Provision of Major Community Facilities and Open Space in Sha Tin OZP

Type of Facilities	Hong Kong Planning Standards and Guidelines (HKPSG) Requirements	Requirement based on OZP planned population	Provision		Surplus/ Shortfall against OZP planned provision
			Existing Provision	Planned Provision (including Existing Provision)	
District Open Space	10 ha per 100,000 persons[#]	50.80ha	55.96 ha	61.72 ha	+ 10.92 ha
Local Open Space	10 ha per 100,000 persons[#]	50.80ha	99.36 ha	114.70 ha	+ 63.90 ha
Sports Centre	1 per 50,000 to 65,000 persons[#] (assessed on a district basis)	7	5	7	0
Sports Ground/ Sport Complex	1 per 200,000 to 250,000 persons[#] (assessed on a district basis)	2	1	1	-1
Swimming Pool Complex – standard	1 complex per 287,000 persons[#] (assessed on a district basis)	1	2	2	+1
District Police Station	1 per 200,000 to 500,000 persons (assessed on a regional basis)	1	0	0	-1

Type of Facilities	Hong Kong Planning Standards and Guidelines (HKPSG) Requirements	Requirement based on OZP planned population	Provision		Surplus/ Shortfall against OZP planned provision
			Existing Provision	Planned Provision (including Existing Provision)	
Divisional Police Station	1 per 100,000 to 200,000 persons (assessed on a regional basis)	2	2	2	0
Magistracy (with 8 courtrooms)	1 per 660,000 persons (assessed on a regional basis)	1	1	1	0
Community Hall	No set standard	N.A.	10	11	N.A.
Library	1 district library for every 200,000 persons (assessed on a district basis)	2	3	5	+3
Kindergarten/ Nursery	34 classrooms for 1,000 children aged 3 to under 6	250 classrooms	339 classrooms	358 classrooms	+108 classrooms

Type of Facilities	Hong Kong Planning Standards and Guidelines (HKPSG) Requirements	Requirement based on OZP planned population	Provision		Surplus/ Shortfall against OZP planned provision
			Existing Provision	Planned Provision (including Existing Provision)	
Primary School	1 whole-day classroom for 25.5 persons aged 6-11 (assessed by EDB on a district/school network basis)	774 classrooms	826 classrooms	854 classrooms	+80 classrooms
Secondary School	1 whole-day classroom for 40 persons aged 12-17 (assessed by EDB on a territory-wide basis)	602 classrooms	935 classrooms	965 classrooms	+363 classrooms
Hospital	5.5 beds per 1,000 persons (assessed by Hospital Authority on a regional/cluster basis)	2,923 beds	3,294 beds	5,144 beds	+ 2221 beds
Clinic/Health Centre	1 per 100,000 persons (assessed on a district basis)	5	3	5	0
Child Care Centre	100 aided places per 25,000 persons[#] (assessed by SWD on a local basis)	2,040 places	582 places	782 places	- 1,258[~] places (A long-term target assessed on a wider spatial context by SWD[~])

Type of Facilities	Hong Kong Planning Standards and Guidelines (HKPSG) Requirements	Requirement based on OZP planned population	Provision		Surplus/ Shortfall against OZP planned provision
			Existing Provision	Planned Provision (including Existing Provision)	
Integrated Children and Youth Services Centre	1 for 12,000 persons aged 6-24[#] (assessed by SWD on a local basis)	6	10	10	+ 4
Integrated Family Services Centre	1 for 100,000 to 150,000 persons[#] (assessed by SWD on a service boundary basis)	3	3	4	+ 1
District Elderly Community Centres	One in each new development area with a population of around 170,000 or above[#] (assessed by SWD)	N.A.	2	3	N.A.

Type of Facilities	Hong Kong Planning Standards and Guidelines (HKPSG) Requirements	Requirement based on OZP planned population	Provision		Surplus/ Shortfall against OZP planned provision
			Existing Provision	Planned Provision (including Existing Provision)	
Neighbourhood Elderly Centres	One in a cluster of new and redeveloped housing areas with a population of 15,000 to 20,000 persons, including both public and private housing[#] (assessed by SWD)	N.A.	10	13	N.A.
Community Care Services (CCS) Facilities	17.2 subsidised places per 1,000 elderly persons aged 65 or above[#] (assessed by SWD on a district basis)	2,857 places	1,162 places	1,998 places	- 859 places[~] (A long-term target assessed on a wider spatial context by SWD[~])

Type of Facilities	Hong Kong Planning Standards and Guidelines (HKPSG) Requirements	Requirement based on OZP planned population	Provision		Surplus/ Shortfall against OZP planned provision
			Existing Provision	Planned Provision (including Existing Provision)	
Residential Care Homes for the Elderly	21.3 subsidised beds per 1,000 elderly persons aged 65 or above[#] (assessed by SWD on a cluster basis)	3,538 beds	1,751 beds	1,871 beds	-1,667 beds[~] (A long-term target assessed on a wider spatial context by SWD[~])
Pre-school Rehabilitation Services	23 subvented places per 1,000 children aged 0 – 6[#] (assessed by SWD on a district basis)	361 places	519 places	609 places	+248 places[~] (A long-term target assessed on a wider spatial context by SWD[~])
Day Rehabilitation Services	23 subvented places per 10,000 persons aged 15 or above[#] (assessed by SWD on a district basis)	995 places	715 places	795 places	-200 places[~] (A long-term target assessed on a wider spatial context by SWD[~])

Type of Facilities	Hong Kong Planning Standards and Guidelines (HKPSG) Requirements	Requirement based on OZP planned population	Provision		Surplus/ Shortfall against OZP planned provision
			Existing Provision	Planned Provision (including Existing Provision)	
Residential Care Services	36 subvented places per 10,000 persons aged 15 or above[#] (assessed by SWD on a cluster basis)	1,558 places	1,027 places	1,027 places	-531 places[~] (A long-term target assessed on a wider spatial context by SWD[~])
Community Rehabilitation Day Centre	1 centre per 420,000 persons[#] (assessed by SWD on a district basis)	1	1	1	0
District Support Centre for Persons with Disabilities	1 centre per 280,000 persons[#] (assessed by SWD on a district basis)	1	0	1	0

Type of Facilities	Hong Kong Planning Standards and Guidelines (HKPSG) Requirements	Requirement based on OZP planned population	Provision		Surplus/ Shortfall against OZP planned provision
			Existing Provision	Planned Provision (including Existing Provision)	
Integrated Community Centre for Mental Wellness	1 standard scale centre per 310,000 persons[#] (assessed by SWD on a district basis)	1.5	1.9	2.4	+ 1

Note:
The planned resident population is about 508,000. If including transients, the overall planned population is about 531,600. All population figures have been adjusted to the nearest hundred.

Remarks:

The requirements exclude planned population of transients.

~ The deficit in provision is based on OZP planned population while the Social Welfare Department (SWD) adopts a wider spatial context/cluster in the assessment of provision for such facilities. In applying the population-based planning standards, the distribution of welfare facilities, supply in different districts, service demand as a result of the population growth and demographic changes as well as the provision of different welfare facilities will be considered. As the HKPSG requirements for these facilities are long-term goals, the actual provision will be subject to consideration of the SWD in the planning and development process as appropriate. The Government has been adopting a multi-pronged approach with long-, medium- and short-term strategies to identify suitable sites or premises for the provision of more welfare services which are in acute demand.

September 2023


大埔滘自然護理區
TAI PO KAU NATURE RESERVE
城門郊野公園
SHING MUN COUNTRY PARK
沙田海
SHA TIN HOI
(TIDE COVE)
馬鞍山郊野公園
MA ON SHAN COUNTRY PARK
獅子山郊野公園
LION ROCK COUNTRY PARK
金山郊野公園
KAM SHAN COUNTRY PARK
獅子山
LION ROCK
Shing Mun River Channel
SHING MUN TUNNEL
LOWER SHING MUN RESERVOIR
KOWLOON RESERVOIR
EAGLES NEST TUNNEL
LION ROCK TUNNEL
TATE'S CAIRN TUNNEL
TAI PO ROAD
SHA TIN HEIGHTS
SUGAR LOAF PEAK (SHUI CHUEN O)
CROWN POINT
AMAH ROCK
BEACON HILL
TATE'S CAIRN (TAI LO SHAN)
SHA TIN PASS
TATE'S PASS
TURRET HILL (NUI PO SHAN)
TURRET PASS (NUI PO AU)
NEEDLE HILL (CHAM SHAN)
LEAD MINE PASS
GRASSY HILL
MA ON SHAN
SHA TIN
TAI SHUI HANG
SHEK MUN
NGAU AU
TSIM MEI FUNG
MAU TSO NGAM
KWUN YAM SHAN
TUNG YEUNG SHAN
TSZ WAN SHAN (TEMPLE HILL)
TAI TSO NGAM
FA SAM HANG
SHEK NGA PUI
LO SHUE TIN
NGAU AU SHAN
FU YUNG PEI
KONG PUI TSUEN
MAN TAU TUN
SHA TIN TAU KOK
SHA TIN WAI
SHA TIN CENTRE
TAI WAI
KAU TO SHAN
COVE HILL
SHEK MUN
RACE COURSE
SEWAGE TREATMENT WORKS
WATER TREATMENT WORKS
A KUNG KOK
TAI SHEK KWU
TSO TU HA
KWUN YAM SHAN TSUEN
TATE'S RIDGE
POLICE POST
TAI WAI
SHA TIN CENTRE
SHA TIN WAI
SHA TIN TAU KOK
SHA TIN HEIGHTS
SHA TIN PASS
TAI TSO NGAM
MAN TAU TUN
KONG PUI TSUEN
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TUNG YEUNG SHAN
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TURRET PASS (NUI PO AU)
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TSO TU HA
KWUN YAM SHAN TSUEN
TATE'S RIDGE
POLICE POST
TATE'S PAS



圖例 NOTATION

ZONES		地帶
COMMERCIAL	C	商業
COMPREHENSIVE DEVELOPMENT AREA	CDA	綜合發展區
COMMERCIAL / RESIDENTIAL	C/R	商業 / 住宅
RESIDENTIAL (GROUP A)	R(A)	住宅（甲類）
RESIDENTIAL (GROUP B)	R(B)	住宅（乙類）
RESIDENTIAL (GROUP C)	R(C)	住宅（丙類）
VILLAGE TYPE DEVELOPMENT	V	鄉村式發展
INDUSTRIAL	I	工業
GOVERNMENT, INSTITUTION OR COMMUNITY	G/IC	政府、機構或社區
OPEN SPACE	O	休憩用地
OTHER SPECIFIED USES	OU	其他指定用途
GREEN BELT	GB	綠化地帶

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

MISCELLANEOUS	其他
BOUNDARY OF PLANNING SCHEME	規劃範圍界線
PLANNING AREA NUMBER	規劃區編號
BUILDING HEIGHT CONTROL ZONE BOUNDARY	建築物高度管制區界線
MAXIMUM BUILDING HEIGHT (IN METRES ABOVE PRINCIPAL DATUM)	最高建築物高度（在主水平基準上若干米）
MAXIMUM BUILDING HEIGHT (IN NUMBER OF STOREYS)	最高建築物高度（樓層數目）
PETROL FILLING STATION	加油站

土地用途及面積一覽表 SCHEDULE OF USES AND AREAS

USES	大約面積及百分率 APPROXIMATE AREA & % 公頃 HECTARES	% 百分率	用途
COMMERCIAL	8.61	0.31	商業
COMPREHENSIVE DEVELOPMENT AREA	15.17	0.55	綜合發展區
COMMERCIAL / RESIDENTIAL	14.55	0.52	商業 / 住宅
RESIDENTIAL (GROUP A)	257.51	9.27	住宅（甲類）
RESIDENTIAL (GROUP B)	195.85	7.05	住宅（乙類）
RESIDENTIAL (GROUP C)	0.95	0.03	住宅（丙類）
VILLAGE TYPE DEVELOPMENT	190.16	6.85	鄉村式發展
INDUSTRIAL	40.33	1.45	工業
GOVERNMENT, INSTITUTION OR COMMUNITY	291.70	10.51	政府、機構或社區
OPEN SPACE	252.70	9.10	休憩用地
OTHER SPECIFIED USES	216.21	7.79	其他指定用途
GREEN BELT	975.51	35.13	綠化地帶
RIVER CHANNEL	97.57	3.51	河道
MAJOR ROAD ETC.	219.95	7.93	主要道路等
TOTAL PLANNING SCHEME AREA	2776.77	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/ST/36 的修訂
AMENDMENTS TO APPROVED PLAN No. S/ST/36

按照城市規劃條例第 5 條展示的修訂
AMENDMENTS EXHIBITED UNDER SECTION 5 OF THE TOWN PLANNING ORDINANCE

- 修訂項目A項 AMENDMENT ITEM A
- 修訂項目B項 AMENDMENT ITEM B
- 修訂項目C1項 AMENDMENT ITEM C1
- 修訂項目C2項 AMENDMENT ITEM C2
- 修訂項目D項 AMENDMENT ITEM D
- 修訂項目E項 AMENDMENT ITEM E
- 修訂項目F項 AMENDMENT ITEM F
- 修訂項目G項 AMENDMENT ITEM G
- 修訂項目H1項 AMENDMENT ITEM H1
- 修訂項目H2項 AMENDMENT ITEM H2
- 修訂項目J項 AMENDMENT ITEM J
- 修訂項目K項 AMENDMENT ITEM K

（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沙田分區計劃大綱圖
TOWN PLANNING ORDINANCE, HONG KONG TOWN PLANNING BOARD
SHA TIN - OUTLINE ZONING PLAN

SCALE 1 : 10 000 比例尺

* METRES 250 0 500 1 000 1 500 METRES *

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/ST/36A

~~APPROVED~~ *DRAFT* SHA TIN OUTLINE ZONING PLAN NO. S/ST/36*A*

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

NOTES

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

(1) These Notes show the uses or developments on land falling within the boundaries of the Plan which are always permitted and which may be permitted by the Town Planning Board, with or without conditions, on application. Where permission from the Town Planning Board for a use or development is required, the application for such permission should be made in a prescribed form. The application shall be addressed to the Secretary of the Town Planning Board, from whom the prescribed application form may be obtained.

(2) Any use or development which is always permitted or may be permitted in accordance with these Notes must also conform to any other relevant legislation, the conditions of the Government lease concerned, and any other Government requirements, as may be applicable.

(3) (a) No action is required to make the existing use of any land or building conform to this Plan until there is a material change of use or the building is redeveloped.

(b) Any material change of use or any other development (except minor alteration and/or modification to the development of the land or building in respect of the existing use which is always permitted) or redevelopment must be always permitted in terms of the Plan or, if permission is required, in accordance with the permission granted by the Town Planning Board.

(c) For the purposes of subparagraph (a) above, "existing use of any land or building" means -

(i) before the publication in the Gazette of the notice of the first statutory plan covering the land or building (hereafter referred as 'the first plan'),

- a use in existence before the publication of the first plan which has continued since it came into existence; or

- a use or a change of use approved under the Buildings Ordinance which relates to an existing building; and

(ii) after the publication of the first plan,

- a use permitted under a plan which was effected during the effective period of that plan and has continued since it was effected; or

- a use or a change of use approved under the Buildings Ordinance which relates to an existing building and permitted under a plan prevailing at the time when the use or change of use was approved.

(4) Except as otherwise specified by the Town Planning Board, when a use or material change of use is effected or a development or redevelopment is undertaken, as always permitted in terms of the Plan or in accordance with a permission granted by the Town

Planning Board, all permissions granted by the Town Planning Board in respect of the site of the use or material change of use or development or redevelopment shall lapse.

(5) Road junctions, alignments of roads and railway tracks, and boundaries between zones may be subject to minor adjustments as detailed planning proceeds.

(6) Temporary uses (expected to be 5 years or less) of any land or building are always permitted as long as they comply with any other relevant legislation, the conditions of the Government lease concerned, and any other Government requirements, and there is no need for these to conform to the zoned use or these Notes. For temporary uses expected to be over 5 years, the uses must conform to the zoned use or these Notes.

(7) The following uses or developments are always permitted on land falling within the boundaries of the Plan except where the uses or developments are specified in Column 2 of the Notes of individual zones:

(a) provision, maintenance or repair of plant nursery, amenity planting, open space, rain shelter, refreshment kiosk, road, bus/public light bus stop or lay-by, cycle track, taxi rank, nullah, public utility pipeline, electricity mast, lamp pole, telephone booth, telecommunications radio base station, automatic teller machine and shrine;

(b) geotechnical works, local public works, road works, sewerage works, drainage works, environmental improvement works, marine related facilities, waterworks (excluding works on service reservoir) and such other public works co-ordinated or implemented by Government; and

(c) maintenance or repair of watercourse and grave.

(8) In any area shown as 'Road', all uses or developments except those specified in paragraph (7) above and those specified below require permission from the Town Planning Board :

toll plaza, on-street vehicle park and railway track.

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

(10) In these Notes,

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

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

~~**APPROVED**~~ ***DRAFT*** SHA TIN OUTLINE ZONING PLAN NO. S/ST/36***A***

Schedule of Uses

	Page
COMMERCIAL	1
COMPREHENSIVE DEVELOPMENT AREA	~~**2**~~ ***3***
COMPREHENSIVE DEVELOPMENT AREA (1)	~~**4**~~ ***5***
COMMERCIAL/RESIDENTIAL	~~**7**~~ ***8***
RESIDENTIAL (GROUP A)	~~**8**~~ ***9***
RESIDENTIAL (GROUP B)	~~**12**~~ ***13***
RESIDENTIAL (GROUP C)	~~**14**~~ ***15***
VILLAGE TYPE DEVELOPMENT	~~**16**~~ ***17***
INDUSTRIAL	~~**18**~~ ***19***
GOVERNMENT, INSTITUTION OR COMMUNITY	~~**20**~~ ***21***
OPEN SPACE	~~**22**~~ ***23***
OTHER SPECIFIED USES	~~**23**~~ ***24***
GREEN BELT	~~**35**~~ ***37***

S/ST/36***A***

COMMERCIAL

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 Eating Place Educational Institution Exhibition or Convention Hall Government Use (not elsewhere specified) Hotel Information Technology and Telecommunications Industries Institutional Use (not elsewhere specified) Library Off-course Betting Centre Office Place of Entertainment Place of Recreation, Sports or Culture Private Club Public Clinic Public Convenience Public Transport Terminus or Station Public Utility Installation Public Vehicle Park (excluding container vehicle) Recyclable Collection Centre Religious Institution School Shop and Services Social Welfare Facility Training Centre Utility Installation for Private Project	Broadcasting, Television and/or Film Studio Flat Government Refuse Collection Point Hospital House Petrol Filling Station Residential Institution

Planning Intention

This zone is intended primarily for commercial developments, which may include shop, services, place of entertainment and eating place, functioning mainly as local shopping centre serving the immediate neighbourhood.

Remarks

(a) No new development, or addition, alteration and/or modification to or redevelopment of an existing building shall result in a total development and/or redevelopment in excess of the maximum building height in terms of metres above Principal Datum as stipulated on the Plan, or the height of the existing building, whichever is the greater.

(b) On land designated "Commercial (1)" ("C(1)"), no new development, or addition, alteration and/or modification to or redevelopment of an existing building shall result in a total development and/or redevelopment in excess of a maximum plot ratio of 9.5, or the plot ratio of the existing building, whichever is the greater.

(c) On land designated "Commercial (2)" ("C(2)"), 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 gross floor area of 32,000m^2 or the gross floor area of the existing building, whichever is the greater.

(d) In determining the maximum plot ratio/gross floor area for the purposes of paragraph (b) and (c) above, any floor space that is constructed or intended for use solely as car park, loading/unloading bay, plant room and caretaker's office, provided such uses and facilities are ancillary and directly related to the development or redevelopment, may be disregarded.

(e) In determining the maximum plot ratio for the purposes of paragraph (b) above, any floor space that is constructed or intended for use solely as Government, institution or community facilities, as required by the Government may be disregarded.

(f) Where the permitted plot ratio/gross floor area 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 plot ratio/gross floor area for the building on land to which paragraphs (b) and (c) 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 plot ratio/gross floor area specified in paragraphs (b) and (c) above may thereby be exceeded.

(g) Based on the individual merits of a development or redevelopment proposal, minor relaxation of the building height and/or plot ratio/gross floor area restrictions stated in paragraphs (a) to (c) above may be considered by the Town Planning Board on application under section 16 of the Town Planning Ordinance.

COMPREHENSIVE DEVELOPMENT AREA

Column 1 Uses always permitted	Column 2 Uses that may be permitted with or without conditions on application to the Town Planning Board
	Flat Government Refuse Collection Point Government Use (not elsewhere specified) House Place of Recreation, Sports or Culture Private Club Public Utility Installation Social Welfare Facility Utility Installation for Private Project

Planning Intention

This zone is intended for comprehensive development/redevelopment of the area for residential use with the provision of open space and other supporting facilities. The zoning is to facilitate appropriate planning control over the development mix, scale, design and layout of development, taking account of various environmental, traffic, infrastructure and other constraints.

Remarks

(a) Pursuant to Section 4A(2) of the Town Planning Ordinance, and except as otherwise expressly provided that it is not required by the Town Planning Board, an applicant for permission for development on land designated "Comprehensive Development Area" shall prepare a Master Layout Plan for the approval of the Town Planning Board and include therein the following information:

(i) the area of the proposed land uses, the nature, position, dimension and heights of all buildings to be erected in the area;

(ii) the proposed total site area and gross floor area for various uses, total number of flats and flat size, where applicable;

(iii) the details and extent of Government, institution or community (GIC) and recreational facilities, public transport and parking facilities, and open space to be provided within the area;

(iv) the alignment, widths and levels of any roads proposed to be constructed within the area;

(v) the landscaping and urban design proposals within the area;

(vi) programmes of development in detail;

(vii) an environmental assessment report to examine any possible environmental problems that may be caused to or by the proposed development during and after construction and the proposed mitigation measures to tackle them;

(Please see next page)

COMPREHENSIVE DEVELOPMENT AREA (Cont'd)

Remarks (Cont'd)

(viii) a drainage and sewerage impact assessment report to examine any possible drainage and sewerage problems that may be caused by the proposed development and the proposed mitigation measures to tackle them;

(ix) a traffic impact assessment report to examine any possible traffic problems that may be caused by the proposed development and the proposed mitigation measures to tackle them; and

(x) such other information as may be required by the Town Planning Board.

(b) The Master Layout Plan should be supported by an explanatory statement which contains an adequate explanation of the development proposal, including such information as land tenure, relevant lease conditions, existing conditions of the site, the character of the site in relation to the surrounding areas, principles of layout design, major development parameters, design population, types of GIC facilities, and recreational and open space facilities.

(c) No new development, or addition, alteration and/or modification to or redevelopment of an existing building shall result in a total development and/or redevelopment in excess of a maximum gross floor area of 52,156m^2.

(d) In determining the maximum gross floor area for the purposes of paragraph (c) above, any floor space that is constructed or intended for use solely as car park, loading/unloading bay, plant room and caretaker's office, or caretaker's quarters and recreational facilities for the use and benefit of all the owners or occupiers of the domestic building or domestic part of the building, provided such uses and facilities are ancillary and directly related to the development or redevelopment, may be disregarded.

(e) Based on the individual merits of a development or redevelopment proposal, minor relaxation of the gross floor area restriction stated in paragraph (c) above may be considered by the Town Planning Board on application under section 16 of the Town Planning Ordinance.

COMPREHENSIVE DEVELOPMENT AREA (1)

Column 1 Uses always permitted	Column 2 Uses that may be permitted with or without conditions on application to the Town Planning Board
	Commercial Bathhouse/ Massage Establishment Eating Place Educational Institution Exhibition or Convention Hall Flat Government Refuse Collection Point Government Use (not elsewhere specified) Hotel House Library Off-course Betting Centre Office Petrol Filling Station Place of Entertainment Place of Recreation, Sports or Culture Private Club Public Clinic Public Convenience Public Transport Terminus or Station Public Utility Installation Public Vehicle Park (excluding container vehicle) Railway Depot Railway Station Religious Institution Residential Institution School Shop and Services Social Welfare Facility Utility Installation for Private Project

Planning Intention

This zone is intended for comprehensive development/redevelopment of the area for residential and/or commercial uses with the provision of open space and other supporting facilities. The zoning is to facilitate appropriate planning control over the development mix, scale, design and layout of development, taking account of various environmental, traffic, infrastructure and other constraints.

(Please see next page)

COMPREHENSIVE DEVELOPMENT AREA (1) (Cont'd)

Remarks

(a) Pursuant to Section 4A(2) of the Town Planning Ordinance, and except as otherwise expressly provided that it is not required by the Town Planning Board, an applicant for permission for development on land designated "Comprehensive Development Area (1)" shall prepare a Master Layout Plan for the approval of the Town Planning Board and include therein the following information:

(i) the area of the proposed land uses, the nature, position, dimensions and heights of all buildings to be erected in the area;

(ii) the proposed total site area and gross floor area for various uses, total number of flats and flat size, where applicable;

(iii) the details and extent of Government, institution or community (GIC) and recreational facilities, public transport and parking facilities, and open space to be provided within the area;

(iv) the alignment, widths and levels of any roads proposed to be constructed within the area;

(v) the landscaping and urban design proposals within the area;

(vi) programmes of development in detail;

(vii) an environmental assessment report to examine any possible environmental problems that may be caused to or by the proposed development during and after construction and the proposed mitigation measures to tackle them;

(viii) a drainage and sewerage impact assessment report to examine any possible drainage and sewerage problems that may be caused by the proposed development and the proposed mitigation measures to tackle them;

(ix) a traffic impact assessment report to examine any possible traffic problems that may be caused by the proposed development and the proposed mitigation measures to tackle them;

(x) a visual impact assessment report to examine any possible visual impacts that may be caused by the proposed development and the proposed mitigation measures to tackle them; and

(xi) such other information as may be required by the Town Planning Board.

(Please see next page)

COMPREHENSIVE DEVELOPMENT AREA (1) (Cont'd)

Remarks (Cont'd)

(b) The Master Layout Plan should be supported by an explanatory statement which contains an adequate explanation of the development proposal, including such information as land tenure, relevant lease conditions, existing conditions of the site, the character of the site in relation to the surrounding areas, principles of layout design, major development parameters, design population, types of GIC facilities, and recreational and open space facilities.

(c) No new development, or addition, alteration and/or modification to or redevelopment of an existing building shall result in a total development and/or redevelopment in excess of the maximum gross floor area specified below:

Site	Maximum Gross Floor Area (GFA)
CDA(1) at East Rail Fo Tan Station and the Adjoining Area	208,600m² (the maximum domestic GFA shall not exceed 191,100m²)
CDA(1) at Ma On Shan Rail Tai Wai Station and the Adjoining Area	253,590m² (the maximum domestic GFA shall not exceed 219,090 m²)

(d) In determining the maximum gross floor area for the purposes of paragraph (c) above, any floor space that is constructed or intended for use solely as car park, loading/unloading bay, plant room and caretaker's office, or caretaker's quarters and recreational facilities for the use and benefit of all the owners or occupiers of the domestic building or domestic part of the building, provided such uses and facilities are ancillary and directly related to the development or redevelopment, may be disregarded. Any floor space that is constructed or intended for use solely as public transport facilities, railway station, railway depot, schools or Government, institution, community or social welfare facilities, as required by the Government, may also be disregarded.

(e) Based on the individual merits of a development or redevelopment proposal, minor relaxation of the gross floor area restriction stated in paragraph (c) above may be considered by the Town Planning Board on application under section 16 of the Town Planning Ordinance.

COMMERCIAL/RESIDENTIAL

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 Eating Place Educational Institution (in a commercial building or in the purpose-designed non-residential portion[@] of an existing building only) Exhibition or Convention Hall Flat Government Use (not elsewhere specified) Hotel House Information Technology and Telecommunications Industries (in a commercial building or in the purpose-designed non-residential portion[@] of an existing building only) Library Off-course Betting Centre Office Place of Entertainment Place of Recreation, Sports or Culture Private Club Public Clinic Public Transport Terminus or Station Public Utility Installation Public Vehicle Park (excluding container vehicle) Residential Institution School (in free-standing purpose-designed school building, in a commercial building or in the purpose-designed non-residential portion[@] of an existing building only) Shop and Services Social Welfare Facility Training Centre Utility Installation for Private Project	Broadcasting, Television and/or Film Studio Commercial Bathhouse/ Massage Establishment Educational Institution (not elsewhere specified) Government Refuse Collection Point Hospital Institutional Use (not elsewhere specified) Petrol Filling Station Public Convenience Recyclable Collection Centre Religious Institution School (not elsewhere specified)

[@] *Excluding floors containing wholly or mainly car parking, loading/unloading bay and/or plant room*

Planning Intention

This zone is intended primarily for commercial and/or residential development. Commercial, residential and mixed commercial/residential uses are always permitted.

RESIDENTIAL (GROUP A)

Column 1 Uses always permitted	Column 2 Uses that may be permitted with or without conditions on application to the Town Planning Board
Ambulance Depot Flat Government Use (not elsewhere specified) House Library Market Place of Recreation, Sports or Culture Public Clinic Public Transport Terminus or Station (excluding open-air terminus or station) Public Vehicle Park (excluding container vehicle) (on land designated "R(A)8" ***and "R(A)10"*** only) Residential Institution School (in free-standing purpose-designed building only) Social Welfare Facility Utility Installation for Private Project	Commercial Bathhouse/ Massage Establishment Eating Place Educational Institution Exhibition or Convention Hall Government Refuse Collection Point Hospital Hotel Institutional Use (not elsewhere specified) Office Petrol Filling Station Place of Entertainment Private Club Public Convenience Public Transport Terminus or Station (not elsewhere specified) Public Utility Installation Public Vehicle Park (excluding container vehicle) (not elsewhere specified) Religious Institution School (not elsewhere specified) Shop and Services (not elsewhere specified) Training Centre

(Please see next page)

RESIDENTIAL (GROUP A) (Cont'd)

Column 1 Uses always permitted	Column 2 Uses that may be permitted with or without conditions on application to the Town Planning Board
In addition, the following uses are always permitted (a) on the lowest three floors of a building, taken to include basements; or (b) in the purpose-designed non-residential portion of an existing building, both excluding floors containing wholly or mainly car parking, loading/unloading bays and/or plant room:	
Eating Place Educational Institution Institutional Use (not elsewhere specified) Off-course Betting Centre Office Place of Entertainment Private Club Public Convenience Recyclable Collection Centre School Shop and Services Training Centre	

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

(a) ***No new development, or addition, alteration and/or modification to or redevelopment of an existing building shall result in a total development and/or redevelopment in excess of the maximum building height in terms of number of storeys or metres above Principal Datum as stipulated on the Plan, or the height of the existing building, whichever is the greater.***

~~**(a)**~~***(b)*** On land designated "Residential (Group A)1" ("R(A)1"), no new development, or addition, alteration and/or modification to or redevelopment of an existing building shall result in a total development and/or redevelopment in excess of a maximum gross floor area ~~**(GFA)**~~ of 501,800m^2 ~~**and a maximum building height in terms of number of storeys or metres above Principal Datum as stipulated on the Plan,**~~ or the ~~**GFA**~~ ***gross floor area*** ~~**and height**~~ of the existing building, whichever is the greater.

RESIDENTIAL (GROUP A) (Cont'd)

Remarks (Cont'd)

~~**(b)**~~***(c)*** On land designated "Residential (Group A)2" ("R(A)2"), no new development, or addition, alteration and/or modification to or redevelopment of an existing building shall result in a total development and/or redevelopment in excess of a maximum ~~**GFA**~~ g***ross floor area*** of 194,500m^2 ~~**and a maximum building height in terms of metres above Principal Datum as stipulated on the Plan,**~~ or the ~~**GFA**~~ g***ross floor area*** ~~**and height**~~ of the existing building, whichever is the greater.

~~**(c)**~~***(d)*** On land designated "Residential (Group A)3" ("R(A)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 a maximum ~~**GFA**~~ g***ross floor area*** of 43,600m^2 ~~**and a maximum building height in terms of metres above Principal Datum as stipulated on the Plan,**~~ or the ~~**GFA**~~ g***ross floor area*** ~~**and height**~~ of the existing building, whichever is the greater.

~~**(d)**~~***(e)*** On land designated "Residential (Group A)4" ("R(A)4"), 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 ~~**GFA**~~ g***ross floor area*** of 234,000m^2, non-domestic GFA of 19,500m^2 ~~**and a maximum building height in terms of metres above Principal Datum as stipulated on the Plan,**~~ or the ~~**GFA**~~ g***ross floor area*** ~~***and height***~~ of the existing building, whichever is the greater.

~~**(e)**~~***(f)*** On land designated "Residential (Group A)5" ("R(A)5"), no new development, or addition, alteration and/or modification to or redevelopment of an existing building shall result in a total development and/or redevelopment in excess of a maximum ~~**GFA**~~ g***ross floor area*** of 38,580m^2 ~~**and a maximum building height in terms of metres above Principal Datum as stipulated on the Plan,**~~ or the ~~**GFA**~~ g***ross floor area*** ~~**and height**~~ of the existing building, whichever is the greater.

~~**(f)**~~***(g)*** On land designated "Residential (Group A)6" ("R(A)6"), no new development, or addition, alteration and/or modification to or redevelopment of an existing building shall result in a total development and/or redevelopment in excess of a maximum ~~**GFA**~~ g***ross floor area*** of 26,240m^2 ~~**and a maximum building height in terms of metres above Principal Datum as stipulated on the Plan,**~~ or the ~~**GFA**~~ g***ross floor area*** ~~**and height**~~ of the existing building, whichever is the greater.

~~**(g)**~~***(h)*** On land designated "Residential (Group A)7" ("R(A)7"), no new development, or addition, alteration and/or modification to or redevelopment of an existing building shall result in a total development and/or redevelopment in excess of a maximum ~~**GFA**~~ g***ross floor area*** of 90,655m^2 ~~**and a maximum building height in terms of metres above Principal Datum as stipulated on the Plan,**~~ or the ~~**GFA**~~ g***ross floor area*** ~~**and height**~~ of the existing building, whichever is the greater.

(Please see next page)

RESIDENTIAL (GROUP A) (Cont'd)

Remarks (Cont'd)

~~(h)~~***(i)*** On land designated "Residential (Group A)8" ("R(A)8"), no new development, or addition, alteration and/or modification to or redevelopment of an existing building shall result in a total development and/or redevelopment in excess of a maximum plot ratio of 6.7 ~~**and a maximum building height in terms of metres above Principal Datum as stipulated on the Plan,**~~ or the plot ratio ~~**and height**~~ of the existing building, whichever is the greater.

(j) On land designated "Residential (Group A)9" ("R(A)9"), no new development, or addition, alteration and/or modification to or redevelopment of an existing building shall result in a total development and/or redevelopment in excess of a maximum plot ratio of 5, or the plot ratio of the existing building, whichever is the greater.

(k) On land designated "Residential (Group A)10" ("R(A)10"), no new development, or addition, alteration and/or modification to or redevelopment of an existing building shall result in a total development and/or redevelopment in excess of a maximum plot ratio of 6, or the plot ratio of the existing building, whichever is the greater.

~~(i)~~***(l)*** In determining the maximum number of storeys for the purpose of paragraph ~~(a)~~ ***(b)*** above, any basement floor(s) may be disregarded.

~~(j)~~***(m)*** In determining the maximum ~~**GFA**~~ g***ross floor area***/plot ratio for the purposes of paragraphs ~~(a)~~***(b)*** to ~~(h)~~***(k)*** above, any floor space that is constructed or intended for use solely as car park, loading/unloading bay, plant room and caretaker's office, or caretaker's quarters and recreational facilities for the use and benefit of all the owners or occupiers of the domestic building or domestic part of the building, provided such uses and facilities are ancillary and directly related to the development or redevelopment, may be disregarded.

~~(k)~~***(n)*** In determining the maximum ~~**GFA**~~ g***ross floor area*** for the purposes of paragraph ~~(g)~~***(h)*** above, any floor space that is constructed or intended for use solely as public transport facilities, railway station, railway depot, or Government, institution or community facilities, as required by the Government, may be disregarded.

~~(l)~~***(o)*** In determining the maximum plot ratio for the purposes of paragraph***s*** (i) ***and (k)*** above, any floor space that is constructed or intended for use solely as ~~**GIC**~~***Government, institution or community*** facilities, as required by the Government may be disregarded.

~~(m)~~***(p)*** Where the permitted plot ratio/~~**GFA**~~ g***ross floor area*** 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 plot ratio/~~**GFA**~~ g***ross floor area*** for the building on land to which paragraphs ~~(a)~~***(b)*** to ~~(h)~~***(k)*** 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 plot ratio/~~**GFA**~~ g***ross floor area*** specified in paragraphs ~~(a)~~***(b)*** to ~~(h)~~***(k)*** above may thereby be exceeded.

~~(n)~~***(q)*** Based on the individual merits of a development or redevelopment proposal, minor relaxation of the building height and/or plot ratio/~~**GFA**~~ g***ross floor area*** restrictions stated in paragraphs (a) to ~~(h)~~***(k)*** above may be considered by the Town Planning Board on application under section 16 of the Town Planning Ordinance.

RESIDENTIAL (GROUP B)

Column 1 Uses always permitted	Column 2 Uses that may be permitted with or without conditions on application to the Town Planning Board
Flat Government Use (Police Reporting Centre, Post Office Only) House Library Residential Institution School (in free-standing purpose-designed building only) Utility Installation for Private Project	Ambulance Depot Eating Place Educational Institution Government Refuse Collection Point Government Use (not elsewhere specified) Hospital Hotel Institutional Use (not elsewhere specified) Off-course Betting Centre Office Petrol Filling Station Place of Entertainment Place of Recreation, Sports or Culture Private Club Public Clinic Public Convenience Public Transport Terminus or Station Public Utility Installation Public Vehicle Park (excluding container vehicle) Recyclable Collection Centre Religious Institution School (not elsewhere specified) Shop and Services Social Welfare Facility Training Centre

Planning Intention

This zone is intended primarily for medium-density residential developments where commercial uses serving the residential neighbourhood may be permitted on application to the Town Planning Board.

Remarks

(a) On land designated "Residential (Group B)1", no new development, or addition, alteration and/or modification to or redevelopment of an existing building shall result in a total development and/or redevelopment in excess of a maximum plot ratio of 3.

(b) On land designated "Residential (Group B)2", no new development, or addition, alteration and/or modification to or redevelopment of an existing building shall result in a total development and/or redevelopment in excess of a maximum plot ratio of 3.6 and a maximum building height in terms of metres above Principal Datum as stipulated on the Plan.

(c) On land designated "Residential (Group B)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 a maximum plot ratio of 2.5 and a maximum building height in terms of metres above Principal Datum as stipulated on the Plan.

(Please see next page)

RESIDENTIAL (GROUP B) (Cont'd)

Remarks (Cont'd)

(d) In determining the maximum plot ratio for the purposes of paragraphs (a) to (c) above, any floor space that is constructed or intended for use solely as car park, loading/unloading bay, plant room and caretaker's office, or caretaker's quarters and recreational facilities for the use and benefit of all the owners and occupiers of the domestic building or domestic part of the building, provided such uses and facilities are ancillary and directly related to the development or redevelopment, may be disregarded.

(e) Based on the individual merits of a development or redevelopment proposal, minor relaxation of the building height and/or plot ratio restrictions stated in paragraphs (a) to (c) above may be considered by the Town Planning Board on application under section 16 of the Town Planning Ordinance.

RESIDENTIAL (GROUP C)

Column 1 Uses always permitted	Column 2 Uses that may be permitted with or without conditions on application to the Town Planning Board
Flat Government Use (Police Reporting Centre, Post Office Only) House Utility Installation for Private Project	Ambulance Depot Eating Place Educational Institution Government Refuse Collection Point Government Use (not elsewhere specified) Hospital Hotel Institutional Use (not elsewhere specified) Library Petrol Filling Station Place of Recreation, Sports or Culture Private Club Public Clinic Public Convenience Public Transport Terminus or Station Public Utility Installation Public Vehicle Park (excluding container vehicle) Recyclable Collection Centre Religious Institution Residential Institution School Shop and Services Social Welfare Facility Training Centre

Planning Intention

This zone is intended primarily for low-rise, low-density residential developments where commercial uses serving the residential neighbourhood may be permitted on application to the Town Planning Board.

Remarks

(a) No new development, or addition, alteration and/or modification to or redevelopment of an existing building shall result in a total development and/or redevelopment in excess of the maximum plot ratio, site coverage and building height specified below, or the plot ratio, site coverage and height of the existing building, whichever is the greater: -

(Please see next page)

RESIDENTIAL (GROUP C) (Cont'd)

Remarks (Cont'd)

Sub-area	Maximum Plot Ratio	Maximum Site Coverage	Number of Storeys
R(C)1	0.6	25 %	--
R(C)2	1	50 %	2 storeys including carport
R(C)3	0.6	--	3 storeys over one-storey carport

(b) In determining the maximum plot ratio for the purposes of paragraph (a) above, any floor space that is constructed or intended for use solely as car park, loading/unloading bay, plant room and caretaker's office, or caretaker's quarters and recreational facilities for the use and benefit of all the owners or occupiers of the domestic building or domestic part of the building, provided such uses and facilities are ancillary and directly related to the development or redevelopment, may be disregarded.

(c) Based on the individual merits of a development or redevelopment proposal, minor relaxation of the plot ratio/site coverage/building height restrictions stated in paragraph (a) above may be considered by the Town Planning Board on application under section 16 of the Town Planning Ordinance.

VILLAGE TYPE DEVELOPMENT

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

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

Eating Place
Library
School
Shop and Services

Planning Intention

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

(Please see next page)

VILLAGE TYPE DEVELOPMENT (Cont'd)

Remarks

(a) No new development, or addition, alteration and/or modification to or redevelopment of an existing building (except development or redevelopment to those annotated with #) shall result in a total development and/or redevelopment in excess of a maximum building height of 3 storeys (8.23 m) or the height of the existing building, whichever is the greater.

(b) Based on the individual merits of a development or redevelopment proposal, minor relaxation of the building height restriction stated in paragraph (a) above may be considered by the Town Planning Board on application under section 16 of the Town Planning Ordinance.

INDUSTRIAL

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 Art Studio (excluding those involving direct provision of services or goods) Bus Depot Cargo Handling and Forwarding Facility (not elsewhere specified) Eating Place (Canteen, Cooked Food Centre only) Government Refuse Collection Point Government Use (not elsewhere specified) Industrial Use (not elsewhere specified) Information Technology and Telecommunications Industries Office (Audio-visual Recording Studio, Design and Media Production, Office Related to Industrial Use only) Public Convenience Public Transport Terminus or Station Public Utility Installation Public Vehicle Park (excluding container vehicle) Radar, Telecommunications Electronic Microwave Repeater, Television and/or Radio Transmitter Installation Recyclable Collection Centre Research, Design and Development Centre Shop and Services (Motor-vehicle Showroom on ground floor, Service Trades only) Utility Installation for Private Project Vehicle Repair Workshop Warehouse (excluding Dangerous Goods Godown)	Broadcasting, Television and/or Film Studio Cargo Handling and Forwarding Facility (Container Freight Station, free-standing purpose-designed Logistics Centre only) Concrete Batching Plant Dangerous Goods Godown Eating Place (not elsewhere specified) (in wholesale conversion of an existing building only) Educational Institution (in wholesale conversion of an existing building only) Exhibition or Convention Hall Hotel (on land designated "Industrial (1)" only) Industrial Use (Bleaching and Dyeing Factory, Electroplating/Printed Circuit Board Manufacture Factory, Metal Casting and Treatment Factory/Workshop only) Institutional Use (not elsewhere specified) (in wholesale conversion of an existing building only) Off-course Betting Centre Offensive Trades Office (not elsewhere specified) Petrol Filling Station Pier Place of Entertainment (in wholesale conversion of an existing building only) Place of Recreation, Sports or Culture (not elsewhere specified) Private Club Public Clinic (in wholesale conversion of an existing building only) Religious Institution (in wholesale conversion of an existing building only) Shop and Services (not elsewhere specified) (ground floor only, except in wholesale conversion of an existing building and Ancillary Showroom[#] which may be permitted on any floor) Training Centre (in wholesale conversion of an existing building only) Wholesale Trade

(Please see next page)

INDUSTRIAL (Cont'd)

Column 1 Uses always permitted	Column 2 Uses that may be permitted with or without conditions on application To the Town Planning Board
In addition, the following uses are always permitted in the purpose-designed non-industrial portion on the lower floors (except basements and floors containing wholly or mainly car parking, loading/unloading bays and/or plant room) of an existing building, provided that the uses are separated from the industrial uses located above by a buffer floor or floors and no industrial uses are located within the non-industrial portion:	In addition, the following use may be permitted with or without conditions on application to the Town Planning Board in the purpose-designed non-industrial portion on the lower floors (except basements and floors containing wholly or mainly car parking, loading/unloading bays and/or plant room) of an existing building, provided that the use is separated from the industrial uses located above by a buffer floor or floors and no industrial uses are located within the non-industrial portion:
Eating Place Educational Institution Exhibition or Convention Hall Institutional Use (not elsewhere specified) Off-course Betting Centre Office Place of Entertainment Place of Recreation, Sports or Culture Private Club Public Clinic Religious Institution Shop and Services Training Centre	Social Welfare Facility (excluding those involving residential care)

[#] *Ancillary Showroom requiring planning permission refers to showroom use of greater than 20 % of the total usable floor area of an industrial firm in the same premises or building.*

Planning Intention

This zone is intended primarily for general industrial uses to ensure an adequate supply of industrial floor space to meet demand from production-oriented industries. Information technology and telecommunications industries and office related to industrial use are also always permitted in this zone.

GOVERNMENT, INSTITUTION OR COMMUNITY

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

Planning Intention

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

(Please see next page)

GOVERNMENT, INSTITUTION OR COMMUNITY (Cont'd)

Remarks

(a) No new development, or addition, alteration and/or modification to or redevelopment of an existing building shall result in a total development and/or redevelopment in excess of the maximum building height in terms of number of storeys ***or metres above Principal Datum*** as stipulated on the Plan, or the height of the existing building, whichever is the greater.

(b) In determining the maximum number of storeys for the purposes of paragraph (a) above, any basement floor(s) may be disregarded.

(c) Based on the individual merits of a development or redevelopment proposal, minor relaxation of the building height restriction stated in paragraph (a) above may be considered by the Town Planning Board on application under section 16 of the Town Planning Ordinance.

OPEN SPACE

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

Planning Intention

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

OTHER SPECIFIED USES

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

For "Railway Station Development" Only

Ambulance Depot
Commercial Bathhouse/Massage Establishment
Eating Place
Exhibition or Convention Hall
Government Use (not elsewhere specified)
Hotel
Library
Off-course Betting Centre
Office
Place of Entertainment
Private Club
Public Clinic
Public Convenience
Public Transport Terminus or Station
Public Utility Installation
Public Vehicle Park (excluding container vehicle)
Railway Station
Recyclable Collection Centre
School
Shop and Services (not elsewhere specified)
Utility Installation for Private Project

Broadcasting, Television and/or Film Studio
Flat
Government Refuse Collection Point
Petrol Filling Station
Place of Recreation, Sports or Culture
Religious Institution
Shop and Services (Motor-vehicle Showroom only)

Planning Intention

This zone is intended primarily to cater for the development of railway station with commercial facilities.

(Please see next page)

OTHER SPECIFIED USES (Cont'd)

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

For "Railway Depot Comprehensive Development Area" Only

Ambulance Depot
Commercial Bathhouse/Massage Establishment
Eating Place (not elsewhere specified)
Exhibition or Convention Hall
Flat
Government Use (not elsewhere specified)
Library
Off-course Betting Centre
Office
Place of Entertainment
Place of Recreation, Sports or Culture
Private Club
Public Clinic
Public Convenience
Public Transport Terminus or Station
Public Utility Installation
Public Vehicle Park
(excluding container vehicle)
Railway Depot
Religious Institution
Residential Institution
School
Shop and Services (not elsewhere specified)
Social Welfare Facility
Utility Installation for Private Project

Broadcasting, Television and/or Film Studio
Eating Place (Cooked Food Centre only)
Educational Institution
Government Refuse Collection Point
Industrial Use (Printing, Publishing and Allied Industries only)
Petrol Filling Station
Recyclable Collection Centre
Shop and Services (Motor-vehicle Showroom and Hawker Centre only)

Planning Intention

This zone is intended primarily to cater for the development of the railway depot with commercial/residential uses above.

(Please see next page)

OTHER SPECIFIED USES (Cont'd)

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

For "Refuse Transfer Station" Only

Government Use Refuse Disposal Installation (Refuse Transfer Station only)	Industrial Use

Planning Intention

This zone is intended primarily to provide land for the development of a refuse transfer station.

For "Kowloon-Canton Railway" Only

Railway Track Railway Station	Eating Place Government Use Private Club Public Utility Installation Shop and Services (excluding Motor-vehicle Showroom) Utility Installation for Private Project

Planning Intention

This zone is intended primarily to cater for the Kowloon-Canton Railway and the associated facilities.

(Please see next page)

OTHER SPECIFIED USES (Cont'd)

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

For "Business" Only

Schedule I: for open-air development or for building other than industrial or industrial-office building[@]

Ambulance Depot
Commercial Bathhouse/Massage Establishment
Eating Place
Educational Institution
Exhibition or Convention Hall
Government Use (Police Reporting Centre, Post Office only)
Information Technology and Telecommunications Industries
Institutional Use (not elsewhere specified)
Library
Non-polluting Industrial Use (excluding industrial undertakings involving the use/storage of Dangerous Goods[△])
Off-course Betting Centre
Office
Place of Entertainment
Place of Recreation, Sports or Culture
Private Club
Public Clinic
Public Convenience
Public Transport Terminus or Station
Public Utility Installation
Public Vehicle Park (excluding container vehicle)
Radar, Telecommunications Electronic Microwave Repeater, Television and/or Radio Transmitter Installation
Recyclable Collection Centre
Religious Institution
Research, Design and Development Centre
School (excluding free-standing purpose-designed building and kindergarten)
Shop and Services
Training Centre
Utility Installation for Private Project
Broadcasting, Television and/or Film Studio
Cargo Handling and Forwarding Facility
Government Refuse Collection Point
Government Use (not elsewhere specified)
Hotel
Non-polluting Industrial Use (not elsewhere specified)
Petrol Filling Station
School (not elsewhere specified)
Social Welfare Facility (excluding those involving residential care)
Warehouse (excluding Dangerous Goods Godown)
Wholesale Trade

(Please see next page)

OTHER SPECIFIED USES (Cont'd)

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

For "Business" Only (Cont'd)

Schedule II: for industrial or industrial-office building [@]

Ambulance Depot
Art Studio (excluding those involving direct provision of services or goods)
Cargo Handling and Forwarding Facility (not elsewhere specified)
Eating Place (Canteen only)
Government Refuse Collection Point
Government Use (not elsewhere specified)
Information Technology and Telecommunications Industries
Non-polluting Industrial Use (excluding industrial undertakings involving the use/storage of Dangerous Goods[△])
Office (excluding those involving direct provision of customer services or goods)
Public Convenience
Public Transport Terminus or Station
Public Utility Installation
Public Vehicle Park (excluding container vehicle)
Radar, Telecommunications Electronic Microwave Repeater, Television and/or Radio Transmitter Installation
Recyclable Collection Centre
Research, Design and Development Centre
Shop and Services (Motor-vehicle Showroom on ground floor, Service Trades only)
Utility Installation for Private Project
Warehouse (excluding Dangerous Goods Godown)
Broadcasting, Television and/or Film Studio
Cargo Handling and Forwarding Facility (Container Freight Station, free-standing purpose-designed Logistics Centre only)
Industrial Use (not elsewhere specified)
Off-course Betting Centre
Office (not elsewhere specified)
Petrol Filling Station
Place of Recreation, Sports or Culture (not elsewhere specified)
Private Club
Shop and Services (not elsewhere specified) (ground floor only except Ancillary Showroom[#] which may be permitted on any floor)
Vehicle Repair Workshop
Wholesale Trade

In addition, for building without industrial undertakings involving offensive trades or the use/storage of Dangerous Goods[△], the following use is always permitted :

Office

(Please see next page)

OTHER SPECIFIED USES (Cont'd)

Column 1 Uses always permitted	Column 2 Uses that may be permitted with or without conditions on application to the Town Planning Board
For "Business" Only (Cont'd)	
In addition, the following uses are always permitted in the purpose-designed non-industrial portion on the lower floors (except basements and floors containing wholly or mainly car parking, loading/unloading bays and/or plant room) of an existing building, provided that the uses are separated from the industrial uses located above by a buffer floor or floors and no industrial uses are located within the non-industrial portion:	In addition, the following use may be permitted with or without conditions on application to the Town Planning Board in the purpose-designed non-industrial portion on the lower floors (except basements and floors containing wholly or mainly car parking, loading/unloading bays and/or plant room) of an existing building, provided that the use is separated from the industrial uses located above by a buffer floor or floors and no industrial uses are located within the non-industrial portion:
Commercial Bathhouse/Massage Establishment Eating Place Educational Institution Exhibition or Convention Hall Institutional Use (not elsewhere specified) Library Off-course Betting Centre Office Place of Entertainment Place of Recreation, Sports or Culture Private Club Public Clinic Religious Institution School (excluding kindergarten) Shop and Services Training Centre	Social Welfare Facility (excluding those involving residential care)

@ *An industrial or industrial-office building means a building which is constructed for or intended to be used by industrial or industrial-office purpose as approved by the Building Authority.*

◿ *Dangerous Goods refer to substances classified as Dangerous Goods and requiring a licence for their use/storage under the Dangerous Goods Ordinance (Cap. 295).*

\# *Ancillary Showroom requiring planning permission refers to showroom use of greater than 20% of the total usable floor area of an industrial firm in the same premises or building.*

Planning Intention

This zone is intended primarily for general business uses. A mix of information technology and telecommunications industries, non-polluting industrial, office and other commercial uses are always permitted in new "business" buildings. Less fire hazard-prone office use that would not involve direct provision of customer services or goods to the general public is always permitted in existing industrial or industrial-office buildings.

(Please see next page)

OTHER SPECIFIED USES (Cont'd)

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

For "Business (1)" Only

Schedule I: for open-air development or
for building other than industrial or industrial-office building[@]

Ambulance Depot
Commercial Bathhouse/Massage Establishment
Eating Place
Government Use (Police Reporting Centre, Post Office only)
Information Technology and Telecommunications Industries
Institutional Use (not elsewhere specified)
Library
Non-polluting Industrial Use (excluding industrial undertakings involving the use/storage of Dangerous Goods[△])
Off-course Betting Centre
Office
Place of Entertainment
Place of Recreation, Sports or Culture
Private Club
Public Clinic
Public Convenience
Public Transport Terminus or Station
Public Utility Installation
Public Vehicle Park (excluding container vehicle)
Radar, Telecommunications Electronic Microwave Repeater, Television and/or Radio Transmitter Installation
Recyclable Collection Centre
Religious Institution
Research, Design and Development Centre
Shop and Services (not elsewhere specified)
Training Centre
Utility Installation for Private Project
Broadcasting, Television and/or Film Studio
Cargo Handling and Forwarding Facility
Educational Institution
Exhibition or Convention Hall
Government Refuse Collection Point
Government Use (not elsewhere specified)
Hotel
Non-polluting Industrial Use (not elsewhere specified)
Petrol Filling Station
School
Shop and Services (Retail Shop only)
Social Welfare Facility (excluding those involving residential care)
Warehouse (excluding Dangerous Goods Godown)
Wholesale Trade

(Please see next page)

OTHER SPECIFIED USES (Cont'd)

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

For "Business (1)" Only (Cont'd)

Schedule II: for industrial or industrial-office building [@]

Ambulance Depot
Art Studio (excluding those involving direct provision of services or goods)
Cargo Handling and Forwarding Facility (not elsewhere specified)
Eating Place (Canteen only)
Government Refuse Collection Point
Government Use (not elsewhere specified)
Information Technology and Telecommunications Industries
Non-polluting Industrial Use (excluding industrial undertakings involving the use/storage of Dangerous Goods[△])
Office (excluding those involving direct provision of customer services or goods)
Public Convenience
Public Transport Terminus or Station
Public Utility Installation
Public Vehicle Park (excluding container vehicle)
Radar, Telecommunications Electronic Microwave Repeater, Television and/or Radio Transmitter Installation
Recyclable Collection Centre
Research, Design and Development Centre
Shop and Services (Motor-vehicle Showroom on ground floor, Service Trades only)
Utility Installation for Private Project
Warehouse (excluding Dangerous Goods Godown)

In addition, for building without industrial undertakings involving offensive trades or the use/storage of Dangerous Goods[△], the following use is always permitted :

Office

Broadcasting, Television and/or Film Studio
Cargo Handling and Forwarding Facility (Container Freight Station, free-standing purpose-designed Logistics Centre only)
Industrial Use (not elsewhere specified)
Off-course Betting Centre
Office (not elsewhere specified)
Petrol Filling Station
Place of Recreation, Sports or Culture (not elsewhere specified)
Private Club
Shop and Services (not elsewhere specified) (ground floor only except Ancillary Showroom[#] which may be permitted on any floor)
Vehicle Repair Workshop
Wholesale Trade

(Please see next page)

OTHER SPECIFIED USES (Cont'd)

Column 1 Uses always permitted	Column 2 Uses that may be permitted with or without conditions on application to the Town Planning Board
For "Business (1)" Only (Cont'd)	
In addition, the following uses are always permitted in the purpose-designed non-industrial portion on the lower floors (except basements and floors containing wholly or mainly car parking, loading/unloading bays and/or plant room) of an existing building, provided that the uses are separated from the industrial uses located above by a buffer floor or floors and no industrial uses are located within the non-industrial portion:	In addition, the following uses may be permitted with or without conditions on application to the Town Planning Board in the purpose-designed non-industrial portion on the lower floors (except basements and floors containing wholly or mainly car parking, loading/unloading bays and/or plant room) of an existing building, provided that the uses are separated from the industrial uses located above by a buffer floor or floors and no industrial uses are located within the non-industrial portion:
Commercial Bathhouse/Massage Establishment Eating Place Institutional Use (not elsewhere specified) Library Off-course Betting Centre Office Place of Entertainment Private Club Public Clinic Religious Institution Shop and Services (not elsewhere specified) Training Centre	Educational Institution Exhibition or Convention Hall School (excluding kindergarten) Shop and Services (Retail Shop only) Social Welfare Facility (excluding those involving residential care)

@ *An industrial or industrial-office building means a building which is constructed for or intended to be used by industrial or industrial-office purpose as approved by the Building Authority.*

△ *Dangerous Goods refer to substances classified as Dangerous Goods and requiring a licence for their use/storage under the Dangerous Goods Ordinance (Cap. 295).*

\# *Ancillary Showroom requiring planning permission refers to showroom use of greater than 20% of the total usable floor area of an industrial firm in the same premises or building.*

Planning Intention

This zone is intended primarily for general business uses. A mix of information technology and telecommunications industries, non-polluting industrial, office and other commercial uses are always permitted in new "business" buildings. Less fire hazard-prone office use that would not involve direct provision of customer services or goods to the general public is always permitted in existing industrial or industrial-office buildings. However, uses such as educational institution, exhibition or convention hall, place of recreation, sports or culture, retail shop and school which will likely attract high concentration of population require planning permission from the Town Planning Board.

(Please see next page)

OTHER SPECIFIED USES (Cont'd)

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

For "Cemetery" Only

Columbarium (Garden of Remembrance only)	Columbarium (not elsewhere specified)
Government Use	Grave (Ossuarium only)
Grave (not elsewhere specified)	Public Utility Installation
Public Convenience	Utility Installation for Private Project

Planning Intention

This zone is primarily for land intended for cemetery use.

For "Amenity Area" Only

Amenity Area	Government Use (not elsewhere specified)
People Mover (Escalators/Lifts)	Public Utility Installation
	Utility Installation for Private Project

Planning Intention

This zone is intended primarily for the provision of amenity area.

For "Waterfront Amenity Area" Only

Public Convenience	Government Use (not elsewhere specified)
Waterfront Amenity Area	Public Utility Installation
	Utility Installation for Private Project

Planning Intention

This zone is intended primarily for the provision of waterfront amenity area.

(Please see next page)

OTHER SPECIFIED USES (Cont'd)

Column 1 Uses always permitted	Column 2 Uses that may be permitted with or without conditions on application to the Town Planning Board
For "Columbarium" Only	
Columbarium	Public Utility Installation Utility Installation for Private Project

Planning Intention

This zone is primarily for land intended for columbarium use.

Remarks

(a) On land designated "Other Specified Uses" annotated "Columbarium",

(i) 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 gross floor area of 4,149m^2 and a maximum site coverage of 37.5%; and

(ii) no new development or addition, alteration and/or modification to an existing building, other than redevelopment of an existing building, shall exceed a maximum building height of 14.5m. An existing building is allowed to be redeveloped to the same height of the building provided the existing gross floor area of the building is not exceeded.

(b) On land designated "Other Specified Uses" annotated "Columbarium (1)",

(i) 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 gross floor area of 293m^2, a maximum site coverage of 40%, and a maximum building height of 6.2m; and

(ii) the maximum number of niches for columbarium use shall not exceed 3,499.

(c) On land designated "Other Specified Uses" annotated "Columbarium (2)",

(i) 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 gross floor area of 120m^2, and a maximum building height of 7.7m; and

(ii) the maximum number of niches for columbarium use shall not exceed 1,716.

(d) Based on the individual merits of a development or redevelopment proposal, minor relaxation of the gross floor area/site coverage/building height restrictions/number of niches stated in paragraphs (a) ~~and (b)~~ ***to (c)*** above may be considered by the Town Planning Board on application under section 16 of the Town Planning Ordinance.

(Please see next page)

OTHER SPECIFIED USES (Cont'd)

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

For "Religious Institution with Columbarium" Only

Religious Institution
Columbarium

Planning Intention

This zone is primarily for land intended for religious institution and columbarium uses.

Remarks

(a) No new development, or addition, alteration and/or modification to or redevelopment of an existing building shall result in a total development and/or redevelopment in excess of a maximum gross floor area of 1,416m^2 and a maximum building height of 3 storeys.

(b) The maximum number of niches for columbarium use shall not exceed 4,779.

(c) Based on the individual merits of a development or redevelopment proposal, minor relaxation of the gross floor area/ building height restrictions/ number of niches stated in paragraphs (a) and (b) above may be considered by the Town Planning Board on application under section 16 of the Town Planning Ordinance.

(Please see next page)

Column 1 Uses always permitted	Column 2 Uses that may be permitted with or without conditions on application to the Town Planning Board
For "Race Course" only	
Private Club Race Course	Government Use Place of Recreation, Sports or Culture Public Utility Installation Utility Installation for Private Project

Planning Intention

This zone is intended primarily to provide/reserve land for race course and its ancillary uses, and provision of outdoor open-air public space for active and/or passive recreational uses serving the needs of the local residents as well as the general public.

For All Other Sites (Not Listed Above)	
As Specified on the Plan	Government Use (not elsewhere specified) Public Utility Installation Utility Installation for Private Project

Planning Intention

This zone is primarily to provide/reserve land for specific purposes and uses.

GREEN BELT

Column 1 Uses always permitted	Column 2 Uses that may be permitted with or without conditions on application to the Town Planning Board
Agricultural Use Barbecue Spot Government Use (Police Reporting Centre only) Nature Reserve Nature Trail On-Farm Domestic Structure Picnic Area Public Convenience Tent Camping Ground Underground Sewage Treatment Works (on land designated "Green Belt (1)" only) Wild Animals Protection Area	Animal Boarding Establishment Broadcasting, Television and/or Film Studio Burial Ground Cable Car Route and Terminal Building Columbarium (within a Religious Institution or extension of existing Columbarium only) Crematorium (within a Religious Institution or extension of existing Crematorium only) Field Study/Education/Visitor Centre Flat Government Refuse Collection Point Government Use (not elsewhere specified) Grave Helicopter Landing Pad Holiday Camp House Marine Fuelling Station Petrol Filling Station Pier Place of Recreation, Sports or Culture Public Transport Terminus or Station Public Utility Installation Public Vehicle Park (excluding container vehicle) Radar, Telecommunications Electronic Microwave Repeater, Television and/or Radio Transmitter Installation Religious Institution Residential Institution School Service Reservoir Social Welfare Facility Utility Installation for Private Project Zoo

Planning Intention

The planning intention of this zone is primarily for defining the limits of urban and sub-urban development areas by natural features and to contain urban sprawl as well as to provide passive recreational outlets. There is a general presumption against development within this zone.

DRAFT ~~**APPROVED**~~ **SHA TIN OUTLINE ZONING PLAN NO. S/ST/36*A***

EXPLANATORY STATEMENT

DRAFT ~~**APPROVED**~~ SHA TIN OUTLINE ZONING PLAN NO. S/ST/36***A***

EXPLANATORY STATEMENT

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DRAFT ~~APPROVED~~ SHA TIN OUTLINE ZONING PLAN NO. S/ST/36***A***

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

EXPLANATORY STATEMENT

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

1. INTRODUCTION

This Explanatory Statement is intended to assist an understanding of the approved Sha Tin Outline Zoning Plan (OZP) No. S/ST/36. It reflects the planning intention and objectives of the Town Planning Board (the Board) for various land-use zonings of the Plan.

2. AUTHORITY FOR THE PLAN AND PROCEDURE

2.1 On 15 April 1966, the draft Sha Tin OZP No. LST/47 was exhibited for public inspection under section 5 of the Town Planning Ordinance (the Ordinance). On 13 June 1967, the then Governor-in-Council (G in C), under section 8(1) of the Ordinance, approved the draft Sha Tin OZP No. LST/47. On 10 July 1973, the then G in C referred the approved OZP No. LST/47 to the Board for replacement under section 12 of the Ordinance. The OZP was subsequently amended seven times and exhibited for public inspection under section 5 or 7 of the Ordinance.

2.2 On 5 July 1988, the then G in C, under section 9(1)(a) of the Ordinance, approved the draft Sha Tin OZP, which was subsequently renumbered as S/ST/4. On 25 June 1991, the then G in C referred the approved OZP No. S/ST/4 to the Board for amendment under section 12(1)(b)(ii) of the Ordinance. It was then amended five times and exhibited for public inspection under section 5 or 7 of the Ordinance to reflect the changing circumstances.

2.3 On 9 December 1997, the Chief Executive in Council (CE in C), under section 9(1)(a) of the Ordinance, approved the draft Sha Tin OZP, which was subsequently renumbered as S/ST/10. On 21 July 1998, the CE in C referred the approved Sha Tin OZP No. S/ST/10 to the Board for amendment under section 12(1)(b)(ii) of the Ordinance. The OZP was subsequently amended and exhibited for public inspection under section 5 of the Ordinance.

2.4 On 11 May 1999, the CE in C, under section 9(1)(a) of the Ordinance, approved the draft Sha Tin OZP, which was subsequently renumbered as S/ST/12. On 20 July 1999, the CE in C referred the approved OZP No. S/ST/12 to the Board for amendment under section 12(1)(b)(ii) of the Ordinance. It was amended twice and exhibited for public inspection under section 5 or 7 of the Ordinance to incorporate the adjustment of planning scheme boundary and to reflect the changing circumstances.

2.5 On 25 September 2001, the CE in C, under section 9(1)(a) of the Ordinance, approved the draft Sha Tin OZP, which was subsequently renumbered as S/ST/15. On 27 November 2001, the CE in C referred the approved Sha Tin OZP No. S/ST/15 to the Board for amendment under section 12(1)(b)(ii) of the Ordinance. It was then amended four times, including the extension of planning scheme boundary to include an area to be reclaimed on the western side of Sha Tin Hoi (Tide Cove), and was exhibited under section 5 or 7 of the Ordinance.

2.6 On 8 June 2004, the CE in C, under section 9(1)(a) of the Ordinance, approved the draft Sha Tin OZP, which was subsequently renumbered as S/ST/20. On 13 September 2005, the CE in C referred the approved Sha Tin OZP No. S/ST/20 to the Board for amendment under section 12(1)(b)(ii) of the Ordinance. It was then amended twice and exhibited for public inspection under section 5 or 7 of the Ordinance to reflect the changing circumstances.

2.7 On 5 June 2007, the CE in C, under section 9(1)(a) of the Ordinance, approved the draft Sha Tin OZP, which was subsequently renumbered as S/ST/23. On 6 July 2010, the CE in C referred the approved Sha Tin OZP No. S/ST/23 to the Board for amendment under section 12(1)(b)(ii) of the Ordinance. It was then amended twice and exhibited for public inspection under section 5 or 7 of the Ordinance to reflect the changing circumstances.

2.8 On 13 March 2012, the CE in C under section 9(1)(a) of the Ordinance, approved the draft Sha Tin OZP, which was subsequently re-numbered as S/ST/26. On 5 June 2012, the CE in C referred the approved Sha Tin OZP No. S/ST/26 to the Board for amendment under section 12(1)(b)(ii) of the Ordinance. It was subsequently amended and exhibited for public inspection under section 5 of the Ordinance.

2.9 On 2 July 2013, the CE in C, under section 9(1)(a) of the Ordinance, approved the draft Sha Tin OZP, which was subsequently renumbered as S/ST/28. On 3 September 2013, the CE in C referred the approved Sha Tin OZP No. S/ST/28 to the Board for amendment under section 12(1)(b)(ii) of the Ordinance. It was subsequently amended and exhibited for public inspection under section 5 of the Ordinance.

2.10 On 2 September 2014, the CE in C, under section 9(1)(a) of the Ordinance, approved the draft Sha Tin OZP, which was subsequently renumbered as S/ST/30. On 6 January 2015, the CE in C referred the approved Sha Tin OZP No. S/ST/30 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 January 2015 under section 12(2) of the Ordinance.**~~ ***It was subsequently amended and exhibited for public inspection under section 5 of the Ordinance.***

2.11 On 1 December 2015, the CE in C, under section 9(1)(a) of the Ordinance, approved the draft Sha Tin OZP, which was subsequently renumbered as S/ST/32. On 11 December 2015, the approved Sha Tin OZP No. S/ST/32 was exhibited for public inspection under section 9(5) of the Ordinance. On 18 October 2016, the CE in C referred the approved Sha Tin OZP No. S/ST/32 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 28 October 2016 under section 12(2) of the Ordinance.~~

2.12 On 13 January 2017, the draft Sha Tin OZP No. S/ST/33 was exhibited for public inspection under section 5 of the Ordinance. After consideration of the representations and comments on 15 and 22 September 2017, the Board decided to propose amendment to the draft Sha Tin OZP No. S/ST/33 by rezoning the site at On Muk Street from "Residential (Group A)6" back to "Open Space". On 13 October 2017, the proposed amendment to the draft OZP was exhibited for public inspection under section 6C(2) of the Ordinance. After consideration of the further representations on 12 February 2018, the Board decided not to amend the draft OZP by the proposed amendment under section 6F(8) of the Ordinance.

2.13 On 29 May 2018, the CE in C, under section 9(1)(a) of the Ordinance, approved the draft Sha Tin OZP, which was subsequently renumbered as S/ST/34. On 8 June 2018, the approved Sha Tin OZP No. S/ST/34 was exhibited for public inspection under section 9(5) of the Ordinance. On 22 June 2021, the CE in C referred the approved Sha Tin OZP No. S/ST/34 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 2 July 2021 under section 12(2) of the Ordinance.~~

2.14 On 3 December 2021, the draft Sha Tin OZP No. S/ST/35 was exhibited for public inspection under section 5 of the Ordinance. ~~The amendments mainly involved the rezoning of a site at Shan Mei Street in Fo Tan from "Industrial" to "Residential (Group A)8" *("R(A)8")* for redevelopment of Sui Fai Factory Estate; the rezoning of a site to the south of Fo Tan Village from "Village Type Development" ("V") and "Green Belt" *("GB")* to "Other Specified Uses" annotated "Columbarium (1)" *("OU(Columbarium(1))")*; the rezoning of a site to the south of Che Kung Miu Road and to the west of Lee Uk Village from "V" to "Government, Institution or Community" *("G/IC")*; and the rezoning of a site at the junction of Che Kung Miu Road and Lion Rock Tunnel Road from "Comprehensive Development Area (1)" to "Residential (Group A)7" *"R(A)7"*. During the two-month exhibition period, a total of 335 representations were received. On 8 March 2022, the representations were published for three weeks for public comments and one comment was received.~~ After consideration of the representations and comment on 22 July 2022, the Board decided not to uphold the representations and ~~that no amendment should be made to~~***not to amend*** the draft OZP to meet the representations.

