63	63	64	66	66	67	68	68	68	68	65	67
34	67	67	67	67	67	67	66	66	64	64	64	63	63	63	63	63	64	66	66	67	68	68	68	68	65	67
33	67	67	67	67	67	67	66	66	64	64	64	63	63	63	63	63	64	66	66	67	68	68	68	68	65	67
32	67	67	67	67	67	67	66	66	64	64	64	63	63	63	63	63	64	66	66	67	68	68	68	68	66	67
31	67	67	67	67	67	67	66	66	64	64	64	63	63	63	63	63	64	66	66	67	68	68	68	68	66	67
30	67	68	67	67	67	67	66	66	64	64	64	63	63	63	63	63	64	66	66	67	68	68	68	68	66	67
29	67	68	67	67	67	67	66	66	64	64	64	63	63	63	63	63	64	66	66	67	68	68	68	68	66	67
28	67	68	68	67	67	67	66	66	64	64	64	63	63	63	63	63	64	66	65	67	68	68	68	68	66	67
27	67	68	68	67	67	67	66	66	64	64	64	63	63	63	63	63	64	66	65	67	68	68	68	68	66	67
26	67	68	68	68	67	67	66	66	65	64	64	63	63	63	63	63	64	66	65	67	68	68	68	68	66	67
25	67	68	68	68	68	67	66	66	65	64	64	63	63	63	63	63	64	66	65	67	68	68	68	68	66	67
24	67	68	68	68	67	67	66	66	65	64	64	64	63	63	63	63	64	66	65	67	68	68	68	68	66	67
23	67	68	68	68	67	67	66	66	65	64	64	64	63	63	63	63	64	66	65	66	68	68	68	68	66	67
22	67	68	68	68	67	67	66	67	65	64	64	64	63	63	63	63	64	65	65	66	68	68	68	68	66	67
21	67	68	68	68	68	67	66	67	65	64	64	64	63	63	63	63	64	65	65	66	68	68	68	68	66	67
20	68	68	68	68	68	68	67	66	65	64	64	64	63	63	63	63	64	65	65	66	68	68	68	67	66	67
19	68	68	68	68	68	68	66	67	65	64	64	64	64	64	64	64	65	65	64	66	68	68	68	67	66	67
18	68	69	68	68	68	68	66	67	65	64	64	64	64	64	64	64	65	65	64	66	68	68	68	67	66	67
17	68	69	68	68	68	68	66	67	65	64	64	64	64	64	64	64	65	65	64	66	68	68	68	67	66	67
16	68	69	68	68	68	68	66	67	65	65	64	64	64	64	64	64	65	65	64	66	67	68	68	67	66	67
15	68	69	69	68	68	68	66	67	65	65	64	64	64	64	64	64	65	65	64	66	67	68	68	67	66	67
14	67	69	68	68	68	68	66	67	65	65	65	64	64	64	64	64	65	65	64	65	67	67	68	67	66	67
13	67	69	68	68	68	68	66	67	65	65	65	64	64	64	64	64	65	65	64	65	67	67	68	67	66	67
12	67	69	68	68	68	68	66	67	65	65	65	65	65	65	65	64	65	65	64	65	66	68	68	67	66	66
11	67	69	68	68	68	68	66	67	66	65	65	65	65	65	65	64	65	65	64	66	66	66	67	67	65	66
10	66	68	68	68	68	68	66	67	66	66	65	65	65	65	65	65	65	65	64	65	65	66	67	67	65	65
9	66	68	68	68	68	68	66	67	66	66	65	65	65	65	65	65	65	65	63	63	65	64	65	66	64	65
8	66	67	67	68	67	68	67	67	66	66	66	66	66	65	65	65	65	65	64	63	64	64	65	66	64	65
7	65	67	67	67	67	68	67	67	66	66	66	66	66	66	66	66	65	66	64	63	62	62	62	65	63	64
6	65	66	66	66	66	67	67	67	67	66	66	66	66	66	66	66	66	66	64	63	61	60	61	63	61	63
5	64	65	65	65	67	68	67	67	67	67	66	66	66	66	66	66	66	66	64	63	59	58	59	62	63	60
4	62	63	64	64	65	67	66	67	67	67	67	66	66	66	66	66	66	66	64	63	59	57	58	61	62	59
Max	68	69	69	68	68	68	67	67	67	67	67	66	66	66	66	66	66	66	66	67	68	68	68	68	66	67

# **Appendix 4.5 Night-time Survey for Fixed Plant Noise**

Date: 2 March 2016

Time: Around 11:30 pm to 12:30 am

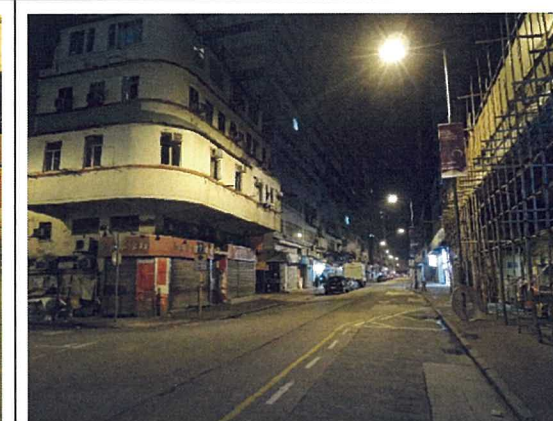
## **Observations:**

Industrial buildings and commercial buildings along Hok Yuen Street were closed and not in operation. Shops along the Hok Yuen Street, Sung Chi Street, Chun Tin Street were also closed including the mechanical workshop and car maintenance workshop at Sung Chi Street. No noticeable fixed plant noise was identified at Chun Tin Street and Sung Chi Street near the position of future residential block of the Scheme.

## **Appendix 4.5** Night time Survey for Fixed Plant Noise

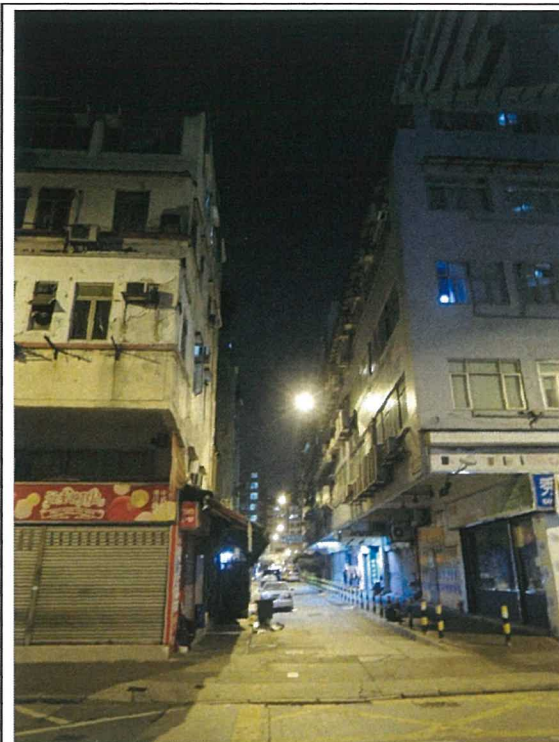


View from Hok Yuen Street to Chun Tin Street

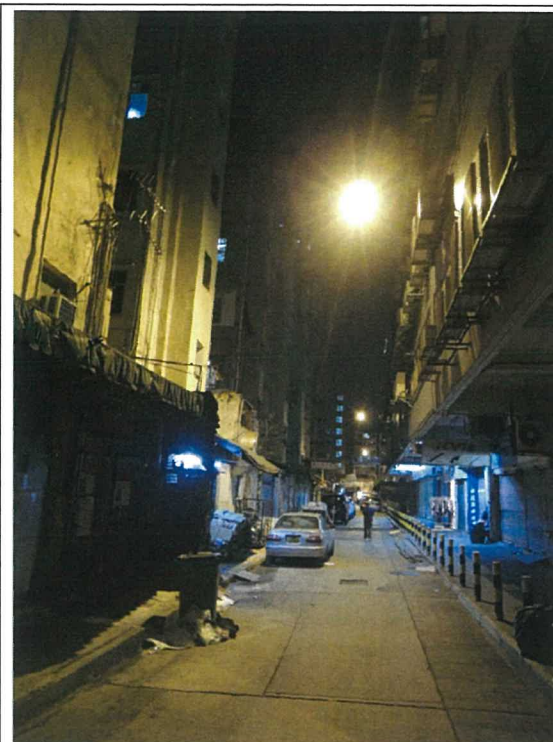


View from Hok Yuen Street to Hang Fung Industrial Building (HFIB)

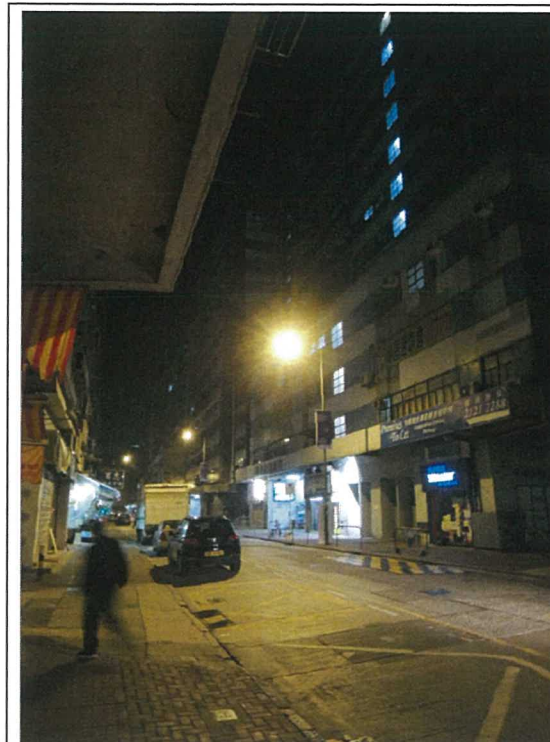




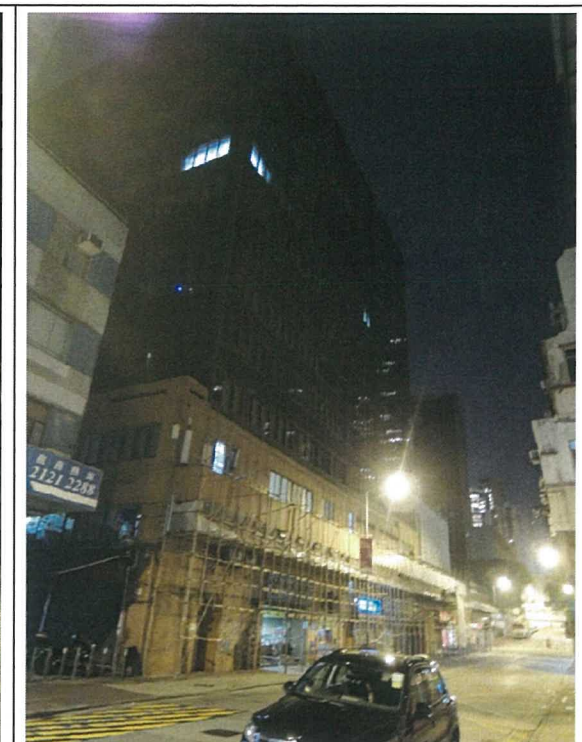
View from Hok Yuen Street to Sung Chi Street.  
The mechanical workshop and car maintenance workshop were closed.  
(Far View)



View from Hok Yuen Street to Sung Chi Street  
The Mechanical workshop and car maintenance workshop on ground floor of HFIB were closed.  
(near View)



View from Hok Yuen Street to Conic Investment Building (CIB)



View for the Hunghom Commercial Centre (HHCC)



The door entrance of CIB was closed at night.



The door entrance of Hung Hom Square of Hung Hom Commercial Centre (HHCC) was closed at night





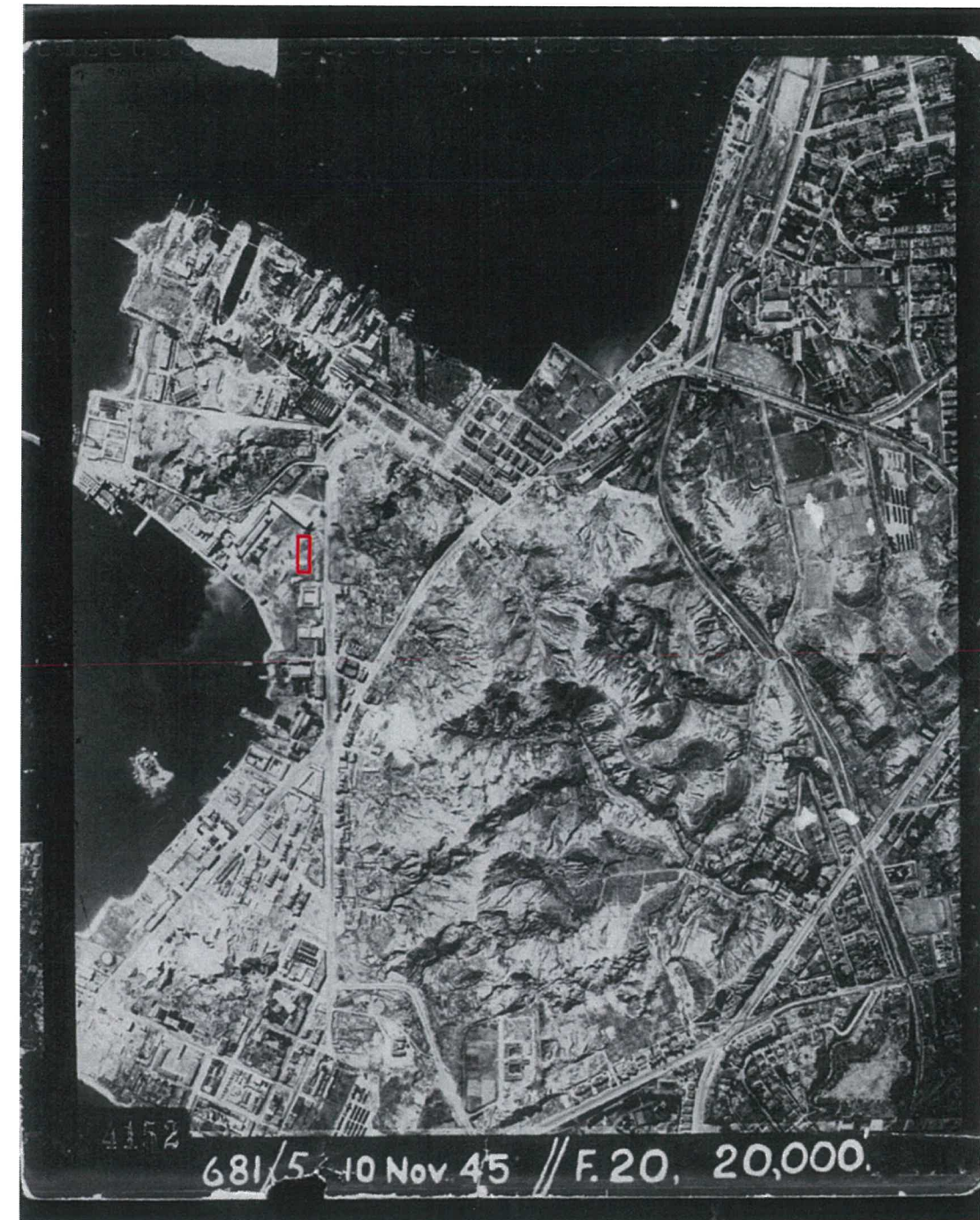
View from Hok Yuen Street to HFIB



The door entrance of HFIB was closed at night

Appendix 6.1 Aerial Photo from 1949 to 2015

Photo 6.1A Aerial Photo in 1949 (The Project Site is bounded by red box)



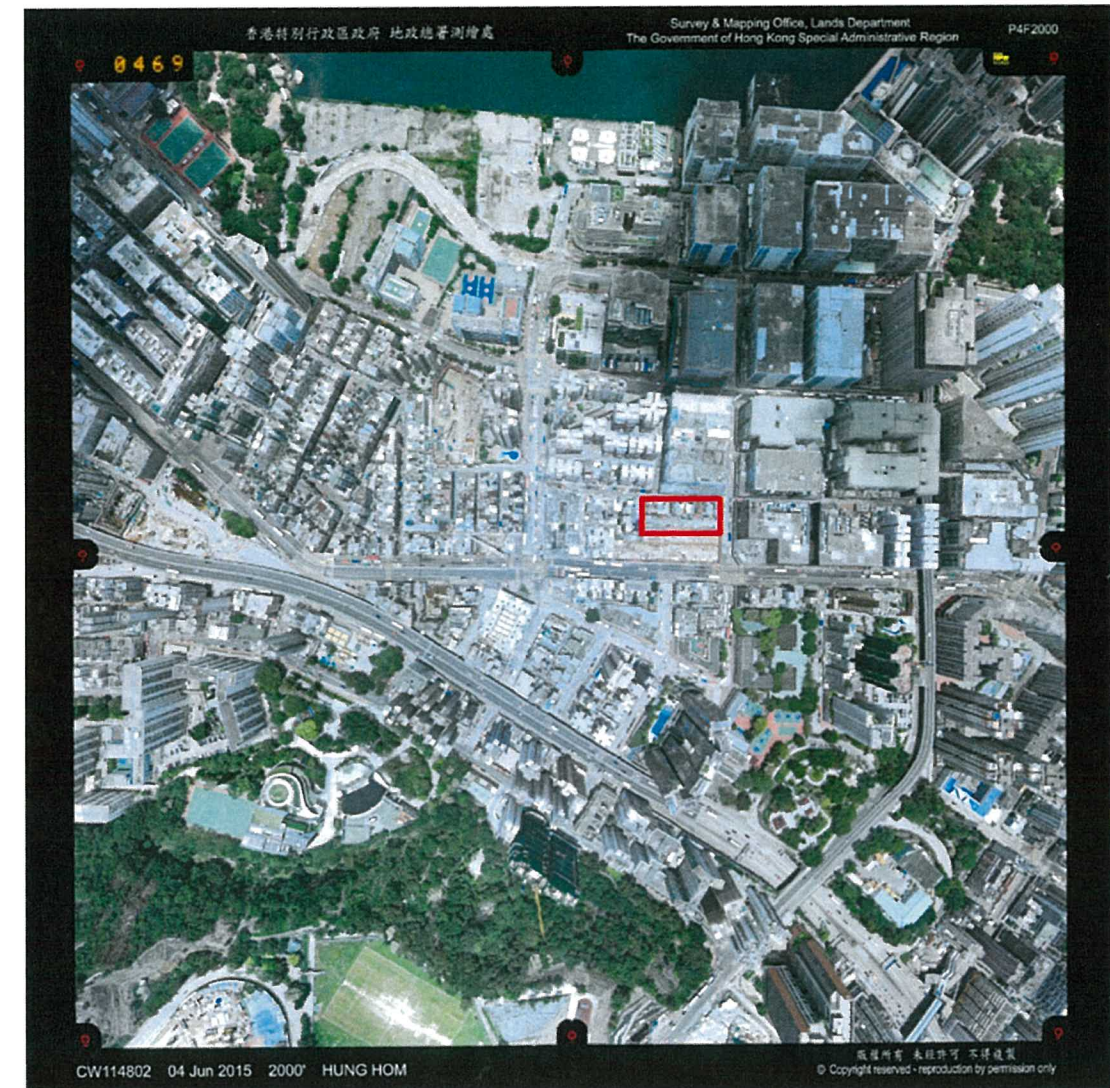
Appendix 6.1  
Aerial Photos



Photo 6.1B Aerial Photo in 1959 (The Project Site is bounded by red box)



Photo 6.1C Aerial Photo in 2015 (The Project Site is bounded by red box)





Appendix 6.2 Site Walkover Photos

Photos Recorded during Site Walkover on March 2016

Appendix 6.2  
Site Walkover Photos



6.2A. Shops at G/F along Nos. 2 – 8 of Chun Tin Street (even nos.)



6.2B. Shops at G/F along Nos. 14-16 of Chun Tin Street (even nos.)





6.2C. Shops at G/F along Nos. 12-20 of Chun Tin Street (even nos.)



6.2D. Shops at G/F along 2-4 of Hok Yuen Street (even nos.)



6.2E. View at Sung Chi Street, i.e. Rear Side of Shops at G/F around 2 - 4 of Chun Tin Street (even nos.)



6.2F. View at Sung Chi Street, i.e. Rear Side of Shops at G/F around 6 of Chun Tin Street (even nos.)





6.2G. View at Sung Chi Street, i.e. Rear Side of Shops at G/F around 12-16 of Chun Tin Street (even nos.)



6.2G. View at Sung Chi Street, i.e. Rear Side of Shops at G/F around 20 - 24 Chun Tin Street (even nos.)



**Appendix 6.3**  
List of Existing Tenants

**Appendix 6.3**      **List of Existing Tenants at Nos. 2-4 Hok Yuen Street (even nos.) and Nos. 2-24 Chun Tin Street (even nos.)**

Address	Name	Current Use	Details
No. 2 Hok Yuen Street	丹麥飽餅屋	Catering	Bakery
No. 4 Hok Yuen Street	知味燒腊茶餐廳	Catering	Food and Beverages (Cha Chan Tang)
No. 2 Chun Tin Street	合利五金廢紙	Workshop	Paper and Metal Recycling Service
No. 4 Chun Tin Street	NIL	(Cannot be identified)	(Cannot be identified)
No. 6 Chun Tin Street	聯興環保回收有限公司	Workshop	Paper and Metal Recycling Service
No. 8 Chun Tin Street	聯興環保回收有限公司	Workshop	Paper/ Metal/ Electronic Appliance Recycling Service
No. 10 Chun Tin Street	達和公司 "Do Well", Co.	(Cannot be identified)	(Cannot be identified)
No. 12 Chun Tin Street	新星五金工程有限公司	Workshop	Metal Hardware Processing
No. 14 Chun Tin Street	新星五金工程有限公司	Workshop	Metal Hardware Processing
No. 16 Chun Tin Street	白河馬企業有限公司	Trading	Air-conditioner sales/services
No. 18 Chun Tin Street	聯發汽車服務公司	Workshop	Car repair and services
No. 20 Chun Tin Street (shop only facing Sung Chi Street)	崇志士多	Retail	(Grocery Store)
No. 22 Chun Tin Street	Target Outlet Co.	Retail	Clothing
No. 24 Chun Tin Street	Target Outlet Co.	Retail	Clothing

## **PART 3      SUPPLEMENTARY INFORMATION**

Appendix 5      Drainage and Sewerage Assessment Report





Prepared for the Urban Renewal Authority February 2016

## Term Environmental Consultancy Services

### Proposed Chun Tin Street / Sung Chi Street Development Scheme

#### Drainage and Sewerage Impact Assessment



Term Environmental Consultancy Services  
Proposed Chun Tin Street / Sung Chi Street Development Scheme  
Drainage and Sewerage Impact Assessment



REVISION SCHEDULE					
Rev	Date	Details	Prepared by	Reviewed by	Approved by
0	Feb 2016	DSIA Report	Wei Chen	David Lau	
Signature					

REVISION RECORD					
Rev	Date	Details	Prepared by	Reviewed by	Approved by
0	Feb 2016	DSIA Report	Wei Chen	David Lau	

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Appendix B	Proposed Drainage Connection Pipe
Appendix C	Estimated Sewage Generated from the Proposed Development
Appendix D	Proposed Sewerage Connection Pipe and Assessment of Existing Sewers





## 1. INTRODUCTION

### 1.1 Background

- 1.1.1 Urban Renewal Authority (URA) commissioned AECOM Consulting Services Ltd (ACSL) as their Consultant to undertake a Drainage and Sewerage Impact Assessment to support the submission of a draft URA Development Scheme Plan of Chun Tin Street / Sung Chi Street Development Scheme (KC-008(A)) to the Town Planning Board for approval.

### 1.2 Information Available for the Study

- 1.2.1 The Drainage Services Department's (DSD's) drainage record plans for the vicinity of the Site have been reviewed.
- 1.2.2 For the DIA, reference has been made to DSD's Stormwater Drainage Manual, ETWB TC No. 2/2006 – Drainage Impact Assessment Process for Public Sector Projects and list of flooding blackspots provided on DSD's website.
- 1.2.3 For the SIA, reference has been made to DSD's Sewerage Manual Parts 1 and 2. Reference has also been made to Environmental Protection Department's (EPD's) Report No. EPD/TP 1/05 – Guidelines for the Estimating of Sewage Flows for Sewage Infrastructure Planning (GESF).

### 1.3 Objectives of Drainage and Sewerage Impact Assessment (DSIA)

- 1.3.1 The aim of the DSIA is to assess potential drainage and sewerage impacts on the existing drainage and sewerage system that may arise from the proposed development and, if necessary, to recommend a scheme and improvement or upgrading works that may be required on the existing drainage and sewerage network to the satisfaction of DSD and EPD.

## 2. PROJECT OUTLINE

### 2.1 Project Title

- 2.1.1 The project title is "Chun Tin Street / Sung Chi Street Development Scheme ("the Scheme")".

### 2.2 Proponent

- 2.2.1 The Project Proponent is Urban Renewal Authority.

### 2.3 Nature and Description of the Project

- 2.3.1 The Project comprises one residential tower providing 310 units on top of a commercial / retail podium.



## 2.4 Location

- 2.4.1 The proposed development is located at Chun Tin Street, Hung Hom. The Site Location Plan is shown on **Figure 1**.

## 2.5 Area of Project Site

- 2.5.1 The Site has a net site area of approximately 1,636m<sup>2</sup> and is fully paved.

## 2.6 Change in Levels

- 2.6.1 No change in ground level as a result of the proposed works is anticipated.

## 2.7 Planning Permission Application

- 2.7.1 This Report forms as part of the environmental assessment for submission of a draft URA's Development Scheme Plan (DSP) to Town Planning Board for approval under s.5 of Town Planning Ordinance.

## 3. PLANNING AND IMPLEMENTATION PROGRAMME

### 3.1 Planning and Implementation

- 3.1.1 Upon approval of the Scheme by CE in C for the URA to implement, the Project will be planned and implemented by the URA and/or its Joint Venture Partner (JVP) under the supervision of an Authorized Person, with support from consultants of various disciplines. The implementation of any works for the Project will be carried out by a Contractor to be identified following the tender process prior to the construction phase.

### 3.2 Project Timetable

- 3.2.1 The proposed development is targeted for occupation in the Year 2025.

### 3.3 Interface with Other Projects

- 3.3.1 No potential interface with other projects is anticipated.

## 4. EXISTING DRAINAGE AND SEWERAGE

### 4.1 Existing Drainage

- 4.1.1 The Site is fully paved. Storm water surface runoffs within the site are collected and discharged into nearby public drains. Recent photos of the Site are attached in **Appendix A**.

- 4.1.2 According to drainage record plans, there is an existing storm water 1 cell 1475x1275 trunk box culvert running along Hok Yuen Street collecting storm





water runoffs in the area including the existing 225/300mm diameter branch drain running along Sung Chi Street. The storm water surface runoffs from the site and nearby area are conveyed via the existing 1 cell 1475x1275 trunk box culvert along Hok Yuen Street for discharge into Kowloon Bay. The existing drainage system in the area is shown on **Figure 2**.

- 4.1.3 According to DSD's website, there is no flooding blackspot identified in the vicinity of the site. There is no Ecologically Important Streams/Rivers (EIS) as defined under ETWB TCW No. 5/2005 affected by the project.

## 4.2 Existing Sewerage

- 4.2.1 According to sewerage record plans, sewage from the existing buildings No.1 – 23 Chun Tin Street is collected via an existing 150mm diameter sewer running north of the Site along Sung Chi Street. Along Hok Yuen Street, there is an existing 600mm / 2x450mm diameter sewer connected to an existing 1 cell 1500x825 box culvert trunk sewer along Ma Tau Wai Road. The sewage collected in the area is conveyed to the To Kwa Wan Preliminary Treatment Works.

- 4.2.2 The existing sewerage system in the area is shown on **Figure 3**.

## 5. PROPOSED DRAINAGE AND SEWERAGE CONNECTION

### 5.1 Proposed Drainage

- 5.1.1 It is proposed that the current drainage pattern should be maintained, i.e. surface runoff from the site would be discharged via a new terminal manhole and 375mm diameter drainage connection pipe to the existing 1 cell 1475x1275 trunk box culvert at existing manhole no.SMH4034040 in Hok Yuen Street. The proposed drainage connection is shown on **Figure 2**.

### 5.2 Proposed Sewerage

- 5.2.1 It is proposed that the sewage generated from the proposed development would be discharged via a new terminal manhole and 225mm diameter connection sewer to the existing 2x450/600mm diameter trunk sewer at existing manhole no.FMH4027767 in Hok Yuen Street. The proposed sewerage connection is shown on **Figure 3**.

## 6. DRAINAGE IMPACT ASSESSMENT

### 6.1 Methodology

- 6.1.1 The scope and requirements of the Drainage Impact Assessment (DIA) will focus on the assessment of changes to drainage characteristics and the assessment of potential drainage impacts, which may occur due to the proposed development. If necessary, the DIA will provide details to quantify the changes in land use and surface runoff coefficients. The DIA is



undertaken in accordance with ETWB TC No. 2/2006 and with reference to the latest DSD's record plans.

- 6.1.2 Existing and predicted flows will be estimated using the Rational Method and the surface runoff (Q) is calculated with the following equation:

$$Q_p = 0.278 C i A$$

where  $Q_p$  = peak runoff in m<sup>3</sup>/s  
 $C$  = runoff coefficient (dimensionless)  
 $i$  = rainfall intensity in mm/hr  
 $A$  = catchment area in km<sup>2</sup>

- 6.1.3 Hydraulic assessment will be based on 1 in 50 year rainstorm return period.
- 6.1.4 Runoff coefficients for different surface types are in accordance with Section 7 of the Stormwater Drainage Manual (SDM). For developed urban area, the fixed runoff coefficient value for paved area is 1.0 (C=1.0).
- 6.1.5 Rainfall intensity adopted in this assessment is in accordance with Section 4.3.2 of SDM and 5 minutes duration is applied.

$$i = a/(t_d + b)^c$$

where  $i$  = extreme mean intensity in mm/hr  
 $t_d$  = duration in minutes  
 $a, b, c$  = storm constants given in SDM Table 3

- 6.1.6 The hydraulic capacity of drainage pipes is calculated using Colebrook-White Equation. A Colebrook-White roughness coefficient (ks) of 1.5mm is adopted for all existing and proposed drains.

### 6.2 Assessment of Drainage Impacts

- 6.2.1 As the existing site is fully paved and the storm water surface runoff from the Site is collected and discharged to the existing storm water 1 cell 1475x1275 trunk box culvert along Hok Yuen Street and that after the proposed development, the drainage characteristics will remain unchanged and no increase in surface runoff as a result, therefore, no significant drainage impact is anticipated.

- 6.2.2 According to the calculation in Table B-1 of **Appendix B**, it is observed that the capacity of the proposed 375mm diameter drainage connection pipe for the Site is sufficient to accommodate all surface runoff generated from the proposed development.

- 6.2.3 As such, the project will not cause any flood risk on the existing drainage system and no mitigation measures is required.

### 6.3 Temporary Drainage and Mitigation Measures

- 6.3.1 As no permanent drainage impact is anticipated due to the proposed





development, this Section focuses on the mitigation measures for the potential drainage impacts which may occur during the construction phase.

6.3.2 Prior to the commencement of the construction works, the Contractor will be required to submit the method statement to the Engineer / Engineer's Representative for approval.

6.3.3 The method statement should include:

- (a) Temporary drainage arrangement, if any, to suit the construction method; and
- (b) Measures for ensuring construction / excavated materials would not be washed down into the existing drainage system.

6.3.4 Layout plans of temporary drainage arrangement should also be submitted to Mainland South of DSD for comments.

6.3.5 Sand / silt removal facilities, for instance sand traps and sediment basins, will be provided before discharging the storm water into the existing drainage system. To ensure no sand or silt is accumulated at the downstream storm water drains and/ or stream courses as a result of ineffective implementation of the proposed mitigation measures, those storm water drains and/ or stream courses will be regularly monitored. If any built up of earth materials is observed, the Contractor will be instructed to remove it immediately.

6.3.6 All temporary drainage mitigation measures will follow the good site practice recommended in EPD's Practice Note ProPECC PN1/94 on Construction Site Drainage and DSD's Technical Circular No. 14/2000 - Temporary Flow Diversions and Temporary Works Affecting Capacity in Stormwater Drainage Systems.

6.3.7 With the implementation of the mitigation measures, it is anticipated that there would be no unacceptable adverse impact on the existing drainage system arising from the proposed works during the construction phase.

## 7. SEWERAGE IMPACT ASSESSMENT

### 7.1 Methodology

7.1.1 The sewage flow generated from the proposed development was estimated in accordance with the EPD's Report No. EPD/TP 1/05 – Guidelines for Estimating Sewage Flows for Sewage Infrastructure Planning (GESF) and the Sewerage Manual published by DSD.

7.1.2 Sewage flows generated from the proposed development has been assessed to identify any sewers with inadequate capacity arising from the proposed development. The parameters and design assumptions used in the assessment are presented below.



7.1.3 Unit flow factors for domestic flows and non-domestic flows as recommended in the GESF have been adopted to estimate the total sewage flow generated from the proposed development and surrounding catchments. The factors adopted for this project are summarized in Table 7-1, Table 7-2 and Table 7-3 below.

**Table 7-1 : Unit Flow Factors for Domestic Flows**

	Unit Flow Factor (m <sup>3</sup> /day)
Private R1	0.190

**Table 7-2 : Unit Flow Factors of Commercial Flows**

	Unit (per)	Unit Flow Factor (m <sup>3</sup> /day)
Commercial Employee	employee	0.080
Commercial activities		
(a) Specific trades:		
J4 Wholesale & Retail	employee	0.200
J10 Restaurants & Hotels	employee	1.500
J11 Community, Social & Personal Services	employee	0.200

Notes of Table 7-2:

- (1) For job type J11, the "per-employee" unit flow factor takes into account the flows of customers and/or tenants.
- (2) The total unit flow generated from an employee in a particular trade is the sum of the unit flow factor of employee and the unit flow factor of commercial activities of a particular trade under consideration.

**Table 7-3: Unit Flow Factors for Industrial Flows**

	Unit (per)	Unit Flow Factor (m <sup>3</sup> /day)
Industrial Employee	employee	0.080
Industrial activities		
J1 Manufacturing		
- Central Kowloon	employee	0.550

Notes of Table 7-3:

- (1) The total unit flow generated from an employee in a particular trade is the sum of the unit flow factor of employee and the unit flow factor of commercial activities of a particular trade under consideration.

7.1.4 The Catchment Inflow Factor (PCIF) according to GESF is assumed 1.0.

7.1.5 The design peaking factors for sewers according to GESF have been adopted for estimating the peak sewage flow from the proposed developments, and the adopted factors are presented in Table 7-4 below.





**Table 7-4 : Peaking Factors**

Population Range	Peaking Factor (including stormwater allowance) for facility with existing upstream sewerage	Peaking Factor (excluding stormwater allowance) for facility with new upstream sewerage
<1,000	8	6
1,000 – 5,000	6	5
5,000 – 10,000	5	4
10,000 – 50,000	4	3
>50,000	$Max(\frac{7.3}{N^{0.15}}, 2.4)$	$Max(\frac{6}{N^{0.175}}, 1.6)$

Notes: (1) N is the contributing population in thousands.

7.1.6 The sewer capacity is calculated using Colebrook-White Equation and Ks of 1.5mm is adopted for the assessment.

## 7.2 Assessment of Sewerage Impacts

7.2.1 An assessment of the capacity of the existing sewers to accommodate the sewage generated from the proposed development has been carried out. The sewerage catchment plan is shown in **Figure 4**. The estimated sewage flow generated from the proposed development and the sub-catchments are summarised respectively in Table 7-5 and Table 7-6 below.

**Table 7-5 : Summary of Estimated Sewage from the Proposed Development**

	Global Unit Flow Factor (m <sup>3</sup> /d)	Population	Estimated Sewage (ADWF) <sup>(1)</sup> (m <sup>3</sup> /s)	Catchment Inflow Factor (P <sub>CIF</sub> )	Peaking Factor	PWWF <sup>(2)</sup> (m <sup>3</sup> /s)
Private R1	0.190	682	0.00150	1.0	8	0.01200
Non-domestic	0.280	174	0.00056	1.0	8	0.00451
	1.580	33	0.00060	1.0	8	0.00483
<b>Total</b>						<b>0.02134</b>

Notes:

- (1) ADWF – Average dry weather flow  
(2) PWWF – Peak wet weather flow, which is equivalent to ADWF x Catchment Inflow Factor (1.0) x Peaking Factor (8)



**Table 7-6 : Summary of Estimated Sewage from the Sub-catchment**

Manhole ID	Sub-catchment	Approx. Area (m <sup>2</sup> )	Population <sup>(1)</sup>	Type	Unit Flow Factor (m <sup>3</sup> /day/person)	ADWF (m <sup>3</sup> /day)	Total ADWF (m <sup>3</sup> /s)
FMH4027767	Eldex Industrial Building	3805	254	J1	0.63	159.81	0.02808
	Summit Building	3898	260	J1	0.63	163.72	
	Winner Building	2457	164	J1	0.63	103.19	
	Loong King Mansion	-	1262	R1	0.19	239.78	
	Green Island Cement Substation	349	23	J1	0.63	14.66	
	Kaiser Estate Phase I / II	7602	507	J11	0.28	141.90	
	Conic Investment Building	3052	203	J11	0.28	56.97	
	Kaiser Estate Phase III	3264	218	J11	0.28	60.93	
	Gemstar Tower	5783	386	J11	0.28	107.95	
	Focal Industrial Centre	8632	575	J1	0.63	362.54	
	Heng Ngai Jewelry Centre	3805	254	J1	0.63	159.81	
	Harbour Centre Tower 2	4156	277	J11	0.28	77.58	
	Hilder Centre	1635	109	J1	0.63	68.67	
	Guardforce Centre	2777	185	J1	0.63	116.63	
	Fu Hang Industrial Building	4085	272	J1	0.63	171.57	
FMH4027764	Hang Fung Industrial Building Phase 1 & 2	5027	335	J1	0.63	211.13	0.00148
	URA Development: TKW/1/002	-	1100	R1	0.19	209.00	
	Hunghom Commercial Centre	6828	455	J11	0.28	127.46	

Notes:

- (1) The population for the sub-catchments is based on 2011 Census. The population for the proposed Development TKW/1/002 is based on the proposed number of units provided by URA. The nos. of employees is calculated assuming 1 employee per 15 square meters based on PNAP 41 (APP-6).

7.2.2 The total sewage generated from the proposed development is estimated to be 0.02134m<sup>3</sup>/s (i.e. 21.34l/s). Details of the sewage estimates are included in **Appendix C**.

7.2.3 In order to assess the impact on the existing public sewerage system due to the proposed development, the capacity of the existing public sewers along Hok Yuen Street needed to be checked and are shown in **Appendix D**.

7.2.4 According to the assessment result in Table D-1 of **Appendix D**, the capacity of the proposed 225mm diameter sewerage connection pipe and the existing 2x450/600mm diameter sewers along Hok Yuen Street is sufficient in terms



of capacity and is therefore, sufficient to accommodate the sewage generated from the proposed development.

## **8. CONCLUSION**

### **8.1 Drainage**

- 8.1.1 As the existing site is fully paved and the land use and drainage conditions after the proposed development remain unchanged, there should be no increase in surface runoff and hence no drainage impact on existing drainage system due to the proposed development. The capacity of the proposed 375mm diameter drainage connection pipe for the proposed development should be adequate. Therefore, no mitigation measures are required on the existing drainage system.
- 8.1.2 Temporary drainage mitigation measures will follow the good site practice recommended in EPD's ProPECC PN1/94 and DSD's TC No. 14/2000. It is anticipated that there would be no unacceptable adverse impact on the existing drainage system during construction with implementation of the mitigation measures.
- 8.1.3 As such, the proposed development will not cause an unacceptable increase in the risk of flooding in areas upstream of, adjacent to or downstream of the project site both during construction and upon completion.

### **8.2 Sewerage**

- 8.2.1 The proposed development will generate a sewage flow of 0.02134m<sup>3</sup>/s (i.e. 21.34l/s). The sewage flow generated from the proposed development will be collected by a new terminal manhole for discharging to the existing sewers along Hok Yuen Street via the proposed 225mm diameter connection sewer at existing manhole no.FMH4027767.
- 8.2.2 As shown in the assessment result in Table D-1, the capacity of the existing 2x450/600mm diameter sewers along Hok Yuen Street should be adequate to accommodate the sewage generated from the proposed development.
- 8.2.3 No adverse impact on the existing sewerage system is anticipated as a result of the proposed sewage discharge to the existing 2x450/600mm diameter sewers along Hok Yuen Street for the proposed development.





## Figures



Project  
**TERM ENVIRONMENTAL CONSULTANCY SERVICES**  
**PROPOSED CHUN TIN STREET/SUNG CHI STREET DEVELOPMENT**  
**SCHEME- DRAINAGE AND SEWERAGE IMPACT ASSESSMENT**

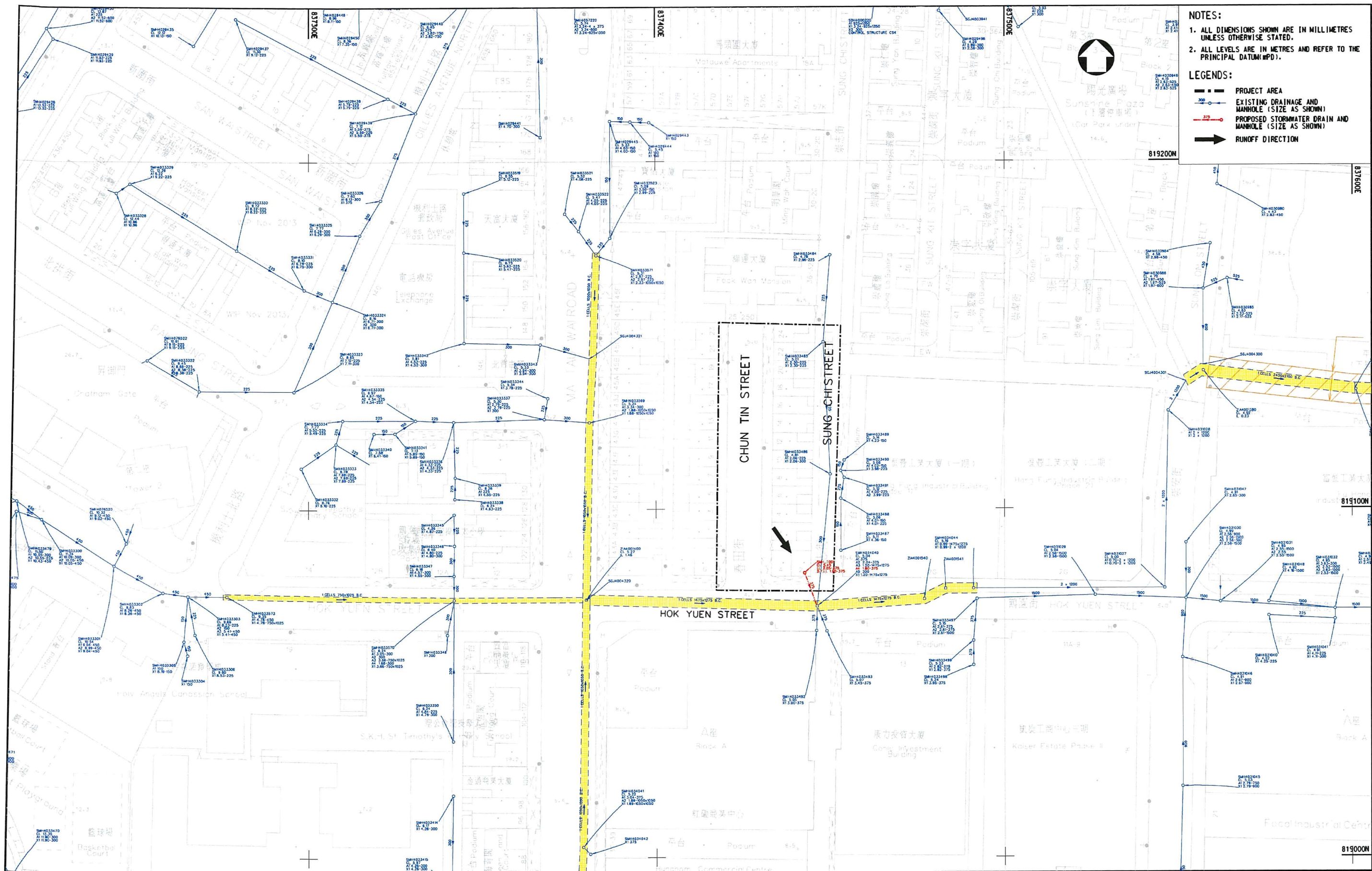
市區重建局  
 URBAN RENEWAL AUTHORITY

Drawing Title  
**SITE LOCATION PLAN**

Drawing No. 圖則編號	<b>FIGURE 1</b>		
Drawn 繪圖	XK	Checked 校核	WCHE/DL
Scale 比例	1:1000 @ A3	Date 日期	02/2016
		Date 日期	02/2016
		Status 現況	PRELIMINARY

**AECOM** AECOM Consulting Services Limited





**NOTES:**  
 1. ALL DIMENSIONS SHOWN ARE IN MILLIMETRES UNLESS OTHERWISE STATED.  
 2. ALL LEVELS ARE IN METRES AND REFER TO THE PRINCIPAL DATUM (MPD).

**LEGENDS:**  
 ——— PROJECT AREA  
 ——— EXISTING DRAINAGE AND MANHOLE (SIZE AS SHOWN)  
 ——— PROPOSED STORMWATER DRAIN AND MANHOLE (SIZE AS SHOWN)  
 → RUNOFF DIRECTION

Project  
**TERM ENVIRONMENTAL CONSULTANCY SERVICES**  
**PROPOSED CHUN TIN STREET/SUNG CHI STREET DEVELOPMENT**  
**SCHEME- DRAINAGE AND SEWERAGE IMPACT ASSESSMENT**

市區重建局  
 URBAN RENEWAL AUTHORITY

Drawing Title  
**EXISTING DRAINAGE AND**  
**PROPOSED DRAINAGE CONNECTION**

Drawing No. 圖則編號	<b>FIGURE 2</b>		
Drawn 繪圖	XK	Checked 校核	WCHE/DL
Scale 比例	1:1000 @ A3	Date 日期	02/2016
Status 現況	PRELIMINARY		
		Approved 批准	-
		Date 日期	02/2016

**AECOM** Consulting Services Limited







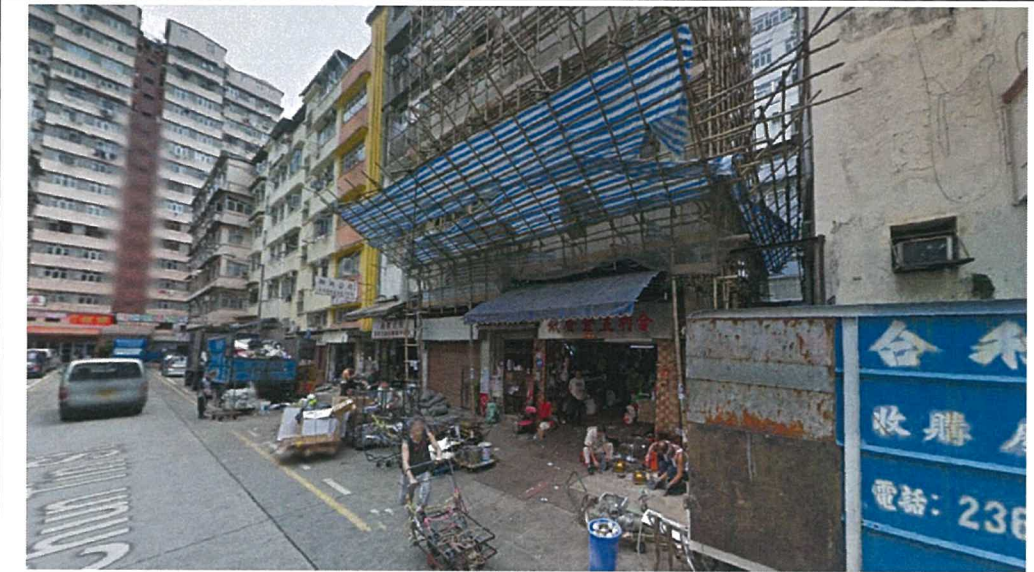






## Appendix A

### Recent Photos of the Site



Chun Tin Street



Chun Tin Street / Hok Yuen Street





Sung Chi Street



Sung Chi Street



Appendix B  
Proposed Drainage Connection Pipe

Term Environmental Consultancy Services  
Proposed Chun Tin Street / Sung Chi Street Development Scheme  
Appendix B - Proposed Drainage Connection Pipe

Table B-1 Capacity Check of Drainage Connection Pipe

Manhole		Invert Levels (mPD)			Design of Pipe										Runoff Estimation					Capacity OK / Not OK ?			
					Shape	Length (m)	Size (mm)	Gradient (1 in)	Hydraulic radius (m)	Cross area (m <sup>2</sup> )	Roughness (m)	Full Bore Velocity (m/s)	Full Bore Capacity (m <sup>3</sup> /s)	Time of Flow (min)	Time of concentration (min)	Paved Area (m <sup>2</sup> )	Upaved Area (m2)	Intensity (mm/hr)	Paved Runoff coefficient		Upaved Runoff coefficient	Peak Flow (m <sup>3</sup> /s)	
From Manhole	To Manhole	u/s	d/s	u/s	d/s																		
SMH <sub>1</sub> T001	SMH4034040 <sup>(1)</sup>	1.90	1.80			Circ	10.3	375	103.0	0.094	0.110	0.0015	1.58	0.174	0.1087	5.1087	1688	0	269.2	0.3	0.3	0.114	OK

Note: (1) Proposed Connection Point  
(2) Time of entry of 5 minutes is assumed

Parameters:  
Roughness  $K_s$  (Conc. Pipe) = 1.5 mm  
Kinematic Viscosity ( $\nu$ ) =  $1.14 \times 10^{-6}$  m<sup>2</sup>/s  
Paved Area Runoff Coefficient = 0.90  
Upaved Area Runoff Coefficient = 0.30  
(Refer to Fluid Mechanics)

Rain Storm Return Period = 50year	
a =	687
b =	4.2
c =	0.42
Rainfall Intensity $I = a/(1+b)^c$	



Term Environmental Consultancy Services  
Proposed Chun Tin Street / Sung Chi Street Development Scheme  
**Appendix C - Estimated Sewage Generated from the Proposed Development**

**1. Residential Flow (Domestic)**

Proposed no. of Units	=		310
Flat Occupancy Assumption (Refer to PlanD HKPSG, Table 9)	=		2.2
Proposed residential population	=	310 x 2.2 =	682
Proposed Unit Flow Factor for Private R1 (Refer to EPD Technical Paper, Report No.EPD/TP 1/05, Table T-1)	=		0.19 m <sup>3</sup> /day
Residential foul flow	=		682 x 0.19 m <sup>3</sup> /day
	=		129.58 m <sup>3</sup> /day
	=		0.00150 m <sup>3</sup> /sec

**2. Commercial/Other Use Flow (Non-domestic)**

**i) Planned Area for Club House**

Refer to EPD Technical Paper, Report No. EPD/TP 1/05, Table T-2 For "Type J11 - Community, Social & Personal Services" -	=		633 m <sup>2</sup>
Proposed Unit Flow Factor of Commercial Activities (per employee)	=		0.2 m <sup>3</sup> /day
Proposed Unit Flow Factor of Commerical Employee	=		0.08 m <sup>3</sup> /day
Refer to PNAP 41 (APP-6), assumed 1 person for every 15m <sup>2</sup> , Number of non-domestic Population	=		633/15
	=		43 employee
Hence, non-domestic flow from i)	=		12.04 m <sup>3</sup> /day
	=		0.00014 m <sup>3</sup> /sec

**ii) Planned Area for Retail**

Assumed approx. 20% of retail area to be restaurants use Refer to EPD Technical Paper, Report No. EPD/TP 1/05, Table T-2 For "Type J4 - Wholesale & Retail" -	=		2,454 m <sup>2</sup>
	=	20% of 2,454 =	491 m <sup>2</sup>
Proposed Unit Flow Factor of Commercial Activities (per employee) For "Type J10 - Restaurants & Hotels" -	=		0.2 m <sup>3</sup> /day
Proposed Unit Flow Factor of Commercial Activities (per employee)	=		1.5 m <sup>3</sup> /day
Proposed Unit Flow Factor of Commerical Employee	=		0.08 m <sup>3</sup> /day
Refer to PNAP 41 (APP-6), assumed 1 person for every 15m <sup>2</sup> , Number of non-domestic Population (Wholesale & Retail)	=	(2,454-491)/15 =	131 employee
Number of non-domestic Population (Restaurants & Hotels)	=	491/15 =	33 employee
Hence, non-domestic flow from ii) (Wholesale & Retail)	=		36.68 m <sup>3</sup> /day
(Restaurants & Hotels)	=		52.14 m <sup>3</sup> /day
	=		0.00103 m <sup>3</sup> /sec
Hence, total non-domestic flow from the development i) + ii)	=		0.00117 m <sup>3</sup> /sec

## Appendix C

### Estimated Sewage Generated from the Proposed Development



3. Total Sewage Generated from the Proposed Development

Peak Factor (Refer to EPD Technical Paper, Report No. EPD/TP 1/05, Table T-5)	=	8
Unit Inflow Factors (P <sub>CIF</sub> ) for Central Kowloon (Refer to EPD Technical Paper, Report No. EPD/TP 1/05, Table T-4)	=	1
Domestic Total	=	0.00150 m <sup>3</sup> /sec
Non-domestic Total	=	0.00117 m <sup>3</sup> /sec
Domestic + Non-domestic Total	=	0.00267 m <sup>3</sup> /sec
Factored Domestic + Non-domestic Total	=	0.02134 m <sup>3</sup> /sec

Appendix D

Proposed Sewerage Connection Pipe  
and Assessment of Existing Sewers

Term Environmental Consultancy Services  
Proposed Chun Tin Street / Sung Chi Street Development Scheme  
Appendix D - Proposed Sewerage Connection Pipe and Assessment of Existing Sewers

Table D-1: Capacity Check of Existing Sewers after the Proposed Development

CW Equation Parameters:  $k = 1.5 \text{ mm}$   
 $g = 9.81 \text{ m/s}^2$   
 $v = 1.00E-06 \text{ m}^3/\text{s}$

Existing Sewers		Diameter of Pipe (mm)	Pipe Length (m)	US GL (mPD)	DS GL (mPD)	US IL (mPD)	DS IL (mPD)	US Cover Depth (mm)	DS Cover Depth (mm)	Gradient	Full Bore Velocity (m/s)	Full Bore Capacity (m <sup>3</sup> /s)	Base Flow* (m <sup>3</sup> /s)	ADWF due to Proposed Development (m <sup>3</sup> /s)	Cumulative ADWF (m <sup>3</sup> /s)	Contributing Population	Peaking Factor	Total Design Flow (m <sup>3</sup> /s)	Full Bore Capacity > Estimated Cumulative Flow	Remarks
From	To																			
FMH_T001	FMH_PR_001	225	17.00	5.20	5.13	3.80	3.67	1.18	1.24	0.0076	1.00	0.040	0.00000	0.00267	0.00267	853	8	0.02134	Yes	Sufficient Capacity
FMH_PR_001	FMH027767	225	11.00	5.13	5.15	3.67	3.24	1.24	1.68	0.0391	2.27	0.059	0.00000	0.00267	0.00267	853	8	0.02134	Yes	Sufficient Capacity
FMH027767	FMH027764	450 x 2	11.93	5.15	5.30	3.24	3.14	1.46	1.71	0.0064	1.65	0.323	0.02808	0.00000	0.03074	9838	5	0.15372	Yes	Sufficient Capacity
FMH027764	FGJ001503	600	9.89	5.30	5.35	3.14	3.11	1.56	1.64	0.0031	1.21	0.341	0.00148	0.00000	0.03222	10310	4	0.12885	Yes	Sufficient Capacity

Note: \* Base Flow refers to the ADWF due to existing development and other proposed/planned developments discharging to the concerned sewer and detail breakdown refers to Table 7-5.

## **PART 3      SUPPLEMENTARY INFORMATION**

Appendix 6      Social Impact Assessment (Stage 1) Report



**Urban Renewal Authority**  
**CHUN TIN STREET / SUNG CHI STREET DEVELOPMENT SCHEME**  
**KC-008(A)**

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**Social Impact Assessment (Stage 1) Report**



May 2016

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- 2. THE SCHEME AREA
- 3. HISTORICAL BACKGROUND (Figure 3.1)
- 4. POPULATION & SOCIO-ECONOMIC CHARACTERISTICS
- 5. HOUSING & ENVIRONMENTAL CONDITIONS
- 6. CULTURAL & LOCAL CHARACTERISTICS, AND CHARACTERISTICS OF LOCAL BUSINESS ACTIVITIES
- 7. RECREATIONAL, AMENITY & COMMUNITY AND WELFARE FACILITIES
- 8. INITIAL ASSESSMENT OF POTENTIAL SOCIAL IMPACT, AND MITIGATION MEASURES
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## 1. INTRODUCTION

1.1 This Social Impact Assessment (SIA) Report for Urban Renewal Authority Chun Tin Street / Sung Chi Street Development Scheme (KC-008(A)) is prepared in accordance with the guidelines stipulated in the Urban Renewal Strategy (URS) requiring the Urban Renewal Authority (URA) to undertake SIA for each proposed scheme or project. In the new Urban Renewal Strategy (URS) issued by the Government in February 2011, the Urban Renewal Authority (URA) will carry out Social Impact Assessment (SIA) studies in the form of “a Stage 1 social impact assessment ..... before the publication of any proposed redevelopment project in the Government Gazette”; and “a Stage 2 social impact assessment .... after the proposed project has been published in the Government Gazette”.

1.2 The URS also states “Early social impact assessments will be initiated and conducted by the DURF (District Urban Renewal Forum) before redevelopment is recommended as the preferred option. The URA will update these assessments by DURF before implementing any specific redevelopment project.” As the Chun Tin Street / Sung Chi Street Development Scheme (the Scheme) falls within the study area of Kowloon City DURF (“KC DURF”) and the consultants for the KC DURF have completed a SIA report of the Urban Renewal Plan for Kowloon City in 2014, reference has been made to this SIA report, where appropriate, in preparation of this Stage 1 SIA.

1.3 According to the URS, the main elements of the non-obtrusive SIA (Stage 1) conducted by the URA before publication of a proposed project should include:-

- the population characteristics of the proposed project area;
- the socio-economic characteristics of the area;
- the housing conditions in the area;
- the characteristics of local business activities, including small shops and street stalls;
- the degree of overcrowding in the area;
- the availability of amenities, community and welfare facilities in the area;
- the historical background of the area;
- the cultural and local characteristics of the area;
- an initial assessment of the potential social impact of the proposed project; and
- an initial assessment of the mitigation measures required.

1.4 The SIA Stage 2 to be conducted after publication of the project will use factual data collected as part of the Freezing Survey (FS) to be conducted upon project commencement. The URS stipulates URA should submit the reports of both the Stage 1 and Stage 2 SIAs to the Town Planning Board (TPB) when it submits a development scheme under section 25 of the Urban

Renewal Authority Ordinance (URAO). It also stipulates the URA should release the reports for public information.

1.5 The URA has decided not to proceed further with the project KC-008 Chun Tin Street / Sung Chi Street, To Kwa Wan, Kowloon City (‘KC-008 project’) and that the KC-008 project should accordingly be withdrawn. The KC-008 project will be discontinued immediately after the publication of relevant Gazette Notice on 6 May 2016. This SIA Stage 1 report is conducted for the Scheme with reference to the SIA assessment from DURF and relevant information collected from the KC-008 project.

## 2. THE SCHEME AREA

2.1 The Scheme comprises buildings at Nos. 2-24 Chun Tin Street (even nos.), Nos. 2-4 Hok Yuen Street (even nos.), the whole Chun Tin Street and part of Sung Chi Street in Kowloon City (**Figure 2.1**). The buildings at Nos. 2-24 Chun Tin Street are 5 to 6 storeys high with cocklofts in the ground floor units of some buildings; whilst the buildings at Nos. 2-4 Hok Yuen Street are 4 storeys high with cocklofts in the ground floor units. The Scheme is bounded by Sung Chi Street to the east, Hok Yuen Street to the south and the URA Ma Tau Wai Road/ Chun Tin Street Development Project (TKW/1/002) to the west. The Scheme covers an area of about 2,475m<sup>2</sup>. The net site area used to calculate the development potential of the Scheme is around 1,636m<sup>2</sup>, which included the area of all the private lots within the Scheme boundary and a portion of existing Chun Tin Street which will be closed permanently for redevelopment and plot ratio calculation of the Scheme.

2.2 The Scheme falls within the “Proposed Mixed Redevelopment and Rehabilitation Area”, in the KC DURF’s Urban Renewal Plan ( covering Bailey Street /Chun Tin Street /San Wai Street /Chatham Road North, Hung Hom). The KC DURF’s Urban Renewal Plan recommended that in the “Proposed Mixed Redevelopment and Rehabilitation Area”, “*redevelopment / and or rehabilitation works are to be carried out at suitable locations having regard to the conditions of individual buildings*”. The SIA of the KC DURF, in particularly the community profile compiled for the area, will be taken into consideration in this report.

2.3 Immediately to the west of the Scheme is the aforementioned URA Ma Tau Wai Road / Chun Tin Street Development Project (TKW/1/002) which was commenced on 29 January 2010 by URA as a self-initiated and self-developed project without joint venture partner. In December 2010, the Secretary for Development (SDEV) has authorized the URA to proceed with the TKW/1/002. The redevelopment intention for TKW/1/002 is for residential towers with commercial / retail podium, with provision of community facility space and at grade open space / amenity area



which would increase local community facility space and help improve streetscape and air ventilation. The said project is currently under construction and is expected to be completed in 2018/19.

- 2.4 The Scheme is also bounded by Sung Chi Street to the east. The existing Sung Chi Street is a sub-standard street for one-way traffic only, with no continuous pavement for pedestrians to walk along. Based on site observation, the situation is compounded by a variety of activities (recycling, lighting engineering, etc) extended from the backyard of the existing buildings of the Scheme which occupy most of the pavement along the street. There are also illegal structures spilling onto the said street with occasional illegal parking of vehicles. The Scheme will propose to widen Sung Chi Street to carry 2-way traffic. Opportunities to improve streetscape and pedestrian walking environment of Sung Chi Street through road widening of Sung Chi Street and regulating the activities within the Scheme boundary along the interface area would be studied.
- 2.5 The Scheme area includes the existing Chun Tin Street which is a dead-end street providing vehicular access to the adjacent Fook Wan Mansion to the north of the Scheme and the future URA development TKW/1/002 to the west of the Scheme. The quiet nature and low traffic of the said street has attracted recycling, car repair and light engineering businesses, which have taken advantage of the 'public' space for additional storage and work space. These activities degrade the general living environment of the area. The street is also provided with on-street metered parking spaces and loading bays, which incurs reverse movement of vehicles, congestion and safety concerns on the street.
- 2.6 The Scheme proposed for permanent closure of the existing Chun Tin Street and included the street for redevelopment. The enlarged Scheme area would bring the following benefits:
- Remove the cul-de-sac condition to improve traffic circulation and provide safer pedestrian environment;
  - Enlarged Scheme area to allow comprehensive redevelopment of the whole area and greater flexibility in building and planning design;
  - Better integration with the URA TKW/1/002 development to enhance urban design and integrated land uses; and
  - Better utilisation of land for more flat supply to meet the mass market demand.

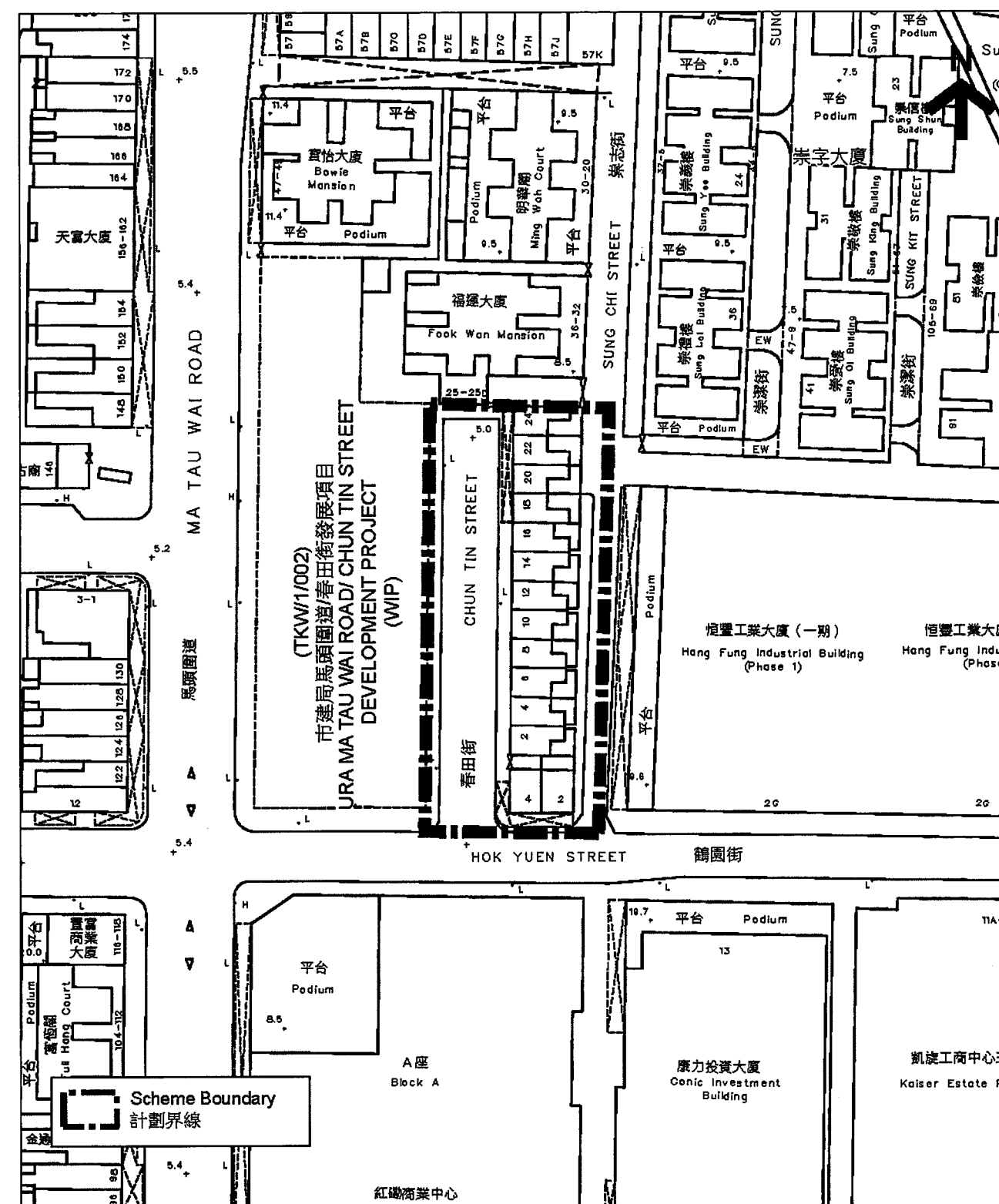


Figure 2.1 Location Plan



3. HISTORICAL BACKGROUND (Figure 3.1)

- 3.1 The origin of the name “To Kwa Wan” has two different narratives. One was named after the bay with plentiful crops of sweet potatoes (“To Kwa”). Another suggests that the Hoi Sum Island (in the middle of the sea) just opposite to To Kwa Wan was shaped like a “To Kwa”.
- 3.2 Before 1864, To Kwa Wan was a bay lined by beaches and mud-flats and the only significant stream from the hinterland running towards the bay was Ma Hang Chung, which flowed closely along the existing Ma Hang Chung Road. Ma Tau Kok (means pier’s headland) was the northern headland of the bay, which was probably named after the long pier of Kowloon Walled City nearby.
- 3.3 To the south of Ma Tau Kok, there was a string of villages along the coast of To Kwa Wan Bay sharing the name of To Kwa Wan Village. This agricultural and stone-cutters village was believed to be the largest village in the To Kwa Wan and Hung Hom area with over 400 people living in 1873.

Land Reclamation

- 3.4 Historical map records indicate that the Scheme Area was probably situated near the coastline before 1890s. Several rounds of reclamation had been undertaken in Ma Tau Kok Bay, To Kwa Wan Bay and Hung Hom since 1890s till 1960s to increase land at the coastline for residential development and industrial uses such as manufacturing, car-repairing, weaving, bleaching and dyeing, printing and electroplating.

Hoi Sum Park

- 3.5 Hoi Sum Island was originally a small island but was subsequently linked with the mainland by reclamation. In 1964, the Lung Mo Temple at the island was relocated into the Tin Hau Temple at No. 49 Ha Heung Road. Hoi Sum Island was developed as Hoi Sham Park with the landmark of Fishtail Rock. The Tin Hau Temple has been graded the Grade III status by the Antiquities Advisory Board.

Pak Tai Temple

- 3.6 The temple was originally located on a hillock, at the junction of the present Tsing Chau Street and Ma Tau Wai Road. According to the inscription on the incense burner, the temple was built in 1876. However, because of urbanization, the temple was demolished and a new temple was built at the present location in the 1930s. The temple had undergone major renovation in 2005.

Green Island Cement

- 3.7 Green Island Cement Company was founded in Macau in 1887. The company has set up a cement plant in Hung Hom, near the existing Hok Yuen Street and Hung Hom Road. The plant covered a large area with both rail and pier for raw materials and products transportation. It supplied cement for both local and overseas construction projects and provided support to the city development. The plant was moved and redeveloped into industrial and commercial blocks, while part of the pier still exists near the building named “Harbour Centre”.

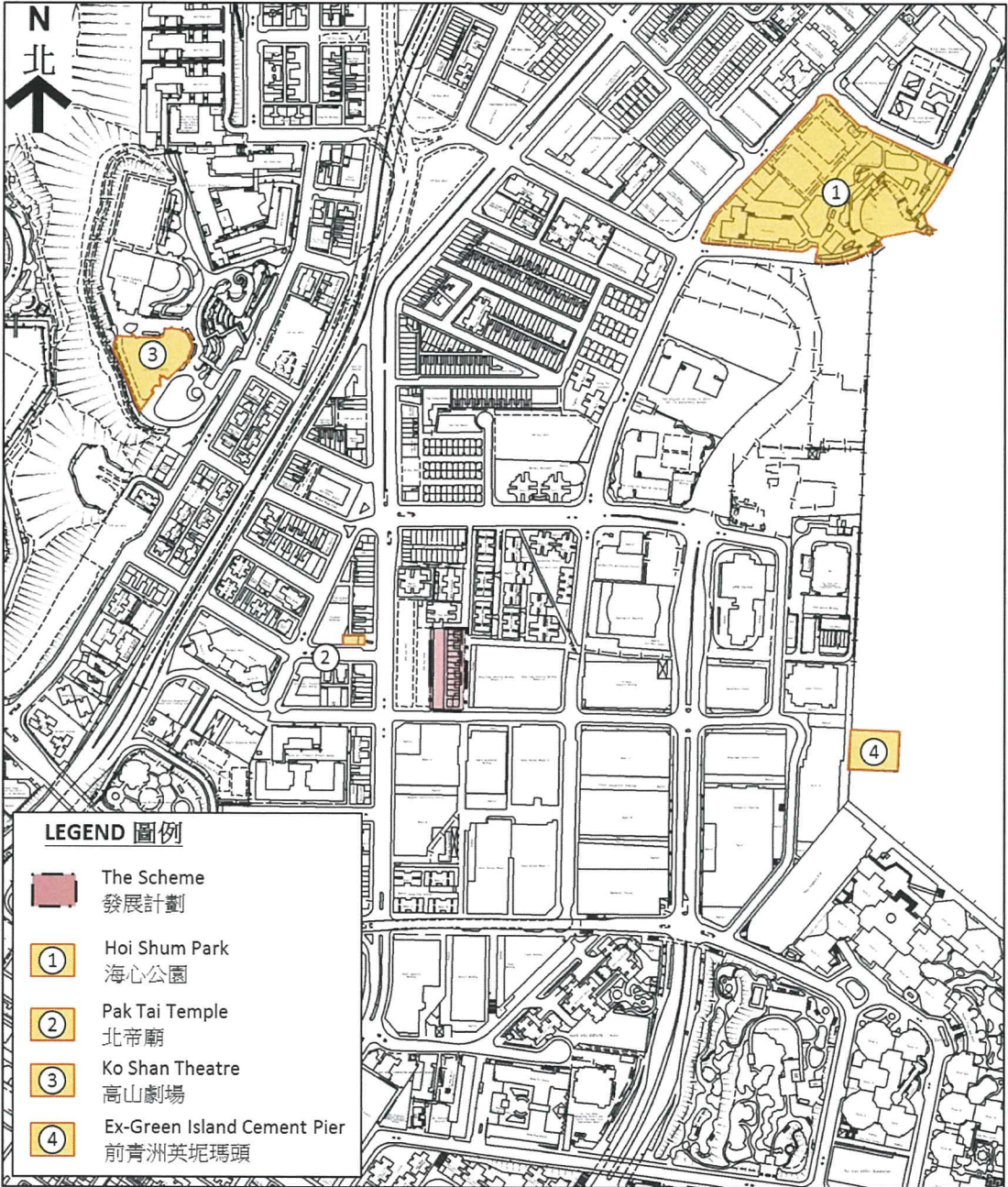


Figure 3.1 Places with Historical Background and Local Characters in To Kwa Wan and Hung Hom



4. POPULATION & SOCIO-ECONOMIC CHARACTERISTICS

4.1 To assess the population and socio-economic characteristics of the Scheme, a combination of sources has been used, namely the 2011 Population Census, past experience from URA KC-008 project and other URA redevelopment projects, and for the accommodation assessment, approved building plans and on-site non-obtrusive inspection.

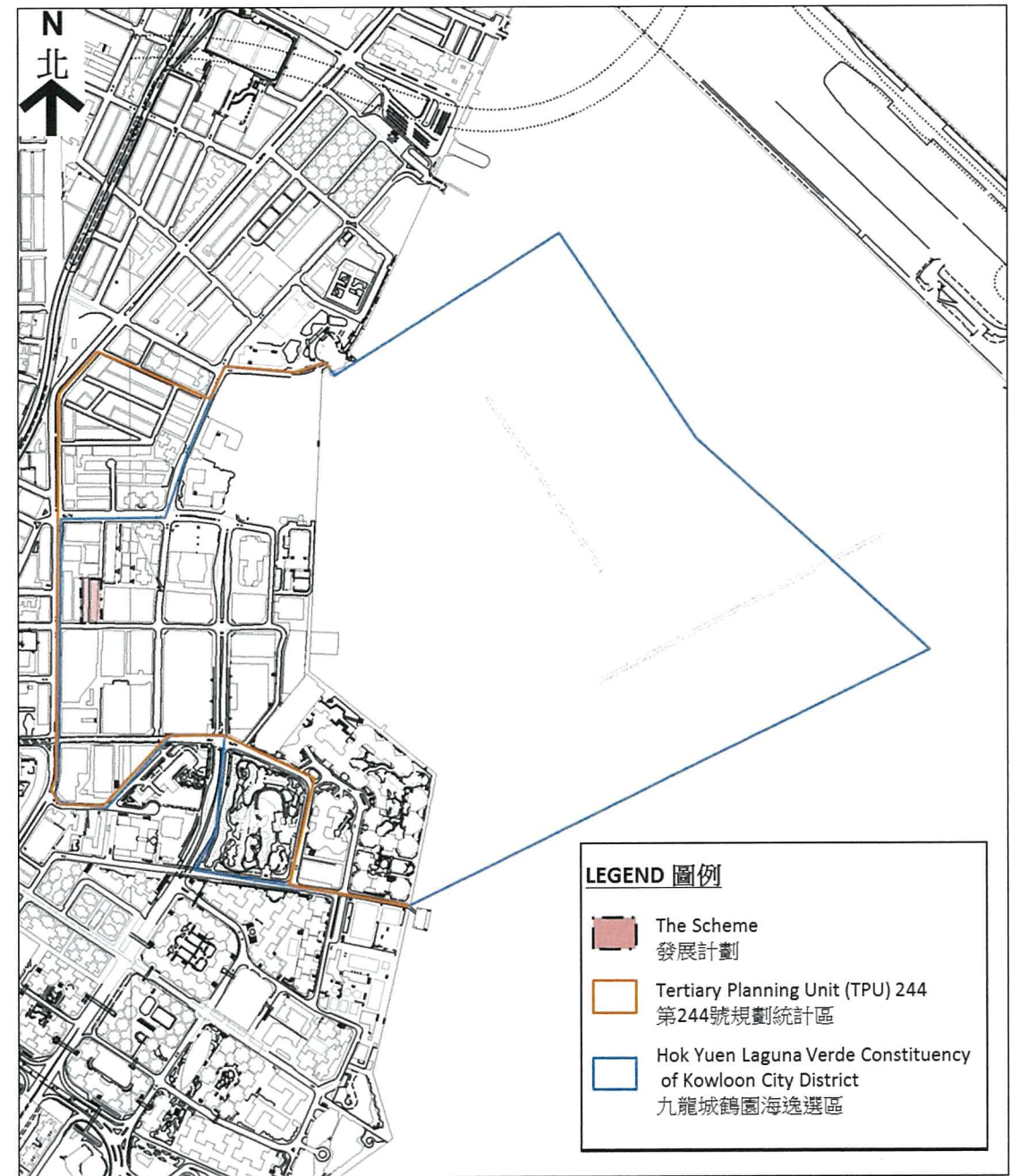


Figure 4.1 Boundary of Hok Yuen Laguna Verde Constituency (G17) of the Kowloon City District and Tertiary Planning Unit (TPU) 244

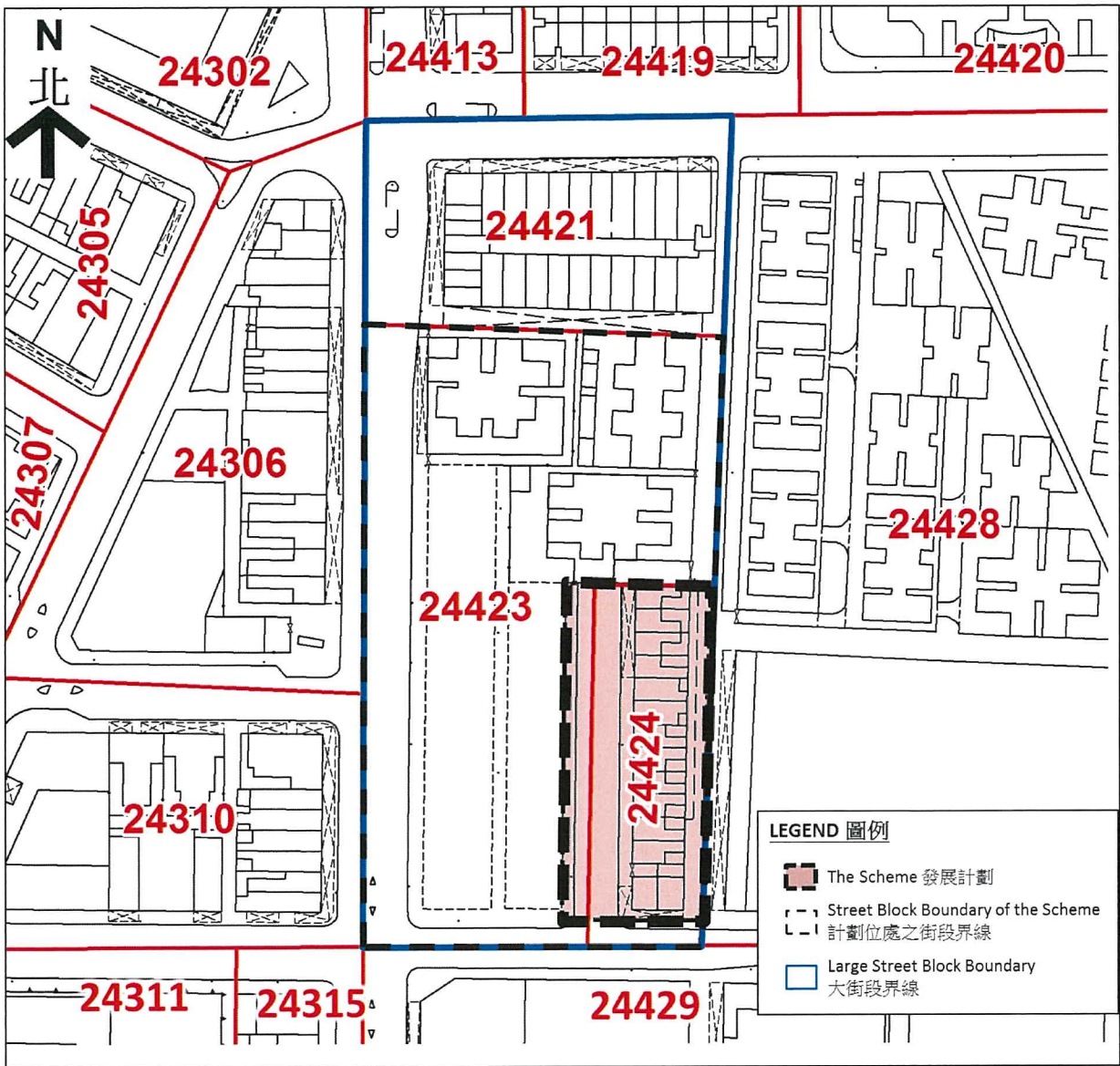


Figure 4.2 Street Block Boundary of the Scheme (TPU/SB 244/23&24) and Large Street Block (24421L covers TPU/SBs 244/21, 244/23 & 244/24)

- 4.2 The Census and Statistics Department's (C&SD) website provides the 2011 Population Census and the information is down to Tertiary Planning Unit (TPU) and Constituency Area levels. Some information, which is at the Large Street Block (LSB) level, is also obtained from C&SD upon request.
- 4.3 The Scheme area falls within Hok Yuen Laguna Verde Constituency (G17) of the Kowloon City District (Figure 4.1). The Scheme lies mostly within TPU/SB 244/24 and partly within TPU/SB/244/23 (Figure 4.2). The said TPU/SBs cover all the existing buildings within the Scheme. The boundary of LSB 24421L includes the TPU/SBs of the Scheme (244/23 & 24) and



the adjacent TPU/SB (i.e. 244/21). The LSB covers residential buildings which have different building ages. It can be assumed that the socio-economic characteristics of those residing in more modern buildings is different (i.e. more affluent in general) to those residing in the older buildings, e.g. those residing in the Scheme area. In particular, LSB information on monthly household / rent paid may not be representative for those living in the Scheme.

4.4 The SIA report submitted by KC DURF ("the Report") has suggested that the average household size within its study area is around 2.6-2.9. However, such figure corresponds to the wide study area of KC DURF, which may be less representative for older, dilapidated buildings with sub-divided flats that are in need of redevelopment. Besides, the buildings within the Scheme area were the subject of the previous URA Chun Tin Street / Sung Chi Street Development Project (KC-008 project) of which freezing survey was conducted at its commencement time in January 2015. Hence, household and population figures used in this SIA report has primarily taken reference from the data collected in KC-008 project with the degree of sharing ratio of 1.22, and average household size of around 2.4. A tenure split of about 40% owner occupied and 60% tenanted households is also assumed in the preparation of this report.

4.5 Given the background of the (general and non-obtrusive nature) source of the data available to carry out this Stage 1 SIA, the assessments derived should only be considered as indicative and for reference use only.

#### ***Overview of Housing & Population Characteristics of Kowloon City District***

4.6 As revealed in the 2011 Population Census, the Kowloon City ("KC") District has a population of about 377,351. In term of monthly household income, the SIA report of KC DURF reported that the area covering the Scheme has a median monthly household income of \$22,855, which is slightly lower than the average of the whole KC District (i.e. \$23,560). The Report explained that the low income level might be related to the residents' occupations and the high proportion of residents with low educational attainment.

4.7 The majority of the living quarters in KC District are in private housing blocks (about 81%); only about 18% of living quarters are in public rental housings / subsidized home ownership housings. The remaining living quarters (about 1%) are in other types of housing. Being built in the 1950s and 1960s, quite a number of private residential blocks in KC District appear to lack proper maintenance and management. The recent (as of December 2015) Building Conditions Survey (BCS) data on private residential buildings with a building age of 30 years or above revealed relatively high percentages of "Varied" and "Poor" conditioned building blocks in the district.

#### ***Household Composition***

4.8 The total number of households estimated to be residing within the Scheme is about 83 households (based on the information collected from KC-008 project). As shown in the approved General Building Plans and the Occupation Permits for the buildings in the Scheme, there are 68 domestic units (including 10 G/F units used for non-domestic uses in the Scheme). The estimated degree of sharing in the Scheme is 1.22 (refer to Para. 4.4 above)).

4.9 The assumed degree of sharing (or the "average number of domestic households per unit of quarters") of 1.22 is higher than 1.0 (i.e. no sharing) recorded for the Kowloon City District, and the territory. This is based on the information collected from KC-008 project. It is reflective of overcrowding and unsatisfactory living conditions, which are common features of redevelopment projects selected by the URA. This estimate would need to be verified by the results of the Stage 2 SIA.

4.10 The Census LSB proportion of singleton is 12% and the territorial figure of singleton household is 17%. However, the information collected from previous KC-008 project indicated that a relatively large number of singletons (28/79 successfully surveyed household, i.e. about 35%). The proportion of singleton household (35%) is much higher than both the LSB ratio and the territorial ratio (12% and 17% respectively). It shows that both the LSB and territorial ratios which include other newer and modern residential buildings may not be able to reflect the situation in the Scheme where there may be more singletons living in the sub-divided units. This estimate would need to be verified by the results of the Stage 2 SIA.

4.11 Based on the information collected from previous KC-008 project, the average household size of those within the Scheme is estimated to be around 2.4, which is lower than the average household sizes of the KC District (2.9) and the territory (2.9). This 'smaller' household size compared to district and territorial data could be a result of the presence of many sub-divided units and/or cubicle apartments which are occupied by mainly singletons or doubletons.

#### ***Population***

4.12 Based on the information collected from previous KC-008 project, the number of households is about 83 households, the estimated number of residents living within the Scheme is around 200 persons. The average household size is 2.4. The number of households, living quarters and population affected will all be verified by the results of the Stage 2 SIA.

4.13 Based on information collected from previous KC-008 project, the economically active age group of 25 to 64 accounts for about 66% of the total population, which is higher than the

Census data of the KC District (59%) and the whole territory (60%). A similar percentage of elderly residents over 65 (15%) is found as compared to the KC District figures (16%) and for the whole territory (13%). If this age group composition is borne out by the FS of this Scheme, the needs of this elderly group are expected to be manageable and extra attention would be paid to them.

#### ***Tenure of Accommodation***

- 4.14 As explained in Para. 4.4 above, the assumption adopted is that about 40% of the households will be owner occupiers with 60% tenants. The LSB data (which covers the Scheme and a few other residential buildings of different ages) also indicates a lower level of owner occupiers (49%) compared to the KC District data (57%) and the territorial data (52%).
- 4.15 The median monthly domestic household rent for all housing types in the Hok Yuen Laguna Verde Constituency area is \$14,500. Median rent for the all housing types in KC district is \$2,900, and the territorial level is \$1,600. The much higher medium rent for the Constituency area than the KC district and the territory is due to the presence of the new and modern private residential development, Laguna Verde, in the Constituency area which is of much higher rent than the general old private housings and public housings.
- 4.16 In conclusion, the information collected from previous KC-008 project and 2011 Census data can more or less reflect the social-economic characteristics of those residing within the Scheme area. Non-obtrusive site observation indicates that the information collected in the previous KC-008 project is still largely valid and a number of units within the Scheme appear to have been converted into sub-divided units, which are likely to be occupied by mainly singletons or doubletons. The Stage 2 SIA to be conducted upon commencement of the Scheme will give clearer and accurate information concerning those living and working within the Scheme. Both the Stages 1 and 2 SIA reports will be submitted to TPB for consideration.

### **5. HOUSING & ENVIRONMENTAL CONDITIONS**

#### ***Building Age***

- 5.1 The Scheme comprises 7 pairs of residential buildings covering 14 street numbers. Each pair of building with their own shared staircases. They were completed between 1955 and 1957, with building age of over 50 years.

#### ***Building and Living Condition***

- 5.2 The buildings within the Scheme area are all under multiple ownerships, except No. 8 Chun Tin Street which is solely owned by one company (based on records in the Land Registry as of April 2016). Based on Home Affairs Department's website information as of January 2016, No. 10-12 Chun Tin Street has an Owners' Corporation (OC), while all other blocks within the Scheme area do not have OC. According to URA's Building Condition Survey (BCS), the building conditions are generally varied. The structural elements and building fabric have defects. The defects are not only localized but also noticed at some internal common areas (e.g. roof and staircase). Some suspected UBWs can be found on the roof and backyards of some buildings.
- 5.3 Based on the Buildings Department (BD)'s records as of December 2015, three pairs of buildings (6 street numbers) within the Scheme area received repair orders issued by BD and had been subject to rehabilitation works carried out by Government Contractors under Operation Building Bright (OBB) Scheme (Category 2). OBB Category 2 involves buildings having difficulties in organizing such repair works, such as buildings without OCs. Once selected as OBB Category 2 target buildings, BD will arrange consultants and contractors engaged by the Government to carry out repair works stipulated in the repair orders on behalf of the owners. However, it is understood that these Category 2 works comprised mainly patch repair of structural defects (e.g. major cracks, spalling) in common or public areas of the buildings. In general, the physical condition of these Category 2 buildings after repair works, are improved but they cannot be considered to have a longer rehabilitation cycle as compared to other comprehensive rehabilitated buildings. Based on past URA's experience in rehabilitation works, even buildings that have undergone repair works need to undertake comprehensive building rehabilitation every 5-6 years in order to avoid deterioration to "Varied" condition.
- 5.4 Suspected UBWs are found on the rooftop and backyard of many of the buildings in the Scheme. A number of original units in the approved General Building Plans (GBPs) are suspected to be sub-divided into smaller units (sub-divided units). The living condition is considered crowded and not satisfactory, and also posing potential hazard on fire safety and hygiene problem.

#### ***Existing Uses***

- 5.5 Based on non-obtrusive site observation in February 2016, the existing ground floor units within the Scheme are used for non-domestic purpose (Para. 6.4 refers as well). The upper floor units appear to be used mainly for domestic purpose, which is in conformity with the use as permitted in the approved GBPs. Detail uses within the Scheme will be verified in the FS and to be reported in the SIA Stage 2.

Degree of Overcrowding

5.6 Based on the information collected from previous KC-008 project, the degree of sharing of living quarters (i.e. the average number of households living in per living quarter) in the Scheme is expected to be about 1.22, and the living condition of those residing within the Scheme is suspected to be less than satisfactory. The degree of sharing of living quarters of the KC District as revealed in the Census is about 1.0, which is not representative of the situation in the Scheme. The degree of sharing of about 1.0 for KC district is due to the district has public housing estates and some relatively newer private residential blocks completed after the 1970s or 1980s, which tend to have only “one household per living quarter”.

6. CULTURAL & LOCAL CHARACTERISTICS, AND CHARACTERISTICS OF LOCAL BUSINESS ACTIVITIES

6.1 To Kwa Wan and Hung Hom area in vicinity of the Scheme does not have a long history of inhabitation nor specialized local industries. Large industrial/ commercial buildings are found to the east of Ma Tau Wai Road, along Hok Yuen Street East, Man Yue Street and Hung Hom Road. The majority of these buildings appear not to be engaged in manufacturing activities but mainly office, storage, workshop/showroom uses. In particular, jewellery and watches shops and workshops/ showrooms are concentrated in this area.

6.2 A significant number of light engineering workshops and car repair trades are found throughout the To Kwa Wan area, with a higher concentration of such activities around Wing Kwong Street, and to the north of Bailey Street. Lesser concentration of such activities are found at Shek Tong Street, San Wai Street and Sung Chi Street.

6.3 A relatively significant presence of Government Departments’ service centres and civil servants’ quarters are also found in the area to the west of Ma Tau Wai Road/ Chatham Road North.

6.4 Seventeen (17) ground floor shop premises within the Scheme were identified at a site visit in February 2016. There were some shops which were closed at the time of site visit and were suspected vacant. At the time of the site visit, there were shops/workshops operating paper and metal recycling services/trades; metal hardware processing; car repair services and cafes. These ground floor shop activities are very commonly found in the vicinity and are not considered as unique, specialized or having significant heritage value. As the operators of recycling services/ trades, metal hardware processing and car repair services have taken advantage of the dead end nature of Chun Tin Street and part of the pavement of Sung Chi Street for additional work/ loading/ storage space, they may have difficulties to find alternative

locations with similar spatial advantages. The location and nature of the business activities of the 17 ground floor shops are listed in Table 6.1.

Table 6.1 Ground Floor Business Activities affected by the Scheme

	Address	Current Use	Details
1.	No. 2 Hok Yuen Street	Catering	Bakery
2.	No. 4 Hok Yuen Street	Catering	Food and Beverage
3.	No. 2 Chun Tin Street	Workshop	Paper and Metal Recycling Service
4.	No. 4 Chun Tin Street	(Cannot be identified)	(Suspected Vacant) <sup>#</sup>
5.	No. 6 Chun Tin Street	Workshop	Paper and Metal Recycling Service
6.	No. 8 Chun Tin Street	Workshop	Paper/ Metal/ Electronic Appliance Recycling Service
7.	No. 10 Chun Tin Street	(Cannot be identified)	(Cannot be identified) <sup>#</sup>
8.	No. 12 Chun Tin Street	Workshop	Metal Hardware Processing
9.	No. 14 Chun Tin Street	Workshop	Metal Hardware Processing
10.	No. 16 Chun Tin Street	Retail/Service	Air-conditioner sales/services
11.	No. 18 Chun Tin Street	Workshop	Car repair and services
12.	No. 20 Chun Tin Street	(Cannot be identified)	(Suspected Vacant) <sup>#</sup>
13.	No. 22 Chun Tin Street	(Cannot be identified)	(Suspected Vacant) <sup>#</sup>
14.	No. 24 Chun Tin Street	Retail	(Suspected Vacant) <sup>##</sup>
15.	Backyard of No. 18 Chun Tin Street (facing Sung Chi Street)	Shop/Service	Selling umbrellas
16.	Backyard of No. 20 Chun Tin Street (facing Sung Chi Street)	Shop/Service	Grocery Store <sup>#</sup>
17.	Backyard of No. 22 Chun Tin Street (facing Sung Chi Street)	Shop/Service	Real estate agency

<sup>#</sup> Shops are closed at the time of site visit.

<sup>##</sup> Notice of relocation placed on the gate

(Based on site survey on 18 February 2016)



- 6.5 Based on the information collected from the previous KC-008, there were some operators occupying more than 1 shop premise with the project at that time. There were also staircase shops and non-domestic use on the upper floor. The details of these shops and any non-domestic uses on the upper floors of the buildings within the Scheme will be recorded in the FS upon commencement of the Scheme and reported in the Stage 2 SIA.
- 6.6 Two ground floor shops, a car repair/servicing shop and an art studio, are observed at Fook Wan Mansion adjoining the Scheme. The two ground floor shops, in particularly the car repair/servicing shop, are currently using Chun Tin Street as their vehicular access. It is observed that the car repair/servicing shop uses Chun Tin Street as their temporary parking space and for car manoeuvring to and from the shop, which have also contributed to the current traffic problem at the dead-end according to site observation. It is anticipated that the shop may have concern on the proposed Scheme as affecting their daily operation. With the proposed Scheme, the two ground floor shops at Fook Wan Mansion will have a new vehicular access via the proposed new vehicular turning area and it will be connected to the widened Sung Chi Street for entering and leaving the area, instead of turning backward to leave Chun Tin Street. The residents of Fook Wan Mansion will also have a new pedestrian pavement in front of their building which is connected to the passageway in the Scheme and the at-grade open space in TKW/1/002 development towards Ma Tau Wai Road.

## 7. RECREATIONAL, AMENITY & COMMUNITY AND WELFARE FACILITIES

- 7.1 **Figure 7.1** shows the location of various government, institution and community (GIC) facilities and public open spaces within the 500m radius area of the Scheme Area. There are a number of public open spaces near the Scheme Area (namely the Ko Shan Road Park, Hoi Sham Park, Ma Tau Kok Road / To Kwa Wan Road Garden, Fat Kwong Street Garden, Ho Man Tin East Service Reservoir Playground and Hutchison Park).
- 7.2 The major GIC facilities within 500m radius of the Scheme are the Kowloon City District Office and Hung Hom Municipal Services Building. There are also many educational facilities, including primary schools and secondary schools in the proximity of the Scheme.
- 7.3 A wide range of existing social welfare facilities and services (refer to **Table 7.1**) are found in close proximity to the Scheme including family, child and youth welfare services, social security services, services for the elderly including elderly centres and rehabilitation and medical social services. In future, subject to funding arrangement and support from Government Departments, there will also be a Neighbourhood Elderly Centre with URA's Kai Ming Street Demand-led

Redevelopment Project (DL-8:KC), and community facility space is reserved within the URA's Ma Tau Wai Road / Chun Tin Street Development Project (TKW/1/002).

- 7.4 Given the large variety of social services, educational, recreational and amenity facilities are provided in the To Kwa Wan and Hung Hom area and the Scheme is relatively small in scale (only a single residential block over a retail podium will be built upon redevelopment), it is envisaged that the existing open space and GIC facilities and services can absorb the demand generated from the future residents of the Scheme. Opportunities for podium greening / landscaping and private open space within the Scheme will be explored. As far as the existing residents within the Scheme are concerned, some of them may need to look for their required GIC facilities in other location(s)/district(s) after their relocation. The Stage 2 SIA will look at this issue in detail.

**Table 7.1: Social Welfare Facilities within 500m Radius of the Scheme**

	Service Unit	Operator	Address
<b>A. Family and Child Welfare</b>			
<u>Child Care Centre Service</u>			
1.	HKSPC William Grimsdale Day Creche (OCCS)	Hong Kong Society for the Protection of Children	G/F, Ka Lai Lau, Ka Wai Chuen, Hung Hom, Kowloon
<u>Extended Hours Child Care Service</u>			
2.	HKSPC William Grimsdale Day Creche (OCCS)	Hong Kong Society for the Protection of Children	G/F, Ka Lai Lau, Ka Wai Chuen, Hung Hom, Kowloon
3.	PLK Chan Lai Wai Lin Nursery (OCCS)/ Chan Lai Wai Lin Kindergarten-cum-Nursery (IP)	Po Leung Kuk	G/F, 1/F and 2/F, Honour Court, 188-194 Ma Tau Wai Road, Kowloon City, Kowloon
4.	PLK Lam Ting Lai Ling Nursery (OCCS)/ Kindergarten-cum-Nursery	Po Leung Kuk	G/F, Ka On Lau, Ka Wai Chuen, Hung Hom, Kowloon
<u>Family Life Education</u>			
5.	HKFYG Parent-child Mediation Centre Family Life Education Unit (Kowloon City District)	Hong Kong Federation of Youth Groups (The)	3/F-5/F, Ka Hing Lau, Ka Wai Chuen, 48 Ma Tau Wai Road, Hung Hom, Kowloon
<u>Integrated Family Service Centre</u>			
6.	HKCYS Hung Hom Integrated Family Services Centre	Hong Kong Children and Youth Services	G/F, Hung Fai House, Hung Home Estate, Kowloon City, Kowloon
<u>Occasional Child Care Service</u>			
7.	HKSPC William Grimsdale Day Creche	Hong Kong Society for the Protection of Children	G/F, Ka Lai Lau, Ka Wai Chuen, Hung Hom, Kowloon
8.	PLK Chan Lai Wai Lin Nursery (OCCS)/ Chan Lai Wai Lin Kindergarten-cum-Nursery (IP)	Po Leung Kuk	G/F, 1/F and 2/F, Honour Court, 188-194 Ma Tau Wai Road, Kowloon City, Kowloon

Service Unit	Operator	Address
9. PLK Lam Ting Lai Ling Kindergarten-cum-Nursery (OCCS)/ Kindergarten-cum-Nursery	Po Leung Kuk	G/F, Ka On Lau, Ka Wai Chuen, Hung Hom, Kowloon
<b>B. Social Security</b>		
<u>Integrated Employment Assistance Programme for Self-reliance</u>		
10. HKLSS Integrated Employment Assistance Programme for Self-reliance	Hong Kong Lutheran Social Service, the Lutheran Church - Hong Kong Synod Limited	2/F, 125 Mau Tau Wai Road, To Kwa Wan, Kowloon
<b>C. Services for the Elderly</b>		
<u>District Elderly Community Centre</u>		
11. Sheng Kung Hui Holy Carpenter Church District Elderly Community Centre	Hong Kong Sheng Kung Hui Welfare Council Limited	Basement, No.1 Dyer Avenue, Hunghom, Kowloon
<u>Integrated Home Care Services (Agency and District-based)</u>		
12. Hong Kong Sheng Kung Hui Hok Yuen Integrated Home Care Services Team	Hong Kong Sheng Kung Hui Welfare Council Limited	Unit 8, G/F, Wing Fai Mansion, 52 Wing Kwong Street, Hung Hom, Kowloon
13. Hong Kong Sheng Kung Hui Lok Man Alice Kwok Integrated Service Centre - Integrated Home Care Services Team	Hong Kong Sheng Kung Hui Welfare Council	Shop No. 2 & 4-5, G/F, Tak Lee Court, 10 Ko Shan Road, To Kwa Wan, Kowloon
14. Hong Kong Sheng Kung Hui Lok Man Integrated Home Care Services Team	Hong Kong Sheng Kung Hui Welfare Council Limited	Shop No. 2 & 4-5, G/F, Tak Lee Court, 10 Ko Shan Road, To Kwa Wan, Kowloon
15. Sheng Kung Hui Holy Carpenter Church District Elderly Community Centre	Hong Kong Sheng Kung Hui Welfare Council Limited	Basement 1/F, No.1 Dyer Avenue, Hunghom, Kowloon
<u>Neighbourhood Elderly Centre</u>		
16. CSBS Tan Siu Lin Neighbourhood Elderly Centre	Chung Sing Benevolent Society	Shop 9-13 & 27, G/F, Wing Fai Mansion, 52 Wing Kwong Street, Hung Hom, Kowloon
<u>Support Team for the Elderly Based at District Elderly Community Centres</u>		
17. Sheng Kung Hui Holy Carpenter Church District Elderly Community Centre	Hong Kong Sheng Kung Hui Welfare Council Limited	G/F, Block H, Lok Man Sun Chuen, 111 Ko Shan Road, To Kwa Wan, Kowloon
<b>D. Rehabilitation and Medical Social Services</b>		
<u>Integrated Community Centre for Mental Wellness</u>		
18. SRACP Vitality Place (Kowloon City) (1.1 Team)	Society of Rehabilitation and Crime Prevention, Hong Kong (The)	Unit 11B, 9/F, Tower B, Hunghom Commercial Centre, 37 Ma Tau Wai Road, Kowloon
<u>Integrated Programme in Kindergarten-cum-Child Care Centre</u>		

Service Unit	Operator	Address
19. PLK Chan Lai Wai Lin Nursery (OCCS)/ Chan Lai Wai Lin Kindergarten-cum-Nursery (IP)	Po Leung Kuk	G/F, 1/F and 2/F, Honour Court, 188-194 Ma Tau Wai Road, Kowloon City, Kowloon
<b>E. Services for Young People</b>		
<u>After School Care Programme</u>		
20. HKFYG Jockey Club Hung Hom Youth S.P.O.T.	Hong Kong Federation of Youth Groups (The)	3/F-5/F, Ka Hing Lau, Ka Wai Chuen, 48 Ma Tau Wai Road, Hung Hom, Kowloon
<u>Integrated Children and Youth Service Centre</u>		
21. HKFYG Jockey Club Hung Hom Youth S.P.O.T.	Hong Kong Federation of Youth Groups (The)	3/F-5/F, Ka Hing Lau, Ka Wai Chuen, 48 Ma Tau Wai Road, Hung Hom, Kowloon
<b>F. Clinical Psychology Service</b>		
<u>Clinical Psychological Service in Case Work Setting in SWD &amp; NGOs</u>		
22. HKCYS Clinical Psychology	Hong Kong Children and Youth Services	UG/F, Hung Fai House, Hung Hom Estate, Kowloon City, Kowloon

Source: Social Welfare Department's website: Local District Service Profile: Welfare Service Units Managed or Funded by Social Welfare Department (Kowloon City), as of 9<sup>th</sup> October 2015.

## 8. INITIAL ASSESSMENT OF POTENTIAL SOCIAL IMPACT, AND MITIGATION MEASURES

### Potential Social Impact

- 8.1 The Scheme has in general unsatisfactory living condition. There are many suspected UBWs and a number of original units appear to be sub-divided resulting in crowded and unsatisfactory living environment. The proposed Scheme, if implemented, would offer a chance of improving the living environment of the affected households and should be considered acceptable by the affected residents.
- 8.2 The Scheme, if implemented, will inevitably affect the domestic and non-domestic occupants within the Scheme. Generally, the most vulnerable resident groups in the Scheme are the elderly, the disabled, single parent families, low-income households, and those who rely heavily on their social network (including receiving support/care from their friends/relatives who live nearby). Upon implementation of the Scheme, the existing residents will be displaced to areas where they have to rebuild their social networks, whereas the existing shops will have to move to other locations to continue their businesses, depending on individual operator's need.
- 8.3 During the freezing and SIA surveys, needy cases such as households with single elderly, elderly couples, family members with disability or new immigrants worrying about the impact of redevelopment on employment, living expenses and social network etc will be identified. The Social Service Team (SST) commissioned by the Urban Renewal Fund (URF) will provide assistance to those in need. This SST is independent of the URA.

***Mitigation Measures and Compensation & Rehousing Policies***

- 8.4 To alleviate the concerns and impacts to the affected residents, the URA will carry out briefing sessions to the owners and tenants shortly after the freezing and SIA surveys to explain the URA compensation and rehousing policies.
- 8.5 In handling problems related to different kinds of livelihood problems, the SST, apart from offering counselling, will mobilise different community resources to liaise closely with Government departments and work with the URA to resolve the residents' and operators' problems and reduce their anxiety. The SST will also provide orientation assistance for those in needs after moving home such as familiarisation with new neighbourhood, accommodation and local facilities.
- 8.6 For the vulnerable groups (including the elderly, disabled and single parent families), arrangements for assistance such as child care/ foster services, domestic help services, etc. offered by the Social Welfare Department, and other social service agencies would be made. For the low-income households, arrangement could be made with the Hong Kong Housing Authority or the Hong Kong Housing Society on public rental housing allocation if they are eligible. In addition, if practicable, those vulnerable groups would be re-housed on compassionate ground as early as possible.

***Prevailing Compensation and Rehousing Policies***

- 8.7 The URA will offer an owner-occupier of domestic property the market value (valued on vacant possession basis) of his property plus an ex-gratia allowance, namely Home Purchase Allowance (HPA), for purchase of the property. The assessment of HPA is based on the value of a notional flat, which is defined as a seven-year-old flat in a building of comparable quality, situated in a similar locality in terms of characteristics and accessibility, and located at the middle floor with average orientation. The HPA is the difference between the value of the notional replacement flat and the market value of the property being acquired.
- 8.8 The URA will also offer "flat for flat" (FFF) in a URA new development in-situ or in the same district (as URA may select for the purpose provided that necessary approval/ authorization has been obtained at the time of FFF offer) as an additional choice to cash compensation to owner-occupiers of domestic units (subject to any changes in the relevant policies. The amount of cash compensation offered to an owner-occupier will not be changed by his/her choice of using that amount, or part of it, to join the flat-for-flat arrangement or otherwise.

- 8.9 According to the new URS, the URA will offer an ex-gratia allowance to eligible elderly owners of tenanted domestic units on compassionate ground in exceptional circumstances such as elderly owners who rely on the rental income from their properties for a living.
- 8.10 Tenants who are not allocated re-housing due to various reasons or who decline re-housing, may receive ex-gratia payments. The amount of ex-gratia payment will be dependent on, amongst other things, whether the tenancies commenced before the date of the FS and continued, or commenced on or after the FS.
- 8.11 In case where tenants were threatened not to have their tenancies renewed, the URA will explain to the owners that they would not get more compensation by evicting the tenants. The URA has also introduced the "Domestic Tenants Compassionate Assistance Programme" to take care of those domestic tenants whose tenancies commenced before the FS of the Scheme and who was required by their landlord to move out from the affected properties due to expiry or termination of their tenancies and before URA acquired the properties successfully.
- 8.12 For owner-occupied non-domestic properties, the market value of the affected property plus an ex-gratia allowance of 4 times the rateable value or 35% of the market value of the affected property, whichever is the higher, will be offered. Owner-occupiers may lodge a claim for business loss as an alternative to both ex-gratia allowance mentioned above and Ex-gratia Business Allowance mentioned in Paragraph 8.13 below. For owners of tenanted or vacant non-domestic properties, the market value of the affected property plus an ex-gratia allowance of 1 time the rateable value or 10% of the market value of the affected property, whichever is the higher, will be offered.
- 8.13 For non-domestic tenants of non-domestic properties, an ex-gratia allowance of 3 times the rateable value of the affected property will be offered. An additional payment of Ex-gratia Business Allowance is also payable to tenants who commenced occupying the premises for business before the date of FS. The amount is calculated at a rate of 0.1 times the rateable value for each year that the affected property has been in operation up to a maximum of 30 years, and subject to a maximum amount of HK\$500,000 and a minimum amount of HK\$70,000. Non-domestic tenants may lodge a claim for business loss in lieu of the above two allowances.
- 8.14 According to the new URS, if requested, the URA will help identify suitable premises in the district of the Scheme to enable the affected shop operators to relocate and continue operation in the same district as far as practicable.



8.15 Details of the current acquisition, compensation and rehousing policies are published on the URA's website and will be communicated to affected persons when acquisition of property interests for this Scheme commences. Prevailing policies relating to property acquisition, rehousing and ex-gratia allowances will be reviewed by the URA from time to time.

8.16 The Stage 2 SIA to be conducted after the FS will further assess the impact of the Scheme in detail on both domestic and non-domestic occupants and propose mitigation measures. It may also be able to highlight the psychological stress and worry for some of the affected within the Scheme. Special measures may have to be adopted under exceptional circumstances.

#### ***Special Measures***

8.17 The buildings within the Scheme were the subject of KC-008 project which was commenced in January 2015. The URA had decided not to proceed further with the KC-008 project and the decision of withdrawal of the KC-008 project was published in the Gazette Notice on 6 May 2016. Nil offer for acquisition nor compensation has been made to the affected owners and tenants within the KC-008 project.

8.18 Due to the unique situation that this Scheme has included the properties in the KC-008 project which is discontinued, the URA will adopt a "People-oriented" approach and has devised a series of one-off special measures ("Special Measures") in addition to the prevailing policies with an aim to address the potential needs of the affected owners and tenants within the Scheme upon approval of the Scheme, and act as measures for mitigating potential social impact during the implementation. The Special Measures will only be applied to this Scheme and should not be viewed as a precedent to be applied to URA's other existing or future redevelopment projects/ schemes. An Information Pamphlet on Special Measures for Owners and Tenants are provided in **Appendix 1**.

## **9. CONCLUSION**

9.1 It is inevitable that the local community and the surrounding neighbourhoods will experience gains and losses due to the proposed redevelopment. Residents, business operators and their employees within the Scheme will be affected in different ways and to various degrees depending on their particular circumstances. Those who currently live in overcrowded or poor building condition within the Scheme may welcome the opportunity to improve their living environment through cash compensation or rehousing if eligible; whilst others (e.g. some business operators) may prefer to remain undisturbed and maintain the status quos. The various degrees of concerns and social impacts to the affected residents, business operators and their employees within the Scheme will be assessed in the Stage 2 SIA in details.

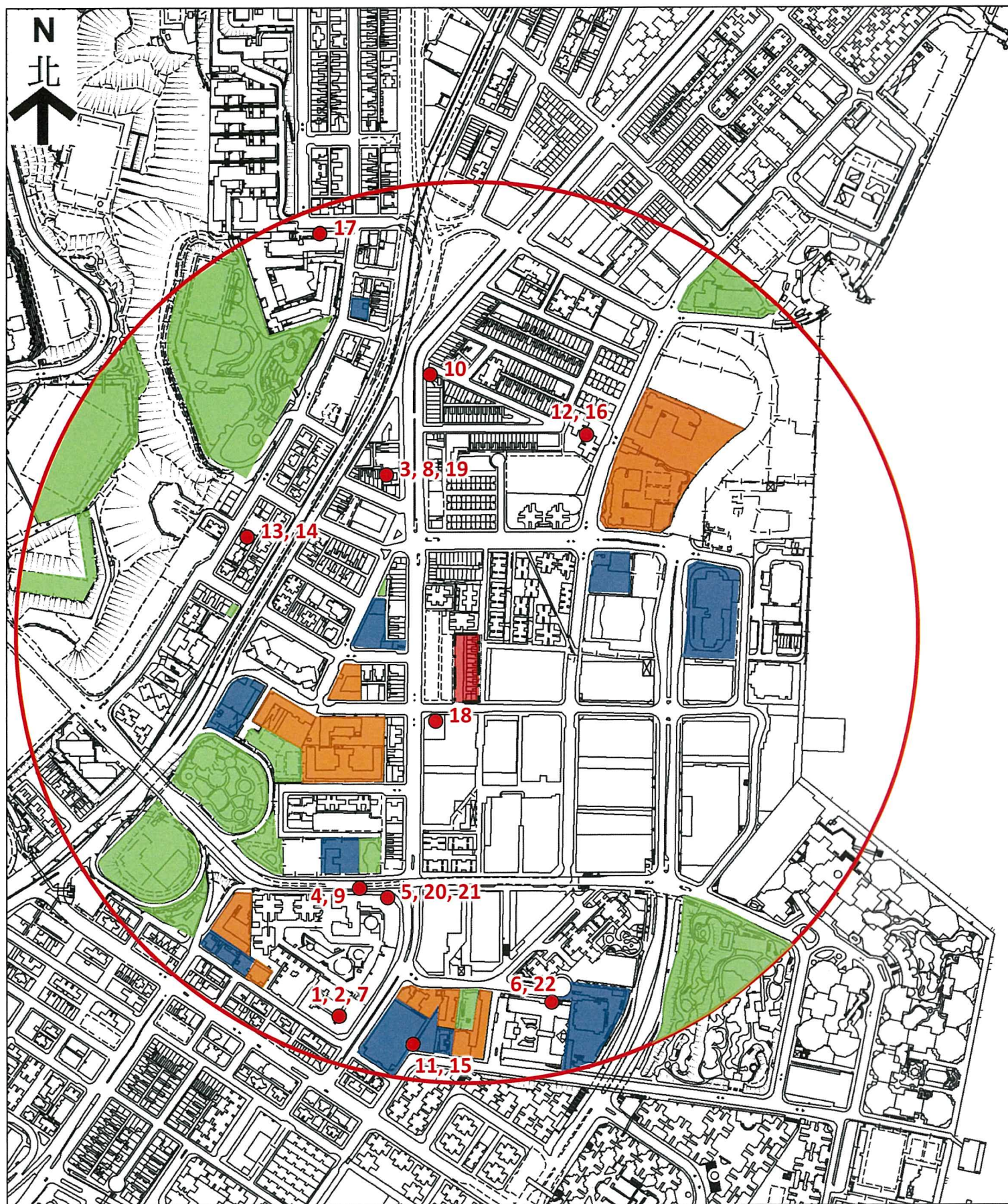
9.2 This Stage 1 SIA study can only provide a general profile of the Scheme. Based on past URA experience in the KC-008 project and other redevelopment projects of similar scale and context, it can be expected that there will be a relatively high degree of sharing of living quarters and a relatively low average household income for those within the Scheme. The assumptions in this report will be verified by the Stage 2 SIA to be carried out after the FS. The needs of the affected households will be assessed and appropriate arrangements to minimise major adverse social impact, if any, from the Scheme will be proposed in the Stage 2 SIA.

9.3 For the non-domestic uses, a number of ground floor shops are witnessed in the Scheme, whereas the upper floor non-domestic uses, if any, are to be recorded in the FS upon commencement of the Scheme under section 23 of the URAO. The ground floor business activities are commonly found in the surrounding area. It is possible for most of them to be relocated to other areas where the respective uses are permissible in both lease and planning terms, and in compliance with the DMC of the buildings. The needs of the affected non-domestic occupants will be assessed in the Stage 2 SIA.

**URBAN RENEWAL AUTHORITY**

**May 2016**





## LEGEND 圖例







-  500m radius from the Scheme  
計劃500米半徑範圍
-  The Scheme  
計劃範圍
-  Social Welfare Service Facilities  
社會福利設施
-  GIC Facilities  
政府、機構或社區設施
-  Public Open Space  
公共休憩用地
-  Educational Facilities  
教育設施

Figure 7.1 Social Welfare Facilities within 500m Radius of the Scheme Area

圖 7.1 計劃500米半徑範圍內的政府、機構或社區設施及公眾休憩用地



Appendix 1

URA Chun Tin Street / Sung Chi Street Development Scheme (KC-008(A)) Information Pamphlet on Special Measures for Owners and Tenants



**Urban Renewal Authority**  
**Chun Tin Street/Sung Chi Street Development Scheme [KC-008(A)]**  
**Information Pamphlet on Special Measures for Owners and Tenants**  
**(Applicable to the above Development Scheme only)**

This information pamphlet outlines the principles of the Special Measures adopted by the Urban Renewal Authority (“URA”) for implementation of a Development Scheme KC-008(A) at Chun Tin Street/Sung Chi Street (“the Project”). This pamphlet is supplemental to the leaflets titled “Principles Adopted by the Urban Renewal Authority in Property Acquisition (Other than Industrial Properties)” and “Principles Adopted by the Urban Renewal Authority for Tenant Re-housing and Ex-gratia Payment for Projects announced under the Urban Renewal Authority Ordinance”.

In consideration of planning merits and community benefit, URA now launches the Project KC-008(A) with an intent for having a larger redevelopment site by including the adjoining Chun Tin Street so as to achieve an improved overall design. URA announced commencement of the Project on 6 May 2016 (“the Commencement Date”). In the meantime, Project KC-008, which was commenced on 16 January 2015, will be withdrawn and discontinued immediately. The Project is subject to a statutory consultation process and the approval of the Chief Executive in Council under the Town Planning Ordinance (“TPO”). Owing to the above particular situation, URA has devised a series of one-off special measures (“the Special Measures”) for owners and tenants affected by the implementation of the Project. The Special Measures are applicable to the Project only and should not be viewed as a precedent to be applied to URA’s other existing or future redevelopment projects/schemes.

Details of the Special Measures are as follows:

**Owners of Domestic Properties**

1. URA will make offers to owners of domestic properties within 3 months after the Commencement Date at market value on vacant possession basis to be assessed as at the Commencement Date (“Domestic MV”).
2. If the owner accepts the Domestic MV, 30% of the Domestic MV will be payable to the owner as deposit upon signing of the Agreement for Sale and Purchase (“ASP”) and the balance of 70% of the Domestic MV will be payable to the owner 1 month after the date of ASP subject to the completion of sale and purchase and transfer of good title to URA (“the Completion Date”).
3. In addition to the offer at the Domestic MV, URA undertakes that it will make another payment (“Special Domestic Allowance”) to the owner who had accepted the Domestic MV and sold his property to URA after approval of the Project given by the Chief Executive in Council under the TPO (“the Approval Date”) (but not otherwise). It is estimated that the owners will receive the Special Domestic Allowance within 4 months after the Approval Date.
4. Special Domestic Allowance is calculated by adopting the higher of the following two total amounts:-
  - (1) Total amount of Domestic MV plus the Home Purchase Allowance (HPA) or Supplementary Allowance (SA) to be assessed according to URA prevailing policy as at the Commencement Date; and
  - (2) Total amount of market value on vacant possession basis assessed at the Approval Date plus the Home Purchase Allowance (HPA) or Supplementary Allowance (SA) to be assessed according to URA then prevailing policy as at the Approval Date;

and less the amount of the Domestic MV already paid by URA to the owner, and subject to the following principles:-

- (i) The HPA or SA shall be assessed with reference to the occupancy status recorded in the Freezing Survey at commencement of the Project. However, in case there is any difference in the occupancy status between those registered in the Freezing Survey of KC-008 and that of KC-008(A), URA will adopt a “people-oriented” approach in assessing the offer basis with due regard on the circumstances of the particular case; and
  - (ii) Domestic property owner who accepts the Domestic MV will be entitled to, if eligible, other allowance(s) (such as Incidental Cost Allowance) available under URA prevailing policy upon the Approval Date.
5. For owner-occupied and vacant domestic property, vacant possession of property has to be delivered by the owner upon the Completion Date. Tenanted domestic property will be sold to URA subject to the existing tenancy.
  6. For property owner who has not accepted the Domestic MV, URA will upon the Approval Date make acquisition offers to him. The acquisition offer will be based on the higher amount after comparing the total amount mentioned in paragraph 4(1) and 4(2) above, plus other allowance(s), if eligible under the then URA prevailing policy. For the avoidance of doubt, any subsequent revised acquisition offer to be issued after the Approval Date will only be based on the then URA prevailing policy and the calculation method in paragraph 4(1) and 4(2) will not be applicable.

7. In assessing the HPA or SA in the acquisition offer mentioned in paragraph 6 above, the principle as outlined in paragraph 4(i) is also applied.

**Owners of Non-Domestic Properties**

8. URA will make offers to owners of non-domestic properties within 3 months after the Commencement Date at market value on vacant possession basis to be assessed as at the Commencement Date (“Non-domestic MV”).
9. If the owner accepts the Non-domestic MV, 30% of the Non-domestic MV will be payable to the owner as deposit upon signing of ASP and the balance of 70% of the Non-domestic MV will be payable to the owner 1 month after the date of ASP subject to the completion of sale and purchase and transfer of good title to URA.
10. In addition to the offer of the Non-domestic MV, URA undertakes that it will make another payment (“Special Non-domestic Allowance”) to the owner who had accepted the Non-domestic MV and sold his property to URA after the Approval Date (but not otherwise). It is estimated that the owners will receive the Special Non-domestic Allowance within 4 months after the Approval Date.
11. Special Non-domestic Allowance is calculated by adopting the higher of the following two total amounts:-
  - (1) Total amount of Non-domestic MV plus the Allowances for Non-domestic Use to be assessed according to URA prevailing policy as at the Commencement Date; and
  - (2) Total amount of market value on vacant possession basis assessed at the Approval Date plus the Allowances for Non-domestic Use to be assessed according to URA then prevailing policy as at the Approval Date;

and less the amount of the Non-domestic MV already paid by URA to the owner, and subject to the following principles.

- (i) Allowances for Non-domestic Use shall be assessed with reference to the occupancy status recorded in the Freezing Survey at commencement of the Project. However, in case there is any difference in the occupancy status between those registered in the Freezing Survey of KC-008 and that of KC-008(A), URA will adopt a “people-oriented” approach in assessing the offer basis with due regard on the circumstances of the particular case; and
  - (ii) Non-domestic property owner who accepts the Non-domestic MV will be entitled to, if eligible, other allowance(s) (such as the Ex-gratia Business Allowance) available under URA prevailing policy upon the Approval Date.
12. For owner-operated and vacant non-domestic property, vacant possession of the property has to be delivered by the owner upon the Completion Date. Tenanted non-domestic property will be sold to URA subject to the existing tenancy.
  13. For property owner who has not accepted the Non-Domestic MV, URA will upon the Approval Date make acquisition offer to him. The acquisition offer will be based on the higher amount after comparing the total amount mentioned in paragraph 11(1) and 11(2) above, plus other allowance(s), if eligible under the then URA prevailing policy. For the avoidance of doubt, any subsequent revised acquisition offer issued after the Approval Date will only be based on the then URA prevailing policy and the calculation method in paragraph 11(1) and 11(2) will not be applicable.
  14. In assessing the Allowances for Non-domestic Use in acquisition offer mentioned in paragraph 13 above, the principle as outlined in paragraph 11(i) is also applied.

**Tenants of Domestic Properties**

15. If the owner of tenanted domestic property accepts the Domestic MV and upon completion of the sale and purchase of the property, URA after becoming the owner of the property will allow the tenant to stay in the property and pay the existing rent until the Approval Date.
16. Re-housing arrangement and/or ex-gratia payment will be offered to eligible tenants in the properties acquired by URA after the Approval Date. The then URA prevailing policy for tenants will apply.
17. Tenant who was registered in the Freezing Survey of KC-008 or KC-008(A) for reasons not attributable to the default of the tenant under the tenancy agreement, but was evicted before the property was acquired by URA (“affected tenant”), can apply for URA’s “Domestic Tenants Compassionate Assistance Programme” (“DTCAP”) or Relocation Assistance in accordance with prevailing policy. Upon the Approval Date, the application of the affected tenant will be processed after completion of the acquisition or government resumption of the affected properties in accordance with the then URA prevailing policy.

**Tenants of Non-domestic Properties**

18. If the owner of tenanted non-domestic property accepts the Non-domestic MV and upon completion of the sale and purchase of the property, URA will after becoming the owner of the property allow the tenants to pay existing rent in continuing their business in the properties until the Approval Date.
19. Ex-gratia allowance will be offered to eligible tenants in the properties acquired by URA after the Approval Date. The then URA prevailing policy for tenants will apply.

URA would remind landlords / tenants that it is an offence for landlords to unlawfully deprive a tenant of occupation of property or to make an unwarranted demand with menaces with a view to gain for himself or others or to defraud against URA. URA will report to the enforcement authorities on all cases of suspected criminal offences.

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**This pamphlet is issued for the purpose of general reference only. The information contained herein is with reference to the principles and practice of the Urban Renewal Authority prevailing at the date of issue of this pamphlet. It shall not constitute any representation on the part of the Urban Renewal Authority or give rise to any expectation whatsoever and shall not be relied on as such. Each case will be considered on its own merits having regard to all factors and circumstances. The terms of acquisition to be offered are subject to the principles and practice of the Urban Renewal Authority prevailing at the time the offer of acquisition is made and are subject to review from time to time as the Urban Renewal Authority shall at its absolute discretion consider appropriate. The Urban Renewal Authority's right to add to, amend or delete the whole or any part of this pamphlet is hereby reserved.**

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For enquiries, please call URA External Relations Department:  
Hotline: 2588 2333  
Fax: 2827 0176  
Address: 26/F., COSCO Tower, 183 Queen's Road Central, Hong Kong

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May 2016

## **PART 3      SUPPLEMENTARY INFORMATION**

Appendix 7      Tentative Implementation Programme



**KC-008(A) URA Chun Tin Street / Sung Chi Street Development Scheme  
Tentative Implementation Programme**

[illegible]

## **PART 3      SUPPLEMENTARY INFORMATION**

Appendix 8      URA's Acquisition and Resumption of Affected Properties

- In addition, an Incidental Costs Allowance (ICA) is offered to owners of domestic flats to contribute to costs incurred (legal and professional fees, removal etc.). The ICA rate is reviewed bi-annually.
- “Flat for flat” (FFF) in a URA new development in-situ or in the same district (as URA may select for the purpose provided that necessary approval/ authorization has been obtained at the time of FFF offer) as an additional choice to cash compensation to owner-occupiers of domestic units (subject to any changes in the relevant policies).
- An Elderly Domestic Owner-Landlords Compassionate Allowance will be offered to eligible elderly owners of tenanted domestic properties on compassionate grounds in the circumstances that the elderly owners rely on the rental income from their sole properties to sustain their livelihood.

## B Non-Domestic Properties

Non-domestic properties are primarily ground-floor retail premises and upper floor commercial premises.

- For owner-occupied premises, the market value plus an ex-gratia allowance of 4 times the rateable value or 35% of the market value of the affected property whichever is the higher. In addition, an Ex-gratia Business Allowance is payable to owner-occupier who had commenced occupying the property for business before the date of Freezing Survey. Owner-occupiers may lodge a claim for business loss in lieu of the above two allowances.
- For owners of tenanted properties, market value plus an ex-gratia allowance of 1 times the

### C Roof-top Interests

- ### Buildings in Single Ownership

The higher of:

- URBAN RENEWAL AUTHORITY  
MAY 2016**



## **PART 3      SUPPLEMENTARY INFORMATION**

Appendix 9      URA's Rehousing and Ex-Gratia Payment Package for Domestic  
and Non-domestic Tenants

**REHOUSING AND EX-GRATIA PAYMENT PACKAGE FOR DOMESTIC AND NON-DOMESTIC TENANTS**

Domestic Tenants

1. The Urban Renewal Authority (URA) will offer an ex-gratia payment to domestic tenants residing in the project area at the time of clearance. For eligible domestic tenants, rehousing will be offered as an alternative to the ex-gratia payment.
2. Re-housing will be offered in units provided by the Hong Kong Housing Authority or the Hong Kong Housing Society subject to the normal eligibility requirements of those bodies. An ex-gratia removal allowance will be offered to eligible domestic tenants who are rehoused.
3. Domestic tenants who are not allocated rehousing units provided by the Hong Kong Housing Authority or the Hong Kong Housing Society due to various reasons may be re-housed in units provided by the URA subject to fulfillment of the prevailing eligibility criteria of the URA. An ex-gratia removal allowance will also be offered to eligible domestic tenants who are rehoused.
4. Domestic tenants who are not allocated rehousing units due to various reasons or who decline re-housing may receive ex-gratia payments based on 3.5 times the rateable value of the area occupied by the tenant if they commence occupying the premises under valid tenancies before the date of Freezing Survey of the project.
5. In case where tenants were threatened not to have their tenancies renewed, “Domestic Tenants Compassionate Assistance Programme” can be applied by those domestic tenants whose tenancies commenced before the Freeing Survey of the Project and who was required by their landlord to move out from the affected properties

due to expiry or termination of their tenancies and before URA acquired the properties successfully.

Non-Domestic Tenants

6. For non-domestic tenants, an ex-gratia allowance of 3 times the rateable value of the affected premises will be offered. An additional payment of ex-gratia business allowance (EGBA) is also payable to any tenant who operates business at the affected premises. The amount is calculated at a rate of 0.1 times the rateable value of the affected premises up to a maximum of 30 years, and subject to a maximum amount of \$500,000 and a minimum of \$70,000.
7. Details of the current policies are published on the URA’s website and will be communicated to affected persons when clearance for a specific project commences. Prevailing policies relating to re-housing and ex-gratia allowances will be reviewed by the URA from time to time.

**URBAN RENEWAL AUTHORITY  
MAY 2016**





## URA overhauls To Kwa Wan renewal project

Friday, May 06, 2016

The Urban Renewal Authority has decided that it will re-launch and expand a redevelopment project in To Kwa Wan.

Under the original plan, announced in January last year, old buildings on Chun Tin Street and Sung Chi Street will be redeveloped. But the authority is now planning to redevelop the roads nearby as well to improve traffic flow.

A director of the authority, Michael Ma, said today the URA decided to revise the plan after taking into account suggestions from the community.

"The reason we commenced in January last year is to facilitate redevelopment immediately.

Subsequent to the commencement of the project, we have heard voices of the community, in particular some of the district members and Legco members, that why the URA did not intend to improve the traffic condition of the adjoining two dead-end streets through this project", he said.

The HK\$1.8 billion redevelopment project is expected to be completed by 2025 because the inclusion of the roads need more statutory approvals. The project would provide 310 flats when completed.

—RTHK



Ann Chiang

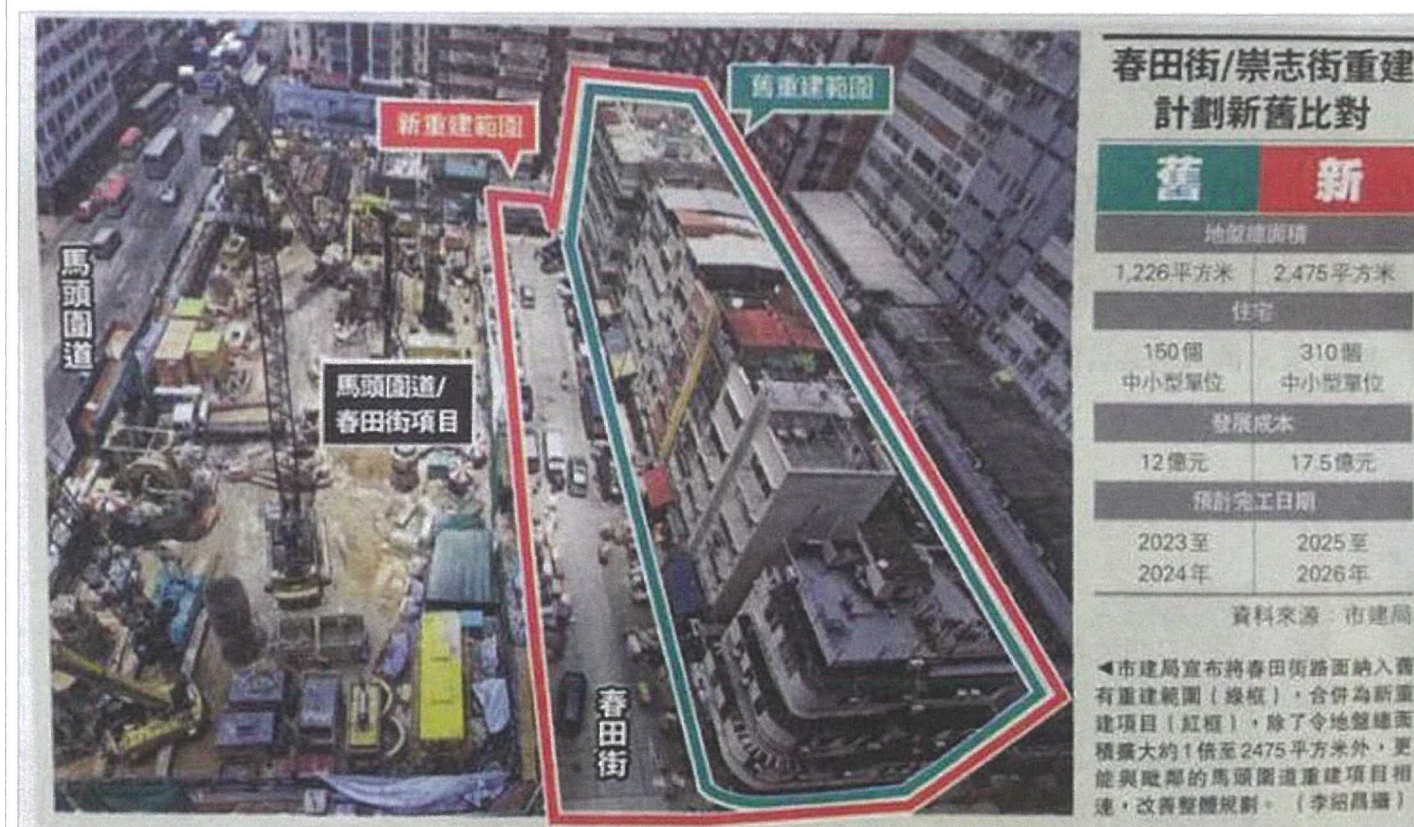
27 mins ·

## 「舊區」代替「舊樓」重建

作為市建局非執董的我一直提倡「舊區重建」代替牙簽式的「舊樓重建」，以小社區整遍規劃才能令區內配套更完善。

市建局昨日公佈開展土瓜灣春田街，崇志街及新增春田街一條路，再配合毗鄰正進行的馬頭圍項目，相信新的「小社區」日後落成將會為區內帶來新氣象。阿Ann表示歡迎並希望能盡快落實。

下圖摘自2016.5.7明報





## New HK\$1.75 billion redevelopment plan to double flat supply but not till 2025 at earliest

PUBLISHED : Friday, 06 May, 2016, 4:30pm

UPDATED : Friday, 06 May, 2016, 7:10pm

News>Hong Kong>Economy

### URBAN RENEWAL

Allen Au-yeung allen.auyeung@scmp.com

Revised Urban Renewal Authority project also meant to improve road access and pedestrian use, pending Town Planning Board's approval

A plan to redevelop dilapidated flats at Chun Tin Street in Hong Kong near the site of a deadly 2010 building collapse has been delayed by a year, but the number of new flats to be supplied will double.

Announcing the change in plan on Friday, the Urban Renewal Authority said it had enlarged the targeted redevelopment area by including an existing street in the original plan.

This would push back the project's completion date by a year to 2025 at the earliest.

However, the number of homes on offer from the redevelopment would double from 150 to 310 flats.

In January last year, the authority revealed it wanted to raze 14 connected low-rise buildings on Chun Tin Street and Hok Yuen Street in To Kwa Wan.

The new plan must be approved by the Town Planning Board.

Michael Ma, the authority's director of planning and design, denied on Friday that a poorly designed original plan caused it to be withdrawn and revised.



"It has nothing to do with poor planning," Ma said.

The aim of the revision integrating the ongoing Ma Tau Wai Road renewal project nearby was to improve road access and make it more pedestrian-friendly, he said, adding: "The inclusion of the adjoining street requires rezoning which has to go through the town planning process."

Ma said the 310 flats to be built would not be luxury flats but instead small and medium-sized.

In total, the project would affect 85 households and 15 shop operators and was estimated to cost HK\$1.75 billion.

To compensate affected landlords and tenants, the authority planned to offer a special one-off measure in which it would offer to buy the flats at current market rate. Another valuation would be conducted if the project was approved. The authority would pay the owners seeking to sell their properties at whichever of the two values is higher.

Asked if property owners might lose out in selling their flats to the authority as the project already started last year and the housing market in the city was now cooling, Ma replied: "We have not started acquisition [of property interest] since the project's commencement last year."



One affected resident, Ku Kan-shing, 70, said he welcomed the redevelopment as his 500-square-foot flat was in poor condition and that the authority's construction nearby had led to considerable shaking and dust.

Yet when asked whether he was happy with the authority's compensation arrangement, Ku said he was not aware of it.

"I just learned about it today," he said. "I don't understand how it works."

Ku also expressed concern that the compensation might not cover the cost of later buying a similar flat in the neighbourhood, where he has resided since 1989.

Kwok Lin-sang, owner of a tea cafe at the junction of Chun Tin Street and Hok Yuen Street, said he also welcomed the redevelopment but would miss the neighbourhood dearly.

“It’s true that the buildings here are dilapidated. There are many sub-divided flats,” Kwok said.  
“But it would be up to my landlord to accept the compensation or not.”

In 2010, Block J at 45 Ma Tau Wai Road collapsed. Four people died when the dilapidated building caved in during work to demolish an illegal structure on the ground floor.

The tragedy prompted calls in the community for the government to urgently address urban decay and review the conditions of old buildings in the city.

Topics:  
Hong Kong Housing

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Source URL: <http://www.scmp.com/news/hong-kong/economy/article/1941699/new-hk175-billion-redevelopment-plan-double-flat-supply-not>



# 紅磡春田街封街起樓

## 改善社區環境 住宅數量倍增 住戶再獲特津

香港文匯報訊（記者 岑志剛）市區重建局昨日宣佈修訂紅磡原春田街／崇志街發展項目，將春田街馬路納入地盤範圍後再重新啟動，以改善該區交通和社區環境，由於涉及改劃程序，發展期料延長1年至2年，因此特別為受影響業主推出一項特別措施，業主可選擇在指定時期內，以市值出售物業給市建局，如果項目最終獲批准，住戶可再獲特別津貼。項目料提供310個住宅單位，較原計劃150個激增1倍，預計2025年至2026年完成。

市建局去年1月宣佈啟動紅磡春田街／崇志街重建項目，但昨日突然宣佈撤回原有項目，建議將附近春田街道路納入重建，以改善鄰近道路的交通安排和行人環境。新項目地盤面積為2,475平方米，較原先地盤面積擴大1倍、住宅數量增加1倍，發展成本估計約為17.5億元，初步建議提供1,470個住宅單位，包括約2,454平方米商業及零售樓面面積，以及約1,220平方米住宅樓面面積，合共310個住宅單位。項目範圍內建築物樓高四至五層，樓齡約為58年至60年，涉及70個業權、85個住戶，以及15間地下商舖受影響。



市建局建議將春田街納入重建範圍，以改善鄰近道路的交通安排和行人環境。左起：市建局收購及遷置總監黃偉權、規劃及設計總監馬昭智、助理總經理黃知文。岑志剛攝



市建局重啟紅磡原春田街／崇志街發展項目，建議將春田街納入重建，以改善鄰近道路的交通安排和行人環境。梁祖堯攝

### 設車輛迴旋處 擴闊崇志街

市建局規劃及設計總監馬昭智表示，今次是市建局首次撤回項目，由於原先地盤僅闊30呎，與馬頭圍道重建項目之間的間春田街是「偏頭路」，會導致人車爭路。局方在聽取居民及議員意見後，決定將春田街一併納入重建，並建議提供車輛迴旋處，以及將崇志街擴闊為一條約12.3米的道路，包括約7.3米闊的雙線行車道及擴闊的行人路，改善當區交通及行人安全。規劃及設計助理總經理黃知文表示，新項目會結合旁邊的馬頭圍項目，以小區（即大地盤）概念設計，提供更舒適、安全的行人空間。

### 走完改劃程序 最長需2年

市建局昨日已展開項目凍結人口調查，由於將春田街納入發展範圍涉及改劃程序，市建局會將計劃草圖交城規會，收集公眾意見及審議後，再呈交行政長官會同行政會議批准，估計需時1年半至2年，預計重建工程需延至2025年至2026年才完成。市建局收購及遷置總監黃偉權表示，因應項目延期重建，市建局為受影響業主提供一項特別措施，今日起約3個月內根據同區7年樓齡價錢評估物業市值，讓業主決定是否以此市值將物業售予局方，如業主同意，局方會在項目獲批後，再向業主支付特別津貼，但無論項目獲批與否，業權都已屬於市建局；如果業主選擇不出售物業，局方會在項目批准後再與住戶商討收購，按項目開始日或批准日物業市值加津貼出價，兩者取較高總金額為收購價。

## 大地盤重建是未來方向

香港文匯報訊（記者 岑志剛）九龍城區存在大量舊樓，具有相當重建潛力。市建局昨日特別提到，春田街／崇志街發展項目納入春田街後，會結合旁邊的馬頭圍項目，以「小區概念」（即大地盤）設計，提供更舒適、安全的行人空間。市建局規劃及設計總監馬昭智說，原重建方案地盤窄狹，難以改善當區環境，基於附近有馬頭圍重建項目，董事局認為應整區審視，希望即使只是小地盤發展，也可改善社區人流和交通。

事實上，市建局在3月宣佈的土瓜灣底利街／榮光街項目，已經首次以「小區規劃」重建舊樓，保留街舖，希望與附近市建局其他項目產生協同效應。馬昭智當時形容，「小區規劃」比一般重建項目構思「進化」，重建後加入綠化地帶可令社區變得更具活力、更人性化，因此將是未來發展方向，往後重建項目也將盡量避免興建單幢樓，保留當區特色，以維持當區城市規劃的肌理。

有意見認為，由於難以達致集齊八成業權的門檻，市建局近年的重建項目，尤其是需求主導重建項目，大多是地盤面積較小的單幢式重建，未能起到市區重建之效。市建局在數月內兩次強調「小區概念」，相信有望整合相鄰重建範圍，避免淪為純粹的建築重建。

## 住戶憂改則拖延搬遷

香港文匯報訊（記者 岑志剛）重建範圍內舊樓日久失修，有業主希望盡快搬走，另覓新家；亦有租戶指該處交通方便，擔心重建後無法在同區尋得替代住處。

今年74歲的古伯，1989年起已居於春田街，目前與太太同住500多呎單位。他表示，過去已先後為單位進行兩次大裝修，直到去年天花出現裂縫，曾經有石屎剝落，導致鋼筋外露和腐蝕，更有水管漏水，對面馬頭圍道重建亦帶來噪音污染，加上自己「年紀大，無本事再住唐樓」，希望搬到有升降機的新樓，對市建局突然修訂計劃感到失望，「無計，等太耐啦！」

古伯說，去年市建局初次公佈重建計劃時，未有聯絡他商談賠償問題，今次會視乎賠償金額決定是否接受收購，「想搬返同區洋樓住，黃埔花園最合心水，最少要有500萬至600萬！」

劉小姐一家三口租住春田街24號一個唐樓單位8年，目前月租逾1萬元。她表示，所住單位同樣

面對石屎剝落及工程噪音問題，更在大樓內牆身發現長1米、闊1厘米的大裂縫，但考慮到地點便利，方便丈夫上班，不希望因為重建而搬遷，「原本以為經濟差些，可以租到另一個單位，但嘅第二度唔啱到同樣價錢」，她指現時搬換重建項目，工程最少延遲一年，擔心賠償會有變動。

### 福運大廈業主不滿

至於位於春田街尾的福運大廈，雖然未有納入項目範圍，但法團及住戶均擔心受重建影響，封閉春田街影響出入。有不願透露姓名的業主立案法團委員，得知市建局將春田街納入重建範圍，早上到街上高呼不滿，擔心影響樓價，「無路可行樓價會跌，你（市建局）大石砸死蟹，一係收購埋我哋個單位。」

住戶陸小姐則表示，物業只住不賣，不擔心樓價受影響，但大廈多處已經老化，「都好舊啦，鹹水喉都漏漏」，希望可以重建。

## 食肆老闆：延遲年半 收穫意外



▲食肆老闆郭先生開業30年累積大批熟客，不想結業。梁祖堯攝



▲汽車美容店員黃先生表示，擔心阻礙車輛進出影響生意。岑志剛攝



特稿

但希望在同區繼續經營，服務老街坊，又擔心無法找到租金相宜的舖位。有不在重建範圍內的商舖則表示反對，指重建牽涉封閉春田街，影響泊車和上落貨。

經營食肆的郭先生，目前以月租2.1萬元租下春田街與鶴園街交界一個舖位。他表示，在當區開業30年，累積大批街坊熟客，不希望結業，「好多客細細個識，睇住佢大個仔、大個女，佢都生理！」昨早得知市建局修訂發展計劃，工程將延遲1年半至2年，讓他有機會繼續服務街坊，覺得像「意外收穫」。

郭先生表示，現任業主「非常好人」，自1997年起已沒有再加租，形容「難過中六合彩」，他知道對方有意出售業權重建，考慮

到該樓宇已經老化，雖然感到不捨但仍會贊成重建，「初初當然唔捨得，但呢度咁樓都咁舊，社會係不斷進步，需要重建。」

郭先生又說，如果在同區覓得月租3萬元以下的舖位，會希望繼續經營，「做咗咁多年，始終係自己老本行，熟客又多，唔使憂生意！」問及賠償問題，郭先生表示，「起碼要夠用，夠我哋過埋低18幾年！」

### 修車店憂泊位難

位於春田街尾25號的汽車美容店，並未納入重建範圍，店員黃先生表示，市建局方案須封閉春田街作重建，擔心阻礙車輛進出影響生意，而在店舖外迴旋處落成後，估計不設長時間泊車位，可能不方便駕駛者光顧。他指出，汽車美容店在去年10月開業，店主看中該處舖位租金便宜，其他地方未必找到，坦言「如果要執都無計！」

■香港文匯報記者 岑志剛



## 重建制度有盲點

本港存在不少舊樓，樓齡動輒長達50年至60年，樓宇結構早已老化，單位牆身出現巨大裂縫，天花石屎剝落，甚至連外牆批盪都剝落，途人走過橫街窄巷，隨時弄得滿頭「雪花」。居民身處其中，理應希望透過重建改善居住環境。

記者昨日訪問多名街坊和商戶，多人異口同聲提到租金問題。年紀老邁的居民擔心賠償額不足以在同區另覓新樓；年輕人亦憂慮以同樣租金租住交通便利地區；30年老店更苦於舖租高企恐被迫遷至遠處，流失忠實的街坊熟客。可見租金高企問題隨時令重建「好心做壞事」，反倒破壞社區凝聚力。

此外，不少舊樓面臨同一問題——沒有法團、居民組織或物業管理公司，即是俗稱的「三無大廈」，業權分散難以達至市建局需求主導計劃規定，最少要集合八成業權簽署意向書的要求，才能啟動重建的要求，加上舊樓業主可能早已遷居香港各區，甚至移民海外，令到這類舊區重建難上加難。

重建社區改善環境和基礎配套，本意是好的，但現時制度仍存在盲點，未能幫到有需要的居民；而本港經濟環境向樓市傾斜，隨時令受影響居民無家可歸。政府及市建局有需要檢討制度，考慮從宏觀的角度，思考重建方式及善後措施。

記者 鄭智森





# **Chun Tin Street / Sung Chi Street** *Development Scheme (KC-008(A))*



## **Stage 2 Social Impact Assessment**

June 2016

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Appendix 1: Premises for Non-domestic Uses within the Scheme Area

Appendix 2: Information Pamphlet on Special Measures for Owners and Tenants  
(May 2016)

Appendix 3: URA's Press Release on Enhancements to Special Measures

Appendix 4: G/F premises at Fook Wan Mansion

## 1. INTRODUCTION

- 1.1 The new Urban Renewal Strategy (URS) issued by the Government in February 2011 states that the Urban Renewal Authority (URA) will carry out Social Impact Assessment (SIA) studies in the form of *"a Stage 1 social impact assessment ..... before the publication of any proposed redevelopment Scheme in the Government Gazette"*; and *"a Stage 2 social impact assessment .... after the proposed Scheme has been published in the Government Gazette"*.
- 1.2 URA published in the Government Gazette the commencement of the Chun Tin Street / Sung Chi Street Development Scheme KC-008(A) (the Scheme) on 6 May 2016. As according to section 25(5) of the Urban Renewal Authority Ordinance (URAO), the URA has submitted the draft Development Scheme Plan (DSP) of the Scheme, including the Stage 1 SIA Report, to the Town Planning Board (TPB) on 13 May 2016. The draft DSP and the Stage 1 SIA Report were then made available for public inspection on 17 May 2016. This Stage 2 SIA report is based on the factual data and opinions collected as part of the freezing survey for this Scheme conducted from 6 May 2016 to 8 May 2016, and from the follow-up survey visits by appointments conducted up to 5 June 2016.
- 1.3 This report covers the elements listed in paragraph 37 of the URS for the affected residents, families and businesses within the Scheme, including:
- (a) the population characteristics of the residents affected by the proposed project;
  - (b) the socio-economic characteristics of the affected residents;
  - (c) the rehousing needs of the affected tenants;
  - (d) the relocation needs of the affected shop operators;
  - (e) the housing preferences of the affected owners and tenants;
  - (f) the employment status of the affected owners and tenants;
  - (g) the place of work of the affected owners and tenants;
  - (h) the social networks of the affected owners and tenants;
  - (i) the educational needs of children of the affected families;
  - (j) the special needs of the elderly;
  - (k) the special needs of the disabled;
  - (l) the special needs of single-parent families, particularly those with small children;
  - (m) a detailed assessment of the potential social impact of the proposed project; and
  - (n) a detailed assessment of the mitigation measures required.
- 1.4 The Christian Family Service Centre has been commissioned by the Urban Renewal Fund to act as the Social Service Team (SST) for this Scheme. They are tasked to provide assistance and advice to residents and operators affected by the Scheme. Cases requesting assistance and those identified in the course of the SIA analysis as requiring assistance have been referred to the SST for their follow-up action.



## 2. BACKGROUND

- 2.1 The proposed development scheme (the Scheme) comprises buildings at Nos. 2-24 Chun Tin Street (even nos.) and Nos. 2-4 Hok Yuen Street (even nos.), the whole Chun Tin Street and part of Sung Chi Street in Kowloon City (**Figure 2.1**). The buildings at Nos. 2-24 Chun Tin Street are 5 to 6 storeys high with cocklofts in the ground floor units of some buildings; whilst the buildings at Nos. 2-4 Hok Yuen Street are 4 storeys high with cocklofts in the ground floor units. The Scheme is bounded by Sung Chi Street to the east, Hok Yuen Street to the south and the URA Ma Tau Wai Road / Chun Tin Street Development Project (TKW/1/002) to the west. The Scheme covers a gross site area of about 2,475m<sup>2</sup>. The net site area used to calculate the development potential of the Scheme is about 1,636m<sup>2</sup>, which included the area of all the private lots within the Scheme boundary and a portion of existing Chun Tin Street which will be closed permanently for redevelopment and plot ratio calculation of the Scheme.
- 2.2 The Scheme area includes the existing Chun Tin Street which is a dead-end street. The Chun Tin Street currently provides vehicular access to the existing old buildings in the Scheme, the adjacent Fook Wan Mansion to the north of the Scheme, and the future URA development TKW/1/002 to the west of the Scheme (which is under construction and is expected to be completed in 2018/19). There are recycling, car repair and light engineering activities along the street and these activities occupy the street space for loading / unloading activities and work. Besides, the dead-end nature of Chun Tin Street and the on-street metered parking and loading bays also resulted in reverse movement of vehicles within the street which creates traffic and pedestrian safety problems.
- 2.3 The Scheme also included part of the Sung Chi Street adjoining the Scheme. The Sung Chi Street is a sub-standard street for one-way traffic only, with no continuous pavement for pedestrian to walk along. There are recycling and lighting engineering activities extending from the backyard of the existing buildings of the Scheme which occupy pavement of the Street. There are also illegal structures spilling onto the said street with occasional illegal parking of vehicles.
- 2.4 The Scheme proposed to comprehensively redevelop the Scheme area to bring in more planning and design merits for the area. Apart from redeveloping the dilapidated buildings into modern and safe residential block cum commercial development at the podium, the Scheme proposed to close the Chun Tin Street and included the area into redevelopment whilst at the same time the Sung Chi Street will be widened and connected to a new turning area created at the original dead-end of Chun Tin Street. In overall the Scheme aims to bring in the following planning and design benefits:
- Remove the cul-de-sac condition of Chun Tin Street to improve traffic circulation and provide safer pedestrian environment;

- Improve the traffic circulation, streetscape and pedestrian walking environment of Sung Chi Street and the adjoining area of the Scheme;
- Enlarged Scheme area to allow comprehensive redevelopment of the whole area and greater flexibility in building and planning design;
- Better integration with the URA TKW/1/002 development to enhance urban design and integrated land uses; and
- Better utilisation of land for more flat supply to meet the mass market demand.

2.5 This SIA report will analyse the potential social impacts to the directly affected residents and shop operators in the Scheme. The potential impacts to some stakeholders in the neighbourhood who may be more affected by the Scheme and during the course of its implementation in future (e.g. Fook Wan Mansion who is currently using the Chun Tin Street as vehicular access road) will also be included. Assessment on the mitigation measures will be discussed in Chapter 12 of the Report.

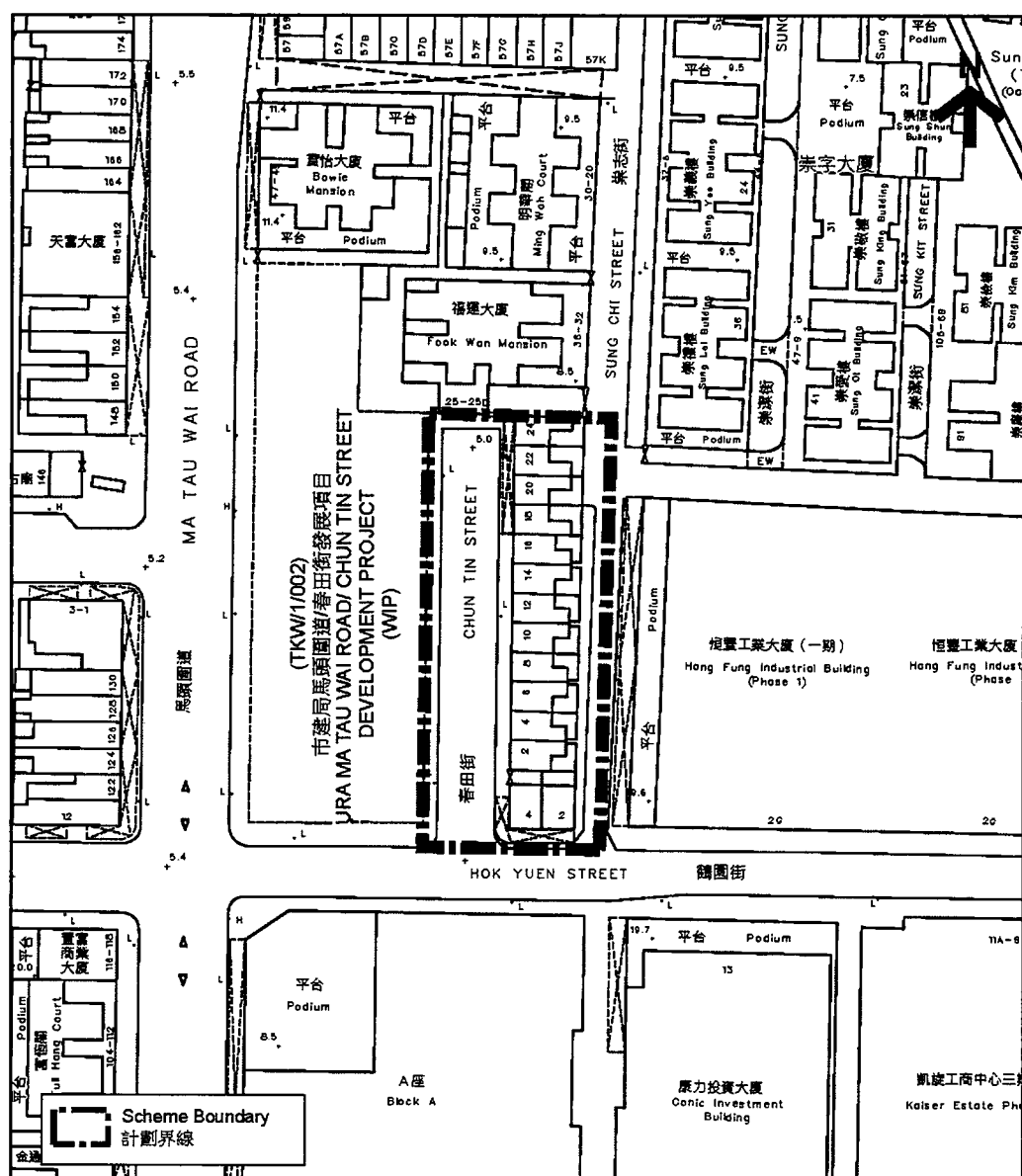


Figure 2.1 Location Plan

### Distribution of Units and Households

- 2.6 According to the approved General Building Plans ("GBPs") and the Occupation Permits ("OPs") for the buildings within the Scheme, there are a total of 72 units. Among which, 68 units (including the 10 ground floor units at Nos. 2-4 Hok Yuen Street and Nos. 2-16 Chun Tin Street) are for domestic use. Only 4 ground floor units at Nos. 18 – 24 Chun Tin Street are designated as "Shop" in the OPs. As such, based on the approved plans, a total of 68 domestic units and 4 non-domestic units will be adopted for the purpose of representing the original distribution of units for this SIA report; whilst the results of the Freezing Survey ("FS") will reflect the existing occupancy situation and uses, which included the existing situation that all the 14 ground floor units (including those with the OPs for domestic purpose) are being used for non-domestic purposes or with mixed uses.



- 2.7 Some 87 units (including self-contained sub-divided units, cockloft units and roof structures) being used for domestic purpose were identified in the FS, of which some 77 units (about 89%) were found to be inhabited and successfully surveyed. The remaining 10 units (also assumed as domestic use for the counting of 87 units) were unable to be surveyed since the residents of these units could not be contacted or refused to respond (up to June 5, 2016). The number of domestic units found in the Scheme is higher than the total 68 original units shown in the approved GBPs and OPs for the buildings within the boundary of the Scheme, mainly because there are sub-divided units and roof structures found in the Scheme.

<b>Successfully Conducted Freezing Survey ("Successfully surveyed")</b>	<b>Living Units</b>	<b>Households</b>
Successfully surveyed (for domestic uses)	77	77
No Contact / Unsurveyed (Upper floor units assumed as domestic use. Excluded G/F units for non-domestic uses.)	10	N/A
<b>Total</b>	<b>87</b>	<b>77</b>

**Table 2.1 Number of living units and households found within Scheme boundary**

- 2.8 There were 77 households found within the 77 successfully surveyed domestic units. Among which, one surveyed unit is registered by a company owner as an owner occupier who currently used the unit as a dormitory for staff. The company owner conducted the FS but refused to do SIA questionnaire. His information provided in the FS will be included for analysis in the report.
- 2.9 Among the 77 surveyed households, 62 households (81%) have responded to both the FS survey, and SIA survey. Fifteen (15) households (about 19%) only answered the FS forms and refused to answer the SIA questions. Those who gave no response to particular FS/SIA questions in the surveys are categorized as "No Response" when processing/ analyzing the relevant data in this report. Those who refused to do SIA questionnaire are not counted in the statistics relating to questions of the SIA questionnaire.

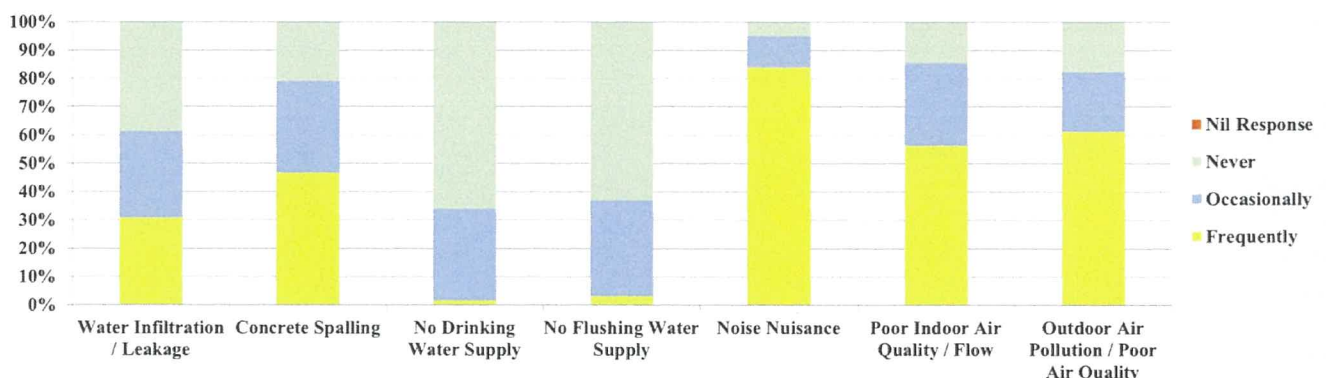
	<b>Household Nos.</b>
Total No. of Households	77
Successfully responded to both FS (successfully surveyed) and SIA questionnaire (successfully interviewed).	62
Only responded to FS (successfully surveyed) but refused to do SIA questionnaire (Refused to do the SIA).	15

**Table 2.2 Results of FS and SIA surveys within the Scheme**

- 2.10 Regarding non-domestic uses, there are some 20 non-domestic premises, including 15 ground floor premises, 2 staircase premises, 1 cockloft premise and 2 upper floor premises, were identified. Eleven (11) business operators were surveyed of which 9 operators answered both the FS and SIA surveys. Two (2) operators only responded to the FS survey, refusing to respond to the SIA questionnaire. Six (6) premises were not able to be surveyed. The responses of the 11 operators form the basis of Section 11 (Business Impact) of this report.

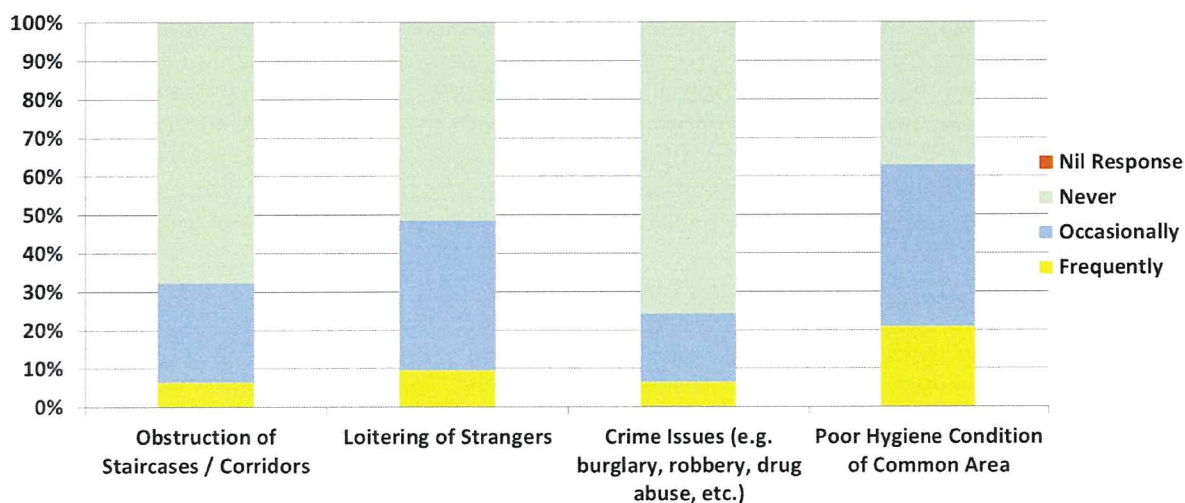
#### Physical condition and living environment

- 2.11 Among the 62 households who have completed the SIA form, nearly 62% of the interviewed households indicated that their units occasionally or frequently suffered from water seepage and about 79% indicated similar frequency of problem with concrete spalling. Around 37% of households indicated that their units occasionally or frequently suffered from problems of no flushing water supply. It indicates that over half of the households are not satisfied with the physical conditions of their units. Regarding the living environment within the units, 95%, 85% and 82% of the respondents indicated that they occasionally or frequently suffered from problems of noise nuisance, poor indoor and outdoor air quality respectively. It indicates more than two-third of the households considered their living environment to be unsatisfactory. **Figure 2.2** shows the opinions of the interviewed households on the physical condition and the living environment within their units.



**Figure 2.2 Opinions on the Physical Conditions and Living Environment of their Units**

- 2.12 On the question of fire safety and hygiene concerns, about 32% of the interviewed households commented that they occasionally or frequently suffered from problem of obstruction of staircases / corridors. About 63% of households responded that they suffered similar frequency of poor hygiene condition of common areas (e.g. in yards, staircases, corridors, etc). On security matters, about 49% and 24% of interviewed households expressed that they experienced occasionally or frequently loitering of strangers, and crime events, e.g. burglary, robbery, drug abuse, respectively. **Figure 2.3** shows the opinions of the interviewed households on the living environment of their units in terms of fire safety, hygiene and security issues.



**Figure 2.3 Opinions on the Living Environment of their Units**

Views on redevelopment

- 2.13 Of the 62 households who responded to the SIA questionnaire, 43 households (about 70%) of respondents support or strongly support the development Scheme. Fifteen (15) households (about 24%) had no comment, and only 4 households (around 6%) did not support the redevelopment, of which 2 households (about 3%) were strongly against it.



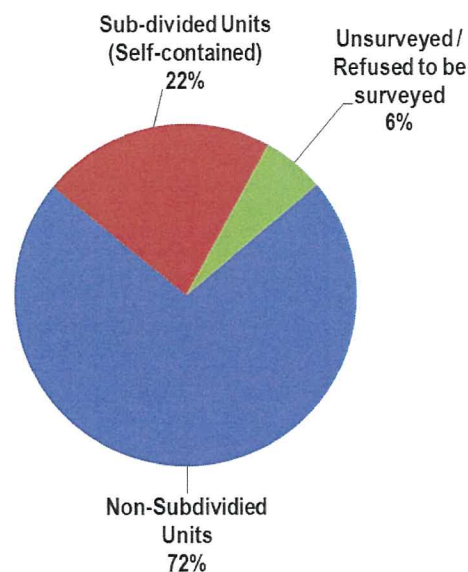
### 3. POPULATION & HOUSEHOLD CHARACTERISTICS

- 3.1 Except stated otherwise, the territorial average numbers used for comparison in this report is based on 2011 Population Census results published by the Census and Statistics Department in March 2012.
- 3.2 A total of 188 residents were recorded in the 77 successfully surveyed households within the Scheme, resulting in an average household size of 2.44 persons. It reflects a lower average household size in the Scheme area as compared to the territorial average of 2.9 persons per household. This lower average household size may be due to the presence of relatively large number of singletons (26 households), which accounts for about 34% of the total number of households in the Scheme.
- 3.3 Based on the number of surveyed households (77) and the successfully surveyed living units (77) within the Scheme, the degree of sharing (or the “average number of domestic households per unit of quarters”) in the Scheme is 1 (77 households / 77 surveyed units), which is the same as the territory-wide average of 1.0 for private permanent housing in the 2011 Census. However, this figure does not truly reflect the overcrowded situation within the Scheme because there are sub-division of original units and existence of unauthorized roof structures. If the original number of domestic units in approved GBPs and OPs are adopted as the basis, the degree of sharing will be about 1.13 (77 households / 68 original units).
- 3.4 The degree of sharing is much higher within those sub-divided units. Of the 68 original residential units indicated in the approved GBPs and OPs, 15 units (22%) were found to be sub-divided into around 37 sub-divided units with independent toilets and appeared to be self-contained (including two ground floor units with cocklofts (original domestic use in OPs) sub-divided for mixed uses). Thirty (30) households were surveyed in these 37 subdivided units. If the 30 households living in sub-divided units are considered as “sharing” of units and the original number of domestic units are adopted as the basis, the degree of sharing is at about 2 (30 households / 15 original units). Among these sub-divided units, only the conversion of 1 property interest into 2 property interests for one unit has been registered in the Land Registry.
- 3.5 In addition to the sub-division of the original domestic units, there are 7 rooftop structures being used for domestic purpose within the Scheme, of which 5 units were surveyed. **Table 3.1** shows the sub-division of domestic units. **Figure 3.1** shows the percentage of sub-division of approved GBP units of the Scheme.

Domestic unit (Current Status)	Units in GBPs and OPs	Total living units found	Surveyed living units	Surveyed Households
i. <b>Non-subdivided</b> original domestic units for domestic use	42	42	42	42
ii. <b>Sub-divided</b> original domestic units (self-contained)	13	35	28	28
iii. <b>Sub-divided</b> original domestic units for <b>mixed uses</b> (with both Domestic and Non-domestic activities <sup>#</sup> )	2	2	2	2
iv. Original domestic units for <b>Non-domestic activities</b> <sup>#</sup>	7	N/A	N/A	N/A
v. Original domestic units confirmed vacant	0	0	0	N/A
vi. <b>Unsurveyed/ Refused to be surveyed</b> original domestic units	4	1	N/A	N/A
<i>Subtotal (i+ii+iii+iv+v+vi)</i>	<i>68</i>	<i>80</i>	<i>72</i>	<i>72</i>
vii. <b>Rooftop structures</b>	N/A	7	5	5
<b>Total (i+ii+iii+iv+v+vi+vii)</b>	<b>68</b>	<b>87</b>	<b>77</b>	<b>77</b>

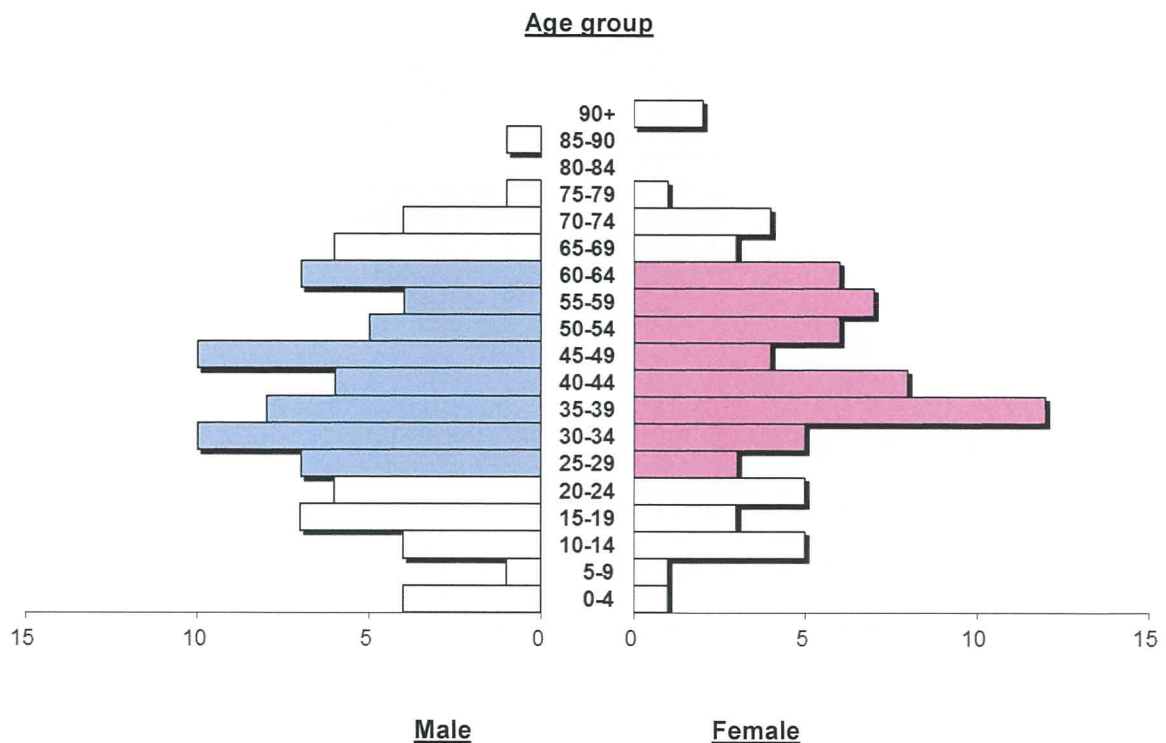
<sup>#</sup> Analysis for non-domestic use is reported in Section 11 (Business Impact) in this report.

**Table 3.1 Sub-division of domestic units**



**Figure 3.1**  
**Percentage of Sub-division of Approved General Building Plans (GBP) units**

- 3.6 A total of 188 residents were recorded in the Freezing Survey, 96 were male, 92 were female. The distribution gives a ratio of 104 male residents to every 100 female residents.
- 3.7 Among the 167 residents who disclosed their age information, the economically active age group of 25 to 64 accounts for the majority of the total population (about 65%). The number of residents in this age group is slightly higher than the corresponding territory-wide level of 62.7%, while the youth age group of 15-24 (about 12%) is comparable to territory-wide level of 12.4%. The 0-14 age group, representing about 10% of the population in the Scheme, is also comparable to the corresponding territory-wide level (11.6%). The elderly group (65 and above), representing about 13% of the total population in the Scheme, is similar to the corresponding territory-wide level of 13.3%. The findings of the survey show that the percentage share of the number of children and elderly in the total population of the Scheme is not particularly high. It is anticipated that the assistance required to support this more vulnerable group should be manageable. **Figure 3.2** showed the age structure of the Scheme.



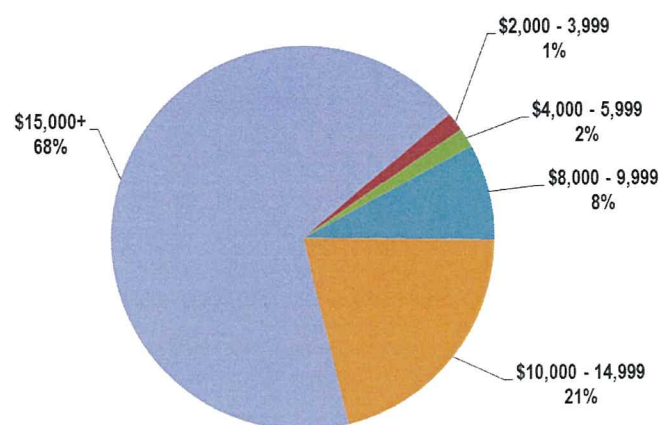
**Figure 3.2 Age Structure**



#### 4. SOCIO-ECONOMIC CHARACTERISTICS

##### Income Level

- 4.1 The monthly income of 62 households are recorded and analyzed. As shown in **Figure 4.1**, approximately 11% of the households have monthly income less than HK\$10,000 per month, which is much lower than the territory-wide average of 24%. For households receiving less than HK\$4,000 per month, the proportion was about 1% (no household in the range of less than HK\$2,000), which is lower than the territory-wide average of 9% as reported in the 2011 Census. A large proportion of interviewed households (68%) have monthly income of more than HK\$15,000 per month. Based on those who responded, the percentage of low-income household living within the Scheme appear to be low.



**Figure 4.1 Household Income (HK\$ per month)**

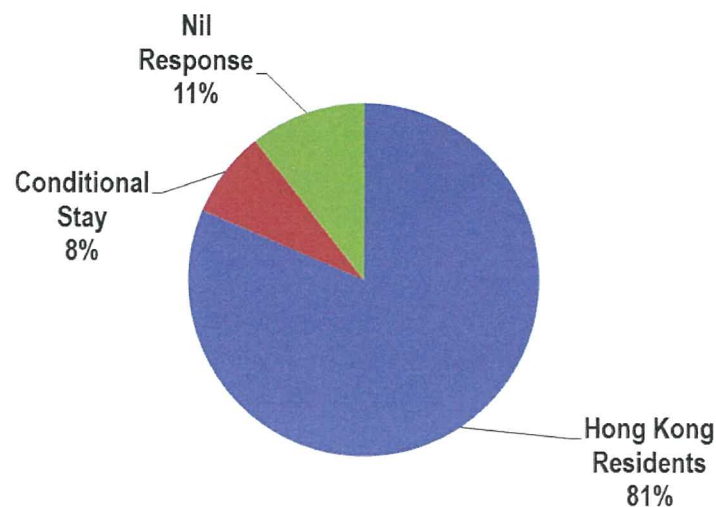
- 4.2 Out of the 62 households who responded to SIA, only 1 household comprising 5 persons (i.e. around 2% of the total households) was recorded as currently receiving Comprehensive Social Security Assistance (CSSA). The percentage share of the population in the Scheme receiving CSSA (3%) is much lower than the territorial level of 6.3% as at end 2011<sup>1</sup>. However, since 15 households refused to do the SIA questionnaire, their household income and financial status cannot be identified in this report. The URA and the SST would pay particular attention and to offer assistance to those in need of help and refer them to relevant services and practical assistance from various Government Departments and services providers.

##### Residence

- 4.3 Approximately 15 out of 188 residents (about 8%) replied that they were subject to conditional stay, as shown in **Figure 4.2**. All the residents in this group could not

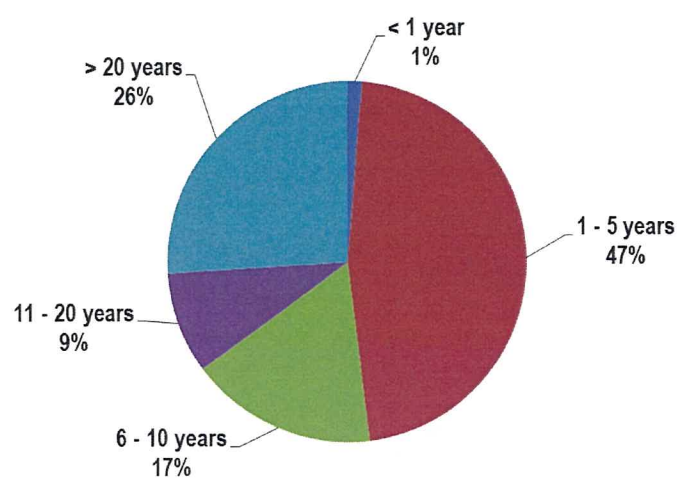
<sup>1</sup> Territorial CSSA data from 'Statistics on Comprehensive Social Security Assistance Scheme, 2001 to 2011, Feature Article of Hong Kong Monthly Digest of Statistics', September 2012, Census and Statistics Department.

meet the eligibility criteria for public rental housing as applied by the Hong Kong Housing Authority (HKHA) and the Hong Kong Housing Society (HKHS). Subject to the merits of individual cases, some may be considered under special circumstances by the SST and the URA and rehousing may be offered on genuine compassionate grounds. Assistance will also be provided, if requested, in finding potential suitable premises at affordable rent in the private market.



**Figure 4.2 HKSAR Resident Status**

- 4.4 **Figure 4.3** indicates the length of time the affected households have resided in their current abode. Out of 77 households, almost half of the surveyed households (some 48%) have lived in the Scheme for less than 5 year, of which 1%, less than a year. Twenty (20) households (about 26%) have lived within the Scheme for over 20 years. Of this group of households living over 20 years, 12 families have elderly family members. This elderly group might find it more difficult to adjust to a new living environment. The assistance of the SST in providing orientation services and holding community gatherings will be important in helping these residents adapt to their new environment.



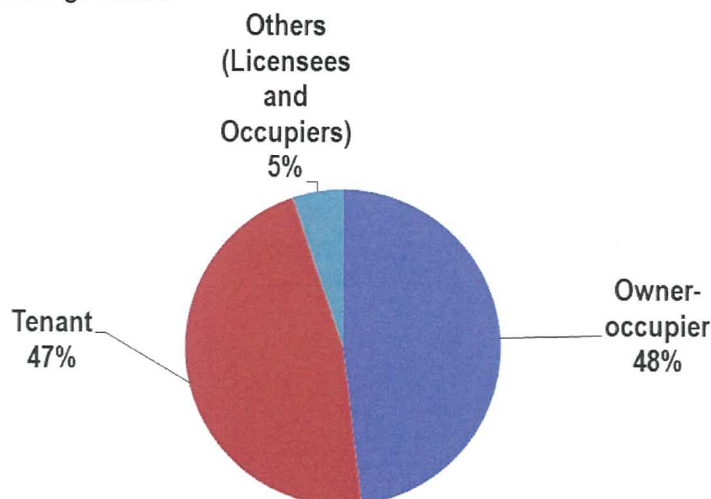
**Figure 4.3** Period of Residence at Current Premises



## 5. HOUSING

### Re-housing Needs and Location Preference

- 5.1 Owner-occupiers accounted for about 48% (37 households)<sup>2</sup> of households in the survey. This rate of owner occupancy is slightly lower than the territory-wide average of 52% and is not surprising given a number of units were sub-divided within the Scheme which appear to be for rent. Tenants accounted for about 47% of households surveyed (36 households). Licensees / occupiers accounted for about 5% of households surveyed (4 households). The occupancy status<sup>3</sup> of the surveyed households is shown in **Figure 5.1**. The high proportion of tenants in the Scheme may result in a higher demand for rehousing services should the Scheme be authorized to be implemented and subject to their eligibility for rehousing. There are 5 households identified living in the rooftop structures (2 households are registered as tenants and 3 households are registered as licensees/ occupiers). Since the roof of all the buildings in the Scheme are open roofs without approved domestic units according to the approved GBPs, all the rooftop structures are considered to be unauthorised structures. For rooftop structure occupiers, apart from meeting the eligibility criteria adopted by the HKHA in rehousing, there are other specific criteria<sup>4</sup> that the rooftop structure occupiers have to satisfy in order to be eligible for public rental housings. For rooftop households which are not eligible for rehousing but with genuine needs, they may be considered as special cases and rehousing may be offered on genuine compassionate grounds.



**Figure 5.1 Occupancy Status of Households (77 surveyed households)**

<sup>2</sup> The owner-occupier status has not been confirmed yet. All responses related to owner-occupiers are based on the questionnaire surveys only.

<sup>3</sup> The occupancy status of the surveyed households has yet to be ascertained.

<sup>4</sup> The relevant specific criteria are listed in the URA website "Re-housing Eligibility of Illegal Rooftop Structure Occupiers":

<http://www.ura.org.hk/en/schemes-and-policies/redevelopment/ura-implemented-projects/ex-gratia/urao/urao-rehousing.aspx>

### Affected Owners

- 5.2 Among the 37 surveyed owner-occupiers, 25 (about 68%) indicated their preference of finding alternative accommodations in the same district as where they are living, i.e. Kowloon City District. Nine (9) owner-occupiers responded that they had yet to decide and 3 owner-occupiers did not respond to the question.
- 5.3 When looking for new accommodation, 20 owner-occupiers (about 54%) indicated that they would prefer to look for flats with similar size, 9 owner-occupiers (about 24%) preferred bigger flats, and 2 owner-occupiers (about 5%) preferred smaller flats. Three (3) owner-occupiers (about 8%) had not yet decided. Three (3) (about 8%) did not respond to the question.
- 5.4 Among the 37 surveyed owner-occupiers, none expressed intention to move to a flat older than their existing premises in terms of building age. Two (2) owner-occupiers (5%) expressed that they would like to move to a flat with comparable building age as the existing one. The majority (22 or about 59%) preferred newer flats and 7 (about 19%) preferred first-hand new flats. Two (2) (5%) had yet to decide, and 4 (11%) did not respond to the question.
- 5.5 Over 78% of the surveyed owner-occupiers wanted their alternative accommodation to be newer than the current abode. The URA will offer owner-occupier of domestic property the market value, plus an ex-gratia allowance (namely Home Purchase Allowance), which is believed that the affected owner-occupiers will be able to buy a newer flat of similar size in the same district. For those affected owner occupiers expressing their desire to move to a new flat, URA will offer 'Flat-for-Flat'(FFF) option for those eligible owner occupiers to choose to buy a new flat in-situ or an URA development in the same district (as URA may select for the FFF purpose provided that necessary approval / authorization has been obtained at the time of FFF offer), as an additional option to cash compensation.

### Affected Tenants

- 5.6 On the housing preference of the 40 tenant households (including licensee/ occupier households), 23 (about 68%) expressed their preference for moving into public rental housing, of which 78% preferred East Kowloon, 17% preferred location in West Kowloon and 5% did not respond to this question. The majority preference for East Kowloon is understandable. However, as stated in paragraphs 4.3 and 5.1 above, those residents who are subject to conditional stay and some of those who lived in rooftop structures may not be eligible for public rental housing. Rehousing may only be considered for very special circumstances and on compassionate grounds.
- 5.7 The URA has made special arrangements with the Hong Kong Housing Authority (HKHA) and the Hong Kong Housing Society (HKHS) to provide flats within their estates for rehousing eligible households. According to information from the HKHA and HKHS websites, there are 7 HKHA public rental housing estates/Tenant Purchase Schemes Estates and 3 HKHS subsidised rental

housing estates in Kowloon City district. In addition, there are 23 HKHA and 1 HKHS public rental housing estates in the neighbouring districts of Wong Tai Sin and Yau Tsim Mong districts. The URA will liaise with HKHA and HKHS to reserve flats in available estates to cater for the potential demand and accord priority to vulnerable groups. Subject to the availability of rehousing flats, the URA will endeavour to arrange rehousing for the eligible tenants in the same or adjacent districts as far as practicable.

#### Affected Rooftop Residents

- 5.8 The 5 surveyed rooftop households should follow the eligibility criteria for public rental housing adopted by the HKHA for illegal rooftop structure occupiers and the specific criteria as stated in paragraph 5.1 above should they be eligible for rehousing under current prevailing policies.

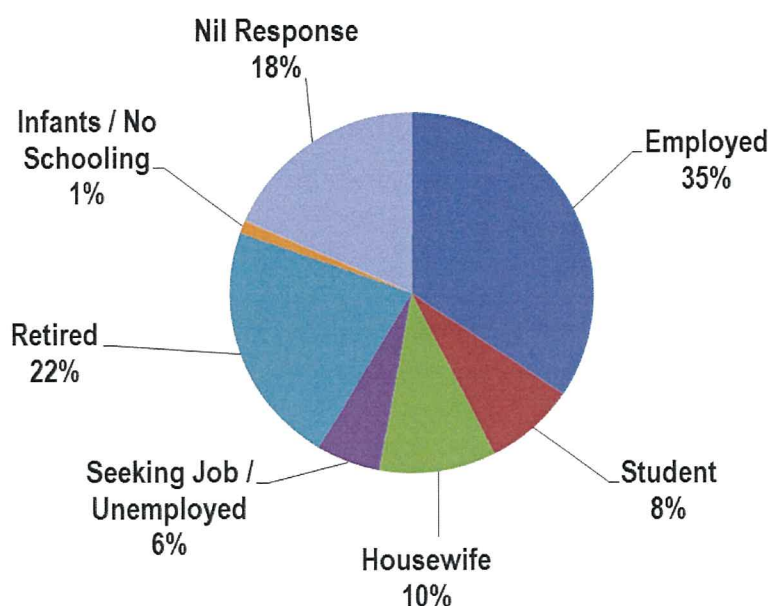


## 6. EMPLOYMENT STATUS AND PLACE OF WORK

- 6.1 Around 49% of the population (93 residents out of a total of 188 residents) within the Scheme was employed. Unemployed persons accounted for about 5% of the total population in the Scheme. The employment status of the affected owners and tenants are analyzed in paragraph 6.2 to 6.7 below.

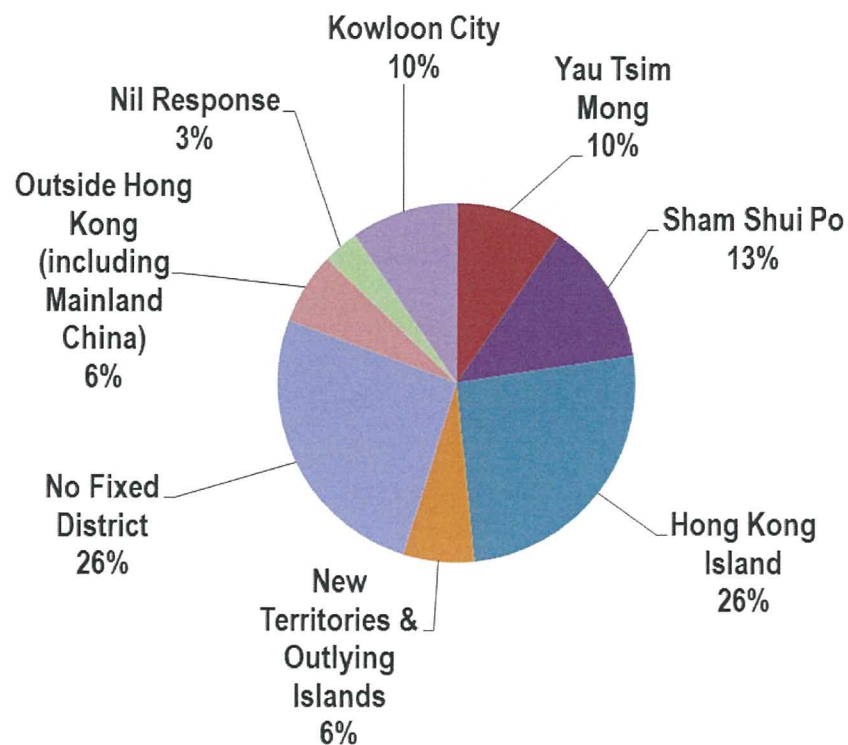
### Affected Owners

- 6.2 A total of 88 residents from the 37 owner-occupier households were recorded in the survey. About 35% of this type of residents was employed, whereas only about 6% were unemployed. **Figure 6.1** shows details of employment status of the family members of owner-occupier households.



**Figure 6.1 Employment Status of Affected Owners' Family Members**

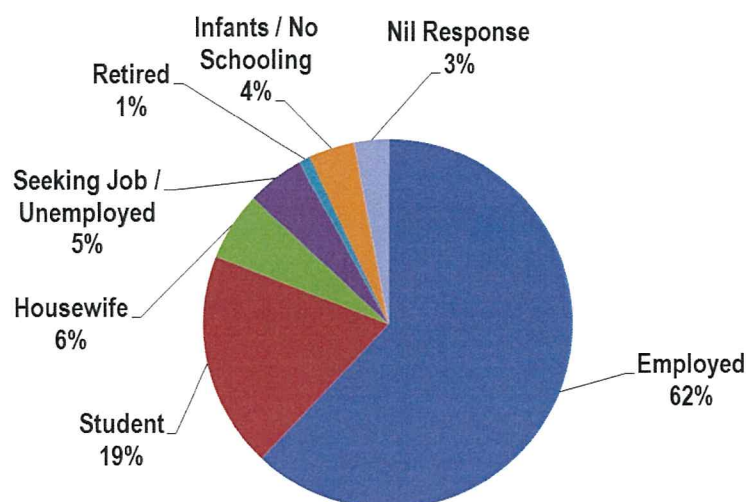
- 6.3 About 10% of the employed residents in the owner-occupier households were working in Kowloon City, and around 13% in Sham Shui Po. About 26% did not have a fixed working district. Other employed residents worked in different districts including HK Island, other parts of Kowloon, the New Territories and outside Hong Kong. Around 3% did not respond to this question. **Figure 6.2** shows the percentage share of different places of work of the employed persons of the owner-occupier households. As mentioned in paragraph 5.2 above, a large number of owner-occupiers (about 68%) indicated their preference of finding alternative accommodation in Kowloon City District, this generally coincides with the survey result of their work places in Kowloon.



**Figure 6.2 Place of Work of Affected Owners' Family Members**

Affected Tenants

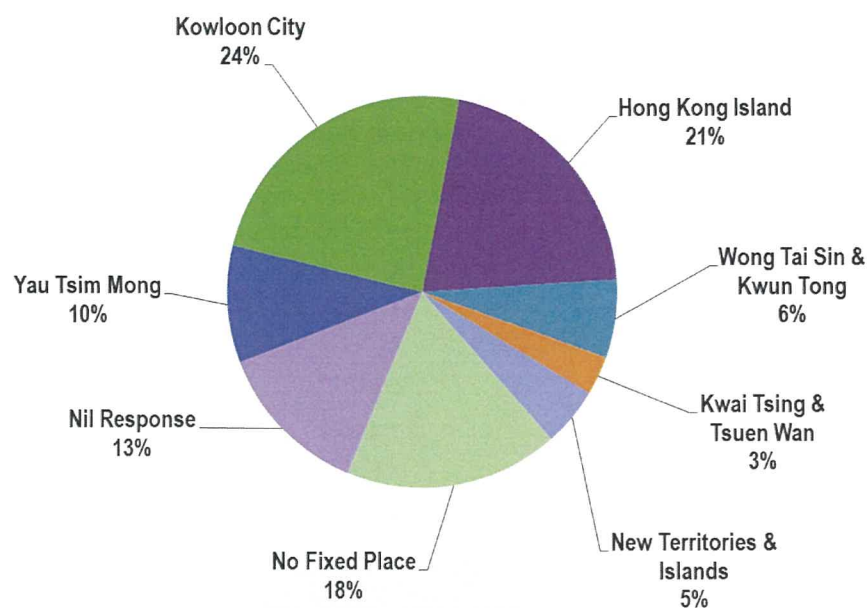
- 6.4 Among the 40 affected tenant households comprising 100 persons, about 62% had employment, whilst about 4% were unemployed (**Figure 6.3**).



**Figure 6.3 Employment Status of Affected Tenants**

- 6.5 Among the 62 tenants who were employees, about 24% were working in Kowloon City. About 10% were working in the neighbouring districts Wong Tai Sin and Kwun Tong districts. Around 5% are working in New Territories and Islands. About 18% of residents had no fixed location of work, whilst 13% of residents did not respond to this question. As mentioned in paragraph 5.6 above, a large number of affected tenants, who preferred to move to public rental housings, hoped to be relocated in East Kowloon; this generally coincides with the survey result of their work places (i.e. about 30% working in Kowloon City, Wong Tai Sin and Kwun Tong districts). **Figure 6.4** shows the places of work of the tenant residents.





**Figure 6.4 Place of Work of Affected Tenants**

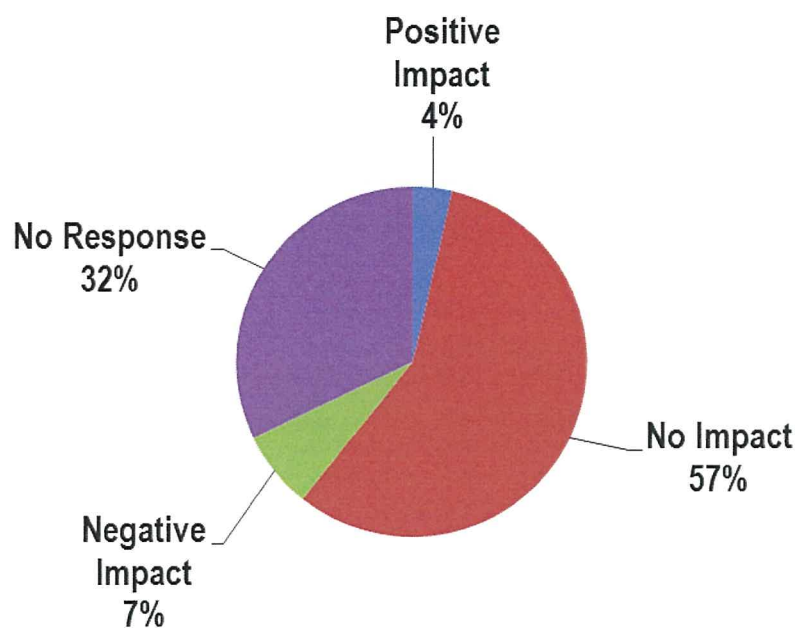
- 6.6 For those employee tenants who were working in Kowloon or Hong Kong Island, there would be economic concerns arising from higher transportation cost if they were to be relocated to the New Territories. The URA will endeavor to meet the locational preferences of residents for public rental housing from the HKHA and the HKHS subject to their eligibilities and the availability of flats at that time. Priority will be given to households of the most vulnerable groups (e.g. disabled persons). The SST will investigate the needy cases as identified and depending on justifications, may make recommendations for rehousing on compassionate grounds.
- 6.7 The findings of the survey show that the unemployment rate of the family members of the owner-occupier households (6%) and the tenant households (4%) which are slightly higher than the territory-wide figure [The territory-wide figure is 3.3% for a period of January 2016 – March 2016<sup>5</sup>]. There may be a financial difficulty for this group of unemployed residents in the Scheme. If the Scheme is to be implemented, the eligible owner-occupier households and tenanted households will be subject to the URA's prevailing compensation policies.

<sup>5</sup> Information from website of Census and Statistic Department as of 19 April 2016.

## 7. ECONOMIC AND EMPLOYMENT IMPACTS

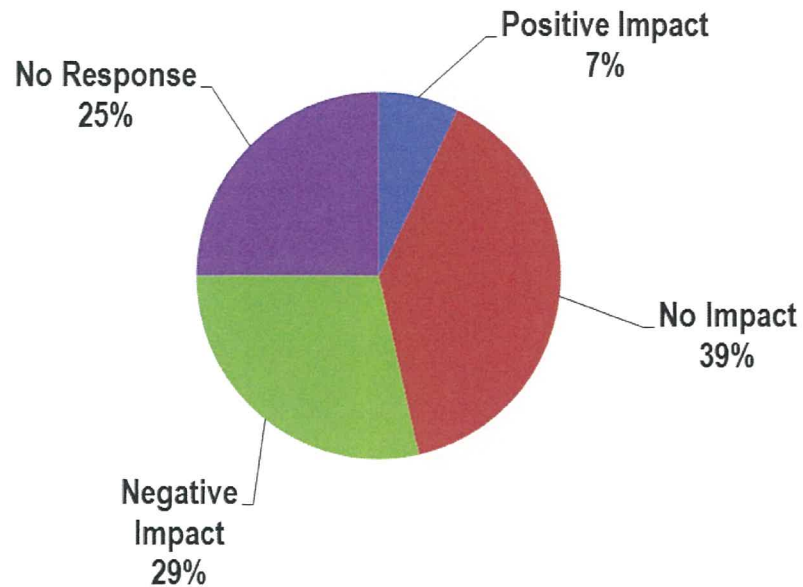
### Affected Owners

- 7.1 **Figure 7.1** summarizes the impact of the redevelopment on employment condition as anticipated by the 28 interviewed domestic owner-occupier households. One (1) household considered that there would be positive impact to their employment condition. The majority (16 households or 57%) considered that it would have no impact. Two (2) households (about 7%) considered there would be negative impact whilst 9 households (32%) gave no response.



**Figure 7.1 Impact on Employment to Affected Owners**

- 7.2 The expected impact on family finances of the 28 interviewed owner-occupiers is summarized in **Figure 7.2**. Two (2) households (about 7%) considered that there would be positive impact on their financial conditions, 11 households (about 39%) considered that there would not be any impact, and 8 households (about 29%) expected negative impact. The remaining 7 affected owner households (about 25%) gave no response to this question.



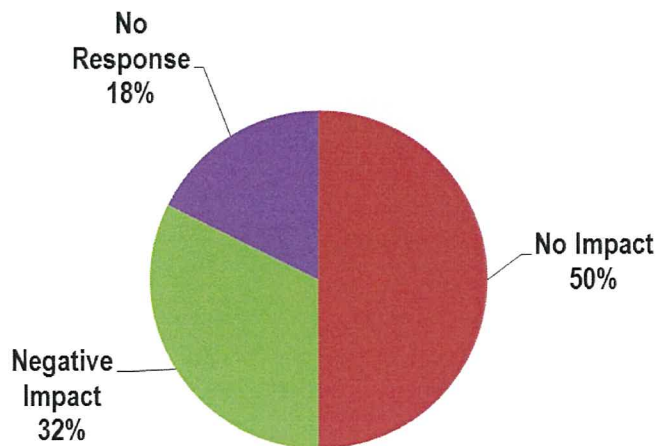
**Figure 7.2 Impact on Economic Condition to Affected Owners**

- 7.3 The 2 owner households expecting positive impact cited more saving as a major advantage. Among the 8 owner households who considered having negative impact, most of them cited more expenditure, less saving and cash flow as their main concerns of bad impacts resulting from the Scheme.

#### Affected Tenants

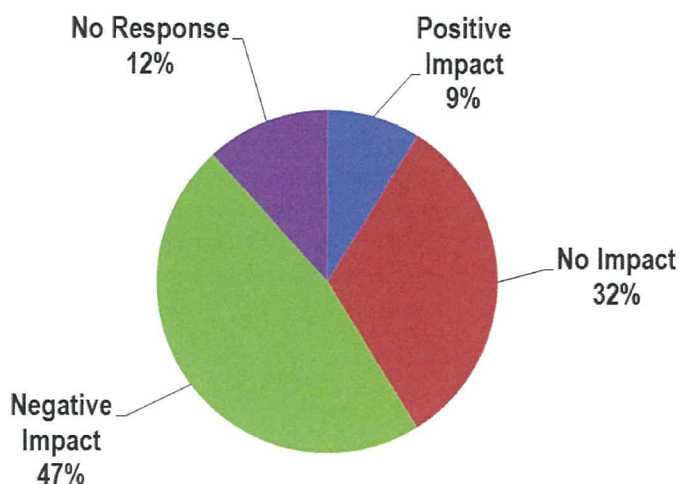
- 7.4 The expected impact on employment condition as reflected by the 34 interviewed tenant households is summarized in **Figure 7.3**. None of the households considered there would be positive impact to their employment whilst almost half of the tenant households (17 households, about 50%) considered there would not be any impact. Eleven (11) households (32%) expected negative impact. Those expecting negative impacts cited long distance from workplace and inconvenience to go to work as the major impacts.





**Figure 7.3 Impact on Employment to Affected Tenants**

- 7.5 The expected impact on family finance as reflected by interviewed tenants is summarized in **Figure 7.4**. Three (3) (about 9%) tenant households considered there would be positive impact to their finance condition due to the Scheme. Eleven (11) households (about 32%) considered there would not be any impact, whilst 16 households (about 47%) expected negative financial impact and 4 households (about 12%) gave no response to this question.



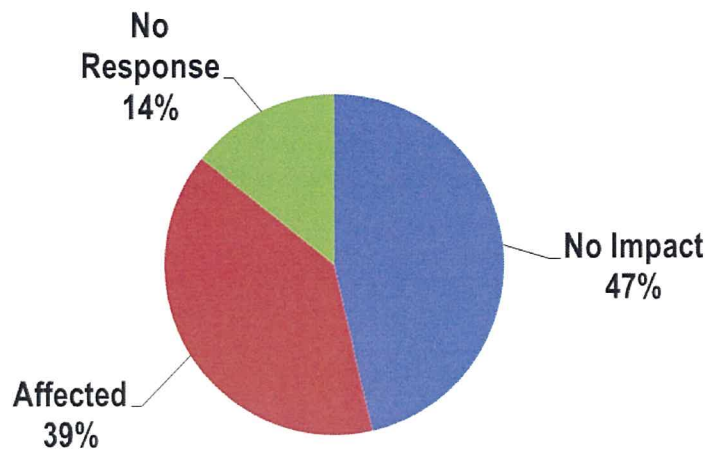
**Figure 7.4 Impact on Economic Condition to Affected Tenants**

- 7.6 For those 16 interviewed tenant households which considered the proposed Scheme would have negative impact, 11 anticipated that their living expenditure would increase due to the Scheme. Nine (9) tenant households anticipated that they would have less saving and 7 tenant households anticipated that they would have less cash flow, and 4 households considered that the Scheme may lead to greater debt burden (each household can express more than one concern).
- 7.7 After the Freezing Survey, URA organised public briefing sessions to the affected owners and tenants to explain the prevailing policies on compensation and rehousing to alleviate their concerns. If the Scheme is to be implemented, the eligible tenant households will be subject to the URA's prevailing compensation policies.

## 8. SOCIAL NETWORK

### Affected Owners

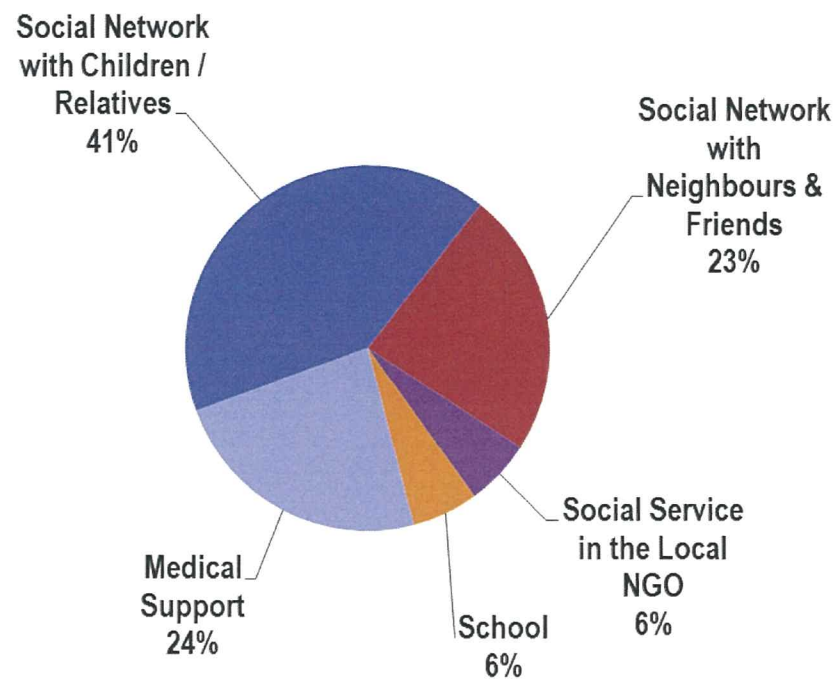
- 8.1 When asked about the likely impact of the proposed redevelopment on their social network, 11 (about 39%) of the 28 interviewed owner-occupier households answered that their current social network would be affected, whilst 13 households or about 47%, considered that their network would not be affected; 4 households (14%) gave no response to this question. The distribution pattern is shown in **Figure 8.1**.



**Figure 8.1 Redevelopment Effect on Social Network to Affected Owners**

- 8.2 Of those respondents who were concerned about the possible adverse effects of the Scheme on their social network (about 39% of the owner-occupiers), the perceived impact on network with children and relatives (7 households), neighbours and friends (4 households) and network related to medical support (4 households) are their three major concerns (each respondent can provide more than one concern). The distribution pattern is shown in **Figure 8.2**.

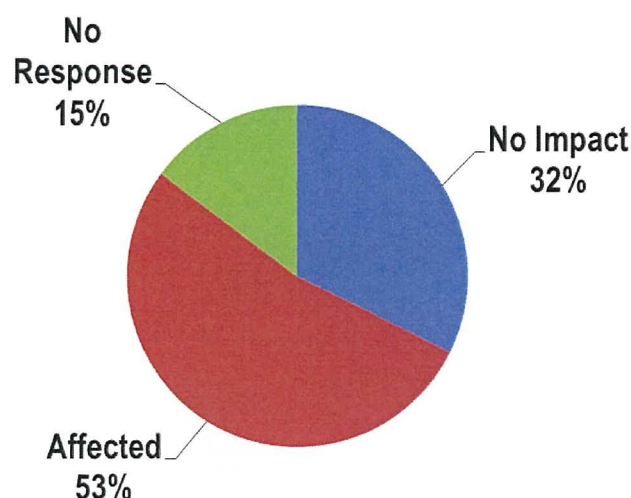




**Figure 8.2 Nature of effect on Social Network to Affected Owners**

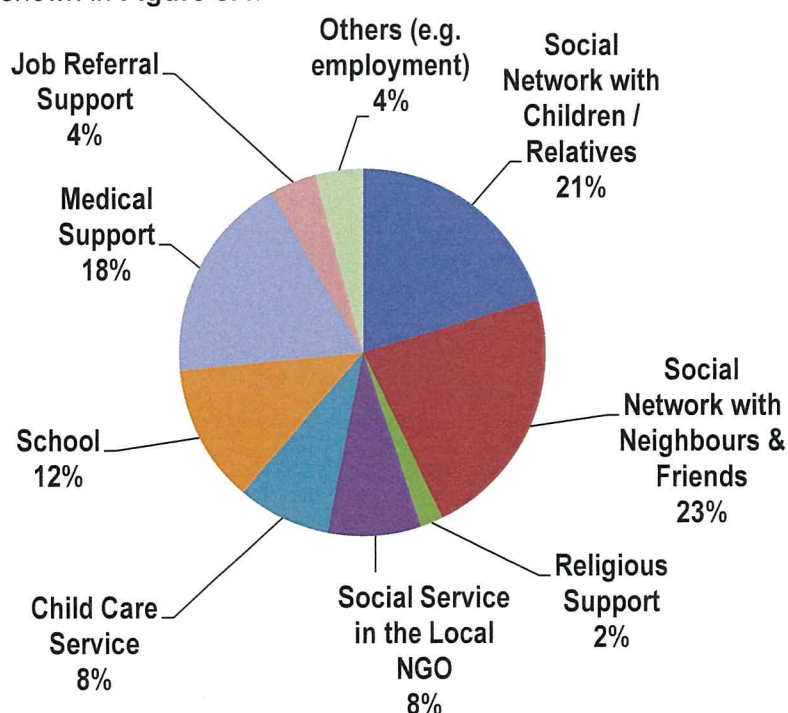
Affected Tenants

- 8.3 When asked about the likely impact of the proposed redevelopment on their social network, 18 or about 53% of the 34 interviewed tenant households answered that their current social network would be affected. Eleven (11 or about 32%) responded that their network would not be affected. Five (5) households or 15% gave no response to this question (**Figure 8.3**).



**Figure 8.3 Redevelopment Effect on Social Network to Affected Tenants**

- 8.4 Of those tenant households who were concerned about the possible adverse effects of the Scheme on their social network (about 53% of the tenant households), the perceived impact on network with neighbours and friends (about 23%), with children / relatives (21%), medical support (about 18%) as their major concerns (respondent could provide more than one concern). The distribution pattern is shown in **Figure 8.4**.



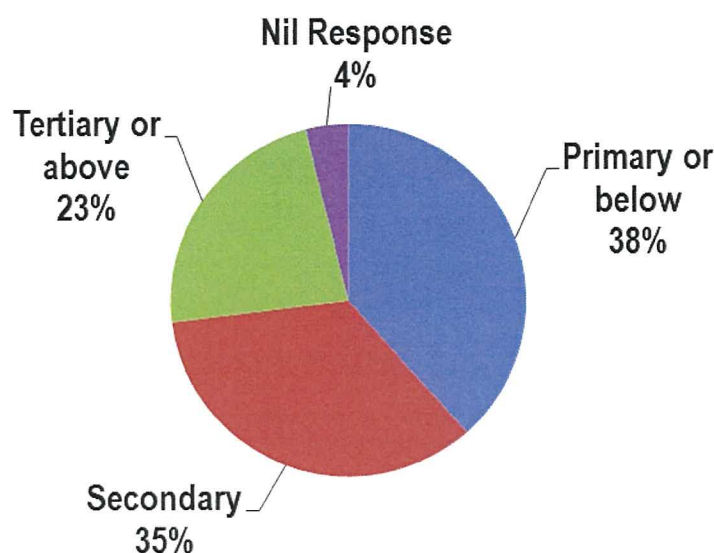
**Figure 8.4 Nature of effect on Social Network to Affected Owners**

- 8.5 About half of both interviewed owner-occupiers and tenants (47% and 32% respectively) who responded that they did not expect impact on their social network would arise is not surprising given that around 48% of total households (see paragraph 4.4) have only lived in the Scheme for 5 years or less.
- 8.6 The SST will provide orientation sessions before and after rehousing to help the affected residents adapt to their new homes and introduce various community resources available in the area, including medical support, NGO services and community facilities. It will help them to identify suitable medical/ social service providers and religious institutions in the new residence setting. However, the social support from children/ relatives may take longer to establish/ re-establish in a new environment. If such residents prefer to live close to their relatives to retain social support, the URA will endeavour to arrange rehousing, subject to the availability of public rental flats, and their eligibility for rehousing based on their locational preference as far as practicable. The URA will also offer in-situ FFF option for those eligible domestic owner-occupiers to choose to buy the newly redeveloped flats in the Scheme so that they can move back to the same area and retain the social networks upon completion of the redevelopment.



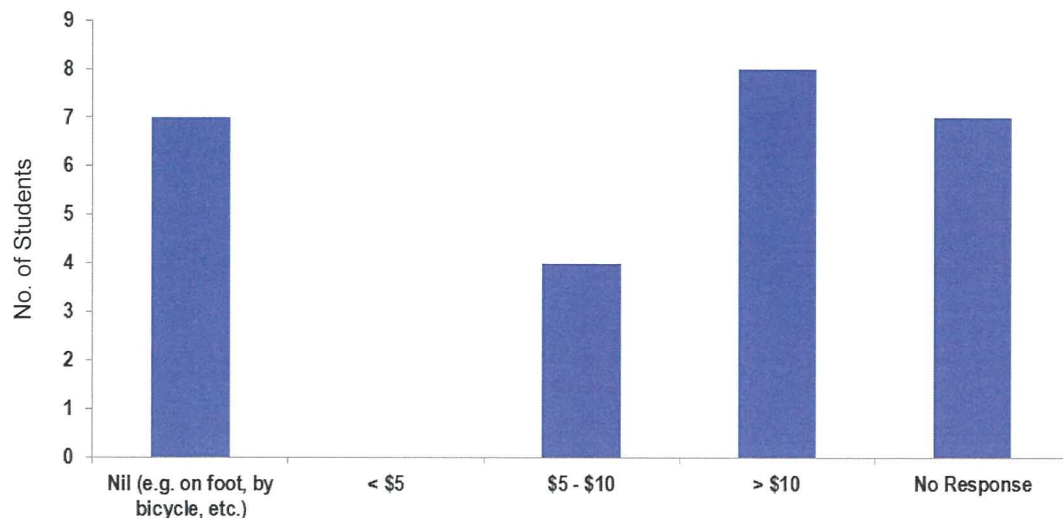
## 9. EDUCATION NEEDS OF CHILDREN

- 9.1 The survey identified 26 students residing within the Scheme. Among these students, 10 (38%) were primary or kindergarten students, 9 (35%) were secondary students and 6 students (about 23%) were Tertiary or above levels. One (1) student did not respond to this question. There were 14 students (about 54%) studying in schools in Kowloon City. One (1) students (4%) studying in Hong Kong Island. Two (2) students (8%) studied elsewhere in Kowloon. Four (4) students (15%) studied in the New Territories. Three (3) students (8%) studied in mainland China/ Macau or overseas. Two (2) students did not respond to this question. **Figure 9.1** shows the type of schools attended by the students residing in the Scheme.



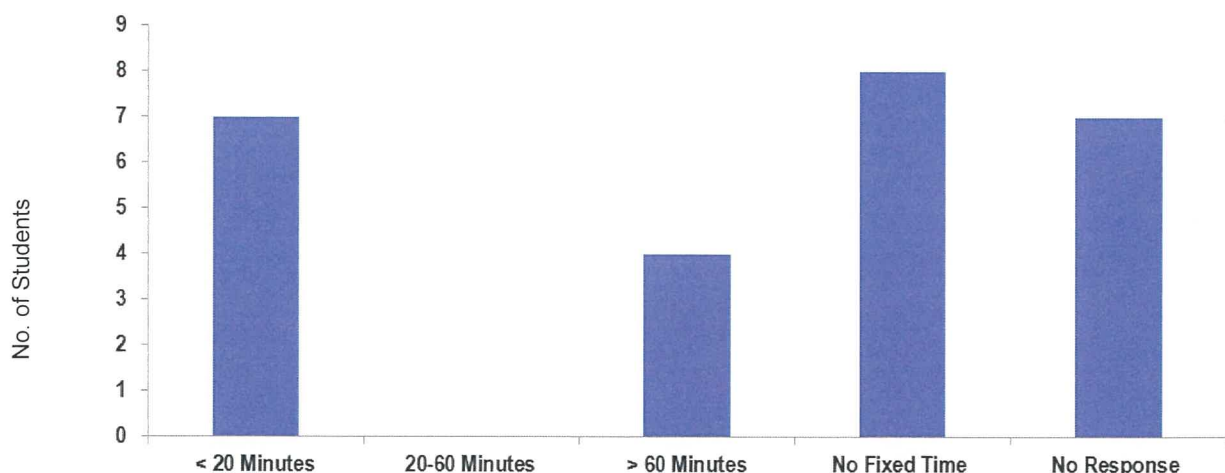
**Figure 9.1 Educational Level of Student**

- 9.2 Given the preponderance of students studying locally, it is not surprising that 7 students (about 27%) did not need to pay for transport to school. Four (4) students (about 15%) spent HK\$10 or less per trip travelling to school and 8 students (about 31%) incurred relatively higher travelling costs of over HK\$10 per trip. Seven (7) students did not respond to this question. **Figure 9.2** shows the transport costs of the students in the interviewed households.



**Figure 9.2 Travelling Cost to School – Single Trip**

- 9.3 **Figure 9.3** shows the students' travelling time to school. Seven (7) students (about 27%) spent 20 minutes or less travelling to their schools. Four students (4 or about 15%) spent over 60 minutes travelling to school whilst 8 students (about 31%) responded that they had no fixed time for travelling to school. Seven (7) students did not respond to this question.



**Figure 9.3 Travelling Time to School – Single Trip**

- 9.4 The 26 students come from 16 households of which 19 students (about 73%) were from tenant households. Seven (7) of these 19 students in tenant households were studying in primary school or kindergarten. Impact of the Scheme on this group of students may be greater as these students may need to change to another school if their families chose to move to public rental housing estates in other areas. It is understandable that parents generally wish their children to continue in their present schools. Relocation away from this area

may cause inconvenience especially for primary and kindergarten students. The URA with the assistance of the SST, will assist the affected families during the acquisition and rehousing stages to meet the educational needs of their children as much as possible. If necessary, appropriate assistance, resources and services from relevant Government Departments will be sought.

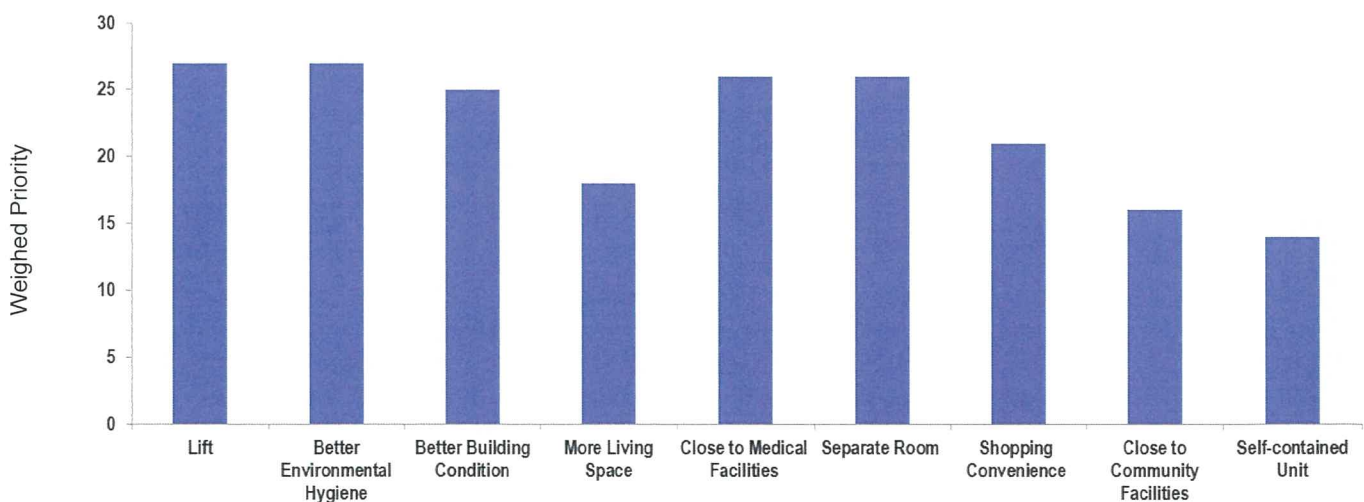


## 10. GROUPS WITH SPECIAL NEEDS

- 10.1 An assessment has been made on the special needs of the elderly, persons with disability, single-parent families and ethnic minority identified in the survey.

### Elderly Persons (65 years and above)

- 10.2 A total of 22 elderly residents in 16 households in the Scheme were recorded during the survey. Of these, only 1 elderly was a singleton whilst 4 elderly residents comprised 2 doubleton households. The remaining 17 elderly residents were from 13 households. Among the 16 households with elderly residents, only one household was tenanted household and all the rest were living in self-owned units.
- 10.3 The presence of elderly population within the Scheme has implications on types of re-housing and other age-related concerns such as accessibility to medical facilities. It is generally understood that elderly persons, particularly singletons, may have more difficulty adapting to their new environment once rehoused. The URA and the SST will make effort to alleviate their anxiety by providing information on the arrangement of rehousing and the new environment surrounding the estate.
- 10.4 **Figure 10.1** shows the aspirations of the elderly when questioned about the improvements they would like to see in their new home. Eligible elderly owner-occupiers can be subject to prevailing cash compensation for buying new flat with better physical living condition (e.g. with lifts).



**Figure 10.1 Elderly Concerns on Living Environment (based on the first three priorities chosen)**

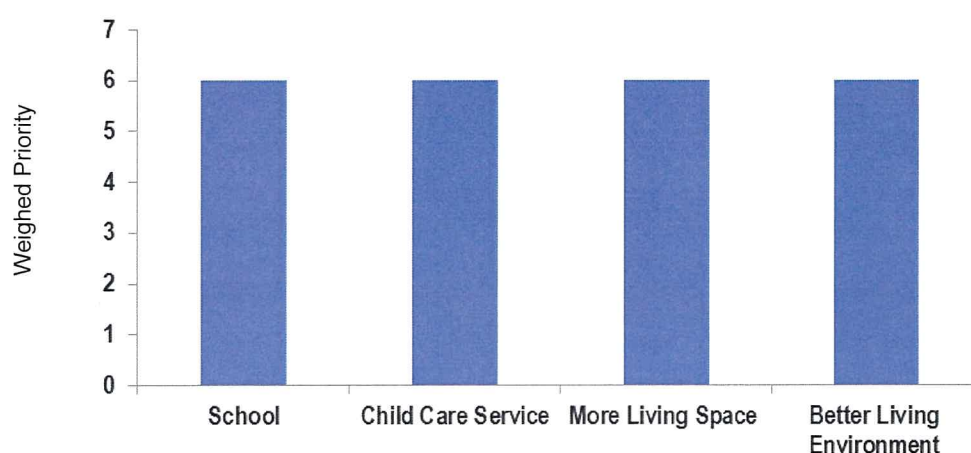
### Persons with Disability

- 10.5 Five (5) residents with disabilities (about 3% of the surveyed population) were

recorded in the survey. Of these, 2 residents have mental health problem, the other three residents have walking difficulties. Three (3) residents with disabilities considered medical support and 1 resident considered the provision of disability access/facility as their primary concerns. Rehousing for disabilities may be considered on compassionate grounds if they are not eligible under the normal eligibilities.

#### Single-parent Families

- 10.6 Two (2) single-parent families with 6 children were identified. These families were particularly concerned with child care service provision, more living space, better living environment and the schooling needs for their children. The concerns were weighed as same importance to the interviewed single-parent families as showed in **Figure 10.2**.



**Figure 10.2 Major Needs of Single-parent Families**  
(based on the first three priorities chosen)

#### Ethnic Minority Group

- 10.7 Among the 77 households, 14 residents from 3 households claimed to be non-ethnic Chinese. One household is from Pakistan and one household is from Philippines. The other household did not respond to this question. Among these 14 non-ethnic Chinese residents, 12 residents are under conditional stay.
- 10.8 All the 3 households who claimed to be non-ethnic Chinese were tenant households. The 2 households who answered the SIA questionnaire, one expressed strongly support to the proposed Scheme and the other had no comment. One (1) household who responded considered there would be no impact of the Scheme on their social network, family finance nor employment. One (1) household considered there would be bad impact on his family finance. The SST will provide assistance to the families to mitigate the adverse impacts. The URA will endeavor to arrange rehousing to tenant households, subject to the availability of public rental flats and their eligibilities.

## 11. BUSINESS IMPACT

- 11.1 According to the original GBPs and OPs of the 14 blocks of buildings in the Scheme area, only 4 ground floor premises (i.e. Nos. 18 – 24 Chun Tin Street (even numbers)) are for “non-domestic uses”. The 10 ground floor premises at Nos. 2 – 4 Hok Yuen Street (even numbers) and Nos. 2 – 16 Chun Tin Street (even numbers) as well as the upper floor units are for domestic use in the OPs of the buildings. Based on the FS records, a total of 20 premises were identified as “non-domestic uses”, which comprise 15 ground floor premises, 2 staircase premises, 1 cockloft premise and 2 upper floor premises.
- 11.2 Among the 20 non-domestic premises, 14 premises were successfully surveyed including 1 vacant premises. Entry to the the remaining 6 premises were not granted and therefore were unsurveyed.
- 11.3 Eleven (11) business operators were identified in the 14 surveyed premises. Among the 11 operators, 1 operator occupied 2 upper floor premises for the same business; 1 operator occupied 3 premises for the same business (2 ground floor premises and 1 staircase premises). **Table 11.1** shows the number of non-domestic premises and business operators identified in the Scheme.

	Non-domestic premises	Business operators
Successfully responded to both FS (successfully surveyed) and SIA (successfully interviewed)	11*	9
Responded to FS forms only (successfully surveyed), but refused to do SIA.	3	2
Unsurveyed/ Refused	6	N/A
<b>* Total</b>	<b>20</b>	<b>11</b>

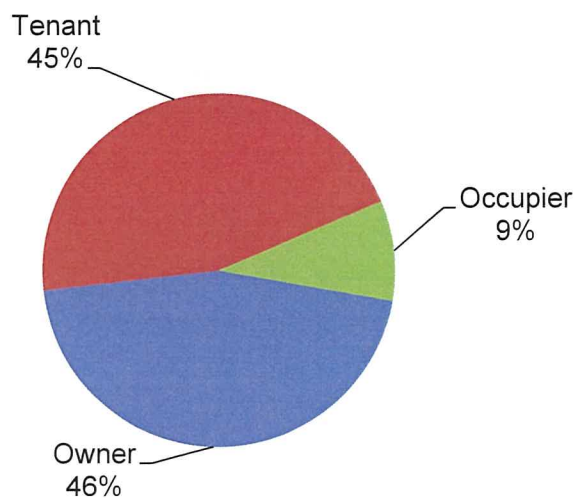
\* Including 1 confirmed vacant unit.

**Table 11.1 Number of non-domestic premises and business operators identified in the Scheme**

- 11.4 In counting the number of business operators found in the Scheme, it is generally based on the total number of FS forms completed (12 completed FS forms) in the Scheme. For clarity purpose, two particular cases encountered in the survey are noted below: (i) an operator occupying 2 upper floor premises filled 2 separate FS forms for each premises. Since the content of the 2 FS forms are the same, only 1 operator will be considered for the 2 upper premises; and (ii) another 1 operator was found to operate 2 different businesses at 2 premises, one business owned by himself and the other business owned with partners. Two (2) business operators are counted in the analysis for the reasons of both nature and ownerships are different for the 2 businesses.



- 11.5 Among the 11 business operators, 9 operators answered both FS and SIA forms; whilst 2 operators answered the FS forms only. Among the 9 operators who answered both FS and SIA, 1 owner claimed in the FS form that her unit was vacant for 7 years but she used to run a business in that premises for more than 30 years before it was left vacant. Given that she used to operate business in the premise before and she answered both FS and SIA forms, her information will be considered in this section's analysis. The following analysis in regard to the size of premises, reason for operating in current premises, length and performance of business and etc. are based upon the answers of the 9 business operators who completed the SIA forms.
- 11.6 Of those 11 operators who answered FS questions regarding their occupancy status, 5 were owner operators, 5 were tenant operators and 1 was an occupier. (Figure 11.1)

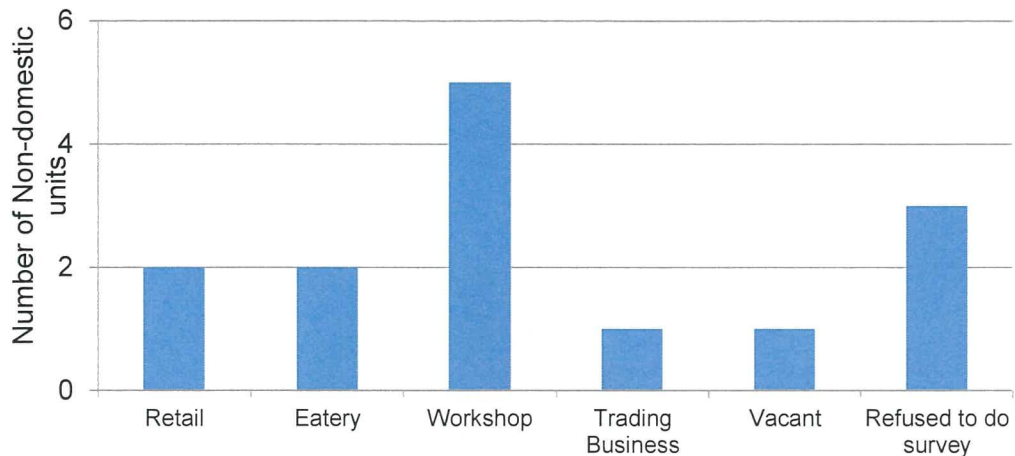


**Figure 11.1 Occupancy Status of Business Operators**

- 11.7 The nature of existing businesses of the 14 non-domestic premises is shown in **Figure 11.2**. Two (2) premises were used for retail sales activities. Two (2) premises were used as eateries. Five (5) premises were used as workshops including recycling, metal hardware processing, and car repair and services. One (1) premises was used for trading business. One (1) premises was vacant. Three (3) premises gave no response to the question. These business activities are typical of shops and services found in many parts of Kowloon City District.
- 11.8 For the workshop operators (including the recycling business, metal hardware processing and the car repair workshops), they will need to find alternative shop premises which can satisfy their various operational requirements and where the respective uses are permissible in both the lease and planning terms, and in compliance with the Deed of Mutual Covenant (DMC) of the buildings. If those operators cannot find suitable premises meeting above criteria for relocation, there is a possibility that they might have to close down their businesses but they will be compensated with relevant ex-gratia allowance (if eligible) according to the

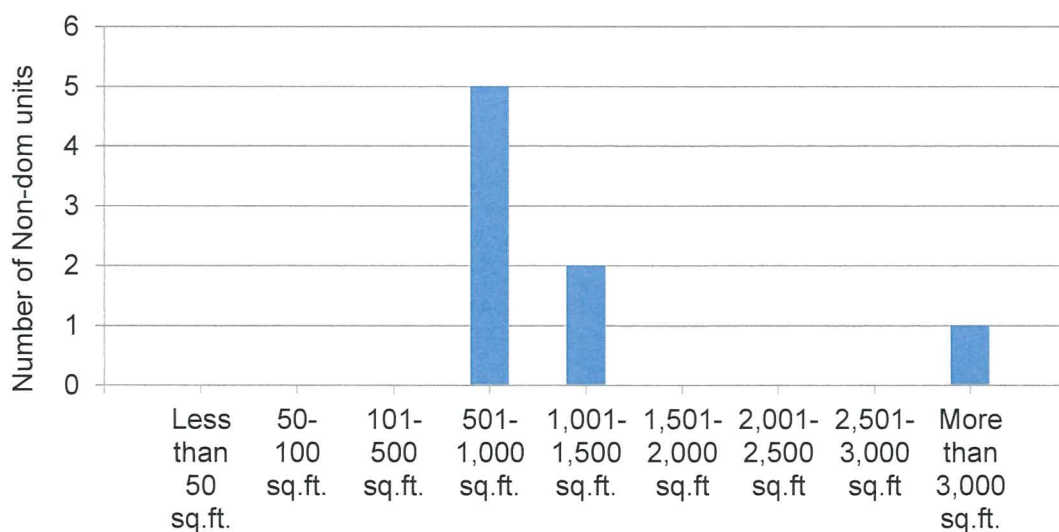
Authority's prevailing policy and the one-off special measures.

- 11.9 Among those 9 operators who answered SIA forms, 2 indicated that it was a chain store or had a branch elsewhere.



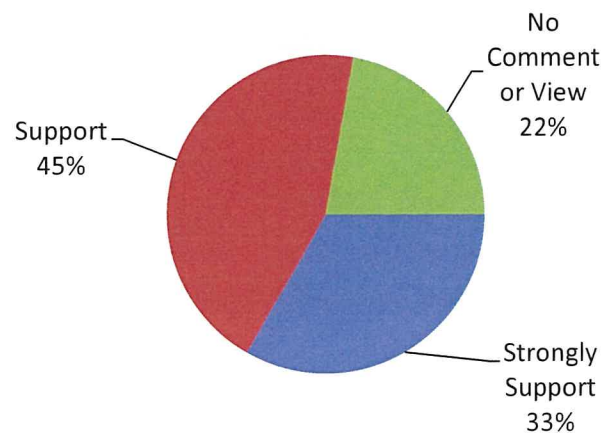
**Figure 11.2 Classification of Non-domestic Uses**

- 11.10 As for the size of the non-domestic premises, of those 9 operators who answered SIA forms and according to their responses, 5 units were between 500sq.ft. and 1,000sq.ft. Two (2) units were between 1,000sq.ft. and 1,500sq.ft. One (1) unit was more than 3,000sq.ft. One operator gave no response to this question. The size distribution of the non-domestic premises are shown in **Figure 11.3**. [NB: The exact size of the premises can only be confirmed subject to detailed survey after the approval of the Scheme by the CE in C].



**Figure 11.3 Size of Non-domestic Premises as claimed by operators**

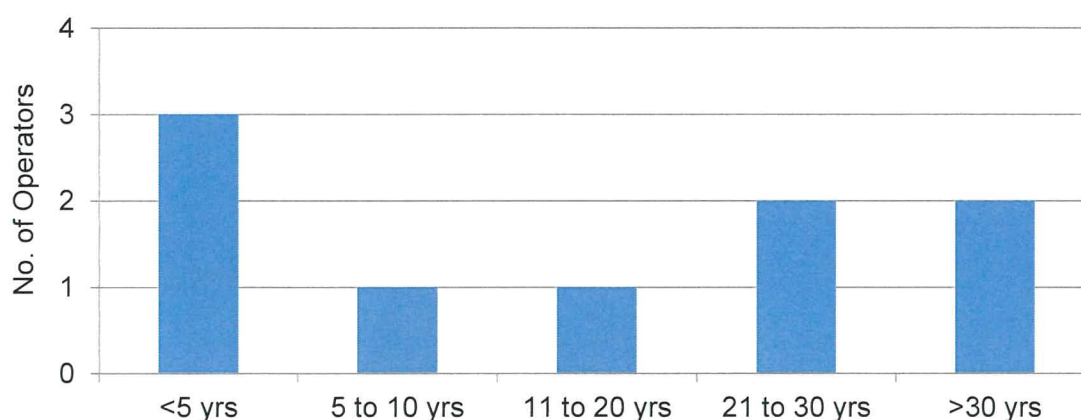
- 11.11 Among the 9 operators who answered SIA forms, 7 (78%) either strongly supported or supported the proposed redevelopment and two (2) (22%) had no comment (**Figure 11.4**). Those who supported the Scheme mainly considered that the building condition was poor and that the buildings should be demolished for redevelopment. Some considered that the redevelopment should be implemented as early as possible. Some considered that the compensation policy is acceptable and the relocation enables shops refurbishment and improve business operation. **Figure 11.4** shows the views of the business operators to the proposed redevelopment.



**Figure 11.4**  
**Views of Business Operators to the Proposed Redevelopment**

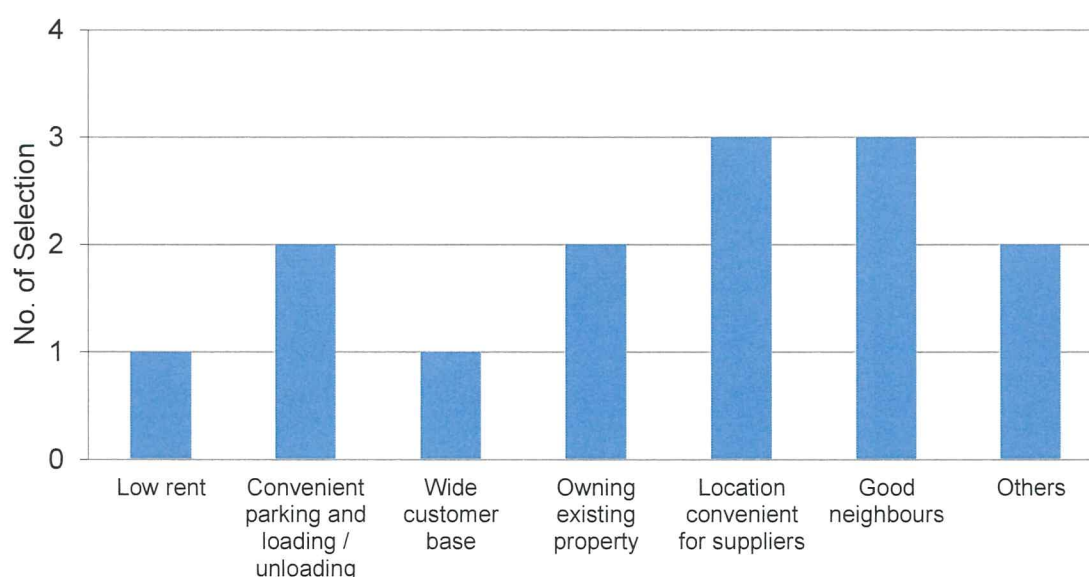
- 11.12 It must be noted that there were 6 non-domestic premises unsurveyed and did not do SIA questionnaire, including the recycling workshops. The above views only represent the views of those surveyed and it shall not preclude the possibility of the unsurveyed operators who may have other views or opposition to the proposed redevelopment.
- 11.13 Three (3) operators out of the 9 interviewed business operators mentioned that they had operated their businesses in other districts before moving to the current premises. It is anticipated that these operators may find it easier to relocate to other premises given their experiences operating in other districts. Six (6) operators indicated that they had only operated in Kowloon City District.
- 11.14 In terms of year of business operation of their existing businesses in the existing premises, among the 9 interviewed operators, 3 operators had been operating in the current premises for less than 5 years, 1 operator between 5 and 10 years, 1 operator between 11 and 20 years, 2 operators between 21 and 30 years, 2 operators had operated over 30 years in the existing premises. (**Figure 11.5**).





**Figure 11.5 Year of Business Operation in the Current Premises**

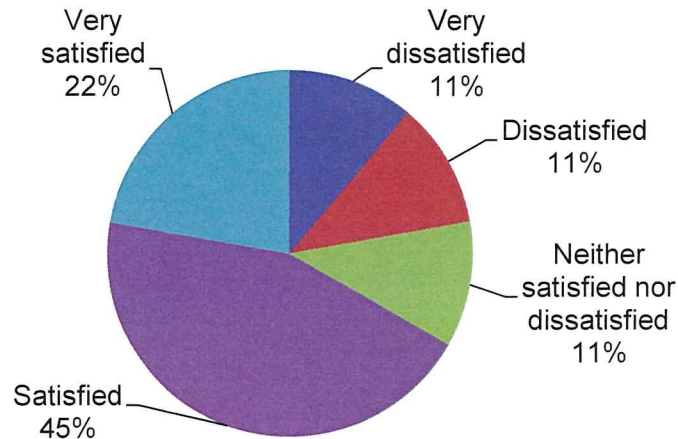
11.15 **Figure 11.6** shows the reasons of 9 interviewed operators for operating their businesses at the existing premises. The reason for operating in existing premises given by two (2) operators was convenient parking and loading/unloading. It is understandable as Chun Tin Street is currently a dead-end road and business operators usually take the advantage of using the street spaces for additional storage and workspaces. Three (3) considered good neighbourhood relationship while 1 considered low rent as their reasons. One (1) considered having wide customer base while 3 considered convenient for supplier. Two (2) operators considered owning the existing property as the reason for operating at the current premise. Two (2) operators cited recommendation by friends and good prospect as reasons behind their decision for operating in the existing premises (Some operators chose more than one reason).



**Figure 11.6 Reasons for Businesses Operating in the Current Premises**

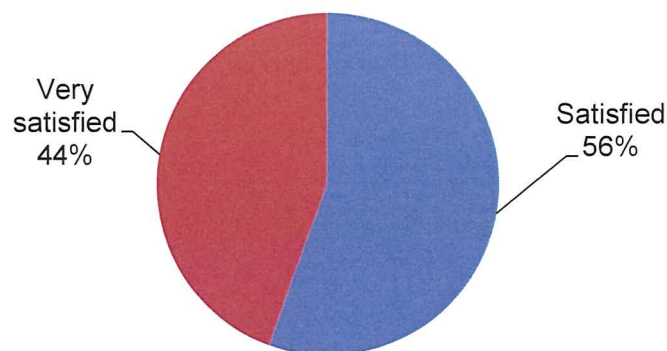
11.16 In terms of the satisfaction level of their business/ business performance of the 9 interviewed operators, 6 operators answered satisfied or very satisfied. 1 operator

indicated it was neither satisfied nor dissatisfied on the performance. 2 operators indicated dissatisfied or very dissatisfied (**Figure 11.7**). In summary, most of the operators (about 67%) were satisfied with their current business performance.



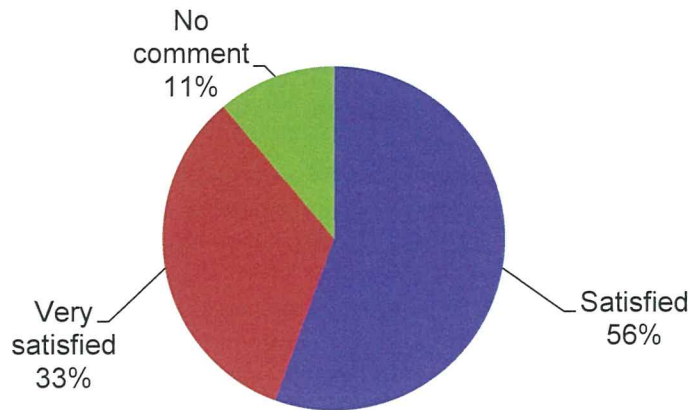
**Figure 11.7 Satisfaction of Business Performance in Existing Premises**

11.17 On the opinion of interpersonal relationship built from the existing business of the 9 operators, 5 operators were satisfied and 4 operators were very satisfied. It is observed that all the operators considered themselves as having good interpersonal network in the area. (**Figure 11.8**).



**Figure 11.8 Satisfaction of Interpersonal Relation in Existing Premises**

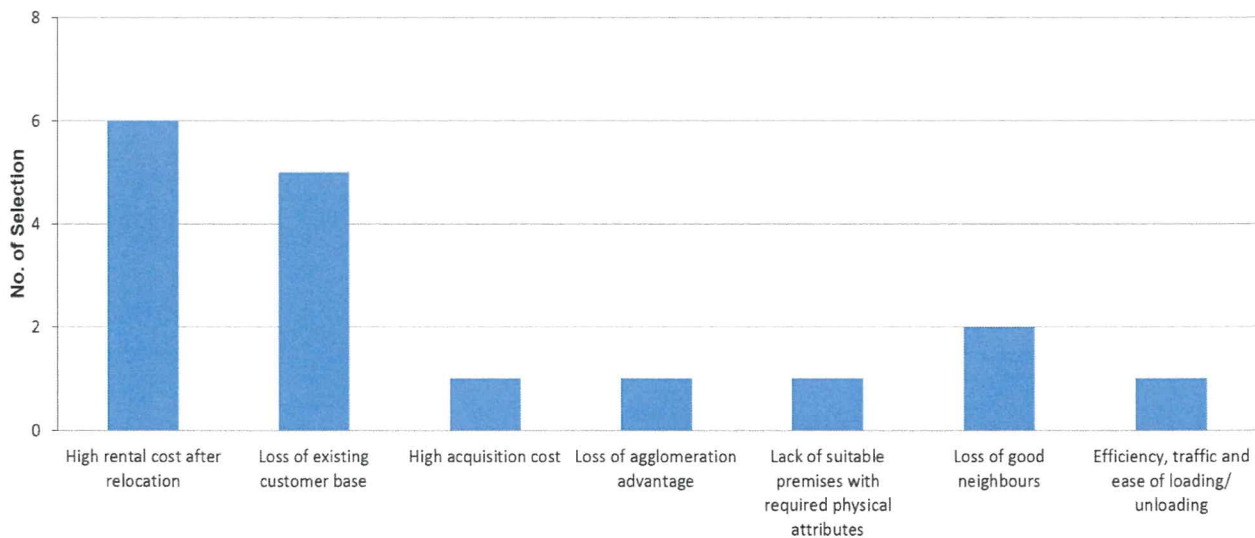
11.18 On the opinion of business network established from the existing shops, e.g. customer base, number of suppliers and etc. Among the 9 interviewed operators, 5 operators were satisfied 3 operators were very satisfied. Remaining 1 operator had no comment on this aspect. (**Figure 11.9**).



**Figure 11.9 Business Network Built up by Operators in Existing Premises**

11.19 On the future intention of the operators if the proposed Scheme is implemented, among the 9 interviewed operators, 8 operators responded that they would like to continue their businesses nearby. Only 1 operator replied that they had not decided yet.

11.20 Among the 9 interviewed operators who had responded on their major concerns on looking for alternative accommodation for continuing their businesses, 6 operators responded that they were concerned with the possibility of higher rental cost after relocation. Five (5) operators were concerned that relocation would result in loss of existing customer base. One (1) operator concerned about the high acquisition cost, while 1 concerned about the lack of suitable premises with required physical attributes. Two (2) operators worried the loss of good neighbours and 1 worried the loss of agglomeration advantage. (Some operators selected more than one concern). **Figure 11.10** shows the major concerns on relocation.



**Figure 11.10 Major Concerns on Relocating to New Premises**



- 11.21 Among the 9 interviewed operators, 7 operators indicated they would like the URA to assist them in finding new premises to continue their businesses. The remaining 2 operators indicated that they did not need any support.
- 11.22 Among the 9 interviewed operators, 4 operators expressed their willingness to meet the URA and the SST whilst 3 operators did not want any assistance. The remaining two (2) operators have chosen “no response” in this question.
- 11.23 Five (5) operators had expressed that their employees had no major concern on the Scheme. One (1) operator provided information on 1 employee who expressed their concerns of employment uncertainty arising from the Scheme. The concerned employee does not need to meet the SST. The other 3 operators had no response to this question.

#### Businesses at Fook Wan Mansion

- 11.24 Three (3) ground floor shops, i.e. a car repair/servicing shop, an air-conditioner engineering shop and an art studio, are observed at the ground floor of Fook Wan Mansion to the immediate north but outside of the Scheme area (**Appendix 4**). These ground floor shops, in particularly the car repair/ servicing shop, are currently using Chun Tin Street as their vehicular access. It is observed that the car repair/servicing shop occasionally uses Chun Tin Street for temporary parking and manoeuvring of vehicles from the shop. Given the Scheme proposed to close Chun Tin Street and open a new vehicular turning area in front of Fook Wan Mansion to connect to Sung Chi Street, these businesses will be served by the new vehicular turning area as their vehicular and pedestrian access in future. It shall be noted that the actual closure of Chun Tin Street (if authorized by the Government) will be carried out subsequent to the completed provision of the vehicular turning area and the widening of Sung Chi Street, of which the anticipated time will be 4 – 5 years later. However, there may be temporary disturbance/ impacts to these nearby business operators during the construction of the road works and redevelopment of the Scheme if the Scheme is authorized to proceed.
- 11.25 The URA will continue its effort to identify and address concerns from the affected premises in Fook Wan Mansion as far as practicable during the planning process of the Scheme, and throughout the implementation process of the Scheme should the Scheme be authorized.

## 12. MITIGATION MEASURES REQUIRED

### Social Service Team

- 12.1 In accordance with the new URS, the Urban Renewal Fund (URF) has been set up to, inter alia, fund the SST who provides assistance to residents and operators affected by URA-implemented redevelopment projects. The SST reports directly to the Board of the URF. The SST is expected to play a co-ordinating role in assisting the residents to access the services they need from relevant Government Departments and/ or other service providers. For instance, the help of the HKHA and the HKHS will be sought in the rehousing process, the Education Bureau in providing school places for children affected by home removal, the Social Welfare Department and various social organisations for counselling services, the Hospital Authority and Department of Health in medical assistance, etc. As at 13 June 2016, the SST has successfully contacted 53 households and 9 business operators. A breakdown of the Cases (Contacts) by client groups is listed in **Table 12.1**.

<b><u>Client Group</u></b>	<b><u>No. of Households/ Shops</u></b>	<b><u>Percentage</u></b>
Domestic Tenants	30	48%
Domestic Owners	23	37%
Business Operators	9	15%
Total	62	100%

**Table 12.1 Breakdown of SST Cases (Contacts) by Client Groups**

- 12.2 The nature of the problems identified is summarized as follows:

<b>Problem or Enquiry Nature</b>	<b>No. of Households/ Shops</b>	<b>Percentage</b>
<b>Domestic Tenants 30 households)</b>		
a) Unclear on compensation and rehousing policies	30	100%
b) Evicted by owners / outrageous rent rise	0	0%
c) Worry about eviction, termination of tenancy or outrageous rent rise in future	0	0%
<b>Domestic Owners (23 households)</b>		
a) Unclear on compensation policies	23	100%
b) Worry about compensation not enough to purchase another flat in the same district	0	0%
<b>Business Operators (9 shops)</b>		
a) Unclear on compensation policies	9	100%
b) Worry about compensation not enough to resume their businesses in the same district	0	0%

**Table 12.2 Nature of Problems Identified Among the Cases (Contacts)**

- 12.3 The SST is expected to adopt a proactive approach to identify individuals at risk early through home and shop visits and to deliver prompt assistance to the residents and operators in need. For residents with no imminent needs, such a proactive approach can also enable the SST to establish a rapport with the clients and facilitate cooperation or engagement in future.

#### Public Briefings

- 12.4 The URA has arranged two public briefings on 7 May 2016 and 11 May 2016 respectively to inform all the stakeholders, including owners, tenants and business operators affected, the details of the Scheme, and to obtain public views on the Scheme. The total attendance of the two public briefings was about 120 persons. The URA has also attended public briefings arranged by Kowloon City District Council Member, the SST and a concern group named "Hok Yuen Chun Tin Alliance". Questions on Freezing Survey, planning, acquisition and compensation and rehousing issues to the affected residents and business operators within the Scheme were addressed at the briefing meetings. Those present were also informed that owners would not get more compensation by evicting tenants identified in the Freezing Survey.
- 12.5 The URA also answered questions related to concerns on potential impacts of the Scheme to residents living in the adjoining developments, including Fook Wan Mansion. Details of the Scheme and the proposed road improvement works and programme were provided at the briefings to alleviate concerns from the residents of the adjoining developments. It was explained in the public briefings to the residents of Fook Wan Mansion that the proposed closure of Chun Tin Street will be replaced by the new road arrangement via Sung Chi Street. The new road will be for public use and also serve the Fook Wan Mansion for vehicular and pedestrian access in lieu of the existing Chun Tin Street with dead-end problem.