2.15 On 8 November 2022, the CE in C, under section 9(1)(a) of the Ordinance, approved the draft Sha Tin OZP, which was subsequently renumbered as S/ST/36. On 18 November 2022, the approved Sha Tin OZP No. S/ST/36 (the Plan) was exhibited for public inspection under section 9(5) of the Ordinance. ***On 30 May 2023, the CE in C referred the approved Sha Tin OZP No. S/ST/36 to the Board for amendment under section 12(1)(b)(ii) of the Ordinance.***

2.16 On XX XXXX 2023, the draft Sha Tin OZP No. S/ST/37 (the Plan) was exhibited for public inspection under section 5 of the Ordinance. The amendments on the Plan mainly involved the rezoning of the site at the junction of Wong Chuk Yeung Street and Kwei Tei Sun Chuen Road from "Green Belt" ("GB") to "Residential (Group A)8" ("R(A)8"); the rezoning of a site to the northeast of Shan Mei Street from "Industrial" ("I") to "Government, Institution or Community" ("G/IC"); the rezoning of two sites to the north and south of On Sum Street from "G/IC" and "Open Space" ("O") to "Commercial (1)" ("C(1)") respectively; the rezoning of a site at Sha Tin Wai Road from "O" to "R(A)9"; the rezoning of a site at the junction on Yuen Hong Street and Yuen Shun Circuit from "G/IC" to "C(1)"; the rezoning of a site at Chap Wai Kon Street from "G/IC" to "R(A)10"; the rezoning of a site on Yuen Hong Street from "I(1)" to "C(2)"; the rezoning of a site at the northern end of Tung Lo Wan Hill Road from "GB" to "Residential (Group B)3" ("R(B)3"); the rezoning of a site to the north of Mei Tin Road from "R(B)" and "GB" to "Other Specified Uses" annotated "Religious Institution with Columbarium" ("OU(Religious Institution with Columbarium"); and the rezoning of a site to the south of Chek Nai Ping on Tai Po Road (Ma Liu Shui) from "GB" to "OU(Columbarium(2))".

3. OBJECT OF THE PLAN

3.1 The object of the Plan is to indicate the broad land-use zones and major road networks for Sha Tin so that development and redevelopment within Sha Tin can be put under statutory planning control. It also provides the planning framework for preparing more detailed non-statutory plans which form the basis for public works planning and site reservation for various uses.

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

3.3 Since the Plan is to show broad land use zonings, there would be situations in which small strips of land not intended for building development purposes and carry no development right under the lease, such as the areas restricted as non-building area or for garden, slope maintenance and access road purposes, are included in the residential zones. The general principle is that such areas should not be taken into account in ***plot ratio (***PR***)*** and site coverage calculation. Development within residential zones should be restricted to building lots carrying development right in order to maintain the character and amenity of the Sha Tin area and not to overload the road network in this area.

3.4 Also, there would be cases that areas occupied by free-standing purpose-designed buildings that are solely accommodating schools or other Government, institution or community facilities, including those located on ground and on podium level, are included in the residential zones. Such areas should not be included into the PR and site coverage calculations.

4. NOTES OF THE PLAN

4.1 Attached to the Plan is a set of Notes which shows the types of uses or developments which are always permitted within the Area and in particular zones and which may be permitted by the Board, with or without conditions, on application. The provision for application for planning permission under section 16 of the Ordinance allows greater flexibility in land-use planning and control of development to meet changing needs.

4.2 For the guidance of the general public, a set of definitions that explains some of the terms used in the Notes may be obtained from the Technical Services Division of the Planning Department and can be downloaded from the Board's website at http://www.info.gov.hk/tpb.

5. THE PLANNING SCHEME AREA

5.1 The Planning Scheme Area (the Area) covered by the Plan is about 2,777 hectares. Its inner core lies at the bottom of the Sha Tin Valley which is separated from Kowloon by a range of hills, dominated by Lion Rock (495m above sea level) and Sugar Loaf Peak (372m above sea level). These hills form a natural barrier to the expansion of the Sha Tin New Town towards the south and south-east. Ma On Shan, the extension to Sha Tin New Town, lies to the north-east of the Area.

5.2 Sha Tin Hoi (Tide Cove) used to be a wide and relatively shallow estuary. It has been extensively reclaimed and the reclamation has formed the southern extremity of Tolo Harbour. Lek Yuen and Wo Che Estates and the race course are situated on reclaimed land. Large pieces of land near Siu Lek Yuen, Ngau Pei Sha and Ma Liu Shui have also been reclaimed from the Tide Cove.

5.3 The boundary of the Area is shown by a heavy broken line on the Plan. For planning and reference purpose, the Area is sub-divided into a number of smaller planning areas as shown on the Plan.

6. POPULATION

Based on the 202***1***~~16~~ Population ~~By c~~Census, the population of the Area was estimated by the Planning Department as about ~~455,900~~ ***488,000*** persons, comprising ~~238,300~~ ***270,000*** in public housing (including Home Ownership Schemes (HOS), Private Sector Participation Schemes (PSPS), Sandwich Class Housing (SCH), and Subsidised Sale Flats Housing (SSFH)) and ~~217,600~~ ***218,000*** in private housing including village type developments. It is estimated that the total planned population would be about ~~518,800~~ ***531,600*** persons.

7. LAND-USE ZONINGS

7.1 Commercial ("C") : Total Area ~~**6.60**~~ ***8.61*** ha

7.1.1 This zone is intended for commercial developments, which may include shop, services, place of entertainment and eating place, functioning mainly as local shopping centre serving the immediate neighbourhood.

7.1.2 This zone covers the major part of Planning Area 20 and parts of Planning Areas 5, 11, 14 and 16. Planning Area 20 is in close proximity to the East Rail Sha Tin Station and forms an extension to the town centre. The site abutting Tai Chung Kiu Road in Planning Area 5 has been developed into a hotel. The site in Planning Area 11 was disposed of in April 1997 to provide commercial and office accommodation to serve the industrial area in Shek Mun. The site in the northern corner of Planning Area 14 has been developed into a permanent concrete 'boat-like' restaurant. The site in the Yuen Chau Kok Industrial Area in Planning Area 14 has been developed into a commercial/office building to serve the adjacent industrial and residential developments. It also serves as a buffer between industrial developments in the Yuen Chau Kok Industrial Area and the adjoining residential developments. The site in Planning Area 16 has also been developed to a commercial/office building to serve the Fo Tan Industrial Area.

"Commercial (1)" ("C(1)"): Total Area 1.37ha

7.1.3 Three sites at the junction on Yuen Hong Street and Yuen Shun Circuit in Siu Lek Yuen in Planning Area 14B, and two sites to the north and south of On Sum Street in Shek Mun in Planning Area 11 respectively are zoned "C(1)". The sites are subject to a maximum PR of 9.5. The two sites in Shek Mun are subject to a maximum building height of 130mPD, while the site in Siu Lek Yuen is subject to a maximum building height of 120mPD.

7.1.4 Facilities of the Department of Health and other social welfare facilities as required by the Government shall be provided at the two sites to the north and south of On Sum Street. In order to facilitate provision of GIC facilities, in determining the maximum PR of the development at the site, any floor space that is constructed or intended for use solely as GIC facilities, as required by the Government, may be disregarded. A public vehicle park shall also be provided at the site to the north of On Sum Street.

"Commercial (2)" ("C(2)"): Total Area 0.64ha

7.1.5 A completed hotel development on Yuen Hong Street in Planning Area 14B is zoned "C(2)". The site is subject to a maximum GFA of 32,000m^2 and a maximum building height of 120mPD.

7.1.6 Minor relaxation of the PR/GFA and/or building height restrictions

for the "C(1)" and "C(2)" sub-zones may be considered by the Board on application under section 16 of the Ordinance. Each application for minor relaxation of the PR/GFA and/or building height restrictions will be considered on its own merits.

7.2 Comprehensive Development Area ("CDA") : Total Area 15.17 ha

7.2.1 This zone is intended for comprehensive development/redevelopment of the "CDA" area for residential use, and the "CDA(1)" area for commercial and/or residential uses, both with the provision of open space and other supporting facilities. The zoning is to facilitate appropriate planning control over the development mix, scale, design and layout of development, taking account of various environmental, traffic, infrastructure and other constraints.

7.2.2 This zoning comprises the following four sites :

(i) "CDA" site at Heung Fan Liu : Total Area 4.55 ha

Development within this "CDA" site is restricted to a maximum gross floor area (GFA) of 52,156m^2. Residential development with landscape areas is restricted to the southern part of the site. The northern part of the site, which is covered by rich vegetation, should be preserved. Upon completion, about 820 flats will be provided.

(ii) "CDA(1)" site at East Rail Fo Tan Station and its Adjoining Area : Total Area 5.13 ha

Development within this "CDA(1)" site is restricted to a maximum GFA of 208,600m². The domestic GFA shall not exceed 191,100m². A primary school will be provided in the development. Upon completion, about 2,800 flats will be provided.

(iii) "CDA(1)" site at the Tuen Ma Line Tai Wai Station and its Adjoining Area : Total Area 5.48 ha

Development within this "CDA(1)" site is restricted to a maximum GFA of 253,590 m². The domestic GFA shall not exceed 219,090 m². A post-secondary college will be provided in the development. Upon completion, about 2,900 flats will be provided. The proposed developments at this "CDA(1)" site and the Tai Wai Maintenance Centre site should be planned comprehensively to ensure a coherent and integrated development at both sites, which would be compatible with the existing and planned developments in the area.

7.2.3 Pursuant to section 4A(2) of the Ordinance, and except as otherwise expressly provided that it is not required by the Board, an applicant for

permission for development on land designated "CDA" shall prepare a Master Layout Plan for the approval of the Board. The Master Layout Plan should be supported by an explanatory statement which contains an adequate explanation of the development proposal, including such information as land tenure, relevant lease conditions, existing conditions of the site, the character of the site in relation to the surrounding areas, principles of layout design, major development parameters, design population, types of Government, institution or community (GIC) facilities, and recreational and open space facilities.

7.3 Commercial/Residential ("C/R") : Total Area 14.55 ha

7.3.1 This zone is intended primarily for commercial and/or residential development. Commercial, residential and mixed commercial/ residential uses are always permitted.

7.3.2 There is only one site zoned for this purpose. It is the existing town centre in Planning Area 7 which provides the main commercial, cultural, social, civic and Government facilities for the Area. The town centre is centrally located between the existing East Rail Sha Tin Station and Shing Mun River. It is at the heart of the road and pedestrian networks of the Area. New Town Plaza, a major development at the site, provides residential accommodation together with retail space, a hotel and an office block.

7.4 Residential (Group A) ("R(A)") : Total Area ~~**253.25**~~ ***257.51*** ha

7.4.1 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.

7.4.2 There are eighteen existing public rental housing estates, seventeen HOS, three PSPS, one SCH, and one SSFH in the Area. There are also two planned public housing developments in Planning Areas ~~**11, and**~~ **16** ***and 62***. Within public housing estates, there are a wide range of low-rise free-standing GIC facilities including schools, community halls, children and youth centres, elderly centres, social and welfare centres as well as ancillary facility buildings such as car parks, shopping centres and markets serving the residents of the concerned estates. Such low-rise free-standing GIC and ancillary facility buildings should be kept as breathing spaces and visual relief for the building mass. No new addition, alteration and/or modification to or redevelopment of these existing individual free-standing GIC and ancillary facility buildings shall result in a height exceeding that of the existing building. All public housing estates are governed by planning brief. Upon the future redevelopment of the estates, the layout and design of these GIC and ancillary facility buildings should be comprehensively reviewed with the support of relevant impact assessments on air ventilation and visual aspects. In addition,

planning briefs setting out the development parameters, design requirements and the relevant technical assessments to be conducted for the planned public housing developments will be provided to guide the future development of the sites.

7.4.3 This zoning includes ~~**eight**~~ ***ten*** sub-areas which are subject to the following development restrictions:

"Residential (Group A)1" ("R(A)1"): Total Area 12.45 ha

(a) The public housing development at Planning Area 52 (Shui Chuen O) is under this zoning. Development/redevelopment within this zoning is subject to restrictions on the maximum total GFA of 501,800m^2 and building height restriction as shown on the Plan, or the GFA and height of existing building, whichever is the greater. The building height restrictions stipulated on the Plan are the maximum permitted height. Staggered building heights with a maximum of 30 domestic storeys and general building heights ranging from 25 to 28 domestic storeys ~~**should be**~~ ***have been*** adopted to create a stepped height profile against the hilly terrain. Maximum building heights of 2 to 4 storeys are stipulated along two view corridors where only low-rise structures are permitted.

(b) The building height restrictions in terms of number of storeys are applicable to buildings above the ground level. Any basement floors may be disregarded.

"Residential (Group A)2" ("R(A)2"): Total Area 4.09 ha

(c) The public housing development at Planning Areas 16 and 58D is under this zoning. Development/redevelopment within this zoning is subject to restrictions on the maximum total GFA of 194,500m^2 and building height restriction as shown on the Plan, or the GFA and height of existing building, whichever is the greater. The building height restriction stipulated on the Plan is the maximum permitted height. Building heights ranging from ~~**26**~~ ***33*** to ~~**36**~~ ***39*** domestic storeys ~~**should be**~~ ***have been*** adopted to create a height profile stepping up from both ends to the centre with reference to the hilly terrain to the north.

"Residential (Group A)3" ("R(A)3"): Total Area 0.87 ha

(d) The HOS development at Planning Area 16 is under this zoning. Development/redevelopment within this zoning is subject to restrictions on the maximum total GFA of 43,600m^2 and building height restriction as shown on the Plan, or the GFA and height of existing building, whichever is the greater.

"Residential (Group A)4" ("R(A)4"): Total Area 4.25 ha

(e) The public housing estate at Planning Area 11 is under this zoning. Development/redevelopment within this zoning is subject to restrictions

on the maximum total domestic GFA of 234,000m^2, non-domestic GFA of 19,500m^2 and building height restriction as shown on the Plan, or the GFA and height of existing building, whichever is the greater. Building heights ranging from about 110 to 140mPD ~~**should be**~~ ***have been*** adopted to create a height profile stepping up from the northwest near On Ming Street to the southeast.

"Residential (Group A)5" ("R(A)5"): Total Area 0.70 ha

(f) The public housing development at Au Pui Wan Street in Planning Area 16 is under this zoning. Development/redevelopment within this zoning is subject to restrictions on the maximum total GFA of 38,580m^2 and building height restriction as shown on the Plan, or the GFA and height of existing building, whichever is the greater.

"Residential (Group A)6" ("R(A)6"): Total Area 0.43 ha

(g) The public housing development at On Muk Street in Planning Area 11 is under this zoning. Development/redevelopment within this zoning is subject to restrictions on the maximum total GFA of 26,240m^2 and building height restriction as shown on the Plan, or the GFA and height of existing building, whichever is the greater.

"Residential (Group A)7" ("R(A)7"): Total Area 2.05 ha

(h) ***The private housing development abutting*** ~~**A site at**~~ Tuen Ma Line Che Kung Temple Station in Planning Area 27, falls within this zoning. ~~**The "R(A)7" zoning is to reflect the completed residential development at the site.**~~ Development/redevelopment within this zoning is subject to restrictions on the maximum total GFA of 90,655m^2 and building height restriction as shown on the Plan, or the GFA and height of existing building, whichever is the greater.

"Residential (Group A)8" ("R(A)8"): Total Area ~~**0.90**~~ ***4.32*** ha

(i) ~~**The**~~ ***Two*** planned ***public*** housing development***s*** at Shan Mei Street in Planning Area 16 ***and at the junction of Wong Chuk Yeung Street and Kwei Tei Sun Chuen Road in Planning Area 62*** ~~***is***~~ ***are*** under this zoning. Development/redevelopment within this zoning is subject to ~~**restrictions on the**~~ ***a*** maximum ~~**total plot ratio (**~~PR~~**)**~~ of 6.7 and building height restriction as shown on the Plan, or the PR and height of existing building, whichever is the greater. ***In determining the maximum PR, any floor space that is constructed or intended for use solely as GIC facilities, as required by the Government may be disregarded.*** The PR control under this zone is regarded as being stipulated in a "new or amended statutory plan" according to the Joint Practice Note No. 4 "Development Control Parameters Plot Ratio/Gross Floor Area", and shall be subject to the streamlining arrangements stated therein.

(j) At detailed design stage, quantitative air ventilation studies will need to be conducted for the public housing development within the "R(A)8" site in Planning Area 62 to further refine the development layout and the relevant mitigation measures from the air ventilation perspective.

"Residential (Group A)9" ("R(A)9"): Total Area 0.56ha

(k) A site for private housing development at Sha Tin Wai Road in Planning Area 14B is under this zoning. Development/redevelopment within this zoning is subject to a maximum PR of 5 and maximum building height as shown on the Plan, or the PR and height of the existing building, whichever is the greater. The PR control under this zone is regarded as being stipulated in a "new or amended statutory plan" according to the Joint Practice Note No. 4 "Development Control Parameters Plot Ratio/Gross Floor Area", and shall be subject to the streamlining arrangements stated therein.

"Residential (Group A)10" ("R(A)10"): Total Area 0.28ha

(l) A site at Chap Wai Kon Street in Planning Area 14B is under this zoning. Development/redevelopment within this zoning is subject to a maximum total PR of 6 and maximum building height as shown on the Plan, or the PR and height of existing building, whichever is the greater. Social welfare facilities as required by the Government shall be provided. In order to facilitate provision of GIC facilities, in determining the maximum PR of the development at the site, any floor space that is constructed or intended for use solely as GIC facilities, as required by the Government, may be disregarded. A public vehicle park shall also be provided at the site. The PR control under this zone is regarded as being stipulated in a "new or amended statutory plan" according to the Joint Practice Note No. 4 "Development Control Parameters Plot Ratio/Gross Floor Area", and shall be subject to the streamlining arrangements stated therein.

~~**7.4.4 At detailed design stage, quantitative air ventilation studies will need to be conducted for the public housing developments within the "R(A)1", "R(A)2", "R(A)3", "R(A)4", and "R(A)5" sites to further refine the development layout and the relevant mitigation measures from the air ventilation perspective.**~~

7.4.~~5~~***4*** Minor relaxation of the PR/GFA and/or building height restrictions for the ~~**"R(A)1", "R(A)2", "R(A)3", "R(A)4", "R(A)5", "R(A)6", "R(A)7" and "R(A)8" zones**~~ **"R(A)" sub-zones** may be considered by the Board on application under section 16 of the Ordinance. Each application for minor relaxation of the PR/GFA and/or building height restrictions will be considered on its own merits.

7.5 Residential (Group B) ("R(B)") : 195.~~5~~***284*** ha

7.5.1 This zone is intended primarily for medium-density residential

developments where commercial uses serving the residential neighbourhood may be permitted on application to the Board.

7.5.2 ~~**Four**~~ ***Five*** sites at Fu Kin Street, Lai Ping Road, north of To Shek Reservoir~~**, and**~~ Tai Po Road-Sha Tin Heights ***and the northern end of Tung Lo Wan Hill Road*** are zoned "R(B)1", "R(B)2" or "R(B)3" which are subject to PR restrictions and/or building height restrictions as shown on the Plan. The restrictions are necessary for the purposes of preserving the general amenity of the area as well as to ensure that the scale of the developments will be compatible with the adjacent developments and will not overtax the infrastructural provision in the area. ***Minor relaxation of the stated restrictions may be considered by the Board on application under section 16 of the Ordinance. Each proposal will be considered on its own merits.***

7.5.3 All sites within this zone, except those in Planning Area 51 and located on the waterfront adjacent to Shing Mun River, are located largely on the hill slopes overlooking the Sha Tin Valley.

7.6 Residential (Group C) ("R(C)") : Total Area 0.95 ha

7.6.1 This zone is intended primarily for low-rise, low-density residential developments where commercial uses serving the residential neighbourhood may be permitted on application to the Board.

7.6.2 Two sites at Tai Po Road in Planning Area 33 and one site at Tai Po Road near the Chinese University of Hong Kong are under this zoning. Developments within this zone are subject to PR, site coverage and/or building height restrictions. These restrictions are necessary for the purposes of preserving the general amenity of the area as well as to ensure that the development intensities will be within the limits of the road capacity. Minor relaxation of the stated restrictions may be considered by the Board on application under section 16 of the Ordinance. Each proposal will be considered on its own merits.

7.7 Village Type Development ("V") : Total Area 190.16 ha

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

7.7.2 In order to ensure that any future development or redevelopment within this zone would retain the village character, a maximum building height

of 3 storeys (8.23m) or the height of the existing building(s), whichever is the greater, is imposed under this zone.

7.7.3 Existing villages such as Tai Wai, Tsang Tai Uk, Siu Lek Yuen, Hin Tin and Kak Tin will be retained. For those villages which have been displaced by public projects, village resite areas have been provided for. Tsok Pok Hang New Village is one of the examples.

7.8 Industrial ("I") : Total Area ~~**41.73**~~ ***40.33*** ha

7.8.1 This zone is intended primarily for general industrial uses to ensure an adequate supply of industrial floor space to meet demand from production-oriented industries. Information technology and telecommunications industries and office related to industrial use are always permitted in this zone.

7.8.2 Industrial land is distributed in three locations, Planning Area 3 (Tai Wai), Planning Area 14 (Siu Lek Yuen) and Planning Area 16 (Fo Tan). They are separated as far apart as possible from the residential areas by open spaces or other physical features.

7.8.3 All industrial land in Planning Area 14 (Siu Lek Yuen) is zoned to "I(1)" with 'Hotel' use under Column 2 in the Notes to allow flexibility for hotel development through planning application.

7.9 Government, Institution or Community ("G/IC") : Total Area ~~**292.13**~~ ***291.70*** ha

7.9.1 This zone is intended primarily for the provision of GIC facilities serving the needs of the local residents and/or a wider district, region or the territory. It is also intended to provide land for uses directly related to or in support of the work of the Government, organizations providing social services to meet community needs, and other institutional establishments. Such developments, particular***ly*** for those which are low-rise, serve to provide visual and spatial relief to the built-up environment of the Area.

7.9.2 Major GIC facilities provided in the Area include:

(a) the Sha Tin Town Hall, the Sha Tin Public Library and the Sha Tin Magistracy in Planning Area 7;
(b) the Sha Tin Government Offices building in Planning Area 20;
(c) the Chinese University of Hong Kong in Planning Area 68;
(d) the Hong Kong Institute of Vocational Education (Sha Tin) in Planning Area 21;
(e) the Hang Seng School of Commerce in Planning Area 54;
(f) the Hong Kong Sports Institute in Planning Area 47;
(g) the Prince of Wales Hospital in Planning Area 14 and the Sha Tin Hospital in Planning Area 65;
(h) Yuen Wo Road Sports Centre and Sha Tin Jockey Club Swimming Pool in Planning Area 26;
(i) service reservoirs, including those in Planning Areas 56 and 62;

(j) the Hong Kong Heritage Museum in Planning Area 25;
(k) the Ten Thousand Buddhas Monastery in Planning Area 6; and
(l) Hin Tin Swimming Pool in Planning Area 17.

7.9.3 ***A site on Shan Mei Street at Planning Area 16 (Fo Tan) is planned for a joint-user complex with various GIC facilities including re-provisioning of the existing public transport interchange at the site.*** Local GIC facilities are/will be provided in the commercial/residential, residential and industrial developments when detailed planning for the Area proceeds.

7.9.4 ~~**Two sites to the south of Sha Tin Road at Planning Area 52 (Shui Chuen O) are planned for a covered public transport terminus and a primary school. They are subject to building height restrictions as stipulated on the Plan or the height of the existing building, whichever is the greater.**~~ Minor relaxation of the building height restriction may be considered by the Board on application under section 16 of the Ordinance. Each application for minor relaxation of building height restriction will be considered on its own merits.

7.10 Open Space ("O") : Total Area ~~**253.68**~~ ***252.70*** ha

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

7.10.2 A prominent feature is the provision of large landscaped open spaces in Planning Area 12 (the Sha Tin Park), Planning Area 28 in the vicinity of the town centre and along the river channel at Siu Lek Yuen. They form a major node of recreational activities and extend along both sides of Shing Mun River providing a spine for pedestrian and cycle movements. A major recreational ground with soccer pitches and tennis courts etc. is provided in Planning Area 26 (Yuen Wo Road). Playgrounds with different active and passive recreational facilities are also provided in Planning Areas 2 (Che Kung Miu Road Playground), 5 (Tsang Tai Uk Playground) and 17 (Hin Tin Playground).

7.10.3 Other major open space zones, including those in Planning Areas 2 and 33, are suitable for passive recreational purposes. In addition, open spaces in Planning Areas 13 and 24 are zoned for this purpose because of their 'fung shui' significance or landscape quality.

7.10.4 In addition to the major open spaces as indicated on the Plan, local open spaces will also be provided within the public housing estates and the large private residential developments for the enjoyment of local residents.

7.11 Other Specified Uses ("OU") : Total Area ~~**215.79**~~ ***216.21*** ha

7.11.1 This zone is intended for specific development(s) and/or uses, which

is/are specified in the annotation of the zone. They include the following specific uses :

(a) the Sha Tin Race Course in Planning Area 47;
(b) the sewage treatment plant in Planning Area 47;
(c) the refuse transfer station in Planning Area 65;
(d) the Fu Shan Crematorium and Columbarium and its extension, a public mortuary and a funeral parlour in Planning Area 18;
(e) the East Rail Sha Tin Station, with commercial development and bus terminus, in Planning Area 20;
(f) the East Rail Ho Tung Lau Maintenance Centre, with commercial/ residential developments above, in Planning Area 15;
(g) the Tai Wai Maintenance Centre, with residential development above, in Planning Area 17;
(h) the land for railway development;
(i) the Sha Tin Water Treatment Works in Planning Areas 9 and 49;
(j) the existing petrol filling stations at On Sum Street in Planning Area 11, Yuen On Street in Planning Area 14 and Tai Po Road in Planning Area 33, and two planned petrol filling stations in Planning Areas 16 and 68;
(k) the sites proposed for business use in Planning Area 11;
(l) Po Fook Hill in Planning Area 6;
(m) Tao Fong Shan Christian Cemetery in Planning Area 6;
(n) the amenity areas adjoining Po Fook Hill and Tao Fong Shan Christian Cemetery;
(o) the waterfront amenity area in the area on the western side of Sha Tin Hoi (Tide Cove);
(p) the portals and the ancillary facilities of the Sha Tin Cavern Sewage Treatment Works in Planning Area 65;
(q) the proposed Columbarium and Garden of Remembrance in Planning Area 65; ~~and~~
(r) Memorial Park Hong Kong in Planning Area 16***;***
(s) Sha Tin Ching Yuen in Planning Area 68; and
(t) Puguangming Temple in Planning Area 4.

7.11.2 Land zoned for "OU" annotated "Business" ("OU(Business)") and "OU(Business (1))" is intended for general business uses. Under this zoning, a mix of information technology and telecommunications industries, non-polluting industrial, office and other commercial uses are always permitted in new "business" buildings. However, in order to ensure that the concerns on fire safety and environmental impacts are properly addressed, only less fire hazard-prone office use that would not involve direct provision of customer services or goods to the general public are permitted as of right in existing industrial buildings or industrial-office buildings within this zone. As it is not possible to phase out existing polluting and hazardous industrial uses all at once, it is necessary to ensure compatibility of the uses within the same industrial building until the whole area is transformed to cater for the new non-polluting business uses. Development within this zone should make reference to the relevant Town Planning Board Guidelines.

7.11.3 The "OU(Business)" zone in Shek Mun comprises twelve existing buildings with mixed industrial and office uses as well as some vacant sites in the south-eastern part of the zone.

7.11.4 On land designated ***as*** "OU(Business (1))", uses such as educational institution, exhibition or convention hall, place of recreation, sports or culture, retail shop and school, which will likely attract high concentration of population, require planning permission from the Board.

7.11.5 The site designated ***as*** "OU" annotated "Columbarium" in Planning Area 6 (i.e. Po Fook Hill) is subject to GFA, site coverage and building height restrictions. The restrictions are necessary for the purposes of minimizing adverse visual, landscape, traffic and environmental impacts caused by columbarium development at the site. Minor relaxation of the stated restrictions may be considered by the Board on application under section 16 of the Ordinance. Each proposal will be considered on its own merits.

7.11.6 The site designated ***as*** "OU" annotated "Columbarium (1)" in Planning Area 16 (i.e. Memorial Park Hong Kong)***, the site designated as "OU" annotated "Columbarium (2)" in Planning Area 68 (i.e. Sha Tin Ching Yuen) an d the site designed as "OU" annotated "Religious Institution with Columbarium" in Planning Area 4 (i.e. Puguangming Temple) are*** ~~is~~ subject to GFA, site coverage, building height, and total number of niches restrictions. The restrictions are necessary for the purposes of minimizing adverse visual, landscape, traffic and environmental impacts caused by columbarium development at the site. Minor relaxation of the stated restrictions may be considered by the Board on application under section 16 of the Ordinance. Each proposal will be considered on its own merits.

7.11.7 The site designated ***as*** "OU" annotated "Columbarium and Garden of Remembrance" in Planning Area 65 has been identified for columbarium development to share the responsibility of developing district-based columbarium facilities and to meet the demand for public niches. The site comprises a low-rise columbarium block providing about 40,000 niches and a garden of remembrance. Aesthetically-designed columbarium building blending in well with ample landscaping works will be adopted to minimize the visual impact. The overall layout of the columbarium block will be subject to detailed architectural design at the subsequent stage.

7.12 Green Belt ("GB") : Total Area ~~**979.71**~~ ***975.51*** ha

7.12.1 The planning intention of this zone is primarily for defining the limits of urban and sub-urban development areas by natural features and to contain urban sprawl as well as to provide passive recreational outlets. There is a general presumption against development within this zone.

7.12.2 Pursuant to the recommendations of the "Relocation of Sha Tin Sewage Treatment Works to Cavern – Feasibility Study", an underground area within the "GB" site at Planning Area 65 has been identified for the relocation of Sha Tin Sewage Treatment Works. The Sha Tin Cavern Sewage Treatment Works consists of sewage and sludge treatment facilities, access tunnels and other associated facilities located in cavern. The "GB" area occupied by the underground sewage treatment works is designated as Sub-area 1 within this zone on the Plan. The use of underground sewage treatment works is always permitted in this sub-area.

8. COMMUNICATIONS

8.1 Roads

8.1.1 Only major road network which comprises trunk roads, primary distributors and district distributors is shown on the Plan. As the Plan is drawn at a small-scale, design details of major road junctions and local access roads are not indicated.

8.1.2 The Area is linked to the northern and western Kowloon via the Lion Rock Tunnel Road and Tai Po Road respectively. The Tate's Cairn Tunnel provides an additional strategic highway linking north-east Kowloon, the Area and further onto Ma On Shan. In the west, Route 5, including the Shing Mun Tunnel, provides a direct access to Tsuen Wan. The Tsing Sha Highway connects the Area with Cheung Sha Wan. In the north, a highway system, which comprises Sha Tin Road, Tai Po Road and Tolo Highway, connects the Area with Tai Po and beyond.

8.2 Railway

8.2.1 Mass Transit Railway (MTR) East Rail Line

The Area is served by the electrified East Rail which provides a major transport link between ~~**Kowloon**~~ ***Hong Kong Island*** and the New Territories. There are altogether five railway stations serving various parts of the Area viz. Tai Wai, Sha Tin, Fo Tan, Racecourse and University Stations.

8.2.2 MTR Tuen Ma Line – ~~**Tai Wai**~~ **Tuen Mun** to Wu Kai Sha

The Tuen Ma Line (TM Line) ***was fully commissioned on 27 June 2021. It*** provides a convenient passenger link connecting Ma On Shan with ***Tuen Mun*** via the Sha Tin hinterland. There are interchange facilities with the existing East Rail in Planning Area 3 (Tai Wai), six stations in Sha Tin (Hin Keng, Tai Wai, Che Kung Temple, Sha Tin Wai, City One and Shek Mun) and a Maintenance Centre at Tai Wai.

~~**8.2.3 MTR Shatin to Central Link**~~

~~The railway scheme for the Shatin to Central Link (SCL) was authorised by CE in C on 27 March 2012 and the railway tracks and station within the area are currently under construction. Pursuant to section 13A of the Ordinance, the railway scheme authorised by the CE in C under the Railways Ordinance (Chapter 519) shall be deemed to be approved under the Ordinance. The railway alignment, stations and structures within the area are shown on the Plan for information only.~~

8.3 Public Transport

In addition to railway, buses, taxis and green mini-buses are the main modes of public transport in the Area. Public transport interchange facilities are provided at convenient locations such as near the railway stations.

8.4 Ferry Services

The use of waterborne transport for external communication is limited at present. There is a ferry pier in Planning Area 68 ***(Ma Liu Shui)*** which provides services to the outlying islands. ~~The adjoining ferry pier has been demolished to make way for the construction of an access road from Ma Liu Shui to Pak Shek Kok. Landing steps are provided in the adjacent area.~~

8.5 Pedestrian and Cycle Networks

A special feature of the Area is a comprehensive system of walkways and cycle tracks, which links all major developments in the Area and provides direct links with most of the open spaces. ***It also forms part of the cycle track network connecting the whole New Territories.*** The system is segregated from the vehicular transport network by means of separate right-of-ways or grade-separated crossings.

9. UTILITY SERVICES

9.1 Water Supply

There are adequate water supplies to serve the Area. The Sha Tin Water Treatment Works located in Planning Areas 9 and 49 at the head of the valley is a major water treatment facility in Hong Kong. It receives water from the Plover Cove Reservoir and High Island Reservoir. The Area is also served by a salt water pumping station in Planning Area 47 (Ma Liu Shui), major fresh water and salt water service reservoirs in Planning Areas 18 (Sha Tin West), 22 (To Shek), 23 (Sha Tin South), 40 (Sha Tin North), 56 (Kau To) and 64 (A Kung Kok), and high-level service reservoirs in Planning Areas 22 (Siu Lek Yuen), 37 (Lower Shing Mun), 61 (Pai Tau Hang) and 62 (Ha Wo Che). Additional service reservoirs are also planned in Planning Areas 52 (Shui Chuen O) and 56 (Kau To North).

9.2 Sewage Treatment

Sewage generated in the Area is treated in the Sha Tin Sewage Treatment Works in Planning Area 47. The treated effluent is discharged to the Kai Tak Nullah through the Tolo Harbour Effluent Export Scheme. The Sha Tin Sewage Treatment Works is to be relocated to cavern at Nui Po Shan in Planning Area 65. Upon the completion of project, the sewage generated in the Area will be treated in the underground sewage treatment works.

9.3 Electricity

There are a number of primary substations provided in the Area including a 400 kV substation in Planning Area 4 (Heung Fan Liu).

9.4 Town Gas

Town gas is supplied to the Area via trunk main from the gas production plant in Tai Po across Tolo Harbour with a gas off-take pigging station in Planning Area 11.

9.5 Telephone

Three telephone exchanges, one in Planning Area 14, one in Planning Area 16 and the other in Planning Area 25, are provided to serve the Area and to cater for the projected increase in demand.

10. CULTURAL HERITAGE

10.1 The Old House at Wong Uk Village and Recorder House, Kowloon Reservoir are both Declared Monuments within the Area. Besides there are graded historic buildings within the Area, namely the Tsang Tai Uk (Grade 1), Tung Lo Wan Li Cottage (Grade 1), Entrance Gate, Chik Chuen Wai, Tai Wai Tsuen (Grade 2), Nos. 5A, 5B, 5C and 6 Pai Tau (Grade 2), Tao Fong Shan Christian Centre (Grade 2), High Rock Christian Camp (Grade 2), Weir, Lower Shing Mun Reservoir (Grade 2), Che Kung Temple (Grade 2), Lam Ancestral Hall, Nos. 8, 10-14 Pai Tau (Grade 3), Ng Yuen (Grade 3), Dam and Supply Basin, Lower Shing Mun Reservoir (Grade 3), Nos. 1, 2 and 3 First Street, Tai Wai (Grade 3), Nos. 33, 34, 36, 37, 38 and 39 Ha Wo Che (Grade 3), Yeung Ancestral Hall, Law Ancestral Hall and So Ancestral Hall in Hin Tin (Grade 3), Lau Ancestral Hall, Sha Tin Tau (Grade 3), Man Fat Din and Pagoda in Man Fat Tsz (Grade 3), and Nos. 7-10 Sheung Wo Che (Grade 3).

10.2 On 19 March 2009, the Antiquities Advisory Board (AAB) released the list of 1,444 historic buildings, in which ~~**all of**~~ the buildings***/structures within the Area*** have been accorded ~~**proposed**~~ gradings ~~**and most of the proposed gradings have been confirmed**~~. ***The*** AAB also released a number of new items in addition to the list of 1,444 historic buildings. These items are subject to the grading assessment by the AAB. Details of the list of 1,444 historic buildings and its new items have been uploaded onto the official

website of the AAB at http://www.aab.gov.hk/en/historic-buildings/results-of-the-assessment/index.html ~~**http://www.aab.gov.hk.**~~

10.3 Prior consultation with the Antiquities and Monuments Office ***(AMO) of Development Bureau*** should be made, if any development, redevelopment or rezoning proposal ~~**that might**~~ ***which may*** affect the above ~~**D**~~***d***eclared ~~**M**~~***m***onuments, ~~**graded**~~ historic buildings / structures ***graded by the AAB***, new items pending ***for*** grading assessment ***by the AAB***, any other historic buildings / structures identified and their immediate environs***, both at grade and underground, all of which are collectively known as heritage sites***.

11. IMPLEMENTATION

11.1 Although existing uses non-conforming to the statutory zonings are tolerated, any material change of use and any other development/redevelopment must be always permitted in terms of the Plan or, if permission is required, in accordance with the permission granted by the Board. The Board has published a set of guidelines for the interpretation of existing use in the urban and new town areas. Any person who intends to claim an "existing use right" should refer to the guidelines and will need to provide sufficient evidence to support his claim. The enforcement of the zonings mainly rests with the Buildings Department, the Lands Department and the various licensing authorities.

11.2 This 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 within the Government as the basis for public works planning and site reservation. 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 Architectural Services Department and the Highways Department. In the implementation of the Plan, the Sha Tin District Council would be consulted as appropriate.

11.3 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 plans/layout plans, and guidelines published by the Board. The outline development plans and layout plans are available for public inspection at the Planning Department. Guidelines published by the Board are available from the Board's website, the Secretariat of the Board and the Technical Services Division of the Planning Department. Application forms and Guidance Notes for planning application can be downloaded from the Board's website and are available from the Secretariat of the Board, and 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.

~~NOVEMBER 2022~~ OCTOBER 2023

[RESTRICTED]

CIVIL ENGINEERING AND DEVELOPMENT DEPARTMENT

AGREEMENT NO. CE 47/2020 (CE) –

TERM CONSULTANCY FOR SITE FORMATION AND INFRASTRUCTURE WORKS FOR PROPOSED HOUSING DEVELOPMENTS IN ZONE 2 (2021 – 2024) – FEASIBILITY STUDY

TASK ORDER NO. 3 – SITE FORMATION AND INFRASTRUCTURE WORKS FOR PROPOSED PUBLIC HOUSING DEVELOPMENT TO THE WEST OF EX-FO TAN COTTAGE AREA, FO TAN – FEASIBILITY STUDY

Planning Report (PR) for Amendments to OZPs (Final – Issue 4)

OCTOBER 18, 2023



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[RESTRICTED]

PROJECT NO.: 2512219A

DATE: OCTOBER 2023

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CE47/TO3/GN/1006	TASK ORDER NO. 3 WEST OF EX-FO TAN COTTAGE AREA PROPOSED ZONING AREA
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CE47/TO3/TIA/207	EXISTING PEDERTRAIN AND CYCLING FACILITIES IN THE VICINITY OF PROPOSED DEVELOPMENT
CE47/TO3/TIA/303	PROPOSED PEDESTRAIN CONNECTIVITY
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CE47/TO3/TIA/406	PROPOSED LAYOUT OF JUNCTION OF FO TAN ROAD / MIN FONG STREET/ SHAN MEI STREET (J05)
CE47/TO3/TIA/407	PROPOSED LAYOUT OF JUNCTION OF FO TAN ROAD/ LOK KING STREET (J06)
CE47/TO3/TIA/408	PROPOSED LAYOUT OF JUNCTION OF FO TAN ROAD / SHA TIN ROAD/ TAI CHUNG KIU ROAD (J11)
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CE47/TO3/DR/1002	TASK ORDER NO. 3 WEST OF EX-FO TAN COTTAGE AREA PROPOSED DRAINAGE LAYOUT PLAN
CE47/TO3/DR/1003	TASK ORDER NO. 3 WEST OF EX-FO TAN COTTAGE AREA PROPOSED DRAINAGE LAYOUT PLAN (ALTERNATIVE)

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ABBREVIATIONS

ADWF	Average Dry Weather Flow
AOI	Area of Influence
ASD	Architectural Services Department
AVA	Air Ventilation Assessment
B/Ds	Bureaux / Government Departments
BDTM	Base District Traffic Model
C&D	Construction and Demolition
CASET	Computer Aided Sustainability Evaluation Tool
CAR	Contamination Assessment Report
CEDD	Civil Engineering and Development Department
DAC	Day Activity Centre
DCU	Day Car Unit
DEVB	Development Bureau
DFC	Design Flow / Capacity
DG	Dangerous Goods
DI	Departmental Instruction
DIA	Drainage Impact Assessment
DP	Designated Project
DSD	Drainage Services Department
EFS	Engineering Feasibility Studies
EIAO	Environmental Impact Assessment Ordinance
EPD	Environmental Protection Department
FEHD	Food and Environmental Hygiene Department
FWSR	Fresh Water Service Reservoir
FLWSR	Flushing Water Service Reservoir
GESF	Guidelines for Estimating Sewage Flows
GIC	Government, institution or community facilities
GLA	Government Land Allocations
GMB	Green Minibus
GMP	Greening Master Plan
GPS	Global Parking Standard
HD	Housing Department
HKPSG	Hong Kong Planning Standard and Guidelines
HMMH	Hostel for Moderately Mentally Handicapped Persons
HSMH	Hostel for Severely Mentally Handicapped Persons
HSPH	Hostel for severely Physically Handicapped Persons
HyD	Highways Department
IDF	Intensity Duration Frequency
IVRSC	Integrated Vocational Rehabilitation Services Centre
LandsD	Lands Department
LATM	Local Area Traffic Model
LCA	Landscape Character Areas

LCSD	Leisure and Cultural Services Department
LR	Landscape Resources
MDD	Mean Daily Demand
OZP	Outline Zoning Plan
PE	Public Engagement
PER	Preliminary Environmental Report
PFRFs	Public Fill Reception Facilities
PlanD	Planning Department
PS	Pumping Station
PT	Public Transport
PRH	Public Rental Housing
RAP	Remediation Action Plan
RC	Reserve Capacity
RCP	Refuse Collection Point
RCHD	Residential Care Home for the Elderly
RR	Remediation Report
SAI	Site of Archaeological Interest
SDM	Stormwater Drainage Manual
SHOS(MPH)	Supported Hostel for Mentally/Physically Handicapped Persons
SI	Site Investigation
SIA	Sewerage Impact Assessment
SIS	Slope Information System
SRTM	Sub-reginal Traffic Model
SSF	Subsidised Sale Flats
SWHSTW	Shek Wu Hui Sewerage Treatment Works
TCR	Total Core Recovery
THFWSR	Table Hill Fresh Water Service Reservoir
TMH	Terminal Manhole
TPDM	Transport Planning and Design Manual
TPI	Tree of Particular Interest
UFF	Unit Flow Factors
V/C	Volume to Capacity
VP	Viewing Point
WSD	Water Supplies Department
WSIA	Water Supply Impact Assessment
WSP	WSP (Asia) Ltd.

1 INTRODUCTION

1.1 BACKGROUND

1.1.1 The Government is committed to facilitating steady and continued land supply, not only for providing people with a place to live and work, but also for the developments of Hong Kong's commerce, industry, innovation and technology and various emerging sectors. In the short to medium term, the Government will continue to optimise the use of built-up land and its surrounding areas to meet the demand of the public for land for housing and other purposes.

1.1.2 On-going land use reviews including the two-stage Green Belt review, amongst others, have been carried out to identify suitable sites for various developments. The subject site located at the northwestern fringe of Fo Tan Industrial Area, Fo Tan abutting Wong Chuk Yeung Street, is one of the potential sites identified under the GB review. The site is bounded by Wong Chuk Yeung Street to the north, Chun Yeung Estate and Choi Wo Court to the east and northeast, and dense trees and vegetation to the south and west. It falls entirely within the "Green Belt" (GB) zone on the approved Sha Tin Outline Zoning Plan (OZP) No. S/ST/36.

1.1.3 The Civil Engineering and Development Department (CEDD) of the Hong Kong Special Administrative Region is tasked to conduct an Engineering Feasibility Study to explore the feasibility of converting land use of the Site for housing and relevant supporting uses. Upon confirmation of the technical feasibility, the Planning Department (PlanD) will initiate proposed amendments to the Outline Zoning Plan (OZP) accordingly.

1.1.4 On 4 May 2021, WSP (Asia) Ltd. (WSP) was commissioned by the CEDD to undertake this project – "Site Formation and Infrastructure Works for Proposed Public Housing Development to the West of Ex-Fo Tan Cottage Area, Fo Tan – Feasibility Study" (the Study) under Task Order No. 3 of Agreement No. CE 47/2020 (CE) "Term Consultancy for Site Formation and Infrastructure Works for Proposed Housing Developments in Zone 2 (2021 – 2024) – Feasibility Study".

1.2 SCOPE OF THIS PROJECT

1.2.1 The Project comprises feasibility study of the site formation and infrastructure works for the potential housing site as shown on **Drawing No. CE47/T03/GN/1001** in **Appendix A**. Main elements of works of this project include, but not limited to the following: -

(a) Recommendation of optimum development parameters for the Development(s) and the required supporting facilities for the Development(s);

(b) Site clearance of existing structures, trees and any other constraints at the Site(s) to the Development(s);

(c) Site formation works;

(d) Slope cutting and earth filling works as well as geotechnical works/structures (including slope/retaining wall upgrading works if necessary);

(e) Decontamination works;

(f) Transport infrastructure works (including site access, new road connecting to the Site(s), diversion/ upgrading of existing roads, flyovers, traffic improvement works, PTI/public transport laybys, pedestrian footpath, cycle track, footbridges/ subways and any other pedestrian and transport facilities etc. if necessary);

(g) Drainage infrastructure works;

(h) Water supply infrastructure works and necessary diversion works;

(i) Environmental mitigation measures for the site formation and infrastructure works and the Development(s);

(j) Landscape works and

(k) Other infrastructure works, such as utility works, electricity substation, etc. deemed to be necessary to support the Development(s).

1.3 SCOPE AND STRUCTURE OF THIS REPORT

1.3.1 The objective of the Planning Report is to:

(a) Form a self-contained report to facilitate amendment to the OZP(s) of the Site(s) including essential information of the Development(s) and Infrastructure Works relating to identifying possible problems, introducing the assessment methodologies, recommending development parameters, illustrating the analyses, addressing issues such as planning intention, land use compatibility, development intensity and BH compatibility, adequacy of the infrastructures required to support the proposed housing and related developments as well as the ways to minimize any adverse impacts, if any;

(b) Include planning assessment and summary of relevant technical and environmental assessments, with mitigation measures / recommended works proposed, if any, supported by plans and illustrative materials so as to demonstrate the technical feasibility and environmental acceptance of the Development(s) and that there will be no insurmountable impacts arising from the proposed Development(s) (from aspects, amongst others, such as traffic and transport impacts, drainage impact, sewerage impact, water supply impact, water pollution risk and impact, utilities impact, geotechnical conditions including natural terrain hazards, land contamination, environmental impact, ecology impact, landscape and visual impact, air ventilation impact, cultural heritage impact and sustainability) in undertaking the proposed amendments to the OZPs.

1.3.2 The Structure of the Report is as follows. Following this introductory chapter, there are seven further chapters:

Section 2	Proposed Development
Section 3	Traffic and Transport Impact
Section 4	Landscape and Visual
Section 5	Air Ventilation
Section 6	Preliminary Environmental Review
Section 7	Preliminary Land Requirement Study
Section 8	Site Formation and Infrastructural Provision
Section 9	Conclusion

2 PROPOSED DEVELOPMENT

2.1 Existing Land Use Zoning and Green Belt Review

2.1.1 The site falls within an area entirely zoned “Green Belt” (GB) on Sha Tin Outline Zoning Plan No. S/ST/36. The planning intention of "GB" zone is primarily for defining the limits of urban and sub-urban development areas by natural features and to contain urban sprawl as well as to provide passive recreational outlets. There is a general presumption against development within this zone. Surrounding land use zonings mainly include "Residential (Group A)" sub-zones, "Industrial" ("I"), "GB", "Government, Institution or Community" ("G/IC") and areas shown as 'Road'. The proposed rezoning from "GB" to "R(A)8" under the Sha Tin OZP is shown on **Drawing No. CE47/T03/GN/1005** in **Appendix A**."

2.1.2 In 2018, the Secretary of Development stated that as part of the mutli-pronged land supply strategy, through on-going land use reviews, the Government has identified over 210 sites with potential for housing development in the short to medium term, including 77 GB sites identified from the two-stage GB review and other land use reviews. The first stage of GB review mainly covered GB areas which were formed, deserted or devegetated, but possessed potential for residential development. The second stage of GB review covered GB zones in the fringe of built-up areas close to existing urban areas and new towns, and those vegetated areas with relatively less buffering effect and lower conservation value. As with other sites rezoned for housing purposes, in proposing rezoning of GB sites, the government will according to the established mechanism and criteria assess a host of factors, including transport and infrastructure capacity, provision of community facilities, development constraints, potential impacts on the local environment, visual and air ventilation impacts, etc. to ensure that there will not be insurmountable impact to the local community, while providing objective information to devise appropriate mitigation measures. The subject site located at the northwestern fringe of Fo Tan Industrial Area, Fo Tan abutting Wong Chuk Yeung Street, is one of the potential sites identified under the second stage of the GB review.

2.2 The Site and its Surrounding

Major Land Uses within the Site

2.2.1 The site comprises approx. **3.4** hectares of Land. Majority of the Site is covered by tree groups clusters with dense vegetation and steep slopes with high topography ranging from **+44mPD to +101mPD**. A semi-natural stream is observed within the site running from the northwest to the southeast at its northern fringe. Over **29 no.** of residential dwellings/temporary structures are observed and scattered within the Site.

Formulation of Development Boundary

2.2.2 The site/development boundary has been reviewed in this Feasibility Study. Taking into account the site features and development constraints including the semi-natural stream, the private lots, the tree group clusters, steep slopes and associated site formation works required, the development boundary has been slightly shifted to the south compared to the original site boundary.

Surrounding

2.2.3 The Site of about 3.4 hectares, is located at the northwestern fringe of the existing Fo Tan Industrial Area, and is characterized by high-rise residential and industrial developments, low-rise village settlements, and dense vegetation and slopes. It is bounded by Wong Chuk Yeung Street to the north and Wo Sheung Tun Street to the east. Two high-rise public housing

developments known as Chun Yeung Estate and Choi Wo Court managed by the Hong Kong Housing Authority, are located to its northeast and southeast respectively. Local village settlements of the nearby recognized villages including Wong Chuk Yeung Village, Kwai Tei Village, Kwai Tei New Village and Fo Tan Kuk San Tsuen are observed to its further north and west. Dense tree groups with vegetation, and steep slopes are observed to its south and west.

Residential Developments

2.2.4 Several clusters of residential developments are located at the surroundings of the Site. To the east, it is dominated by a series of industrial buildings. Several residential blocks are at the further east of these industrial buildings, namely The Grandville, Eden Gardens, Pine Villa, Rosary Villas and Pat Tsz Wo Village. At the northeast and south east of the Site, there are two high-rise public housing developments namely Chun Yeung Estate and Choi Wo Court. To the north of Chun Yeung Estate, it's currently occupied by low-rise village house settlements of Kwai Tei New Village. To the south, a group of high to low-rise residential developments, namely Garden Villa, Vorte Palais, Ville De Cascade, Greenwood Terrace, Hong Kong Baptist University Staff Quarters, Ville De Jardin, Sha Tin 33, Scenery Garden and Sui Wo Court are located.

Character of the Site

2.2.5 In accordance with the Sha Tin Outline Zoning Plan No. S/ST/36, the Site falls within "Green Belt" zone. The site and its surroundings are categorized by rural and urban landscape, consisting of natural woodlands, scattered settlements, public and private residential developments, workshops and community facilities. The Site is also embraced by mountains such as Cove Hill in the north, Grassy Hill in the west and Needle Hill in the southwest, together with the existing stream along the northern boundary of the Site, forming part of the natural landscape of the area.

Major Roads and Transportation Network

2.2.6 The Site is served by various primary, district and local distributor roads. The distributor roads provide connection between industrial, commercial and residential areas within the district. Fo Tan Road is a primary distributor running through north and south by Kwei Tei Street, Sui Wo Road, Tsung Tau Ha Road, Shan Mei Street, Slip Road to/from Tai Po Road, Yuen Wo Road and Tai Chung Kiu Road. By interchanging with Tai Po Road - Sha Tin Section and Sha Tin Road, it serves a major distributor conveying traffic between Fo Tan areas. Sui Wo Road is a district distributor running through east and west by Mei Wo Circuit, Lai Wo Lane, Wong Chuk Yeung Street, Ngau Wu Tok Street, Shan Mei Street, Cheung Lek Mei Street, Fo Tan Road, Au Pui Wan Street and Kwei Tei Street. Kwei Tei Street is a single two-lane local distributor running through east and west connecting Tsung Tau Ha Road and Wong Chuk Yeung Street. Wong Chuk Yeung Street is another local distributor running through north and south connecting Kwei Tei San Chuen Road to the north and Sui Wo Road to the south. The East Rail Line currently runs through the area, the closest rail station is Fo Tan Station, which is approx. 1.2km away from the proposed development.

2.3 DESIGN PARAMETERS

2.3.1 The proposed development at this Site is predominantly public housing, which would consist of 4 residential blocks providing about 3,104 SSF or 3,610 PRH flats accommodating a planned population of about 8,381 or 9,747 respectively upon full development.

2.3.2 Supporting this residential development and to meet the local need, there would be other non-domestic provisions such as retail/commercial facilities providing some daily necessity, a kindergarten and welfare facilities, etc. subject to later design.

Table 2.1 Summary of Preliminary Design & Planning Parameters

Formation Level (mPD)	Gradually sloping from +95mPD in the southern portion to +68mPD in the northern portion.
Gross Site Area for Rezoning Site	Approx. 3.4 ha
Net Site Area	Approx. 2.2 ha
Housing Type	Public Housing
Proposed Plot Ratio [1]	6.7 (Domestic: 6.5 + Non-domestic: 0.2)
Flat Production (approx.) [2]	3,104 (SSF) / 3,610 (PRH)
Estimated Design Population[2]	8,381 (SSF) / 9,747 (PRH)
Site Coverage	Not exceed 65%
No. of Housing Block	4
Proposed Maximum Building Height	Not Exceeding +240mPD
Local Open Space [4]	Minimum 1 m^2 per person
Greenery coverage provision [5]	A minimum 20% and a target of an overall 30% greenery coverage
Welfare Facilities (GFA) (m^2) [3]	7,150
Education Facility [4]	6-classroom kindergarten (SSF) / 7-classroom kindergarten (PRH)
Retail (GFA) (m^2)	1,600

Remarks:

[1] Non-domestic plot ratio would include retail, kindergarten, estate management office, etc. subject to later design stage. Welfare facilities and ancillary carpark are not included in the calculation of non-domestic plot ratio and total plot ratio.

[2] 10% allowance to flat number and design population would be adopted in the technical assessments to allow design flexibility, subject to later detailed design stage.

[3] About 5% of total domestic GFA.

[4] In accordance with the HKPSG.

[5] Green coverage of at least 20% should be considered as a minimum unless constrained by special circumstances.

Tentative Development Programme

2.3.3 Upon the handover of the site by CEDD to HD in 2030 tentatively, the proposed housing development is tentatively scheduled for completion in 2034/2035.

Preliminary Development Scheme

2.3.4 Residential blocks with proposed maximum building height of +240mPD are proposed at the subject site (as shown in **Appendix C**). The proposed building height and blocks arrangement are considered optimal taking into account the following major site constraints and design considerations, and the intention of maximizing the development potential of the site:

- High Topography and Steep natural terrain is along the southern boundary of the Site and the slope gradient is in general even steeper at the east.

- Semi-natural watercourses is running along the northern boundary of the Site from west to east.
- Potential landscape impact with vegetated slopes and trees likely affected.
- Adjoining private lots and domestic squatters within/in the vicinity of the Site.
- Extensive site formation and slope works.
- Permitted burial ground is located to the southeast of the Site.
- Bus and mini–bus laybys and an access road crossing existing watercourse would be provided to suit the needs of the development.
- Further to the 2020 Policy Address, public housing projects would need to reserve about 5% of total attainable domestic GFA for welfare facilities. As such, the development has been formulated to accommodate welfare facilities, education, retail, parking and local open space facilities; and
- Building gaps of at least 15m wide between residential blocks (i.e. Blocks 2 & 3) is allowed to provide sufficient air permeability of the site. Smaller angles between the prevailing wind directions and building axes are also considered for maximising the penetration of the prevailing wind through the sites.
- Cost effectiveness and Construction Programme

2.4 DEVELOPMENT OF PLATFORMS

2.4.1 Following consultations with the relevant departments (e.g. HD, PlanD, TD, DSD, AFCD, LandsD), various development layouts and platform options were developed and reviewed. Three layouts incorporating (i) a full preservation of the existing stream (designated “Option 1A” and “Option 1B”); and (ii) full diversion of the existing stream to box culvert (designated “Option 2”) were selected for further assessment.

2.4.2 Platform options, comprising both watercourse preservation and watercourse diversion schemes, have been developed on the basis that resumption of the six private land lots will not be involved. Three site formation schemes “Option 1A”, “Option 1B” and “Option 2” are discussed, the layouts of three options are shown in **Drawing no. CE47/TO3/FIG/071, CE47/TO3/FIG/069 & CE47/TO3/FIG/067 in Appendix C** respectively.

(i) Option 1A – Full watercourse preservation with bus layby Type A;

(ii) Option 1B – Full watercourse preservation with bus layby Type B; and

(iii) Option 2 – Full watercourse diversion with bus layby Type B

2.4.3 The fundamental arrangement for these platforms to be generally dipping down from west to east of the Site. The platform schemes for Option 1A and Option 1B are comparatively similar, with differences with the types of off-site bus layby and platform level adopted. The three options are proposed to consist of stepped platforms with various elevations in each scheme, the fundamental arrangement for these platforms to be generally dipping down from west to east of the Site. All three developed platform options will have to (i) avoid encroaching the Permitted Burial Ground Site No. ST/28 directly upslope of the Site and (ii) maximise the net site area for housing development as far as possible. The design of the site formation will be further reviewed at the detailed design stage to determine whether the steeper cut slope with soil nails should be adopted to reduce the extent of required cutting works. Under Option 2, soldier pile walls will be required and the volume of excavated spoil to be disposed is also significantly higher than Option 1A and 1B. In addition, if the adjacent watercourse is to be diverted, there will be a loss of freshwater habitats and ecological values which could not be recreated or compensated. Translocation of aquatic fauna is also required. Furthermore, the

proposed box culvert in Option 2 is hard to maintain due to the large elevation. In view of the above considerations, Option 2 is not recommended for further development and assessment.

2.4.4 The Platform schemes for Option 1A and Option 1B are comparatively similar, with differences with the types of off-site bus layby and platform level adopted. Although Option 1B seems to be more favourable from a site formation viewpoint (i.e., lower cost, shorter construction time and lesser excavated spoil to be disposed), Option 1A is recommended as bus boarding and alighting by future residents can take place with relatively much ease with a significantly lower road gradient than Option 1B. In view of the pedestrian connectivity and walkability in addition to the capital and maintenance costs involved with the vertical transport systems, and the Option 1A with convenient access at grade on flat ground to the proposed bus layby and the vicinity for future residents would be preferable to Option 1B. Hence, in view of the above considerations, Option 1A is recommended for further development and assessment among the three platform options.

2.5 PROPOSED ZONING FOR THE DEVELOPMENT

2.5.1 The site is currently zoned “GB” on the approved Sha Tin Outline Zoning Plan S/ST/36. To take forward the proposed public housing development under the study, the site of about 3.4 ha mainly covering the proposed public housing development and slope areas, is proposed to be rezoned to “Residential (Group A)8” (“R(A)8”) subject to a maximum total plot ratio of 6.7 and building height of 240mPD. For the areas proposed for access roads, bus or mini-bus lay-bys and the remaining areas within the works limit, they will remain as "GB" or areas shown as 'Road'. To facilitate the provision of GIC facilities, it is also proposed that in determining the maximum plot ratio for the subject development, any floor space that is constructed or intended for use solely as GIC facilities, as required by the Government, may be disregarded.

2.5.2 The proposed rezoning boundary and net site area permissible for GFA calculation are shown in **Drawing No. CE47/TO3/GN/1006.**

3 TRAFFIC AND TRANSPORT IMPACT

3.1 TRAFFIC AND TRANSPORT IMPACT ASSESSMENT METHODOLOGY

3.1.1 A sub-regional traffic model (SRTM) based on TD's 2015-based Base District Traffic Model (BDTM) NTE1 covering AOI will be developed for this Assignment. Design year with 3 years upon (i.e. year 2038) the population intake has been adopted for the traffic assessment. Traffic forecasts have been carried out for the Design Year.

3.1.2 The major planned / committed developments within / in the vicinity of AOI are reviewed and incorporated into the development of traffic forecast as appropriate.

3.2 EXISTING ROAD NETWORK

3.2.1 The proposed site is located in Fo Tan, Sha Tin. Bounded by the Ex-Fo Tan Cottage Area to the east and abuts Wong Chuk Yeung Street to the north and falls entirely within the "Green Belt" (GB) zone on the approved Sha Tin Outline Zoning Plan No. S/ST/36. Traffic to/ from the proposed development will mainly rely on Wong Chuk Yeung Street and Fo Tan Road, via other strategic road such as Tai Po Road, Sha Tin Road to connect other major town.

3.2.2 The road network in the vicinity of the Site comprises the following:

a) Sha Tin Road
b) Fo Tan Road
c) Tai Po Road – Sha Tin section
d) Yuen Wo Road
e) Sui Wo Road
f) Kwei Tei Street
g) Wong Chuk Yeung Street

3.3 EXISTING TRAFFIC CONDITION

3.3.1 Result of the junction capacity analysis indicates that most assessed key junctions are generally operating within capacity during AM and PM peak hours in year 2022. The road link capacity assessment results indicate that most of assessed key road links are operating with the V/C ratio below 1.0 during AM and PM peak hours, except L04 Tai Po Road, which have planned widening works to increase the capacity.

3.4 EXISTING PEDESTRIAN AND CYCLING NETWORK

3.4.1 Footpaths are currently available on both side of Wong Chuk Yeung Street, Kwei Tei Street and Fo Tan Road connecting Fo Tan town centre and the site. As the gradient of Wong Chuk Yeung Street are approx. 10%, universal accessibility may be a concern for the resident to/from other area.

3.4.2 The closest cycle track along Fo Tan Road is located near Min Fong Street, which is approx. 1.2km away from the proposed site. The existing footpath and cycle track networks in the vicinity are shown in **Drawing No. CE47/TO3/TIA/207.**

3.4.3 Currently there are pedestrian footpath along both side of Wong Chuk Yeung Street, it is expected the majority of pedestrian flow may walk towards downhill to various destination, such

as public transport lay-by near at Chun Yeung Estate or ancillary facilities near Chun Yeung Estate via Wong Chuk Yeung Street.

3.4.4 In view of steep gradient (approx. 10%) in existing Wong Chuk Yeung Street, pedestrian connection to/from the proposed public housing site with the surrounding for provision of universal accessibility facilities will be further investigated at later design stage. The connectivity of proposed site is illustrated in **Drawing No. CE47/TO3/TIA/303**.

3.5 EXISTING PUBLIC TRANSPORT FACILITIES

3.5.1 Existing road-based public transport (PT) services within the area are mainly covered by franchised buses and green minibus (GMB). The East Rail Line currently runs through the area. The closest rail station is Fo Tan Station, which is approx. 1.2km away from the proposed development. The existing PT services for the area are mainly available along Fo Tan Road and at the public transport layby of Chun Yeung Estate. The existing scheduled PT services servicing the area are summarized in **Table 3.1**.

Table 3.1 Existing Public Transport Services in the Vicinity

Operator	Type	Route No.	Terminal	
The Kowloon Motor Bus Co.(1933) Limited (KMB)	Bus	48P	Fo Tan Chun Yeung Estate	Tsing Lung Tau
		48X	Wo Che	Tsuen Wan (Bayview Garden)
		73A	Fanling (Wah Ming)	Yu Chui Court
		80M	Sui Wo Court	Kowloon Tong Station
		81K	Sun Tin Wai	Sui Wo Court
		85	Fo Tan (Shan Mei St)	Kowloon City Ferry
		88K	Hin Keng	Royal Ascot
		88X	Fo Tan Chun Yeung Estate	Ping Tin (Circular)
		280X	Sui Wo Court	Tsim Sha Tsui East (Mody Road)
		285	Fo Tan Chun Yeung Estate	Sha Tin Central (Circular)
		285A	Fo Tan Chun Yeung Estate	Fo Tan Station (Circular)
Citybus Limited (CTB)		798	Fo Tan (Chun Yeung Estate)	Tiu Keng Leng Station
		798X	Fo Tan (Chun Yeung Estate)	Tseung Kwan O Industrial Estate
		989	Fo Tan (Chun Yeung Estate)	Sai Wan Ho
AMS Public Transport Holdings Limited	GMB	481X	Tsuen Wan (Tsuen Wan Market St)	Chun Yeung Estate
Charm King Corporation Limited		814	Sha Tin (Lai Ping Rd)	Sha Tin Town Centre
Easywell Industrial Limited		65K	Wong Nai Tau	Fo Tan Station
Rich Success Transportation Limited		60K	Sha Tin Station	Kwei Tei New Village
		60P	Sha Tin Station	Chun Yeung Estate
		61S	Sha Tin (Wo Che Estate)	Mong Kok Station
		62K	Sha Tin Station	Sha Tin Lodge
Himwell Limited		69K	Greenwood Terrance	Sha Tin Station
		811	Sui Wo Court	Yu Chui Court
		811A	Greenwood Terrance	Pictorial Garden
		811B	Yiu On Estate	Fo Tan Industrial Area
		811K	Sui Wo Court Bus Terminus	Fo Tan Station
		811P	Royal Ascot	City One Sha Tin
		811S	Sui Wo Court	Yiu On Estate

3.6 PROPOSED PUBLIC TRANSPORT LAYBY

3.6.1 Wong Chuk Yeung Street is the only frontage connecting to existing public road, to avoid encroachment of public road, the major site entrance (for both pedestrians and vehicles) would be formed on existing Wong Chuk Yeung Street. The proposed preliminary access arrangement for proposed development is shown in **Drawing No. CE47/TO3/TIA/302**.

3.6.2 The western end sub-standard cul-de-sac is proposed to be upgraded. A vehicular access would be provided at the western end in form of priority junction shared by other ancillary use, such as car park, social welfare facilities and retail, etc.

3.6.3 To accommodate the future public transit demand from proposed housing site, a bus lay-by is proposed near to the site. It is anticipated that future user will walk directly to the proposed lay-by along Wong Chuk Yeung Street.

3.6.4 As the current Wong Chuk Yeung Street is approx. 10%, it is not an ideal condition for passengers boarding and alighting. As such, an access road is proposed to connect the Wong Chuk Yeung Street between Kwei Tei Sun Chuen Road and access of Chun Yeung Estate.

3.6.5 As there are no proper U-turn facilities at Wong Chuk Yeung Street for the proposed bus services to turn-around, as well as PT layby for the proposed bus and GMB services, a cul-de-sac would be provided at the end of the proposed access road to allow buses turning-around.

3.6.6 A bus layby and 6m wide footpath would be provided at the southern side of the proposed access road. To provide an ideal boarding and alighting condition for passengers, the level of the proposed access road would match with that of the connected point of Wong Chuk Yeung Street. A GMB layby would also be provided along the Wong Chuk Yeung Street and located 30m away from the east of the proposed access road by CEDD.

3.7 TRAFFIC AND TRANSPORT IMPACT ASSESSMENT

Development Parameter

3.7.1 The type of public housing (i.e. Subsidized Sale Flats (SSF) or Public Rental Housing (PRH)) would be subject to the latest housing policy of the Government. Worst scenario (i.e. greater trip generation) and a 10% allowance on flat number would be adopted in the technical assessment with a view to allow design flexibility of the Project. Based on the calculation, the trip generation for development Scenario 1 (SSF) is generally higher than Scenario 2 (PRH). Hence, for conservative purpose, Scenario 1 (SSF) with 10% allowance will be adopted proposed trip generation.

Findings of Junction Capacity Assessment

3.7.2 The junction capacity performance were assessed to examine the performance for the concerned junctions within AOI of the design years 2038 Reference and Design cases. The area of influence and identified critical link and junction are shown in **Drawing no. CE47/TO3/TIA/203**. The assessment results for the Design Year 2038 Reference and Design Scenario are presented in the **Table 3.2.**

Table 3.2 Key Junction Capacity Assessment Results for Design Year 2038

Index	Junction	Type[2]	Performance[1]			
			2038 Reference		2038 Design	
			AM	PM	AM	PM
J01	Wong Chuk Yeung Street / Kwei Tei Street	R	0.40	0.26	0.78	0.58
J02	Fo Tan Road / Kwei Tei Street	R	0.57	0.48	0.69	0.55
J03	Fo Tan Road / Sui Wo Road	S	**-2%**	**3%**	**-8%**	**-2%**
J04	Fo Tan Road / Tsung Tau Ha Road	S	54%	76%	38%	57%
J05	Fo Tan Road / Min Fong Street / Shan Mei Street	S	16%	28%	**10%**	21%
J06	Fo Tan Road / Lok King Street / Slip Road from Tai Po Road – Sha Tin	S	**10%**	**10%**	**4%**	**7%**
J07	Fo Tan Road / Slip Road to Tai Po Road – Sha Tin	S	23%	50%	15%	42%
J08	Wong Chuk Yeung Street / Wo Sheung Tun Street	P	0.14	0.11	0.18	0.13
J09	Wong Chuk Yeung Street / Kwei Tei Sun Chuen Road	P	<0.10	<0.10	0.71	0.49
J10	Fo Tan Road / Yuen Wo Road	S	**9%**	**11%**	**3%**	**7%**
J11	Fo Tan Road / Tai Chung Kiu Road	S	**-7%**	**13%**	**-11%**	**6%**
J12	Au Pui Wan Street / Wo Heung Street	P	0.60	0.57	0.61	0.58
J13	Au Pui Wan Street / Min Fong Street	P	0.79	**0.93**	0.80	**0.95**
J14	Au Pui Wan Street / Tsung Tau Ha Road	P	0.63	0.65	0.63	0.66
J15	Tsung Tau Hau Road / Kwei Tei Street	P	0.54	0.36	0.54	0.36
J16	Sui Wo Road / Shan Mei Street	P	**1.03**	**1.06**	**1.03**	**1.06**
J17	Sui Wo Road / Wong Chuk Yeung Street	R	0.67	0.61	0.67	0.61

Notes: [1] Figures shown represent "Reserve Capacity" (RC) for the signal-controlled junctions and "Design Flow / Capacity" (DFC) ratio for the roundabout / priority junction. The acceptance criteria RC of affected signalized junctions is equal to or less than 15%, DFC ratio of the affected priority junctions/roundabouts is less than or equal to 0.85. Otherwise, traffic improvement scheme(s) should be proposed to restore the DFC ratio and RC of the affected junctions to the above acceptance criteria.