The URA also briefed the residents about the programme and implementation arrangement of the proposed road works and URA's plan to mitigate any adverse impact to the Fook Wan Mansion. The URA has answered questions and enquiries from residents and business operators in Fook Wan Mansion at the briefings to address their concerns and questions with information as far as possible.

#### Enquiries and Hotline Services

- 12.6 The URA also answers enquiries and provides hotline services to residents within the redevelopment area. Some 15 enquiries had been received between 6 May 2016 and 13 June 2016. The subject matters of the enquiries are summarised in Table 12.3.

<b>Subject Matters of Enquiries</b>	<b>Percentage</b>
Project information, progress, timetable and procedures of urban renewal	20%
Acquisition Compensation and rehousing policies	7%
Household Survey (e.g. registration arrangement)	33%
Others (e.g. residents briefing session information)	40%
Total	100%

**Table 12.3 Nature of Enquiries**

- 12.7 Given the Scheme is commenced under section 25 of the URAO, the URA has to submit the draft Development Scheme Plan (DSP) and the SIA Reports of the Scheme to the TPB for consideration as according to section 25(5) of the URAO. Upon the URA's submission on 13 May 2016, the TPB made the draft DSP and the Stage 1 SIA Report available for public comment from 17 May to 6 June 2016. Some public comments on the draft DSP of the Scheme and the Stage 1 SIA Report were received by the TPB within that period. The URA will respond and address the comments and concerns to the TPB for their consideration.
- 12.8 Based on past experience with implementation of redevelopment projects, the URA is confident that the prevailing compensation and rehousing policies and arrangements, with the services offered by the SST and the URA can reasonably mitigate the impact on the majority of the residents / business operators arising from the proposed redevelopment. In summary, the principal mitigation measures being pursued include:-
- (i) outreach activities by the SST to ensure that all affected persons potentially in need are identified on top of those who were already identified in the SIA survey;
  - (ii) assistance in finding public rental rehousing for eligible persons in need;
  - (iii) conducting initial assessment of the elderly with low incomes or disability and other vulnerable groups for eligibility for compassionate housing;

- (iv) providing orientation assistance for those in need after moving home such as familiarisation with new neighbourhood, accommodation and local facilities; and
- (v) providing assistance to identify suitable replacement premises for affected businesses.

12.9 As revealed by the survey, 70% of the interviewed households either supported or strongly supported the Scheme as some of them considered that they would have more savings and less expenditure through the URA's prevailing compensation and rehousing policies. In addition, 24% of the households had no comment on the Scheme. Only around 6% of the interviewed households did not support the Scheme. (Paragraph 2.13 refers). Those households who did not support the Scheme considered that the redevelopment would have negative impacts on the social network and their family finance. With regard to the view of business operators, 78% of the interviewed operators/owners indicated support or strongly support for the Scheme. The operators/owners supporting the Scheme considered that the building condition was poor and the building should be redeveloped to bring better local environment. The remaining 22% of operators had no comment or view (Paragraph 11.10 refers). The above figures did not include the views of the non-surveyed operators/ owners. They may have opposition to the Scheme but not expressed to the URA as they refused to do FS.

12.10 The URA will assist displaced elderly owner-occupiers to find replacement flats within urban Kowloon. Redevelopment will inevitably affect the existing social network of some residents in the Scheme. The SST will follow up their cases for 6 months after their relocation to a new accommodation. In helping "the affected residents in maintaining and rebuilding social support network", the team will also conduct below activities:-

- (i) the displaced residents have contacted at least once their old acquaintance in Kowloon City after resettlement, e.g. through organizing a re-union gathering for displaced residents;
- (ii) the displaced residents have established connections in their new neighbourhood, e.g. programs on getting to know the local facilities in new community and visitation to the social service providers in the new neighbourhood.

12.11 The URA together with the SST will ensure that the requisite services and practical assistance by relevant Government Departments and/or service providers are made available to the community in need, and that social and livelihood problems relating to the Scheme are resolved in a timely manner.

#### Prevailing Acquisition, Compensation and Rehousing Policy

##### Domestic Properties

12.12 The URA will offer an owner-occupier of domestic property the market value (valued on vacant possession basis) of his property plus an ex-gratia allowance, namely Home Purchase Allowance (HPA), for purchase of the property. The assessment of HPA is based on the value of a notional replacement flat of similar

size, which is defined as a seven-year-old flat in a building of comparable quality, situated in a similar locality in terms of characteristics and accessibility, and located at the middle floor with average orientation. The HPA is the difference between the value of the notional replacement flat and the market value of the property being acquired. The URA will offer an owner of tenanted or vacant domestic property the market value (valued on vacant possession basis) of his property plus a Supplementary Allowance (SA), where applicable, up to 50% of the HPA above mentioned. In addition to HPA or SA, URA will offer an incidental cost allowance to owners of domestic properties to assist payment of removal expenses and expenditure relating to the purchase of a replacement property.

- 12.13 According to the new URS, and as far as relevant legislation allows, the URA will offer FFF arrangement to eligible owner-occupiers of domestic properties. Under such arrangement, new flats will be made available in the new development in-situ or within URA's redevelopment projects in the same district as an additional option to cash compensation to such owner-occupiers. As this is an additional option, the amount of cash compensation offered to an owner-occupier will not be affected by his/her choice of joining the FFF Scheme.
- 12.14 Affected eligible domestic tenants will be re-housed in units provided by the HKHA or the HKHS. Tenants who are re-housed will be offered an ex-gratia removal allowance. The allowance is in line with the HKHA's rates. The amount receivable will be according to the size of the household and the rates prevailing at the time.
- 12.15 Tenants who are not allocated re-housing due to various reasons or who decline re-housing, may receive ex-gratia payments. The amount of ex-gratia payment will be dependent on, amongst other things, whether the tenancies commenced before the date of the Freezing Survey and continued, or commenced on or after the freezing survey. Details of the ex-gratia payments for domestic tenants can be obtained from [www.ura.org.hk](http://www.ura.org.hk).
- 12.16 According to the new URS, the URA will offer an ex-gratia allowance to eligible elderly owners of tenanted domestic units on compassionate ground in exceptional circumstances such as elderly owners who rely on the rental income from their properties for a living.
- 12.17 In case where tenants were threatened not to have their tenancies renewed, URA will explain to the owners that they would not get more compensation by evicting the tenants. The URA has also introduced the "Domestic Tenants Compassionate Assistance Programme" to take care of those domestic tenants whose tenancies commenced before the Freezing Survey of this Scheme and moved out from the properties because they have been required to move out from their properties by their landlords upon expiry or termination of their tenancies and before URA purchases the properties. In general, eligible domestic tenants who meet the criteria under this programme will be offered, after acquisition or resumption of the properties concerned, special ex-gratia payment of 3 times the rateable value of their properties subject to a minimum of HK\$70,000 (for a 1 person household) and HK\$80,000 (for a 2 persons plus household). Under very special circumstances, the URA will provide special arrangements for eligible tenants in special hardship on compassionate grounds.



Non-domestic Properties

- 12.18 For owner-occupied non-domestic premises, the market value of the affected property (valued on vacant possession basis) plus an ex-gratia allowance of 4 times the rateable value or 35% of the market value of the affected property, whichever is the higher, will be offered. Owner-occupiers of non-domestic premises may choose to claim for business loss as an alternative to both ex-gratia allowance mentioned above and Ex-gratia Business Allowance (EGBA) mentioned in Paragraph 12.19 below. For owners of tenanted or vacant non-domestic properties, the market value (valued on vacant possession basis) of the affected property plus an ex-gratia allowance of 1 time the rateable value or 10% of the market value of the affected property, whichever is the higher, will be offered.
- 12.19 For non-domestic tenants of non-domestic premises, an ex-gratia allowance of 3 times the rateable value of the affected premises will be offered. An additional payment of EGBA is also payable to tenants and owner-occupiers who commenced occupying the premises for business before the date of freezing survey. The amount is calculated at a rate of 0.1 times the rateable value for each year that the affected premises has been in operation up to a maximum of 30 years, and subject to a maximum amount of HK\$500,000 and a minimum amount of HK\$70,000. Non-domestic tenants may lodge a claim for business loss in lieu of the above two allowances.
- 12.20 According to the new URS, if requested, the URA will help identify suitable premises in the district of the redevelopment project to enable the affected shop operators to relocate and continue operation in the same district as far as practicable.
- 12.21 Details of the current acquisition and compensation policies are published on the URA's website and will be communicated to affected persons when acquisition of property interests for this Scheme commences. Prevailing policies relating to property acquisition, rehousing and ex-gratia allowances will be reviewed by the URA from time to time.

Special Measures for the Scheme KC-008(A)

- 12.22 The buildings within the Scheme were the subject of KC-008 project which was commenced in January 2015. The URA had decided not to proceed further with the KC-008 project and the decision of withdrawal of the KC-008 project was published in the Gazette Notice on 6 May 2016. Nil offers for acquisition nor compensation has been made to the affected owners and tenants within the KC-008 project.
- 12.23 Due to the unique situation that this Scheme has included the properties in the URA Chun Tin Street/ Sung Chi Street Development Project (KC-008) which is discontinued, the URA provides a series of special measures ("Special Measures") in addition to the prevailing compensation policies (para 12.12 to 12.21) to address the potential needs of the affected owners and tenants within the Scheme. The Special Measures which aims to provide assistance to the affected

owners and tenants for relocation which was announced on the commencement day of the Scheme. Details of the Special Measures were explained in the two public briefings arranged by the URA and the related pamphlets were distributed to the affected owners immediately after the commencement of the Scheme. The pamphlets that provided the details of the Special Measures are included in **Appendix 2**.

- 12.24 Upon commencement of the Scheme and subsequent to the announcement of the Special Measures, the URA heard of concerns from the affected owners and business operators considered that the Special Measures was not adequate to fully alleviate their concerns as they had to accommodate the risk of waiting for about 18 – 24 months' time until URA's Scheme approval in receiving owners' Home Purchase Allowance(HPA)/Supplementary Allowance(SA)/Allowances for Non-domestic Use, or tenants' ex-gratia payments/re-housing arrangement. In view of the strong concern of the affected residents and the special circumstance of the Scheme, the URA announced two enhancements to the Special Measures on 14 June 2016 to further address the concerns of the affected residents and business operators in the Scheme on a "People-oriented approach". Under the two enhancements, domestic and non-domestic owners accepting the market value of their properties offered by the URA can apply for an advance payment of the HPA/SA/Allowances for Non-domestic Use to be assessed at the commencement date of the Scheme. For the tenants in the properties acquired by the URA, they will be offered an alternative choice of ex-gratia payments from the URA in addition to the option of continuing their current tenancy agreements at the existing rent as provided in the Special Measures announced earlier. Rehousing to public rental housing can only be arranged for eligible tenants after the approval of the Scheme.
- 12.25 According to the announced Special Measures for KC-008(A) Scheme, URA will make offer to owners to purchase their properties within 3 months' time from commencement date of the Scheme, without waiting for TPB's and CE in C's approval for the Scheme which will be anticipated to be about 18 – 24 months later. The owners and tenants will be benefited from the special measures including the announcement as described in paragraph 12.24 above in shorter time and it is assessed that the residents and business operators' concerns can be partly addressed.
- 12.26 In addition to the above Special Measures on compensation and rehousing policies, the URA has also announced on 11 May 2016 a special rehabilitation package to help the affected residents to repair their buildings during the time of waiting for the authorisation of the Scheme for redevelopment. The URA will provide technical and financial assistance to the affected owners and tenants to repair their buildings to address structural problems and water leakage problems to improve their living conditions in the existing buildings. The details of this special rehabilitation measures are provided in **Appendix 3**.
- 12.27 The above Special Measures are one-off measures and will only be applied to this Scheme and should not be viewed as a precedent to be applied to URA's other existing or future redevelopment projects/schemes. The URA is confident that with the Special Measures provided for this Scheme in addition to the prevailing compensation policies, together with the mitigation measures as described in the

above paragraphs, it will be sufficient to alleviate the social impacts to the residents and business operators affected in the Scheme.

**URBAN RENEWAL AUTHORITY  
JUNE 2016**



## Premises for Non-domestic Uses within the Scheme Area



2 Hok Yuen Street & 4 Hok Yuen Street



2 Chun Tin Street & 4 Chun Tin Street



6 Chun Tin Street & 8 Chun Tin Street



1/F and 4/F, 8 Chun Tin Street



10 Chun Tin Street



Staircase shop, 10 Chun Tin Street



12 Chun Tin Street &  
14 Chun Tin Street



Staircase shop, 14 Chun Tin Street



CL/F and G/F, 16 Chun Tin Street



18 Chun Tin Street



20 Chun Tin Street



22 Chun Tin Street





24 Chun Tin Street



20 Chun Tin Street & 22 Chun Tin Street  
(Backside, facing Sung Chi Street)



**Urban Renewal Authority**  
**Chun Tin Street/Sung Chi Street Development Scheme [KC-008(A)]**  
**Information Pamphlet on Special Measures for Owners and Tenants**  
**(Applicable to the above Development Scheme only)**

This information pamphlet outlines the principles of the Special Measures adopted by the Urban Renewal Authority ("URA") for implementation of a Development Scheme KC-008(A) at Chun Tin Street/Sung Chi Street ("the Project"). This pamphlet is supplemental to the leaflets titled "Principles Adopted by the Urban Renewal Authority in Property Acquisition (Other than Industrial Properties)" and "Principles Adopted by the Urban Renewal Authority for Tenant Re-housing and Ex-gratia Payment for Projects announced under the Urban Renewal Authority Ordinance".

In consideration of planning merits and community benefit, URA now launches the Project KC-008(A) with an intent for having a larger redevelopment site by including the adjoining Chun Tin Street so as to achieve an improved overall design. URA announced commencement of the Project on 6 May 2016 ("the Commencement Date"). In the meantime, Project KC-008, which was commenced on 16 January 2015, will be withdrawn and discontinued immediately. The Project is subject to a statutory consultation process and the approval of the Chief Executive in Council under the Town Planning Ordinance ("TPO"). Owing to the above particular situation, URA has devised a series of one-off special measures ("the Special Measures") for owners and tenants affected by the implementation of the Project. The Special Measures are applicable to the Project only and should not be viewed as a precedent to be applied to URA's other existing or future redevelopment projects/schemes.

Details of the Special Measures are as follows:

**Owners of Domestic Properties**

1. URA will make offers to owners of domestic properties within 3 months after the Commencement Date at market value on vacant possession basis to be assessed as at the Commencement Date ("Domestic MV").
2. If the owner accepts the Domestic MV, 30% of the Domestic MV will be payable to the owner as deposit upon signing of the Agreement for Sale and Purchase ("ASP") and the balance of 70% of the Domestic MV will be payable to the owner 1 month after the date of ASP subject to the completion of sale and purchase and transfer of good title to URA ("the Completion Date").
3. In addition to the offer at the Domestic MV, URA undertakes that it will make another payment ("Special Domestic Allowance") to the owner who had accepted the Domestic MV and sold his property to URA after approval of the Project given by the Chief Executive in Council under the TPO ("the Approval Date") (but not otherwise). It is estimated that the owners will receive the Special Domestic Allowance within 4 months after the Approval Date.
4. Special Domestic Allowance is calculated by adopting the higher of the following two total amounts:-
  - (1) Total amount of Domestic MV plus the Home Purchase Allowance (HPA) or Supplementary Allowance (SA) to be assessed according to URA prevailing policy as at the Commencement Date; and
  - (2) Total amount of market value on vacant possession basis assessed at the Approval Date plus the Home Purchase Allowance (HPA) or Supplementary Allowance (SA) to be assessed according to URA then prevailing policy as at the Approval Date;and less the amount of the Domestic MV already paid by URA to the owner, and subject to the following principles:-
  - (i) The HPA or SA shall be assessed with reference to the occupancy status recorded in the Freezing Survey at commencement of the Project. However, in case there is any difference in the occupancy status between those registered in the Freezing Survey of KC-008 and that of KC-008(A), URA will adopt a "people-oriented" approach in assessing the offer basis with due regard on the circumstances of the particular case; and
  - (ii) Domestic property owner who accepts the Domestic MV will be entitled to, if eligible, other allowance(s) (such as Incidental Cost Allowance) available under URA prevailing policy upon the Approval Date.
5. For owner-occupied and vacant domestic property, vacant possession of property has to be delivered by the owner upon the Completion Date. Tenanted domestic property will be sold to URA subject to the existing tenancy.
6. For property owner who has not accepted the Domestic MV, URA will upon the Approval Date make acquisition offers to him. The acquisition offer will be based on the higher amount after comparing the total amount mentioned in paragraph 4(1) and 4(2) above, plus other allowance(s), if eligible under the then URA prevailing policy. For the avoidance of doubt, any subsequent revised acquisition offer to be issued after the Approval Date will only be based on the then URA prevailing policy and the calculation method in paragraph 4(1) and 4(2) will not be applicable.

7. In assessing the HPA or SA in the acquisition offer mentioned in paragraph 6 above, the principle as outlined in paragraph 4(i) is also applied.

#### **Owners of Non-Domestic Properties**

8. URA will make offers to owners of non-domestic properties within 3 months after the Commencement Date at market value on vacant possession basis to be assessed as at the Commencement Date ("Non-domestic MV").
9. If the owner accepts the Non-domestic MV, 30% of the Non-domestic MV will be payable to the owner as deposit upon signing of ASP and the balance of 70% of the Non-domestic MV will be payable to the owner 1 month after the date of ASP subject to the completion of sale and purchase and transfer of good title to URA.
10. In addition to the offer of the Non-domestic MV, URA undertakes that it will make another payment ("Special Non-domestic Allowance") to the owner who had accepted the Non-domestic MV and sold his property to URA after the Approval Date (but not otherwise). It is estimated that the owners will receive the Special Non-domestic Allowance within 4 months after the Approval Date.
11. Special Non-domestic Allowance is calculated by adopting the higher of the following two total amounts:-
  - (1) Total amount of Non-domestic MV plus the Allowances for Non-domestic Use to be assessed according to URA prevailing policy as at the Commencement Date; and
  - (2) Total amount of market value on vacant possession basis assessed at the Approval Date plus the Allowances for Non-domestic Use to be assessed according to URA then prevailing policy as at the Approval Date;and less the amount of the Non-domestic MV already paid by URA to the owner, and subject to the following principles.
  - (i) Allowances for Non-domestic Use shall be assessed with reference to the occupancy status recorded in the Freezing Survey at commencement of the Project. However, in case there is any difference in the occupancy status between those registered in the Freezing Survey of KC-008 and that of KC-008(A), URA will adopt a "people-oriented" approach in assessing the offer basis with due regard on the circumstances of the particular case; and
  - (ii) Non-domestic property owner who accepts the Non-domestic MV will be entitled to, if eligible, other allowance(s) (such as the Ex-gratia Business Allowance) available under URA prevailing policy upon the Approval Date.
12. For owner-operated and vacant non-domestic property, vacant possession of the property has to be delivered by the owner upon the Completion Date. Tenanted non-domestic property will be sold to URA subject to the existing tenancy.
13. For property owner who has not accepted the Non-Domestic MV. URA will upon the Approval Date make acquisition offer to him. The acquisition offer will be based on the higher amount after comparing the total amount mentioned in paragraph 11(1) and 11(2) above, plus other allowance(s), if eligible under the then URA prevailing policy. For the avoidance of doubt, any subsequent revised acquisition offer issued after the Approval Date will only be based on the then URA prevailing policy and the calculation method in paragraph 11(1) and 11(2) will not be applicable.
14. In assessing the Allowances for Non-domestic Use in acquisition offer mentioned in paragraph 13 above, the principle as outlined in paragraph 11(i) is also applied.

#### **Tenants of Domestic Properties**

15. If the owner of tenanted domestic property accepts the Domestic MV and upon completion of the sale and purchase of the property, URA after becoming the owner of the property will allow the tenant to stay in the property and pay the existing rent until the Approval Date.
16. Re-housing arrangement and/or ex-gratia payment will be offered to eligible tenants in the properties acquired by URA after the Approval Date. The then URA prevailing policy for tenants will apply.
17. Tenant who was registered in the Freezing Survey of KC-008 or KC-008(A) for reasons not attributable to the default of the tenant under the tenancy agreement, but was evicted before the property was acquired by URA ("affected tenant"), can apply for URA's "Domestic Tenants Compassionate Assistance Programme" ("DTCAP") or Relocation Assistance in accordance with prevailing policy. Upon the Approval Date, the application of the affected tenant will be processed after completion of the acquisition or government resumption of the affected properties in accordance with the then URA prevailing policy.

### **Tenants of Non-domestic Properties**

18. If the owner of tenanted non-domestic property accepts the Non-domestic MV and upon completion of the sale and purchase of the property, URA will after becoming the owner of the property allow the tenants to pay existing rent in continuing their business in the properties until the Approval Date.
19. Ex-gratia allowance will be offered to eligible tenants in the properties acquired by URA after the Approval Date. The then URA prevailing policy for tenants will apply.

URA would remind landlords / tenants that it is an offence for landlords to unlawfully deprive a tenant of occupation of property or to make an unwarranted demand with menaces with a view to gain for himself or others or to defraud against URA. URA will report to the enforcement authorities on all cases of suspected criminal offences.

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**This pamphlet is issued for the purpose of general reference only. The information contained herein is with reference to the principles and practice of the Urban Renewal Authority prevailing at the date of issue of this pamphlet. It shall not constitute any representation on the part of the Urban Renewal Authority or give rise to any expectation whatsoever and shall not be relied on as such. Each case will be considered on its own merits having regard to all factors and circumstances. The terms of acquisition to be offered are subject to the principles and practice of the Urban Renewal Authority prevailing at the time the offer of acquisition is made and are subject to review from time to time as the Urban Renewal Authority shall at its absolute discretion consider appropriate. The Urban Renewal Authority's right to add to, amend or delete the whole or any part of this pamphlet is hereby reserved.**

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For enquiries, please call URA External Relations Department:

Hotline: 2588 2333

Fax: 2827 0176

Address: 26/F., COSCO Tower, 183 Queen's Road Central, Hong Kong

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May 2016



新聞稿  
PRESS RELEASE



14 June 2016

**URA Board approves enhancements to special compensation measure for  
Chun Tin Street/Sung Chi Street Development Scheme**

The Board of the Urban Renewal Authority (URA) today (Tuesday) approved two enhancements to the one-off special compensation measure announced earlier for the affected owners and tenants of the Chun Tin Street/Sung Chi Street Development Scheme (KC-008(A)) commenced on 6 May 2016.

The two enhancements are introduced after taking careful consideration of the unique circumstances of the KC-008(A) Development Scheme and the time that might involve in obtaining the approval from the Town Planning Board. KC-008(A) covers the same buildings of KC-008 Development Project, which had not been authorised by the Secretary for Development and was withdrawn by the URA on 6 May 2016.

Under the two enhancements to the special compensation package, domestic and non-domestic owners accepting the market value of their properties offered by the URA can apply for an advance payment of their HPA and associated allowances to be assessed at the commencement date of the KC-008(A) project.

For domestic tenants residing in properties acquired by the URA, they will be offered an alternative choice of ex-gratia payments from the URA in addition to the option of continuing their current tenancy agreements at the existing rent. Due to prevailing policies, the URA could only provide to eligible tenants rehousing arrangement to public housing, after the approval of the project.

A spokesman for the URA said the two enhancements together with the special compensation measure are being offered because of the unique circumstances of this project, they would not set a precedent for other existing or future projects of the URA. The Authority had also introduced a separate one-off special rehabilitation package in May to relieve the safety concerns of the affected owners and tenants by providing them technical and financial assistance to carry out repair works to their units and buildings.

(ENDS)

查詢詳情，請電：冼綺琦小姐（2588 2457 / 9733 1550）或謝宛穎小姐（2588 2306）

For enquiries, please contact: Ms Dicky Sinn (2588 2457 / 9733 1550) or Ms Patricia Tse (2588 2306)



G/F Premises at Fook Wan Mansion (1)



G/F Premises at Fook Wan Mansion (2)



市區重建局

URBAN RENEWAL  
AUTHORITY

Our Ref: PDP/KC-008(A)

15 July 2016

**By Hand & By Fax (letter only)**  
**Fax No. 2894 9502**

District Planning Officer/ Kowloon  
14/F North Point Government Offices  
333 Java Road, North Point,  
Hong Kong.

(Attn.: Mr. Barry Yan)

Dear Barry,

*downgraded  
N. 22.7.2016*

~~CONFIDENTIAL~~

**Draft Urban Renewal Authority**  
**Chun Tin Street / Sung Chi Street Development Scheme Plan (KC-008(A))**

I refer to our submission of the captioned draft Development Scheme Plan (the Scheme) dated 13 May 2016, the Departmental comments received via your emails dated 22 and 23 June 2016 respectively and the public comments received via your letter dated 17 June 2016. We would like to enclose our responses to comments (R to C) to the Government Departments and public views for your necessary action.

The Departmental comments are mainly related to the issues on road closure and road re-arrangement, GFA calculations, lease matters, urban design and visual impact, and other technical aspects including air ventilation, air quality, noise, waste management and sewerage impacts. Our R to C provided elaborations on the planning and design of the DSP and technical clarifications on the technical concerns (see Attachment 1). The R to C also includes a Revised Environmental Assessment Report (EA) and Revised Drainage and Sewerage Impact Assessment (DSIA) which have incorporated revisions to address concerns in the various technical studies as provided in the R to C to Government Departments.

In addition, we have revised the following documents in response to TPB's comments (see Attachment 2):-

- Revised Draft DSP Plan – incorporated suggested revisions in formatting and presentation in writing.
- Revised Notes of Plan – incorporated suggested revisions in formatting and presentation in writing.
- Revised Explanatory Statement – incorporated suggested revisions in formatting and presentation in writing.

We also include our consolidated R to C to the public views received during the publication of draft DSP (i.e. 17 May 2016 – 7 June 2016) (see Attachment 3).





Please note **no** fundamental change has been proposed to the submitted draft DSP under URAO s.25, i.e. no change on the proposed boundaries of the DSP, the site area, the overall development parameters nor planning intention. The further information as contained in this letter is mainly technical clarifications to address various Departmental comments and public concerns, which are minor in nature. We look forward to your prompt processing and consideration on the R to C along with your ongoing preparation work for TPB's consideration.

Thank you for your assistance on this matter.

Yours sincerely,

Christopher Wong  
Assistant General Manager  
Planning & Design Division

Encl.

**Attachment 1**

R to C to Departmental Comments

Revised Environmental Assessment Report

Revised Drainage and Sewerage Impact Assessment Report

**Attachment 1 -**

**URA Chun Tin Street/ Sung Chi Street Development Scheme (KC-008(A))**

**Responses to Comments from Government Departments on Draft DSP submission**

<b>Government Departments</b>	<b>Comments</b>	<b>Responses</b>
<b>Planning Department (CTP/UD&amp;L, contact officer: Miss Carmen Chan 2231 4840)</b>	<p><u>Urban Design and Visual Impact</u></p> <p>3. The subject site is located right adjacent to another URA project (TKW/1/002) within the same street block. According to the Planning Report submitted by the project proponent, relaxing the BH from 120mPD to 130mPD could facilitate a slimmer design of the building block for visual relief and to enhance local ventilation. It would also allow more design flexibility while maintaining the maximum GFA as per the OZP. Generally, there is no denying that there is more design flexibility with allowance of a higher maximum BH, but this alone may not be sufficient to justify the height relaxation/increase. From an urban design point of view, the consideration should be whether there are design merits not otherwise achievable without the proposed increase in BH. In this regard, the project proponent has not convincingly demonstrated that such is the case.</p>	<p>Minor building height relaxation from 120mPD to 130mPD is proposed for the Scheme in view of the site constraints and the design merits achievable from the height relaxation. The site is elongated in shape and surrounded by developments. The building disposition and building form is highly restricted by the site configuration which is difficult to fulfill requirements in Building Ordinance and related regulations, such as the prescribed window requirements, site coverage, etc. while at same time maintaining certain design merits including better local ventilation, wider gap between buildings and visual corridor. Given the very restricted site shape and located in the densely developed area, the slight relaxation of building height can help achieving a better building and urban design.</p> <p>In section 4.23 of Planning Report, it has been explained that the Visual appraisal carried out demonstrate the proposed building height is compatible with the surrounding developments as viewed from main street angles in the vicinity, and without jeopardizing the urban design principles.</p>



Government Departments	Comments	Responses
	<p>4. In comparing a notional scheme in compliance with BH restriction of 120mPD as per the OZP with the proposed scheme of 130mPD, the project proponent pointed out that the resulting building block of the compliance scheme will reduce the ground floor for passageway. It is noted that for the OZP-compliance scheme, the project proponent simply adjusted the proposed scheme by extending part of its building footprint westwards towards the TKW/1/001 development rendering a slightly wider building form. In order to keep the original linear tower shape of the proposed scheme, the project proponent could consider the possibility of extending the tower footprint southwards towards Hok Yuen Street, thus the condition of reducing and overshadowing the ground floor passageway could be avoided.</p>	<p>Building height of 130mPD allows the design of a slimmer building block which provides a wider separation between the proposed development and MTW Road development. It can enhance local air ventilation, daylight penetration and wider visual corridor for the adjoining developments in the area, e.g. Fook Wan Mansion and the future MTW Road residential development. It has been demonstrated in the Planning Report that under BH of 120mPD (Figure 2.9), the proposed building block will be widened towards MTW Road development, and potentially obstructs views of Fook Wan Mansion.</p> <p>The residential block in the Scheme is proposed at the more central part of the site instead of moving southward towards Hok Yuen Street to avoid overlooking effect and reducing the separation with the two towers of the MTW Road development. Keeping the 120mPD BH and extending the tower footprint southwards, the residents' views of both the Fook Wan Mansion and the MTW Road development, same for the visual relief of the passageway, will not be improved as the tower on top will span a longer façade length given the linear site configuration. To facilitate a slimmer design of the building block for visual relief and to enhance local ventilation, relaxing the BH from 120mPD to 130mPD is considered necessary.</p>

Government Departments	Comments	Responses
	<p>5. Regarding the Visual Appraisal presented, the project proponent has not explained how the local viewing points were determined and the supporting photomontages have not provided comparison with the OZP-compliance scheme.</p>	<p>The local viewing points of the Visual Appraisal are selected with due consideration of major view corridors of pedestrian in the vicinity. Viewing points from major roads and high levels, which are also major pedestrian views corridors, are selected, i.e. viewing from north and south of Ma Tau Wai Road, viewing from Bailey Street, and view from Pak Kung Street. Besides, major node of interest with concentration of pedestrian has been selected to demonstrate the visual effect of the proposed development, i.e. the views from Ko Shan Park.</p>
	<p><u>Air Ventilation</u></p> <p>6. In terms of air ventilation impact, it does not appear that there will be any significant improvement to the pedestrian wind environment due to an increase in building height for the proposed development. We also have the following comments for the project proponent to address:</p> <p>(i) Problematic Area – As mentioned in our previous comment (provided during pre-submission stage), the applicant should confirm if there any problematic areas induced by the presence of proposed development at the project site in the “Air Ventilation” section.</p> <p>(ii) Paragraph 4.27 – The applicant should confirm whether the mentioned wind data</p>	<p>Noted.</p> <p>(i) It is confirmed that no problematic areas would be induced by the presence of proposed development at the project site.</p> <p>(ii) It is confirmed that wind data is referred to the RAMS wind data at grid x:083, y:040.</p> <p>(iii) With further investigation of the surrounding environs, it is anticipated that wind from south direction would likely be blocked by the existing Hunghom Commercial Centre.</p>

Government Departments	Comments	Responses
	<p>is referred to the RAMS wind data at grid x:083, y:040 in view of the project site location.</p> <p>(iii) Paragraph 4.28 (4<sup>th</sup> bullet) – The applicant should elaborate how the proposed stepped podium floors facing Hok Yuen Street could facilitate the wind penetration through the proposed podium under S wind.</p>	
<p><b>Buildings Department</b>  <b>(CBS/K, contact officer: Mr. George Cheung 26261529)</b></p>	<p>I have reservation on the proposed development scheme under the Buildings Ordinance (BO) as it may contravene the following provisions under the BO:</p> <p>(a) The scheme involves extinguishment of Chun Tin Street with erection of a building over, under and upon on the street, which would contravene section 31 of the BO. In addition, it is noted that the adjoining sites have used the Chun Tin Street for the following purposes under the BO, extinguishment of it may cause contraventions under the Building (Planning) Regulations (B(P)R):</p> <p>(1) The Fook Wan Mansion at 25-25D Chun Tin Street has used the Chun Tin Street as one of the means of escape in case of fire under B(P)R41(I) and means of access for firefighting and rescue under B(P)R41B and B(P)R41A; and</p> <p>(2) The redevelopment site of URA (Project No. TKW/1/002) at Ma Tau Wai Road / Chun Tin</p>	<p>(a) URA has recognized that the adjoining sites including Fook Wan Mansion and the redevelopment site of URA (TKW/1/002) use Chun Tin Street for the mentioned purposes under BO. It has therefore been described clearly in the Draft DSP submission that the new road arrangement including the vehicular turning area and the widened Sung Chi Street will be for public use and to serve the 2 adjoining sites, so as to ensure the extinguishment of Chun Tin Street will not cause contraventions to the BO for the 2 adjoining sites. To be more specific, further details with respect to the arrangement for Fook Wan Mansion and the redevelopment site of URA (TKW/1/002) are explained as follows:</p> <p>1) The Means of Escape in case of fire under B(P)R41(I) and means of access for firefighting and rescue under B(P)R41B and B(P)R41 A for Fook Wan Mansion will be provided via the new vehicular turning area which is connected with the widened Sung Chi Street leading to Hok Yuen</p>



Government Departments	Comments	Responses
	<p>Street has used the Chun Tin Street as one of the specified streets for site classification to assess plot ratio and site coverage of the buildings proposed on the site under B(P)R 20 and B(P)R 21.</p>	<p>Street. For this purpose the DSP has clearly indicated that an unobstructed path of 7.3m clear width can be provided for such access. The drawing in the TIA report (Figure SP8) has also demonstrated the access arrangement of fire engine through the above path as been accepted by Transport Department at the stage of Traffic report submission in March 2016. Fire Services Department has also indicated no comment on above proposal during the circulation of Draft DSP.</p> <p>2) In the Planning report para. 4.19 it has been stated that: <i>“By taking the advantage that both the Scheme and the adjoining TKW/1/002 development being URA projects and in particularly TKW/1/002 is an URA’s self-developed project, the design of the Scheme has duly considered the building and landscape layout of the TKW/1/002 site to develop a more integrated design approach for the Scheme. Meanwhile, coordinated efforts have been made to ensure for both sites are in compliance with the relevant building and planning ordinances and regulations, such as Buildings Ordinance and Building (Planning) Regulations...”</i> As URA is the land grantee and the developer for this self-developed site (TKW/1/002) and the construction is currently only at foundation stage, the issue of the site using the Chun Tin Street as one of the specified streets for site classification to assess</p>

Government Departments	Comments	Responses
		<p>plot ratio and site coverage of the buildings proposed on the site under B(P)R 20 and B(P)R 21 can be dealt with in the GBP submission for TKW/1/002. The Authorized Person of URA for the TKW/1/002 site will make necessary amendments in the forthcoming GBP submissions to demonstrate and ensure the building design will not contravene BO in this related aspect owing to the proposed extinguishment of Chun Tin Street.</p>
	<p>(b) It is unclear that whether the site area for assessment of plot ratio and site coverage under the B(P)R20 and B(P)R21 for the proposed development scheme has included the areas of existing Chun Tin Street, the proposed vehicular turning area from Sung Chi Street and the proposed area for widening the existing Sung Chi Street or not. If the areas are included in the site area, it will contravene B(P)R 23(2).</p>	<p>(b) The site area for assessment of plot ratio and site coverage under B(P)R20&amp;21 for the proposed development scheme shall not include the road area required for the purpose of complying BO by the 2 adjoining sites (i.e. Fook Wan Mansion and the redevelopment site of URA (TKW/1/002)) and thus will not contravene B(P)R23(2). Enclosed please find an indicative plan (the Plan (II)) demarcating the said road area. However, the area (shown hatched brown in Plan) dedicated for pedestrian traffic by the public and accommodation of Loading / unloading bays are proposed to be included in the site area as B(P)R23(2) permits. The GFA and site coverage calculation under B(P)R20&amp;21 on this basis (also shown on the Plan) can demonstrate the maximum GFA permissible under B(P)R, which have not exceeded the limit of maximum GFA as proposed in the Draft DSP submission (please refer to <i>Remarks(1)</i> in DSP no. S/K9/URA1/A).</p>

Government Departments	Comments	Responses
		<p>It must be emphasized that the site area for B(P)R assessment is merely for the purpose of fulfilling regulatory requirements under BO, and is not deemed necessary to be the same basis adopted for planning control under the DSP.</p>
	<p>2. Exemptions and/or modifications with or without condition(s) under the BO may be considered for the proposed extinguishment of Chun Tin Street and inclusion of the exiting or proposed streets or roads in site area for the purposes of plot ratio and site coverage calculations under B(P)R, but they will only be considered on its individual merits based on relevant information or justification submitted to the Building Authority. In this connection, the applicant is advised to appoint an Authorized Person to submit a pre-submission enquiry on the issues arisen under the PNAP ADM-19 at an early stage to seek determination from the Building Authority in this respect.</p>	<p>Noted. The draft DSP is at planning stage. Application for modification under the BO for the proposed extinguishment of Chun Tin Street and inclusion of the exiting or proposed streets or roads in site area for the purposes of plot ratio and site coverage calculations under B(P)R will only be submitted with necessary justifications at GBP stage provided that the TPB consider and approve the planning concept, the related planning gain and development parameters in the Draft DSP.</p>
	<p>3. In addition , I have the following comments on the proposed development scheme:</p> <p>(a) In accordance with the Government's committed policy to implement building design to foster a quality and sustainable built 'environment, the sustainable building design requirements (including building separation, building setback ad site coverage of greenery) should be included, where possible, in the</p>	<p>Noted. Considerations have been given on (a), (b) and (c) as mentioned in the comments in the proposed design contained in the Draft DSP submission. The concerned requirements to meet BD's standard will be duly complied with at GBP submission stage.</p>



Government Departments	Comments	Responses
	<p>conditions in the planning approvals.</p> <p>(b) Adequate prescribed windows in accordance with B(P)R30 and B(P)R31 should be provided for every domestic flat.</p> <p>(c) Refuge floor/ roof should be provided for all buildings exceeding 25 storeys in height above the lowest ground storey in accordance with Subsection B18 of the Code of Practice for Fire Safety in Buildings 2011.</p> <p>(d) Detailed comments under the BO can only be formulated at the building plan submission stage.</p>	
<b>Lands Department (DLO/KW, contact officer: Ms. Sandy Sin 23001739))</b>	<p>3. According to the Planning Report, the following road amendments are proposed by URA:</p> <p>(i) Chun Tin Street will be permanently closed;</p> <p>(ii) Sung Chi Street will be widened from the existing one-way road to a two-way road and, at the same time, URA will provide 3 LGV loading/unloading bays abutting the widened Sung Chi Street but within its lot boundary for shared use by the proposed development and the public; and</p> <p>(iii) A new vehicular turning area ("New Vehicular Turning Area") at the northern portion of the Scheme will be provided to serve Fook Wan Mansion, the adjoining URA Project No, TKW/11022 (i.e. Lot No. KIL 11244) and future</p>	<p>Noted.</p>

Government Departments	Comments	Responses
	<p>development of subject site,</p> <p>The above proposed road works will affect the adjoining Fook Wan Mansion, KIL 11244 and nearby developments would defer to CES/UR to advise you on the required procedure and timing etc. for authorization of the road works under Roads (Works, Use and Compensation) Ordinance (Cap 370).</p>	
	<p>4. <u>Observations from lease perspective</u> From lease perspective, I would raise the following issues for URA and CES/UR to note:</p> <p>(i) According to the Planning Report, URA is prepared to take up future management and maintenance of the New Vehicular Turning Area and 3 LGV loading and unloading bays which would be opened for sharing use by the public including the adjoining lots. URA should clarify the future ownership of the aforesaid traffic facilities. If the liability in managing the maintaining the traffic facilities for public use is to be passed onto those affected flat owners, it may lead to criticism from the future flat owners and probably disputes over such liability.</p> <p>(ii) The adjoining KIL 11244 was granted to URA with BC to be expired on 31.12.2020. Its permissible vehicular access and Green Area to be formed under lease would be along and</p>	<p>(i) Subject to the conditions as approved by the Government on URA's taking up future management and maintenance of the mentioned traffic facilities for public use pursuant to the DSP scheme, the intent is all future management and maintenance liabilities will rest with the URA and the URA shall not transfer such liability to future individual flat owners. Such intent could be specified in the land grant for the site of this Scheme.</p> <p>(ii) Noted. The issue on any implication on the interface between the Scheme and KIL11244 (URA's TKW/1/002 redevelopment site) will be further sought out at later implementation stage. Nevertheless, it must be noted that the programme for obtaining Certificate of Compliance (CC) for KIL11244 will be within 2019, upon when the</p>

Government Departments	Comments	Responses
	<p>within the proposed New Vehicular Turning Area respectively. A copy of the grant plan is now enclosed for your easy reference. Clarification from URA is required as to whether implementation of the Scheme would have any implication on URA's (being Grantee of KIL11244) compliance of the Green Area Clauses etc. or vice versa. Subject to URA's clarification, modification of the related Green Area Clauses may be required. URA and CES/UR shall further consider if there will be any interface problem between the Scheme and KIL11244.</p> <p>(iii) Regarding KIL 9928 where Fook Wan Mansion is erected, it is restricted to non-industrial use and its governing lease is silent on provision of parking or vehicular access etc. I believe that CES/UR will take into account any lease implication arising from this lot when processing the land grant for the Scheme.</p> <p>(iv) As shown on Figure 1.3 of the Planning Report, pedestrian movement is proposed within the adjoining KIL 11244. As the lease governing KIL 11244 is silent on providing the proposed at-grade pedestrian passageway, its implementation cannot be done though the existing lease of KIL 11244.</p>	<p>vehicular access and Green Area of KIL11244 will have been formed under Lease. As such the date of completion for KIL11244 will be ahead of the targeted commencement of construction works of KC-008(A), the latter being in 2020/21 since it has to be subsequent to both site clearance and procedures to obtain authorization of road closure for Chun Tin Street. On this basis, suitable clauses/ requirements shall be incorporated into the future lease of KC-008(A) in dealing with the interface issues and development programme during the lease preparation for KC-008(A) prior to its construction.</p> <p>(iii) Noted.</p> <p>(iv) Noted. It is not required to alter/ modify the existing lease of KIL11244 for the proposed at-grade pedestrian passageway. The lot is owned by the URA and the site is being developed by the URA itself. The URA will manage and maintain the at-grade area within KIL11244 which shall be open for public use in future. Such arrangement is not stipulated under lease, but more owing to an initiative by the URA to enhance pedestrian flow in the district and improve local accessibility upon completion of redevelopment of the said site. Such planning gain is to be achieved by the integrated planning of the 2 sites both redeveloped by the URA.</p>



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<b>Lands Department (CES/UR, contact officer: Mr. Ernest Wong 28340716))</b>	<p>3.The proposed development will involve permanent closure of Chun Tin Street, widening of Sung Chi Street, improvement at the junction of Hok Yuen Street/Sung Chi Street, and creation of new vehicular turning area at the northern portion of the scheme area. Completion of the following statutory/gazettal requirements are required before the proposed private treaty grant of the lot can be further proceeded:</p> <ul style="list-style-type: none"> <li>(a) the authorization of the proposed development scheme under the Urban Renewal Authority Ordinance;</li> <li>(b) the authorization of the closure of Chun Tin Street, the widening of Sung Chi Street and other proposed road works under the Roads Ordinance Cap 370;</li> <li>(c) the approval by the CE in council for the resumption of those private property interests in the scheme area that URA cannot acquire by private agreement.</li> </ul>	<p>3. Noted.</p>
	<p>4. Please also note the following comments to the Planning Report (the Report):</p> <ul style="list-style-type: none"> <li>a. URA should provide a plan delineating the boundary of the proposed private lot in arriving at the net site area of 1,636 sq.m. as stated in Table 4.1 of Part I of the Report, and showing the portion(s) of the site that it intends to be dedicated for public use/public facilities;</li> </ul>	<p>4. a.&amp; b.</p> <p>A plan (refer to attached Plan (I)) indicates the proposed private lot areas included into the net site area as well as the Chun Tin Street to be included into the net site area for your reference. However, it must be noted that in terms of development intensity the proposed scheme aims to restrict the maximum GFA as described in the draft DSP (please refer to Remarks(1) in DSP no. S/K9/URA1/A). The indication of net site area as shown is only for</p>

Government Departments	Comments	Responses
	<p>b. The remarks underneath the Table 4.1 of Part I of the Report states that "only part of Chun Tin Street is included in the Net Site Area". URA should clarify which part of the Chun Tin Street will not be included in the Net Site Area;</p> <p>c. URA should clarify whether impact on air quality etc as stated in paragraph 4.31 in Part I of the Report is <u>insurmountable</u> or not insurmountable.</p> <p>d. It is noted in paragraph 3.24 and 3.25 of Appendix 3 in part 3 of the Report that podium setback from the Project along Sung Chi Street is proposed to allow for a wider passageway and to cater for 3 LGV L/UL bays so as to meet the HKPSG, and that "URA intends to take up the management and maintenance of the 3 LGV bays (paragraph 3.25(v) of the Report refers). In paragraph 3.31 of Appendix 3 in Part 3 of the Report, URA intends to take up the management and maintenance responsibilities of Sung Chi Street and the new vehicular turning area. URA should clarify (i) whether they intend to take up the management and maintenance responsibilities of the <u>whole</u> width of Sung Chi Street or the widened portion of Sung Chi Street fronting its site only (i.e. the widened portion of Sung Chi Street); and (ii) whether the new vehicular turning area and 3LGV bays fall within the boundary of the proposed lot area,</p>	<p>reference purpose. For clarity, the part of Chun Tin Street which shall be retained for vehicular road access for both public use and adjoining developments will not be included in the Net site area.</p> <p>c. Impact on air quality etc as stated in paragraph 4.31 in Part I of the Report is not insurmountable justified by as our consultant's environmental assessment.</p> <p>d. URA's proposal for taking up the management and maintenance of the portions of road/ footpath is clarified and explained as follows:</p> <p>i) the widened portion of Sung Chi Street fronting the site only (i.e. mainly the widened pedestrian footpath but not the carriageway portion), which is within URA's lot area, will be proposed to be dedicated for public use and be managed and maintained by URA in future. The carriageway portion of Sung Chi Street will however be retained as public road owned by the Government.</p> <p>(ii) the proposed 3 LGV bays fall within the boundary of the proposed lot area, and shall be managed and maintained by URA in future.</p> <p>(iii) The new vehicular turning area shall serve for the vehicular ingress/ egress for the Scheme and KIL11244 (URA's TKW/1/002 redevelopment site), the means of access for firefighting for Fook Wan Mansion and for public use as well. As such this area shall not be included in the</p>

Government Departments	Comments	Responses
	<p>and if so, URA should advise which party will be responsible for the management and maintenance of the 3 LGV bays, the vehicular turning area and the relevant portion of Sung Chi Street, i.e. whether they will be managed and maintained by the URA itself, or by all the owners of the lot including URA, the prospective flat and shop owner;</p>	<p>proposed lot area in future. However, as URA is the project proponent for the Scheme, it is URA's intent to bring in more improvement to the environment at there and take up the management and maintenance responsibility of this area in future. The same intent has been indicated in the Traffic report submission to Transport Department earlier and no adverse comment was obtained then.</p> <p>(iv) Subject to the conditions as approved by the Government on URA's taking up future management and maintenance of the mentioned traffic facilities for public use pursuant to the DSP scheme, the intent is all future management and maintenance liabilities will rest with the URA and the URA shall not transfer such liability to future flat owners.</p>
	<p>e. URA states in paragraph 3.24 (iii) in part 3 of the Report that it intends to "dedicate the said area for pavement and lay-bys free-of-charge for public use. PlanD and TD have to consider whether the requirements under the HKPSG will still be complied with for URA's proposed shared use of the 3 LGV bays with the public. If the 3 LGV bays are to be dedicated as public facilities, URA should also explain how the priority of using the laybys between the general public and the users of the development under the KC-008(A) scheme is to be implemented,</p>	<p>e. The proposed provision of 3 LGV bays are required to comply with the requirements under the HKPSG. On this basis, these facilities cannot be dedicated solely for public use. The URA proposed the L/UL bays for share use with the public with the intent to benefit the public with more public transport facilities. If in LandsD's opinion the proposed shared use of the LGVs with the public when vacancy is available will arouse the concern of potential public complaint and cannot be regarded as dedication for public use or as public facilities, URA will not pursue this shared use proposal. URA should consider maintaining the said LGV bays as private</p>



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	<p>such that the proposed shared use of the laybys at Sung Chi Street will not be subject to public complaint. If the use of 3 LGV bays is to be shared with the public when vacancy is available (paragraph 3.24 (ii) of the Report refers), then the arrangement for the use of 3 LGV bays cannot be regarded as dedication for public use or as public facilities. URA should consider either maintains the said LGV bays as private facilities, or simply as public facilities, otherwise it is envisaged that public complaint on the management and use will arise. Alternatively, URA may consider to implement the required LGV bays serving the lot within the basement area underneath the vehicular turning area. In this regard, URA has to clarify its intention. In this connection, TD should comment from the traffic and transport point of view.</p> <p>f. The proposed dedication of the new vehicular turning area, 3LGV bays, relevant portion of the Sung Chi Street etc. have to be subject to the comment of BD under the Building Ordinance.</p> <p>g. Regarding the proposed road closure and road works under Cap 370, URA as the project proponent, has to reimburse Government all the administrative and gazettal costs and compensation arising from the proposed road project and</p>	<p>facilities. Subject to PlanD and TD's view, the Explanatory Notes for the Draft DSP (para. 7.5, 7.7 and 7.15) shall be amended accordingly.</p> <p>f. Noted. BD's comment (if any) on this aspect will be addressed.</p> <p>g. Noted. URA has in the various DSPs commenced and implemented in the past, involved similarly road closure authorization procedure (e.g. H15, H18, SSP/1/003-005). URA fully understand and will follow the procedures for road closure and land resumption to meet Government's requirements at the implementation stage.</p>

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	<p>gazettal. A written agreement will be executed if the gazettal application is to be proceeded. In the event the proposed road works are not authorized under Cap370, URA has to consider the fall-back scenario and whether its resumption application under the Lands resumption Ordinance and Urban Renewal Authority Ordinance would still be proceeded.</p> <p>h. Regarding the proposed pedestrian connections between the scheme area, the KIL 11244 and the Fook Wan Mansion, there is the need that:</p> <p>(a) To delineate a 24-hour footpath access fronting the entrance of the Fook Wan Mansion and a footpath access from and within the scheme area to KIL 11244 under the proposed land grant,</p> <p>(b) URA should consider whether the lease conditions of KIL 11244 would be modified to cater for the pedestrian connection, or to delineate the pedestrian connection and access under the DMC of KIL 11244 so as to clearly set out its intention.</p> <p>i. With the above questions and details to be clarified by URA, this Office has to reconsider the whole development proposal during the implementation stage and the land grant application stage. There is no guarantee that the</p>	<p>h. Noted. It is not required to alter/ modify the existing lease of KIL11244 for the proposed at-grade pedestrian passageway. The lot is owned by the URA and the site is being developed by the URA itself. The URA will manage and maintain the at-grade area within KIL11244 which shall be open for public use in future. Such arrangement is not stipulated under lease, but more owing to an initiative by the URA to enhance pedestrian flow in the district and improve local accessibility upon completion of redevelopment of this site.</p> <p>i. Noted.</p>

Government Departments	Comments	Responses
	<p>proposed resumption of the private lot interests within the scheme area, the proposed road works, and the land grant and the proposed development parameters, will be approved. The land grant, if approved, will be subject to the decision of the relevant authority and the lease conditions to be imposed by Lands Department.</p>	
<p><b>Home Affairs Department (DO(KC), contact officer: Miss Eunice Chan 2773 0736)</b></p>	<p>2. Taking into account views expressed during the briefing sessions and forums held by various organisations in the district after URA's announcement of the captioned development project, our preliminary observations/assessment of the public reaction to the draft development scheme plan (DSP) are set out below:-</p> <p>(a) Alliances comprising affected domestic and non-domestic owners/occupiers of Nos. 2-24 Chun Tin Street (even number) and Nos. 2-4 Hok Yuen Street (even number) have been formed for compensation bargaining, including the provision of ex-gratia allowance and rehousing arrangement. While they welcome the development scheme, they worry that if the scheme is not approved by the Town Planning Board (TPB), URA may not submit another development scheme.</p>	<p>Noted.</p>



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	(b) The owners/occupiers of nearby building(s) excluded from the scheme do not support the project and are expected to submit the following comments to TPB.	Noted. Public comments, including owners/occupiers of the adjacent building Fook Wan Mansion, are received. While separate responses to comments are provided for the public comments to TPB, the following responses are provided for the stated comments summarised by DO.
	1. Their building(s) should be included in the scheme;	<p>URA's selection of sites for redevelopment is based on a number of considerations, which includes, but not limited to, building age, building condition, allocation of public resources and any planning and social gains for the redevelopment, etc.</p> <p>The scheme boundary of KC-008(A) have been delineated based on the above factors and the key objective is to achieve better planning and design merits through inclusion of inefficient land use such as dead-end road for a more comprehensive redevelopment. The adjacent development, Fook Wan Mansion was built in 1975 and is relatively newer and in more satisfactory building condition. URA does not consider including the relatively new building in a better condition into the scheme boundary conducive to arresting urban decay.</p>

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	<p>2. The condition of their building(s) and their living environment will be adversely affected by the construction sites;</p>	<p>Buildings Department and URA have jointly inspected the adjacent residential building, Fook Wan Mansion, and the inspection indicated that the building has no safety and structural problems. Nevertheless, as the usual practice of the URA's projects, the URA will ensure compliance of relevant environmental requirements and appropriate mitigation measures are provided during the construction stage of URA projects to minimise the impacts to the adjacent development.</p>
	<p>3. They worry that any blockage of Chun Tin Street during construction will affect them to the effect that they have to detour round the industrial area when accessing Ma Tau Wai Road; and</p>	<p>The proposed widening of Sung Chi Street, which will be in place subject to be approval by TPB and CE in C, will greatly improve the condition of the existing Sung Chi Street and its interface with the adjoining industrial building. The residents of Fook Wan Mansion will be provided with a much enhanced access via Sung Chi Street according to URA's DSP proposal.</p> <p>If the Scheme is to be approved by TPB , the proposed closure of Chun Tin Street will only be carried out after the widening of Sung Chi Street within the scheme area, which is about 4 – 5 years' later according to the estimated implementation programme. By the time of closure of Chun Tin Street, continuous pedestrian</p>

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		walkway will be provided via Sung Chi Street within the scheme area and as an alternative, pedestrian can also walk directly to Ma Tau Wai Road via the at-grade open space provided within the adjacent URA Ma Tau Wai Road Development (TKW/1/002) which will be completed by 2018/19.
	4. They do not support the traffic arrangement plan submitted by URA because they will lose the existing car parking spaces, loading and unloading bay.	Due to the proposed closure of Chun Tin Street and the elimination of the metered parking spaces and L/UL bays at the street, the proposal for re-provisioning of on-street metered parking spaces and L/UL bays are proposed in the TIA report and submitted to TD who indicated no comment to the TIA report.
<b>Development Bureau (DPO/K, contact officer: Mr. Barry Yan 2231 4978)</b>	1. I trust URA will verify and update the relevant information and assessments (e.g. population and household characteristics, degree of sharing ratio, tenant split etc.) in the Stage 2 SIA. Accordingly, URA should also update the mitigation measures (including the revised one-off special measures approved by URA Board on 14 June 2016) in Appendix I of the Stage 1 SIA as appropriate to minimize the social impacts.”	Stage 2 SIA report was submitted to TPB on June 23, 2016 which provided information and assessments based on the data collected from freezing survey and SIA questionnaire of the affected residents/business operators in the Scheme. One-off mitigation measures enhanced by URA for the affected residents/business operators in the Scheme are also included in the report. The Stage 2 SIA Report was made available for public inspection at the Planning Enquiry Counters of Planning Department and the URA from June 27, 2016.



Government Departments	Comments	Responses
EPD via email on 8 June 2016 via PlanD on 22 Jun 2016	After reviewed the supporting Planning Report and the relevant supplementary documents including <i>Appendix 4 - Environmental Assessment Report (EA)</i> and <i>Appendix 5 - Drainage and Sewage Assessment Report (DSA)</i> , we considered that the assessment in the EA is <u>inadequate to support the conclusions</u> in the EA report and Planning Report that impact on air quality, noise, waste management are not insurmountable. For the DSIA, incorrect assumption is noted which may affect the findings of the sewerage impact assessment.	More elaboration and clarification of findings in the EA report are provided below.
	The project proponent/consultant is required to critically review the assessment in the EA, rectify the incorrect assumptions in the DSA, and resubmit the EA and DSA for our consideration. Our detailed technical comments on the EA and DSIA attached at <u>Annex 1</u> for the project proponent/consultant to follow-up.	As above.
	Planning Report	
	<p><u>S.4.31</u></p> <p>– Typo, please clarify if the second sentence should reads as follows:  <i>“The study concluded that the impact on air quality, noise, waste management <del>was</del> <b>are not</b> insurmountable.”</i></p> <p>– We are not able to agree on the above conclusion (assuming the typo is revised) in the</p>	<p>It is confirmed that this is a typo. The study concluded that the impact on air quality, noise, waste management are not insurmountable.</p> <p>Noted. More elaboration and clarification of the findings in the EA report are provided. We consider it is justified to draw <u>the conclusion that the impact on air quality, noise, waste management are <b>not</b></u></p>

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	<p>Planning Report due to the followings:</p> <ul style="list-style-type: none"> <li>a) The consultants has only assessed noise from fixed sources qualitatively without considering all noise sources concerned.</li> <li>b) The buffer distance requirement for vehicle emission stipulated under the HKPSG cannot be met.</li> <li>c) Not all potential land contamination issues in the subject site are covered in the land contamination assessment.</li> </ul> <p>As such, without further detailed assessment and revision of the EA report, we <u>do not agree on the conclusion that the impact on air quality, noise, waste management are <b>not</b> insurmountable.</u></p>	<u>insurmountable.</u>
	<u>Appendix 4 – Environmental Assessment Report</u>	
	<u>Noise Impact Assessment</u>	
	<p>(A) Major Assessment</p> <p>The report has only assessed noise from fixed sources qualitatively without considering all noise sources concerned. We have not been able to agree on the respective conclusions in this report.</p>	Noted. A quantitative fixed plant noise assessment which demonstrates compliance of HKPSG requirement is enclosed.
	The figures in this report are unclear, e.g. Figures 2.8, 4.1 to 4.3. We cannot check the accuracy of some information presented in this report.	Noted. Figures with better resolution is provided.

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	<p>(B) Other Assessment  <u>S.1.1.5, S.2.1.1 and elsewhere in this report</u>  The consultant should avoid, preceding to a full description, using abbreviation such as "MTW" in S.1.1.5 and S.2.1.1.</p>	<p>Please note that description of MTW Project was defined in S1.1.3.</p>
	<p><u>Figure 2.1</u>  The consultant should have clearly indicated the nearby roads, e.g. Chun Tin Street, and Sung Chi Street in this figure.</p>	<p>Noted. Figure 2.1 has been revised accordingly.</p>
	<p><u>Table 2-2</u>  The consultant should have reviewed if the road widening work at Sung Chi Street is a DP under the EIAO by including information such as the road classifications of Sung Chi Street. The consultant should have indicated the extent of the road widening work in a drawing.</p>	<p>Table 2-2 has been revised to clarify that the proposed road widening work at Sung Chi Street is not classified as a DP under the EIAO.</p> <p>The extent of the road widening work has been shown in Figure 1.2 and 1.3 of the Planning Report accordingly.</p>
	<p><u>S.4.3.7</u>  Except the 1st sentence, all other sentences are unnecessary.</p>	<p>Noted. S 4.3.7 has been revised accordingly.</p>
	<p><u>S.4.4.6</u>  The consultant should advise the exact observation location. Noise sources on the roof of the surrounding buildings not noticeable on the street may be noticeable at higher elevations.</p>	<p>A night time noise survey was carried out on the roof level of Hang Fung Industrial Building during night-time period (23:00-00:00) on 7 July 2016. No noticeable fixed plant noise was identified at the roof of the surrounding buildings.</p>
	<p><u>Appendix 4.1</u>  The consultant should have also presented the posted</p>	<p>Noted. The posted speed limits have been presented in the Appendix 4.1. The road segments previously</p>



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	speed limits and should have sought the HyD's endorsement on the types of road surfaces.	assumed as low noise road surface have been changed to concrete road surface for conservative purpose.
	<u>Appendix 4.4</u> The consultant should have made clear if the assessed scenario included "widened section of Sung Chi Street".	The assessed scenario included the widened section of Sung Chi Street. S.4.3.3 has been revised to provide the clarification.
	<u>S.4.3.5</u> It is unclear what "ament notional design" in the 3rd line means.	Comment noted. S4.3.5 has been amended accordingly.
	<u>S.4.4</u> The consultant should have advised if there will be any fixed noise source from the development.  Please refer to comment (A)(1) above.  According to our cursory check, there may be more fixed noise sources in the vicinity of the development, e.g. equipment on top of Hung Hom Commercial Centre, than those identified in this report.	A new section 4.4.15 has been included to provide information of fixed noise sources from the development.  A section includes a quantitative fixed plant noise assessment which demonstrates compliance of HKPSG requirement is included.
	<u>S.4.4.1</u> The consultant should have made clear that the determined ASR is for assessment purpose only and should not prejudice the Authority's discretion on the enforcement based on the contemporary conditions.	Noted. S4.4.1 has been amended accordingly.

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	<p><u>S.4.4.6</u> The consultant should avoid using subject wording such as "unacceptable" to describe The consultant finding. The report should have advised if there is adverse noise impact.</p>	Noted. S4.4.11 has been amended accordingly.
	<p><u>S.8.3.1</u> The consultant should avoid using subject wording such as "unacceptable" to describe The consultant finding. The report should have advised if noise mitigation measures are recommended to minimize the noise impact.</p> <p><u>S.8.3.3</u> Please refer to comment (A)(1) above.</p>	<p>Noted. S8.3.1 and S8.3.3 has been amended accordingly.</p> <p>The revised report includes a quantitative fixed plant noise assessment to demonstrate the compliance of HKPSG requirement.</p>
	<u>Air Quality Assessment</u>	
	<p><u>S.3.4.3</u> The consultant should provide ATC2014's page references for road type of Sung Chi Street and Hok Yuen Street.</p>	Information of the road type of Sung Chi Street and Hok Yuen Street has been provided in Appendix 4.1.
	<p><u>S.3.4.4 &amp; Figure 3.2</u> “... Given the narrow width of the Site and the site immediately adjoins to streets on three sides, the proposed residential development in the Scheme inevitably falls within the 5m distance from the adjoining streets, i.e. Sung Chi Street and the new vehicular running area (Figure 3.2)...”,the above paragraphs in S3.4.4 indicates that the buffer distance</p>	The site of KC-008(A) is partly zoned R(A) and partly shown as Road in the current OZP. The proposed redevelopment of KC-008(A) is largely similar to the original planning intention for high density residential use, with only inclusion of a portion of the Chun Tin Street which contributes to more design flexibility for building disposition and podium setback to provide more buffer distance of the residential tower from the

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	<p>requirement for vehicle emission stipulated under the HKPSG cannot be met. Unless the design of block layout of the site can be revisited with a view to fulfilling the above buffer distance requirement, i.e. no air sensitive uses within 5m buffer zone (subject to confirmation of road type(s) of concerned roads), <u>the Project Proponent should carry out quantitative air quality impact assessment (AQIA) to address the air quality impacts associated with the Project for our consideration.</u></p>	<p>road.</p> <p>If under the scenario that URA did not commence the KC-008(A) to include Chun Tin Street, the R(A) site itself can be redeveloped for high density residential development under current zoning, without any statutory requirement to submit EA and AQIA. It is of the view that the original KC-008 site will have more constraints in building disposition and the residential tower cannot meet the 5m buffer zone from Sung Chi Street neither.</p> <p>Based on the observation of the future air quality conditions predicted in the PATH model and the low traffic flow of the nearby roads and vertical distance of the domestic units with the road, it is anticipated that the local air quality would comply the air quality standards in AQOs and the KC-008(A) will not be adversely affected by vehicular emission.</p>
	<p><u>Waste Management &amp; Land Contamination Assessment</u></p>	
	<p><u>S.5.2</u> Please provide breakdown of the quantities of C&amp;D materials based on the different construction activities. The corresponding management options of each type of C&amp;D materials/wastes should be addressed accordingly. The Consultant should consider providing a summary in tabulated form.</p>	<p>Breakdown of the quantities of C&amp;D materials has been provided in Table 5.1 and the corresponding management options of each type of C&amp;D material/wastes are elaborated in S.5.2.2.</p>



Government Departments	Comments	Responses
	<p><u>S.5.2.1 and 5.2.2</u> It is noted that surplus excavated materials would be generated during the construction phase. Also according to Section 3.3 (Historical Background), the Site is likely to be located on reclaimed area. Therefore please confirm if excavation of marine sediment could be involved, if affirmative, please further elaborate on the proper handling and disposal of sediment.</p>	<p>According to the information collected from the URA's MTW Road Project, which is immediately next to KC-008(A) site, no marine deposit was found during the excavation works. Given the close proximity and the likely similar ground condition of the two sites, no excavation of marine sediment is anticipated for the KC-008(A). S.5.2.8 has been included to discuss the marine deposit issue.</p>
	<p><u>S.5.2.7</u> Please clarify whether any asbestos waste and/or chemical waste will be generated during the demolition of existing buildings/construction phase. If affirmative, please further elaborate the proper handling and disposal of asbestos waste and/or chemical waste. The consultant should provide the estimated quantity of chemical waste, taking into account of the comment above, to be generated.</p>	<p>Noted. Clarification is provided in S 5.2.9 and S.5.2.10 on the estimated quantity of chemical wasted and the proper handling and disposal of asbestos waste and chemical waste.</p>
	<p><u>S.6.1</u> Please note that the consultant is required to confirm with documentary justifications by means of carrying out of <u>land contamination assessment in accordance with relevant prevailing guidelines</u> (hereafter referred as <b>LCA</b>) to substantiate whether there is any land contamination issue for the entire proposed development site; and if affirmative the relevant party needs to carry out appropriate land remediation if needed in accordance with relevant prevailing</p>	<p>Noted. A LCA would be carried out before commencement of construction works.</p>


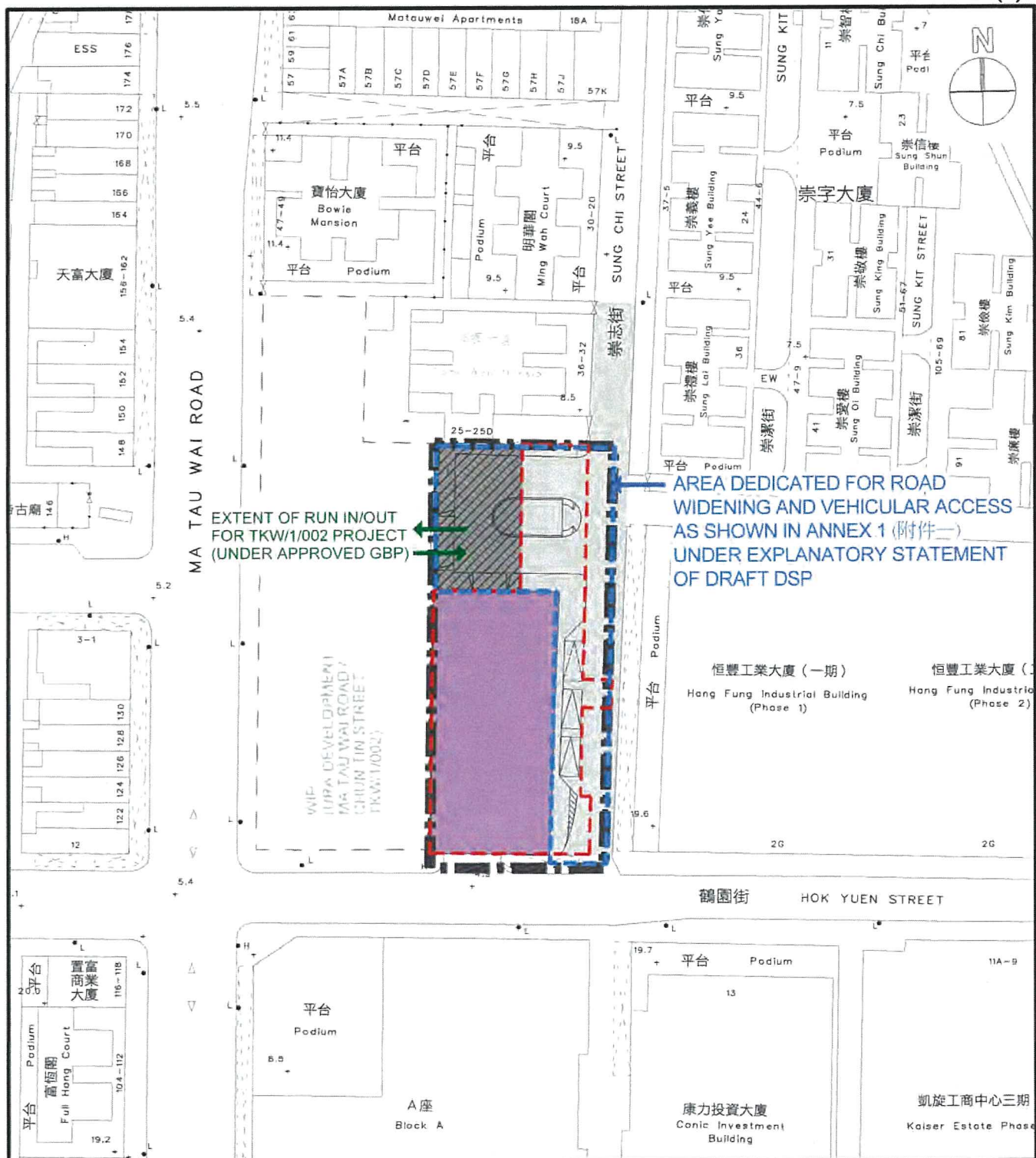
Government Departments	Comments	Responses
	guidelines., The LCA and/or remediation works should be completed before commencement of any construction works for the further development.	
	In connection with comment 21 above, the preliminary contamination assessment based on a preliminary review of the historical land use of the Site and observation from a preliminary site walkover as presented in the submission, which had identified only one potential land contamination issue arising from a motor vehicle workshop, is not deemed sufficient to rule out the needs of including the other areas/premises in the Site which may have involved other activities/uses in the past in a LCA. The Consultant is therefore required to confirm whether a LCA <u>covering the whole site</u> will be conducted when the site is accessible.	The LCA covering the whole site will be conducted when the site is accessible to URA. Section 6.4.2 has been revised accordingly.
	<u>S.6.3.1, 4<sup>th</sup> Sentence</u> Please check for typo error(s).	The typo error has been revised accordingly.
	<u>S.6.3.1, Table 6-1, and Appendix 6.1, 6.2 &amp; 6.3</u> Only aerial photos for three (3) years were provided in Appendix 6.1. Photos for the other years as tabulated in Table 6-1 should be included in Appendix 6.1 for a more complete description of the site history.  Photo 6.1A was stated as Aerial Photo in 1949, but bottom of photo has shown the dates as 10 Nov 45. Please clarify.	The description of the site history in Table 6-1 has been revised with additional supporting information in order to provide a complete description of the site history.  Photo 6.1A shows the aerial photo taken in Year 1945. The typo has been revised.  The potential land contamination issue(s) due to historic uses/activities for the existing premises as presented in Appendix 6.2 & 6.3 will be reviewed under a LCA


Government Departments	Comments	Responses
	As mentioned in comment 21 & 22 above, potential land contamination issue(s) due to historic uses/activities for the existing premises as presented in Appendix 6.2 & 6.3 should be reviewed under a LCA.	when the site is accessible to URA.
	<u>S.6.4. and 6.4.1</u> It is mentioned that further supplementary site appraisal is suggested when the area is accessible to the project proponent / consultant and a Contamination Assessment Plan (CAP) would be prepared accordingly. Please take into account 21 & 22 above for potential land contamination issues other than that caused by the motor vehicle workshop, and therefore the CAP to be prepared should not be confined to only where the motor vehicle workshop is located. Please also note that a CAP requires EPD's endorsement prior to the commencement of land contamination site investigation works.	S.6.4.2 of the revised report has been further elaborated on the relevant requirements of CAP.
	<u>Appendix 5 – Sewage Impact Assessment</u>	
	<u>Appendix C</u> The no. of people per flat of 2.2 is too low, please review it with reference to the latest occupancy data in that area.	The flat occupancy has been reviewed and revised.
	<u>Appendix D</u> The Ground Level of FMH_PR_001 should be 5.15mPD, not 5.13mPD according to Figure 3, please amend.	The ground level of FMH_PR_001 has been revised.




Government Departments	Comments	Responses
<b>PlanD's email dated Jun 22, 2016</b>	<p>The following parties have no objection / no comment on the DSP.</p> <ul style="list-style-type: none"> <li>- Fire Services Department</li> <li>- Drainage Services Department</li> <li>- Water Supplies Department</li> <li>- Leisure and Cultural Services Department</li> </ul>	Noted.

## PLAN (I)

 KC-008(A) DSP  
SCHEME BOUNDARY

 RED DOTTED GREY AREA -  
PROPOSED PRIVATE LOT AREA INCLUDED  
IN NET SITE AREA; BUT TO BE DEDICATED  
FOR VEHICULAR ACCESS AND  
PEDESTRIAN WIDENING FOR PUBLIC USE

 RED DOTTED PURPLE AREA -  
PROPOSED PRIVATE LOT AREA AND  
PART OF CHUN TIN STREET INCLUDED IN  
NET SITE AREA

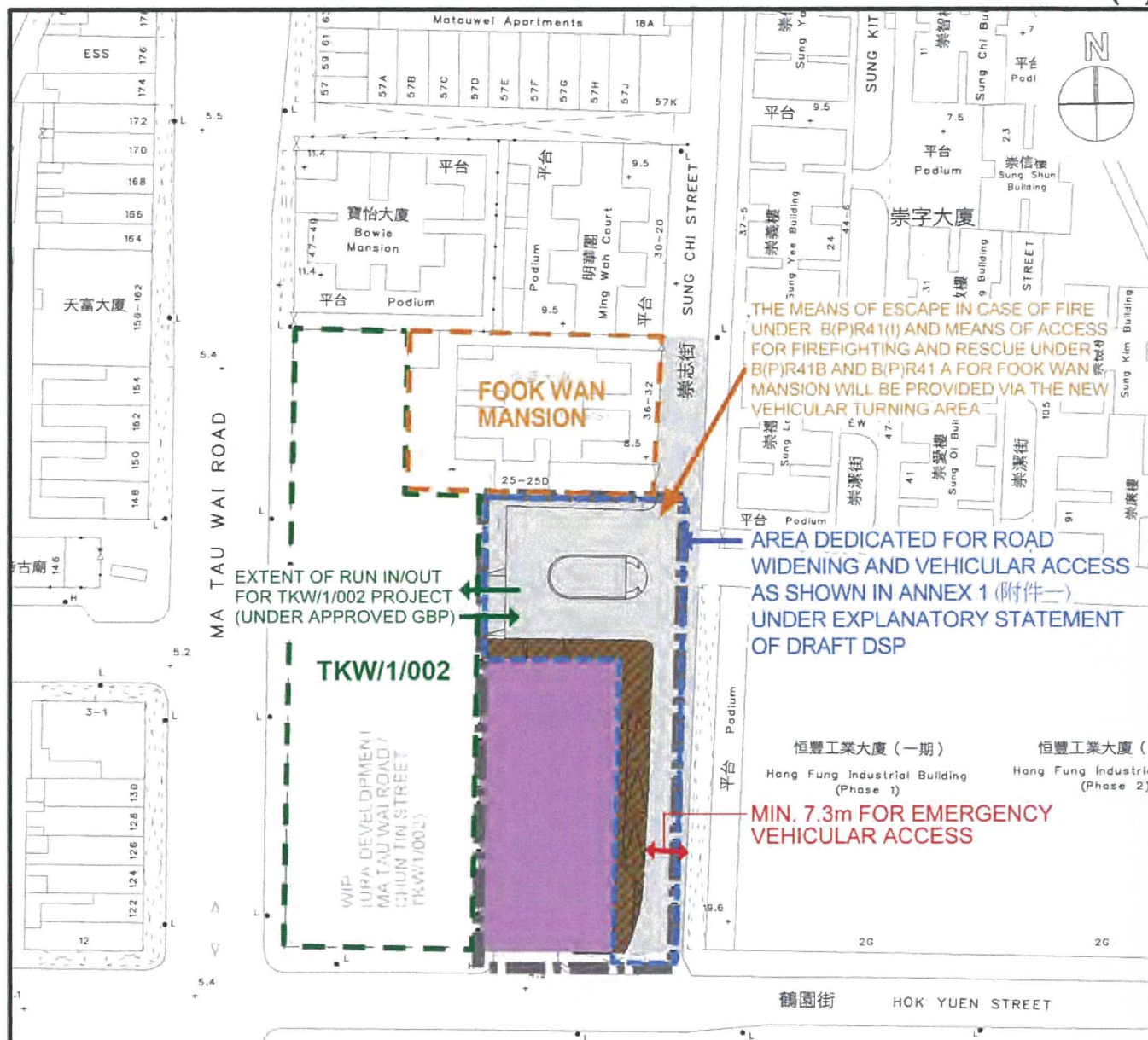
 GREY HATCHED AREA -  
PART OF THE CHUN TIN  
STREET NOT INCLUDED IN  
NET SITE AREA

NET SITE AREA  
= 1,636 m<sup>2</sup>

 (INCLUDED PRIVATE LOTS AREA AND  
 PART OF CHUN TIN STREET AS  
 SHOWN ABOVE)

REMARKS:

PART OF CHUN TIN STREET WHICH SHALL BE RETAINED FOR VEHICULAR ROAD ACCESS FOR PUBLIC USE AND ADJOINING DEVELOPMENTS WILL NOT BE INCLUDED IN THE NET SITE AREA



KC-008(A) DSP  
SCHEME BOUNDARY



PURPLE AREA -  
INCLUDED IN NET SITE AREA



BROWN HATCHED AREA -  
AREA DEDICATED FOR  
PEDESTRIAN TRAFFIC BY  
THE PUBLIC AND  
ACCOMMODATION OF  
LOADING / UNLOADING BAYS  
INCLUDED IN NET SITE AREA

NET SITE AREA FOR CALCULATION  
UNDER B(P) R:



= 1,336 m<sup>2</sup>

# CALCULATION OF SITE AREA, PLOT RATIO & SITE COVERAGE UNDER B(P)R 22 & 23

NET SITE AREA	1336 m <sup>2</sup>
CLASS OF SITE	C
PERMISSIBLE SITE COVERAGE FOR DOMESTIC (ABOVE 15m) (UNDER BUILDING ORDINANCE)	1336 x 40% = 534m <sup>2</sup> (PROPOSED OK)
PERMISSIBLE PLOT RATIO FOR NON-DOMESTIC (UNDER BUILDING ORDINANCE)	15
PERMISSIBLE PLOT RATIO FOR DOMESTIC (UNDER BUILDING ORDINANCE)	10
PROPOSED PLOT RATIO FOR DOMESTIC (UNDER BUILDING ORDINANCE)	12270 (refer item (i) below) = 9.2 1336
MAX. PERMISSIBLE PLOT RATIO FOR NON-DOMESTIC OF COMPOSITE BUILDING (UNDER BUILDING ORDINANCE)	(10 - 9.2) x $\frac{15}{10}$ = 1.2
PROPOSED PLOT RATIO FOR NON-DOMESTIC OF COMPOSITE BUILDING (UNDER BUILDING ORDINANCE)	1603 (# refer item (ii) below) = 1.2 (<1.2) 1336
i) TOTAL PERMISSIBLE GFA FOR DOMESTIC (UNDER TOWN PLANNING AS ANNOTATED IN DSP)*	12270 m <sup>2</sup>
ii) TOTAL PERMISSIBLE GFA FOR NON-DOMESTIC (UNDER TOWN PLANNING AS ANNOTATED IN DSP)*	2454 m <sup>2</sup>

\* REFER DRAFT DSP NO.: S/K9/URA1/A REMARKS (1)

# NON-DOMESTIC GFA UNDER B(P)R (i.e. 1603m<sup>2</sup>) NOT EXCEED MAX. PERMISSIBLE GFA UNDER TOWN PLANNING  
IN DSP (i.e. 2454m<sup>2</sup>) (∴ OK)



**Urban Renewal Authority**

Term Environmental Consultancy Services  
Service Order No.002

**Chun Tin Street / Sung Chi Street  
Development Scheme (KC-008(A))**

**Environmental Assessment Report**

Jul 2016

	Name	Signature
Prepared:	S.P. Ma / Hazel Cheng	
Checked:	Angela Tong	
Approved:	Y.T. Tang	

Version: A Date: 27 Jul 2016

**Disclaimer**

This *Report* is prepared for the Urban Renewal Authority and is given for its sole benefit in relation to and pursuant to *Term Environmental Consultancy Services for the Urban Renewal Authority Projects* and may not be disclosed to, quoted to or relied upon by any person other than the Urban Renewal Authority without our prior written consent. No person (other than the Urban Renewal Authority) into whose possession a copy of this *Report* comes may rely on this *Report* without our express written consent and the Urban Renewal Authority may not rely on it for any purpose other than as described above.

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## Environmental Assessment Report

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## 1 INTRODUCTION

### 1.1 Background

- 1.1.1 The Urban Renewal Authority ("URA") intends to commence the Chun Tin Street / Sung Chi Street Development Scheme (KC-008(A)) ("the Scheme") under section 25 of the Urban Renewal Authority Ordinance ("URAO"). Under section 25 of URAO, a draft URA Development Scheme Plan ("DSP") of KC-008(A) with its planning proposal is required to submit to the Town Planning Board ("TPB") for approval. This Environmental Assessment (EA) is prepared to review and assess the potential environmental impact / benefit associated with the implementation of the Scheme in supporting the submission of the draft DSP to TPB for approval.
- 1.1.2 The URA has appointed AECOM Consulting Services Limited (ACSL), to carry out this EA for the Scheme.
- 1.1.3 The Development Scheme site ("the Site") is located at the junction of Hok Yuen Street and Sung Chi Street. The Site is zoned as "Residential (Group A)" ("R(A)") and Chun Tin Street is shown as "Road" on the approved Hung Hom Outline Zoning Plan ("OZP") No. S/K9/24. Adjacent to the site on the west is another URA redevelopment project at Ma Tau Wai Road (TKW/1/002, or namely MTW Project).
- 1.1.4 The gross site area of the Scheme is about 2,745 m<sup>2</sup>, with a net site area of about 1,636 m<sup>2</sup>. The Scheme intends to demolish the existing old tenement buildings on Nos. 2-24 Chun Tin Street and Nos. 2-4 Hok Yuen Street (even numbers) and include the existing Chun Tin Street for redevelopment. The Site is proposed to be zoned as "R(A)7", with the proposed total Gross Floor Area ("GFA") is of around 14,724 m<sup>2</sup>. It will be redeveloped for mainly residential with commercial uses at lower levels, as well as to enhance the existing traffic and pedestrian environment via road improvement works in the Scheme area.
- 1.1.5 In the Scheme, a single residential tower of about 34 residential storeys is proposed on a 3-level commercial / retail podium with private residential clubhouse and podium garden on the podium roof. Such a podium design would create more set-back from adjacent roads emission and noise sources as possible when compared with the existing residential developments in the Site. The proposed building height is 130mPD to accommodate the permissible GFA of the Site. In order to enhance pedestrian connectivity at ground level and more efficient land use, the existing Chun Tin Street, which is a dead-end road, will be permanently closed and extinguished for redevelopment. A new vehicular turning area leading from the existing Sung Chi Street will be provided at the north of the Scheme to provide vehicular access to the Site and the adjoining development including MTW Project and Fook Wan Mansion. The enlarged site area will facilitate a more flexible and better building disposition and layout. The Scheme will also provide carriageway and pavement widening of Sung Chi Street to enhance the traffic condition and pedestrian environment.
- 1.1.6 This EA has been undertaken with reference to the guidance for environmental considerations provided in Chapter 9 "Environment" of the Hong Kong Planning Standards and Guidelines ("HKPSG"). This EA presents a qualitative study of the potential environmental impacts, including air quality, noise, waste management and land contamination, while sewage impact assessment (SIA) is presented separately from this EA report.

## 2 SITE LOCATION AND BUILDING DESIGN

### 2.1 Site location and Existing Land Use

- 2.1.1 The Chun Tin Street Development (CTS) Site is bounded by the MTW Project to the west, Hok Yuen Street to the south, Sung Chi Street to the east and Fook Wan Mansion to the north. Existing buildings in the vicinity include low-rise residential buildings with commercial activities on the ground floor and industrial buildings. Site location plan, photos and conditions of the Site, as well as the concerned Chun Tin Street and Sung Chi Street, are shown in below **Figures 2.1 to 2.5**.

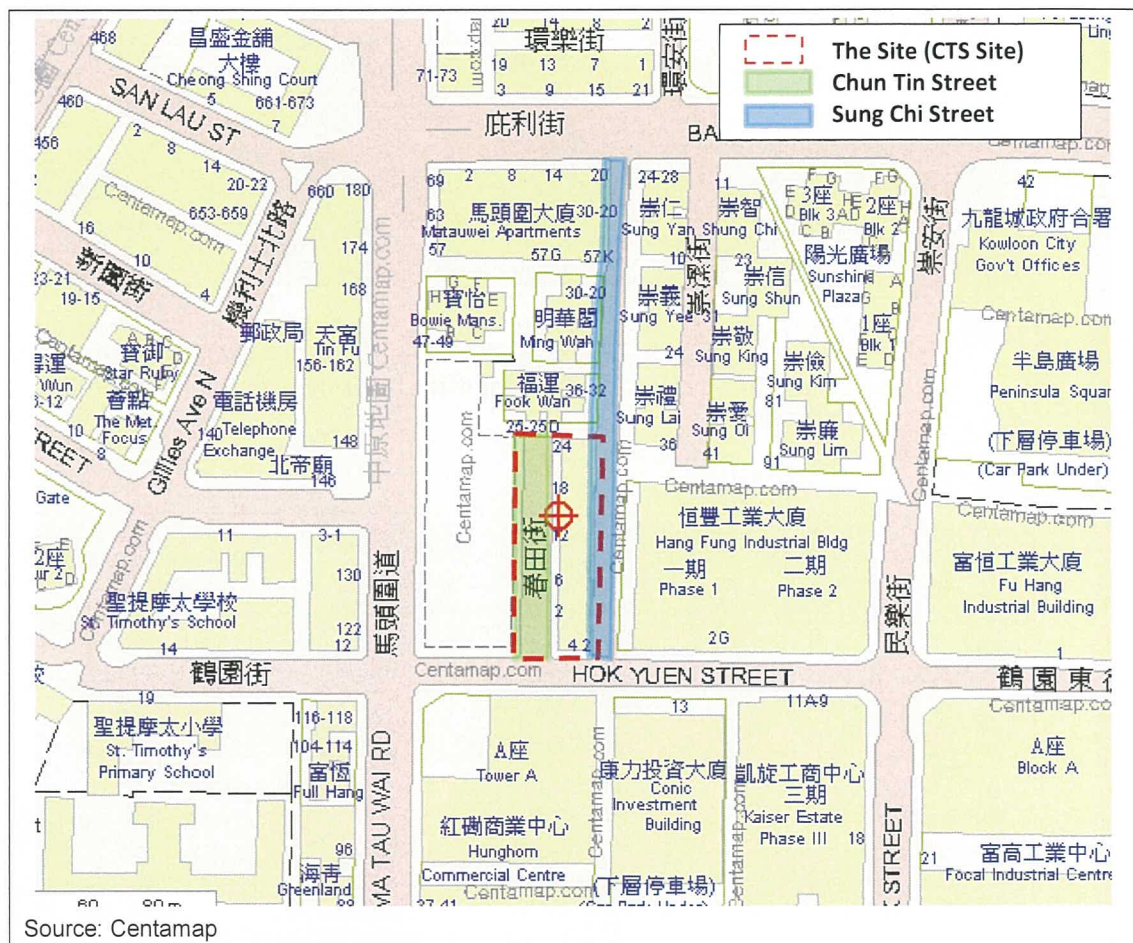
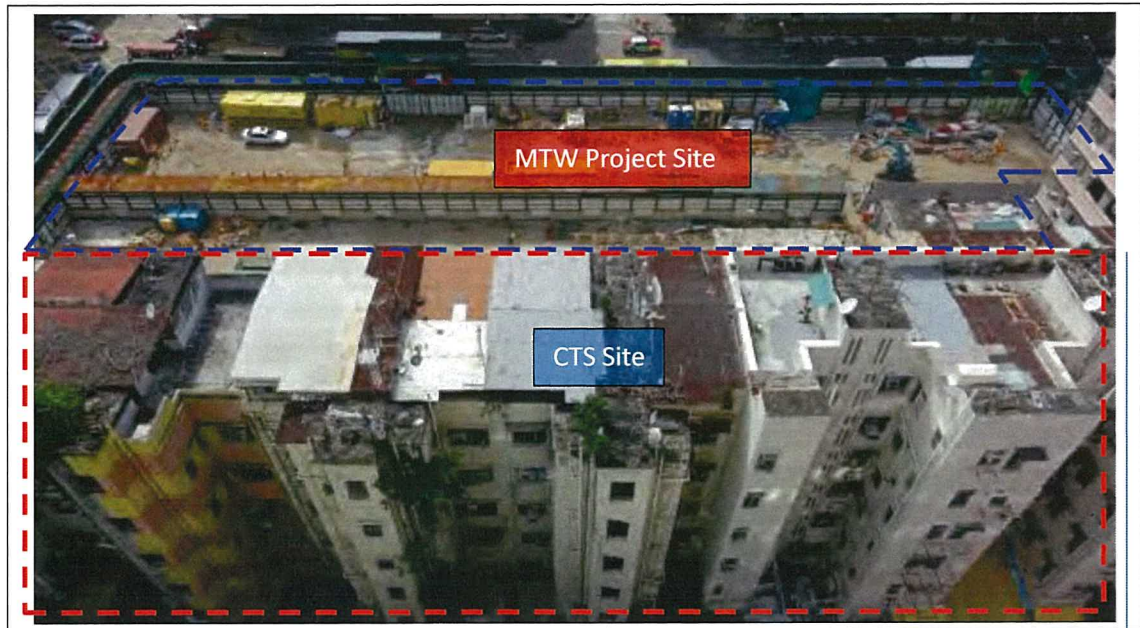
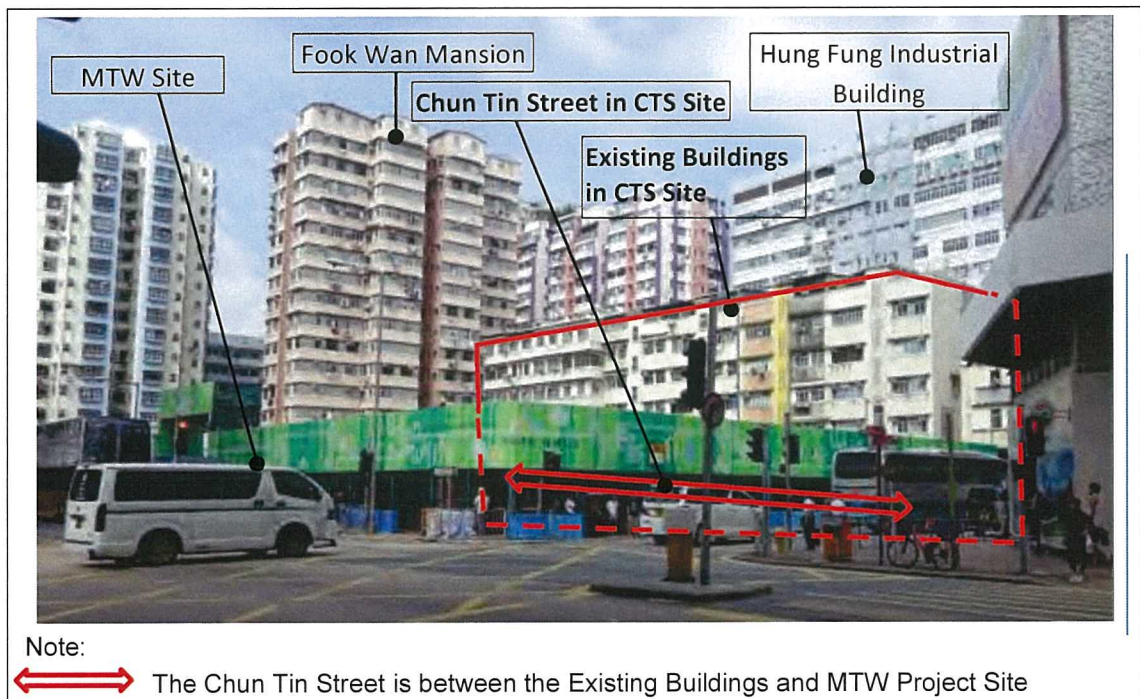


Figure 2.1 Site Location Plan





**Figure 2.2** Overview of the Site and nearby URA Development from Hung Fung Industrial Building – Ma Tau Wai Project (MTW) Under Foundation Work and Chun Tin Street (CTS) Development Scheme with Existing Old Buildings Still In Place



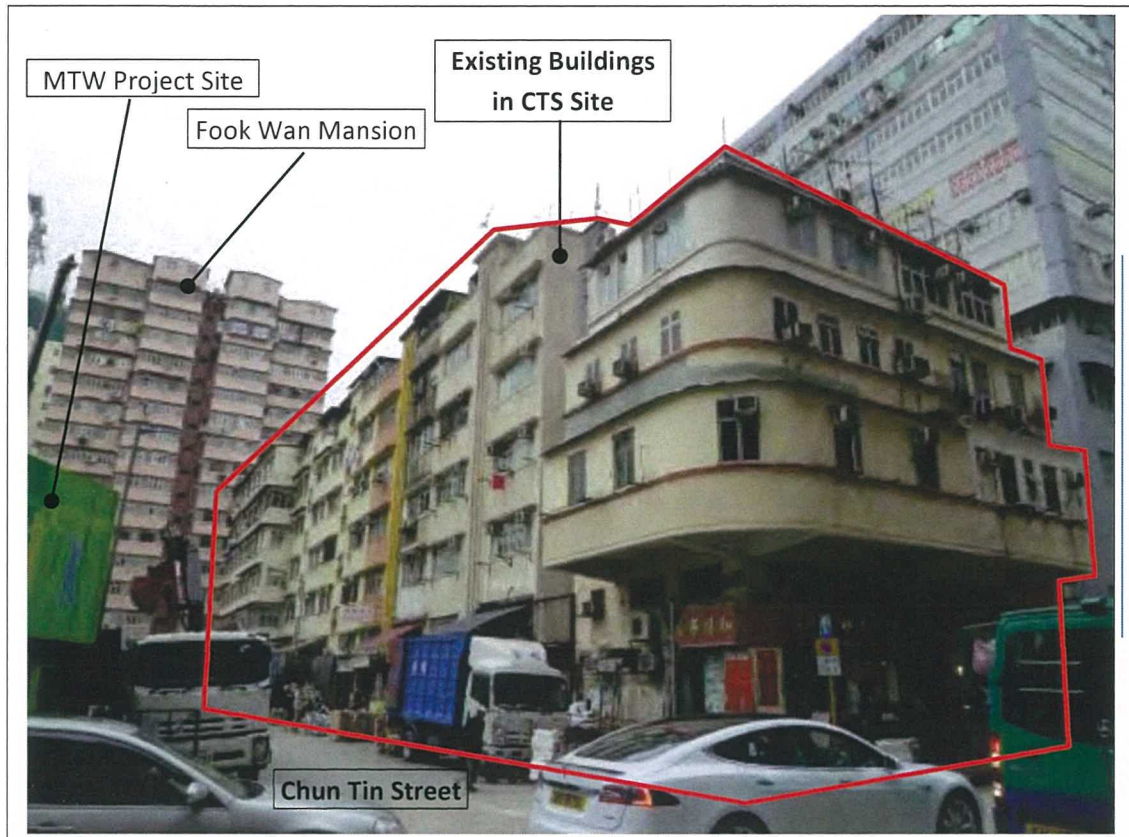
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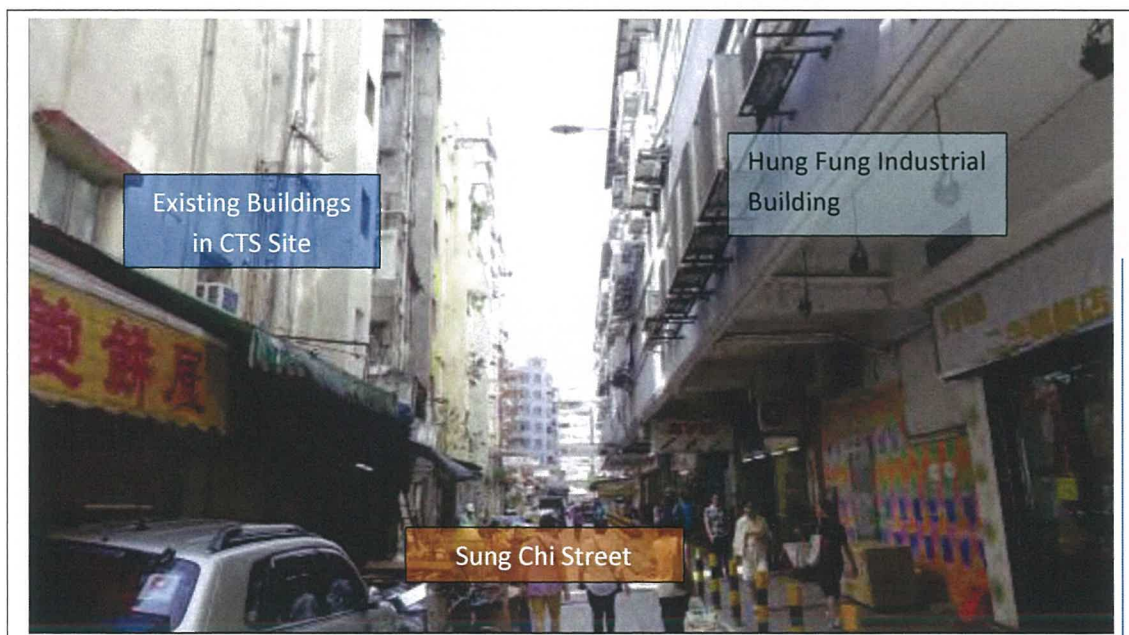
The Chun Tin Street is between the Existing Buildings and MTW Project Site

**Figure 2.3** Ma Tau Wai Project (MTW) and Existing Old Buildings on Chun Tin Street (CTS) Still In Place, View From Ma Tau Wai Road / Hok Yuen Street Junction





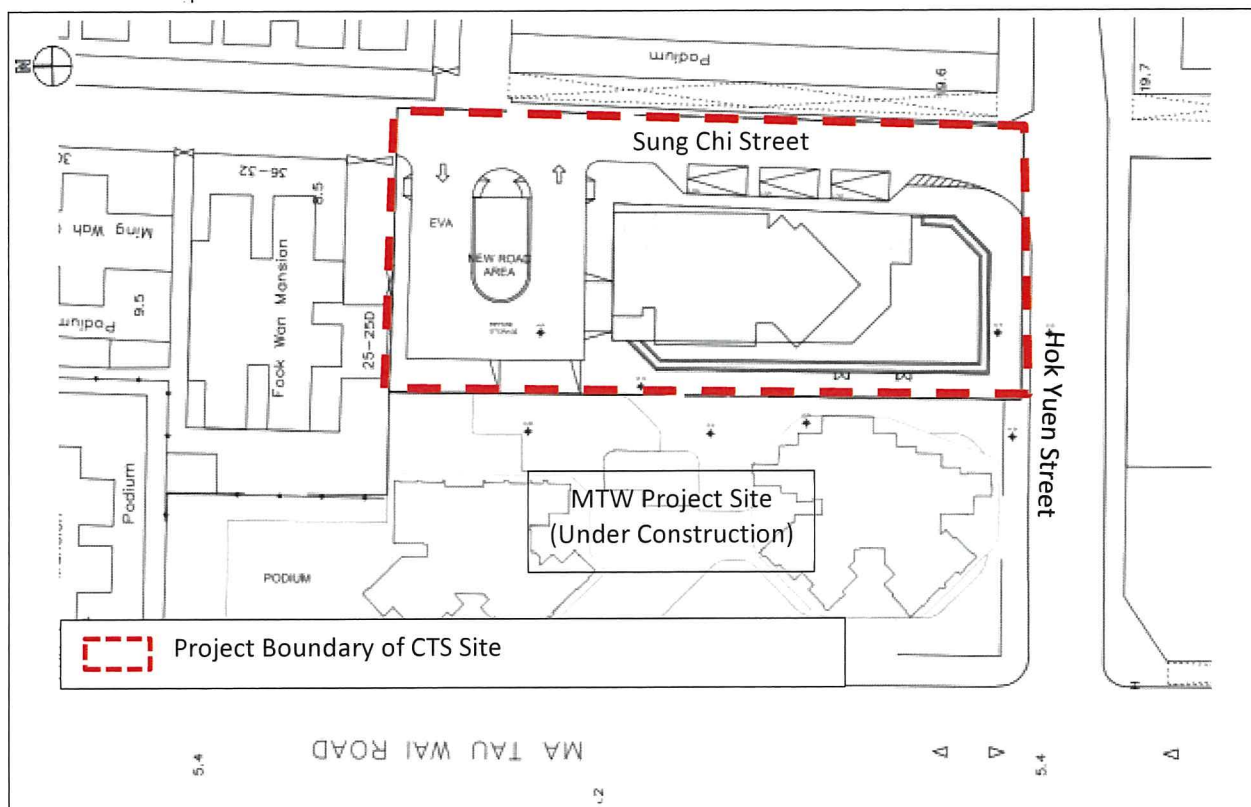
**Figure 2.4** Ma Tau Wai Project (MTW), Existing Old Buildings on Chun Tin Street (CTS), Fook Wan Mansion and Chun Tin Street, View From Hok Yuen Street



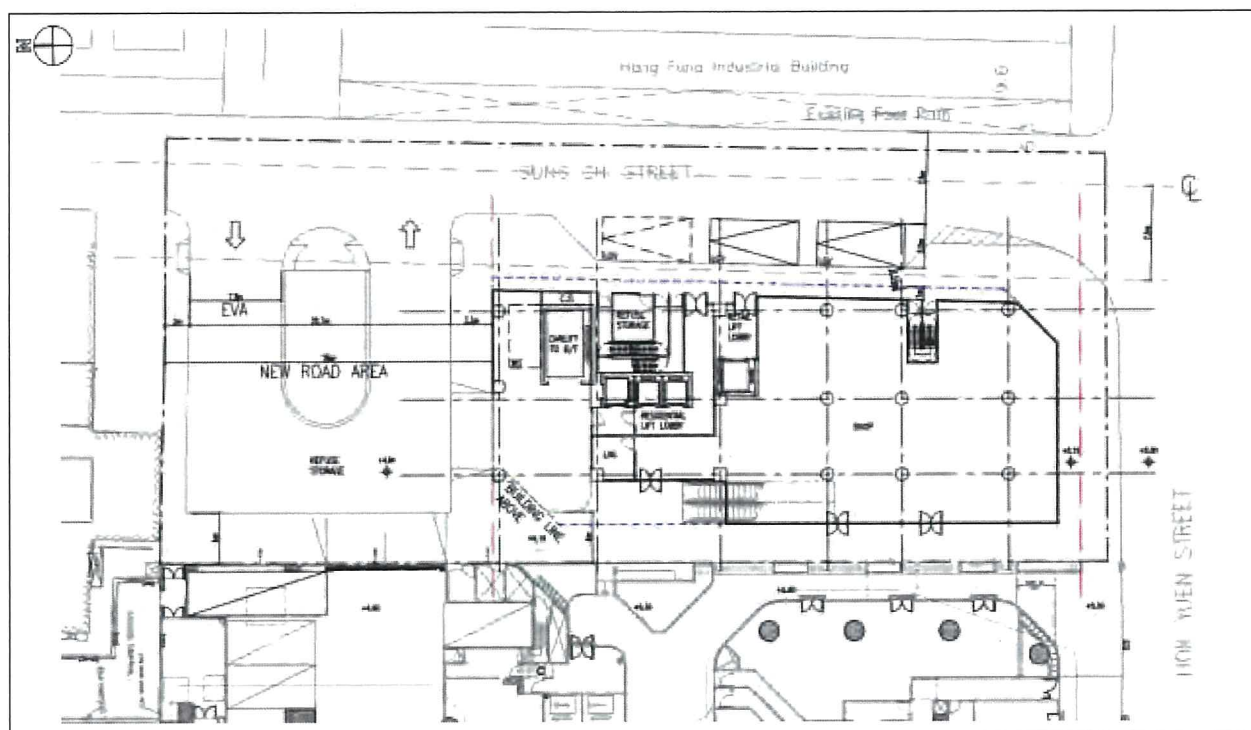
**Figure 2.5** Currently Sub-standard Sung Chi Street Between Existing Buildings on Chun Tin Street (CTS) and Hung Fung Industrial Building, View From Hok Yuen Street

## 2.2 Proposed Development

2.2.1 The conceptual block layout of the Site and the notional ground floor and basement layout plans are shown in **Figures 2.6, 2.7 and 2.8** respectively. **Figure 2.9** shows the indicative section of the development.

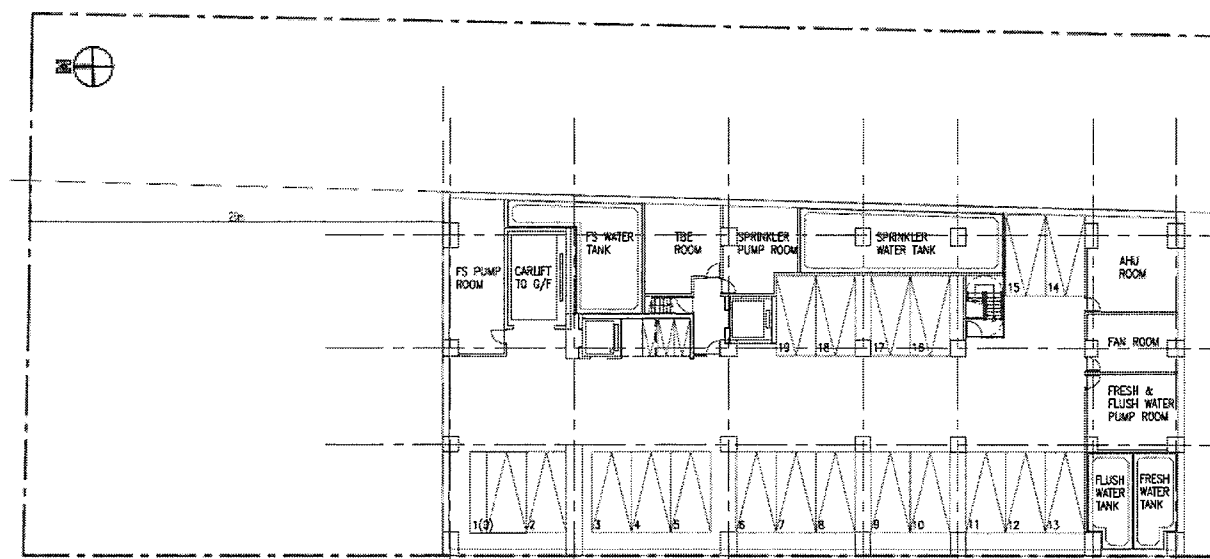


**Figure 2.6** Conceptual Plan for the Subject Site

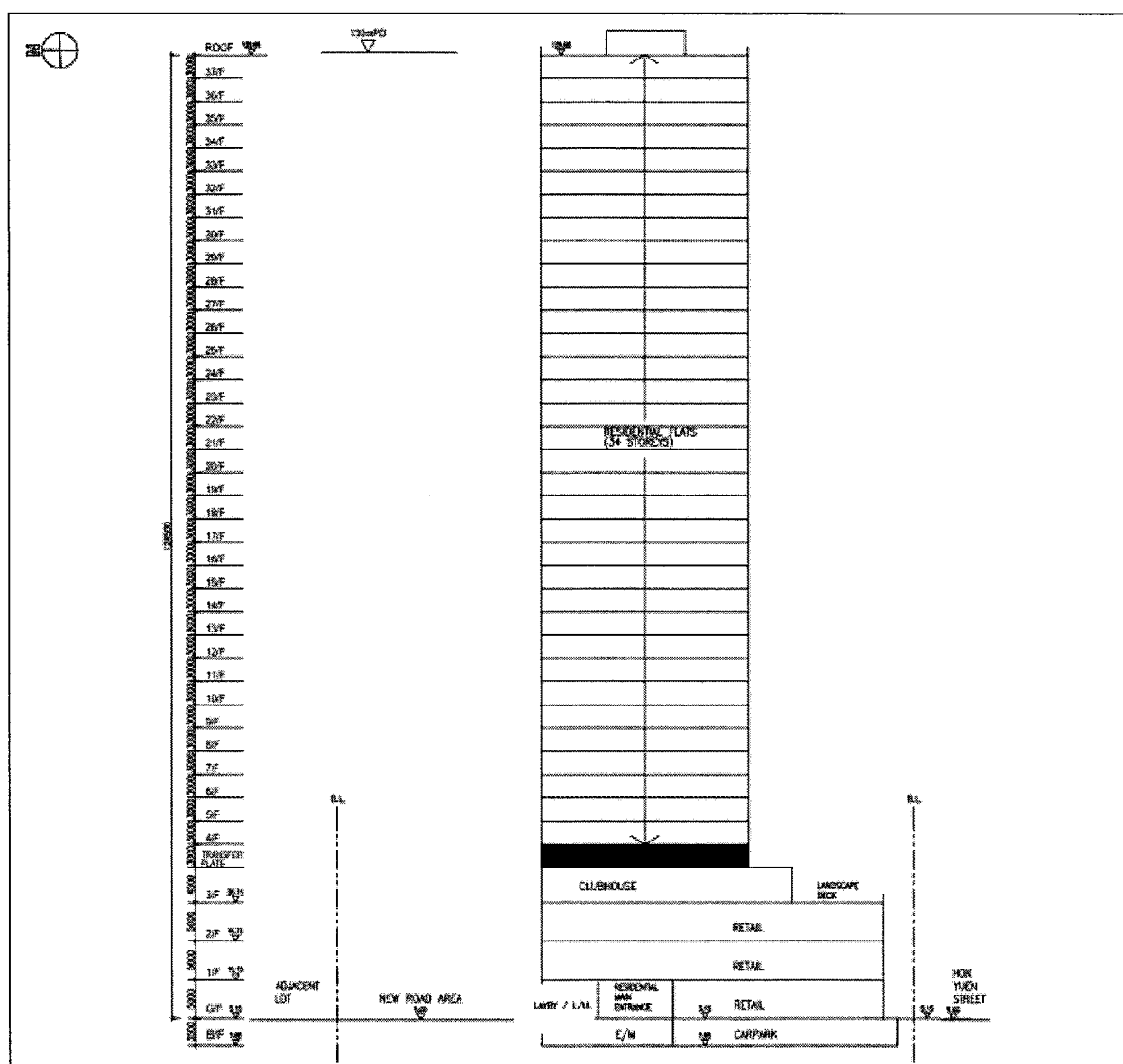


**Figure 2.7** Notional G/F Layout





**Figure 2.8      Notional B/F Layout**



**Figure 2.9** Indicative Section of the Proposed Development in the Scheme

2.2.2 Major development parameters of the proposed development are tabulated in **Table 2-1** while associated proposals have been presented in **Table 2-2**.

**Table 2-1 Major Development Parameters**

Parameters	The Project Site
Proposed Zoning	"R(A)7"
Net Site area for Plot Ratio Calculation	1,636sq.m.
Domestic GFA	12,270sq.m. (PR= 7.5)
Non-domestic GFA	2,454sq.m. (PR= 1.5)
No. of residential floors	34 floors (1 Tower)
Units per floor	1 Tower Total: 310 flats
Building height	130 mPD
Car parking	A 1-level basement car park with car lift to provide about 19 private car parking spaces for the proposed development within the Scheme.  2 to 3 LGV bays are proposed to be provided at-grade at the podium setback area on Sung Chi Street within the Scheme.
Occupation Year	2025

**Table 2-2 Associated Works under the Scheme**

Associated Works	Description
Road Closure	Chun Tin Street is proposed to be closed and extinguished permanently for redevelopment, to facilitate better building layout/ increase in flat supply as well as to provide a safer environment for pedestrian and vehicular traffic.
New Vehicular Turning Area	A new vehicular turning area entering from Sung Chi Street will be created for public use. It will serve as vehicular access to the Scheme, TKW/1/002 and the adjacent Fook Wan Mansion.
Road Widening Works	The current one-way Sung Chi Street will be widened to a 2-way street with pavement for public use, by setting back of the podium of the proposed development in the Scheme.  Sung Chi Street is classified as a local distributor road based on the road function defined in The Annual Traffic Census 2014 (i.e. Roads within districts linking developments to the District Distributor). The proposed road widening works at Sung Chi Street therefore does not constitute a Designated Project (DP) under the Environmental Impact Assessment Ordinance (EIAO).
Vehicular Ingress/Egress	Vehicular ingress/egress for the Scheme area will be at the northern part of the Scheme fronting the new vehicular turning area.

2.2.3 The proposed zoning / use of the Scheme area is for R(A)7 (i.e. residential development use), with such land use already permitted as of right in part of the Scheme area covering the building lots at Chun Tin Street (even nos.). The planning intent under the Scheme will involve mainly the utilisation of Chun Tin Street through closing the street to increase development potential of residential use and maximise flat gain.

2.2.4 In order to evaluate the potential environmental impact associated with the Scheme, below environmental parameters have been discussed in the following chapters.

- (a) Air quality impact due to vehicular emissions and industrial emissions
- (b) Noise impact due to road traffic and industrial fixed plant noise emissions
- (c) Waste Management
- (d) Land contamination issue

- 2.2.5 Potential drainage and sewage issues due to the proposed design have been assessed in separate SIA Report.



### 3 AIR QUALITY IMPACT ASSESSMENT

#### 3.1 Introduction

- 3.1.1 This section addresses the potential air quality impact associated with construction activities, road traffic emission from the roads and industrial emissions from the industrial uses in the vicinity.

#### 3.2 Environmental Legislation and Guidelines

- 3.2.1 The air quality impact assessment criteria shall follow the Air Pollution Control Ordinance (APCO) and make reference to the Hong Kong Planning Standards and Guidelines (HKPSG).
- 3.2.2 Notifiable and regulatory construction works are under the control of Air Pollution Control (Construction Dust) Regulation. Notifiable works are site formation, reclamation, demolition, foundation and superstructure construction for buildings and road construction. Regulatory works are building renovation, road opening and resurfacing slope stabilization, and other activities including stockpiling, dusty material handling, excavation, concrete works, stockpiling, dusty material handling etc. Contractors and site agents are required to inform the Environmental Protection Department ("EPD") on carrying out construction works and to adopt dust reduction measures to reduce dust emission to the acceptable level.
- 3.2.3 The APCO also provides the statutory authority for controlling air pollutants from a variety of sources. The Hong Kong Air Quality Objectives (AQOs) stipulate the maximum allowable concentrations over specific periods for the pollutants. The prevailing AQOs of concerned pollutants are shown in Table 3-1.

**Table 3-1 Hong Kong Air Quality Objectives**

Pollutant	Concentration ( $\mu\text{g}/\text{m}^3$ ) Averaging Time <sup>(i)</sup>				
	10 Minutes	1 Hour	24 Hours	3 Months	1 Year <sup>(v)</sup>
Sulphur Dioxide ( $\text{SO}_2$ )	500 <sup>(ii)</sup>	—	125 <sup>(iii)</sup>	—	—
Respirable Suspended Particulates (PM10) <sup>(vi)</sup>	—	—	100 <sup>(iii)</sup>	—	50
Fine Suspended Particulates (PM2.5) <sup>(vii)</sup>	—	—	75 <sup>(iii)</sup>	—	35
Nitrogen Dioxide ( $\text{NO}_2$ )	—	200 <sup>(iv)</sup>	—	—	40

Notes:

- (i) Measured at 293K (20°C) and 101.325 kPa (one atmosphere)
- (ii) Not to be exceeded more than 3 times per year
- (iii) Not to be exceeded more than 9 times per year
- (iv) Not to be exceeded more than 18 times per year
- (v) Arithmetic means
- (vi) PM10 means suspended particulates in air with a nominal aerodynamic diameter of 10 $\mu\text{m}$  or smaller
- (vii) PM2.5 means suspended particulates in air with a nominal aerodynamic diameter of 2.5 $\mu\text{m}$  or smaller

- 3.2.4 Chapter 9 Environment Guidelines of the HKPSG provides a non-statutory guidelines for potential polluting uses specify buffer distances between sources of pollution and sensitive uses. In terms of vehicular emission, buffer distances set in the HKPSG refers to the site nature and the road types of the adjacent roads. However, the specific buffer distance requirement is a guideline for "Open Space Site" instead of "domestic premises". The following buffer distances for active and passive recreational uses are recommended in the HKPSG:

- (i) at least 20m to trunk roads and primary distributors;
- (ii) at least 10m to district distributors; and
- (iii) at least 5m to local distributors.

#### **Ambient Air Quality**

- 3.2.5 EPD's Kwun Tong Air Quality Monitoring Station (AQMS) is the nearest monitoring station to the Site. Existing ambient air quality of the subject site has been made reference to this monitoring station and the relevant PATH-2016 data (updated in December 2015) as provided on EPD's

website. **Table 3-2** summarizes the annual averaged concentrations of key air pollutants due to vehicle emission recorded at Kwun Tong AQMS from 2010 to 2014. The 5-year average of NO<sub>2</sub> annual averaged concentration exceeds the prevailing statutory AQOs at the Kwun Tong AQMS.

**Table 3-2 Annual Average Concentrations of Pollutions from 2010 to 2014 at EPD's Kwun Tong Monitoring Station**

Pollutant	AQO of Annual Averaged Concentration ( $\mu\text{g}/\text{m}^3$ )		Annual Averaged Concentration at Kwun Tong AQMS ( $\mu\text{g}/\text{m}^3$ )					
	Before 2014	Since 2014 <sup>[1]</sup>	2010	2011	2012	2013	2014	5-year Average
Sulphur Dioxide (SO <sub>2</sub> )	80	-	10	12	11	12	11	11.2
Respirable Suspended Particulates (PM10)	55	50	47	49	43	52	<u>51</u>	48.4
Fine Suspended Particulates (PM2.5)	-	35	-	-	28	33	31	30.7 <sup>[2]</sup>
Nitrogen Dioxide (NO <sub>2</sub> )	80	40	59	63	59	59	<u>54</u>	<u>58.8</u>

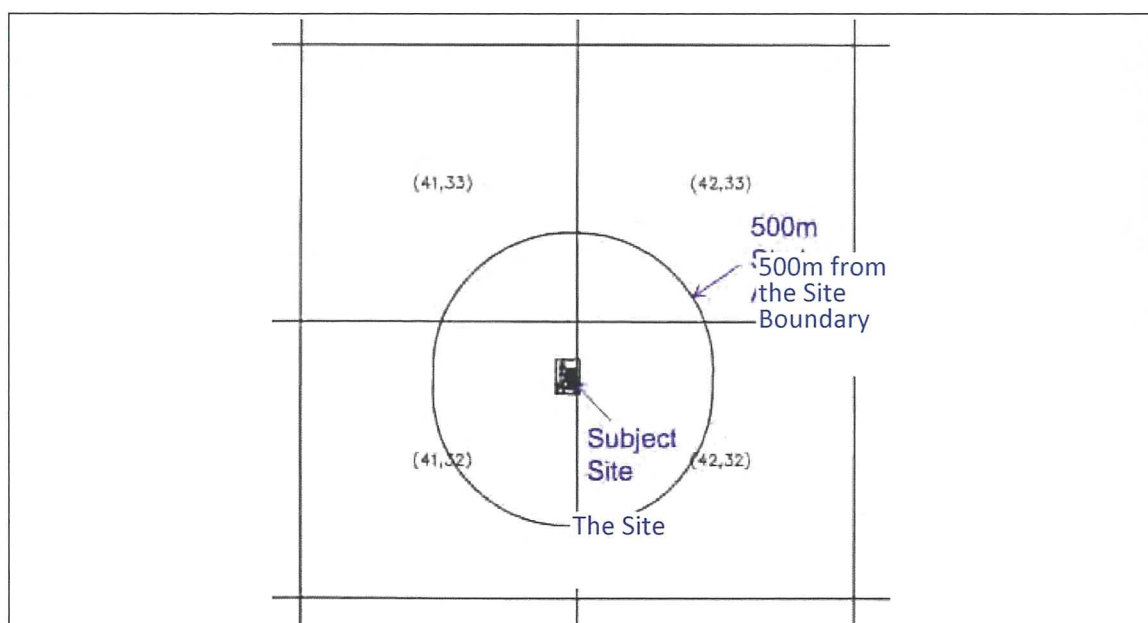
Notes:

Monitoring results exceeded the AQO are underlined.

<sup>[1]</sup> New AQOs is effective from 1 January 2014.

<sup>[2]</sup> Only three years data available for PM2.5.

- 3.2.6 Since the Site is located away from the Kwun Tong AQMS, further review on PATH-2016 data under EPD website has been conducted to investigate the future air quality background concentration at the Site. As shown in **Figure 3-1**, the Site is located at Grids [41,32] and [42,32] while 500m study area are within Grids [41,33] and [42,33].
- 3.2.7 Hourly data of PATH model at Level 1 in Year 2020 has been extracted and averaged annual concentrations at each grid have been summarized in **Table 3-3**. It predicts that annual averaged concentrations of all concerned air pollutants would comply with the statutory AQOs in corresponding grids.



**Figure 3.1 Project Site Location and Corresponding Grids under PATH-2016**

**Table 3-3 Annual Averaged Air Pollutants Concentrations in 2020 from PATH Model**

Pollutants	Annual AQO	Annual Averaged Concentration per Grid, $\mu\text{g}/\text{m}^3$			
		[41,32]	[42,32]	[41,33]	[42,33]
Sulphur Dioxide ( $\text{SO}_2$ )	- <sup>[1]</sup>	9.7	10.2	8.5	8.4
Respirable Suspended Particulates (PM10) <sup>[2]</sup>	50	41.4	41.8	41.7	40.9
Fine Suspended Particulates (PM2.5) <sup>[3]</sup>	35	29.4	29.7	29.6	29.0
Nitrogen Dioxide ( $\text{NO}_2$ )	40	30.0	29.0	31.6	28.4

Notes:

[1] No annual AQO for  $\text{SO}_2$ .

[2] Adjustment has been added to the Annual RSP (PM10) concentration with reference to EPD's "Guidelines on Choice of Models and Model Parameters".

[3] Since PM2.5 data is not available in PATH model results, a recommended PM2.5 to PM10 ratio of 0.71 has been applied for the estimation of annual PM2.5 with reference to EPD's "Guidelines on the Estimation of PM2.5 for Air Quality Assessment in Hong Kong".

### 3.3 Fugitive Dust Emission during Construction Phase

#### *Impact Assessment*

- 3.3.1 At this preliminary stage, detailed information on the construction activities of the Scheme is not yet available. Construction phase air quality impact will be therefore addressed qualitatively.
- 3.3.2 Construction of the proposed development would commence at the fourth quarter of 2020 tentatively, and to be completed by 2025. The potentially most affected ASRs in the vicinity of the proposed development include the adjacent URA Ma Tau Wei development, Fook Wan Mansion, Sung Lai Building, Hang Fung Industrial Building, Conic Investment Building and Hunghom Commercial Centre.
- 3.3.3 During demolition of the existing buildings at the Site, as well as the construction phase of the Scheme, dust emissions generated during construction activities would be the major source of air quality impact. Typically, dust would be generated from scope work, vehicles movement on haul roads, excavation, loading or unloading stockpile material, stockpiling of material and wind erosion of exposed areas.
- 3.3.4 Although the abovementioned ASRs locate in the proximity to the Site, potential construction dust impact could be minimised with implementation of dust suppression measures stipulated in the Air Pollution Control (Construction Dust) Regulation.

#### *Mitigation Measures*

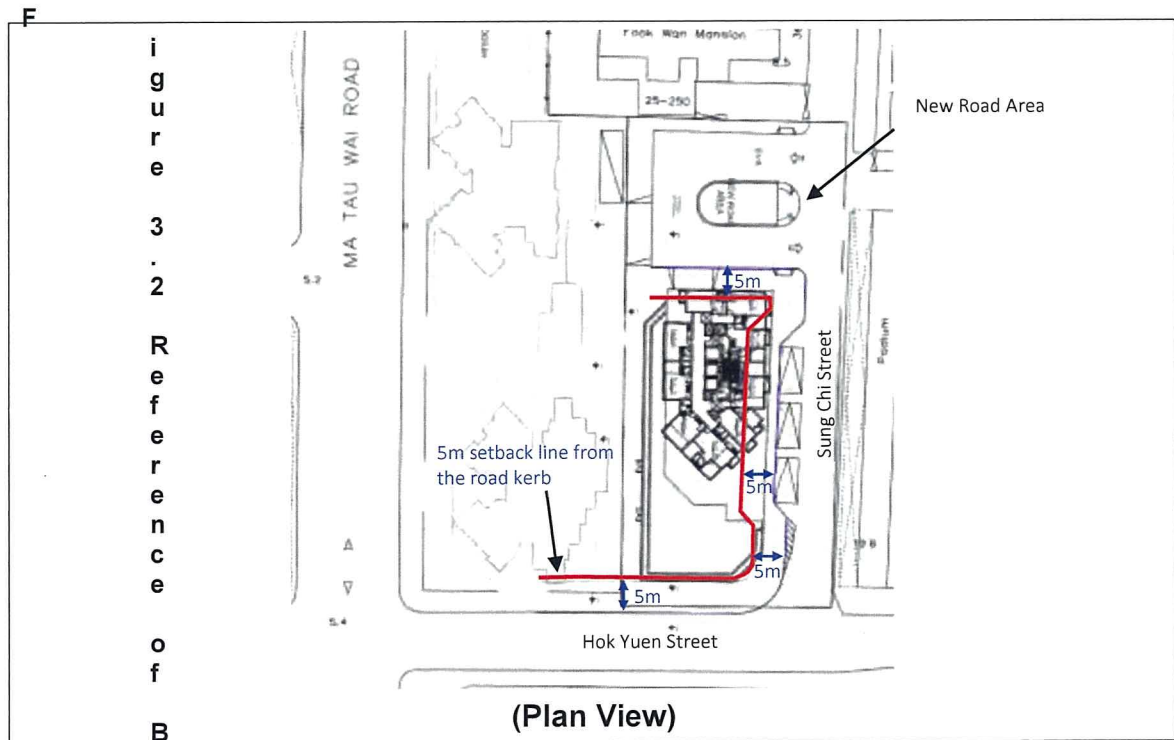
- 3.3.5 To minimise the impact to the surrounding ASRs, dust suppression measures stipulated in the Air Pollution Control (Construction Dust) Regulation should be incorporated to control dust emission from the Site. Major control measures relevant to this project are listed below, and they are recommended to be included in relevant contract documents:
- Restricting heights from which materials are to be dropped, as far as practicable, to minimise the fugitive dust arising from unloading / loading;
  - A vehicle wheel and body washing facility shall be installed at the site exit to remove any dusty materials from wheels before leaving the Site;
  - Where applicable, vehicles arriving / leaving the site loaded with dusty materials shall be covered entirely by clean impervious sheeting to ensure that the dusty materials remain within the vehicles;
  - Water spraying demolition wastes generated to prevent dust generation or covering with tarpaulin sheet;
  - All dusty activities shall be sprayed with water to dampen dust, or otherwise an impermeable barrier shall be established around specific dusty activities;



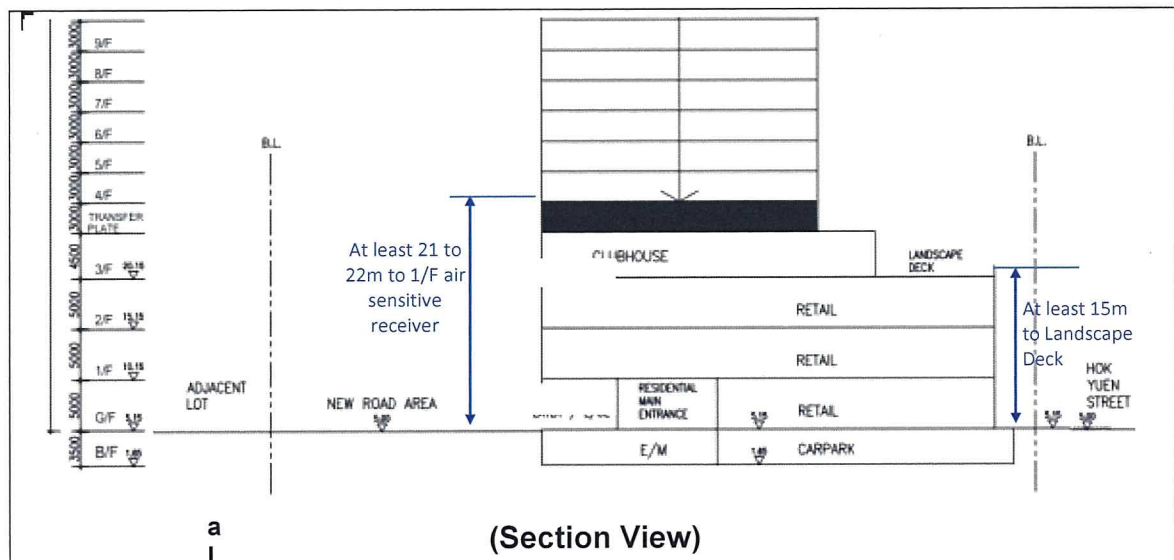
- Works area for site clearance shall be sprayed with water before, during and after the clearance so as to maintain the entire surface wet;
  - Open temporary stockpiles should be avoided. Any stockpile of dusty materials shall be covered entirely by impervious sheeting, and / or placed in an area sheltered on the top and 4 sides;
  - All dusty materials shall be sprayed with water immediately prior to any loading, unloading or transfer operation so as to keep the dusty materials wet; and
  - All spraying of materials and surfaces should avoid excessive water usage.
- 3.3.6 In addition, all PME should be regularly maintained to minimise gaseous emissions. Vehicle engines and plant not in use or idling should be switched off.
- 3.3.7 Wherever possible, prefabrication of materials (e.g. concrete) off-site should be encouraged, if necessary.
- 3.3.8 With the implementation of the dust suppression measures, adverse construction dust impact would not be anticipated.

### 3.4 Vehicular Emission Impact

- 3.4.1 The predicted future background concentration of all concerned air quality parameters in 2020, as shown in **Table 3-3**, would comply with the prevailing AQO. The planned occupation year of the Scheme is in Year 2025 and it is expected that the Scheme would not be subject to adverse air quality impact.
- 3.4.2 At the local level, the Site adjoins Sung Chi Street and Hok Yuen Street, which are classified as local distributors with reference to the Annual Traffic Census 2014 issued by Transport Department (TD). The proposed new vehicular turning area, which is connected from Sung Chi Street, is expected to be classified as local distributor taking consideration of its same usage and nature as Sung Chi Street, as advised by the traffic consultant.
- 3.4.3 As shown in **Figure 2.6** above, the Site is a redevelopment site located within a densely built area. With its elongated shaped, there is large site constraint in the building disposition and layout of the Scheme for fulfilling the requirements in the relevant building ordinance and regulations, including prescribed window requirements under Building Ordinance. Given the narrow width of the Site and the site immediately adjoins to streets on three sides, the proposed residential development in the Scheme inevitably falls within the 5m distance from the adjoining streets, i.e. Sung Chi Street and the new vehicular turning area (**Figure 3.2**). However, since the residential tower will be built on top of a 3-level commercial podium, the first sensitive domestic units will have about 22m vertical distance away from the street level (**Figure 3.3**). In addition, traffic forecast study, with no adverse comment from TD (**Appendix 3.1**), concluded that Sung Chi Street and the new vehicular turning area will have a relatively low traffic flow. In view of the above considerations, it is therefore considered that the domestic units of the proposed development would not be subject to adverse vehicular emission impact.
- 3.4.4 Three loading/unloading bays for light goods vehicles will be provided at the roadside of the widened Sung Chi Street. Since the L/UL bays are only for LGVs with far vertical distance with the residential towers on top of the podium and car idling at the bays are not allowed according to the Motor Vehicle Idling (Fixed Penalty) Ordinance (Cap.611), the provision of L/UL bays shall not induce a major source nor create adverse vehicular emission to the domestic units in the Scheme.



**Buffer Distance Requirement for Vehicular Emission Impact for “Open Space Site” in HKPSG**



**Distance of Sensitive Domestic Units from Street Level**

### **Mitigation Measures**

- 3.4.5 Since only minimal additional vehicular emission would be created in relation to the proposed widening of Sung Chi Street, it is anticipated that the future air quality conditions shall be of similar magnitude as that of the PATH model, and thus no mitigation measures are considered necessary.
- 3.4.6 For fresh air intake of the central air conditioning system of the future retails and club house, it is recommended to allow at least a 5m buffer distance from Sung Chi Street and the new vehicular turning area. Similar buffer distance is also recommended for the future sitting out areas.

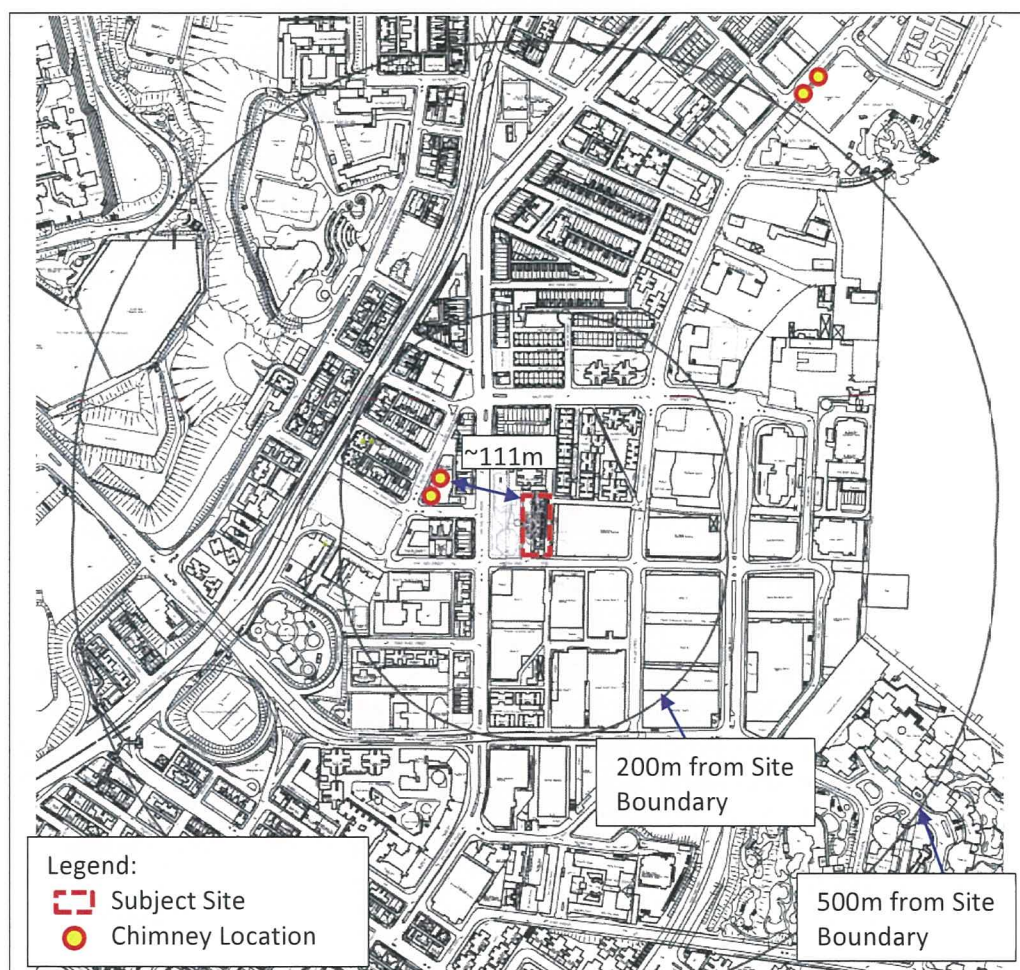
### **3.5 Industrial Emission Impact**

### Desktop Review

- 3.5.1 Desktop review of relevant nearby environmental reports <sup>[1]</sup> identified a number of chimneys in Ma Tau Wai yet they are all outside 500m study boundary of proposed development. According to these environmental reports, the nearest chimneys (KTEIA-2060, KTEIA-2079) are located at about 523m and 561m away from site boundary of proposed development along Yut Yat Street, as shown in **Figure 3.3** below. As such, these chimneys (KTEIA-2060, KTEIA-2079) would not be included in this study.

### Site Visit/Site Observation

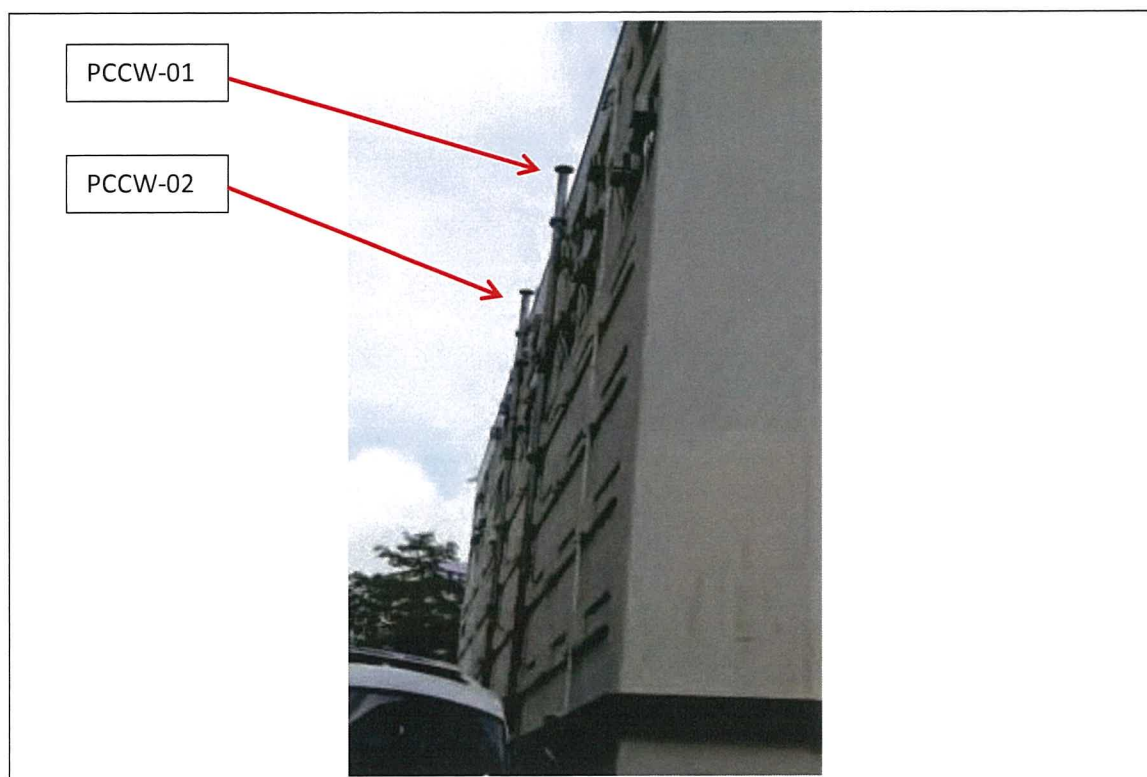
- 3.5.2 Site visits were conducted in September 2015 to identify and investigate any potential environmental polluting industrial sources affecting the proposed residential development within 500m study area from the Project.
- 3.5.3 Within 500m study area from the Site, 2 nos. of chimneys were identified, as indicated in **Figure 3.4** at around 110m from proposed site boundary (PCCW-01 and PCCW-02). The photos of identified chimneys PCCW-01 and PCCW-02 are shown in **Figure 3.5**.



**Figure 3.4 Chimneys Identified near the Project Site**

<sup>[1]</sup> Reference reports with relevant information included the Approved EIA report of Kai Tak Development (EIA-157/2008) and Environmental Assessment for "Proposed Residential Development in "Residential (Group E)" zone, 18 Chi Kiang Street To Kwa Wan" of Planning Study A/K10/237.





**Figure 3.5** Chimney PCCW-01 and PCCW-02

#### ***Impact Evaluation***

- 3.5.4 As shown in **Figure 3.4**, only two chimneys are located within 500m study area and are located at telephone exchange building (PCCW) on Gillies Avenue North. These chimneys are connected to emergency generator room (see **Appendix 3.2**) which are not of industrial use and will not be frequently operated during normal days. Other identified chimneys are also located outside 500m from Site boundary. Hence, quantitative assessment due to industrial emission is considered not necessary. It is also concluded that no adverse industrial emission impact on the Site is anticipated.

#### **3.6 Conclusion**

- 3.6.1 Fugitive dust impacts to the nearby air sensitive receivers due to demolition and construction works are expected to be insignificant with the implementation of dust suppression measures as well as good site practice as stipulated under the Air Pollution Control (Construction Dust) Regulation.
- 3.6.2 Based on the future air quality conditions as predicted in PATH model, local air quality would comply with the statutory AQOs. In addition to the low traffic flow of the local distributors and the vertical separation of the domestic units from the local road, it is anticipated that the Scheme will not be adversely affected by vehicular emission.
- 3.6.3 In view of considerable separation between the non-industrial chimneys and the proposed residential development, no adverse industrial emission impact on the proposed development is anticipated.

## 4 NOISE IMPACT ASSESSMENT

### 4.1 Introduction

- 4.1.1 This section presents an assessment on the noise impact from construction works during construction phase, road traffic and industrial uses during the occupation of the proposed development.

### 4.2 Construction Noise

#### **General**

- 4.2.1 Detailed information on demolition and construction activities of the proposed development has not been available yet at this preliminary stage, the demolition and construction noise impact was addressed qualitatively.

#### **Environmental Legislation and Guidance**

- 4.2.2 Construction works within restricted hours (public holidays and Sundays, and from 19:00 to 07:00 hours on other days) are not anticipated in general and would be controlled under Noise Control Ordinance (CAP 400, NCO) as required.
- 4.2.3 Construction noise for works during non-restricted hours should reference to the assessment criteria stipulated under *ProPECC PN 2/93 "Noise from Construction Activities – Non-statutory Controls"*, where recommended construction noise criteria for dwellings are  $L_{Aeq,30min}$  of 75 dB(A); while that for school are 70 dB(A) and 65dB(A) during normal school days and examination periods respectively.

#### **Impact Assessment**

- 4.2.4 Major construction activities would involve demolition of existing buildings at the Site, as well as construction activities related to site clearance, site formation, excavation, foundation, building and road widening works of Sung Chi Street. The use of PME for the demolition and construction works of the proposed development would likely be the major source of noise impact potentially affecting the NSRs located in the vicinity of the Site.
- 4.2.5 Provided that adequate demolition and construction noise mitigation measures are implemented, together with appropriate construction work programme planning, and avoidance of unnecessary concurrent operation of the noisy PME, it is expected that the construction noise impact would be minimised.

#### **Mitigation Measures**

- 4.2.6 In order to alleviate the potential construction noise impacts on the nearby NSRs, the following mitigation measures are suggested:
- (i) Implementation of good site practices to limit noise emissions at source, and avoid unnecessary concurrent operation of noisy PME;
  - (ii) Use of quieter PMEs and avoid unnecessary PME idling;
  - (iii) Use of quieter alternative construction method; and
  - (iv) Use of noise barriers/enclosure, if appropriate.

#### **Conclusion**

- 4.2.7 Provided that adequate construction noise mitigation measures are implemented, together with appropriate construction work programme planning, and avoidance of unnecessary concurrent operation of the noisy PME, minimised or limited construction noise impact on the nearby NSRs is expected during construction phase.

### 4.3 Operation Phase - Road Traffic Noise Impact

#### *Assessment Criterion*

- 4.3.1 According to the HKPSG, road traffic noise impact has been assessed against the noise limit of  $L_{10}$  (1-hr) 70 dB(A) for domestic premises. The standard applies to the uses which rely on opened windows for ventilation.

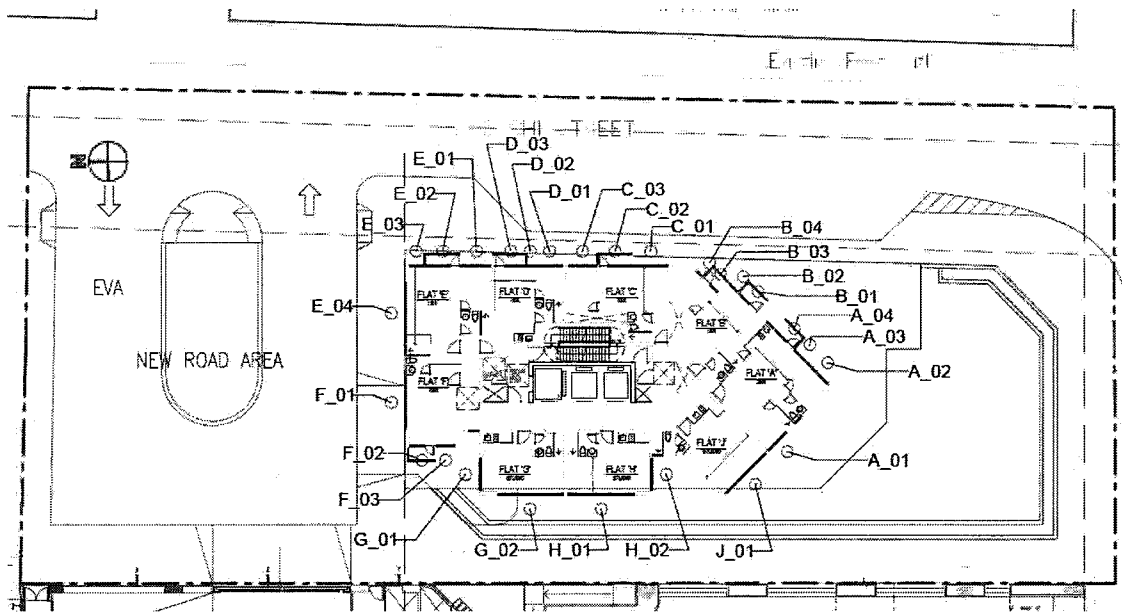
#### *Assessment Methodology*

- 4.3.2 According to the HKPSG, predictions can be readily based on the procedures given in the UK Department of Transport "Calculation of Road Traffic Noise" 1988 (CRTN). For application in Hong Kong, the road traffic noise is represented in terms of  $L_{10}$  (1-hr) dB(A). The predicted noise levels at the building facades include 2.5 dB(A) facade reflection and correction factors for effects due to gradient, distance, view angle, road surface and barriers.
- 4.3.3 For planning purpose, road traffic noise should be predicted based on the maximum traffic forecast within 15 years upon the occupation of the proposed development. In this connection, the assessment is conducted based on the peak hour traffic flow predictions in Year 2040, as the operation of the proposed development would be commenced in Year 2025 tentatively. The assessed scenario has considered the widened section of Sung Chi Street. Traffic flows and heavy vehicle percentages are given in **Appendix 4.1**, provided by the project traffic consultant. Letter of no comment from TD on the Year 2040 traffic forecast is presented in **Appendix 3.1**. For conservative assessment purpose, no low noise road surface was assumed in the calculation.
- 4.3.4 To evaluate the initial traffic noise prediction of the development, an indicative traffic noise prediction has been conducted by employing commercial computer software. The computer plot of the road scheme is shown in **Appendix 4.3**.

#### *Impact Assessment*

- 4.3.5 Preliminary traffic noise study evaluated that the predicted traffic noise levels at the proposed development during peak hours of Year 2040 would range from 57 dB(A) to 69 dB(A). Based on the notional design in the Scheme, a preliminary road traffic noise assessment is carried out and the assessment points of the notional design are shown in **Figure 4.1**; while predicted road traffic noise levels at each assessment point are presented in **Appendix 4.4**.
- 4.3.6 In addition, considering that only minimal traffic flow would be generated on the New Road Area and the proposed widening of Sung Chi Street (**Appendix 3.1**), traffic noise impact generated from the New Road Area and the widened Sung Chi Street on the surrounding noise sensitive receivers (NSRs) is anticipated to be insignificant, while the traffic noise climate shall be prevailed by the existing adjacent road network.
- 4.3.7 Based on the current notional layout and its noise modelling results as shown in **Appendix 4.4**, all proposed residential units in this layout would comply with the assessment criterion.





**Figure 4.1** Assessment Points for Road Traffic Noise Assessment based on the notional layout of the Scheme

### Conclusion

- 4.3.8 Based on the current notional design of the Scheme, 100% of the proposed residential units (i.e. 306 units) of the development would comply with the 70 dB(A) assessment criteria.
- 4.3.9 Although the study is based on a notional layout in the Scheme, which will be subject to detailed design and changes, it is anticipated that the proposed development in the Scheme will not face adverse traffic noise impact in view of road traffic noise level of the surrounding context.

## 4.4 Fixed Plant Noise Impact

### Environmental Legislation and Guidance

- 4.4.1 Fixed plant noise impact is controlled under Noise Control Ordinance (NCO). In accordance with the Technical Memorandum for the Assessment of Noise from Places other than Domestic Premises, Public Places or Construction Sites (IND-TM), the Area Sensitivity Rating (ASR) of the Site is considered as "B" as the Site is located in urban area and is not affected by the Influencing Factor. The Acceptable Noise Levels (ANLs) therefore refer to be  $L_{eq(30min)}$  65 dB(A) for daytime / evening (from 07:00 to 23:00) and 55 dB(A) for night-time (from 23:00 to 07:00) respectively. The determined ASR is for assessment purpose only and should not prejudice the Authority's discretion on the enforcement based on the contemporary conditions.

### Site Observation

- 4.4.2 As observed during site inspection at the roof of the Hang Fung Industrial Building (HFIB), fixed plant noise sources located in the vicinity of the Site include cooling towers which are located mainly at PCCW Telephone Exchange (PCCW), Cheerful Commercial Building (CCB) and Conic Investment Building (CIB) along Hok Yuen Street and Sung Chi Street. Photos and the locations of the fixed plant noise sources are presented in **Appendix 4.5**. The fixed plant noise sources observed during the site survey are summarized in **Table 4-1**.

**Table 4-1 Potential Fixed Plant Noise Sources near the Site**

Building	Source Type	Source ID
PCCW Telephone Exchange Building (PCCW)	Three Cooling Towers on roof floor of PCCW	PCCW_01 to PCCW_03
Cheerful Commercial Building (CCB)	A cooling tower on podium of CCB	CCB_CT_01
Conic Investment Building (CIB)	Two Cooling Towers on 4/F Podium and one at the roof of CIB	CIB_CT_01 to 02, CIB_CT_03

- 4.4.3 There are also fixed plant noise sources located on the roof of the Hung Hom Commercial Centre (HHCC). However, permission was not granted by the management office of HHCC to access the roof level for site survey and noise measurement. Fixed plant noise sources at HHCC was then identified based on aerial photo and the information available from public domain (**Appendix 4.6** refers). The identified fixed plant noise sources located at the rooftop of HHCC are summarized in **Table 4-2**. Fixed plant noise was not noticeable at the roof of the HFIB during the daytime site visit due to noise climate masked by traffic noise from Ma Tau Wai Road and Hok Yuen Street.

**Table 4-2 Fixed Plant Noise Sources at the rooftop of HHCC**

Building	Source Type	Source ID
HHCC Tower A	7 cooling towers	HHCCA_01 to HHCCA_07
HHCC Tower B	6 cooling towers	HHCCB_01 to HHCCB_06

**Impact Assessment**PCCW telephone exchange

- 4.4.4 Based on the information provided by HKT Limited, as shown in **Appendix 4.7**, three sets of cooling towers (model: FWS- 127-7.5) are installed on the rooftop of Hung Hom Telephone Exchange building. The specification indicated that noise level measured at 16 m from the plant's louver is 55 dB(A). As the separation between the cooling towers and the proposed development would be over 106 m, the project noise level at 1 m façade of future development would be 42 dB(A) (i.e.  $(55 - 20 \log (105/16) + 3)$  dB(A)). The total fixed plant noise resulted from operation of 3 cooling towers would be 47 dB(A) (i.e.  $42 + 10 \times \log (3)$  dB(A)).

Cheerful Commercial Building (CCB)

- 4.4.5 As shown in **Appendix 4.5**, the cooling tower (ID CCB\_CT\_01) located at the podium of the CCB would be totally screened by the future residential tower of the MTW Project. As the target completion year of the MTW Project is 2019 which is about 6 years ahead of the proposed development, the fixed impact noise impact from the cooling tower at CCB to future development is considered insignificant.

Conic Investment Building (CIB) and Hunghom Commercial Centre (HHCC)

- 4.4.6 Noise monitoring was carried out at the rooftop of Hang Fung Industrial Building (HFIB), which is of similar height as the rooftop of CIB and HHCC and located immediately to the west of Site, to measure the noise level associated with the operation of the fixed plant items at CIB and HHCC. Only minor noise sources (e.g. split-type AC units) were found on the rooftop of HFIB and the noise contribution from these sources to the measurement results is expected to be minimal. The monitoring location is shown in **Appendix 4.8**. Considering the HFIB is located immediately to the west of Site, it is anticipated that HFIB and proposed development will share a similar noise environment.
- 4.4.7 As discussed in Section 4.4.4, fixed plant noise from the CIB and HHCC was not noticeable during daytime visit due to the noise climate being masked by nearby traffic noise. Therefore further site visit was conducted on 7 Jul 2016 during evening period in order to minimize the influence of the traffic noise from Ma Tau Wai Road and Hok Yuen Street. Fixed plant noise from CIB and HHCC was marginally audible at the southwest corner of the rooftop of HFIB (i.e. the measurement point) during the noise measurement period while the road traffic noise was still dominate the noise climate. A total of six sets of 5 minutes A-weighted equivalent continuous noise level ( $L_{Aeq}$ ) were measured and the measurement result is summarized in **Table 4-3**.

**Table 4-3 Measured Noise Levels at the southwest corner of the rooftop of HFIB**

Measurement Time	Measured Noise Levels, $L_{Aeq}$ (5min), dB(A) (Free-Field)
2021 to 2026 hours	63.0
2026 to 2031 hours	62.7
2031 to 2036 hours	61.2
2036 to 2041 hours	62.6
2041 to 2046 hours	62.2
2046 to 2051 hours	61.6
$L_{Aeq}$ (30 min)	<b>62.3</b>

- 4.4.8 Based on the noise measurement point and the nearest façade of the proposed development locating at about 30m and 45m from the fixed plant items at CIB and HHCC respectively, the predicted fixed plant noise level at 1 m from the nearest sensitive façade of the proposed development would be 62 dB(A) (i.e.  $(62 - 20 \times \log (44/30) + 3)$  dB(A)), complying with the ANL set out in the IND-TM (i.e. 65 dB(A) for daytime and evening (0700 to 2300 hours)) for ASR B.
- 4.4.9 A night time site survey (2330 to 0030 hours) was conducted on 2 Mar 2016 (weekday) to investigate the night time operating situation with respect to the identified fixed plant noise sources



at the surroundings. It was observed during site inspections that surrounding industrial/commercial buildings were closed. Details of site observations and findings are provided in **Appendix 4.9**.

- 4.4.10 Additional night time site survey (0030 to 0100 hours) was also conducted on 8 July 2016 (weekday) at the rooftop of HFIB in order to investigate the night-time noise climate associated with any operation of fixed plant noise sources at the rooftop of CIB and HHCC. Site survey revealed that the fixed plant noise from CIB and HHCC was inaudible at the same measurement location on HFIB as conducted during evening period, in addition to the CIB and HHCC were found closed with light off indicating no night time operation at CIB and HHCC. Therefore, based on the information provided by HKT Limited, only three cooling towers at the rooftop of Hung Hom Telephone Exchange building was in operation during night-time and the cumulative fixed plant noise impact is found to be 47 dB(A) which comply with the ANL set out in the IND-TM (i.e. 55 dB(A) for night-time) for ASR B. No adverse fixed plant noise impact is anticipated at the proposed development during night time.

***Fixed plant source from the Project***

- 4.4.11 According to the notional design, electrical and mechanical (E&M) equipment such as water pumps, fan room and air handling units are expected to be provided within plant rooms where located at the basement floor of the future development. With the provision of enclosed plant rooms, as well as the adoption of acoustic silencers or acoustic louvers at the ventilation intake/outlet where necessary, potential fixed plant noise from future E&M equipment is not expected to be a concern. In accordance with Table 4.1 of chapter 9 of HKPSG, the fixed plant noise emission should be controlled to comply with the ANL-5 dB or the prevailing background noise levels measured at 1m from the facades of the nearby NSRs. Such requirements will be included in the contract specifications for the procurement and installation of fixed plant equipment during project construction stage.

***Conclusion***

- 4.4.12 Existing fixed plant noise sources in the vicinity of the Site have been identified. For daytime and evening period, the background noise is dominated by the road traffic on the adjacent road network. Noise measurement was carried out at the rooftop of HFIB to investigate the existing fixed plant noise impact associated with the noise sources located at CIB and HFIB, which are located closest to the proposed development. It is estimated that the cumulative fixed plant noise levels at the proposed development would be 62 dB(A) (i.e. 62 dB(A) + 47 dB(A)) which comply with the stipulated daytime noise criterion.
- 4.4.13 During night-time period, the fixed plant noise from the noise sources located at rooftop of CIB and HHCC was inaudible at the rooftop of the HFIB. As the surrounding industrial buildings and commercial buildings including CIB and HHCC were closed, the only fixed plant sources operating in the vicinity during night-time are the three cooling towers at the rooftop of Hung Hom Telephone Exchange building. The predicted night-time fixed plant noise level at 1m from the sensitive façade of the proposed development is 47 dB(A), complying the stipulated night-time noise limit of 55dB(A) for ASR B. No adverse fixed plant noise impact on the proposed development is anticipated during daytime and night-time periods.
- 4.4.14 The fixed plant sources from the Project will be located at the basement floor of the future development. With the provision of enclosed plant rooms, as well as the adoption of acoustic silencers or acoustic louvers at the ventilation intake/outlet where necessary, potential fixed plant noise from future fixed plant items is not expected to be a concern.

## 5 WASTE MANAGEMENT

### 5.1 Legislation and Requirement

- 5.1.1 In general, sustainable approaches to waste management should be adopted to produce less waste and reuse or recover value from waste.
- 5.1.2 Waste collection and disposal is covered by the Waste Disposal Ordinance (Cap. 354) (WDO). This provides a licensing system for the disposal of certain wastes and for the control of certain wastes by regulation. All wastes should be properly stored and disposed in accordance with relevant waste management regulations and guidelines.

### 5.2 Construction Phase

#### *Waste Types*

- 5.2.1 The demolition and construction activities to be carried out for the proposed development would generate a variety of waste that can be divided into distinct categories based on their composition and ultimate method of disposal. The identified waste types include:
- Construction and demolition (C&D) materials, comprising inert and non-inert materials, from the demolition and construction works;
  - Chemical waste from any maintenance of construction plant and equipment; and
  - General refuse from the workforce.

#### *Inert and non-inert C&D Materials*

- 5.2.2 Inert C&D Materials includes construction debris, soil, rock and concrete, should be re-used on-site as filling materials or off-site as public fill at public fills reception facilities. C&D Waste (non-inert C&D material) includes metal from the existing structures, wood from formwork, equipment parts, and materials and equipment wrappings, etc. should be re-used or recycled as far as possible. C&D Waste is not suitable for public fill and requires disposal to licensed landfill facilities. It is recommended that different types of wastes should be segregated, stored, transported and disposed of separately in accordance with EPD's required procedure.
- 5.2.3 As the Scheme involves demolition of existing buildings and construction of one floor of basement, there will be generation of inert C&D materials during construction. It is estimated that about 7,400m<sup>3</sup> excavated materials would be generated and about 1,200m<sup>3</sup> would be suitable for backfilling during site formation stage. It is also estimated that about 8,000 m<sup>3</sup> C&D materials will be generated during the demolition work.
- 5.2.4 To account the quantity of C&D materials to be generated from construction of the new building, C&D materials generation rate of 0.1m<sup>3</sup> per m<sup>2</sup> of GFA constructed is adopted in accordance with the "Reduction of Construction Waste Final Report, Hong Kong Polytechnic University (March 1993)". The total GFA of the proposed future development from the Project will be approximately 14,724m<sup>2</sup>. The C&D materials will be generated from superstructure construction is approximately 1,472 m<sup>3</sup>. The volume of C&D materials from building construction is relatively small and not expected to induce adverse waste management issue.
- 5.2.5 The volume of C&D Waste, such as maintenance and packaging waste being generated by the Project will be subject to specific construction procedures and site practices. The estimated amount of C&D wastes generated during site clearance and construction of superstructure works would be minimal with careful design, planning, good site management and control of ordering procedures etc.
- 5.2.6 The estimated quantities of inert and non-inert C&D material generated from the construction of the Project are presented in **Table 5-1**.

**Table 5-1 Estimated Quantities of C&D materials to be Generated, Reused and Disposed of**

Construction Activities	C&D material (m <sup>3</sup> )	C&D material to be Reused On-site (m <sup>3</sup> )	C&D material to be disposed of (m <sup>3</sup> )	
			Inert	Non-inert
Excavation	7,400	1,200	6,200	-
Demolition of existing buildings	2620	-	2,360	260
Superstructure construction	1,472	-	1,325 <sup>(a)</sup>	147 <sup>(a)</sup>

**Note:**

(a) Approximately ratio for (inert waste) : (non-inert waste) is 9:1 according to "Monitoring of Solid Waste in Hong Kong, 2014" by EPD

- 5.2.7 Detailed design of the foundation works and building construction is not yet available at this stage. A preliminary estimation of the amount of inert C&D materials arising from the Scheme should be reviewed in the Environmental Management Plan (EMP) and should be submitted by the Contractor prior to the commencement of construction works.

Marine Sediment

- 5.2.8 According to the information collected from the adjoining MTW Road Project which is also an URA project, no marine deposit was found during the excavation works at MTW Road project site. Considering the Project Site is located immediately next to the MTW Road project site, excavation of marine sediment is not anticipated.

Chemical Waste

- 5.2.9 Chemical waste, such as spent lubricants for equipment or waste battery, may be generated. As far as the scale of the works is small, the quantity of chemical waste generated would be minimal. It is expected that the approximate quantity of the lubrication oil is about 500L/month and hence approximately 24m<sup>3</sup> of chemical waste will be generated during construction period of 48 months. A licensed collector should be employed to handle and dispose of the chemical waste. Furthermore, the chemical waste should be handled in accordance with the Code of Practice on the Packaging, Labelling and Storage of Chemical Waste. The Works Contractor should register as a Chemical Waste Producer under the WDO.
- 5.2.10 Since the existing structures were built in 1950s, asbestos containing materials may be present at the existing structures which would be demolished. Asbestos investigation would be carried out before the commencement of demolition works. Asbestos investigation and asbestos abatement plan will be made in accordance with the relevant statutory requirements if any asbestos is found in the Site. In addition, other chemical waste, if any, to be generated during the demolition works will be handled and disposed of in accordance with the Code of Practice on the Packaging, Handling and Storage of Chemical Waste. For asbestos wastes, if any, will be handled and disposed of in accordance with the Code of Practice on the Handling, Transportation and Disposal of Asbestos Wastes. With the implementation of proper waste management measures, no adverse environmental impacts are expected.
- 5.2.11 No hazardous materials or hazardous wastes are expected to be generated during the construction of the Site.

General Refuse

- 5.2.12 General refuse such as food scraps, waste paper, empty containers, etc would be generated from construction workforce during construction phase. Such refuse should be properly managed so intentional or accidental release to the surrounding environment does not occur. Effective collection of site wastes would be required to prevent waste materials being blown around by wind, flushed or leached into nearby waters, or creating an odour nuisance or pest and vermin problem. Waste storage areas should be well maintained and cleaned regularly.
- 5.2.13 With the implementation of good waste management practices at the site, adverse environmental impacts are not expected to arise from the storage, handling and transportation of general refuse generated by construction workers.
- 5.2.14 A tentative estimated timing of waste arising from construction phase is shown in **Table 5-2**.



**Table 5-2 Tentative Estimated Timing of Waste Arising from Construction Phase**

Type of Waste	Timing
C&D Material	2 <sup>th</sup> Quarter 2021 to 4 <sup>th</sup> Quarter 2024
C&D Waste	2 <sup>th</sup> Quarter 2021 to 4 <sup>th</sup> Quarter 2024
Chemical Waste	2 <sup>th</sup> Quarter 2021 to 2 <sup>th</sup> Quarter 2025
General Refuse	(Entire construction phase)

**Mitigation Measures**

- 5.2.15 Prior to the commencement of the construction works, the constructor will identify the types and amount of waste generated and its associated mitigation measures according to the requirements as stipulated in ETWB TCW No. 19/2005.
- 5.2.16 The Contractor should adopt good housekeeping practices such as waste segregation prior to disposal. Stockpiling and segregating areas should be provided at site. Effective collection of site wastes would be required to prevent waste materials being blown around by wind, flushed or leached into nearby waters, or creating an odour nuisance or pest and vermin problems. Waste storage areas should be well maintained and cleaned regularly.
- 5.2.17 Whenever there are excess recyclable construction materials, including bricks, plastics and metals, re-use and recycling should be carried out as far as practicable for waste minimisation. Other inert non-recyclable materials such as concrete, asphalt, etc. should be treated as public fill. Non-inert and non-recyclable wastes should be disposed at designated landfill site.
- 5.2.18 General refuse should be stored in enclosed bins or compaction units separate from C&D materials. A reputable waste collector should be employed by the Contractor to remove general refuse from the Site, separately from C&D materials. Preferably an enclosed and covered area should be provided to reduce the occurrence of "wind-blown" light materials.
- 5.2.19 Provided that good site practices are strictly followed, there would be no adverse impacts related to waste management during construction phase.

**5.3 Waste Management Implications**

- 5.3.1 Domestic wastes will be expected as the major type of waste from the redevelopment, including food residues, plastic and metal products, and paper. No chemical or hazardous waste is anticipated. Wastes generated will be collected and disposed of on a regular basis. Wastes generated from the Site will also include recyclable wastes such as paper, plastics and metals. Reuse and recycling of such wastes is encouraged in line with Government policy in view of clear environmental benefits. The volumes of wastes likely to be generated by the proposed development are considered to be insignificant.
- 5.3.2 Domestic waste that cannot be reused or recycled is disposed of as general refuse. It is proposed to be taken to the collection point near the Site, however, where necessary appropriately licensed and respectable waste collectors should be employed to collect the various waste types generated at the development. With strict implementation of good site practices, good management and controls to reduce the generation of waste amounts, adverse impacts due to waste management will not be anticipated.
- 5.3.3 Provided that all recommended measures and legislations are strictly followed, there would be no adverse impacts related to waste management during operation phase.

**5.4 Conclusions**

- 5.4.1 A variety of wastes including inert C&D material, C&D waste, chemical waste and general refuse would be generated during the construction phase and domestic waste during occupation phase. Provided that the wastes generated would be managed with appropriate measures, no adverse adverse environmental impacts arising from the handling, storage, transportation or disposal of the wastes generated during the occupation of the Scheme would be envisaged.

## 6 LAND CONTAMINATION

### 6.1 General

- 6.1.1 This section presents the potential land contamination issues within the Site. The purpose of this preliminary contamination assessment is to identify any need for detailed land contamination assessment to avoid any exposures of risk due to land contamination on the future occupants of the Site.

### 6.2 Environmental Legislation, Standards and Criteria

- 6.2.1 The relevant environmental legislation guidelines and standards related to land contamination aspect include the followings:
- Practice Guide for Investigation and Remediation of Contaminated Land, August 2011 (Practice Guide);
  - Guidance Note for Contamination Land Assessment and Remediation, August 2007 (Guidance Note); and
  - Guidance Manual for Use of Risk-Based Remediation Goals (RBRGs) for Contaminated Land Management, December 2007 (Guidance Manual).

### 6.3 Preliminary Review

#### *Site History*

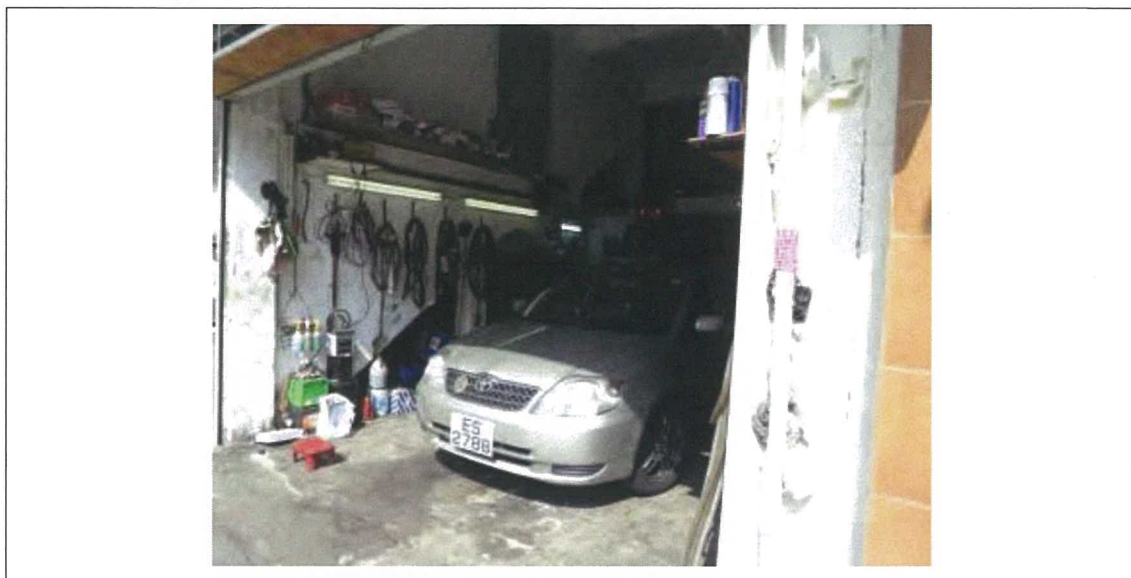
- 6.3.1 A preliminary review of historical aerial photos has been carried out for Year 1945, 1959 and 2015 as shown in **Appendix 6.1**. Referring to aerial photo taken in Year 1945, the Project Site was bare land without settlements, hence the potential land contamination due to land use prior to the Year 1945 is not anticipated. Based on the information published by URA, the existing buildings within the Project Site were established from Year 1955 to 1957. It is observed that the buildings and settlements had been established within the Project Site at that period and no change in land use was recognized on the Project Site since then. Summary of site history is presented in **Table 6-1**.

**Table 6-1 Summary of Site History**

Year	Site Description
1945	The Site was observed to be bare land with no buildings and settlements (Note: Based on aerial photo taken in Year 1945)
1955 - 1957	Existing buildings within the Project Site established (Note: Based on the information in a published document from URA ( <a href="http://www.ura.org.hk/media/3560007/for_public_inspection_e_final_20160519.pdf">http://www.ura.org.hk/media/3560007/for_public_inspection_e_final_20160519.pdf</a> ))
1959	The Site was observed to be occupied with buildings and settlements (Note: Based on aerial photo taken in Year 1959)
1955 – present	No significant changes in land uses (Note: The existing building was being occupied for more than 60 years and there is no change in land use (residential building) in this period)

**Preliminary Site Walkover**

- 6.3.2 Preliminary site walkover was conducted in late 2015 to identify potential contamination within the Site. Site walkover photos have been depicted in **Appendix 6.2**.
- 6.3.3 Due to inaccessible to the existing tenants, detailed site appraisal could not be conducted for land contamination assessment during the preparation of this EA. It is therefore recommended to carry out a detailed land contamination assessment (LCA) after the Site is made accessible to URA.
- 6.3.4 Based on the existing tenants of the Site as presented in **Appendix 6.3** and observations of preliminary site walkover, the motor vehicle workshop at No.18 Chun Tin Street as shown in **Figure 6.1** was identified as a potential land contaminated area. Further supplementary site appraisal is suggested when the Site is available to access.



**Figure 6.1 Identified Potential Contaminated Area during the Site Walkover**

**6.4 Summary and Conclusion**

- 6.4.1 Based on the preliminary review of the historical land use of the Site and the observations of site walkover, a potential land contamination issue arising from the operation of motor vehicle workshop at No. 18 Chun Tin Street is anticipated. However, it is currently inaccessible to the existing tenants, and thus a detailed site appraisal together with LCA covering the whole Project Site should be conducted after it is accessible.
- 6.4.2 The LCA will be carried out in accordance with relevant guidelines including "Guidance Note for Contaminated Land Assessment and Remediation" (Guidance Note), "The Practice Guide for Investigation and Remediation of Contaminated Land" (Practice Guide), and "Guidance Manual for Use of Risk-based Remediation Goals for Contaminated Land Management" (Guidance Manual). The LCA will assess if there is any land contamination. If affirmative, a Contamination Assessment Plan (CAP) will be carried out to identify and propose appropriate land remediation if needed in accordance with relevant prevailing guidelines will be carried out.



**7 SEWAGE IMPACT ASSESSMENT**

- 7.1.1 Proper collection and treatment of sewage is a basic sanitation requirement to safeguard public health and environmental hygiene. Sewage disposal is therefore a major factor influencing water quality.
- 7.1.2 The aim of the Sewage Impact Assessment (SIA) is to assess potential impacts on the existing sewerage system that may arise from the proposed development of the Scheme and, if necessary, to recommend a scheme and improvement or upgrading works to alleviate the impacts that may be required on the existing sewerage network to the satisfaction of EPD and Drainage Services Department (DSD).
- 7.1.3 Detailed discussion on sewerage connection is provided in the separated "Sewerage Impact Assessment" Report.

## **8 CONCLUSION**

### **8.1 Introduction**

- 8.1.1 In order to evaluate the potential environmental impact / benefit associated with the prevailing situation, against the proposed Scheme, this EA has been undertaken with reference to the relevant environmental related ordinances and regulations, as well as the guidance for environmental considerations provided in Chapter 9 "Environment" of the HKPSG.
- 8.1.2 This EA presents a qualitative study of the potential environmental impacts, including air quality, noise, waste management and land contamination. Sewage impact assessment is presented separately from this EA report.
- 8.1.3 Key findings of this study are summarised in the following paragraphs.

### **8.2 Air Quality**

- 8.2.1 During construction phase, adverse air quality impacts on the ASRs in the vicinity is not anticipated provided that mitigation measures stipulated in the Air Pollution Control (Construction Dust) Regulation are followed.
- 8.2.2 Based on the ambient air quality statistics, the predicted future background concentration of concerned parameters in Year 2025 (i.e. the planned occupation year of the Scheme) would comply with the AQOs. In the local level, no adverse air quality impact on the Scheme is also expected considering that the redevelopment nature is similar to the prevailing condition and the Scheme adopts commercial podium creating adequate separation of about 20m between the sensitive floor and street level. Besides, the surrounding streets of the Scheme are only local distributors which will have relatively low traffic flow, and thus it is anticipated that the vehicular emission from these street is insignificant.
- 8.2.3 Industrial chimneys are located more than 500m from the Site and only two non-industrial use chimneys within the study boundary. With no industrial chimneys within 200m from the Site, no adverse industrial emission impact on the proposed development is anticipated.

### **8.3 Noise**

- 8.3.1 Provided that adequate construction noise mitigation measures are implemented, together with appropriate construction work programme planning, and avoidance of unnecessary concurrent operation of the noisy PME, construction noise impacts on the nearby NSRs can be controlled and minimised.
- 8.3.2 Based on the notional design of the Scheme, it is estimated to meet 100% compliance rate with the highest predicted road traffic noise level up to 69 dB(A), complying with the noise criterion of 70dB(A). It is anticipated that the Scheme would not face adverse traffic noise impact.
- 8.3.3 Existing fixed plant noise sources in the vicinity of the Site have been identified. For daytime and evening, the background noise is dominated by the road traffic on the adjacent road network. The cumulative fixed plant noise levels at the proposed development was found to be 62 dB(A) which comply with the stipulated daytime noise criterion for ASR B.
- 8.3.4 During night-time period, the fixed plant noise from the noise sources located at rooftop of CIB and HHCC was inaudible at the rooftop of the HFIB. As the surrounding industrial buildings and commercial buildings including CIB and HHCC were closed, the only fixed plant items to be operated during night-time are the three cooling towers at the rooftop of Hung Hom Telephone Exchange building. The cumulative noise impact of 47 dB(A) at 1m façade of the proposed development which comply with the ANL set out in the IND-TM (i.e. 55 dB(A) for night-time) for ASR B. No adverse fixed plant noise impact on the proposed development is anticipated.
- 8.3.5 The fixed plant sources from the Project will be located at the basement floor of the future development. With the provision of enclosed plant rooms, as well as the adoption of acoustic silencers or acoustic louvers at the ventilation intake/outlet where necessary, potential fixed plant noise from future fixed plant items is not expected to be a concern.

### **8.4 Waste Management**

- 8.4.1 With the implementation of proper handling and storage of wastes generated during the occupation of the Scheme, no adverse environmental impacts arising from the handling, storage, transportation or disposal of the wastes generated during the construction and occupation phase of the Scheme is envisaged.

## **8.5 Land Contamination**

- 8.5.1 Upon the preliminary review of the historical land use of the Site, as well as the observations of site walkover, a potential land contamination issue arising from the operation of motor vehicle workshop at No. 18 Chun Tin Street is anticipated. Further supplementary site appraisal is suggested when this area is accessible to URA and a LCA to be carried out in accordance to relevant guidelines.



**8.6 Sewage Impact**

- 8.6.1 The individual SIA report is provided separately to address the potential sewage impact and necessary mitigation measures as needed.

**8.7 Summary**

- 8.7.1 The Scheme is aimed to bring about better planning gain and overall improvement in building environment in Chun Tin Street / Sung Chi Street. Based on the assessment findings, the Scheme is considered to be environmentally acceptable and feasible, as well as beneficial to the prevailing situation.

## APPENDICES

**Appendix 3.1**  
Letter of No Comment from Transport Department on the  
Traffic Forecast



By Fax  
2528 6343



運輸署

Transport Department

**CONFIDENTIAL**

本署檔案 Our Ref. : TD KR 182/111-1C  
來函檔號 Your Ref. : J6473/2  
電話 Tel. : 2399 2504  
圖文傳真 Fax : 2397 8046  
電郵 Email : joycewlee@td.gov.hk

25 February 2016

CKM Asia Limited  
21st Floor, Methodist House  
36 Hennessy Road  
Wanchai  
Hong Kong  
(Attn: Mr. Chin Kim Meng)

Dear Mr. Chin,

**URA Chun Tin Street/Sung Chi Street Development Scheme (KC-008A)**  
**Traffic Forecast for Environmental Assessment**

I refer to your letter of the above reference dated 23 February 2016. I have no adverse comment on the methodology adopted for estimating year 2040 traffic data for Environmental Impact Assessment.

Yours faithfully,

(Joyce W. C. LEE)  
for Commissioner for Transport

市區(九龍)及新界分區辦事處  
Urban (Kln.) & NT Regional Office  
九龍聯運街三十號旺角政府合署七樓及八樓  
7th & 8th Floors, Mong Kok Government Offices, 30 Luen Wan Street, Kowloon.  
圖文傳真 Fax No.: 2381 3799 (新界區) (NTRO) 2397 8046 (九龍市區) (U(K)RO)  
網址 Web Site: <http://www.td.gov.hk>

**Appendix 3.2**  
Letter from PCCW for Identified Chimneys



SWA536057

**HKT** Here To Serve

Mr. Rodney Ip  
AECOM Consulting Service Ltd.  
8/F, Grand Central Plaza Tower 2,  
138 Shatin Rural Committee Road,  
Shatin, Hong Kong

Your ref: 40033291/449445  
Our ref: FM/L0085/16/CT  
Our tel: 2883 3577  
Our fax: 2304 6314

February 12, 2016

AECOM Received  
16 FEB 2016

Dear Mr. Ip,

**Request of Information – Hung Hom Exchange**

Thank you for your letter of January 27, 2016 regarding the exhaust stacks and mechanical ventilation and air conditioning equipment at the exchange building at 140 Gillies Avenue.

We are pleased to provide you with the following information.

1. The 2 exhaust stacks are the exhaust chimneys of standby generators of the exchange which will be used in the event of city main power outages.
2. The 3 sets of cooling towers are part of the air conditioning system and they are operated continuously. Please refer to the attached product specification with sound power level for reference.

HKT is committed to protecting the environment when we conduct our business. In October 2015, we installed air hoods for the cooling towers and variable speed control for the air fans to further bring down noise levels. Photos of the air hoods are attached for your reference.

Should you have any queries, please do not hesitate to contact us.

Yours faithfully,

Chris T.K. Ting  
General Manager, Operations  
Facilities Management  
HKT Limited

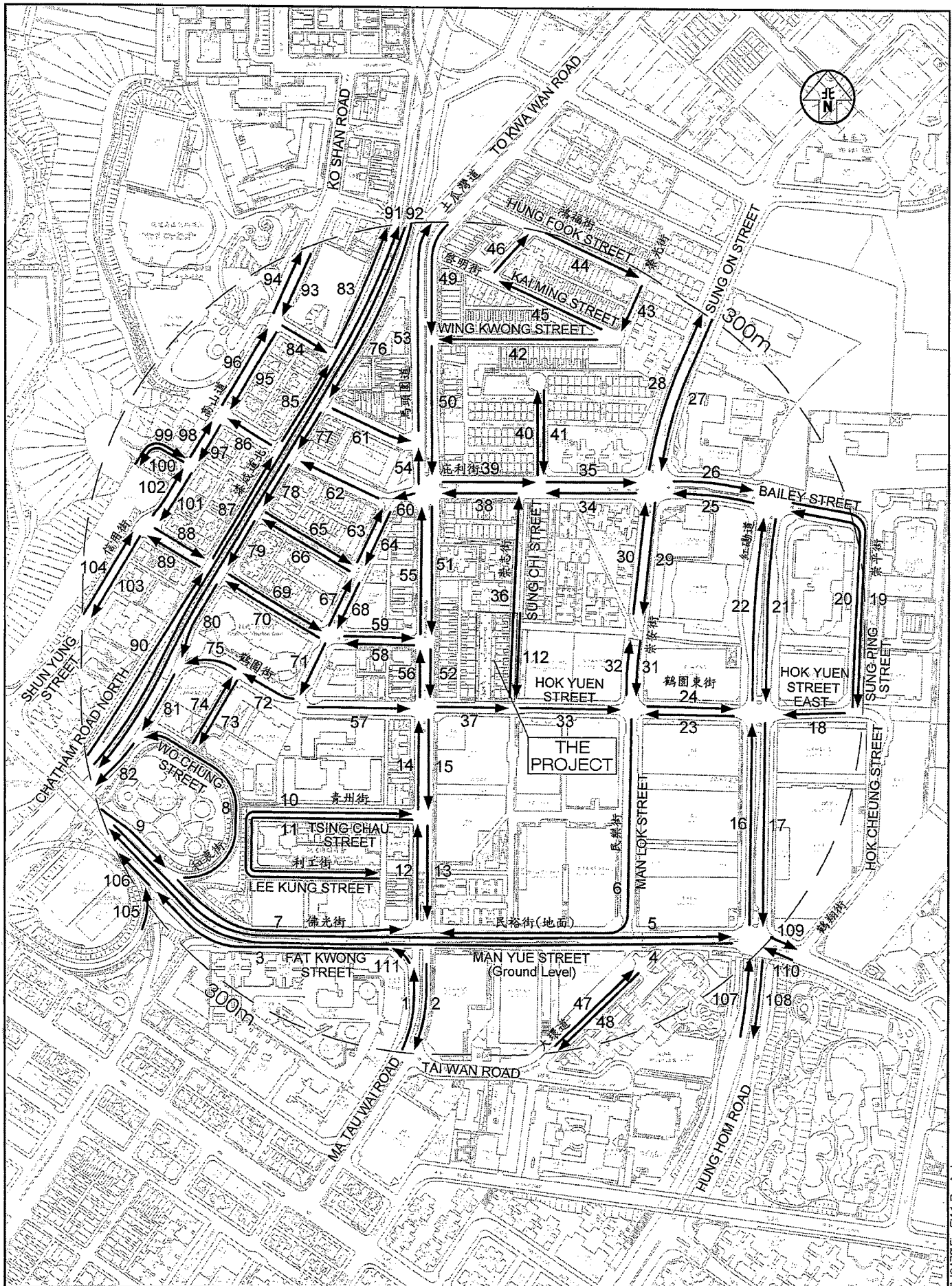
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FM	40033291
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**Appendix 4.1**  
Traffic Flow Data



Project Title  
MERGED PROPOSAL OF CHUN TIN STREET DEVELOPMENT SCHEME KC008A

Figure Title  
THE CONCERNED ROAD SECTIONS

Job No. J6475	Figure No. EIA1	Scale In A3 1 : 5,000
Designed by L K K	Drawn by W S W	Checked by K C
	Revision A	Date 11 JAN 2018

**CKM Asia Limited**  
Traffic and Transportation Planning Consultants  
21st Floor, Methodist House, 36 Hennessy Road, Wan Chai, Hong Kong  
Tel: (852) 2520 5990 Fax: (852) 2528 6343 Email: mail@ckm.com.hk

I:\JOB\J6450-J6499\J6475\Fig EIA1 Rev A.dwg

# Estimated Year 2040 Traffic Data

No.	Road	From	To	2040 AM Peak Hour Traffic Flows				
				Speed Limit (km/h)	Veh/hr	Vehicle Type for Noise Assessment (%)		
						PV	HV	Total
1	Ma Tau Wai Road	Tai Wan Road	Fat Kwong Street	50	700	55%	45%	100%
2	Ma Tau Wai Road	Fat Kwong Street	Tai Wan Road	50	850	56%	44%	100%
3	Fat Kwong Street	Ma Tau Wai Road	Slip Road to Fat Kwong Street	50	200	63%	37%	100%
4	Fat Kwong Street Flyover	Hung Hom Road	Chatham Road North	50	250	81%	19%	100%
5	Fat Kwong Street Flyover	Chatham Road North	Hung Hom Road	50	700	79%	21%	100%
6	Man Lok Street & Man Yue Street	Hok Yuen Street	Ma Tau Wai Road	50	350	59%	41%	100%
7	Fat Kwong Street	Wo Chung Street	Ma Tau Wai Road	50	450	74%	26%	100%
8	Wo Chung Street	Fat Kwong Street	Chatham Road North	50	250	76%	24%	100%
9	Fat Kwong Street	Chatham Road North	Wo Chung Street	50	650	74%	26%	100%
10	Tsing Chau Street & Lee Kung Street	Cul-sac end	Ma Tau Wai Road	50	100	80%	20%	100%
11	Tsing Chau Street & Lee Kung Street	Ma Tau Wai Road	Cul-sac end	50	100	90%	10%	100%
12	Ma Tau Wai Road	Fat Kwong Street	Tsing Chau Street	50	800	57%	43%	100%
13	Ma Tau Wai Road	Tsing Chau Street	Fat Kwong Street	50	450	47%	53%	100%
14	Ma Tau Wai Road	Tsing Chau Street	Hok Yuen Street	50	800	56%	44%	100%
15	Ma Tau Wai Road	Hok Yuen Street	Tsing Chau Street	50	500	48%	52%	100%
16	Hung Hom Road	Fat Kwong Street flyover	Hok Yuen Street East	50	600	67%	33%	100%
17	Hung Hom Road	Hok Yuen Street East	Fat Kwong Street flyover	50	1000	75%	25%	100%
18	Hok Yuen Street East	Sung Ping Street	Hung Hom Road	50	400	79%	21%	100%
19	Sung Ping Street	Hung Hom Road	Hok Yuen Street East	50	250	77%	23%	100%
20	Sung Ping Street	Hok Yuen Street East	Hung Hom Road	50	100	92%	8%	100%
21	Hung Hom Road	Bailey Street	Hok Yuen Street East	50	700	72%	28%	100%
22	Hung Hom Road	Hok Yuen Street East	Bailey Street	50	650	69%	31%	100%
23	Hok Yuen Street East	Sung On Street	Hung Hom Road	50	200	66%	34%	100%
24	Hok Yuen Street East	Hung Hom Road	Sung On Street	50	250	74%	26%	100%
25	Bailey Street	Hung Hom Road	Sung On Street	50	500	68%	32%	100%
26	Bailey Street	Sung On Street	Hung Hom Road	50	700	72%	28%	100%
27	Sung On Street	Chi Kiang Street	Bailey Street	50	400	65%	35%	100%
28	Sung On Street	Bailey Street	Chi Kiang Street	50	250	54%	46%	100%
29	Sung On Street	Bailey Street	Cul-sac end	50	200	64%	36%	100%
30	Sung On Street	Cul-sac end	Bailey Street	50	200	59%	41%	100%
31	Sung On Street	Cul-sac end	Hok Yuen Street	50	50	82%	18%	100%
32	Sung On Street	Hok Yuen Street	Cul-sac end	50	150	75%	25%	100%
33	Hok Yuen Street East	Sung Chi Street	Sung On Street	50	500	67%	33%	100%
34	Bailey Street	Sung On Street	Wan On Street	50	500	70%	30%	100%
35	Bailey Street	Wan On Street	Sung On Street	50	550	73%	27%	100%
36	Sung Chi Street	Hok Yuen Street	Bailey Street	50	100	86%	14%	100%
37	Hok Yuen Street	Ma Tau Wai Road	Sung Chi Street	50	550	68%	32%	100%
38	Bailey Street	Sung Chi Street	Ma Tau Wai Road	50	600	73%	27%	100%
39	Bailey Street	Ma Tau Wai Road	Sung Chi Street	50	600	74%	26%	100%
40	Wan On Street	Bailey Street	Cul-sac end	50	100	80%	20%	100%
41	Wan On Street	Cul-sac end	Bailey Street	50	150	82%	18%	100%
42	Wing Kwong Street	Kai Ming Street	Ma Tau Wai Road	50	250	75%	25%	100%
43	Wing Kwong Street	Hung Fook Street	Kai Ming Street	50	350	76%	24%	100%
44	Hung Fook Street	Yuk Shing Street	Wing Kwong Street	50	50	81%	19%	100%
45	Kai Ming Street	Wing Kwong Street	Yuk Shing Street	50	100	77%	23%	100%
46	Yuk Shing Street	Kai Ming Street	Hung Fook Street	50	100	79%	21%	100%
47	Tai Wan Road	Wai Wan Lane	Cul-sac end	50	50	79%	21%	100%
48	Tai Wan Road	Cul-sac end	Wai Wan Lane	50	50	81%	19%	100%
49	Ma Tau Wai Road	Chi Kiang Street	Wing Kwong Street	50	1100	58%	42%	100%
50	Ma Tau Wai Road	Wing Kwong Street	Bailey Street	50	1250	60%	40%	100%
51	Ma Tau Wai Road	Bailey Street	Pak Kung Street	50	600	48%	52%	100%
52	Ma Tau Wai Road	Pak Kung Street	Hok Yuen Street	50	650	53%	47%	100%
53	Ma Tau Wai Road	Shek Tong Street	Chi Kiang Street	50	400	36%	64%	100%
54	Ma Tau Wai Road	San Lau Street	Shek Tong Street	50	350	29%	71%	100%
55	Ma Tau Wai Road	Pak Kung Street	Bailey Street	50	400	41%	59%	100%
56	Ma Tau Wai Road	Hok Yuen Street	Pak Kung Street	50	850	57%	43%	100%
57	Hok Yuen Street	Gillies Avenue North	Ma Tau Wai Road	50	450	71%	29%	100%



58	Pak Kung Street	Ma Tau Wai Road	Gillies Avenue North	50	500	75%	25%	100%
59	Pak Kung Street	Gillies Avenue North	Ma Tau Wai Road	50	100	86%	14%	100%
60	San Lau Street	Ma Tau Wai Road	Gillies Avenue North	50	800	71%	29%	100%
61	Shek Tong Street	Chatham Road North	Ma Tau Wai Road	50	100	85%	15%	100%
62	San Lau Street	Gillies Avenue North	Chatham Road North	50	750	75%	25%	100%
63	Gillies Avenue North	San Wai Street	San Lau Street	50	200	72%	28%	100%
64	Gillies Avenue North	San Lau Street	San Wai Street	50	300	67%	33%	100%
65	San Wai Street	Chatham Road North	Gillies Avenue North	50	200	82%	18%	100%
66	San Wai Street	Gillies Avenue North	Chatham Road North	50	100	87%	13%	100%
67	Gillies Avenue North	Pak Kung Street	San Wai Street	50	200	73%	27%	100%
68	Gillies Avenue North	San Wai Street	Pak Kung Street	50	350	70%	30%	100%
69	Pak Kung Street	Chatham Road North	Gillies Avenue North	50	150	76%	24%	100%
70	Pak Kung Street	Gillies Avenue North	Chatham Road North	50	100	57%	43%	100%
71	Gillies Avenue North	Pak Kung Street	Hok Yuen Street	50	600	71%	29%	100%
72	Hok Yuen Street	Gillies Avenue North	Hok Yuen Lane	50	200	69%	31%	100%
73	Hok Yuen Lane	Hok Yuen Street	Cul-sac end	50	50	94%	6%	100%
74	Hok Yuen Lane	Cul-sac end	Hok Yuen Street	50	50	100%	0%	100%
75	Hok Yuen Street	Hok Yuen Lane	Chatham Road North	50	200	68%	32%	100%
76	Chatham Road North	Kiang Hsi Street	Shek Tong Street	50	1100	63%	37%	100%
77	Chatham Road North	Shek Tong Street	San Lau Street	50	1100	63%	37%	100%
78	Chatham Road North	San Lau Street	San Wai Street	50	1100	63%	37%	100%
79	Chatham Road North	San Wai Street	Pak Kung Street	50	1000	61%	39%	100%
80	Chatham Road North	Pak Kung Street	Hok Yuen Street	50	900	60%	40%	100%
81	Chatham Road North	Hok Yuen Street	Wo Chung Street	50	1050	61%	39%	100%
82	Chatham Road North	Wo Chung Street	Fat Kwong Street	50	1300	63%	37%	100%
83	Chatham Road North	Shansi Street	Kiang Hsi Street	50	1500	66%	34%	100%
84	Shansi Street	Ko Shan Road	Chatham Road North	50	250	78%	22%	100%
85	Chatham Road North	San Lau Street	Shansi Street	50	1300	64%	36%	100%
86	San Lau Street	Chatham Road North	Ko Shan Road	50	300	74%	26%	100%
87	Chatham Road North	Pak Kung Street	San Lau Street	50	800	56%	44%	100%
88	Pak Kung Street	Ko Shan Road	Chatham Road North	50	250	86%	14%	100%
89	Pak Kung Street	Chatham Road North	Ko Shan Road	50	300	82%	18%	100%
90	Chatham Road North	Fat Kwong Street	Pak Kung Street	50	850	57%	43%	100%
91	Chatham Road North flyover	Fat Kwong Street	Kiang Hsi Street	70	3050	80%	20%	100%
92	Chatham Road North flyover	Kiang Hsi Street	Fat Kwong Street	70	2250	77%	23%	100%
93	Ko Shan Road	Kiang Hsi Street	Shansi Street	50	300	75%	25%	100%
94	Ko Shan Road	Shansi Street	Kiang Hsi Street	50	400	77%	23%	100%
95	Ko Shan Road	Shansi Street	San Lau Street	50	300	76%	24%	100%
96	Ko Shan Road	San Lau Street	Shansi Street	50	600	77%	23%	100%
97	Ko Shan Road	San Lau Street	Wai Yin Path	50	450	78%	22%	100%
98	Ko Shan Road	Wai Yin Path	San Lau Street	50	450	81%	19%	100%
99	Wai Yin Path	Cul-sac end	Ko Shan Road	50	50	79%	21%	100%
100	Wai Yin Path	Ko Shan Road	Cul-sac end	50	100	92%	8%	100%
101	Ko Shan Road	Wai Yin Path	Pak Kung Street	50	400	78%	22%	100%
102	Ko Shan Road	Pak Kung Street	Wai Yin Path	50	500	82%	18%	100%
103	Shun Yung Street	Pak Kung Street	Fat Kwong Street	50	650	79%	21%	100%
104	Shun Yung Street	Fat Kwong Street	Pak Kung Street	50	700	84%	16%	100%
105	Ping Chi Street	Chatham Road North	Fat Kwong Street	50	300	86%	14%	100%
106	Fat Kwong Street	Ping Chi Street	Chatham Road North	50	400	75%	25%	100%
107	Hung Hom Road	Tak Hong Street	Fat Kwong Street flyover	50	750	75%	25%	100%
108	Hung Hom Road	Fat Kwong Street flyover	Tak Hong Street	50	1050	75%	25%	100%
109	Tai Wan Road East	Hung Hom Road	Hok Cheung Street	50	850	81%	19%	100%
110	Tai Wan Road East	Hok Cheung Street	Hung Hom Road	50	400	74%	26%	100%
111	Slip Road of Ma Tau Wai Road	Ma Tau Wai Road	Fat Kwong Street	50	200	63%	37%	100%
112	Sung Chi Street	Access Road	Hok Yuen Street	50	50	88%	13%	100%

No.	Road	From	To	2040 AM Peak Hour Traffic Flows				
				Speed Limit (km/h)	Veh/hr	Vehicle Type for Noise Assessment (%)		
						PV	HV	Total
1	Ma Tau Wai Road	Tai Wan Road	Fat Kwong Street	50	850	59%	41%	100%
2	Ma Tau Wai Road	Fat Kwong Street	Tai Wan Road	50	750	61%	39%	100%
3	Fat Kwong Street	Ma Tau Wai Road	Slip Road to Fat Kwong Street	50	250	69%	31%	100%
4	Fat Kwong Street Flyover	Hung Hom Road	Chatham Road North	50	300	84%	16%	100%
5	Fat Kwong Street Flyover	Chatham Road North	Hung Hom Road	50	600	84%	16%	100%
6	Man Lok Street & Man Yue Street	Hok Yuen Street	Ma Tau Wai Road	50	400	83%	17%	100%
7	Fat Kwong Street	Wo Chung Street	Ma Tau Wai Road	50	350	71%	29%	100%
8	Wo Chung Street	Fat Kwong Street	Chatham Road North	50	250	81%	19%	100%
9	Fat Kwong Street	Chatham Road North	Wo Chung Street	50	550	75%	25%	100%
10	Tsing Chau Street & Lee Kung Street	Cul-sac end	Ma Tau Wai Road	50	100	91%	9%	100%
11	Tsing Chau Street & Lee Kung Street	Ma Tau Wai Road	Cul-sac end	50	100	83%	17%	100%
12	Ma Tau Wai Road	Fat Kwong Street	Tsing Chau Street	50	900	65%	35%	100%
13	Ma Tau Wai Road	Tsing Chau Street	Fat Kwong Street	50	350	47%	53%	100%
14	Ma Tau Wai Road	Tsing Chau Street	Hok Yuen Street	50	950	66%	34%	100%
15	Ma Tau Wai Road	Hok Yuen Street	Tsing Chau Street	50	400	51%	49%	100%
16	Hung Hom Road	Fat Kwong Street flyover	Hok Yuen Street East	50	550	71%	29%	100%
17	Hung Hom Road	Hok Yuen Street East	Fat Kwong Street flyover	50	900	78%	22%	100%
18	Hok Yuen Street East	Sung Ping Street	Hung Hom Road	50	450	86%	14%	100%
19	Sung Ping Street	Hung Hom Road	Hok Yuen Street East	50	150	85%	15%	100%
20	Sung Ping Street	Hok Yuen Street East	Hung Hom Road	50	100	92%	8%	100%
21	Hung Hom Road	Bailey Street	Hok Yuen Street East	50	500	71%	29%	100%
22	Hung Hom Road	Hok Yuen Street East	Bailey Street	50	650	72%	28%	100%
23	Hok Yuen Street East	Sung On Street	Hung Hom Road	50	200	84%	16%	100%
24	Hok Yuen Street East	Hung Hom Road	Sung On Street	50	300	87%	13%	100%
25	Bailey Street	Hung Hom Road	Sung On Street	50	600	72%	28%	100%
26	Bailey Street	Sung On Street	Hung Hom Road	50	500	72%	28%	100%
27	Sung On Street	Chi Kiang Street	Bailey Street	50	350	69%	31%	100%
28	Sung On Street	Bailey Street	Chi Kiang Street	50	300	70%	30%	100%
29	Sung On Street	Bailey Street	Cul-sac end	50	150	57%	43%	100%
30	Sung On Street	Cul-sac end	Bailey Street	50	200	82%	18%	100%
31	Sung On Street	Cul-sac end	Hok Yuen Street	50	100	88%	12%	100%
32	Sung On Street	Hok Yuen Street	Cul-sac end	50	50	83%	17%	100%
33	Hok Yuen Street East	Sung Chi Street	Sung On Street	50	450	82%	18%	100%
34	Bailey Street	Sung On Street	Wan On Street	50	500	74%	26%	100%
35	Bailey Street	Wan On Street	Sung On Street	50	350	71%	29%	100%
36	Sung Chi Street	Hok Yuen Street	Bailey Street	50	100	84%	16%	100%
37	Hok Yuen Street	Ma Tau Wai Road	Sung Chi Street	50	550	83%	17%	100%
38	Bailey Street	Sung Chi Street	Ma Tau Wai Road	50	600	76%	24%	100%
39	Bailey Street	Ma Tau Wai Road	Sung Chi Street	50	400	72%	28%	100%
40	Wan On Street	Bailey Street	Cul-sac end	50	100	80%	20%	100%
41	Wan On Street	Cul-sac end	Bailey Street	50	150	83%	17%	100%
42	Wing Kwong Street	Kai Ming Street	Ma Tau Wai Road	50	250	79%	21%	100%
43	Wing Kwong Street	Hung Fook Street	Kai Ming Street	50	350	78%	22%	100%
44	Hung Fook Street	Yuk Shing Street	Wing Kwong Street	50	50	84%	16%	100%
45	Kai Ming Street	Wing Kwong Street	Yuk Shing Street	50	100	76%	24%	100%
46	Yuk Shing Street	Kai Ming Street	Hung Fook Street	50	100	79%	21%	100%
47	Tai Wan Road	Wai Wan Lane	Cul-sac end	50	100	92%	8%	100%
48	Tai Wan Road	Cul-sac end	Wai Wan Lane	50	50	82%	18%	100%
49	Ma Tau Wai Road	Chi Kiang Street	Wing Kwong Street	50	850	62%	38%	100%
50	Ma Tau Wai Road	Wing Kwong Street	Bailey Street	50	1050	66%	34%	100%
51	Ma Tau Wai Road	Bailey Street	Pak Kung Street	50	500	59%	41%	100%
52	Ma Tau Wai Road	Pak Kung Street	Hok Yuen Street	50	600	62%	38%	100%
53	Ma Tau Wai Road	Shek Tong Street	Chi Kiang Street	50	550	53%	47%	100%
54	Ma Tau Wai Road	San Lau Street	Shek Tong Street	50	450	50%	50%	100%
55	Ma Tau Wai Road	Pak Kung Street	Bailey Street	50	500	51%	49%	100%
56	Ma Tau Wai Road	Hok Yuen Street	Pak Kung Street	50	1000	67%	33%	100%
57	Hok Yuen Street	Gillies Avenue North	Ma Tau Wai Road	50	400	79%	21%	100%

58	Pak Kung Street	Ma Tau Wai Road	Gillies Avenue North	50	550	81%	19%	100%
59	Pak Kung Street	Gillies Avenue North	Ma Tau Wai Road	50	100	87%	13%	100%
60	San Lau Street	Ma Tau Wai Road	Gillies Avenue North	50	800	74%	26%	100%
61	Shek Tong Street	Chatham Road North	Ma Tau Wai Road	50	100	78%	22%	100%
62	San Lau Street	Gillies Avenue North	Chatham Road North	50	850	78%	22%	100%
63	Gillies Avenue North	San Wai Street	San Lau Street	50	350	88%	12%	100%
64	Gillies Avenue North	San Lau Street	San Wai Street	50	350	82%	18%	100%
65	San Wai Street	Chatham Road North	Gillies Avenue North	50	100	82%	18%	100%
66	San Wai Street	Gillies Avenue North	Chatham Road North	50	100	62%	38%	100%
67	Gillies Avenue North	Pak Kung Street	San Wai Street	50	350	90%	10%	100%
68	Gillies Avenue North	San Wai Street	Pak Kung Street	50	400	86%	14%	100%
69	Pak Kung Street	Chatham Road North	Gillies Avenue North	50	250	77%	23%	100%
70	Pak Kung Street	Gillies Avenue North	Chatham Road North	50	150	89%	11%	100%
71	Gillies Avenue North	Pak Kung Street	Hok Yuen Street	50	650	79%	21%	100%
72	Hok Yuen Street	Gillies Avenue North	Hok Yuen Lane	50	300	79%	21%	100%
73	Hok Yuen Lane	Hok Yuen Street	Cul-sac end	50	50	100%	0%	100%
74	Hok Yuen Lane	Cul-sac end	Hok Yuen Street	50	100	92%	8%	100%
75	Hok Yuen Street	Hok Yuen Lane	Chatham Road North	50	300	81%	19%	100%
76	Chatham Road North	Kiang Hsi Street	Shek Tong Street	50	1000	73%	27%	100%
77	Chatham Road North	Shek Tong Street	San Lau Street	50	950	72%	28%	100%
78	Chatham Road North	San Lau Street	San Wai Street	50	950	72%	28%	100%
79	Chatham Road North	San Wai Street	Pak Kung Street	50	900	71%	29%	100%
80	Chatham Road North	Pak Kung Street	Hok Yuen Street	50	800	73%	27%	100%
81	Chatham Road North	Hok Yuen Street	Wo Chung Street	50	1100	74%	26%	100%
82	Chatham Road North	Wo Chung Street	Fat Kwong Street	50	1300	75%	25%	100%
83	Chatham Road North	Shansi Street	Kiang Hsi Street	50	1450	60%	40%	100%
84	Shansi Street	Ko Shan Road	Chatham Road North	50	150	64%	36%	100%
85	Chatham Road North	San Lau Street	Shansi Street	50	1350	59%	41%	100%
86	San Lau Street	Chatham Road North	Ko Shan Road	50	300	78%	22%	100%
87	Chatham Road North	Pak Kung Street	San Lau Street	50	850	48%	52%	100%
88	Pak Kung Street	Ko Shan Road	Chatham Road North	50	150	84%	16%	100%
89	Pak Kung Street	Chatham Road North	Ko Shan Road	50	350	72%	28%	100%
90	Chatham Road North	Fat Kwong Street	Pak Kung Street	50	1050	52%	48%	100%
91	Chatham Road North flyover	Fat Kwong Street	Kiang Hsi Street	70	3250	75%	25%	100%
92	Chatham Road North flyover	Kiang Hsi Street	Fat Kwong Street	70	2050	80%	20%	100%
93	Ko Shan Road	Kiang Hsi Street	Shansi Street	50	350	90%	10%	100%
94	Ko Shan Road	Shansi Street	Kiang Hsi Street	50	550	83%	17%	100%
95	Ko Shan Road	Shansi Street	San Lau Street	50	350	90%	10%	100%
96	Ko Shan Road	San Lau Street	Shansi Street	50	650	80%	20%	100%
97	Ko Shan Road	San Lau Street	Wai Yin Path	50	500	88%	12%	100%
98	Ko Shan Road	Wai Yin Path	San Lau Street	50	500	81%	19%	100%
99	Wai Yin Path	Cul-sac end	Ko Shan Road	50	50	83%	17%	100%
100	Wai Yin Path	Ko Shan Road	Cul-sac end	50	50	77%	23%	100%
101	Ko Shan Road	Wai Yin Path	Pak Kung Street	50	500	88%	12%	100%
102	Ko Shan Road	Pak Kung Street	Wai Yin Path	50	500	82%	18%	100%
103	Shun Yung Street	Pak Kung Street	Fat Kwong Street	50	600	81%	19%	100%
104	Shun Yung Street	Fat Kwong Street	Pak Kung Street	50	400	81%	19%	100%
105	Ping Chi Street	Chatham Road North	Fat Kwong Street	50	400	91%	9%	100%
106	Fat Kwong Street	Ping Chi Street	Chatham Road North	50	500	81%	19%	100%
107	Hung Hom Road	Tak Hong Street	Fat Kwong Street flyover	50	600	77%	23%	100%
108	Hung Hom Road	Fat Kwong Street flyover	Tak Hong Street	50	1000	78%	22%	100%
109	Tai Wan Road East	Hung Hom Road	Hok Cheung Street	50	600	84%	16%	100%
110	Tai Wan Road East	Hok Cheung Street	Hung Hom Road	50	350	71%	29%	100%
111	Slip Road of Ma Tau Wai Road	Ma Tau Wai Road	Fat Kwong Street	50	250	69%	31%	100%
112	Sung Chi Street	Access Road	Hok Yuen Street	50	50	85%	15%	100%

Vehicle Type for Noise Assessment

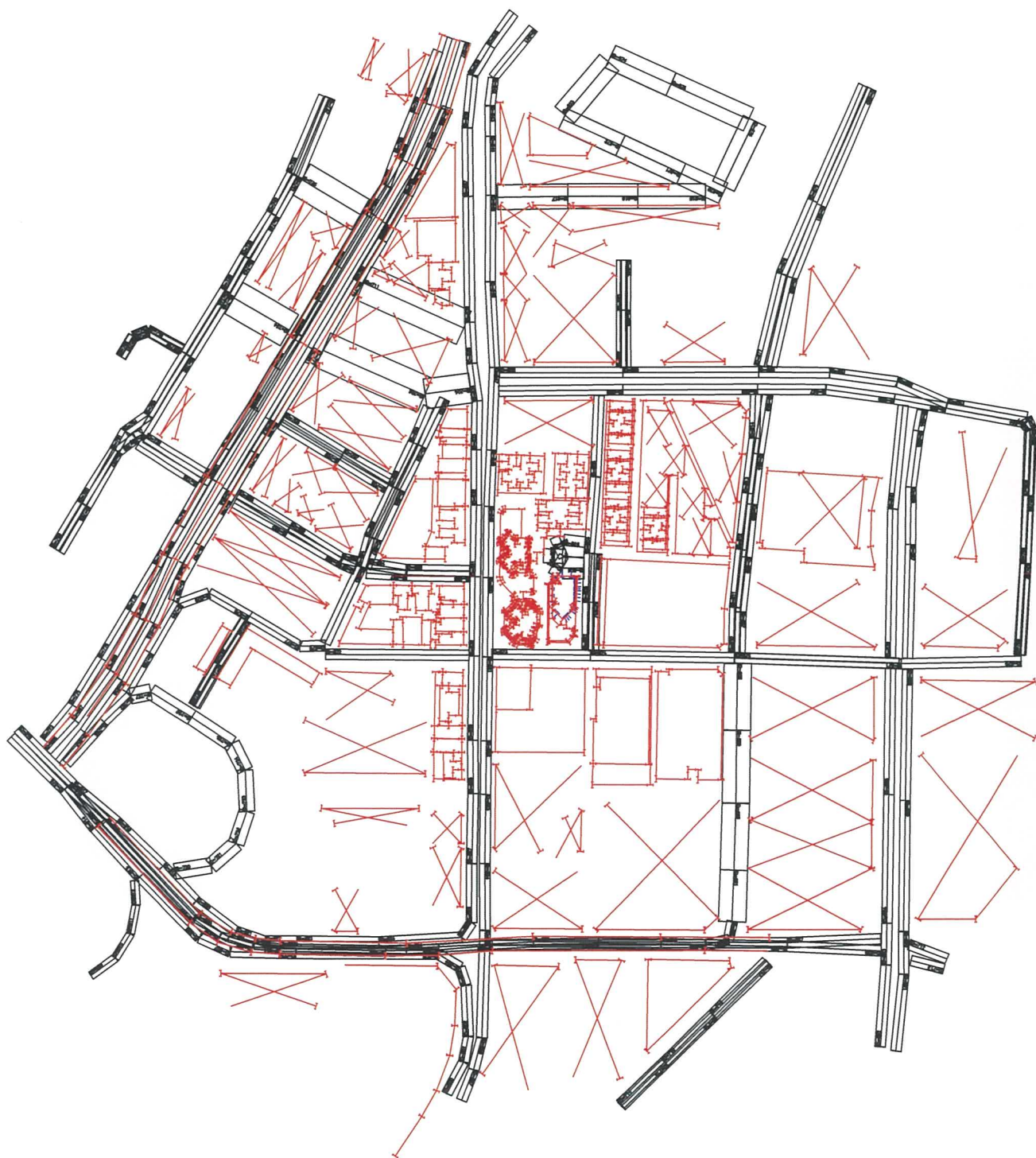
PV: Motorcycle, Private Car, Taxi

HV: Light Goods Vehicle, Heavy Goods Vehicle, Minibus, Franchise Bus



**Appendix 4.2**  
Not Used

**Appendix 4.3**  
Computer Plot of Road Traffic Noise Model





**Appendix 4.4**  
**Predicted Road Traffic Noise Level**

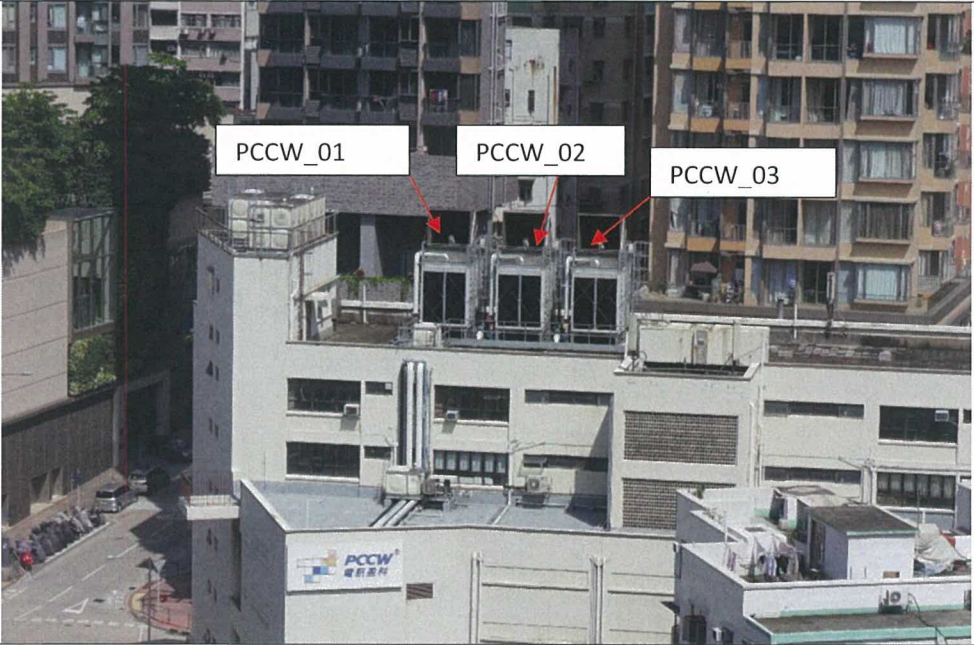
Appendix 4.4 Predicted Road Traffic Noise Level under Year 2040 AM Peak

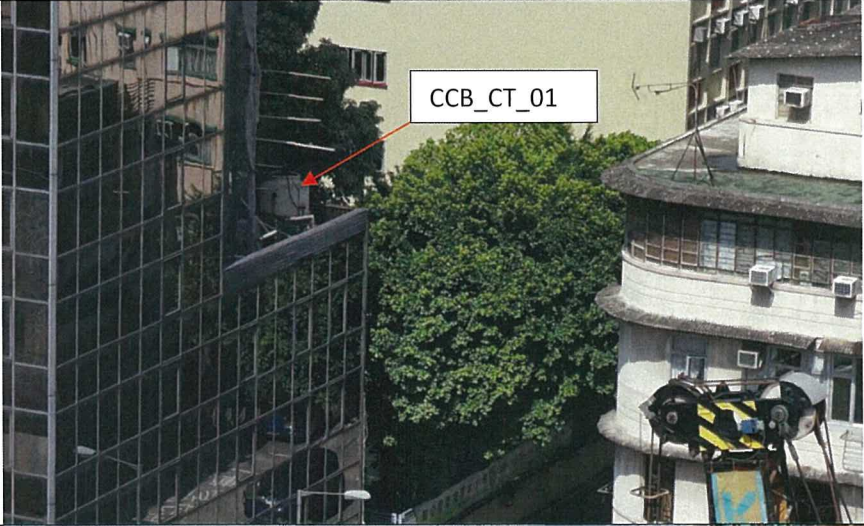
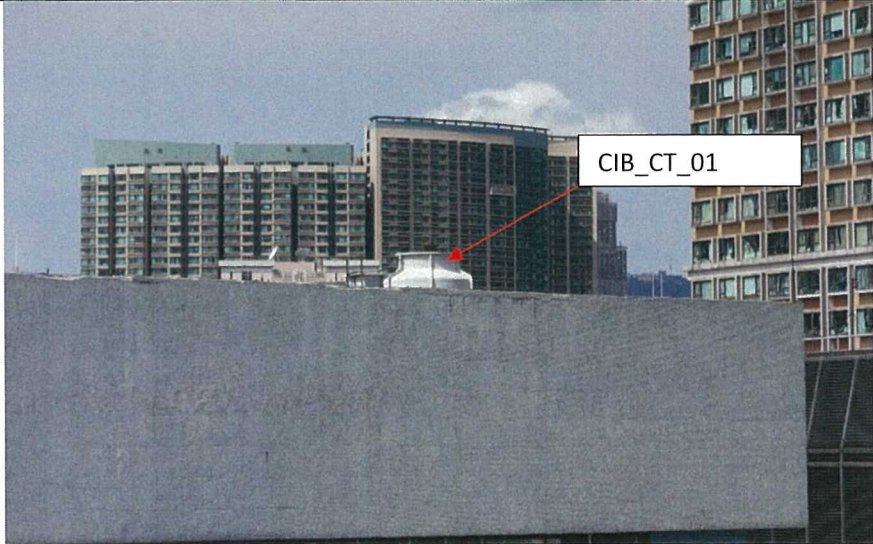
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37	67	67	67	67	67	67	66	66	64	64	64	64	63	63	63	63	64	67	67	68	68	68	68	69	68	66	67
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4	63	63	64	64	65	67	66	67	67	67	67	67	66	66	66	66	66	66	64	63	60	58	60	61	62	59	63
Max	68	69	68	68	68	68	67	67	67	67	67	67	66	66	66	66	66	67	67	68	68	68	68	69	68	66	67


**Appendix 4.5**  
**Locations and photos of Fixed Plant Noise Sources**



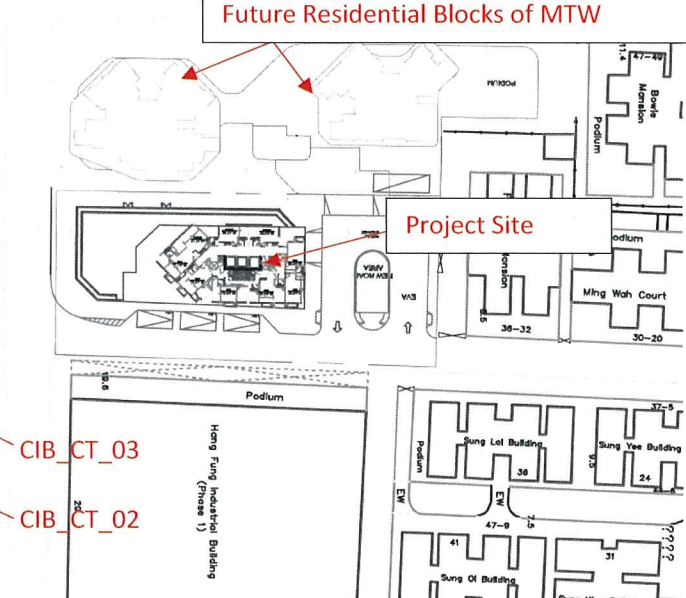
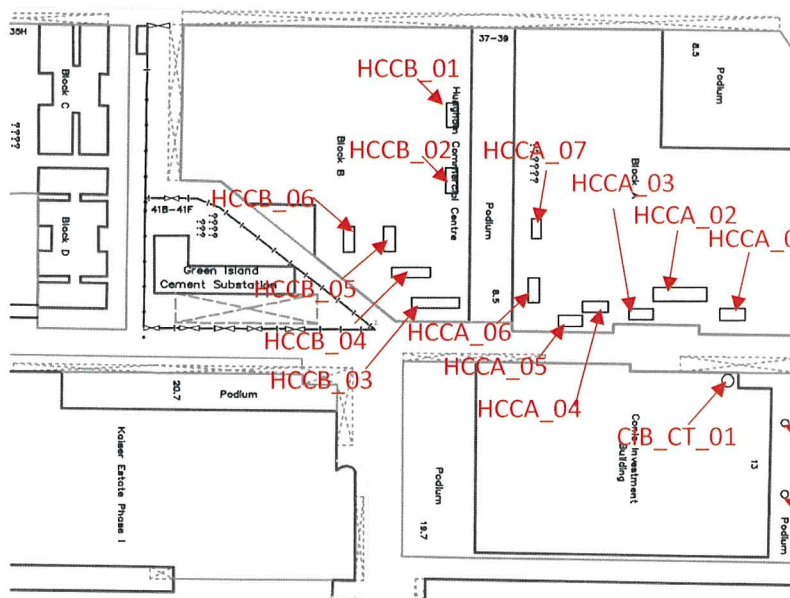
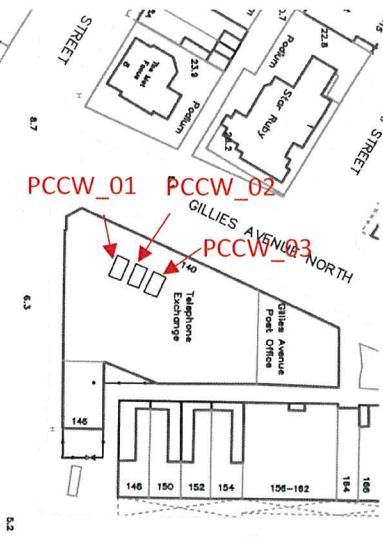
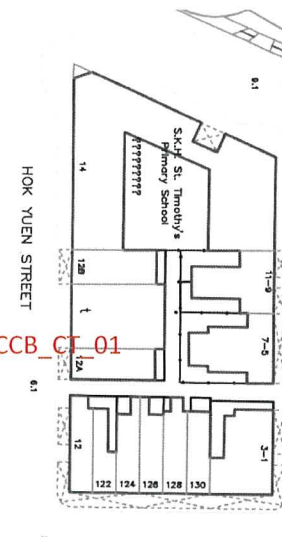
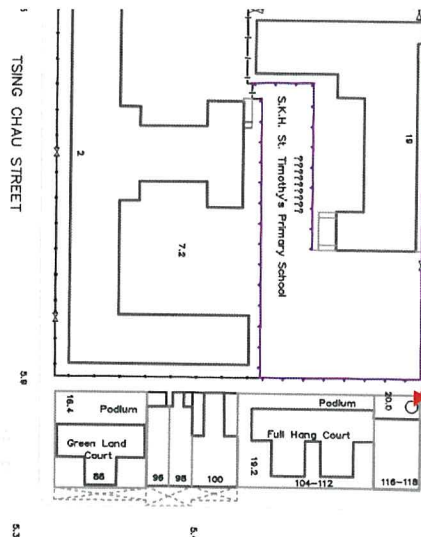
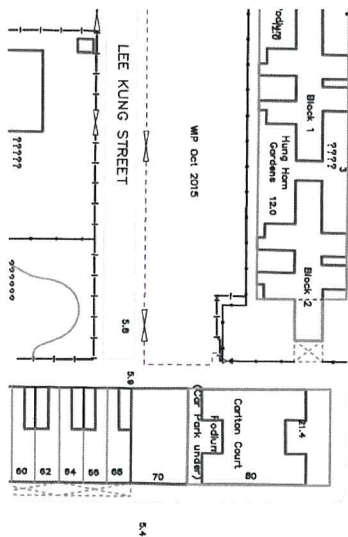
**Appendix 4.5 Locations and photos of Fixed Plant Noise Sources**

Location	Fixed Plant ID.	Source Type	Photo
PCC W Telephone Exchange	PCCW_01 to PCCW_03	Three Cooling Towers on roof floor of PCCW	 An aerial photograph of the PCCW building's roof. Three large, white, rectangular cooling towers are visible, each with a red arrow pointing to it from a label. The labels are 'PCCW_01', 'PCCW_02', and 'PCCW_03'. The building is a multi-story structure with a grey roof. In the background, there are other buildings and a street with parked cars.

Location	Fixed Plant ID.	Source Type	Photo
Cheerful Commercial Building (CCB)	CCB_CT_01	A cooling tower on podium of CCB	 A photograph showing a building with a glass facade. A red arrow points to a cooling tower on the podium, labeled CCB_CT_01.
Conic Investment Building (CIB)	CIB_CT_01	Two Cooling Towers at the roof of CIB	 A photograph showing a building with a grey facade. A red arrow points to a cooling tower on the roof, labeled CIB_CT_01.

Location	Fixed Plant ID.	Source Type	Photo
	CIB_CT_02 and CIB_CT_03	Two Cooling Towers on 4/F of CIB	
HHCC Tower A	HHCCA_01 to HHCCA_07	7 Cooling towers	See Appendix 4.6 for more information
HHCC Tower B	HHCCB_01 to HHCCB_06	6 Cooling towers	See Appendix 4.6 for more information





**Appendix 4.6**

Aerial photo and other information showing fixed plant  
sources at Hunghom Commercial Centre

**Appendix 4.6 Aerial photo and other information showing fixed plant sources at Hunghom Commercial Centre**

**Photo 4.6A** Aerial Photo in 2015 (Tower A and Tower B of Hunghom Commercial Centre are bounded by red box)

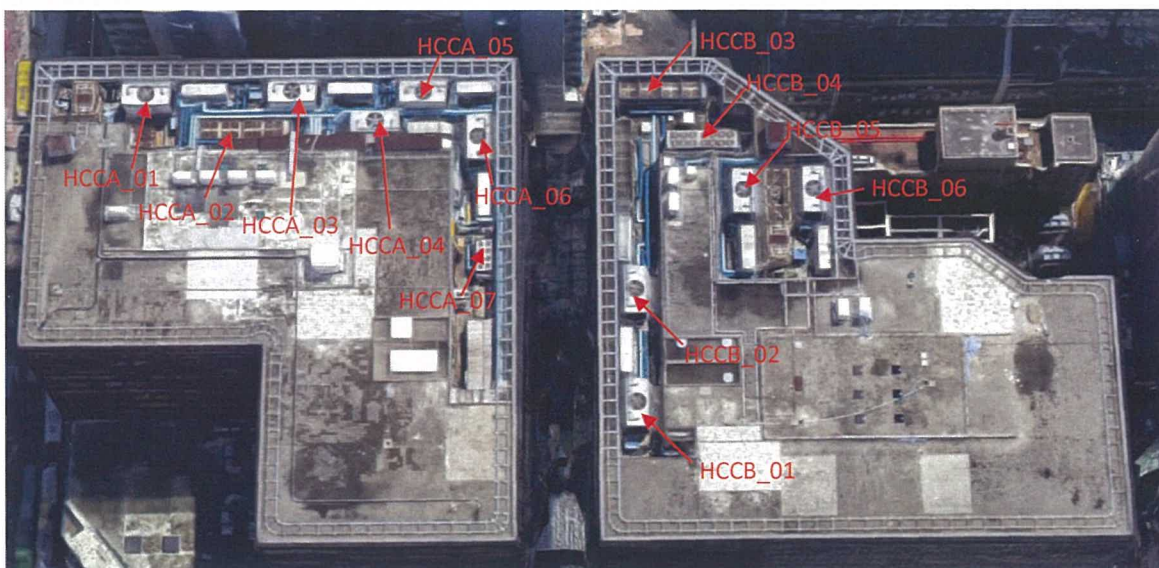




**Photo 4.6B** Aerial Photo in 2015 (Zoom in) (Tower A and Tower B of Hunghom Commercial Centre are bounded by red box)



**Photo 4.6C** Aerial view from Google Map (Reference source: <https://www.google.com.hk/maps/@22.3099949,114.1871999,306a,20y,91.13h,17.76t/data=!3m1!1e3?hl=en>)



**Appendix 4.7**  
**Specifications of Cooling Towers at PCCW Exchange**



Mr. Rodney Ip  
AECOM Consulting Service Ltd.  
8/F, Grand Central Plaza Tower 2,  
138 Shatin Rural Committee Road,  
Shatin, Hong Kong

Your ref: 40033291/449445  
Our ref: FM/L0085/16/CT  
Our tel: 2883 3577  
Our fax: 2304 6314

February 12, 2016



Dear Mr. Ip,

## Request of Information – Hung Hom Exchange

Thank you for your letter of January 27, 2016 regarding the exhaust stacks and mechanical ventilation and air conditioning equipment at the exchange building at 140 Gillies Avenue.

We are pleased to provide you with the following information.

1. The 2 exhaust stacks are the exhaust chimneys of standby generators of the exchange which will be used in the event of city main power outages.
2. The 3 sets of cooling towers are part of the air conditioning system and they are operated continuously. Please refer to the attached product specification with sound power level for reference.

HKT is committed to protecting the environment when we conduct our business. In October 2015, we installed air hoods for the cooling towers and variable speed control for the air fans to further bring down noise levels. Photos of the air hoods are attached for your reference.

Should you have any queries, please do not hesitate to contact us.

Yours faithfully,

Chris T.K. Ting  
General Manager, Operations  
Facilities Management  
HKT Limited

Enc.

40033291

PM	40033291
<input checked="" type="checkbox"/> Scanned Ck: _____	
<input checked="" type="checkbox"/> Ready <input type="checkbox"/> Not Scanned	
<input type="checkbox"/> X <input type="checkbox"/> A <input type="checkbox"/> B <input type="checkbox"/> C	



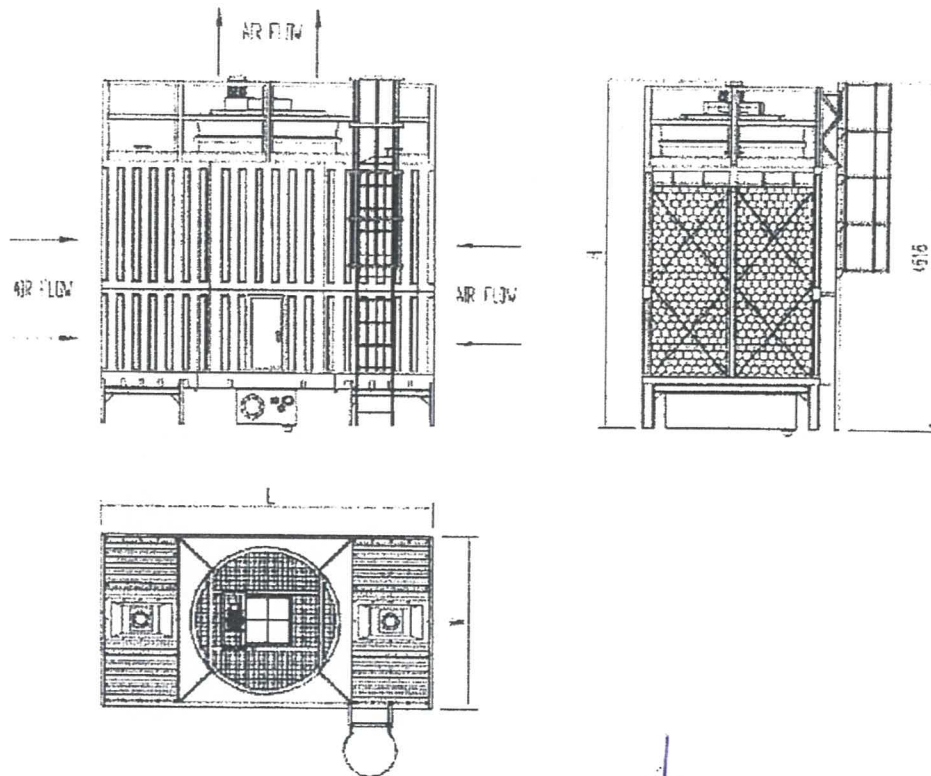
Photos of Cooling Towers at Hung Hom Exchange





XXA536057

## TOWER SCHEMATIC



Model FWS-			94-3.7	94-5.5	94-7.5	127-5.5	127-7.5	127-11	169-7.5	169-11	169-15
Overall Dimension	Length (L)	mm	4000	4000	4000	4400	4400	4400	4400	4400	4400
	Width (W)	mm	2000	2000	2000	2300	2300	2300	2600	2600	2600
	Height (H)	mm	4613	4728	4781	4728	4781	4901	4781	4901	4946
Specification	Water Flow	M <sup>3</sup> /Hr	94	108	119	127	141	160	169	192	213
	Air Flow	M <sup>3</sup> /Hr	86400	98700	109500	110200	122400	139000	146100	166000	184000
	Fan Diameter	mm	1600	1600	1600	1800	1800	1800	2000	2000	2000
	Motor Power	Kw	3.7	5.5	7.5	5.5	7.5	11	7.5	11	15
Piping	Inlet	mm	125 x 2	125 x 2	125 x 2	125 x 2	125 x 2	125 x 2	125 x 2	125 x 2	125 x 2
	Outlet	mm	150	150	150	200	200	200	200	200	200
	Floot Valve	mm	25	25	25	40	40	40	40	40	40
	Overflow	mm	65	65	65	80	80	80	80	80	80
	Drain	mm	65	65	65	80	80	80	80	80	80
Weight	Dry	Kgs	1530	1546	1551	1710	1720	1764	2020	2069	2080
	Wet	Kgs	2927	2943	2948	3416	3426	3470	3961	4010	4021
Noise Level	DF	dBA	70	71	71	71	73	74	73	74	75
	Panel	1.5M	dBA	59	59	59	61	62	63	62	63
		16M	dBA	46	46	47	48	49	49	49	50
	Lower	1.5M	dBA	65	65	66	68	69	70	69	71
		16M	dBA	52	53	55	55	55	56	55	57

NOTE: Nominal tons are based upon 95°F (35°C) HW, 85°F (29.4°C) CW, 78°F (25.6°C) WB, 85°F (29.4°C) DB, 30" Hg (101.6 kPa) Barometric Pressure and 3 GPM/ton (11.4 L/ton).

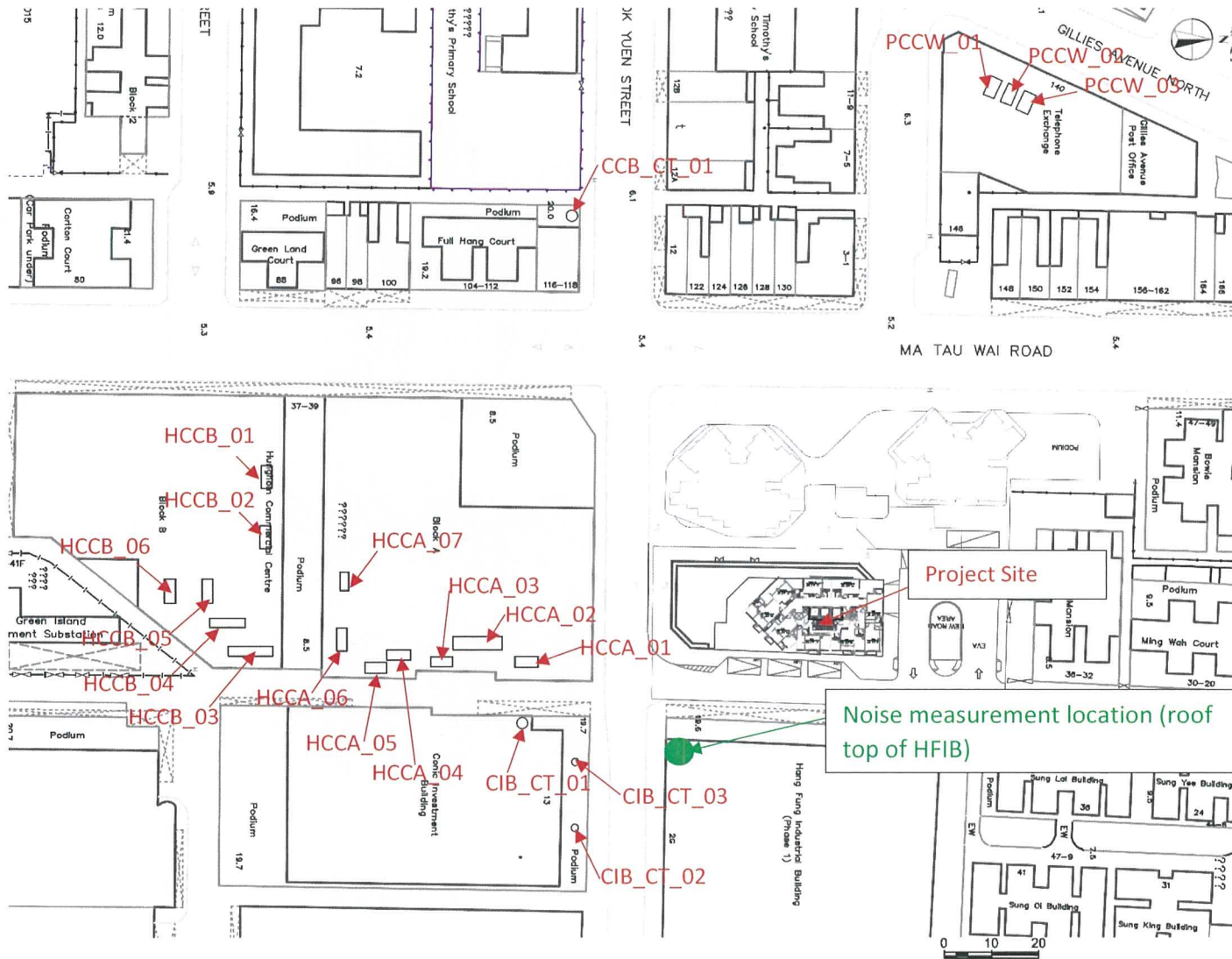
Pump head of the cooling tower is approximately equal to the height of tower (H).

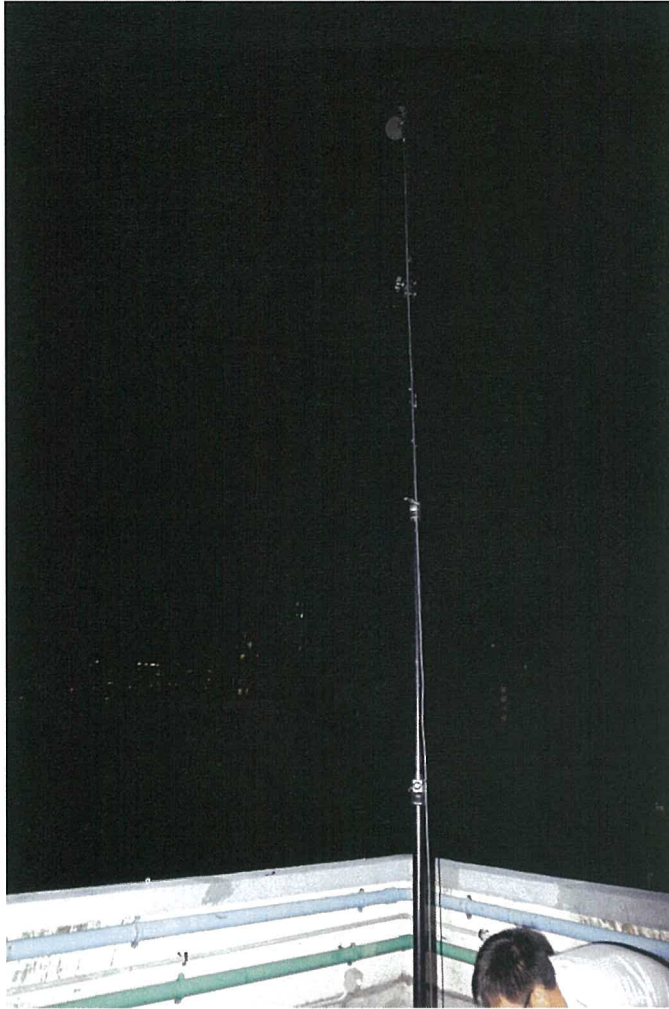
Dimension shown in this catalogue is metric sized and specifications are subject to change without further notice for technical improvement of our products.

**Appendix 4.8**  
**Noise Measurement Location at rooftop of Hang Fung**  
**Industrial Building**



## Appendix 4.8 Noise Measurement Location





**Photo 4.8A Noise measurement on the rooftop of Hang Fung Industrial Building**

**Appendix 4.9**  
Night time Survey for Fixed Plant Noise



# Appendix 4.9 Night-time Survey for Fixed Plant Noise

Date: 2 March 2016 and 8 July 2016

Time: Around 2330 to 0100 hours

## Observations:

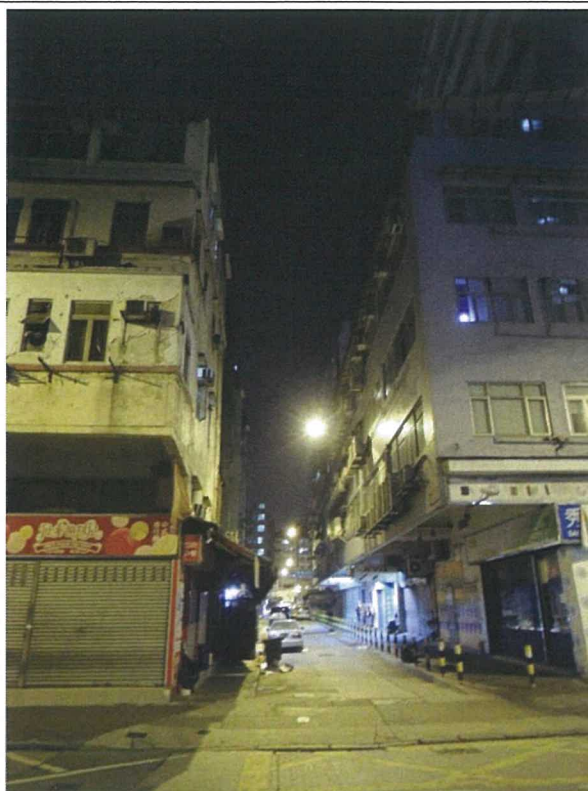
Industrial buildings and commercial buildings along Hok Yuen Street were closed and not in operation. Shops along the Hok Yuen Street, Sung Chi Street, Chun Tin Street were also closed including the mechanical workshop and car maintenance workshop at Sung Chi Street. No noticeable fixed plant noise was identified at Chun Tin Street and Sung Chi Street near the position of future residential block of the Scheme.



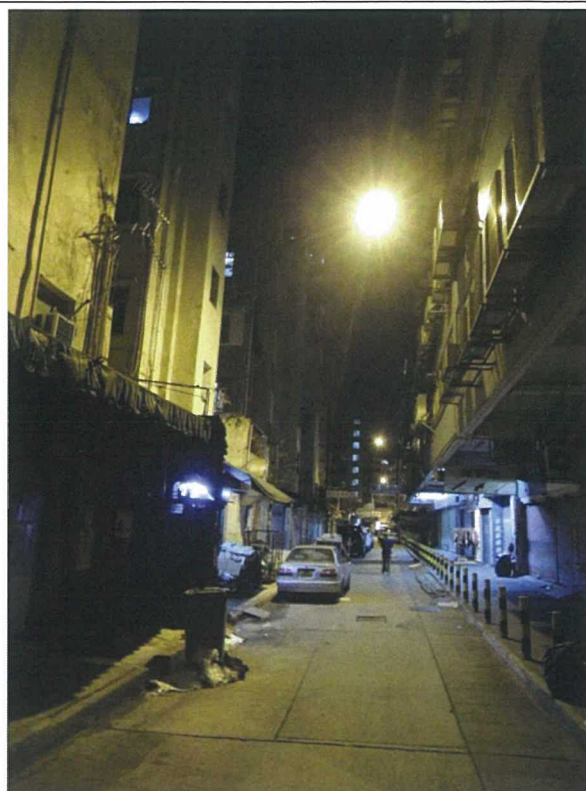
View from Hok Yuen Street to Chun Tin Street



View from Hok Yuen Street to Hang Fung Industrial Building (HFIB)

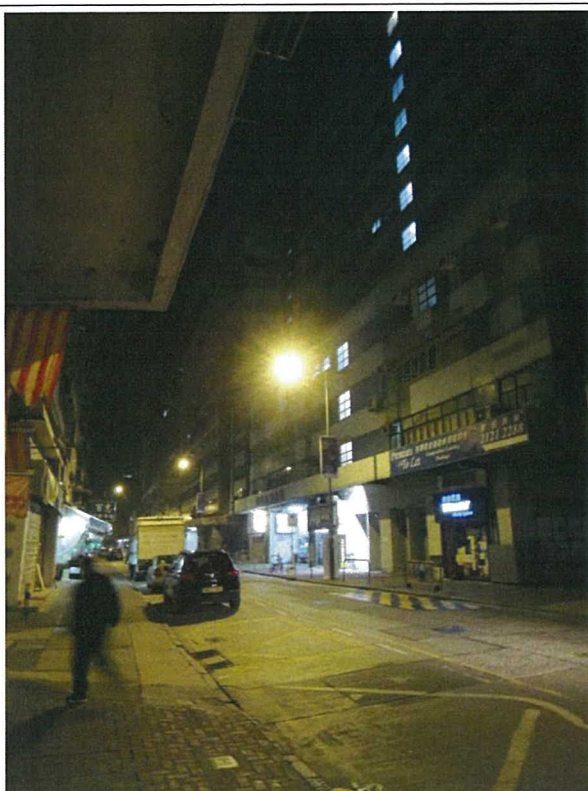


View from Hok Yuen Street to Sung Chi Street.  
The mechanical workshop and car maintenance  
workshop were closed.  
(Far View)



View from Hok Yuen Street to Sung Chi Street  
The Mechanical workshop and car maintenance  
workshop on ground floor of HFIB were closed.  
(near View)





View from Hok Yuen Street to Conic Investment Building (CIB)



View for the Hunghom Commercial Centre (HHCC)

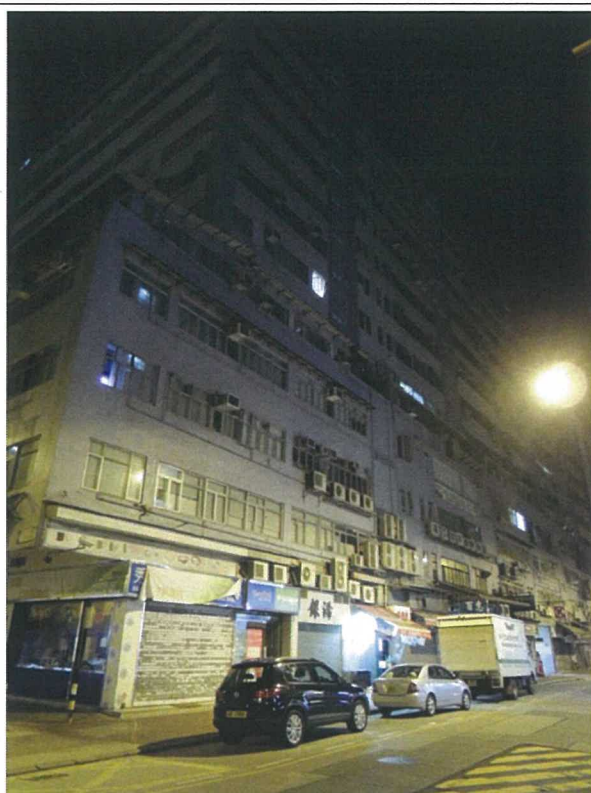


The door entrance of CIB was closed at night.