[2] R: Roundabout, P: Priority Junctions, S: Signalised Junctions

3.7.3 The junction capacity assessment results indicate that J03, J11 and J16 would have performance RC lower than 0% for signalised junction; DFC greater than 1.00 for priority junction. For J05, J06, J10 & J13, the junction performance RC are lower than 15% or DFC greater than 0.85 for priority junction. Other than the above assessed key junctions, the remaining key junctions would be operating with spare capacity in Design Year 2038.

Consideration of Junction Improvement Proposal

3.7.4 J03, J05, J06, J11 and J16, junction improvement schemes are proposed. It is noted that the proposed improvement schemes of J03 and J16 would have interfacing issue with the Government Property Agency's "single site, multiple use" project (proposed joint-user complex at Shan Mei Street), further liaison with relevant departments for such issue shall be conducted in the detail design stage.

3.7.5 It is noted that J05 is interfacing with project from DSD named "Revitalisation of Tai Wai Nullah and Fo Tan Nullah – Investigation", along the southern side of Fo Tan Road next to the existing nullah. The proposed design of covered walkway may need to be adjusted to suit the junction widening scheme. The detailed proposal to be further elaborated in later section.

3.7.6 J10 is located across Fo Tan Road and Yuen Wo Road, after carefully review the alignment and nearby facilities, it is observed a pedestrian & cycling subway is located underneath the subjected junction, entrance are located at corners of junction and expected the widening works will be seriously constrained by subway entrance. As a result, there would be no sufficient spaces for implementation of junction improvement proposal. In view of serious site constraint and positive R.C. value, no junction improvement scheme would be proposed.

3.7.7 J13 is located at Au Pui Wan Street and Min Fong Street, which is bounded by existing buildings and footpaths. As a result, there would be no sufficient spaces for implementation of junction improvement proposal. In view of serious site constraint and positive R.C. value, no junction improvement scheme would be proposed.

Proposed Junction Improvement at Junction J03 – J/O Fo Tan Road/ Sui Wo Road

3.7.8 To enhance the junction performance of J03 – J/O Fo Tan Road/ Sui Wo Road, it is proposed to widen part of Fo Tan Road (westbound) as shown in the **Drawing No. CE47/TO3/TIA/405**.

3.7.9 New proposed traffic lane and footpath may encroach to the existing public toilet near Fo Tan Cooked Foot Market (West) and STT car park located near Shan Mei Street. Liaison with relevant parties will be conducted to investigate the feasibility of improvement schemes.

Proposed Junction Improvement at J05 – J/O Fo Tan Road/ Min Fong Street/ Shan Mei Street

3.7.10 Possible junction improvement scheme had been formulated and shown in **Drawing No. CE47/TO3/TIA/406**. To provide extra green time for two straight ahead flow along Fo Tan Road, it is proposed to adjust the MOC by cancelling the split phase in Fo Tan Road NB and Left turn movement to Shan Mei Street, road marking to be revised and 4 nos of traffic lanes will be provided at the exit arm. To provide sufficient width for widening, it is proposed to demolish part of planter and reduce the width of proposed coved walkway under DSD's project "Revitalisation of Tai Wai Nullah and Fo Tan Nullah – Investigation".

Proposed Junction Improvement at J06 – J/O Fo Tan Road/ Lok King Street/ Slip Road from Tai Po Road - Sha Tin

3.7.11 Possible junction improvement scheme had been formulated and shown in **Drawing No. CE47/TO3/TIA/407**.

3.7.12 To improve the capacity of the junction, widening of Lok King Street WB is proposed, an additional traffic lane is proposed to allow more traffic pass through within same phases, part of the nearside verge and greenery at Lok King Street to be demolished and convert to carriageway. Road marking and traffic signage to be revised accordingly.

Proposed Junction Improvement at J11 – J/O Fo Tan Road/ Tai Chung Kiu Road

3.7.13 Possible junction improvement scheme had been formulated and shown in **Drawing No. CE47/TO3/TIA/408.**

3.7.14 An additional left turn lane is proposed for Fo Tan Road EB, this modification may involve the extension of existing vehicular bridge. To further improve the junction performance, it is

proposed to revise the central divider and traffic island along Tai Chung Kiu Road. In order to provide 3 right turn lane simultaneously.

Proposed Junction Improvement at Junction J16 – J/O Sui Wo Road / Shan Mei Street

3.7.15 Possible junction improvement scheme had been formulated and shown in and **Drawing No. CE47/TO3/TIA/405**.

3.7.16 The road alignment of J16 is seriously constraint by Wah Lok Industrial Centre and Goldfield Industrial Centre, while only one southbound traffic lane can be provided along Sui Wo Road, the effectiveness of improvement scheme is limited by site constraint.

3.7.17 The junction performance assessment results of the above junctions in Design Year 2038 with and without the implementation of the proposed improvement schemes are tabulated in **Table 3.3**.

Table 3.3 Critical Junctions Performance with and without Improvement scheme

Index	Junction	Type[2]	Performance[1]			
			2038 Design Without Improvement		2038 Design With Improvement	
			AM	PM	AM	PM
J03	Fo Tan Road / Sui Wo Road	S	**-8%**	**-2%**	**11%**	15%
J05	Fo Tan Road/ Min Fong Street/ Shan Mei Street	S	**10%**	**21%**	15%	28%
J06	Fo Tan Road/ Lok King Street/ Slip Road from Tai Po Road – Sha Tin	S	**4%**	**7%**	16%	15%
J11	Fo Tan Road / Tai Chung Kiu Road	S	**-11%**	**6%**	**3%**	13%
J16	Sui Wo Road / Shan Mei Street	P	**1.03**	**1.06**	**1.02**	**1.05**

Notes:

[1] Figures shown represent "Reserve Capacity" (RC) for the signal-controlled junctions and "Design Flow / Capacity" (DFC) ratio for the roundabout / priority junction. The acceptance criteria RC of affected signalized junctions is equal to or less than 15%, DFC ratio of the affected priority junctions/roundabouts is less than or equal to 0.85. Otherwise, traffic improvement scheme(s) should be proposed to restore the DFC ratio and RC of the affected junctions to the above acceptance criteria.

[2] R: Roundabout, P: Priority Junctions, S: Signalised Junctions

Findings of Road Link Capacity Assessment

3.7.18 The link capacity performance were assessed to examine the performance for the concerned link section within AOI of the design years 2038 Reference and Design cases. The area of influence and identified critical link and junction are shown in **Drawing no. CE47/TO3/TIA/203**. The assessment results are presented in the **Table 3.4.**

Table 3.4 Key Road Link Capacity Assessment Results for Design Year 2038

Index	Road Link	Direction	Capacity	V/C Ratio[1]			
				2038 Reference		2038 Design	
				AM	PM	AM	PM
L01	Kwei Tei Street	Eastbound	1,400	0.41	0.42	0.64	0.58
		Westbound	1,400	0.20	0.15	0.38	0.32
L02	Fo Tan Road	Northbound	7,100	0.17	0.15	0.21	0.18
		Southbound	7,100	0.20	0.20	0.25	0.23

	(Between Sui Wo Road and Tsung Tau Ha Road)						
L03	Fo Tan Road (Between Min Fong Street and Lok King Street)	Northbound	5,200	0.56	0.45	0.60	0.49
		Southbound	5,200	0.52	0.52	0.58	0.55
L04	Tai Po Road - Sha Tin	Eastbound	5,400	0.77	0.97	0.78	0.98
		Westbound	5,400	0.97	0.84	0.98	0.85
L05	Yuen Wo Road	Eastbound	3,200	0.24	0.28	0.26	0.30
		Westbound	3,200	0.29	0.20	0.30	0.22
L06	Tai Chung Kiu Road	Eastbound	5,250	0.16	0.11	0.16	0.11
		Westbound	5,250	0.24	0.15	0.24	0.15
L07	Sha Tin Road	Northbound	3,300	0.70	0.81	0.71	0.82
L08	Sha Tin Road	Southbound	3,300	0.73	0.77	0.75	0.78
L09	Wong Chuk Yeung Street	Eastbound	1,400	0.13	0.14	0.31	0.32
		Westbound	1,400	0.11	0.16	0.35	0.31
L10	Au Pui Wan Street	Southbound	2,875	0.35	0.32	0.36	0.33
L11	Shan Mei Street	Northbound	900	0.67	0.56	0.67	0.56
		Southbound	900	0.57	0.56	0.57	0.56

Notes: [1] For road links, the performance indicator is V/C (Volume to Capacity) ratio. A V/C ratio equal to or less than 1.0 means that the road has sufficient capacity to cope with the volume of vehicular traffic under consideration. A V/C ratio above 1.0 indicates the onset of mild congestion and a V/C ratio between 1.0 and 1.2 would indicate a manageable degree of congestion. A V/C ratio above 1.2 indicate more serious congestion with traffic speeds progressively deteriorating with further increasing in traffic.

3.7.19 Road Link capacity assessment has shown that most of the assessed road link would have v/c ratio smaller than 1.0 after the implementation of Truck Road T4 and Tai Po Road widening, which revealed that the performance level of road network in the vicinity would be manageable the potential traffic impacts induced by the proposed public housing development on the vicinity would be limited.

Pedestrian Trip Generation

3.7.20 It is assumed that pedestrian trip taking feeder services to MTR station would utilise the proposed bus lay-by at the eastern side of site boundary on Wong Chuk Yeung Street, the proposed site induces minimal pedestrian trips on the external pedestrian network during commuter peak hours, the model split would be further discussed in the upcoming section of public transport facilitates.

3.7.21 The assessment for pedestrian facilities along the major pedestrian desire line under future condition are shown in **Table 3.5.**

Table 3.5 Assessment on Footpaths in Design Years

Index	Location[1]	Clear Width (m)[2]	Pedestrian Flow (ped/hr)		Pedestrian Flow Rate (ped/min/m)[3]		LOS[4]	
			AM	PM	AM	PM	AM	PM
F1	Wong Chuk Yeung Street (Western side)	3.5	1080	980	7.20	6.53	A	A
F2	Wong Chuk Yeung Street	2.0	480	240	8.00	4.00	A	A

	(Eastern side)							
F3	Kwei Tei Street (Northern side)	6.5	600	400	1.82	1.21	A	A
F4	Kwei Tei Street (Southern side)	3.0	600	260	5.00	2.17	A	A
F5	Wong Chuk Yeung Street (Northern side)	2.5	600	300	6.67	3.33	A	A
F6	Wong Chuk Yeung Street (Southern side)	3.5	320	360	2.13	2.40	A	A
F7	Wong Chuk Yeung Street to GMB layby (Western side)	3.0	1300	1280	10.83	10.67	A	A
F8	Proposed Footbridge	3.0	700	700	5.83	5.83	A	A

Notes:

[1] Please refer to Drawing No. CE47/TO3/TIA/501 for the location of the assessed pedestrian facilities;

[2] Clear width in metres;

[3] Pedestrian flow rates are computed based on effective width, effective width = clear width – dead width. Dead widths 0.5m as clearance for building side, curbs or fixed objects, trees and plants, building face and other clearance is adopted in calculating the effective width. For conservative purpose, total of 1m dead widths would be reduced for both sides of pedestrian footpath

[4] Referring to TPDM Volume 6 Section 10.4.2, the LOS of a footpath is classified into 6 levels (i.e. A to F). In general, LOS A and B provide a very good walking environment; LOS C and D are typical acceptable values; LOS E and F reflect a congested walkway environment.

3.7.22 The results indicate that all assessed footpaths will be operating with LOS C or above in Year 2038 with the proposed development in place, the proposed public housing development would not induce adverse potential impacts on the nearby footpath in the vicinity of the proposed development.

3.8 RAILWAY ASSESSMENT

Capacity of Railway Infrastructure

3.8.1 Based on "LCQ1: Alleviating the loading of MTR East Rail Line" dated 15/6/2022, the train frequency of the EAL during the morning peak has increased from about three minutes before commissioning of the cross-harbour extension to about 2.7 minutes now (i.e. 22 trains per hour).

3.8.2 Based on the THB's reply to 2022 SFCQ No. 0839, the design maximum capacity of the new signalling system is 82,500 passengers trips per hour per direction under 6ppsm. As mentioned in THB's reply to 2022 SFCQ No. 0736, The carrying capacity under 4ppsm would be 71.2% of 6ppsm (i.e. 58,740 passengers trips per hour per direction).

Demand Forecast and Railway Assessment

3.8.3 As mentioned, the design capacity of ERL under 6ppsm and 4ppsm are 82,500 ped/hr/dir and 58,740 ped/hr/dir respectively, and the induced pedestrian trips using MTR from the proposed site is 860 ped/hr during morning peak hour according to the TIA.

3.8.4 Assumed that all the induced pedestrian trips using MTR would travel to one direction, the additional demand for ERL from the proposed site would only increase the V/C ratio of NSC by 0.0104 (i.e. 860 ped/hr / 82,500 ped/hr/dir) under 6ppsm and 0.0146 (i.e. 860 ped/hr / 58,740 ped/hr/dir) under 4ppsm, which are considered as insignificant from traffic viewpoint.

3.9 SUMMARY OF PTTIA

3.9.1 The major site entrance (for both pedestrians and vehicles) would be formed on public road along Wong Chuk Yeung Street to connect the northern boundary of the site.

3.9.2 The junction capacity assessment results indicate that J03, J05, J06, J10, J11, J13 and J16 would have performance RC lower than 15% in signalised junction and DFC. greater than 0.85 in priority junction/ roundabout. Other than the above assessed key junctions, others would be operating with spare capacity in Design Year 2038.

3.9.3 In view of steep gradient (<10%) in existing Wong Chuk Yeung Street, pedestrian connection to/from the proposed public housing site with the surrounding for provision of universal accessibility facilities will be further investigated at later design stage.

3.9.4 A bus lay-by and a GMB layby are proposed near to the site, to facilitate the future public transit demand from the proposed housing site as well as the neighbouring community. It is anticipated that residents from the proposed development and local road users will walk directly to the proposed lay-by along Wong Chuk Yeung Street.

3.9.5 Based on the assessment on the pedestrian facilities, all assessed pedestrian facilities in Design Year 2038 are predicted to operate with LOS C or above. It is envisaged that the impacts due to the proposed public housing development on existing pedestrian network would be minimal.

3.9.6 Based on preliminary traffic and transport assessment, of the proposed development with implementation of the junction improvement schemes for J03, J05, J06, J11 and J16 by CEDD. Therefore, it can be concluded that the proposed public housing development is acceptable from the traffic point of view.

4 LANDSCAPE AND VISUAL

4.1 ASSESSMENT METHODOLOGY

4.1.1 The assessment area for the landscape impact assessment includes all areas within a 500m distance from the Public Housing Site Boundary as shown on Landscape Resource Plan **Figure 4.1** and Landscape Character Area Plan **Figure 4.2**. The assessment area for the visual impact assessment is defined by the visual envelope as shown on **Figure 4.3**, the photos of the LRs and LCAs are shown on **Figure 4.4 – 4.5**.

4.1.2 VIA is carried out to assess the potential visual impacts arising from the proposed development in accordance with TPB PG-No. 41. The assessment of visual impact analyses the potential visual impacts of the Project with respect to the existing views and the visual amenity of the representative key public Viewing points (VP) and their sensitive receivers identified within the Visual Envelope.

4.1.3 Potential impacts would result from the temporary and permanent above ground structure elements during the construction and operation phase. The sources of impacts are listed as follows:

- Removal of vegetation due to site clearance
- Site formation works & excavation works
- Construction of roads and associated facilities
- Construction of underground utilities
- Construction traffic
- Temporary site office, machinery and works area
- After dark lighting & welding
- Operation of residential development, other GIC facilities and associated infrastructure

4.2 BASELINE CONDITION

4.2.1 The Proposed Public Housing Development Site is about 2.2ha and falls within the Approved Sha Tin Outline Zoning Plan No. S/ST/36, zoned as “Green Belt” (GB). Currently, the Site is currently occupied by village houses, squatters and informal settlement with the rest of the area mostly Green Belt which comprising mixed woodland, shrubland. The Site is proposed to be rezoned as “R(A)” (or a subzone thereof).

4.2.2 Overall, the visual context is mainly tall residential towers, mid-rise residential developments, villas, and industrial buildings surrounded by natural mixed woodlands and small village settlements. Although the proposed development can impact the views of hikers and local residents in the vicinity, it corresponds to the high-rise urban mixed-use developments and industrial centres in proximity.

4.3 LANDSCAPE IMPACT AND TREE TREATMENT

4.3.1 Individual Landscape Resources (LRs) and Landscape Character Areas LCAs) have been identified with their “Sensitivity to Change” evaluated. Potential sources of landscape impacts have been assessed. The magnitude of landscape impacts on LRs including **LR1.1 – Natural Woodland**, **LR 3.2 – Low-rise Residential Development**, and **LR5.1 – Major Road**, and on LCAs including **LCA1 – Upland & Hillside Landscape** and **LCA2 – Urban Peripheral Village Landscape** are assessed to be “***Intermediate***”. Potential landscape mitigation measures have

been proposed to alleviate the landscape impact. The significance of landscape impacts after implementation of the mitigation measures have been evaluated.

4.3.2 Individual tree survey has been carried out for most of the site area, while board brush tree survey has been carried out for the remaining inaccessible site areas. **270** nos. of existing trees were individually surveyed and **1,000** nos. of trees in 25 tree groups as those areas are inaccessible, including steep slopes with dangerous and fenced off areas. All trees are with conditions ranging from "**poor**" to "**average**" were recorded within the tree survey boundary. All of the surveyed trees are common species and no Old and Valuable Trees (OVTs) are observed according to the Register of OVTs maintained by the Leisure and Cultural Services Department.

4.3.3 Among the approximate **1,270** nos. of trees within the tree survey boundary, approximately **898** nos., including **161** nos. individually surveyed trees and **737** nos. from tree group survey, are proposed to be felled due to the proposed site formation works. Amongst the 898 nos. trees to be felled, 8 nos. are trees of undesirable species which are exempted from compensation in accordance with TC(W) 04/2020 *Tree Preservation*.

4.3.4 Approximately **49** nos. of standard sized trees would be planted by CEDD within the Works Limit but outside Public Housing Site Boundary. The exact quantity of new trees planted by HD within Public Housing Site Boundary will be determined in the later design stage. Approximately **273** light standard trees are proposed to be planted at the berm planter of the southern cut slope of the project site. Approximately **348** whip trees are proposed to be compensated offsite in slope 7SW-B/C14. The exact quantity of compensatory planting is subject to further assessment at later investigation and detail design stage. The locations of the off-site compensatory trees are shown on **Fig. 4.14**.

4.3.5 The provision of afforestation area and plantation enrichment to mitigate the direct loss of woodland habitat will be subject to review in the next stage of Project, the details should be submitted to AFCD and the maintenance department for review.

4.3.6 The loss of trees within the site boundary due to the site formation works can be effectively mitigated by preservation of existing trees as far as possible, landscape treatment on slopes, compensatory plantings and landscaping/ greening works within the Development. More details of the assessment is enclosed in **Appendix D - Tree Survey Plan and Schedule**. A detailed tree survey and tree preservation and removal proposal will be prepared in the detailed design stage.

4.4 VISUAL IMPACT

4.4.1 Before adopting the proposed mitigation measures, design considerations that would avoid or reduce the identified impacts on landscape, or that would make the Proposed Public Housing Development visually more compatible with the setting, including Careful Adjustment of Building Blocks and Height, Greening, Streetscape Design, Aesthetic Design of Buildings, Preservation of Existing Vegetation are examined. In considering the minimization of landscape and visual impacts, alternative layouts of development have also been reviewed.

4.5 MITIGATION MEASURES

4.5.1 Proposed mitigation measures are used to reduce potential landscape and visual impacts of the Project as low as possible and finally, mitigating residual impacts as practical as possible.

4.5.2 The proposed landscape and visual mitigation measures in the construction and operation phases are listed in the table below, together with an indication of relevant implementation and maintenance government departments in accordance with *DEVB TC(W) No. 6/2015 Maintenance of Vegetation and Hard Landscape Features*.

ID No.	Table 4.1 Landscape and Visual Mitigation Measure	Funding Agency	Implementation Agency	Management Agency	Maintenance Agency
Construction Phase					
CM1	Preservation of Existing Vegetation – Any existing vegetation and trees not affected by the Project and within 5m offset from the Works Limit shall be carefully preserved and protected in accordance with DEVB TCW No. 4/2020 and the latest Guidelines on Tree Preservation by GLTMS of DEVB.	CEDD	Contractor (CEDD)	Contractor (CEDD)	Contractor (CEDD)
CM2	Control of Night-time Lighting Glare - All night-time lighting shall be avoided as far as possible. All lights should be directed light and no light glare shall illuminate directly outside the Works Limit.	CEDD	Contractor (CEDD)	Contractor (CEDD)	Contractor (CEDD)
CM3	Optimisation of Construction Areas and Providing Temporary Landscape Treatment on Temporary Construction Works – Construction areas' control, such as reducing the extent of working areas, temporary working areas, storage area and shortening construction period, shall be enforced to minimise potential landscape and visual impact arising from construction activities. Temporary landscape treatment such as hydroseeding temporary stockpiles is recommended.	CEDD	Contractor (CEDD)	Contractor (CEDD)	Contractor (CEDD)
CM4	Erection of Decorative Screen Hoarding - Site hoardings shall be painted in a colour that is compatible with the surrounding. Where possible, non-reflective, recessive colours should be used. Hoarding should be taken down at the end of the construction period.	CEDD	Contractor (CEDD)	Contractor (CEDD)	Contractor (CEDD)
Operation Phase					
OM1	Compensatory Tree Planting Where Practical – The compensatory trees shall be proposed outside the Proposed Public Housing Development but within Works Limit as far as practicable and to the satisfaction of relevant Government departments. Required numbers and locations of compensatory trees shall be determined and agreed upon separately with the Government during the Tree Removal Application process under *DevB TCW 4/2020*. Approximately **49** nos. of standard trees would be planted by CEDD within the Works Limit but outside Public Housing Site Boundary. The exact number, species and size of new trees planted by HD within Public Housing Site Boundary will be determined in the later design stage. Approximately **273** light standard trees are proposed to be planted at the berm planter of the southern cut slope of the project site. Approximately **348** whip trees are proposed to be compensated offsite in slope 7SW-B/C14.	CEDD (Compensatory trees outside the Proposed Public Housing Development but within Works Limit)	Contractor employed by CEDD (Compensatory trees outside the Proposed Public Housing Development but within Works Limit)	LCSD (Along non-expressway public roads) / ArchSD (for compensatory tree planting proposed to be located at slope 7SW-B/C14 under ArchSD's maintenance responsibility) / LandsD (for compensatory tree planting proposed to be located in the area outside the Proposed Public Housing Development but within Works Limit of unleased and unallocated Government land)	LCSD (Along non-expressway public roads) / ArchSD (for compensatory tree planting proposed to be located at slope 7SW-B/C14 under ArchSD's maintenance responsibility) / LandsD (for compensatory tree planting proposed to be located in the area outside the Proposed Public Housing Development but within Works Limit of unleased and unallocated Government land)
OM2	Buffer Planting – Buffer trees, shrubs or climbers are proposed to be planted as a visual barrier and/or noise barrier to nearby unsightly views, noise emitters or to reduce wall effect. Edge planters should be considered to alleviate likely visual impact. Evergreen plant species with dense foliage is recommended to be planted close to noise and dust emitters for better noise and dust reduction efficiency. The selection of planting species should make reference to *Street Tree Selection Guide of GLTMS, DEVB* and *GMP* for Sha Tin District. The proposed plant species are subject to further review at detail design stage.	CEDD (Buffer planting outside the Proposed Public Housing Development but within Works Limit))/ HA (Buffer planting within the Proposed Public Housing Development)	Contractor employed by CEDD (Buffer planting outside the Proposed Public Housing Development but within Works Limit) / Contractor employed by HD (Buffer planting within the Proposed Public Housing Development)	HD (within the Proposed Public Housing Development) / LCSD (Along non-expressway public roads) /	HD (within the Proposed Public Housing Development) / LCSD (Along non-expressway public roads) /
OM3	Aesthetic Design of Housing Development – A compatible design, construction materials and façade for the Development will assist in achieving visual uniformity with the surrounding environment. Finishing materials on the form, micro and macro texture, reflectivity/light absorbance and compatibility to the nearby environment shall be considered.	HA	Contractor (HD)	HD	HD

ID No.	Table 4.1 Landscape and Visual Mitigation Measure	Funding Agency	Implementation Agency	Management Agency	Maintenance Agency
OM4	Landscape Treatment within the Proposed Public Housing Development - Plantings should be provided on at-grade areas within the Site where practicable. Landscape treatment for the slope such as shrubs and groundcover shall be considered. Screening planting should be considered to soften the built structures. Sustainable landscape design, such as zero-irrigation, should be taken into consideration. Native plant species should be chosen and compatible with the surrounding environment. Overall target of 30% green coverage shall be provided as far as possible within the housing development with reference *to* the *Hong Kong Planning Standards and Guidelines*. A minimum of 20% green coverage and open space with min. 1sqm local open space per person should be provided unless constrained by special circumstances with reference to *HKPSG Ch.4*.	HA	Contractor (HD)	HD	HD
OM5	Building Separation of Proposed Public Housing Development –_Building separation between residential blocks shall be considered to enhance visual permeability and minimize wall effect of the proposed housing development. One major building separation, min. 15m wide building gap between Block 2 and Block 3 shall be applied to enhance visual openness between building blocks.	HA	Contractor (HD)	HD	HD

4.6 RESIDUAL LANDSCAPE AND VISUAL IMPACT

4.6.1 Before mitigation, the significance of impacts on LRs and LCAs ranges from "***Moderate***" to "***Insubstantial***". The major direct landscape impacts include degrading of existing landscape quality and incompatibility of the works with the surrounding landscape context. With the implementation of the appropriate mitigation measures, the residual impacts are expected to be "***Slight***" or "***Insubstantial***". Appraisal of each LR and LCA is at the below **Table 4.2.**

Table 4.2: Magnitude of Change for Landscape Resources and Landscape Character Area

ID No.	LR / LCA	Sensitivity	Sources of Impacts from the Project	Scale of LR / LCA Affected	Reversibility of Works	Duration of Impact (Temporary / Permanent)		Compatibility with Surrounding Landscape (Good / Fair / Poor)		Magnitude of Change (Large/ Intermediate/ Small/ Negligible)		Impact Significance Without Mitigation Measures (Substantial/ Moderate/ Slight/ Insubstantial)	
						Construction	Operation	Construction	Operation	Construction	Operation	Construction	Operation
LR1.1	Natural Woodland	High	C1-C7, O1	Small	Irreversible	Permanent	Permanent	Poor	Fair	Intermediate	Intermediate	Moderate	Moderate
LR1.2	Vegetated Slope	Low	C1-C7, O1	Small	Irreversible	Permanent	Permanent	Fair	Good	Small	Small	Slight	Slight
LR1.3	Rocky Area	Low	Nil	Nil	n/a	n/a	n/a	n/a	n/a	Negligible	Negligible	Insubstantial	Insubstantial
LR2.1	Watercourse	Medium	C1-C7, O1	Small	Reversible	Temporary	Temporary	Fair	Good	Small	Small	Slight	Slight
LR3.1	High-rise Residential Development	Low	C1-C7, O1	Small	Reversible	Temporary	Temporary	Fair	Good	Small	Small	Slight	Slight
LR3.2	Low-rise Residential Development	Low	C1-C7, O1	Small	Irreversible	Permanent	Permanent	Fair	Fair	Intermediate	Intermediate	Slight	Slight
LR4.1	Industrial Building	Low	C1-C7, O1	Small	Reversible	Temporary	Temporary	Fair	Good	Small	Small	Slight	Slight
LR4.2	School	Medium	Nil	Nil	n/a	n/a	n/a	n/a	n/a	Negligible	Negligible	Insubstantial	Insubstantial
LR4.3	Food Market	Low	C1-C7, O1	Small	Reversible	Temporary	Temporary	Fair	Good	Small	Small	Slight	Slight
LR4.4	Commercial Building	Low	Nil	Nil	n/a	n/a	n/a	n/a	n/a	Negligible	Negligible	Insubstantial	Insubstantial
LR5.1	Major Road	Medium	C1-C7, O1	Medium	Irreversible	Permanent	Permanent	Fair	Good	Intermediate	Intermediate	Moderate	Moderate
LR5.2	Local Transportation Corridor	Low	C1-C7, O1	Small	Irreversible	Permanent	Permanent	Fair	Good	Small	Small	Slight	Slight
LR5.3	Car Park	Low	C1-C7, O1	Small	Reversible	Temporary	Temporary	Fair	Good	Small	Small	Slight	Slight
LR5.4	Public Transportation Interchange	Low	C1-C7, O1	Small	Reversible	Temporary	Temporary	Fair	Good	Small	Small	Slight	Slight
LR6.1	Garden	Medium	Nil	Nil	n/a	n/a	n/a	n/a	n/a	Negligible	Negligible	Insubstantial	Insubstantial
LR6.2	Playground	High	Nil	Nil	n/a	n/a	n/a	n/a	n/a	Negligible	Negligible	Insubstantial	Insubstantial
LR6.3	Sitting-out Area	Low	Nil	Nil	n/a	n/a	n/a	n/a	n/a	Negligible	Negligible	Insubstantial	Insubstantial
LR7.1	Ha Wo Che Service Reservoir	Low	Nil	Nil	n/a	n/a	n/a	n/a	n/a	Negligible	Negligible	Insubstantial	Insubstantial
LR7.2	Kwei Tei Street Substation	Medium	Nil	Nil	n/a	n/a	n/a	n/a	n/a	Negligible	Negligible	Insubstantial	Insubstantial
LR7.3	Construction Site	Low	Nil	Nil	n/a	n/a	n/a	n/a	n/a	Negligible	Negligible	Insubstantial	Insubstantial
LR7.4	Fo Tan Fresh Water And Salt Water Pumping Station	Low	Nil	Nil	n/a	n/a	n/a	n/a	n/a	Negligible	Negligible	Insubstantial	Insubstantial
LCA1	Upland & Hillside Landscape	High	C1-C7, O1	Small	Irreversible	Permanent	Permanent	Poor	Fair	Intermediate	Intermediate	Moderate	Moderate
LCA2	Urban Peripheral Village Landscape	Low	C1-C7, O1	Small	Irreversible	Permanent	Permanent	Poor	Fair	Intermediate	Intermediate	Slight	Slight
LCA3	Residential Urban Landscape	Low	C1-C7, O1	Small	Irreversible	Permanent	Permanent	n/a	n/a	Small	Small	Slight	Slight
LCA4	Industrial Urban Landscape	Low	C1-C7, O1	Small	Reversible	Temporary	Temporary	n/a	n/a	Small	Small	Slight	Slight
LCA5	Transportation Corridor Landscape	Low	C1-C7, O1	Small	Irreversible	Permanent	Permanent	Fair	Good	Small	Small	Slight	Slight
LCA6	River Landscape	Medium	C1-C7, O1	Small	Irreversible	Permanent	Permanent	Fair	Good	Small	Small	Slight	Slight

4.6.2 The Proposed Public Housing Development will be partially screened by the existing trees in the front from **VP1**.

- **Visual Composition**: In view of the visual composition, the existing visual elements include mountain backdrop of To Fung Shan and the associated vegetations as well as the open sky view in the background and it will be partially replaced by the Proposed Public Housing Development. Chun Yeung Estate locates in the midground to the left. In the front, there is an engineering slope with existing trees. The Proposed Public Housing Development will be hardly compatible with the surroundings in this certain VP.
- **Visual Obstruction**: Visual obstruction to the existing mountain backdrop of To Fung Shan will be imposed, leading to the moderate loss of greenery, visual amenities, open sky view and visual openness to this viewpoint.
- **Effect on Public Viewers**: Regarding the effect on public viewers, additional building mass will be located in the background of this viewpoint, natural landscape currently enjoyed by the public viewers will be affected, leading to a moderate visual change to public viewers.
- **Effect on Visual Resources**: During operational phase, proposed mitigation measures (OM2, OM3, OM4 and OM5) such as buffer planting, aesthetic design of housing development, landscape treatment within the Public Housing Site Boundary and building separation can be applied to alleviate visual impacts. Provision of landscape treatment and tree planting can soften the building structure and enhance visual amenities of the Proposed Public Housing Development. Buffer planting along the proposed footbridge would soften its hard structure. Materials, textures and landscape treatment applied to the proposed car parking block would also enhance its overall permeability. Building separation can enhance visual openness and permeability. Although the above proposed mitigation measures would alleviate part of the visual impact, the Proposed Public Housing Development would impose moderate loss of visual resources such as mountain backdrop and open sky view on this viewpoint. However, considering the relatively close distance to the proposed building development, there's limited effectiveness of the proposed mitigation measures.

4.6.3 Regarding **VP2**, the Proposed Public Housing Development will be fully screened from this viewpoint.

- **Visual Composition**: Small portion of Cove Hill (Kau To Shan) can be observed in the background. Existing Fo Tan Industrial Area including Shatin Cold Storage No.1, Pak Sik Godown and part of the residential building development The Arles can be seen in the midground, and the Proposed Public Housing Development is screened by these clusters completely, thus, the proposed housing development will be compatible with the surroundings.
- **Visual Obstruction**: Since the Proposed Public Housing Development is fully screened by existing buildings, no visual obstruction is observed for this viewpoint.
- **Effect on Public Viewers**: No visual effect is observed for this viewpoint as the Proposed Public Housing Development is fully screened by existing buildings, magnitude of visual changes is considered to be **negligible**.
- **Effect on Visual Resources**: There will be no effect on the existing visual resources as the Proposed Public Housing Development is fully screened by the existing buildings.

4.6.4 The Proposed Public Housing Development will be partially screened by the existing trees in the front from **VP3**.

- **Visual Composition**: In view of the visual composition, small portion of high-rise residential towers and industrial buildings of Fo Tan townscape such as Chun Yeung Estate and Royal Ascot and various hills surrounds Fo Tan area such as Cove Hill (Kau To Shan) and To Fung Shan in the background. Part of Chun Yeung Estate and industrial buildings will be replaced by the Proposed Public Housing Development. Trees and vegetation along the hiking trail compose the view in the front. The proposed housing development will be compatible with the surroundings if mitigation measures are applied.
- **Visual Obstruction**: Additional building mass will be extended from the existing Fo Tan townscape in the background, also small portion of natural landscape of hillside will be screened. Openness of existing sky view and mountain backdrop at the back will not be affected.
- **Effect on Public Viewers**: Regarding the effect on public viewers, natural landscape currently enjoyed by the public viewers will be affected, leading to a **slightly adverse** of visual change to public viewers.
- **Effect on Visual Resources**: With the proposed mitigation measures (OM3) in place during operation phase, building edge of the Proposed Public Housing Development would be soften and blend in with the surrounding urban context. Openness of existing sky view and mountain backdrop at the back will not be affected.

4.6.5 Regarding **VP4**, the Proposed Public Housing Development will be fully screened from this viewpoint.

- **Visual Composition**: Lion's Pavilion locates in the front and occupies most of the visual composition. Some trees and vegetations can be observed in the midground. The Proposed Public Housing Development is screened by the described objects completely, thus, the proposed housing development will be compatible with the surroundings.
- **Visual Obstruction**: Since the Proposed Public Housing Development is fully screened by existing structure and vegetations, no visual obstruction is observed for this viewpoint.
- **Effect on Public Viewers**: No visual effect is observed for this viewpoint as the Proposed Public Housing Development is fully screened by existing topography and vegetations, magnitude of visual changes is considered to be **negligible**.
- **Effect on Visual Resources**: There will be no effect on the existing visual resources as the Proposed Public Housing Development is fully screened by existing topography and vegetations.

4.6.6 Regarding **VP5**, the Proposed Public Housing Development will be fully screened from this viewpoint.

- **Visual Composition**: Existing visual elements include building of Sui Wo Court locates at the back. Urban landscape such as vegetations on existing topography and some streetscapes compose the midground, the Proposed Public Housing Development is screened by these completely. Sui Wo Court Bus terminal and its associated road compose the scenery at the front. Therefore, the proposed housing development will be compatible with the surroundings.
- **Visual Obstruction**: Since the Proposed Public Housing Development is fully screened by existing topography and vegetations, no visual obstruction is observed for this viewpoint.

- **Effect on Public Viewers**: No visual effect is observed for this viewpoint as the Proposed Public Housing Development is fully screened by existing topography and vegetations, magnitude of visual changes is considered to be **negligible**.
- **Effect on Visual Resources**: There will be no effect on the existing visual resources as the Proposed Public Housing Development is fully screened by existing topography and vegetations.

4.6.7 Regarding **VP6**, the Proposed Public Housing Development will be fully screened from this viewpoint.

- **Visual Composition**: Existing Fo Tan Industrial Area such as Goldfield Industrial Centre can be seen in the background and midground. Shan Mei Street Playground in the front of this viewpoint is observed. The Proposed Public Housing Development will be fully screened and none of the visual composition will be affected. Therefore, the proposed housing development will be compatible with the surroundings.
- **Visual Obstruction**: Since the Proposed Public Housing Development is fully screened by existing buildings, no visual obstruction is observed for this viewpoint.
- **Effect on Public Viewers**: No visual effect is observed for this viewpoint as the Proposed Public Housing Development is fully screened by existing buildings, magnitude of visual changes is considered to be **negligible**.
- **Effect on Visual Resources**: There will be no effect on the existing visual resources as the Proposed Public Housing Development is fully screened by the existing buildings.

4.6.8 Regarding **VP7**, the Proposed Public Housing Development will be fully screened from this viewpoint.

- **Visual Composition**: Existing Fo Tan Industrial Area such as Sui Fai Factory Estate can be seen in the background and midground. Shan Mei Street Sitting-out Area in the front of this viewpoint is observed. The Proposed Public Housing Development will be fully screened and none of the visual composition will be affected, thus, the proposed housing development will be compatible with the surroundings.
- **Visual Obstruction**: Since the Proposed Public Housing Development is fully screened by existing buildings, no visual obstruction is observed for this viewpoint.
- **Effect on Public Viewers**: No visual effect is observed for this viewpoint as the Proposed Public Housing Development is fully screened by existing buildings, magnitude of visual changes is considered to be **negligible**.
- **Effect on Visual Resources**: There will be no effect on the existing visual resources as the Proposed Public Housing Development is fully screened by the existing buildings.

4.6.9 Regarding **VP8**, the Proposed Public Housing Development will be fully screened from this viewpoint.

- **Visual Composition**: In view of the visual composition, the existing visual elements include Chun Yeung Estate, part of the Fo Tan Industrial Area as well as the open sky view in the background. Chun Yeung Shopping Centre locates in the midground to the middle. Existing trees and vegetation of Kwei Tei Street Garden locates in the front. Therefore, the proposed housing development will be compatible with the surroundings.
- **Visual Obstruction**: Since the Proposed Public Housing Development is fully screened by existing buildings, no visual obstruction is observed for this viewpoint.
- **Effect on Public Viewers**: No visual effect is observed for this viewpoint as the Proposed Public Housing Development is fully screened by existing buildings, magnitude of visual changes is considered to be **negligible**.

- **Effect on Visual Resources**: There will be no effect on the existing visual resources as the Proposed Public Housing Development is fully screened by the existing buildings.

4.6.10 The Proposed Public Housing Development will be partly screened by the existing building in the front from **VP9**.

- **Visual Composition**: Needle Hill can be observed in the background and part of it will be replaced by the Proposed Public Housing Development. Existing housing development Chun Yeung Estate locates at the midground and Kwei Tei Sun Chuen Road composes the foreground. Large portion of the proposed housing development can be seen, thus, it will be hardly compatible with the surroundings.
- **Visual Obstruction**: Building mass of the Proposed Public Housing Development will be extended from the Chung Yeung Estate, also most of natural landscape of hillside will be screened. Openness of existing sky view and mountain backdrop at the back will be affected. The Proposed Public Housing Development will impose moderate loss of visual openness to the public viewers.
- **Effect on Public Viewers**: Regarding the effect on public viewers, additional building mass will be extended from Chung Yeung Estate of this viewpoint, visual resources of open sky view currently enjoyed by public viewers will be affected, leading to a moderate visual change of this viewpoint.
- **Effect on Visual Resources**: During operational phase, proposed mitigation measures (OM2, OM3, OM4 and OM5) such as buffer planting, aesthetic design of housing development, landscape treatment within the Public Housing Site Boundary and building separation can be applied to alleviate visual impacts. Although the above proposed mitigation measures would alleviate part of the visual impact, the Proposed Public Housing Development would impose moderate loss of visual resources such as mountain backdrop and open sky view on this viewpoint.

4.6.11 The Proposed Public Housing Development will screen the existing mountain backdrop, vegetation and sky openness from **VP10**.

- **Visual Composition**: In view of the visual composition, existing visual elements of open sky view, mountain backdrop of To Fung Shan in the background and midground view will be partially replaced by the Proposed Public Housing Development. The proposed housing development will be hardly compatible with the surroundings in this certain VP.
- **Visual Obstruction**: Visual obstruction to the existing open sky view and visual amenities will be imposed, leading to the substantial loss of visual openness to this viewpoint.
- **Effect on Public Viewers**: Regarding the effect on public viewers, additional building mass will be appeared in this viewpoint, natural amenity such as vegetations, mountain backdrop and open sky view currently enjoyed by public viewers will be affected, considering the relatively close distance to the proposed building development, leading to a substantial visual change of this viewpoint.
- **Effect on Visual Resources**: During operational phase, proposed mitigation measures (OM2, OM3, OM4 and OM5) such as buffer planting, aesthetic design of housing development, landscape treatment within the Public Housing Site Boundary and building separation can be applied to alleviate visual impacts. Aesthetic building design and variation in building height profile can alleviate the dominating effect of building blocks and enhance visual interest. Building separation can enhance visual openness and permeability.

4.6.12 Regarding **VP11**, the Proposed Public Housing Development will be fully screened from this viewpoint.

- **Visual Composition**: In view of the visual composition, the existing visual elements include Jubilee Garden, Royal Ascot, part of the Fo Tan Residential Area as well as the open sky view in the background. Park landscape such as paving, trees and vegetation of Penfold Park locates in the midground and to the front. The Proposed Public Housing Development is screened by the described objects completely, thus, the proposed housing development will be compatible with the surroundings.
- **Visual Obstruction**: Since the Proposed Public Housing Development is fully screened by existing vegetations, no visual obstruction is observed for this viewpoint.
- **Effect on Public Viewers**: No visual effect is observed for this viewpoint as the Proposed Public Housing Development is fully screened by existing vegetations, magnitude of visual changes is considered to be **negligible**.
- **Effect on Visual Resources**: There will be no effect on the existing visual resources as the Proposed Public Housing Development is fully screened by existing vegetations.

4.6.13 The Proposed Public Housing Development will be mostly screened by the existing building in the front from **VP12**.

- **Visual Composition**: In view of visual composition, the existing urban townscape of Fo Tan such as Sui Wo Court and Choi Wo Court as well as the mountain backdrop of Grassy Hill would not be affected, except a tiny portion of vegetation on Grassy Hill will be replaced by the Proposed Public Housing Development in the background. Shing Mun River locates at the midground and Shing Mun River No.2 Promenade Rest Garden compose the front. Only small portion of the proposed housing development can be seen, thus, it will be compatible with the surroundings.
- **Visual Obstruction**: Openness of existing sky view will not be affected while there is visual obstruction to the existing mountain backdrop of Grassy Hill.
- **Effect on Public Viewers**: For the effect on public viewers, the Proposed Public Housing Development will only cause an insubstantial visual change to this viewpoint. Only a small portion of vegetation of Grassy Hill will be loss and replaced by the Proposed Public Housing Development.
- **Effect on Visual Resources**: With the proposed mitigation measures (OM3) in place during operation phase, building edge of the Proposed Public Housing Development would be soften and blend in with the surrounding urban context.

4.6.14 The Proposed Public Housing Development will screen the existing mountain backdrop, vegetation and sky openness from **VP13**.

- **Visual Composition**: In view of the visual composition, the existing visual elements such as Wah Sang Industrial Building, Wah Luen Industrial Centre, Choi Wo Court of Fo Tan townscape and vegetations in the mid-ground, mountain backdrop of Turret Hill, Buffalo Hill as well as the open sky view in the background will be replaced by the Proposed Public Housing Development. Vegetation around Wong Chuk Yeung Tsuen compose the view in the front. The proposed housing development will be hardly compatible with the surroundings in this certain VP.
- **Visual Obstruction**: Visual obstruction to the existing mountain backdrop of Turret Hill, sky visibility will be imposed, leading to the substantial loss of greenery, visual amenities, open sky view and visual openness to this viewpoint.
- **Effect on Public Viewers**: Regarding the effect on public viewers, additional building mass will be located in the mid-ground of this viewpoint, natural landscape and sky

openness currently enjoyed by the public viewers will be affected. Considering the relatively close distance to the proposed building development, it leads to a substantial visual change to public viewers.

- **Effect on Visual Resources**: Proposed mitigation measures (OM2, OM3 and OM4) such as buffer planting, aesthetic design of housing development and landscape treatment within the Public Housing Site Boundary can be applied to alleviate visual impacts. Buffer planting along the proposed footbridge would soften its hard structure. Aesthetic building design and variation in building height profile can alleviate the wall effect of building mass and enhance visual interest of the building blocks. Materials, textures and landscape treatment applied to the proposed building block would also enhance its overall permeability. Although the above proposed mitigation measures would alleviate part of the visual impact, the Proposed Public Housing Development would impose substantial loss of visual resources such as mountain backdrop, vegetation and open sky view on this viewpoint.

4.6.15 With proposed mitigation measures in place, the overall visual impact in respect to the Proposed Public Housing Development will be range from ***negligible*** to ***substantially adverse*** in operation phase. The overall rating on each visual impact is on **Table 4.3**.

Table 4.3: Summary of Visual Impacts for all VPs

VP	VP Name	Sensitivity of VP	Proposed Mitigation Measures	Visual Impacts at Operation Phase (after mitigation)
VP1	Top of Slope from Kwai Tei New Village	Medium	OM2 – OM5	Moderately adverse
VP2	Fo Tan MTR Station near Exit A	Low	N/A	Negligible
VP3	Shing Mun Forest Track - Needle Hill Section	Medium	OM3	Slightly adverse
VP4	Lion's Pavilion	Medium	N/A	Negligible
VP5	Sui Wo Court Bus Terminal	Medium	N/A	Negligible
VP6	Shan Mei Street Playground	Low	N/A	Negligible
VP7	Shan Mei Street Sitting-out Area	Low	N/A	Negligible
VP8	Kwei Tei Street Garden	Low	N/A	Negligible
VP9	Public Car Park near Fo Tan Kuk San Tsuen	Medium	OM2 – OM5	Moderately adverse
VP10	Wong Chuk Yeung Street Sitting-out Area	High	OM2 – OM5	Substantially adverse
VP11	Penfold Park	Medium	N/A	Negligible
VP12	Shing Mun River No.2 Promenade Rest Garden	Medium	OM3	Slightly adverse
VP13	Top of Slope from Wong Chuk Yeung Tsuen Path	High	OM2 - OM4	Substantially adverse

4.7 CUMULATIVE IMPACTS

4.7.1 Cumulative visual impacts during operation phase for the proposed public housing developments in the vicinity is assessed below:

<u>HA - Public Housing Development at Shan Mei Street (Redevelopment of Sui Fai Factory Estate)</u>

4.7.2 The proposed amendments to the Sha Tin OZP No. S/ST/36, including expansion of a planned public housing development at the existing Sui Fai Factory Estate with a maximum building height of 140mPD under Residential (Group A)8 (R(A)8).

4.7.3 It is expected to be transform from Industrial Buildings (LR4.1) to High-Rise Residential (LR3.1). Landscape can be mitigated by instating soft and hard landscape in the future.

4.7.4 In terms of visual impact and with reference to the photomontages, the proposed public housing development together with the Public Housing Development at Shan Mei Street would share similar visual character of the existing and planned high-rise residential developments in the Fo Tan Area. It would cause a visual obstruction to open sky views, mountain backdrop and reduce visual openness in some viewpoints, such as VP7, VP12 and VP13.

4.8 SUMMARY

4.8.1 The Development will inevitably result in some landscape impacts. Natural Woodland (**LR1.1**), Low-rise Residential Development (**LR3.2**), Upland & Hillside Landscape (**LCA1**) and Urban Peripheral Village Landscape (**LCA2**) are expected to be affected the most due to the amount of affected area and the loss of trees and/or vegetation during the construction phase. After mitigation, residual landscape impacts ranges from "***slight***" to "***Insubstantial***".

4.8.2 The overall landscape impact would be ***acceptable*** with proposed mitigation measures during construction and operation phase.

4.8.3 **270** nos. of existing trees were individually surveyed and **1,000** nos. of trees in 25 tree groups were recorded within the tree survey boundary. A total of **369** nos. of are proposed to be retained in situ. **3** nos. of the individually surveyed trees affected by the proposed works was proposed to be transplanted. Approximately **898** nos. of surveyed trees are proposed to be removed.

4.8.4 No registered "Old and Valuable Tree" (OVT) or Tree of Particular Interest (TPI) was recorded.

4.8.5 Approximately **49** nos. of standard trees would be planted by CEDD within the Works Limit but outside Public Housing Site Boundary. The exact quantity of new trees planted by HD within Public Housing Site Boundary will be determined in the later design stage. Approximately **273** light standard trees are proposed to be planted at the berm planter of the southern cut slope of the project site. Approximately **348** whip trees are proposed to be compensated offsite in slope 7SW-B/C14. The exact quantity of compensatory planting is subject to further assessment at later investigation and detail design stage.

4.8.6 In considering minimization of visual impacts, alternative layouts of proposed development have been reviewed, the proposed scheme is preferred for the decreased profile of building blocks which would reduce additional visual blockage, decrease the wall effect and increase permeability to natural sceneries of the surroundings. In view of preserving the scenery of riverside, the current building layout has been adjusted to provide 10m setback to the north of the proposed public housing development along the existing stream. Besides, at-grade core activities and green area have been placed in western end of the Site.

4.8.7 The proposed public housing development would introduce a visual element up to a building height of 240mPD in the surrounding area. However, given its valley setting largely enclosed by surrounding hillslopes on the three sides, except on the east where the urban high-rise developments of the Fo Tan area are located, the VPs with more adverse visual impacts are mainly from the east or within a close distance. These VPs include VP10 and VP13 with **substantially adverse** visual impact, and VP1 and VP9 with **moderately adverse** visual impact; while the visual impacts of all the remaining nine VPs range from **negligible to slightly adverse**. Although the proposed development would inevitably alter the existing visual context of its hillside locality, it would form part or extension of the existing urban townscape of the Fo Tan at most of the VPs.

4.8.8 To reduce the visual impact, proposed mitigation measures such as plantation of compensatory or new trees (OM1), buffer planting (OM2), compatible design of building façade (OM3) and landscape treatment within the proposed public housing development (OM4) will enhance visual uniformity with the surrounding rural landscape. In order to enhance the visual permeability and openness, building separation of min.15m wide between Block 2 & Block 3 has been applied (OM5).

4.8.9 With the implementation of the above visual mitigation measures and additional design measures to be considered at the detailed design stage, such as permeable podium design, compliance with the Sustainable Building Design Guidelines and variation in building height profile can alleviate the dominating effect of building blocks/wall effect of building mass and

enhance visual interest, visual impact on the overall visual context and character would be alleviated. Any possibility of additional mitigation measures should be considered at the detailed design stage to further mitigate the visual impact of the proposed development.

Table 4.4 Significance Threshold for LR & LCA

LR/LCA ID[1]	LR/LCA Name	Sensitivity of LR/LCA (High / Medium / Low)	Magnitude of Change (Large/ Intermediate/ Small/ Negligible)		Significance Threshold of Potential Landscape Impact (before mitigation) (Substantial, Moderate, Slight, Insubstantial)		Proposed Mitigation Measures	Significance Threshold of Potential Landscape Impact (after mitigation) (Substantial, Moderate, Slight, Insubstantial)		
			Construction	Operation	Construction	Operation		Construction	Operation (Day 1)	Operation (Year 10)
LR1.1	Natural Woodland	High	Intermediate	Intermediate	Moderate	Moderate	CM1-CM4 OM2-OM4	Moderate	Slight	Slight
LR3.2	Low-rise Residential Development	Low	Intermediate	Intermediate	Slight	Slight	CM1-CM4 OM2-OM4	Slight	Slight	Slight
LCA1	Upland & Hillside Landscape	High	Intermediate	Intermediate	Moderate	Moderate	CM1-CM4 OM2-OM4	Moderate	Slight	Slight
LCA2	Urban Peripheral Village Landscape	Low	Intermediate	Intermediate	Slight	Slight	CM1-CM4 OM1-OM4	Slight	Slight	Slight

Notes: ^ Please refer to Preliminary Landscape and Visual Impact Assessment for other LRs/ LCAs not affected by the Development

** Unless otherwise indicated, all impacts are adverse.*

[1] All other LRs / LCAs will not be affected by the Development hence will not require assessment.

5 AIR VENTILATION

5.1 TECHNICAL ASSESSMENT

5.1.1 The Expert Evaluation based on the site wind characteristics and wind environment under the proposed development situation regarding qualitative air ventilation assessment (AVA) was conducted. The methodology and requirements as outlined in the Technical Guide for Air Ventilation Assessment for Development in Hong Kong (Technical Circular No. 1/06 and Annex A) issued by Housing, Planning and Lands Bureau and Environment, Transport and Work Bureau will be followed.

Site Wind Availability

5.1.2 The proposed Development Site is situated at the west of Fo Tan and beside Chun Yeung Estate within the green belt area. Based on the site inspection and preliminary desktop analysis, the Site is currently occupied by mixed woodland, and scattered low-rise type houses.

5.1.3 The topology within the site area is a valley area at the level range from +60mPD to +120mPD. Meanwhile, in the surrounding hilly area, the slopes increase steeply towards the north and south directions. The ground level steeply increases at the farther north direction from +60mPD to +300mPD. On another hand, the ground level gradually increases from +90mPD to +270mPD at the immediate west side of the site. In addition, the ground at the east is flat reclamation lands from 0mPD to +30mPD level in general.

5.1.4 The development site is surrounded by scattered village houses, residential developments, industrial buildings, village house settlements and open space. Some surrounding land uses are classified as Agriculture and Recreation. The metro developments are mainly distributed at the eastern direction of the site, i.e., high-rise residential buildings, industrial buildings, and public facilities buildings. And the major road networks cover Wong Chuk Yeung Tsuen Path, Wong Chuk Yeung Street, Kwei Tei San Chuen Road, Wo Sheung Tun Street, Kwei Tei Street, Man Hang Street, Sui Wo Road, Fo Tan Road, Cheung Lek Mei Street, Au Pui Wan Street and Tsung Tau Ha Road etc.

5.1.5 The annual prevailing winds are considered under NNE, NE, ENE and E directions; while the summer prevailing wind directions are S, SSW and SW. These prevailing wind directions are typical in Hong Kong and the building form of proposed public housing developments should make full use of these wind conditions.

Existing Wind Environment

5.1.6 As shown in **Figure 5.1**, there are mainly mountainside green belt areas together with several scatted low-rise villages along north-south direction. Due to the valley type of landscape in the proposed development site area, only part of the upstream prevailing wind flowing down the mountainside could ventilate the Site and its surrounding area at the pedestrian level under NNE, S, SSW and SW winds. In the northeast portion of the Site, the ventilation performance is weak immediately downstream of the high-rise Chun Yeung Estate due to the wind blockage effect.

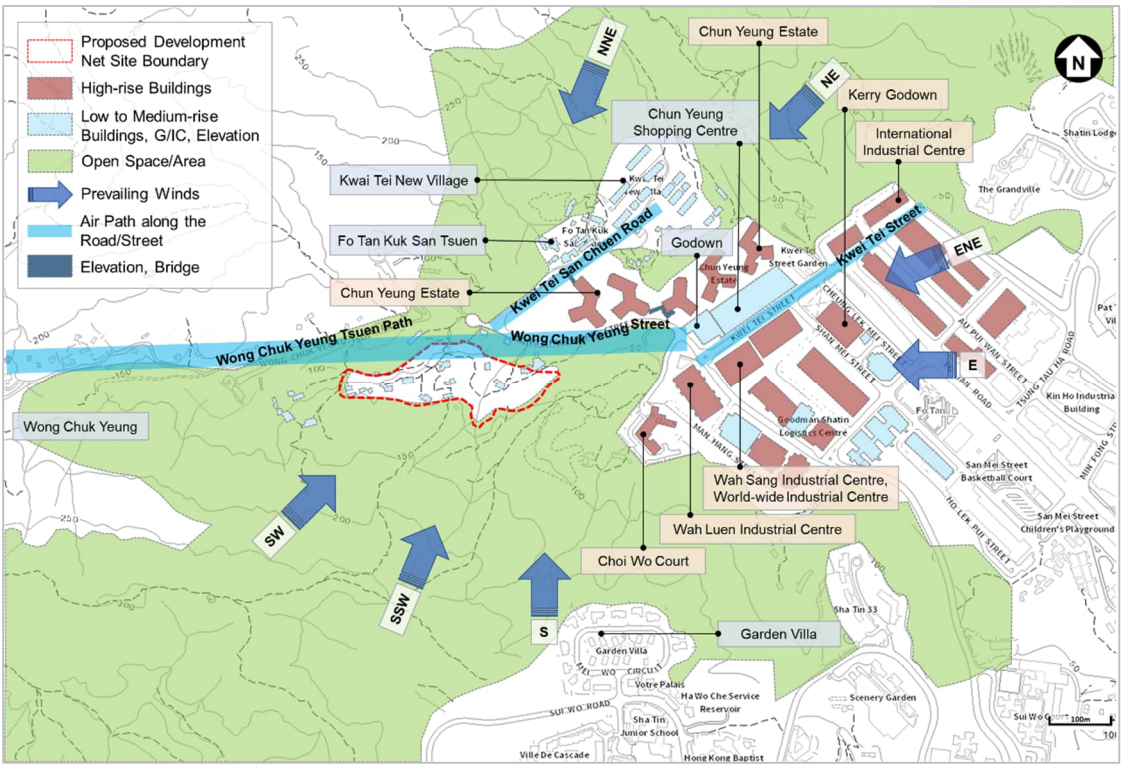


Figure 5.1 – Existing Wind Environment under Prevailing Winds

5.1.7 On the other hand, most of the prevailing NE and ENE winds could skim over the low-rise Kwai Tei New Village and Fo Tan Kuk San Tsuen along Kwei Tei San Chuen Road. The upstream prevailing wind would reach the west portions of the Site area and its vicinity without any critical blockage. Due to the wind blockage effect by the high-rise Chun Yeung Estate and industrial building groups, a region of weak ventilation performance may be observed at the northeast portion of the Site. The Kwei Tei Street facilitates a portion of incoming NE and ENE winds to pass through the high-rise industrial building groups and reach the southeast boundary of the Site, and the wind blockage effect by the existing development at the pedestrian level in the vicinity of the southeast boundary of the proposed site could be relieved. Moreover, only a small portion of E wind could bypass the clusters of buildings and enter the Site area. As the Site is located on the immediate south side of Wong Chuk Yeung Street and Wong Chuk Yeung Tsuen Path, the mountain valley which generally along Wong Chuk Yeung Street and Wong Chuk Yeung Tsuen Path could be regarded as a major air path to facilitate the E wind to ventilate the northern portion of the Site and the further downstream Wong Chuk Yeung Tsuen. With the consideration of the wind blockage effect of the proposed development, it is expected that potential problematic areas may be induced at the downstream areas of the proposed site under these prevailing wind directions.

Air Ventilation Performance of the Proposed Development

5.1.8 The Site located in Fo Tan, Sha Tin is bounded by the Ex-Fo Tan Cottage Area and Wo Sheung Tun Street to the east and abuts Wong Chuk Yeung Street to the north. **Figure 5.2** shows the indicative Site layout. The proposed site formation level is at +68 to +95mPD. Four housing blocks are arranged at podium level. On the other hand, there is a proposed platform of +95mPD level at the west of the site.

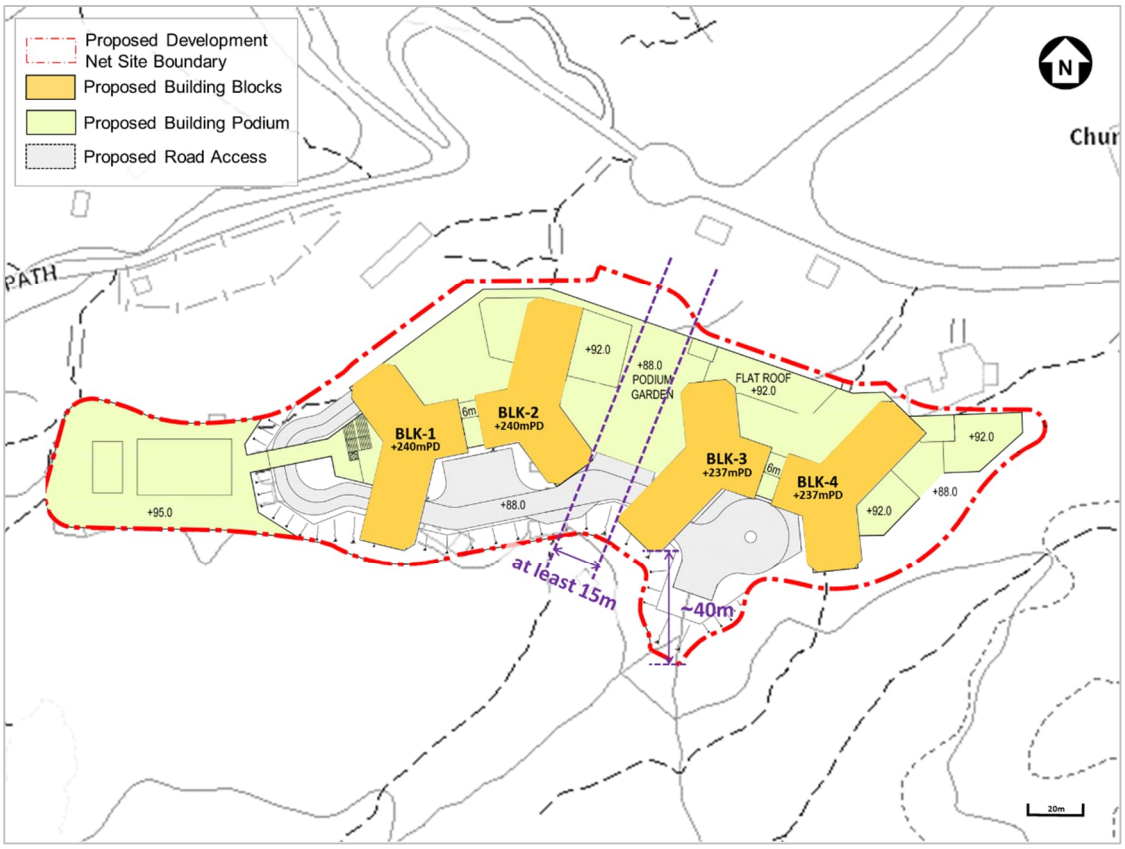


Figure 5.2 – Layout Plan of the Proposed Public Housing Development

5.1.9 **Figure 5.3** shows the prevailing winds from NNE direction would penetrate through the Site via the open space and building separations to ventilate the downstream areas. Incoming NNE winds are substantially from the hilly rural areas and low-rise Fo Tan Kuk San Tsuen. Since the NNE wind is partially blocked by the high-rise Chun Yeung Estate at the northeast direction of the proposed site, the wind availability at the eastern portion of the site would be relatively weaker. The stream of NNE wind reaching the site would skim over the proposed podium and pass through the proposed site via the at least 15m wide building separation of Blocks 2 and 3. This building separation serves as an air path to relieve the adverse ventilation impacts on the downstream areas by the proposed development. In addition, the proposed open spaces at the western portion of the site would also allow the smooth passage of the NNE wind to the downstream areas.

5.1.10 **Figure 5.4** shows the prevailing winds from NE wind would penetrate through the Site via the open space and building separations to ventilate the downstream areas. NE winds from the upstream rural and residential areas (i.e. low-rise Fo Tan Kuk San Tsuen and high-rise Chun Yeung Estate) would flow towards the proposed site along Kwei Tei San Chuen Road which serves as a road air path. Part of the incoming NE wind would be impeded by high-rise Chun Yeung Estate. The stream of NE wind reaching the proposed site would skim over the proposed podium in the middle of the site region. The stream would then turn 15° to the south and then penetrate through the site via the at least 15m wide building separation of Blocks 2 and 3. The stream of NE wind would further ventilate the downstream rural and greenbelt areas. This building separation can help to relieve the adverse ventilation impacts on the downstream areas by the proposed development. In addition, another part of the incoming NNE wind would skim over the proposed open spaces at the western portion of the Site smoothly.

5.1.11 To further minimize the potential air ventilation impact induced, the proposed public housing development has incorporated another mitigation measures, i.e., provide an about 40m building setback of building Block 3 from the southern site boundary to relieve the adverse ventilation

impact on the downstream areas by the proposed development under E wind direction. As shown in **Figure 5.5**, an indicative air path penetrating through the southern portion of the site (i.e. the proposed road access and slope to the south of the proposed building Block 3) can be captured under E wind. Meanwhile, the incoming ENE and E winds would reach the proposed site from Wong Chuk Yeung Street which serves as a road air path. Part of the incoming wind would also be impeded by the high-rise Chun Yeung Estate. Due to the longitudinal shape of the proposed site region, the proposed housing blocks are generally arranged in line. The upstream ENE and E winds are generally parallel to the building blocks arrangement. The wind blockage surface area against the prevailing wind would be relatively smaller. The part of the incoming wind would bypass the series of the proposed building development by two sides. One stream would flow along northern site boundary, while another stream would flow along southern site boundary. In addition, Wong Chuk Yeung Tsuen Path at the northwest of the site is generally aligned to ENE and E directions. It would serve as a road air path to facilitate wind availability in the vicinity of the proposed site.

5.1.12 **Figure 5.6** the prevailing winds from S direction would penetrate through the Site via the open space and building separations to ventilate the downstream areas. Incoming S winds from the hilly rural areas would pass through the proposed site via the at least 15m wide building separation of Blocks 2 and 3, and skim over the proposed podium area in the middle and western portions of the site. This building separation serves as an air path to relieve the adverse ventilation impact on the downstream areas by the proposed development. In addition, the proposed open space at the western portion of the site would also allow the smooth passage of the upcoming S wind to the downstream areas.

5.1.13 **Figure 5.7** the prevailing winds from SW and SSW directions would penetrate through the Site via the open space and building separations to ventilate the downstream areas. Incoming SW and SSW winds from the hilly rural areas would reach the site without significant blockage. The stream of SW wind would turn 15° to the north wind pass through the proposed site via the at least 15m wide building separation of Blocks 2 and 3, and skim over the proposed podium. While the stream of SSW wind would pass through the proposed site via the building separation of Blocks 2 and 3 directly and skim over the proposed podium. The building separation serves as an air path to relieve the adverse ventilation impact on the downstream areas by the proposed development. In addition, the proposed open space at the western portion of the site would also allow the smooth passage of the upcoming SW and SSW winds to the downstream areas. At the downstream area, Kwei Tei San Chuen Road serves as a road air path to facilitate the wind availability of the residential areas at the northeast side of the proposed site.

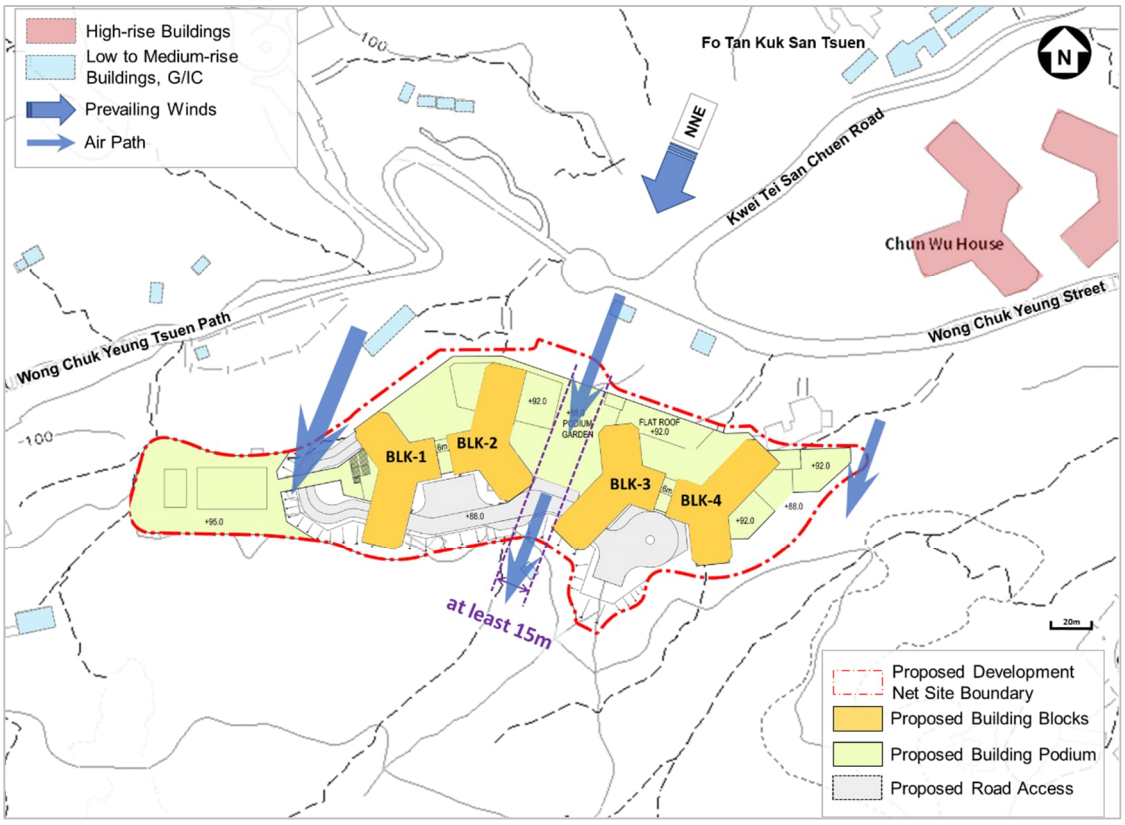


Figure 5.3 – Proposed Wind Environment under Prevailing NNE Wind

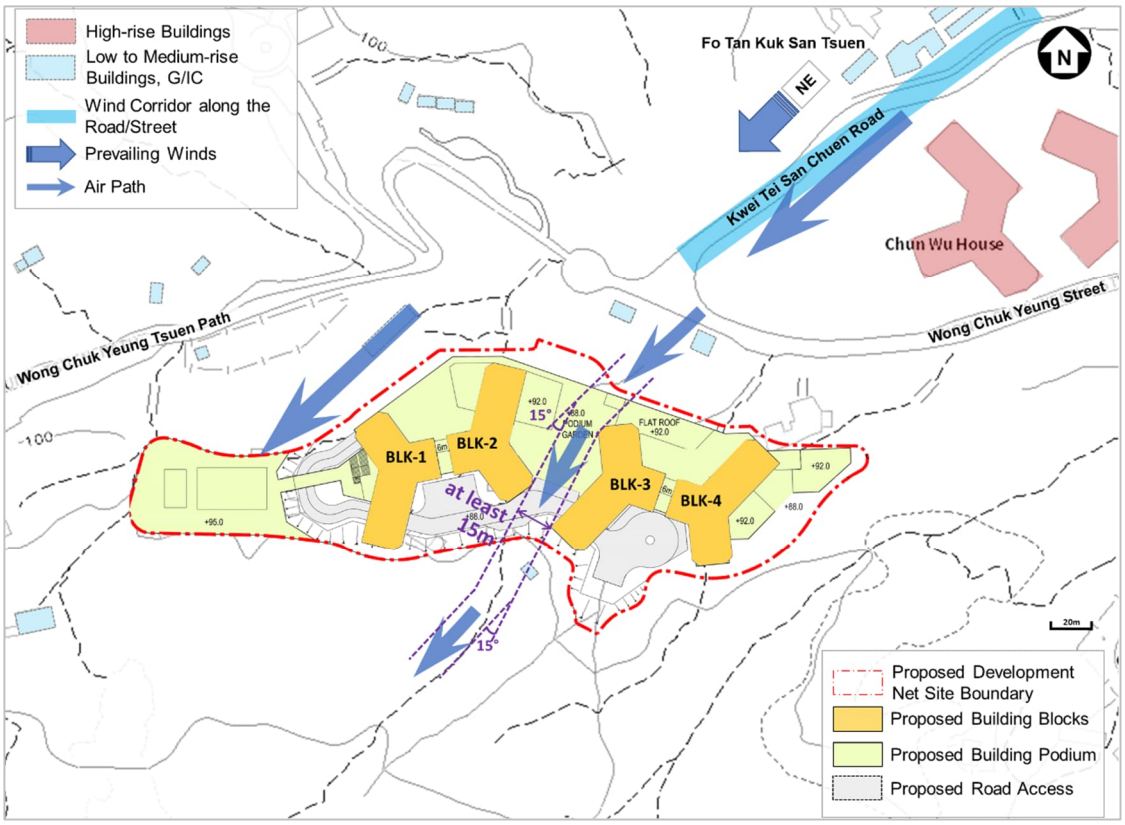


Figure 5.4 – Proposed Wind Environment under Prevailing NE Wind

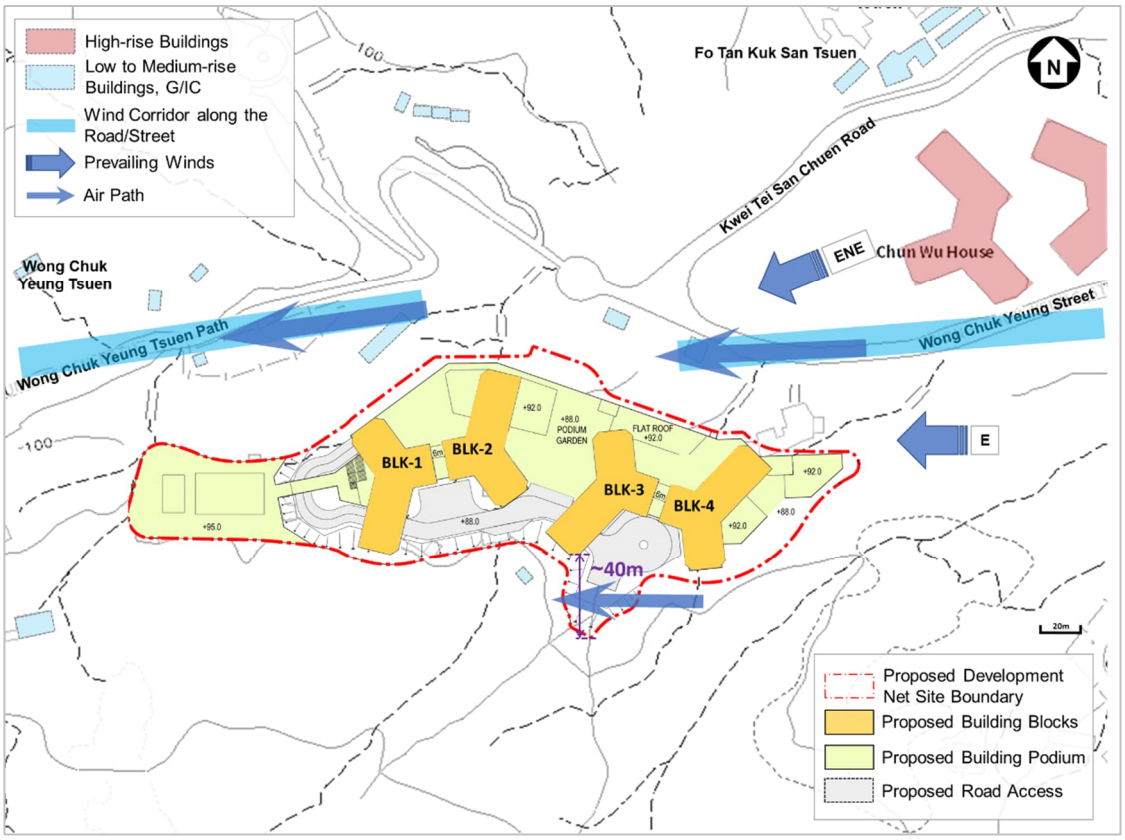


Figure 5.5 – Proposed Wind Environment under Prevailing ENE and E Winds

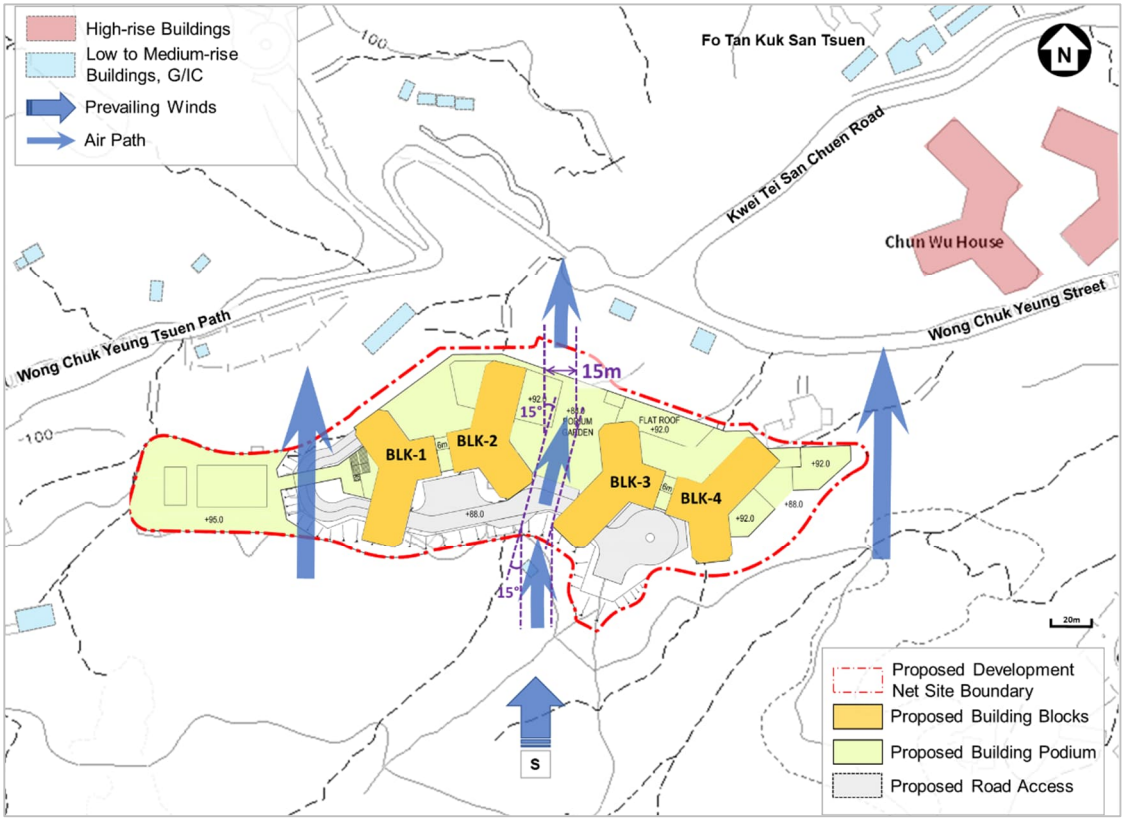


Figure 5.6 – Proposed Wind Environment under Prevailing S Wind

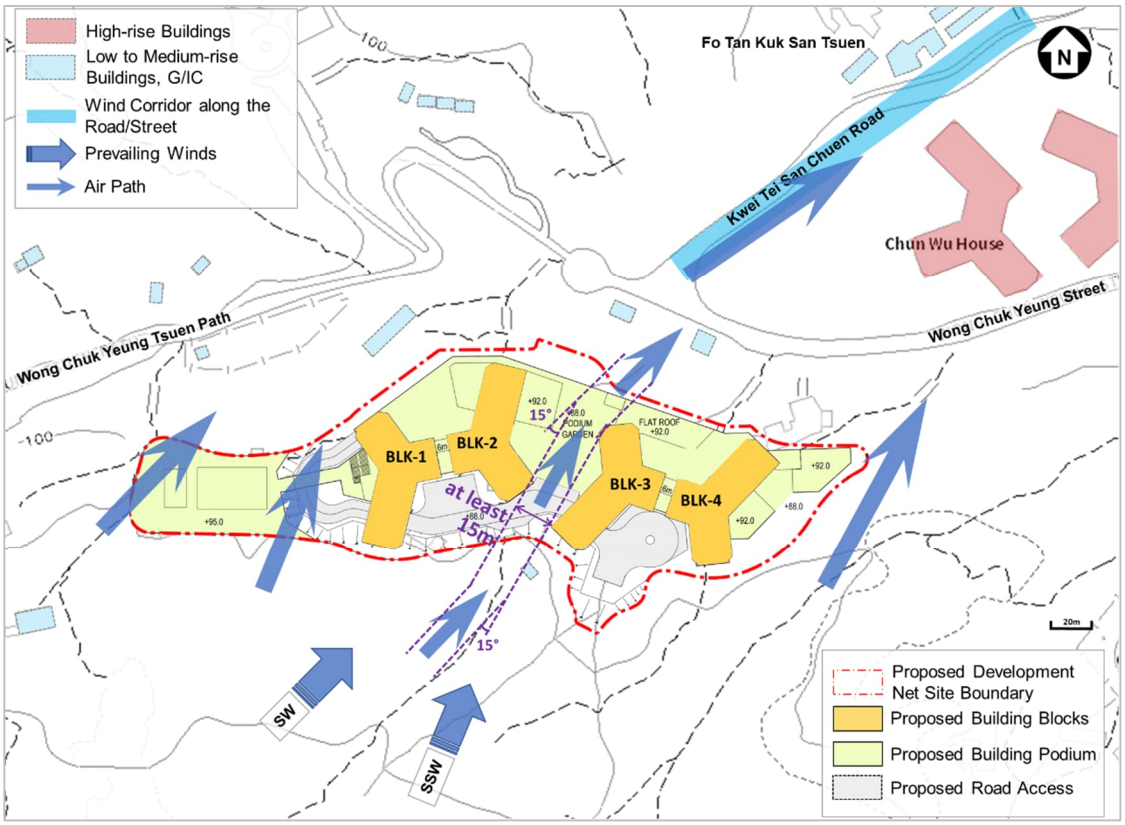


Figure 5.7 – Proposed Wind Environment under Prevailing SW and SSW Winds

5.1.14 Under prevailing NNE, NE and S winds, the possible problematic areas could be observed at the immediate downstream of Blocks 1 & 2 and Blocks 3 & 4. Since the limited building separations, wind blockage effects would be induced by the building blocks. It is expected that ventilation performance at these local pedestrian level would be weakened. However, there are mainly rural greenbelt areas in the south to western direction of the Site, mainly road network and rural hilly areas at the northern direction, and Fo Tan San Chuen and Chun Yeng Estate are located at the northeast side of the proposed site. No major sensitive receiver locates at the direct downstream areas. Thus, the adverse ventilation impacts on the pedestrian would be insignificant.

5.1.15 Under prevailing E and ENE winds, the possible problematic areas could also be observed at the local region of immediate downstream of proposed building blocks due to the construction of proposed building blocks. However, the arrangement of the proposed building blocks is generally parallel to these wind directions. The wind blockage effects by the proposed building blocks would be reduced. The road air path along Wong Chuk Yeung Tsuen Path would also relieve the adverse impact on the further downstream Wong Chuk Yeung Tsuen (approx. 700m away from the Site) by the proposed building blocks. Apart from Wong Chuk Yeung Tsuen, no major sensitive receiver locates in the downstream areas of the site. It is expected insignificant adverse ventilation impacts on the pedestrian could be observed under these wind directions.

5.1.16 Under prevailing SW and SSW winds, the possible problematic areas could be observed at the immediate downstream areas of Blocks 1 & 2 and Blocks 3 & 4 with limited building separations. It is expected that ventilation performance at these local regions (at the immediate downstream of the north of the proposed building blocks 1, 2, 3 & 4)) at pedestrian level under SW and SSW winds would be weakened. However, the at least 15m wide building separation of Blocks 2 and 3 which allows penetration of SW and SSW winds through the site and Kwei Tei San Chuen Road would relieve the adverse impact brought by the proposed building development.

Mitigation Measures

5.1.17 As discussed above, the concerns mainly entail the prevailing winds and the potential impacts that the proposed public housing development might bring up upon to neighbouring built-up areas. The mitigation measures of natural ventilation are suggested to be considered in the development design.

(a) Under prevailing NNE, NE and S winds, the minimum 15m building separation between building Blocks 2&3 is considered as an air path to ventilate the Site and its downstream non-residential hilly areas. The proposed open spaces at the western portion of the site could also alleviate ventilation impacts under NNE, NE and S winds;

(b) For prevailing SW and SSW winds, the minimum 15m building separation between building blocks 2&3 is considered as an air path to ventilate the Site and its northeast downstream residential areas (i.e. Fo Tan Kuk San Tsuen, Kwei Tei New Village and Chun Yeung Estate). The proposed open spaces at the western portion of the Site would also relieve the ventilation impacts on the western vicinity of the site.;

(c) The building blocks arrangements are generally parallel to the upstream ENE and E winds. A building setback (about 40m) from building Block 3 to the southern boundary of the site is also provided as a mitigation measures. These features help to facilitate most of the wind bypass the site from the southern and northern site boundaries to ventilate the downstream areas of the Site;

(d) Moreover, Wong Chuk Yeung Tsuen Path, Wong Chuk Yeung Street are also provided at the northern boundary of the proposed site to facilitate the ventilation performance of ENE and E winds. While Kwei Tei San Chuen Road at the northeast side of the site would also help to facilitate the ventilation performance of NE and SW winds. The adverse impacts on the northern vicinity of the site would be alleviated.

5.2 CONCLUSION RECOMMENDATIONS

5.2.1 The Expert Evaluation based on the Site wind characteristics and wind environment under the proposed public housing development situation regarding qualitative air ventilation assessment (AVA) was conducted. The result of the evaluation provides an overview of likely impacts associated with the proposed public housing development under both annual prevailing winds NNE, NE, ENE and E directions, summer prevailing winds from S, SSW and SW directions as well as the surrounding topography.

5.2.2 In the directional analysis, it is found that the proposed mitigation measures, i.e. the building separation of at least 15m between building Blocks 2 & 3, the about 40m wide building setback from Block 3 to southern site boundary could help alleviate the potential air ventilation impact induced by the proposed development under various prevailing winds. The major air path and the surrounding topography of the development site can relieve the impact brought by the proposed development. In addition, under NNE, NE and S winds, no major sensitive receivers are found at the direct downstream areas of the proposed Site.

5.2.3 It is expected that the proposed public housing development would not induce significant adverse effect on the general air ventilation performance in the areas of the site and its surroundings. (e.g. Fo Tan Kuk San Tsuen, Kwai Tei New Village and Chun Yeung Estate etc).

5.2.4 Following the Technical Guide for Air Ventilation Assessment (AVA) for Development in Hong Kong (Technical Circular No.1/06 and Annex A), the AVA Expert Evaluation provides a qualitative assessment of the design and/or design options and facilitates the identification of problems and issues. It is particularly useful for large sites and/or sites with specific and unique wind features, issues, concerns, and problems. While, an AVA Initial Study will refine and substantiate the Expert Evaluation. It is to allow for scheme design optimization during the detailed design stage and/or to prove that the future scheme would perform no worse than the current scheme in ventilation performance. To minimize any possible impacts and improve the

existing wind environment, the designers shall consider the recommended good design features in the detailed design of the development. The present AVA Expert Evaluation is sufficient for rezoning exercise, and an AVA Initial Study is recommended to be conducted as appropriate at the detailed design stage.

6 PRELIMINARY ENVIRONMENTAL REVIEW

6.1 PRELIMINIARY ENVIRONMENTAL REVIEW

6.1.1 A Preliminary Environmental Review (PER) has been conducted to identify the key environmental issues associated with the site formation, recommended scheme of the Development and associated infrastructure works during the construction and operation phases. The major environmental concerns are identified to be noise impacts from the surrounding road traffic and premises.

6.2 AIR QUALITY IMAPCT ASSESSMENT

Technical Assessment

6.2.1 The major sources of fugitive dust impacts during the construction phase of the Project will be arising from the following construction activities:

- Excavation
- Stockpiling
- Earth moving
- Transferring or handling of dusty materials
- Wind erosion

6.2.2 With the implementation of mitigation measures as specified in Air Pollution Control (Construction Dust) Regulation and good site practices during the construction phase, fugitive dust generation could be properly controlled and adverse fugitive dust impact is therefore not anticipated.

6.2.3 Some industrial chimneys are identified to the southeast of the Site, which is located far more than 400m away from the Study boundary. No industrial chimney was identified within the 200m assessment area. Potential adverse impacts from industrial emissions to the proposed sensitive uses is considered not anticipated during operation phase.

6.2.4 During operation phase, the major pollutant source within the assessment area would be mainly vehicular emissions arising from tailpipe emissions from nearby open roads networks. The Project site is mainly bounded by a few roads including Wong Chuk Yeung Street, Wo Sheung Tun Street and Wong Chuk Yeung Tsuen Path. With reference to Annual Traffic Census 2021 (ATC 2021), the road types of these road are not defined. As a conservative approach, the buffer distance requirement of local access road is assumed same as that of Local Distributor (LD). Therefore, 5m buffer distance requirements are assumed for the roads to the surroundings of the Site. As the distance between the project site boundary to all nearby roads are more than 5m, the buffer distance requirement could be fulfilled.

6.2.5 If the design of the layout plans for the proposed public housing could follow the above buffer zones requirements according to HKPSG, no adverse impacts arising from the vehicular emissions is anticipated during operation phase.

Mitigation Measures

6.2.6 In order to comply with Air Pollution Control Ordinance, the requirements for dust control stipulated in the Air Pollution Control (Construction Dust) Regulation and those requirements according to Recommended Pollution Control Clauses for Construction Contracts should be incorporated in the Contract Specification in order to minimise any potential dust nuisance arising from the construction activities. Other control measures from Air Pollution Control (Non-road Mobile Machinery) (Emission) Regulation, DEVB's TC No.1/2015, Technical Circular

(Works) No. 13/2020 and the good site practices should be also implemented during construction phase.

6.2.7 During operation phase, no further mitigation measure is required if sufficient buffer distances are provided between the corresponding roads and the air sensitive uses. No industrial emission is identified within 200m Study Area and emissions from industrial activities is not anticipated.

6.3 NOISE IMAPCT ASSESSMENT

Technical Assessment

6.3.1 This project will provide essential infrastructures and formed lands for supporting the proposed public housing. The potential source of noise impact for construction of the Project would be the use of Powered Mechanical Equipment (PME) for various activities, including site clearance, earth works, excavation, construction of retaining structure and road works within the project Sites.

6.3.2 Road traffic from nearby road network (i.e. Wong Chuk Yeung St.) is the dominant noise source within the 300m assessment area. Potential road traffic noise impact on the proposed Development is anticipated. Representative Noise Sensitive Receivers (NSRs), building structures with noise screening effect, topographical contours, road segments with traffic flow data and existing/committed noise barriers are input into the traffic noise model in evaluating the potential traffic noise impacts.

6.3.3 The road traffic noise impacts potentially affecting the NSRs are evaluated. The predicted results are summarized in **Table 6.1**.

Table 6.1 Summary of Predicted Traffic Noise Impact Results at Residential Block

Block	Noise Criterion, dB (A)	Maximum Noise Level, dB(A)	Require Mitigation Measures (Y/N)
1	70	72	Y
2	70	70	N
3	70	69	N
4	70	71	Y

6.3.4 Besides, road traffic noise impacts on the existing noise sensitive receivers (NSRs) due to road junction improvement works and new assess roads have been also assessed. As no significant contribution to the overall noise from other existing roads impact is found (i.e., predicted noise level contribution is less than 1.0 dB(A)), mitigation measures are not required on the project road.

6.3.5 Potential fixed noise sources within 300m assessment area were identified based on desktop review, including BOC Data Centre, Wah Sang Industrial Building, Yan Hing Centre and Wah Luen Industrial Building. Based on the assessment results, the predicted maximum noise levels at the representative NSRs would comply with relevant noise criteria.

Mitigation Measures

6.3.6 Mitigation measures to minimize the construction noise impact should be implemented during construction phase. Typical noise mitigation measures include:

- good site practice to limit noise emission at source;
- use of silenced equipment;
- use of movable noise barrier;
- use of noise enclosure/ acoustic shed;
- reduction in the number of items of PME operation at any given time;

- avoidance of works in restricted hours; and
- use of quieter construction methods and equipment for the proposed construction works, where applicable etc.

6.3.7 A noise control plan should be set up to ensure regular maintenance of all plant and equipment, reduce noise generation at source, and that appropriate silencing applications are in use based upon the best reasonable practice.

6.3.8 To minimize the potential traffic noise impact, provision of acoustic windows and a 1.5m architectural fin are recommended as mitigation measures for the area exceeding noise criteria of 70dB(A). For the uses with more stringent noise criterion (i.e., 65 dB(A) for Child Care Centre), the noise sensitive uses should not be planned at the area where the façade is most affected by the traffic noise. If noise sensitive uses are unavoidable at these non-compliance areas, fixed glazing and provisions allowed for installation of split-type air-conditioning by the future occupants shall be provided.

6.4 WATER QUALITY IMPACT ASSESSMENT

6.4.1 Water Sensitive Receivers (WSRs) within 500m assessment area from the Project site boundary are identified and the assessment of potential water quality impacts during construction stage and operation stage are carried out. Potential sources of water quality impact associated with construction activities for the Project include:

- Construction site runoff.
- General construction activities.
- Accidental spillage of chemicals;
- Construction Activities in Close Proximity of Inland Water;
- Sewage effluent from the construction workforce; and
- Groundwater from Contaminated Areas, Contaminated Site Runoff and Wastewater from Land Decontamination.

6.4.2 Potential sources of water quality impact associated with operation of the Project include:

- Sewage generated from the Development; and
- Runoff from road surfaces and paved areas.
- Runoff from Landscape Areas

6.4.3 A semi-natural stream is located in close vicinity to the Project Site. Mitigation measures is required to protect WSRs from site run-off and drainage, and the best management practices in ProPECC PN 1/94 “Construction Site Drainage” should be followed for managing construction site run-off and various construction activities. With implementation of the recommended mitigation measures along with compliance of the effluent standards set under Technical Memorandum Standards for Effluents Discharged into drainage and Sewerage Systems, Inland and Coastal Waters (TM-DSS), construction site runoff can be effectively controlled, and adverse impacts to storm drains or the marine environment is not anticipated.

6.4.4 During Operation phase, sewage discharge will be the major water pollution source of the proposed development. The sewage generated from the proposed development should be collected and conveyed to the nearest public sewerage system (i.e. Sha Tin Cavern Sewage Treatment Works) via proper connections to minimise water quality impact from the operation of the proposed development. All sewage discharged shall comply with the TM-DSS controlled under the Water Pollution Control Ordinance (WPCO). Stormwater runoff from paved surfaces within the Project site will be directed to a managed stormwater drainage system. With full implementation of stormwater best management practice and control on the fertilizers and pesticides, no significant impact on the aquatic environment is anticipated due to the runoffs.

6.5 WASTE MANAGEMENT ASSESSMENT

Technical Assessment

6.5.1 During construction phase, various types of wastes will be generated from site clearance and site formation activities, construction of new buildings and other superstructures. Each waste type will require a different approach for management according to their chemical and physical nature characteristics, in accordance with legislations and guidelines applicable to waste management and the disposal.

6.5.2 Construction & demolition (C&D) materials, chemical waste and general refuse are anticipated during the construction phase. Waste reduction measures and good site practice are recommended to minimise waste generation and maximise reuse opportunities. Recommendation of mitigation measures have followed the avoidance-minimization-recycling-refuse-treatment-disposal hierarchy.

6.5.3 Inert C&D materials will be reused onsite as backfilling as much as possible before transporting to public fill reception facilities (PFRFs). Non-inert C&D materials will be sorted onsite and taken to the appropriate recycling facilities. Excess non-recyclable non-inert wastes will be disposed of at designated landfills.

6.5.4 During operation phase, the amount of waste generated are expected from residential units. The quantity of general refuse is expected to be reasonable with implementation of appropriate mitigation measures.

6.5.5 General refuse shall be collected by a reputable waste collector on a daily basis and delivered to the refuse collection point accordingly. It is expected that such arrangements would minimise potential environmental impacts such as odour nuisance or pest/vermin problem. An effectual waste recycling program is recommended by placing recycling bins in prominent places with clear indications to promote waste separation at source for aluminium cans, plastics and wastepaper.

6.5.6 For those activities which generate chemical waste, it may be possible to find alternatives to eliminate the use of chemicals, reduce the generation quantities or replace with a chemical type that is less harmful on the environment and less invasive on the health and safety of workers.

6.5.7 When chemical waste is produced at the site, the operator shall register with EPD as a Chemical Waste Producer, and to follow the guidelines stated in the Code of Practice on the Packaging, Labelling and Storage of Chemical Wastes. The operator shall engage a licensed collector to transport and dispose the chemical wastes at the Chemical Waste Treatment Centre in Tsing Yi, or other licensed facility, in accordance with the Waste Disposal (Chemical Waste) (General) Regulation. A trip-ticket system shall be implemented by the operator in order to monitor the chemical wate disposal process.

Table 6.2: Estimated Quantities of Wastes to be Generated during Construction and Operation Phase

Construction Phase					
Work Stage	**Work Stage**	**Work Stage**	**On-site Reuse (m^3)**	**Total Disposed (m^3)**	**Recommended Outlets**
Site Clearance and Site Formation	Inert C&D materials[i]	98,730	37,715	61,015#	Reuse within the site as much as possible prior to delivery to PFRFs
	Non-Inert C&D materials[ii]	1,840	0	1,840	Reduce and recycle as much

					as possible before disposal to landfill
Total C&D Materials		**100,570**	**37,715**	**62,855**	
Maintenance and Operation of Mobile Equipment	Chemical Waste	Maintenance and Operation of Mobile Equipment	A few hundred litres or less per month		Collected by a licensed collector to be disposed of at the CWTC
Local Workforce	General Refuse[iii]	Local Workforce	0	53 kg/day	Recycle as much as possible before disposal to landfill

Notes:
i) "Inert C&D Materials" includes all grade rock, excavated soil, broken concrete, asphalt, bitumen and soft granular materials, etc.
ii) "Non-inert C&D materials" includes, but not limited to, bamboo, timber, vegetation, paper and plastic, etc.
iii) Based on the commercial and industrial waste generation rate of about 0.53 kg/person/day.

The total quantity of surplus inert C&D materials generated with respective disposal programme for the whole development is not yet available and will be provided in subsequent update.

Operation Phase

Planned Population during peak time (fully operational)	**EPD's MSW Generation Rate**	**Estimated MSW Arising**	**Example of Wastes Found in MSW**
9,747	1.44 kg/person/day	14.0 tpd[i] (equivalent to 5,123 tpa[ii])	• Mixed refuse • Recyclable waste

Notes:
[i] tpd denotes tonnes per day.
[ii] tpa denotes tonnes per annum, assuming 365 days per annum.

6.5.8 With proper implementation of the recommended measures, no unacceptable adverse environmental impacts is expected from the handling, storage, transportation or disposal of the waste generated by Project development.

Mitigation Measures

6.5.9 Some recommendations of good site practices, waste reduction measures, alongside with the waste transportation, storage and collection are provided in the following:

- Training of site personnel in proper waste management and chemical handling procedures;
- Provision of sufficient waste disposal points and regular collection of wastes;
- All waste should be handled and stored properly to prevent leakage or overflow. An enclosed and covered area is preferred to reduce the occurrence of windblown light material, and during transportation of waste by either covering trucks or by transporting wastes in enclosed containers;
- Provision of wheel washing facilities before the trucks leaving the works area so as to minimise dust introduction to public roads;
- Plan the use of construction materials carefully to minimise amount of waste generated and avoid unnecessary generation of waste;
- Designation of different locations to stockpile each material to enhance reuse. Stockpiling area should be provided with covers and water spraying system to prevent materials from wind-blown or being washed away;

- Obtain relevant waste disposal permits from the appropriate regulatory authorities; and
- Maintain records of the amount of waste generated, recycled and disposed.

6.6 LAND CONTAMINATION ASSESSMENT

Technical Assessment

6.6.1 Site inspection for the Project Site was conducted on 14 May 2021, to identify possible land contamination within the site. The site inspection checklist and photographic logs are presented in **Appendix E**.

6.6.2 During site inspection, mountainous terrain and thick vegetation were the major land use and there were inaccessible areas including the interior of village houses, and a vehicle workshop which was gated and occupied.

6.6.3 Desktop review and historical information have been obtained and reviewed. According to the records obtained from various Government departments, there are no record of chemical spillage / leakage, fire incident, dangerous goods (DG) licence and/or DG accident / spillage in connection to the Project Site.

6.6.4 As there are inaccessible areas for visual inspection during the site survey, and these sites would still be in operation until site clearance, re-appraisal of these inaccessible areas shall be conducted when the site becomes accessible, prior to development of the Site. A site re-appraisal and supplementary CAP will be prepared for the inaccessible areas and the entire Project Site when the land has been resumed.

Mitigation Measures

6.6.5 Site Investigation (SI) shall commence soon after EPD's agreement on the supplementary CAP and site clearance. Upon availability of the SI results, assessment on contaminated land shall be conducted and presented in a Contamination Assessment Report (CAR). The CAR shall present the findings of the SI and evaluate the potential environmental impact based on the extent of potential contamination identified.

6.6.6 If remediation is required, a Remediation Action Plan (RAP) shall be prepared in purpose to set remediation goals and specify remediation monitoring and measurements to monitor remediation progress and to confirm completion of the remediation.

6.6.7 A Remediation Report (RR) shall be prepared to demonstrate adequate clean-up upon completion of the remediation and submitted to EPD. No construction works or development of Site should be carried out prior to the endorsement of the RR. The content of the RR shall include the description of remediation programme carried out and the remediation monitoring results for verification.

6.6.8 Given all remediation works would be completed if potential contamination is found associated to the Project Site, no unacceptable adverse environmental impacts is expected from land contamination.

6.7 ECOLOGY

6.7.1 The ecological impact assessment is conducted with reference to the technical guidance of ecological assessment in Annexes 8 and 16 of Technical Memorandum under Environmental Impact Assessment Ordinance and the relevant Guidance Notes (GN 7/2010 and GN 10/2010). The study area for ecological impact assessment covered 500m away from the Proposed Site Boundary, including the Housing Development, Slope Works and Road Works (i.e. west access road and bus-layby).

6.7.2 The ecological baseline has been established based on literature review and ecological surveys that lasted for nine months and completed in June 2022, covering both wet and dry seasons. A total of habitat types, including channel, developed area, natural stream, plantation, semi-natural watercourse, shrubland/grassland, village/orchard and woodland were identified within

the study area (as shown in **Figure 5.8**). Within the Study Area, a total of 360 plant species, 34 bird species, 66 butterfly species, 20 dragonfly species, 9 reptile species, 10 amphibian species, 9 mammal species and 15 freshwater aquatic was recorded (as shown in **Appendix E – L**).

6.7.3 Potential direct ecological impacts arising during the construction phase including permanent habitat loss and impact on flora fauna species of conservation importance were identified within the Proposed Site Boundary. The Proposed Site Boundary was dominated by village/orchard, and the Project will cause potential permanent habitat loss to approximately 0.04ha developed area, 0.03ha plantation, 371m semi-natural watercourse (SNW1), 0.03ha shrubland/grassland, 2.14ha village/orchard and 1.4ha woodland within the Proposed Site Boundary. Most habitats to be lost (i.e. developed area, plantation, semi-natural watercourse, shrubland/grassland and village/orchard) are of low to very low ecological value (see **Table 6.3**). No specific ecological mitigation measures will be required for the permanent loss of habitats of relatively lower ecological value. The impact of permanent loss of woodland of medium ecological value (see **Table 6.3**) is considered as moderate. Permanent loss of about 1.4 ha of woodland would be mitigated by compensatory planting / woodland compensation. Preliminary options of both in-situ and off-site compensation have been proposed under consideration. Within the Proposed Site Boundary, 11 species of conservation importance (including 2 plant species, 3 bird species, 2 butterfly species, 2 reptile species, 1 mammal species and 1 freshwater aquatic species) were recorded (as shown in **Figure 5.9**). Among the eleven species of conservation importance recorded within the site boundary, only two flora species, i.e. *Cibotium barometz* (金毛狗) and *Diospyros vaccinioides* (小果柿), and one aquatic invertebrate species, i.e. *Cryptopotamon anacoluthon* (鰓刺溪蟹), will be directly impacted. In order to mitigate the remaining potential direct ecological impacts on flora and fauna species of conservation importance within the Proposed Site Boundary, pre-construction detailed vegetation survey followed by transplantation of flora species of conservation importance (including *Cibotium barometz* and *Diospyros vaccinoides*), and pre-construction verification survey followed by translocation of freshwater aquatic species of conservation importance (*Cryptopotamon anacoluthon*) will be carried out.

Table 6.3 Estimated Habitat Loss within the Proposed Site Boundary

Habitat	Ecological Value	Size (ha or m)			Subtotal
		Housing Development	Road Works	Slope Works	
Developed Area	Very Low	/	0.04	/	0.04
Plantation	Very Low	/	0.03	/	0.03
Semi-natural Watercourse	Low	358 m	/	13 m	371 m
Shrubland/Grassland	Low	/	/	0.03	0.03
Village/Orchard	Low	1.77	0.12	0.25	2.14
Woodland	Medium	0.43	0.13	0.84	1.40

6.7.4 A buffer zone of about 10m on both sides of the existing semi-natural stream (SNS1) will be established to further avoid direct and indirect impact to protect and conserve SNS1. As an ecological enhancement measure, removal of exotic vegetation species and planting of native vegetation species as part of the woodland compensation have been suggested within the 10m buffer zone, aiming to conserve and/or enrich the ecological value of SNS1. Also, demolition of existing artificial structures located within the buffer zone, where applicable, are also considered as possible enhancement measures to recover SNS1 from existing human disturbances.

6.7.5 There are potential indirect impacts on the surrounding natural habitats and other species of conservation importance, including noise & dust, surface runoff, water quality, light glare, human disturbance and bird collision during the construction and operational phases. These

impacts are either minor or insignificant after the implementation of respective measures recommended and do not require specific ecological mitigation measure to be implemented to mitigate their impact. Good site practices will also be implemented to minimize indirect impact to the ecological resources in the vicinity during both construction and operational phases.

6.7.6 With the implementation of the proposed mitigation measures during the construction and operational phase, the overall ecological impact is considered to be acceptable. Monitoring of establishment of the compensatory planting, implementation of transplantation and translocation and monitoring of the individuals of plant and freshwater aquatic species of conservation importance to be transplanted, translocated and/or compensated, will be implemented where applicable.

6.8 CULTURAL HERITAGE

6.8.1 Based on the heritage impact study conducted under the Assignment, no significant built heritage resources are identified within the Site area and Study Area. It is anticipated that there would be no direct or indirect potential cultural heritage impacts caused by the proposed site formation and infrastructure works. Hence, based on the available findings, the cultural heritage impacts due to the site formation and infrastructure works associated with the future housing development are deemed acceptable with mitigation. As much of the Site is currently inaccessible (e.g. due to current land occupation, fencing, concrete cover, paved roads etc.), further site inspection should be carried out prior to construction commencement. The project proponent shall alert AMO immediately if any built heritage and archaeological remains are identified in the construction stage.

6.9 SUSTAINABILITY

6.9.1 A Preliminary Sustainability Assessment has been conducted by adopting the Computer Aided Sustainability Evaluation Tool (CASET) Version 5.0 in accordance with the 8 Guiding Principles, 27 Sustainability Parameters and 23 Checklist Questions outlined by the Sustainable Development Division of the Environmental Bureau.

6.9.2 The Project could cause potential impacts on environmental quality like most of other construction projects. However, due to the limited scale of the development, the environmental impacts are considered insignificant.

6.9.3 The Project would create job opportunities during construction stage and operation stage. It would also generate income from rental and would contribute to compensating the construction and operation costs in the long term. Therefore, the economic impact of the Project is considered insignificant.

6.9.4 The Project has minor shortcomings in the environmental aspects but significant benefits in social aspects. The Project will contribute to resolving housing shortage, improve society and social infrastructures as well as providing leisure and cultural vibrancy to the community etc. Hence, the proposed housing development is considered to be sustainable.

6.10 SUMMARY OF ENVIRONMENTAL REVIEW

6.10.1 Adverse air quality impact is not expected to nearby ASRs during the construction stage given that standard control measures will be provided. No industrial chimney was identified within 200m from the project site, thus potential adverse impacts from industrial emissions to the proposed sensitive uses is not anticipated during the operation phase. As the 5m buffer distance stipulated in HKPSG is fulfilled, no adverse impacts arising from the vehicular emissions is anticipated during operation phase.

6.10.2 No adverse noise impact is expected to nearby NSRs during the construction stage given that standard mitigation measures will be provided. For the traffic noise impact, residential blocks comply with the noise criteria with implementation of acoustic window (baffle type) and architecture fin. The Child Care Centre is recommended to be equipped with air conditioning if noise sensitive uses are unavoidable at these non-compliance areas. No significant contribution to the overall noise from other existing roads impact is anticipated (i.e., predicted noise level contribution is less than 1.0 dB(A)). Fixed noise sources on the proposed development are assessed and no adverse impact is anticipated.

6.10.3 With the effective implementation of the standard mitigation measures such as suitable drainage system with silt traps, good site management practices, careful working practices, proper sewage collection and disposal system, and deployment of wastewater treatment facilities or groundwater recharging operation as necessary during construction stage, no adverse water quality impact is anticipated. During the operation stage, the potential water quality impact is minimized with proper management on sewage generate from the proposed development, full implementation of stormwater best management practice and control on the fertilizers and pesticides.

6.10.4 C&D materials, chemical waste and general refuse are anticipated to be generated during construction phase. Measures such as implementing C&DMMP, reusing C&D materials and proper handling on chemical waste should be carried out, and no unacceptable adverse environmental impacts is expected from the handling, storage, transportation or disposal of the waste generate by Project development.

6.10.5 The major land uses of the existing Project site are vacant land (greenfield development) with some vegetation. Based on desktop study, relevant government records and visual site inspections, potential land contamination is unlikely. However, as part of the Project Site area, including a vehicle workshop and interior of village houses, are inaccessible and should be re-appraised when access of these areas become available. If potential contamination is found associated to the Project site after SI and assessment under CAR, remediation works should be conducted following the RAP to decontaminate the land to acceptable level and submit the RR for EPD's endorsement before Project commencement.

7 PRELIMINARY LAND REQUIREMENT STUDY

7.1 INTRODUCTION

7.1.1 The Preliminary Land Requirement Study presented below is to formulate the land requirement for proposed development, and identify land uses, facilities and properties that may be affected by the land resumption and clearance for the proposed development.

7.2 LAND REQUIREMENT

7.2.1 The area within the proposed development boundary is approximately 3.4 hectare (ha). The affected private and government lands (either permanently or temporarily for the proposed development) are summarized in **Table 7.1** below. Details of land requirements are presented in the ***Preliminary Land Required Report and Land Requirement Plans***.

Table 7.1 Land Requirement within the Proposed Works Area

Type of Land	Area (m^2)
Private land	0
Government land license	11,392.46
Unallocated/unleased government lands	22,607.54
Total Required Land	**34,000**

Cultural Heritage, existing structures, Graves, Urns, Kam Taps and Shrines

7.2.2 Based on the initial development layout, there are no existing grave, kam taps, urns or shrines that may require clearance within the Site. The existing accesses from Wo Sheung Tun Street to the graves will also not be affected by the proposed site formation and infrastructure works.

7.2.3 No feature of heritage and conservation value including those with archaeological resources is identified within the Site area. Hence, no direct impact from construction works of the Project on built heritage would be anticipated.

Registered Old and Valuable Trees (OVT) or Tree of Particular Interest

7.2.4 No registered “Old and Valuable Trees” (OVTs) was recorded under DEVB TCW No. 05/2020 and No Trees of Particular Interest (TPI) were identified according to the criteria in Section 2.6 of Guidelines for Tree Risk Assessment and Management Arrangement (9th edition) within the Site and the 500m study area. The detail findings are presented in **TR16 Preliminary Landscape and Visual Impact Assessment.**

Registered Geotechnical Features

7.2.5 There are twenty registered geotechnical features identified within the vicinity of the Proposed Works Limit.

7.2.6 The impact on cultural heritage, trees, graves, urns, registered geotechnical features and other land lots have been identified with no insurmountable land issue expected. Sufficient lead time should be allowed for the land acquisition and site clearance process when planning the implementation programme.

8 SITE FORMATION AND INFRASTRUCTURAL PROVISION

8.1 GEOTECHNICAL

Ground Profiles

8.1.1 Based on the existing ground investigation records and the geological maps, the Site is underlain by fill, alluvium, colluvium, completely decomposed Granite and highly to moderately decomposed Granite and bedrock (slightly to moderately decomposed Granite). Bedrock is below the saprolite layer.

8.2 SITE FORMATION ASSESSMENT

8.2.1 This Preliminary Site Formation Assessment aims to assess the site formation requirements for the proposed development and presents recommendations in relation to site formation for the proposed development.

8.2.2 The proposed site formation level has been reviewed taken into account the existing topography and access allowed to the adjacent area. The level of the proposed access road and the housing site platform should match with the adjacent natural hillside and existing ground as far as practicable to minimise the extent of the slopes works and retaining structures and maximise of land use.

8.2.3 A balanced cut and fill approach is adopted as far as practicable in designing the proposed site formation level. It is proposed to form multi-platforms with a gentle gradient for the proposed housing development to minimize the excavation extent and provide adequate fall for draining the stormwater runoff within the Site. Temporary peripheral drains will be provided around the development site to collect the surface runoff and divert the collected surface runoff to nearby drainage facilities during construction.

8.2.4 The existing geological conditions have also been taken into account for the design of site formation works for the proposed developments. Details of the site formation assessments and associated recommendations are discussed below.

Site Formation Works

8.2.5 A balanced cut and fill approach is adopted as far as practicable in designing the proposed site formation levels. The proposed formation levels for the proposed development are shown in **Drawing No. CE47/TO3/FIG/074**. The proposed site formation level ranges from +95mPD in the western portion to +68mPD in the northern portion.

8.2.6 Based on the proposed site formation levels, it is estimated approximately 99,000 m^3 of material will be excavated and approximately 38,000 m^3 of fill materials are required to achieve the proposed formation levels.

Site Formation Assessment

8.2.7 Formation of New Slopes and Retaining Walls

8.2.7.1 Both cutting and filling works will be required throughout the proposed development area to achieve the required development levels and this may necessitate the formation of new slopes and retaining walls. Some of the geotechnical constraints specific to these works are summarised below:

(a) Excavation and slope formation work may be required in materials that have persistent weakness planes such as bedding, shear planes, foliation, cleavage etc. This can have

implications for rock and soil slope stability, particularly if the weakness planes are adversely oriented with respect to the slope face.

(b) Whilst the majority of excavated soils are likely to be suitable for re-use of fill within the proposed development area. Any unsuitable materials will need to be identified and either treated prior to re-use or removed from the Site.

8.2.7.2 Although, landscape treatment for new man-made slope and retaining wall is not required in the current feasibility stage. According to GEO publication No. 1/2011, soft landscape for slope angle between 15°to 35°may include grass, groundcover, climbers, ferns, shrubs and small trees with biodegradable erosion mat.

8.2.7.3 13 existing man-made structures are proposed to be removed by the proposed development including slopes and retaining wall.

8.2.7.4 For the proposed site formation design inside the Site in this feasibility study, slope cuttings were kept to a maximum of 30° to avoid stabilization measures (e.g. soil nails) which could in turn obstruct the future building works. In addition to technical feasibility, the site formation design will be reviewed to minimise excavation and achieve cost effectiveness in detailed design stage.

8.2.7.5 Upon the proposed development involving the formation works of 45°cut slopes with soil nails at this preliminary design stage, the more steeper cut slope with the maximum 45°soil nail may be considered at the detailed design stage to reduce the extent of the required cutting works.

8.2.7.6 The L-shaped retaining wall is proposed along the east portion of the site boundary line in this feasibility study. The maximum retaining height is 6m to minimize the extents of upgrading works for new formed feature located at south-eastern. Exploration on alternative feasibility and cost-effective design, e.g. steep cut with reinforcement / reinforced earth wall will be carried out in detailed design stage.

8.2.8 Groundwater Control

8.2.8.1 Available data for the development site indicates that the groundwater level is 3.9m below ground level, it is likely that groundwater control will be required for the excavation works. The hydrogeological conditions at development site should be further investigated in the investigation stage to ensure that groundwater control measures are adequate and do not have adverse impacts on nearby structures, facilities etc.

8.2.9 Superficial Deposits within the Development Site

8.2.9.1 The geological maps indicate the superficial deposits consists of terrace alluvium (Qpa) and debris flow deposits (Qpd) are located at the Site area, and 1.9m thick pond deposits was recorded in borehole (Ref. No. 50173/FLN-BH03). However, from aerial photograph interpretation, no pond(s) was observed in the location of the aforementioned borehole or within the Site. Further GI works in the investigation and design stage is required to assess the extent of these materials.

8.2.10 Handling of Unsuitable Materials

8.2.10.1 Unsuitable material such as un-engineered fill and alluvium may be encountered during excavation works within the development site. Further ground investigation is required to determine the extent, thickness and nature of the fill and alluvium within the Site where excavation is proposed.

8.2.10.2 Non-inert materials from demolition and construction activities will be reused and recycled within the site as much as possible before disposal. Disposal should be considered as last resort and is proposed to be disposed of at one of the three strategic landfills, according to current practices.

8.2.11 Disposal of materials

8.2.11.1 As the volume of C&D material generated from the Site or the fill imported to the Site are currently estimated to be more than 50,000m^3, Construction and Demolition Material Management Plan (C&DMMP) is required for this Project in accordance with the Project Administration Handbook (Chapter 4 and ETWB TCW No. 19/2005.

8.2.12 Subject to further agreement with the Public Fill Reception Facilities (PFRFs) and the location of the PFRFs would be subject to the designation from the Public Fill Committee.

Conclusion

8.2.13 The estimated cut and fill volume for the proposed site formation works is summarised in **Table 8.1** below.

Table 8.1 Estimated Cut and Fill Volume in Terms of Site Formation

(A) Artificial hard material (1) (m^3)	(B) Material other than rock and artificial hard material (2) (m^3)	(C) Rock Excavation (m^3)	(D) Non-inert material (3) (m^3)	(E) Total Inert C&D material (m^3)	(F) Total filling material required (m^3)	(G) Inert C&D material to be reused for filling on site (4) (m^3)	(H) Total Net (+)Surplus / (-)deficit Volume (m^3)
14,900	83,830	0	1,840	98,730	37,715	37,715	61,015

Note: (1) The artificial hard materials comprise mainly the structure within the built-up area (including temporary structure, residential dwellings, workshops).
(2) The type of material other than rock and artificial hard material comprises mainly soil, topsoil and other unsuitable materials.
(3) 200mm thick unsuitable top soil is assumed for agricultural land where 9,200m^2 all options are assumed based on aerial photographic interpretation.
(4) Filling works on site mainly include backfilling for site formation.
Where (A) + (B) + (C) = (E) and (E) - (G) = (H)

8.2.14 There is no insurmountable technical problem in terms of site formation works at this stage. As only limited geological information can be obtained at the current stage, site specific GI works should be carried out in the investigation and design stage to further verify the geological conditions of the Site.

8.3 DRAINAGE

8.3.1 The Preliminary Drainage Impact Assessment (DIA) has been carried out to identify, assess the drainage impact after the implementation of the Development; and proposed appropriate mitigation measures, if necessary, to mitigate any potential adverse drainage impacts. A location plan of the proposed Development is shown on **Drawing No. CE47/TO3/GN/1001.**

8.3.2 To consider the effect of climate change in the drainage design, the projection of rainfall increase percentage and sea level rise given in Table 28 of SDM is added to the respective design rainfall intensities/synthetic rainstorm profiles and design extreme sea levels. Climate change effect up to end-21st century is adopted in the assessment and summarized in **Table 8.2** below.

Table 8.2 Rainfall and Sea Level Projection due to Climate Change

	Rainfall Projection	Sea Level Projection (m)

End of 21st Century (2081-2100)	16%	0.47

8.3.3 The existing sub-catchment plan of the assessment area is shown on **Drawing No. CE47/TO3/DR/1101**. The ratio of paved/ unpaved area of the catchment are determined in accordance with the aerial photo.

8.3.4 There is an existing stream along northern boundary of the site. Based on the latest site formation layout, the existing streams will be remained unchanged with a buffer zone of 10m generally applied.

8.3.5 Three stormwater discharge points are proposed as shown in **Drawing No. CE47/TO3/DR/1002**. Runoff from the Development (catchment NC1 to NC4) will be discharged via terminal manhole TMH-01 to TMH-03 and MH-04 to the existing stream along northern boundary, subsequently connected to existing 4 cells 2500 x 2200 box culvert via SSH4005674 stormwater chamber and SNF4003101 connection point.

8.3.6 Slope drains are proposed along the southern site of housing boundary to collect the surface runoff from natural terrain (catchment C3, C4, C7). Another alternative scheme comprises of cut-off drains at the slope crest of proposed man-made slopes is also proposed to intercept the surface runoff from natural terrains as shown in **Drawing No. CE47/TO3/DR/1003**.

8.3.7 Additional surface runoff can be anticipated due to the increased paved area in the site. As a result, the existing drainage system at the downstream of the connection point shall bear the increased burden.

8.3.8 The existing drainage system have sufficient capacity to cater the additional runoff after development. As a result, it is considered that the Development would not cause any adverse drainage impact nor worsen the existing drainage condition.

8.3.9 It is concluded that there is no insurmountable impact to the drainage infrastructure due to the Development. The proposed drainage discharge work is considered technically feasible and construction viable. It will be carried out during the site formation works for the Site.

8.4 SEWERAGE

8.4.1 The Preliminary Sewerage Impact Assessment (SIA) has been carried out to identify, assess the sewerage impact after the implementation of the Development; and proposed appropriate mitigation measures, if necessary, to mitigate any potential adverse sewerage impacts.

8.4.2 Based on the DSD's Sewerage Record Plan, there is an existing 300-375mm dia. gravity sewer to the north of Site along Wong Chuk Yeung Street. Another existing 225-300mm dia. gravity sewer is identified along Kwei Tei Street, which then goes along Shan Mei Street and enlarged to 600mm dia. after joint with an existing 600mm gravity sewer at Sui Wo Road.

8.4.3 The Site falls within Sha Tin Main Sewerage Pumping Station (STMSPS) and eventually to Sha Tin Sewerage Treatment Works (STSTW) for secondary treatment. The current utilization and capacity of the existing sewerage facilities are summarized in **Table 8.3**.

Table 8.3 Current Utilization and Capacity of the Exiting Sewerage Facilities

Existing Sewerage Facilities	Current Average Daily Flow (m^3/day)	Capacity (m^3/day)	Designed Peak Flow (l/s)
STMSPS	181,652	518,400 (Peak Flow)	1590 x 4 pumps = 6360 (4 duty 3 standby)

STSTW	-	340,000 (ADWF)	-

8.4.4 In order to releasing the existing site of Sha Tin Sewage Treatment Works (STSTW) for other beneficial uses, the relocation of the STSTW to caverns is planned to be carried out in two stages. As advised by EPD, the relocation project has commenced its Stage 1 works in February 2019, with a view to completing the whole project by 2031. The design capacity of the future relocated will be remained at 340,000 m^3/day.

8.4.5 The total sewage, Average Dry Weather Flow (ADWF) generated from the Development is estimated to be 2163.59 m^3/day. For the potential welfare/GIC and other facilities within the Site, assumptions are made to estimate the number of employee/visitors and following the priority list of social welfare facilities.

8.4.6 Sewage generated from the Development will be collected and discharged to two proposed terminal manhole (TMH-01 and TMH-02) within the Site. The invert level of proposed TMH-01 and TMH-02 is +74.50 mPD and 65.35 mPD respectively.

8.4.7 Sewage collected from both TMH-01 and TMH-02 will be conveyed to proposed MH-05 at Wong Chul Yeung Street via 300mm sewer pipe. An approximately 363m long HDPE gravity sewer with 450mm (OD) along Wong Chuk Yeung Road and Kwei Tei Street is proposed to connect proposed MH-05 and the existing manhole FMH4038621. The proposed sewerage layout plan is shown on Drawing No. **CE47/TO3/DR/1301**.

8.4.8 An approximately 35m long gravity sewer is proposed to lay via pipe jacking across junction connecting Wong Chul Yeung Street and Kwei Tei Street between proposed MH-13 and MH-14 to minimize the traffic impact at the roundabout.

8.4.9 With the additional sewage flow from the Development (i.e. 2163.59 m^3/day), the peak sewage flow would exceed the design capacity by 165.5% and 112.3% at the critical pipe section between FMH4038621 to FMH4038622 and FMH4038624 to FMH4038625. Therefore, upgrading of the exiting sewerage is required for the Development from 300mm to 450mm.

8.4.10 For existing sewerage facilities (STMSPS), comparison calculations between the additional flow due to the Development and the capacity are carried out. The total ADWF and peak flow with the additional sewage flow from the Development is estimated to be 183,938.95 m^3/day and 5,429.37 l/s respectively, which would occupy 85.10% of the design max capacity of STMSPS. Therefore, the Development will not have adverse impact on the existing sewerage facilities. For existing STSTW, the additional flow from the Development only accounts for 0.64% of design capacity. Therefore, it is considered that the potential sewerage impact on STSTW would be minimal.

8.5 WATERWORKS

8.5.1 The Preliminary Water Supply Impact Assessment (WSIA) has been carried out to identify and assess the water supply impact after the implementation of the Development; and proposed appropriate mitigation measures, if necessary, to mitigate any potential adverse water supply impacts.

8.5.2 The water demand for the Development was estimated in accordance with Water Supplies Department's (WSD) Departmental Instruction (DI) No. 1309. The assessment of watermain under fire-fighting scenario was also performed based on the requirement stipulated in WSD's DI No. 1309.

8.5.3 The unit demands used in estimating the potable water and flushing water consumption for the proposed Development are presented in the **Table 8.4**. The unit demands are based on unit

water demand in WSD's DI 1309. The following design parameters are adopted for the design of the proposed water supply system: -

Table 8.4 Potable and Flushing Water Unit Demand

Type	Unit	Potable Water Demand	Flushing Water Demand
Residential - R1	m^3/h/d	0.23	0.11 [1]
Service Trade – Sha Tin	m^3/h/d	0.045	-
Student	m^3/h/d	0.025	0.025
Landscape irrigation use	m^3/ha/d	100 [2]	-

Note: [1] Flushing water unit demand is adopted as per advice from WSD.

[2] Potable Water Demand is adopted with reference to ArchSD TIP No.10/05.

8.5.4 With reference to DI No. 1309, the estimated fresh water demand and flushing water demand for the Development is about 2,999 m^3/day and 1,188 m^3/day respectively.

8.5.5 A 300mm dia. fresh water distribution main is proposed to lay from the proposed Ha Wo Che FWSR extension to the Site. Two water mains are proposed to tee-off from the proposed 300mm dia. fresh water main near the Site. The pipe sizes are proposed to be 300mm and 200mm for fresh and fire service water main respectively. A 200mm dia. salt water distribution main is proposed to lay from the proposed Ha Wo Che Salt Water Tank extension to the Site for flushing.

8.5.6 The residual head and invert level of the proposed potable and flushing water inlet during daily operation at the site boundary is listed on the **Table 8.5** below.

Table 8.5 Residual head and invert level of water mains

Location	Residual Head (m)			Invert Level (mPD)		
	Fresh Water	Fire	Flushing Water	Fresh Water	Fire	Flushing Water
To the west of ex-Fo Tan cottage	56.61	46.18	66.56	73.70	73.85	73.80

Note: It is understood that water tank and pumps as inside service will be designed by project proponent for internal supply if necessary.

Minimum of 20 m residual head for fresh water supply can be provided from the planned fresh water and flushing water mains respectively. No mitigation measure would be ne

Fresh Water Supply System

8.5.7 Existing fresh water mains and salt water mains record plans are obtained from WSD. Existing 150-450 mm dia. fresh water main is identified along Wong Chuk Yeung Road.

8.5.8 Existing fresh water supply to the area is supplied by Ha Wo Che Fresh Water Service Reservoir (Ha Wo Che FWSR) with total capacity of 10,565 m^3. The invert level is +146.5 mPD and top water level is +152.4 mPD. As advised by WSD, currently the fresh water from Sha Tin North FWSR pumps to Ha Wo Che FWSR via the Fo Tan Fresh Water & Salt Water Pumping Station (Fo Tan FW & SW PS) for water supply to uphill areas in Fo Tan. However, fresh water could not be supplied to the proposed development from Sha Tin North FWSR due to insufficient pressure.

8.5.9 The existing storage capacity of Ha Wo Che FWSR is 10,565 m^3. An assessment of the adequacy of the Ha Wo Che FWSR to serve the Development site is carried out and concluded that the existing capacity of Ha Wo Che FWSR cannot cope with the additional fresh water

demand of 2,999 m^3/day arising from the Development. Thus, upgrading works of Ha Wo Che FWSR will be required.

8.5.10 In accordance with the statistics of existing Fo Tan FW PS, the current output factor to Ha Wo Che FWSR exceeds 120% from July to October 2022. Therefore, the existing pumping capacity of Fo Tan FW PS cannot cope with the additional water demand arising from the proposed Development. Upgrading works to the associated pumping system is needed to cater for the water demand from the Development.

8.5.11 Based on the design guideline from WSD, the required capacity for a fresh water service reservoir should take into account the requirements of balancing storage, system breakdown storage, non-effective storage and dead storage. Thus, the additional storage capacity proposed for Ha Wo Che FWSR upgrading is about 4,755 m^3.

8.5.12 In regard to Fo Tan FW PS, it is proposed to upgrade the pumping station with additional of fresh water pump or upgrading of existing pump size within the pumping station. The required pump capacity for fresh water is 4,500 m^3/day (i.e. 1.5 x fresh water MDD). The associated connecting fresh water distribution water mains and pumping mains are proposed as shown in **Drawing No. CE47/TO3/WS/1020**.

8.5.13 To summarise the above and as coordinated with WSD, a new fresh water supply system is recommended, which comprises of the following works:

I. Lay a new fresh water main (DN300) from existing DN600 fresh water main at Shan Mei Street to Fo Tan FW & SW PS;
II. Upgrade the Fo Tan FW & SW PS with an additional fresh water pump capacity of 4,500 m^3/day (2,999 x 1.5);
III. Lay a new pumping main (DN300) from Fo Tan FW & SW PS to the proposed Ha Wo Che FWSR extension;
IV. Construct a new tank/compartment with a storage capacity of 4,755 m^3 at Ha Wo Che FWSR (also known as “proposed Ha Wo Che FWSR extension”);
V. Lay a new distribution water main (DN300) from the proposed Ha Wo Che FWSR extension to the Development; and
VI. Connect the new distribution water main to the existing DN600 fresh water main at Shan Mei Street to enhance the reliability.

Salt Water Supply System

8.5.14 In the vicinity of the Site, an existing 150mm dia. salt water main is identified along Wong Chuk Yeung Road.

8.5.15 The nearest existing salt water supply to the vicinity of the Site area is supplied by Sha Tin Seafront Salt Water Pumping Station (Sha Tin Seafront SWPS) with design capacity of 84,020 m^3. In view the proposed development is out of existing salt water supply zone and located in high level areas, WSD advised to supply the development with salt water from Ha Wo Che Salt Water Tank via the Fo Tan FW & SW PS rather than directly from the Sha Tin Seafront SWPS. The existing storage capacity of Ha Wo Che Salt Water Tank is 324 m^3.

8.5.16 As advised by WSD, the design capacity of the Sha Tin Seafront SWPS is 84.02 MLD. An assessment of the adequacy of the Sha Tin Seafront SWPS to serve the Development site is carried out and the existing Sha Tin Seafront SWPS‘s design capacity is lower than the future daily salt water demand of 85.83 MLD. Thus, the existing Sha Tin Seafront SWPS is insufficient to supply the Development.

8.5.17 For the Ha Wo Che Salt Water Tank, its existing storage capacity is 324 m^3. An assessment of the adequacy of the Ha Wo Che Salt Water Tank to serve the Development site is carried out and concluded that the existing Ha Wo Che Salt Water Tank cannot cope with the additional

flushing water demand arising from the. Thus, construction of a new salt water tank or upgrading works of Ha Wo Che Salt Water Tank will be required.

8.5.18 In accordance with the statistics of existing Fo Tan SW PS, the current output factor to Ha Wo Che Salt Water Tank exceeds 100% from July to October 2022. Therefore, the existing pumping capacity of Fo Tan SW PS cannot cope with the additional water demand arising from the proposed Development. Upgrading works to the associated pumping system is needed to cater for the water demand from the Development.

8.5.19 Based on the design guideline from WSD, the additional storage capacity proposed for Ha Wo Che SW Tank upgrading is about 360 m^3.

8.5.20 In regard to Fo Tan SW PS, it is proposed to upgrade the pumping station with additional of salt water pump or upgrading of existing pump size within the pumping station. The required pump capacity for salt water is 1,500 m^3/day (i.e. 1.2 x flushing water MDD). The associated connecting salt water distribution water mains and pumping mains are proposed as shown in **Drawing No. CE47/TO3/WS/1010**.

8.5.21 To summarise the above and as coordinated with WSD, a new salt water supply system is recommended, which comprises of the following works:

I. Lay a new salt water main (DN200) from existing DN400 salt water main at Shan Mei Street to Fo Tan FW & SW PS;
II. Upgrade the Fo Tan FW & SW PS with an additional salt water pump capacity of 1,500 m^3/day (1,188 x 1.2);
III. Lay a new pumping main (DN200) from Fo Tan FW & SW PS to the proposed new distribution main as mentioned in Item V below;
IV. Construct a new tank/compartment with a storage capacity of 360 m^3 at Ha Wo Che SW Tank (also known as “proposed Ha Wo Che SW Tank extension”); and
V. Lay a new distribution water main (DN200) from the proposed Ha Wo Che SW Tank extension to the Development.

<u>Implementation of the New Fresh Water and Salt Water Supply System</u>

8.5.22 Additional demand on fresh water and salt water are anticipated arising from the development. As such, upgrading works to the existing Ha Wo Che Fresh Water and Salt Water Service Reservoirs and the existing Fo Tan Fresh Water and Salt Water Pump Station by WSD are necessary. Laying of the associated inlet and outlet fresh and salt water mains between the existing Ha Wo Che Fresh Water and Salt Water Service Reservoirs and the development site along Sui Wo Road and Wong Chuk Yeung Street will be implemented by CEDD.

<u>Water Gathering Ground</u>

8.5.23 According to the WSD’s record drawing on water gathering ground, the proposed development areas do not fall into the WSD’s Water Gathering Ground, and hence both short-term and long-term impacts on the Water Gathering Ground are not anticipated.

8.6 UTILITIES

8.6.1 Relevant government departments and utility undertakings were contacted for collection of existing and planned utilities record within or in the vicinity of the study area.

8.6.2 The major existing services & utilities include:

(a) Stormwater Drainage System

(b) Sewerage System

(c) Fresh Water & Flush Water Supply

(d) Public Lighting Cable

(e) CLP Power Cable

(f) Town Gas Main

(g) Telecommunication Cable

8.6.3 Several 132kV, 33kV, 11kV cables will be affected by the Development. The 11kV cables is proposed to tee off from existing cables for power supply to the Site.

8.6.4 There are also 132kV overhead cables running along the east and west peripheries of the Site which could pose constraints to the proposed development. It was agreed that the 132kV overhead cables will be diverted prior to the construction of the proposed site formation and infrastructure works of this Project.

8.6.5 The nearest existing gas main is located at the footpath of Wong Chuk Yeung Street. As discussed with Towngas, the gas supply for the proposed development will be extended from the existing medium pressure gas min at the junction of Wong Chuk Yeung Street and Wo Sheung Tun Street to the Site. Upon site inspection, there is also an aboveground gas governor kiosk near the vehicular entrance of Chun Yeung Estate for gas pressure monitoring.

8.6.6 Part of the HyD lightings cable were located in the proposed development area and are proposed to be demission and removed. Distribution network of the lighting supply is proposed to be extended from the existing public lighting and its cable which is located of Wong Chuk Yeung Street.

8.6.7 For the proposed development, the schematic design approach will aim to provide connections from the existing utilities. A list of new connection of utilities are proposed as follows:

(a) Stormwater Drainage System

(b) Sewerage System

(c) Fresh Water & Flush Water Supply

(d) Public Lighting Cable

(e) CLP Power Cable

(f) Town Gas Main

(g) Telecommunication Cable

8.6.8 The programme for connection of the new utilities will be prepared for agreement with the utility undertakings in the design stage.

8.6.9 For those utilities encroached in the proposed development area, suspension will be required. The list of utilities required to be abandoned are proposed as follows:

(a) CLP electricity cables;

(b) Public lighting system;

(c) Watermains

8.6.10 No utility reserve is required for the proposed development. Liaison works for any necessary upgrading works and detailed connection works shall also be arranged in detailed design stage.

8.6.11 As per the available information of the site and received existing utilities records from utilities undertakings, the site was assessed to be with no major constraints with sufficient spaces for the new utilities provision and diversion of existing utilities. Hence, it is considered that the proposed utilities works are technically feasible. It is concluded that there is no insurmountable impact to the existing utilities within and near the Site due to the development.

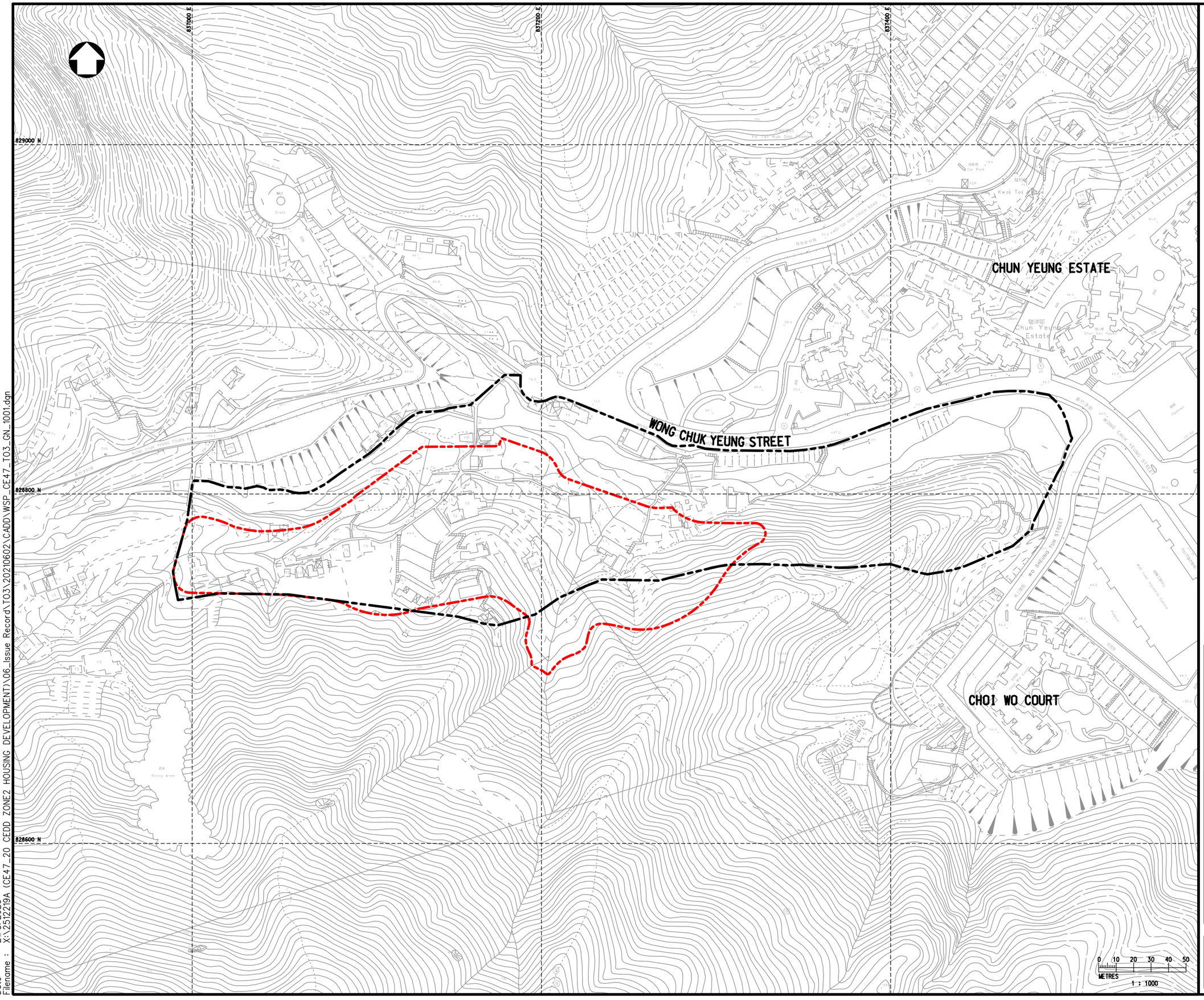
9 CONCLUSION

9.1 CONCLUSION

9.1.1 The proposed development at the west of Ex-Fo Tan Cottage Area, Fo Tan, is demonstrated to be technically feasible in terms of traffic and transport, drainage, sewerage, water supply, geotechnical, environmental, landscape and visual and air ventilation aspects. Subject to the implementation of appropriate mitigation measures and improvement works, the proposed housing development will not induce any insurmountable impact on the community, environment and existing infrastructures.