The door entrance of Hung Hom Square of Hung Hom Commercial Centre (HHCC) was closed at night





View from Hok Yuen Street to HFIB



The door entrance of HFIB was closed at night

**Appendix 6.1**  
**Aerial Photos**

Appendix 6.1 Aerial Photo from 1945 to 2015

Photo 6.1A Aerial Photo in 1945 (The Project Site is bounded by red box)

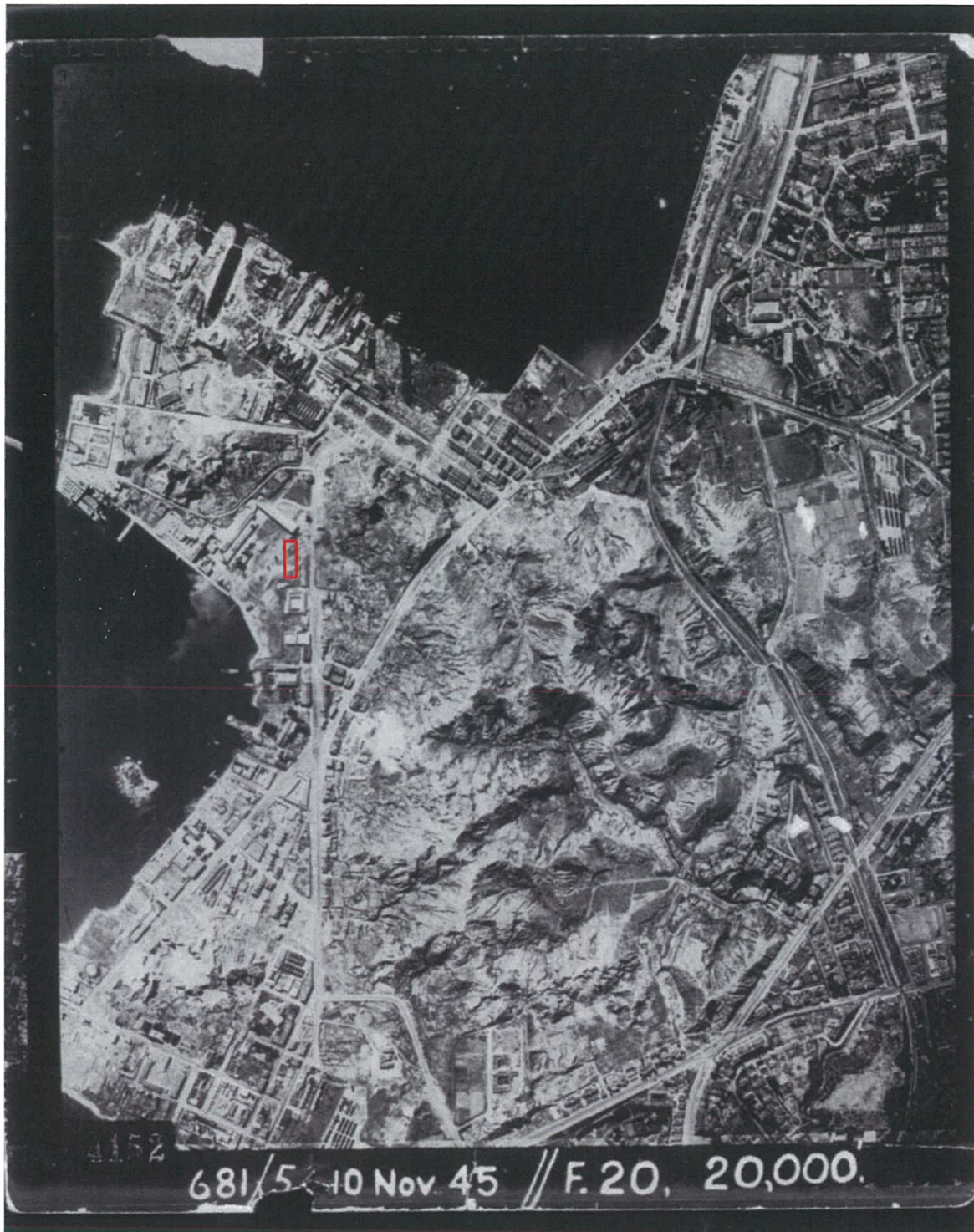




Photo 6.1B Aerial Photo in 1959 (The Project Site is bounded by red box)

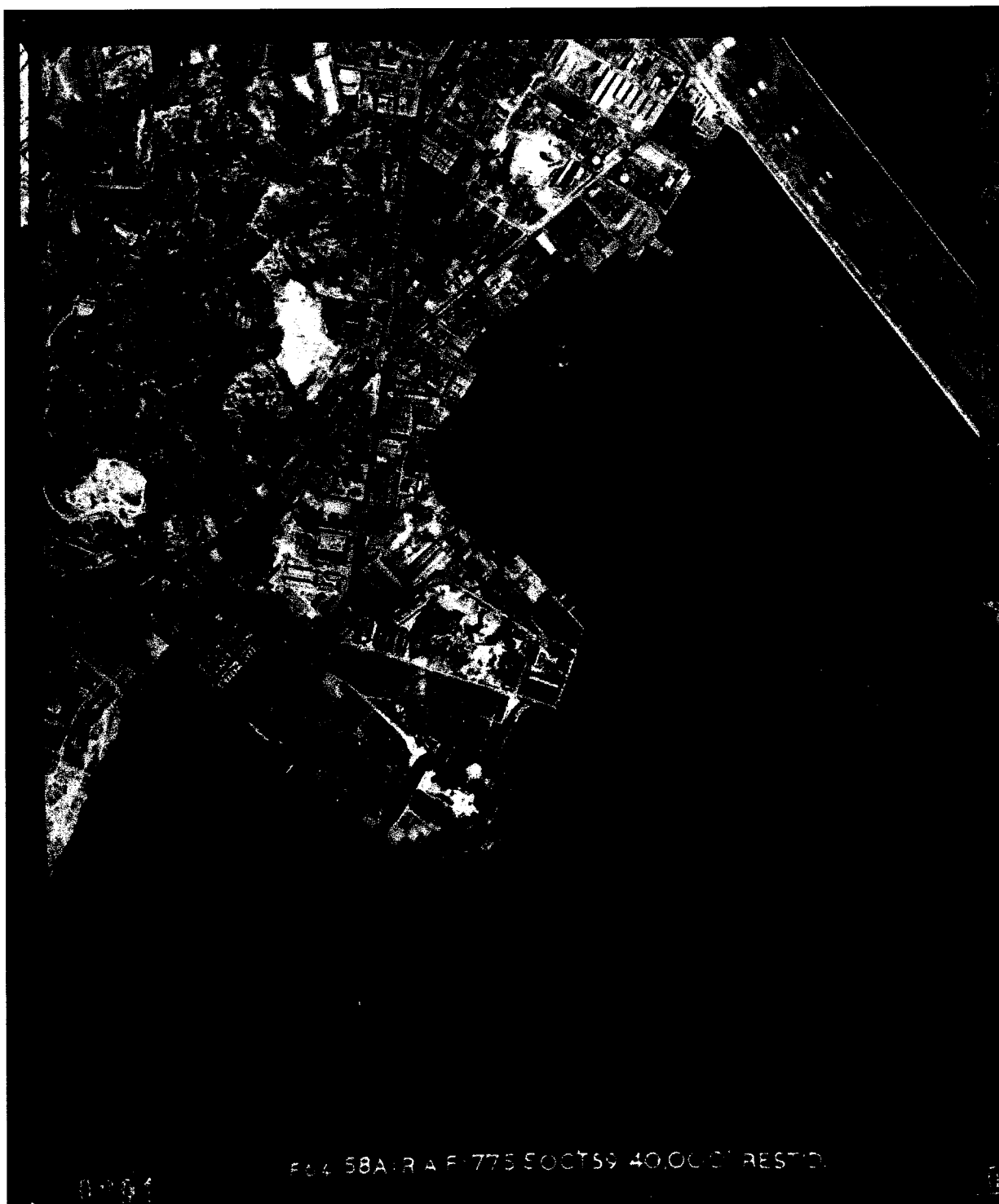


Photo 6.1C Aerial Photo in 2015 (The Project Site is bounded by red box)



**Appendix 6.2**  
Site Walkover Photos



Appendix 6.2 Site Walkover Photos

Photos Recorded during Site Walkover on March 2016



6.2A. Shops at G/F along Nos. 2 – 8 of Chun Tin Street (even nos.)



6.2B. Shops at G/F along Nos. 14-16 of Chun Tin Street (even nos.)



6.2C. Shops at G/F along Nos. 12-20 of Chun Tin Street (even nos.)



6.2D. Shops at G/F along 2-4 of Hok Yuen Street (even nos.)





6.2E. View at Sung Chi Street, i.e. Rear Side of Shops at G/F around 2 - 4 of Chun Tin Street (even nos.)



6.2F. View at Sung Chi Street, i.e. Rear Side of Shops at G/F around 6 of Chun Tin Street (even nos.)





6.2G. View at Sung Chi Street, i.e. Rear Side of Shops at G/F around 12-16 of Chun Tin Street (even nos.)



6.2G. View at Sung Chi Street, i.e. Rear Side of Shops at G/F around 20 - 24 Chun Tin Street (even nos.)

**Appendix 6.3**  
List of Existing Tenants

**Appendix 6.3 List of Existing Tenants at Nos. 2-4 Hok Yuen Street (even nos.) and Nos. 2-24 Chun Tin Street (even nos.)**

Address	Name	Current Use	Details
No. 2 Hok Yuen Street	丹麥飽餅屋	Catering	Bakery
No. 4 Hok Yuen Street	知味燒腊茶餐廳	Catering	Food and Beverages (Cha Chan Tang)
No. 2 Chun Tin Street	合利五金廢紙	Workshop	Paper and Metal Recycling Service
No. 4 Chun Tin Street	NIL	(Cannot be identified)	(Cannot be identified)
No. 6 Chun Tin Street	聯興環保回收有限公司	Workshop	Paper and Metal Recycling Service
No. 8 Chun Tin Street	聯興環保回收有限公司	Workshop	Paper/ Metal/ Electronic Appliance Recycling Service
No. 10 Chun Tin Street	達和公司 "Do Well", Co.	(Cannot be identified)	(Cannot be identified)
No. 12 Chun Tin Street	新星五金工程有限公司	Workshop	Metal Hardware Processing
No. 14 Chun Tin Street	新星五金工程有限公司	Workshop	Metal Hardware Processing
No. 16 Chun Tin Street	白河馬企業有限公司	Trading	Air-conditioner sales/services
No. 18 Chun Tin Street	聯發汽車服務公司	Workshop	Car repair and services
No. 20 Chun Tin Street (shop only facing Sung Chi Street)	崇志士多	Retail	(Grocery Store)
No. 22 Chun Tin Street	Target Outlet Co.	Retail	Clothing
No. 24 Chun Tin Street	Target Outlet Co.	Retail	Clothing



## **Term Environmental Consultancy Services**

### **Proposed Chun Tin Street / Sung Chi Street Development Scheme**

#### **Drainage and Sewerage Impact Assessment**

**REVISION SCHEDULE**

Rev	Date	Details	Prepared by	Reviewed by	Approved by
1	Jul 2016	DSIA Report	Wei Chen	David Lau	
Signature					

**REVISION RECORD**

Rev	Date	Details	Prepared by	Reviewed by	Approved by
1	Jul 2016	DSIA Report	Wei Chen	David Lau	
0	Feb 2016	DSIA Report	Wei Chen	David Lau	

AECOM Consulting Services Limited  
38th Floor, Metroplaza Tower 1  
223 Hing Fong Road  
Kwai Fong, Hong Kong

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Appendix A	Recent Photos of the Site
Appendix B	Proposed Drainage Connection Pipe
Appendix C	Estimated Sewage Generated from the Proposed Development
Appendix D	Proposed Sewerage Connection Pipe and Assessment of Existing Sewers



## **1. INTRODUCTION**

### **1.1 Background**

- 1.1.1 Urban Renewal Authority (URA) commissioned AECOM Consulting Services Ltd (ACSL) as their Consultant to undertake a Drainage and Sewerage Impact Assessment to support the submission of a draft URA Development Scheme Plan of Chun Tin Street / Sung Chi Street Development Scheme (KC-008(A)) to the Town Planning Board for approval.

### **1.2 Information Available for the Study**

- 1.2.1 The Drainage Services Department's (DSD's) drainage record plans for the vicinity of the Site have been reviewed.
- 1.2.2 For the DIA, reference has been made to DSD's Stormwater Drainage Manual, ETWB TC No. 2/2006 – Drainage Impact Assessment Process for Public Sector Projects and list of flooding blackspots provided on DSD's website.
- 1.2.3 For the SIA, reference has been made to DSD's Sewerage Manual Parts 1 and 2. Reference has also been made to Environmental Protection Department's (EPD's) Report No. EPD/TP 1/05 – Guidelines for the Estimating of Sewage Flows for Sewage Infrastructure Planning (GESF).

### **1.3 Objectives of Drainage and Sewerage Impact Assessment (DSIA)**

- 1.3.1 The aim of the DSIA is to assess potential drainage and sewerage impacts on the existing drainage and sewerage system that may arise from the proposed development and, if necessary, to recommend a scheme and improvement or upgrading works that may be required on the existing drainage and sewerage network to the satisfaction of DSD and EPD.

## **2. PROJECT OUTLINE**

### **2.1 Project Title**

- 2.1.1 The project title is "Chun Tin Street / Sung Chi Street Development Scheme ("the Scheme")".

### **2.2 Proponent**

- 2.2.1 The Project Proponent is Urban Renewal Authority.

### **2.3 Nature and Description of the Project**

- 2.3.1 The Project comprises one residential tower providing 310 units on top of a commercial / retail podium.



## **2.4 Location**

- 2.4.1 The proposed development is located at Chun Tin Street, Hung Hom. The Site Location Plan is shown on **Figure 1**.

## **2.5 Area of Project Site**

- 2.5.1 The Site has a net site area of approximately 1,636m<sup>2</sup> and is fully paved.

## **2.6 Change in Levels**

- 2.6.1 No change in ground level as a result of the proposed works is anticipated.

## **2.7 Planning Permission Application**

- 2.7.1 This Report forms as part of the environmental assessment for submission of a draft URA's Development Scheme Plan (DSP) to Town Planning Board for approval under s.5 of Town Planning Ordinance.

# **3. PLANNING AND IMPLEMENTATION PROGRAMME**

## **3.1 Planning and Implementation**

- 3.1.1 Upon approval of the Scheme by CE in C for the URA to implement, the Project will be planned and implemented by the URA and/or its Joint Venture Partner (JVP) under the supervision of an Authorized Person, with support from consultants of various disciplines. The implementation of any works for the Project will be carried out by a Contractor to be identified following the tender process prior to the construction phase.

## **3.2 Project Timetable**

- 3.2.1 The proposed development is targeted for occupation in the Year 2025.

## **3.3 Interface with Other Projects**

- 3.3.1 No potential interface with other projects is anticipated.

# **4. EXISTING DRAINAGE AND SEWERAGE**

## **4.1 Existing Drainage**

- 4.1.1 The Site is fully paved. Storm water surface runoffs within the site are collected and discharged into nearby public drains. Recent photos of the Site are attached in **Appendix A**.

- 4.1.2 According to drainage record plans, there is an existing storm water 1 cell 1475x1275 trunk box culvert running along Hok Yuen Street collecting storm



water runoffs in the area including the existing 225/300mm diameter branch drain running along Sung Chi Street. The storm water surface runoffs from the site and nearby area are conveyed via the existing 1 cell 1475x1275 trunk box culvert along Hok Yuen Street for discharge into Kowloon Bay. The existing drainage system in the area is shown on **Figure 2**.

- 4.1.3 According to DSD's website, there is no flooding blackspot identified in the vicinity of the site. There is no Ecologically Important Streams/Rivers (EIS) as defined under ETWB TCW No. 5/2005 affected by the project.

## **4.2 Existing Sewerage**

- 4.2.1 According to sewerage record plans, sewage from the existing buildings No.1 – 23 Chun Tin Street is collected via an existing 150mm diameter sewer running north of the Site along Sung Chi Street. Along Hok Yuen Street, there is an existing 600mm / 2x450mm diameter sewer connected to an existing 1 cell 1500x825 box culvert trunk sewer along Ma Tau Wai Road. The sewage collected in the area is conveyed to the To Kwa Wan Preliminary Treatment Works.

- 4.2.2 The existing sewerage system in the area is shown on **Figure 3**.

## **5. PROPOSED DRAINAGE AND SEWERAGE CONNECTION**

### **5.1 Proposed Drainage**

- 5.1.1 It is proposed that the current drainage pattern should be maintained, i.e. surface runoff from the site would be discharged via a new terminal manhole and 375mm diameter drainage connection pipe to the existing 1 cell 1475x1275 trunk box culvert at existing manhole no.SMH4034040 in Hok Yuen Street. The proposed drainage connection is shown on **Figure 2**.

### **5.2 Proposed Sewerage**

- 5.2.1 It is proposed that the sewage generated from the proposed development would be discharged via a new terminal manhole and 225mm diameter connection sewer to the existing 2x450/600mm diameter trunk sewer at existing manhole no.FMH4027767 in Hok Yuen Street. The proposed sewerage connection is shown on **Figure 3**.

## **6. DRAINAGE IMPACT ASSESSMENT**

### **6.1 Methodology**

- 6.1.1 The scope and requirements of the Drainage Impact Assessment (DIA) will focus on the assessment of changes to drainage characteristics and the assessment of potential drainage impacts, which may occur due to the proposed development. If necessary, the DIA will provide details to quantify the changes in land use and surface runoff coefficients. The DIA is

undertaken in accordance with ETWB TC No. 2/2006 and with reference to the latest DSD's record plans.

- 6.1.2 Existing and predicted flows will be estimated using the Rational Method and the surface runoff (Q) is calculated with the following equation:

$$Q_p = 0.278 C i A$$

where  $Q_p$  = peak runoff in  $m^3/s$   
 $C$  = runoff coefficient (dimensionless)  
 $i$  = rainfall intensity in  $mm/hr$   
 $A$  = catchment area in  $km^2$

- 6.1.3 Hydraulic assessment will be based on 1 in 50 year rainstorm return period.
- 6.1.4 Runoff coefficients for different surface types are in accordance with Section 7 of the Stormwater Drainage Manual (SDM). For developed urban area, the fixed runoff coefficient value for paved area is 1.0 ( $C=1.0$ ).
- 6.1.5 Rainfall intensity adopted in this assessment is in accordance with Section 4.3.2 of SDM and 5 minutes duration is applied.

$$i = a/(t_d + b)^c$$

where  $i$  = extreme mean intensity in  $mm/hr$   
 $t_d$  = duration in minutes  
 $a, b, c$  = storm constants given in SDM Table 3

- 6.1.6 The hydraulic capacity of drainage pipes is calculated using Colebrook-White Equation. A Colebrook-White roughness coefficient ( $k_s$ ) of 1.5mm is adopted for all existing and proposed drains.

## 6.2 Assessment of Drainage Impacts

- 6.2.1 As the existing site is fully paved and the storm water surface runoff from the Site is collected and discharged to the existing storm water 1 cell 1475x1275 trunk box culvert along Hok Yuen Street and that after the proposed development, the drainage characteristics will remain unchanged and no increase in surface runoff as a result, therefore, no significant drainage impact is anticipated.
- 6.2.2 According to the calculation in Table B-1 of **Appendix B**, it is observed that the capacity of the proposed 375mm diameter drainage connection pipe for the Site is sufficient to accommodate all surface runoff generated from the proposed development.
- 6.2.3 As such, the project will not cause any flood risk on the existing drainage system and no mitigation measures is required.

## 6.3 Temporary Drainage and Mitigation Measures

- 6.3.1 As no permanent drainage impact is anticipated due to the proposed



development, this Section focuses on the mitigation measures for the potential drainage impacts which may occur during the construction phase.

- 6.3.2 Prior to the commencement of the construction works, the Contractor will be required to submit the method statement to the Engineer / Engineer's Representative for approval.
- 6.3.3 The method statement should include:
- (a) Temporary drainage arrangement, if any, to suit the construction method; and
  - (b) Measures for ensuring construction / excavated materials would not be washed down into the existing drainage system.
- 6.3.4 Layout plans of temporary drainage arrangement should also be submitted to Mainland South of DSD for comments.
- 6.3.5 Sand / silt removal facilities, for instance sand traps and sediment basins, will be provided before discharging the storm water into the existing drainage system. To ensure no sand or silt is accumulated at the downstream storm water drains and/ or stream courses as a result of ineffective implementation of the proposed mitigation measures, those storm water drains and/ or stream courses will be regularly monitored. If any built up of earth materials is observed, the Contractor will be instructed to remove it immediately.
- 6.3.6 All temporary drainage mitigation measures will follow the good site practice recommended in EPD's Practice Note ProPECC PN1/94 on Construction Site Drainage and DSD's Technical Circular No. 14/2000 - Temporary Flow Diversions and Temporary Works Affecting Capacity in Stormwater Drainage Systems.
- 6.3.7 With the implementation of the mitigation measures, it is anticipated that there would be no unacceptable adverse impact on the existing drainage system arising from the proposed works during the construction phase.

## **7. SEWERAGE IMPACT ASSESSMENT**

### **7.1 Methodology**

- 7.1.1 The sewage flow generated from the proposed development was estimated in accordance with the EPD's Report No. EPD/TP 1/05 – Guidelines for Estimating Sewage Flows for Sewage Infrastructure Planning (GESF) and the Sewerage Manual published by DSD.
- 7.1.2 Sewage flows generated from the proposed development has been assessed to identify any sewers with inadequate capacity arising from the proposed development. The parameters and design assumptions used in the assessment are presented below.



7.1.3 Unit flow factors for domestic flows and non-domestic flows as recommended in the GESF have been adopted to estimate the total sewage flow generated from the proposed development and surrounding catchments. The factors adopted for this project are summarized in Table 7-1, Table 7-2 and Table 7-3 below.

**Table 7-1 : Unit Flow Factors for Domestic Flows**

	Unit Flow Factor (m <sup>3</sup> /day)
Private R1	0.190

**Table 7-2 : Unit Flow Factors of Commercial Flows**

	Unit (per)	Unit Flow Factor (m <sup>3</sup> /day)
Commercial Employee	employee	0.080
Commercial activities		
(a) Specific trades:		
J4 Wholesale & Retail	employee	0.200
J10 Restaurants & Hotels	employee	1.500
J11 Community, Social & Personal Services	employee	0.200

Notes of Table 7-2:

- (1) For job type J11, the "per-employee" unit flow factor takes into account the flows of customers and/or tenants.
- (2) The total unit flow generated from an employee in a particular trade is the sum of the unit flow factor of employee and the unit flow factor of commercial activities of a particular trade under consideration.

**Table 7-3: Unit Flow Factors for Industrial Flows**

	Unit (per)	Unit Flow Factor (m <sup>3</sup> /day)
Industrial Employee	employee	0.080
Industrial activities		
J1 Manufacturing - Central Kowloon	employee	0.550

Notes of Table 7-3:

- (1) The total unit flow generated from an employee in a particular trade is the sum of the unit flow factor of employee and the unit flow factor of commercial activities of a particular trade under consideration.

7.1.4 The Catchment Inflow Factor (PCIF) according to GESF is assumed 1.0.

7.1.5 The design peaking factors for sewers according to GESF have been adopted for estimating the peak sewage flow from the proposed developments, and the adopted factors are presented in Table 7-4 below.

**Table 7-4 : Peaking Factors**

Population Range	Peaking Factor (including stormwater allowance) for facility with existing upstream sewerage	Peaking Factor (excluding stormwater allowance) for facility with new upstream sewerage
<1,000	8	6
1,000 – 5,000	6	5
5,000 – 10,000	5	4
10,000 – 50,000	4	3
>50,000	$Max(\frac{7.3}{N^{0.15}}, 2.4)$	$Max(\frac{6}{N^{0.175}}, 1.6)$

Notes: (1) N is the contributing population in thousands.

- 7.1.6 The sewer capacity is calculated using Colebrook-White Equation and Ks of 1.5mm is adopted for the assessment.

## 7.2 Assessment of Sewerage Impacts

- 7.2.1 An assessment of the capacity of the existing sewers to accommodate the sewage generated from the proposed development has been carried out. The sewerage catchment plan is shown in **Figure 4**. The estimated sewage flow generated from the proposed development and the sub-catchments are summarised respectively in Table 7-5 and Table 7-6 below.

**Table 7-5 : Summary of Estimated Sewage from the Proposed Development**

	Global Unit Flow Factor (m <sup>3</sup> /d)	Population	Estimated Sewage (ADWF) <sup>(1)</sup> (m <sup>3</sup> /s)	Catchment Inflow Factor (P <sub>CIF</sub> )	Peaking Factor	PWWF <sup>(2)</sup> (m <sup>3</sup> /s)
Private R1	0.190	899	0.00198	1.0	6	0.01186
Non-domestic	0.280	174	0.00056	1.0	6	0.00339
	1.580	33	0.00060	1.0	6	0.00362
<b>Total</b>						<b>0.01887</b>

Notes:

- (1) ADWF – Average dry weather flow  
(2) PWWF – Peak wet weather flow, which is equivalent to ADWF x Catchment Inflow Factor (1.0) x Peaking Factor (6)

**Table 7-6 : Summary of Estimated Sewage from the Sub-catchment**

Manhole ID	Sub-catchment	Approx. Area (m <sup>2</sup> )	Population <sup>(1)</sup>	Type	Unit Flow Factor (m <sup>3</sup> /day/person)	ADWF (m <sup>3</sup> /day)	Total ADWF (m <sup>3</sup> /s)
FMH4027767	Eldex Industrial Building	3805	254	J1	0.63	159.81	0.02808
	Summit Building	3898	260	J1	0.63	163.72	
	Winner Building	2457	164	J1	0.63	103.19	
	Loong King Mansion	-	1262	R1	0.19	239.78	
	Green Island Cement Substation	349	23	J1	0.63	14.66	
	Kaiser Estate Phase I / II	7602	507	J11	0.28	141.90	
	Conic Investment Building	3052	203	J11	0.28	56.97	
	Kaiser Estate Phase III	3264	218	J11	0.28	60.93	
	Gemstar Tower	5783	386	J11	0.28	107.95	
	Focal Industrial Centre	8632	575	J1	0.63	362.54	
	Heng Ngai Jewelry Centre	3805	254	J1	0.63	159.81	
	Harbour Centre Tower 2	4156	277	J11	0.28	77.58	
	Hilder Centre	1635	109	J1	0.63	68.67	
	Guardforce Centre	2777	185	J1	0.63	116.63	
	Fu Hang Industrial Building	4085	272	J1	0.63	171.57	
	Hang Fung Industrial Building Phase 1 & 2	5027	335	J1	0.63	211.13	
	URA Development: TKW/1/002	-	1100	R1	0.19	209.00	
FMH4027764	Hunghom Commercial Centre	6828	455	J11	0.28	127.46	0.00148

Notes:

- (1) The population for the sub-catchments is based on 2011 Census. The population for the proposed Development TKW/1/002 is based on the proposed number of units provided by URA. The nos. of employees is calculated assuming 1 employee per 15 square meters based on PNAP 41 (APP-6).

- 7.2.2 The total sewage generated from the proposed development is estimated to be 0.01887m<sup>3</sup>/s (i.e. 18.87l/s). Details of the sewage estimates are included in **Appendix C**.
- 7.2.3 In order to assess the impact on the existing public sewerage system due to the proposed development, the capacity of the existing public sewers along Hok Yuen Street needed to be checked and are shown in **Appendix D**.
- 7.2.4 According to the assessment result in Table D-1 of **Appendix D**, the capacity of the proposed 225mm diameter sewerage connection pipe and the existing 2x450/600mm diameter sewers along Hok Yuen Street is sufficient in terms



of capacity and is therefore, sufficient to accommodate the sewage generated from the proposed development.

## **8. CONCLUSION**

### **8.1 Drainage**

8.1.1 As the existing site is fully paved and the land use and drainage conditions after the proposed development remain unchanged, there should be no increase in surface runoff and hence no drainage impact on existing drainage system due to the proposed development. The capacity of the proposed 375mm diameter drainage connection pipe for the proposed development should be adequate. Therefore, no mitigation measures are required on the existing drainage system.

8.1.2 Temporary drainage mitigation measures will follow the good site practice recommended in EPD's ProPECC PN1/94 and DSD's TC No. 14/2000. It is anticipated that there would be no unacceptable adverse impact on the existing drainage system during construction with implementation of the mitigation measures.

8.1.3 As such, the proposed development will not cause an unacceptable increase in the risk of flooding in areas upstream of, adjacent to or downstream of the project site both during construction and upon completion.

### **8.2 Sewerage**

8.2.1 The proposed development will generate a sewage flow of 0.01887m<sup>3</sup>/s (i.e. 18.87l/s). The sewage flow generated from the proposed development will be collected by a new terminal manhole for discharging to the existing sewers along Hok Yuen Street via the proposed 225mm diameter connection sewer at existing manhole no.FMH4027767.

8.2.2 As shown in the assessment result in Table D-1, the capacity of the existing 2x450/600mm diameter sewers along Hok Yuen Street should be adequate to accommodate the sewage generated from the proposed development.

8.2.3 No adverse impact on the existing sewerage system is anticipated as a result of the proposed sewage discharge to the existing 2x450/600mm diameter sewers along Hok Yuen Street for the proposed development.

## Figures



# NOTES:

1. ALL DIMENSIONS SHOWN ARE IN MILLIMETRES UNLESS OTHERWISE STATED.
2. ALL LEVELS ARE IN METRES AND REFER TO THE PRINCIPAL DATUM(PD1).

# LEGENDS:

----- PROJECT AREA

Project  
TERM ENVIRONMENTAL CONSULTANCY SERVICES  
PROPOSED CHUN TIN STREET/SUNG CHI STREET DEVELOPMENT  
SCHEME- DRAINAGE AND SEWERAGE IMPACT ASSESSMENT



市區重建局  
URBAN RENEWAL AUTHORITY

Drawing Title

SITE LOCATION PLAN

Drawing No.  
圖則編號

FIGURE 1

Drawn  
繪圖 XK

Checked  
校核 WCHE/DL

Approved  
批准 -

Scale  
比例 1:1000 @ A3

Date  
日期 02/2016

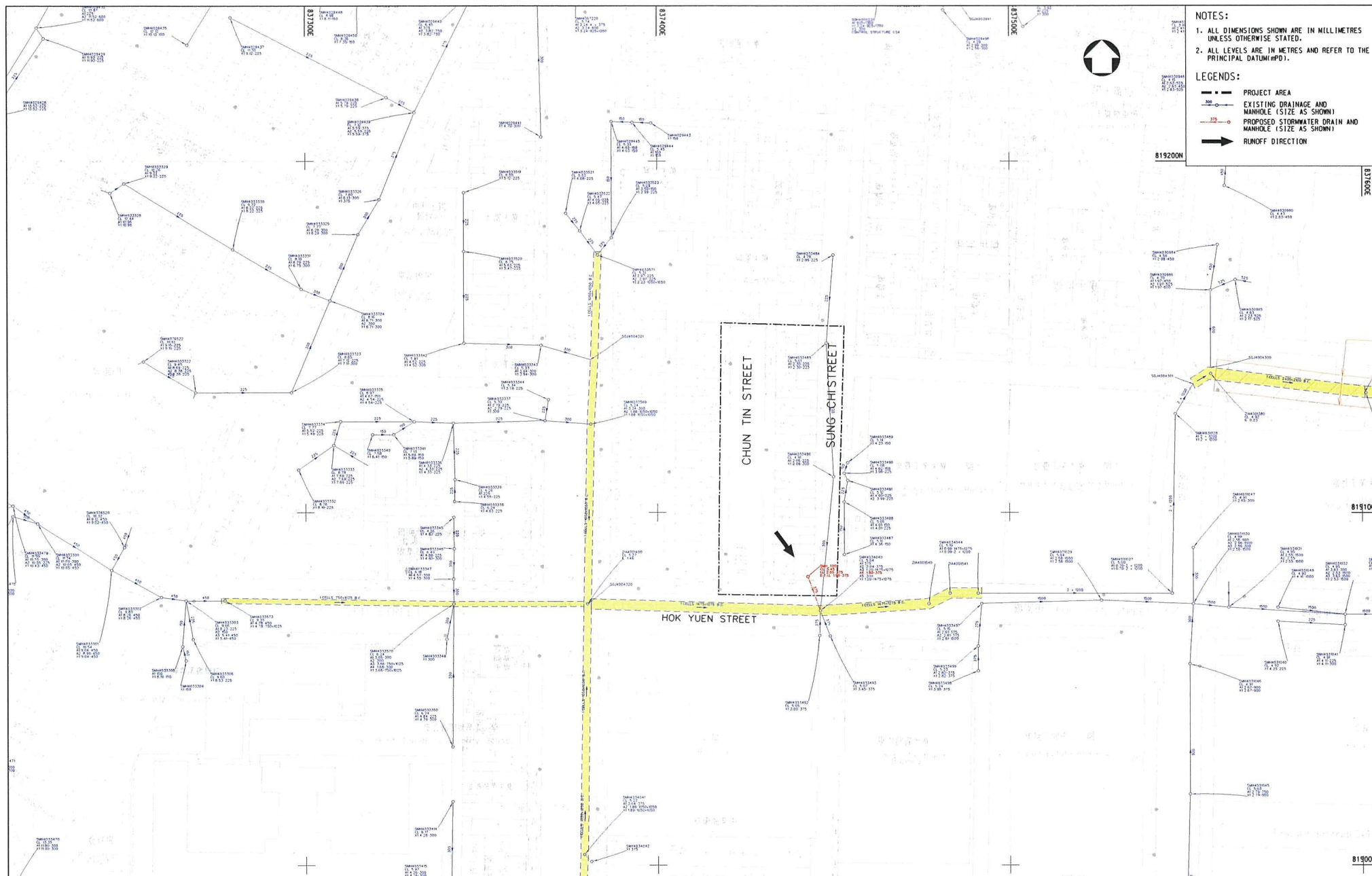
Date  
日期 02/2016

Status  
現況 PRELIMINARY

**AECOM**

AECOM Consulting Services Limited





Project  
**TERM ENVIRONMENTAL CONSULTANCY SERVICES**  
**PROPOSED CHUN TIN STREET/SUNG CHI STREET DEVELOPMENT**  
**SCHEME- DRAINAGE AND SEWERAGE IMPACT ASSESSMENT**



市區重建局  
 URBAN RENEWAL AUTHORITY

Drawing Title

**EXISTING DRAINAGE AND**  
**PROPOSED DRAINAGE CONNECTION**

Drawing No.  
 圖則編號

**FIGURE 2**

Drawn  
 繪圖

XK

Checked  
 校核

WCHE/DL

Approved  
 批准

—

Scale  
 比例

02/2016

Date  
 日期

02/2016

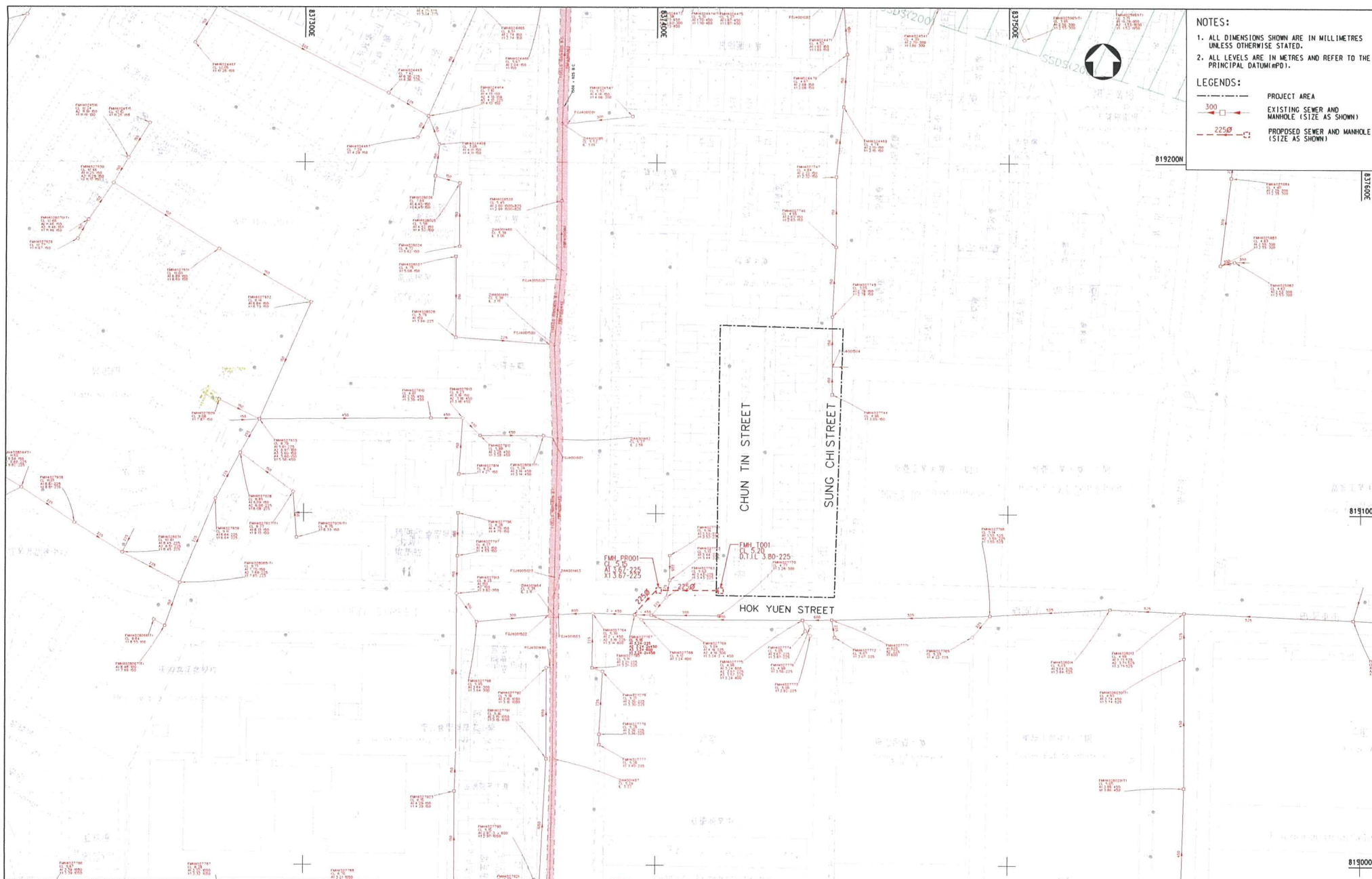
1:1000 @ A3

Status  
 現況

PRELIMINARY



AECOM Consulting Services Limited



- NOTES:**
1. ALL DIMENSIONS SHOWN ARE IN MILLIMETRES UNLESS OTHERWISE STATED.
  2. ALL LEVELS ARE IN METRES AND REFER TO THE PRINCIPAL DATUM (PD).

**LEGENDS:**

PROJECT AREA  
 EXISTING SEWER AND MANHOLE (SIZE AS SHOWN)  
 PROPOSED SEWER AND MANHOLE (SIZE AS SHOWN)

Project  
 TERM ENVIRONMENTAL CONSULTANCY SERVICES  
 PROPOSED CHUN TIN STREET/SUNG CHI STREET DEVELOPMENT  
 SCHEME- DRAINAGE AND SEWERAGE IMPACT ASSESSMENT

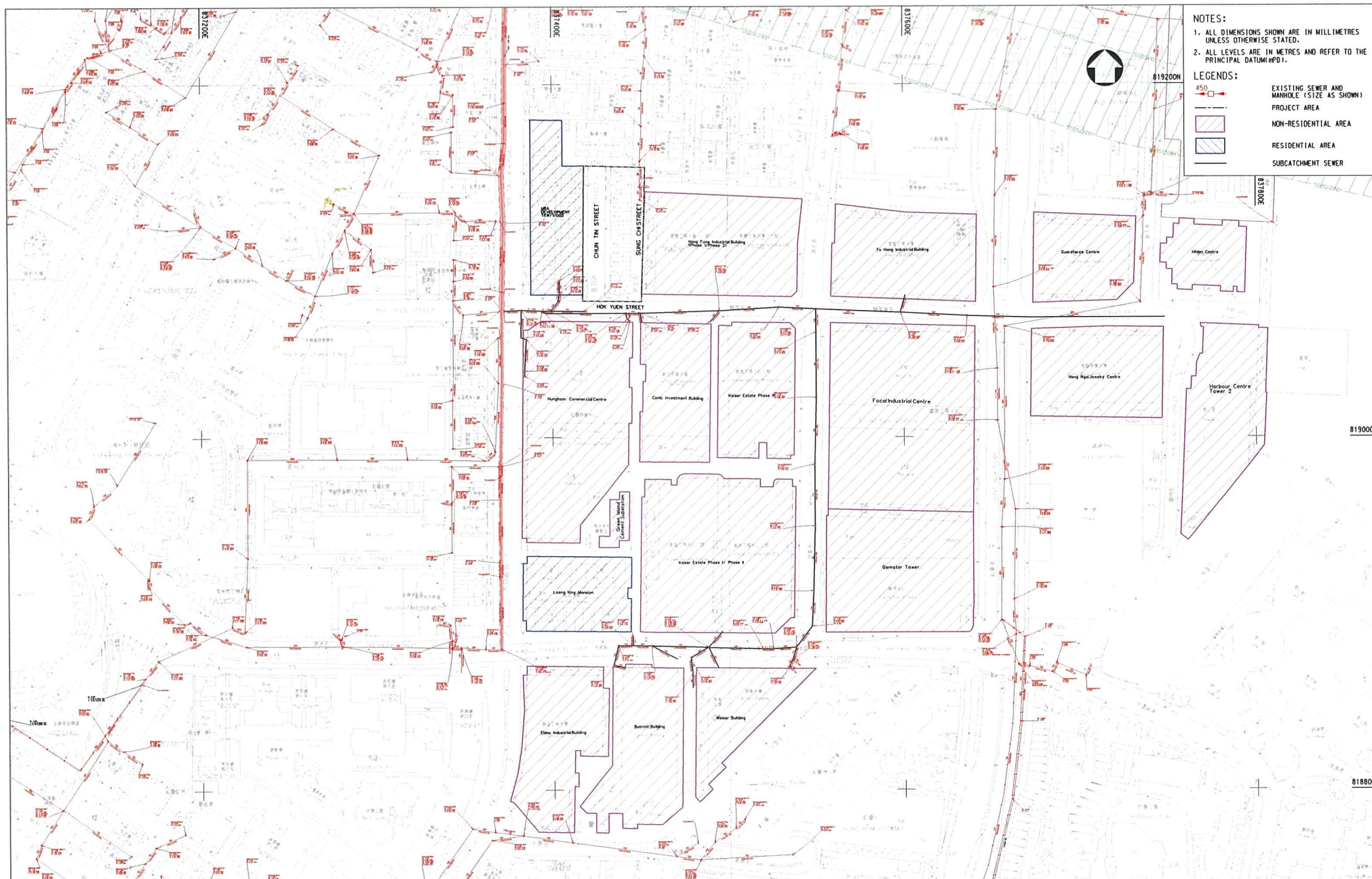


Drawing Title  
 EXISTING SEWERAGE  
 AND PROPOSED SEWERAGE CONNECTION

Drawing No. 圖則編號			FIGURE 3		
Drawn 繪圖	XK	Checked 校核	WCHE/DL	Approved 批准	-
Scale 比例	1:1000 @ A3	Date 日期	02/2016	Date 日期	02/2016
Status 現況			PRELIMINARY		

**AECOM** AECOM Consulting Services Limited





- NOTES:
1. ALL DIMENSIONS SHOWN ARE IN MILLIMETRES UNLESS OTHERWISE STATED.
  2. ALL LEVELS ARE IN METRES AND REFER TO THE PRINCIPAL DATUM (PD).
- LEGENDS:
- EXISTING SEWER AND MANHOLE (SIZE AS SHOWN)
  - PROJECT AREA
  - NON-RESIDENTIAL AREA
  - RESIDENTIAL AREA
  - SUBCATCHMENT SEWER

Project  
TERM ENVIRONMENTAL CONSULTANCY SERVICES  
PROPOSED CHUN TIN STREET/SUNG CHI STREET DEVELOPMENT  
SCHEME- DRAINAGE AND SEWERAGE IMPACT ASSESSMENT



Drawing Title

SEWERAGE CATCHMENT PLAN

Drawing No.  
圖則編號

FIGURE 4

Drawn  
繪圖 DRAWN

Checked  
校核 WCHE/DL

Approved  
批准

Scale  
比例 1:2000 @ A3

Date  
日期 02/2016

Date  
日期 02/2016

Status  
現況

PRELIMINARY

AECOM

AECOM Consulting Services Limited

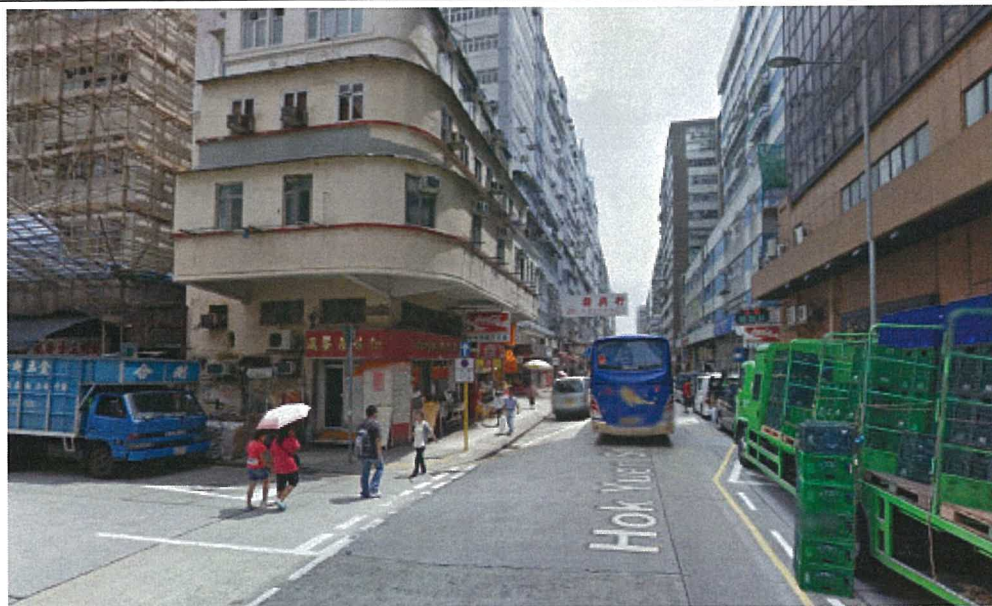


## **Appendix A**

### **Recent Photos of the Site**



Chun Tin Street



Chun Tin Street / Hok Yuen Street



Sung Chi Street



Sung Chi Street



## **Appendix B**

### **Proposed Drainage Connection Pipe**

Term Environmental Consultancy Services  
Proposed Chun Tin Street / Sung Chi Street Development Scheme  
Appendix B - Proposed Drainage Connection Pipe

**Table B-1 Capacity Check of Drainage Connection Pipe**

Manhole		Invert Levels (mPD)		Design of Pipe										Runoff Estimation						Capacity OK / Not OK ?	
From Manhole	To Manhole			Shape	Length (m)	Size (mm)	Gradient (1 in)	Hydraulic radius (m)	Cross area (m²)	Roughness (m)	Full Bore Velocity (m/s)	Full Bore Capacity (m³/s)	Time of Flow min	Time of concentration min	Paved Area (m²)	Upaved Area (m2)	Intensity (mm/hr)	Paved Runoff coefficient	Upaved Runoff coefficient		Peak Flow (m³/s)
												Q <sub>c</sub>									
u/s	d/s	u/s	d/s																		
SMH_T001	SMH4034040 <sup>(1)</sup>	1.90	1.80	Circ	10.3	375	103.0	0.094	0.110	0.0015	1.58	0.174	0.1087	5.1087	1688	0	269.2	0.9	0.3	0.114	OK

Note: (1) Proposed Connection Point  
(2) Time of entry of 5 minutes is assumed

**Parameters:**

Roughness K<sub>s</sub> (Conc. Pipe) = 1.5 mm  
Kinematic Viscosity (ν) = 1.14E-06 m<sup>2</sup>/s  
Paved Area Runoff Coefficient = 0.90  
Unpaved Area Runoff Coefficient = 0.30  
(Refer to Fluid Mechanics)

Rain Storm Return Period = 50year	
a =	687
b =	4.2
c =	0.42
Rainfall Intensity $i=a/(t_c+b)^c$	

## **Appendix C**

### **Estimated Sewage Generated from the Proposed Development**



Term Environmental Consultancy Services  
Proposed Chun Tin Street / Sung Chi Street Development Scheme  
Appendix C - Estimated Sewage Generated from the Proposed Development

**1. Residential Flow (Domestic)**

Proposed no. of Units	=	310
Flat Occupancy Assumption (Refer to C&SD 2011 Census, Average Size of Domestic Households for Kowloon City)	=	2.9
Proposed residential population	= 310 x 2.9 =	899
Proposed Unit Flow Factor for Private R1 (Refer to EPD Technical Paper, Report No. EPD/TP 1/05, Table T-1)	=	0.19 m <sup>3</sup> /day
Residential foul flow	=	899 x 0.19 m <sup>3</sup> /day
	=	170.81 m <sup>3</sup> /day
	=	<u>0.00198 m<sup>3</sup>/sec</u>

**2. Commercial/Other Use Flow (Non-domestic)**

**i) Planned Area for Club House**

Refer to EPD Technical Paper, Report No. EPD/TP 1/05, Table T-2 For "Type J11 - Community, Social & Personal Services" -	=	633 m <sup>2</sup>
Proposed Unit Flow Factor of Commercial Activities (per employee)	=	0.2 m <sup>3</sup> /day
Proposed Unit Flow Factor of Commercial Employee	=	0.08 m <sup>3</sup> /day
Refer to PNAP 41 (APP-6), assumed 1 person for every 15m <sup>2</sup> , Number of non-domestic Population	=	633/15
	=	43 employee
Hence, non-domestic flow from i)	=	12.04 m <sup>3</sup> /day
	=	<u>0.00014 m<sup>3</sup>/sec</u>

**ii) Planned Area for Retail**

Assumed approx. 20% of retail area to be restaurants use Refer to EPD Technical Paper, Report No. EPD/TP 1/05, Table T-2 For "Type J4 - Wholesale & Retail" -	=	2,454 m <sup>2</sup>
	= 20% of 2,454 =	491 m <sup>2</sup>
Proposed Unit Flow Factor of Commercial Activities (per employee) For "Type J10 - Restaurants & Hotels" -	=	0.2 m <sup>3</sup> /day
Proposed Unit Flow Factor of Commercial Activities (per employee)	=	1.5 m <sup>3</sup> /day
Proposed Unit Flow Factor of Commercial Employee	=	0.08 m <sup>3</sup> /day
Refer to PNAP 41 (APP-6), assumed 1 person for every 15m <sup>2</sup> , Number of non-domestic Population (Wholesale & Retail)	=	(2,454-491)/15 = 131 employee
Number of non-domestic Population (Restaurants & Hotels)	=	491/15 = 33 employee
Hence, non-domestic flow from ii) (Wholesale & Retail)	=	36.68 m <sup>3</sup> /day
(Restaurants & Hotels)	=	52.14 m <sup>3</sup> /day
	=	<u>0.00103 m<sup>3</sup>/sec</u>
Hence, total non-domestic flow from the development i) + ii)	=	<u>0.00117 m<sup>3</sup>/sec</u>

### 3. Total Sewage Generated from the Proposed Development

Peak Factor (Refer to EPD Technical Paper, Report No. EPD/TP 1/05, Table T-5)	=	6
Unit Inflow Factors ( $P_{CIF}$ ) for Central Kowloon (Refer to EPD Technical Paper, Report No. EPD/TP 1/05, Table T-4)	=	1
Domestic Total	=	0.00198 m <sup>3</sup> /sec
Non-domestic Total	=	0.00117 m <sup>3</sup> /sec
Domestic + Non-domestic Total	=	0.00314 m <sup>3</sup> /sec
Factored Domestic + Non-domestic Total	=	<u>0.01887 m<sup>3</sup>/sec</u>

## **Appendix D**

### **Proposed Sewerage Connection Pipe and Assessment of Existing Sewers**



Term Environmental Consultancy Services  
Proposed Chun Tin Street / Sung Chi Street Development Scheme  
Appendix D - Proposed Sewerage Connection Pipe and Assessment of Existing Sewers

Table D-1 Capacity Check of Existing Sewers after the Proposed Development

CW Equation Parameters: k = 1.5 mm  
g = 9.81 m/s<sup>2</sup>  
v = 1.00E-06 m<sup>2</sup>/s

Existing Sewers		Diameter of Pipe (mm)	Pipe Length (m)	US GL (mPD)	DS GL (mPD)	US IL (mPD)	DS IL (mPD)	US Cover Depth (mm)	DS Cover Depth (mm)	Gradient	Full Bore Velocity (m/s)	Full Bore Capacity (m <sup>3</sup> /s)	Base Flow* (m <sup>3</sup> /s)	ADWF due to Proposed Development (m <sup>3</sup> /s)	Cumulative ADWF (m <sup>3</sup> /s)	Contributing Population	Peaking Factor	Total Design Flow (m <sup>3</sup> /s)	Full Bore Capacity > Estimated Cumulative Flow	Remarks
From	To																			
FMH_T001	FMH_PR_001	225	17.00	5.20	5.15	3.80	3.67	1.18	1.26	0.0076	1.00	0.040	0.00000	0.00314	0.00314	1006	6	0.01887	Yes	Sufficient Capacity
FMH_PR_001	FMH4027767	225	11.00	5.15	5.15	3.67	3.24	1.26	1.69	0.0391	2.27	0.090	0.00000	0.00000	0.00314	1006	6	0.01887	Yes	Sufficient Capacity
FMH4027767	FMH4027764	450 x 2	11.93	5.15	5.30	3.24	3.14	1.46	1.71	0.0084	1.65	0.525	0.02808	0.00000	0.03122	9991	5	0.15611	Yes	Sufficient Capacity
FMH4027764	FGJ4001503	600	9.69	5.30	5.35	3.14	3.11	1.56	1.64	0.0031	1.21	0.341	0.00148	0.00000	0.03270	10463	4	0.13079	Yes	Sufficient Capacity

Note: \* Base Flow refers to the ADWF due to existing development and other proposed/planned developments discharging to the concerned sewer and detail breakdown refers to Table 7-5.

**Attachment 2**

Revised Draft DSP Plan (English and Chinese)

Revised Notes of Plan (English and Chinese)

Revised Explanatory Statement (English and Chinese)





**DRAFT URBAN RENEWAL AUTHORITY**  
**CHUN TIN STREET/SUNG CHI STREET**  
**DEVELOPMENT SCHEME PLAN NO. S/K9/URA1/A**

(Being a Draft Plan for the Purposes of the Town Planning Ordinance prepared by the Urban Renewal Authority under section 25 of the Urban Renewal Authority 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 widths, road junctions and alignments of roads 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 Schedule of Uses:
- (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; and
  - (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.
- (8) 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 permission is required.

- (9) 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.
- (10) Any development not compatible with the Urban Renewal Authority’s Development Scheme for the area is prohibited by virtue of section 25(4) of the Urban Renewal Authority Ordinance.



**DRAFT URBAN RENEWAL AUTHORITY**  
**CHUN TIN STREET / SUNG CHI STREET**  
**DEVELOPMENT SCHEME PLAN NO. S/K9/URA1/A**

Schedule of Uses

	<u>Page</u>
RESIDENTIAL (GROUP A) 7	1

**RESIDENTIAL (GROUP A) 7**

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	Commercial Bathhouse/Massage Establishment
Flat	Eating Place
Government Use (not elsewhere specified)	Education Institution
House	Exhibition or Convention Hall
Library	Government Refuse Collection Point
Market	Hospital
Place of Recreation, Sports or Culture	Hotel
Public Clinic	Institutional Use (not elsewhere specified)
Public Transport Terminus or Station (excluding open-air terminus or station)	Mass Transit Railway Vent Shaft and/or Other Structure above Ground Level other than Entrances
Residential Institution	Office
School (in free-standing purpose-designed building only)	Petrol Filling Station
Social Welfare Facility	Place of Entertainment
Utility Installation for Private Project	Private Club
	Public Convenience
	Public Transport Terminus or Station (not elsewhere specified)
	Public Utility Installation
	Public Vehicle Park (excluding container vehicle)
	Religious Institution
	School (not elsewhere specified)
	Shop and Services
	Training Centre

(Please see next page)

**RESIDENTIAL (GROUP A) 7 (Cont'd)**

---

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 bay 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

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.

Remarks

- (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 gross floor area (GFA) of 12,270m<sup>2</sup> and a maximum non-domestic GFA of 2,454m<sup>2</sup>; and a maximum building height of 130 metres above Principal Datum.
- (2) In determining the relevant maximum GFA for the purposes of paragraph (1) above, any floor space that is constructed or intended for use solely as carpark, loading/unloading bay, plant room, 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.

(Please see next page)



**RESIDENTIAL (GROUP A) 7 (Cont'd)**

Remarks (Cont'd)

- (3) Where the permitted plot ratio as defined in Building (Planning) Regulations is permitted to be exceeded in circumstances as set out in Regulation 22(1) or (2) of the said Regulations, the GFA for the building on land to which paragraph (1) above applies may be increased by the additional plot ratio by which the permitted plot ratio is permitted to be exceeded under and in accordance with the said Regulation 22(1) or (2), notwithstanding that the relevant maximum GFA specified in paragraph (1) above may thereby be exceeded.
- (4) Based on the individual merits of a development or redevelopment proposal, minor relaxation of the GFA and building height restrictions as stated in paragraph (1) above may be considered by the Town Planning Board on application under section 16 of the Town Planning Ordinance.

**DRAFT URBAN RENEWAL AUTHORITY**  
**CHUN TIN STREET/SUNG CHI STREET**  
**DEVELOPMENT SCHEME PLAN NO. S/K9/URA1/A**

**EXPLANATORY STATEMENT**

**DRAFT URBAN RENEWAL AUTHORITY**  
**CHUN TIN STREET/SUNG CHI STREET**  
**DEVELOPMENT SCHEME PLAN NO. S/K9/URA1/A**

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**DRAFT URBAN RENEWAL AUTHORITY  
CHUN TIN STREET/SUNG CHI STREET  
DEVELOPMENT SCHEME PLAN NO. S/K9/URA1/A**

(Being a Draft Plan for the Purpose of the Town Planning Ordinance prepared by the Urban Renewal Authority under section 25 of the Urban Renewal Authority 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. INTRODUCTION**

This Explanatory Statement is intended to assist an understanding of the draft Urban Renewal Authority (URA) Chun Tin Street/Sung Chi Street Development Scheme Plan No. S/K9/URA1/A. It reflects the planning intention and objectives of the Town Planning Board (the Board) for the area covered by the Plan.

**2. AUTHORITY FOR THE PLAN AND PROCEDURES**

- 2.1 In the URA's 15<sup>th</sup> Business Plan (2016/17) approved by the Financial Secretary in early 2016, Chun Tin Street/Sung Chi Street Development Scheme (KC-008(A)) was proposed to be processed as a Development Scheme under section 25 of the URA Ordinance (URAO).
- 2.2 On 6 May 2016, pursuant to section 23(1) of the URAO, the URA notified in the Government Gazette the commencement of implementation of the Chun Tin Street/Sung Chi Street Development Scheme.
- 2.3 On 13 May 2016, the URA submitted the draft URA Chun Tin Street/Sung Chi Street Development Scheme Plan for the Development Scheme to the Board under section 25(5) of the URAO.
- 2.4 On xxx, the Board, under section 25(6)(a) of the URAO, deemed the draft URA Chun Tin Street/Sung Chi Street Development Scheme Plan as being suitable for publication. Under section 25(7) of the URAO, the draft Development Scheme Plan, which the Board has deemed suitable for publication under section 25(6)(a) of the URAO, is deemed to be a

draft plan prepared by the Board for the purposes of the Town Planning Ordinance (the Ordinance).

- 2.5 On xx xx, the draft URA Chun Tin Street/Sung Chi Street Development Scheme Plan No. S/K9/URA1/1 (the Plan) was exhibited under section 5 of the Ordinance. By virtue of section 25(9) of the URAO, the Plan has from that date replaced the draft Hung Hom Outline Zoning Plan (OZP) No. S/K9/25 in respect of the area delineated and described herein.

### **3. OBJECT OF THE PLAN**

The Plan illustrates that the Development Scheme Area (the Area) is designated as “Residential (Group A)7” (“R(A)7”) primarily for high density residential developments with commercial uses being always permitted on the lowest three floors of a building or in the purpose-designed non-residential portion of an existing building. The Scheme also aims to enhance local traffic and pedestrian environment via closure of Chun Tin Street for better site utilisation and road improvement works at Sung Chi Street. It is planned to be developed by means of the Development Scheme prepared under section 25 of the URAO. The Development Scheme intends to achieve environmental improvement through redevelopment and promoting efficient land use.

### **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 in this zone 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. AREA COVERED BY THE PLAN**

- 5.1 The Development Scheme boundary, which is shown in heavy broken line on the Plan, covers a total area of about 2,475m<sup>2</sup>.
- 5.2 The Area covers a whole row of old and dilapidated tenement buildings bounded by Chun Tin Street, Hok Yuen Street and Sung Chi Street. The Area also covers Chun Tin Street which is a dead-end road that is proposed to be closed and integrated into the Area for

redevelopment to achieve better site utilisation, increase redevelopment potential and enhance local traffic and pedestrian environment. The Area also includes part of Sung Chi Street adjoining the Area to carry out road improvement works and the adjoining pavement of Hok Yuen Street of which the tenement buildings overhang above.

- 5.3 The Area has excluded the lots to the immediate west of Chun Tin Street which is the site of URA Ma Tau Wai Road/Chun Tin Street Development Project (TKW/1/002) currently under redevelopment. The lots to the immediate north are occupied by Fook Wan Mansion, which is relatively new and in better building condition. It is also excluded from the Development Scheme boundary.
- 5.4 On the approved Hung Hom OZP No. S/K9/24, the Area was primarily zoned "Residential (Group A)" and with an area shown as "Road" before the exhibition of the Plan.

## **6. EXISTING CONDITIONS**

- 6.1 The buildings within the Area are between four to six storeys and predominantly residential in nature with commercial/retail shops and some workshops for car repair services, metal hardware processing and recycling activities at ground floor. Most of the existing buildings are in deteriorating condition.
- 6.2 The poor housing condition, the presence of sub-divided units, unauthorised building structures on the roofs and backyards of many of the buildings, and a number of ground floor workshops are sources of environmental nuisance in the area.
- 6.3 Buildings facing Chun Tin Street are affected by noise and environmental nuisance generated from the workshop activities at the ground floor of Chun Tin Street.
- 6.4 The existing Chun Tin Street in the Area is a dead-end road only serving as vehicular access to the old tenement buildings in the Area as well as the adjoining Fook Wan Mansion and the URA Ma Tau Wai Road/Chun Tin Street Development Project (TKW/1/002). Vehicles will use Hok Yuen Street to enter Chun Tin Street; and manoeuvre and turn around at the dead-end of Chun Tin Street to leave via Hok Yuen Street. The workshop activities at the ground floor of the tenement buildings in the Area often occupy the pavement and Chun Tin Street for parking and loading/unloading of goods especially during day time. There are conflicts of usage among pedestrian, workshop activities and vehicular traffic at Chun Tin Street.



- 6.5 The URA Ma Tau Wai Road/Chun Tin Street Development Project (TKW/1/002) is located to the immediate west of the Area. It is currently a construction site. URA will redevelop the site for residential and commercial uses. The redevelopment will comprise two residential towers on top of a podium with commercial and community uses on the lower floors, with at-grade open space provided for public use in the redevelopment site. The TKW/1/002 project is anticipated to be completed by 2018/2019.

## **7. PLANNING AND LAND USE PROPOSALS**

- 7.1 On the Plan, the Area is zoned “R(A)7” and the Notes of the Plan indicated broadly the intended land use within the Area.

### **Uses**

- 7.2 The “R(A)7” 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.
- 7.3 Development or redevelopment within the “R(A)7” zone is restricted to a maximum domestic GFA of 12,270sq.m. and a maximum non-domestic GFA of 2,454sq.m., and a maximum building height of 130 metres above Principal Datum (mPD). The proposed development within the Area will provide about 310 residential units in a residential tower on top of a 3-level podium with commercial / retail uses. Ancillary car park will be provided in a basement floor to serve the development.
- 7.4 A maximum building height of 130mPD for the Area is proposed in consideration of the elongated shape of the site which has imposed constraints in maximising the site development potential. With the more relaxed building height of 130mPD, a slimmer building block and more design flexibility can be provided in the Area to accommodate the permissible GFA of the Area to provide more flat supply to the market. The reduced building bulk of the residential tower can also enhance local air ventilation and permeability to bring improvement to the local environment in this part of the dense urban context. Visual appraisal has been carried out and the proposed development with 130mPD in the Area is considered compatible with the surrounding developments without obstructing the mountain ridgeline in Kowloon.
- 7.5 To provide design flexibility, minor relaxation of the GFA and building height restrictions may be considered by the Board on

application under section 16 of the Ordinance taking into account its individual planning and design merits.

### **Internal Transport Facilities**

- 7.6 Ancillary car parking spaces will be provided in a basement car park to serve the development in order to minimise the impact on the local traffic flow. Loading / unloading bays will be provided at the roadside of the widened Sung Chi Street along the Area. The loading/unloading bays will be for share use to benefit both the residents and retail users of the proposed development and the public.

### **Vehicular Circulation**

- 7.7 To improve the local traffic arrangement and circulation, the existing dead-end street at Chun Tin Street will be permanently closed. A portion of land at the north of the Area will be dedicated for a new road as a vehicular turning area connecting from Sung Chi Street. The dedicated area will be for public use and will serve as vehicular access for the proposed development of the Area, Fook Wan Mansion to the north and the future development at URA Ma Tau Wai Road / Chun Tin Street Development Project (TKW/1/002) to the west.
- 7.8 Widening of Sung Chi Street to a two-lane carriageway with pavement is proposed to enhance the traffic and pedestrian flow. A further building setback at ground floor level of about 5m to 6m from road kerb of Sung Chi Street to create a wider passageway for pedestrians and provide loading/unloading bays for shared use with the public.
- 7.9 URA will take up the management and maintenance of the new vehicular turning area, its adjoining pavement in the Area, and loading/unloading bays along Sung Chi Street.
- 7.10 An indicative plan showing the proposed road arrangement of the Area is attached in **Annex 1**.

### **Pedestrian Circulation**

- 7.11 Taking the opportunity of redevelopment, the Development Scheme aims to rationalise the local pedestrian circulation to improve the safety and pedestrian walking environment within the Area. Continuous pavement will be provided along the new vehicular turning road, Sung Chi Street and Hok Yuen Street adjoining the proposed development in the Area. It will provide safe pedestrian walking environment and direct pavement network from Sung Chi Street towards Ma Tau Wai Road via the future at-grade open space provided within the adjoining URA development (TKW/1/002) or via the pavement surrounding the proposed development in the Area.

- 7.12 With the closure of Chun Tin Street for integration into the Area for redevelopment, it offers the opportunity to provide more space for road widening of Sung Chi Street and pedestrian passageway at grade within the Area to provide a pleasant and safer pedestrian walking environment separated from the traffic road.
- 7.13 The ground floor of the proposed development will be setback by about 5m to 6m from road kerb of Sung Chi Street and about 5m from road kerb of Hok Yuen Street for provision of a wider pavement along both streets.

#### **Open Space and Greening**

- 7.14 Private open space will be provided on the podium for the enjoyment of the residents of the proposed development. To enhance pedestrian circulation between Sung Chi Street and Ma Tau Wai Road, at-grade open space or pedestrian passage will be provided in the design to provide better pedestrian linkage with the at-grade open space at the adjoining URA development (TKW/1/002).
- 7.15 Greening at podium edge and pedestrian level of the proposed development within the Area will be provided as far as practicable and optimised to meet the Sustainable Building Design (SBD) Guidelines and to enhance the local streetscape.
- 7.16 Landscaping including road paving and roadside greening will be provided at the new turning area and its adjoining pavement, and the corner area at the junction of Sung Chi Street and Hok Yuen Street to create a pleasant and comfortable streetscape.

### **8. IMPLEMENTATION OF THE SCHEME**

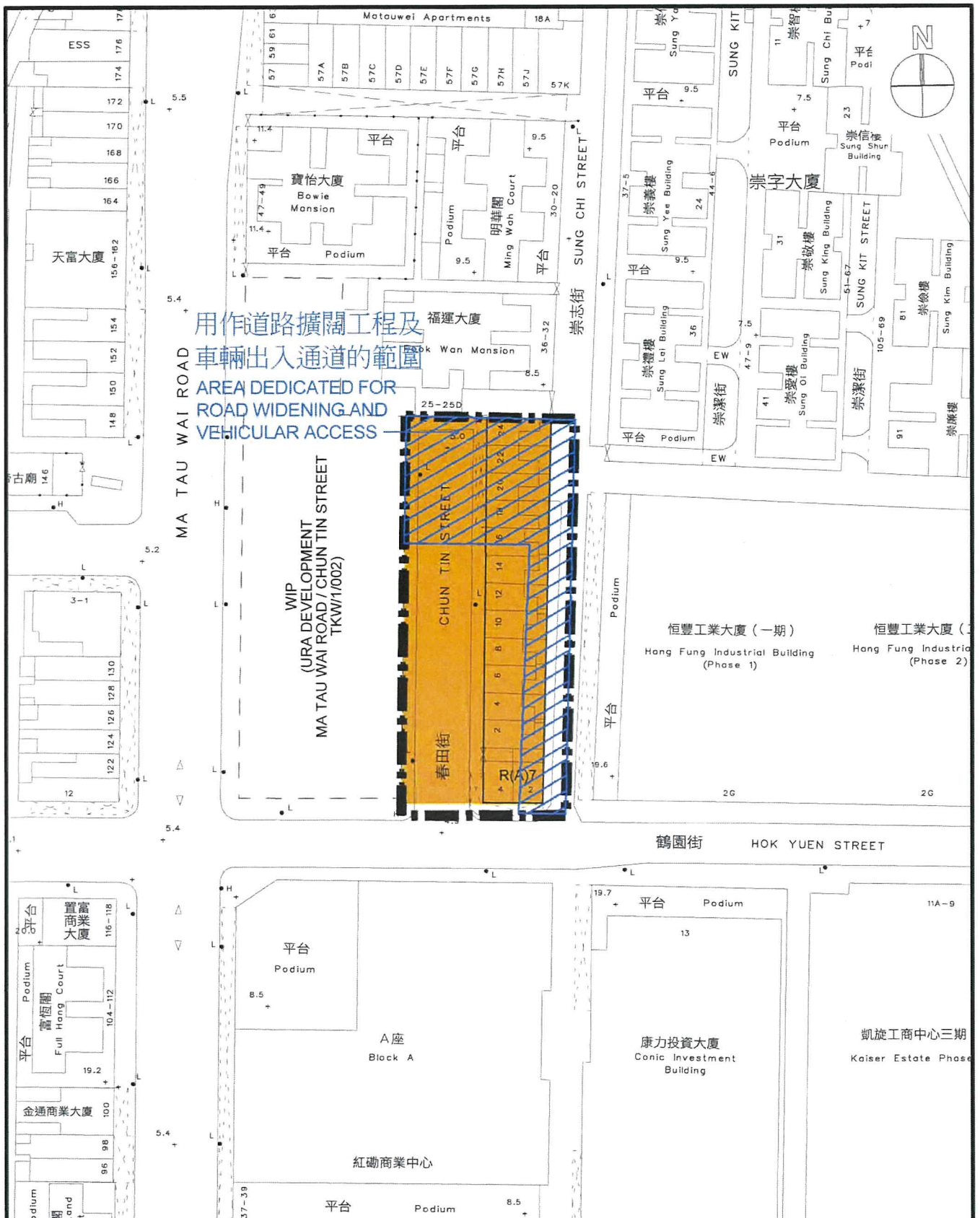
- 8.1 The proposals set out in the Plan form an integral part of the Development Scheme for the Area.
- 8.2 The URA does not own or lease any land within the boundaries of the Development Scheme. The URA intends to acquire the properties within the Area of the Scheme. With respect to any of such properties which cannot be acquired by purchase, the Secretary for Development would consider, upon the application of the URA, recommending to the Chief Executive in Council the resumption of properties under the Lands Resumption Ordinance, if necessary.
- 8.3 All eligible tenants will be offered an ex-gratia payment package in accordance with URA's policy. The URA has already entered into agreement with the Hong Kong Housing Society (HKHS) and the



Hong Kong Housing Authority (HKHA) for the purpose of making available rehousing units by HKHS or HKHA to rehouse affected tenants who satisfy the eligibility criteria of HKHS or HKHA.

- 8.4 Non-domestic tenants of properties acquired by URA whose tenancies are terminated by URA due to implementation of the Development Scheme may be offered an ex-gratia allowance to assist in their business relocation.
- 8.5 The URA may implement the Development Scheme on its own or in association with one or more joint venture partners.

TOWN PLANNING BOARD  
MAY 2016



計劃範圍  
SCHEME AREA  
住宅(甲類)7  
R(A)7

市區重建局春田街 / 崇志街發展計劃  
URBAN RENEWAL AUTHORITY  
CHUN TIN STREET / SUNG CHI STREET  
DEVELOPMENT SCHEME



Scale 1:1,000  
METERS 10 0 10 20 30 40 50

KC-008(A)

附件一  
ANNEX 1

**市區重建局**  
**春田街／崇志街發展計劃草圖編號 S/K9/URA1/A**

(這是為施行《城市規劃條例》的規定而由市區重建局根據《市區重建局條例》  
第 25 條擬備的草圖)

註 釋

(注意：這份《註 釋》是圖則的一部分)

- (1) 這份《註釋》說明圖則涵蓋範圍內的土地上經常准許的用途或發展，以及須向城市規劃委員會申請許可的用途或發展。城市規劃委員會若批給許可，可能附加或不附加條件。須取得這種許可的人士，應以特定表格向城市規劃委員會提出申請。有關的特定表格可向城市規劃委員會秘書索取，填妥後送交城市規劃委員會秘書收。
- (2) 在進行這份《註釋》所載的用途或發展(包括經常准許及可獲批給許可的用途或發展)時，必須同時遵守一切其他有關的法例、政府土地契約條款的規定，以及任何其他適用的政府規定。
- (3)
  - (a) 任何土地或建築物的現有用途，即使不符合圖則的規定，也無須更正，直至用途有實質改變或建築物進行重建為止。
  - (b) 任何用途的實質改變，或任何其他發展(就現有用途而對有關土地或建築物的發展作出輕微改動及／或修改是經常准許的，不在此限)或重建，則必須是圖則所經常准許的；或是如果必須先取得城市規劃委員會的許可，則須符合城市規劃委員會所批給許可的內容。
  - (c) 就上文(a)分段而言，「任何土地或建築物的現有用途」指 -
    - (i) 首份涵蓋有關土地或建築物的法定圖則(下稱「首份圖則」)的公告在憲報刊登之前，
      - 已經存在的用途，而該項用途由展開以來一直持續進行；或
      - 與現有建築物有關並根據《建築物條例》獲得批准的用途或用途更改；以及



- (ii) 在首份圖則公布之後，
- 首份圖則或其後公布的任何一份圖則所准許的用途，而該項用途在有關圖則有效期內展開，而且自展開以來一直持續進行；或
  - 與現有建築物有關並根據《建築物條例》獲得批准的用途或用途更改，而且在獲得批准之時，是當時有效的圖則所准許的。
- (4) 除城市規劃委員會另有訂明外，凡圖則經常准許或依據城市規劃委員會所批給許可而已經展開或實質改變用途，或已經進行發展或重建，則城市規劃委員會就該地點所批給的一切與用途或實質改變用途或發展或重建有關的許可，即告失效。
- (5) 進行詳細規劃時，路面闊度、路口和道路的路線可能須要略為調整。
- (6) 任何土地或建築物的臨時用途(預料為期不超過五年)，只要符合一切其他有關的法例、政府土地契約條款的規定，以及任何其他政府規定，便屬經常准許的用途，無須符合有關地帶指定的用途或這份《註釋》的規定。預料為期超過五年的臨時用途，則必須符合有關地帶指定的用途或這份《註釋》的規定。
- (7) 以下是圖則涵蓋範圍內的土地上經常准許的用途或發展，但在「土地用途表」第二欄所載的用途或發展除外：
- (a) 植物苗圃、美化種植、休憩用地、避雨處、小食亭、道路、巴士／公共小型巴士車站或路旁停車處、單車徑、香港鐵路車站入口、香港鐵路地下結構、的士站、大溝渠、公用事業設施管道、電線杆、電燈柱、電話亭、電訊無線電發射站、自動櫃員機和神龕的提供、保養或修葺工程；以及
  - (b) 由政府統籌或落實的土力工程、地區小工程、道路工程、排污工程、渠務工程、環境改善工程、與海事有關的設施、水務工程(配水庫工程除外)及其他公共工程。
- (8) 除非另有訂明，准許的用途和發展在同一地帶內的所有附帶建築、工程和其他作業，以及所有直接有關並附屬於准許用途和發展的用途，均是經常

准許的，無須另行申請規劃許可。

- (9) 在這份《註釋》內，「現有建築物」指一間實際存在，並符合任何有關法例及有關政府土地契約條款的建築物(包括構築物)。
- (10) 根據《市區重建局條例》第 25(4)條的規定，任何與市區重建局為圖則所涵蓋的地區擬備的發展計劃不相容的發展，均禁止進行。

市區重建局  
春田街／崇志街  
發展計劃草圖編號 S/K9/URA1/A

土地用途表

住宅(甲類)7

頁次  
1



**住宅(甲類)7**

第一欄 經常准許的用途	第二欄 須先向城市規劃委員會申請，可能在有 附帶條件或無附帶條件下獲准的用途
救護站	商營浴室／按摩院
分層住宅	食肆
政府用途(未另有列明者)	教育機構
屋宇	展覽或會議廳
圖書館	政府垃圾收集站
街市	醫院
康體文娛場所	酒店
政府診所	機構用途(未另有列明者)
公共車輛總站或車站(露天總站或車站 除外)	香港鐵路通風塔及／或高出路面的 其他構築物(入口除外)
住宿機構	辦公室
學校(只限設於特別設計的獨立校舍)	加油站
社會福利設施	娛樂場所
私人發展計劃的公用設施裝置	私人會所
	公廁設施
	公共車輛總站或車站(未另有列明者)
	公用事業設施裝置
	公眾停車場(貨櫃車除外)
	宗教機構
	學校(未另有列明者)
	商店及服務行業
	訓練中心

(請看下頁)

住宅(甲類)7(續)

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除以上所列，在(a)建築物的最低三層，包括地庫；或(b)現有建築物特別設計的非住宅部分，而兩者均不包括全層或主要為停車位、上落客貨車位及／或機房的樓層，經常准許的用途亦包括：

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食肆  
教育機構  
機構用途(未另有列明者)  
場外投注站  
辦公室  
娛樂場所  
私人會所  
公廁設施  
可循環再造物料回收中心  
學校  
商店及服務行業  
訓練中心

規劃意向

此地帶的規劃意向，主要是作高密度住宅發展。在建築物的最低三層，或現有建築物特別設計的非住宅部分，商業用途屬經常准許的用途。

備註

- (1) 任何新發展或現有建築物的加建、改動及／或修改，或現有建築物的重建，不得引致整個發展及／或重建計劃的最大住用總樓面面積超過 12 270 平方米及最大非住用總樓面面積超過 2 454 平方米，以及最高建築物高度超過主水平基準上 130 米。
- (2) 為施行上文第(1)段而計算有關最大總樓面面積時，任可樓面空間如純粹建造或擬用作停車位、上落客貨車位、機房和管理員辦事處，或管理員宿舍和康樂設施，而兩者都是供住用建築物或建築物住用部分的全部擁有人或佔用人使用及使其受益，只要這些用途和設施是附屬於發展或重建計劃及與其直接有關，則可免計算在內。

(請看下頁)

住宅(甲類)7(續)

備 註 (續)

- (3) 遇有《建築物(規劃)規例》第 22(1)或(2)條所列的情況而獲准超過該規例界定的准許地積比率時，在上文第(1)段適用的土地範圍內的建築物的總樓面面積可提高；提高的幅度為根據上述規例第 22(1)或(2)條獲准超過准許地積比率的幅度，縱使提高後的總樓面面積因而超過上文第(1)段所規定的有關最高總樓面面積亦可。
- (4) 城市規劃委員會如接獲根據《城市規劃條例》第 16 條提出的申請，可按個別發展或重建計劃的情況，考慮略為放寬上文第(1)段所述的總樓面面積及最高建築物高度的限制。



市區重建局

春田街／崇志街發展計劃草圖編號 S/K9/URA1/A

說明書

## 市區重建局

### 春田街／崇志街發展計劃草圖編號 S/K9/URA1/A

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8.	計劃的實施	5

**市區重建局**  
**春田街／崇志街發展計劃草圖編號 S/K9/URA1/A**

(這是為施行《城市規劃條例》的規定而由市區重建局根據《市區重建局條例》  
第 25 條擬備的草圖)

**說明書**

注意：就《城市規劃條例》而言，不應視本《說明書》為圖則的一部分。

**1. 引言**

本《說明書》旨在協助大眾了解《市區重建局(下稱「市建局」) 春田街／崇志街發展計劃草圖編號 S/K9/URA1/A 的內容，並闡述城市規劃委員會(下稱「城規會」)就該圖涵蓋範圍所訂定的規劃意向和目的。

**2. 擬備該圖的權力依據及程序**

- 2.1 在財政司司長在二零一六年上旬核准市建局第十五個業務計劃(二零一六／一七年度)，建議根據《市區重建局條例》第 25 條，以發展計劃方式進行春田街／崇志街發展計劃。
- 2.2 二零一六年五月六日，根據《市區重建局條例》第 23(1)條，市建局在政府憲報上公布春田街／崇志街發展計劃開始實施的日期。
- 2.3 二零一六年五月十三日，市建局根據《市區重建局條例》第 25(5)條，就發展計劃向城規會呈交發展計劃草圖。
- 2.4 XX年X月XX日，城規會根據《市區重建局條例》第 25(6)(a)條認為發展計劃草圖適宜公布。根據《市區重建局條例》第 25(7)條，城規會根據《市區重建局條例》第 25(6)(a)條認為適宜公布的發展計劃草圖，須當作是由城規會為施行《城市規劃條例》而擬備的草圖。
- 2.5 XX年X月XX日，城規會根據《城市規劃條例》第 5 條，展示《市區重建局春田街／崇志街發展計劃草圖編號 S/K9/URA1/1》(「該圖」)。憑藉《市區重建局條例》第 25(9)條，該圖由上述日期起即取代《紅磡分區計劃大綱草圖編號 S/K9/25》中與該圖所劃定及描述的地區有關的部分。



### 3. 擬備該圖的目的

該圖旨在顯示發展計劃區(下稱「該區」)已指定為「住宅(甲類)7」地帶，作高密度住宅用途。在建築物的最低三層，或現有建築物特別設計的非住宅部分，商業用途屬經常准許的用途。發展計劃亦旨在透過封閉春田街以改善區內的交通及行人環境，提高土地運用的效益及進行崇志街道路改善工程。發展計劃根據《市區重建局條例》第 25 條擬備，該區擬藉發展計劃的方式進行發展。該發展計劃擬透過重建以改善環境，及促進更具效益的土地用途。

### 4. 該圖的《註釋》

- 4.1 該圖附有一份《註釋》，分別說明該區此地帶內經常准許的各類用途或發展，以及須向城規會申請許可的各類用途或發展。城規會若批給許可，可能附加或不附加條件。《城市規劃條例》第 16 條有關申請規劃許可的規定，使當局可較靈活地規劃土地用途及管制發展，以配合不斷轉變的社會需要。
- 4.2 為使公眾易於明白起見，規劃署專業事務部備有一份《釋義》，把《註釋》內部分詞彙的定義列出，以供公眾索閱。這份《釋義》亦可從城規會的網頁下載(網址為 <http://www.info.gov.hk/tpb>)。

### 5. 該圖涵蓋的地區

- 5.1 發展計劃的界線在該圖上以粗虛線顯示，總面積約為 2,475 平方米。
- 5.2 該區涵蓋被春田街，鶴園街及崇志街圍繞的一整列殘破舊樓宇，及春田街。春田街是一條掘頭路，發展計劃擬議將春田街封閉及納入該區的重建計劃內，以達至更有效益地運用土地、增加地盤發展潛力及改善區內交通和行人環境。此外，該區亦包涵了毗連該區的崇志街部分路面和被該區的樓宇覆蓋的鶴園街行人路，以進行道路改善工程。
- 5.3 該區並不包括毗連西面的市建局馬頭圍道／春田街發展項目(TKW/1/002)的地盤及緊接該區北面地段的福運大廈。市建局馬頭圍道／春田街發展項目(TKW/1/002)現正進行重建工程，而福運大廈的樓齡相對較新及樓宇狀況較佳。
- 5.4 在本圖則展示之前，該區於紅磡分區計劃大綱核准圖編號 S/K9/24 上主要劃作為「住宅(甲類)」地帶，及部分範圍顯示為道路。

## 6. 現時狀況

- 6.1 該區內樓宇樓高 4 至 6 層，主要作住宅用途。地面設有商業／零售店舖和一些用作汽車維修、五金加工及回收業務的工場。大部分現有建築物處於日漸惡化的狀況。
- 6.2 該區內的樓宇狀況欠佳，樓宇被分間成細小單位，很多樓宇的天台及後院建有僭建物，地舖亦有用作工場，令該區環境受到滋擾。
- 6.3 春田街的地舖有工場活動，面向春田街的樓宇受到這些工場活動帶來的嘈音及環境滋擾。
- 6.4 現時春田街為一條掘頭路，只用作通往該區的舊樓群及毗鄰該區的福運大廈和市建局馬頭圍道／春田街發展項目（TKW/1/002）的車輛通道。車輛經由鶴園街駛入春田街，須於春田街的盡頭掉頭經鶴園街離開。該區內的地舖工場活動亦經常佔用了春田街的行人路面及行車道作泊車及上落貨，情況於日間尤為明顯。這反映了春田街存在行人、車輛及工場活動之間同時佔用路面並有所衝突的情況。
- 6.5 緊接該區西面的市建局馬頭圍道／春田街發展項目（TKW/1/002）現時為建築地盤。市建局將會重建該地盤作住宅及商業用途。該重建項目包括兩座住宅樓宇及用作商業及社區設施用途的基座，並會提供地面休憩空間給公眾使用。TKW/1/002 發展項目預計將於 2018/2019 年度完成。

## 7. 規劃及土地用途建議

- 7.1 該區在該圖上劃為「住宅(甲類) 7」地帶。該圖的《註釋》顯示區內概括的預定土地用途。

### 用途

- 7.2 「住宅(甲類)7」地帶的基本規劃意向主要是作高密度住宅發展。在建築物的最低三層，或現有建築物特別設計的非住宅部分，商業用途屬經常准許的用途。
- 7.3 在「住宅(甲類) 7」地帶內的任何發展或重建，最大住用總樓面面積上限為 12,270 平方米、最大非住用總樓面面積上限為 2,454 平方米及最高建築物高度限制為主水平基準上 130 米。擬議發展

將有一座住宅樓宇連 3 層基座作商業/零售用途，提供約 310 個住宅單位。擬議發展將為該區於地庫提供附屬泊車位。

- 7.4 鑑於該區的地盤呈長方型，在設計上對用盡地盤的發展潛力帶來很大的限制。因此，該區的最高建築物高度限制建議為主水平基準上 130 米，以有利於減低樓宇寬度及在樓宇設計上提供更大彈性，並可容納可發展的總樓面面積，為市場增加房屋供應。較細小的住宅樓宇體積亦可改善區內的空氣流通，為這個處於高密度市區內的小區改善區內環境。經過景觀評估，擬議發展為主水平基準上 130 米的設計不會阻礙到九龍山脊線，並且能融入與周邊的建築群。
- 7.5 為提供設計上的靈活性，城市規劃委員會如接獲根據《城市規劃條例》第 16 條提出的申請，按個別規劃和設計優點，考慮略為放寬樓面面積和建築物高度限制。

#### **內部運輸設施**

- 7.6 為盡量減低發展計劃對鄰近交通的影響，該區將於地庫提供附屬泊車位。上落客停車處將會設於沿著該區邊緣擴闊後的崇志街路旁。這些上落客停車處將提供予該區的住客、商業用戶及公眾共同使用。

#### **車輛通道**

- 7.7 為改善該區交通安排和流通度，現時春田街掘頭路將會永久封閉。該區的北面將會提供一個全新的道路路面作車輛迴旋處與崇志街連接，提供地方供車輛在該處作迴轉之用。該全新的車輛迴旋處會開放給公眾使用，並可作為該區的擬議發展計劃、北面的福運大廈及西面市建局馬頭圍道/春田街發展項目（TKW/1/002）的車輛通道。
- 7.8 為改善車輛及行人通道環境，崇志街將擴闊為一條附有行人路的雙程車道。在該區的樓宇設計方面，樓宇的地面樓層會後移至距離崇志街路旁約 5 至 6 米，以營造一條更寬闊的行人通道及提供上落客停車處供該區居民及公共使用。
- 7.9 市建局將負責管理及保養該區新的車輛迴旋處和其旁邊的行人通道，以及在崇志街設置的上落客停車處。
- 7.10 該區擬議的道路安排指示圖載於附件一。

### 行人通道

- 7.11 藉著重建，本發展計劃旨在調整當區的行人通道，從而改善區內的行人安全和步行環境。該區將沿著新的車輛迴旋處，崇志街及鶴園街提供有連貫性的行人通道。透過將來在市建局發展項目（TKW/1/002）內的地面休憩空間及沿擬議發展計劃周邊的行人路面，可打造一個安全的步行環境及行人網絡，行人可直接由崇志街通往馬頭圍道。
- 7.12 藉著將春田街永久封閉以達致更全面的重建規劃，發展計劃提供機會擴闊崇志街，提供更多地面空間及地面行人通路，將行人和車輛分開，打造一個更宜人和安全的行人步行環境。
- 7.13 擬議發展的基座的地面樓層會後移至距離崇志街路旁約 5 至 6 米及距離鶴園街路旁約 5 米，以提供更寬敞的行人通路。

### 休憩用地及綠化

- 7.14 擬議發展將於平台上提供私人休憩空間供住客使用。此外，為改善崇志街及馬頭圍道之間的人流，擬議發展在設計上會闢設路面休憩空間或行人通道，以配合毗連的市建局發展項目（TKW/1/002）內的地面休憩用地，提供更完善的行人網絡。
- 7.15 在可能的情況下，擬議發展的基座邊緣及行人區會盡量綠化，以合乎「可持續建築設計指引」標準及優化該區的街景。
- 7.16 市建局將會在新的車輛迴旋處和其旁邊的行人道，及崇志街與鶴園街交界處鋪設路面及進行街道綠化，從而打造更優美舒適的街道環景。

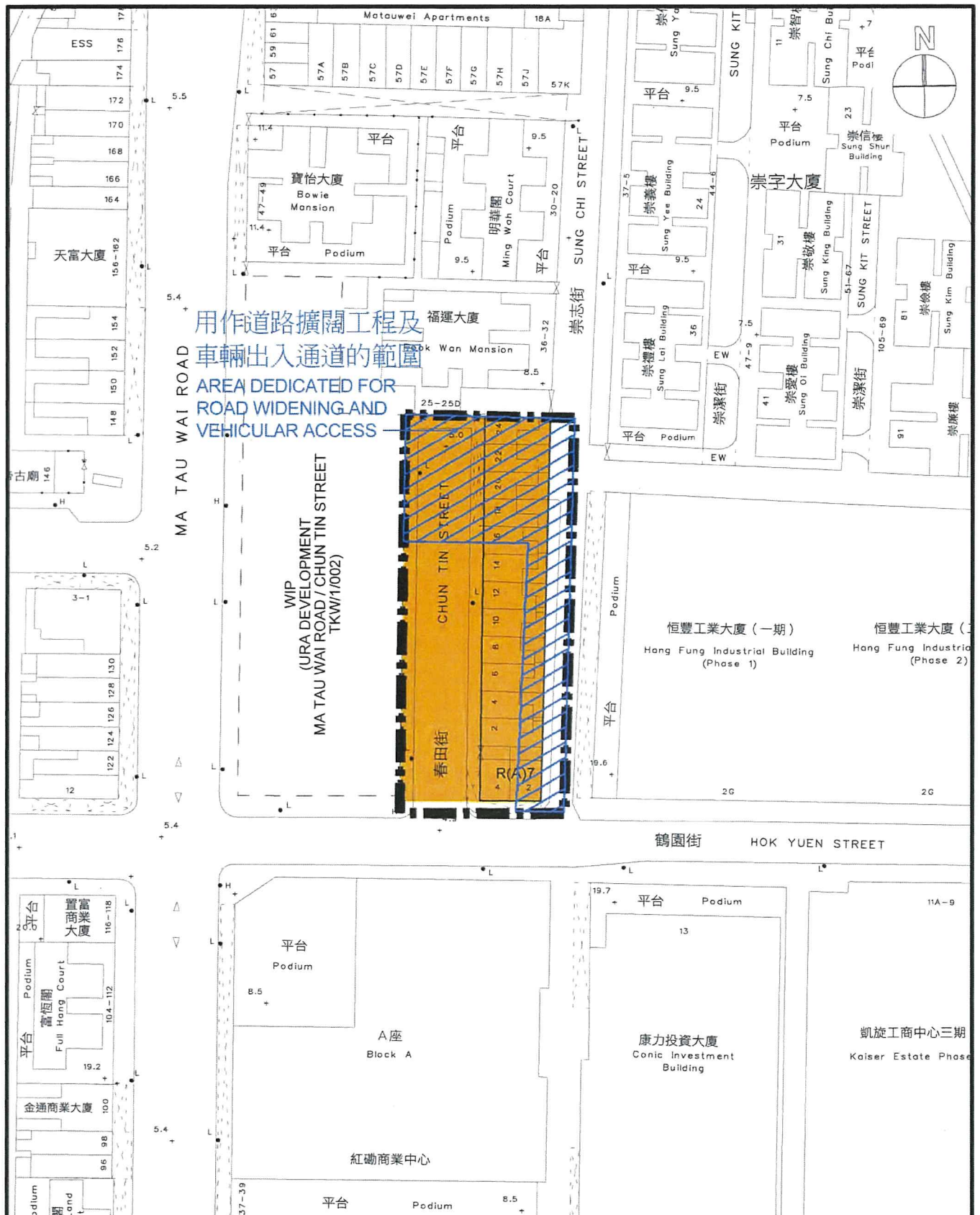
## 8. 計劃的實施

- 8.1 該圖所載的建議是該區發展計劃的必須部分。
- 8.2 市建局並不擁有或沒有租用發展計劃範圍內的任何土地。市建局擬以收購方式取得該區內的物業。在有須要的情況下，如果有關物業不能透過收購方式取得，市建局會向發展局局長申請，建議行政長官會同行政會議建議根據《收回土地條例》收地。
- 8.3 市建局會按照既定的政策，向所有合資格的租客提出特惠津貼補償方案。市建局與香港房屋協會(下稱「房協」)及香港房屋委員會(下稱「房委會」)已訂立協議，由房協或房委會提供單位，安置合資格入住房協或房委會單位的受影響租客。



- 8.4 市建局所收購的物業的非住用租戶，如因發展計劃的實施而被市建局終止租約，有關租戶可獲提供特惠津貼，以協助租戶遷移業務。
- 8.5 市建局可單獨實施發展計劃，亦可與一個或多於一個聯營伙伴合作實施發展計劃。

城市規劃委員會  
二零一六年五月



計劃範圍  
SCHEME AREA  
住宅(甲類)7  
R(A)7

市區重建局春田街 / 崇志街發展計劃  
URBAN RENEWAL AUTHORITY  
CHUN TIN STREET / SUNG CHI STREET  
DEVELOPMENT SCHEME



Scale 1:1,000  
METERS 10 0 10 20 30 40 50

KC-008(A)

附件一  
ANNEX 1

**Attachment 3**

Consolidated R to C to public views

[illegible]



### Attachment 3 (附件 3) -

市建局對 KC-008(A) 發展計劃於城規會就計劃作諮詢期間(17/5/2016 – 7/6/2016) 收到的意見的回應:

Ref. Nos:	綜合意見種類及原因:	市建局回應:
<b>*意見類別一： 規劃及設計方面</b>		
001-043	<p>反對永久封閉春田街，要求保留春田街現狀。</p> <p>春田街附近居住環境非常密集，如果將春田街永久封閉，並加建 3 棟高樓層大型住宅，不但未能改善環境，而且增加大量人流，只會令春田街附近的環境更加密集。</p> <p>建議保留春田街兩旁現狀，並重建兩旁低密度矮層純住宅單位來保持現狀。</p>	<p>KC-008(A)發展計劃建議以小區發展的概念，全面改善整個重建範圍，整合未有善用的土地資源，提高發展效益，從而改善社區的整體環境及交通網絡。</p> <p>現時計劃範圍內舊樓居住環境擠迫及不理想。春田街是一條掘頭路，車輛進出須要倒車，造成交通混亂及安全問題，亦未能善用土地資源。</p> <p>項目建議重建計劃範圍內的舊樓群為新式樓宇，改善了整體樓宇安全及外觀。同時以小區發展的概念，整體設計地面通道及行人環境，提供安全及連貫的行人網絡，增加綠化覆蓋率，並會根據屋宇署的《可持續建築設計指引》，在樓宇設計及布局上改善空氣流通，採光，綠化等條件，項目落成後會大大改善該小區的居住環境。</p> <p>根據現有的規劃大綱圖，春田街兩旁的地盤(包括本項目範圍)被劃定為住宅(甲類)地帶。住宅(甲類)地帶的規劃意向是用作高密度住宅發展。本項目的發展計劃草圖建議將項目範圍劃作住宅(甲類)7 地帶，提供 1 座約 34 層高的住宅樓宇及 3 層商業平台，有關建議與原本的規劃意向大致相同。建議的總建築樓面面積，地盤覆蓋率等亦符合《建築物條例》下准許的地盤發展參數。</p> <p>由於春田街雙數號樓宇原已在規劃大綱圖內劃定為住宅(甲類)用地，規劃意向是用作高密度住宅發展，因此即使市建局不進行 KC-008(A)發展計劃，有關樓宇仍然可以根據規劃大綱圖內所准許的發展參數進行重建，而且不需要如市建局提出的 KC-008(A)發展計劃般進行公眾諮詢。</p> <p>在項目對環境影響方面，市建局聘請了顧問就項目可能造成的潛在的環境影響作出評估，報告指出項目對鄰近地區的噪音、空氣質量，廢物管理，污水處理及排水統及空氣流通等各方面的影響均甚為輕微。</p>
	市建局提出的 KC-008A 草圖沒有需要永久封閉春田街，只是為了增加土地百份比。	<p>由於春田街是一條掘頭路，車輛進出須要倒車，造成交通混亂及安全問題，亦未能善用土地資源。</p> <p>計劃透過封閉春田街重組交通及行人網絡，利用該空</p>

註：\* 意見類別僅為市建局建議以作參考，目的在有效回應相同類別的意見，並不是意見提出者指定的分類。

Ref. Nos:	綜合意見種類及原因:	市建局回應:
		<p>間提供地面行人通道及使建議興建的樓宇基座後移, 留出空間藉以擴闊崇志街成雙線行車道, 讓車輛進入該範圍後不再須要在掘頭路盡頭倒車, 而只須沿建議的新車輛迴旋處直接駛至擴闊的崇志街離開, 令交通網絡更暢順及完善.</p> <p>計劃亦希望藉着封閉春田街掘頭路, 可以整合未善用的土地資源, 增加房屋供應以回應市民的居住需求.</p>
<p>208-209, 267-279, 244</p>	<p>草圖上無論道路, 交通, 網絡上都未能達致改善用地, 改善交通, 封閉春田街只會令區內交通推向更壞.</p> <p>新項目會令車輪流量大大增加, 造成交通混亂, 阻塞崇志街行人安全.</p> <p>春田街掘頭路的安全及交通問題只因政府管理不善, 如改善管理, 春田街也和其他街道一樣理想. 如果沒有有關工場, 道路也可改善.</p>	<p>計劃透過封閉春田街以更有效益地運用土地, 利用春田街的空間提供地面行人通道及使建議興建的樓宇基座後移, 留出空間藉以擴闊崇志街成雙線行車道, 帶來以下好處:</p> <ul style="list-style-type: none"> <li>(i) 車輛進入該範圍不再需要在掘頭路盡頭倒車, 而只須沿建議的新車輛迴旋處直接駛至擴闊的崇志街離開至鶴園街, 改善交通流暢度及安全;</li> <li>(ii) 將來的車輛只須利用擴闊的崇志街進入該範圍, 減少了在鶴園街的車道出入口, 令交通網絡更暢順;</li> <li>(iii) 利用封閉春田街的空間, 可在項目範圍與毗連的 TKW/1/002 地盤間提供安全的地面行人通道, 改善行人網絡;</li> <li>(iv) 在毗連項目的崇志街路段會擴闊為雙線行車道, 及提供約 5 米闊的行人通道, 相比現時崇志街狹窄及不連貫的行人通道, 將來的崇志街可提供更安全的行人網絡.</li> </ul> <p>由於春田街雙數號樓宇原已在規劃大綱圖上劃為住宅 (甲類) 的高密度住宅用途, 在沒有本計劃的發展建議下, 將來車輛流量亦可能因地盤重建而增加, 有關交通並不會因為保留春田街而得以改善. 因此, 市建局相信計劃的建議可藉着進行重建, 一併改善整體的交通及行人環境.</p> <p>交通顧問就計劃內的道路設計及交通建議提交了交通影響評估報告予運輸署, 報告指出有關建議不會對該區的交通帶來負面影響, 建議的道路改善工程亦能改善該區交通網絡及行人環境. 運輸署早前同意顧問公司的建議及評估報告。</p>
<p>244</p>	<p>要解決掘頭路問題, 只須稍為修改 KC-008 項目. 不須封春田街.</p>	<p>市建局建議封閉春田街, 除了希望解決掘頭路問題, 亦希望藉此重整小區內的交通及行人網絡, 整合未有善用的土地資源, 增加房屋供應以回應市民的居住需求, 改善社區的整體居住環境。</p>
<p>135</p>	<p>反對取消已有的泊車錶位.</p>	<p>計劃的交通影響評估報告指出將來在計劃內的住宅及商舖會提供地庫停車場外, 因應封閉春田街及取消春田街上的泊車錶位, 報告已建議在計劃的鄰近地方增加泊車錶位. 該建議早前已交運輸署, 運輸署在規劃階</p>

Ref. Nos:	綜合意見種類及原因:	市建局回應:
		段沒有反對意見.
<b>*意見類別二: 要求將福運大廈一併納入 KC-008A 項目內收購及重建範圍</b>		
044-086,  092-100,  101-130,  131-200,	<p>要求將福運大廈一併納入 KC-008A 項目內收購及重建, 原因:</p> <ul style="list-style-type: none"> <li>- 市建局在鄰近進行工程已對福運大廈有結構性影響;</li> <li>- KC-008A 對福運大廈的交通出入及消防造成極大不便;</li> <li>- 市建局工程嚴重影響居民安全及生活;</li> <li>- 市建局在鄰近地盤施工對福運大廈造成滋擾, 包括蚊患及鼠患.</li> </ul>	<p>市建局重建項目大多是 50 年樓齡以上, 樓宇狀況較差及失修的樓宇。而市建局在制定重建計劃時, 亦會考慮不同的因素, 包括樓宇狀況、資源分配及重建對社區帶來的裨益等。福運大廈屬七十年代興建、樓齡 40 年的大廈(建於 1975 年), 樓宇內有電梯, 市建局已視察其外圍及室內的公共地方, 歸納其樓宇狀況屬尚可接受, 沒有明顯失修, 故此市建局現時沒有考慮將福運大廈納入 KC-008(A)的重建範圍內。</p> <p>根據《市區重建局條例》(《條例》), 市建局就《條例》第 25 條開展的發展計劃須要向城市規劃委員會提交發展計劃草圖。城規會在審議後可以認同草圖內的建議及決定草圖適合公布; 或因應意見的理據, 要求市建局修改草圖內的建議, 包括草圖的計劃範圍, 發展參數等。就城規會的任何決定, 市建局須考慮其建議是否可行及作出相關修改以實施項目。如城規會審批後認為草圖適合公布, 會按照《城市規劃條例》第 5 條展示草圖作公眾諮詢, 草圖最後須要得到行政長官會同行政會議批核, 市建局才會落實進行項目重建。</p>
<b>*意見類別三: 環境影響 及技術問題</b>		
282-439	福運大廈居民認為計劃會影響他們的境觀.	<p>市建局就規劃 KC-008(A)發展計劃的時候, 已考慮到福運大廈與本計劃範圍很接近, 因此建議在福運大廈前方興建一段闊度約 26 米的新道路路面作車輛迴旋處, 使計劃內的樓宇與福運大廈保留一定空間距離。此外, 發展計劃的基座與毗連的 TKW/1/002 項目的基座會保持約 6 至 7 米間距, 使福運大廈的前方有一定空間感及視野, 以減低了對福運大廈的景觀影響。</p> <p>為盡量避免影響福運大廈前方的視野及景觀, 發展計劃建議放寬計劃內的樓宇高度限制至 130 米, 藉以縮減樓宇本身的體積及闊度, 改善樓宇間的間距。</p>
	春田街起高建築物至 130 米, 影響福運大廈不但空氣不流通, 視野會更差, 光線更暗.	<p>計劃建議放寬計劃內的樓宇高度限制至 130 米, 藉以縮減樓宇體積及闊度, 使樓宇間的間距擴闊, 空氣更流通, 及採光更好。計劃內樓宇間距的設計上亦符合《建築物條例》內對樓宇間距及採光等要求, 同時設計上亦會參考屋宇署發出的相關指引(如《可持續建築設計指引》等), 在樓宇設計上加入基座階級式設計, 基座後移等, 改善地盤內的空氣流通。</p> <p>相比原先在沒有 KC-008(A)建議的建築物高度為 130 米的規劃情況下, 春田街雙數號亦可以根據規劃大綱</p>

Ref. Nos:	綜合意見種類及原因:	市建局回應:
		<p>益，因此決定開展本計劃以納入春田街作整體的小區重建，同時撤回 KC-008 項目。</p> <p>由於市建局考慮到 KC-008 項目與本計劃的內受影響的樓宇完全相同，而且本計劃須交由城市規劃委員會審批需時，因此市建局已內受影響的居民提供了一次性的特別補償安排，包括提前在政府授權進行計劃前，向受影響業主提出收購及補償建議，及在物業收購手續完成後，對有關物業內合資格的租提供現金補償，或選擇繼續以原租金居於原有物業內，直至計劃獲政府授權進行。讓受影響居民可選擇提前接受收購補償的安排。</p>
<b>*意見類別四: 關注團體提出替代方案</b>		
279	<p>香港大學社會工作及社會行政系 從社區影響到規劃: 舊區重建民間觀點研究報告</p> <p>研究報告探討及總結了以下建議:</p> <p>1/ 重建項目對居民及周邊居民的影響,</p> <p>2/ 要求原區及原址安置,</p> <p>3/ 在重建地區建資助房屋.</p>	<p>市建局根據《市區重建策略》的指引，就計劃開展前進行了第一階段社會影響評估，並對建議計劃對項目範圍的潛在社會影響作出了初步評估。在開展項目後，市建局根據凍結人口調查所得的受影響居民及商戶的資料進行了第二階段社會影響評估，並且就所分析的結果進行詳細評估及建議所需的紓緩措施。</p> <p>該兩份社會影響評估報告已包括了《市區重建策略》中要求的各方面社會影響作出分析，並且以凍結人口調查的實際數據作詳細分析及建議紓緩措施，相信已可以有效評估及反映了計劃對居民及周邊居民的影響。相對意見書內提出的研究結果並沒有如凍結人口調查所得的全面及詳細的住戶資料，研究報告的結果未能如市建局的社會影響評估報告般全面反映計劃對居民的影響。</p> <p>就要求原區及原址安置，市建局根據《市區重建局條例》開展的重建項目，如得到政府授權進行，會有既定的收購補償及安置政策處理受影響的業主及租客。對於就本計劃提出對市建局收購補償及安置問題的意見，市建局已有相應的政策及措施處理。</p> <p>有關利用重建地盤提供建資助房屋的建議，關乎政府對資助房屋的政策，須要由政府與市建局在政策上作出商議，並非由市建局自行決定。</p>
280 - 281	<p>社區文化關注 (陳楚思) 及 紅土社區達人 (陳楚思) 提交的意見，就計劃提出 3 個部份:</p> <p>1/ 計劃加劇交通擠塞問題</p>	<p>市建局就計劃聘請了交通顧問就計劃內的道路設計及交通建議向運輸署提交了交通影響評估報告，報告指出有關建議不會對該區的交通帶來負面影響，建議的道路改善工程亦能改善該區交通網絡及行人環境。運輸署早前同意顧問公司的建議及評估報告。</p> <p>交通影響評估報告已就計劃所帶來的交通流量及根據運輸署對未來交通流量的估計數據作出評估，當中已</p>



Ref. Nos:	綜合意見種類及原因:	市建局回應:
		包括了毗連的市建局 TKW/1/002 項目可能會增加的交通流量, 評估指出計劃不會對鄰近的交通網絡造成負面影響.
	2/ 重建時間拖長為食街, 只有市建局賺盡; 應顧及重建時間進, 盡快安置賠償.	<p>市建局將春田街納入重建範圍, 希望藉着封閉春田街掘頭路, 整合未善用的土地資源, 改善整個小區的交通網絡及行人環境, 並且可以增加房屋供應以回應市民的居住需求.</p> <p>市建局根據《市區重建局條例》開展的重建項目, 如得到政府授權進行後, 會有既定的收購補償及安置政策處理受影響的業主及租客. 然而, 市建局鑑於本計劃的特殊情況, 顧及計劃內居民在比較原先的 KC-008 項目時須要多等約 2 年時間, 因此市建局決定向受影響業主及租客提供一次性的特別補償安排, 包括提前在政府授權進行計劃前, 向受影響業主提出收購及補償建議, 及在物業收購手續完成後, 對有關物業內合資格的租提供現金補償, 或選擇繼續以原租金居於原有物業內, 直至計劃獲政府授權進行.</p>
	3/ 提出替代方案, 實現宜居社區的願景: 原區安置, 保育社區網絡, 社區經濟	<p>意見內所提出的替代方案並沒有充分的技術評估及數據分析, 亦沒有經過規劃程序的公眾諮詢, 未能反映方案的可行性及地區支持.</p> <p>相反本計劃的建議已包括了各項的初步技術評估及可行性研究, 計劃須要經過規劃及諮詢程序, 政府部門的意見及城規會的審議. 因此, 市建局在獲得授權推行該計劃之前, 計劃的可行性及認受性在審議的過程中會被詳細及充份的考慮.</p>

Our Ref: PDP/KC-008(A)

6 September 2016

**By Fax (letter only) & By Hand**  
**Fax No. 2894 9502**



District Planning Officer/ Kowloon  
14/F North Point Government Offices  
333 Java Road, North Point,  
Hong Kong.

(Attn.: Ms. Johanna CHENG)

Dear Johanna,

**CONFIDENTIAL**

**Submission of the Draft Development Scheme Plan (DSP)  
for the Urban Renewal Authority  
Chun Tin Street / Sung Chi Street Development Scheme (KC-008(A))**

I refer to your Department's emails dated 17 and 18 August 2016 enclosing the Government Departments' further comments to URA's response to comment (R to C) submitted via our letter dated 15 July 2016 and your email dated 12 August 2016 enclosing three public comments received by Town Planning Board (TPB) after the public inspection period of the captioned draft DSP.

We are pleased to enclose our response to the further departmental comments (**Attachment 1**) and correspondingly the revised sections of the Environmental Assessment (EA) Report including (i) Noise Impact Assessment, (ii) Air Quality Impact Assessment and (iii) Waste Management & Land Contamination Assessment (**Attachment 2**). The revised sections of the EA Report provided under this letter cover has addressed EPD's comments and has re-affirmed to demonstrate with adequate technical justifications that the proposed Scheme will not pose insurmountable environmental impact. Besides, we also enclose three URA letters issued on 16 August 2016 to the three public comments which were received by URA and copied to TPB on 26, 27 and 28 July 2016 respectively (**Attachment 3**).

We trust that the above responses have addressed the departmental and public comments received so far and they are enclosed for your information and the TPB's consideration.

Please feel free to contact our Miss. Mable Kwan at 2588 2752 if you have enquiry on the submission. Thank you for your attention.

Yours Sincerely,



Christopher Wong  
General Manager  
Planning & Design Division

Encl.

RT/CW/mk



## **Attachment 1**

Responses to Further Comments from Government Departments on Draft  
DSP submission

**Attachment 1 -**

**URA Chun Tin Street/ Sung Chi Street Development Scheme (KC-008(A))**

**Responses to Further Comments from Government Departments on Draft DSP submission**

<b>Government Departments</b>	<b>Comments</b>	<b>Responses</b>
<p>DLO/KW, Lands Department</p> <p>(Contact Officer : Ms. Sandy Sin 2300-1739)</p>	<p>(i) URA has confirmed that it would take up the future management and maintenance of those public traffic facilities such as Turning Area and LGV loading/unloading bays and it is not prepared to transfer such liability to future individual flat owners. I defer to CES/UR to consider how such proposals can be implemented in the future land grant.</p> <p>(iii) Once again, I leave it to URA and CES/UR to take into account any interface problem between the Scheme and KIL 11244, and any implication on the adjoining private developments. This office will further comment from district perspective at the land grant stage when more details are provided.</p>	<p>(i) Noted.</p> <p>(iii) Noted</p>
<p>CES/UR, Lands Department</p> <p>(Contact Officer : Ms. Jane Leung 2854-9100)</p>	<p><b><u>Para.4 (a &amp; b)</u></b></p> <p>(i) Despite Plan (I) was provided to show how the net site area of 1,636m<sup>2</sup> was arrived, the reason of such irregular shape of the net site area e.g. the eastern boundary and exclusion of half of the vehicular turning area was not explained. The grey hatched area appeared on Plan (I) was incorrectly shown grey cross-</p>	<p><b><u>Para.4 (a &amp; b)</u></b></p> <p>(i) The shape of the net site area comes up from the principles of including all the private lot area that URA will acquire or resume, as well as the portion of Chun Tin Street area land used for development in future. Given portion of Chun Tin Street will be dedicated for public use and vehicular access, that</p>



Government Departments	Comments	Responses
	<p>hatched area in the legend.</p> <p>(ii) As URA stated that "The indication of net site as shown is only for reference purpose" and URA did not explain the implication of the proposed net site area/dedications in relation to the future development site and lot boundary, URA should clearly state the proposed lot boundary and the boundary of its vehicular access area and various formation areas.</p> <p>(iii) As URA included portion of the future vehicular road access in the net site area (i.e. the "red dotted grey area" in Plan (I)), the grey hatched black area will be land locked as no-man's Government land. Such land locked situation is not acceptable from land administration point of view.</p>	<p>portion will not be counted in the net site area for PR calculation in URA's Scheme. The grey hatched area pattern shown on Plan (I) and the Legend are the same.</p> <p>(ii) The planning intention of the Draft DSP is to stipulate the maximum development potential by maximum GFA to be attained in the Scheme as explained before. TPB when considering the Draft DSP can make reference to net site area in determining maximum GFA with reference to the PR calculation if they deem it necessary or not. The Draft DSP boundary has been clearly delineated to reflect the planning intention and the extent of proposed development already. The lot boundary issue will be addressed but will only be dealt with at land grant stage.</p> <p>(iii) There will not be a land locked situation in future as URA proposed to have a land grant to cover the Grey Hatched Area, the Red Dotted Purple Area and the Red Dotted Grey Area. Under the future land grant, URA will dedicate (or surrender) a portion of the land in the land grant as appropriate, i.e. within the Grey Hatched Black Area and the Red dotted Grey Area, for vehicular access and road for public use. The issue is only a</p>

Government Departments	Comments	Responses
	<p><b><u>Para. 4 (d) (i)</u></b>  URA seems to suggest there will be widening/improvement works to the “carriageway portion of Sung Chi Street” and “the carriageway portion of Sung Chi Street will however be retained as public road owned by Government”. Prior agreement from TD and HyD on subsequent maintenance and management of Sung Chi Street has to be obtained. Subject to TD’s view, it is suggested that the whole width of Sung Chi Street should be managed and maintained by URA.</p> <p><b><u>Para. 4 (d) (iii) &amp; (iv)</u></b>  (i) URA indicated her intention to take up management and maintenance of the improved public road, however half of the new vehicular turning area (i.e. “grey hatched area” on Plan (I)) is excluded from the net site area. It is not clear how URA can take up the management and maintenance of the excluded area.</p>	<p>technical matter to be dealt with and relevant clauses can be liaised with LandsD during the land grant preparation to include such provision within the land grant.</p> <p><b><u>Para. 4(d)(i)</u></b>  As responded in the R to C provided earlier, it is URA’s intention to manage and maintain only the pedestrian footpath which is within the URA’s lot area, but not the carriageway of Sung Chi Street as it is all along Government land. The intention of the road improvement works and related management and maintenance proposal has been stipulated in the TIA report and submitted to TD, who has no adverse comment at this stage. The same has also stipulated in the planning report of the Draft DSP and the Explanatory Statement of the draft DSP circulated for departmental comment.</p> <p><b><u>Para. 4(d)(iii) &amp; (iv)</u></b>  (i) The net site area is for TPB’s reference only in consideration of the Draft DSP. It deals with the planning issue at this stage but not meaning to be the future lot boundary. As explained in <u>Para.4 (a &amp; b) above</u>, URA will take up the management and maintenance of those dedicated area for public use and vehicular access within the land grant. Relevant clauses can be liaised with LandsD during the land grant preparation to include</p>

Government Departments	Comments	Responses
	<p>(ii) URA has to consider how she would take up the management and maintenance of the improved public road with TD and HyD as the management and maintenance of the public road and traffic facilities cannot be enforceable under lease.</p> <p><b><u>Para. 4 (e)</u></b></p> <p>(i) Subject to TD's view, it is suggested that the 3 LGV bays are preferred to be developed as private lot facilities. Any shared arrangement with public use may arouse management problem. The shared use requirement of the 3 LGV bays cannot be enforceable under lease.</p> <p>(ii) URA should also clarify the width of pedestrian footpath adjoining the 3 LGV bays as the loading and unloading activities will be carried out nearby.</p> <p><b><u>Para. 4 (g)</u></b></p> <p>URA has not responded whether it has any fall back arrangement in the event that the proposed road works are not authorized under Cap.370.</p>	<p>such provision in the land grant.</p> <p>(ii) Noted. Same response as (i) above. Subject to the approval of the Scheme by TPB, URA will liaise with TD and HyD in the detailed arrangement on the management and maintenance concerns.</p> <p><b><u>Para. 4(e)</u></b></p> <p>(i) Noted. As mentioned in the previous R to C, the URA proposed the L/UL bays for share use with the public with the intent to benefit the public with more public transport facilities. If in LandsD's opinion that such share use proposal cannot be enforceable under lease, URA should consider maintaining the said LGV bays as private facilities. Subject to PlanD and TD's view, the Explanatory Statements for the draft DSP shall be amended accordingly.</p> <p>(ii) The footpath adjoining the 3 LGV bays will be about 2.5m in width.</p> <p><b><u>Para. 4(g)</u></b></p> <p>If the proposed road work is not authorized under Cap. 370, URA will study the reasons for un-authorization and consider the feasibility and implication to decide whether to revise the Scheme.</p>

Government Departments	Comments	Responses
	<p><b><u>Para. 4 (h)</u></b></p> <p>If there is no stipulation in the lease or DMC, the future flat owners of KIL 11244 may not agree to let the public (including the residents in the subject proposed scheme) to pass through the pedestrian passage within the KIL 11244. The linkage with the at-grade open space at the adjoining URA development (TWK/1/002) should be reflected in para. 6.5, 7.11 and 7.14 of the draft Explanatory Statement and the pedestrian access should be written in the DMC of KIL 11244.</p> <p>2. After reviewing the confirmation of various items by URA, this Office has to reconsider the whole development proposal during the implementation and land grant application stage and my comments as contained in para.4(i) of memo dated 23.6.2016 are still valid.</p>	<p><b><u>Para. 4(h)</u></b></p> <p>KIL 11244 is owned by URA and the site is being developed by URA itself. The intention of at grade open space and passageway will be stipulated in the DMC of KIL 11244 and URA will manage and maintain at grade area and open for public use in future. Given the TKW/1/002 is outside the Scheme boundary of KC-008(A), it will not be included in the Explanatory Statement of KC-008(A).</p> <p>2. The draft DSP is at the planning stage with notional design which aims to spell out the development intentions and the development intensity of the proposed development. Only upon the draft DSP be approved by TPB and CE in C, the URA can implement the Scheme and carry out detailed design. URA will liaise with relevant departments at the detailed design stage.</p>
<p>Transport Department</p> <p>(Contact Officer : Ms. Joyce W. C. Lee 2399-2504)</p>	<p>(a) The overall intention of parking standards provided in the Hong Kong Planning Standards and Guidelines (HKPSG) is to ensure that sufficient parking spaces and L/UL facilities would be provided to meet the development's own demand Hence, the proposed 3 L/UL bays should form part of the internal facilities and should not be opened for public use.</p>	<p>(a) The proposed 3 L/UL bays are to comply with the HKPSG requirements for the proposed development. It is part of the internal transport facilities of the proposed development. At the same time, the URA proposed the L/UL bays for share use with the public with the intent to benefit the public with more public transport facilities. If in Government Departments' opinion that</p>



Government Departments	Comments	Responses
	<p>Appropriate traffic management measures should be put in place to ensure that the above requirement is fulfilled.</p> <p>(b) According to a survey conducted by the Applicant, about 5 out of 12 on-street parking spaces and existing L/UL bays at Chun Tin Street are used by the residents, visitors and local shop owners of the existing buildings at the captioned site, while the remaining 7 on-street parking spaces are used by other general public.</p> <p>As the applicant will provide a total of 19 private car parking spaces and 3 L/UL bays within their development for residents, visitors and retail shops to meet the parking demand, we have no adverse comment on deletion of 5 on-street parking spaces and existing L/UL bays. Furthermore, the other 7 on-street parking spaces will be reprovisioned.</p>	<p>such share use proposal would arouse concerns and not enforceable, URA should consider maintaining the said LGV bays as private facilities. Subject to PlanD and TD's view, the Explanatory Statement for the draft DSP shall be amended accordingly.</p> <p>Noted. Appropriate traffic management measures will be proposed and liaised with TD and HyD at the detailed design stage.</p> <p>(b) Noted.</p>

Government Departments	Comments	Responses
<p>CTP/UD&amp;L, PlanD</p> <p>(Contact Officer : Miss Carmen Chan 2231-4840)</p>	<p><b><u>Urban Design and Visual Impact</u></b></p> <p><b><u>Item 4:</u></b> It is gathered from the proponents responses that keeping the BH of 120mPD by extending the tower footprint southwards would not improve the residents' views of both the Fook Wan Mansion and MTW Road development and the visual relief offered by the passageway, as the proposed tower will span a longer facade length given the linear site configuration. The proponents argued that a relaxation of BH to 130mPD would facilitate a slimmer building block design for visual relief and enhance local ventilation. Based on the information provided so far, such improvements and their significance have not been demonstrated. Approval of an increased BH for the subject site may set a precedent giving rise to similar applications which would gradually undermine the building height profile intended for the area; hence, unless with strong and convincing justifications, we consider that the current BH of 120mPD should be maintained.</p> <p><b><u>Air Ventilation Perspective</u></b> Referring to the Response-to-Comment (R-to-C) table for the captioned proposal, we have no further comment on the planning report from air ventilation perspective.</p>	<p><b><u>Urban Design and Visual Impact</u></b></p> <p><b><u>Item 4:</u></b> Noted. URA has explained in the planning report of the draft DSP (in particularly in section 4.23 to 4.25 regarding "Proposed Building Height" and relevant plans and drawings) on the design consideration, design merits and the justification on the proposal of relaxation of BH to 130mPD. URA has also submitted a computer-generated animation video to demonstrate the development proposal in 130mPD and its visual effect to the surroundings. URA is of the view that the proposed relaxation of building height would maximize the development potential of the site while enhancing air ventilation and permeability of the local area with slight increase of only about 8% to the original BHR. The proposed relaxation can facilitate a better urban design and is demonstrated to be compatible with surrounding environment.</p> <p><b><u>Air Ventilation Perspective</u></b> Noted.</p>

Government Departments	Comments	Responses
Social Welfare Department (SWD) via email from Mr. Barry Yan, PlanD on 18 Aug, 2016.	<p>“You may remember when being consulted on the URA development projects at Kowloon City area back in 2014, we have furnished a ‘wish list’ of welfare facilities to be incorporated in the subject sites. We have reviewed and updated the ‘wish list’ of welfare facilities as follows for your consideration and follow up, please. ... We should be grateful if PlanD could keep us abreast of the progress of the proposed development and let us have the relevant planning parameters of the site (in particular the area which could be allocated for welfare use). We will review the proposed welfare facilities with regard to the finalised development scheme, and shall let you have the detailed requirement of respective facilities (such as schedule of accommodation, etc.) once the proposal is confirmed.”</p> <p>“We have no further comments on the SIA report”</p>	<p>URA has consolidated comments from departments on the proposed 15<sup>th</sup> BP/CP before the commencement of projects including KC-008(A). It is considered that due to site constraint and the provision of community space provided in the adjoining TKW/1/002 site, no GFA for social welfare facilities will be reserved in KC-008(A) site.</p> <p>Noted.</p>
TPB Via email from Mr. Barry Yan, PlanD on 17 Aug, 2016.	TPB’s mark-up comments on the draft DSP Plan, Note and Explanatory Statement.	Noted. The comments shall be incorporated in the respective documents should the TPB approved the draft DSP for gazettal under s. 5 of Town Planning Ordinance.
DO(KC), HAD	No comment.	Noted.
EPD (Contact Officer : Mr. Leo Luk	After reviewed the submission, we note that our previous comments on the Environmental Assessment (EA) are not fully addressed and the assessment in the	Further to the meeting between EPD and our consultant AECOM on 26.8.2016 to discuss about the NIA, the NIA has been revised to address and

Government Departments	Comments	Responses
2835-1096)	<p>revised EA is still <u>inadequate to support its conclusions</u>. In particular, quantitative air quality impact assessment is not provided and the noise impact assessment is still far from satisfactory.</p> <p>The project proponent/consultant is required to critically review the noise assessment and submit the quantitative air quality impact assessment for our consideration. Our detailed technical comments on the revised EA are attached at <u>Annex 1</u> for the project proponent/consultant to follow-up.</p> <p>For the DSA, we note that our comments are properly addressed. As such, we have no further comment on the DSA from the sewerage planning perspectives.</p>	<p>respond to EPD's comments. Besides, in response to EPD's request, a quantitative Air Quality Impact Assessment (AQIA) has been carried out and the results indicated that the air pollutant concentrations would comply with the AQOs by adopting appropriate mitigation measures at the podium levels. The revised technical assessments on the NIA and AQIA demonstrated that the proposed development will not pose insurmountable environmental impact to the surroundings.</p> <p>Noted.</p>
	<b>Noise Impact Assessment</b>	
	<p><b>(A) Major Comment</b></p> <p>(1) The assessment of noise from fixed sources contains a lot of irregularities. The Consultant has not taken into account the correction factors, such as correction for tonality, intermittency nor impulsiveness. In addition, as mentioned in comments (B)(6), (B)(7) and (B)(11) below, some reasons for not assessing the noise from some fixed sources are not well justified.</p>	<p>Correction factors for tonality, intermittency and impulsiveness have been taken account in the revised EA report.</p>
	<p><b><u>(B) Other Comments</u></b></p> <p>(1) <u>S.4.2.6 and S.8.3.1</u></p> <p>The Consultant should consider recommending the project proponent to adopt the "Recommended Pollution</p>	<p>S.4.2.6 and S.8.3.1 have been revised accordingly.</p>



Government Departments	Comments	Responses
	Control Clauses for Construction Contracts" for this project.	
	<p>(2) <u>S.4.3.6 and Appendix 4.1</u>  2nd line: Should "Appendix 3.1" be amended as "Appendix 4.1"?</p> <p>The Consultant should not have concluded that the traffic noise impact from the New Road Area and the proposed widening section of Sung Chi Street on nearby NSRs would be insignificant without any quantitative assessment. Having said that, we doubt whether this section is necessary if the assessed overall road traffic noise levels are not exceeding the 70 dB(A) criterion.</p>	<p>Section 4.3.6 has been revised accordingly.</p> <p>Quantitative road traffic noise assessment on the nearby NSRs has been included in the revised sections of the EA report to demonstrate that no adverse traffic noise impact would be arising from the New Road Area and the proposed widening section of Sung Chi Street.</p>
	<p>(3) <u>S.4.3.9 and S.8.3.2</u>  Last line: Should "... adverse traffic noise impact..." be amended as ".... <b>insurmountable</b> traffic noise impact..."?</p>	<p>S.4.3.9 and S.8.3.2 has been revised accordingly.</p>
	<p>(4) <u>S.4.4.3</u>  The consultant should confirm whether there was any roof of a nearby building where they could have a direct line of sight of all the fixed noise sources on the roof of HHCC such that they could check the latest inventory of the sources.</p>	<p>We have investigated that the rooftop of Carlton Court has direct line of sight of all the fixed noise sources on the roof of HHCC. Photos taken from the rooftop of Carlton Court has been included in Appendix 4.6 to show the latest inventory of the fixed noise sources on the roof of HHCC.</p>
	<p>(5) <u>Table 4-2, Appendix 4.5 and Appendix 4.8</u>  The Source IDs for those fixed noise sources at the rooftop of HHCC are inconsistent.</p>	<p>Appendix 4.5 and Appendix 4.8 has been revised accordingly.</p>

Government Departments	Comments	Responses
	<p>(6) <u>S.4.4.4 and Appendix 4.7</u>  The Consultant have assessed the noise impact from the cooling towers on the PCCW telephone exchange based on the noise level data at 16m from each of the cooling towers in the catalogue. The Consultant should have sought confirmation from the supplier or the operator on whether this was the maximum measured noise level at all sides of the noise source. If not, it will be necessary to carry out a benchmarking on the sound power levels of cooling towers of similar dimensions and cooling capacity</p> <p>Appendix 4.7: The Consultant should have justified why noise from the panel as shown in the catalogue was not considered.</p>	<p>Benchmarking on the sound power levels of cooling towers with similar fan power has been carried out. Reference has been made to "Good Practices on Ventilation System Noise Control" published by the EPD. S.4.4.4 is revised accordingly.</p>
	<p>(7) <u>S.4.4.5 and Appendix 4.5</u>  Without further information of the MTW project such as confirmed heights and layouts of the buildings there, we are skeptical that the cooling towers at the rooftop of CCB would be totally screened by the MTW project.</p>	<p>The confirmed layout of MTW project is shown in Appendix 4.5 and Appendix 4.11. The section of the MTW project showing the heights of the future developments is presented in Appendix 4.11.</p>
	<p>(8) <u>S.4.4.6</u>  Last sentence: Should "... to the west of Site, ..." be amended as "... to the east of the Site, ..."?</p>	<p>S.4.4.8 (formerly S4.4.6) has been revised accordingly.</p>
	<p>(9) <u>S.4.4.7 and Table 4-3</u>  The Consultant should have justified why the results obtained in the measurement period (20:21 to 20:51 hours), which was not the quietest period in an evening,</p>	<p>Based on our site inspection carried out on rooftop of the CIB and HFIB, the fixed plant noise sources were in operation during the</p>

Government Departments	Comments	Responses
	<p>were representative.</p> <p>Our cursory check found that the HFIB, the CIB and the HHCC are of similar heights. The consultant should justify that the measurements were not affected by the screening effects of the parapets on the roof of the CIB and the HHCC.</p> <p>1st sentence: "Section 4.4.4" should be amended to "Section 4.4.3".</p>	<p>measurement period. The measurement period was selected due to relative small contribution from the traffic noise, such that the fixed plant noise measured from 20:21 to 20:51 hours is considered representative.</p> <p>The microphone was set at approx.. 4m above the rooftop of the HFIB such that the measurement point has direct line of sight on the fixed plant noise sources located on the roof of the CIB and the HHCC. Revised S.4.4.7 refers.</p> <p>S.4.4.9 (formerly S4.4.7) has been revised accordingly.</p>
	<p>(10) <u>S.4.4.8</u></p> <p>Our cursory check found that the distance between the noise sources on the rooftop of HHCC and the nearest noise sensitive facade of the proposed development may be incorrect.</p> <p>The consultant should have explained what was "44" in the formula "<math>62-20 \times \log(44/30) + 3</math>", and why the smaller separation distance (30 m) was adopted in formula. It should be noted that the assessed noise level in this section, putting aside its correctness, was obtained without taking into account noise from the cooling towers at Hung Hom Telephone Exchange building.</p>	<p>The noise assessment has been revised and the cumulative impact has been assessed and is presented in S.4.4.12. Please refer to the relevant sections for details.</p>

Government Departments	Comments	Responses
	<p>(11) <u>S.4.4.9 and S.4.4.10</u>  In addition to the site visits, the Consultant should have sought confirmation from the operators on the operation hours of the fixed noise sources to verify their findings.</p>	<p>Interviews with staff from management office of both CIB and HHCC were undertaken on 30 August 2016. They advised that the identified fixed plant noise sources in CIB and HHCC will not be in operation between 2300 and 0700 hours. Section 4.4.14 has been amended accordingly.</p>
	<p>(12) <u>S.4.4.11</u>  Penultimate sentence: "measured at 1m from the facades of the nearby NSRs" should be amended to ", whichever is the lower".</p>	<p>Text has been amended.</p>
	<p>(13) <u>S.4.4.12 to S.4.4.14, and S.8.3.3 to S.8.3.5</u>  Given my above comments, I cannot agree on the conclusions in these sections.</p>	<p>The fixed plant noise impact assessment has been revised to incorporate the above comments and it demonstrated that no adverse fixed plant noise impact on the proposed development is anticipated during daytime and night time periods.</p>
	<p>(14) <u>Appendix 4.4</u>  There should be a noise unit and a descriptor, L<sub>10</sub> (1 hour), for the sound pressure levels.</p>	<p>Appendix 4.4 has been revised accordingly.</p>
	Air Quality Assessment	
	<p>(1) <u>RtC - item 1 related to AQIA</u>  There is no road type information in Appendix 4.1. Please clarify.</p>	<p>Road type information has been included in Appendix 3.3.</p>



Government Departments	Comments	Responses
	<p>(2) <u>RtC - item 2 related to AQIA and S.3.4.3</u>  We note that "... the proposed residential development in the Scheme inevitably falls within the 5m distance from the adjoining streets, i. e. Sung Chi Street and the new vehicular turning area ...", i.e., still indicating that the relevant buffer distance requirements for vehicular emissions stipulated under the HKPSG cannot be met; and there is no quantitative AQIA to address the AQ impact arising the Project. Please clarify and provide AQIA for review.</p>	<p>Quantitative AQIA has been included to address the vehicular emission impact to the Project.</p>
	Waste Management & Land Contamination Assessment	
	<p>(1) <u>S.5.2.1</u>  Since asbestos waste is one of the potential wastes to be generated, please include asbestos waste in this section.</p>	<p>S.5.2.1 has been revised accordingly.</p>
	<p>(2) <u>Table 5-1</u>  The estimated quantity of C&amp;D materials to be generated does not tally with that in S.5.2.3 for "Demolition works". Please review/revise as appropriate.</p>	<p>S.5.2.3 has been revised accordingly.</p>
	<p>(3) <u>S.6.2.1</u>  The quoted guideline should be read as "Guidance Note for <u>Contaminated</u> Land Assessment and Remediation".</p>	<p>S.6.2.1 has been revised accordingly.</p>
	<p>(4) <u>S.6.3.4 and 6.4.1</u>  It is mentioned that land contamination assessment will be carried out after the Project site is accessible. For completeness, please identify all potentially contaminating activities (e.g. waste recycling workshops,</p>	<p>All potentially contaminating activities has been identified in Appendix 6.3.</p>

Government Departments	Comments	Responses
	metal hardware processing workshops) from existing uses.	
	(5) <u>S.6.4.2</u> For avoidance of doubt, please state that the LCA and/or remediation works will be completed before commencement of any construction works for the development.	S.6.4.2 has been revised accordingly.

## **Attachment 2**

Air Quality Impact Assessment

Noise Impact Assessment

Waste Management

Land Contamination Assessment

Appendices

### 3 AIR QUALITY IMPACT ASSESSMENT

#### 3.1 Introduction

- 3.1.1 This section addresses the potential air quality impact associated with construction activities, road traffic emission from the roads and industrial emissions from the industrial uses in the vicinity.

#### 3.2 Environmental Legislation and Guidelines

- 3.2.1 The air quality impact assessment criteria shall follow the Air Pollution Control Ordinance (APCO) and make reference to the Hong Kong Planning Standards and Guidelines (HKPSG).
- 3.2.2 Notifiable and regulatory construction works are under the control of Air Pollution Control (Construction Dust) Regulation. Notifiable works are site formation, reclamation, demolition, foundation and superstructure construction for buildings and road construction. Regulatory works are building renovation, road opening and resurfacing slope stabilization, and other activities including stockpiling, dusty material handling, excavation, concrete works, stockpiling, dusty material handling etc. Contractors and site agents are required to inform the Environmental Protection Department ("EPD") on carrying out construction works and to adopt dust reduction measures to reduce dust emission to the acceptable level.
- 3.2.3 The APCO also provides the statutory authority for controlling air pollutants from a variety of sources. The Hong Kong Air Quality Objectives (AQOs) stipulate the maximum allowable concentrations over specific periods for the pollutants. The prevailing AQOs of concerned pollutants are shown in **Table 3-1**.

**Table 3-1 Hong Kong Air Quality Objectives**

Pollutant	Concentration limit ( $\mu\text{g}/\text{m}^3$ ) <sup>(i)</sup>				
	10 Minutes	1 Hour	24 Hours	3 Months	1 Year <sup>(v)</sup>
Sulphur Dioxide (SO <sub>2</sub> )	500 <sup>(ii)</sup>	—	125 <sup>(ii)</sup>	—	—
Respirable Suspended Particulates (PM10) <sup>(vi)</sup>	—	—	100 <sup>(iii)</sup>	—	50
Fine Suspended Particulates (PM2.5) <sup>(vii)</sup>	—	—	75 <sup>(iii)</sup>	—	35
Nitrogen Dioxide (NO <sub>2</sub> )	—	200 <sup>(iv)</sup>	—	—	40

Notes:

- (i) Measured at 293K (20°C) and 101.325 kPa (one atmosphere)
- (ii) Not to be exceeded more than 3 times per year
- (iii) Not to be exceeded more than 9 times per year
- (iv) Not to be exceeded more than 18 times per year
- (v) Arithmetic means
- (vi) PM10 means suspended particulates in air with a nominal aerodynamic diameter of 10µm or smaller
- (vii) PM2.5 means suspended particulates in air with a nominal aerodynamic diameter of 2.5µm or smaller

- 3.2.4 Chapter 9 Environment Guidelines of the HKPSG provides a non-statutory guidelines for potential polluting uses specify buffer distances between sources of pollution and sensitive uses. In terms of vehicular emission, buffer distances set in the HKPSG refers to the site nature and the road types of the adjacent roads. The following buffer distances for active and passive recreational uses are recommended in the HKPSG:

- (i) at least 20m to trunk roads and primary distributors;
- (ii) at least 10m to district distributors; and
- (iii) at least 5m to local distributors.

#### **Ambient Air Quality**

- 3.2.5 EPD's Kwun Tong Air Quality Monitoring Station (AQMS) is the nearest monitoring station to the Site. Existing ambient air quality of the subject site has been made reference to this monitoring station and the relevant data extracted from Pollutants in the Atmosphere and the Transport over Hong Kong 2016 Version (PATH-2016) as provided on EPD's website. **Table 3-2** summarizes the



annual averaged concentrations of key air pollutants due to vehicle emission recorded at Kwun Tong AQMS from 2011 to 2015. The 5-year average of NO<sub>2</sub> annual averaged concentration exceeds the prevailing statutory AQOs at the Kwun Tong AQMS.

**Table 3-2 Annual Average Concentrations of Pollutions from 2011 to 2015 at EPD's Kwun Tong Monitoring Station**

Pollutant	AQO of Annual Averaged Concentration (µg/m <sup>3</sup> )		Annual Averaged Concentration at Kwun Tong AQMS (µg/m <sup>3</sup> )					
	Before 2014	Since 2014 <sup>(1)</sup>	2011	2012	2013	2014	2015	5-year Average
Sulphur Dioxide (SO <sub>2</sub> )	80	-	12	11	12	11	8	11
Respirable Suspended Particulates (PM <sub>10</sub> )	55	50	49	43	52	<u>51</u>	44	48
Fine Suspended Particulates (PM <sub>2.5</sub> ) <sup>(4)</sup>	-	35	-	28	33	31	27	30
Nitrogen Dioxide (NO <sub>2</sub> )	80	40	63	59	59	<u>54</u>	<u>55</u>	<u>58</u>

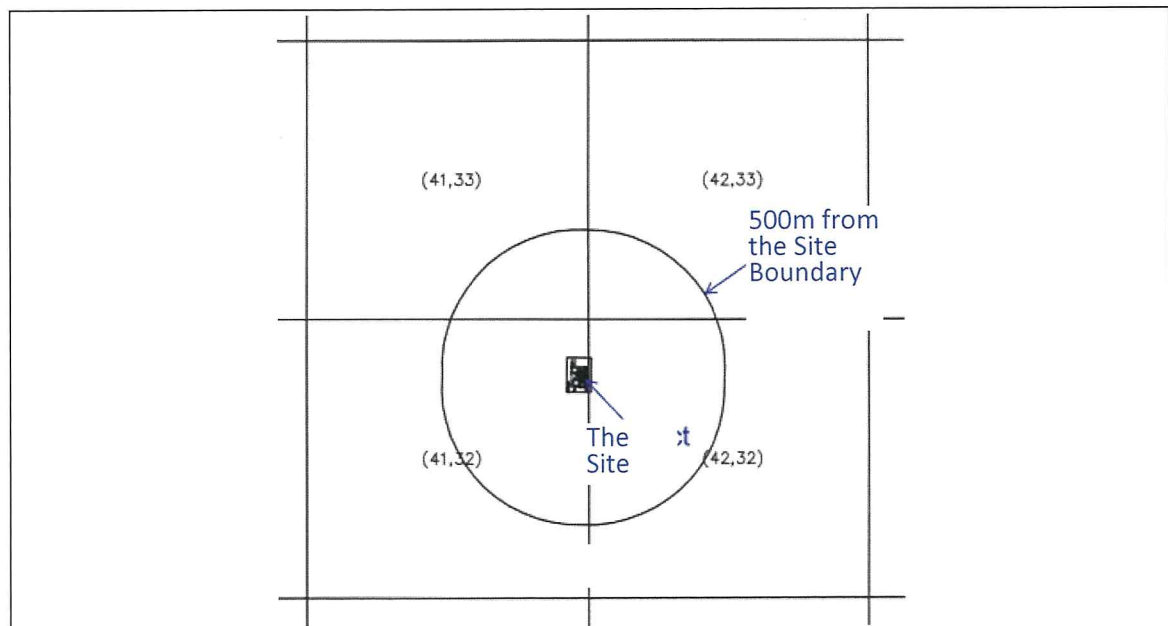
Notes:

Monitoring results exceeded the AQO are underlined.

(1) New AQOs is effective from 1 January 2014.

(2) Only four years data available for PM<sub>2.5</sub>.

- 3.2.6 Since the Site is located away from the Kwun Tong AQMS, further review on PATH-2016 data available on EPD website has been conducted to investigate the future air quality background concentration at the Site. As shown in **Figure 3-1**, the Site is located at Grids [41,32] and [42,32] while 500m study area are within Grids [41,33] and [42,33].
- 3.2.7 Hourly data of PATH model at Level 1 in Year 2020 has been extracted and averaged annual concentrations at each grid have been summarized in **Table 3-3**. It predicts that annual averaged concentrations of all concerned air pollutants would comply with the statutory AQOs in corresponding grids.



**Figure 3.1 Project Site Location and Corresponding Grids under PATH-2016**

**Table 3-3 Annual Averaged Air Pollutants Concentrations in 2020 from PATH Model**

Pollutants	Annual AQO	Annual Averaged Concentration per Grid, $\mu\text{g}/\text{m}^3$			
		[41,32]	[42,32]	[41,33]	[42,33]
Sulphur Dioxide (SO <sub>2</sub> )	- <sup>(1)</sup>	9.7	10.2	8.5	8.4
Respirable Suspended Particulates (PM <sub>10</sub> ) <sup>(2)</sup>	50	41.4	41.8	41.7	40.9
Fine Suspended Particulates (PM <sub>2.5</sub> ) <sup>(3)</sup>	35	29.4	29.7	29.6	29.0
Nitrogen Dioxide (NO <sub>2</sub> )	40	30.0	29.0	31.6	28.4

Notes:

(1) No annual AQO for SO<sub>2</sub>.(2) Adjustment has been added to the Annual RSP (PM<sub>10</sub>) concentration with reference to EPD's "Guidelines on Choice of Models and Model Parameters".(3) Since PM<sub>2.5</sub> data is not available in PATH model results, a recommended PM<sub>2.5</sub> to PM<sub>10</sub> ratio of 0.71 has been applied for the estimation of annual PM<sub>2.5</sub> with reference to EPD's "Guidelines on the Estimation of PM<sub>2.5</sub> for Air Quality Assessment in Hong Kong".

### 3.3 Construction Phase - Fugitive Dust Emission

#### *Impact Assessment*

- 3.3.1 At this preliminary stage, detailed information on the construction activities of the Scheme is not yet available. Construction phase air quality impact will be therefore addressed qualitatively.
- 3.3.2 Construction of the proposed development would commence at the fourth quarter of 2020 tentatively, and to be completed by 2025. The nearby ASRs in the vicinity of the proposed development include the adjacent URA Ma Tau Wei development, Fook Wan Mansion, Sung Lai Building, Hang Fung Industrial Building, Conic Investment Building and Hunghom Commercial Centre, etc.
- 3.3.3 During demolition of the existing buildings at the Site, as well as the construction phase of the Project, dust emissions generated during construction activities would be the major source of air quality impact. Typically, dust would be generated from scope work, vehicles movement on haul roads, excavation, loading or unloading stockpile material, stockpiling of material and wind erosion of exposed areas.
- 3.3.4 Although the abovementioned ASRs locate in the proximity to the Site, potential construction dust impact could be minimised with implementation of dust suppression measures stipulated in the Air Pollution Control (Construction Dust) Regulation.

#### *Mitigation Measures*

- 3.3.5 To minimise the impact to the surrounding ASRs, dust suppression measures stipulated in the Air Pollution Control (Construction Dust) Regulation should be incorporated to control dust emission from the Site. Major control measures relevant to this project are listed below, and they are recommended to be included in relevant contract documents:
- Restricting heights from which materials are to be dropped, as far as practicable, to minimise the fugitive dust arising from unloading / loading;
  - A vehicle wheel and body washing facility shall be installed at the site exit to remove any dusty materials from wheels before leaving the Site;
  - Where applicable, vehicles arriving / leaving the site loaded with dusty materials shall be covered entirely by clean impervious sheeting to ensure that the dusty materials remain within the vehicles;
  - Water spraying demolition wastes generated to prevent dust generation or covering with tarpaulin sheet;
  - All dusty activities shall be sprayed with water to dampen dust, or otherwise an impermeable barrier shall be established around specific dusty activities;

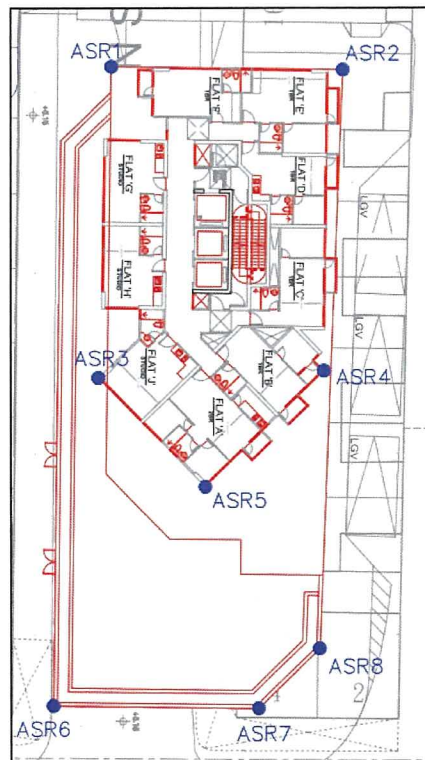


- Works area for site clearance shall be sprayed with water before, during and after the clearance so as to maintain the entire surface wet;
  - Open temporary stockpiles should be avoided. Any stockpile of dusty materials shall be covered entirely by impervious sheeting, and / or placed in an area sheltered on the top and 4 sides;
  - All dusty materials shall be sprayed with water immediately prior to any loading, unloading or transfer operation so as to keep the dusty materials wet; and
  - All spraying of materials and surfaces should avoid excessive water usage.
- 3.3.6 In addition, all PME should be regularly maintained to minimise gaseous emissions. Vehicle engines and plant not in use or idling should be switched off.
- 3.3.7 Wherever possible, prefabrication of materials (e.g. concrete) off-site should be encouraged, if necessary.
- 3.3.8 With the implementation of the dust suppression measures, adverse construction dust impact would not be anticipated.

### 3.4 Operation Phase - Vehicular Emission Impact

#### *Air Sensitive Receivers*

- 3.4.1 A number of notional assessment points within the site boundary have been identified for the vehicular emission impact assessment and are shown in **Figure 3.2** below. As the retail floors (G/F to 3/F) are provided with central air-conditioning and the fresh air intakes would be located on the top of the podium level, the assessment heights are taken on the landscape deck at the top of the podium level (i.e. 15m above ground) and then from 1<sup>st</sup> residential floor (i.e. 22.5m above ground), with every 5 floors up to the maximum building height.



**Figure 3.2 Locations of Air Sensitive Receivers**

#### *Identification of Pollution Sources*

- 3.4.2 Potential air quality impacts on the proposed development would be associated with the following pollution sources.
- Background pollutant concentrations; and

- Vehicle emissions from surrounding open roads within 500m from the site boundary;

### **Identification of Key/Representative Air Pollutants**

- 3.4.3 Since vehicular emission comprises mainly Nitrogen oxides (NO<sub>x</sub>), RSP and FSP, it is anticipated that vehicular emission will contribute to the future cumulative impacts of NO<sub>2</sub>, RSP and FSP in the assessment area and these three criteria pollutants are assessed in this study. For other pollutants, since no chimney in operation is identified within the 500m study area (**Section 3.5** refers), they are not considered as key pollutants for the purpose of this study.

### **Assessment Methodology**

#### Assessment Year

- 3.4.4 The air pollution impacts of future road traffic shall be calculated based on the highest emission strength from the road within the next 15 years upon population intake of the proposed development, i.e. Year 2040. As a worst scenario, traffic data of the assessment area in Year 2040 provided by the traffic consultant is adapted to the EMFAC-HK model set as the first year of the population intake of the proposed development, i.e. Year 2025, to estimate the hourly emission factors of each vehicles classes. The latest model version (version 3.1.1) of EMFAC-HK provided by EPD is employed in this Study. The proposed approach of the EMFAC-HK model is presented in **Sections 3.4.6 et seq.**

#### Background Pollutant Concentrations – PATH-2016 Model

- 3.4.5 PATH-2016 model released by EPD in January 2016 is used to quantify the background air quality. The emission sources including those in Pearl River Delta Economic Zone, roads, marine, airport, power plants and industries within Hong Kong are all considered in the PATH-2016 model. PATH-2016 model with Year 2020 emission inventory is adopted in this Study.

#### EMFAC-HK Model

- 3.4.6 EMFAC-HK model is adopted to determine the vehicle emission factors of NO<sub>x</sub> (i.e. initial NO + initial NO<sub>2</sub>), RSP and FSP. The EMFAC-HK model (version 3.1.1) provided by EPD is employed in this Study.

#### (a) Vehicle Classes

The “vehicle fleet” refers to all motor vehicles operating on roads within the Study Area. The modelled fleet was broken down into 16 vehicle classes based on the information as shown in Appendix 1 of Guideline on Modelling Vehicle Emissions published by EPD. The 16 vehicle classes modelled in EMFAC-HK are summarized in

#### 3.4.7 **Table 3-4.**

**Table 3-4 Vehicle Classes in EMFAC-HK Model**

Index	Vehicle Class Description	Gross Vehicle Weight (tonnes)
1	Private Cars (PC)	ALL
2	Taxi	ALL
3	Light Goods Vehicles (<=2.5t)	<=2.5t
4	Light Goods Vehicles (2.5-3.5t)	>2.5-3.5t
5	Light Goods Vehicles (3.5-5.5t)	>3.5-5.5t
6	Medium & Heavy Goods Vehicles (5.5-15t)	>5.5-15t
7	Medium & Heavy Goods Vehicles (>=15t)	>15t
8	Public Light Buses	ALL
9	Private Light Buses (<=3.5t)	<=3.5t
10	Private Light Buses (>3.5t)	>3.5t
11	Non-franchised Buses (<6.4t)	<=6.36t
12	Non-franchised Buses (6.4-15t)	>6.36-15t
13	Non-franchised Buses (>15t)	>15t
14	Single Deck Franchised Buses	ALL
15	Double Deck Franchised Buses	ALL



Index	Vehicle Class Description	Gross Vehicle Weight (tonnes)
16	Motor Cycles	ALL

## (b) Road Grouping

- 3.4.8 With reference to The Annual Traffic Census 2014, the road type of all road links within the study area include local distributors, district distributors and primary distributors. Their corresponding speed limits for these three road types are 50kph, 70kph and 80kph respectively. Hence, three sets of emission factors, i.e. 50kph, 70kph and 80kph, are calculated.

## (c) Model Year

- 3.4.9 The assessment year as mentioned in **Section 3.4.4** is selected as the model year of EMFAC-HK model.

## (d) Modelling Modes

- 3.4.10 According to EPD's guideline, "Burden mode" is used for calculating area-specific emission inventories. It is selected for this Project, since it can provide hourly vehicular emissions, taking into account of ambient conditions and speeds combined with vehicle activity, i.e. the number of vehicles, the kilometers driven per day and the number of daily trips.

## (e) Technology Fractions

- 3.4.11 Each vehicle class has diverse technological factors in different years. According to the underlying assumption in EMFAC-HK model, each vehicle class can be modelled by the individual behaviour of unique technology groups. Each technology group represents the vehicles from the same class (but with distinct emission control technologies) which have similar in-use deterioration rates and respond the same to repair. It means that the vehicles from the same class have the same emission standards or specific equipment installed on them (e.g. multi-port fuel injection, three-way catalyst, adaptive fuel controls, etc) which made them have the same performance.
- 3.4.12 The latest implementation programme of the vehicle emission standards in Hong Kong as published and available in EPD's website (i.e. updated as of December 2015) is adopted in this assessment. The exhaust technology fractions are made reference to the latest Year 2013 vehicle age distribution data for various vehicle classes that are available in EPD's website ([http://www.epd.gov.hk/epd/english/environmentinhk/air/guide\\_ref/emfac.html](http://www.epd.gov.hk/epd/english/environmentinhk/air/guide_ref/emfac.html)). It is assumed that the fuel properties will also be in line with the implementation of these standards.
- 3.4.13 Evaporative technology fraction in the model is based on the default value.

## (f) Vehicle Population

- 3.4.14 As recommended in the EPD's Guideline on Modelling Vehicle Emissions, default vehicle populations forecast in EMFAC-HK is used.

## (g) Accrual Rate

- 3.4.15 The default accrual rates in EMFAC-HK are estimated from the local mileage data adjusted to reflect the total VKT for each vehicle class. The default value is used.

## (h) Diurnal Variation of Daily Trips

- 3.4.16 The diurnal variation of daily trips is used to estimate the start emissions of petrol and LPG vehicles, thus the trips of diesel vehicles are zero. The number of trips per day of petrol and LPG vehicle should be equal to the number of cold starts per day. The cold start is only allowed at the middle in some of the local distributions with speed of 50kph.

- 3.4.17 For those roads with cold starts, the diurnal variation of daily trips (Trip<sub>within assessment area</sub>) is estimated as:

$$\text{Trip}_{\text{within assessment area}} = (\text{Trip}_{\text{within HK}} / \text{VKT}_{\text{within HK}}) \times \text{VKT}_{\text{within assessment area}}$$

- 3.4.18 Trip<sub>within HK</sub> is the default data of EMFAC-HK model. VKT<sub>within HK</sub> is the VKT of local roads in Hong Kong, which is estimated based on the default VKT data of EMFAC-HK model and the relevant data as published in the "Annual Traffic Census 2014" by Transport Department (TD). Details of the trip estimation are as shown in **Appendix 3.1**. VKT<sub>within assessment area</sub> is provided by the traffic consultant. The trips for each road type in the assessment area are provided in **Appendix 3.1**.

## (i) Diurnal Variation of Daily Vehicle-Kilometer-Travelled (VKT)

- 3.4.19 Vehicle-kilometer-travelled (VKT) represents the total distance travelled on a weekday. The VKT is calculated by multiplying the number of vehicle and the length of road travelled. The diurnal variation of VKT is provided by the traffic consultant, and is presented in **Appendix 3.1** with TD's endorsement. The input in the model was by vehicle/fuel/hour.

## (j) Speed Fraction

- 3.4.20 Speed fraction represents the percentage in different speed ranges of each vehicle type weighted by VKT.
- 3.4.21 The 24-hour speed fraction of each vehicle type is provided by the traffic consultant, and is presented in **Appendix 3.1** with TD's endorsement.

## (k) Hourly Temperature and Relative Humidity Profile

- 3.4.22 According to the information provided by Hong Kong Observatory (HKO), King's Park Weather Station is the nearest station of the Project. Thus, data recorded at King's Park Weather Station are adopted for the model input.

## (l) Emission Factors Adopted in the Air Quality Impact Assessment

- 3.4.23 The hourly emissions of NO<sub>x</sub>, RSP and FSP derived from EMFAC-HK model are divided by the number of vehicles and the distance travelled to obtain the emission factors in gram per miles per vehicle. Individual tailpipe NO<sub>2</sub>/NO<sub>x</sub> ratios of each vehicle type are calculated based on the template provided in EPD's website ([http://103.31.21.127/initial\\_NO2X\\_ratio.html](http://103.31.21.127/initial_NO2X_ratio.html)). The calculated 24-hour initial NO, initial NO<sub>2</sub>, RSP and FSP emission factors of 16 vehicle classes for the three road types are adopted in this air quality impact assessment and are presented in **Appendix 3.2**.

Vehicle Emissions from Open Roads – CALINE 4

- 3.4.24 Traffic on all open roads within the 500m study area has been included in this assessment. The United States Environmental Protection Agency (USEPA) approved CALINE4 dispersion model is used for calculation of the NO, NO<sub>2</sub>, RSP and FSP concentrations.
- 3.4.25 The predicted 24-hour traffic flows and vehicle mixes for the road networks in Year 2040 were provided by the traffic consultant and adopted in this air quality assessment, and are attached in **Appendix 3.1**. Agreement from TD on the use of the traffic forecast for this Study was endorsed on 25 February 2016. The 24-hour traffic flows and composite emission factors for each road link are presented in **Appendix 3.3**.
- 3.4.26 The dispersion modelling was conducted based on the meteorological data extracted from the PATH-2016 model. The grid cells of 4132 were used for extraction of meteorological data and background pollutant concentration. Surface roughness coefficient of 370 cm was taken in the CALINE4 model.
- 3.4.27 Ozone Limiting Method (OLM) is adopted for conversion of NO<sub>x</sub> to NO<sub>2</sub> based on the predicted O<sub>3</sub> level from PATH-2016. For vehicle emissions, OLM is applied to the predicted initial NO concentrations from open roads (from CALINE4). The NO<sub>2</sub>/NO<sub>x</sub> conversion is calculated as follows:

$$[NO_2]_{pred} = [NO_2]_{initial} + \text{MIN} \{ [NO]_{initial}, \text{ or } (46/48) \times [O_3]_{bkgd} \}$$

where

$[NO_2]_{pred}$	is the predicted NO <sub>2</sub> concentration
$[NO_2]_{initial}$	is the predicted initial NO <sub>2</sub> concentration from open roads
$[NO]_{initial}$	is the predicted initial NO concentration from open roads
MIN	means the minimum of the two values within the brackets
$[O_3]_{bkgd}$	is the representative O <sub>3</sub> background concentration
(46/48)	is the molecular weight of NO <sub>2</sub> divided by the molecular weight of O <sub>3</sub>

Cumulative Concentration Calculations

- 3.4.28 The PATH-2016 model output is added to the sum of the CALINE4 model result sequentially on an hour-to-hour basis to derive the short-term and long-term cumulative impacts at the ASRs.
- 3.4.29 With reference to the EPD's *Guidelines on Choice of Models and Model Parameters*, PATH-2016's output of RSP concentration are adjusted as follows:

- 10th highest daily RSP concentration: add  $37.6 \mu\text{g}/\text{m}^3$
- Annual RSP concentration: add  $21.9 \mu\text{g}/\text{m}^3$

3.4.30 With reference to the EPD's *Guidelines on the Estimation of PM<sub>2.5</sub> for Air Quality Assessment in Hong Kong*, the following conservative formulae are adopted to calculate background FSP concentration from the RSP concentration extracted from PATH-2016 model:

- Annual ( $\mu\text{g}/\text{m}^3$ ):  $\text{PM}_{2.5} = 0.71 \times \text{PM}_{10}$
- Daily ( $\mu\text{g}/\text{m}^3$ ):  $\text{PM}_{2.5} = 0.75 \times \text{PM}_{10}$

#### ***Prediction and Evaluation of Environmental Impacts***

- 3.4.31 The cumulative hourly average NO<sub>2</sub>, daily average RSP and FSP, and annual average NO<sub>2</sub>, RSP and FSP concentrations at the identified ASRs are predicted and the results are presented in **Appendix 3.4**.
- 3.4.32 No exceedance of AQOs of NO<sub>2</sub>, RSP and FSP would occur at any identified ASRs. According to **Section 2.2**, the landscape deck and residential floors (4/F to 37/F) are from 15m above ground and above. Adverse air quality impact to the residential floors of the proposed development is not expected.
- 3.4.33 According to the Chapter 9 of the HKPSG, the air sensitive uses should include residential areas, child care centers, residential care homes for the elderly, hospitals and clinics, schools and active recreational activities. Based on the current layout scheme, the proposed development only provide the landscape deck for recreational activities and the residential units are located at 15m above ground or above, therefore, no adverse air quality impact to the proposed development would be expected.

#### ***Mitigation Measures***

- 3.4.34 Cumulative air quality impacts of vehicular emission from existing open roads surrounding the proposed development on the proposed development has been assessed. No exceedance of AQOs of NO<sub>2</sub>, RSP and FSP would occur at the landscape deck and the residential floors of the proposed development and thus no mitigation measures are considered necessary.
- 3.4.35 With careful locations of the fresh air intake of the central air conditioning system where air pollutant concentrations comply with the AQOs, for example locations at 15m above ground or above, the employees/users of the retail podium of the Project will not be subject to unacceptable air quality impact.

### **3.5 Industrial Emission Impact**

#### ***Desktop Review***

- 3.5.1 Desktop review of relevant nearby environmental reports<sup>[1]</sup> identified a number of chimneys in Ma Tau Wai yet they are all outside 500m study boundary of proposed development. According to these environmental reports, the nearest chimneys (KTEIA-2060, KTEIA-2079) are located at about 523m and 561m away from site boundary of proposed development along Yut Yat Street, as shown in **Figure 3.3** below. As such, these chimneys (KTEIA-2060, KTEIA-2079) would not be included in this study.

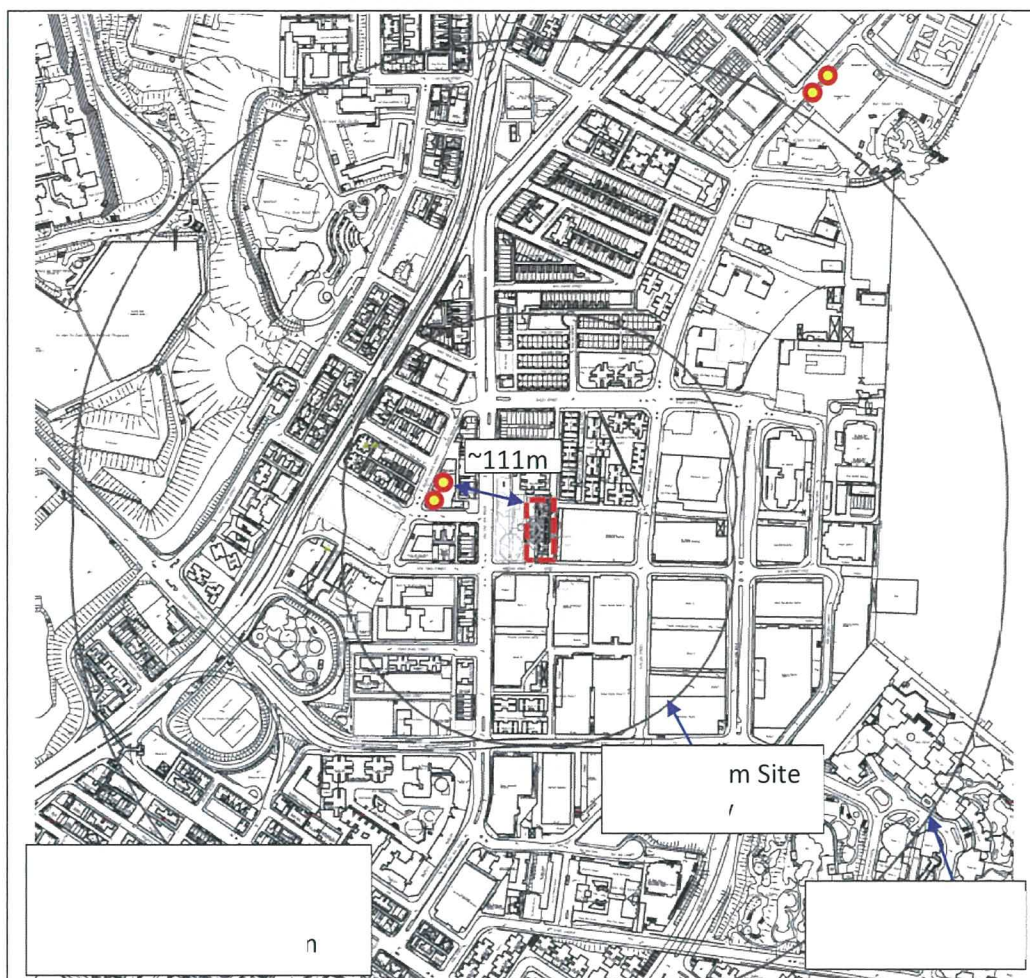
#### ***Site Visit/Site Observation***

- 3.5.2 Site visits were conducted in September 2015 to identify and investigate any potential environmental polluting industrial sources affecting the proposed residential development within 500m study area from the Project.

<sup>[1]</sup> Reference reports with relevant information included the Approved EIA report of Kai Tak Development (EIA-157/2008) and Environmental Assessment for "Proposed Residential Development in "Residential (Group E)" zone, 18 Chi Kiang Street To Kwa Wan" of Planning Study A/K10/237.

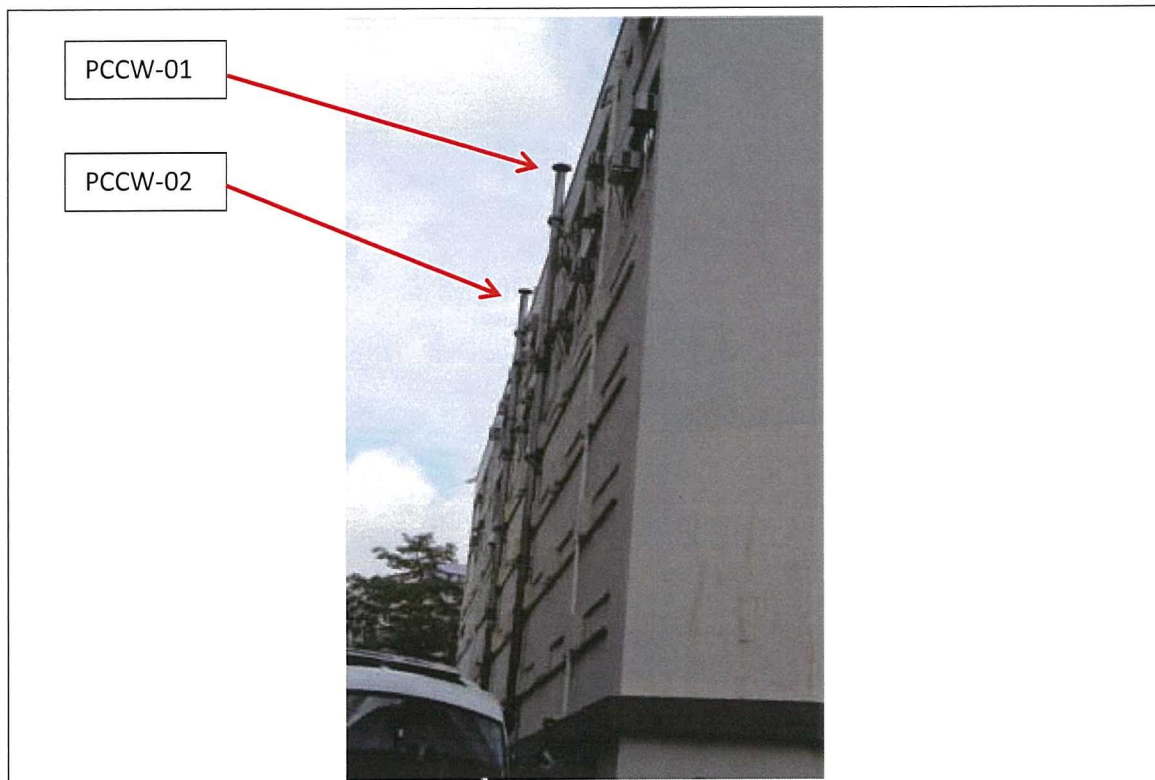


3.5.3 Within 500m study area from the Site, 2 nos. of chimneys were identified, as indicated in **Figure 3.3** at around 110m from proposed site boundary (PCCW-01 and PCCW-02). The photos of identified chimneys PCCW-01 and PCCW-02 are shown in **Figure 3.4**.



**Figure 3.3** Chimneys Identified near the Project Site





**Figure 3.4** Chimney PCCW-01 and PCCW-02

#### ***Impact Evaluation***

- 3.5.4 As shown in **Figure 3.4**, only two chimneys are located within 500m study area and are located at telephone exchange building (PCCW) on Gillies Avenue North. These chimneys are connected to emergency generator room (see **Appendix 3.5**) which are not of industrial use and will not be frequently operated during normal days. Other identified chimneys are also located outside 500m from Site boundary. Hence, quantitative assessment due to industrial emission is considered not necessary. It is also concluded that no adverse industrial emission impact on the Site is anticipated.

#### **3.6 Conclusion**

- 3.6.1 Fugitive dust impacts to the nearby air sensitive receivers due to demolition and construction works are expected to be insignificant with the implementation of dust suppression measures as well as good site practice as stipulated under the Air Pollution Control (Construction Dust) Regulation.
- 3.6.2 Based on the future air quality conditions as predicted in PATH model, local air quality would comply with the statutory AQOs. Potential cumulative air quality impacts on the proposed development has been assessed, it is anticipated that the Scheme would not be adversely affected by vehicular emission.
- 3.6.3 In view of considerable separation between the non-industrial chimneys and the proposed residential development, no adverse industrial emission impact on the proposed development is anticipated.

## 4 NOISE IMPACT ASSESSMENT

### 4.1 Introduction

- 4.1.1 This section presents an assessment on the noise impact from construction works during construction phase, road traffic and industrial uses during the occupation of the proposed development.

### 4.2 Construction Noise

#### **General**

- 4.2.1 Detailed information on demolition and construction activities of the proposed development has not been available yet at this preliminary stage, the demolition and construction noise impact was addressed qualitatively.

#### **Environmental Legislation and Guidance**

- 4.2.2 Construction works within restricted hours (public holidays and Sundays, and from 19:00 to 07:00 hours on other days) are not anticipated in general and would be controlled under Noise Control Ordinance (CAP 400, NCO) as required.
- 4.2.3 Construction noise for works during non-restricted hours should reference to the assessment criteria stipulated under *ProPECC PN 2/93 "Noise from Construction Activities – Non-statutory Controls"*, where recommended construction noise criteria for dwellings are  $L_{Aeq,30min}$  of 75 dB(A); while that for school are 70 dB(A) and 65dB(A) during normal school days and examination periods respectively.

#### **Impact Assessment**

- 4.2.4 Major construction activities would involve demolition of existing buildings at the Site, as well as construction activities related to site clearance, site formation, excavation, foundation, building and road widening works of Sung Chi Street. The use of PME for the demolition and construction works of the proposed development would likely be the major source of noise impact potentially affecting the NSRs located in the vicinity of the Site.
- 4.2.5 Provided that adequate demolition and construction noise mitigation measures are implemented, together with appropriate construction work programme planning, and avoidance of unnecessary concurrent operation of the noisy PME, it is expected that the construction noise impact would be minimised.

#### **Mitigation Measures**

- 4.2.6 In order to alleviate the potential construction noise impacts on the nearby NSRs, the following mitigation measures are suggested:
- (i) Implementation of good site practices to limit noise emissions at source, and avoid unnecessary concurrent operation of noisy PME;
  - (ii) Use of quieter PMEs and avoid unnecessary PME idling;
  - (iii) Use of quieter alternative construction method; and
  - (iv) Use of noise barriers/enclosure, if appropriate.

In addition, the "*Recommended Pollution Control Clauses for Construction Contracts*" published by the EPD would be adopted in the Contract Specification for the Contractors to follow and implement relevant measures and good site practices in minimising noise nuisance.

#### **Conclusion**

- 4.2.7 Provided that adequate construction noise mitigation measures are implemented, together with appropriate construction work programme planning, and avoidance of unnecessary concurrent operation of the noisy PME, minimised or limited construction noise impact on the nearby NSRs is expected during construction phase.

### 4.3 Operation Phase - Road Traffic Noise Impact

#### *Assessment Criterion*

- 4.3.1 According to the HKPSG, road traffic noise impact has been assessed against the noise limit of  $L_{10}$  (1-hr) 70 dB(A) for domestic premises. The standard applies to the uses which rely on opened windows for ventilation.

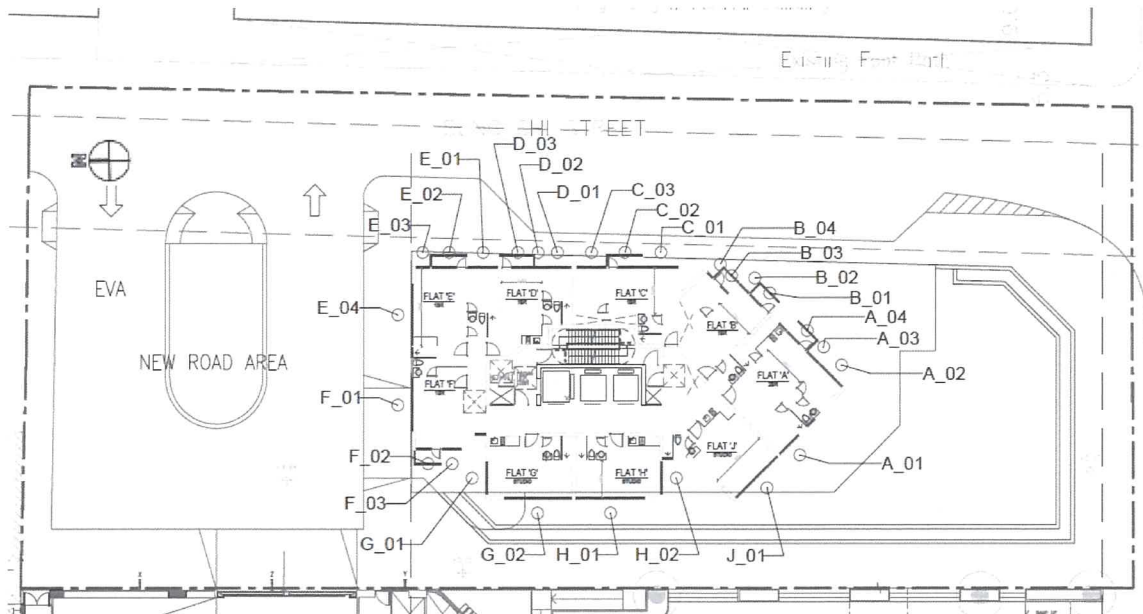
#### *Assessment Methodology*

- 4.3.2 According to the HKPSG, predictions can be readily based on the procedures given in the UK Department of Transport "Calculation of Road Traffic Noise" 1988 (CRTN). For application in Hong Kong, the road traffic noise is represented in terms of  $L_{10}$  (1-hr) dB(A). The predicted noise levels at the building facades include 2.5 dB(A) facade reflection and correction factors for effects due to gradient, distance, view angle, road surface and barriers.
- 4.3.3 For planning purpose, road traffic noise should be predicted based on the maximum traffic forecast within 15 years upon the occupation of the proposed development. In this connection, the assessment is conducted based on the peak hour traffic flow predictions in Year 2040, as the operation of the proposed development would be commenced in Year 2025 tentatively. The assessed scenario has considered the widened section of Sung Chi Street. Traffic flows and heavy vehicle percentages are given in **Appendix 4.1**, provided by the project traffic consultant. Letter of no comment from TD on the Year 2040 traffic forecast is presented in **Appendix 3.1**. For conservative assessment purpose, no low noise road surface was assumed in the calculation.
- 4.3.4 To evaluate the initial traffic noise prediction of the development, an indicative traffic noise prediction has been conducted by employing commercial computer software. The computer plot of the road scheme is shown in **Appendix 4.3**.

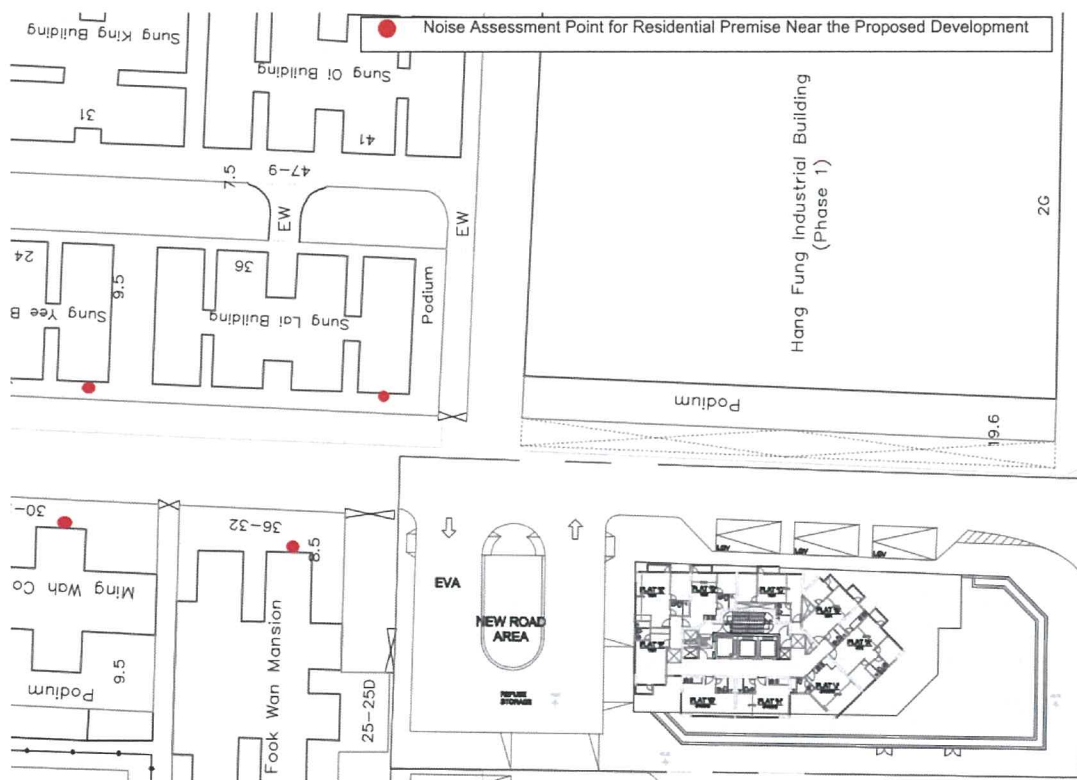
#### *Impact Assessment*

- 4.3.5 Preliminary traffic noise study evaluated that the predicted traffic noise levels at the proposed development during peak hours of Year 2040 would range from 57 dB(A) to 69 dB(A). Based on the notional design in the Scheme, a preliminary road traffic noise assessment is carried out and the assessment points of the notional design are shown in **Figure 4.1**; while predicted road traffic noise levels at each assessment point are presented in **Table 1 of Appendix 4.4**.
- 4.3.6 In addition, there would be minimal traffic flow on the future proposed New Road Area and the proposed widening of Sung Chi Street (See **Appendix 4.1**). The maximum predicted traffic noise levels at the existing residential premises, such as Fook Wan Mansion, Sung Lai Building, Ming Wah Court and Song Yee Building, which are next to the proposed development, are predicted to be ranged from 66 to 68 dB(A), which are complying with the stipulated noise criterion of 70dB(A). Therefore, no adverse traffic noise impact is expected from the future proposed New Road Area and the proposed widening of Sung Chi Street. The assessment points of the existing residential premises next to the proposed development are shown in **Figure 4.2** with the predicted road traffic noise levels presented in **Table 2 of Appendix 4.4**.
- 4.3.7 Based on the current notional layout and its noise modelling results as shown in **Appendix 4.4**, all proposed residential units in this layout would comply with the assessment criterion.





**Figure 4.1** Assessment Points for Road Traffic Noise Assessment based on the notional layout of the Scheme



**Figure 4.2** Road Traffic Noise Assessment Points for Residential Premise near the Proposed Development



### Conclusion

- 4.3.8 Based on the current notional design of the Scheme, 100% of the proposed residential units (i.e. 306 units) of the development would comply with the 70 dB(A) assessment criteria.
- 4.3.9 Although the study is based on a notional layout in the Scheme, which will be subject to detailed design and changes, it is anticipated that the proposed development in the Scheme will not face insurmountable traffic noise impact in view of road traffic noise level of the surrounding context.

## 4.4 Fixed Plant Noise Impact

### Environmental Legislation and Guidance

- 4.4.1 Fixed plant noise impact is controlled under Noise Control Ordinance (NCO). In accordance with the Technical Memorandum for the Assessment of Noise from Places other than Domestic Premises, Public Places or Construction Sites (IND-TM), the Area Sensitivity Rating (ASR) of the Site is considered as "B" as the Site is located in urban area and is not affected by the Influencing Factor. The Acceptable Noise Levels (ANLs) therefore refer to be  $L_{eq(30min)}$  65 dB(A) for daytime / evening (from 07:00 to 23:00) and 55 dB(A) for night-time (from 23:00 to 07:00) respectively. The determined ASR is for assessment purpose only and should not prejudice the Authority's discretion on the enforcement based on the contemporary conditions.

### Site Observation

- 4.4.2 As observed during site inspection at the roof of the Hang Fung Industrial Building (HFIB), fixed plant noise sources located in the vicinity of the Site would include cooling towers which are located mainly at PCCW Telephone Exchange (PCCW), Cheerful Commercial Building (CCB) and Conic Investment Building (CIB) along Hok Yuen Street and Sung Chi Street. Photos and the locations of the fixed plant noise sources are presented in **Appendix 4.5**. The fixed plant noise sources observed during the site survey are summarized in **Table 4-1**.

**Table 4-1 Potential Fixed Plant Noise Sources near the Site**

Building	Source Type	Source ID
PCCW Telephone Exchange Building (PCCW)	Three Cooling Towers on roof floor of PCCW	PCCW_01 to PCCW_03
Cheerful Commercial Building (CCB)	A cooling tower on podium of CCB	CCB_CT_01
Conic Investment Building (CIB)	Two Cooling Towers on 4/F Podium and one at the roof of CIB	CIB_CT_01 to 02, CIB_CT_03

- 4.4.3 There are also fixed plant noise sources located on the roof of the Hunghom Commercial Centre (HHCC). However, permission was not granted by the management office of HHCC to access the roof level for site survey and noise measurement. Fixed plant noise sources at HHCC was then identified based on photos taken from the rooftop of Carlton Court and the information available from public domain (See **Appendix 4.6**). The identified fixed plant noise sources located at the rooftop of HHCC are summarized in **Table 4-2**. Fixed plant noise was not noticeable at the roof of the HFIB during the daytime site visit due to noise climate masked by traffic noise from Ma Tau Wai Road and Hok Yuen Street.

**Table 4-2 Fixed Plant Noise Sources at the rooftop of HHCC**

Building	Source Type	Source ID
HHCC Tower A	7 cooling towers / Chillers	HHCCA_01 to HHCCA_07
HHCC Tower B	7 cooling towers / Chillers	HHCCB_01 to HHCCB_07

## Impact Assessment

### Hong Hom Telephone Exchange

- 4.4.4 Based on the information provided by HKT Limited, as shown in **Appendix 4.7**, three sets of cooling towers (model: FWS- 127-7.5) are installed on the rooftop of Hung Hom Telephone Exchange building. The specification indicated that the fan motor power of the cooling towers is 7.5 KW which equivalent to 10 hp (horsepower). In accordance with Table 7b of "Good Practices on Ventilation System Noise Control" published by the EPD, the typical sound power level of each cooling tower with fan power of 10 hp is 96 dB(A). Based on the separation distance (i.e. 105m) between three sets of cooling towers and the proposed development, the fixed plant noise levels at 1 m from the facade of proposed development is predicted to be 55dB(A) (i.e.  $(96 + 10\log(3) - (20\log(105)+8) + 3\text{dB(A)})^2$ , complying with daytime noise criterion of 65dB(A) (i.e. ANL-5).
- 4.4.5 Tonality measurement has been conducted on the roof of No. 4 Chun Tin Street to investigate the noise from the cooling towers at Hung Hom Telephone Exchange building having any tonal characteristics. The measurement point has direct line of sight on the cooling towers. Noise measurement was carried out from 2320 to 2350 hours. One-third octave bands of the A-weighted spectrum of the noise measurement results is presented in **Appendix 4.10**. Measurement results indicate that the cooling towers do not have tonal characteristic. Based on the on-site observation, no impulsive and intermittency characteristics was observed during measurement period.
- 4.4.6 According to the information provided by HKT Limited (**Appendix 4.7** refers), the cooling towers at the rooftop of Hung Hom Telephone Exchange building are in operation during night-time, hence the predicted night-time fixed plant noise levels at the proposed development is 55 dB(A), which comply with the stipulated night-time noise criterion of 55 dB(A) as set out in the IND-TM for ASR B. No adverse fixed plant noise impact is anticipated at the proposed development during night time.

### Cheerful Commercial Building (CCB)

- 4.4.7 As shown in **Appendix 4.5**, the cooling tower (ID CCB\_CT\_01) located at the podium (at about 5/F of the building) of the CCB would be totally screened by the future residential tower of the MTW Project. As the target completion year of the MTW Project is 2019 which is about 6 years ahead of the proposed development, the fixed impact noise impact from the cooling tower at CCB to future development is considered insignificant. The confirmed layout and the heights of the buildings of the MTW project are shown in **Appendix 4.11** for reference.

### Conic Investment Building (CIB) and Hunghom Commercial Centre (HHCC)

- 4.4.8 Noise monitoring was carried out at the rooftop of Hang Fung Industrial Building (HFIB), which is of similar height as the rooftop of CIB and HHCC and located immediately to the east of the Site, to measure the noise level associated with the operation of the fixed plant items at CIB and HHCC. Microphone was set at approx. 4 m high above the rooftop level of HFIB such that the measurement point would have direct line of sight on the fixed plant noise sources located on the roof of CIB and HHCC. Only minor noise sources (e.g. split-type AC units) were found on the rooftop of HFIB and the noise contribution from these sources to the measurement results is expected to be minimal. The monitoring location is shown in **Appendix 4.8**. Considering HFIB is located immediately to the east of the Site, it is anticipated that HFIB and proposed development will share a similar noise environment.
- 4.4.9 As discussed in Section 4.4.3, fixed plant noise from the CIB and HHCC was not noticeable during daytime visit due to the noise climate being masked by nearby traffic noise. Therefore further site visit was conducted on 7 Jul 2016 during evening period in order to minimize the influence of the traffic noise from Ma Tau Wai Road and Hok Yuen Street. Fixed plant noise from CIB and HHCC was marginally audible at the southwest corner of the rooftop of HFIB (i.e. the measurement point) during the noise measurement period while the road traffic noise was still dominate the noise climate. A total of six sets of 5 minutes A-weighted equivalent continuous noise level ( $L_{Aeq}$ ) were measured and the measurement result is summarized in **Table 4-3**.

<sup>2</sup> Calculation based on the following equation:

$$\text{SPL} = \text{SWL of plant} + \text{correction for no. of plant (i.e. } 10\log(\text{no. of plant})) + \text{distance correction (i.e. } 20\log(r)+8) + \text{façade correction (i.e. } 3\text{dB(A))}.$$

**Table 4-3 Measured Noise Levels at the southwest corner of the rooftop of HFIB**

Measurement Time	Measured Noise Levels, $L_{Aeq}$ (5min), dB(A) (Free-Field)
2021 to 2026 hours	63.0
2026 to 2031 hours	62.7
2031 to 2036 hours	61.2
2036 to 2041 hours	62.6
2041 to 2046 hours	62.2
2046 to 2051 hours	61.6
$L_{Aeq}$ (30 min)	<b>62.3</b>

- 4.4.10 As confirmed by the management office of both CIB and HHCC, the identified fixed plant noise sources in CIB and HHCC are not in operation between 2300 and 0700 hours. Background noise measurement was carried out between 2300 and 2330 hours at the rooftop of HFIB and the measured noise level ( $L_{Aeq}$ , (30min)) was 61.8 dB(A). With consideration of correction from background noise, a maximum of 3 dB(A) background correction has been applied as conservative approach, and hence the background corrected fixed plant noise level is 59 dB(A) (i.e. 62dB(A) - 3dB(A)).
- 4.4.11 The measurement point was located at more than 30 m from the fixed plant sources on the rooftop of HHCC and CIB. Considering that the proposed development will be located farther away from the fixed plant noise sources (i.e. at more than 45 m from the fixed plant noise sources on the rooftop of HHCC and CIB), it is anticipated that the fixed plant noise levels at the proposed development will not exceed 62 dB(A) (i.e. 59dB(A) + 3dB(A) façade correction), complying with daytime noise criterion of 65dB(A) for ASR B.
- 4.4.12 Tonality characteristics of the existing fixed noise sources at CIB and HHCC have been investigated and measurement results in one-third octave bands of the A-weighted spectrum is presented in **Appendix 4.10**. No tonal characteristic in the fixed plant noises was found. Based on the on-site observation, no impulsive and intermittency characteristics was observed during measurement period.
- 4.4.13 A night time site survey (2330 to 0030 hours) was conducted on 2 Mar 2016 (weekday) to investigate the night time operating situation with respect to the identified fixed plant noise sources at the surroundings. It was observed during site inspections that surrounding industrial/commercial buildings were closed. Details of site observations and findings are provided in **Appendix 4.9**.
- 4.4.14 Additional night time site survey (0030 to 0100 hours) was also conducted on 8 July 2016 (weekday) at the rooftop of HFIB and CIB in order to investigate the night-time noise climate associated with any operation of fixed plant noise sources at the rooftop of CIB and HHCC. Site survey revealed that the fixed plant noise from CIB and HHCC was inaudible at the rooftop of CIB and the same measurement location on HFIB as conducted during evening period, in addition to CIB and HHCC were found closed with light off indicating no night time operation at CIB and HHCC. Interview with management office of both CIB and HHCC on 30 Aug 2016 also revealed that the identified fixed plant noise sources in CIB and HHCC are not in operation between 2300 and 0700 hours. Therefore, no fixed plant noise impact from these fixed plant sources on the roof of CIB and HHCC is anticipated during night time.

#### Cumulative Fixed Plant Noise Impact on Proposed Development

- 4.4.15 As discussed in **Section 4.4.4** and **Section 4.4.11**, the predicted daytime noise levels from the fixed plant noise sources on the roof of Hung Hom Telephone Exchange building and CIB and HHCC are 55dB(A) and 62dB(A) respectively. The cumulative fixed plant noise impact at the proposed development during daytime and evening time would not exceed 63 dB(A) (i.e. 62 dB(A) + 55 dB(A)), which comply with the daytime noise criterion of 65dB(A) for ASR B.
- 4.4.16 With no night time operation in CIB and HHCC, there would be no cumulative night time fixed plant noise impact on the proposed development. As discussed in **Section 4.4.6**, the predicted night-time fixed plant noise level from cooling towers on Hung Hom Telephone Exchange building is 55

dB(A) and thus no adverse fixed plant noise impact is anticipated at the proposed development during night time.

Fixed plant source from the Project

- 4.4.17 According to the notional design, electrical and mechanical (E&M) equipment such as water pumps, fan room and air handling units are expected to be provided within plant rooms where located at the basement floor of the future development. With the provision of enclosed plant rooms, as well as the adoption of acoustic silencers or acoustic louvers at the ventilation intake/outlet where necessary, potential fixed plant noise from future E&M equipment is not expected to be a concern. In accordance with Table 4.1 of chapter 9 of HKPSG, the fixed plant noise emission should be controlled to comply with the ANL-5 dB or the prevailing background noise levels, whichever is the lower. Such requirements will be included in the contract specifications for the procurement and installation of fixed plant equipment during detailed design stage.

**Conclusion**

- 4.4.18 Existing fixed plant noise sources in the vicinity of the Site have been identified. For daytime and evening period, the background noise is dominated by the road traffic on the adjacent road network. Noise measurement was carried out at the rooftop of HFIB to investigate the existing fixed plant noise impact associated with the noise sources located at CIB and HFIB, which are located closest to the proposed development. In addition to the noise sources on Hung Hom Telephone Exchange building, it is estimated that the cumulative fixed plant noise levels at the proposed development would be 63 dB(A) which comply with the stipulated daytime and evening noise criterion of 65dB(A).
- 4.4.19 During night-time period, the fixed plant noise from the noise sources located on the rooftop of CIB and HHCC was inaudible at the rooftop of the CIB and the HFIB. Management offices of the CIB and the HHCC also confirmed that the identified fixed plant sources are not in operation between 2300 to 0700 hours. As the surrounding industrial buildings and commercial buildings including CIB and HHCC were closed, the only fixed plant sources operating in the vicinity during night-time are the three cooling towers at the rooftop of Hung Hom Telephone Exchange building. The predicted night-time fixed plant noise level at 1m from the sensitive façade of the proposed development is 55 dB(A), complying the stipulated night-time noise limit of 55 dB(A) for ASR B. No adverse fixed plant noise impact on the proposed development is anticipated during daytime and night-time periods.
- 4.4.20 The fixed plant sources from the Project will be located at the basement floor of the future development. With the provision of enclosed plant rooms, as well as the adoption of acoustic silencers or acoustic louvers at the ventilation intake/outlet where necessary, potential fixed plant noise from future fixed plant items is not expected to be a concern.



## 5 WASTE MANAGEMENT

### 5.1 Legislation and Requirement

- 5.1.1 In general, sustainable approaches to waste management should be adopted to produce less waste and reuse or recover value from waste.
- 5.1.2 Waste collection and disposal is covered by the Waste Disposal Ordinance (Cap. 354) (WDO). This provides a licensing system for the disposal of certain wastes and for the control of certain wastes by regulation. All wastes should be properly stored and disposed in accordance with relevant waste management regulations and guidelines.

### 5.2 Construction Phase

#### *Waste Types*

- 5.2.1 The demolition and construction activities to be carried out for the proposed development would generate a variety of waste that can be divided into distinct categories based on their composition and ultimate method of disposal. The identified waste types include:
- Construction and demolition (C&D) materials, comprising inert and non-inert materials, from the demolition and construction works;
  - Potential building materials containing asbestos ;
  - Chemical waste from any maintenance of construction plant and equipment; and
  - General refuse from the workforce.

#### *Inert and non-inert C&D Materials*

- 5.2.2 Inert C&D Materials includes construction debris, soil, rock and concrete, should be re-used on-site as filling materials or off-site as public fill at public fills reception facilities. C&D Waste (non-inert C&D material) includes metal from the existing structures, wood from formwork, equipment parts, and materials and equipment wrappings, etc. should be re-used or recycled as far as possible. C&D Waste is not suitable for public fill and requires disposal to licensed landfill facilities. It is recommended that different types of wastes should be segregated, stored, transported and disposed of separately in accordance with EPD's required procedure.
- 5.2.3 As the Scheme involves demolition of existing buildings and construction of one floor of basement, there will be generation of inert C&D materials during construction. It is estimated that about 7,400m<sup>3</sup> excavated materials would be generated and about 1,200m<sup>3</sup> would be suitable for backfilling during site formation stage. It is also estimated that about 2,620 m<sup>3</sup> C&D materials will be generated during the demolition work.
- 5.2.4 To account the quantity of C&D materials to be generated from construction of the new building, C&D materials generation rate of 0.1m<sup>3</sup> per m<sup>2</sup> of GFA constructed is adopted in accordance with the "Reduction of Construction Waste Final Report, Hong Kong Polytechnic University (March 1993)". The total GFA of the proposed future development from the Project will be approximately 14,724m<sup>2</sup>. The C&D materials will be generated from superstructure construction is approximately 1,472 m<sup>3</sup>. The volume of C&D materials from building construction is relatively small and not expected to induce adverse waste management issue.
- 5.2.5 The volume of C&D Waste, such as maintenance and packaging waste being generated by the Project will be subject to specific construction procedures and site practices. The estimated amount of C&D wastes generated during site clearance and construction of superstructure works would be minimal with careful design, planning, good site management and control of ordering procedures etc.
- 5.2.6 The estimated quantities of inert and non-inert C&D material generated from the construction of the Project are presented in **Table 5-1**.

**Table 5-1 Estimated Quantities of C&D materials to be Generated, Reused and Disposed of**

Construction Activities	C&D material (m <sup>3</sup> )	C&D material to be Reused On-site (m <sup>3</sup> )	C&D material to be disposed of (m <sup>3</sup> )	
			Inert	Non-inert
Excavation	7,400	1,200	6,200	-
Demolition of existing buildings	2,620	-	2,360	260
Superstructure construction	1,472	-	1,325 <sup>(a)</sup>	147 <sup>(a)</sup>

**Note:**

(a) Approximately ratio for (inert waste) : (non-inert waste) is 9:1 according to "Monitoring of Solid Waste in Hong Kong, 2014" by EPD

- 5.2.7 Detailed design of the foundation works and building construction is not yet available at this stage. A preliminary estimation of the amount of inert C&D materials arising from the Scheme should be reviewed in the Environmental Management Plan (EMP) and should be submitted by the Contractor prior to the commencement of construction works.

Marine Sediment

- 5.2.8 According to the information collected from the adjoining MTW Road Project which is also an URA project, no marine deposit was found during the excavation works at MTW Road project site. Considering the Project Site is located immediately next to the MTW Road project site, excavation of marine sediment is not anticipated.

Chemical Waste

- 5.2.9 Chemical waste, such as spent lubricants for equipment or waste battery, may be generated. As far as the scale of the works is small, the quantity of chemical waste generated would be minimal. It is expected that the approximate quantity of the lubrication oil is about 500L/month and hence approximately 24m<sup>3</sup> of chemical waste will be generated during construction period of 48 months. A licensed collector should be employed to handle and dispose of the chemical waste. Furthermore, the chemical waste should be handled in accordance with the Code of Practice on the Packaging, Labelling and Storage of Chemical Waste. The Works Contractor should register as a Chemical Waste Producer under the WDO.
- 5.2.10 Since the existing structures were built in 1950s, materials containing asbestos may be present at the existing structures which would be demolished. Asbestos investigation would be carried out before the commencement of demolition works. Asbestos investigation and asbestos abatement plan will be made in accordance with the relevant statutory requirements if any asbestos is found in the Site. In addition, other chemical waste, if any, to be generated during the demolition works will be handled and disposed of in accordance with the Code of Practice on the Packaging, Handling and Storage of Chemical Waste. For asbestos wastes, if any, will be handled and disposed of in accordance with the Code of Practice on the Handling, Transportation and Disposal of Asbestos Wastes. With the implementation of proper waste management measures, no adverse environmental impacts are expected.

- 5.2.11 No hazardous materials or hazardous wastes are expected to be generated during the construction of the Site.

General Refuse

- 5.2.12 General refuse such as food scraps, waste paper, empty containers, etc would be generated from construction workforce during construction phase. Such refuse should be properly managed so intentional or accidental release to the surrounding environment does not occur. Effective collection of site wastes would be required to prevent waste materials being blown around by wind, flushed or leached into nearby waters, or creating an odour nuisance or pest and vermin problem. Waste storage areas should be well maintained and cleaned regularly.
- 5.2.13 With the implementation of good waste management practices at the site, adverse environmental impacts are not expected to arise from the storage, handling and transportation of general refuse generated by construction workers.

- 5.2.14 A tentative estimated timing of waste arising from construction phase is shown in **Table 5-22**.

**Table 5-2 Tentative Estimated Timing of Waste Arising from Construction Phase**

Type of Waste	Timing
C&D Material	2 <sup>th</sup> Quarter 2021 to 4 <sup>th</sup> Quarter 2024
C&D Waste	2 <sup>th</sup> Quarter 2021 to 4 <sup>th</sup> Quarter 2024
Chemical Waste	2 <sup>th</sup> Quarter 2021 to 2 <sup>th</sup> Quarter 2025
General Refuse	(Entire construction phase)

### **Mitigation Measures**

- 5.2.15 Prior to the commencement of the construction works, the constructor will identify the types and amount of waste generated and its associated mitigation measures according to the requirements as stipulated in ETWB TCW No. 19/2005.
- 5.2.16 The Contractor should adopt good housekeeping practices such as waste segregation prior to disposal. Stockpiling and segregating areas should be provided at site. Effective collection of site wastes would be required to prevent waste materials being blown around by wind, flushed or leached into nearby waters, or creating an odour nuisance or pest and vermin problems. Waste storage areas should be well maintained and cleaned regularly.
- 5.2.17 Whenever there are excess recyclable construction materials, including bricks, plastics and metals, re-use and recycling should be carried out as far as practicable for waste minimisation. Other inert non-recyclable materials such as concrete, asphalt, etc. should be treated as public fill. Non-inert and non-recyclable wastes should be disposed at designated landfill site.
- 5.2.18 General refuse should be stored in enclosed bins or compaction units separate from C&D materials. A reputable waste collector should be employed by the Contractor to remove general refuse from the Site, separately from C&D materials. Preferably an enclosed and covered area should be provided to reduce the occurrence of "wind-blown" light materials.
- 5.2.19 Provided that good site practices are strictly followed, there would be no adverse impacts related to waste management during construction phase.

### **5.3 Waste Management Implications**

- 5.3.1 Domestic wastes will be expected as the major type of waste from the redevelopment, including food residues, plastic and metal products, and paper. No chemical or hazardous waste is anticipated. Wastes generated will be collected and disposed of on a regular basis. Wastes generated from the Site will also include recyclable wastes such as paper, plastics and metals. Reuse and recycling of such wastes is encouraged in line with Government policy in view of clear environmental benefits. The volumes of wastes likely to be generated by the proposed development are considered to be insignificant.
- 5.3.2 Domestic waste that cannot be reused or recycled is disposed of as general refuse. It is proposed to be taken to the collection point near the Site, however, where necessary appropriately licensed and respectable waste collectors should be employed to collect the various waste types generated at the development. With strict implementation of good site practices, good management and controls to reduce the generation of waste amounts, adverse impacts due to waste management will not be anticipated.
- 5.3.3 Provided that all recommended measures and legislations are strictly followed, there would be no adverse impacts related to waste management during operation phase.

### **5.4 Conclusions**

- 5.4.1 A variety of wastes including inert C&D material, C&D waste, chemical waste and general refuse would be generated during the construction phase and domestic waste during occupation phase. Provided that the wastes generated would be managed with appropriate measures, no adverse environmental impacts arising from the handling, storage, transportation or disposal of the wastes generated during the occupation of the Scheme would be envisaged.

## 6 LAND CONTAMINATION

### 6.1 General

- 6.1.1 This section presents the potential land contamination issues within the Site. The purpose of this preliminary contamination assessment is to identify any need for detailed land contamination assessment to avoid any exposures of risk due to land contamination on the future occupants of the Site.

### 6.2 Environmental Legislation, Standards and Criteria

- 6.2.1 The relevant environmental legislation guidelines and standards related to land contamination aspect include the followings:
- Practice Guide for Investigation and Remediation of Contaminated Land, August 2011 (Practice Guide);
  - Guidance Note for Contaminated Land Assessment and Remediation, August 2007 (Guidance Note); and
  - Guidance Manual for Use of Risk-Based Remediation Goals (RBRGs) for Contaminated Land Management, December 2007 (Guidance Manual).

### 6.3 Preliminary Review

#### *Site History*

- 6.3.1 A preliminary review of historical aerial photos has been carried out for Year 1945, 1959 and 2015 as shown in **Appendix 6.1**. Referring to aerial photo taken in Year 1945, the Project Site was bare land without settlements, hence the potential land contamination due to land use prior to the Year 1945 is not anticipated. Based on the information published by URA, the existing buildings within the Project Site were established from Year 1955 to 1957. It is observed that the buildings and settlements had been established within the Project Site at that period and no change in land use was recognized on the Project Site since then. Summary of site history is presented in **Table 6-1**.

**Table 6-1 Summary of Site History**

Year	Site Description
1945	The Site was observed to be bare land with no buildings and settlements (Note: Based on aerial photo taken in Year 1945)
1955 – 1957	Existing buildings within the Project Site established (Note: Based on the information in a published document from URA ( <a href="http://www.ura.org.hk/media/3560007/for_public_inspection_e_final_20160519.pdf">http://www.ura.org.hk/media/3560007/for_public_inspection_e_final_20160519.pdf</a> ))
1959	The Site was observed to be occupied with buildings and settlements (Note: Based on aerial photo taken in Year 1959)
1955 – present	No significant changes in land uses (Note: The existing building was being occupied for more than 60 years and there is no change in land use (residential building) in this period)



**Preliminary Site Walkover**

- 6.3.2 Preliminary site walkover was conducted in late 2015 to identify potential contamination within the Site. Site walkover photos have been depicted in **Appendix 6.2**.
- 6.3.3 Due to inaccessible to the existing tenants, detailed site appraisal could not be conducted for land contamination assessment during the preparation of this EA. It is therefore recommended to carry out a detailed land contamination assessment (LCA) after the Site is made accessible to URA.
- 6.3.4 Based on the existing tenants of the Site and observations of preliminary site walkover, all potentially contaminating activities have been identified and are presented in **Appendix 6.3**. Further supplementary site appraisal is suggested when the Site is available to access.

**6.4 Summary and Conclusion**

- 6.4.1 Based on the preliminary review of the historical land use of the Site and the observations of site walkover, a potential land contamination issue arising from the operation of motor vehicle workshop at No. 18 Chun Tin Street is anticipated. However, it is currently inaccessible to the existing tenants, and thus a detailed site appraisal together with LCA covering the whole Project Site should be conducted after it is accessible.
- 6.4.2 The LCA will be carried out prior to the commencement of any construction works in accordance with relevant guidelines including "Guidance Note for Contaminated Land Assessment and Remediation" (Guidance Note), "The Practice Guide for Investigation and Remediation of Contaminated Land" (Practice Guide), and "Guidance Manual for Use of Risk-based Remediation Goals for Contaminated Land Management" (Guidance Manual). The LCA will assess if there is any land contamination. If affirmative, a Contamination Assessment Plan (CAP) will be carried out to identify and propose appropriate land remediation if needed in accordance with relevant prevailing guidelines will be carried out. If necessary, Contamination Assessment Report (CAR), Remediation Action Plan (RAP) and Remediation Report (RR) should be prepared for the EPD's approval before commencement of any construction works for the development.

**Appendix 3.1**  
Letter of No Comment from Transport Department on the  
Traffic Forecast and Traffic Data

By Fax  
2528 6343



**CONFIDENTIAL**

本署檔案 Our Ref. : TD KR 182/111-1C  
來函檔號 Your Ref. : J6473/2  
電話 Tel. : 2399 2504  
圖文傳真 Fax : 2397 8046  
電郵 Email : joycewcllee@td.gov.hk

25 February 2016

CKM Asia Limited  
21st Floor, Methodist House  
36 Hennessy Road  
Wanchai  
Hong Kong  
(Attn: Mr. Chin Kim Meng)

Dear Mr. Chin,

**URA Chun Tin Street/Sung Chi Street Development Scheme (KC-008A)**  
**Traffic Forecast for Environmental Assessment**

I refer to your letter of the above reference dated 23 February 2016. I have no adverse comment on the methodology adopted for estimating year 2040 traffic data for Environmental Impact Assessment.

Yours faithfully,

(Joyce W. C. LEE)  
for Commissioner for Transport

市區(九龍)及新界分區辦事處  
Urban (Kln.) & NT Regional Office  
九龍聯運街三十號旺角政府合署七樓及八樓  
7th & 8th Floors, Mong Kok Government Offices, 30 Luen Wan Street, Kowloon.  
圖文傳真 Fax No.: 2381 3799 (新界區) (NTRO) 2397 8046 (九龍市區) (U(K)RO)  
網址 Web Site: <http://www.td.gov.hk>

Appendix 3.1 Traffic Data

URA  
Road Type: LD Post Speed 50kph  
Year: 2025

VKT

Vehicle Classes	Description	Fuel Type	Hour																							
			0:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00
			 1:00	 2:00	 3:00	 4:00	 5:00	 6:00	 7:00	 8:00	 9:00	 10:00	 11:00	 12:00	 13:00	 14:00	 15:00	 16:00	 17:00	 18:00	 19:00	 20:00	 21:00	 22:00	 23:00	 0:00
1	PC	Petrol	323	241	217	203	191	183	230	581	1127	869	709	678	869	599	557	730	825	1185	1129	1048	736	600	474	366
		Diesel	2	2	2	1	1	1	2	4	8	6	5	5	6	4	4	5	6	9	8	8	5	4	3	3
		Diesel	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2	Taxi	LPG	502	365	369	283	291	300	422	667	671	686	597	506	615	419	570	664	495	597	577	669	689	703	715	577
		Petrol	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		Diesel	0	0	0	0	0	0	2	11	17	17	23	30	21	24	22	24	18	16	11	1	1	1	1	1
3	LGV3	Petrol	0	0	0	0	0	1	1	2	4	4	7	8	5	7	6	7	6	4	3	1	1	1	0	0
		Diesel	0	0	0	0	0	0	0	2	11	17	23	30	21	24	22	24	18	16	11	1	1	1	1	
		Diesel	18	16	11	17	10	20	32	72	165	160	261	323	209	265	243	265	230	172	125	38	27	35	19	20
5	LGV6	Diesel	0	0	0	0	0	0	7	20	98	105	118	44	40	141	105	134	48	85	50	16	5	11	0	0
6	HGV7	Diesel	0	0	0	0	0	0	0	5	28	29	31	11	11	37	28	37	8	22	14	2	2	2	0	0
7	HGV8	Diesel	0	0	0	0	0	0	0	4	23	24	25	7	7	34	23	30	6	17	11	3	2	2	0	0
8	PLB	Diesel	17	0	0	0	0	0	16	50	38	33	27	49	36	35	38	34	37	38	15	38	51	43	46	37
		LPG	30	0	0	0	0	0	29	86	66	57	48	86	63	62	66	59	64	65	26	65	89	76	80	65
		Petrol	2	0	0	0	0	1	5	14	15	24	7	20	22	6	10	18	2	8	6	7	2	0	3	3
9	PV4	Diesel	1	0	0	0	0	1	3	9	9	14	4	12	13	4	6	11	1	5	3	4	1	0	2	2
		LPG	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		Petrol	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10	PV5	Diesel	2	0	0	0	0	2	7	17	18	22	10	13	6	29	18	16	16	10	12	6	1	0	3	2
		LPG	0	0	0	0	0	1	2	5	6	7	3	4	2	9	5	5	5	3	3	2	0	0	1	1
		Diesel	10	0	0	0	0	1	11	21	50	52	66	31	43	18	81	55	45	49	29	33	19	7	2	10
12	NFB7	Diesel	4	0	0	0	0	6	17	46	47	63	28	41	19	77	50	40	45	24	31	20	4	0	4	4
13	NFB8	Diesel	3	0	0	0	0	4	7	21	20	26	11	13	6	31	21	17	15	10	10	6	3	1	4	4
14	FBSD	Diesel	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	2	0	0	0
15	FBDD	Diesel	7	0	0	0	0	0	8	33	28	30	24	26	21	29	26	26	25	25	18	22	21	22	30	24
16	MC	Petrol	281	27	23	27	22	20	26	27	72	54	68	44	54	41	34	57	75	104	97	60	52	37	49	44

Trips

Vehicle Classes	Description	Fuel Type	Hour																							
			0:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00
			↓ 1:00	↓ 2:00	↓ 3:00	↓ 4:00	↓ 5:00	↓ 6:00	↓ 7:00	↓ 8:00	↓ 9:00	↓ 10:00	↓ 11:00	↓ 12:00	↓ 13:00	↓ 14:00	↓ 15:00	↓ 16:00	↓ 17:00	↓ 18:00	↓ 19:00	↓ 20:00	↓ 21:00	↓ 22:00	↓ 23:00	↓ 0:00
1	PC	Petrol	137	102	92	86	81	78	97	247	478	369	301	288	369	254	236	310	350	503	479	445	312	255	201	155
2	Taxi	LPG	38	27	28	21	22	23	32	50	50	52	45	38	46	31	43	50	37	45	43	50	52	53	54	43
3	LGV3	Petrol	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4	LGV4	Petrol	0	0	0	0	0	0	0	1	2	2	3	4	3	3	3	3	3	2	2	1	0	0	0	0
8	PLB	LPG	3	0	0	0	0	0	3	9	7	6	5	9	7	7	7	6	7	7	3	7	9	8	8	7
9	PV4	Petrol	0	0	0	0	0	0	1	3	4	6	2	5	5	2	2	4	1	2	1	2	0	0	1	1
		LPG	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10	PV5	Petrol	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		LPG	0	0	0	0	0	0	1	2	2	2	1	1	1	3	2	1	2	1	1	1	0	0	0	0
16	MC	Petrol	716	70	59	69	55	50	66	68	185	138	173	111	137	105	88	146	192	265	248	154	133	93	125	111



# Appendix 3.1 Traffic Data

URA  
Road Type: DD Post Speed 50kph  
Year: 2025

## VKT

Vehicle Classes	Description	Fuel Type	Hour																							
			0:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00
			1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	0:00
1	PC	Petrol	503	364	309	264	231	218	327	1024	2061	1566	1273	1209	1557	1064	985	1306	1477	2215	2061	1886	1282	1019	772	623
		Diesel	4	3	2	2	2	2	2	7	15	11	9	9	11	8	7	9	11	16	15	14	9	7	6	4
2	Taxi	Diesel	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		LPG	983	695	665	468	466	495	794	1402	1452	1466	1281	1075	1317	892	1208	1426	1049	1320	1258	1434	1446	1458	1452	1190
3	LGV3	Petrol	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		Diesel	0	0	0	0	0	0	0	4	19	33	31	46	61	42	50	46	50	41	35	21	4	4	4	4
4	LGV4	Petrol	1	1	1	1	0	1	1	3	8	8	14	17	11	14	13	14	12	10	7	2	1	2	1	1
		Diesel	35	32	20	31	19	34	57	137	327	307	541	665	434	543	501	553	492	389	273	80	57	71	39	41
5	LGV6	Diesel	0	0	0	0	0	0	12	42	212	225	236	90	78	281	213	266	86	166	95	33	11	23	0	0
6	HGV7	Diesel	0	0	0	0	0	0	0	12	57	57	63	25	24	76	57	75	21	48	28	5	6	5	0	0
7	HGV8	Diesel	0	0	0	0	0	1	1	11	55	55	59	19	20	74	53	69	19	43	26	8	6	6	0	0
8	PLB	Diesel	49	0	0	0	0	0	47	158	124	107	84	149	110	108	112	101	100	105	42	114	152	129	134	109
		LPG	85	0	0	0	0	0	83	276	215	186	147	260	191	188	195	176	175	183	74	199	266	224	233	189
9	PV4	Petrol	4	0	0	0	0	4	10	26	28	45	13	42	47	13	21	38	6	22	16	13	5	0	8	8
		Diesel	3	0	0	0	0	2	6	16	17	27	8	25	29	8	12	23	4	13	9	8	3	0	5	5
		LPG	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10	PV5	Petrol	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		Diesel	5	0	0	0	0	6	14	31	34	43	22	29	14	61	38	32	42	27	32	13	4	0	8	8
		LPG	1	0	0	0	0	2	4	9	10	13	7	9	4	19	11	10	13	8	10	4	1	0	2	2
11	NFB6	Diesel	22	0	0	0	1	20	39	86	94	120	62	85	36	161	108	92	110	71	80	38	14	5	20	21
12	NFB7	Diesel	11	0	0	0	0	14	33	80	87	116	57	84	38	160	102	84	113	63	80	38	9	0	10	10
13	NFB8	Diesel	9	0	0	0	0	12	17	39	40	53	25	31	13	66	43	36	38	29	28	14	7	3	11	12
14	FBSD	Diesel	0	0	0	0	0	0	0	0	2	2	10	0	0	0	0	0	0	0	0	10	0	0	0	0
15	FBDD	Diesel	92	0	0	0	0	0	106	441	387	420	319	350	272	391	345	348	321	328	237	284	275	290	397	318
16	MC	Petrol	281	37	30	30	24	24	34	57	162	115	127	83	102	75	63	108	122	182	165	114	96	64	84	73

## Trips

Vehicle Classes	Description	Fuel Type	Hour																							
			0:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00
			1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	0:00
1	PC	Petrol	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2	Taxi	LPG	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3	LGV3	Petrol	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4	LGV4	Petrol	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8	PLB	LPG	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9	PV4	Petrol	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		LPG	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10	PV5	Petrol	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		LPG	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
16	MC	Petrol	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Appendix 3.1 Traffic Data

URA  
Road Type: PD Post Speed 80kph  
Year: 2025

VKT

Vehicle Classes	Description	Fuel Type	Hour																									
			0:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00		
			1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	0:00		
1	PC	Petrol	712	442	367	303	252	257	457	1475	3003	2274	1935	1847	2365	1617	1500	2007	2337	3538	3293	2873	1924	1515	1145	908		
		Diesel	5	3	3	2	2	2	3	11	22	16	14	13	17	12	11	14	17	26	24	21	14	11	8	7		
		Diesel	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
2	Taxi	LPG	1540	1000	965	666	650	676	1223	2599	2693	2725	2090	1770	2153	1463	1987	2358	1478	1872	1779	2367	2345	2355	2338	1913		
		Petrol	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
		Diesel	0	0	0	0	0	0	0	4	12	25	20	35	46	32	41	36	41	34	29	18	4	5	5	4		
3	LGV3	Petrol	1	1	1	1	1	1	2	5	12	11	23	28	18	23	21	23	23	18	13	3	2	3	2	2		
		Diesel	55	43	29	41	26	46	87	200	474	448	894	1104	716	898	832	926	899	715	502	133	93	115	61	64		
		Diesel	0	0	0	0	0	0	20	63	304	319	395	149	132	469	357	447	164	332	191	58	21	36	0	0		
6	HGV7	Diesel	0	0	0	0	0	0	0	37	190	187	204	82	81	244	182	243	67	155	87	21	20	19	0	0		
		7	HGV8	Diesel	0	0	0	0	0	7	7	35	187	196	208	68	67	255	183	238	67	151	90	31	23	24	0	0
				Diesel	11	0	0	0	0	0	11	40	31	28	20	35	26	25	27	24	23	23	10	27	36	32	32	27
8	PLB			LPG	19	0	0	0	0	0	19	70	54	48	35	61	45	44	47	43	40	41	17	48	63	55	56	46
		9	PV4	Petrol	6	0	0	0	2	5	12	32	37	56	20	56	60	18	29	50	8	29	21	18	7	0	9	10
				Diesel	3	0	0	0	1	3	7	19	22	34	12	34	36	11	17	30	5	17	13	11	4	0	6	6
LPG	0			0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
10	PV5	Petrol	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
		Diesel	6	0	0	0	0	6	16	38	45	57	30	38	19	80	50	45	55	35	44	19	6	3	9	9		
		LPG	2	0	0	0	0	2	5	11	14	17	9	12	6	24	15	14	17	11	13	6	2	1	3	3		
11	NFB6	Diesel	27	0	0	0	3	19	44	107	118	147	80	108	45	204	140	116	145	93	105	50	20	10	25	27		
12	NFB7	Diesel	12	0	0	0	0	12	41	101	111	147	77	114	51	215	138	113	160	89	117	50	13	0	12	12		
13	NFB8	Diesel	8	0	0	0	0	8	17	38	43	54	27	35	16	73	48	43	45	34	34	17	8	4	12	12		
14	FBSD	Diesel	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
15	FBDD	Diesel	67	0	0	0	0	0	76	348	304	333	243	268	206	298	265	270	242	243	175	218	207	221	300	246		
16	MC	Petrol	281	112	87	89	70	66	110	190	533	377	425	273	336	255	212	361	413	625	562	380	317	212	274	238		

Trips

Vehicle Classes	Description	Fuel Type	Hour																							
			0:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00
			1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	0:00
1	PC	Petrol	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2	Taxi	LPG	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3	LGV3	Petrol	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4	LGV4	Petrol	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8	PLB	LPG	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9	PV4	Petrol	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		LPG	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
10	PV5	Petrol	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		LPG	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
16	MC	Petrol	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

## Appendix 3.1 Traffic Data

### Trips Estimation

**Table A - Default Trips Data extracted directly from EMFAC-HK model V3.1.1 for Year 2025**

Hong Kong SAR Trips-per-Day by Vehicle/Fuel (Trips <sub>Default</sub> )	Petrol	Diesel	LPG
01 - Private Cars (PC)	1016017	7331.897	0
02 - Taxi	0	0	72779.28
03 - Light Goods Vehicles<=2.5t	26.16572	3893.941	0
04 - Lt Goods Vehicles 2.5-3.5t	5263.878	208847	0
05 - Light Goods Vehicles>3.5t	0	103985	0
06 - Medium & Heavy Goods Vehicl	0	49664.57	0
07 - Medium & Heavy Goods Vehicle	0	133991.6	0
08 - Public Light Buses	0	6337.848	11044.41
09 - Private Light Bus <=3.5t	1808.942	1091.568	0
10 - Private Light Bus >3.5t	13.04988	6452.341	1961.765
11 - Non-franchised Bus<=6.4t	0	11729.17	0
12 - Non-franchised Bus 6.4-15t	0	8216.821	0
13 - Non-franchised Bus >15t	0	11833.18	0
14 - Franchised Bus (SD)	0	4140.374	0
15 - Franchised Bus (DD)	0	57632.71	0
16 - Motorcycles (MC)	365774.4	0	0

**Table B - Default VKT Data extracted directly from EMFAC-HK model V3.1.1 for Year 2025**

Hong Kong SAR VKT by Vehicle/Fuel (VKT <sub>Default</sub> )	Petrol	Diesel	LPG
01 - Private Cars (PC)	18954634	140073.2	0
02 - Taxi	0	0	7665956
03 - Light Goods Vehicles<=2.5t	375.6422	67517.73	0
04 - Lt Goods Vehicles 2.5-3.5t	80549.44	3376372	0
05 - Light Goods Vehicles>3.5t	0	2407614	0
06 - Medium & Heavy Goods Vehicl	0	1024928	0
07 - Medium & Heavy Goods Vehicle	0	2766660	0
08 - Public Light Buses	0	474513.2	826892.7
09 - Private Light Bus <=3.5t	59324.61	38443.22	0
10 - Private Light Bus >3.5t	221.9315	176332.7	50039.1
11 - Non-franchised Bus<=6.4t	0	342479.6	0
12 - Non-franchised Bus 6.4-15t	0	238983.4	0
13 - Non-franchised Bus >15t	0	343799.3	0
14 - Franchised Bus (SD)	0	72384.13	0
15 - Franchised Bus (DD)	0	1272882	0
16 - Motorcycles (MC)	1136366	0	0

**Table C - Average Daily Vehicle-kilometre on Roads Covered in the Annual Traffic Census 2014 published by Transport Department**

Region	Average Daily Vehicle-km		
	Major Road Network	Minor Road Network	All Road Network
Hong Kong Island	4539676	1099152	5638828
Kowloon	7639370	1008604	8647974
New Territories	18567724	2335107	20902831
Sub-total	30746770	4442863	35189633
% Share (Total)	87.4%	12.6%	100.0%

**Table D - Trips Estimation for the Assessment Area**

Vehicle Classes	Estimated VKT for Local Roads in Hong Kong <sup>#</sup>			Trips per Estimated VKT for Local Roads in Hong Kong <sup>^</sup>		
	Petrol	Diesel	LPG	Petrol	Diesel	LPG
01 - Private Cars (PC)	2393115	17685	0	0.42	0.41	0.00
02 - Taxi	0	0	967864	0.00	0.00	0.08
03 - Light Goods Vehicles<=2.5t	47	8524	0	0.55	0.46	0.00
04 - Lt Goods Vehicles 2.5-3.5t	10170	426283	0	0.52	0.49	0.00
05 - Light Goods Vehicles>3.5t	0	303973	0	0.00	0.34	0.00
06 - Medium & Heavy Goods Vehicl	0	129402	0	0.00	0.38	0.00
07 - Medium & Heavy Goods Vehicle	0	349304	0	0.00	0.36	0.00
08 - Public Light Buses	0	59910	104399	0.00	0.11	0.11
09 - Private Light Bus <=3.5t	7490	4854	0	0.24	0.22	0.00
10 - Private Light Bus >3.5t	28	22263	6318	0.47	0.29	0.31
11 - Non-franchised Bus<=6.4t	0	43240	0	0.00	0.27	0.00
12 - Non-franchised Bus 6.4-15t	0	30173	0	0.00	0.27	0.00
13 - Non-franchised Bus >15t	0	43406	0	0.00	0.27	0.00
14 - Franchised Bus (SD)	0	9139	0	0.00	0.45	0.00
15 - Franchised Bus (DD)	0	160708	0	0.00	0.36	0.00
16 - Motorcycles (MC)	143472	0	0	2.55	0.00	0.00

Remarks:

<sup>#</sup> - Estimated VKT for local roads in Hong Kong = VKT<sub>(Default)</sub> x % Share of VKT for minor road network (i.e. 12.6%), which is the estimated as detailed in the Table C.

<sup>^</sup> - Estimated trips for local roads in Hong Kong = Trips<sub>(Default)</sub> / Estimated VKT for local roads in Hong Kong.

# Appendix 3.1 Traffic Data

URA

Road Type: LD Post Speed 50kph

Year: 2025

## Speed Fraction

Vehicle Classes	Description	Hour	Speed Fraction by Bin (KPH)																	
			0	8	16	24	32	40	48	56	64	72	80	88	96	104	112	120	128	136
			8	16	24	32	40	48	56	64	72	80	88	96	104	112	120	128	136	144
1	Private Cars (PC)	0:00 - 1:00	0.000	0.000	0.564	0.436	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		1:00 - 2:00	0.000	0.000	0.181	0.819	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		2:00 - 3:00	0.000	0.000	0.121	0.879	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		3:00 - 4:00	0.000	0.000	0.052	0.948	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		4:00 - 5:00	0.000	0.000	0.047	0.953	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		5:00 - 6:00	0.000	0.000	0.067	0.933	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		6:00 - 7:00	0.000	0.000	0.402	0.598	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		7:00 - 8:00	0.000	0.000	0.892	0.108	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		8:00 - 9:00	0.055	0.067	0.848	0.030	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		9:00 - 10:00	0.000	0.104	0.861	0.035	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		10:00 - 11:00	0.000	0.017	0.930	0.053	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		11:00 - 12:00	0.000	0.000	0.941	0.059	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		12:00 - 13:00	0.000	0.037	0.913	0.050	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		13:00 - 14:00	0.000	0.000	0.938	0.062	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		14:00 - 15:00	0.000	0.000	0.930	0.070	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		15:00 - 16:00	0.000	0.048	0.910	0.042	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		16:00 - 17:00	0.000	0.000	0.951	0.049	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		17:00 - 18:00	0.013	0.056	0.903	0.028	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		18:00 - 19:00	0.000	0.031	0.934	0.035	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		19:00 - 20:00	0.000	0.036	0.914	0.050	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		20:00 - 21:00	0.000	0.000	0.912	0.088	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		21:00 - 22:00	0.000	0.000	0.885	0.115	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		22:00 - 23:00	0.000	0.000	0.854	0.146	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		23:00 - 0:00	0.000	0.000	0.677	0.323	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
3	Taxi	0:00 - 1:00	0.000	0.000	0.708	0.292	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		1:00 - 2:00	0.000	0.000	0.287	0.713	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		2:00 - 3:00	0.000	0.000	0.224	0.776	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		3:00 - 4:00	0.000	0.000	0.109	0.891	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		4:00 - 5:00	0.000	0.000	0.100	0.900	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		5:00 - 6:00	0.000	0.000	0.131	0.869	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		6:00 - 7:00	0.000	0.000	0.556	0.444	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		7:00 - 8:00	0.000	0.000	0.951	0.049	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		8:00 - 9:00	0.105	0.099	0.775	0.021	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		9:00 - 10:00	0.000	0.171	0.805	0.024	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		10:00 - 11:00	0.000	0.029	0.952	0.019	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		11:00 - 12:00	0.000	0.000	0.976	0.024	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		12:00 - 13:00	0.000	0.074	0.908	0.018	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		13:00 - 14:00	0.000	0.000	0.973	0.027	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		14:00 - 15:00	0.000	0.000	0.972	0.028	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		15:00 - 16:00	0.000	0.087	0.896	0.017	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		16:00 - 17:00	0.000	0.000	0.988	0.012	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		17:00 - 18:00	0.021	0.096	0.876	0.007	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		18:00 - 19:00	0.000	0.041	0.950	0.009	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		19:00 - 20:00	0.000	0.073	0.907	0.020	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		20:00 - 21:00	0.000	0.000	0.957	0.043	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		21:00 - 22:00	0.000	0.000	0.948	0.052	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		22:00 - 23:00	0.000	0.000	0.924	0.076	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		23:00 - 0:00	0.000	0.000	0.810	0.190	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000



# Appendix 3.1 Traffic Data

URA

Road Type: LD Post Speed 50kph

Year: 2025

## Speed Fraction

Vehicle Classes	Description	Hour	Speed Fraction by Bin (KPH)																	
			0	8	16	24	32	40	48	56	64	72	80	88	96	104	112	120	128	136
			8	16	24	32	40	48	56	64	72	80	88	96	104	112	120	128	136	144
4	Light Goods Vehicles<=2.5t	0:00 - 1:00	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		1:00 - 2:00	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		2:00 - 3:00	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		3:00 - 4:00	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		4:00 - 5:00	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		5:00 - 6:00	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		6:00 - 7:00	0.000	0.000	0.439	0.561	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		7:00 - 8:00	0.000	0.000	0.750	0.250	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		8:00 - 9:00	0.031	0.056	0.836	0.077	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		9:00 - 10:00	0.000	0.067	0.831	0.102	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		10:00 - 11:00	0.000	0.007	0.865	0.128	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		11:00 - 12:00	0.000	0.000	0.874	0.126	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		12:00 - 13:00	0.000	0.018	0.881	0.101	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		13:00 - 14:00	0.000	0.000	0.851	0.149	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		14:00 - 15:00	0.000	0.000	0.837	0.163	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		15:00 - 16:00	0.000	0.028	0.887	0.085	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		16:00 - 17:00	0.000	0.000	0.873	0.127	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		17:00 - 18:00	0.011	0.026	0.891	0.072	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		18:00 - 19:00	0.000	0.017	0.900	0.083	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		19:00 - 20:00	0.000	0.000	0.964	0.036	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		20:00 - 21:00	0.000	0.000	0.848	0.152	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		21:00 - 22:00	0.000	0.000	0.841	0.159	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		22:00 - 23:00	0.000	0.000	0.762	0.238	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		23:00 - 0:00	0.000	0.000	0.746	0.254	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
5	Lt Goods Vehicles 2.5-3.5t	0:00 - 1:00	0.000	0.000	0.627	0.373	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		1:00 - 2:00	0.000	0.000	0.251	0.749	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		2:00 - 3:00	0.000	0.000	0.191	0.809	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		3:00 - 4:00	0.000	0.000	0.066	0.934	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		4:00 - 5:00	0.000	0.000	0.069	0.931	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		5:00 - 6:00	0.000	0.000	0.108	0.892	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		6:00 - 7:00	0.000	0.000	0.499	0.501	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		7:00 - 8:00	0.000	0.000	0.922	0.078	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		8:00 - 9:00	0.065	0.090	0.824	0.021	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		9:00 - 10:00	0.000	0.135	0.839	0.026	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		10:00 - 11:00	0.000	0.020	0.941	0.039	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		11:00 - 12:00	0.000	0.000	0.953	0.047	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		12:00 - 13:00	0.000	0.039	0.921	0.040	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		13:00 - 14:00	0.000	0.000	0.951	0.049	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		14:00 - 15:00	0.000	0.000	0.947	0.053	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		15:00 - 16:00	0.000	0.052	0.916	0.032	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		16:00 - 17:00	0.000	0.000	0.959	0.041	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		17:00 - 18:00	0.008	0.054	0.915	0.023	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		18:00 - 19:00	0.000	0.027	0.942	0.031	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		19:00 - 20:00	0.000	0.039	0.930	0.031	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		20:00 - 21:00	0.000	0.000	0.949	0.051	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		21:00 - 22:00	0.000	0.000	0.936	0.064	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		22:00 - 23:00	0.000	0.000	0.904	0.096	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		23:00 - 0:00	0.000	0.000	0.754	0.246	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000

# Appendix 3.1 Traffic Data

URA

Road Type: LD Post Speed 50kph

Year: 2025

## Speed Fraction

Vehicle Classes	Description	Hour	Speed Fraction by Bin (KPH)																
			0	8	16	24	32	40	48	56	64	72	80	88	96	104	112	120	128
			8	16	24	32	40	48	56	64	72	80	88	96	104	112	120	128	136
																			144
6	Lt Goods Vehicles 3.5-5.5t	0:00 - 1:00	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		1:00 - 2:00	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		2:00 - 3:00	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		3:00 - 4:00	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		4:00 - 5:00	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		5:00 - 6:00	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		6:00 - 7:00	0.000	0.000	0.524	0.476	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		7:00 - 8:00	0.000	0.000	0.960	0.040	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		8:00 - 9:00	0.059	0.100	0.820	0.021	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		9:00 - 10:00	0.000	0.146	0.829	0.025	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		10:00 - 11:00	0.000	0.016	0.947	0.037	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		11:00 - 12:00	0.000	0.000	0.953	0.047	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		12:00 - 13:00	0.000	0.033	0.924	0.043	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		13:00 - 14:00	0.000	0.000	0.954	0.046	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		14:00 - 15:00	0.000	0.000	0.949	0.051	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		15:00 - 16:00	0.000	0.053	0.916	0.031	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		16:00 - 17:00	0.000	0.000	0.945	0.055	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		17:00 - 18:00	0.007	0.051	0.913	0.029	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		18:00 - 19:00	0.000	0.025	0.936	0.039	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		19:00 - 20:00	0.000	0.029	0.945	0.026	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		20:00 - 21:00	0.000	0.000	0.971	0.029	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		21:00 - 22:00	0.000	0.000	0.974	0.026	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		22:00 - 23:00	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		23:00 - 0:00	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
7	Heavy Goods Vehicles 5.5-15t	0:00 - 1:00	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		1:00 - 2:00	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		2:00 - 3:00	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		3:00 - 4:00	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		4:00 - 5:00	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		5:00 - 6:00	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		6:00 - 7:00	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		7:00 - 8:00	0.000	0.000	0.929	0.071	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		8:00 - 9:00	0.056	0.074	0.835	0.035	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		9:00 - 10:00	0.000	0.116	0.838	0.046	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		10:00 - 11:00	0.000	0.018	0.934	0.048	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		11:00 - 12:00	0.000	0.000	0.946	0.054	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		12:00 - 13:00	0.000	0.032	0.926	0.042	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		13:00 - 14:00	0.000	0.000	0.938	0.062	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		14:00 - 15:00	0.000	0.000	0.922	0.078	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		15:00 - 16:00	0.000	0.041	0.915	0.044	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		16:00 - 17:00	0.000	0.000	0.959	0.041	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		17:00 - 18:00	0.014	0.035	0.928	0.023	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		18:00 - 19:00	0.000	0.024	0.944	0.032	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		19:00 - 20:00	0.000	0.050	0.950	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		20:00 - 21:00	0.000	0.000	1.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		21:00 - 22:00	0.000	0.000	1.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		22:00 - 23:00	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		23:00 - 0:00	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000

## Appendix 3.1 Traffic Data

URA

Road Type: LD Post Speed 50kph

Year: 2025

### Speed Fraction

Vehicle Classes	Description	Hour	Speed Fraction by Bin (KPH)																	
			0	8	16	24	32	40	48	56	64	72	80	88	96	104	112	120	128	136
			8	16	24	32	40	48	56	64	72	80	88	96	104	112	120	128	136	144
8	Heavy Goods Vehicles >=15t	0:00 - 1:00	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		1:00 - 2:00	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		2:00 - 3:00	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		3:00 - 4:00	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		4:00 - 5:00	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		5:00 - 6:00	0.000	0.000	0.000	1.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		6:00 - 7:00	0.000	0.000	1.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		7:00 - 8:00	0.000	0.000	1.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		8:00 - 9:00	0.066	0.073	0.850	0.011	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		9:00 - 10:00	0.000	0.126	0.857	0.017	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		10:00 - 11:00	0.000	0.022	0.956	0.022	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		11:00 - 12:00	0.000	0.000	0.974	0.026	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		12:00 - 13:00	0.000	0.038	0.943	0.019	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		13:00 - 14:00	0.000	0.000	0.971	0.029	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		14:00 - 15:00	0.000	0.000	0.961	0.039	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		15:00 - 16:00	0.000	0.052	0.926	0.022	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		16:00 - 17:00	0.000	0.000	0.986	0.014	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		17:00 - 18:00	0.018	0.041	0.933	0.008	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		18:00 - 19:00	0.000	0.030	0.955	0.015	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		19:00 - 20:00	0.000	0.033	0.967	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		20:00 - 21:00	0.000	0.000	1.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		21:00 - 22:00	0.000	0.000	1.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		22:00 - 23:00	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		23:00 - 0:00	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
11	Public Light Buses	0:00 - 1:00	0.000	0.000	0.823	0.177	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		1:00 - 2:00	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		2:00 - 3:00	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		3:00 - 4:00	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		4:00 - 5:00	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		5:00 - 6:00	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		6:00 - 7:00	0.000	0.000	0.588	0.412	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		7:00 - 8:00	0.000	0.000	0.974	0.026	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		8:00 - 9:00	0.099	0.043	0.837	0.021	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		9:00 - 10:00	0.000	0.119	0.856	0.025	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		10:00 - 11:00	0.000	0.038	0.944	0.018	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		11:00 - 12:00	0.000	0.000	0.996	0.004	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		12:00 - 13:00	0.000	0.081	0.915	0.004	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		13:00 - 14:00	0.000	0.000	0.979	0.021	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		14:00 - 15:00	0.000	0.000	0.981	0.019	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		15:00 - 16:00	0.000	0.083	0.901	0.016	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		16:00 - 17:00	0.000	0.000	1.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		17:00 - 18:00	0.027	0.099	0.874	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		18:00 - 19:00	0.000	0.070	0.903	0.027	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		19:00 - 20:00	0.000	0.080	0.916	0.004	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		20:00 - 21:00	0.000	0.000	0.983	0.017	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		21:00 - 22:00	0.000	0.000	0.980	0.020	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		22:00 - 23:00	0.000	0.000	0.979	0.021	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		23:00 - 0:00	0.000	0.000	0.912	0.088	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000

# Appendix 3.1 Traffic Data

URA

Road Type: LD Post Speed 50kph

Year: 2025

## Speed Fraction

Vehicle Classes	Description	Hour	Speed Fraction by Bin (KPH)																
			0	8	16	24	32	40	48	56	64	72	80	88	96	104	112	120	128
			8	16	24	32	40	48	56	64	72	80	88	96	104	112	120	128	136
12	Private Light Bus <=3.5t	0:00 - 1:00	0.000	0.000	0.710	0.290	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		1:00 - 2:00	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		2:00 - 3:00	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		3:00 - 4:00	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		4:00 - 5:00	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		5:00 - 6:00	0.000	0.000	0.178	0.822	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		6:00 - 7:00	0.000	0.000	0.482	0.518	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		7:00 - 8:00	0.000	0.000	0.982	0.018	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		8:00 - 9:00	0.018	0.136	0.846	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		9:00 - 10:00	0.000	0.148	0.852	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		10:00 - 11:00	0.000	0.014	0.982	0.004	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		11:00 - 12:00	0.000	0.000	0.989	0.011	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		12:00 - 13:00	0.000	0.038	0.958	0.004	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		13:00 - 14:00	0.000	0.000	0.984	0.016	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		14:00 - 15:00	0.000	0.000	0.990	0.010	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		15:00 - 16:00	0.000	0.057	0.940	0.003	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		16:00 - 17:00	0.000	0.000	1.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		17:00 - 18:00	0.010	0.070	0.920	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		18:00 - 19:00	0.000	0.015	0.981	0.004	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		19:00 - 20:00	0.000	0.036	0.960	0.004	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		20:00 - 21:00	0.000	0.000	1.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		21:00 - 22:00	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		22:00 - 23:00	0.000	0.000	0.980	0.020	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		23:00 - 0:00	0.000	0.000	0.807	0.193	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
13	Private Light Bus >3.5t	0:00 - 1:00	0.000	0.000	0.582	0.418	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		1:00 - 2:00	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		2:00 - 3:00	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		3:00 - 4:00	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		4:00 - 5:00	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		5:00 - 6:00	0.000	0.000	0.205	0.795	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		6:00 - 7:00	0.000	0.000	0.502	0.498	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		7:00 - 8:00	0.000	0.000	0.981	0.019	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		8:00 - 9:00	0.018	0.136	0.846	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		9:00 - 10:00	0.000	0.154	0.846	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		10:00 - 11:00	0.000	0.012	0.984	0.004	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		11:00 - 12:00	0.000	0.000	0.990	0.010	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		12:00 - 13:00	0.000	0.026	0.974	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		13:00 - 14:00	0.000	0.000	0.991	0.009	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		14:00 - 15:00	0.000	0.000	0.991	0.009	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		15:00 - 16:00	0.000	0.052	0.946	0.002	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		16:00 - 17:00	0.000	0.000	1.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		17:00 - 18:00	0.010	0.070	0.920	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		18:00 - 19:00	0.000	0.018	0.980	0.002	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		19:00 - 20:00	0.000	0.025	0.975	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		20:00 - 21:00	0.000	0.000	1.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		21:00 - 22:00	0.000	0.000	1.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		22:00 - 23:00	0.000	0.000	0.975	0.025	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		23:00 - 0:00	0.000	0.000	0.753	0.247	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000



# Appendix 3.1 Traffic Data

URA

Road Type: LD Post Speed 50kph

Year: 2025

## Speed Fraction

Vehicle Classes	Description	Hour	Speed Fraction by Bin (KPH)																	
			0	8	16	24	32	40	48	56	64	72	80	88	96	104	112	120	128	136
			8	16	24	32	40	48	56	64	72	80	88	96	104	112	120	128	136	144
14	Non-franchised Bus<=6.4t	0:00 - 1:00	0.000	0.000	0.576	0.424	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		1:00 - 2:00	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		2:00 - 3:00	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		3:00 - 4:00	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		4:00 - 5:00	0.000	0.000	0.000	1.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		5:00 - 6:00	0.000	0.000	0.133	0.867	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		6:00 - 7:00	0.000	0.000	0.490	0.510	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		7:00 - 8:00	0.000	0.000	0.975	0.025	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		8:00 - 9:00	0.019	0.128	0.846	0.007	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		9:00 - 10:00	0.000	0.141	0.852	0.007	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		10:00 - 11:00	0.000	0.010	0.985	0.005	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		11:00 - 12:00	0.000	0.000	0.985	0.015	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		12:00 - 13:00	0.000	0.027	0.963	0.010	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		13:00 - 14:00	0.000	0.000	0.991	0.009	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		14:00 - 15:00	0.000	0.000	0.987	0.013	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		15:00 - 16:00	0.000	0.049	0.947	0.004	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		16:00 - 17:00	0.000	0.000	0.993	0.007	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		17:00 - 18:00	0.016	0.045	0.939	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		18:00 - 19:00	0.000	0.019	0.974	0.007	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		19:00 - 20:00	0.000	0.025	0.965	0.010	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		20:00 - 21:00	0.000	0.000	0.980	0.020	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		21:00 - 22:00	0.000	0.000	1.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		22:00 - 23:00	0.000	0.000	0.954	0.046	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		23:00 - 0:00	0.000	0.000	0.724	0.276	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
15	Non-franchised Bus 6.4-15t	0:00 - 1:00	0.000	0.000	0.705	0.295	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		1:00 - 2:00	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		2:00 - 3:00	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		3:00 - 4:00	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		4:00 - 5:00	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		5:00 - 6:00	0.000	0.000	0.197	0.803	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		6:00 - 7:00	0.000	0.000	0.498	0.502	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		7:00 - 8:00	0.000	0.000	0.985	0.015	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		8:00 - 9:00	0.026	0.136	0.838	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		9:00 - 10:00	0.000	0.155	0.845	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		10:00 - 11:00	0.000	0.011	0.986	0.003	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		11:00 - 12:00	0.000	0.000	0.989	0.011	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		12:00 - 13:00	0.000	0.036	0.957	0.007	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		13:00 - 14:00	0.000	0.000	0.993	0.007	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		14:00 - 15:00	0.000	0.000	0.991	0.009	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		15:00 - 16:00	0.000	0.052	0.944	0.004	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		16:00 - 17:00	0.000	0.000	0.995	0.005	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		17:00 - 18:00	0.010	0.046	0.944	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		18:00 - 19:00	0.000	0.017	0.977	0.006	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		19:00 - 20:00	0.000	0.029	0.964	0.007	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		20:00 - 21:00	0.000	0.000	1.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		21:00 - 22:00	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		22:00 - 23:00	0.000	0.000	0.979	0.021	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		23:00 - 0:00	0.000	0.000	0.798	0.202	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000

Appendix 3.1 Traffic Data

URA  
Road Type: LD Post Speed 50kph  
Year: 2025

Speed Fraction

Vehicle Classes	Description	Hour	Speed Fraction by Bin (KPH)															
			0	8	16	24	32	40	48	56	64	72	80	88	96	104	112	120
			 8	 16	 24	 32	 40	 48	 56	 64	 72	 80	 88	 96	 104	 112	 120	 128
16	Non-franchised Bus >15t	0:00 - 1:00	0.000	0.000	0.674	0.326	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		1:00 - 2:00	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		2:00 - 3:00	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		3:00 - 4:00	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		4:00 - 5:00	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		5:00 - 6:00	0.000	0.000	0.180	0.820	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		6:00 - 7:00	0.000	0.000	0.617	0.383	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		7:00 - 8:00	0.000	0.000	0.969	0.031	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		8:00 - 9:00	0.021	0.116	0.857	0.006	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		9:00 - 10:00	0.000	0.128	0.863	0.009	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		10:00 - 11:00	0.000	0.007	0.987	0.006	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		11:00 - 12:00	0.000	0.000	0.990	0.010	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		12:00 - 13:00	0.000	0.034	0.966	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		13:00 - 14:00	0.000	0.000	0.985	0.015	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		14:00 - 15:00	0.000	0.000	0.983	0.017	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		15:00 - 16:00	0.000	0.044	0.941	0.015	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		16:00 - 17:00	0.000	0.000	1.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		17:00 - 18:00	0.023	0.022	0.955	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		18:00 - 19:00	0.000	0.023	0.977	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		19:00 - 20:00	0.000	0.034	0.966	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		20:00 - 21:00	0.000	0.000	1.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		21:00 - 22:00	0.000	0.000	1.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		22:00 - 23:00	0.000	0.000	0.952	0.048	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		23:00 - 0:00	0.000	0.000	0.768	0.232	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
17	Franchised Bus (SD)	0:00 - 1:00	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		1:00 - 2:00	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		2:00 - 3:00	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		3:00 - 4:00	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		4:00 - 5:00	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		5:00 - 6:00	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		6:00 - 7:00	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		7:00 - 8:00	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		8:00 - 9:00	0.000	0.000	1.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		9:00 - 10:00	0.000	0.000	1.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		10:00 - 11:00	0.000	0.000	1.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		11:00 - 12:00	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		12:00 - 13:00	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		13:00 - 14:00	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		14:00 - 15:00	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		15:00 - 16:00	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		16:00 - 17:00	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		17:00 - 18:00	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		18:00 - 19:00	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		19:00 - 20:00	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		20:00 - 21:00	0.000	0.000	1.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		21:00 - 22:00	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		22:00 - 23:00	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		23:00 - 0:00	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000

# Appendix 3.1 Traffic Data

URA  
Road Type: LD Post Speed 50kph  
Year: 2025

## Speed Fraction

Vehicle Classes	Description	Hour	Speed Fraction by Bin (KPH)																	
			0	8	16	24	32	40	48	56	64	72	80	88	96	104	112	120	128	136
			8	16	24	32	40	48	56	64	72	80	88	96	104	112	120	128	136	144
18	Franchised Bus (DD)	0:00 - 1:00	0.000	0.000	0.840	0.160	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		1:00 - 2:00	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		2:00 - 3:00	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		3:00 - 4:00	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		4:00 - 5:00	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		5:00 - 6:00	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		6:00 - 7:00	0.000	0.000	0.591	0.409	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		7:00 - 8:00	0.000	0.000	1.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		8:00 - 9:00	0.105	0.048	0.847	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		9:00 - 10:00	0.000	0.107	0.893	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		10:00 - 11:00	0.000	0.000	1.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		11:00 - 12:00	0.000	0.000	1.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		12:00 - 13:00	0.000	0.057	0.943	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		13:00 - 14:00	0.000	0.000	1.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		14:00 - 15:00	0.000	0.000	1.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		15:00 - 16:00	0.000	0.051	0.949	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		16:00 - 17:00	0.000	0.000	1.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		17:00 - 18:00	0.000	0.046	0.954	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		18:00 - 19:00	0.000	0.000	0.982	0.018	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		19:00 - 20:00	0.000	0.061	0.939	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		20:00 - 21:00	0.000	0.000	1.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		21:00 - 22:00	0.000	0.000	1.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		22:00 - 23:00	0.000	0.000	1.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		23:00 - 0:00	0.000	0.000	0.976	0.024	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
19	Motorcycles (MC)	0:00 - 1:00	0.000	0.000	0.546	0.454	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		1:00 - 2:00	0.000	0.000	0.175	0.825	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		2:00 - 3:00	0.000	0.000	0.115	0.885	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		3:00 - 4:00	0.000	0.000	0.034	0.966	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		4:00 - 5:00	0.000	0.000	0.041	0.959	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		5:00 - 6:00	0.000	0.000	0.053	0.947	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		6:00 - 7:00	0.000	0.000	0.418	0.582	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		7:00 - 8:00	0.000	0.000	0.854	0.146	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		8:00 - 9:00	0.018	0.063	0.878	0.041	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		9:00 - 10:00	0.000	0.070	0.883	0.047	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		10:00 - 11:00	0.000	0.022	0.892	0.086	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		11:00 - 12:00	0.000	0.000	0.902	0.098	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		12:00 - 13:00	0.000	0.022	0.889	0.089	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		13:00 - 14:00	0.000	0.000	0.894	0.106	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		14:00 - 15:00	0.000	0.000	0.884	0.116	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		15:00 - 16:00	0.000	0.037	0.894	0.069	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		16:00 - 17:00	0.000	0.000	0.948	0.052	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		17:00 - 18:00	0.021	0.053	0.904	0.022	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		18:00 - 19:00	0.000	0.045	0.925	0.030	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		19:00 - 20:00	0.000	0.021	0.891	0.088	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		20:00 - 21:00	0.000	0.000	0.865	0.135	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		21:00 - 22:00	0.000	0.000	0.846	0.154	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		22:00 - 23:00	0.000	0.000	0.833	0.167	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		23:00 - 0:00	0.000	0.000	0.670	0.330	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000

**URA**  
**Road Type:** DD Post Speed 70kph  
**Year:** 2025

Vehicle Classes	Description	Hour	Speed Fraction by Bin (KPH)																		
			0	8	16	24	32	40	48	56	64	72	80	88	96	104	112	120	128	136	
			 8	 16	 24	 32	 40	 48	 56	 64	 72	 80	 88	 96	 104	 112	 120	 128	 136	 144	
1	Private Cars (PC)	0:00 - 1:00	0.000	0.000	0.000	1.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
		1:00 - 2:00	0.000	0.000	0.000	1.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
		2:00 - 3:00	0.000	0.000	0.000	1.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
		3:00 - 4:00	0.000	0.000	0.000	1.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
		4:00 - 5:00	0.000	0.000	0.000	1.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
		5:00 - 6:00	0.000	0.000	0.000	1.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
		6:00 - 7:00	0.000	0.000	0.000	1.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
		7:00 - 8:00	0.000	0.000	0.000	1.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
		8:00 - 9:00	0.000	0.000	0.086	0.914	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
		9:00 - 10:00	0.000	0.000	0.063	0.937	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
		10:00 - 11:00	0.000	0.000	0.048	0.952	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
		11:00 - 12:00	0.000	0.000	0.047	0.953	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
		12:00 - 13:00	0.000	0.000	0.049	0.951	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
		13:00 - 14:00	0.000	0.000	0.048	0.952	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
		14:00 - 15:00	0.000	0.000	0.047	0.953	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
		15:00 - 16:00	0.000	0.000	0.047	0.953	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
		16:00 - 17:00	0.000	0.000	0.043	0.957	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
		17:00 - 18:00	0.000	0.000	0.044	0.956	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
		18:00 - 19:00	0.000	0.000	0.046	0.954	0.000	0.000	0.000	0.000											



**URA**  
**Road Type:** DD Post Speed 70kph  
**Year:** 2025

Vehicle Classes	Description	Hour	Speed Fraction by Bin (KPH)																	
			0	8	16	24	32	40	48	56	64	72	80	88	96	104	112	120	128	136
			 8	 16	 24	 32	 40	 48	 56	 64	 72	 80	 88	 96	 104	 112	 120	 128	 136	 144
4	Light Goods Vehicles<=2.5t	0:00 - 1:00	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		1:00 - 2:00	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		2:00 - 3:00	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		3:00 - 4:00	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		4:00 - 5:00	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		5:00 - 6:00	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		6:00 - 7:00	0.000	0.000	0.000	1.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		7:00 - 8:00	0.000	0.000	0.000	1.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		8:00 - 9:00	0.000	0.000	0.055	0.945	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		9:00 - 10:00	0.000	0.000	0.047	0.953	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		10:00 - 11:00	0.000	0.000	0.064	0.936	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		11:00 - 12:00	0.000	0.000	0.066	0.934	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		12:00 - 13:00	0.000	0.000	0.071	0.929	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		13:00 - 14:00	0.000	0.000	0.060	0.940	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		14:00 - 15:00	0.000	0.000	0.056	0.944	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		15:00 - 16:00	0.000	0.000	0.059	0.941	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		16:00 - 17:00	0.000	0.000	0.080	0.920	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		17:00 - 18:00	0.000	0.000	0.082	0.918	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		18:00 - 19:00	0.000	0.000	0.105	0.895	0.000	0.000	0.000	0.0										