APPENDIX A

DRAWINGS



LEGEND :

STUDY BOUNDARY

PROPOSED PUBLIC HOUSING SITE BOUNDARY

Rev	Description	By	Date

Consultant

wsp

Project title

AGREEMENT NO.CE47/2020 (CE)

TERM CONSULTANCY FOR SITE FORMATION AND INFRASTRUCTURE WORKS FOR PROPOSED HOUSING DEVELOPMENTS IN ZONE 2 (2021 - 2024) - FEASIBILITY STUDY

Drawing title

TASK ORDER NO.3
FO TAN
LAYOUT PLAN

Drawing no.	Rev.
CE47/T03/GN/1001	-

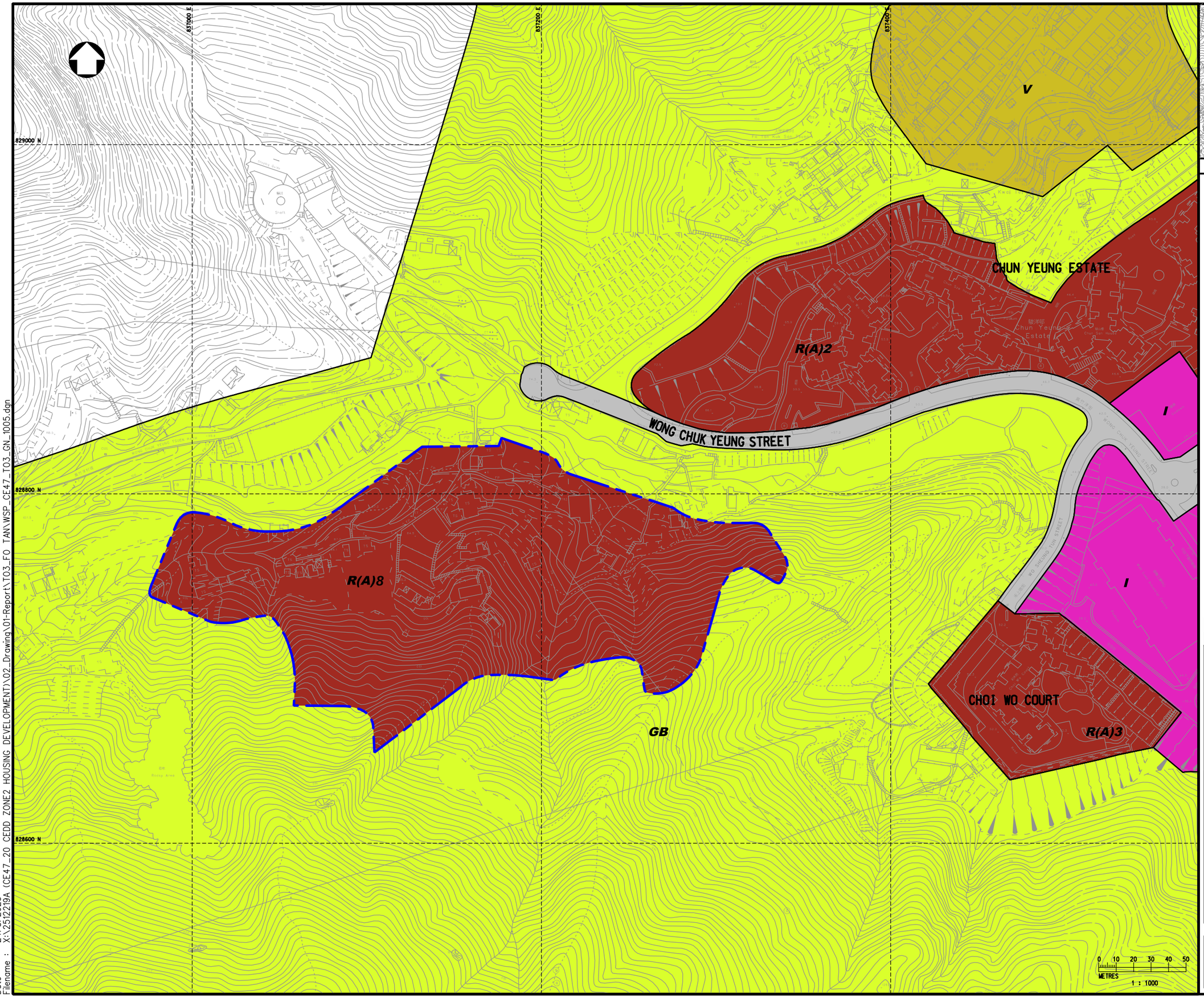
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CAD	APR 2021	HL	EW

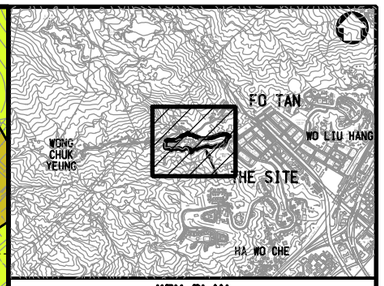
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KEY PLAN

LEGEND :

- REZONING BOUNDARY
- I — INDUSTRIAL
- GB — GREEN BELT
- R(A) — RESIDENTIAL (GROUP A)
- V — VILLAGE TYPE DEVELOPMENT

Rev	Description	By	Date
-	FIRST ISSUE	EW	SEP 21

Consultant

wsp

Project title

AGREEMENT NO.CE47/2020 (CE)
TERM CONSULTANCY FOR SITE FORMATION AND INFRASTRUCTURE WORKS FOR PROPOSED HOUSING DEVELOPMENTS IN ZONE 2 (2021 - 2024) - FEASIBILITY STUDY

Drawing title

TASK ORDER NO.3
WEST OF EX-FO TAN COTTAGE AREA STATUTORY LAND USE ZONING PLAN

Drawing no.	Rev.
CE47/T03/GN/1005	-

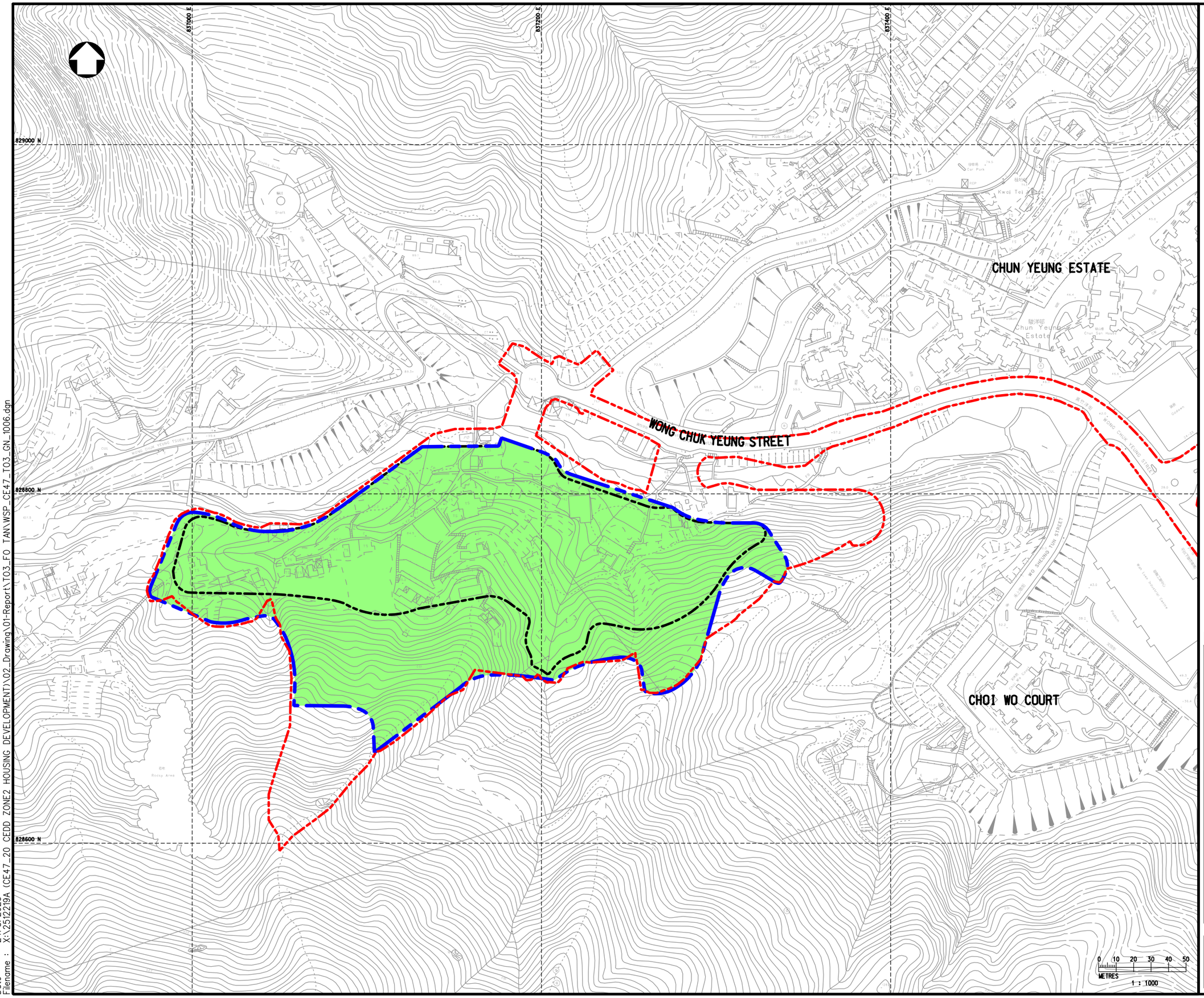
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LEGEND :

- PROPOSED PUBLIC HOUSING SITE BOUNDARY
- REZONING BOUNDARY
- WORKS LIMIT

Rev	Description	By	Date

Consultant

wsp

Project title

AGREEMENT NO.CE47/2020 (CE)
TERM CONSULTANCY FOR SITE FORMATION AND INFRASTRUCTURE WORKS FOR PROPOSED HOUSING DEVELOPMENTS IN ZONE 2 (2021 - 2024) - FEASIBILITY STUDY

Drawing title

TASK ORDER NO.3
WEST OF EX-FO TAN COTTAGE AREA
LAYOUT PLAN

Drawing no.	Rev.
CE47/T03/GN/1006	-

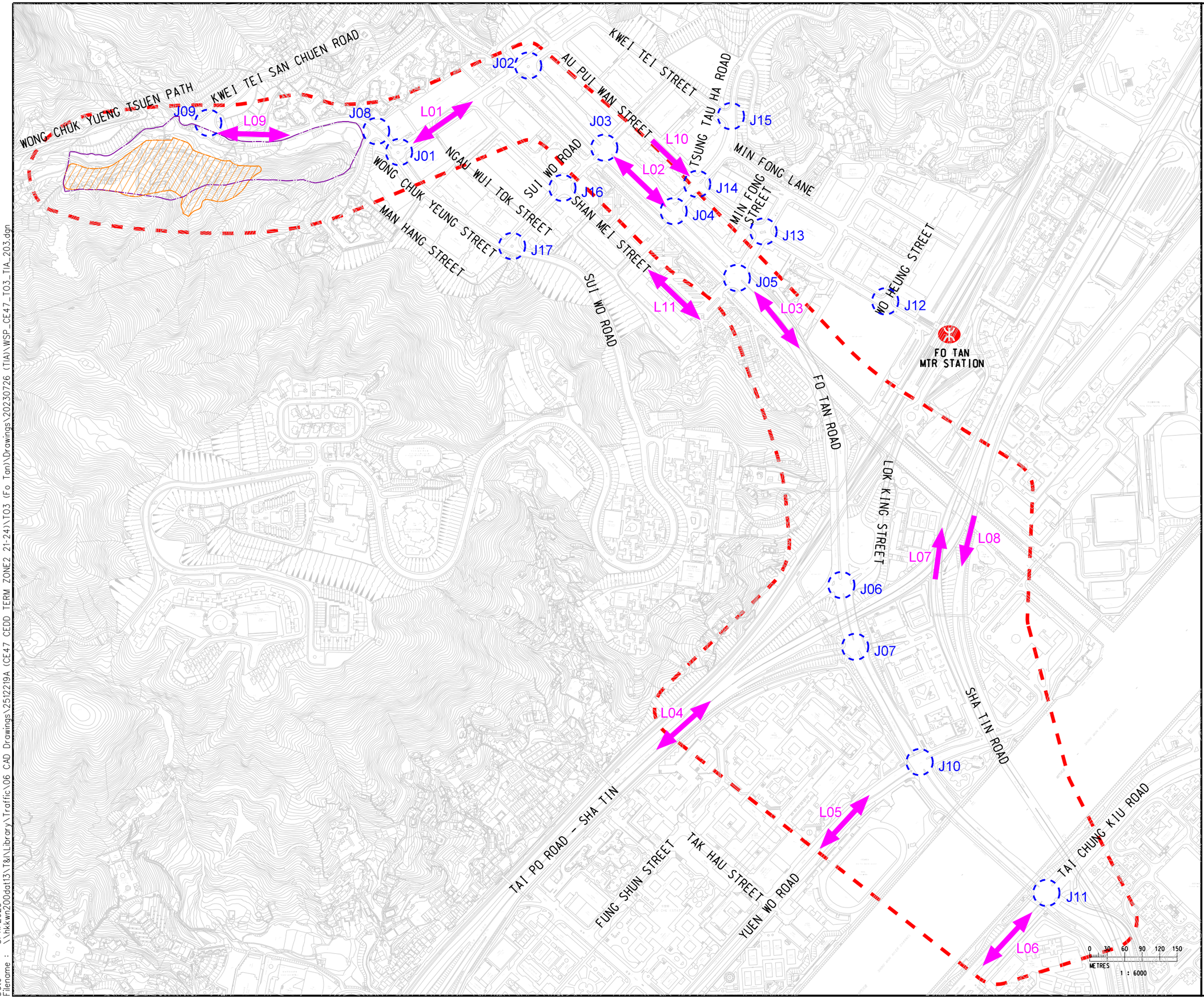
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LEGEND :

- AREA OF INFLUENCE
- PROPOSED PUBLIC HOUSING BOUNDARY
- STUDY BOUNDARY
- L01 J08 EXISTING KEY JUNCTIONS
- MTR STATION

Rev	Description	By	Date

Consultant

wsp

Project title

AGREEMENT NO.CE47/2020 (CE)

TERM CONSULTANCY FOR SITE FORMATION AND INFRASTRUCTURE WORKS FOR PROPOSED HOUSING DEVELOPMENTS IN ZONE 2 (2021 - 2024) - FEASIBILITY STUDY

Drawing title

AREA OF INFLUENCE AND IDENTIFIED CRITICAL LINK AND JUNCTION

Drawing no.	Rev.
CE47/T03/TIA/203	A

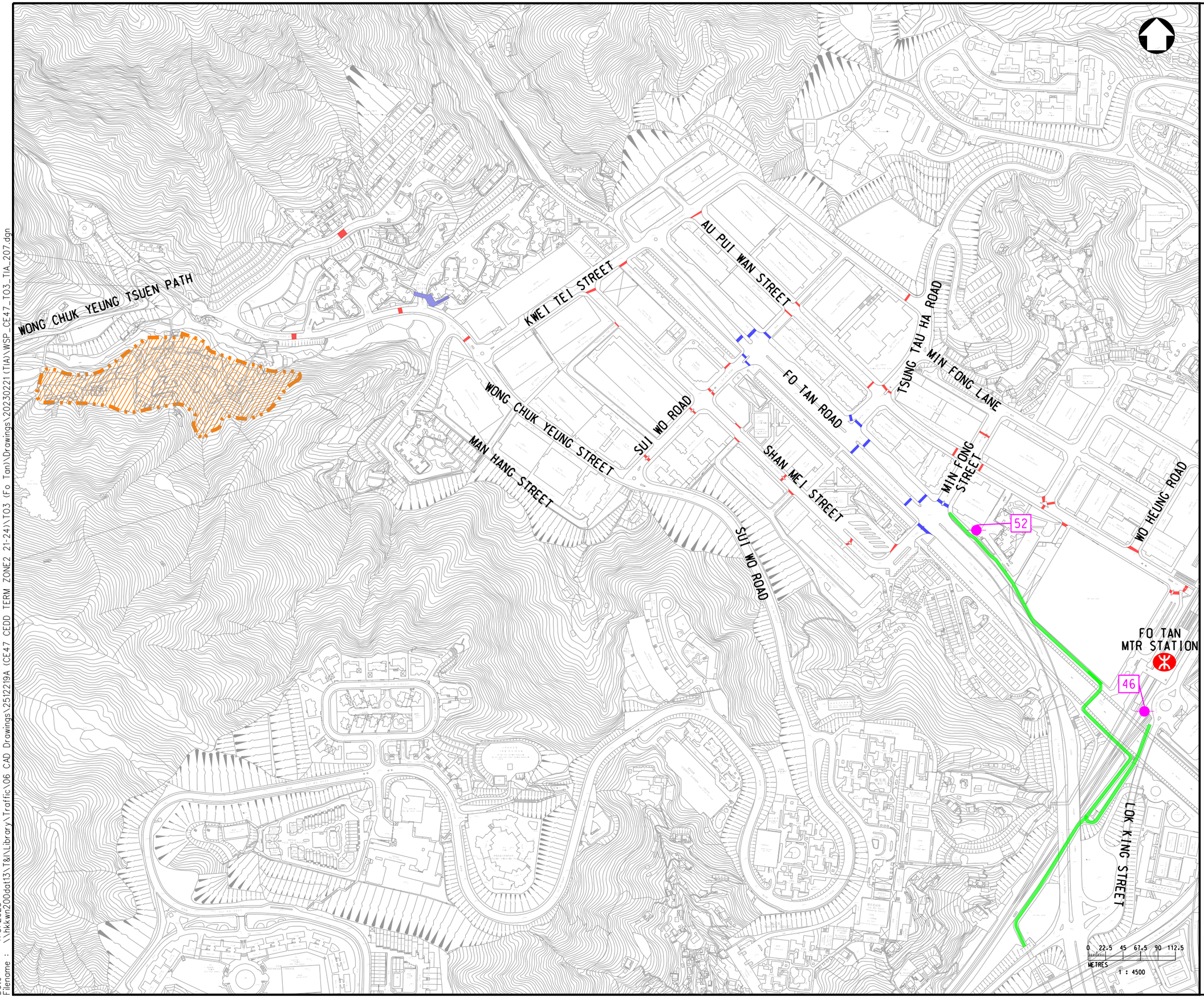
Drawn	Date	Checked	Approved
WTL	JUL 2023	-	DC

Scale	Status
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SPECIAL DUTIES (WORKS) DIVISION
CIVIL ENGINEERING OFFICE

Date : 8/11/2023
Filename : \\hkwn200dat13\T&N\Library\Traffic\06 CAD Drawings\2512219A (CE47 CEDD TERM ZONE2 21-24)\T03 (Fo Tan)\Drawings\20230726 (TIA)\WSP_CE47_T03_TIA_203.dgn



LEGEND :

- PROPOSED PUBLIC HOUSING BOUNDARY
- MTR STATION
- ELEVATED WALKWAY / FOOTBRIDGE
- SIGNALISED CROSSING
- CAUTIONARY CROSSING
- CYCLE TRACK
- NO. OF CYCLE PARKING SPACES

Rev	Description	By	Date

Consultant

wsp

Project title

AGREEMENT NO.CE47/2020 (CE)

TERM CONSULTANCY FOR SITE FORMATION AND INFRASTRUCTURE WORKS FOR PROPOSED HOUSING DEVELOPMENTS IN ZONE 2 (2021 - 2024) - FEASIBILITY STUDY

Drawing title

EXISTING PEDESTRIAN AND CYCLING FACILITIES IN THE VICINITY OF PROPOSED DEVELOPMENT

Drawing no.	Rev.
CE47/T03/TIA/207	A

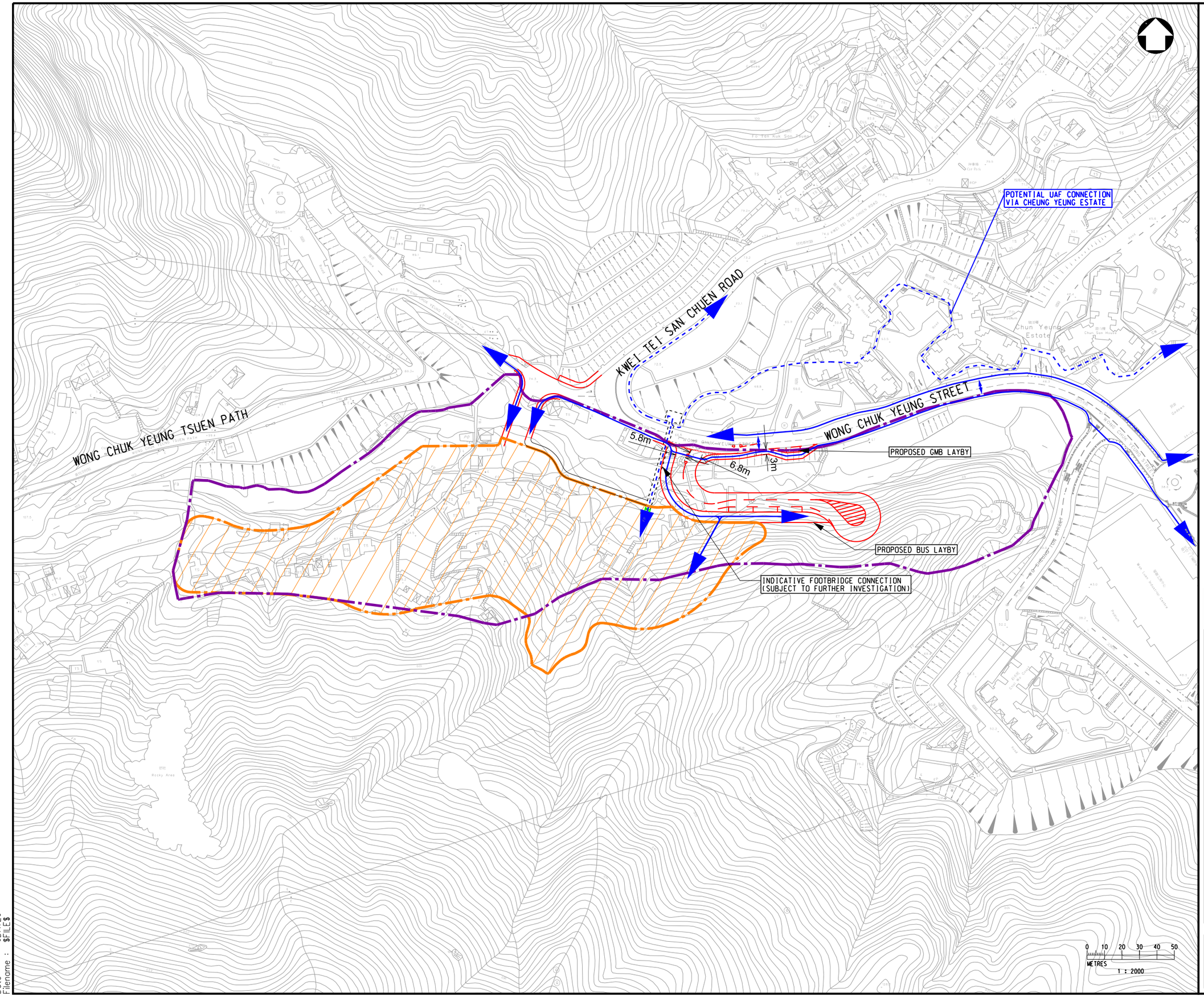
Drawn	Date	Checked	Approved
WTL	NOV 2022	-	DC

Scale	Status
1:4500 (A3)	-

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SPECIAL DUTIES (WORKS) DIVISION
CIVIL ENGINEERING OFFICE

Date : 4/3/2023
Filename : \\hkkwn200dat13\T&I\Library\Trafic\06 CAD Drawings\2512219A (CE47 CEDD TERM ZONE2 21-24)\T03 (Fo Tan)\Drawings\20230221 (TIA)\WSP_CE47_T03_TIA_207.dgn



LEGEND :

- PROPOSED PUBLIC HOUSING SITE BOUNDARY
- STUDY BOUNDARY
- PROPOSED ROAD LAYOUT
- PEDESTRIAN CONNECTIVITY

Rev	Description	By	Date

Consultant

wsp

Project title

AGREEMENT NO.CE47/2020 (CE)

TERM CONSULTANCY FOR SITE FORMATION AND INFRASTRUCTURE WORKS FOR PROPOSED HOUSING DEVELOPMENTS IN ZONE 2 (2021 - 2024) - FEASIBILITY STUDY

Drawing title

PROPOSED PEDESTRIAN CONNECTIVITY

Drawing no.	Rev.
CE47/T03/TIA/303	B

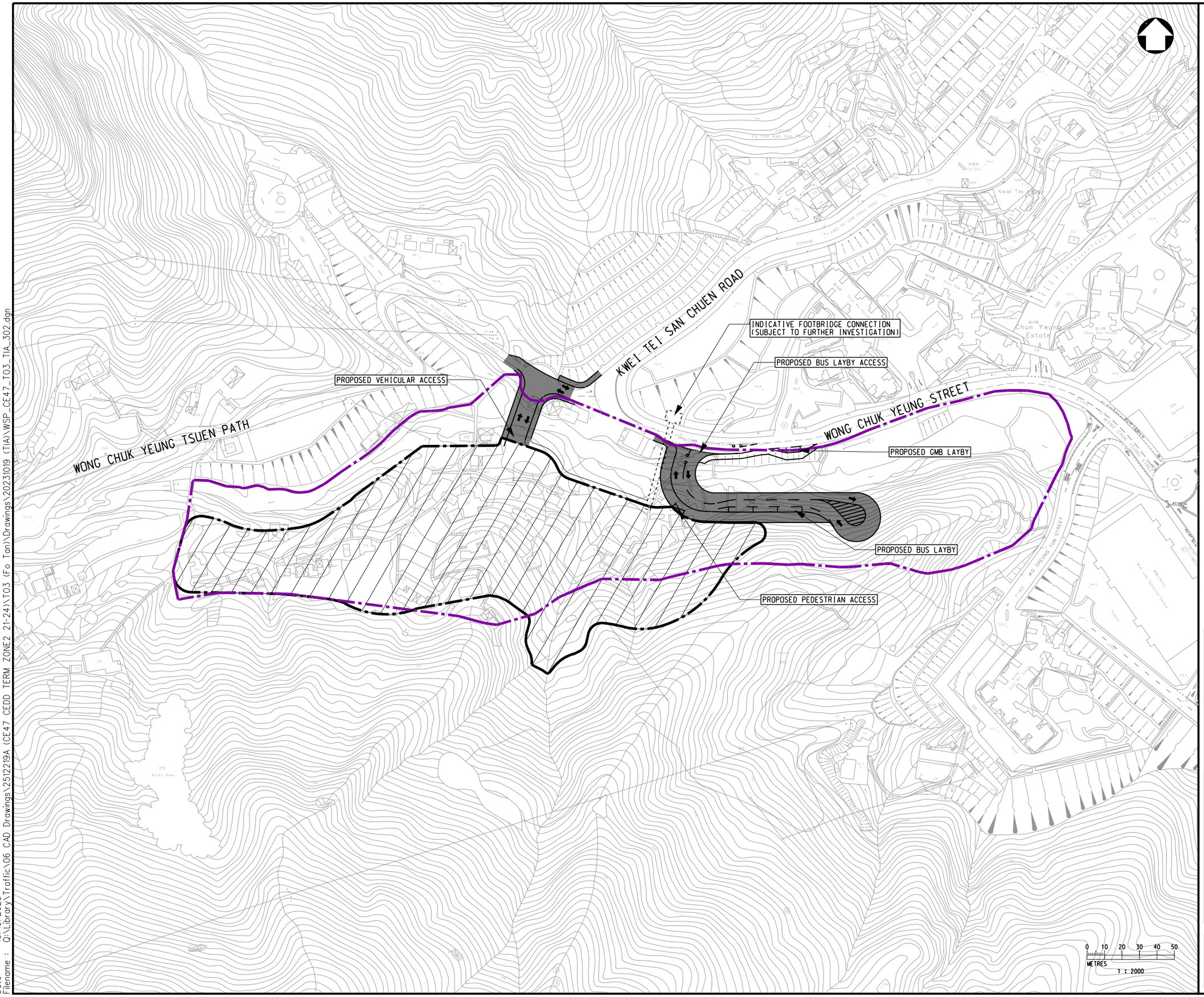
Drawn	Date	Checked	Approved
WTL	JUL 2023	-	DC

Scale	Status
1 : 2000 (A3)	-

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土木工程處 專責事務(工程)部
SPECIAL DUTIES (WORKS) DIVISION
CIVIL ENGINEERING OFFICE

Date : $DATE$
Filename : $FILE$



LEGEND :

- PROPOSED PUBLIC HOUSING SITE BOUNDARY
- STUDY BOUNDARY
- +60 PROPOSED SITE FORMATION LEVEL
- PROPOSED ROAD LAYOUT
- PROPOSED PUBLIC ROAD

Rev	Description	By	Date

Consultant

wsp

Project title

AGREEMENT NO.CE47/2020 (CE)

TERM CONSULTANCY FOR SITE FORMATION AND INFRASTRUCTURE WORKS FOR PROPOSED HOUSING DEVELOPMENTS IN ZONE 2 (2021 - 2024) - FEASIBILITY STUDY

Drawing title

PRELIMINARY ACCESS ARRANGMENT FOR PROPOSED DEVELOPMENT

Drawing no.	Rev.
CE47/T03/TIA/302	B

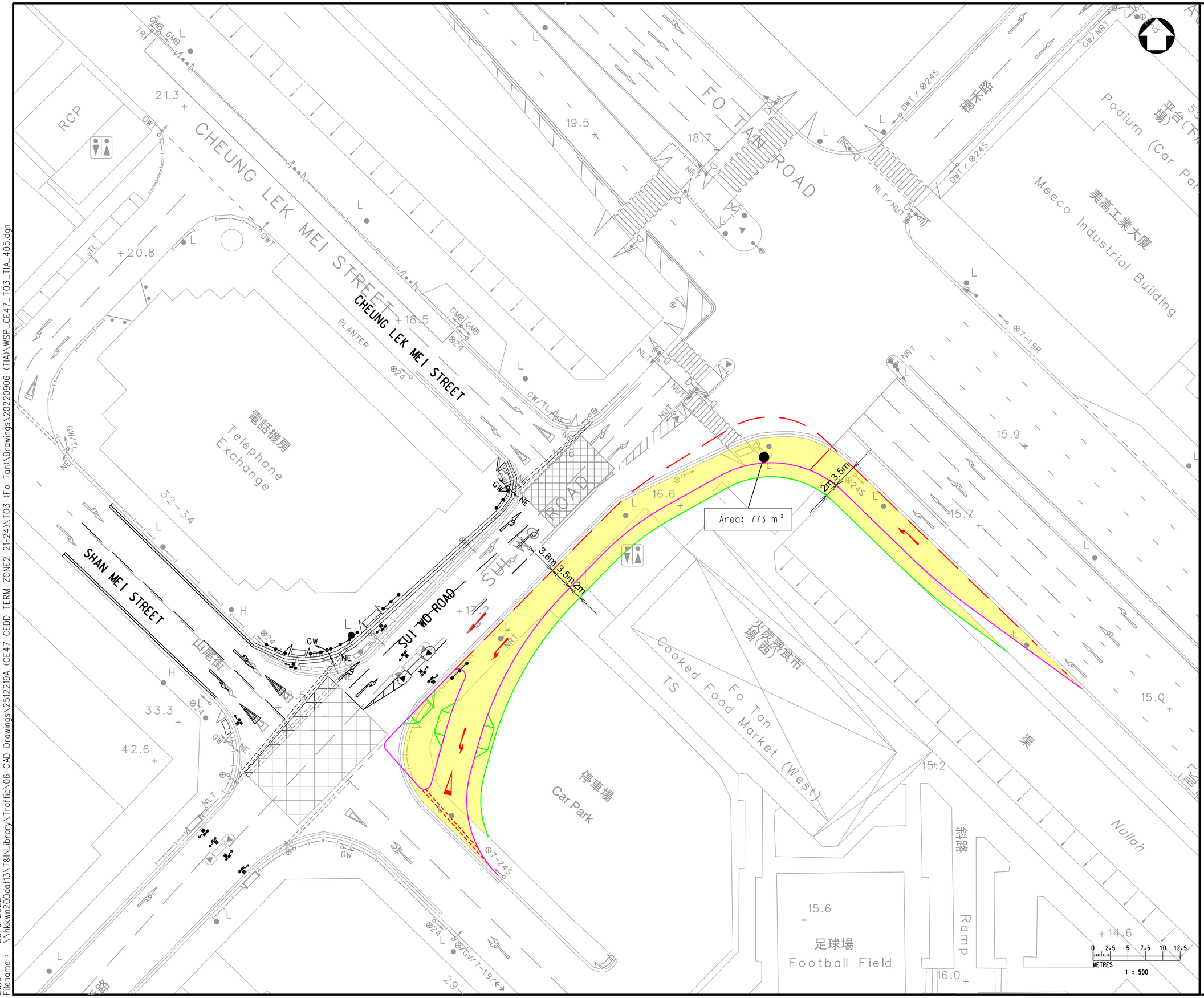
Drawn	Date	Checked	Approved
WTL	JUL 2023	-	DC

Scale	Status
1 : 2000 (A3)	-

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CIVIL ENGINEERING OFFICE

Date : 10/19/2023
Filename : Q:\Library\Traffic\06 CAD Drawings\2512219A (CE47 CEDD TERM ZONE2 21-24)\T03 (Fo Tan)\Drawings\20231019 (TIA)\WSP_CE47_T03_TIA_302.dgn



LEGEND :

- PLANNED IMPROVEMENT
- PROPOSED KERBLINE
- PROPOSED ROAD MARKING
- PROPOSED FOOTPATH
- PROPOSED RESUMED LAND AREA

Rev	Description	By	Date

Consultant

wsp

Project title

AGREEMENT NO.CE47/2020 (CE)

TERM CONSULTANCY FOR SITE FORMATION AND INFRASTRUCTURE WORKS FOR PROPOSED HOUSING DEVELOPMENTS IN ZONE 2 (2021 - 2024) - FEASIBILITY STUDY

Drawing title

PROPOSED LAYOUT OF JUNCTION OF FO TAN ROAD / SUI WO ROAD (J03) & SUI WO ROAD / SHAN MEI STREET (J16)

Drawing no.	Rev.
CE47/T03/TIA/405	-

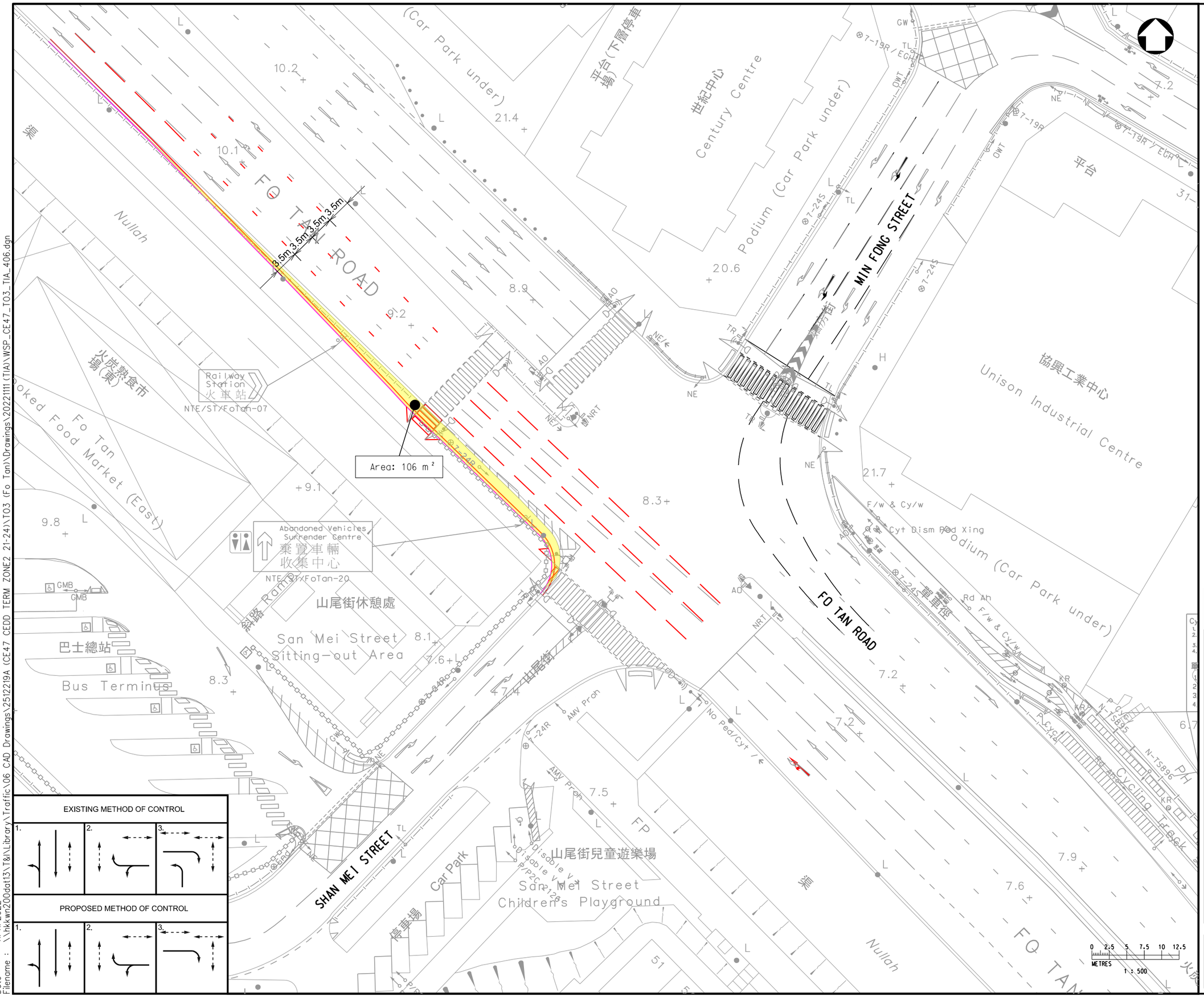
Drawn	Date	Checked	Approved
WTL	SEP 2022	-	DC

Scale	Status
1 : 500 (A3)	-

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CIVIL ENGINEERING OFFICE

Date : 20/9/2022
Filename : \\hkkwn200dat13\T&N_Library\Trafic\06 CAD Drawings\2512219A (CE47 CEDD TERM ZONE2 21-24)\T03 (Fo Tan)\Drawings\20220906 (TIA)\WSP_CE47_T03_TIA_405.dgn



Rev	Description	By	Date

Consultant

wsp

Project title

AGREEMENT NO.CE47/2020 (CE)

TERM CONSULTANCY FOR SITE FORMATION AND INFRASTRUCTURE WORKS FOR PROPOSED HOUSING DEVELOPMENTS IN ZONE 2 (2021 - 2024) - FEASIBILITY STUDY

Drawing title

PROPOSED LAYOUT OF JUNCTION OF FO TAN ROAD / MIN FONG STREET / SHAN MEI STREET (J05)

Drawing no.	Rev.
CE47/TO3/TIA/406	A

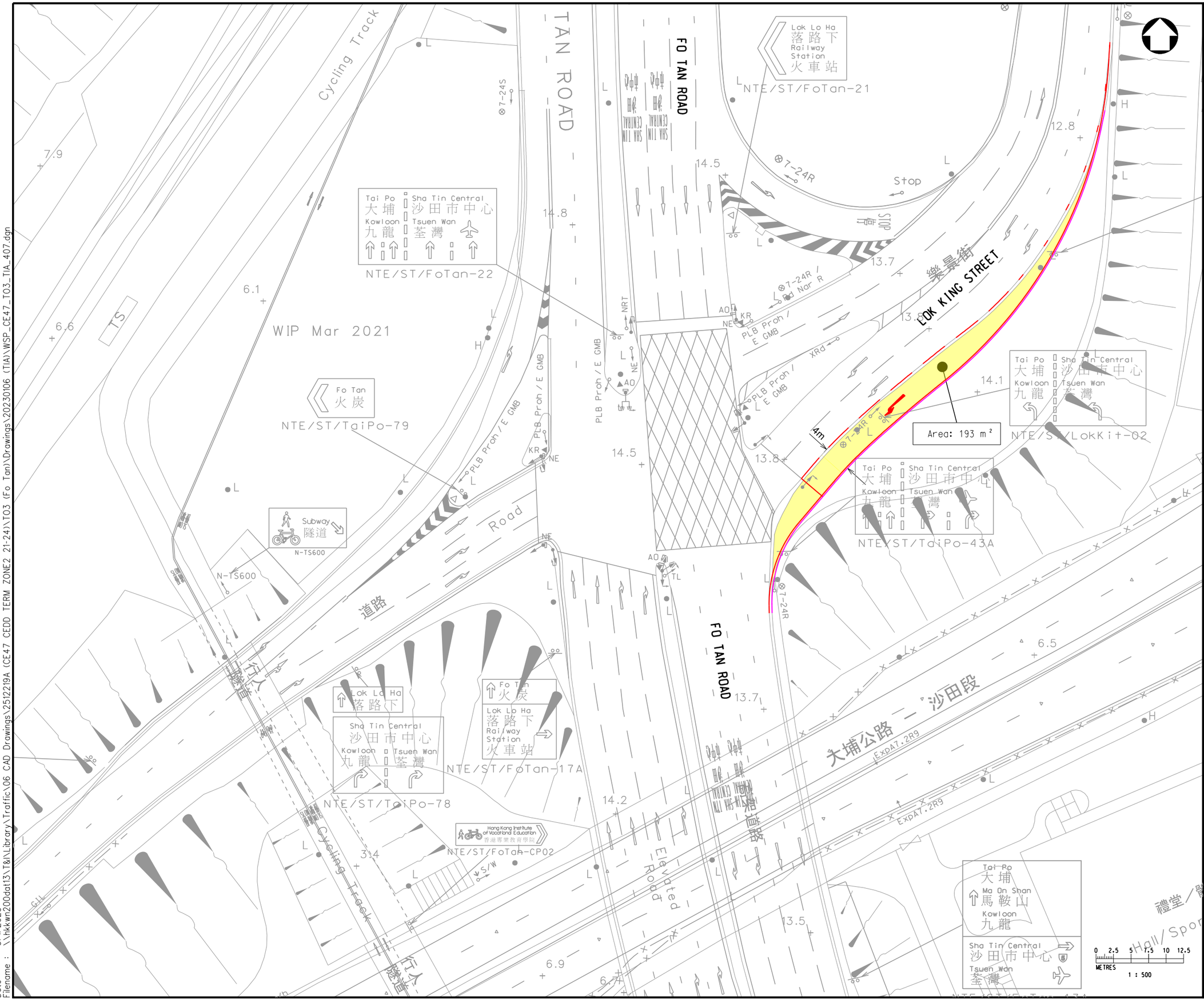
Drawn	Date	Checked	Approved
WTL	NOV 2022	-	DC

Scale	Status
1 : 500 (A3)	-

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Date : 11/11/2022
Filename : \\hkkwn200dat13\T&N_Library\Traffic\06 CAD Drawings\2512219A (CE47 CEDD TERM ZONE2 21-24)\TO3 (Fo Tan)\Drawings\20221111 (TIA)\WSP_CE47_TO3_TIA_406.dgn



LEGEND :

- PROPOSED KERBLINE
- PROPOSED ROAD MARKING
- PROPOSED RESUMED LAND AREA

Rev	Description	By	Date

Consultant

wsp

Project title

AGREEMENT NO.CE47/2020 (CE)
TERM CONSULTANCY FOR SITE FORMATION AND INFRASTRUCTURE WORKS FOR PROPOSED HOUSING DEVELOPMENTS IN ZONE 2 (2021 - 2024) - FEASIBILITY STUDY

Drawing title

PROPOSED LAYOUT OF JUNCTION OF FO TAN ROAD / LOK KING STREET (J06)

Drawing no.			Rev.
CE47/T03/TIA/407			A
Drawn	Date	Checked	Approved
WTL	NOV 2022	-	DC
Scale		Status	
1 : 500 (A3)		-	

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0 2.5 5 7.5 10 12.5 METRES
1 : 500

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Date : 5/1/2023
Filename : \\hkkwn200dat13\T&I\Library\Traffic\06 CAD Drawings\251219A (CE47 CEDD TERM ZONE2 21-24)\T03 (Fo Tan)\Drawings\20230106 (TIA)\WSP_CE47_T03_TIA_407.dgn

Area: 450 m²

Area: 146 m²

Area: 15 m²

Area: 7 m²

Area: 69 m²

Area: 48 m²

FO TAN ROAD

TAI CHUNG KIU ROAD

SHA TIN ROAD

Cycling Track

Subway

Ramp

Elevated Road

3.4m

3.3m

0.7m

9.5m

0 2.5 5 7.5 10 12.5
METRES
1 : 500

LEGEND :

- PROPOSED KERBLINE
- PROPOSED ROAD MARKING
- PROPOSED ROAD MARKING TO BE ERASED
- PROPOSED RESUMED LAND AREA

Rev	Description	By	Date

Consultant

wsp

Project title

AGREEMENT NO.CE47/2020 (CE)
TERM CONSULTANCY FOR SITE FORMATION AND INFRASTRUCTURE WORKS FOR PROPOSED HOUSING DEVELOPMENTS IN ZONE 2 (2021 - 2024) -
FEASIBILITY STUDY

Drawing title

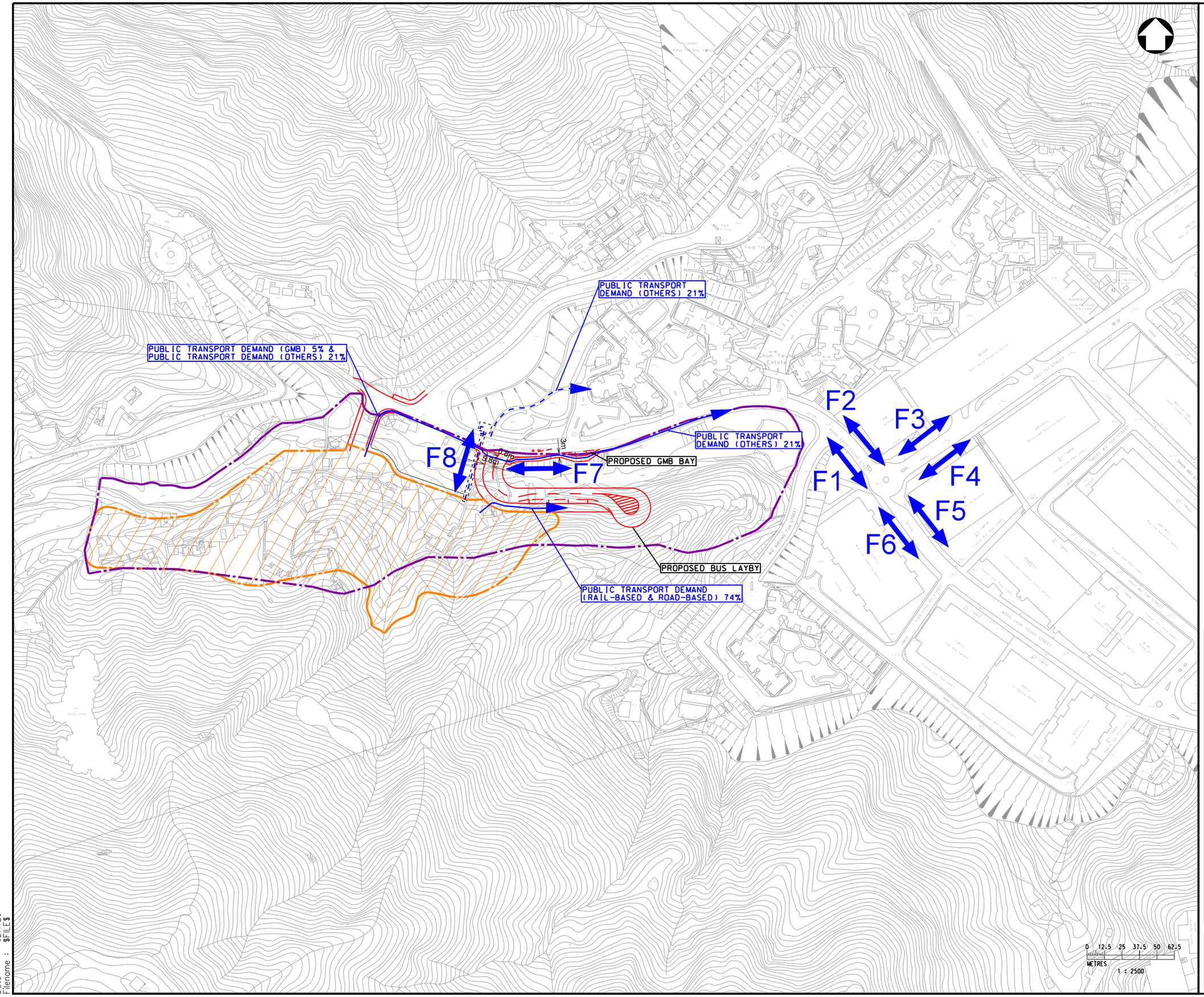
PROPOSED LAYOUT OF JUNCTION OF FO TAN ROAD / SHA TIN ROAD / TAI CHUNG KIU ROAD (J11)

Drawing no.			Rev.
CE47/TO3/TIA/408			A
Drawn: WTL	Date: NOV 2022	Checked: -	Approved: DC
Scale: 1 : 500 (A3)		Status: -	

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SPECIAL DUTIES (WORKS) DIVISION
CIVIL ENGINEERING OFFICE

Date : 19/1/2023
Filename : \\hkkwn200dat13\T&N\Library\Traffic\06 CAD Drawings\2512219A (CE47 CEDD TERM ZONE2 21-24)\TO3 (Fo Tan)\Drawings\20230106 (TIA)\WSP_CE47_TO3_TIA_408.dgn



LEGEND :

- PROPOSED PUBLIC HOUSING SITE BOUNDARY
- STUDY BOUNDARY
- L01 EXISTING FOOTPATH
- PROPOSED ROAD LAYOUT

Rev	Description	By	Date

Consultant

wsp

Project title

AGREEMENT NO.CE47/2020 (CE)

TERM CONSULTANCY FOR SITE FORMATION AND INFRASTRUCTURE WORKS FOR PROPOSED HOUSING DEVELOPMENTS IN ZONE 2 (2021 - 2024) - FEASIBILITY STUDY

Drawing title

IDENTIFIED PEDESTRAIN FOOTPATHS

Drawing no.	Rev.
CE47/T03/TIA/501	C

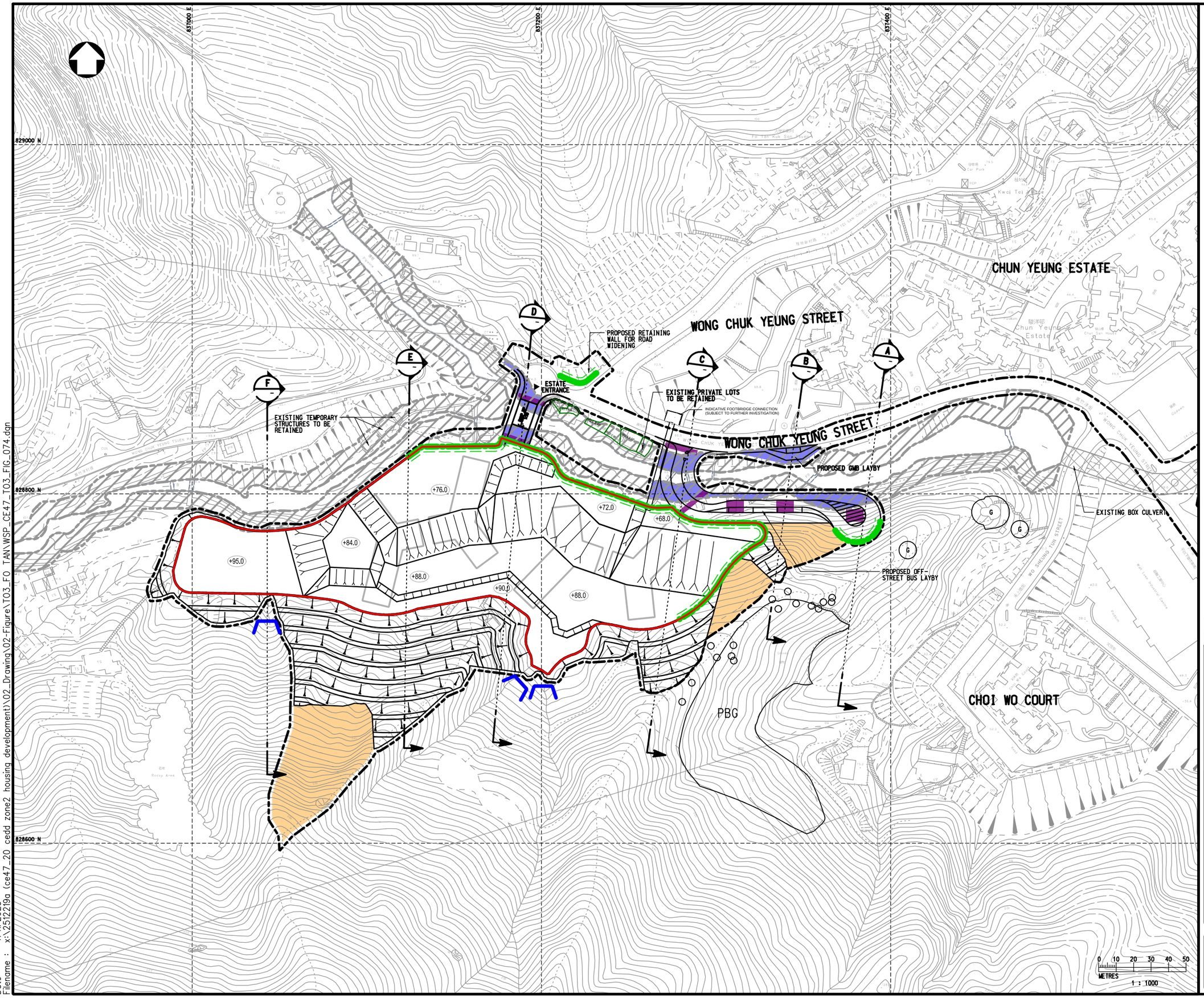
Drawn	Date	Checked	Approved
WTL	JUL 2023	-	DC

Scale	Status
1 : 2500 (A3)	-

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CIVIL ENGINEERING OFFICE

Date : $DATE$
Filename : $FILE$



NOTES :

1. ALL DIMENSIONS ARE IN MILLIMETRES UNLESS OTHERWISE STATED.
2. ALL LEVELS ARE IN METRES (M) AND RELATIVE TO HONG KONG PRINCIPAL DATUM (mPD).

LEGEND :

- PROPOSED PUBLIC HOUSING SITE BOUNDARY (NET SITE AREA =~ 21,980m²)
- WORKS LIMITS
- PRIVATE LOT
- PROPOSED MAX. 30°SLOPE
- G — EXISTING GRAVE WITH 5m PROTECTION ZONE
- +60 — PROPOSED SITE FORMATION LEVEL
- BUFFER ZONE FOR EXISTING STREAM
- PROPOSED 45° CUT SLOPE WITH SOIL NAILS
- PROPOSED L-SHAPE RETAINING WALL (RETAINING HEIGHT = MAX. 6m)
  - EDGE OF WALL BASE
- MITIGATION FOR NTHS: CHECK DAM (INDICATIVE ONLY)
- MITIGATION FOR NTHS: ADDITIONAL SOIL NAILS (INDICATIVE ONLY)
- PRPOSED BRIDGE ABUTMENT/ PIER (INDICATIVE ONLY)
- PROPOSED WORKS WITHIN THE BUFFER ZONE FOR EXISTION STREAM

NOTE:
FOR REFERENCE ONLY, SUBJECT TO CHANGE AT DETAILED DESIGN STAGE.

Rev	Description	By	Date
–	FIRST ISSUE	HL	AUG 22

Consultant: wsp

Project title:
AGREEMENT NO.CE47/2020 (CE)
TERM CONSULTANCY FOR SITE FORMATION AND INFRASTRUCTURE WORKS FOR PROPOSED HOUSING DEVELOPMENTS IN ZONE 2 (2021 – 2024) – FEASIBILITY STUDY

Drawing title:
TASK ORDER NO.3
WEST OF EX-FO TAN COTTAGE AREA – SITE FORMATION PLAN

Drawing no.	Rev.
CE47/T03/FIG/074	–

Drawn	Date	Checked	Approved
CAD	SEP 22	VS	YWY

Scale	Status
1:1000 (A1)	–

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Date : 4/11/2023
Filename : x:\25122l9a (ce47_20 cedd zone2 housing development)\02_Drawing\02-Figure\T03_FO TAN\WSP_CE47_T03_FIG_074.dgn

836500 E
837000 E
837500 E
829000 N
828500 N
WONG CHUK YEUNG TSUEN PATH
WONG CHUK YEUNG STREET
CHUN YEUNG ESTATE
CHOI WO COURT
GARDEN VILLA
C1
C2
C3
C4
C5
C6

NOTES :

1. ALL DIMENSIONS ARE IN MILLIMETRES UNLESS OTHERWISE STATED.
2. ALL LEVELS ARE IN METRES (M) AND RELATIVE TO HONG KONG PRINCIPAL DATUM (mPD).

LEGEND :

- PROPOSED PUBLIC HOUSING SITE BOUNDARY
- CATCHMENT I.D.
- FLOW DIRECTION

Rev	Description	By	Date
–	FIRST ISSUE	HL	OCT 21

Consultant

wsp

Project title

AGREEMENT NO.CE47/2020 (CE)
TERM CONSULTANCY FOR SITE FORMATION AND INFRASTRUCTURE WORKS FOR PROPOSED HOUSING DEVELOPMENTS IN ZONE 2 (2021 – 2024) – FEASIBILITY STUDY

Drawing title

TASK ORDER NO.3
WEST OF EX-FO TAN COTTAGE AREA
EXISTING CATCHMENT PLAN

Drawing no.	Rev.
CE47/TO3/DR/1101	–

Drawn	Date	Checked	Approved
CAD	APR 2021	VS	YWY

Scale: 1:2000 (A1)
Status: –

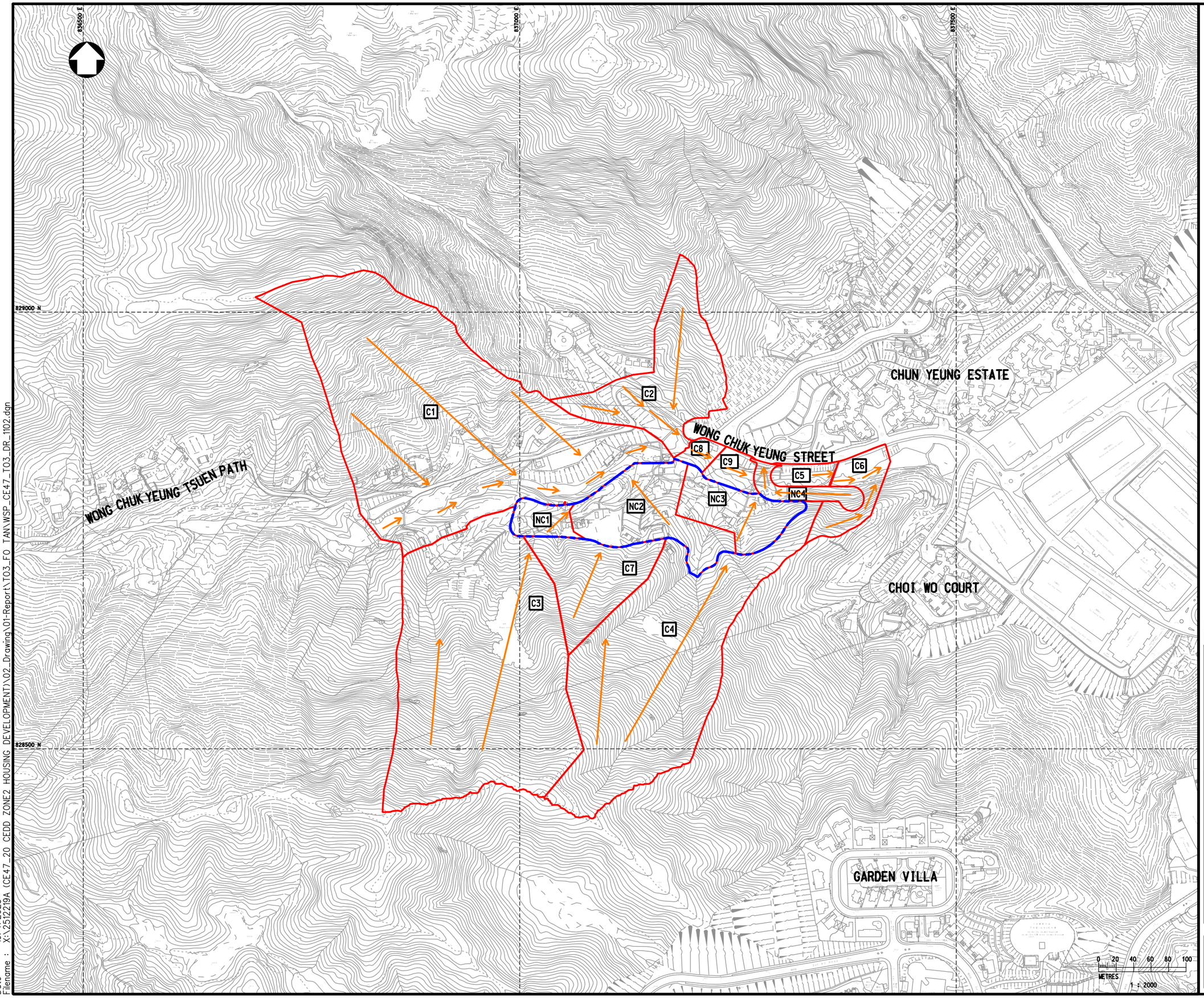
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CHECK PRINT
4/4/2023
Checked By:
Checked Date:

0 20 40 60 80 100
METRES
1 : 2000

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土木工程處
CIVIL ENGINEERING OFFICE

Date : 4/4/2023
Filename : X:\2512219A (CE47_20 CEDD ZONE2 HOUSING DEVELOPMENT)\02_Drawing\01-Report\TO3_FO TAN\WSP_CE47_TO3_DR_1101.dgn



NOTES :

1. ALL DIMENSIONS ARE IN MILLIMETRES UNLESS OTHERWISE STATED.
2. ALL LEVELS ARE IN METRES (M) AND RELATIVE TO HONG KONG PRINCIPAL DATUM (mPD).

LEGEND :

- PROPOSED PUBLIC HOUSING SITE BOUNDARY
- C1 CATCHMENT I.D.
- FLOW DIRECTION

Rev	Description	By	Date
–	FIRST ISSUE	HL	OCT 21

Consultant

wsp

Project title

AGREEMENT NO.CE47/2020 (CE)
TERM CONSULTANCY FOR SITE FORMATION AND INFRASTRUCTURE WORKS FOR PROPOSED HOUSING DEVELOPMENTS IN ZONE 2 (2021 – 2024) – FEASIBILITY STUDY

Drawing title

TASK ORDER NO.3
WEST OF EX-FO TAN COTTAGE AREA
PLANNED CATCHMENT PLAN

Drawing no.	Rev.
CE47/T03/DR/1102	–

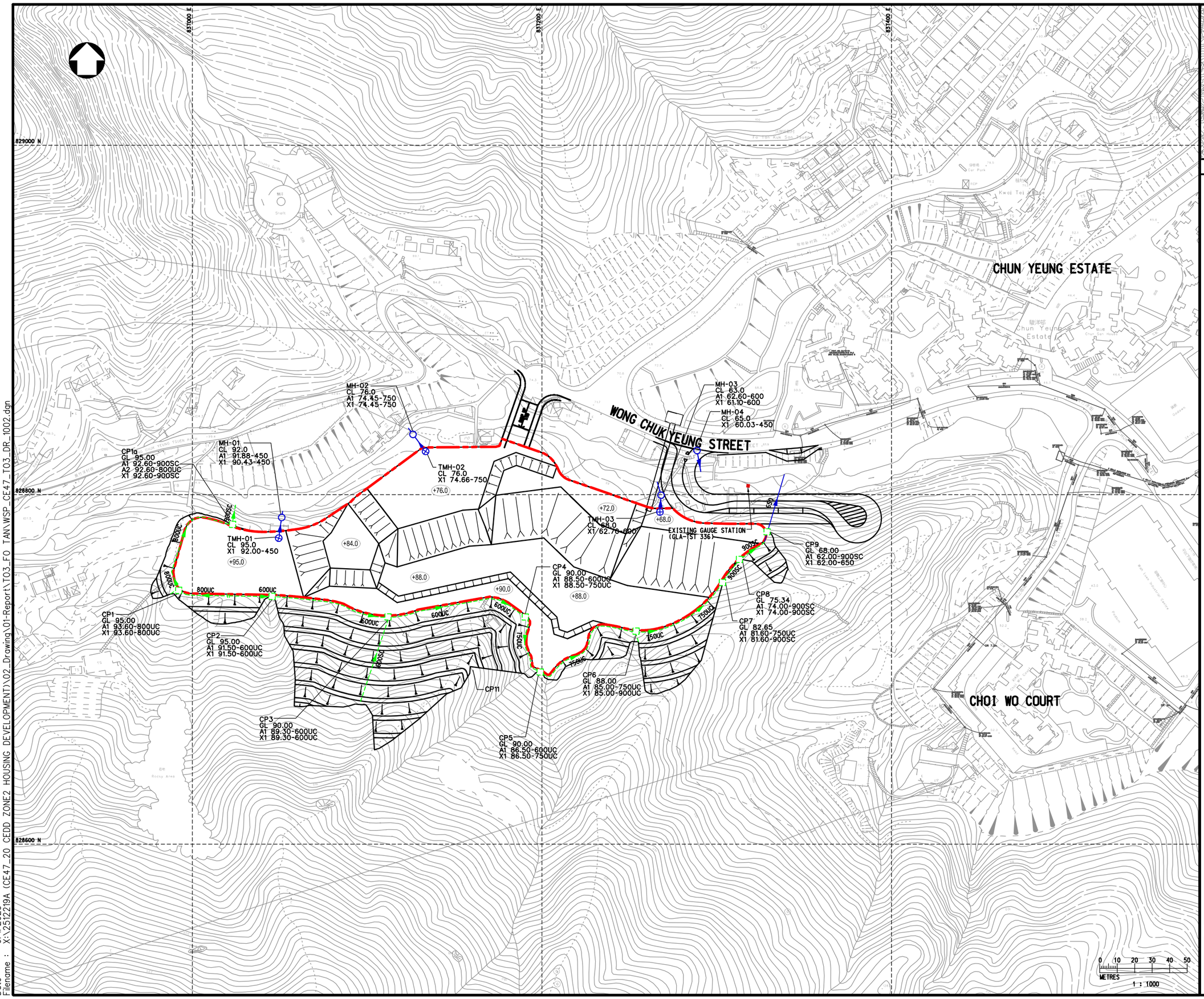
Drawn	Date	Checked	Approved
CAD	APR 2021	VS	YWY

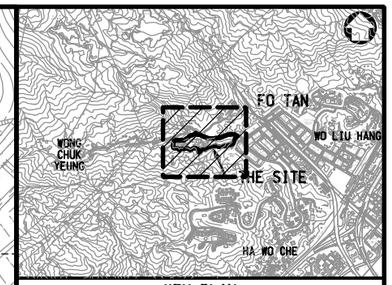
Scale: 1:2000 (A1)
Status: –

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Date : 19/4/2023
Filename : X:\2512219A (CE47_20 CEDD ZONE2 HOUSING DEVELOPMENT)\02_Drawing\01-Report\T03_FO TAN\WSP_CE47_T03_DR_1102.dgn





KEY PLAN

NOTES :

1. ALL DIMENSIONS ARE IN MILLIMETRES UNLESS OTHERWISE STATED.
2. ALL LEVELS ARE IN METRES (M) AND RELATIVE TO HONG KONG PRINCIPAL DATUM (mPD).
3. THE INCOMING PIPES ARE MARKED A1,A2,A3,..... COUNTING CLOCKWISE FROM THE FIRST OUTGOING PIPE X1. OUTGOING PIPES ARE MARKED X1,X2,X3....COUNTING CLOCKWISE FROM NORTH.

e.g. MANHOLE NUMBER; COVER LEVEL OR GROUND LEVEL; 225mm DIA. INCOMING PIPE INVERT LEVEL; 375mm DIA. INCOMING PIPE INVERT LEVEL; 525mm DIA. OUTGOING PIPE INVERT LEVEL

LEGEND :

- PROPOSED PUBLIC HOUSING SITE BOUNDARY
- EXISTING STORM WATER MANHOLE
- EXISTING STORM PIPE
- PROPOSED STORM WATER MANHOLE
- PROPOSED TERMINAL STORM WATER MANHOLE
- PROPOSED STORM PIPE
- PROPOSED CATCHPIT
- PROPOSED U-CHANNEL
- (+60) PROPOSED SITE FORMATION LEVEL

Rev	Description	By	Date
–	FIRST ISSUE	HL	OCT 21

Consultant

wsp

Project title

AGREEMENT NO.CE47/2020 (CE)

TERM CONSULTANCY FOR SITE FORMATION AND INFRASTRUCTURE WORKS FOR PROPOSED HOUSING DEVELOPMENTS IN ZONE 2 (2021 – 2024) – FEASIBILITY STUDY

Drawing title

TASK ORDER NO.3
WEST OF EX-FO TAN COTTAGE AREA
PROPOSED DRAINAGE LAYOUT PLAN

Drawing no.	Rev.
CE47/T03/DR/1002	–

Drawn	Date	Checked	Approved
CAD	APR 2021	VS	YWY

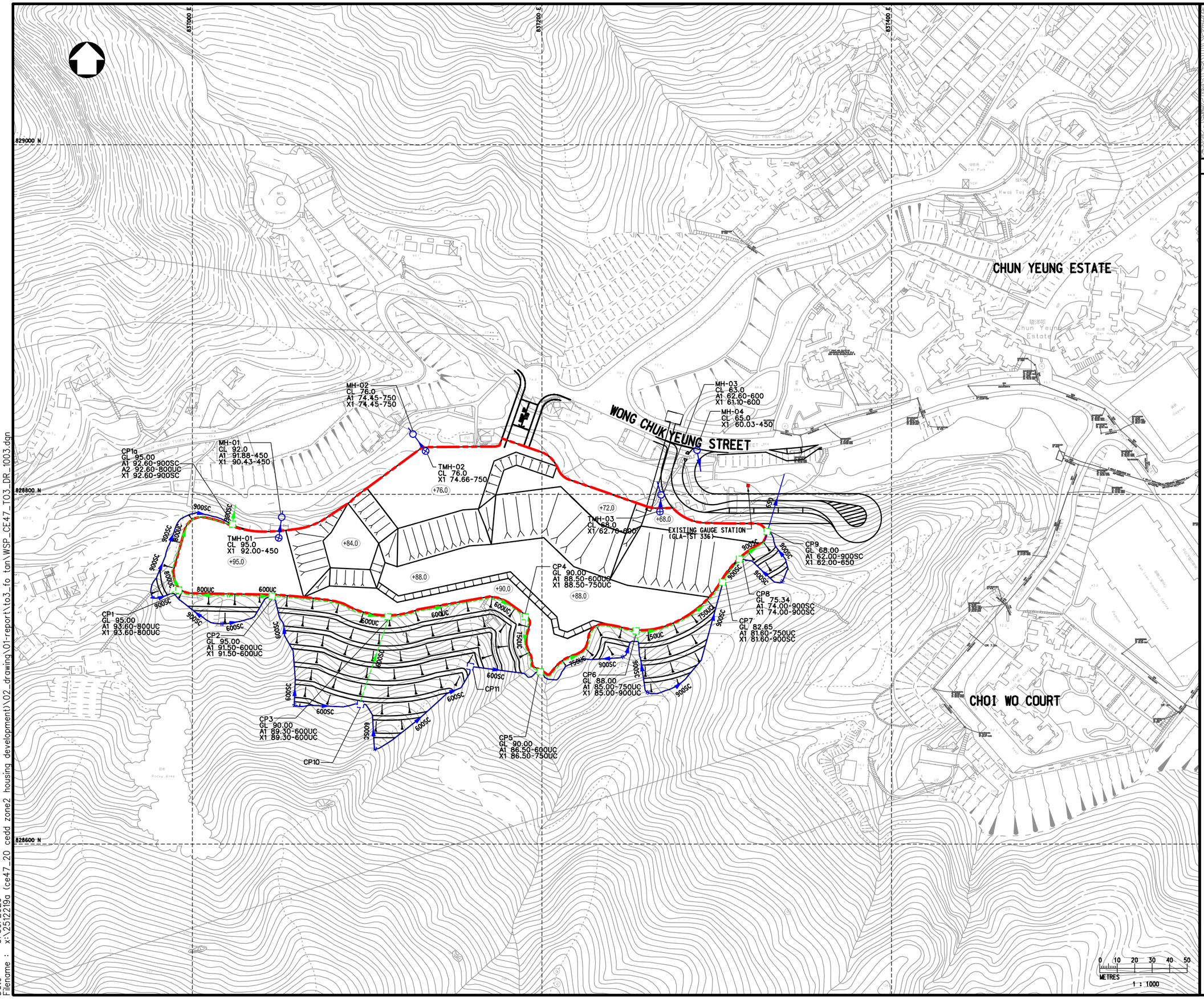
Scale: 1:1000 (A1)

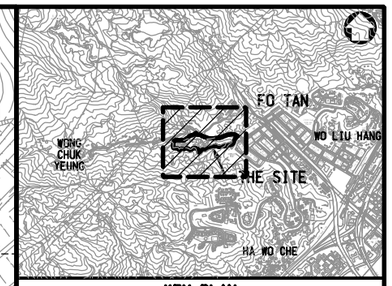
Status: –

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Date : 6/1/2023
Filename : X:\2512219A (CE47_20 CEDD ZONE2 HOUSING DEVELOPMENT)\02_Drawing\01-Report\T03_FO TAN\WSP_CE47_T03_DR_1002.dgn





KEY PLAN

NOTES :

1. ALL DIMENSIONS ARE IN MILLIMETRES UNLESS OTHERWISE STATED.
2. ALL LEVELS ARE IN METRES (M) AND RELATIVE TO HONG KONG PRINCIPAL DATUM (mPD).
3. THE INCOMING PIPES ARE MARKED A1,A2,A3,..... COUNTING CLOCKWISE FROM THE FIRST OUTGOING PIPE X1. OUTGOING PIPES ARE MARKED X1,X2,X3....COUNTING CLOCKWISE FROM NORTH.

e.g. MANHOLE NUMBER; COVER LEVEL OR GROUND LEVEL; 225mm DIA. INCOMING PIPE INVERT LEVEL; 375mm DIA. INCOMING PIPE INVERT LEVEL; 525mm DIA. OUTGOING PIPE INVERT LEVEL

LEGEND :

- PROPOSED PUBLIC HOUSING SITE BOUNDARY
- EXISTING STORM WATER MANHOLE
- EXISTING STORM PIPE
- PROPOSED STORM WATER MANHOLE
- PROPOSED TERMINAL STORM WATER MANHOLE
- PROPOSED STORM PIPE
- PROPOSED CATCHPIT
- PROPOSED U-CHANNEL
- PROPOSED CUT-OFF CATCHPIT (OUTSIDE PUBLIC HOUSING SITE BOUNDARY)
- PROPOSED CUT-OFF DRAIN (OUTSIDE PUBLIC HOUSING SITE BOUNDARY)
- (+60) PROPOSED SITE FORMATION LEVEL

Rev	Description	By	Date
–	FIRST ISSUE	HL	OCT 21

Consultant

wsp

Project title

AGREEMENT NO.CE47/2020 (CE)

TERM CONSULTANCY FOR SITE FORMATION AND INFRASTRUCTURE WORKS FOR PROPOSED HOUSING DEVELOPMENTS IN ZONE 2 (2021 – 2024) – FEASIBILITY STUDY

Drawing title

TASK ORDER NO.3
WEST OF EX-FO TAN COTTAGE AREA
PROPOSED DRAINAGE LAYOUT PLAN(ALTERNATIVE)

Drawing no.	Rev.
CE47/T03/DR/1003	–

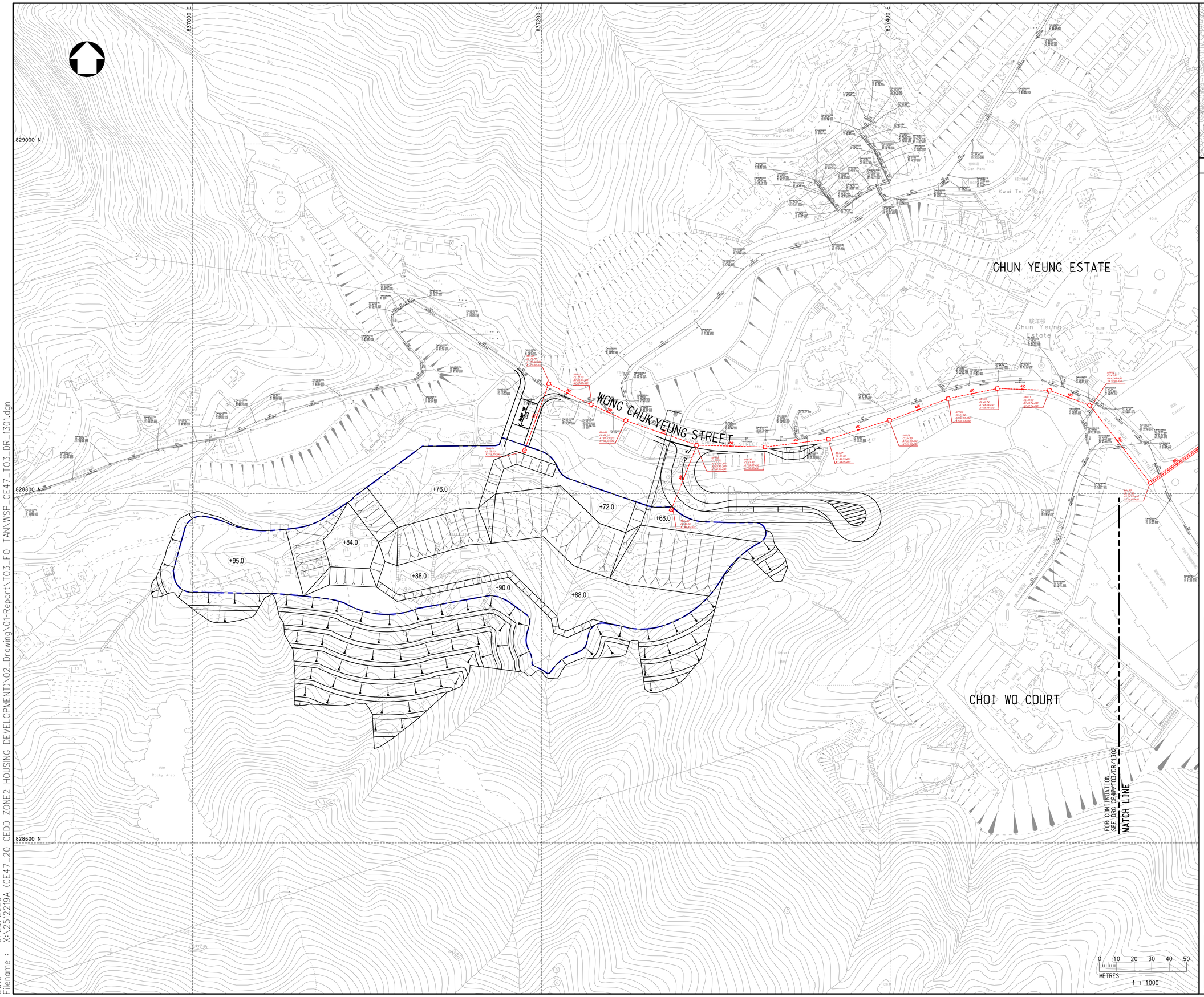
Drawn	Date	Checked	Approved
CAD	APR 2021	VS	YWY

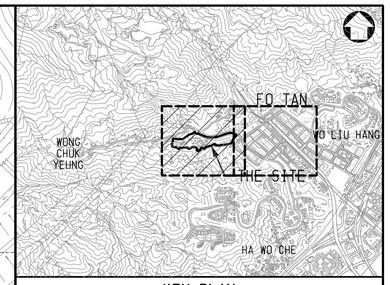
Scale	Status
1:1000 (A1)	–

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KEY PLAN

NOTES :

1. ALL DIMENSIONS ARE IN MILLIMETRES UNLESS OTHERWISE STATED.
2. ALL LEVELS ARE IN METRES (M) AND RELATIVE TO HONG KONG PRINCIPAL DATUM (mPD).

LEGEND :

- PROPOSED PUBLIC HOUSING SITE BOUNDARY
- 800 PIPE SIZE — EXISTING SEWERAGE MANHOLES / EXISTING SEWERAGE PIPE
- 800 PIPE SIZE — PROPOSED SEWERAGE MANHOLES / PROPOSED SEWERAGE PIPE
- PROPOSED SEWERAGE TERMINAL MANHOLE

Rev	Description	By	Date
–	FIRST ISSUE	HL	SEP 21

Consultant

wsp

Project title

AGREEMENT NO.CE47/2020 (CE)

TERM CONSULTANCY FOR SITE FORMATION AND INFRASTRUCTURE WORKS FOR PROPOSED HOUSING DEVELOPMENTS IN ZONE 2 (2021 – 2024) – FEASIBILITY STUDY

Drawing title

TASK ORDER NO.3 WEST OF EX-FO TAN COTTAGE AREA PROPOSED SEWERAGE LAYOUT PLAN

Drawing no.	Rev.
CE47/TO3/DR/1301	–

Drawn	Date	Checked	Approved
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Scale	Status
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837000E

CHUN YEUNG ESTATE

CHOI YEUNG ESTATE

FO TAN ROAD

WO LIU HANG

SUI WO ROAD

VILLE DE CASCADE

MTR (EAST RAIL LINE)

TAI PO ROAD – SHA TIN

TAI CHUNG KIU ROAD

SIU LEK YUEN ROAD

SHA TIN

LRP/006

0 40 80 120 160 200
METRES
1 : 4000

LEGEND :

- PROPOSED PUBLIC HOUSING SITE BOUNDARY
- EXTEND OF WATER MAINS WORKS
- DN400 EXISTING SALT WATER MAIN
- DN200 PROPOSED SALT WATER MAIN
- PROPOSED FO TAN FW & SW EXTENSION
- PROPOSED HA WO CHE SW TANK EXTENSION

Rev	Description	By	Date

Consultant

wsp

Project title

AGREEMENT NO.CE47/2020 (CE)
TERM CONSULTANCY FOR SITE FORMATION AND INFRASTRUCTURE WORKS FOR PROPOSED HOUSING DEVELOPMENTS IN ZONE 2 (2021 – 2024) – FEASIBILITY STUDY

Drawing title

TASK ORDER NO. 3
WEST OF EX-FO TAN COTTAGE AREA
PROPOSED SALT WATER MAIN
MASTER LAYOUT PLAN

Drawing no.	Rev.
CE47/T03/WS/1010	–

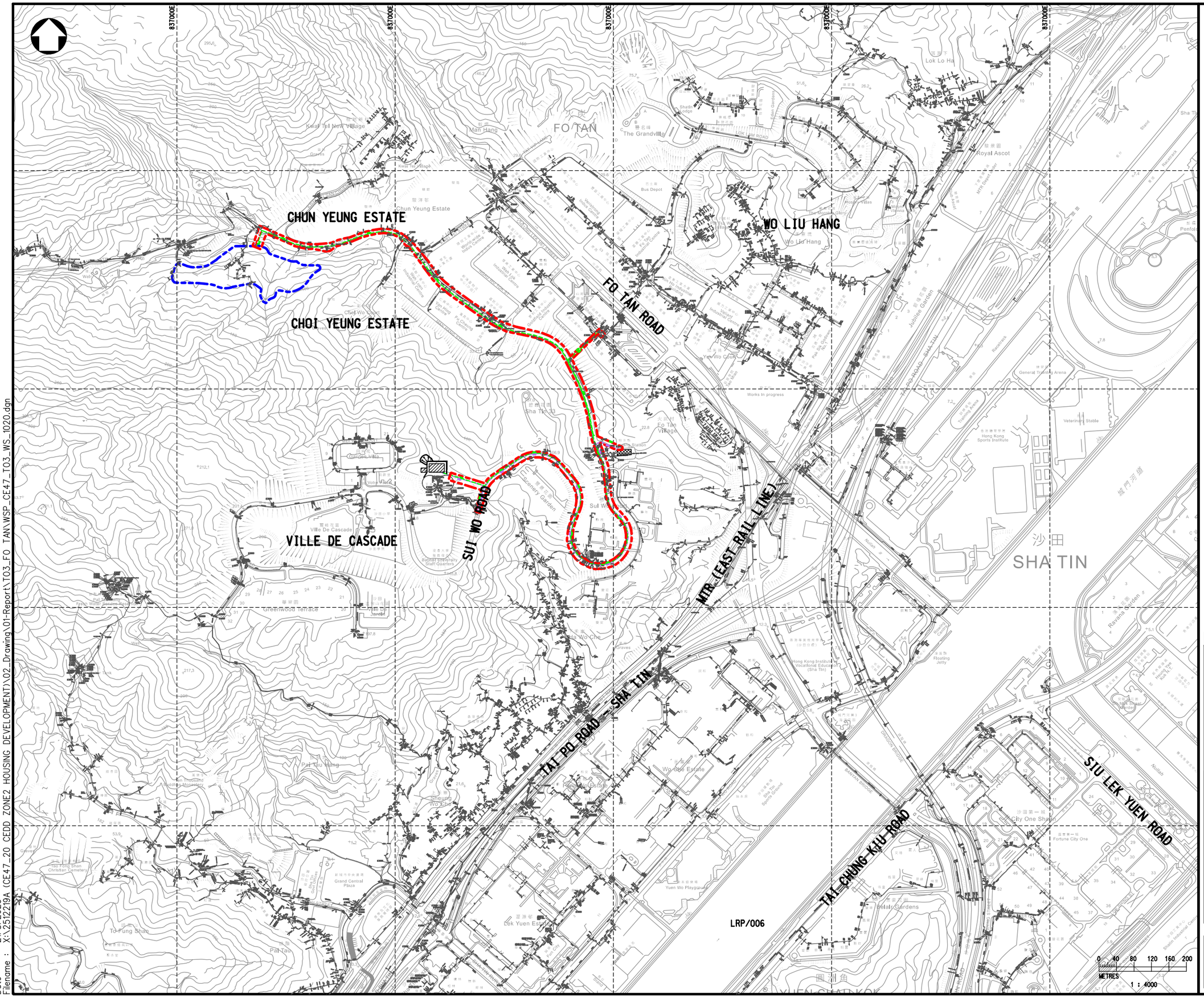
Drawn	Date	Checked	Approved
CAD	APR 2021	VS	YWY

Scale: 1:4000 (A1)
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Filename : X:\2512219A (CE47_20 CEDD ZONE2 HOUSING DEVELOPMENT)\02_Drawing\01-Report\T03_FO TAN\WSP_CE47_T03_WS_1010.dgn



LEGEND :

- PROPOSED PUBLIC HOUSING SITE BOUNDARY
- EXTEND OF WATER MAINS WORKS
- DN400 EXISTING FRESH WATER MAIN
- DN300 PROPOSED FRESH WATER MAIN
- DN200 PROPOSED FIRE SERVICE WATER MAIN
- DN300 PROPOSED PUMPING MAIN
- PROPOSED FO TAN FW & SW EXTENSION
- PROPOSED HA WO CHE SW TANK EXTENSION

Rev	Description	By	Date

Consultant

wsp

Project title

AGREEMENT NO.CE47/2020 (CE)
TERM CONSULTANCY FOR SITE FORMATION AND INFRASTRUCTURE WORKS FOR PROPOSED HOUSING DEVELOPMENTS IN ZONE 2 (2021 – 2024) – FEASIBILITY STUDY

Drawing title

TASK ORDER NO. 3
WEST OF EX-FO TAN COTTAGE AREA
PROPOSED FRESH WATER MAIN
MASTER LAYOUT PLAN

Drawing no.			Rev.
CE47/T03/WS/1020			–
Drawn: CAD	Date: APR 2021	Checked: VS	Approved: YWY
Scale: 1:4000 (A1)		Status: –	

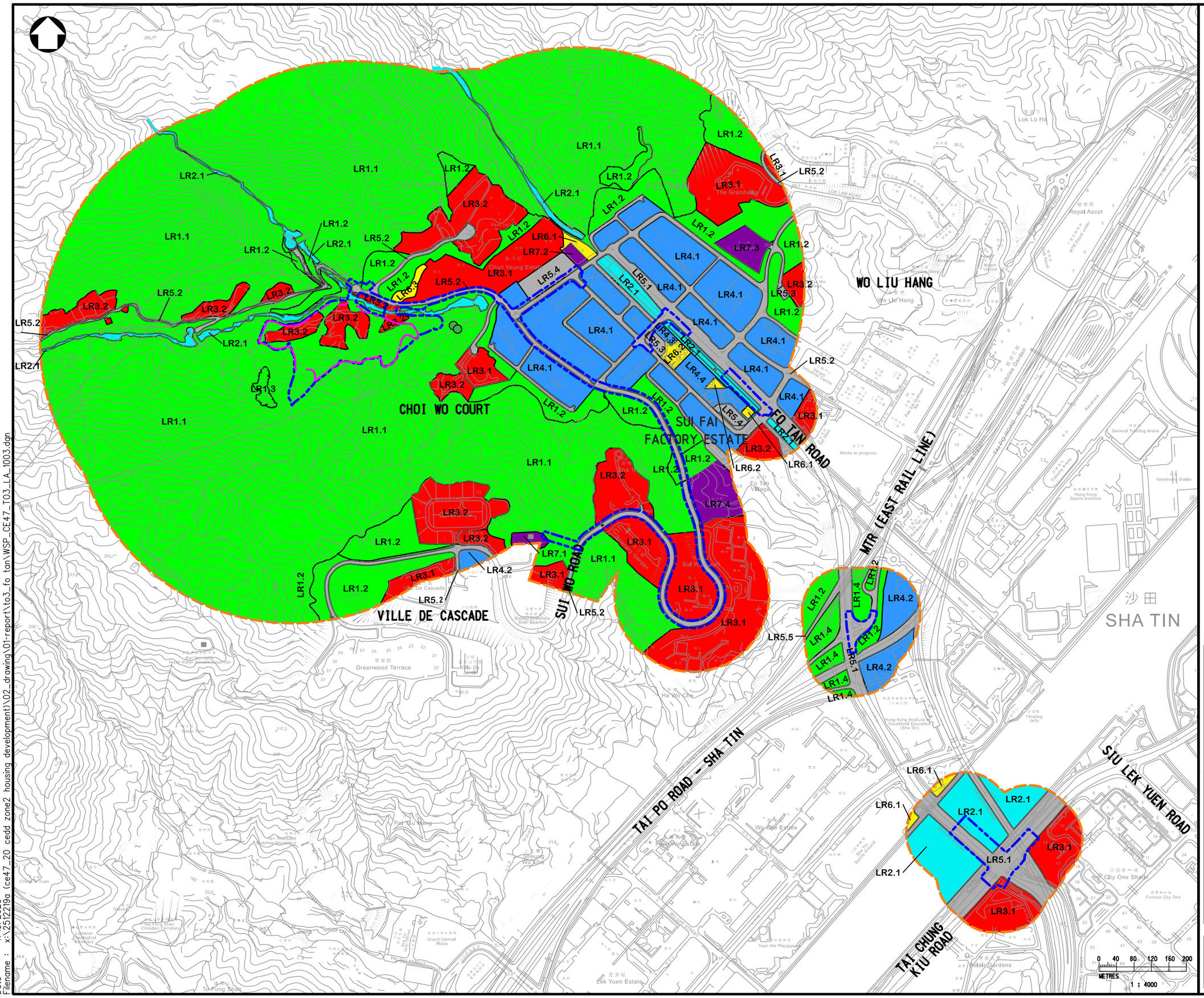
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APPENDIX B

FIGURE



LEGEND :

- WORKS LIMIT
- 500m/100m ASSESSMENT BOUNDARY
- REZONING BOUNDARY

LR1 LANDSCAPE VEGETATION

- LR1.1 NATURAL WOODLAND
- LR1.2 VEGETATED SLOPE
- LR1.3 ROCKY AREA
- LR1.4 ROADSIDE PLANTING

LR2 WATER BODIES

- LR2.1 WATERCOURSE

LR3 RESIDENTIAL

- LR3.1 HIGH-RISE RESIDENTIAL
- LR3.2 LOW-RISE RESIDENTIAL

LR4 INDUSTRIAL/COMMERCIAL / INSTITUTIONAL DEVELOPMENT

- LR4.1 INDUSTRIAL BUILDINGS
- LR4.2 SCHOOL
- LR4.3 FOOD MARKET
- LR4.4 COMMERCIAL BUILDING

LR5 TRANSPORTATION & ASSOCIATED FACILITIES

- LR5.1 MAJOR ROAD
- LR5.2 LOCAL TRANSPORTATION CORRIDOR
- LR5.3 CAR PARK
- LR5.4 PUBLIC TRANSPORTATION INTERCHANGE
- LR5.5 EAST RAIL LINE

LR6 PUBLIC OPEN SPACE / RECREATIONAL AREA

- LR6.1 GARDEN
- LR6.2 PLAYGROUND
- LR6.3 SITTING-OUT AREA

LR7 OTHERS

- LR7.1 HA WO CHE SERVICE RESERVOIR
- LR7.2 KWEI TEI STREET SUBSTATION
- LR7.3 CONSTRUCTION SITE
- LR7.4 FO TAN FRESH WATER AND SALT WATER PUMPING STATION
- *Aquilaria sinensis* (NOT AFFECTED)

Rev	Description	By	Date

Consultant

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Project title

AGREEMENT NO.CE47/2020 (CE)
TERM CONSULTANCY FOR SITE FORMATION AND INFRASTRUCTURE WORKS FOR PROPOSED HOUSING DEVELOPMENTS IN ZONE 2 (2021 - 2024) - FEASIBILITY STUDY

Drawing title

TASK ORDER NO. 3
WEST OF EX-FO TAN COTTAGE AREA
- LANDSCAPE RESOURCE PLAN

Drawing no.		Rev.
FIGURE 4.1		-
Drawn: CAD	Date: APR 2021	Checked: VS	Approved: CL
Scale: 1:4000 (A1)		Status: -	

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LEGEND :

- WORKS LIMIT
- 500m/100m ASSESSMENT BOUNDARY
- REZONING BOUNDARY
- LCA1 UPLAND & HILLSIDE LANDSCAPE
- LCA2 URBAN PERIPHERAL VILLAGE LANDSCAPE
- LCA3 RESIDENTIAL URBAN LANDSCAPE
- LCA4 INDUSTRIAL URBAN LANSCAPE
- LCA5 TRANSPORTATION CORRIDOR LANDSCAPE
- LCA6 RIVER LANDSCAPE

CHUN YEUNG ESTATE
FO TAN
WO LIU HANG
FO TAN ROAD
CHOI WO COURT
SUI FAI FACTORY ESTATE
VILLE DE CASCADE
SUI WO ROAD
MTR (EAST RAIL LINE)
SHA TIN
TAI PO ROAD - SHA TIN
SIU LEK YUEN ROAD
TAI CHUNG KIU ROAD

0 40 80 120 160 200
METRES
1 : 4000

Rev	Description	By	Date

Consultant

wsp

Project title

AGREEMENT NO.CE47/2020 (CE)
TERM CONSULTANCY FOR SITE FORMATION AND INFRASTRUCTURE WORKS FOR PROPOSED HOUSING DEVELOPMENTS IN ZONE 2 (2021 - 2024) - FEASIBILITY STUDY

Drawing title

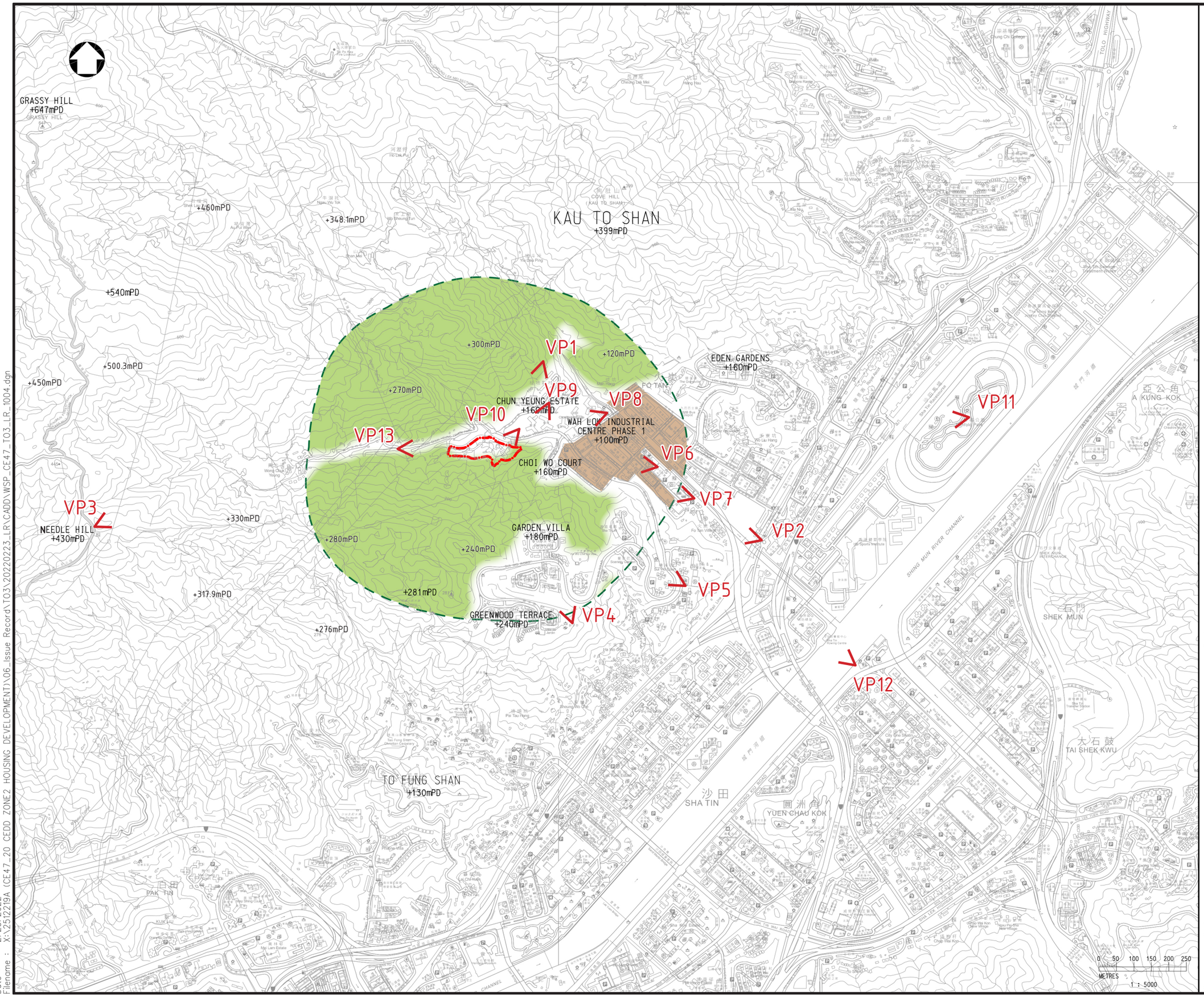
TASK ORDER NO. 3
WEST OF EX-FO TAN COTTAGE AREA
- LANDSCAPE CHARACTER AREA PLAN

Drawing no.		Rev.
FIGURE 4.2		-
Drawn: CAD	Date: APR 2021	Checked: VS / Approved: CL
Scale: 1:4000 (A1)		Status: -

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Filename : x:\25122119a (ce47_20 cedd zone2 housing development)\02_drawing\01-report\to3_fo tan\WSP_CE47_TO3_LA_1004.dgn



LEGEND :

- PUBLIC HOUSING SITE BOUNDARY
- VISUAL ENVELOPE
- < VP1 TOP OF SLOPE FROM KWAI TEI NEW VILLAGE
- < VP2 FO TAN MTR STATION NEAR EXIT A
- < VP3 SHING MUN FOREST TRACK - NEEDLE HILL SECTION
- < VP4 LION'S PAVILION
- < VP5 SUI WO COURT BUS TERMINAL
- < VP6 SHAN MEI STREET PLAYGROUND
- < VP7 SHAN MEI STREET SITTING-OUT AREA
- < VP8 KWEI TEI STREET GARDEN
- < VP9 PUBLIC CAR PARK NEAR FO TAN KUK SAN TSUEN
- < VP10 WONG CHUK YEUNG STREET SITTING-OUT AREA
- < VP11 PENFOLD PARK
- < VP12 SHING MUN RIVER NO.2 PROMENADE REST GARDEN
- < VP13 TOP OF SLOPE FROM WONG CHUK YUEUNG TSUEN PATH
- MAIN TRANSPORTATION CORRIDOR AND INDUSTRIAL BUILDINGS (main visual detractor)
- GREEN VIEWS (main visual resource)

Rev	Description	By	Date

Consultant

wsp

Project title

AGREEMENT NO.CE47/2020 (CE)
TERM CONSULTANCY FOR SITE FORMATION AND INFRASTRUCTURE WORKS FOR PROPOSED HOUSING DEVELOPMENTS IN ZONE 2 (2021 - 2024) - FEASIBILITY STUDY

Drawing title

TASK ORDER NO.3
WEST OF EX-FO TAN COTTAGE AREA
- LOCATION OF VIEWING POINTS

Drawing no.			Rev.
FIGURE 4.3			–
Drawn: CAD	Date: APR 2021	Checked: VS	Approved: CL
Scale: 1:5000 (A1)		Status: –	

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LCA1 UPLAND & HILLSIDE LANDSCAPE



LCA2 URBAN PERIPHERAL VILLAGE LANDSCAPE

PLEASE REFER TO PRELIMINARY LANDSCAPE AND VISUAL IMPACT ASSESSMENT FOR OTHER LRS/ LCAS NOT AFFECTED BY THE DEVELOPMENT

Rev	Description	By	Date

Consultant

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Project title

AGREEMENT NO.CE47/2020 (CE)

TERM CONSULTANCY FOR SITE FORMATION AND INFRASTRUCTURE WORKS FOR PROPOSED HOUSING DEVELOPMENTS IN ZONE 2 (2021 - 2024) - FEASIBILITY STUDY

Drawing title

TASK ORDER NO.3
WEST OF EX-FO TAN COTTAGE AREA
- LANDSCAPE CHARACTER AREA PHOTOS

Drawing no.		Rev.
FIGURE 4.4		
Drawn	Date: FEB 2022	Checked: VS / Approved: CL
Scale: N.T.S.	Status	

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LR1.1 NATURAL WOODLAND



LR3.2 LOW-RISE RESIDENTIAL

PLEASE REFER TO PRELIMINARY LANDSCAPE AND VISUAL IMPACT ASSESSMENT FOR OTHER LRS/ LCAS NOT AFFECTED BY THE DEVELOPMENT

Rev	Description	By	Date

Consultant

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Project title

AGREEMENT NO.CE47/2020 (CE)

TERM CONSULTANCY FOR SITE FORMATION AND INFRASTRUCTURE WORKS FOR PROPOSED HOUSING DEVELOPMENTS IN ZONE 2 (2021 - 2024) - FEASIBILITY STUDY

Drawing title

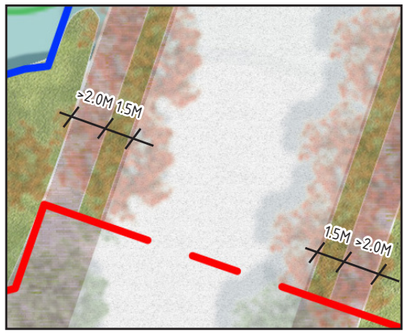
TASK ORDER NO.3
WEST OF EX-FO TAN COTTAGE AREA
- LANDSCAPE RESOURCES PHOTOS

Drawing no.		Rev.
FIGURE 4.5		
Drawn	Date: FEB 2022	Checked: VS / Approved: CL
Scale: N.T.S.	Status	

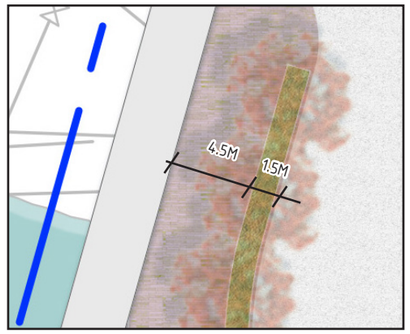
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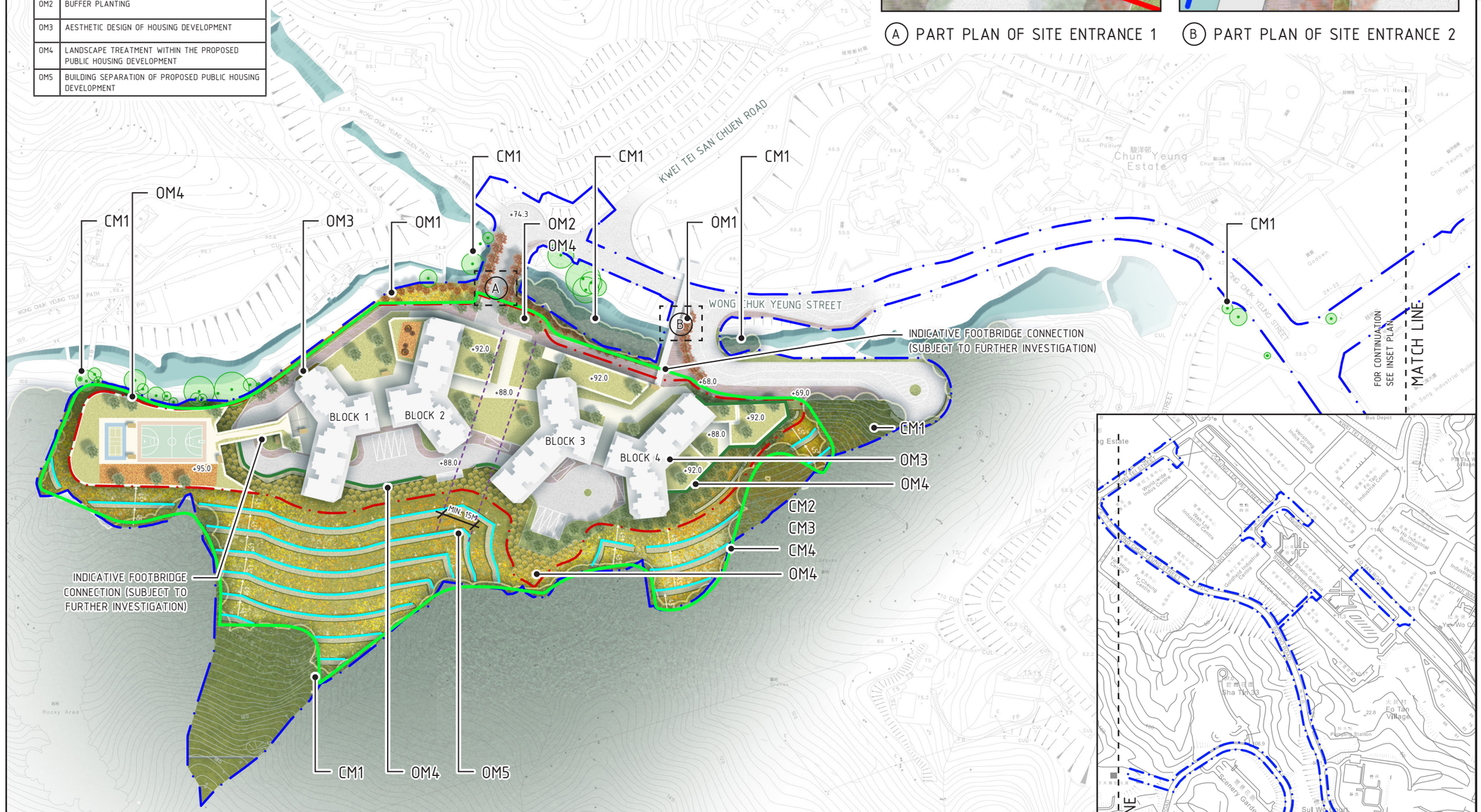
CM1	PRESERVATION OF EXISTING VEGETATION
CM2	CONTROL OF NIGHT-TIME LIGHTING GLARE
CM3	OPTIMISATION OF CONSTRUCTION AREAS AND PROVIDING TEMPORARY LANDSCAPE TREATMENT ON TEMPORARY CONSTRUCTION WORKS
CM4	ERECTION OF DECORATIVE SCREEN HOARDING
OM1	COMPENSATORY TREE PLANTING WHERE PRACTICAL
OM2	BUFFER PLANTING
OM3	AESTHETIC DESIGN OF HOUSING DEVELOPMENT
OM4	LANDSCAPE TREATMENT WITHIN THE PROPOSED PUBLIC HOUSING DEVELOPMENT
OM5	BUILDING SEPARATION OF PROPOSED PUBLIC HOUSING DEVELOPMENT



(A) PART PLAN OF SITE ENTRANCE 1

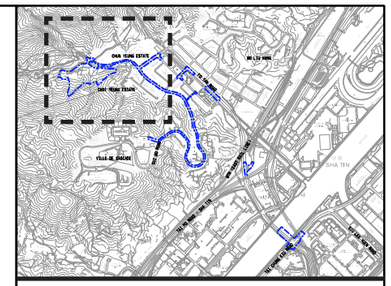


(B) PART PLAN OF SITE ENTRANCE 2



0 10 20 30 40 50
METRES 1:2000

NOTES:
THE BUILDING BLOCK LAYOUT AND LANDSCAPE DESIGN FOR THE PROPOSED HOUSING DEVELOPMENT ARE STILL IN PRELIMINARY DESIGN STAGE, THE EXACT NUMBER, LOCATION OF THE NEW TREE PLANTING, PLANT SPECIES, GREEN COVERAGE, OPEN SPACE, PAVING DESIGN WITHIN THE PROPOSED HOUSING DEVELOPMENT ARE SUBJECT TO FURTHER REVIEWED AT DETAILED DESIGN STAGE.



KEY PLAN

- WORKS LIMIT
- PUBLIC HOUSING SITE BOUNDARY
- REZONING BOUNDARY
- PROPOSED NEW TREE PLANTING
- PROPOSED COMPENSATORY TREE PLANTING
- PROPOSED WHIP TREE PLANTING
- EXISTING TREE TO BE RETAINED
- EXISTING TREE GROUP TO BE RETAINED
- ROAD
- AT GRADE PAVING
- PODIUM PAVING
- CHILDREN'S PLAY AREA/FITNESS AREA
- AT-GRADE PLANTING
- PODIUM PLANTING
- SHRUB/GROUNDCOVER PLANTING ON SLOPE
- RETAINING WALL
- CLIMBER PLANTING
- BERM PLANTER
- EXISTING STREAM

Rev	Description	By	Date

Consultant
wsp

Project title
AGREEMENT NO.CE47/2020 (CE)
TERM CONSULTANCY FOR SITE FORMATION AND INFRASTRUCTURE WORKS FOR PROPOSED HOUSING DEVELOPMENTS IN ZONE 2 (2021 - 2024) - FEASIBILITY STUDY

Drawing title
TASK ORDER NO.3
WEST OF EX-FO TAN COTTAGE AREA
- CONCEPTUAL LANDSCAPE
&
MITIGATION MEASURES PLAN

Drawing no.		Rev.
FIGURE 4.6		
Drawn	Date: JAN 2023	Checked: VS / Approved: CL
Scale: 1:2000@A3	Status	

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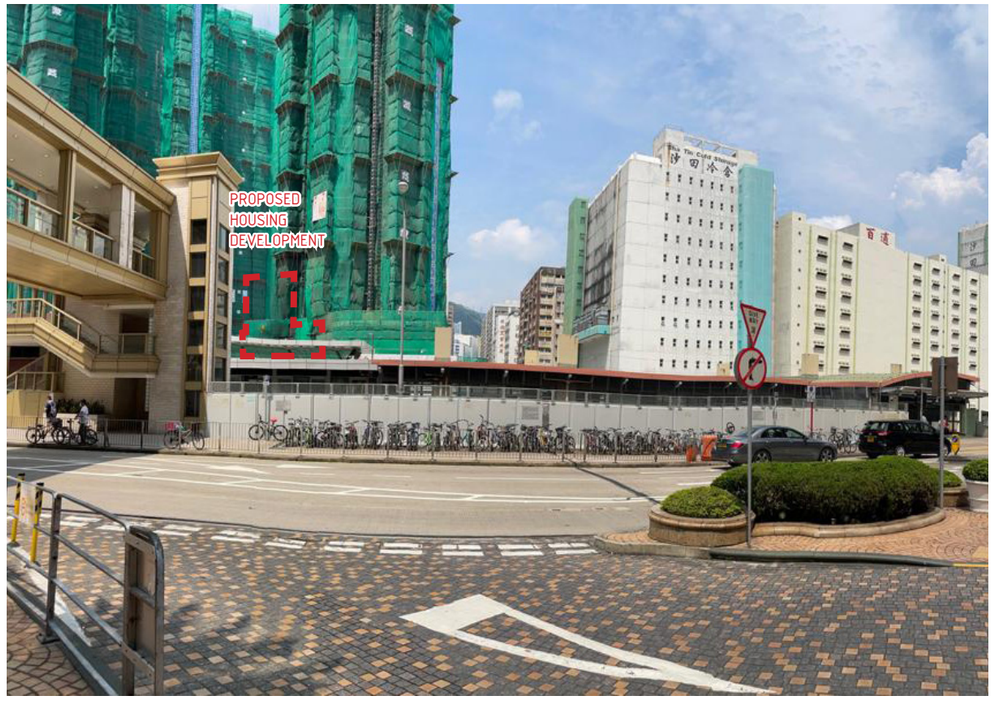
VP1 - TOP OF SLOPE FROM KWAI TEI NEW VILLAGE



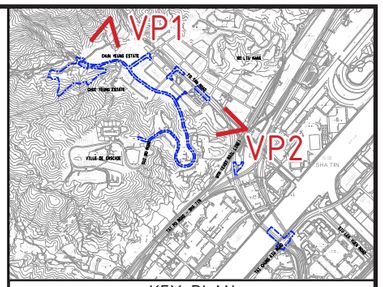
PHOTOMONTAGE WITH MITIGATION MEASURES



VP2 - FO TAN MTR STATIOIN NEAR EXIT A



PHOTOMONTAGE WITH/WITHOUT MITIGATION MEASURES



KEY PLAN

OM1 COMPENSATORY TREE PLANTING WHERE PRACTICAL

OM2 BUFFER PLANTING

OM3 AESTHETIC DESIGN OF HOUSING DEVELOPMENT

OM4 LANDSCAPE TREATMENT WITHIN THE PROPOSED PUBLIC HOUSING DEVELOPMENT

OM5 BUILDING SEPARATION OF PROPOSED PUBLIC HOUSING DEVELOPMENT

Rev	Description	By	Date

Consultant

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Project title

AGREEMENT NO.CE47/2020 (CE)

TERM CONSULTANCY FOR SITE FORMATION AND INFRASTRUCTURE WORKS FOR PROPOSED HOUSING DEVELOPMENTS IN ZONE 2 (2021 - 2024) - FEASIBILITY STUDY

Drawing title

TASK ORDER NO.3
WEST OF EX-FO TAN COTTAGE AREA
- PHOTOS OF VIEWING POINT 1&2

Drawing no.		Rev.
FIGURE 4.7		
Drawn	Date: JAN 2023	Checked: VS / Approved: CL
Scale: N.T.S.	Status	

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VP3 - SHING MUN FOREST TRACK - NEEDLE HILL SECTION



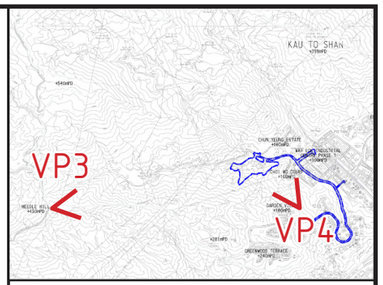
PHOTOMONTAGE WITH/WITHOUT MITIGATION MEASURES



VP4 - LION'S PAVILION



PHOTOMONTAGE WITH/WITHOUT MITIGATION MEASURES



KEY PLAN

OM1 COMPENSATORY TREE PLANTING WHERE PRACTICAL

OM2 BUFFER PLANTING

OM3 AESTHETIC DESIGN OF HOUSING DEVELOPMENT

OM4 LANDSCAPE TREATMENT WITHIN THE PROPOSED PUBLIC HOUSING DEVELOPMENT

OM5 BUILDING SEPARATION OF PROPOSED PUBLIC HOUSING DEVELOPMENT

Rev	Description	By	Date

Consultant

wsp

Project title

AGREEMENT NO.CE47/2020 (CE)

TERM CONSULTANCY FOR SITE FORMATION AND INFRASTRUCTURE WORKS FOR PROPOSED HOUSING DEVELOPMENTS IN ZONE 2 (2021 - 2024) - FEASIBILITY STUDY

Drawing title

TASK ORDER NO.3
WEST OF EX-FO TAN COTTAGE AREA
- PHOTOS OF VIEWING POINT 3&4

Drawing no.		Rev.
FIGURE 4.8		
Drawn	Date: JAN 2023	Checked: VS / Approved: CL
Scale: N.T.S.	Status	

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VP5 - SUI WO COURT BUS TERMINAL



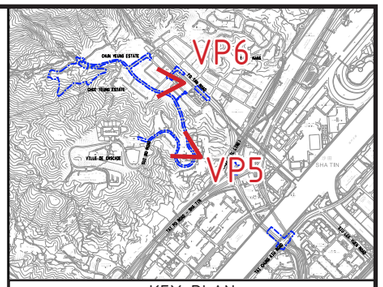
PHOTOMONTAGE WITH/WITHOUT MITIGATION MEASURES



VP6 - SHAN MEI STREET PLAYGROUND



PHOTOMONTAGE WITH/WITHOUT MITIGATION MEASURES



KEY PLAN

OM1 COMPENSATORY TREE PLANTING WHERE PRACTICAL

OM2 BUFFER PLANTING

OM3 AESTHETIC DESIGN OF HOUSING DEVELOPMENT

OM4 LANDSCAPE TREATMENT WITHIN THE PROPOSED PUBLIC HOUSING DEVELOPMENT

OM5 BUILDING SEPARATION OF PROPOSED PUBLIC HOUSING DEVELOPMENT

Rev	Description	By	Date

Consultant

wsp

Project title

AGREEMENT NO.CE47/2020 (CE)
TERM CONSULTANCY FOR SITE FORMATION AND INFRASTRUCTURE WORKS FOR PROPOSED HOUSING DEVELOPMENTS IN ZONE 2 (2021 - 2024) - FEASIBILITY STUDY

Drawing title

TASK ORDER NO.3
WEST OF EX-FO TAN COTTAGE AREA
- PHOTOS OF VIEWING POINT 5&6

Drawing no.		Rev.
FIGURE 4.9		
Drawn	Date: JAN 2023	Checked: VS / Approved: CL
Scale: N.T.S.	Status	

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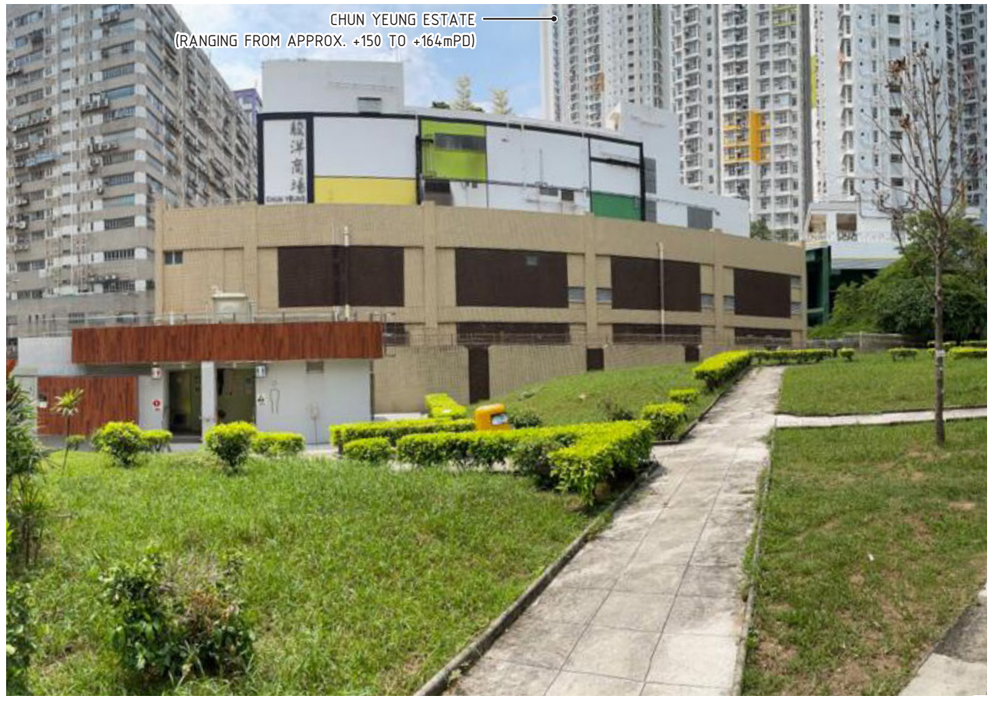
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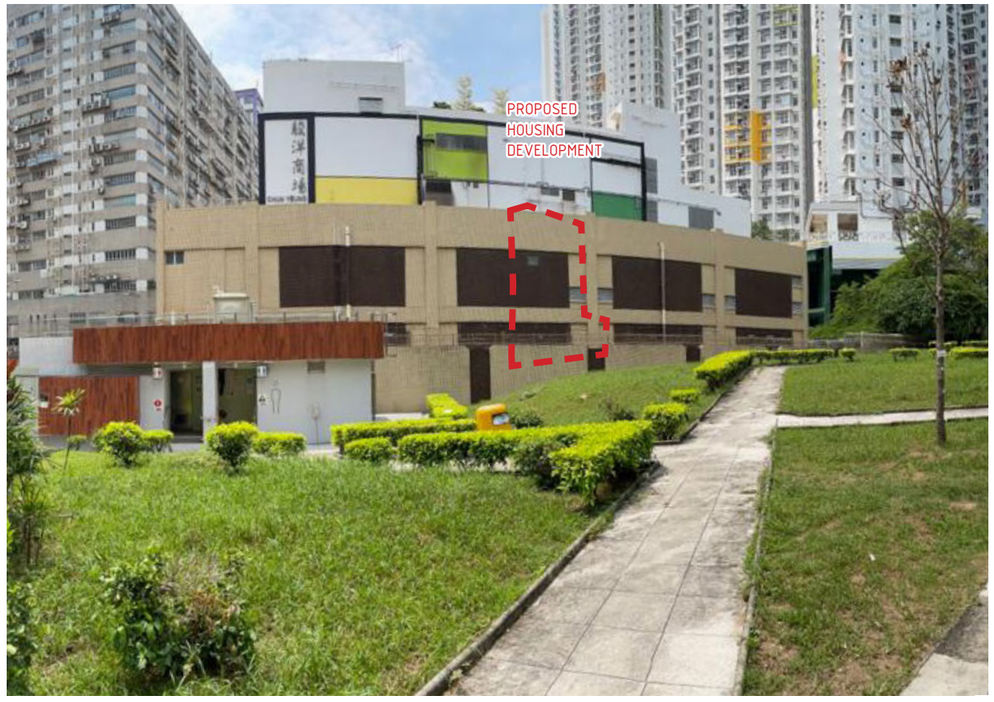
VP7 - SHAN MEI STREET SITTING-OUT AREA



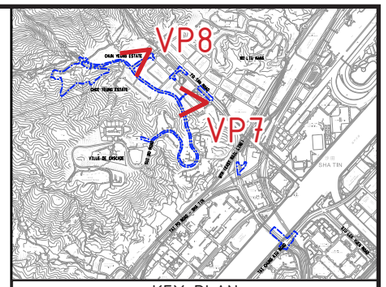
PHOTOMONTAGE WITH/WITHOUT MITIGATION MEASURES



VP8 - KWEI TEI STREET GARDEN



PHOTOMONTAGE WITH/WITHOUT MITIGATION MEASURES



KEY PLAN

OM1 COMPENSATORY TREE PLANTING WHERE PRACTICAL

OM2 BUFFER PLANTING

OM3 AESTHETIC DESIGN OF HOUSING DEVELOPMENT

OM4 LANDSCAPE TREATMENT WITHIN THE PROPOSED PUBLIC HOUSING DEVELOPMENT

OM5 BUILDING SEPARATION OF PROPOSED PUBLIC HOUSING DEVELOPMENT

Rev	Description	By	Date

Consultant

wsp

Project title

AGREEMENT NO.CE47/2020 (CE)

TERM CONSULTANCY FOR SITE FORMATION AND INFRASTRUCTURE WORKS FOR PROPOSED HOUSING DEVELOPMENTS IN ZONE 2 (2021 - 2024) - FEASIBILITY STUDY

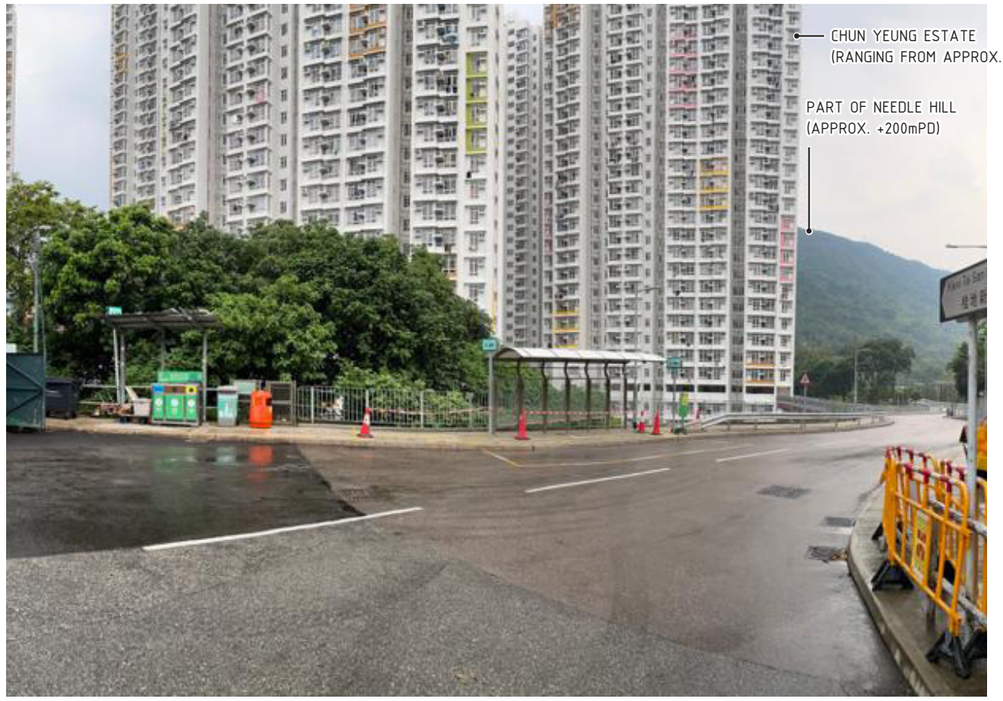
Drawing title

TASK ORDER NO.3
WEST OF EX-FO TAN COTTAGE AREA
- PHOTOS OF VIEWING POINT 7&8

Drawing no.		Rev.
FIGURE 4.10		
Drawn	Date: JAN 2023	Checked: VS / Approved: CL
Scale: N.T.S.	Status	

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VP9 - PUBLIC CAR PARK NEAR FO TAN KUK SAN TSUEN



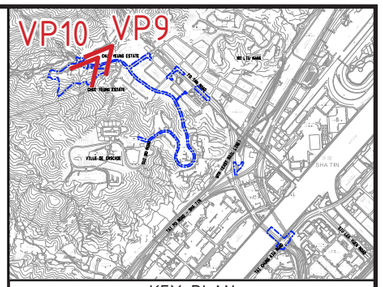
PHOTOMONTAGE WITH MITIGATION MEASURES



VP10 - WONG CHUK YEUNG STREET SITTING-OUT AREA



PHOTOMONTAGE WITH MITIGATION MEASURES



KEY PLAN

OM1 COMPENSATORY TREE PLANTING WHERE PRACTICAL

OM2 BUFFER PLANTING

OM3 AESTHETIC DESIGN OF HOUSING DEVELOPMENT

OM4 LANDSCAPE TREATMENT WITHIN THE PROPOSED PUBLIC HOUSING DEVELOPMENT

OM5 BUILDING SEPARATION OF PROPOSED PUBLIC HOUSING DEVELOPMENT

Rev	Description	By	Date

Consultant

wsp

Project title

AGREEMENT NO.CE47/2020 (CE)
TERM CONSULTANCY FOR SITE FORMATION AND INFRASTRUCTURE WORKS FOR PROPOSED HOUSING DEVELOPMENTS IN ZONE 2 (2021 - 2024) - FEASIBILITY STUDY

Drawing title

TASK ORDER NO.3
WEST OF EX-FO TAN COTTAGE AREA
- PHOTOS OF VIEWING POINT 9&10

Drawing no.		Rev.
FIGURE 4.11		
Drawn	Date: JAN 2023	Checked: VS / Approved: CL
Scale: N.T.S.	Status	

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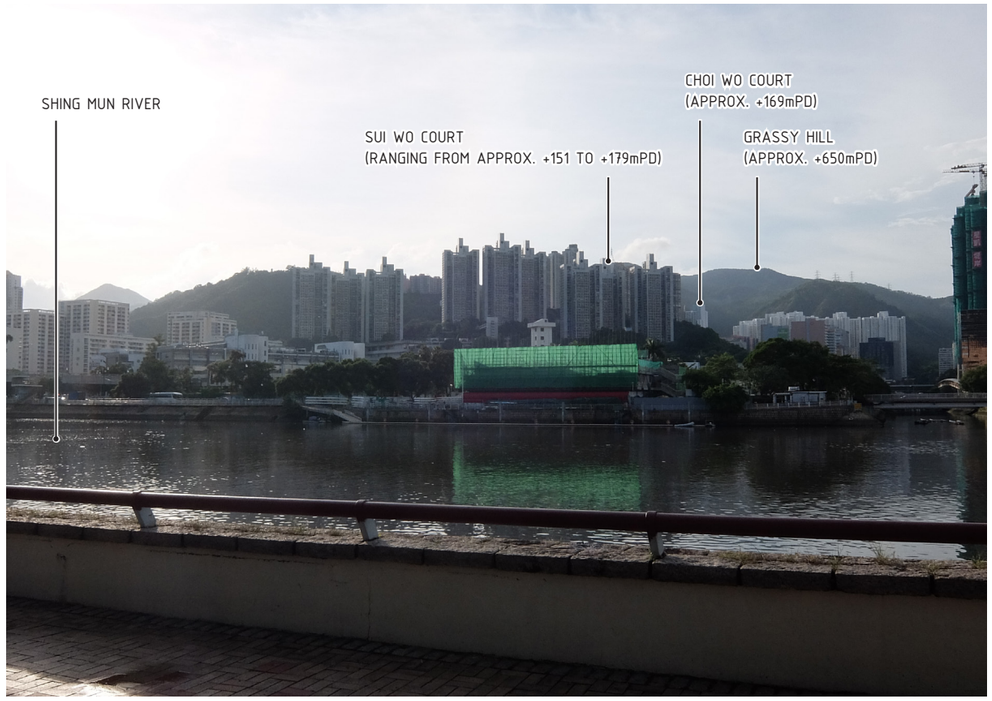
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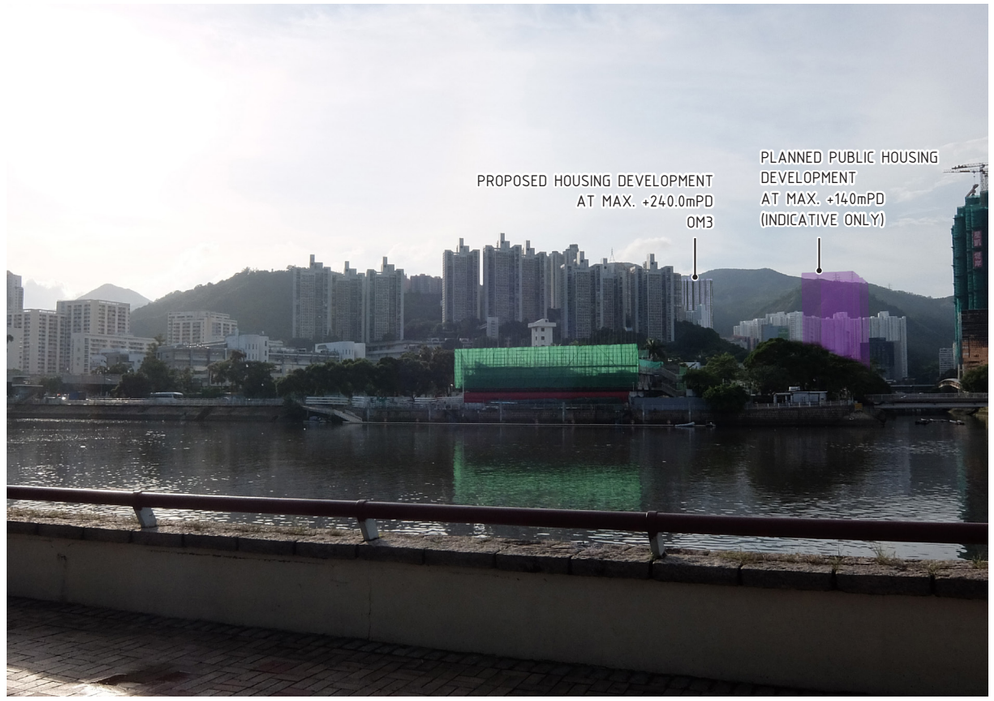
VP11 - PENFOLD PARK



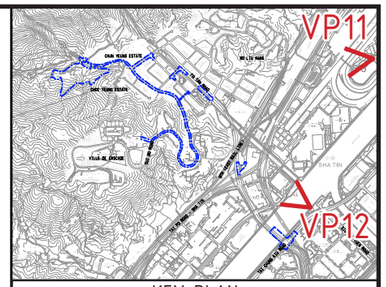
PHOTOMONTAGE WITH/WITHOUT MITIGATION MEASURES



VP12 - SHING MUN RIVER NO.2 PROMENADE REST GARDEN



PHOTOMONTAGE WITH MITIGATION MEASURES



KEY PLAN

OM1 COMPENSATORY TREE PLANTING WHERE PRACTICAL

OM2 BUFFER PLANTING

OM3 AESTHETIC DESIGN OF HOUSING DEVELOPMENT

OM4 LANDSCAPE TREATMENT WITHIN THE PROPOSED PUBLIC HOUSING DEVELOPMENT

OM5 BUILDING SEPARATION OF PROPOSED PUBLIC HOUSING DEVELOPMENT

Rev	Description	By	Date
0	DRAFT ISSUE 1	HL	NOV 21

Consultant

wsp

Project title

AGREEMENT NO.CE47/2020 (CE)
TERM CONSULTANCY FOR SITE FORMATION AND INFRASTRUCTURE WORKS FOR PROPOSED HOUSING DEVELOPMENTS IN ZONE 2 (2021 - 2024) - FEASIBILITY STUDY

Drawing title

TASK ORDER NO.3
WEST OF EX-FO TAN COTTAGE AREA
- PHOTOS OF VIEWING POINT 11&12

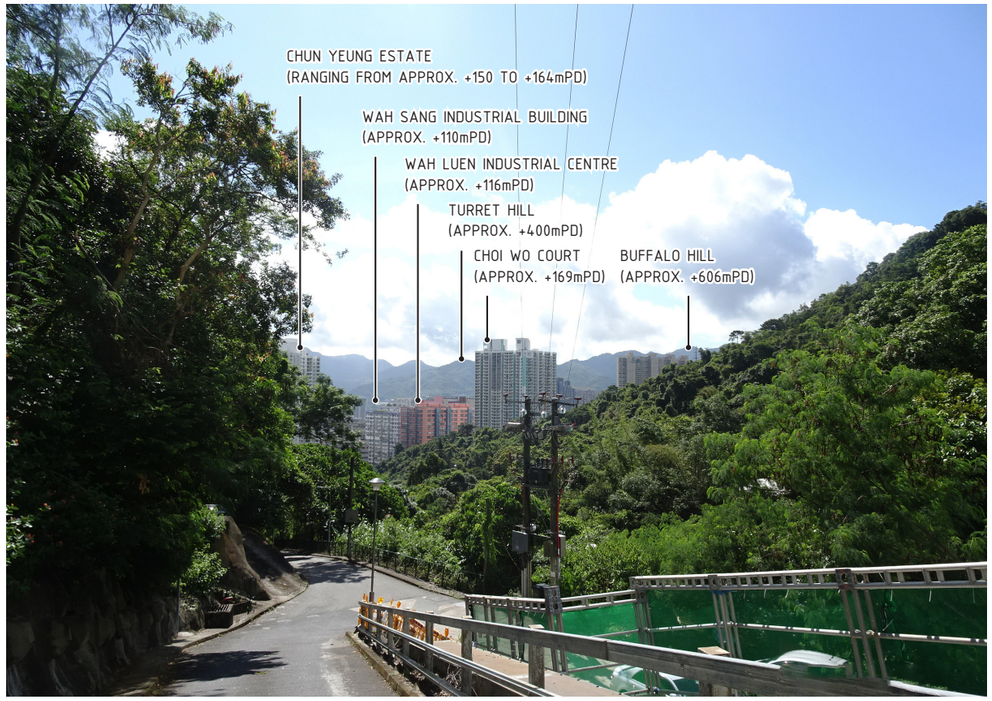
Drawing no.	Rev.
FIGURE 4.12	

Drawn	Date	Checked	Approved
	JAN 2023	VS	CL

Scale	Status
N.T.S.	FOR INFORMATION

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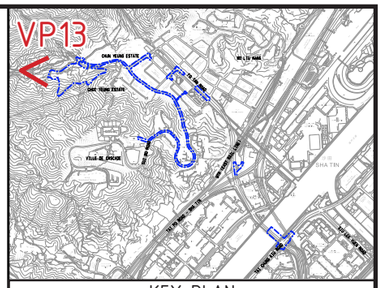
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北拓展處
NORTH DEVELOPMENT OFFICE



VP13 - TOP OF SLOPE FROM WONG CHUK YUEUNG TSUEN PATH



PHOTOMONTAGE WITH MITIGATION MEASURES



KEY PLAN

OM1 COMPENSATORY TREE PLANTING WHERE PRACTICAL

OM2 BUFFER PLANTING

OM3 AESTHETIC DESIGN OF HOUSING DEVELOPMENT

OM4 LANDSCAPE TREATMENT WITHIN THE PROPOSED PUBLIC HOUSING DEVELOPMENT

OM5 BUILDING SEPARATION OF PROPOSED PUBLIC HOUSING DEVELOPMENT

Rev	Description	By	Date
0	DRAFT ISSUE 1	HL	NOV 21

Consultant

wsp

Project title

AGREEMENT NO.CE47/2020 (CE)

TERM CONSULTANCY FOR SITE FORMATION AND INFRASTRUCTURE WORKS FOR PROPOSED HOUSING DEVELOPMENTS IN ZONE 2 (2021 - 2024) - FEASIBILITY STUDY

Drawing title

TASK ORDER NO.3
WEST OF EX-FO TAN COTTAGE AREA
- PHOTOS OF VIEWING POINT 13

Drawing no.	Rev.
FIGURE 4.13	

Drawn	Date	Checked	Approved
	JAN 2023	VS	CL

Scale	Status
N.T.S.	

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COMPENSATORY PLANTING SCHEDULE (OFF-SITE) (TREE PLANTING PLAN REFER TO DRAWING CE47_TO3_TS_1003)

Scientific Name	Chinese Name	Size	Spacing	Origin	No. of Trees
Bridelia tomentosa	土蜜樹	Whip tree	2m	Native	29
Elaeocarpus chinensis	中華杜英	Whip tree	2m	Native	29
Itea chinensis	鼠刺	Whip tree	2m	Native	29
Mallotus paniculatus	白楸	Whip tree	2m	Native	29
Schefflera heptaphylla	鴨腳木	Whip tree	2m	Native	29
Phyllanthus emblica	油甘子	Whip tree	2m	Native	29
Polyspora axillaris	大頭茶	Whip tree	2m	Native	29
Reevesia thyrsoidea	梭羅樹	Whip tree	2m	Native	29
Rhus succedanea	野漆樹	Whip tree	2m	Native	29
Sapium discolor	山烏桕	Whip tree	2m	Native	29
Schima superba	木荷	Whip tree	2m	Native	29
Viburnum odoratissimum	珊瑚樹	Whip tree	2m	Native	29
					348

Basic Information

Slope No.	7SW-B/C14
Consequence Category	1
Toe Facility	Cottage, licensed and squatter area
Toe Facility Distance (m)	3
Crest Facility	Undeveloped green belt
Crest Facility Distance (m)	0
Easting (m)	837424
Northing (m)	829134

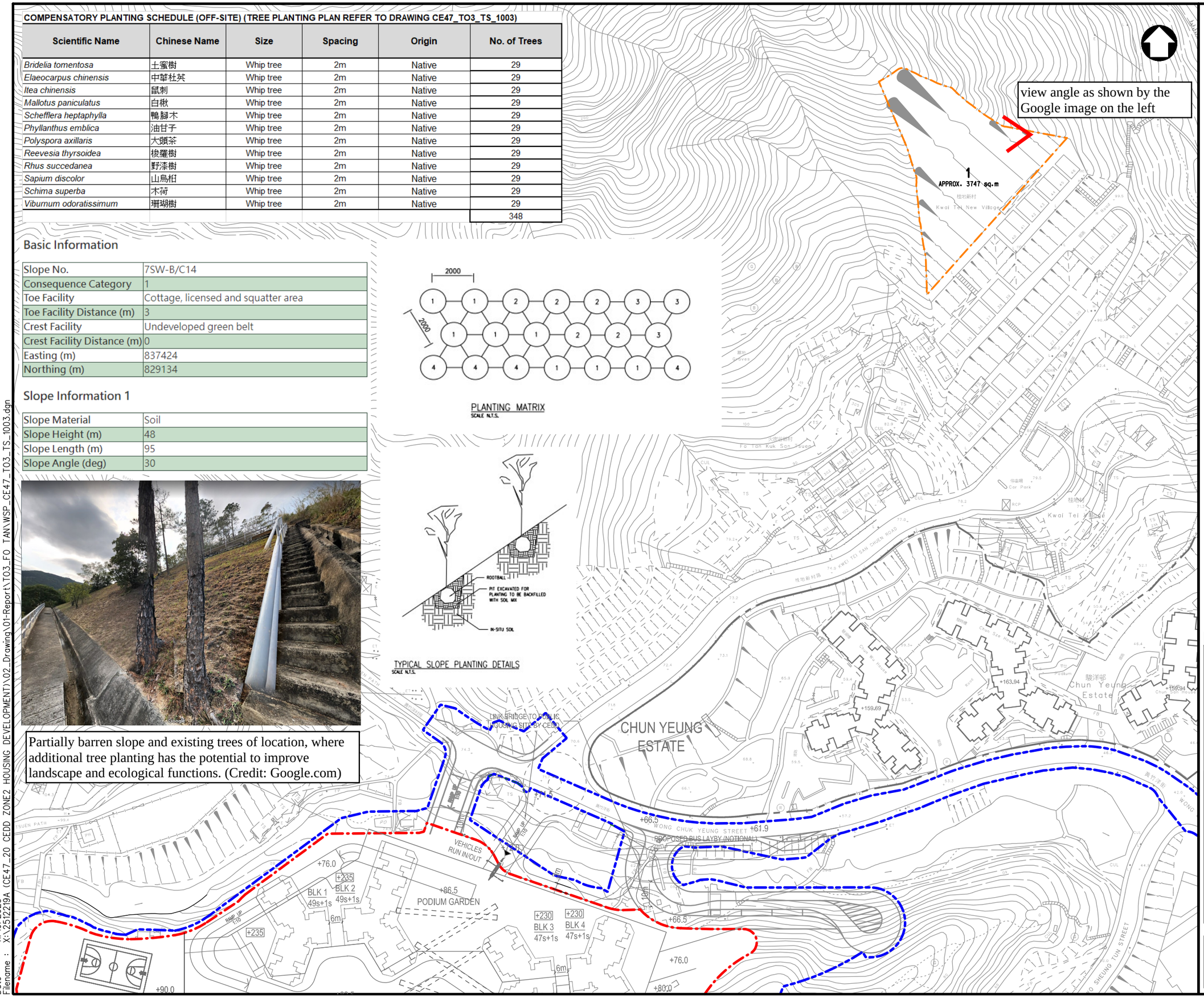
Slope Information 1

Slope Material	Soil
Slope Height (m)	48
Slope Length (m)	95
Slope Angle (deg)	30

Partially barren slope and existing trees of location, where additional tree planting has the potential to improve landscape and ecological functions. (Credit: Google.com)

PLANTING MATRIX
SCALE N.T.S.

TYPICAL SLOPE PLANTING DETAILS
SCALE N.T.S.