URA  
Road Type: DD Post Speed 70kph  
Year: 2025

Vehicle Classes	Description	Hour	Speed Fraction by Bin (KPH)																	
			0	8	16	24	32	40	48	56	64	72	80	88	96	104	112	120	128	136
			 8	 16	 24	 32	 40	 48	 56	 64	 72	 80	 88	 96	 104	 112	 120	 128	 136	 144
6	Lt Goods Vehicles 3.5-5.5t	0:00 - 1:00	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		1:00 - 2:00	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		2:00 - 3:00	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		3:00 - 4:00	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		4:00 - 5:00	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		5:00 - 6:00	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		6:00 - 7:00	0.000	0.000	0.000	1.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		7:00 - 8:00	0.000	0.000	0.000	1.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		8:00 - 9:00	0.000	0.000	0.069	0.931	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		9:00 - 10:00	0.000	0.000	0.053	0.947	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		10:00 - 11:00	0.000	0.000	0.058	0.942	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		11:00 - 12:00	0.000	0.000	0.060	0.940	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		12:00 - 13:00	0.000	0.000	0.060	0.940	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		13:00 - 14:00	0.000	0.000	0.059	0.941	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		14:00 - 15:00	0.000	0.000	0.058	0.942	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		15:00 - 16:00	0.000	0.000	0.058	0.942	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		16:00 - 17:00	0.000	0.000	0.067	0.933	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		17:00 - 18:00	0.000	0.000	0.067	0.933	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		18:00 - 19:00	0.000	0.000	0.075	0.925	0.000	0.000	0.000	0										

**URA**  
**Road Type:** DD Post Speed 70kph  
**Year:** 2025

Vehicle Classes	Description	Hour	Speed Fraction by Bin (KPH)																	
			0	8	16	24	32	40	48	56	64	72	80	88	96	104	112	120	128	136
			 8	 16	 24	 32	 40	 48	 56	 64	 72	 80	 88	 96	 104	 112	 120	 128	 136	 144
8	Heavy Goods Vehicles >=15t	0:00 - 1:00	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		1:00 - 2:00	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		2:00 - 3:00	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		3:00 - 4:00	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		4:00 - 5:00	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		5:00 - 6:00	0.000	0.000	0.000	1.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		6:00 - 7:00	0.000	0.000	0.000	1.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		7:00 - 8:00	0.000	0.000	0.000	1.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		8:00 - 9:00	0.000	0.000	0.097	0.903	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		9:00 - 10:00	0.000	0.000	0.069	0.931	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		10:00 - 11:00	0.000	0.000	0.068	0.932	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		11:00 - 12:00	0.000	0.000	0.057	0.943	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		12:00 - 13:00	0.000	0.000	0.072	0.928	0.000	1.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		13:00 - 14:00	0.000	0.000	0.069	0.931	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		14:00 - 15:00	0.000	0.000	0.062	0.938	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		15:00 - 16:00	0.000	0.000	0.064	0.936	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		16:00 - 17:00	0.000	0.000	0.078	0.922	0.000	1.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		17:00 - 18:00	0.000	0.000	0.076	0.924	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		18:00 - 19:00	0.000	0.000	0.082	0.918	0.000	0.000	0.000	0.0										

**URA**  
**Road Type:** DD Post Speed 70kph  
**Year:** 2025

Vehicle Classes	Description	Hour	Speed Fraction by Bin (KPH)																		
			0	8	16	24	32	40	48	56	64	72	80	88	96	104	112	120	128	136	
			8	16	24	32	40	48	56	64	72	80	88	96	104	112	120	128	136	144	
12	Private Light Bus <=3.5t	0:00 - 1:00	0.000	0.000	0.000	1.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
		1:00 - 2:00	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
		2:00 - 3:00	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
		3:00 - 4:00	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
		4:00 - 5:00	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
		5:00 - 6:00	0.000	0.000	0.000	1.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
		6:00 - 7:00	0.000	0.000	0.000	1.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
		7:00 - 8:00	0.000	0.000	0.000	1.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
		8:00 - 9:00	0.000	0.000	0.104	0.896	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
		9:00 - 10:00	0.000	0.000	0.091	0.909	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
		10:00 - 11:00	0.000	0.000	0.067	0.933	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
		11:00 - 12:00	0.000	0.000	0.069	0.931	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
		12:00 - 13:00	0.000	0.000	0.067	0.933	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
		13:00 - 14:00	0.000	0.000	0.069	0.931	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
		14:00 - 15:00	0.000	0.000	0.066	0.934	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
		15:00 - 16:00	0.000	0.000	0.066	0.934	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
		16:00 - 17:00	0.000	0.000	0.037	0.963	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
		17:00 - 18:00	0.000	0.000	0.042	0.958	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
		18:00 - 19:00	0.000	0.000	0.059	0															



**URA**  
**Road Type:** DD Post Speed 70kph  
**Year:** 2025

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**URA**  
**Road Type:** DD Post Speed 70kph  
**Year:** 2025

Vehicle Classes	Description	Hour	Speed Fraction by Bin (KPH)																	
			0	8	16	24	32	40	48	56	64	72	80	88	96	104	112	120	128	136
			 8	 16	 24	 32	 40	 48	 56	 64	 72	 80	 88	 96	 104	 112	 120	 128	 136	 144
16	Non-franchised Bus >15t	0:00 - 1:00	0.000	0.000	0.000	1.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		1:00 - 2:00	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		2:00 - 3:00	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		3:00 - 4:00	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		4:00 - 5:00	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		5:00 - 6:00	0.000	0.000	0.000	1.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		6:00 - 7:00	0.000	0.000	0.000	1.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		7:00 - 8:00	0.000	0.000	0.000	1.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		8:00 - 9:00	0.000	0.000	0.093	0.907	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		9:00 - 10:00	0.000	0.000	0.081	0.919	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		10:00 - 11:00	0.000	0.000	0.057	0.943	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		11:00 - 12:00	0.000	0.000	0.057	0.943	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		12:00 - 13:00	0.000	0.000	0.053	0.947	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		13:00 - 14:00	0.000	0.000	0.059	0.941	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		14:00 - 15:00	0.000	0.000	0.058	0.942	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		15:00 - 16:00	0.000	0.000	0.059	0.941	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		16:00 - 17:00	0.000	0.000	0.037	0.963	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		17:00 - 18:00	0.000	0.000	0.038	0.962	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		18:00 - 19:00	0.000	0.000	0.052	0.948	0.000	0.000	0.000	0										

**URA**  
**Road Type:** DD Post Speed 70kph  
**Year:** 2025

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Appendix 3.1 Traffic Data

URA  
Road Type: PD Post Speed 80kph  
Year: 2025

Speed Fraction

Vehicle Classes	Description	Hour	Speed Fraction by Bin (KPH)															
			0	8	16	24	32	40	48	56	64	72	80	88	96	104	112	120
1	Private Cars (PC)	0:00 - 1:00	0.000	0.000	0.000	0.000	0.332	0.000	0.668	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		1:00 - 2:00	0.000	0.000	0.000	0.000	0.340	0.000	0.660	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		2:00 - 3:00	0.000	0.000	0.000	0.000	0.342	0.000	0.658	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		3:00 - 4:00	0.000	0.000	0.000	0.000	0.343	0.000	0.657	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		4:00 - 5:00	0.000	0.000	0.000	0.000	0.332	0.000	0.668	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		5:00 - 6:00	0.000	0.000	0.000	0.000	0.351	0.000	0.649	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		6:00 - 7:00	0.000	0.000	0.000	0.000	0.330	0.000	0.670	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		7:00 - 8:00	0.000	0.000	0.000	0.000	0.341	0.409	0.250	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		8:00 - 9:00	0.000	0.000	0.000	0.500	0.250	0.250	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		9:00 - 10:00	0.000	0.000	0.000	0.060	0.691	0.249	0.000	0.000	0.000	0.000	0.000	0.000	0.000	5.000	0.000	0.000
		10:00 - 11:00	0.000	0.000	0.000	0.059	0.679	0.262	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		11:00 - 12:00	0.000	0.000	0.000	0.059	0.273	0.405	0.263	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		12:00 - 13:00	0.000	0.000	0.000	0.060	0.274	0.666	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		13:00 - 14:00	0.000	0.000	0.000	0.059	0.273	0.402	0.266	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		14:00 - 15:00	0.000	0.000	0.000	0.060	0.274	0.404	0.262	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		15:00 - 16:00	0.000	0.000	0.000	0.059	0.681	0.260	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		16:00 - 17:00	0.000	0.000	0.000	0.059	0.268	0.400	0.273	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		17:00 - 18:00	0.000	0.000	0.405	0.100	0.224	0.271	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		18:00 - 19:00	0.000	0.000	0.000	0.058	0.668	0.274	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		19:00 - 20:00	0.000	0.000	0.000	0.059	0.273	0.668	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		20:00 - 21:00	0.000	0.000	0.000	0.000	0.333	0.402	0.265	0.000	0.000	0.000	0.000	0.000	0.000	6.000	0.000	0.000
		21:00 - 22:00	0.000	0.000	0.000	0.000	0.334	0.403	0.263	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		22:00 - 23:00	0.000	0.000	0.000	0.000	0.335	0.000	0.665	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		23:00 - 0:00	0.000	0.000	0.000	0.000	0.335	0.000	0.665	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
3	Taxi	0:00 - 1:00	0.000	0.000	0.000	0.000	0.314	0.000	0.686	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		1:00 - 2:00	0.000	0.000	0.000	0.000	0.321	0.000	0.679	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		2:00 - 3:00	0.000	0.000	0.000	0.000	0.324	0.000	0.676	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		3:00 - 4:00	0.000	0.000	0.000	0.000	0.325	0.000	0.675	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		4:00 - 5:00	0.000	0.000	0.000	0.000	0.313	0.000	0.687	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		5:00 - 6:00	0.000	0.000	0.000	0.000	0.333	0.000	0.667	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		6:00 - 7:00	0.000	0.000	0.000	0.000	0.314	0.000	0.686	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		7:00 - 8:00	0.000	0.000	0.000	0.000	0.308	0.403	0.289	0.000	0.000	0.000	0.000	0.000	0.000	6.000	0.000	0.000
		8:00 - 9:00	0.000	0.000	0.000	0.492	0.220	0.288	0.000	0.000	0.000	0.000	0.000	0.000	0.000	4.000	0.000	0.000
		9:00 - 10:00	0.000	0.000	0.000	0.060	0.652	0.288	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		10:00 - 11:00	0.000	0.000	0.000	0.060	0.660	0.280	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		11:00 - 12:00	0.000	0.000	0.000	0.060	0.255	0.402	0.283	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		12:00 - 13:00	0.000	0.000	0.000	0.062	0.256	0.682	0.000	0.000	0.000	0.000	0.000	0.000	0.000	6.000	0.000	0.000
		13:00 - 14:00	0.000	0.000	0.000	0.061	0.255	0.400	0.284	0.000	0.000	0.000	0.000	0.000	0.000	6.000	0.000	0.000
		14:00 - 15:00	0.000	0.000	0.000	0.061	0.255	0.404	0.280	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		15:00 - 16:00	0.000	0.000	0.000	0.061	0.661	0.278	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		16:00 - 17:00	0.000	0.000	0.000	0.062	0.261	0.408	0.269	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		17:00 - 18:00	0.000	0.000	0.413	0.105	0.215	0.267	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		18:00 - 19:00	0.000	0.000	0.000	0.062	0.669	0.269	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		19:00 - 20:00	0.000	0.000	0.000	0.060	0.254	0.686	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		20:00 - 21:00	0.000	0.000	0.000	0.000	0.316	0.399	0.285	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		21:00 - 22:00	0.000	0.000	0.000	0.000	0.317	0.402	0.281	0.000	0.000	0.000	0.000	0.000	0.000	6.000	0.000	0.000
		22:00 - 23:00	0.000	0.000	0.000	0.000	0.317	0.000	0.683	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		23:00 - 0:00	0.000	0.000	0.000	0.000	0.317	0.000	0.683	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000



## Appendix 3.1 Traffic Data

URA

Road Type: PD Post Speed 80kph

Year: 2025

### Speed Fraction

Vehicle Classes	Description	Hour	Speed Fraction by Bin (KPH)																	
			0	8	16	24	32	40	48	56	64	72	80	88	96	104	112	120	128	136
			8	16	24	32	40	48	56	64	72	80	88	96	104	112	120	128	136	144
4	Light Goods Vehicles<=2.5t	0:00 - 1:00	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		1:00 - 2:00	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		2:00 - 3:00	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		3:00 - 4:00	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		4:00 - 5:00	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		5:00 - 6:00	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		6:00 - 7:00	0.000	0.000	0.000	0.000	0.000	0.585	0.000	0.415	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		7:00 - 8:00	0.000	0.000	0.000	0.000	0.000	0.706	0.147	0.147	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		8:00 - 9:00	0.000	0.000	0.000	0.255	0.575	0.170	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		9:00 - 10:00	0.000	0.000	0.000	0.000	0.037	0.790	0.173	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.0%	0.000	0.000	0.000
		10:00 - 11:00	0.000	0.000	0.000	0.043	0.832	0.125	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		11:00 - 12:00	0.000	0.000	0.000	0.045	0.566	0.233	0.156	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		12:00 - 13:00	0.000	0.000	0.000	0.044	0.546	0.410	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		13:00 - 14:00	0.000	0.000	0.000	0.045	0.545	0.259	0.151	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		14:00 - 15:00	0.000	0.000	0.000	0.049	0.552	0.249	0.150	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		15:00 - 16:00	0.000	0.000	0.000	0.040	0.788	0.172	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		16:00 - 17:00	0.000	0.000	0.000	0.056	0.512	0.270	0.162	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		17:00 - 18:00	0.000	0.000	0.315	0.087	0.472	0.126	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		18:00 - 19:00	0.000	0.000	0.000	0.049	0.751	0.200	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		19:00 - 20:00	0.000	0.000	0.000	0.072	0.534	0.394	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		20:00 - 21:00	0.000	0.000	0.000	0.000	0.490	0.340	0.170	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		21:00 - 22:00	0.000	0.000	0.000	0.000	0.495	0.337	0.168	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		22:00 - 23:00	0.000	0.000	0.000	0.000	0.495	0.000	0.505	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		23:00 - 0:00	0.000	0.000	0.000	0.000	0.581	0.000	0.419	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
5	Lt Goods Vehicles 2.5-3.5t	0:00 - 1:00	0.000	0.000	0.000	0.000	0.378	0.000	0.622	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		1:00 - 2:00	0.000	0.000	0.000	0.000	0.404	0.000	0.596	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		2:00 - 3:00	0.000	0.000	0.000	0.000	0.392	0.000	0.608	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		3:00 - 4:00	0.000	0.000	0.000	0.000	0.400	0.000	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		4:00 - 5:00	0.000	0.000	0.000	0.000	0.381	0.000	0.619	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		5:00 - 6:00	0.000	0.000	0.000	0.000	0.407	0.000	0.593	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		6:00 - 7:00	0.000	0.000	0.000	0.000	0.381	0.000	0.619	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		7:00 - 8:00	0.000	0.000	0.000	0.000	0.416	0.334	0.250	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		8:00 - 9:00	0.000	0.000	0.000	0.416	0.335	0.249	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		9:00 - 10:00	0.000	0.000	0.000	0.054	0.698	0.248	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		10:00 - 11:00	0.000	0.000	0.000	0.069	0.716	0.215	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		11:00 - 12:00	0.000	0.000	0.000	0.068	0.313	0.402	0.217	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		12:00 - 13:00	0.000	0.000	0.000	0.070	0.315	0.615	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		13:00 - 14:00	0.000	0.000	0.000	0.069	0.313	0.401	0.217	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		14:00 - 15:00	0.000	0.000	0.000	0.069	0.314	0.402	0.215	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		15:00 - 16:00	0.000	0.000	0.000	0.069	0.717	0.214	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		16:00 - 17:00	0.000	0.000	0.000	0.078	0.282	0.447	0.193	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		17:00 - 18:00	0.000	0.000	0.455	0.133	0.222	0.190	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		18:00 - 19:00	0.000	0.000	0.000	0.078	0.730	0.192	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		19:00 - 20:00	0.000	0.000	0.000	0.070	0.312	0.618	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		20:00 - 21:00	0.000	0.000	0.000	0.000	0.377	0.408	0.215	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		21:00 - 22:00	0.000	0.000	0.000	0.000	0.381	0.404	0.215	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		22:00 - 23:00	0.000	0.000	0.000	0.000	0.384	0.000	0.616	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		23:00 - 0:00	0.000	0.000	0.000	0.000	0.397	0.000	0.603	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000

Appendix 3.1 Traffic Data

URA  
Road Type: PD Post Speed 80kph  
Year: 2025

Speed Fraction

Vehicle Classes	Description	Hour	Speed Fraction by Bin (KPH)															
			0	8	16	24	32	40	48	56	64	72	80	88	96	104	112	120
			8	16	24	32	40	48	56	64	72	80	88	96	104	112	120	128
6	Lt Goods Vehicles 3.5-5.5t	0:00 - 1:00	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		1:00 - 2:00	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		2:00 - 3:00	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		3:00 - 4:00	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		4:00 - 5:00	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		5:00 - 6:00	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		6:00 - 7:00	0.000	0.000	0.000	0.000	0.360	0.000	0.640	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		7:00 - 8:00	0.000	0.000	0.000	0.000	0.375	0.320	0.305	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		8:00 - 9:00	0.000	0.000	0.000	0.398	0.305	0.297	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		9:00 - 10:00	0.000	0.000	0.000	0.052	0.651	0.297	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		10:00 - 11:00	0.000	0.000	0.000	0.061	0.674	0.265	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		11:00 - 12:00	0.000	0.000	0.000	0.061	0.300	0.378	0.261	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		12:00 - 13:00	0.000	0.000	0.000	0.063	0.298	0.639	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		13:00 - 14:00	0.000	0.000	0.000	0.062	0.298	0.374	0.266	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		14:00 - 15:00	0.000	0.000	0.000	0.062	0.300	0.372	0.266	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		15:00 - 16:00	0.000	0.000	0.000	0.061	0.677	0.262	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		16:00 - 17:00	0.000	0.000	0.000	0.072	0.273	0.423	0.232	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		17:00 - 18:00	0.000	0.000	0.433	0.121	0.216	0.230	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		18:00 - 19:00	0.000	0.000	0.000	0.071	0.693	0.236	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		19:00 - 20:00	0.000	0.000	0.000	0.059	0.291	0.650	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		20:00 - 21:00	0.000	0.000	0.000	0.000	0.346	0.374	0.280	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		21:00 - 22:00	0.000	0.000	0.000	0.000	0.359	0.374	0.267	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		22:00 - 23:00	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		23:00 - 0:00	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
7	Heavy Goods Vehicles 5.5-15t	0:00 - 1:00	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		1:00 - 2:00	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		2:00 - 3:00	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		3:00 - 4:00	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		4:00 - 5:00	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		5:00 - 6:00	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		6:00 - 7:00	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		7:00 - 8:00	0.000	0.000	0.000	0.000	0.304	0.375	0.321	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		8:00 - 9:00	0.000	0.000	0.000	0.488	0.201	0.311	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		9:00 - 10:00	0.000	0.000	0.000	0.064	0.627	0.309	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		10:00 - 11:00	0.000	0.000	0.000	0.067	0.652	0.281	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		11:00 - 12:00	0.000	0.000	0.000	0.066	0.237	0.409	0.288	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		12:00 - 13:00	0.000	0.000	0.000	0.070	0.236	0.694	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		13:00 - 14:00	0.000	0.000	0.000	0.067	0.237	0.417	0.279	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		14:00 - 15:00	0.000	0.000	0.000	0.068	0.239	0.417	0.276	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		15:00 - 16:00	0.000	0.000	0.000	0.067	0.657	0.276	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		16:00 - 17:00	0.000	0.000	0.000	0.074	0.235	0.456	0.235	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		17:00 - 18:00	0.000	0.000	0.447	0.120	0.184	0.249	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		18:00 - 19:00	0.000	0.000	0.000	0.074	0.674	0.252	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		19:00 - 20:00	0.000	0.000	0.000	0.059	0.220	0.721	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		20:00 - 21:00	0.000	0.000	0.000	0.000	0.297	0.402	0.301	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		21:00 - 22:00	0.000	0.000	0.000	0.000	0.320	0.366	0.314	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		22:00 - 23:00	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		23:00 - 0:00	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000

## Appendix 3.1 Traffic Data

URA

Road Type: PD Post Speed 80kph

Year: 2025

### Speed Fraction

Vehicle Classes	Description	Hour	Speed Fraction by Bin (KPH)																	
			0	8	16	24	32	40	48	56	64	72	80	88	96	104	112	120	128	136
			8	16	24	32	40	48	56	64	72	80	88	96	104	112	120	128	136	144
8	Heavy Goods Vehicles >=15t	0:00 - 1:00	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		1:00 - 2:00	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		2:00 - 3:00	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		3:00 - 4:00	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		4:00 - 5:00	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		5:00 - 6:00	0.000	0.000	0.000	0.000	0.311	0.000	0.689	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		6:00 - 7:00	0.000	0.000	0.000	0.000	0.301	0.000	0.699	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		7:00 - 8:00	0.000	0.000	0.000	0.000	0.301	0.391	0.308	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		8:00 - 9:00	0.000	0.000	0.000	0.496	0.199	0.305	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		9:00 - 10:00	0.000	0.000	0.000	0.062	0.632	0.306	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		10:00 - 11:00	0.000	0.000	0.000	0.067	0.653	0.280	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		11:00 - 12:00	0.000	0.000	0.000	0.068	0.234	0.422	0.276	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		12:00 - 13:00	0.000	0.000	0.000	0.067	0.235	0.698	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		13:00 - 14:00	0.000	0.000	0.000	0.067	0.231	0.419	0.283	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		14:00 - 15:00	0.000	0.000	0.000	0.067	0.233	0.425	0.275	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		15:00 - 16:00	0.000	0.000	0.000	0.067	0.659	0.274	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		16:00 - 17:00	0.000	0.000	0.000	0.074	0.231	0.458	0.237	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		17:00 - 18:00	0.000	0.000	0.459	0.123	0.175	0.243	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		18:00 - 19:00	0.000	0.000	0.000	0.075	0.683	0.242	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		19:00 - 20:00	0.000	0.000	0.000	0.063	0.229	0.708	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		20:00 - 21:00	0.000	0.000	0.000	0.000	0.304	0.435	0.261	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		21:00 - 22:00	0.000	0.000	0.000	0.000	0.291	0.459	0.250	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		22:00 - 23:00	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		23:00 - 0:00	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
11	Public Light Buses	0:00 - 1:00	0.000	0.000	0.000	0.000	1.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		1:00 - 2:00	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		2:00 - 3:00	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		3:00 - 4:00	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		4:00 - 5:00	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		5:00 - 6:00	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		6:00 - 7:00	0.000	0.000	0.000	0.000	0.000	0.975	0.000	0.025	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		7:00 - 8:00	0.000	0.000	0.000	0.000	0.954	0.013	0.033	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		8:00 - 9:00	0.000	0.000	0.000	0.096	0.887	0.017	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		9:00 - 10:00	0.000	0.000	0.000	0.048	0.933	0.019	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		10:00 - 11:00	0.000	0.000	0.000	0.052	0.921	0.027	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		11:00 - 12:00	0.000	0.000	0.000	0.054	0.931	0.000	0.015	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		12:00 - 13:00	0.000	0.000	0.000	0.050	0.930	0.020	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		13:00 - 14:00	0.000	0.000	0.000	0.051	0.928	0.000	0.021	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		14:00 - 15:00	0.000	0.000	0.000	0.054	0.926	0.000	0.020	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		15:00 - 16:00	0.000	0.000	0.000	0.052	0.926	0.022	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		16:00 - 17:00	0.000	0.000	0.000	0.060	0.940	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		17:00 - 18:00	0.000	0.000	0.000	0.114	0.886	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		18:00 - 19:00	0.000	0.000	0.000	0.066	0.934	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		19:00 - 20:00	0.000	0.000	0.000	0.050	0.930	0.020	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		20:00 - 21:00	0.000	0.000	0.000	0.000	0.978	0.015	0.007	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		21:00 - 22:00	0.000	0.000	0.000	0.000	0.958	0.017	0.025	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		22:00 - 23:00	0.000	0.000	0.000	0.000	0.967	0.000	0.033	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		23:00 - 0:00	0.000	0.000	0.000	0.000	0.970	0.000	0.030	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000

Appendix 3.1 Traffic Data

URA  
Road Type: PD Post Speed 80kph  
Year: 2025

Speed Fraction

Vehicle Classes	Description	Hour	Speed Fraction by Bin (KPH)															
			0	8	16	24	32	40	48	56	64	72	80	88	96	104	112	120
			8	16	24	32	40	48	56	64	72	80	88	96	104	112	120	128
12	Private Light Bus <=3.5t	0:00 - 1:00	0.000	0.000	0.000	0.000	0.359	0.000	0.641	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		1:00 - 2:00	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		2:00 - 3:00	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		3:00 - 4:00	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		4:00 - 5:00	0.000	0.000	0.000	0.000	0.178	0.000	0.822	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		5:00 - 6:00	0.000	0.000	0.000	0.000	0.331	0.000	0.669	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		6:00 - 7:00	0.000	0.000	0.000	0.000	0.345	0.000	0.655	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		7:00 - 8:00	0.000	0.000	0.000	0.000	0.347	0.336	0.317	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		8:00 - 9:00	0.000	0.000	0.000	0.458	0.247	0.295	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		9:00 - 10:00	0.000	0.000	0.000	0.063	0.650	0.287	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		10:00 - 11:00	0.000	0.000	0.000	0.067	0.719	0.214	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		11:00 - 12:00	0.000	0.000	0.000	0.066	0.296	0.383	0.255	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		12:00 - 13:00	0.000	0.000	0.000	0.069	0.302	0.629	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		13:00 - 14:00	0.000	0.000	0.000	0.070	0.294	0.402	0.234	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		14:00 - 15:00	0.000	0.000	0.000	0.066	0.274	0.392	0.268	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		15:00 - 16:00	0.000	0.000	0.000	0.067	0.684	0.249	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		16:00 - 17:00	0.000	0.000	0.000	0.065	0.332	0.377	0.226	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		17:00 - 18:00	0.000	0.000	0.409	0.126	0.260	0.205	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		18:00 - 19:00	0.000	0.000	0.000	0.078	0.729	0.193	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		19:00 - 20:00	0.000	0.000	0.000	0.066	0.294	0.640	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		20:00 - 21:00	0.000	0.000	0.000	0.000	0.356	0.368	0.276	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		21:00 - 22:00	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		22:00 - 23:00	0.000	0.000	0.000	0.000	0.357	0.000	0.643	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		23:00 - 0:00	0.000	0.000	0.000	0.000	0.345	0.000	0.655	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
13	Private Light Bus >3.5t	0:00 - 1:00	0.000	0.000	0.000	0.000	0.388	0.000	0.612	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		1:00 - 2:00	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		2:00 - 3:00	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		3:00 - 4:00	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		4:00 - 5:00	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		5:00 - 6:00	0.000	0.000	0.000	0.000	0.413	0.000	0.587	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		6:00 - 7:00	0.000	0.000	0.000	0.000	0.350	0.000	0.650	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		7:00 - 8:00	0.000	0.000	0.000	0.000	0.356	0.351	0.293	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		8:00 - 9:00	0.000	0.000	0.000	0.458	0.247	0.295	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		9:00 - 10:00	0.000	0.000	0.000	0.058	0.648	0.294	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		10:00 - 11:00	0.000	0.000	0.000	0.063	0.668	0.269	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		11:00 - 12:00	0.000	0.000	0.000	0.068	0.300	0.364	0.268	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		12:00 - 13:00	0.000	0.000	0.000	0.063	0.268	0.669	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		13:00 - 14:00	0.000	0.000	0.000	0.066	0.293	0.385	0.256	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		14:00 - 15:00	0.000	0.000	0.000	0.068	0.292	0.378	0.262	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		15:00 - 16:00	0.000	0.000	0.000	0.069	0.673	0.258	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		16:00 - 17:00	0.000	0.000	0.000	0.071	0.309	0.409	0.211	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		17:00 - 18:00	0.000	0.000	0.409	0.126	0.260	0.205	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		18:00 - 19:00	0.000	0.000	0.000	0.077	0.707	0.216	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		19:00 - 20:00	0.000	0.000	0.000	0.062	0.275	0.663	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		20:00 - 21:00	0.000	0.000	0.000	0.000	0.383	0.494	0.123	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		21:00 - 22:00	0.000	0.000	0.000	0.000	0.283	0.478	0.239	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		22:00 - 23:00	0.000	0.000	0.000	0.000	0.345	0.000	0.655	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		23:00 - 0:00	0.000	0.000	0.000	0.000	0.356	0.000	0.644	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000



# Appendix 3.1 Traffic Data

URA  
Road Type: PD Post Speed 80kph  
Year: 2025

## Speed Fraction

Vehicle Classes	Description	Hour	Speed Fraction by Bin (KPH)															
			0	8	16	24	32	40	48	56	64	72	80	88	96	104	112	120
			8	16	24	32	40	48	56	64	72	80	88	96	104	112	120	128
14	Non-franchised Bus<=6.4t	0:00 - 1:00	0.000	0.000	0.000	0.000	0.319	0.000	0.681	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		1:00 - 2:00	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		2:00 - 3:00	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		3:00 - 4:00	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		4:00 - 5:00	0.000	0.000	0.000	0.000	0.414	0.000	0.586	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		5:00 - 6:00	0.000	0.000	0.000	0.000	0.390	0.000	0.610	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		6:00 - 7:00	0.000	0.000	0.000	0.000	0.351	0.000	0.649	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		7:00 - 8:00	0.000	0.000	0.000	0.000	0.338	0.367	0.295	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		8:00 - 9:00	0.000	0.000	0.000	0.452	0.246	0.302	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		9:00 - 10:00	0.000	0.000	0.000	0.062	0.651	0.287	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		10:00 - 11:00	0.000	0.000	0.000	0.068	0.668	0.264	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		11:00 - 12:00	0.000	0.000	0.000	0.069	0.293	0.381	0.257	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		12:00 - 13:00	0.000	0.000	0.000	0.070	0.298	0.632	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		13:00 - 14:00	0.000	0.000	0.000	0.068	0.290	0.389	0.253	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		14:00 - 15:00	0.000	0.000	0.000	0.067	0.286	0.395	0.252	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		15:00 - 16:00	0.000	0.000	0.000	0.066	0.678	0.256	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		16:00 - 17:00	0.000	0.000	0.000	0.074	0.302	0.420	0.204	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		17:00 - 18:00	0.000	0.000	0.409	0.128	0.248	0.215	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		18:00 - 19:00	0.000	0.000	0.000	0.075	0.726	0.199	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		19:00 - 20:00	0.000	0.000	0.000	0.068	0.280	0.652	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		20:00 - 21:00	0.000	0.000	0.000	0.000	0.326	0.385	0.289	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		21:00 - 22:00	0.000	0.000	0.000	0.000	0.289	0.406	0.305	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		22:00 - 23:00	0.000	0.000	0.000	0.000	0.341	0.000	0.659	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		23:00 - 0:00	0.000	0.000	0.000	0.000	0.330	0.000	0.670	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
15	Non-franchised Bus 6.4-15t	0:00 - 1:00	0.000	0.000	0.000	0.000	0.376	0.000	0.624	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		1:00 - 2:00	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		2:00 - 3:00	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		3:00 - 4:00	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		4:00 - 5:00	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		5:00 - 6:00	0.000	0.000	0.000	0.000	0.388	0.000	0.612	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		6:00 - 7:00	0.000	0.000	0.000	0.000	0.341	0.000	0.659	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		7:00 - 8:00	0.000	0.000	0.000	0.000	0.342	0.372	0.286	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		8:00 - 9:00	0.000	0.000	0.000	0.479	0.244	0.277	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		9:00 - 10:00	0.000	0.000	0.000	0.062	0.651	0.287	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		10:00 - 11:00	0.000	0.000	0.000	0.070	0.682	0.248	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		11:00 - 12:00	0.000	0.000	0.000	0.068	0.291	0.400	0.241	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		12:00 - 13:00	0.000	0.000	0.000	0.069	0.293	0.638	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		13:00 - 14:00	0.000	0.000	0.000	0.068	0.288	0.404	0.240	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		14:00 - 15:00	0.000	0.000	0.000	0.068	0.288	0.401	0.243	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		15:00 - 16:00	0.000	0.000	0.000	0.067	0.689	0.244	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		16:00 - 17:00	0.000	0.000	0.000	0.074	0.307	0.423	0.196	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		17:00 - 18:00	0.000	0.000	0.427	0.125	0.256	0.192	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		18:00 - 19:00	0.000	0.000	0.000	0.075	0.730	0.195	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		19:00 - 20:00	0.000	0.000	0.000	0.068	0.285	0.647	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		20:00 - 21:00	0.000	0.000	0.000	0.000	0.345	0.437	0.218	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		21:00 - 22:00	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		22:00 - 23:00	0.000	0.000	0.000	0.000	0.371	0.000	0.629	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		23:00 - 0:00	0.000	0.000	0.000	0.000	0.381	0.000	0.619	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000

Appendix 3.1 Traffic Data

URA  
Road Type: PD Post Speed 80kph  
Year: 2025

Speed Fraction

Vehicle Classes	Description	Hour	Speed Fraction by Bin (KPH)															
			0	8	16	24	32	40	48	56	64	72	80	88	96	104	112	120
			8	16	24	32	40	48	56	64	72	80	88	96	104	112	120	128
16	Non-franchised Bus >15t	0:00 - 1:00	0.000	0.000	0.000	0.000	0.381	0.000	0.619	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		1:00 - 2:00	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		2:00 - 3:00	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		3:00 - 4:00	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		4:00 - 5:00	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		5:00 - 6:00	0.000	0.000	0.000	0.000	0.406	0.000	0.594	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		6:00 - 7:00	0.000	0.000	0.000	0.000	0.323	0.000	0.677	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		7:00 - 8:00	0.000	0.000	0.000	0.000	0.347	0.351	0.302	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		8:00 - 9:00	0.000	0.000	0.000	0.443	0.244	0.313	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		9:00 - 10:00	0.000	0.000	0.000	0.057	0.641	0.302	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		10:00 - 11:00	0.000	0.000	0.000	0.077	0.679	0.244	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		11:00 - 12:00	0.000	0.000	0.000	0.063	0.286	0.380	0.271	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		12:00 - 13:00	0.000	0.000	0.000	0.073	0.270	0.657	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		13:00 - 14:00	0.000	0.000	0.000	0.069	0.286	0.382	0.263	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		14:00 - 15:00	0.000	0.000	0.000	0.072	0.284	0.382	0.262	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		15:00 - 16:00	0.000	0.000	0.000	0.063	0.669	0.268	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		16:00 - 17:00	0.000	0.000	0.000	0.080	0.310	0.421	0.189	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		17:00 - 18:00	0.000	0.000	0.466	0.125	0.244	0.165	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		18:00 - 19:00	0.000	0.000	0.000	0.079	0.726	0.195	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		19:00 - 20:00	0.000	0.000	0.000	0.069	0.256	0.675	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		20:00 - 21:00	0.000	0.000	0.000	0.000	0.376	0.499	0.125	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		21:00 - 22:00	0.000	0.000	0.000	0.000	0.337	0.442	0.221	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		22:00 - 23:00	0.000	0.000	0.000	0.000	0.365	0.000	0.635	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		23:00 - 0:00	0.000	0.000	0.000	0.000	0.375	0.000	0.625	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
17	Franchised Bus (SD)	0:00 - 1:00	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		1:00 - 2:00	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		2:00 - 3:00	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		3:00 - 4:00	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		4:00 - 5:00	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		5:00 - 6:00	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		6:00 - 7:00	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		7:00 - 8:00	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		8:00 - 9:00	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		9:00 - 10:00	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		10:00 - 11:00	0.000	0.000	0.000	0.000	1.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		11:00 - 12:00	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		12:00 - 13:00	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		13:00 - 14:00	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		14:00 - 15:00	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		15:00 - 16:00	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		16:00 - 17:00	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		17:00 - 18:00	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		18:00 - 19:00	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		19:00 - 20:00	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		20:00 - 21:00	0.000	0.000	0.000	0.000	1.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		21:00 - 22:00	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		22:00 - 23:00	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		23:00 - 0:00	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000

### Appendix 3.1 Traffic Data

URA

Road Type: PD Post Speed 80kph

Year: 2025

#### Speed Fraction

Vehicle Classes	Description	Hour	Speed Fraction by Bin (KPH)																	
			0	8	16	24	32	40	48	56	64	72	80	88	96	104	112	120	128	136
			 8	 16	 24	 32	 40	 48	 56	 64	 72	 80	 88	 96	 104	 112	 120	 128	 136	 144
18	Franchised Bus (DD)	0:00 - 1:00	0.000	0.000	0.000	0.000	0.710	0.000	0.290	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		1:00 - 2:00	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		2:00 - 3:00	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		3:00 - 4:00	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		4:00 - 5:00	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		5:00 - 6:00	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		6:00 - 7:00	0.000	0.000	0.000	0.000	0.721	0.000	0.279	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		7:00 - 8:00	0.000	0.000	0.000	0.000	0.712	0.120	0.168	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		8:00 - 9:00	0.000	0.000	0.000	0.204	0.626	0.170	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		9:00 - 10:00	0.000	0.000	0.000	0.054	0.779	0.167	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		10:00 - 11:00	0.000	0.000	0.000	0.058	0.786	0.156	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		11:00 - 12:00	0.000	0.000	0.000	0.058	0.658	0.125	0.159	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		12:00 - 13:00	0.000	0.000	0.000	0.060	0.664	0.276	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		13:00 - 14:00	0.000	0.000	0.000	0.059	0.659	0.125	0.157	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		14:00 - 15:00	0.000	0.000	0.000	0.059	0.660	0.127	0.154	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		15:00 - 16:00	0.000	0.000	0.000	0.059	0.787	0.154	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		16:00 - 17:00	0.000	0.000	0.000	0.062	0.663	0.132	0.143	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		17:00 - 18:00	0.000	0.000	0.135	0.111	0.612	0.142	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		18:00 - 19:00	0.000	0.000	0.000	0.062	0.797	0.141	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		19:00 - 20:00	0.000	0.000	0.000	0.059	0.660	0.281	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		20:00 - 21:00	0.000	0.000	0.000	0.000	0.719	0.128	0.153	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		21:00 - 22:00	0.000	0.000	0.000	0.000	0.720	0.124	0.156	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		22:00 - 23:00	0.000	0.000	0.000	0.000	0.720	0.000	0.280	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		23:00 - 0:00	0.000	0.000	0.000	0.000	0.723	0.000	0.277	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
19	Motorcycles (MC)	0:00 - 1:00	0.000	0.000	0.000	0.000	0.330	0.000	0.670	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		1:00 - 2:00	0.000	0.000	0.000	0.000	0.338	0.000	0.662	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		2:00 - 3:00	0.000	0.000	0.000	0.000	0.340	0.000	0.660	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		3:00 - 4:00	0.000	0.000	0.000	0.000	0.341	0.000	0.659	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		4:00 - 5:00	0.000	0.000	0.000	0.000	0.332	0.000	0.668	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		5:00 - 6:00	0.000	0.000	0.000	0.000	0.351	0.000	0.649	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		6:00 - 7:00	0.000	0.000	0.000	0.000	0.325	0.000	0.675	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		7:00 - 8:00	0.000	0.000	0.000	0.000	0.337	0.283	0.380	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		8:00 - 9:00	0.000	0.000	0.000	0.354	0.267	0.379	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		9:00 - 10:00	0.000	0.000	0.000	0.047	0.572	0.381	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		10:00 - 11:00	0.000	0.000	0.000	0.057	0.637	0.306	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		11:00 - 12:00	0.000	0.000	0.000	0.057	0.273	0.362	0.308	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		12:00 - 13:00	0.000	0.000	0.000	0.059	0.274	0.667	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		13:00 - 14:00	0.000	0.000	0.000	0.057	0.271	0.369	0.303	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		14:00 - 15:00	0.000	0.000	0.000	0.058	0.271	0.366	0.305	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		15:00 - 16:00	0.000	0.000	0.000	0.058	0.641	0.301	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		16:00 - 17:00	0.000	0.000	0.000	0.067	0.257	0.436	0.240	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		17:00 - 18:00	0.000	0.000	0.441	0.113	0.208	0.238	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		18:00 - 19:00	0.000	0.000	0.000	0.066	0.692	0.242	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		19:00 - 20:00	0.000	0.000	0.000	0.057	0.270	0.673	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		20:00 - 21:00	0.000	0.000	0.000	0.000	0.329	0.365	0.306	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		21:00 - 22:00	0.000	0.000	0.000	0.000	0.330	0.365	0.305	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		22:00 - 23:00	0.000	0.000	0.000	0.000	0.333	0.000	0.667	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		23:00 - 0:00	0.000	0.000	0.000	0.000	0.331	0.000	0.669	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000

## **Appendix 3.2**

### **Emission Factors**



## Appendix 3.2 Emission Factors

### URA - Postspeed -80kph

#### Emission Factor (gm/mile/vehicle) in Caline Format - NOx

Hour	MC	PC	Taxi	NFB6	NFB7	NFB8	PV4	PV5	LGV3	LGV4	LGV6	HGV7	HGV8	FBSD	FBDD	PLB
0:00 - 1:00	0.45907	0.03630	0.43155	2.98460	2.61291	2.42416	0.49991	1.38076	0.00000	0.72944	0.00000	0.00000	0.00000	0.00000	4.48361	1.21883
1:00 - 2:00	0.46060	0.03646	0.43311	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.73674	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
2:00 - 3:00	0.46234	0.03662	0.43497	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.73459	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
3:00 - 4:00	0.46434	0.03680	0.43702	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.73789	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
4:00 - 5:00	0.46441	0.03678	0.43712	3.05579	0.00000	0.00000	0.49391	0.00000	0.00000	0.73316	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
5:00 - 6:00	0.46680	0.03702	0.43941	3.04475	2.63378	2.45763	0.50209	1.39642	0.00000	0.74077	0.00000	0.00000	2.78568	0.00000	0.00000	0.00000
6:00 - 7:00	0.46582	0.03692	0.43900	3.02183	2.60969	2.39195	0.50300	1.37902	0.88728	0.73423	1.33451	0.00000	2.77796	0.00000	4.52293	1.22561
7:00 - 8:00	0.47098	0.03802	3.68329	3.11114	2.69561	2.52306	0.50733	1.42329	0.93186	0.77542	1.37071	2.28293	2.91399	0.00000	4.55479	1.21869
8:00 - 9:00	0.50188	0.04272	2.62636	3.54696	3.08880	3.10506	0.54866	1.62491	1.04516	0.98815	1.57045	2.80757	3.60801	0.00000	4.94855	1.24300
9:00 - 10:00	0.48768	0.19637	0.45905	3.35012	2.89909	2.82856	0.52702	1.52852	0.82062	0.87150	1.47641	2.53504	3.27094	0.00000	4.77722	1.23176
10:00 - 11:00	0.48636	0.03989	0.45522	3.35168	2.90597	2.86255	0.52766	1.52869	0.98407	0.87937	1.48050	2.53906	3.27893	3.94664	4.77702	1.22484
11:00 - 12:00	0.46651	0.03745	0.43810	3.15386	2.73177	2.57072	0.50897	1.43768	0.92625	0.79225	1.38422	2.32067	2.96780	0.00000	4.61173	1.22271
12:00 - 13:00	0.47043	0.03798	3.59465	3.21948	2.78387	2.65748	0.51176	1.46075	0.93565	0.81310	1.40880	2.37977	3.05809	0.00000	4.67363	1.21744
13:00 - 14:00	0.46305	0.03719	3.58727	3.14282	2.72223	2.57211	0.50759	1.43215	0.92062	0.79032	1.37918	2.31518	2.95283	0.00000	4.60017	1.21428
14:00 - 15:00	0.46296	0.03720	0.43520	3.14029	2.72097	2.57457	0.50597	1.43173	0.92356	0.79053	1.37926	2.31709	2.95611	0.00000	4.60124	1.21480
15:00 - 16:00	0.48127	0.03948	0.45074	3.33896	2.89335	2.82893	0.52367	1.52445	0.97174	0.87601	1.47457	2.52857	3.26791	0.00000	4.75923	1.21640
16:00 - 17:00	0.46765	0.03737	0.43811	3.17115	2.74758	2.62539	0.50978	1.44548	0.92095	0.79340	1.38531	2.33611	2.98353	0.00000	4.62299	1.22565
17:00 - 18:00	0.53304	0.04508	0.49020	4.05979	3.54376	3.87125	0.58646	1.85503	1.22131	1.23402	1.81758	3.26842	4.31159	0.00000	5.27152	1.24031
18:00 - 19:00	0.48988	0.03994	0.45655	3.37791	2.92431	2.88775	0.52930	1.54102	0.97408	0.88618	1.48885	2.55539	3.30517	0.00000	4.79426	1.23265
19:00 - 20:00	0.47539	0.03840	0.44552	3.21930	2.78734	2.65235	0.51327	1.46599	0.94900	0.81441	1.40909	2.37023	3.05710	0.00000	4.67962	1.22529
20:00 - 21:00	0.46563	0.22293	0.43758	3.09361	2.69959	2.58233	0.50482	1.44119	0.89058	0.76909	1.36129	2.27160	2.91808	3.93942	4.54403	1.21302
21:00 - 22:00	0.46533	0.03729	3.61970	3.07498	0.00000	2.53108	0.00000	1.40978	0.89111	0.76930	1.36418	2.27587	2.91369	0.00000	4.54083	1.20775
22:00 - 23:00	0.45742	0.03616	0.42974	2.99397	2.60673	2.40814	0.49883	1.36641	0.85815	0.73007	0.00000	0.00000	0.00000	0.00000	4.48920	1.20801
23:00 - 0:00	0.45817	0.03624	0.43067	2.61358	2.41755	2.40814	0.49867	1.37037	0.88087	0.73385	0.00000	0.00000	0.00000	0.00000	4.49540	1.21016
daily	0.47993	0.05771	1.21560	3.27458	2.84561	2.75526	0.52125	1.49812	0.95920	0.85905	1.47853	2.53895	3.26509	3.94232	4.68320	1.22076

#### Emission Factor (gm/mile/vehicle) in Caline Format - RSP

Hour	MC	PC	Taxi	NFB6	NFB7	NFB8	PV4	PV5	LGV3	LGV4	LGV6	HGV7	HGV8	FBSD	FBDD	PLB
0:00 - 1:00	0.00534	0.00457	0.00000	0.09306	0.06306	0.10560	0.01617	0.07021	0.00000	0.04483	0.00000	0.00000	0.00000	0.00000	0.26338	0.03983
1:00 - 2:00	0.00536	0.00458	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.04520	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
2:00 - 3:00	0.00536	0.00459	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.04503	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
3:00 - 4:00	0.00537	0.00459	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.04514	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
4:00 - 5:00	0.00535	0.00457	0.00000	0.09516	0.00000	0.00000	0.01510	0.00000	0.00000	0.04487	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
5:00 - 6:00	0.00539	0.00461	0.00000	0.09463	0.06322	0.10615	0.01600	0.07061	0.00000	0.04524	0.00000	0.00000	0.12916	0.00000	0.00000	0.00000
6:00 - 7:00	0.00533	0.00456	0.00000	0.09377	0.06259	0.10433	0.01608	0.06958	0.03781	0.04487	0.04740	0.00000	0.12889	0.00000	0.26384	0.03963
7:00 - 8:00	0.00559	0.00492	0.00000	0.09580	0.06471	0.10761	0.01691	0.07133	0.03988	0.04739	0.04800	0.07585	0.13267	0.00000	0.26528	0.03948
8:00 - 9:00	0.00703	0.00672	0.00000	0.11661	0.07469	0.12381	0.02123	0.08676	0.04361	0.05620	0.05163	0.09160	0.15510	0.00000	0.27864	0.04077
9:00 - 10:00	0.00638	0.02552	0.00000	0.10538	0.06990	0.11608	0.01926	0.07805	0.03544	0.05222	0.04981	0.08374	0.14409	0.00000	0.27308	0.04024
10:00 - 11:00	0.00650	0.00578	0.00000	0.10592	0.07029	0.11731	0.01954	0.07845	0.04205	0.05266	0.04996	0.08411	0.14467	0.21573	0.27353	0.04023
11:00 - 12:00	0.00576	0.00502	0.00000	0.09845	0.06587	0.10917	0.01744	0.07307	0.03962	0.04805	0.04835	0.07731	0.13471	0.00000	0.26770	0.04029
12:00 - 13:00	0.00603	0.00525	0.00000	0.10020	0.06727	0.11141	0.01811	0.07379	0.04022	0.04941	0.04879	0.07953	0.13736	0.00000	0.27039	0.04025
13:00 - 14:00	0.00577	0.00502	0.00000	0.09838	0.06585	0.10944	0.01752	0.07298	0.03950	0.04807	0.04834	0.07740	0.13455	0.00000	0.26782	0.04021
14:00 - 15:00	0.00577	0.00503	0.00000	0.09828	0.06583	0.10952	0.01733	0.07300	0.03961	0.04809	0.04835	0.07748	0.13466	0.00000	0.26790	0.04025
15:00 - 16:00	0.00651	0.00578	0.00000	0.10599	0.07029	0.11668	0.01941	0.07871	0.04172	0.05267	0.04997	0.08416	0.14478	0.00000	0.27362	0.04026
16:00 - 17:00	0.00583	0.00501	0.00000	0.09915	0.06636	0.11074	0.01763	0.07354	0.03941	0.04813	0.04840	0.07791	0.13530	0.00000	0.26834	0.04048
17:00 - 18:00	0.00910	0.00809	0.00000	0.13984	0.08412	0.14428	0.02499	0.10386	0.04892	0.06542	0.05653	0.10959	0.17711	0.00000	0.28887	0.04106
18:00 - 19:00	0.00661	0.00576	0.00000	0.10715	0.07076	0.11804	0.01966	0.07937	0.04162	0.05294	0.05010	0.08456	0.14554	0.00000	0.27408	0.04054
19:00 - 20:00	0.00602	0.00524	0.00000	0.09982	0.06719	0.11108	0.01805	0.07384	0.04057	0.04873	0.07902	0.13708	0.00000	0.00000	0.27022	0.04025
20:00 - 21:00	0.00565	0.02857	0.00000	0.09565	0.06512	0.10941	0.01704	0.07245	0.03838	0.04728	0.04795	0.07592	0.13317	0.21573	0.26569	0.03968
21:00 - 22:00	0.00565	0.00490	0.00000	0.09497	0.00000	0.10811	0.00000	0.07073	0.03842	0.04731	0.04801	0.07608	0.13305	0.00000	0.26567	0.03953
22:00 - 23:00	0.00535	0.00457	0.00000	0.09355	0.06299	0.10525	0.01615	0.06951	0.03680	0.04491	0.00000	0.00000	0.00000	0.00000	0.26380	0.03956
23:00 - 0:00	0.00536	0.00457	0.00000	0.09330	0.06313	0.10547	0.01608	0.06968	0.03777	0.04510	0.00000	0.00000	0.00000	0.00000	0.26393	0.03958
daily	0.00630	0.00794	0.00000	0.10368	0.06866	0.11428	0.01872	0.07717	0.04079	0.05109	0.05005	0.08436	0.14425	0.21573	0.27021	0.04008

## Appendix 3.2 Emission Factors

Emission Factor (gm/mile/vehicle) in Caline Format - FSP

Hour	MC	PC	Taxi	NFB6	NFB7	NFB8	PV4	PV5	LGV3	LGV4	LGV6	HGV7	HGV8	FBSD	FBDD	PLB
0:00 - 1:00	0.00451	0.00423	0.00000	0.08562	0.05801	0.09715	0.01491	0.06459	0.00000	0.04124	0.00000	0.00000	0.00000	0.00000	0.24231	0.03664
1:00 - 2:00	0.00453	0.00425	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.04158	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
2:00 - 3:00	0.00453	0.00425	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.04143	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
3:00 - 4:00	0.00453	0.00426	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.04153	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
4:00 - 5:00	0.00452	0.00423	0.00000	0.08754	0.00000	0.00000	0.01393	0.00000	0.00000	0.04128	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
5:00 - 6:00	0.00455	0.00427	0.00000	0.08706	0.05816	0.09766	0.01476	0.06496	0.00000	0.04162	0.00000	0.00000	0.11883	0.00000	0.00000	0.00000
6:00 - 7:00	0.00450	0.00423	0.00000	0.08627	0.05758	0.09599	0.01484	0.06402	0.03479	0.04128	0.04360	0.00000	0.11858	0.00000	0.24274	0.03646
7:00 - 8:00	0.00473	0.00457	0.00000	0.08814	0.05954	0.09900	0.01560	0.06562	0.03669	0.04360	0.04416	0.06978	0.12205	0.00000	0.24406	0.03633
8:00 - 9:00	0.00596	0.00623	0.00000	0.10728	0.06872	0.11390	0.01958	0.07982	0.04012	0.05171	0.04750	0.08427	0.14269	0.00000	0.25635	0.03751
9:00 - 10:00	0.00541	0.02367	0.00000	0.09695	0.06431	0.10680	0.01777	0.07181	0.03260	0.04805	0.04582	0.07704	0.13257	0.00000	0.25123	0.03702
10:00 - 11:00	0.00551	0.00536	0.00000	0.09745	0.06467	0.10792	0.01802	0.07218	0.03868	0.04845	0.04596	0.07738	0.13310	0.19847	0.25164	0.03702
11:00 - 12:00	0.00488	0.00466	0.00000	0.09057	0.06060	0.10044	0.01609	0.06722	0.03644	0.04421	0.04448	0.07112	0.12394	0.00000	0.24629	0.03707
12:00 - 13:00	0.00510	0.00487	0.00000	0.09218	0.06189	0.10250	0.01670	0.06788	0.03700	0.04546	0.04489	0.07316	0.12637	0.00000	0.24876	0.03703
13:00 - 14:00	0.00488	0.00466	0.00000	0.09051	0.06058	0.10068	0.01616	0.06714	0.03634	0.04422	0.04447	0.07121	0.12379	0.00000	0.24640	0.03699
14:00 - 15:00	0.00488	0.00467	0.00000	0.09042	0.06057	0.10076	0.01599	0.06716	0.03644	0.04424	0.04448	0.07128	0.12389	0.00000	0.24646	0.03703
15:00 - 16:00	0.00552	0.00536	0.00000	0.09751	0.06467	0.10735	0.01791	0.07241	0.03838	0.04845	0.04597	0.07743	0.13320	0.00000	0.25173	0.03704
16:00 - 17:00	0.00494	0.00465	0.00000	0.09122	0.06105	0.10188	0.01626	0.06766	0.03625	0.04428	0.04453	0.07168	0.12447	0.00000	0.24687	0.03724
17:00 - 18:00	0.00776	0.00751	0.00000	0.12865	0.07739	0.13274	0.02306	0.09556	0.04501	0.06019	0.05201	0.10083	0.16294	0.00000	0.26576	0.03778
18:00 - 19:00	0.00560	0.00534	0.00000	0.09858	0.06510	0.10860	0.01814	0.07303	0.03829	0.04871	0.04609	0.07780	0.13390	0.00000	0.25215	0.03730
19:00 - 20:00	0.00509	0.00486	0.00000	0.09184	0.06182	0.10219	0.01665	0.06793	0.03732	0.04544	0.04483	0.07270	0.12611	0.00000	0.24860	0.03703
20:00 - 21:00	0.00477	0.02650	0.00000	0.08800	0.05991	0.10066	0.01572	0.06666	0.03530	0.04350	0.04411	0.06984	0.12252	0.19847	0.24444	0.03651
21:00 - 22:00	0.00478	0.00455	0.00000	0.08737	0.00000	0.09946	0.00000	0.06507	0.03534	0.04353	0.04417	0.06999	0.12241	0.00000	0.24442	0.03636
22:00 - 23:00	0.00452	0.00424	0.00000	0.08606	0.05795	0.09683	0.01490	0.06395	0.03386	0.04132	0.00000	0.00000	0.00000	0.00000	0.24270	0.03639
23:00 - 0:00	0.00452	0.00424	0.00000	0.08584	0.05808	0.09703	0.01484	0.06410	0.03474	0.04149	0.00000	0.00000	0.00000	0.00000	0.24281	0.03642
daily	0.00534	0.00737	0.00000	0.09538	0.06317	0.10514	0.01727	0.07100	0.03753	0.04701	0.04605	0.07761	0.13271	0.19847	0.24859	0.03688

URA - Postspeed - 70kph

Emission Factor (gm/mile/vehicle) in Caline Format - NOx

Hour	MC	PC	Taxi	NFB6	NFB7	NFB8	PV4	PV5	LGV3	LGV4	LGV6	HGV7	HGV8	FBSD	FBDD	PLB
0:00 - 1:00	0.53620	0.04582	0.49473	3.91639	3.38913	3.64431	0.58523	1.79371	0.00000	1.21209	0.00000	0.00000	0.00000	0.00000	5.97605	1.41457
1:00 - 2:00	0.53748	0.04595	0.49616	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	1.21302	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
2:00 - 3:00	0.53937	0.04614	0.49814	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	1.21465	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
3:00 - 4:00	0.54164	0.04635	0.50044	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	1.21669	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
4:00 - 5:00	0.54228	0.04642	0.50117	3.93334	0.00000	0.00000	0.00000	0.00000	0.00000	1.21706	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
5:00 - 6:00	0.54388	0.04656	0.50276	3.93810	3.40792	3.66451	0.58958	1.80489	0.00000	1.21845	0.00000	0.00000	4.15987	0.00000	0.00000	0.00000
6:00 - 7:00	0.54437	0.04661	0.50327	3.93945	3.40909	3.66577	0.58976	1.80561	1.30626	1.21885	1.79148	0.00000	4.16129	0.00000	6.01125	1.42931
7:00 - 8:00	0.54220	0.04640	0.50105	3.93345	3.40389	3.66018	0.58855	1.80251	1.30442	1.21709	1.78870	3.25367	4.15495	0.00000	6.00209	1.42542
8:00 - 9:00	0.54769	0.04686	0.50321	4.02619	3.48989	3.77887	0.59652	1.85350	1.32616	1.25118	1.81972	3.33596	4.28442	4.95278	6.13194	1.46547
9:00 - 10:00	0.54426	0.04650	0.50032	4.00972	3.47659	3.76352	0.59503	1.84312	1.32290	1.24259	1.81245	3.31741	4.24678	4.91019	6.12414	1.45848
10:00 - 11:00	0.53883	0.04597	0.49513	3.97218	3.44123	3.72229	0.59077	1.83265	1.32634	1.24268	1.80964	3.30230	4.23372	4.89665	6.12118	1.44507
11:00 - 12:00	0.53655	0.04578	0.49322	3.96970	3.44480	3.71996	0.59025	1.82701	1.32633	1.24153	1.80940	3.29048	4.21629	0.00000	6.11337	1.44203
12:00 - 13:00	0.53339	0.04550	0.49023	3.97528	3.43819	3.70563	0.58823	1.82885	1.32532	1.23984	1.80484	3.28306	4.22597	0.00000	6.10421	1.43678
13:00 - 14:00	0.53290	0.04547	0.48993	3.96004	3.43451	3.71038	0.58793	1.82089	1.31997	1.23810	1.80293	3.28661	4.21861	0.00000	6.09938	1.43474
14:00 - 15:00	0.53254	0.04546	0.48978	3.95706	3.43383	3.70836	0.58757	1.81956	1.31813	1.23707	1.80211	3.28329	4.20840	0.00000	6.09024	1.43331
15:00 - 16:00	0.53282	0.04549	0.49012	3.95627	3.42839	3.70891	0.58759	1.82029	1.31911	1.23684	1.80175	3.28553	4.21024	0.00000	6.09101	1.43358
16:00 - 17:00	0.53511	0.04570	0.49277	3.94630	3.42073	3.68888	0.58689	1.81099	1.33022	1.24467	1.80990	3.29643	4.23833	0.00000	6.11242	1.43416
17:00 - 18:00	0.53793	0.04595	0.49534	3.95401	3.42550	3.69634	0.58860	1.81555	1.33310	1.24745	1.81299	3.30646	4.24274	0.00000	6.12663	1.43971
18:00 - 19:00	0.53930	0.04607	0.49649	3.96326	3.42969	3.71680	0.59054	1.82253	1.34318	1.24946	1.81788	3.31177	4.25363	0.00000	6.13669	1.44322
19:00 - 20:00	0.53924	0.04601	0.49543	3.97026	3.45482	3.71174	0.59085	1.82511	1.34034	1.24219	1.80686	3.29758	4.25603	0.00000	6.11254	1.44499
20:00 - 21:00	0.53446	0.04561	0.49263	3.91427	3.38730	3.64234	0.58460	1.79222	1.29850	1.21147	1.77982	3.23530	4.13469	4.88769	5.97282	1.41198
21:00 - 22:00	0.53405	0.04559	0.49235	3.91191	0.00000	3.64015	0.00000	1.79229	1.29780	1.21078	1.77873	3.23333	4.13220	0.00000	5.96923	1.41101
22:00 - 23:00	0.53409	0.04561	0.49251	3.91108	3.38454	3.63937	0.58418	1.79066	1.29757	1.21054	0.00000	0.00000	0.00000	0.00000	5.96796	1.41090
23:00 - 0:00	0.53509	0.04571	0.49358	3.91344	3.38657	3.64156	0.58465	1.79204	1.29830	1.21123	0.00000	0.00000	0.00000	0.00000	5.97155	1.41261
daily	0.53787	0.04595	0.49533	3.96389	3.43712	3.70786	0.58992	1.82200	1.32363	1.23929	1.80767	3.29782	4.22989	4.89758	6.07013	1.43247

## Appendix 3.2 Emission Factors

Emission Factor (gm/mile/vehicle) in Caline Format - RSP

Hour	MC	PC	Taxi	NFB6	NFB7	NFB8	PV4	PV5	LGV3	LGV4	LGV6	HGV7	HGV8	FBSD	FBDD	PLB
0:00 - 1:00	0.00888	0.00810	0.00000	0.13746	0.08272	0.13958	0.02498	0.10203	0.00000	0.06466	0.00000	0.00000	0.00000	0.00000	0.31313	0.05066
1:00 - 2:00	0.00888	0.00810	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.06466	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
2:00 - 3:00	0.00888	0.00810	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.06466	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
3:00 - 4:00	0.00888	0.00810	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.06466	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
4:00 - 5:00	0.00888	0.00810	0.00000	0.13746	0.00000	0.00000	0.00000	0.00000	0.00000	0.06466	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
5:00 - 6:00	0.00888	0.00810	0.00000	0.13746	0.08272	0.13958	0.02498	0.10202	0.00000	0.06466	0.00000	0.00000	0.17320	0.00000	0.00000	0.00000
6:00 - 7:00	0.00888	0.00810	0.00000	0.13746	0.08272	0.13958	0.02498	0.10202	0.05120	0.06466	0.05575	0.00000	0.17320	0.00000	0.31313	0.05066
7:00 - 8:00	0.00888	0.00810	0.00000	0.13746	0.08272	0.13958	0.02498	0.10203	0.05120	0.06466	0.05575	0.10461	0.17320	0.00000	0.31313	0.05066
8:00 - 9:00	0.00930	0.00840	0.00000	0.14148	0.08441	0.14265	0.02576	0.10568	0.05186	0.06593	0.05636	0.10794	0.17716	0.22900	0.31699	0.05265
9:00 - 10:00	0.00918	0.00832	0.00000	0.14077	0.08415	0.14225	0.02567	0.10498	0.05176	0.06562	0.05622	0.10723	0.17602	0.22839	0.31676	0.05240
10:00 - 11:00	0.00912	0.00826	0.00000	0.13964	0.08365	0.14146	0.02549	0.10466	0.05196	0.06574	0.05627	0.10706	0.17598	0.22839	0.31717	0.05214
11:00 - 12:00	0.00911	0.00826	0.00000	0.13964	0.08376	0.14146	0.02550	0.10438	0.05199	0.06572	0.05628	0.10670	0.17553	0.00000	0.31705	0.05214
12:00 - 13:00	0.00913	0.00827	0.00000	0.14030	0.08379	0.14133	0.02549	0.10487	0.05205	0.06577	0.05628	0.10677	0.17614	0.00000	0.31723	0.05219
13:00 - 14:00	0.00913	0.00826	0.00000	0.13978	0.08378	0.14153	0.02550	0.10441	0.05192	0.06574	0.05628	0.10702	0.17602	0.00000	0.31723	0.05216
14:00 - 15:00	0.00912	0.00826	0.00000	0.13969	0.08378	0.14150	0.02548	0.10435	0.05187	0.06571	0.05627	0.10691	0.17573	0.00000	0.31699	0.05211
15:00 - 16:00	0.00911	0.00826	0.00000	0.13969	0.08368	0.14153	0.02548	0.10441	0.05190	0.06571	0.05627	0.10702	0.17582	0.00000	0.31705	0.05211
16:00 - 17:00	0.00906	0.00825	0.00000	0.13888	0.08338	0.14080	0.02526	0.10343	0.05215	0.06590	0.05635	0.10713	0.17639	0.00000	0.31729	0.05186
17:00 - 18:00	0.00906	0.00825	0.00000	0.13893	0.08337	0.14084	0.02530	0.10350	0.05218	0.06593	0.05635	0.10727	0.17631	0.00000	0.31740	0.05190
18:00 - 19:00	0.00907	0.00826	0.00000	0.13921	0.08340	0.14130	0.02543	0.10389	0.05245	0.06598	0.05642	0.10737	0.17655	0.00000	0.31758	0.05197
19:00 - 20:00	0.00912	0.00826	0.00000	0.13969	0.08396	0.14126	0.02551	0.10421	0.05240	0.06575	0.05624	0.10695	0.17676	0.00000	0.31705	0.05214
20:00 - 21:00	0.00888	0.00810	0.00000	0.13746	0.08272	0.13958	0.02499	0.10202	0.05120	0.06466	0.05575	0.10461	0.17320	0.22839	0.31313	0.05066
21:00 - 22:00	0.00888	0.00810	0.00000	0.13746	0.00000	0.13958	0.00000	0.10211	0.05120	0.06466	0.05575	0.10461	0.17320	0.00000	0.31313	0.05066
22:00 - 23:00	0.00888	0.00810	0.00000	0.13746	0.08272	0.13958	0.02498	0.10201	0.05120	0.06466	0.00000	0.00000	0.00000	0.00000	0.31313	0.05066
23:00 - 0:00	0.00888	0.00810	0.00000	0.13746	0.08272	0.13958	0.02498	0.10202	0.05120	0.06466	0.00000	0.00000	0.00000	0.00000	0.31313	0.05066
daily	0.00904	0.00823	0.00000	0.13941	0.08362	0.14115	0.02543	0.10401	0.05193	0.06567	0.05627	0.10705	0.17601	0.22843	0.31583	0.05159

Emission Factor (gm/mile/vehicle) in Caline Format - FSP

Hour	MC	PC	Taxi	NFB6	NFB7	NFB8	PV4	PV5	LGV3	LGV4	LGV6	HGV7	HGV8	FBSD	FBDD	PLB
0:00 - 1:00	0.00756	0.00751	0.00000	0.12646	0.07610	0.12842	0.02305	0.09387	0.00000	0.05949	0.00000	0.00000	0.00000	0.00000	0.28808	0.04661
1:00 - 2:00	0.00756	0.00751	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.05949	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
2:00 - 3:00	0.00756	0.00751	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.05949	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
3:00 - 4:00	0.00756	0.00751	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.05949	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
4:00 - 5:00	0.00756	0.00751	0.00000	0.12646	0.00000	0.00000	0.00000	0.00000	0.00000	0.05949	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
5:00 - 6:00	0.00756	0.00751	0.00000	0.12646	0.07610	0.12842	0.02305	0.09386	0.00000	0.05949	0.00000	0.00000	0.15935	0.00000	0.00000	0.00000
6:00 - 7:00	0.00756	0.00751	0.00000	0.12646	0.07610	0.12842	0.02305	0.09386	0.04710	0.05949	0.05129	0.00000	0.15935	0.00000	0.28808	0.04661
7:00 - 8:00	0.00756	0.00751	0.00000	0.12646	0.07610	0.12842	0.02305	0.09387	0.04710	0.05949	0.05129	0.09624	0.15935	0.00000	0.28808	0.04661
8:00 - 9:00	0.00792	0.00779	0.00000	0.13017	0.07766	0.13124	0.02377	0.09722	0.04770	0.06066	0.05186	0.09931	0.16299	0.21068	0.29163	0.04844
9:00 - 10:00	0.00782	0.00771	0.00000	0.12951	0.07742	0.13087	0.02368	0.09658	0.04762	0.06037	0.05172	0.09865	0.16194	0.21012	0.29142	0.04821
10:00 - 11:00	0.00777	0.00767	0.00000	0.12847	0.07695	0.13015	0.02352	0.09629	0.04780	0.06048	0.05177	0.09849	0.16190	0.21012	0.29180	0.04797
11:00 - 12:00	0.00776	0.00766	0.00000	0.12847	0.07706	0.13015	0.02353	0.09603	0.04782	0.06047	0.05178	0.09817	0.16149	0.00000	0.29169	0.04797
12:00 - 13:00	0.00777	0.00767	0.00000	0.12908	0.07709	0.13002	0.02352	0.09648	0.04788	0.06051	0.05178	0.09823	0.16205	0.00000	0.29185	0.04802
13:00 - 14:00	0.00778	0.00767	0.00000	0.12860	0.07707	0.13021	0.02353	0.09606	0.04776	0.06048	0.05177	0.09846	0.16194	0.00000	0.29185	0.04799
14:00 - 15:00	0.00776	0.00766	0.00000	0.12851	0.07707	0.13018	0.02351	0.09600	0.04771	0.06045	0.05177	0.09836	0.16168	0.00000	0.29163	0.04794
15:00 - 16:00	0.00776	0.00766	0.00000	0.12851	0.07699	0.13021	0.02351	0.09606	0.04775	0.06045	0.05177	0.09846	0.16175	0.00000	0.29169	0.04794
16:00 - 17:00	0.00772	0.00765	0.00000	0.12777	0.07671	0.12954	0.02331	0.09516	0.04798	0.06063	0.05184	0.09856	0.16228	0.00000	0.29190	0.04771
17:00 - 18:00	0.00772	0.00765	0.00000	0.12781	0.07670	0.12957	0.02334	0.09522	0.04800	0.06066	0.05184	0.09869	0.16220	0.00000	0.29201	0.04775
18:00 - 19:00	0.00773	0.00766	0.00000	0.12807	0.07673	0.12999	0.02346	0.09558	0.04825	0.06070	0.05190	0.09878	0.16243	0.00000	0.29217	0.04781
19:00 - 20:00	0.00777	0.00767	0.00000	0.12851	0.07724	0.12996	0.02354	0.09587	0.04821	0.06050	0.05174	0.09839	0.16262	0.00000	0.29169	0.04797
20:00 - 21:00	0.00756	0.00751	0.00000	0.12646	0.07610	0.12842	0.02305	0.09386	0.04710	0.05949	0.05129	0.09624	0.15935	0.00000	0.28808	0.04661
21:00 - 22:00	0.00756	0.00751	0.00000	0.12646	0.00000	0.12842	0.00000	0.09394	0.04710	0.05949	0.05129	0.09624	0.15935	0.00000	0.28808	0.04661
22:00 - 23:00	0.00756	0.00751	0.00000	0.12646	0.07610	0.12842	0.02305	0.09385	0.04710	0.05949	0.00000	0.00000	0.00000	0.00000	0.28808	0.04661
23:00 - 0:00	0.00756	0.00751	0.00000	0.12646	0.07610	0.12842	0.02305	0.09386	0.04710	0.05949	0.00000	0.00000	0.00000	0.00000	0.28808	0.04661
daily	0.00769	0.00764	0.00000	0.12825	0.07693	0.12986	0.02346	0.09569	0.04777	0.06042	0.05177	0.09849	0.16193	0.21016	0.29057	0.04746

## Appendix 3.2 Emission Factors

### URA - Postspeed - 50kph

#### Emission Factor (gm/mile/vehicle) in Caline Format - NOx

Hour	MC	PC	Taxi	NFB6	NFB7	NFB8	PV4	PV5	LGV3	LGV4	LGV6	HGV7	HGV8	FBSD	FBDD	PLB
0:00 - 1:00	1.30733	0.08736	0.62465	4.55091	4.06120	4.50960	0.64279	2.08300	0.00000	1.46543	0.00000	0.00000	0.00000	0.00000	7.64678	2.20161
1:00 - 2:00	1.38364	0.08594	0.60608	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	1.31452	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
2:00 - 3:00	1.51100	0.08910	0.61467	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	1.29199	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
3:00 - 4:00	1.39480	0.08615	0.60428	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	1.24346	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
4:00 - 5:00	1.40726	0.08431	0.59956	3.93334	0.00000	0.00000	0.00000	0.00000	0.00000	1.24505	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
5:00 - 6:00	1.39674	0.08352	0.60019	4.08543	3.59676	3.89688	0.60401	1.90745	0.00000	1.26232	0.00000	0.00000	4.15987	0.00000	0.00000	0.00000
6:00 - 7:00	1.38501	0.08488	0.61833	4.48242	3.88663	4.46254	0.65695	2.50546	1.48356	1.42161	2.03198	0.00000	5.51240	0.00000	7.19364	2.13564
7:00 - 8:00	1.36956	0.08806	0.63349	5.01220	4.34698	4.90961	0.69895	2.66118	1.60689	1.59738	2.22863	4.08435	5.50399	0.00000	7.99971	2.26039
8:00 - 9:00	1.34566	0.09152	0.67227	5.29396	4.61574	5.41532	0.72837	2.69604	1.77851	1.79636	2.44633	4.40776	6.13989	6.55385	9.20461	2.31099
9:00 - 10:00	1.34085	0.09005	0.64856	5.26447	4.58251	5.31067	0.72156	2.52447	1.71184	1.70710	2.37336	4.28893	5.85705	6.55404	8.46552	2.03445
10:00 - 11:00	1.34611	0.08880	0.63315	5.03550	4.36092	4.94717	0.70689	2.41761	1.65603	1.62056	2.23822	4.11751	5.52336	6.53596	7.97530	1.97736
11:00 - 12:00	1.32187	0.08861	0.62948	5.00480	4.33482	4.91855	0.69853	2.37613	1.65106	1.60338	2.21710	4.07993	5.44882	0.00000	7.97030	1.95549
12:00 - 13:00	1.30460	0.08858	0.63175	5.04243	4.37927	5.01800	0.69813	2.54419	1.66956	1.62900	2.24447	4.12997	5.55795	0.00000	8.19853	2.04607
13:00 - 14:00	1.32162	0.08821	0.62450	4.99506	4.32448	4.89610	0.70578	2.42318	1.63689	1.59716	2.21020	4.05820	5.42702	0.00000	7.94430	1.99173
14:00 - 15:00	1.33794	0.08855	0.62704	4.98968	4.32173	4.89257	0.69118	2.44347	1.63099	1.59579	2.20748	4.04319	5.41255	0.00000	7.94273	1.99329
15:00 - 16:00	1.32479	0.08929	0.63446	5.07926	4.39972	5.02186	0.70054	2.41479	1.68099	1.63784	2.26605	4.13774	5.58899	0.00000	8.16273	2.03451
16:00 - 17:00	1.36189	0.08951	0.63103	5.00631	4.33422	4.92421	0.73210	2.48478	1.64849	1.60409	2.21017	4.08565	5.45698	0.00000	7.95869	2.03576
17:00 - 18:00	1.36626	0.09130	0.64900	5.13978	4.43530	5.14505	0.71384	2.57001	1.71358	1.66355	2.28762	4.20896	5.71459	0.00000	8.17264	2.19758
18:00 - 19:00	1.35545	0.09048	0.63855	5.04946	4.36775	5.00280	0.69348	2.50520	1.68139	1.63089	2.24641	4.14309	5.55810	0.00000	7.94147	2.20356
19:00 - 20:00	1.38801	0.09106	0.64113	5.05094	4.37952	5.02975	0.71429	2.73811	1.68713	1.64208	2.25380	4.20855	5.58156	0.00000	8.23517	2.23950
20:00 - 21:00	1.43035	0.09124	0.63558	4.99327	4.34008	4.92546	0.66572	2.28915	1.63893	1.59470	2.22259	4.12454	5.47716	6.52401	7.96071	2.18053
21:00 - 22:00	1.38987	0.09092	0.63596	5.01227	0.00000	4.92249	0.00000	2.27854	1.63523	1.58855	2.22260	4.12203	5.47386	0.00000	7.95591	2.21015
22:00 - 23:00	1.41935	0.09101	0.63565	4.96059	4.31656	4.85991	0.71777	2.27566	1.60324	1.57532	0.00000	0.00000	0.00000	0.00000	7.95422	2.18990
23:00 - 0:00	1.40818	0.08936	0.62888	4.71040	4.14674	4.62679	0.70760	2.16674	1.59772	1.51566	0.00000	0.00000	0.00000	0.00000	7.91131	2.19848
daily	1.35481	0.08955	0.63265	5.02460	4.37372	4.98471	0.70358	2.49203	1.66775	1.61901	2.26961	4.16040	5.61815	6.53298	8.10037	2.12706

#### Emission Factor (gm/mile/vehicle) in Caline Format - RSP

Hour	MC	PC	Taxi	NFB6	NFB7	NFB8	PV4	PV5	LGV3	LGV4	LGV6	HGV7	HGV8	FBSD	FBDD	PLB
0:00 - 1:00	0.02438	0.01130	0.00000	0.16473	0.09583	0.16181	0.03030	0.12243	0.00000	0.07409	0.00000	0.00000	0.00000	0.00000	0.36228	0.06502
1:00 - 2:00	0.02354	0.01014	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.06843	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
2:00 - 3:00	0.02645	0.01051	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.06753	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
3:00 - 4:00	0.02500	0.00992	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.06565	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
4:00 - 5:00	0.03210	0.01057	0.00000	0.13746	0.00000	0.00000	0.00000	0.00000	0.00000	0.06569	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
5:00 - 6:00	0.03471	0.01091	0.00000	0.14376	0.08638	0.14552	0.02632	0.10921	0.00000	0.06628	0.00000	0.00000	0.17320	0.00000	0.00000	0.00000
6:00 - 7:00	0.03428	0.01181	0.00000	0.16066	0.09198	0.15993	0.02966	0.11967	0.05643	0.07216	0.06042	0.00000	0.21405	0.00000	0.34771	0.06092
7:00 - 8:00	0.03420	0.01333	0.00000	0.18363	0.10104	0.17154	0.03345	0.13650	0.06013	0.07876	0.06431	0.13751	0.21405	0.00000	0.37164	0.06765
8:00 - 9:00	0.03151	0.01442	0.00000	0.19555	0.10874	0.18277	0.03574	0.14572	0.06436	0.08472	0.06821	0.15717	0.23052	0.25164	0.40005	0.07301
9:00 - 10:00	0.02728	0.01338	0.00000	0.19429	0.10733	0.18064	0.03506	0.14513	0.06300	0.08227	0.06696	0.14875	0.22357	0.25164	0.38343	0.07072
10:00 - 11:00	0.02560	0.01270	0.00000	0.18527	0.10169	0.17283	0.03352	0.13766	0.06170	0.07965	0.06462	0.13993	0.21494	0.25164	0.37164	0.06877
11:00 - 12:00	0.02413	0.01245	0.00000	0.18410	0.10112	0.17224	0.03311	0.13682	0.06161	0.07911	0.06425	0.13811	0.21299	0.00000	0.37164	0.06804
12:00 - 13:00	0.02353	0.01260	0.00000	0.18622	0.10259	0.17479	0.03349	0.13853	0.06221	0.08003	0.06485	0.14139	0.21636	0.00000	0.37792	0.07012
13:00 - 14:00	0.02342	0.01236	0.00000	0.18438	0.10119	0.17207	0.03324	0.13685	0.06134	0.07906	0.06426	0.13783	0.21287	0.00000	0.37164	0.06774
14:00 - 15:00	0.02382	0.01241	0.00000	0.18419	0.10116	0.17201	0.03301	0.13684	0.06117	0.07902	0.06422	0.13726	0.21246	0.00000	0.37164	0.06778
15:00 - 16:00	0.02451	0.01279	0.00000	0.18803	0.10326	0.17495	0.03377	0.13978	0.06256	0.08041	0.06530	0.14213	0.21737	0.00000	0.37726	0.06996
16:00 - 17:00	0.02492	0.01259	0.00000	0.18448	0.10123	0.17257	0.03397	0.13716	0.06160	0.07921	0.06418	0.13857	0.21348	0.00000	0.37164	0.06811
17:00 - 18:00	0.02622	0.01325	0.00000	0.18977	0.10393	0.17709	0.03441	0.14163	0.06312	0.08101	0.06553	0.14528	0.22005	0.00000	0.37671	0.07178
18:00 - 19:00	0.02432	0.01271	0.00000	0.18580	0.10187	0.17407	0.03314	0.13803	0.06240	0.07995	0.06475	0.14103	0.21587	0.00000	0.37059	0.06943
19:00 - 20:00	0.02359	0.01271	0.00000	0.18608	0.10232	0.17479	0.03376	0.13845	0.06268	0.08029	0.06494	0.14449	0.21673	0.00000	0.37836	0.07009
20:00 - 21:00	0.02434	0.01254	0.00000	0.18386	0.10132	0.17257	0.03248	0.13710	0.06130	0.07893	0.06441	0.14003	0.21405	0.25164	0.37164	0.06781
21:00 - 22:00	0.02385	0.01238	0.00000	0.18481	0.00000	0.17257	0.00000	0.13608	0.06122	0.07874	0.06444	0.14003	0.21405	0.00000	0.37164	0.06776
22:00 - 23:00	0.02599	0.01251	0.00000	0.18263	0.10093	0.17098	0.03366	0.13628	0.06028	0.07826	0.00000	0.00000	0.00000	0.00000	0.37164	0.06774
23:00 - 0:00	0.02709	0.01204	0.00000	0.17174	0.09756	0.16491	0.03256	0.12848	0.06009	0.07600	0.00000	0.00000	0.00000	0.00000	0.37024	0.06657
daily	0.02577	0.01265	0.00000	0.18490	0.10238	0.17354	0.03365	0.13803	0.06201	0.07955	0.06522	0.14287	0.21759	0.25164	0.37475	0.06859



## Appendix 3.2 Emission Factors

Emission Factor (gm/mile/vehicle) in Caline Format - FSP

Hour	MC	PC	Taxi	NFB6	NFB7	NFB8	PV4	PV5	LGV3	LGV4	LGV6	HGV7	HGV8	FBS0	FBD0	PLB
0:00 - 1:00	0.02039	0.01048	0.00000	0.15155	0.08817	0.14887	0.02797	0.11263	0.00000	0.06817	0.00000	0.00000	0.00000	0.00000	0.33330	0.05982
1:00 - 2:00	0.01976	0.00940	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.06296	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
2:00 - 3:00	0.02229	0.00975	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.06213	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
3:00 - 4:00	0.02092	0.00920	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.06040	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
4:00 - 5:00	0.02664	0.00981	0.00000	0.12646	0.00000	0.00000	0.00000	0.00000	0.00000	0.06044	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
5:00 - 6:00	0.02876	0.01012	0.00000	0.13226	0.07947	0.13388	0.02428	0.10047	0.00000	0.06098	0.00000	0.00000	0.15935	0.00000	0.00000	0.00000
6:00 - 7:00	0.02847	0.01096	0.00000	0.14781	0.08462	0.14714	0.02738	0.11009	0.05191	0.06639	0.05559	0.00000	0.19693	0.00000	0.31989	0.05604
7:00 - 8:00	0.02845	0.01236	0.00000	0.16894	0.09296	0.15782	0.03088	0.12558	0.05532	0.07247	0.05917	0.12651	0.19693	0.00000	0.34191	0.06224
8:00 - 9:00	0.02628	0.01337	0.00000	0.17991	0.10004	0.16815	0.03300	0.13406	0.05920	0.07795	0.06275	0.14459	0.21208	0.23151	0.36804	0.06717
9:00 - 10:00	0.02287	0.01241	0.00000	0.17875	0.09874	0.16619	0.03236	0.13352	0.05796	0.07569	0.06160	0.13685	0.20569	0.23151	0.35275	0.06507
10:00 - 11:00	0.02151	0.01179	0.00000	0.17045	0.09356	0.15900	0.03094	0.12665	0.05676	0.07328	0.05945	0.12874	0.19774	0.23151	0.34191	0.06327
11:00 - 12:00	0.02029	0.01155	0.00000	0.16937	0.09303	0.15846	0.03057	0.12587	0.05668	0.07278	0.05911	0.12707	0.19595	0.00000	0.34191	0.06260
12:00 - 13:00	0.01978	0.01169	0.00000	0.17132	0.09438	0.16081	0.03091	0.12745	0.05722	0.07363	0.05967	0.13008	0.19905	0.00000	0.34769	0.06451
13:00 - 14:00	0.01970	0.01147	0.00000	0.16963	0.09310	0.15831	0.03068	0.12590	0.05643	0.07274	0.05912	0.12680	0.19584	0.00000	0.34191	0.06232
14:00 - 15:00	0.02005	0.01151	0.00000	0.16946	0.09306	0.15825	0.03047	0.12590	0.05627	0.07270	0.05908	0.12628	0.19546	0.00000	0.34191	0.06235
15:00 - 16:00	0.02059	0.01187	0.00000	0.17299	0.09500	0.16095	0.03117	0.12860	0.05755	0.07398	0.06008	0.13076	0.19998	0.00000	0.34708	0.06436
16:00 - 17:00	0.02095	0.01168	0.00000	0.16972	0.09313	0.15876	0.03136	0.12619	0.05667	0.07288	0.05905	0.12749	0.19640	0.00000	0.34191	0.06266
17:00 - 18:00	0.02204	0.01229	0.00000	0.17459	0.09562	0.16292	0.03177	0.13030	0.05807	0.07453	0.06028	0.13366	0.20244	0.00000	0.34657	0.06604
18:00 - 19:00	0.02048	0.01179	0.00000	0.17094	0.09372	0.16015	0.03059	0.12699	0.05741	0.07355	0.05957	0.12975	0.19860	0.00000	0.34094	0.06388
19:00 - 20:00	0.01993	0.01179	0.00000	0.17119	0.09413	0.16081	0.03117	0.12738	0.05766	0.07387	0.05974	0.13293	0.19939	0.00000	0.34809	0.06448
20:00 - 21:00	0.02057	0.01163	0.00000	0.16915	0.09322	0.15876	0.02998	0.12613	0.05639	0.07262	0.05926	0.12882	0.19693	0.23151	0.34191	0.06239
21:00 - 22:00	0.02014	0.01149	0.00000	0.17003	0.09000	0.15876	0.00000	0.12520	0.05632	0.07244	0.05928	0.12882	0.19693	0.00000	0.34191	0.06234
22:00 - 23:00	0.02188	0.01160	0.00000	0.16802	0.09286	0.15731	0.03107	0.12538	0.05545	0.07200	0.00000	0.00000	0.00000	0.00000	0.34191	0.06232
23:00 - 0:00	0.02271	0.01117	0.00000	0.15800	0.08976	0.15172	0.03006	0.11820	0.05527	0.06992	0.00000	0.00000	0.00000	0.00000	0.34062	0.06125
daily	0.02161	0.01173	0.00000	0.17010	0.09419	0.15965	0.03107	0.12699	0.05704	0.07319	0.06001	0.13144	0.20019	0.23151	0.34477	0.06311

**Appendix 3.3**  
24-hour Traffic Flows and Composite Emission Factors  
for Each Road Link

### Appendix 3.3 24-hour Traffic Flows and Composite Emission Factors for Each Road Link

### Summary of Composite Vehicular Emission Factors for CALINE4

### Open Road 24 hour NO Emission and Traffic Profile

	Source ID	Link No	Host Type	X-Start	X-End	Y-Start	Y-End	Height	Width	Length	Flow 01	Flow 02	Flow 03	Flow 04	Flow 05	Flow 06	Flow 07	Flow 08	Flow 09	Flow 10	Flow 11	Flow 12	Flow 13	Flow 14	Flow 15	Flow 16	Flow 17	Flow 18	Flow 19	Flow 20	Flow 21	Flow 22	Flow 23	Flow 24		
MTW	1	1	1	837678.8	837678.8	837678.8	837678.8	0.0	12.5	52.6	150	0.41	100	0.38	100	0.38	100	0.37	100	0.37	100	0.37	100	0.37	100	0.37	100	0.37	100	0.37	100	0.37	100	0.37	100	0.37
MTW	1	2	1	837678.8	837678.8	837678.8	837678.8	0.0	12.5	52.6	150	0.41	100	0.38	100	0.38	100	0.37	100	0.37	100	0.37	100	0.37	100	0.37	100	0.37	100	0.37	100	0.37	100	0.37	100	0.37
MTW	1	3	1	837678.8	837678.8	837678.8	837678.8	0.0	12.5	52.6	150	0.41	100	0.38	100	0.38	100	0.37	100	0.37	100	0.37	100	0.37	100	0.37	100	0.37	100	0.37	100	0.37	100	0.37	100	0.37
MTW	1	4	1	837678.8	837678.8	837678.8	837678.8	0.0	12.5	52.6	150	0.41	100	0.38	100	0.38	100	0.37	100	0.37	100	0.37	100	0.37	100	0.37	100	0.37	100	0.37	100	0.37	100	0.37	100	0.37
MTW	1	5	1	837678.8	837678.8	837678.8	837678.8	0.0	12.5	52.6	150	0.41	100	0.38	100	0.38	100	0.37	100	0.37	100	0.37	100	0.37	100	0.37	100	0.37	100	0.37	100	0.37	100	0.37	100	0.37
MTW	1	6	1	837678.8	837678.8	837678.8	837678.8	0.0	12.5	52.6	150	0.41	100	0.38	100	0.38	100	0.37	100	0.37	100	0.37	100	0.37	100	0.37	100	0.37	100	0.37	100	0.37	100	0.37	100	0.37
MTW	1	7	1	837678.8	837678.8	837678.8	837678.8	0.0	12.5	52.6	150	0.41	100	0.38	100	0.38	100	0.37	100	0.37	100	0.37	100	0.37	100	0.37	100	0.37	100	0.37	100	0.37	100	0.37	100	0.37
MTW	1	8	1	837678.8	837678.8	837678.8	837678.8	0.0	12.5	52.6	150	0.41	100	0.38	100	0.38	100	0.37	100	0.37	100	0.37	100	0.37	100	0.37	100	0.37	100	0.37	100	0.37	100	0.37	100	0.37
MTW	1	9	1	837678.8	837678.8	837678.8	837678.8	0.0	12.5	52.6	150	0.41	100	0.38	100	0.38	100	0.37	100	0.37	100	0.37	100	0.37	100	0.37	100	0.37	100	0.37	100	0.37	100	0.37	100	0.37
MTW	1	10	1	837678.8	837678.8	837678.8	837678.8	0.0	12.5	52.6	150	0.41	100	0.38	100	0.38	100	0.37	100	0.37	100	0.37	100	0.37	100	0.37	100	0.37	100	0.37	100	0.37	100	0.37	100	0.37
MTW	1	11	1	837678.8	837678.8	837678.8	837678.8	0.0	12.5	52.6	150	0.41	100	0.38	100	0.38	100	0.37	100	0.37	100	0.37	100	0.37	100	0.37	100	0.37	100	0.37	100	0.37	100	0.37	100	0.37
MTW	1	12	1	837678.8	837678.8	837678.8	837678.8	0.0	12.5	52.6	150	0.41	100	0.38	100	0.38	100	0.37	100	0.37																

Remarks:  
1. Links with blank source ID are road sources which are

### Appendix 3.3 24-hour Traffic Flows and Composite Emission Factors for Each Road Link

### Summary of Composite Vehicular Emission Factors for CALINE4

### Open Road 24 hour NO Emission and Traffic Profile

[illegible]

Remarks:  
1. Links with blank source ID are road sources which are not used



### Appendix 3.3 24-hour Traffic Flows and Composite Emission Factors for Each Road Link

### Summary of Composite Vehicular Emission Factors for CALINE4

### Open Road 24 hour NO Emission and Traffic Profile

[illegible]

Remarks:  
1. Links with blank source ID are road sources which are not used



### Open Road 24 hour NOx Emission and Traffic Profile

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District	Source ID <sup>1</sup>	Link No	Road	Y-Start	Y-End
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Remarks:  
1. Links with blank source ID are road sources which are not used

1. Links with blank source ID are road sources which are not used



## Open Road 24 hour NOx Emission and Traffic Profile

Remarks:  
1. Links with blank source ID are road sources which are not used.

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### Appendix 3.3 24-hour Traffic Flows and Composite Emission Factors for Each Road Link

### Summary of Composite Vehicular Emission Factors for CALINE4

### Open Road 24 hour RSP Emission and Traffic Profile

District	Source ID	Link No.	Route Type	X-Start	Y-Start	X-End	Y-End	Height	Width	Length	Flow	Hour 01	Hour 02	Hour 03	Hour 04	Hour 05	Hour 06	Hour 07	Hour 08	Hour 09	Hour 10	Hour 11	Hour 12	Hour 13	Hour 14	Hour 15	Hour 16	Hour 17	Hour 18	Hour 19	Hour 20	Hour 21	Hour 22	Hour 23	Hour 24	
MW	1	1	1	339722	339722	339722	339722	0.0	12.4	52.2	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
MW	1	2	1	339722	339722	339722	339722	0.0	12.4	52.2	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
MW	1	3	1	339722	339722	339722	339722	0.0	12.4	52.2	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
MW	1	4	1	339722	339722	339722	339722	0.0	12.4	52.2	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
MW	1	5	1	339722	339722	339722	339722	0.0	12.4	52.2	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
MW	1	6	1	339722	339722	339722	339722	0.0	12.4	52.2	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
MW	1	7	1	339722	339722	339722	339722	0.0	12.4	52.2	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
MW	1	8	1	339722	339722	339722	339722	0.0	12.4	52.2	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
MW	1	9	1	339722	339722	339722	339722	0.0	12.4	52.2	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
MW	1	10	1	339722	339722	339722	339722	0.0	12.4	52.2	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
MW	1	11	1	339722	339722	339722	339722	0.0	12.4	52.2	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
MW	1	12	1	339722	339722	339722	339722	0.0	12.4	52.2	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
MW	1	13	1	339722	339722	339722	339722	0.0	12.4	52.2	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
MW	1	14	1	339722	339722	339722	339722	0.0	12.4	52.2	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
MW	1	15	1	339722	339722	339722	339722	0.0	12.4	52.2	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
MW	1	16	1	339722	339722	339722	339722	0.0	12.4	52.2	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
MW	1	17	1	339722	339722	339722	339722	0.0	12.4	52.2	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
MW	1	18	1	339722	339722	339722	339722	0.0	12.4	52.2	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
MW	1	19	1	339722	339722	339722	339722	0.0	12.4	52.2	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
MW	1	20	1	339722	339722	339722	339722	0.0	12.4	52.2	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
MW	1	21	1	339722	339722	339722	339722	0.0	12.4	52.2	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
MW	1	22	1	339722	339722	339722	339722	0.0	12.4	52.2	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
MW	1	23	1	339722	339722	339722	339722	0.0	12.4	52.2	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
MW	1	24	1	339722	339722	339722	339722	0.0	12.4	52.2	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
MW	1	25	1	339722	339722	339722	339722	0.0	12.4	52.2	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
MW	1	26	1	339722	339722	339722	339722	0.0	12.4	52.2	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
MW	1	27	1	339722	339722	339722	339722	0.0	12.4	52.2	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
MW	1	28	1	339722	339722	339722	339722	0.0	12.4	52.2	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
MW	1	29	1	339722	339722	339722	339722	0.0	12.4	52.2	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
MW	1	30	1	339722	339722	339722	339722	0.0	12.4	52.2	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
MW	1	31	1	339722	339722	339722	339722	0.0	12.4	52.2	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
MW	1	32	1	339722	339722	339722	339722	0.0	12.4	52.2	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
MW	1	33	1	339722	339722	339722	339722	0.0	12.4	52.2	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
MW	1	34	1	339722	339722	339722	339722	0.0	12.4	52.2	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
MW	1	35	1	339722	339722	339722	339722	0.0	12.4	52.2	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
MW	1	36	1	339722	339722	339722	339722	0.0	12.4	52.2	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
MW	1	37	1	339722	339722	339722	339722	0.0	12.4	52.2	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
MW	1	38	1	339722	339722	339722	339722	0.0	12.4	52.2	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
MW	1	39	1	339722	339722	339722	339722	0.0	12.4	52.2	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
MW	1	40	1	339722	339722	339722	339722	0.0	12.4	52.2	100	100	10																							

Remarks:  
1. Links with blank source ID are road sources which are not used

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### Open Road 24 hour RSP Emission and Traffic Profile

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Remarks:  
1. Links with blank source ID are road sources which are not used





4

District	Source ID	Link No	Row Type	X-Start	Y-Start	X-End	Y-End	Height	Width	Hour 01	Hour 02	Hour 03	Hour 04	Hour 05	Hour 06	Hour 07	Hour 08	Hour 09	Hour 10	Hour 11	Hour 12	Hour 13	Hour 14	Hour 15	Hour 16	Hour 17	Hour 18	Hour 19	Hour 20	Hour 21	Hour 22	Hour 23	Hour 24
										Flow	EnF	Flow	EnF	Flow	EnF	Flow	EnF	Flow	EnF	Flow	EnF	Flow	EnF	Flow	EnF	Flow	EnF	Flow	EnF	Flow	EnF	Flow	EnF
MTW	L435	246	1	3317275	3318314	3322277	3326924	0.0	5.1	19.0	30	0.018	30	0.018	30	0.018	30	0.018	30	0.018	30	0.018	30	0.018	30	0.018	30	0.018	30	0.018	30	0.018	30
MTW	L436	247	1	3317275	3318314	3322277	3326924	0.0	5.1	19.0	30	0.018	30	0.018	30	0.018	30	0.018	30	0.018	30	0.018	30	0.018	30	0.018	30	0.018	30	0.018	30	0.018	30
MTW	L437	248	1	3317275	3318314	3322277	3326924	0.0	5.1	19.0	30	0.018	30	0.018	30	0.018	30	0.018	30	0.018	30	0.018	30	0.018	30	0.018	30	0.018	30	0.018	30	0.018	30
MTW	L438	249	1	3317275	3318314	3322277	3326924	0.0	5.1	19.0	30	0.018	30	0.018	30	0.018	30	0.018	30	0.018	30	0.018	30	0.018	30	0.018	30	0.018	30	0.018	30	0.018	30
MTW	L439	250	1	3317275	3318314	3322277	3326924	0.0	5.1	19.0	30	0.018	30	0.018	30	0.018	30	0.018	30	0.018	30	0.018	30	0.018	30	0.018	30	0.018	30	0.018	30	0.018	30
MTW	L440	71	1	3317283	3318283	3322283	3317773	0.0	11.0	30	0.002	30	0.008	30	0.008	30	0.002	30	0.014	30	0.014	30	0.017	30	0.018	30	0.018	30	0.018	30	0.018	30	0.018
MTW	L441	89	1	3317283	3318283	3322283	3317773	0.0	5.1	27.0	30	0.002	30	0.008	30	0.008	30	0.002	30	0.014	30	0.014	30	0.017	30	0.018	30	0.018	30	0.018	30	0.018	30
MTW	L442	31	1	3317283	3318283	3322283	3317773	0.0	5.1	27.0	30	0.002	30	0.008	30	0.008	30	0.002	30	0.014	30	0.014	30	0.017	30	0.018	30	0.018	30	0.018	30	0.018	30
MTW	L443	31	1	3317283	3318283	3322283	3317773	0.0	5.1	27.0	30	0.002	30	0.008	30	0.008	30	0.002	30	0.014	30	0.014	30	0.017	30	0.018	30	0.018	30	0.018	30	0.018	30
MTW	L444	31	1	3317283	3318283	3322283	3317773	0.0	5.1	27.0	30	0.002	30	0.008	30	0.008	30	0.002	30	0.014	30	0.014	30	0.017	30	0.018	30	0.018	30	0.018	30	0.018	30
MTW	L445	31	1	3317283	3318283	3322283	3317773	0.0	5.1	27.0	30	0.002	30	0.008	30	0.008	30	0.002	30	0.014	30	0.014	30	0.017	30	0.018	30	0.018	30	0.018	30	0.018	30
MTW	L446	31	1	3317283	3318283	3322283	3317773	0.0	5.1	27.0	30	0.002	30	0.008	30	0.008	30	0.002	30	0.014	30	0.014	30	0.017	30	0.018	30	0.018	30	0.0			

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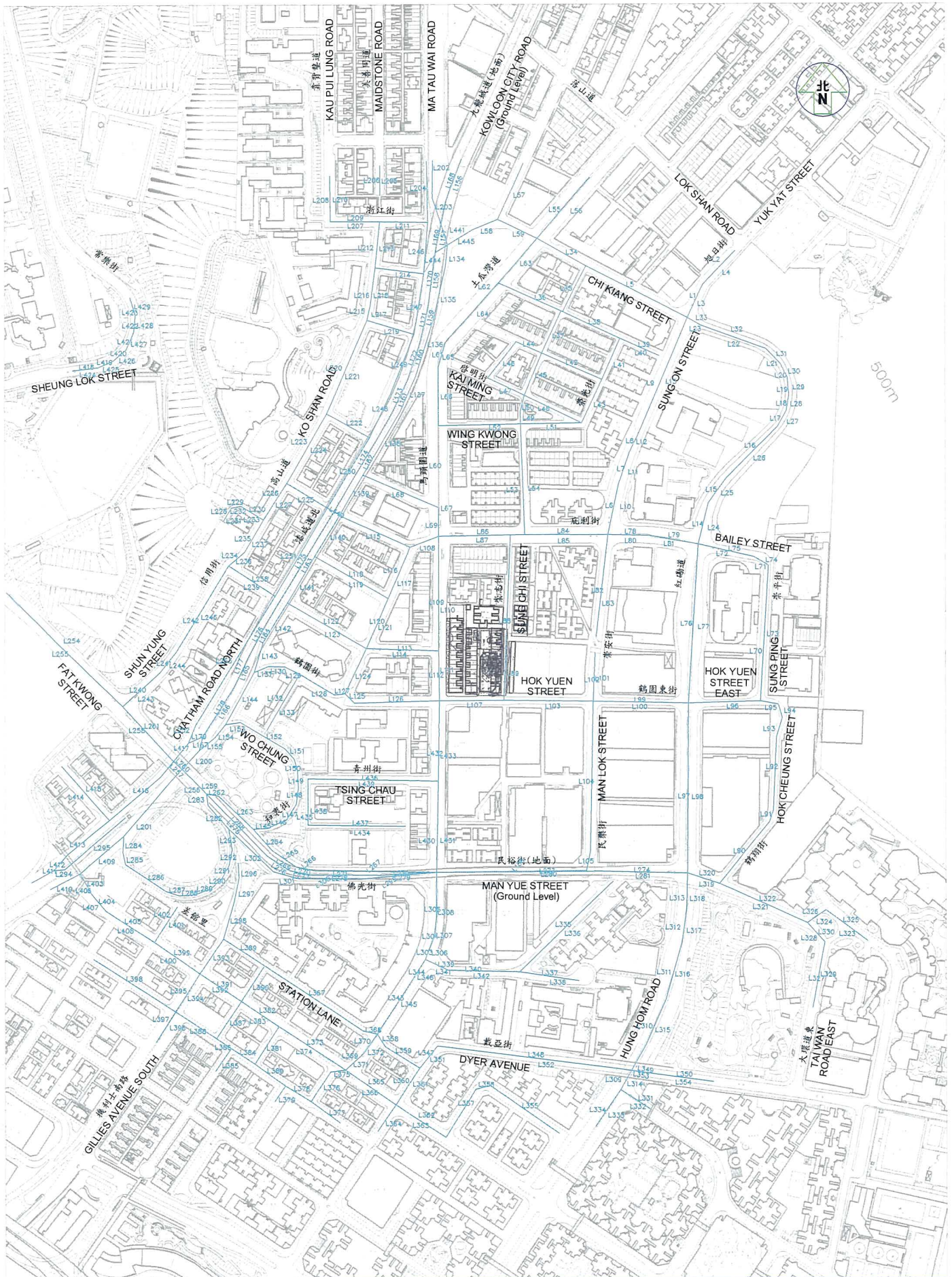




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Location and Source ID for Each Road Link

### Appendix 3.3

#### Summary of Road Type and Speed Limit for Each Road Link

Source ID	Road Type #	Speed Limit (kph)
L001	LD	50
L002	LD	50
L003	DD	70
L004	LD	50
L005	LD	50
L006	DD	70
L007	DD	70
L008	DD	70
L009	LD	50
L010	LD	50
L011	LD	50
L012	LD	50
L013	LD	50
L014	LD	50
L015	LD	50
L016	LD	50
L017	LD	50
L018	LD	50
L019	LD	50
L020	LD	50
L021	LD	50
L022	LD	50
L023	LD	50
L024	LD	50
L025	LD	50
L026	LD	50
L027	LD	50
L028	DD	70
L029	DD	70
L030	LD	50
L031	DD	70
L032	DD	70
L033	DD	70
L034	DD	70
L035	DD	70
L036	DD	70
L037	LD	50
L038	DD	70
L039	LD	50
L040	LD	50
L041	DD	70
L042	DD	70
L043	DD	70
L044	DD	70
L045	LD	50
L046	LD	50
L047	DD	70
L048	DD	70



## Appendix 3.3

### Summary of Road Type and Speed Limit for Each Road Link

Source ID	Road Type #	Speed Limit (kph)
L049	DD	70
L050	DD	70
L051	LD	50
L052	LD	50
L053	LD	50
L054	LD	50
L055	DD	70
L056	DD	70
L057	LD	50
L058	LD	50
L059	LD	50
L060	LD	50
L061	LD	50
L062	LD	50
L063	LD	50
L064	LD	50
L065	DD	70
L066	DD	70
L067	DD	70
L068	DD	70
L069	DD	70
L070	DD	70
L071	LD	50
L072	LD	50
L073	LD	50
L074	LD	50
L075	LD	50
L076	LD	50
L077	LD	50
L078	DD	70
L079	DD	70
L080	LD	50
L081	LD	50
L082	LD	50
L083	LD	50
L084	LD	50
L085	LD	50
L086	PD	80
L087	PD	80
L088	PD	80
L089	PD	80
L090	PD	80
L091	PD	80
L092	DD	70
L093	PD	80
L094	PD	80
L095	PD	80
L096	PD	80

### Appendix 3.3

#### Summary of Road Type and Speed Limit for Each Road Link

Source ID	Road Type #	Speed Limit (kph)
L097	DD	70
L098	DD	70
L099	LD	50
L100	LD	50
L101	LD	50
L102	LD	50
L103	DD	70
L104	LD	50
L105	LD	50
L106	LD	50
L107	LD	50
L108	LD	50
L109	LD	50
L110	LD	50
L111	LD	50
L112	LD	50
L113	LD	50
L114	LD	50
L115	LD	50
L116	LD	50
L117	LD	50
L118	LD	50
L119	LD	50
L120	LD	50
L121	LD	50
L122	DD	70
L123	DD	70
L124	LD	50
L125	LD	50
L126	PD	80
L127	PD	80
L128	PD	80
L129	PD	80
L130	PD	80
L131	PD	80
L132	DD	70
L133	DD	70
L134	DD	70
L135	DD	70
L136	DD	70
L137	DD	70
L138	DD	70
L139	DD	70
L140	DD	70
L141	DD	70
L142	DD	70
L143	DD	70
L144	DD	70

## Appendix 3.3

### Summary of Road Type and Speed Limit for Each Road Link

Source ID	Road Type #	Speed Limit (kph)
L145	DD	70
L146	DD	70
L147	DD	70
L148	LD	50
L149	LD	50
L150	LD	50
L151	LD	50
L152	LD	50
L153	LD	50
L154	LD	50
L155	LD	50
L156	LD	50
L157	LD	50
L158	DD	70
L159	DD	70
L160	LD	50
L161	LD	50
L162	LD	50
L163	LD	50
L164	LD	50
L165	LD	50
L166	DD	70
L167	DD	70
L168	LD	50
L169	LD	50
L170	LD	50
L171	LD	50
L172	LD	50
L173	LD	50
L174	DD	70
L175	DD	70
L176	LD	50
L177	DD	70
L178	DD	70
L179	LD	50
L180	DD	70
L181	DD	70
L182	DD	70
L183	DD	70
L184	LD	50
L185	LD	50
L186	LD	50
L187	LD	50
L188	LD	50
L189	LD	50
L190	DD	70
L191	DD	70
L192	LD	50

## Appendix 3.3

### Summary of Road Type and Speed Limit for Each Road Link

Source ID	Road Type #	Speed Limit (kph)
L193	LD	50
L194	LD	50
L195	LD	50
L196	LD	50
L197	LD	50
L198	LD	50
L199	DD	70
L200	DD	70
L201	LD	50
L202	LD	50
L203	LD	50
L204	LD	50
L205	LD	50
L206	LD	50
L207	DD	70
L208	DD	70
L209	LD	50
L210	LD	50
L211	DD	70
L212	DD	70
L213	PD	80
L214	PD	80
L215	PD	80
L216	PD	80
L217	LD	50
L218	LD	50
L219	PD	80
L220	LD	50
L221	LD	50
L222	DD	70
L223	DD	70
L224	DD	70
L225	DD	70
L226	LD	50
L227	LD	50

Remarks:

# - LD stands for Local Distributors

DD stands for District Distributors

PD stands for Primary Distributors



## **Appendix 3.4**

### **Cumulative Concentrations at Identified ASRs**

### Appendix 3.4 Cumulative Concentrations at Identified ASRs

NO<sub>x</sub> Concentration (µg/m<sup>3</sup>)

Receptor ID	Height (mAG)	19th Highest Hourly (AQO: 200)	Annual (AQO: 40)
ASR 1	15	154	38
ASR 1	22.5	150	36
ASR 1	37.5	146	33
ASR 1	52.5	144	32
ASR 1	67.5	142	31
ASR 1	82.5	142	30
ASR 1	97.5	141	30
ASR 1	112.5	141	30
ASR 1	127.5	141	30
ASR 1	130	141	30
ASR 2	15	154	38
ASR 2	22.5	151	35
ASR 2	37.5	144	33
ASR 2	52.5	144	32
ASR 2	67.5	142	31
ASR 2	82.5	141	30
ASR 2	97.5	141	30
ASR 2	112.5	141	30
ASR 2	127.5	141	30
ASR 2	130	141	30
ASR 3	15	154	38
ASR 3	22.5	150	36
ASR 3	37.5	146	33
ASR 3	52.5	144	32
ASR 3	67.5	142	31
ASR 3	82.5	142	30
ASR 3	97.5	141	30
ASR 3	112.5	141	30
ASR 3	127.5	141	30
ASR 3	130	141	30
ASR 4	15	154	38
ASR 4	22.5	151	35
ASR 4	37.5	144	33
ASR 4	52.5	144	32
ASR 4	67.5	142	31
ASR 4	82.5	142	30
ASR 4	97.5	141	30
ASR 4	112.5	141	30
ASR 4	127.5	141	30
ASR 4	130	141	30
ASR 5	15	154	38
ASR 5	22.5	150	36
ASR 5	37.5	146	33
ASR 5	52.5	144	32
ASR 5	67.5	142	31
ASR 5	82.5	142	30
ASR 5	97.5	141	30
ASR 5	112.5	141	30
ASR 5	127.5	141	30
ASR 5	130	141	30
ASR 6	15	154	38
ASR 6	22.5	150	36
ASR 6	37.5	146	33
ASR 6	52.5	144	32
ASR 6	67.5	142	31
ASR 6	82.5	142	30
ASR 6	97.5	141	30
ASR 6	112.5	141	30
ASR 6	127.5	141	30
ASR 6	130	141	30
ASR 7	15	154	38
ASR 7	22.5	150	36
ASR 7	37.5	146	33
ASR 7	52.5	144	32
ASR 7	67.5	142	31
ASR 7	82.5	142	30
ASR 7	97.5	141	30
ASR 7	112.5	141	30
ASR 7	127.5	141	30
ASR 7	130	141	30
ASR 8	15	154	38
ASR 8	22.5	150	35
ASR 8	37.5	145	33
ASR 8	52.5	144	32
ASR 8	67.5	142	31
ASR 8	82.5	142	30
ASR 8	97.5	141	30
ASR 8	112.5	141	30
ASR 8	127.5	141	30
ASR 8	130	141	30

Remarks:

The assessment heights have been taken from the landscape deck (i.e. 15m above ground) and then 1st residential floor (i.e. 22.5m above ground), and every 5 floors up to the maximum building height.

### Appendix 3.4 Cumulative Concentrations at Identified ASRs

RSP Concentration ( $\mu\text{g}/\text{m}^3$ )			
Receptor ID	Height (mAG)	10th Highest Daily (AQO: 100)	Annual (AQO: 50)
ASR 1	15	91	42
ASR 1	22.5	91	42
ASR 1	37.5	91	41
ASR 1	52.5	91	41
ASR 1	67.5	91	41
ASR 1	82.5	91	41
ASR 1	97.5	91	41
ASR 1	112.5	91	41
ASR 1	127.5	91	41
ASR 1	130	91	41
ASR 2	15	91	42
ASR 2	22.5	91	42
ASR 2	37.5	91	41
ASR 2	52.5	91	41
ASR 2	67.5	91	41
ASR 2	82.5	91	41
ASR 2	97.5	91	41
ASR 2	112.5	91	41
ASR 2	127.5	91	41
ASR 2	130	91	41
ASR 3	15	91	42
ASR 3	22.5	91	42
ASR 3	37.5	91	41
ASR 3	52.5	91	41
ASR 3	67.5	91	41
ASR 3	82.5	91	41
ASR 3	97.5	91	41
ASR 3	112.5	91	41
ASR 3	127.5	91	41
ASR 3	130	91	41
ASR 4	15	91	42
ASR 4	22.5	91	42
ASR 4	37.5	91	41
ASR 4	52.5	91	41
ASR 4	67.5	91	41
ASR 4	82.5	91	41
ASR 4	97.5	91	41
ASR 4	112.5	91	41
ASR 4	127.5	91	41
ASR 4	130	91	41
ASR 5	15	91	42
ASR 5	22.5	91	42
ASR 5	37.5	91	41
ASR 5	52.5	91	41
ASR 5	67.5	91	41
ASR 5	82.5	91	41
ASR 5	97.5	91	41
ASR 5	112.5	91	41
ASR 5	127.5	91	41
ASR 5	130	91	41
ASR 6	15	91	42
ASR 6	22.5	91	42
ASR 6	37.5	91	41
ASR 6	52.5	91	41
ASR 6	67.5	91	41
ASR 6	82.5	91	41
ASR 6	97.5	91	41
ASR 6	112.5	91	41
ASR 6	127.5	91	41
ASR 6	130	91	41
ASR 7	15	91	42
ASR 7	22.5	91	42
ASR 7	37.5	91	41
ASR 7	52.5	91	41
ASR 7	67.5	91	41
ASR 7	82.5	91	41
ASR 7	97.5	91	41
ASR 7	112.5	91	41
ASR 7	127.5	91	41
ASR 7	130	91	41
ASR 8	15	91	42
ASR 8	22.5	91	42
ASR 8	37.5	91	41
ASR 8	52.5	91	41
ASR 8	67.5	91	41
ASR 8	82.5	91	41
ASR 8	97.5	91	41
ASR 8	112.5	91	41
ASR 8	127.5	91	41
ASR 8	130	91	41

**Remarks:**

The assessment heights have been taken from the landscape deck (i.e. 15m above ground) and then 1st residential floor (i.e. 22.5m above ground), and every 5 floors up to the maximum building height.

#### Appendix 3.4 Cumulative Concentrations at Identified ASRs

FSP Concentration ( $\mu\text{g}/\text{m}^3$ )			
Receptor ID	Height (mAG)	10th Highest Daily (AQO: 75)	Annual (AQO: 35)
ASR 1	15	69	30
ASR 1	22.5	68	30
ASR 1	37.5	68	29
ASR 1	52.5	68	29
ASR 1	67.5	68	29
ASR 1	82.5	68	29
ASR 1	97.5	68	29
ASR 1	112.5	68	29
ASR 1	127.5	68	29
ASR 1	130	68	29
ASR 2	15	69	30
ASR 2	22.5	68	30
ASR 2	37.5	68	29
ASR 2	52.5	68	29
ASR 2	67.5	68	29
ASR 2	82.5	68	29
ASR 2	97.5	68	29
ASR 2	112.5	68	29
ASR 2	127.5	68	29
ASR 2	130	68	29
ASR 3	15	69	30
ASR 3	22.5	68	30
ASR 3	37.5	68	29
ASR 3	52.5	68	29
ASR 3	67.5	68	29
ASR 3	82.5	68	29
ASR 3	97.5	68	29
ASR 3	112.5	68	29
ASR 3	127.5	68	29
ASR 3	130	68	29
ASR 4	15	69	30
ASR 4	22.5	68	30
ASR 4	37.5	68	29
ASR 4	52.5	68	29
ASR 4	67.5	68	29
ASR 4	82.5	68	29
ASR 4	97.5	68	29
ASR 4	112.5	68	29
ASR 4	127.5	68	29
ASR 4	130	68	29
ASR 5	15	69	30
ASR 5	22.5	68	30
ASR 5	37.5	68	29
ASR 5	52.5	68	29
ASR 5	67.5	68	29
ASR 5	82.5	68	29
ASR 5	97.5	68	29
ASR 5	112.5	68	29
ASR 5	127.5	68	29
ASR 5	130	68	29
ASR 6	15	69	30
ASR 6	22.5	68	30
ASR 6	37.5	68	29
ASR 6	52.5	68	29
ASR 6	67.5	68	29
ASR 6	82.5	68	29
ASR 6	97.5	68	29
ASR 6	112.5	68	29
ASR 6	127.5	68	29
ASR 6	130	68	29
ASR 7	15	69	30
ASR 7	22.5	68	30
ASR 7	37.5	68	29
ASR 7	52.5	68	29
ASR 7	67.5	68	29
ASR 7	82.5	68	29
ASR 7	97.5	68	29
ASR 7	112.5	68	29
ASR 7	127.5	68	29
ASR 7	130	68	29
ASR 8	15	69	30
ASR 8	22.5	68	30
ASR 8	37.5	68	29
ASR 8	52.5	68	29
ASR 8	67.5	68	29
ASR 8	82.5	68	29
ASR 8	97.5	68	29
ASR 8	112.5	68	29
ASR 8	127.5	68	29
ASR 8	130	68	29

#### Remarks:

The assessment heights have been taken from the landscape deck (i.e. 15m above ground) and then 1st residential floor (i.e. 22.5m above ground), and every 5 floors up to the maximum building height.



**Appendix 3.5**  
Letter from PCCW for Identified Chimneys



Mr. Rodney Ip  
AECOM Consulting Service Ltd.  
8/F, Grand Central Plaza Tower 2,  
138 Shatin Rural Committee Road,  
Shatin, Hong Kong

Your ref: 40033291/449445  
Our ref: FM/L0085/16/CT  
Our tel: 2883 3577  
Our fax: 2304 6314

February 12, 2016

AECOM Received  
16 FEB 2016

Dear Mr. Ip,

## Request of Information – Hung Hom Exchange

Thank you for your letter of January 27, 2016 regarding the exhaust stacks and mechanical ventilation and air conditioning equipment at the exchange building at 140 Gillies Avenue.

We are pleased to provide you with the following information.

1. The 2 exhaust stacks are the exhaust chimneys of standby generators of the exchange which will be used in the event of city main power outages.
2. The 3 sets of cooling towers are part of the air conditioning system and they are operated continuously. Please refer to the attached product specification with sound power level for reference.

HKT is committed to protecting the environment when we conduct our business. In October 2015, we installed air hoods for the cooling towers and variable speed control for the air fans to further bring down noise levels. Photos of the air hoods are attached for your reference.

Should you have any queries, please do not hesitate to contact us.

Yours faithfully,

Chris T.K. Ting  
General Manager, Operations  
Facilities Management  
HKT Limited

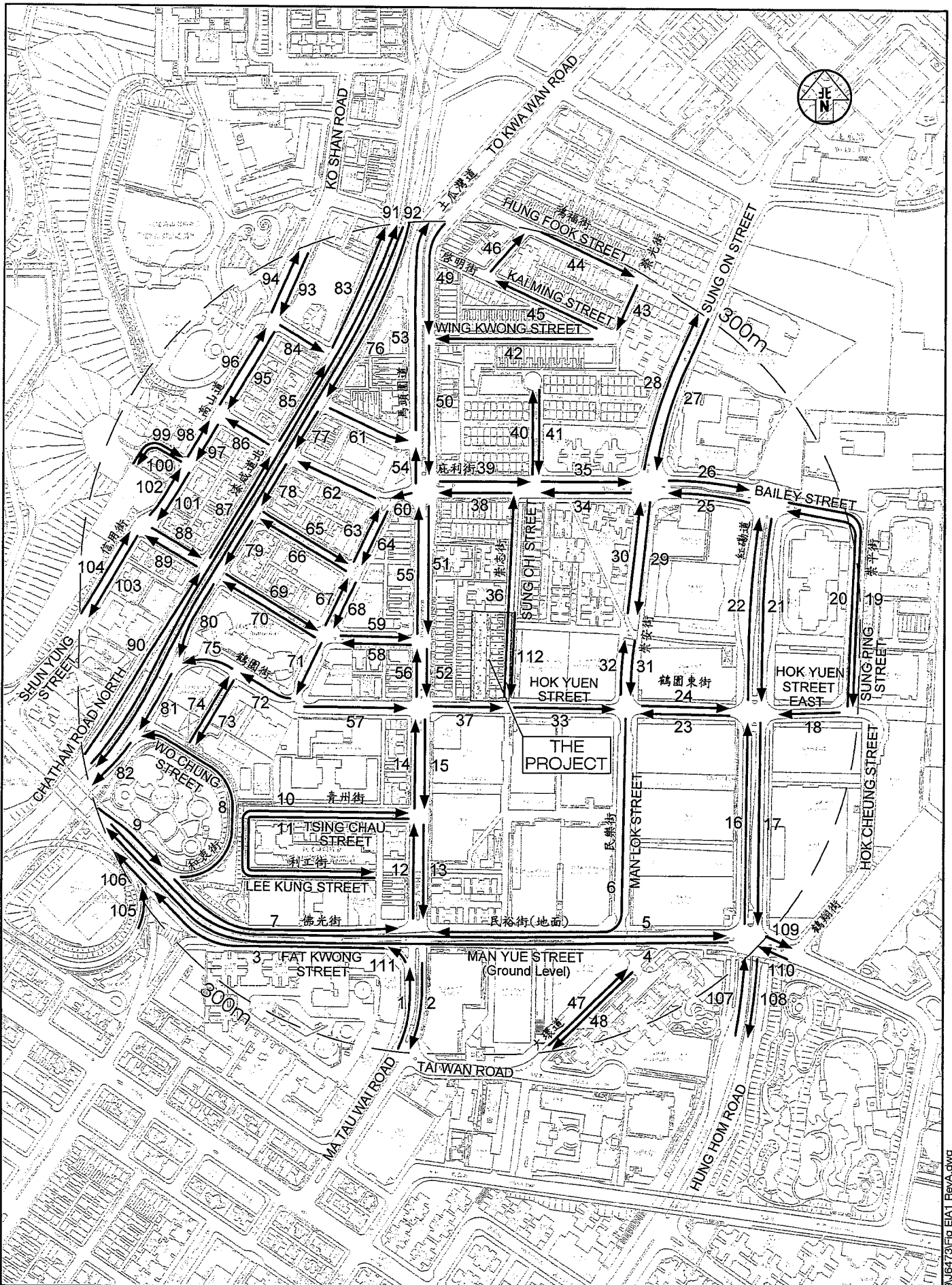
Enc.