LEGEND :

- TREE COMPENSATION AREA
- WORKS LIMIT
- PUBLIC HOUSING SITE BOUNDARY

Rev	Description	By	Date

Consultant

Project title

AGREEMENT NO.CE47/2020 (CE)
TERM CONSULTANCY FOR SITE FORMATION AND INFRASTRUCTURE WORKS FOR PROPOSED HOUSING DEVELOPMENTS IN ZONE 2 (2021 - 2024) - FEASIBILITY STUDY

Drawing title

COMPENSATORY PLANTING PLAN

(SHEET 1)

Drawing no.			Rev.
FIGURE 4.14			–
Drawn CAD	Date	Checked VS	Approved YWY
Scale N.T.S.		Status –	

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Date : 11/10/2023
Filename : X:\2512219A (CE47_20 CEDD ZONE2 HOUSING DEVELOPMENT)\02_Drawing\01-Report\TO3_FO TAN\WSP_CE47_TO3_TS_1003.dgn

Compensatory Planting Schedule (By CEDD)

Proposed Species Name	Size	Planting Spacing	Quantity	Reasons for Species Adoption
Bishofia javanica (秋槭)	Standard 3000 x 2000	4m	6	Native, GMP
Cinnamomum burmanni (陰香)	Standard 3000 x 2000	4m	13	Native, GMP
Liquidambar formosana (楓香)	Standard 3000 x 2000	4m	15	Native, GMP, STSG
Sterculia lanceolata (假蘋婆)	Standard 3000 x 2000	4m	9	Native, GMP, STSG
Peltophorum tonkinense (銀珠)	Standard 3000 x 2000	4m	6	Exotic, GMP
			49	

Notes:
GMP: Greening Master Plan for Sha Tin District
STSG: Street Tree Selection Guide

Tree Planting Schedule (Berm planter)

Proposed Species Name	Size	Planting Spacing	Quantity	Reason for Species Adoption
Bridelia tomentosa 土蜜樹	Light Standard 2000 x 1000	3m	21	Native, GEO pub No.1/2011
Cyclobalanopsis championii 嶺南青岡	Light Standard 2000 x 1000	3m	21	Native, GEO pub No.1/2011
Cyclobalanopsis myrsinifolia 小葉青岡	Light Standard 2000 x 1000	3m	21	Native, GEO pub No.1/2011
Elaeocarpus chinensis 中華杜英	Light Standard 2000 x 1000	3m	21	Native, GEO pub No.1/2011
Litsea glutinosa 潺槁樹	Light Standard 2000 x 1000	3m	21	Native, GEO pub No.1/2011
Machilus breviflora 短序潤楠	Light Standard 2000 x 1000	3m	21	Native, GEO pub No.1/2011
Mallotus apelta 白背葉	Light Standard 2000 x 1000	3m	21	Native, GEO pub No.1/2011
Ormosia emarginata 凹葉紅豆	Light Standard 2000 x 1000	3m	21	Native, GEO pub No.1/2011
Phyllanthus emblica 油甘子	Light Standard 2000 x 1000	3m	21	Native, GEO pub No.1/2011
Pyrus calleryana 豆梨	Light Standard 2000 x 1000	3m	21	Native, GEO pub No.1/2011
Reevesia thyrsoidea 梭羅樹	Light Standard 2000 x 1000	3m	21	Native, GEO pub No.1/2011
Sapium discolor 山烏桕	Light Standard 2000 x 1000	3m	21	Native, GEO pub No.1/2011
Schefflera heptaphylla 鴨腳木	Light Standard 2000 x 1000	3m	21	Native, GEO pub No.1/2011
			273	

LEGEND :

- PUBLIC HOUSING SITE BOUNDARY
- TREE SURVEY BOUNDARY
- EXISTING TREE GROUP TO BE RETAINED
- WORKS LIMIT
- FT293 EXISTING TREE TO BE RETAINED
- COMPENSATORY TREE (BY CEDD)
- PROPOSED WORKS
- SIMAR SLOPE

WONG CHUK YEUNG STREET
CHUN YEUNG ESTATE
WO SHEUNG TUN
CHOI WO COURT
PROPOSED OFF-STREET BUS LAYBY
PODIUM GARDEN
VEHICULAR RUN IN/OUT
BERM PLANTER 1 LENGTH : ~211m
BERM PLANTER 2 LENGTH : ~135m
BERM PLANTER 3 LENGTH : ~114m
BERM PLANTER 4 LENGTH : ~96m
BERM PLANTER 5 LENGTH : ~84m
BERM PLANTER 6 LENGTH : ~31m
BERM PLANTER 7 LENGTH : ~12m
BERM PLANTER 8 LENGTH : ~67m
BERM PLANTER 9 LENGTH : ~34m
BERM PLANTER 10 LENGTH : ~27m
BERM PLANTER 11 LENGTH : ~12m
BERM PLANTER 12 LENGTH : ~12m

Rev	Description	By	Date

Consultant: wsp

Project title:
AGREEMENT NO.CE47/2020 (CE)
TERM CONSULTANCY FOR SITE FORMATION AND INFRASTRUCTURE WORKS FOR PROPOSED HOUSING DEVELOPMENTS IN ZONE 2 (2021 - 2024) - FEASIBILITY STUDY

Drawing title:
TREE PLANTING PLAN(ON-SITE)

Drawing no.	Rev.
Figure 4.15	-

Drawn	Date	Checked	Approved
CAD	APR 2021	VS	YMY
Scale: 1:1000 (A1)		Status: -	

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13/3/2023
Checked By:
Checked Date:
0 10 20 30 40 50
METRES
1 : 1000

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土木工程處
CIVIL ENGINEERING OFFICE

Date : 13/3/2023
Filename : x:\2512219a (ce47_20 cedd zone2 housing development)\02_drawing\01-report\to3_fo tan\WSP_CE47_TO3_TS_1010.dgn

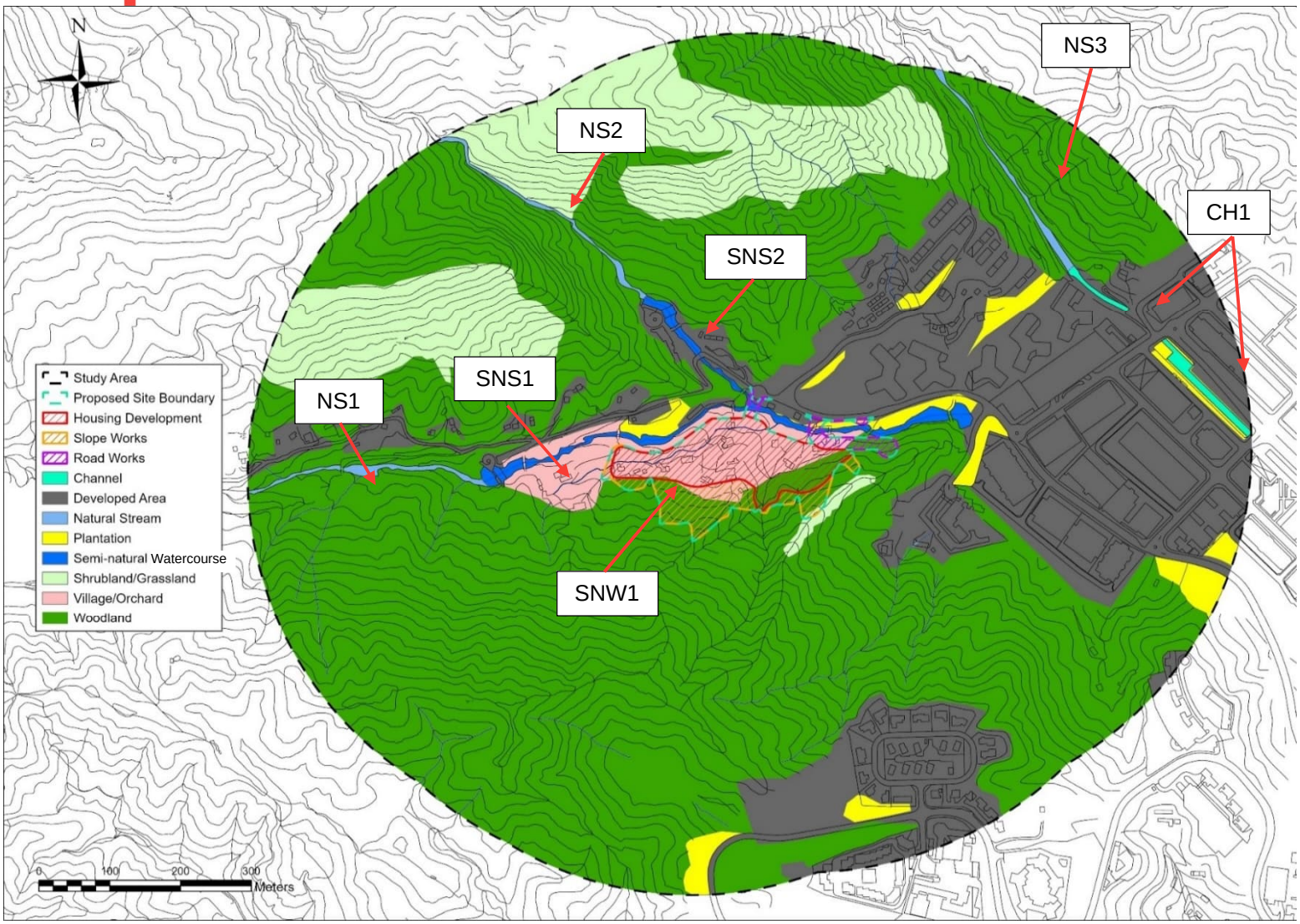


Figure 5.8 Habitat Map within the Study Area (Abbreviations: CH: Channel; NS: Natural Stream; SNS: Semi-natural Stream; SNW: Semi-natural Watercourse

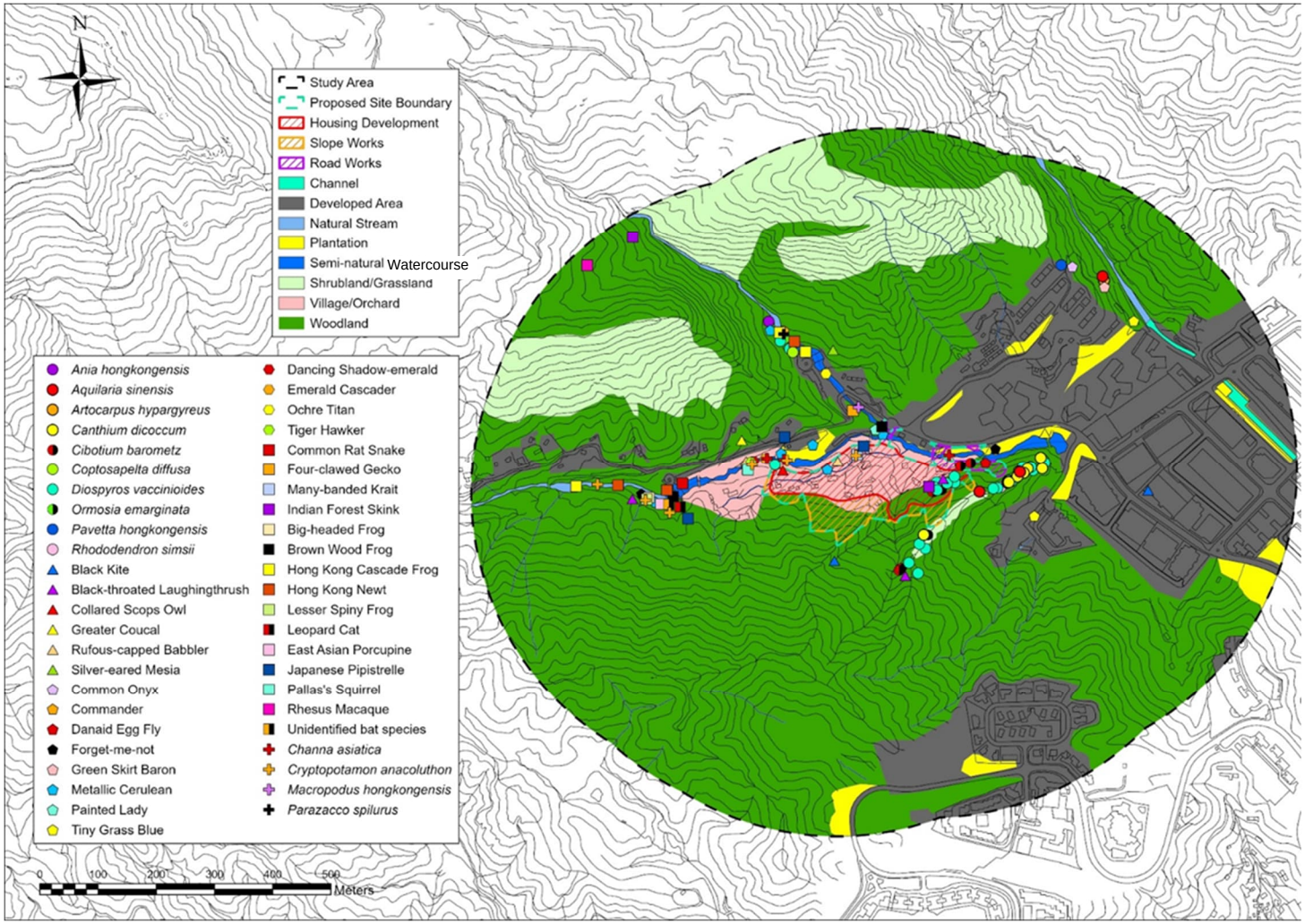


Figure 5.9 Habitat map and locations of species of conservation importance – Overall

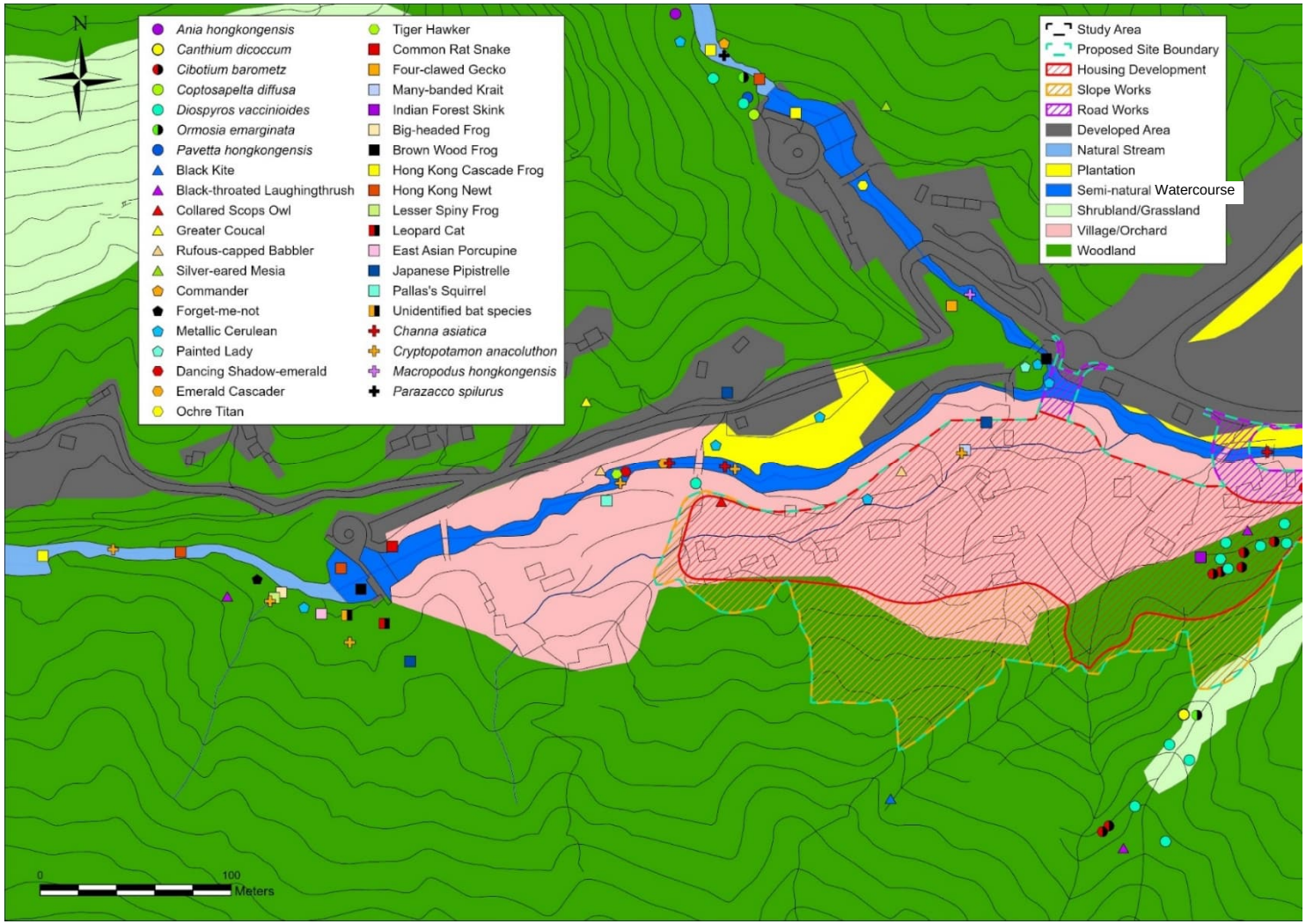


Figure 5.9a Habitat map and locations of species of conservation importance (Sheet 1 of 3)

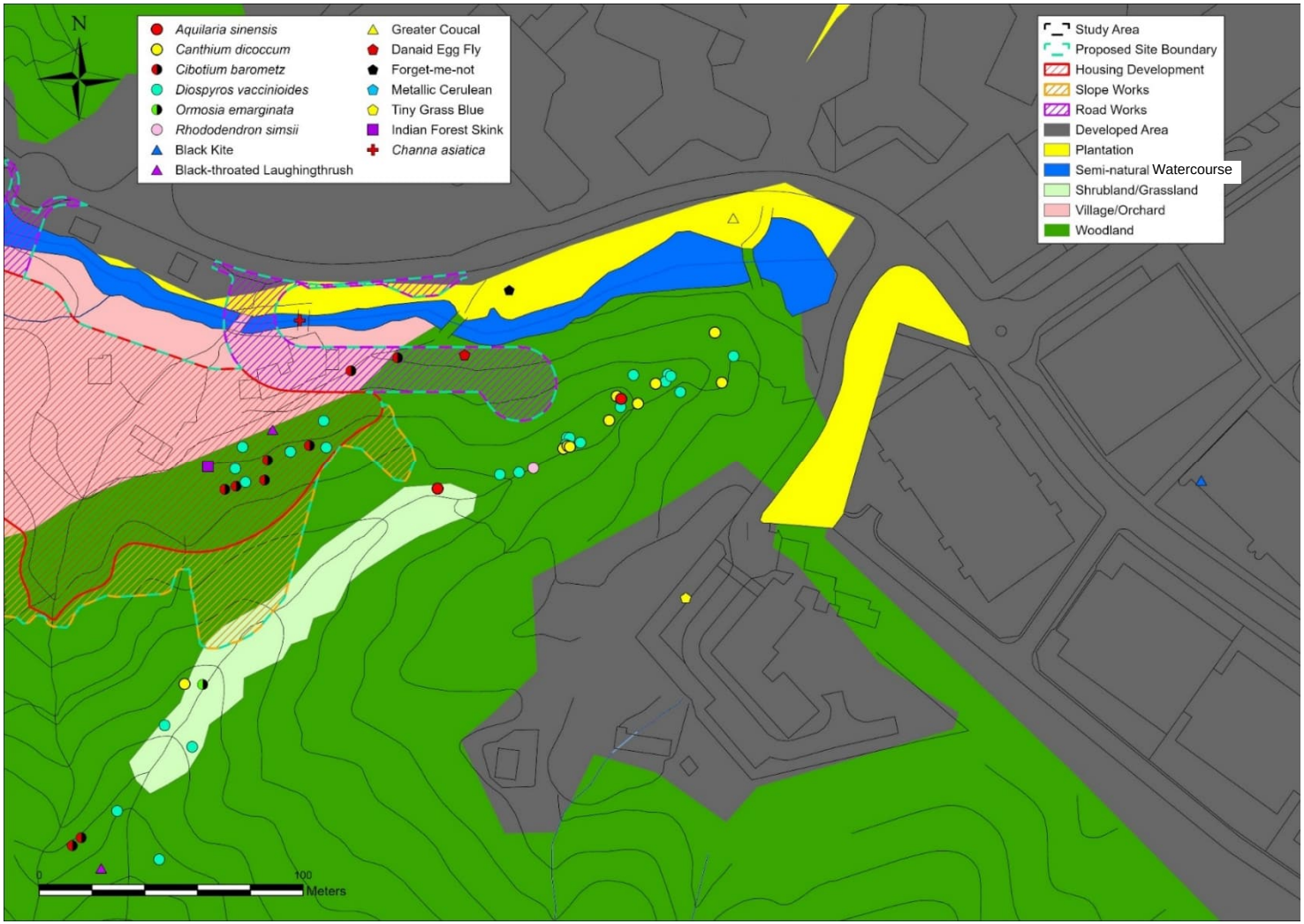


Figure 5.9b Habitat map and locations of species of conservation importance (Sheet 2 of 3)

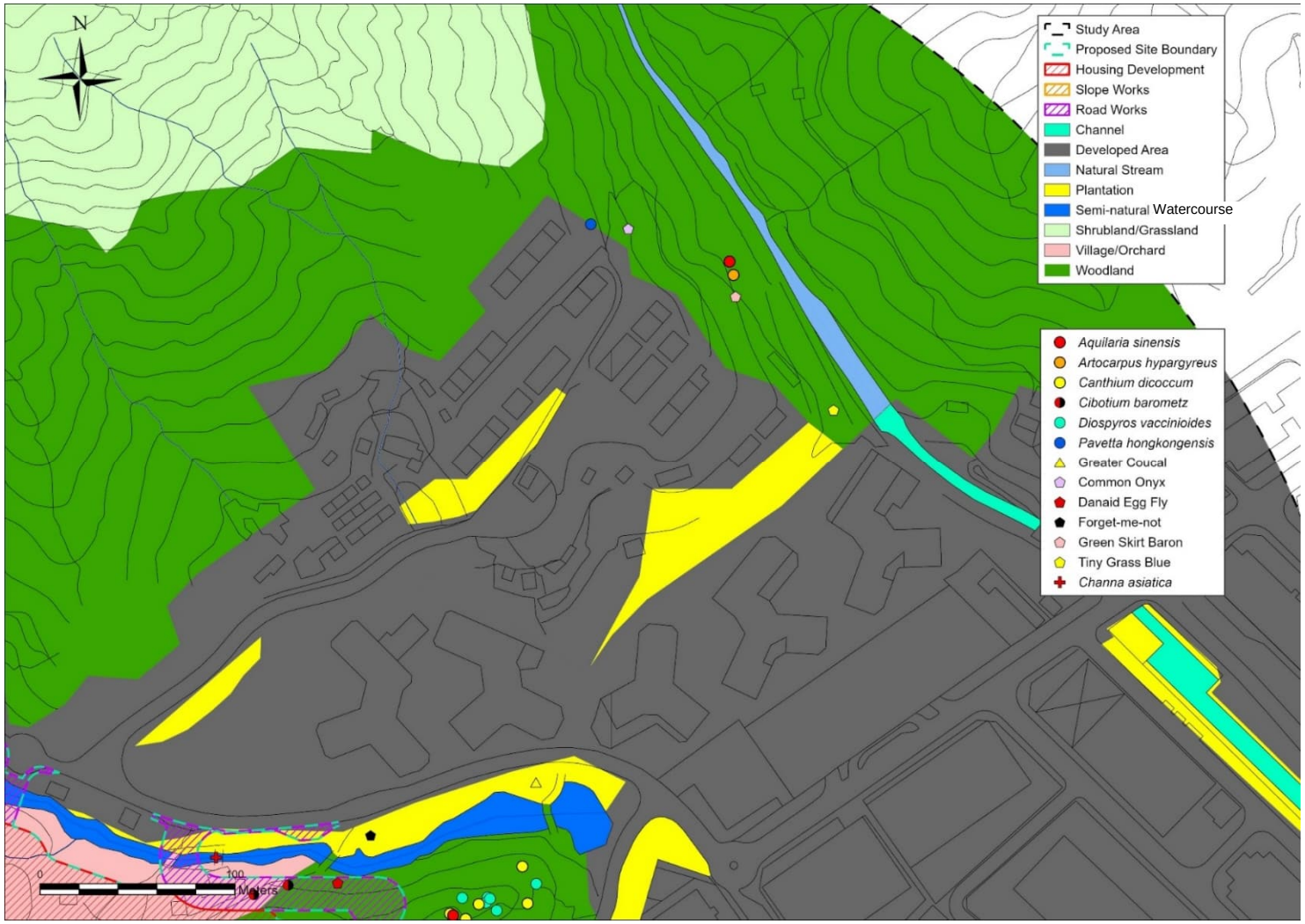
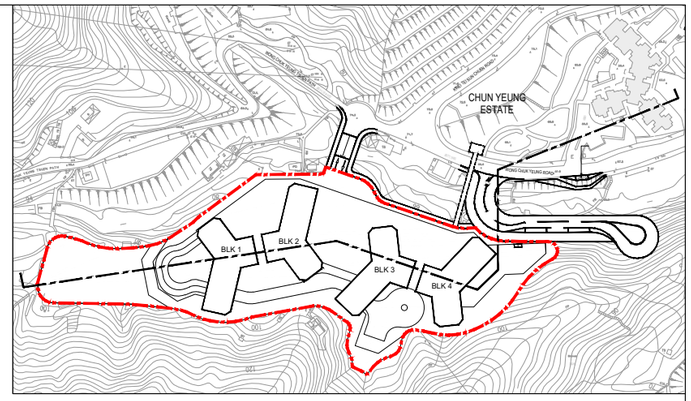


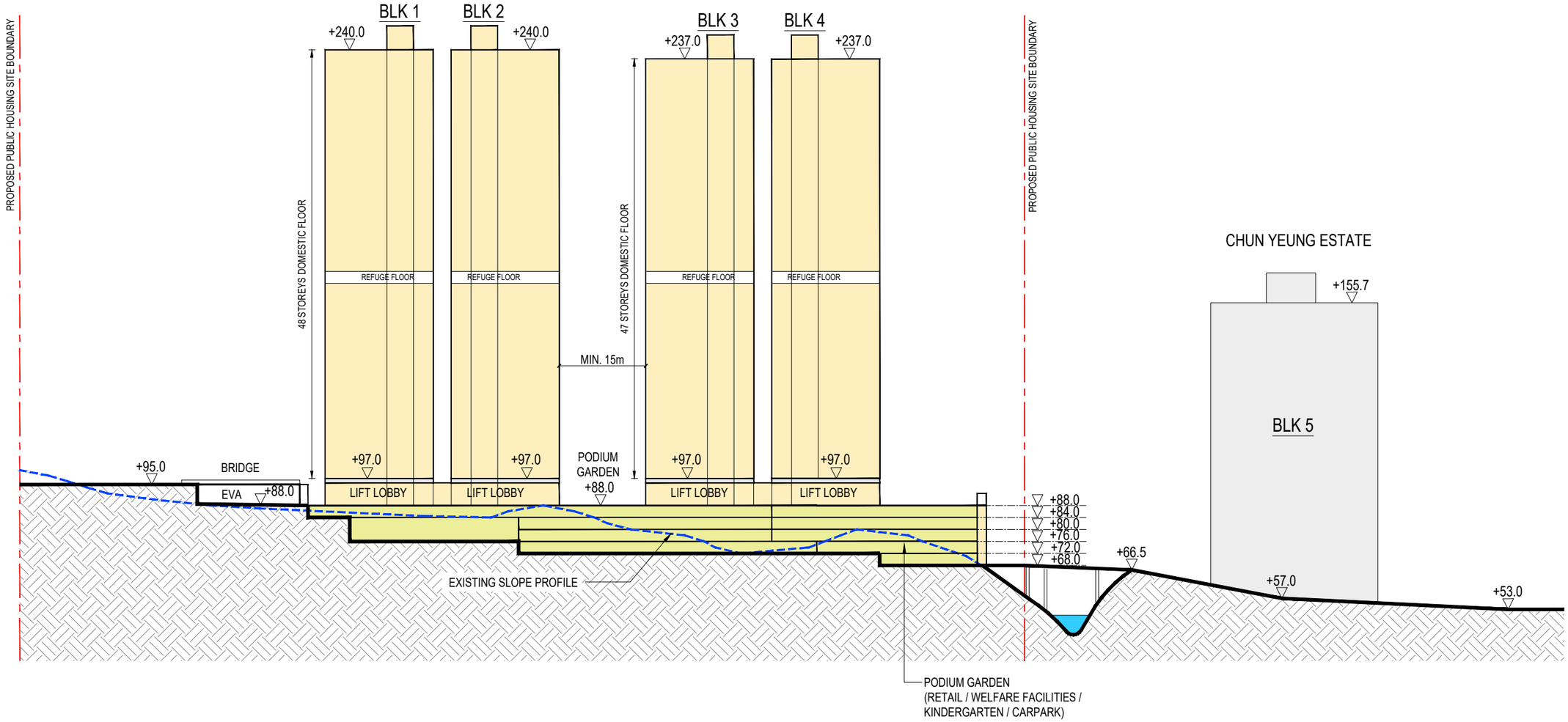
Figure 5.9c Habitat map and locations of species of conservation importance (Sheet 3 of 3)

APPENDIX C

INDICATIVE SECTION AND LAYOUT PLAN FOR THE PROPOSED PUBLIC HOUSING DEVELOPMENT AND SITE FORMATION OPTIONS



KEY PLAN



POTENTIAL SITE

WEST OF EX-FO TAN COTTAGE AREA, FO TAN

DRAWING TITLE

INDICATIVE SECTION PLAN

NOTE: FOR REFERENCE ONLY, SUBJECT TO CHANGE AT DETAILED DESIGN STAGE

房 屋 署
HOUSING DEPARTMENT

比 例 SCALE
1:750(A1); 1:1500(A3)

日 期 DATE
10/10/2023

N

Sha Tin

WONG CHUK YEUNG TSUEN PATH 黃竹洋村徑

KWEI TEI SUN CHUEN ROAD

CHUN YEUNG ESTATE

LINK BRIDGE BY CEDD

+74.3

EMERGENCY VEHICLE / VEHICLE / PEDESTRIAN / RUN IN / OUT

RAMP UP 1:10

INDICATIVE FOOTBRIDGE CONNECTION (SUBJECT TO FURTHER INVESTIGATION)

NOTIONAL GMB LAY-BY BY CEDD

+66.5

WONG CHUK YEUNG ROAD

+61.9

10m

3m

PEDESTRIAN ENTRANCE

CONNECTION BETWEEN THE BUS LAY-BY AND PODIUM

+68.0

+69.0

NOTIONAL BUS LAY-BY BY CEDD

PODIUM GARDEN

(RETAIL / WELFARE FACILITIES / KINDERGARTEN / CARPARK)

+88.0 mPD

MIN. 15m

BLK 1

+240.0 mPD

BLK 2

+240.0 mPD

BLK 3

+237.0 mPD

BLK 4

+237.0 mPD

+88.0

GREENERY/ OPEN SPACE

+95.0 mPD

LEGEND

PROPOSED PUBLIC HOUSING SITE BOUNDARY

POTENTIAL SITE

WEST OF EX-FO TAN COTTAGE AREA, FO TAN

DRAWING TITLE

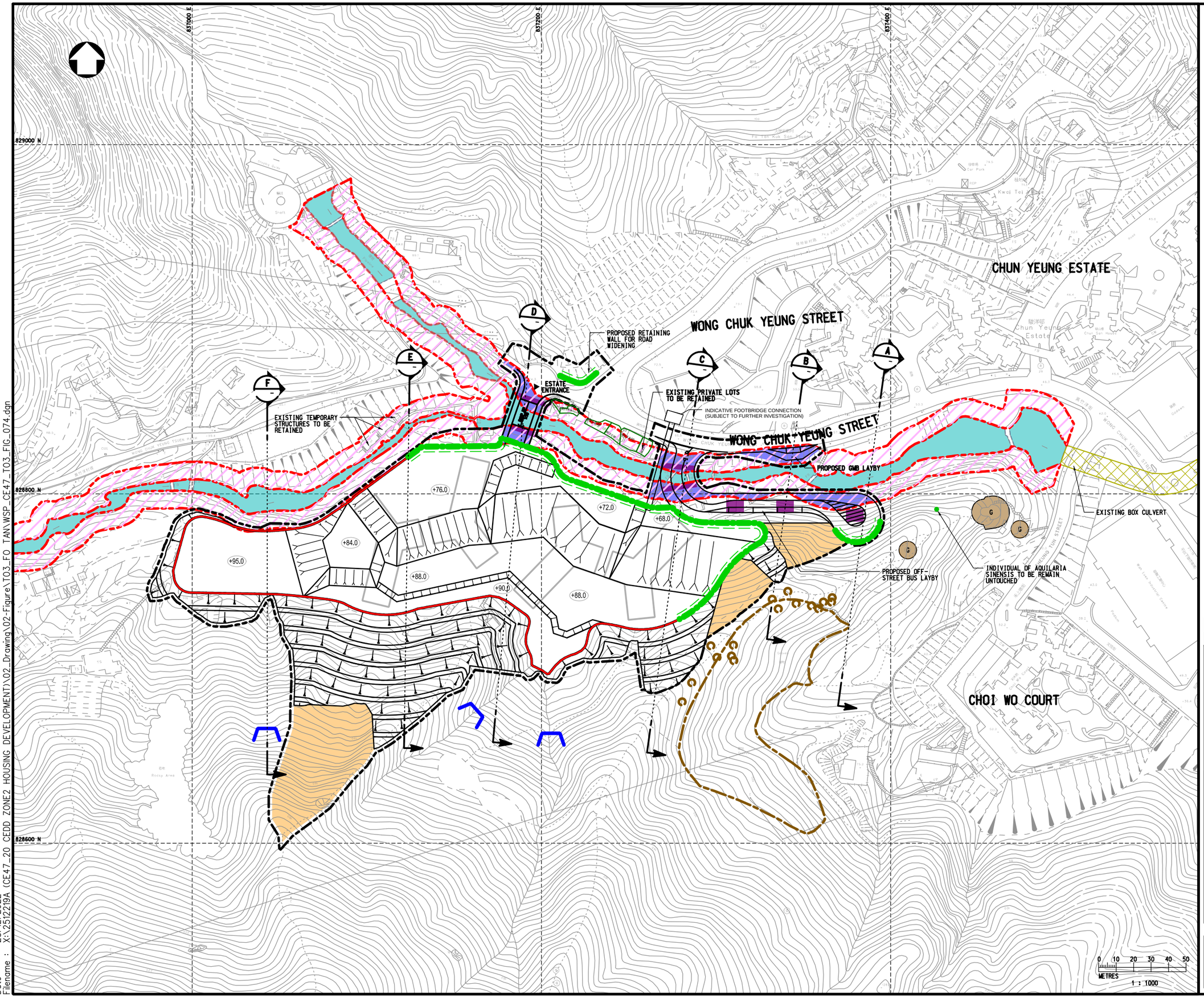
INDICATIVE LAYOUT PLAN

NOTE: FOR REFERENCE ONLY, SUBJECT TO CHANGE AT DETAILED DESIGN STAGE

房 屋 署
HOUSING DEPARTMENT

比 例 SCALE
1:500(A1); 1:1000(A3)

日 期 DATE
10/10/2023



NOTES :

1. ALL DIMENSIONS ARE IN MILLIMETRES UNLESS OTHERWISE STATED.
2. ALL LEVELS ARE IN METRES (M) AND RELATIVE TO HONG KONG PRINCIPAL DATUM (mPD).

LEGEND :

- PROPOSED PUBLIC HOUSING SITE BOUNDARY (NET SITE AREA =~ 21,980 m^2)
- PERMITTED BURIAL GROUND SITE
- SITE BOUNDARY
- PRIVATE LOT
- EXISTING STREAM
- PROPOSED MAX. 30°SLOPE
- EXISTING GRAVE WITH 5m PROTECTION ZONE
- +60 PROPOSED SITE FORMATION LEVEL
- BUFFER ZONE FOR EXISTING STREAM
- PROPOSED 45° CUT SLOPE WITH SOIL NAILS
- EXISTING AQUILARIA SINENSIS
- PROPOSED L-SHAPE RETAINING WALL (RETAINING HEIGHT = MAX. 6m)
  - EDGE OF WALL BASE
- MITIGATION FOR NTHS: CHECK DAM (INDICATIVE ONLY)
- MITIGATION FOR NTHS: ADDITIONAL SOIL NAILS (INDICATIVE ONLY)
- PRPOSED BRIDGE ABUTMENT/ PIER (INDICATIVE ONLY)
- PROPOSED WORKS WITHIN THE BUFFER ZONE FOR EXISTION STREAM

NOTE:
FOR REFERENCE ONLY, SUBJECT TO CHANGE AT DETAILED DESIGN STAGE.

Rev	Description	By	Date
–	FIRST ISSUE	HL	AUG 22

Consultant

wsp

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TERM CONSULTANCY FOR SITE FORMATION AND INFRASTRUCTURE WORKS FOR PROPOSED HOUSING DEVELOPMENTS IN ZONE 2 (2021 – 2024) – FEASIBILITY STUDY

Drawing title

TASK ORDER NO.3
WEST OF EX-FO TAN COTTAGE AREA – SITE FORMATION PLAN
REVISED SITE BOUNDARY PLAN
OPTION 1A

Drawing no.	Rev.
CE47/TO3/FIG/071	–

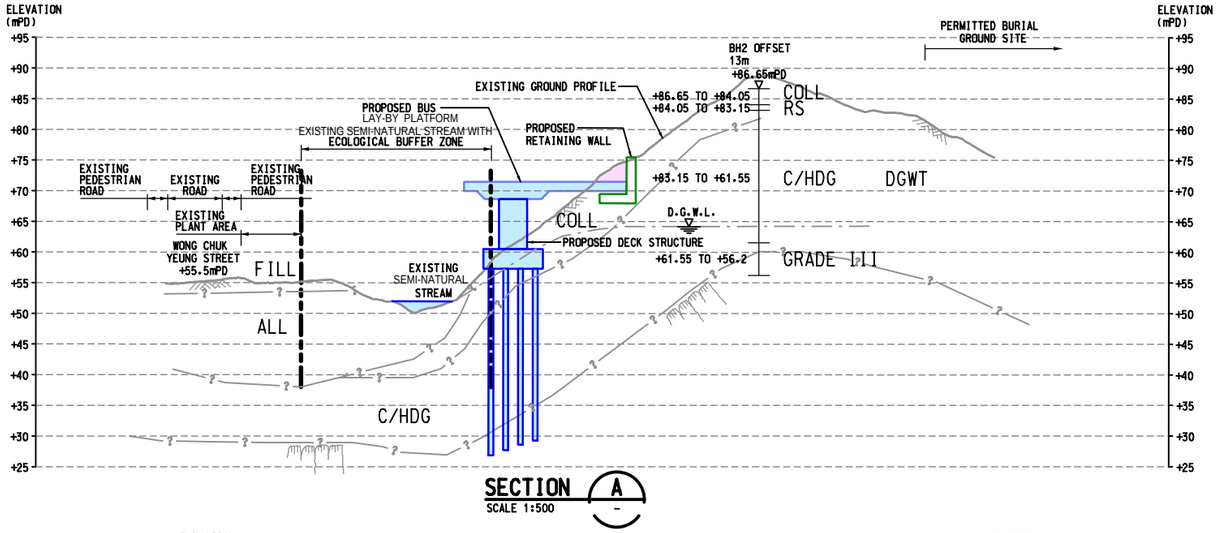
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CAD	SEP 22	VS	YWY

Scale	Status
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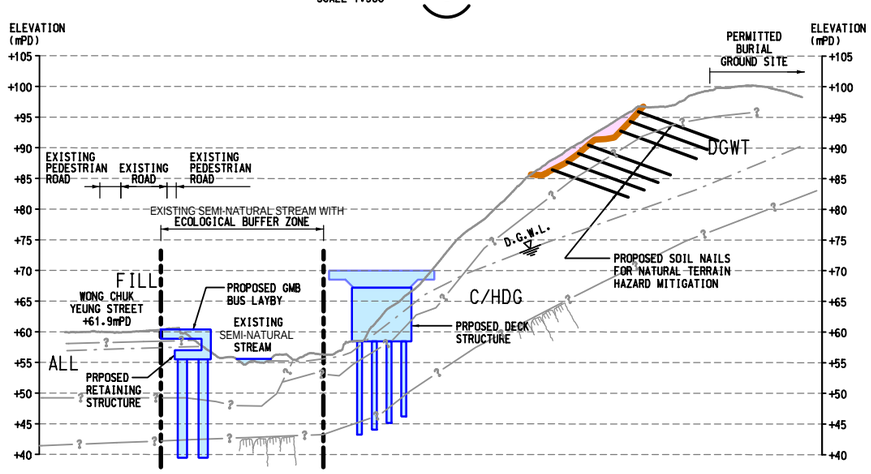
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土木工程處
CIVIL ENGINEERING OFFICE

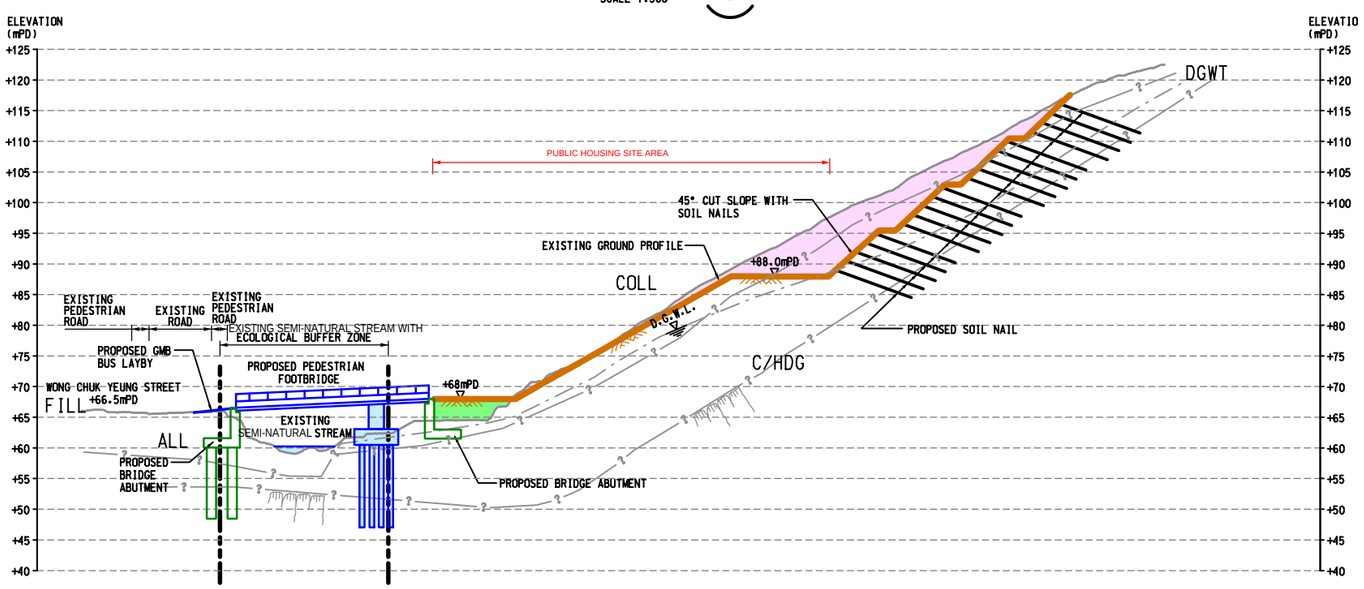
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SECTION A
SCALE 1:500



SECTION B
SCALE 1:500



SECTION C
SCALE 1:500

0 5 10 15 20 25
METRES
1 : 500

NOTES :

1. ALL DIMENSIONS ARE IN MILLIMETRES UNLESS OTHERWISE STATED.
2. ALL LEVELS ARE IN METRES (M) AND RELATIVE TO HONG KONG PRINCIPAL DATUM (mPD).
3. INFERRED ROCKHEAD FROM AVAILABLE SI RECORDS. EXACT GEOLOGICAL PROFILE TO BE CONFIRMED IN THE SUBSEQUENT SLOPES OF THE PROJECT

LEGEND :

- EXCAVATION
- FILL
- INFERRED ROCKHEAD
- PROPOSED GROUND PROFILE

NOTE:
FOR REFERENCE ONLY, SUBJECT TO CHANGE AT DETAILED DESIGN STAGE.

Rev	Description	By	Date
-	FIRST ISSUE	VS	OCT 22

Consultant

wsp

Project title

AGREEMENT NO.CE47/2020 (CE)
TERM CONSULTANCY FOR SITE FORMATION AND INFRASTRUCTURE WORKS FOR PROPOSED HOUSING DEVELOPMENTS IN ZONE 2 (2021 - 2024) - FEASIBILITY STUDY

Drawing title

TASK ORDER NO. 3
WEST OF EX-FO TAN COTTAGE AREA - SECTIONS
OPTION 1A
(SHEET 1 OF 2)

Drawing no.	Rev.
CE47/TO3/FIG/071A	-

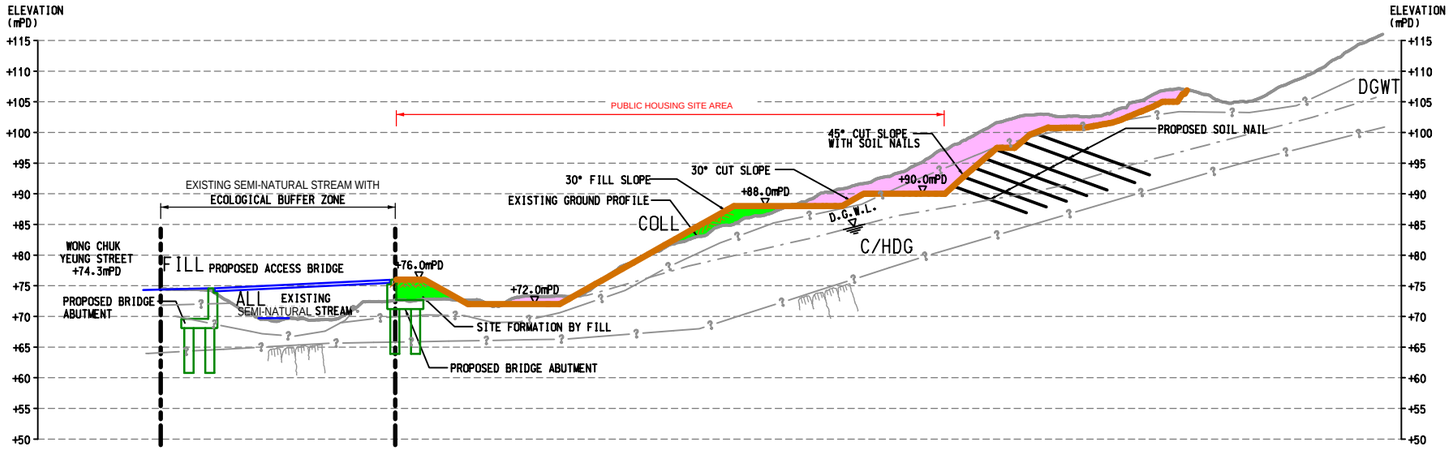
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CAD	AUG 22	VS	YWY

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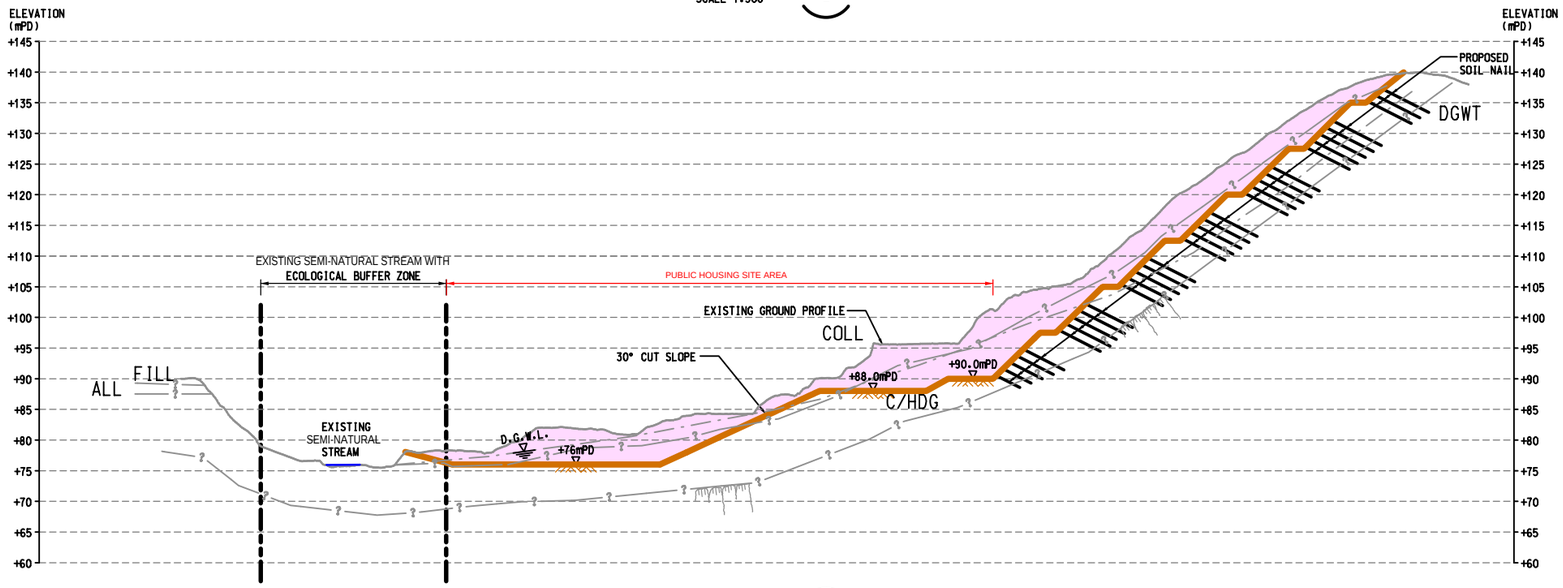
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土木工程處
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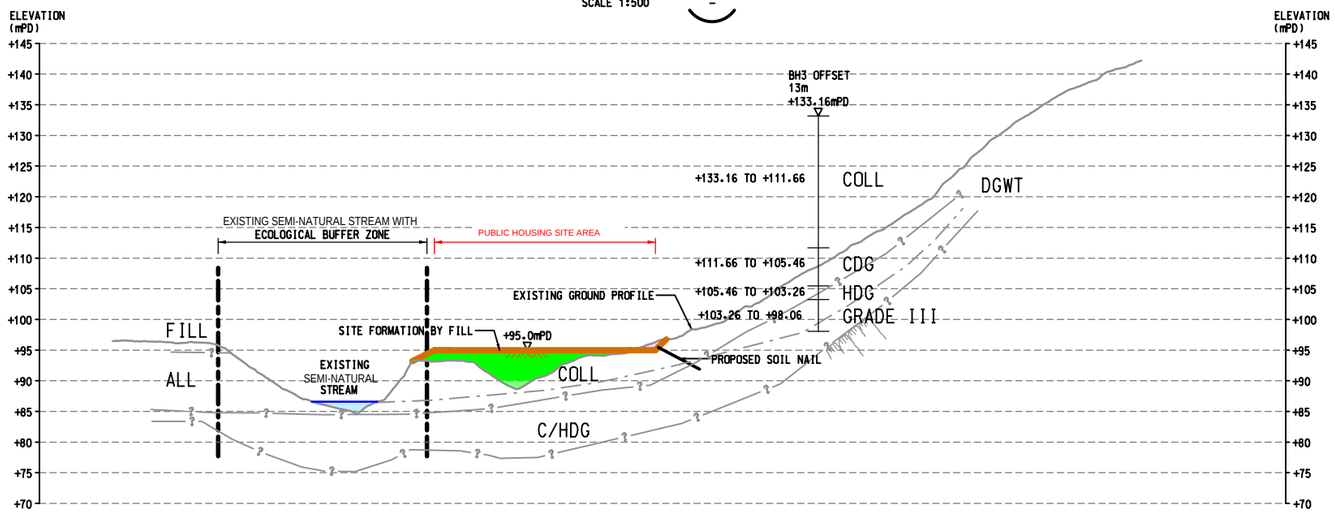
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SECTION D
SCALE 1:500



SECTION E
SCALE 1:500



SECTION F
SCALE 1:500

NOTES :

1. ALL DIMENSIONS ARE IN MILLIMETRES UNLESS OTHERWISE STATED.
2. ALL LEVELS ARE IN METRES (M) AND RELATIVE TO HONG KONG PRINCIPAL DATUM (mPD).
3. INFERRED ROCKHEAD FROM AVAILABLE SI RECORDS. EXACT GEOLOGICAL PROFILE TO BE CONFIRMED IN THE SUBSEQUENT SLOPES OF THE PROJECT

LEGEND :

- EXCAVATION
- FILL
- INFERRED ROCKHEAD
- PROPOSED GROUND PROFILE

NOTE:
FOR REFERENCE ONLY, SUBJECT TO CHANGE AT DETAILED DESIGN STAGE.

Rev	Description	By	Date
-	FIRST ISSUE	VS	OCT 22

Consultant

wsp

Project title

AGREEMENT NO.CE47/2020 (CE)
TERM CONSULTANCY FOR SITE FORMATION AND INFRASTRUCTURE WORKS FOR PROPOSED HOUSING DEVELOPMENTS IN ZONE 2 (2021 - 2024) - FEASIBILITY STUDY

Drawing title

TASK ORDER NO. 3
WEST OF EX-FO TAN COTTAGE AREA - SECTIONS
OPTION 1A
(SHEET 2 OF 2)

Drawing no.	Rev.
CE47/TO3/FIG/071B	-

Drawn	Date	Checked	Approved
CAD	AUG 22	VS	YWY

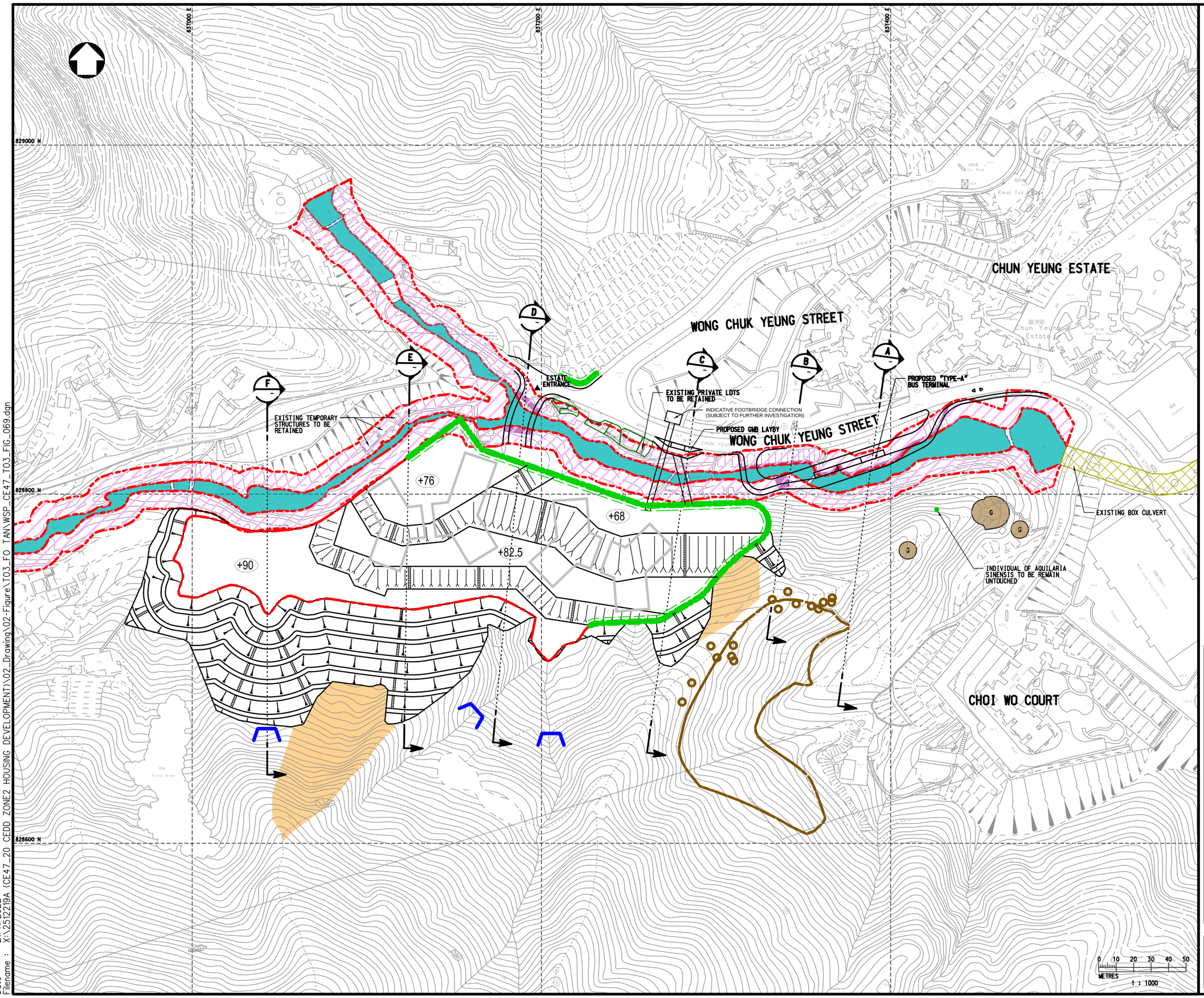
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AS SHOWN (A1)	-

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土木工程處
CIVIL ENGINEERING OFFICE

0 5 10 15 20 25
METRES
1 : 500

Date : 30/12/2022
Filename : X:\2512219A (CE47_20 CEDD ZONE2 HOUSING DEVELOPMENT)\02_Drawing\02-Figure\TO3_FO TAN\WSP_CE47_TO3_FI
7_TO3_FIG_074-B.dgn



NOTES :

1. ALL DIMENSIONS ARE IN MILLIMETRES UNLESS OTHERWISE STATED.
2. ALL LEVELS ARE IN METRES (M) AND RELATIVE TO HONG KONG PRINCIPAL DATUM (mPD).

LEGEND :

- PROPOSED PUBLIC HOUSING SITE BOUNDARY (NET SITE AREA = ~ 18,757m²)
- PERMITTED BURIAL GROUND SITE
- PRIVATE LOT
- EXISTING STREAM
- PROPOSED MAX. 30°SLOPE
- G — EXISTING GRAVE WITH 5m PROTECTION ZONE
- +60 — PROPOSED SITE FORMATION LEVEL
- BUFFER ZONE FOR EXISTING STREAM
- PROPOSED 45° CUT SLOPE WITH SOIL NAILS
- EXISTING AQUILARIA SINENSIS
- PROPOSED L-SHAPE RETAINING WALL (RETAINING HEIGHT = MAX. 6m)
  - EDGE OF WALL BASE
- MITIGATION FOR NTHS: ADDITIONAL SOIL NAILS (INDICATIVE ONLY)
- MITIGATION FOR NTHS: CHECK DAM (INDICATIVE ONLY)
- PRPOSED BRIDGE ABUTMENT/ PIER (INDICATIVE ONLY)

NOTE:
FOR REFERENCE ONLY, SUBJECT TO CHANGE AT DETAILED DESIGN STAGE.

Rev	Description	By	Date
-	FIRST ISSUE	HL	AUG 22

Consultant

wsp

Project title

AGREEMENT NO.CE47/2020 (CE)
TERM CONSULTANCY FOR SITE FORMATION AND INFRASTRUCTURE WORKS FOR PROPOSED HOUSING DEVELOPMENTS IN ZONE 2 (2021 - 2024) - FEASIBILITY STUDY

Drawing title

TASK ORDER NO.3
WEST OF EX-FO TAN COTTAGE AREA - SITE FORMATION PLAN
REVISED SITE BOUNDARY PLAN OPTION 1B

Drawing no.	Rev.
CE47/T03/FIG/069	-

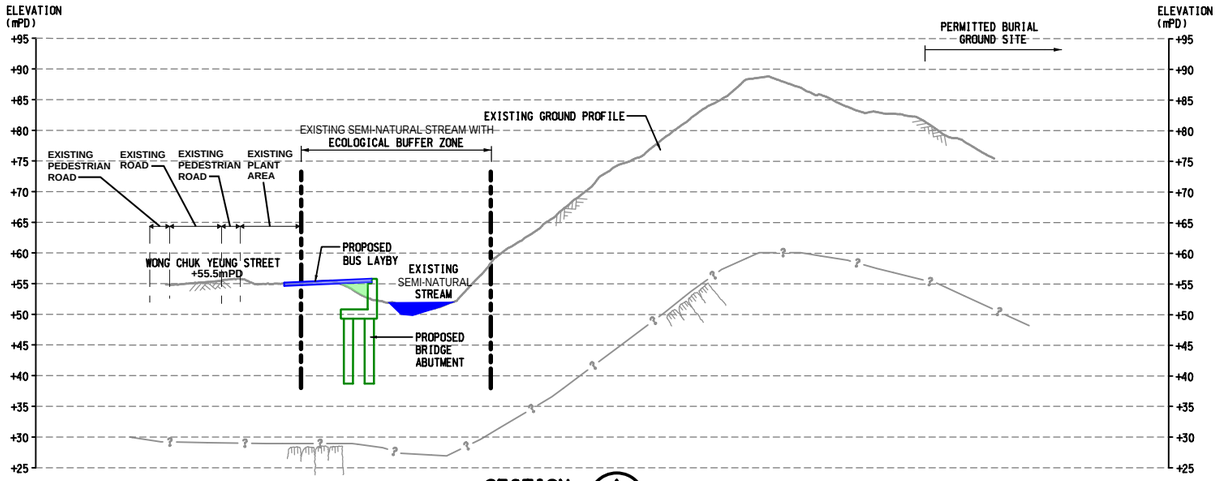
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CAD	AUG 22	VS	YWY

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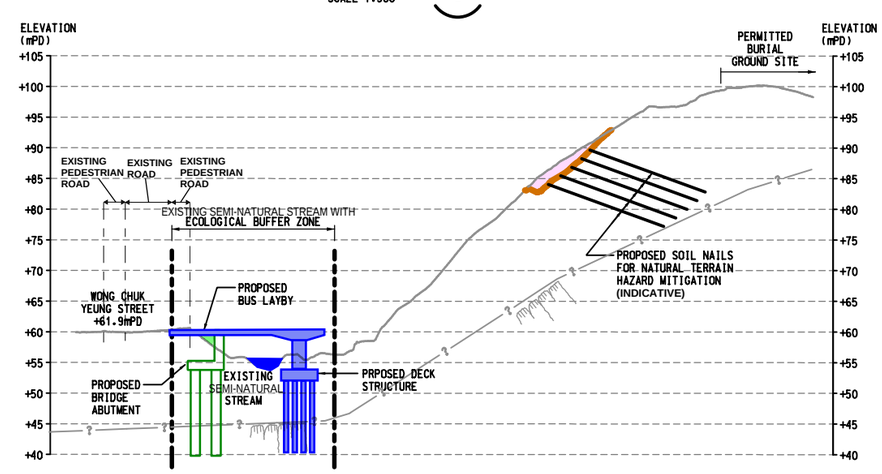
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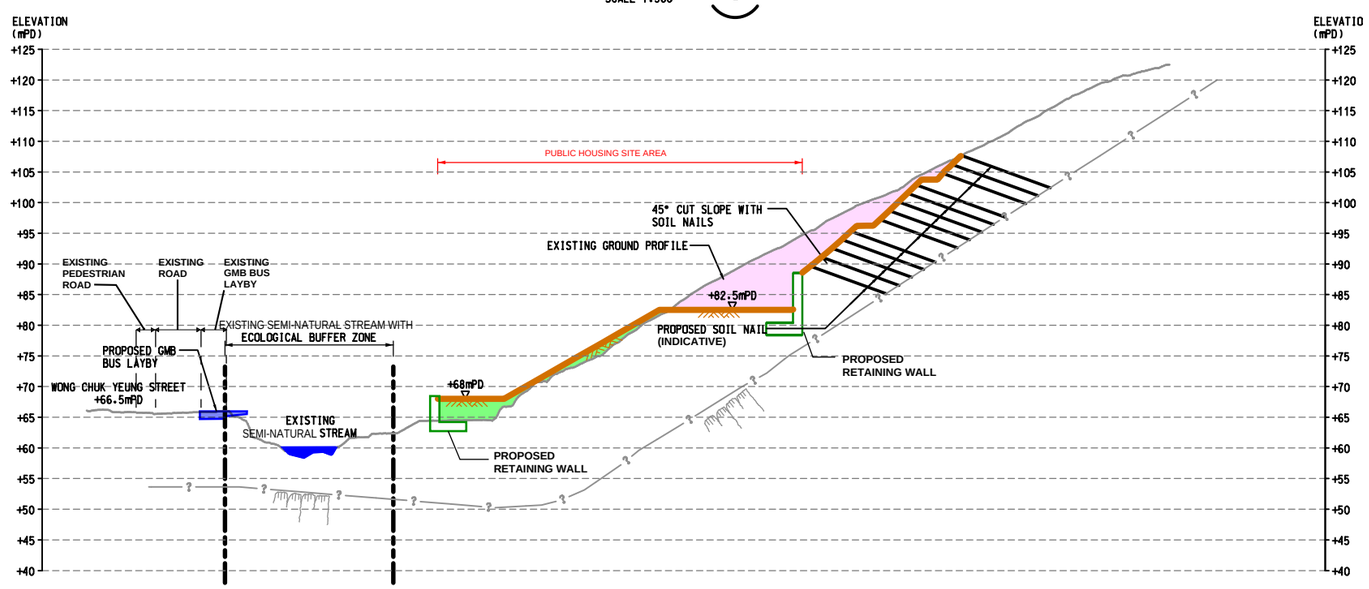
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SECTION A
SCALE 1:500



SECTION B
SCALE 1:500



SECTION C
SCALE 1:500

0 5 10 15 20 25
METRES
1 : 500

NOTES :

1. ALL DIMENSIONS ARE IN MILLIMETRES UNLESS OTHERWISE STATED.
2. ALL LEVELS ARE IN METRES (M) AND RELATIVE TO HONG KONG PRINCIPAL DATUM (mPD).
3. INFERRED ROCKHEAD FROM AVAILABLE SI RECORDS. EXACT GEOLOGICAL PROFILE TO BE CONFIRMED IN THE SUBSEQUENT SLOPES OF THE PROJECT

LEGEND :

EXCAVATION

FILL

INFERRED ROCKHEAD

NOTE:
FOR REFERENCE ONLY, SUBJECT TO CHANGE AT DETAILED DESIGN STAGE.

Rev	Description	By	Date
-	FIRST ISSUE	HL	AUG 22

Consultant

wsp

Project title

AGREEMENT NO.CE47/2020 (CE)
TERM CONSULTANCY FOR SITE FORMATION AND INFRASTRUCTURE WORKS FOR PROPOSED HOUSING DEVELOPMENTS IN ZONE 2 (2021 - 2024) - FEASIBILITY STUDY

Drawing title

TASK ORDER NO. 3
WEST OF EX-FO TAN COTTAGE AREA - SECTIONS
OPTION 1B
(SHEET 1 OF 2)

Drawing no.	Rev.
CE47/T03/FIG/069A	-

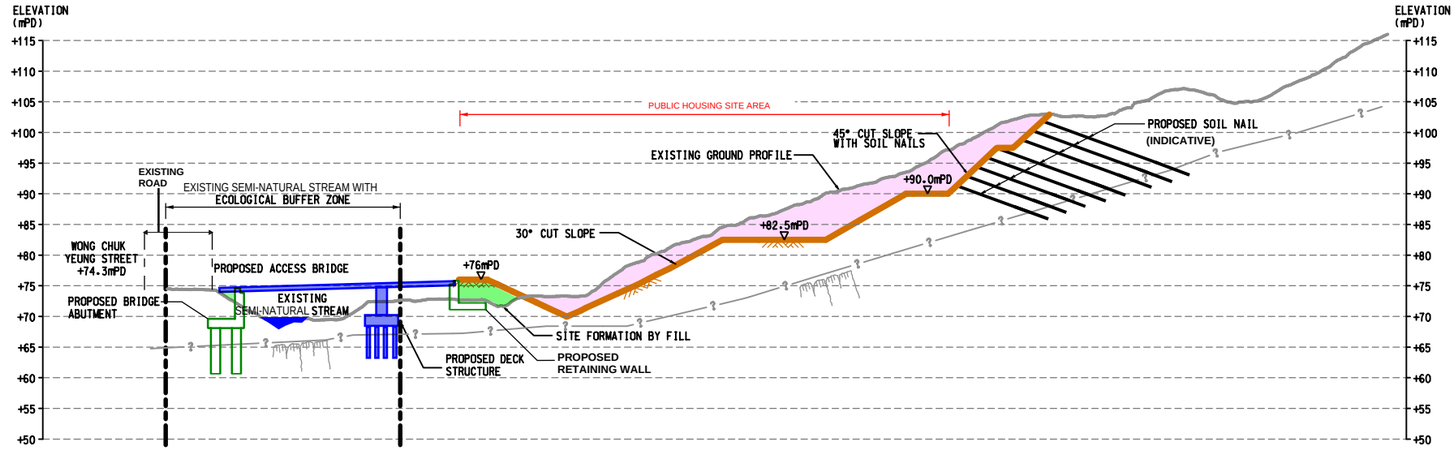
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CAD	AUG 22	VS	YWY

Scale	Status
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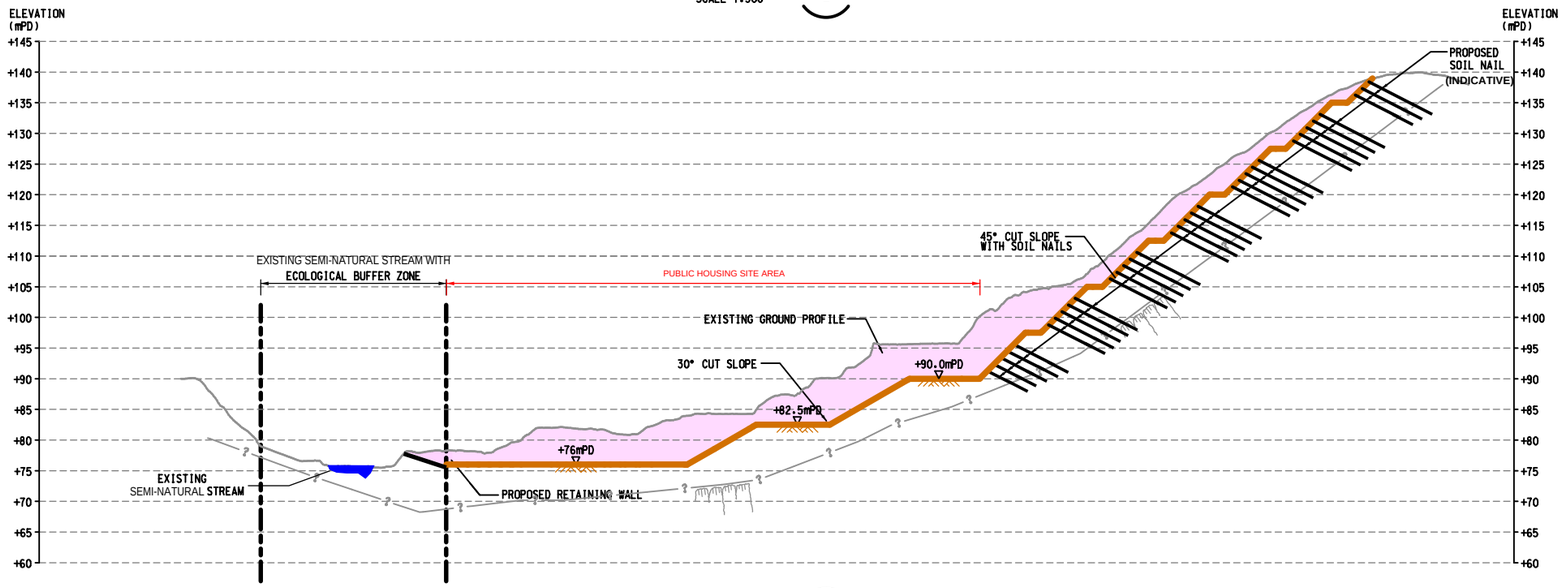
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土木工程處
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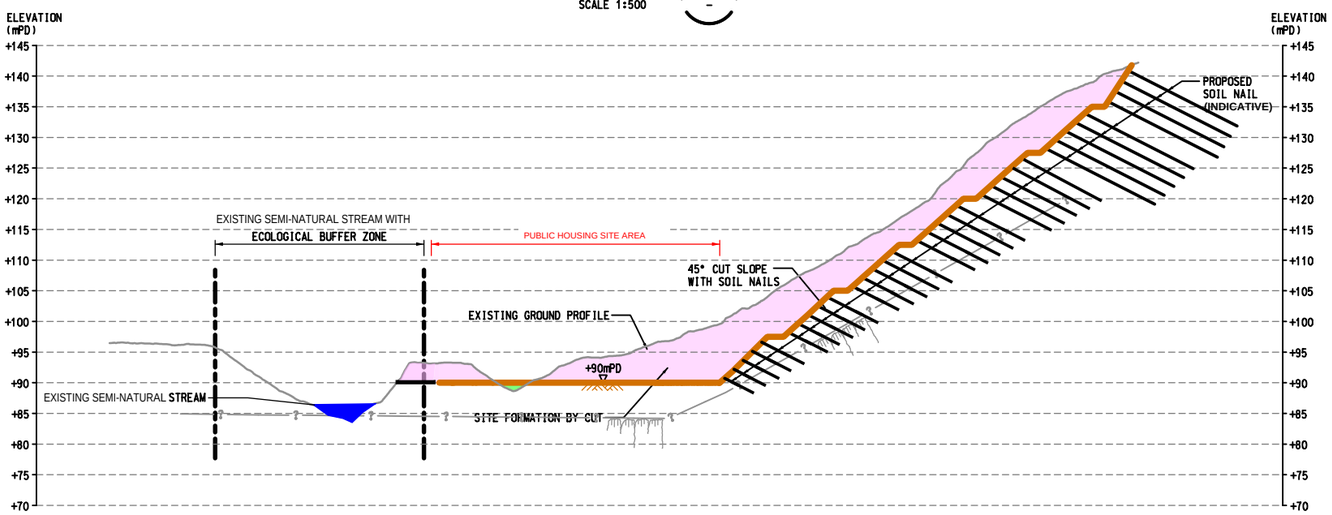
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SECTION D
SCALE 1:500



SECTION E
SCALE 1:500



SECTION F
SCALE 1:500

0 5 10 15 20 25
METRES
1 : 500

NOTES :

1. ALL DIMENSIONS ARE IN MILLIMETRES UNLESS OTHERWISE STATED.
2. ALL LEVELS ARE IN METRES (M) AND RELATIVE TO HONG KONG PRINCIPAL DATUM (mPD).
3. INFERRED ROCKHEAD FROM AVAILABLE SI RECORDS. EXACT GEOLOGICAL PROFILE TO BE CONFIRMED IN THE SUBSEQUENT SLOPES OF THE PROJECT

LEGEND :

EXCAVATION

FILL

INFERRED ROCKHEAD

NOTE:
FOR REFERENCE ONLY, SUBJECT TO CHANGE AT DETAILED DESIGN STAGE.