40033291

FM	40033291
<input checked="" type="checkbox"/> Scanned C/c: _____	
<input type="checkbox"/> Ready <input type="checkbox"/> Not Scanned	
<input type="checkbox"/> X	<input type="checkbox"/> A <input type="checkbox"/> B <input type="checkbox"/> C

## **Appendix 4.1**

### **Traffic Flow Data**



Project Title	Job No. J6473	Figure No. EIA1	Scale in A3 1 : 3,000
MERGED PROPOSAL OF CHUN TIN STREET DEVELOPMENT SCHEME KCO08A	Designed by L K K	Drawn by W S W	Checked by K C
		Revision A	Date 11 JAN 2016
Figure Title	CKM Asia Limited Traffic and Transportation Planning Consultants 21st Floor, Methodist House, 36 Hennessy Road, Wan Chai, Hong Kong. Tel: (852) 2520 5990 Fax: (852) 2528 6343 Email: mail@ckmasia.com.hk		
THE CONCERNED ROAD SECTIONS			

T:\JOB\J6450-J6499\J6473\Fig EIA1 RevA.dwg



# Estimated Year 2040 Traffic Data

No.	Road	From	To	2040 AM Peak Hour Traffic Flows				
				Speed Limit (km/h)	Veh/hr	Vehicle Type for Noise Assessment (%)		
						PV	HV	Total
1	Ma Tau Wai Road	Tai Wan Road	Fat Kwong Street	50	700	55%	45%	100%
2	Ma Tau Wai Road	Fat Kwong Street	Tai Wan Road	50	850	56%	44%	100%
3	Fat Kwong Street	Ma Tau Wai Road	Slip Road to Fat Kwong Street	50	200	63%	37%	100%
4	Fat Kwong Street Flyover	Hung Hom Road	Chatham Road North	50	250	81%	19%	100%
5	Fat Kwong Street Flyover	Chatham Road North	Hung Hom Road	50	700	79%	21%	100%
6	Man Lok Street & Man Yue Street	Hok Yuen Street	Ma Tau Wai Road	50	350	59%	41%	100%
7	Fat Kwong Street	Wo Chung Street	Ma Tau Wai Road	50	450	74%	26%	100%
8	Wo Chung Street	Fat Kwong Street	Chatham Road North	50	250	76%	24%	100%
9	Fat Kwong Street	Chatham Road North	Wo Chung Street	50	650	74%	26%	100%
10	Tsing Chau Street & Lee Kung Street	Cul-sac end	Ma Tau Wai Road	50	100	80%	20%	100%
11	Tsing Chau Street & Lee Kung Street	Ma Tau Wai Road	Cul-sac end	50	100	90%	10%	100%
12	Ma Tau Wai Road	Fat Kwong Street	Tsing Chau Street	50	800	57%	43%	100%
13	Ma Tau Wai Road	Tsing Chau Street	Fat Kwong Street	50	450	47%	53%	100%
14	Ma Tau Wai Road	Tsing Chau Street	Hok Yuen Street	50	800	56%	44%	100%
15	Ma Tau Wai Road	Hok Yuen Street	Tsing Chau Street	50	500	48%	52%	100%
16	Hung Hom Road	Fat Kwong Street flyover	Hok Yuen Street East	50	600	67%	33%	100%
17	Hung Hom Road	Hok Yuen Street East	Fat Kwong Street flyover	50	1000	75%	25%	100%
18	Hok Yuen Street East	Sung Ping Street	Hung Hom Road	50	400	79%	21%	100%
19	Sung Ping Street	Hung Hom Road	Hok Yuen Street East	50	250	77%	23%	100%
20	Sung Ping Street	Hok Yuen Street East	Hung Hom Road	50	100	92%	8%	100%
21	Hung Hom Road	Bailey Street	Hok Yuen Street East	50	700	72%	28%	100%
22	Hung Hom Road	Hok Yuen Street East	Bailey Street	50	650	69%	31%	100%
23	Hok Yuen Street East	Sung On Street	Hung Hom Road	50	200	66%	34%	100%
24	Hok Yuen Street East	Hung Hom Road	Sung On Street	50	250	74%	26%	100%
25	Bailey Street	Hung Hom Road	Sung On Street	50	500	68%	32%	100%
26	Bailey Street	Sung On Street	Hung Hom Road	50	700	72%	28%	100%
27	Sung On Street	Chi Kiang Street	Bailey Street	50	400	65%	35%	100%
28	Sung On Street	Bailey Street	Chi Kiang Street	50	250	54%	46%	100%
29	Sung On Street	Bailey Street	Cul-sac end	50	200	64%	36%	100%
30	Sung On Street	Cul-sac end	Bailey Street	50	200	59%	41%	100%
31	Sung On Street	Cul-sac end	Hok Yuen Street	50	50	82%	18%	100%
32	Sung On Street	Hok Yuen Street	Cul-sac end	50	150	75%	25%	100%
33	Hok Yuen Street East	Sung Chi Street	Sung On Street	50	500	67%	33%	100%
34	Bailey Street	Sung On Street	Wan On Street	50	500	70%	30%	100%
35	Bailey Street	Wan On Street	Sung On Street	50	550	73%	27%	100%
36	Sung Chi Street	Hok Yuen Street	Bailey Street	50	100	86%	14%	100%
37	Hok Yuen Street	Ma Tau Wai Road	Sung Chi Street	50	550	68%	32%	100%
38	Bailey Street	Sung Chi Street	Ma Tau Wai Road	50	600	73%	27%	100%
39	Bailey Street	Ma Tau Wai Road	Sung Chi Street	50	600	74%	26%	100%
40	Wan On Street	Bailey Street	Cul-sac end	50	100	80%	20%	100%
41	Wan On Street	Cul-sac end	Bailey Street	50	150	82%	18%	100%
42	Wing Kwong Street	Kai Ming Street	Ma Tau Wai Road	50	250	75%	25%	100%
43	Wing Kwong Street	Hung Fook Street	Kai Ming Street	50	350	76%	24%	100%
44	Hung Fook Street	Yuk Shing Street	Wing Kwong Street	50	50	81%	19%	100%
45	Kai Ming Street	Wing Kwong Street	Yuk Shing Street	50	100	77%	23%	100%
46	Yuk Shing Street	Kai Ming Street	Hung Fook Street	50	100	79%	21%	100%
47	Tai Wan Road	Wai Wan Lane	Cul-sac end	50	50	79%	21%	100%
48	Tai Wan Road	Cul-sac end	Wai Wan Lane	50	50	81%	19%	100%
49	Ma Tau Wai Road	Chi Kiang Street	Wing Kwong Street	50	1100	58%	42%	100%
50	Ma Tau Wai Road	Wing Kwong Street	Bailey Street	50	1250	60%	40%	100%
51	Ma Tau Wai Road	Bailey Street	Pak Kung Street	50	600	48%	52%	100%
52	Ma Tau Wai Road	Pak Kung Street	Hok Yuen Street	50	650	53%	47%	100%
53	Ma Tau Wai Road	Shek Tong Street	Chi Kiang Street	50	400	36%	64%	100%
54	Ma Tau Wai Road	San Lau Street	Shek Tong Street	50	350	29%	71%	100%
55	Ma Tau Wai Road	Pak Kung Street	Bailey Street	50	400	41%	59%	100%
56	Ma Tau Wai Road	Hok Yuen Street	Pak Kung Street	50	850	57%	43%	100%

57	Hok Yuen Street	Gillies Avenue North	Ma Tau Wai Road	50	450	71%	29%	100%
58	Pak Kung Street	Ma Tau Wai Road	Gillies Avenue North	50	500	75%	25%	100%
59	Pak Kung Street	Gillies Avenue North	Ma Tau Wai Road	50	100	86%	14%	100%
60	San Lau Street	Ma Tau Wai Road	Gillies Avenue North	50	800	71%	29%	100%
61	Shek Tong Street	Chatham Road North	Ma Tau Wai Road	50	100	85%	15%	100%
62	San Lau Street	Gillies Avenue North	Chatham Road North	50	750	75%	25%	100%
63	Gillies Avenue North	San Wai Street	San Lau Street	50	200	72%	28%	100%
64	Gillies Avenue North	San Lau Street	San Wai Street	50	300	67%	33%	100%
65	San Wai Street	Chatham Road North	Gillies Avenue North	50	200	82%	18%	100%
66	San Wai Street	Gillies Avenue North	Chatham Road North	50	100	87%	13%	100%
67	Gillies Avenue North	Pak Kung Street	San Wai Street	50	200	73%	27%	100%
68	Gillies Avenue North	San Wai Street	Pak Kung Street	50	350	70%	30%	100%
69	Pak Kung Street	Chatham Road North	Gillies Avenue North	50	150	76%	24%	100%
70	Pak Kung Street	Gillies Avenue North	Chatham Road North	50	100	57%	43%	100%
71	Gillies Avenue North	Pak Kung Street	Hok Yuen Street	50	600	71%	29%	100%
72	Hok Yuen Street	Gillies Avenue North	Hok Yuen Lane	50	200	69%	31%	100%
73	Hok Yuen Lane	Hok Yuen Street	Cul-sac end	50	50	94%	6%	100%
74	Hok Yuen Lane	Cul-sac end	Hok Yuen Street	50	50	100%	0%	100%
75	Hok Yuen Street	Hok Yuen Lane	Chatham Road North	50	200	68%	32%	100%
76	Chatham Road North	Kiang Hsi Street	Shek Tong Street	50	1100	63%	37%	100%
77	Chatham Road North	Shek Tong Street	San Lau Street	50	1100	63%	37%	100%
78	Chatham Road North	San Lau Street	San Wai Street	50	1100	63%	37%	100%
79	Chatham Road North	San Wai Street	Pak Kung Street	50	1000	61%	39%	100%
80	Chatham Road North	Pak Kung Street	Hok Yuen Street	50	900	60%	40%	100%
81	Chatham Road North	Hok Yuen Street	Wo Chung Street	50	1050	61%	39%	100%
82	Chatham Road North	Wo Chung Street	Fat Kwong Street	50	1300	63%	37%	100%
83	Chatham Road North	Shansi Street	Kiang Hsi Street	50	1500	66%	34%	100%
84	Shansi Street	Ko Shan Road	Chatham Road North	50	250	78%	22%	100%
85	Chatham Road North	San Lau Street	Shansi Street	50	1300	64%	36%	100%
86	San Lau Street	Chatham Road North	Ko Shan Road	50	300	74%	26%	100%
87	Chatham Road North	Pak Kung Street	San Lau Street	50	800	56%	44%	100%
88	Pak Kung Street	Ko Shan Road	Chatham Road North	50	250	86%	14%	100%
89	Pak Kung Street	Chatham Road North	Ko Shan Road	50	300	82%	18%	100%
90	Chatham Road North	Fat Kwong Street	Pak Kung Street	50	850	57%	43%	100%
91	Chatham Road North flyover	Fat Kwong Street	Kiang Hsi Street	70	3050	80%	20%	100%
92	Chatham Road North flyover	Kiang Hsi Street	Fat Kwong Street	70	2250	77%	23%	100%
93	Ko Shan Road	Kiang Hsi Street	Shansi Street	50	300	75%	25%	100%
94	Ko Shan Road	Shansi Street	Kiang Hsi Street	50	400	77%	23%	100%
95	Ko Shan Road	Shansi Street	San Lau Street	50	300	76%	24%	100%
96	Ko Shan Road	San Lau Street	Shansi Street	50	600	77%	23%	100%
97	Ko Shan Road	San Lau Street	Wai Yin Path	50	450	78%	22%	100%
98	Ko Shan Road	Wai Yin Path	San Lau Street	50	450	81%	19%	100%
99	Wai Yin Path	Cul-sac end	Ko Shan Road	50	50	79%	21%	100%
100	Wai Yin Path	Ko Shan Road	Cul-sac end	50	100	92%	8%	100%
101	Ko Shan Road	Wai Yin Path	Pak Kung Street	50	400	78%	22%	100%
102	Ko Shan Road	Pak Kung Street	Wai Yin Path	50	500	82%	18%	100%
103	Shun Yung Street	Pak Kung Street	Fat Kwong Street	50	650	79%	21%	100%
104	Shun Yung Street	Fat Kwong Street	Pak Kung Street	50	700	84%	16%	100%
105	Ping Chi Street	Chatham Road North	Fat Kwong Street	50	300	86%	14%	100%
106	Fat Kwong Street	Ping Chi Street	Chatham Road North	50	400	75%	25%	100%
107	Hung Hom Road	Tak Hong Street	Fat Kwong Street flyover	50	750	75%	25%	100%
108	Hung Hom Road	Fat Kwong Street flyover	Tak Hong Street	50	1050	75%	25%	100%
109	Tai Wan Road East	Hung Hom Road	Hok Cheung Street	50	850	81%	19%	100%
110	Tai Wan Road East	Hok Cheung Street	Hung Hom Road	50	400	74%	26%	100%
111	Slip Road of Ma Tau Wai Road	Ma Tau Wai Road	Fat Kwong Street	50	200	63%	37%	100%
112	Sung Chi Street	Access Road	Hok Yuen Street	50	50	88%	13%	100%

No.	Road	From	To	2040 PM Peak Hour Traffic Flows				
				Speed Limit (km/h)	Veh/hr	Vehicle Type for Noise Assessment (%)		
						PV	HV	Total
1	Ma Tau Wai Road	Tai Wan Road	Fat Kwong Street	50	850	59%	41%	100%
2	Ma Tau Wai Road	Fat Kwong Street	Tai Wan Road	50	750	61%	39%	100%
3	Fat Kwong Street	Ma Tau Wai Road	Slip Road to Fat Kwong Street	50	250	69%	31%	100%
4	Fat Kwong Street Flyover	Hung Hom Road	Chatham Road North	50	300	84%	16%	100%
5	Fat Kwong Street Flyover	Chatham Road North	Hung Hom Road	50	600	84%	16%	100%
6	Man Lok Street & Man Yue Street	Hok Yuen Street	Ma Tau Wai Road	50	400	83%	17%	100%
7	Fat Kwong Street	Wo Chung Street	Ma Tau Wai Road	50	350	71%	29%	100%
8	Wo Chung Street	Fat Kwong Street	Chatham Road North	50	250	81%	19%	100%
9	Fat Kwong Street	Chatham Road North	Wo Chung Street	50	550	75%	25%	100%
10	Tsing Chau Street & Lee Kung Street	Cul-sac end	Ma Tau Wai Road	50	100	91%	9%	100%
11	Tsing Chau Street & Lee Kung Street	Ma Tau Wai Road	Cul-sac end	50	100	83%	17%	100%
12	Ma Tau Wai Road	Fat Kwong Street	Tsing Chau Street	50	900	65%	35%	100%
13	Ma Tau Wai Road	Tsing Chau Street	Fat Kwong Street	50	350	47%	53%	100%
14	Ma Tau Wai Road	Tsing Chau Street	Hok Yuen Street	50	950	66%	34%	100%
15	Ma Tau Wai Road	Hok Yuen Street	Tsing Chau Street	50	400	51%	49%	100%
16	Hung Hom Road	Fat Kwong Street flyover	Hok Yuen Street East	50	550	71%	29%	100%
17	Hung Hom Road	Hok Yuen Street East	Fat Kwong Street flyover	50	900	78%	22%	100%
18	Hok Yuen Street East	Sung Ping Street	Hung Hom Road	50	450	86%	14%	100%
19	Sung Ping Street	Hung Hom Road	Hok Yuen Street East	50	150	85%	15%	100%
20	Sung Ping Street	Hok Yuen Street East	Hung Hom Road	50	100	92%	8%	100%
21	Hung Hom Road	Bailey Street	Hok Yuen Street East	50	500	71%	29%	100%
22	Hung Hom Road	Hok Yuen Street East	Bailey Street	50	650	72%	28%	100%
23	Hok Yuen Street East	Sung On Street	Hung Hom Road	50	200	84%	16%	100%
24	Hok Yuen Street East	Hung Hom Road	Sung On Street	50	300	87%	13%	100%
25	Bailey Street	Hung Hom Road	Sung On Street	50	600	72%	28%	100%
26	Bailey Street	Sung On Street	Hung Hom Road	50	500	72%	28%	100%
27	Sung On Street	Chi Kiang Street	Bailey Street	50	350	69%	31%	100%
28	Sung On Street	Bailey Street	Chi Kiang Street	50	300	70%	30%	100%
29	Sung On Street	Bailey Street	Cul-sac end	50	150	57%	43%	100%
30	Sung On Street	Cul-sac end	Bailey Street	50	200	82%	18%	100%
31	Sung On Street	Cul-sac end	Hok Yuen Street	50	100	88%	12%	100%
32	Sung On Street	Hok Yuen Street	Cul-sac end	50	50	83%	17%	100%
33	Hok Yuen Street East	Sung Chi Street	Sung On Street	50	450	82%	18%	100%
34	Bailey Street	Sung On Street	Wan On Street	50	500	74%	26%	100%
35	Bailey Street	Wan On Street	Sung On Street	50	350	71%	29%	100%
36	Sung Chi Street	Hok Yuen Street	Bailey Street	50	100	84%	16%	100%
37	Hok Yuen Street	Ma Tau Wai Road	Sung Chi Street	50	550	83%	17%	100%
38	Bailey Street	Sung Chi Street	Ma Tau Wai Road	50	600	76%	24%	100%
39	Bailey Street	Ma Tau Wai Road	Sung Chi Street	50	400	72%	28%	100%
40	Wan On Street	Bailey Street	Cul-sac end	50	100	80%	20%	100%
41	Wan On Street	Cul-sac end	Bailey Street	50	150	83%	17%	100%
42	Wing Kwong Street	Kai Ming Street	Ma Tau Wai Road	50	250	79%	21%	100%
43	Wing Kwong Street	Hung Fook Street	Kai Ming Street	50	350	78%	22%	100%
44	Hung Fook Street	Yuk Shing Street	Wing Kwong Street	50	50	84%	16%	100%
45	Kai Ming Street	Wing Kwong Street	Yuk Shing Street	50	100	76%	24%	100%
46	Yuk Shing Street	Kai Ming Street	Hung Fook Street	50	100	79%	21%	100%
47	Tai Wan Road	Wai Wan Lane	Cul-sac end	50	100	92%	8%	100%
48	Tai Wan Road	Cul-sac end	Wai Wan Lane	50	50	82%	18%	100%
49	Ma Tau Wai Road	Chi Kiang Street	Wing Kwong Street	50	850	62%	38%	100%
50	Ma Tau Wai Road	Wing Kwong Street	Bailey Street	50	1050	66%	34%	100%
51	Ma Tau Wai Road	Bailey Street	Pak Kung Street	50	500	59%	41%	100%
52	Ma Tau Wai Road	Pak Kung Street	Hok Yuen Street	50	600	62%	38%	100%
53	Ma Tau Wai Road	Shek Tong Street	Chi Kiang Street	50	550	53%	47%	100%
54	Ma Tau Wai Road	San Lau Street	Shek Tong Street	50	450	50%	50%	100%
55	Ma Tau Wai Road	Pak Kung Street	Bailey Street	50	500	51%	49%	100%
56	Ma Tau Wai Road	Hok Yuen Street	Pak Kung Street	50	1000	67%	33%	100%
57	Hok Yuen Street	Gillies Avenue North	Ma Tau Wai Road	50	400	79%	21%	100%



58	Pak Kung Street	Ma Tau Wai Road	Gillies Avenue North	50	550	81%	19%	100%
59	Pak Kung Street	Gillies Avenue North	Ma Tau Wai Road	50	100	87%	13%	100%
60	San Lau Street	Ma Tau Wai Road	Gillies Avenue North	50	800	74%	26%	100%
61	Shek Tong Street	Chatham Road North	Ma Tau Wai Road	50	100	78%	22%	100%
62	San Lau Street	Gillies Avenue North	Chatham Road North	50	850	78%	22%	100%
63	Gillies Avenue North	San Wai Street	San Lau Street	50	350	88%	12%	100%
64	Gillies Avenue North	San Lau Street	San Wai Street	50	350	82%	18%	100%
65	San Wai Street	Chatham Road North	Gillies Avenue North	50	100	82%	18%	100%
66	San Wai Street	Gillies Avenue North	Chatham Road North	50	100	62%	38%	100%
67	Gillies Avenue North	Pak Kung Street	San Wai Street	50	350	90%	10%	100%
68	Gillies Avenue North	San Wai Street	Pak Kung Street	50	400	86%	14%	100%
69	Pak Kung Street	Chatham Road North	Gillies Avenue North	50	250	77%	23%	100%
70	Pak Kung Street	Gillies Avenue North	Chatham Road North	50	150	89%	11%	100%
71	Gillies Avenue North	Pak Kung Street	Hok Yuen Street	50	650	79%	21%	100%
72	Hok Yuen Street	Gillies Avenue North	Hok Yuen Lane	50	300	79%	21%	100%
73	Hok Yuen Lane	Hok Yuen Street	Cul-sac end	50	50	100%	0%	100%
74	Hok Yuen Lane	Cul-sac end	Hok Yuen Street	50	100	92%	8%	100%
75	Hok Yuen Street	Hok Yuen Lane	Chatham Road North	50	300	81%	19%	100%
76	Chatham Road North	Kiang Hsi Street	Shek Tong Street	50	1000	73%	27%	100%
77	Chatham Road North	Shek Tong Street	San Lau Street	50	950	72%	28%	100%
78	Chatham Road North	San Lau Street	San Wai Street	50	950	72%	28%	100%
79	Chatham Road North	San Wai Street	Pak Kung Street	50	900	71%	29%	100%
80	Chatham Road North	Pak Kung Street	Hok Yuen Street	50	800	73%	27%	100%
81	Chatham Road North	Hok Yuen Street	Wo Chung Street	50	1100	74%	26%	100%
82	Chatham Road North	Wo Chung Street	Fat Kwong Street	50	1300	75%	25%	100%
83	Chatham Road North	Shansi Street	Kiang Hsi Street	50	1450	60%	40%	100%
84	Shansi Street	Ko Shan Road	Chatham Road North	50	150	64%	36%	100%
85	Chatham Road North	San Lau Street	Shansi Street	50	1350	59%	41%	100%
86	San Lau Street	Chatham Road North	Ko Shan Road	50	300	78%	22%	100%
87	Chatham Road North	Pak Kung Street	San Lau Street	50	850	48%	52%	100%
88	Pak Kung Street	Ko Shan Road	Chatham Road North	50	150	84%	16%	100%
89	Pak Kung Street	Chatham Road North	Ko Shan Road	50	350	72%	28%	100%
90	Chatham Road North	Fat Kwong Street	Pak Kung Street	50	1050	52%	48%	100%
91	Chatham Road North flyover	Fat Kwong Street	Kiang Hsi Street	70	3250	75%	25%	100%
92	Chatham Road North flyover	Kiang Hsi Street	Fat Kwong Street	70	2050	80%	20%	100%
93	Ko Shan Road	Kiang Hsi Street	Shansi Street	50	350	90%	10%	100%
94	Ko Shan Road	Shansi Street	Kiang Hsi Street	50	550	83%	17%	100%
95	Ko Shan Road	Shansi Street	San Lau Street	50	350	90%	10%	100%
96	Ko Shan Road	San Lau Street	Shansi Street	50	650	80%	20%	100%
97	Ko Shan Road	San Lau Street	Wai Yin Path	50	500	88%	12%	100%
98	Ko Shan Road	Wai Yin Path	San Lau Street	50	500	81%	19%	100%
99	Wai Yin Path	Cul-sac end	Ko Shan Road	50	50	83%	17%	100%
100	Wai Yin Path	Ko Shan Road	Cul-sac end	50	50	77%	23%	100%
101	Ko Shan Road	Wai Yin Path	Pak Kung Street	50	500	88%	12%	100%
102	Ko Shan Road	Pak Kung Street	Wai Yin Path	50	500	82%	18%	100%
103	Shun Yung Street	Pak Kung Street	Fat Kwong Street	50	600	81%	19%	100%
104	Shun Yung Street	Fat Kwong Street	Pak Kung Street	50	400	81%	19%	100%
105	Ping Chi Street	Chatham Road North	Fat Kwong Street	50	400	91%	9%	100%
106	Fat Kwong Street	Ping Chi Street	Chatham Road North	50	500	81%	19%	100%
107	Hung Hom Road	Tak Hong Street	Fat Kwong Street flyover	50	600	77%	23%	100%
108	Hung Hom Road	Fat Kwong Street flyover	Tak Hong Street	50	1000	78%	22%	100%
109	Tai Wan Road East	Hung Hom Road	Hok Cheung Street	50	600	84%	16%	100%
110	Tai Wan Road East	Hok Cheung Street	Hung Hom Road	50	350	71%	29%	100%
111	Slip Road of Ma Tau Wai Road	Ma Tau Wai Road	Fat Kwong Street	50	250	69%	31%	100%
112	Sung Chi Street	Access Road	Hok Yuen Street	50	50	85%	15%	100%

#### Vehicle Type for Noise Assessment

PV: Motorcycle, Private Car, Taxi

HV: Light Goods Vehicle, Heavy Goods Vehicle, Minibus, Franchise Bus

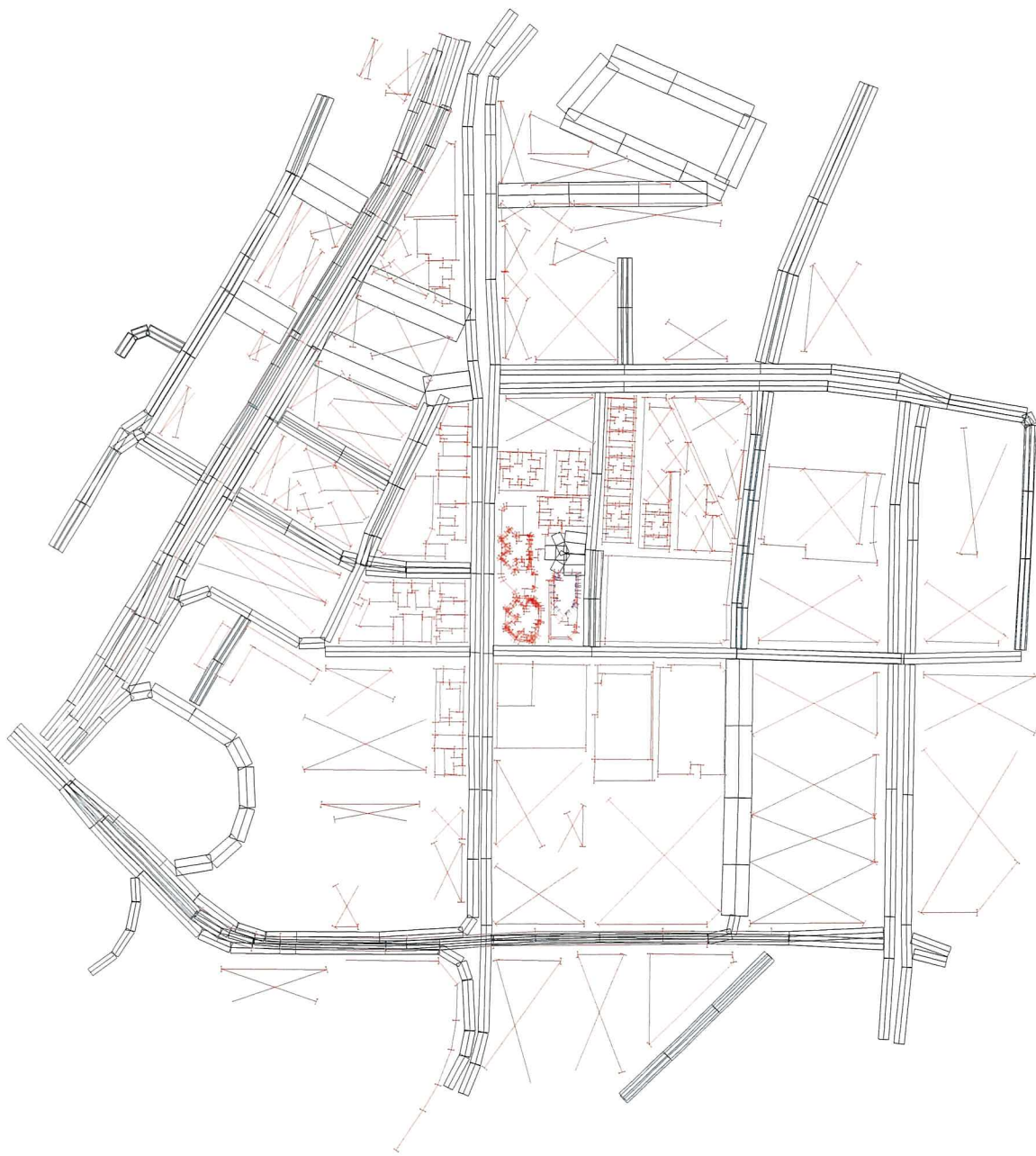


## **Appendix 4.2**

### **Not Used**

## **Appendix 4.3**

### **Computer Plot of Road Traffic Noise Model**



## **Appendix 4.4**

### **Predicted Road Traffic Noise Level**



#### Appendix 4.4 Predicted Road Traffic Noise Level under Year 2040 AM Peak

Table 1: Predicted Road Traffic Noise Level for the Proposed Development

Floor	L <sub>10</sub> (1 hour) dB(A)																									
	A_01	A_02	A_03	A_04	B_01	B_02	B_03	B_04	C_01	C_02	C_03	D_01	D_02	D_03	E_01	E_02	E_03	E_04	F_01	F_02	F_03	G_01	G_02	H_01	H_02	J_01
37	67	67	67	67	67	67	66	66	64	64	64	64	63	63	63	64	67	67	68	68	68	68	69	68	66	67
36	67	67	67	67	67	67	66	66	64	64	64	63	63	63	63	64	67	67	68	68	68	68	69	68	66	67
35	67	67	67	67	67	67	66	66	64	64	64	63	63	63	63	64	67	67	68	68	68	68	69	68	66	67
34	67	67	67	67	67	67	66	66	64	64	64	63	63	63	63	64	67	66	67	68	68	68	69	68	66	67
33	67	67	67	67	67	67	66	66	64	64	64	63	63	63	63	64	67	66	67	68	68	68	69	68	66	67
32	67	67	67	67	67	67	66	66	64	64	64	63	63	63	63	64	67	66	67	68	68	68	69	68	66	67
31	67	67	67	67	67	67	66	66	64	64	64	63	63	63	63	64	66	66	67	68	68	68	69	68	66	67
30	67	68	67	67	67	67	66	66	64	64	64	63	63	63	63	64	66	66	67	68	68	68	69	68	66	67
29	67	68	67	67	67	67	66	66	64	64	64	63	63	63	63	64	66	66	67	68	68	68	69	68	66	67
28	67	68	68	67	67	67	66	66	64	64	64	63	63	63	63	64	66	66	67	68	68	68	69	68	66	67
27	67	68	68	67	67	67	66	66	64	64	64	63	63	63	63	64	66	66	67	68	68	68	69	68	66	67
26	67	68	68	68	67	67	66	66	65	64	64	63	63	63	63	64	66	66	67	68	68	68	69	68	66	67
25	67	68	68	68	67	67	66	66	64	64	64	63	63	63	63	64	66	65	67	68	68	68	69	68	66	67
24	67	68	68	68	67	67	66	66	64	64	64	64	63	63	63	63	64	66	65	67	68	68	69	68	66	67
23	68	68	68	68	67	67	66	66	64	64	64	64	63	63	63	63	64	66	65	67	68	68	69	68	66	67
22	68	68	68	68	67	67	66	67	65	64	64	64	63	63	63	63	64	66	65	67	68	68	68	68	66	67
21	68	68	68	68	68	67	66	67	65	64	64	64	63	63	63	64	66	65	67	68	68	68	68	68	66	67
20	68	68	68	68	68	67	66	67	65	64	64	64	64	64	63	64	66	65	67	68	68	68	68	68	66	67
19	68	68	68	68	68	68	66	67	65	64	64	64	64	64	64	64	66	65	66	68	68	68	68	68	66	67
18	68	69	68	68	68	68	66	67	65	64	64	64	64	64	64	64	66	65	66	68	68	68	68	68	66	67
17	68	69	68	68	68	68	66	67	65	64	64	64	64	64	64	64	66	65	66	68	68	68	68	68	66	67
16	68	69	68	68	68	68	66	67	65	65	64	64	64	64	64	64	65	64	66	68	68	68	68	68	66	67
15	68	69	68	68	68	68	66	67	65	65	64	64	64	64	64	64	65	64	66	68	67	68	68	67	66	67
14	67	69	68	68	68	68	66	67	65	65	65	64	64	64	64	64	65	64	65	67	67	68	68	67	66	67
13	67	69	68	68	68	68	66	67	65	65	65	65	65	65	64	64	65	64	65	67	67	67	68	67	66	66
12	67	69	68	68	68	68	66	67	65	65	65	65	65	65	65	65	65	64	65	67	66	67	67	67	66	66
11	67	69	68	68	68	68	66	67	66	65	65	65	65	65	65	65	65	64	64	66	66	67	67	67	65	66
10	66	68	68	68	68	68	66	67	66	66	65	65	65	65	65	65	65	64	64	66	65	66	67	67	65	66
9	66	68	68	68	68	68	66	67	66	66	65	65	65	65	65	65	65	64	64	65	65	66	66	65	65	65
8	66	67	67	68	67	68	67	67	66	66	66	66	66	65	65	65	65	64	63	64	63	64	66	66	64	65
7	65	67	67	67	67	68	67	67	66	66	66	66	66	66	66	66	66	64	63	63	62	63	65	65	63	64
6	65	66	66	66	67	68	67	67	67	66	66	66	66	66	66	66	66	64	63	61	60	62	63	64	61	64
5	64	65	65	65	67	68	67	67	67	66	66	66	66	66	66	66	66	64	63	60	59	61	62	63	60	63
4	63	63	64	64	65	67	66	67	67	67	67	67	66	66	66	66	66	64	63	60	58	60	61	62	59	63
Max	68	69	68	68	68	68	67	67	67	67	67	67	66	66	66	66	67	67	68	68	68	68	69	68	66	67

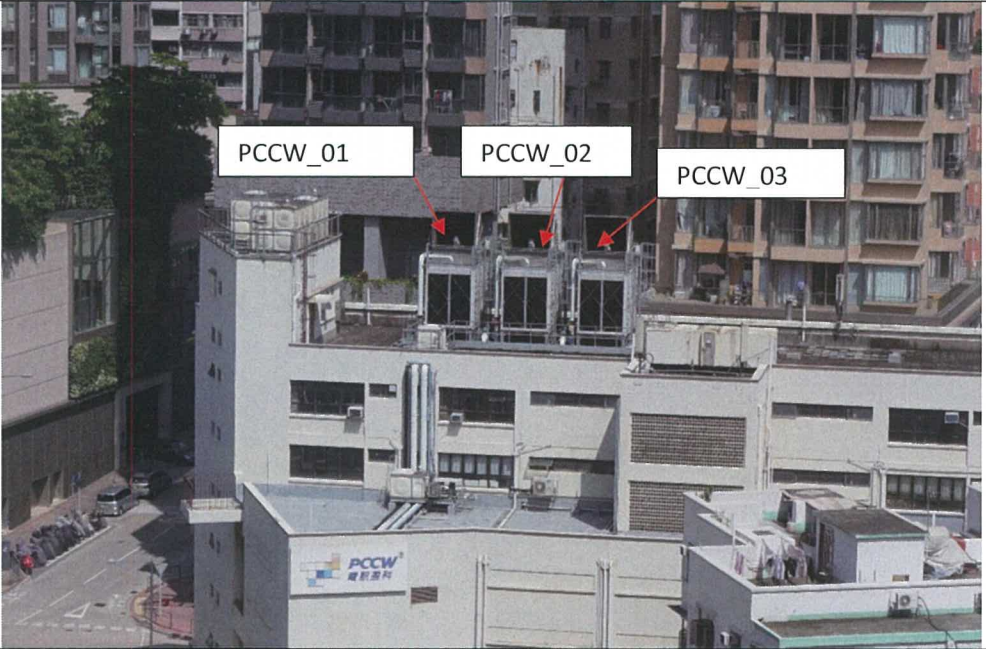
**Table 2: Predicted Road Traffic Noise Level for NSRs near the Proposed Development**

Floor	L <sub>10</sub> (1 hour), dB(A)			
	Fook Wan Mansion	Sung Lai Building	Ming Wah Court	Sung Yee Building
15	63	65	63	64
14	63	65	63	64
13	63	65	63	64
12	63	66	63	64
11	63	66	63	64
10	64	66	63	65
9	64	66	64	65
8	64	66	64	65
7	65	66	64	65
6	65	67	65	66
5	65	67	65	66
4	66	67	66	67
3	66	68	66	67
2	64	68	63	67
1	58	62	55	59
<b>Max</b>	<b>66</b>	<b>68</b>	<b>66</b>	<b>67</b>

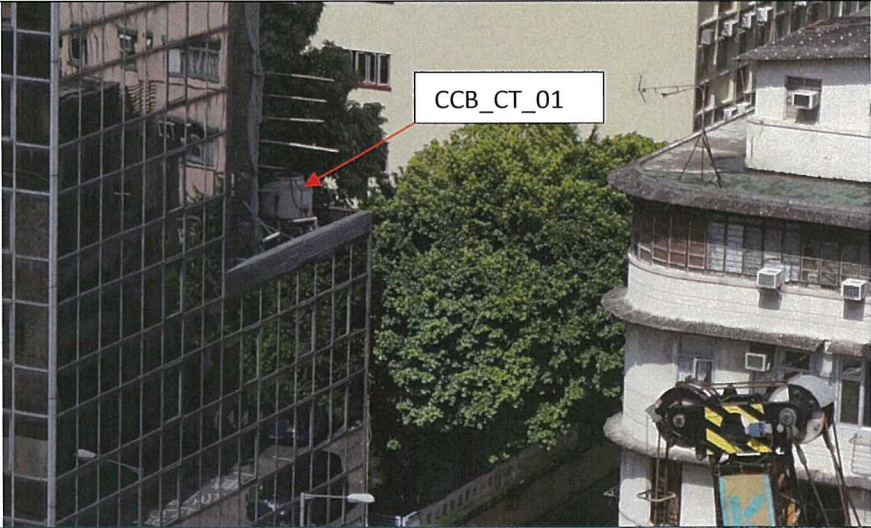
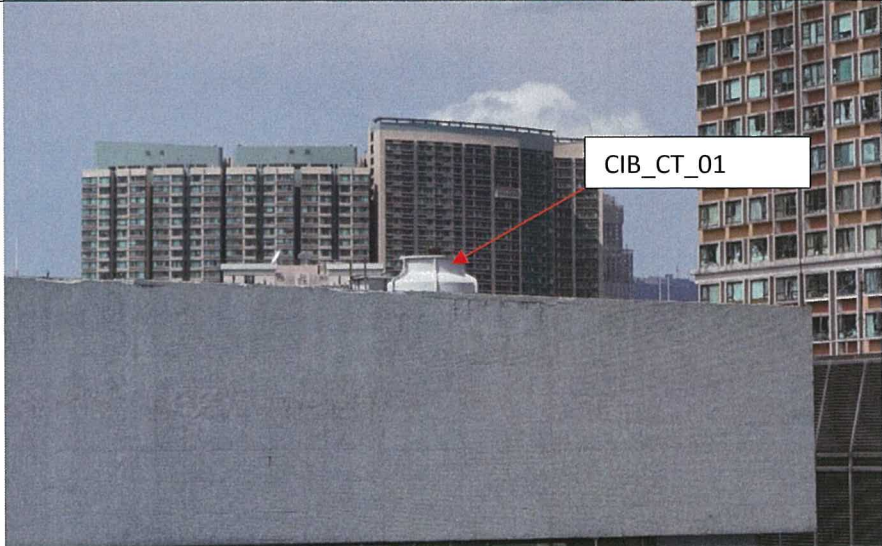
## **Appendix 4.5**


### **Locations and photos of Fixed Plant Noise Sources**

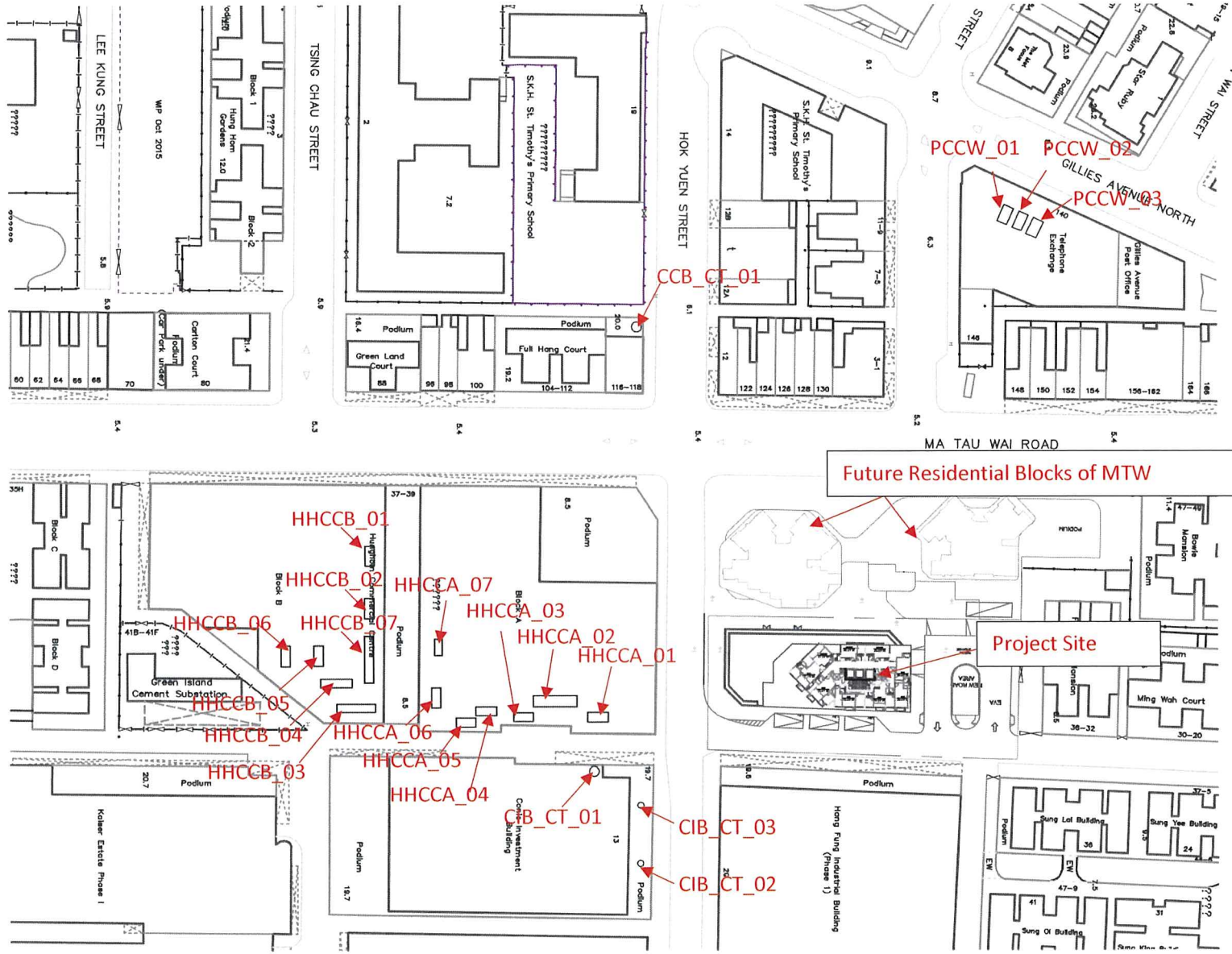
Appendix 4.5 Locations and photos of Fixed Plant Noise Sources

Location	Fixed Plant ID.	Source Type	Photo
PCCW Telephone Exchange	PCCW_01 to PCCW_03	Three Cooling Towers on roof floor of PCCW	 An aerial photograph of the PCCW Telephone Exchange building, a large white structure with a flat roof. Three cooling towers are visible on the roof, each labeled with a white box and red arrows: PCCW_01, PCCW_02, and PCCW_03. The building is surrounded by other urban structures and a street with parked cars is visible in the foreground.



Location	Fixed Plant ID.	Source Type	Photo
Cheerful Commercial Building (CCB)	CCB_CT_01	A cooling tower on podium of CCB	
Conic Investment Building (CIB)	CIB_CT_01	Two Cooling Towers at the roof of CIB	

Location	Fixed Plant ID.	Source Type	Photo
	CIB_CT_02 and CIB_CT_03	Two Cooling Towers on 4/F of CIB	
HHCC Tower A	HHCCA_01 to HHCCA_07	7 Cooling towers / Chillers	See Appendix 4.6 for more information
HHCC Tower B	HHCCB_01 to HHCCB_07	7 Cooling towers / Chillers	See Appendix 4.6 for more information



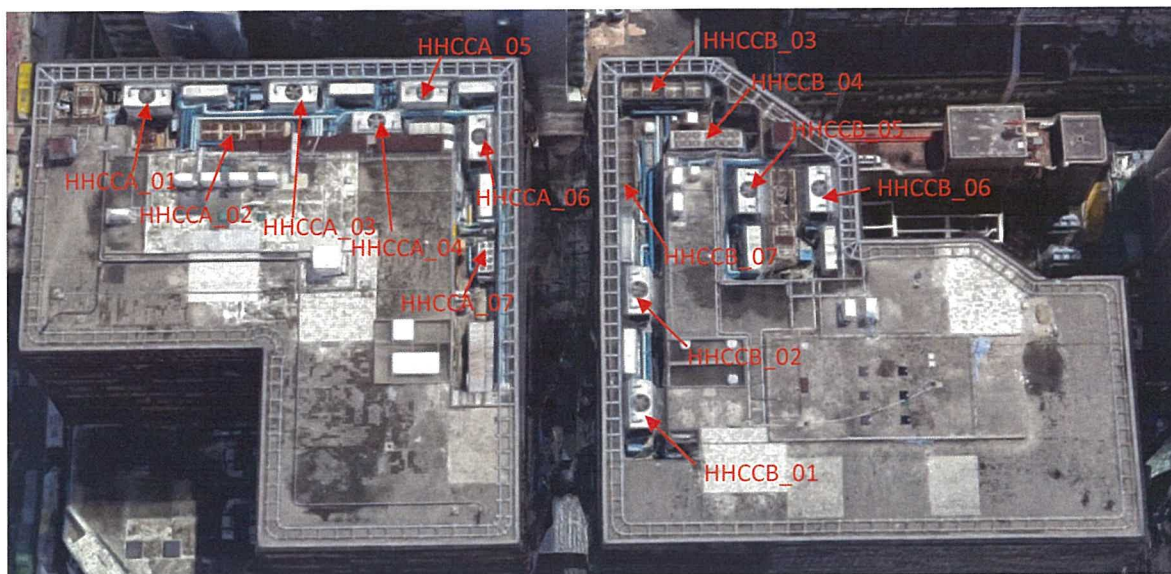
## **Appendix 4.6**

Aerial photo and other information showing fixed plant  
sources at Hunghom Commercial Centre

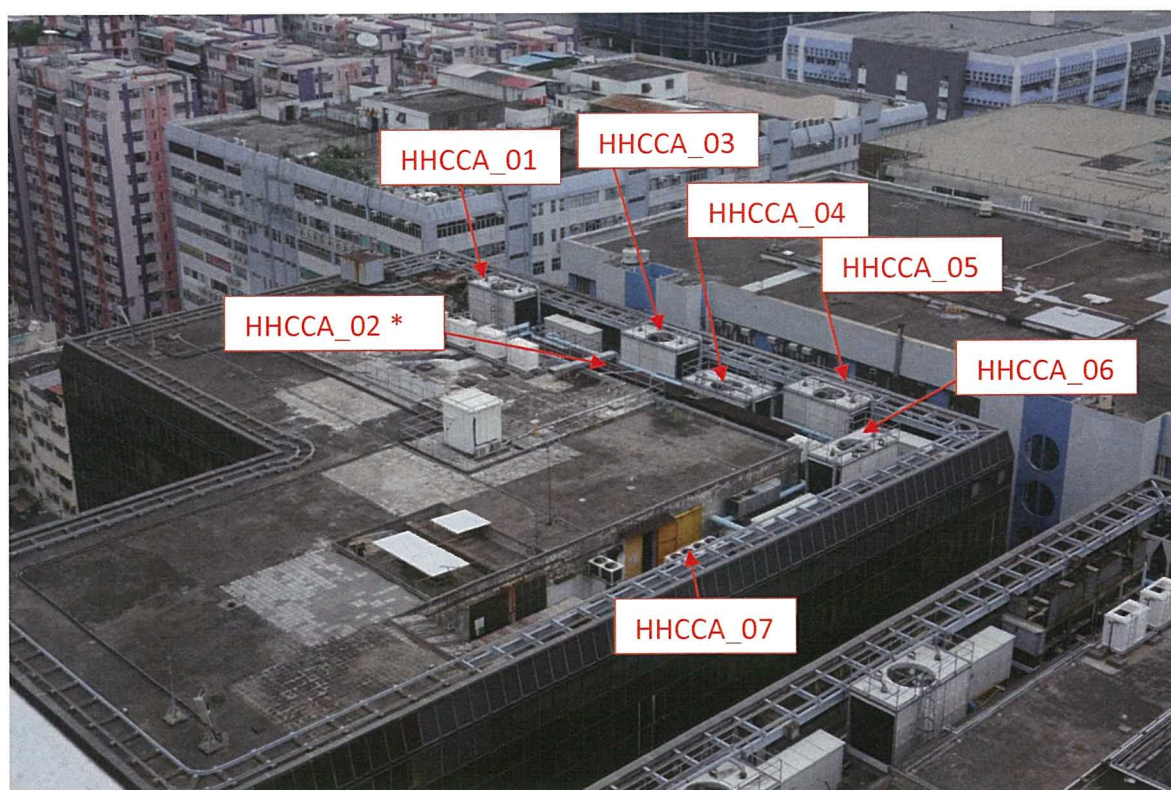


## Appendix 4.6 Fixed plant sources at Hunghom Commercial Centre

**Photo 4.6A** Aerial view from Google Map (Reference source: <https://www.google.com.hk/maps/@22.3099949,114.1871999,306a,20y,91.13h,17.76t/data=!3m1!1e3?hl=en>)

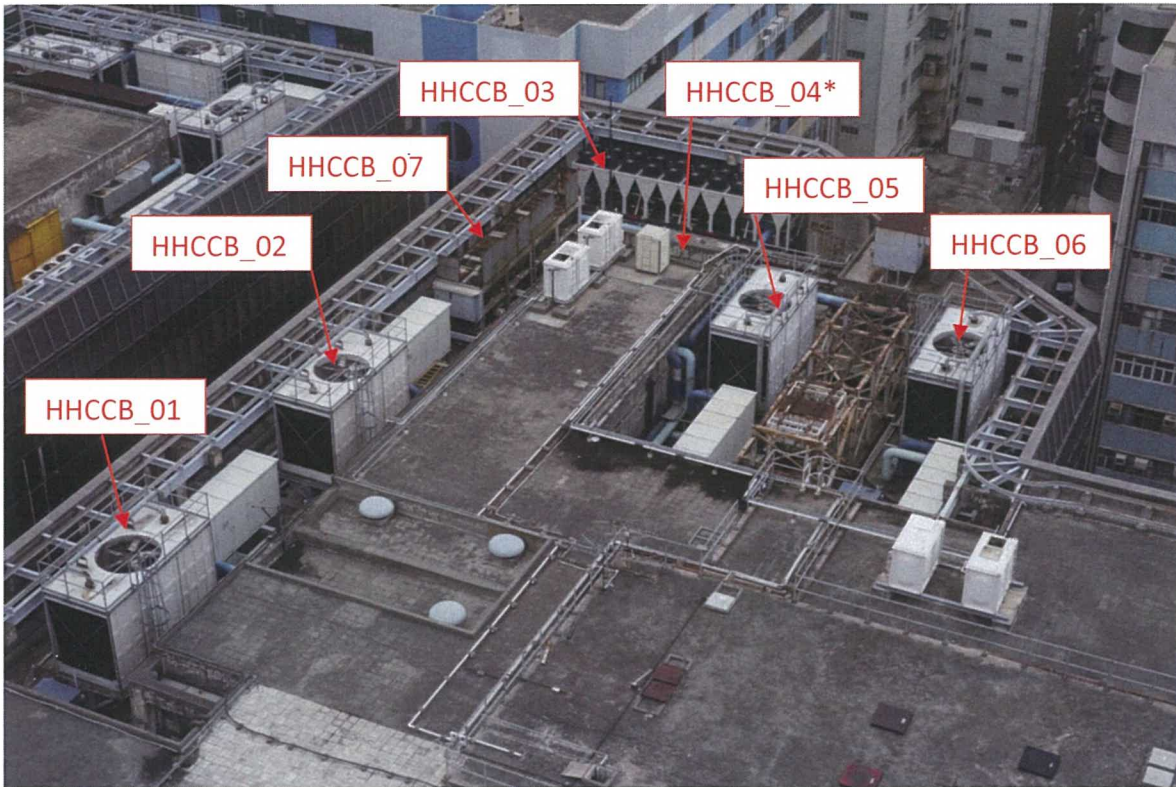


**Photo 4.6B** Fixed Noise Sources at Hunghom Commercial Centre Tower A



\* HHCCA\_02 may not be visible at the photo taking point

Photo 4.6C Fixed Noise Sources at Hunghom Commercial Centre Tower B



\* HHCCB\_04 may not be visible at the photo taking point

## **Appendix 4.7**

### **Specifications of Cooling Towers at PCCW Exchange**



Mr. Rodney Ip  
AECOM Consulting Service Ltd.  
8/F, Grand Central Plaza Tower 2,  
138 Shatin Rural Committee Road,  
Shatin, Hong Kong

Your ref: 40033291/449445  
Our ref: FM/L0085/16/CT  
Our tel: 2883 3577  
Our fax: 2304 6314

February 12, 2016

AECOM Received  
16 FEB 2016

Dear Mr. Ip,

## Request of Information – Hung Hom Exchange

Thank you for your letter of January 27, 2016 regarding the exhaust stacks and mechanical ventilation and air conditioning equipment at the exchange building at 140 Gillies Avenue.

We are pleased to provide you with the following information.

1. The 2 exhaust stacks are the exhaust chimneys of standby generators of the exchange which will be used in the event of city main power outages.
2. The 3 sets of cooling towers are part of the air conditioning system and they are operated continuously. Please refer to the attached product specification with sound power level for reference.

HKT is committed to protecting the environment when we conduct our business. In October 2015, we installed air hoods for the cooling towers and variable speed control for the air fans to further bring down noise levels. Photos of the air hoods are attached for your reference.

Should you have any queries, please do not hesitate to contact us.

Yours faithfully,



Chris T.K. Ting  
General Manager, Operations  
Facilities Management  
HKT Limited

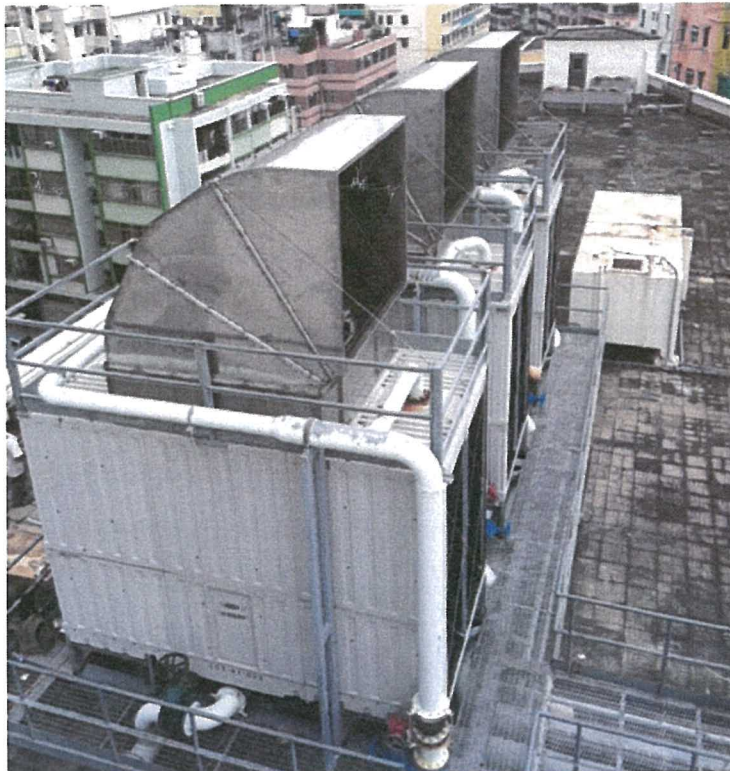
Enc.

40033291

FM	40033291
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<input checked="" type="checkbox"/> Ready <input type="checkbox"/> Not Scanned	
<input type="checkbox"/> X	<input type="checkbox"/> A <input type="checkbox"/> B <input type="checkbox"/> C



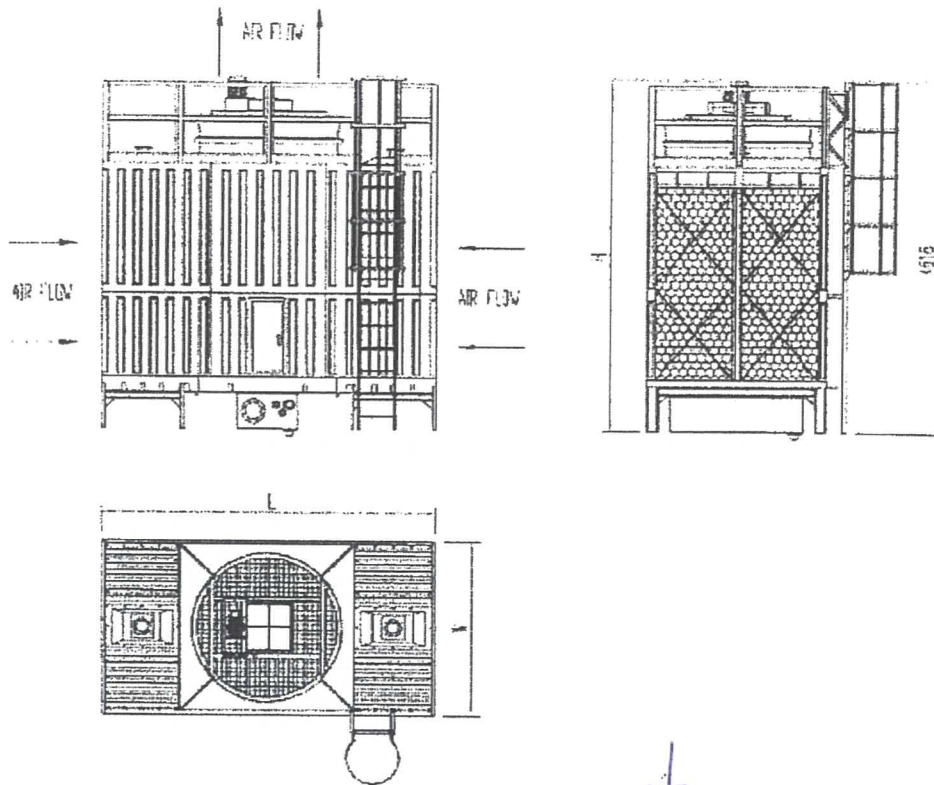
Photos of Cooling Towers at Hung Hom Exchange





XXA536057

## TOWER SCHEMATIC



Model FWS-			94-3.7	94-5.5	94-7.5	127-5.5	127-7.5	127-11	169-7.5	169-11	169-15
Overall Dimension	Length (L)	mm	4000	4000	4000	4400	4400	4400	4400	4400	4400
	Width (W)	mm	2000	2000	2000	2300	2300	2300	2600	2600	2600
	Height (H)	mm	4613	4728	4781	4728	4781	4901	4781	4901	4946
Specification	Water Flow	M <sup>3</sup> /Hr	94	108	119	127	141	160	169	192	213
	Air Flow	M <sup>3</sup> /Hr	86400	98700	109500	110200	122400	139000	146100	166000	184000
	Fan Diameter	mm	1600	1600	1600	1800	1800	1800	2000	2000	2000
	Motor Power	Kw	3.7	5.5	7.5	5.5	7.5	11	7.5	11	15
Piping	Inlet	mm	125 x 2	125 x 2	125 x 2	125 x 2	125 x 2	125 x 2	125 x 2	125 x 2	125 x 2
	Outlet	mm	150	150	150	200	200	200	200	200	200
	Floot Valve	mm	25	25	25	40	40	40	40	40	40
	Overflow	mm	65	65	65	80	80	80	80	80	80
	Drain	mm	65	65	65	80	80	80	80	80	80
Weight	Dry	Kgs	1530	1546	1551	1710	1720	1764	2020	2069	2080
	Wet	Kgs	2927	2943	2948	3416	3426	3470	3961	4010	4021
Noise Level	DF	dBA	70	71	71	71	73	74	73	74	75
	Panel	1.5M	dBA	59	59	59	61	62	63	62	63
		16M	dBA	46	46	47	48	49	49	49	50
	Louver	1.5M	dBA	65	65	66	68	69	70	69	71
		16M	dBA	52	53	55	55	56	55	56	57

NOTE: Nominal tons are based upon 95°F (35°C) HW, 85°F (29.4°C) CW, 78°F (25.6°C) WB, 85°F (29.4°C) DB, 30" Hg (101.6 kPa) Barometric Pressure and 3 GPM/ton (11.4 L/ton).

Pump head of the cooling tower is approximately equal to the height of tower (H).

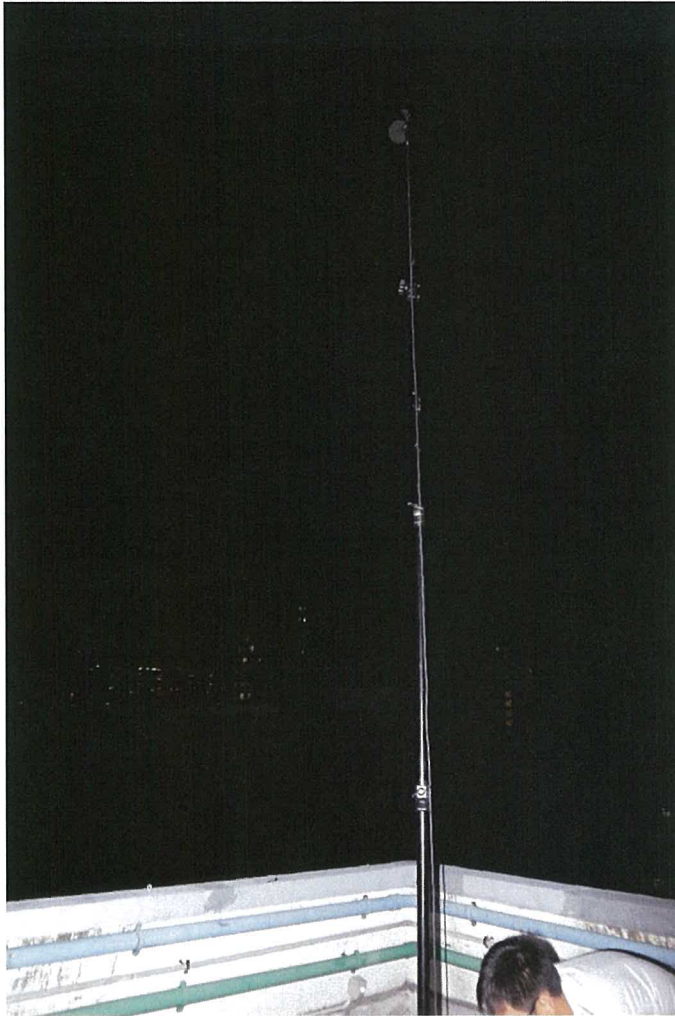
Dimension shown in this catalogue is metric sized and specifications are subject to change without further notice for technical improvement of our products.

**Appendix 4.8**  
**Noise Measurement Location at rooftop of Hang Fung  
Industrial Building**

## Appendix 4.8 Noise Measurement Location







**Photo 4.8A Noise measurement on the rooftop of Hang Fung Industrial Building**

## **Appendix 4.9**

### **Night time Survey for Fixed Plant Noise**

# **Appendix 4.9 Night-time Survey for Fixed Plant Noise**

Date: 2 March 2016

Time: Around 11:30 pm to 12:30 am

## **Observations:**

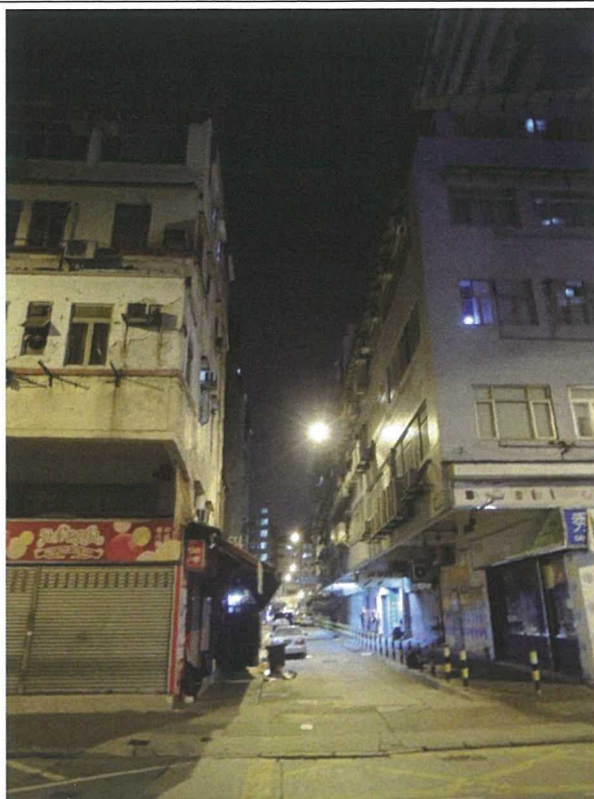
Industrial buildings and commercial buildings along Hok Yuen Street were closed and not in operation. Shops along the Hok Yuen Street, Sung Chi Street, Chun Tin Street were also closed including the mechanical workshop and car maintenance workshop at Sung Chi Street. No noticeable fixed plant noise was identified at Chun Tin Street and Sung Chi Street near the position of future residential block of the Scheme.



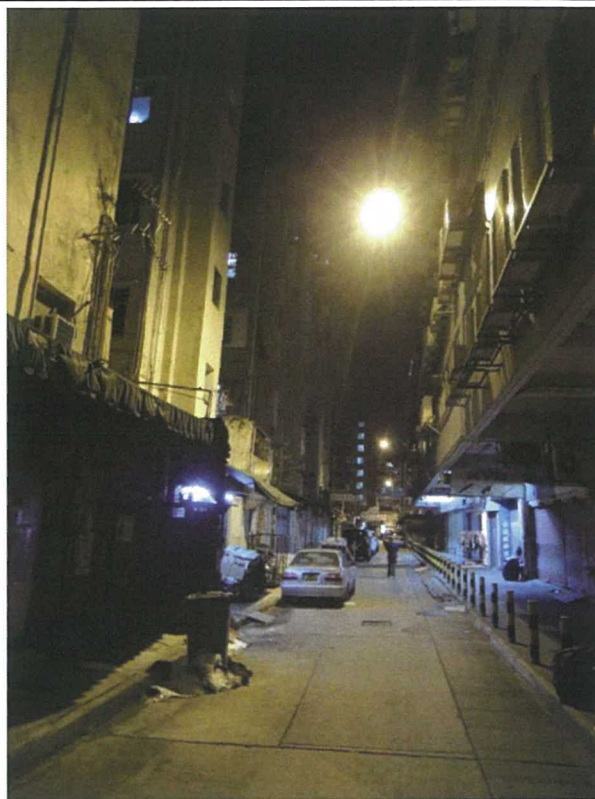
View from Hok Yuen Street to Chun Tin Street



View from Hok Yuen Street to Hang Fung Industrial Building (HFIB)

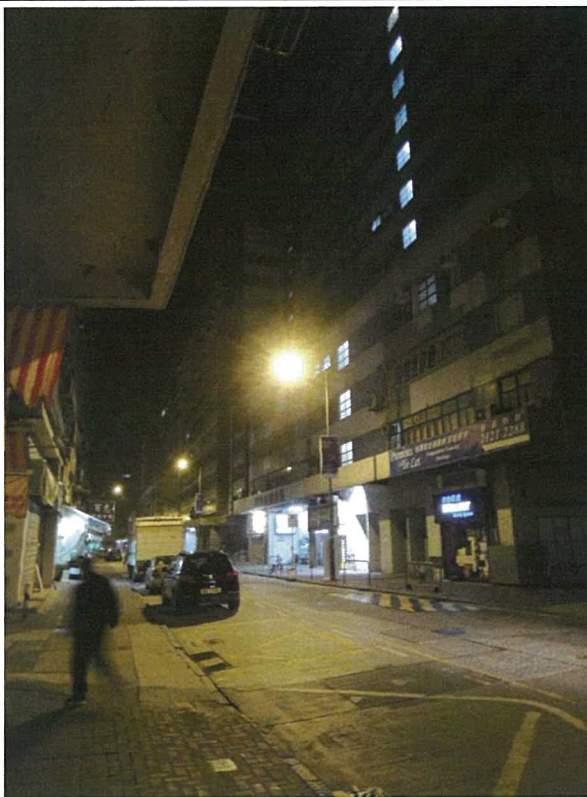


View from Hok Yuen Street to Sung Chi Street.  
The mechanical workshop and car maintenance workshop were closed.  
(Far View)

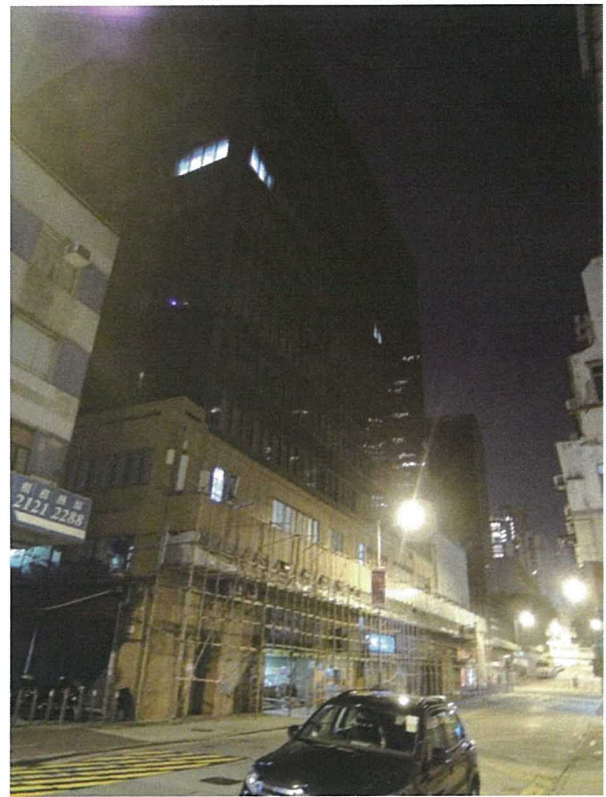


View from Hok Yuen Street to Sung Chi Street  
The Mechanical workshop and car maintenance workshop on ground floor of HFIB were closed.  
(near View)





View from Hok Yuen Street to Conic Investment Building (CIB)



View for the Hunghom Commercial Centre (HHCC)



The door entrance of CIB was closed at night.



The door entrance of Hung Hom Square of Hung Hom Commercial Centre (HHCC) was closed at night



View from Hok Yuen Street to HFIB



The door entrance of HFIB was closed at night

## **Appendix 4.10**

### **Tonal Measurement Details and Results**

## Appendix 4.10 Tonal Measurement Details and Results

### 1. Tonal characteristic measurement for cooling towers at Hung Hom Telephone Exchange building

- 1.1 Noise measurement was conducted on 30 Aug 2016 between 2320 and 2350 hours at the rooftop of No. 4 Chun Tin Street to investigate the noise from the cooling towers at Hung Hom Telephone Exchange building having any tonal characteristics (i.e. PCCW\_01, PCCW\_02 and PCCW\_03). Noise measurement location is shown in the **Figure 4.10A** below. The measurement point has direct line of sight on the cooling towers. One-third octave bands of the A-weighted spectrum of the noise measurement results is presented in **Table 4.10A** and **Figure 4.10B**.



Figure 4.10A



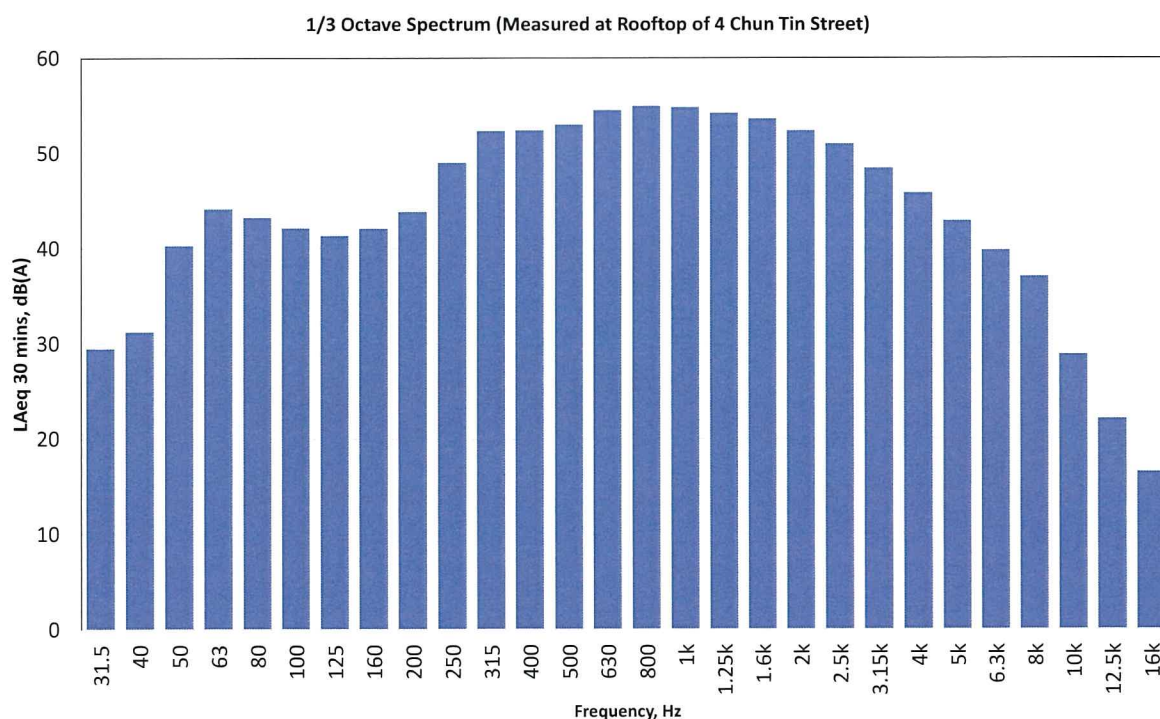
**Table 4.10A Measured One-third octave bands of the A-weighted spectrum**

Frequency, Hz	31.5	40	50	63	80	100	125	160	200	250
LAeq (30min), dB(A)	29.4	31.2	40.2	44.1	43.2	42.1	41.3	42.1	43.8	49.0

Frequency, Hz	315	400	500	630	800	1k	1.25k	1.6k	2k	2.5k
LAeq (30min), dB(A)	52.3	52.4	53.0	54.5	54.9	54.8	54.2	53.6	52.3	51.0

Frequency, Hz	3.15k	4k	5k	6.3k	8k	10k	12.5k	16k
LAeq (30min), dB(A)	48.4	45.8	42.8	39.8	37.0	28.8	22.1	16.5

**Figure 4.10B One-third octave bands of the A-weighted spectrum**



- 1.2 Based on the measured noise spectrum, tonality factor,  $f_{\text{tone}}$ , for all 1/3 octave bands or a pair of bands, are found to be lower than 3.0 dB. No tonality correction should be applied in accordance with the IND-TM.

## 2. Tonal characteristic measurement for fixed plant source at the rooftop of Conic Investment Building (CIB) and Hunghom Commercial Centre (HHCC)

- 2.1. Noise measurement was conducted on 7 Jul 2016 between 2021 and 2051 hours at the rooftop of Hang Fung Industrial Building (HFIB) to investigate any tonal characteristic arising from the fixed plant noise sources at the rooftop of the CIB and the HHCC. Noise measurement location is shown in the **Appendix 4.8**. Microphone was set at approx. 4 m high above the rooftop level of the HFIB such that the measurement point would have direct line of sight on the fixed plant noise sources located on the roof of the CIB and the HHCC.. One-third octave bands of the A-weighted spectrum is presented in **Table 4.10B** and **Figure 4.10C**.

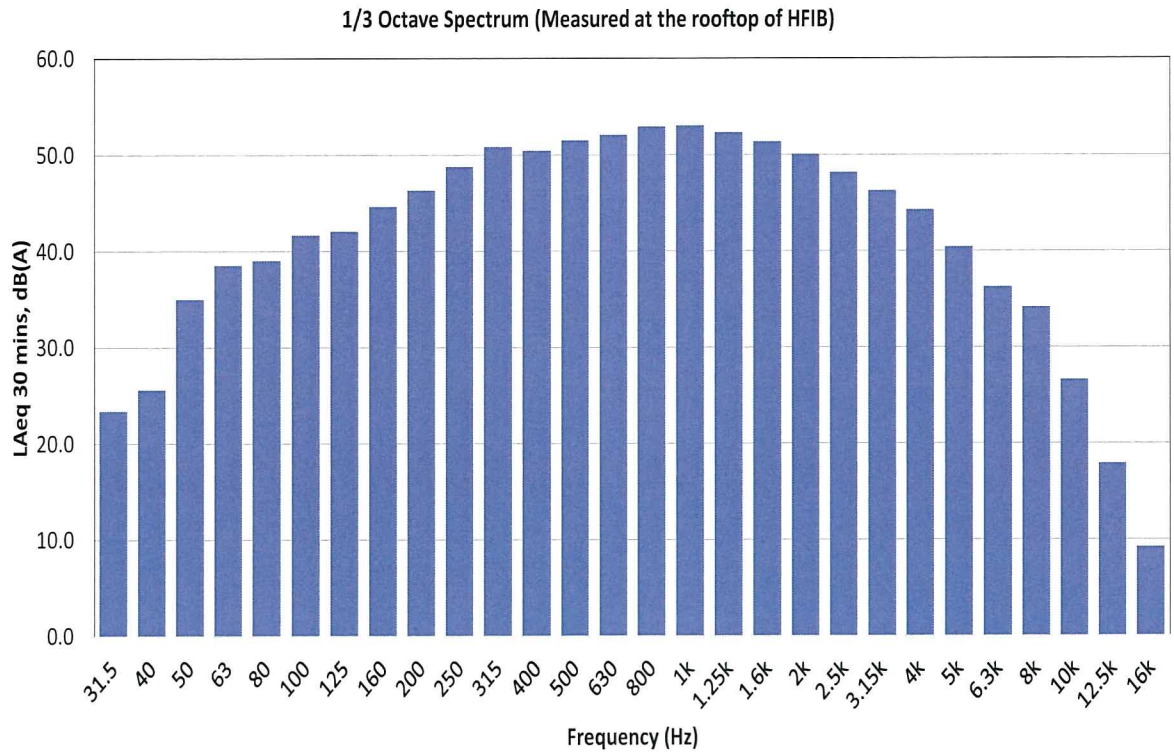
**Table 4.10B Measured One-third octave bands of the A-weighted spectrum**

Frequency, Hz	31.5	40	50	63	80	100	125	160	200	250
LAeq (30min), dB(A)	23.4	25.6	35.0	38.5	39.0	41.6	42.0	44.6	46.3	48.8

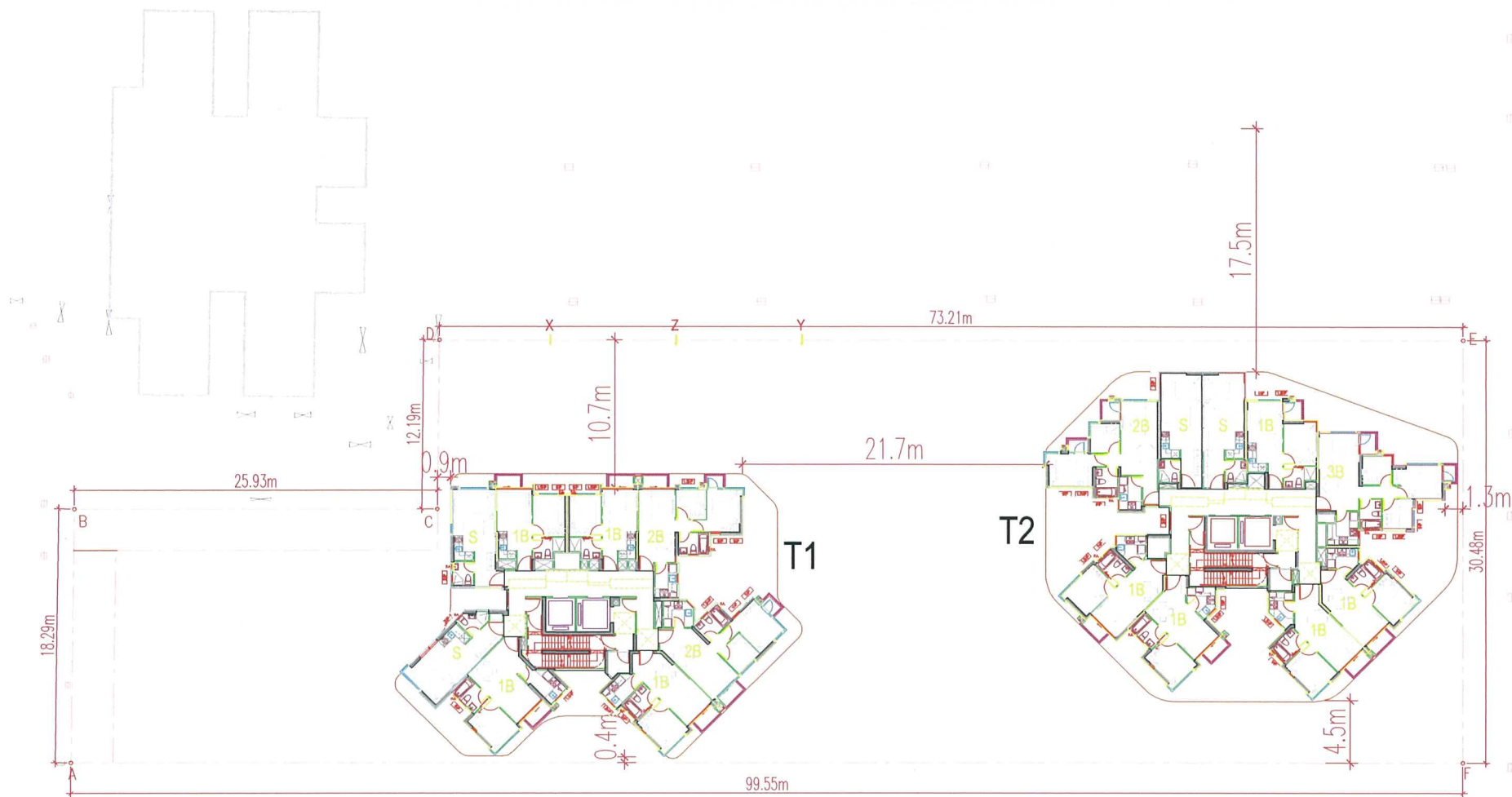
Frequency, Hz	315	400	500	630	800	1k	1.25k	1.6k	2k	2.5k
LAeq (30min), dB(A)	50.8	50.4	51.5	52.1	52.9	53.0	52.3	51.4	50.0	48.2

Frequency, Hz	3.15k	4k	5k	6.3k	8k	10k	12.5k	16k
LAeq (30min), dB(A)	46.3	44.3	40.4	36.2	34.2	26.6	17.9	9.2

**Figure 4.10C One-third octave bands of the A-weighted spectrum**



- 2.2. Based on the measured noise spectrum, there is no level of 1/3 octave bands or the arithmetic average of the levels of a pair of bands, that is more than 1.0 dB higher than the level of each of the adjacent bands on either side of the band or pair of bands under consideration. Therefore, no tonality correction should be applied in accordance with the IND-TM.





**Appendix 4.11**  
Confirmed Layout and Section Drawing for MTW Project



ANGUS K.T. CHAN  
Editorial Director, Hong Kong

AMENDED PLAN

9	DEC 2015	AMENDMENT NO. 1
9-00000-1-15	2015-12	AMENDMENT NO. 1-15



**P&T Architects and Engineers Ltd**  
巴馬丹拿建築及工程師有限公司

www.100gong.com

Fig. 1. *Phragmites australis* (1) and *Scirpus atrovirens* (2) stands in the Krasnodar Territory.

<p> <a href="#">View Comments (0)</a>  <a href="#">permanently</a> </p> <p> <a href="#">Report a Spelling Problem</a>  <a href="#">Print it</a> </p>	<p> <a href="#">View</a> <a href="#">Add</a> <a href="#">Delete</a> </p> <p> <a href="#">View</a> <a href="#">Add</a> <a href="#">Delete</a> </p>
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[illegible][illegible]

성명	성별	연령	직업
김민준	남	28	개발자
이서연	여	25	마케터
박지민	남	32	경영자
정수민	남	30	연구자
최유진	여	27	디자인
한지우	남	35	투자자
김민준	남	28	개발자
이서연	여	25	마케터
박지민	남	32	경영자
정수민	남	30	연구자
최유진	여	27	디자인
한지우	남	35	투자자

TABLE 1. Continued

SECTION A-A &amp; SECTION B-B

1.250	43
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A-10

	A1B1						
INTEREST / %	CHECKED / %			APPROVED / %			

이 글은 『한글서체』의 원형을 소개하고, 한글서체와 관련된 다양한 문제를 소개하고 있다. 한글서체의 원형을 소개하고, 한글서체와 관련된 다양한 문제를 소개하고 있다. 한글서체의 원형을 소개하고, 한글서체와 관련된 다양한 문제를 소개하고 있다.

```

    to get your hands
    underneath it!
    * by which means? (yes, it helps to go
    underneath)
    the strength of the current is too strong to simply go for straight up. You

```

14. Write short and to the point answers for the following questions. (10 marks)

---

## **Appendix 6.1**

### **Aerial Photos**

Appendix 6.1 Aerial Photo from 1945 to 2015

Photo 6.1A Aerial Photo in 1945 (The Project Site is bounded by red box)

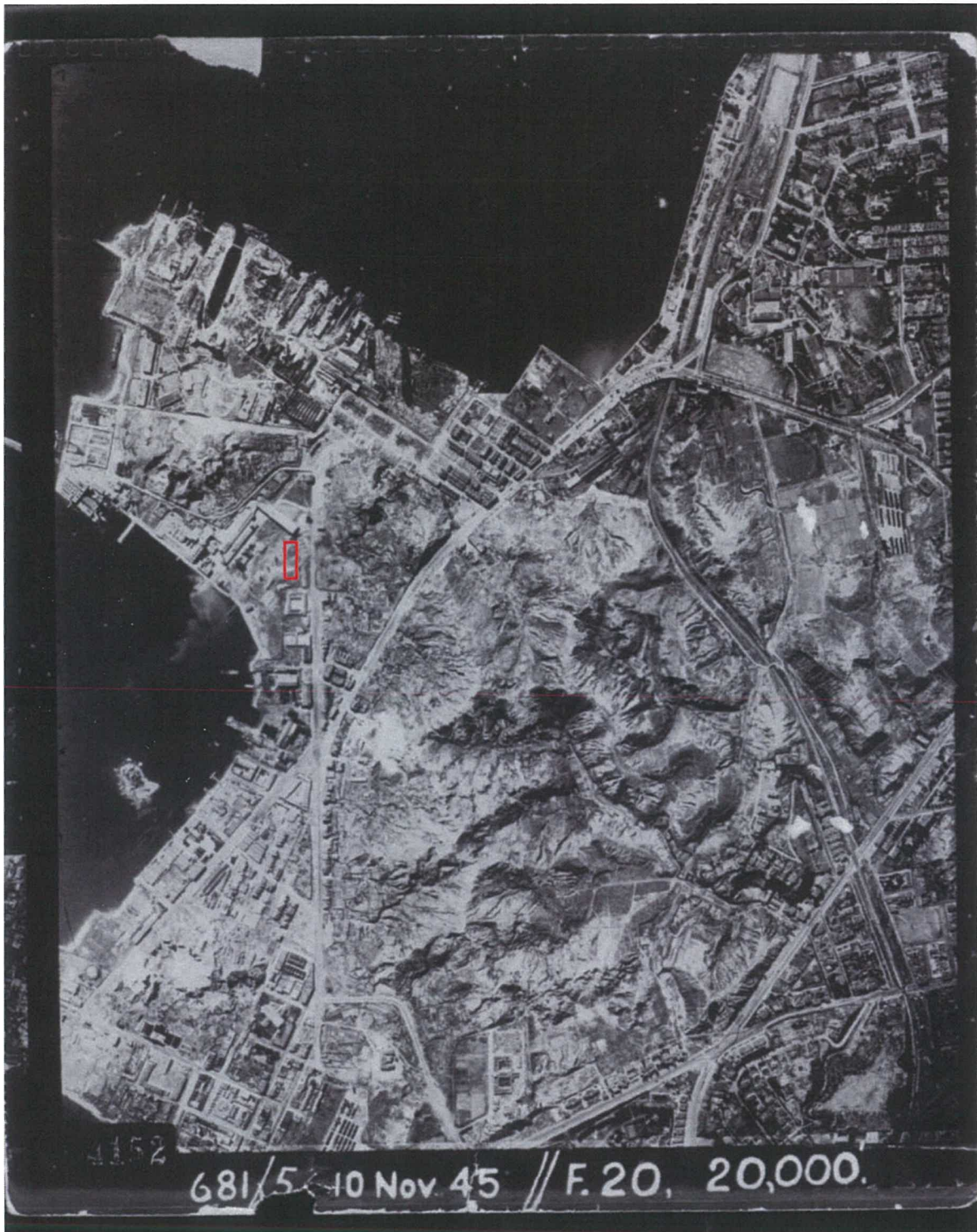




Photo 6.1B Aerial Photo in 1959 (The Project Site is bounded by red box)

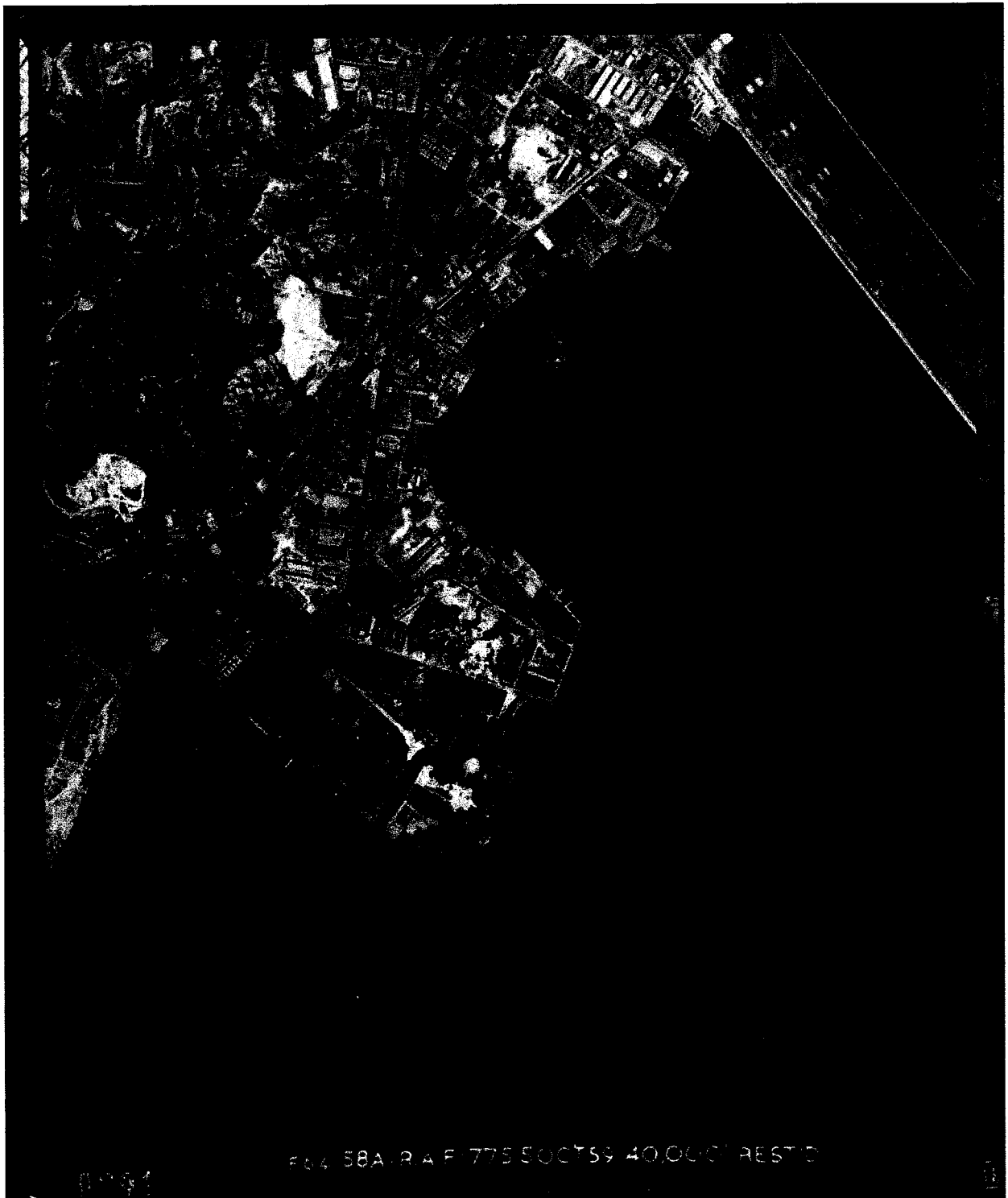
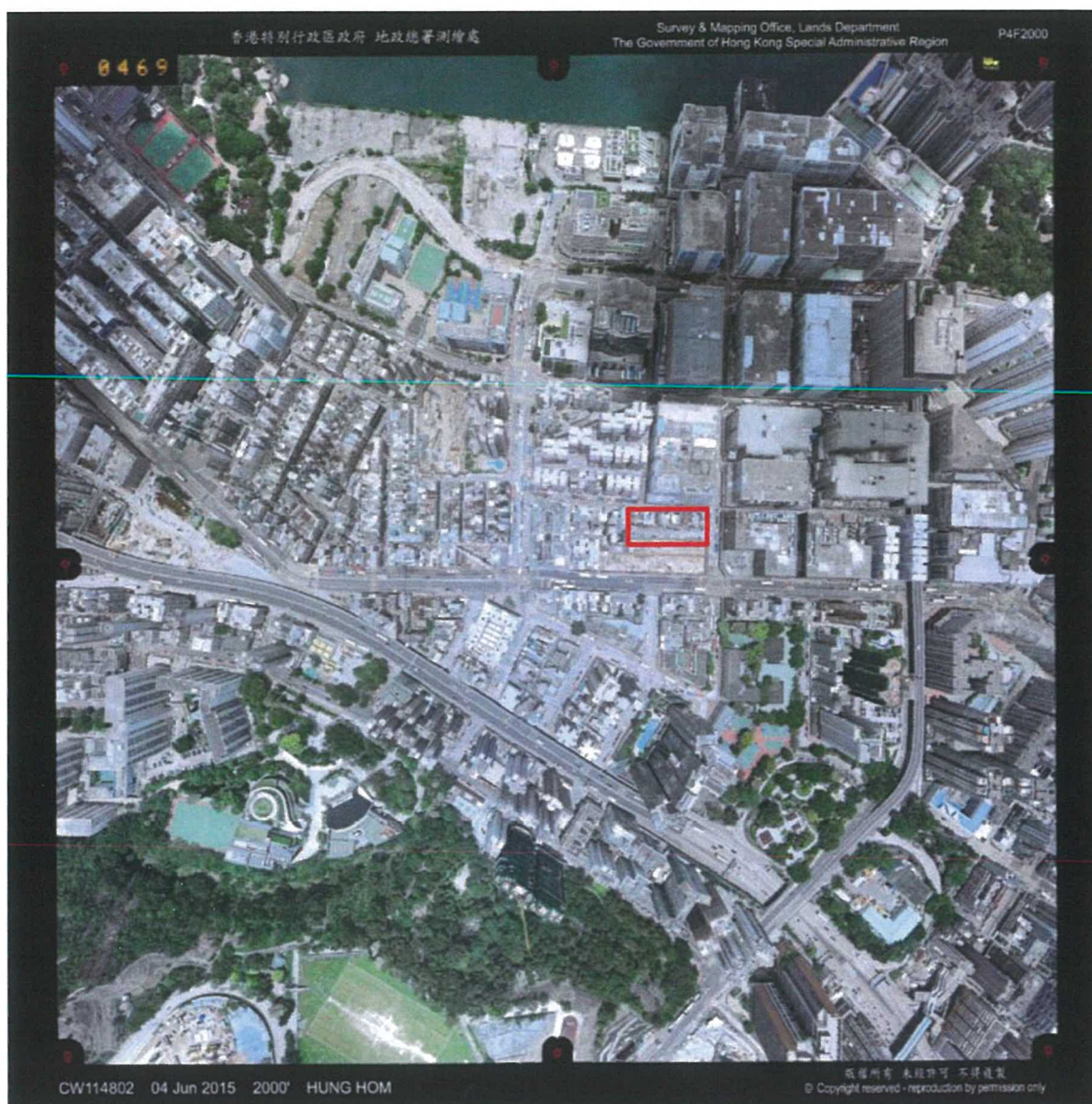


Photo 6.1C Aerial Photo in 2015 (The Project Site is bounded by red box)



## **Appendix 6.2**

### **Site Walkover Photos**



## Appendix 6.2 Site Walkover Photos

Photos Recorded during Site Walkover on March 2016



6.2A. Shops at G/F along Nos. 2 – 8 of Chun Tin Street (even nos.)



6.2B. Shops at G/F along Nos. 14-16 of Chun Tin Street (even nos.)





6.2C. Shops at G/F along Nos. 12-20 of Chun Tin Street (even nos.)



6.2D. Shops at G/F along 2-4 of Hok Yuen Street (even nos.)



6.2E. View at Sung Chi Street, i.e. Rear Side of Shops at G/F around 2 - 4 of Chun Tin Street (even nos.)



6.2F. View at Sung Chi Street, i.e. Rear Side of Shops at G/F around 6 of Chun Tin Street (even nos.)





6.2G. View at Sung Chi Street, i.e. Rear Side of Shops at G/F around 12-16 of Chun Tin Street (even nos.)



6.2G. View at Sung Chi Street, i.e. Rear Side of Shops at G/F around 20 - 24 Chun Tin Street (even nos.)



## **Appendix 6.3**

### List of Existing Tenants



**Appendix 6.3 List of Existing Tenants at Nos. 2-4 Hok Yuen Street (even nos.) and Nos. 2-24 Chun Tin Street (even nos.)**

Address	Name	Current Use	Details	Involvement of Potential Land Contamination Activities (Yes/No)
No. 2 Hok Yuen Street	丹麥飽餅屋	Catering	Bakery	No
No. 4 Hok Yuen Street	知味燒腊茶餐廳	Catering	Food and Beverages (Cha Chan Tang)	No
No. 2 Chun Tin Street	合利五金廢紙	Workshop	Paper and Metal Recycling Service	Yes
No. 4 Chun Tin Street	NIL	(Cannot be identified)	(Cannot be identified)	(Cannot be identified)
No. 6 Chun Tin Street	聯興環保回收有限公司	Workshop	Paper and Metal Recycling Service	Yes
No. 8 Chun Tin Street	聯興環保回收有限公司	Workshop	Paper/ Metal/ Electronic Appliance Recycling Service	Yes
No. 10 Chun Tin Street	達和公司 "Do Well", Co.	(Cannot be identified)	(Cannot be identified)	(Cannot be identified)
No. 12 Chun Tin Street	新星五金工程有限公司	Workshop	Metal Hardware Processing	Yes
No. 14 Chun Tin Street	新星五金工程有限公司	Workshop	Metal Hardware Processing	Yes
No. 16 Chun Tin Street	白河馬企業有限公司	Trading	Air-conditioner sales/services	No
No. 18 Chun Tin Street	聯發汽車服務公司	Workshop	Car repair and services	Yes
No. 20 Chun Tin Street (shop only facing Sung Chi Street)	崇志士多	Retail	(Grocery Store)	No
No. 22 Chun Tin Street	Target Outlet Co.	Retail	Clothing	No
No. 24 Chun Tin Street	Target Outlet Co.	Retail	Clothing	No

**Attachment 3**

URA's letters to Public Comments

本函檔號：CCD/CDD/KC-008(A)/20160816

九龍紅磡  
馬頭圍道 37-41 號  
紅磡廣場 2 樓 B79 及 B81 號  
九龍城區議會

余志榮議員、楊永杰議員、林博議員、張仁康議員, MH、  
勞超傑議員、鄭利明議員、何華漢議員及丁健華議員



以傳真和郵遞方式發送  
(傳真號碼：2333 9170)

余議員、楊議員、林議員、張議員、  
勞議員、鄭議員、何議員及丁議員：

**有關福運大廈居民對春田街／崇志街發展計劃 (KC-008(A)) 的意見**

各議員於 2016 年 7 月 26 日致市區重建局 (下稱：「本局」) 行政總監的信件經已收悉。繼本局於 7 月 29 日的簡覆，本人現獲授權回覆如下：

本局於 2015 年 1 月開展春田街／崇志街發展項目 (KC-008) 後，在其公眾諮詢期間，收到一些反對及意見。其後，透過不同的渠道收集了更多公眾意見，其中包括春田街掘頭路現時的环境及交通狀況並不理想，有須要改善。與此同時，本局亦有收到意見，表示支持本局重建應以較大範圍的形式進行，以達致改善社區的整體環境及讓重建計劃帶來更大的規劃裨益，善用土地資源以增加市區房屋供應。

在詳細考慮了這些社會的不同意見及考慮了擴大重建範圍可帶來的規劃及社區裨益後，本局決定擴大 KC-008 的重建範圍以包括春田街道路，並於本年 5 月 6 日開展九龍城春田街／崇志街發展計劃 (KC-008(A))，以達致更有效運用土地和全面改善整個重建範圍及附近居民的居住環境。本局亦於同日中止春田街／崇志街發展項目 (KC-008)。

本局建議將春田街納入發展計劃，當中目的包括改善當區道路安排和行人環境。目前春田街的掘頭路是造成環境滋擾的原因，導致區內交通擠塞和安全問題。發展計劃建議提供一個符合標準的車輛迴旋處供公眾使用，附近的崇志街亦會擴闊以提供雙線行車道，改善交通流及行人安全。

應地區人士及居民的邀請，本局職員曾多次與居民會面，向他們解釋 KC-008(A) 規劃及設計等事宜。就福運大廈居民對封閉春田街的疑慮，本局會安排管理層與他們會面，直接了解他們的意見及訴求。

本局感謝議員對上述項目的關注。如有垂詢，請致電 2588 2620 與本人聯絡。

A handwritten signature in black ink, which appears to be '殷倩華' (Ip Kwai-hing), is placed above the official title.

市區重建局  
社區發展高級經理 殷倩華

2016 年 8 月 16 日

EW/SY/KV





中華人民共和國香港特別行政區  
Hong Kong Special Administrative Region of the People's Republic of China



九龍城區議會 Kowloon City District Council  
余志榮議員 Admond Yue of DC member

市區重建局行政總監

韋志成先生

就近月 貴局強行撤回 KC-008 方案並重新推出 KC-008(A) 項目事宜上，不同居民及機構曾多次就此向 貴局請願，但並未得到局方的正面回應。有鑑於 15-7-2016 福運大廈業主立案法團之業主周年大會上，福運大廈居民經過詳細討論投票後，通過認為春田街之永久封閉及新的 KC-008(A) 整體規劃對福運大廈有著不可逆轉的負面影響。並決議兩大訴求：

- 1) 強烈反對永久封閉春田街及 KC-008A 重建方案
- 2) 強烈譴責市建局規劃不公義，並要求交待突然撤銷原有方案的原因及重啟舊有 KC-008 方案

鑑於事情嚴重，福運大廈各居民感到相當煩憂。遂請本辦事處跟進，以專函要求 貴局積極研究居民之訴求，以避免日後持續性的爭拗。就此本人聯通多位九龍城區議員 懇請 閣下能體察民情盡快處理。肅此 候覆。

如有任何查詢，歡迎致電本辦事處譚先生聯絡，電話：2333 9123。

即頌 崇祺。

九龍城區議員

余志榮

楊永杰

林 博

張仁康

勞超傑

鄭利明

何華漢

丁健華

2016 年 7 月 26 日



福運大廈業主立案法團/福運大廈關注組(反對封閉春田街)

九龍紅磡春田街 25 號

7 月 28 日諮詢會上親手送遞

To: 市區重建局行政總監韋志成

From: 受 KC-008A 影響之福運大廈業主代表/福運大廈關注組(反對封閉春田街)

關於: 支持福運大廈關注組(反對封閉春田街)之地區人仕及近期傳媒報導

韋先生:

以下為目前為止已表態支持之九龍城區議會議員 (排名不分先後, 參考見附件):

余志榮議員/ 楊永杰議員/ 林博議員/ 張仁康議員/ 勞超傑議員/

鄭利明議員/ 何華漢議員/ 丁健華議員

我們正不斷積極爭取更多關注此規劃不公義及嚴重影響民生議題的人仕及組織

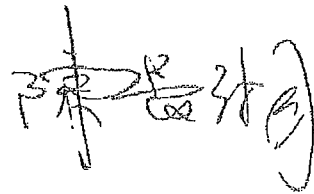
支持, 另亦附上近期傳媒報導供參考; 希望閣下能秉承市建局“以人為本”的建

局宗旨, 積極跟進及正面回應福運大廈關注組就反對永久封閉春田街及 KC-008A

重建方案所提及的意見及會面訴求, 謝謝關注!!

此致

市區重建局行政總監韋志成



陳長湘法團主席代行

福運大廈業主立案法團及各業主/

福運大廈關注組(反對封閉春田街)

抄送: 城市規劃委員會/各關注之議員及媒体

本函檔號：CCD/CDD/KC-008(A)/DP/20160816

九龍何文田愛民邨  
德民樓 429 室(平台)  
民主黨黃碧雲立法會議員辦事處  
黃碧雲議員



尊敬的黃議員：

**有關福運大廈業主對春田街／崇志街發展計劃 (KC-008(A))的意見**

貴辦事處於 2016 年 6 月 27 日致市區重建局(下稱：「本局」)的信件，本局已於 7 月 28 日收悉。繼本局於 7 月 29 日的簡覆，本局現謹回覆如下：

本局於 2015 年 1 月開展春田街／崇志街發展項目 (KC-008) 後，在其公眾諮詢期間，收到一些反對及意見。其後，透過不同的渠道收集了更多公眾意見，其中包括春田街掘頭路現時的环境及交通狀況並不理想，有須要改善。與此同時，本局亦有收到意見，表示支持本局重建應以較大範圍的形式進行，以達致改善社區的整體環境及讓重建計劃帶來更大的規劃裨益，善用土地資源可以增加市區房屋供應。

在詳細考慮了這些社會的不同意見及考慮了擴大重建範圍可帶來的規劃及社區裨益後，本局決定擴大 KC-008 的重建範圍以包括春田街道路，並於本年 5 月 6 日開展九龍城春田街／崇志街發展計劃 (KC-008(A))項目，以達致更有效運用土地和全面改善整個重建範圍及附近居民的居住環境。本局亦於同日中止春田街／崇志街發展項目 (KC-008)。

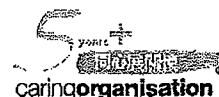
本局建議將春田街納入發展計劃，當中目的包括改善當區道路安排和行人環境。目前春田街的掘頭路是造成環境滋擾的原因，導致區內交通擠塞和安全問題。發展計劃建議提供一個符合標準的車輛迴旋處供公眾使用，附近的崇志街亦會擴闊以提供雙線行車道，改善交通流及行人安全。

應地區人士及居民的邀請，本局職員曾多次與居民會面，向他們解釋 KC-008(A)的規劃及設計等事宜。至於福運大廈居民指本局在馬頭圍道地盤工程引致環境衛生及樓宇安全等問題，本局除了敦促地盤承建商緊密監察工程外，亦曾聯同屋宇署人員到福運大廈實地視察，屋宇署已表示福運大廈並沒有任何結構安全問題。本局會繼續與福運大廈居民保持接觸，了解他們的訴求。

本局感謝 閣下轉達居民對上述項目的關注。如有垂詢，請聯絡本人 (電話：2588 2208) 或本局社區發展高級經理殷倩華女士 (電話：2588 2620)。

市區重建局  
社區發展總監 黃麗娟  
(殷倩華 代行)

2016 年 8 月 16 日

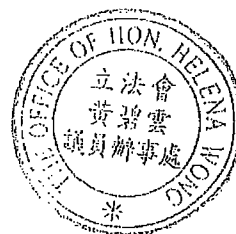


致市區重建局：

本辦事處一直關注受 KC-008 及 KC-008A 方案所影響的福運大廈，並隨即於二零一六年六月五日在福運大廈舉辦居民大會，及後一直跟進福運大廈相關議題，包括：蚊患問題，沉降，警署簽到簿及春田街非法泊車等。現收到福運大廈業主代表來信表達對 KC-008A 之不滿。其訴求如下：

- 1) 強烈反對永久封閉春田街及 KC-008A 重建方案
- 2) 強烈譴責市建局規劃不公義，並要求交待突然撤銷原有方案的原因及重啟舊有 KC-008 方案

市建局將以人為本作為其中的建局宗旨，故望市建局能為受重建影響居民正面回應，樹立正面形象。



黃碧雲立法會議員辦事處  
27-6-2016

福運大廈業主立案法團/福運大廈關注組(反對封閉春田街)

九龍紅磡春田街 25 號

7月28日資詢會上親手送遞

To: 市區重建局行政總監韋志成

From: 受 KC-008A 影響之福運大廈業主代表/福運大廈關注組(反對封閉春田街)

關於: 支持福運大廈關注組(反對封閉春田街)之地區人仕及近期傳媒報導

韋先生:

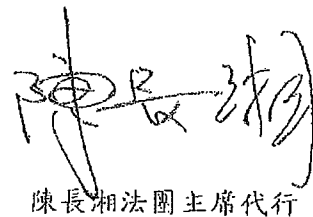
以下為目前為止已表態支持之地區人仕及組織名單(排名不分先後,參考見附件):

黃碧雲議員(民主黨)/譚國僑議員(民協)/游蕙禎小姐(青年新政)

我們關注組正不斷積極爭取更多關注此規劃不公義及嚴重影響民生議題的人仕及組織支持,另亦附上近期傳媒報導供參考,希望閣下能秉承市建局以人為本的建局宗旨,積極跟進及正面回應福運大廈關注組就反對永久封閉春田街及 KC-008A 重建方案所提及的意見及會面訴求,謝謝關注!!

此致

市區重建局行政總監韋志成



陳長湘法團主席代行

福運大廈業主立案法團及各業主/

福運大廈關注組(反對封閉春田街)

抄送: 城市規劃委員會/各關注之議員及媒体



九龍紅磡春田街25號

To: 游蕙禎小姐

From: 受 KC-008A 影響之福運大廈業主代表/福運大廈關注組(反對封閉春田街)

游蕙禎小姐:

就近日市區重建局強行撤回 KC-008 方案並重新推出 KC-008A 項目事宜上,我等多次就此向市建局請願,但通通都得不到局方正面回應。我們於 15-7-2016 業主立案法團之業主周年大會上經過詳細討論投票後,通過認為春田街之永久封閉及新的 KC-008A 的整體規劃對福運大廈有著不可逆轉的負面影響,故成立福運大廈關注組(反對封閉春田街)代表與市建局長期並有組織跟進,現欲爭取閣下簽署支持我們關注組以下訴求大綱(詳細可見附件):

- 1) 強烈反對永久封閉春田街及 KC-008A 重建方案
- 2) 強烈譴責市建局規劃不公義,並要求交待突然撤銷原有方案的原因及重啟舊有 KC-008 方案

如能獲閣下支持,請在以下橫線上簽署回覆表態,感激關注此民生議題!



青年新政九龍西總幹事

游蕙禎小姐

陳長湘法團主席代行

福運大廈業主立案法團及各業主/  
福運大廈關注組(反對封閉春田街)

福運大廈業主立案法團/福運大廈關注組(反對封閉春田街)

九龍紅磡春田街 25 號

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To: 譚國僑 議員

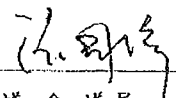
From: 受 KC-008A 影響之福運大廈業主代表/福運大廈關注組(反對封閉春田街)

譚國僑 議員：

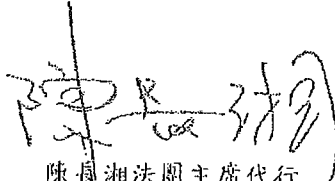
就近日市區重建局強行撤回 KC-008 方案並重新推出 KC-008A 項目事宜上，我等多次就此向市建局請願，但通通都得不到局方正面回應。我們於 15-7-2016 業主立案法團之業主周年大會上經過詳細討論投票後，通過認為春田街之永久封閉及新的 KC-008A 的整體規劃對福運大廈有著不可逆轉的負面影響，故成立福運大廈關注組(反對封閉春田街)代表與市建局長期並有組織跟進，現欲爭取閣下簽署支持我們關注組以下訴求大綱(詳細可見附件)：

- 1) 強烈反對永久封閉春田街及 KC-008A 重建方案
- 2) 強烈譴責市建局規劃不公義，並要求交待突然撤銷原有方案的原因及重啟舊有 KC-008 方案

如能獲閣下支持，請在以下橫線上簽署回覆表態，感激關注此民生議題！

  
區 議 會 議 員

譚國僑 議員

  
陳長湘法團主席代行

福運大廈業主立案法團及各業主/  
福運大廈關注組(反對封閉春田街)

本函檔號：CCD/CDD/KC-008(A)/20160816

九龍紅磡  
春田街 25 號  
福運大廈業主立案法團及各業主/  
福運大廈關注組(反對封閉春田街)  
(經辦人：陳長湘法團主席)

以郵寄送遞

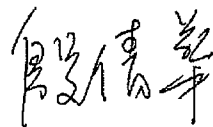
陳主席：

關於春田街／崇志街發展計劃 KC-008(A)事宜

就 貴法團及關注組於 2016 年 7 月 28 日向市區重建局(下稱「本局」)代表遞交予本局行政總監的來信，繼本局於 2016 年 7 月 29 日的簡覆後，本人現獲授權回覆如下：

本局十分理解 貴法團及關注組對本局春田街／崇志街發展計劃 KC-008(A)及馬頭圍道／春田街重建項目工程的意見，有關來信要求本局行政總監與福運大廈居民會面一事，本局會安排管理層職員代表行政總監與居民會面，直接了解及解答大家對上述項目規劃及樓宇安全的意見及問題。本局現正就會面安排與當區區議員商討中，議員會協助聯絡福運大廈居民，以落實會面日期及地點。

本局感謝 貴法團及關注組轉達居民對上述項目的關注。如有任何查詢，歡迎與本人聯絡(電話：2588 2620)。



市區重建局  
社區發展高級經理 殷倩華

2016 年 8 月 16 日

副本抄送：九龍城區議會余志榮議員

BW/SY/BC

福運大廈業主立案法團/福運大廈關注組(反對封閉春田街)

九龍紅磡春田街 25 號

7 月 28 日資詢會上親手送遞

To: 市區重建局行政總監韋志成

From: 受 KC-008A 影響之福運大廈業主代表/福運大廈關注組(反對封閉春田街)

韋先生:

就近日市區重建局強行撤回 KC-008 方案並重新推出 KC-008A 項目事宜上，我們作為春田街將來唯一存在物業之眾業主，我等明白重建發展的目標，是將環境惡劣、殘破失修的樓宇，重建成符合現代生活標準的樓宇。市建局透過徵集面積較龐大的土地，進行綜合規劃，以重整區內的基礎建設如道路、休憩及社區設施等，達致善用土地，改善整體社區環境。但我等認為在最新的 KC-008A 規劃方案上達不到以上改善整體社區環境目的，另我們多次向貴局了解規劃細節，並舉行多次請願，但通通都得不到貴局正面回應。我們於 15-7-2016 業主立案法團之業主周年大會上經過詳細討論投票後，我們等業主通過認為春田街永久封閉及新的 KC-008A 的整體規劃對福運大廈有著不可逆轉的負面影響，並成立福運大廈關注組(反對封閉春田街)代表與市建局長期跟進，現要求與閣下進行正式面對面會議，跟進以下訴求細節：

- 1) 強烈反對永久封閉春田街及 KC-008A 重建方案
- 2) 強烈譴責市建局規劃不公義，並要求交待突然撤銷原有方案的原因及重啟舊有 KC-008 方案



福運大廈業主立案法團/福運大廈關注組(反對封閉春田街)

九龍紅磡春田街 25 號

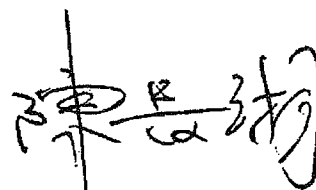
7 月 28 日諮詢會上親手送遞

- 3) 現有市建局之工程地盤已對福運大廈有結構性的影響, 必須交待復修安排以及如何確保將來市建局另一地盤動工時不會對本大廈再有造成任何影響
- 4) 現有市建局之工程對福運大廈居民的施工滋擾上必須作出針對性的改善:-
- a) 嚴格規管施工時間變為 9am-6pm
  - b) 加設大型隔音布或減音設備於面向福運大廈之方向
  - c) 杜絕因地盤作業的嚴重蚊患及鼠患, 定期向本立案法團交待
  - d) 春田街大型車輛進出時間必須安排於非上落班等煩忙時間, 即 10am-5pm
- 5) 在春田街或被封閉之先, 市建局必須協調區議會, 警方及食環署加強交通以至衛生環境管理, 謝絕以春田街環境管理惡劣以作為支持永久封閉的原因

請回覆會議最早安排以便儘早討論解決, 減短對居民之影響!

此致

市區重建局行政總監韋志成



陳長翹法團主席代行

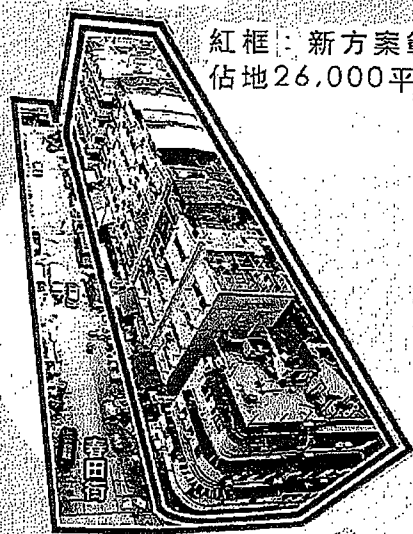
福運大廈業主立案法團及各業主/

福運大廈關注組(反對封閉春田街)

抄送: 城市規劃委員會/民政事務總署/九龍城區議會/各關注之議員及媒体

# 市建局撤回項目為賺到盡 新方案「食」街轉移地積比

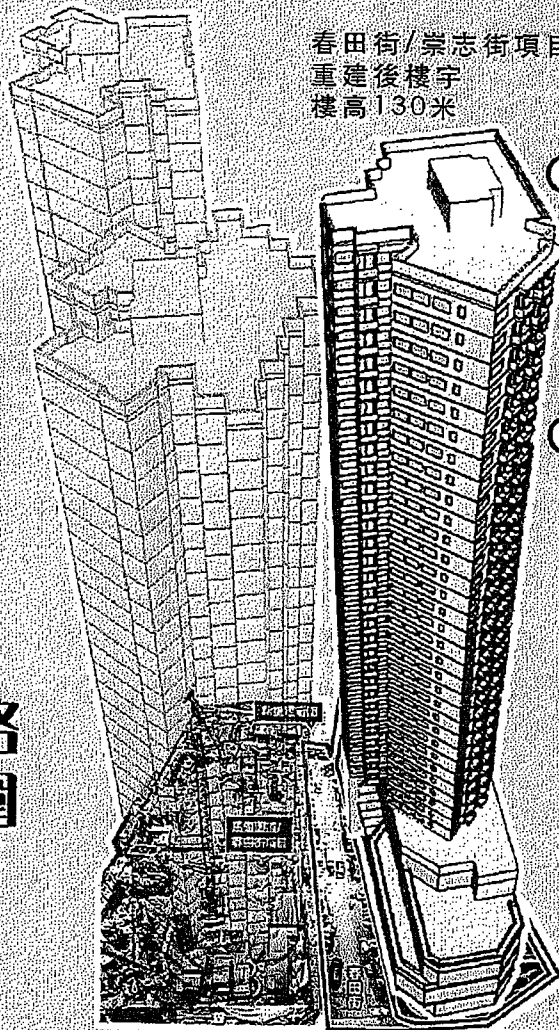
綠框：舊方案範圍  
佔地13,000平方尺



紅框：新方案範圍  
佔地26,000平方尺

將春田街馬路  
食進重建範圍  
地盤面積  
擴大一倍

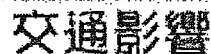
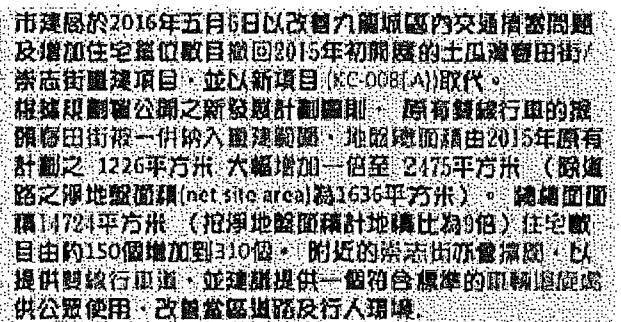
馬頭圍道/春田街項目  
重建後樓宇



春田街/崇志街項目  
重建後樓宇  
樓高130米

六層唐樓  
變38層  
蛋糕底  
插針樓

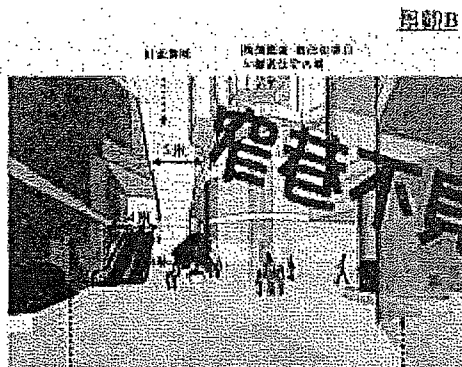
總樓面面積  
增加四倍  
多建160單位  
六億  
袋袋平安



- ① 兩個建議項目都將佔用擴闊後的崇志街邊處作車輛出入口。  
(舊田街／崇志街項目19個私人停車位屬頭圍／舊田街項目料設58個私人停車位)
- ② 即最高峰時期需要承載77部額外私家車及3輛降車的出入，以及現有使用崇志街前往崇安街方向的車輛
- ③ 因應車流量增加，市建局確實有建議將崇志街由5米擴闊至12米，但地盤以外的鐘鑼街及崇志街（西面）卻未有建議擴闊，結果，交通的瓶頸會帶到項目範圍以外，令鐘鑼街及崇志街路口更塞
- ④ 兩個項目都使用汽車升降梯連接地庫車位，效率較低（比較傳統車路斜坡），包括人手開升降梯，使用轉盤等時間慢，在繁忙時間會帶來排隊問題，而兩個項目都使用同一個出入口，將有可能塞滿崇志街，甚至影響鐘鑼街。
- ⑤ 新邊旋處增加車流量及塞車問題延伸帶來行人安全，廢氣／噪音等問題，緊貼新邊旋處的福康大廈將會被影響最深。
- ⑥ 市建局亦指出（TIA 3.31）願意將來負責管理擴闊的一節崇志街及新邊旋處，這樣會否將崇志街變成鐘鑼私家街，其過度管理文化不容許公眾自由使用？
- ⑦ 市建局交通影響評估清楚指出，舊田街現有12個車位不會在將來項目內重置，亦指出政府可考慮在區內其他地方重置，舊田街現有的2個上公共落貨位亦不會被重置，同屬福康大廈及附近公眾泊車需求。



- ① 原來廣被區內行人使用的崇志街將成為雙程車路，根據市建局圖則行人將被轉移由馬頭圍道，經將來市建局項目商場，再途經迴旋處進入崇志街。
- ② 這個惡心吞排實質上只是市建局希望將行人帶入將來項目地下三層的消閒空間，而當行人離開時，他們需再經過迴旋處才可轉左往原有的崇志街（庇利街方向）。但新項目將對崇志街帶來額外車流對行人帶來的安全問題卻隻字不提。
- ③ 除了行人，現時沿崇志街往庇利街方向的店舖甚至崇志街的食肆（因不少行人經崇志街往崇志街）都會受到影響。



設計圖雖標示與馬頭圍／藝田街項目之間有9.5米行人通道，但有4米寬為「樓平台覆蓋，餘下只有5米寬徑」，「見天」。兩邊15米高的平台基座形成密不透風的圍牆，環境並非如市建局所形容可改善行人環境。

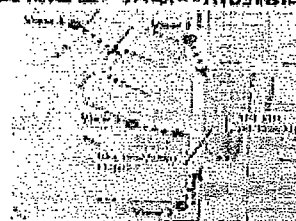
香港不見天？！

# 土瓜灣春田街/崇志街重建項目((KC-008(A)))

## 新發展計劃圖則簡介

### 景觀影響 及 額外高度

- ① 由於地盤面積增大1倍，樓宇體積大增，高度增加至38層，就算設計強調已擴闊崇志街，又從寶蘭街後退5米，但加上馬頭圍/春田街項目兩幢約30層高的住宅，對周邊平均十多層樓高住宅及一帶較窄的街道網造成壓迫的空間感，路面行人日光及通風環境現況。
- ② 將來的發展尤如龐然大物，高度及規模比較周邊環境相當不配合（市建局提交的景觀影響評估 景觀1,2,3,5）。
- ③ 尤其春田街被減，崇志街擴闊使新住宅大廈阻礙福運大廈（只有15層高）往寶蘭街景觀。
- ④ 市建局更在這項規劃內建議增加10米（即3層左右），擠高強補，實行賺到盡！明明住宅還有剩餘的上蓋覆蓋率將樓宇向東及向西再闊一點用盡覆蓋率（site coverage），但偏偏要制作一些規劃增建（即減去某部份樓宇以確保地面行人路的暢通性）換取10米的樓高度增加，實質為了擠高D，賣貴D~



### 重建時間影響

- ① 市建局2015年1月已經完成春田街/崇志街凍結人口，如果跟原有地盤面積並按照法定大綱圖規限去做，根本不需要多餘的城規程序，理應2021/2023就會完成重建。
- ② 可惜1年過去，市建局剛宣布“食街”（即春田街），要擴大地盤，然後就要增加至少2年時間去做總綱程序。拍市建局文件，預計項目暫10年先可以完成（即2029-2036年）。
- ③ 是誰令到重建時間一再加長？本來附近居民要對住個建築地盤0-7年，依家要玩到10年以上。整件事，食街，增加樓面面積，向社區裡街坊/受影響影響街坊/居民要應酬，而得益的只是市建局可以賺多啲。
- ④ 我們並不是講同快~好，但若程序拖長了能令規劃，設計，實務等更完善是可以接受的，但就以上種種質疑，再加上在過程中悄悄消失的資助房屋的理念，令人質疑市建局拖長計劃所耗的時間和金錢。

### 「食街」地積比，淨賺好歡喜！

- ① 春田街/崇志街以改善交通及行人環境為名將原有屬於公眾街區空間變為地產商賣中物以增加可盈利面積。其地盤面積於免補地價及無住戶賠償下倍增，使可出售面積增加一倍。估計扣除建築成本，顧問費等開支，利潤為額外6億。
- ② 雖然增加了單位，但之前提及過考慮資助房屋的理念已經消失，即是次改動等增加更多賣到爆的私人豪宅（例如土瓜灣新盤賣點呎價\$13,000起）。
- ③ 春田街發展情況與其他市建局重建項目加出一轍，例如加觀劇市中心重建項目免補地價食掉裕民坊，月華街，仁愛園巴士站，康寧道，裕民坊公園，政府合署和診所等33.8萬平方呎政府及公共用地（拍2005年截標約值130億）。
- ④ 儘管市建局聲稱會於土瓜灣一帶的重建項目打造行人小店小街，保留社區，但市建局往績，加灣仔利用街一帶重建項目，住屋變成豪宅，小店變成高級消費場所，食街只為賺面，不為社區，如何能令市民及受影響街坊信服？

（本報曾於前次刊出有關市建局提供的市建局春田街/崇志街發展計劃圖則）