Rev	Description	By	Date
-	FIRST ISSUE	HL	AUG 22

Consultant

wsp

Project title

AGREEMENT NO.CE47/2020 (CE)

TERM CONSULTANCY FOR SITE FORMATION AND INFRASTRUCTURE WORKS FOR PROPOSED HOUSING DEVELOPMENTS IN ZONE 2 (2021 - 2024) - FEASIBILITY STUDY

Drawing title

TASK ORDER NO. 3
WEST OF EX-FO TAN COTTAGE AREA - SECTIONS
OPTION 1B
(SHEET 2 OF 2)

Drawing no.	Rev.
CE47/T03/FIG/069B	-

Drawn	Date	Checked	Approved
CAD	AUG 22	VS	YWY

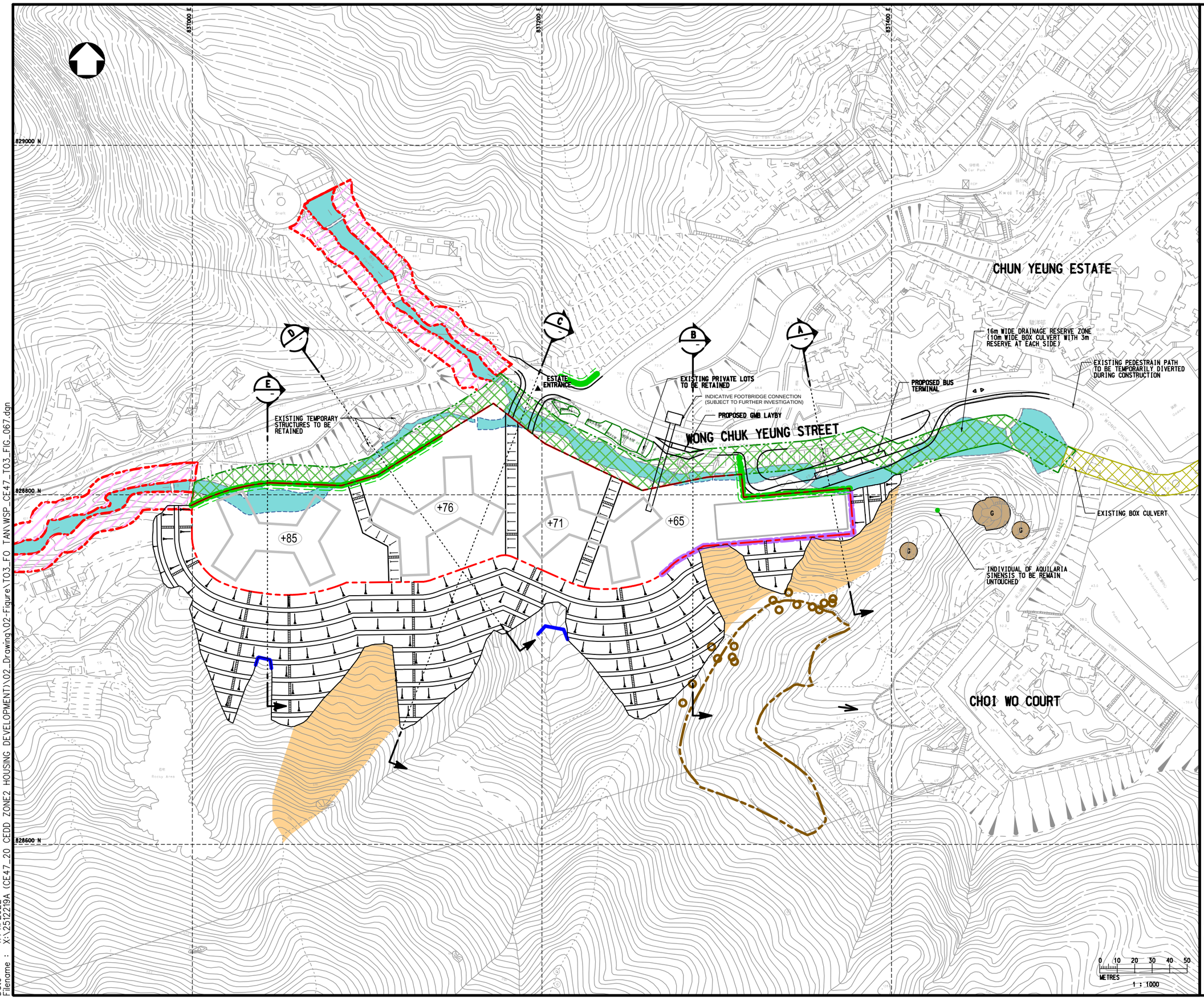
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Status: -

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Date : 18/8/2022
Filename : x:\2512219a (ce47_20 cedd zone2 housing development)\02_drawing\02-figure\to3_fo tan\WSP_CE47_T03_FIG_069-B.dgn



NOTES :

1. ALL DIMENSIONS ARE IN MILLIMETRES UNLESS OTHERWISE STATED.
2. ALL LEVELS ARE IN METRES (M) AND RELATIVE TO HONG KONG PRINCIPAL DATUM (mPD).

LEGEND :

- STUDY BOUNDARY
- PROPOSED PUBLIC HOUSING SITE BOUNDARY (NET SITE AREA = ± 21,450m²)
- PERMITTED BURIAL GROUND SITE
- PRIVATE LOT
- EXISTING STREAM
- PROPOSED MAX. 30°SLOPE
- G — EXISTING GRAVE WITH 5m PROTECTION ZONE
- +60 — PROPOSED SITE FORMATION LEVEL
- BUFFER ZONE FOR EXISTING STREAM
- PROPOSED 45° CUT SLOPE WITH SOIL NAILS
- EXISTING AQUILARIA SINENSIS
- PROPOSED L-SHAPE RETAINING WALL (RETAINING HEIGHT = MAX. 6m)
  - EDGE OF WALL BASE
- PROPOSED SOILDER PILE (RETAINING HEIGHT = MAX. 10m)
- MITIGATION FOR NTHS: ADDITIONAL SOIL NAILS (INDICATIVE ONLY)
- MITIGATION FOR NTHS: CHECK DAM (INDICATIVE ONLY)

NOTE:
FOR REFERENCE ONLY, SUBJECT TO CHANGE AT DETAILED DESIGN STAGE.

Rev	Description	By	Date
–	FIRST ISSUE	HL	JUL 22

Consultant

wsp

Project title

AGREEMENT NO.CE47/2020 (CE)
TERM CONSULTANCY FOR SITE FORMATION AND INFRASTRUCTURE WORKS FOR PROPOSED HOUSING DEVELOPMENTS IN ZONE 2 (2021 – 2024) – FEASIBILITY STUDY

Drawing title

TASK ORDER NO.3
WEST OF EX-FO TAN COTTAGE AREA – SITE FORMATION PLAN
REVISED SITE BOUNDARY PLAN
OPTION 2

Drawing no.	Rev.
CE47/T03/FIG/067	–

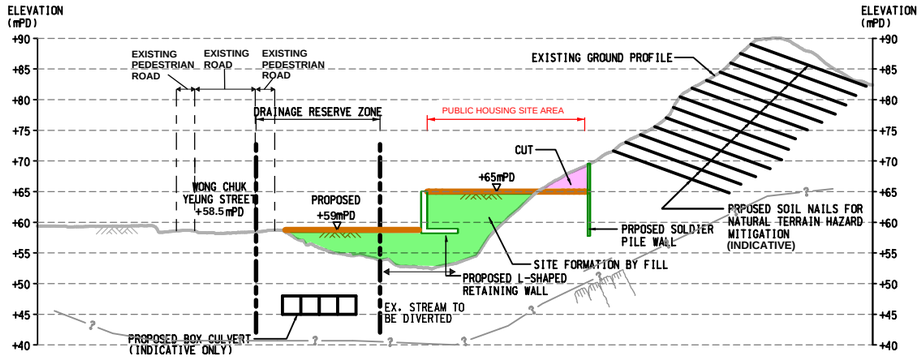
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CAD	JUL 22	VS	YWY

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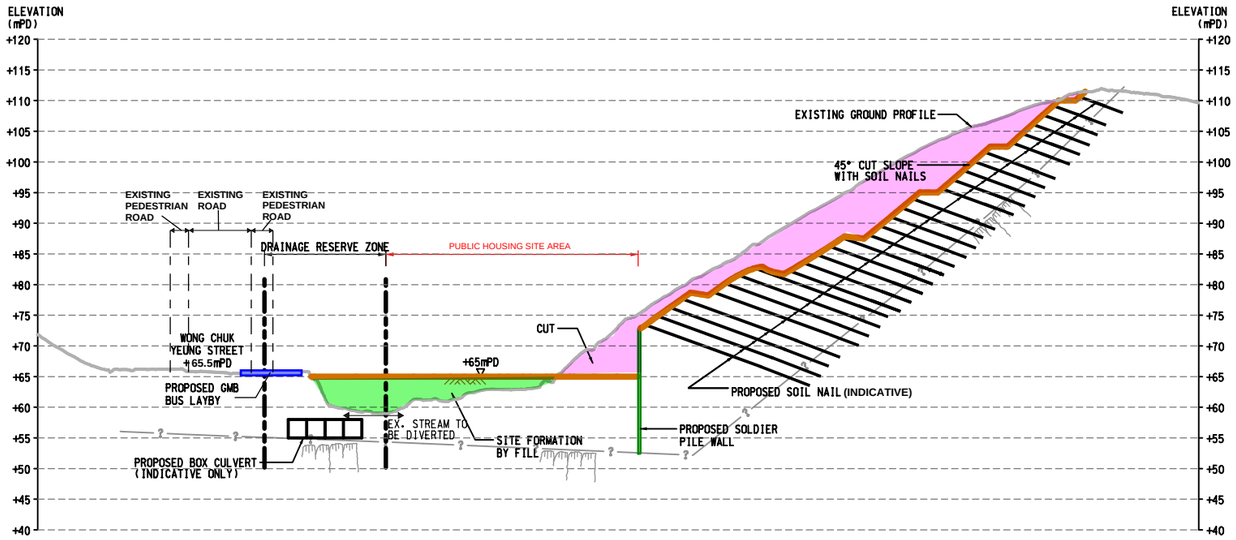
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CIVIL ENGINEERING OFFICE

Date : 17/11/2022
Filename : X:\2512219A (CE47_20 CEDD ZONE2 HOUSING DEVELOPMENT)\02_Drawing\02-Figure\T03_FO TAN\WSP_CE47_T03_FIG_067.dgn

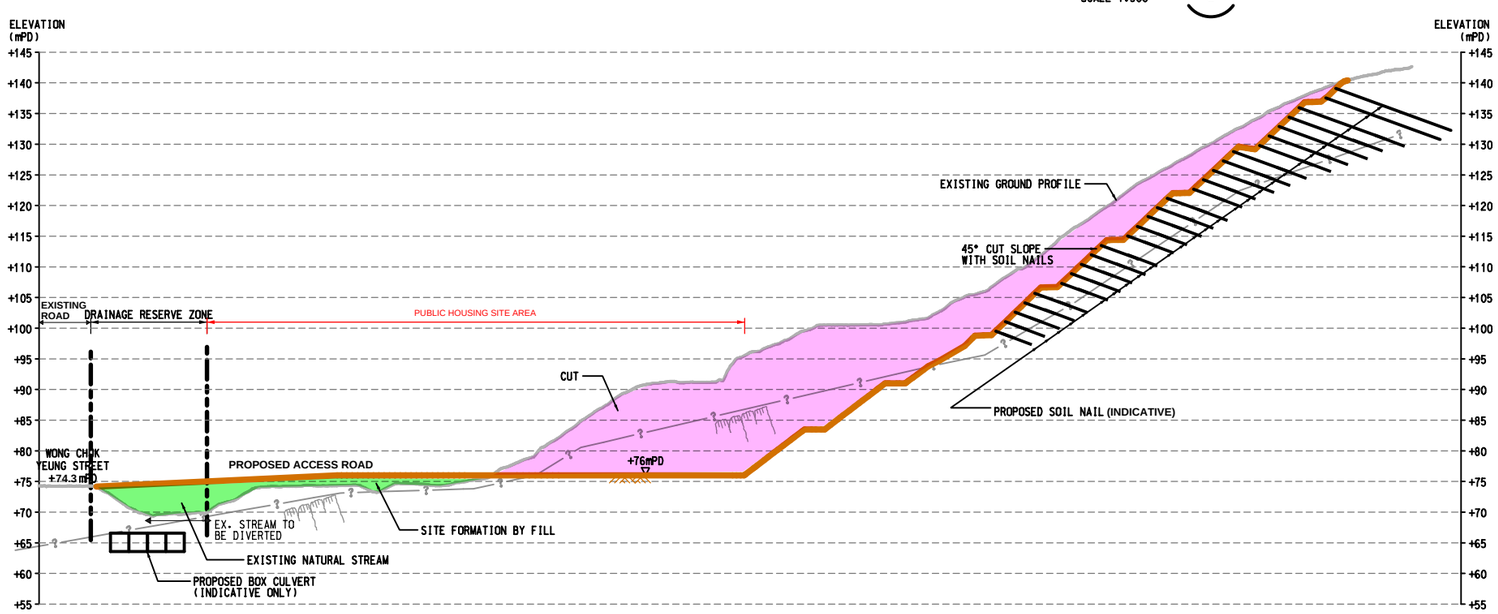


SECTION A
SCALE 1:500 -



WONG CHUK YEUNG STREET + mPD

SECTION B
SCALE 1:500 -



SECTION C
SCALE 1:500 -

0 5 10 15 20 25
METRES
1 : 500

NOTES :

1. ALL DIMENSIONS ARE IN MILLIMETRES UNLESS OTHERWISE STATED.
2. ALL LEVELS ARE IN METRES (M) AND RELATIVE TO HONG KONG PRINCIPAL DATUM (mPD).
3. INFERRED ROCKHEAD FROM AVAILABLE SI RECORDS. EXACT GEOLOGICAL PROFILE TO BE CONFIRMED IN THE SUBSEQUENT SLOPES OF THE PROJECT

LEGEND :

EXCAVATION

FILL

INFERRED ROCKHEAD

NOTE:
FOR REFERENCE ONLY, SUBJECT TO CHANGE AT DETAILED DESIGN STAGE.

Rev	Description	By	Date
-	FIRST ISSUE	HL	JUL 22

Consultant

wsp

Project title

AGREEMENT NO.CE47/2020 (CE)
TERM CONSULTANCY FOR SITE FORMATION AND INFRASTRUCTURE WORKS FOR PROPOSED HOUSING DEVELOPMENTS IN ZONE 2 (2021 - 2024) - FEASIBILITY STUDY

Drawing title

TASK ORDER NO. 3
WEST OF EX-FO TAN COTTAGE AREA - SECTIONS
OPTION 2
(SHEET 1 OF 2)

Drawing no.	Rev.
CE47/T03/FIG/067A	-

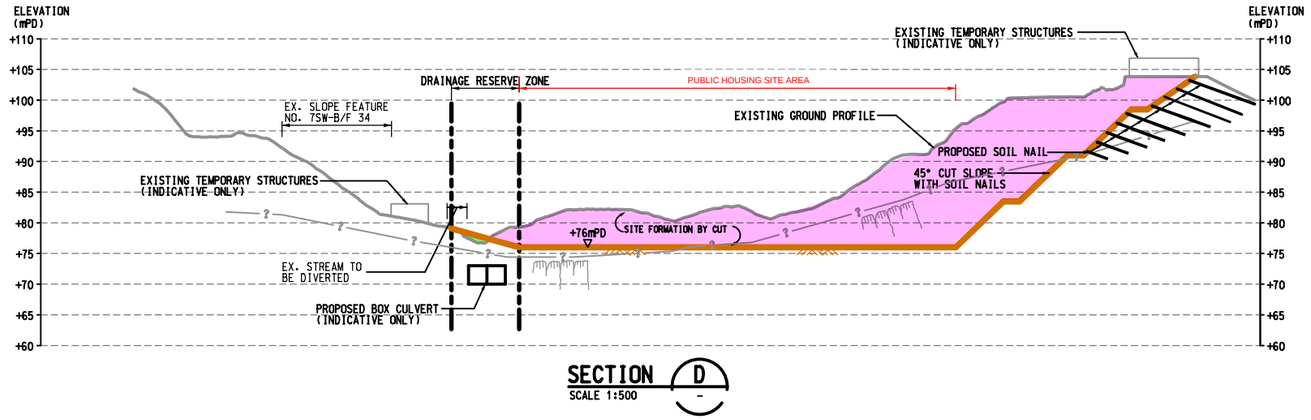
Drawn	Date	Checked	Approved
CAD	JUL 22	YS	YWY

Scale	Status
AS SHOWN (A1)	-

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CIVIL ENGINEERING OFFICE

Date : 18/8/2022
Filename : X:\2512219A (CE47_20 CEDD ZONE2 HOUSING DEVELOPMENT)\02_Drawing\02-Figure\T03_FO TAN\WSP_CE47_T03_FIG_067-A.dgn



SECTION D
SCALE 1:500

SECTION E
SCALE 1:500

NOTES :

1. ALL DIMENSIONS ARE IN MILLIMETRES UNLESS OTHERWISE STATED.
2. ALL LEVELS ARE IN METRES (M) AND RELATIVE TO HONG KONG PRINCIPAL DATUM (mPD).
3. INFERRED ROCKHEAD FROM AVAILABLE SI RECORDS. EXACT GEOLOGICAL PROFILE TO BE CONFIRMED IN THE SUBSEQUENT SLOPES OF THE PROJECT

LEGEND :

EXCAVATION

FILL

INFERRED ROCKHEAD

NOTE:
FOR REFERENCE ONLY, SUBJECT TO CHANGE AT DETAILED DESIGN STAGE.

0 5 10 15 20 25
METRES
1 : 500

Rev	Description	By	Date
–	FIRST ISSUE	HL	JUL 22

Consultant

wsp

Project title

AGREEMENT NO.CE47/2020 (CE)
TERM CONSULTANCY FOR SITE FORMATION AND INFRASTRUCTURE WORKS FOR PROPOSED HOUSING DEVELOPMENTS IN ZONE 2 (2021 – 2024) – FEASIBILITY STUDY

Drawing title

TASK ORDER NO. 3
WEST OF EX-FO TAN COTTAGE AREA – SECTIONS
OPTION 2
(SHEET 2 OF 2)

Drawing no.	Rev.
CE47/T03/FIG/067B	–

Drawn	Date	Checked	Approved
CAD	JUL 22	VS	YWY

Scale	Status
AS SHOWN (A1)	–

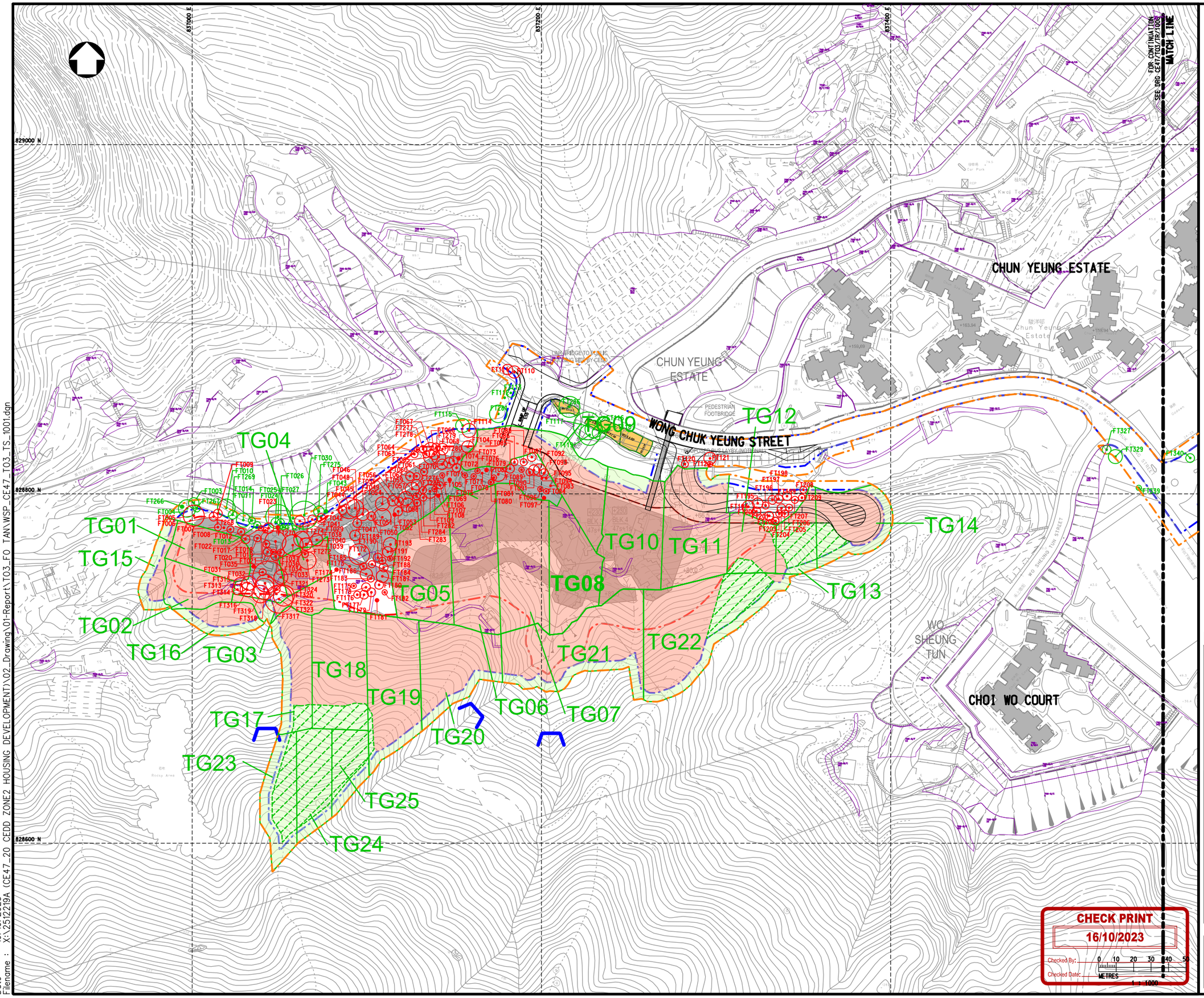
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Date : 18/8/2022
Filename : x:\2512219a (ce47_20 cedd zone2 housing development)\02_drawing\02-figure\to3_fo tan\WSP_CE47_TO3_FIG_067-B.dgn

APPENDIX D

TREE SURVEY PLAN AND SCHEDULE



LEGEND :

- PUBLIC HOUSING SITE BOUNDARY
- TREE SURVEY BOUNDARY
- EXISTING TREE GROUP TO BE RETAINED
- EXISTING TREE GROUP TO BE AFFECTED BY PROPOSED WORK
- MITIGATION OFR NTHS : ADDITIONAL SOIL NAILS (INDICATIVE ONLY)
- WORKS LIMIT
- FT293 EXISTING TREE TO BE RETAINED
- FT043 EXISTING TREE TO BE REMOVED
- PROPOSED WORKS
- SIMAR SLOPE
- MITIGATION FOR NTHS : CHECK DAM (INDICATIVE ONLY)

Rev	Description	By	Date

Consultant

wsp

Project title

AGREEMENT NO.CE47/2020 (CE)
TERM CONSULTANCY FOR SITE FORMATION AND INFRASTRUCTURE WORKS FOR PROPOSED HOUSING DEVELOPMENTS IN ZONE 2 (2021 - 2024) - FEASIBILITY STUDY

Drawing title

TREE SURVEY LAYOUT PLAN OVERLAID WITH PROPOSED WORK

Drawing no.	Rev.
CE47/T03/TS/1001	-

Drawn	Date	Checked	Approved
CAD	APR 2021	VS	YMY

Scale: 1:1000 (A1)
Status: -

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CHECK PRINT
16/10/2023
Checked By:
Checked Date:
0 10 20 30 40 50
METRES
1 : 1000

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CIVIL ENGINEERING OFFICE

Date : 16/10/2023
Filename : X:\2512219A (CE47_20 CEDD ZONE2 HOUSING DEVELOPMENT)\02_Drawing\01-Report\T03_FO TAN\WSP_CE47_T03_TS_1001.dgn

LEGEND :

- WORKS LIMIT
- TREE SURVEY BOUNDARY
- LOT BOUNDARY
- TREE TO BE RETAINED
- TREE TO BE REMOVED
- TREE TO BE TRANSPLANTED
- TG-1 TREE GROUP TO BE RETAINED
- TG-1 TREE GROUP TO BE REMOVED
- PROPOSED WORKS
- SIMAR SLOPE

Rev	Description	By	Date

Consultant

wsp

Project title

AGREEMENT NO.CE47/2020 (CE)
TERM CONSULTANCY FOR SITE FORMATION AND INFRASTRUCTURE WORKS FOR PROPOSED HOUSING DEVELOPMENTS IN ZONE 2 (2021 - 2024) - FEASIBILITY STUDY

Drawing title

TASK ORDER NO.3 FO TAN
TREE SURVEY LAYOUT PLAN
OVERLAID WITH PROPOSED WORK

Drawing no.	Rev.
CE47/T03/TS/1006	–

Drawn	Date	Checked	Approved
CAD		VS	YWY

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Status: –

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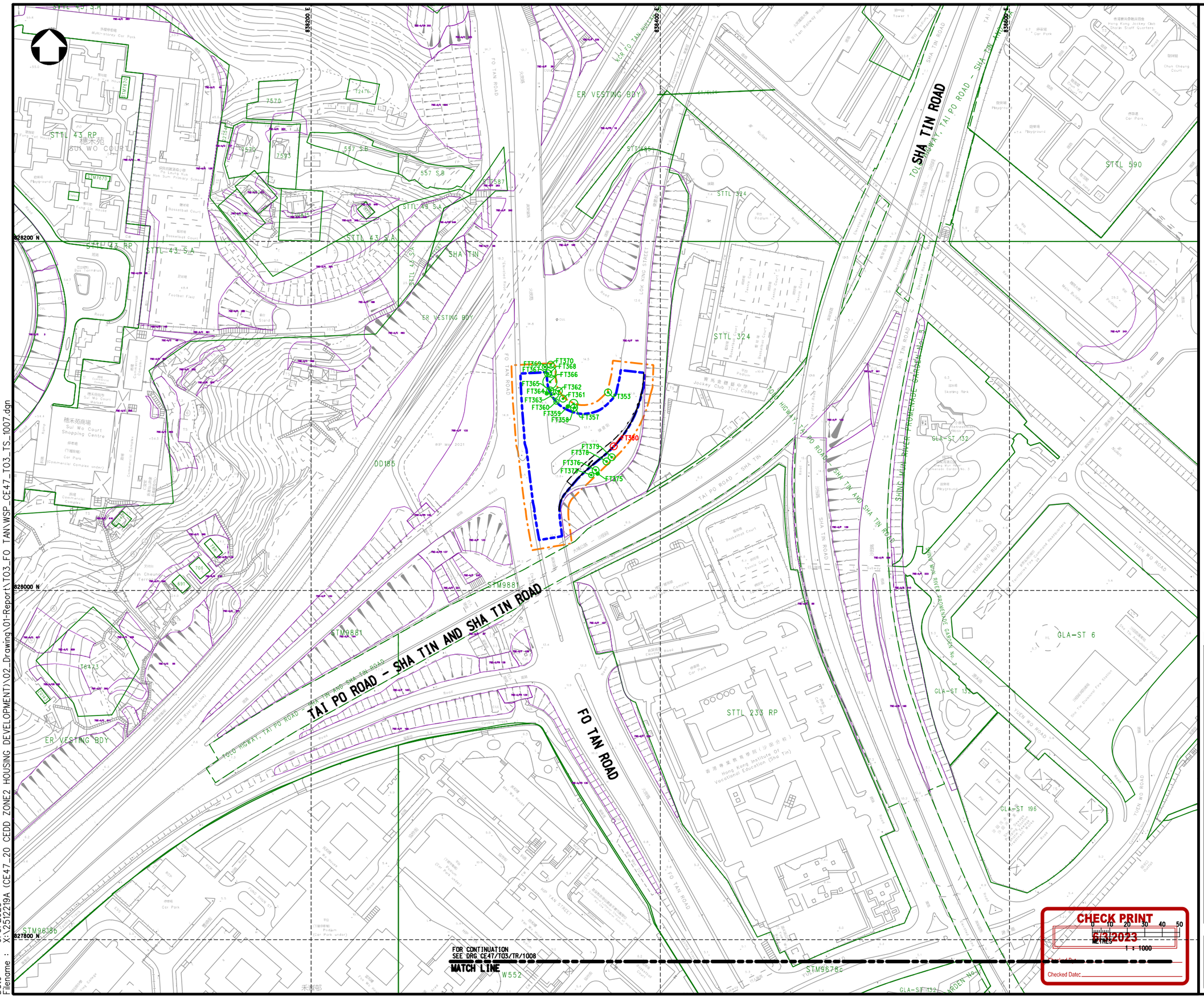
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土木工程拓展署
CIVIL ENGINEERING AND DEVELOPMENT DEPARTMENT
土木工程處
CIVIL ENGINEERING OFFICE

Date : 24/2/2023
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FOR CONTINUATION SEE DRG CE47/T03/TR/1001
MATCH LINE

FOR CONTINUATION SEE DRG CE47/T03/TR/1007
MATCH LINE

KWEI TEI STREET
SUI WO ROAD
AU PUI WAN STREET
FO TAN ROAD
SHAN MEI STREET
CHUN YEUNG ESTATE
SHA TIN
FLATTED FACTORY


838200 E
838400 E
838600 E
828200 N
828000 N
827800 N
STTL 43 S.A
STTL 43 RP
穗禾苑
SUI WO COURT
STTL 43 S.A
557 S.B
7570
7535
7520
T2475
SMW670
STTL 49 S.A
SHA TIN
ER VESTING BDY
FO TAN ROAD
KCR FO TAN HUMEN
LOK KING STREET
STTL 1451
STTL 324
STTL 590
SHA TIN ROAD
TOLO HIGHWAY, TAI PO ROAD - SHA TIN AND SHA TIN ROAD
Jockey Club Ti-I College
Hong Kong Institute of Vocational Education (Sha Tin)
STTL 233 RP
Sha Tin Swimming Pool
Sha Tin Sheltered Care Home
Sha Tin Government Offices
Sha Tin Town Hall
Sha Tin Public Library
Sha Tin Complex
Sha Tin Fire Station
Sha Tin Ambulance Depot
Sha Tin Police Station
Sha Tin Police Married Quarters
Sha Tin Police Headquarters
Sha Tin Police Station Married Quarters
Sha Tin Police Station Married Quarters Annex
Sha Tin Police Station Married Quarters Extension
Sha Tin Police Station Married Quarters Extension Annex
Sha Tin Police Station Married Quarters Extension Annex 2
Sha Tin Police Station Married Quarters Extension Annex 3
Sha Tin Police Station Married Quarters Extension Annex 4
Sha Tin Police Station Married Quarters Extension Annex 5
Sha Tin Police Station Married Quarters Extension Annex

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838400 E
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838800 E
827800 N
827600 N
827400 N

YUEN WO ROAD
SHING MUN RIVER CHANNEL
SHA TIN ROAD
TAI CHUNG KIU ROAD
FO TAN ROAD
SHA TIN SPORTS GROUND
SHING MUN RIVER PROMENADE GARDEN No.1
SHING MUN RIVER PROMENADE GARDEN No.2
CHE ESTATE
Sha Tin Sports Ground
Belair Gardens
Pedestrian Subway Access
(DRAGON BRIDGE)
TOLO HIGHWAY - TAI PO ROAD - SHA TIN AND SHA TIN ROAD

GLA-ST 71
GLA-ST 132
GLA-ST 134
GLA-ST 325
GLA-ST 41
STTL 1 S.A RP
STTL 1 S.A ss.1
STTL 1 S.H
STTL 1 S.B
STTL 1 S.E
STTL 1 S.M
STTL 11
W552
W561
STIM9678c

LEGEND :

- WORKS LIMIT
- TREE SURVEY BOUNDARY
- LOT BOUNDARY
- TREE TO BE RETAINED
- TREE TO BE REMOVED
- TREE TO BE TRANSPLANTED
- TG-1 TREE GROUP TO BE RETAINED
- TG-1 TREE GROUP TO BE REMOVED
- PROPOSED WORKS
- SIMAR SLOPE

Rev	Description	By	Date

Consultant

wsp

Project title

AGREEMENT NO.CE47/2020 (CE)
TERM CONSULTANCY FOR SITE FORMATION AND INFRASTRUCTURE WORKS FOR PROPOSED HOUSING DEVELOPMENTS IN ZONE 2 (2021 - 2024) - FEASIBILITY STUDY

Drawing title

TASK ORDER NO.3 FO TAN TREE SURVEY LAYOUT PLAN OVERLAID WITH PROPOSED WORK

Drawing no.	Rev.
CE47/T03/TS/1008	-

Drawn	Date	Checked	Approved
CAD		VS	YWY

Scale	Status
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CIVIL ENGINEERING AND DEVELOPMENT DEPARTMENT
土木工程處
CIVIL ENGINEERING OFFICE

Date : 13/1/2023
Filename : x:\2512219a (ce47_20 cedd zone2 housing development)\02_drawing\01-report\to3_fo tan\WSP_CE47_T03_TS_1008.dgn

Tree Assessment Schedule - Individual Tree Survey
Agreement No. CE47/2020 (CE) - Term Consultancy for Site Formation and Infrastructure Works for Proposed Housing Developments in Zone 2 (2021-2024) - Task Order 3 (Fo Tan)
Date of Tree Survey: : Oct 2021 to Dec 2021

Tree No.	Species		Tree Size			Amenity value	Form	Health Condition	Structural condition	Suitability for transplanting		Conservation status (Yes/Yes(Culvated)/No)	Recommendation	Maintenance department to provide comments on TPRP		Remarks
	Scientific name	Chinese Name	Height (m)	DBH (mm)	Crown Spread (m)	(high(H)/ medium(M) /low(L))	(good G)/average (A)/poor (P))			(high(H)/ medium(M)/ low(L))	Remarks		(Retain/Transplant/ Remove)	Before	After	
FT-003	*Sterculia lanceolata*	假蘋婆	6	100	6	L	P	A	A	L	1,2,4,5	No	Retain	LandsD	LandsD	Creeper, on slope
FT-004	*Sterculia lanceolata*	假蘋婆	8	350	10	L	A	A	A	L	1,2,5	No	Retain	LandsD	LandsD	Creeper, co-dominant stem, on slope
FT-005	*Macaranga tanarius var. tomentosa*	血桐	8	350	12	L	A	A	A	L	1,2,5	No	Remove	LandsD	-	Creeper, close to rock
FT-006	*Litsea glutinosa*	潺槁	12	350	5	M	A	A	A	L	2,5	No	Remove	LandsD	-	Creeper, on slope
FT-007	*Litsea glutinosa*	潺槁	10	200	4	L	A	P	A	L	1,2,4,5	No	Remove	LandsD	-	Old wound, restricted root growth
FT-008	*Bridelia tomentosa*	土密樹	10	150	4	M	A	A	A	L	1,2,5	No	Remove	LandsD	-	Creeper
FT-009	*Litsea glutinosa*	潺槁	10	150	5	M	A	A	A	L	1,2,5	No	Remove	LandsD	-	Creeper, on slope
FT-010	*Machilus chinensis*	華潤楠	12	450	5	M	A	A	A	L	2,5	No	Retain	LandsD	LandsD	Creeper, on slope
FT-011	*Machilus chinensis*	華潤楠	12	400	8	M	A	A	A	L	2,5	No	Retain	LandsD	LandsD	Co-dominant stem, dead branch, restricted root growth
FT-012	*Aporosa dioica*	銀柴	6	100	4	M	A	A	A	L	2,5	No	Remove	LandsD	-	Creeper, on slope
FT-013	*Cratoxylum cochinchinense*	黃牛木	8	150	4	L	P	A	P	L	1,2,4,5	No	Retain	LandsD	LandsD	Imbalance Crown, close to rock, broekn branchES
FT-014	*Schima superba*	木荷	6	100	2	M	A	A	A	L	2,5	No	Retain	LandsD	LandsD	Creeper, restricted root growth
FT-017	*Aporosa dioica*	銀柴	8	150	5	M	A	A	A	L	2,5	No	Remove	LandsD	-	Creeper, multi-stem, on slope
FT-018	*Schima superba*	木荷	7	250	4	M	A	A	A	L	2,5	No	Remove	LandsD	-	Dieback twigs, on slope
FT-019	*Artocarpus heterophyllus*	菠蘿蜜	10	120	3	L	A	A	A	L	1,2,5	No	Remove	LandsD	-	Creeper, on slope
FT-020	*Aporosa dioica*	銀柴	10	150	4	L	P	A	A	L	1,2,4,5	No	Remove	LandsD	-	Leaning at 10 degree, on slope
FT-021	*Sterculia lanceolata*	假蘋婆	10	200	5	M	A	A	A	L	2,5	No	Remove	LandsD	-	Leaning at 15 degree, creeper, on slope
FT-022	*Bridelia insulana*	禾串樹	8	150	3	M	A	A	A	L	2,5	No	Remove	LandsD	-	Creeper
FT-023	*Schefflera heptaphylla*	鴨腳木	6	220	6	L	A	A	A	L	1,2,5	No	Remove	LandsD	-	Heavy lateral limb, close to rock, near resident house
FT-024	*Schima superba*	木荷	7	250	5	L	P	A	A	L	1,2,4,5	No	Retain	LandsD	LandsD	Creeper, on slope
FT-025	*Schima superba*	木荷	9	300	7	L	P	A	A	L	1,2,4,5	No	Retain	LandsD	LandsD	Cross branches, on slope
FT-026	*Schefflera heptaphylla*	鴨腳木	5	250	4	L	A	A	A	L	1,2,5	No	Retain	LandsD	LandsD	Creeper, on slope
FT-027	*Dead Tree*	死樹	6	300	0.5	L	P	P	P	L	9	No	Retain	LandsD	LandsD	Dead tree, on slope
FT-029	*Schefflera heptaphylla*	鴨腳木	6	200	6	L	P	A	A	L	1,2,4,5	No	Remove	LandsD	-	Wounds, Water sprout, on slope
FT-030	*Schima superba*	木荷	8	250	8	M	A	A	A	L	2,5	No	Retain	LandsD	LandsD	Cross branches, on slope
FT-031	*Platycladus orientalis*	側柏	7	150	2	L	P	A	P	L	1,2,4,5	No	Remove	LandsD	-	Co-dominant trunk. Dieback twigs, restricted root growth
FT-032	*Dimocarpus longan*	龍眼	8	300	4	L	P	P	A	L	1,2,4,5	No	Remove	LandsD	-	Dieback twigs, on slope
FT-033	*Clausena lansium*	黃皮	6	250	5	L	P	A	P	L	1,2,4,5	No	Remove	LandsD	-	Leaning at 45 degrees, creeper, on slope
FT-034	*Litchi chinensis*	荔枝	15	500	12	M	A	A	A	L	2,5,8	No	Remove	LandsD	-	Restricted root growth, close to rock
FT-035	*Machilus pauhoi*	刨花潤楠	5	120	3	L	P	A	P	L	1,2,4,5	No	Remove	LandsD	-	Creepers, on slope, topping
FT-036	*Clausena lansium*	黃皮	6	150	4	L	P	A	A	L	1,2,4,5	No	Remove	LandsD	-	Co-dominant stem, restricted root growth
FT-037	*Litchi chinensis*	荔枝	16	550	12	L	P	A	A	L	1,2,4,5,8	No	Remove	LandsD	-	Co-dominant trunk, Dead Branches, on slope
FT-038	*Litchi chinensis*	荔枝	10	350	9	L	P	A	A	L	1,2,4,5	No	Remove	LandsD	-	Co-dominant trunk, topping
FT-039	*Litchi chinensis*	荔枝	9	350	7	L	P	P	A	L	1,2,4,5	No	Remove	LandsD	-	Bark crack, dead branches, restricted root growth
FT-040	*Litchi chinensis*	荔枝	9	300	7	L	P	P	P	L	1,2,4,5	No	Remove	LandsD	-	Decay, old wounds, restricted root growth, termits
FT-041	*Dimocarpus longan*	龍眼	7	200	5	L	P	A	A	L	1,2,4,5	No	Remove	LandsD	-	Water Sprouts, restricted root growth
FT-042	*Dimocarpus longan*	龍眼	12	250	5	L	A	A	P	L	1,2,4,5	No	Remove	LandsD	-	Decay on trunk, restricted root growth
FT-043	*Dimocarpus longan*	龍眼	7	150	2	L	P	A	A	L	1,2,4,5	No	Retain	LandsD	LandsD	Cross branches, restricted root growth
FT-044	*Dimocarpus longan*	龍眼	8	160	5	L	A	P	P	L	1,2,4,5	No	Remove	LandsD	-	Broken branch, close to rock
FT-045	*Litchi chinensis*	荔枝	12	500	12	M	A	A	A	L	2,5,8	No	Remove	LandsD	-	Heavy lateral limb, restricted root growth
FT-046	*Citrus limon*	檸檬	7	250	5	M	A	A	A	L	2,5	No	Remove	LandsD	-	Broken branch, restricted root growth
FT-047	*Clausena lansium*	黃皮	7	400	6	M	A	A	A	L	2,5	No	Remove	LandsD	-	Multi-stem, restricted root growth
FT-048	*Litchi chinensis*	荔枝	11	450	10	M	A	A	A	L	2,5	No	Remove	LandsD	-	Cross branches, restricted root growth

Tree Assessment Schedule - Individual Tree Survey
Agreement No. CE47/2020 (CE) - Term Consultancy for Site Formation and Infrastructure Works for Proposed Housing Developments in Zone 2 (2021-2024) - Task Order 3 (Fo Tan)
Date of Tree Survey: : Oct 2021 to Dec 2021

Tree No.	Species		Tree Size			Amenity value	Form	Health Condition	Structural condition	Suitability for transplanting		Conservation status (Yes/Yes(Culvated)/No)	Recommendation	Maintenance department to provide comments on TPRP		Remarks
	Scientific name	Chinese Name	Height (m)	DBH (mm)	Crown Spread (m)	(high(H)/ medium(M) /low(L))	(good G)/average (A)/poor (P))			(high(H)/ medium(M)/ low(L))	Remarks		(Retain/Transplant/ Remove)	Before	After	
FT-049	*Dimocarpus longan*	龍眼	8	400	7	M	A	A	A	L	2,5	No	Remove	LandsD	-	Co-dominant stem, Heavy lateral limb
FT-050	*Clausena lansium*	黃皮	4	195	5	L	P	A	P	L	1,2,4,5	No	Remove	LandsD	-	Ant nest, multi stem
FT-051	*Litchi chinensis*	荔枝	10	560	10	L	A	A	P	L	1,2,4,5,8	No	Remove	LandsD	-	Co-dominant stem, cavity on trunk, close to rock
FT-052	*Dead Tree*	死樹	6	200	2	L	P	P	P	L	9	No	Remove	LandsD	-	Dead tree
FT-053	*Citrus limon*	檸檬	7	180	5	L	P	P	A	L	1,2,4,5	No	Remove	LandsD	-	Dieback twigs, close to rock
FT-054	*Litchi chinensis*	荔枝	7	350	8	L	P	P	A	L	1,2,4,5	No	Remove	LandsD	-	Dieback twigs, restricted root growth
FT-055	*Artocarpus heterophyllus*	菠蘿蜜	10	300	6	L	P	P	P	L	1,2,4,5	No	Remove	LandsD	-	Dieback twigs, topped
FT-056	*Clausena lansium*	黃皮	7	200	5	L	A	P	A	L	1,2,4,5	No	Remove	LandsD	-	Dieback twigs, close to rock
FT-057	*Averrhoa carambola*	楊桃	7	300	8	L	A	A	P	L	1,2,4,5	No	Remove	LandsD	-	Dead Branch, close to rock
FT-058	*Litchi chinensis*	荔枝	9	350	8	L	A	P	A	L	1,2,4,5	No	Remove	LandsD	-	Dieback twigs, restricted root growth
FT-059	*Dimocarpus longan*	龍眼	7	250	8	L	A	P	A	L	1,2,4,5	No	Remove	LandsD	-	Fungus bodies found on branches, close to rock
FT-060	*Clausena lansium*	黃皮	4	130	4	L	P	A	P	L	1,2,4,5	No	Remove	LandsD	-	Included bark
FT-061	*Artocarpus heterophyllus*	菠蘿蜜	10	180	4	L	P	P	A	L	1,2,4,5	No	Remove	LandsD	-	Dead twigs, close to rock
FT-062	*Clausena lansium*	黃皮	7	150	5	L	A	P	A	L	1,2,4,5	No	Remove	LandsD	-	Dead Branch, restricted root growth
FT-063	*Artocarpus heterophyllus*	菠蘿蜜	8	150	4	L	P	A	A	L	1,2,4,5	No	Remove	LandsD	-	Dead twigs, close to rock, restricted root growth
FT-064	*Artocarpus heterophyllus*	菠蘿蜜	8	250	4	L	P	A	P	L	1,2,4,5	No	Remove	LandsD	-	Water Sprouts, close to rock, restricted root growth
FT-065	*Averrhoa carambola*	楊桃	8	230	8	L	P	A	P	L	1,2,4,5	No	Remove	LandsD	-	Bark crack, close to rock, restricted root growth
FT-066	*Averrhoa carambola*	楊桃	6	150	6	L	P	A	P	L	1,2,4,5	No	Remove	LandsD	-	Heavy lateral limb, close to rocks, restricted root growth
FT-067	*Dimocarpus longan*	龍眼	6	350	8	L	A	P	A	L	1,2,4,5	No	Remove	LandsD	-	Dieback twigs, Dead branches, close to rock
FT-068	*Dimocarpus longan*	龍眼	8	350	8	L	A	P	A	L	1,2,4,5	No	Remove	LandsD	-	Creeper, Imbalanced tree crown , restricted root growth
FT-069	*Artocarpus heterophyllus*	菠蘿蜜	7	120	3	L	A	A	P	L	1,2,4,5	No	Remove	LandsD	-	Co-dominant stem, restricted root growth, exposed roots
FT-070	*Clausena lansium*	黃皮	6	150	6	M	A	A	A	L	2,5	No	Remove	LandsD	-	Creeper, restricted root growth
FT-071	*Dimocarpus longan*	龍眼	8	230	6	L	A	P	P	L	1,2,4,5	No	Remove	LandsD	-	Dead Branch, close to rock, restricted root growth
FT-072	*Dimocarpus longan*	龍眼	8	200	5	M	A	A	A	L	2,5	No	Remove	LandsD	-	Creeper, restricted root growth, old wound
FT-073	*Litchi chinensis*	荔枝	7	210	5	M	A	A	A	L	2,5	No	Remove	LandsD	-	Restricted root growth, close to rocks, multi-stem
FT-074	*Litchi chinensis*	荔枝	4	600	2	L	P	A	P	L	1,2,4,5,8	No	Remove	LandsD	-	Topped, restricted root growth
FT-075	*Clausena lansium*	黃皮	6	150	3	M	A	A	A	L	2,5	No	Remove	LandsD	-	Co-dominant stem, restricted root growth
FT-076	*Clausena lansium*	黃皮	6	180	3	L	A	A	A	L	1,2,5	No	Remove	LandsD	-	co-dominant stem, restricted root growth, topping
FT-077	*Artocarpus heterophyllus*	菠蘿蜜	8	160	3	M	A	A	A	L	2,5	No	Remove	LandsD	-	Stubs, restricted root growth
FT-078	*Citrus maxima*	柚	4	120	1	L	A	A	A	L	1,2,5	No	Remove	LandsD	-	Water Sprouts, Stubs
FT-079	*Clausena lansium*	黃皮	6	100	2	L	P	A	A	L	1,2,4,5	No	Remove	LandsD	-	Leaning at 15 degrees, restricted root growth
FT-080	*Artocarpus heterophyllus*	菠蘿蜜	7	130	3	L	P	A	A	L	1,2,4,5	No	Remove	LandsD	-	Restricted root growth, topping
FT-081	*Artocarpus heterophyllus*	菠蘿蜜	8	220	3	L	A	A	A	L	1,2,5	No	Remove	LandsD	-	Restricted root growth, co-dominant stem
FT-082	*Dimocarpus longan*	龍眼	9	350	8	L	A	A	P	L	1,2,4,5	No	Remove	LandsD	-	Included bark, stubs, restricted root growth
FT-083	*Clausena lansium*	黃皮	3	140	1	L	P	A	A	L	1,2,4,5	No	Remove	LandsD	-	Co-dominant stem, topped
FT-084	*Lagerstroemia indica*	紫薇	8	150	3	L	A	P	A	L	1,2,4,5	Yes - Culvated	Remove	LandsD	-	Sparse foliage, restricted root growth
FT-085	*Clausena lansium*	黃皮	6	180	5	M	A	A	A	L	2,5	No	Remove	LandsD	-	Multi stem
FT-086	*Clausena lansium*	黃皮	7	200	4	L	A	A	P	L	1,2,4,5	No	Remove	LandsD	-	Cross branches
FT-087	*Clausena lansium*	黃皮	9	250	5	L	P	P	A	L	1,2,4,5	No	Remove	LandsD	-	Multi-stem, old wound on trunk
FT-088	*Clausena lansium*	黃皮	6	150	4	M	A	A	A	L	2,5	No	Remove	LandsD	-	Multi stem, creeper
FT-089	*Clausena lansium*	黃皮	7	120	3	L	P	A	P	L	1,2,4,5	No	Remove	LandsD	-	Co-dominant stem
FT-090	*Clausena lansium*	黃皮	6	150	4	L	P	A	A	L	1,2,4,5	No	Remove	LandsD	-	Heavy lateral limb
FT-091	*Clausena lansium*	黃皮	8	200	6	M	A	A	A	L	2,5	No	Remove	LandsD	-	Multi stem

Tree Assessment Schedule - Individual Tree Survey

Agreement No. CE47/2020 (CE) - Term Consultancy for Site Formation and Infrastructure Works for Proposed Housing Developments in Zone 2 (2021-2024) - Task Order 3 (Fo Tan)

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FT-092	*Dimocarpus longan*	龍眼	11	300	7	L	A	P	P	L	1,2,4,5	No	Remove	LandsD	-	Broken branches, included bark
FT-093	*Clausena lansium*	黃皮	5	130	5	L	A	P	P	L	1,2,4,5	No	Remove	LandsD	-	Old wound with decay
FT-094	*Clausena lansium*	黃皮	4	150	1	L	P	P	A	L	1,2,4,5	No	Remove	LandsD	-	Creepers, topped
FT-095	*Clausena lansium*	黃皮	3	130	1	L	P	A	P	L	1,2,4,5	No	Remove	LandsD	-	Topped
FT-096	*Artocarpus heterophyllus*	菠蘿蜜	7	150	3	L	A	A	P	L	1,2,4,5	No	Remove	LandsD	-	Exposed root, restricted root growth
FT-097	*Artocarpus heterophyllus*	菠蘿蜜	7	110	2	L	A	A	A	L	1,2,5	No	Remove	LandsD	-	Restricted root growth
FT-104	*Macaranga tanarius* var. *tomentosa*	血桐	7	180	7	L	A	A	P	L	1,2,4,5	No	Remove	LandsD	-	Leaning at 15 degree, on slope
FT-105	*Clausena lansium*	黃皮	6	140	2	L	A	P	A	L	1,2,4,5	No	Remove	LandsD	-	Stubs, restricted root growth
FT-106	*Averrhoa carambola*	楊桃	4	200	4	M	A	A	A	L	2,5	No	Remove	LandsD	-	Topped, restricted root growth
FT-107	*Mangifera indica*	芒果	6	350	2	L	P	A	P	L	1,2,4,5	No	Remove	LandsD	-	Topped, restricted root growth
FT-108	*Clausena lansium*	黃皮	5	110	3	L	A	A	P	L	1,2,4,5	No	Remove	LandsD	-	Multi- stem, imbalance crown
FT-109	*Dimocarpus longan*	龍眼	8	350	8	L	A	A	P	L	1,2,4,5	No	Remove	LandsD	-	Dead twigs
FT-110	*Sterculia lanceolata*	假蘋婆	7	270	7	L	A	P	P	L	1,2,4,5	No	Remove	LCSD	-	dieback twigs, close to rock, restricted root growth
FT-111	*Sterculia lanceolata*	假蘋婆	6	230	6	L	A	A	P	L	1,2,4,5	No	Remove	LCSD	-	Creepers, close to rock
FT-112	*Dead Tree*	死樹	6	300	1	L	P	P	P	L	9	No	Retain	LandsD	LandsD	Dead Tree
FT-113	*Bridelia insulana*	禾串樹	7	180	5	L	P	A	P	L	1,2,4,5	No	Retain	LCSD	LCSD	Leaning at 15 degree, close to rock, creepers
FT-114	*Eriobotrya japonica*	枇杷	8	320	8	L	A	P	A	L	1,2,4,5	No	Remove	LandsD	-	Creepers, close to rock
FT-115	*Syzygium jambos*	蒲桃	8	320	8	L	P	A	P	L	1,2,4,5	No	Retain	LandsD	LandsD	Heavy lateral limb, close to rock
FT-116	*Macaranga tanarius* var. *tomentosa*	血桐	7	210	5	L	P	A	P	L	1,2,4,5	No	Retain	LandsD	LandsD	Multi-stem, creepers, hanger, broken stem
FT-117	*Macaranga tanarius* var. *tomentosa*	血桐	8	460	8	L	P	A	P	L	1,2,4,5	No	Retain	LandsD	LandsD	Multi-stem, leaning at 35 degree, broken branches, creepers
FT-118	*Ficus variegata* Blume	青果榕	5	230	4	L	P	A	P	L	1,2,4,5	No	Retain	LandsD	LandsD	Multi-stem, creepers, close to rock
FT-119	*Macaranga tanarius* var. *tomentosa*	血桐	8	360	6	L	P	A	P	L	1,2,4,5	No	Retain	LandsD	LandsD	Multi-stem, creepers, wounds, close to rock
FT-120	*Clausena lansium*	黃皮	5	210	4	L	P	A	P	L	1,2,4,5	No	Remove	LCSD	-	Wound on trunk, close to rock
FT-121	*Dimocarpus longan*	龍眼	9	280	7	L	A	P	A	L	1,2,4,5	No	Remove	LCSD	-	Creepers
FT-122	*Clausena lansium*	黃皮	5	110	3	L	P	A	P	L	1,2,4,5	No	Remove	LCSD	-	Multi-stem, Wound on trunk, restricted root growth
FT-172	*Ficus variegata* Blume	青果榕	12	550	12	L	A	P	A	L	1,2,4,5,8	No	Remove	LandsD	-	Dead twigs, on slope, restricted root growth
FT-173	*Clausena lansium*	黃皮	5	125	1	L	P	A	A	L	1,2,4,5	No	Remove	LandsD	-	On slope, restricted root growth, imbalance crown
FT-174	*Clausena lansium*	黃皮	3	210	2	L	P	A	A	L	1,2,4,5	No	Remove	LandsD	-	Multi stem, stub, on slope, close to rock, topped
FT-175	*Ficus hispida*	對葉榕	7	160	3	L	P	A	P	L	1,2,4,5	No	Remove	LandsD	-	Creepers, wounds, leaning at 15 degree, on slope
FT-176	*Schima superba*	木荷	10	290	4	L	A	P	P	L	1,2,4,5	No	Remove	LandsD	-	Dead Branch, on slope, close to rock
FT-177	*Syzygium jambos*	蒲桃	8	250	5	L	P	A	A	L	1,2,4,5	No	Remove	LandsD	-	Multi stem, topped, on slope
FT-178	*Schima superba*	木荷	12	330	5	M	A	A	A	L	2,5	No	Remove	LandsD	-	On slope, multi-stem
FT-179	*Schima superba*	木荷	10	400	5	L	A	P	A	L	1,2,4,5	No	Remove	LandsD	-	Creeper, on slope
FT-180	*Schima superba*	木荷	12	280	5	M	A	A	A	L	2,5	No	Remove	LandsD	-	Creeper, on slope
FT-181	*Clausena lansium*	黃皮	5	105	2	L	P	P	A	L	1,2,4,5	No	Remove	LandsD	-	Stub
FT-182	*Ficus hispida*	對葉榕	4	250	3	L	P	A	P	L	1,2,4,5	No	Remove	LandsD	-	Topped
FT-183	*Schima superba*	木荷	8	180	4	L	P	A	P	L	1,2,4,5	No	Remove	LandsD	-	Leaning at 25 degree
FT-184	*Schima superba*	木荷	9	260	4	L	A	P	A	L	1,2,4,5	No	Remove	LandsD	-	Dead twigs, on slope
FT-185	*Schima superba*	木荷	9	265	4	M	A	A	A	L	2,5	No	Remove	LandsD	-	On slope
FT-186	*Averrhoa carambola*	楊桃	6	430	7	L	A	P	A	L	1,2,4,5	No	Remove	LandsD	-	Defoliation, hanger
FT-187	*Sterculia lanceolata*	假蘋婆	8	170	7	M	A	A	A	L	2,5	No	Remove	LandsD	-	On slope, close to rock
FT-188	*Schefflera heptaphylla*	鴨腳木	8	160	5	L	P	A	A	L	1,2,4,5	No	Remove	LandsD	-	Imbalance Crown, on slope
FT-189	*Sterculia lanceolata*	假蘋婆	10	130	4	L	A	P	A	L	1,2,4,5	No	Remove	LandsD	-	Water Sprout, on slope

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Date of Tree Survey: : Oct 2021 to Dec 2021

Tree No.	Species		Tree Size			Amenity value	Form	Health Condition	Structural condition	Suitability for transplanting		Conservation status (Yes/Yes(Culvated)/No)	Recommendation	Maintenance department to provide comments on TPRP		Remarks
	Scientific name	Chinese Name	Height (m)	DBH (mm)	Crown Spread (m)	(high(H)/ medium(M) /low(L))	(good G)/average (A)/poor (P))			(high(H)/ medium(M)/ low(L))	Remarks		(Retain/Transplant/ Remove)	Before	After	
FT-190	*Ficus variegata* Blume	青果榕	11	380	5	M	A	A	A	L	2,5	No	Remove	LandsD	-	Dead branches
FT-191	*Ficus variegata* Blume	青果榕	11	400	6	M	A	A	A	L	2,5	No	Remove	LandsD	-	Multi-trunk
FT-192	*Macaranga tanarius* var. *tomentosa*	血桐	3	280	3	L	P	P	A	L	1,2,4,5	No	Remove	LandsD	-	Topped, restricted root growth
FT-193	*Melia azedarach*	苦楝	10	260	8	M	A	A	A	L	2,5	No	Remove	LandsD	-	Dead branches, restricted root growth, close to rock
FT-194	*Litchi chinensis*	荔枝	8	300	7	L	A	P	A	L	2,4,5	No	Remove	LandsD	-	Dieback twigs, close to rock
FT-195	*Dimocarpus longan*	龍眼	10	250	6	L	A	P	A	L	2,4,5	No	Remove	LandsD	-	Close to rock, creepers, dead branches
FT-196	*Dimocarpus longan*	龍眼	10	200	4	L	A	P	A	L	2,4,5	No	Remove	LandsD	-	Close to rock, creepers, hangers
FT-197	*Dimocarpus longan*	龍眼	10	200	5	L	A	A	P	L	2,4,5	No	Remove	LandsD	-	Close to rock, leaning at 25 degree
FT-198	*Dimocarpus longan*	龍眼	10	200	5	L	P	P	A	L	2,4,5	No	Remove	LandsD	-	Close to rock, dead branches
FT-199	*Clausena lansium*	黃皮	7	200	5	L	A	A	P	L	2,4,5	No	Remove	LandsD	-	Leaning 25 degrees, Imbalance Crown, close to rock
FT-200	*Ficus hispida*	對葉榕	7	200	5	L	A	A	A	L	2,5	No	Remove	LandsD	-	Close to rock, on slope, imbalance crown
FT-201	*Clausena lansium*	黃皮	7	150	5	L	P	A	A	L	2,4,5	No	Remove	LandsD	-	Multi-stem, close to rock
FT-202	*Clausena lansium*	黃皮	8	150	4	L	A	A	A	L	2,5	No	Remove	LandsD	-	Close to rock, on slope
FT-203	*Clausena lansium*	黃皮	8	180	4	L	A	A	P	L	2,4,5	No	Remove	LandsD	-	Leaning 25 degrees, Close to rock
FT-204	*Dimocarpus longan*	龍眼	9	150	5	L	P	A	A	L	2,5	No	Remove	LandsD	-	Close to rock, on slpe
FT-205	*Clausena lansium*	黃皮	7	150	4	L	P	A	A	L	2,5	No	Remove	LandsD	-	Leaning 25 degrees, Imbalance tree crown, Close to rock
FT-206	*Sterculia lanceolata*	假蘋婆	8	250	4	L	A	A	A	L	2,5	No	Remove	LandsD	-	Leaning 20 degrees, close to rock
FT-207	*Dimocarpus longan*	龍眼	6	120	4	L	A	P	A	L	2,4,5	No	Remove	LandsD	-	Close to rock, Dead branches
FT-208	*Dimocarpus longan*	龍眼	8	150	4	L	P	A	A	L	2,5	No	Remove	LandsD	-	Close to rock
FT-209	*Clausena lansium*	黃皮	7	250	4	L	P	A	P	L	2,4,5	No	Remove	LandsD	-	Leaning 20 degrees, Imbalance tree crown, close to rock
FT-266	*Dimocarpus longan*	龍眼	7	240	2	L	P	A	A	L	1,2,4,5	No	Retain	LandsD	LandsD	Close to rock
FT-267	*Averrhoa carambola*	楊桃	6	170	4	L	P	A	P	L	1,2,4,5	No	Retain	LandsD	LandsD	Co-dominant stem, leaning at 10 degrees, close to rock
FT-268	*Dead Tree*	死樹	3	330	1	L	P	P	P	L	9	No	Remove	LandsD	-	Dead tree, no canopy
FT-269	*Litsea glutinosa*	潺槁	8	280	5	L	P	P	P	L	1,2,4,5	No	Retain	LandsD	LandsD	Topping, close to rock, no tree tapping
FT-270	*Clausena lansium*	黃皮	4	100	2	M	A	A	A	L	2,5	No	Remove	LandsD	-	Restricted root growth
FT-271	*Juniperus chinensis*	龍柏	5	130	3	L	P	A	P	L	1,2,4,5	No	Retain	LandsD	LandsD	Co-dominant stem
FT-272	*Clausena lansium*	黃皮	7	100	4	L	P	A	P	L	1,2,4,5	No	Remove	LandsD	-	On slope
FT-273	*Ficus variegata* Blume	青果榕	12	560	10	M	A	A	A	L	2,5,8	No	Remove	LandsD	-	Restricted root growth
FT-274	*Litchi chinensis*	荔枝	4	210	1.5	L	P	A	P	L	1,2,4,5	No	Remove	LandsD	-	Restricted root growth, Water sprout
FT-275	*Sterculia lanceolata*	假蘋婆	9	250	6	M	A	A	A	L	2,5	No	Retain	LandsD	LandsD	On slope
FT-276	*Dimocarpus longan*	龍眼	9	310	6	L	A	P	A	L	1,2,4,5	No	Remove	LandsD	-	Restricted root growth
FT-277	*Artocarpus heterophyllus*	菠蘿蜜	5	150	4	L	A	P	A	L	1,2,4,5	No	Remove	LandsD	-	Close to rock
FT-278	*Clausena lansium*	黃皮	5	160	3	M	A	A	A	L	2,5	No	Remove	LandsD	-	Close to rock
FT-279	*Artocarpus heterophyllus*	菠蘿蜜	7	210	5	M	A	A	A	L	2,5	No	Remove	LandsD	-	Close to rock
FT-280	*Dimocarpus longan*	龍眼	7	250	6.5	M	A	A	A	L	2,5	No	Remove	LandsD	-	Close to rock
FT-281	*Litchi chinensis*	荔枝	10	610	10	L	A	A	A	L	1,2,5,8	No	Retain	LandsD	LandsD	Wound on trunk base, close to rock, no tree tapping
FT-282	*Artocarpus heterophyllus*	菠蘿蜜	8	170	4	L	A	P	A	L	1,2,4,5	No	Remove	LandsD	-	Restricted root growth
FT-283	*Clausena lansium*	黃皮	8	240	4	M	A	A	A	L	2,5	No	Remove	LandsD	-	Near pathway
FT-284	*Artocarpus heterophyllus*	菠蘿蜜	8	180	4	M	A	A	A	L	2,5	No	Remove	LandsD	-	Root restricted growth
FT-285	*Artocarpus heterophyllus*	菠蘿蜜	8	150	4	L	A	P	P	L	1,2,4,5	No	Remove	LandsD	-	Close to rock, topping, Root restricted growth
FT-286	*Mangifera indica*	芒果	8	580	6	L	A	A	A	L	1,2,5,8	No	Retain	LandsD	LandsD	Co-dominant stem, restricted root growth, No tree tapping
FT-313	*Ficus hispida*	對葉榕	5	120	4	M	A	A	A	L	2,5	No	Remove	LandsD	-	Close to rock, Restricted root growth
FT-314	*Schefflera heptaphylla*	鴨腳木	5	100	3	M	A	A	A	L	2,5	No	Remove	LandsD	-	Restricted root growth

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Tree No.	Species		Tree Size			Amenity value	Form	Health Condition	Structural condition	Suitability for transplanting		Conservation status (Yes/Yes(Culvated)/No)	Recommendation	Maintenance department to provide comments on TPRP		Remarks
	Scientific name	Chinese Name	Height (m)	DBH (mm)	Crown Spread (m)	(high(H)/ medium(M) /low(L))	(good G)/average (A)/poor (P))			(high(H)/ medium(M)/ low(L))	Remarks		(Retain/Transplant/ Remove)	Before	After	
FT-315	*Ilex rotunda*	鐵冬青	5	100	4	M	A	A	A	L	2,5	No	Remove	LandsD	-	Close to rock, Restricted root growth
FT-316	*Schefflera heptaphylla*	鴨腳木	5	100	4	M	A	A	A	L	2,5	No	Remove	LandsD	-	On slope
FT-317	*Schefflera heptaphylla*	鴨腳木	7	180	5	M	A	A	A	L	2,5	No	Remove	LandsD	-	Close to rock, Restricted root growth
FT-318	*Diospyros eriantha*	烏柿	7	150	6	M	A	A	A	L	2,5	No	Remove	LandsD	-	Co-dominant stem, on slope
FT-319	*Osmanthus fragrans*	桂花	7	130	5	M	A	A	A	L	2,5	No	Remove	LandsD	-	Co-dominant stem, on slope
FT-320	*Myrica rubra*	楊梅	5	110	2	L	P	A	P	L	1,2,4,5	No	Remove	LandsD	-	On slope, Wound
FT-321	*Aglaia odorata*	小葉米仔蘭	4	110	4	M	A	A	A	L	2,5	No	Remove	LandsD	-	Restricted root growth
FT-322	*Schefflera heptaphylla*	鴨腳木	8	230	6	M	A	A	A	L	2,5	No	Remove	LandsD	-	On slope
FT-323	*Aporosa dioica*	銀柴	8	430	8	L	P	A	P	L	1,2,4,5	No	Remove	LandsD	-	Collapsed, on slope
FT-324	*Mangifera indica*	芒果	9	480	9	M	A	A	A	L	2,5	No	Remove	LandsD	-	On slope
FT-327	*Bauhinia variegata*	宮粉羊蹄甲	7	180	5	L	P	A	A	L	1,2,4,5	No	Retain	LCSD	LCSD	On edge of road, Restricted root growth, Wounds at trunk, Crossed root with T328
FT-329	*Delonix regia*	鳳凰木	10	180	8	L	P	A	A	L	1,2,4,5	No	Retain	LCSD	LCSD	Crooked trunk
FT-339	*Macaranga tanarius* var. *tomentosa*	血桐	5	230	3	M	A	A	A	L	2	No	Retain	LCSD	LCSD	On edge of road, Restricted root growth
FT-340	*Ficus microcarpa*	榕樹	8	300	5	M	A	A	A	L	2	No	Retain	LCSD	LCSD	On tree pit, Restricted root growth
FT-342	*Thevetia peruviana*	黃花夾竹桃	3	230	2	L	P	P	P	L	1,2,4,5	No	Retain	LCSD	LCSD	On edge of road, Restricted root growth, Topped, Decaying trunk
FT-343	*Thevetia peruviana*	黃花夾竹桃	3	150	4	M	A	A	A	L	2	No	Retain	LCSD	LCSD	On edge of road, Restricted root growth,Slightly leaning trunk
FT-344	*Lagerstroemia speciosa*	大花紫薇	3	140	2	M	A	A	A	L	2	Yes - Culvated	Retain	LCSD	LCSD	On raised planter, Restricted root growth
FT-345	*Lagerstroemia speciosa*	大花紫薇	3.5	140	2	M	A	A	A	L	2	Yes - Culvated	Retain	LCSD	LCSD	On raised planter, Restricted root growth
FT-346	*Lagerstroemia speciosa*	大花紫薇	3.5	140	2	L	P	A	A	L	1,2,4,5	Yes - Culvated	Retain	LCSD	LCSD	On raised planter, Restricted root growth, Leaning Trunk
FT-347	*Melia azedarach*	苦楝	8	200	5	M	A	A	A	L	2	No	Retain	LCSD	LCSD	On raised planter, Restricted root growth
FT-353	*Peltophorum pterocarpum*	盾柱木	8	280	4	M	A	A	A	L	2,5	No	Retain	LandsD	LandsD	On edge of road
FT-357	*Peltophorum pterocarpum*	盾柱木	8	280	5	L	P	A	A	L	1,2,4,5	No	Retain	LandsD	LandsD	Crooked trunk
FT-358	*Peltophorum pterocarpum*	盾柱木	8	280	4	L	P	A	A	L	1,2,4,5	No	Retain	LandsD	LandsD	Crooked trunk
FT-359	*Bauhinia variegata*	宮粉羊蹄甲	4	150	2	L	P	A	A	L	1,2,4,5	No	Retain	LandsD	LandsD	Leaning trunk
FT-360	*Bauhinia purpurea*	紅花羊蹄甲	6	180	3	L	P	A	A	L	1,2,4,5	No	Retain	LandsD	LandsD	Crooked trunk
FT-361	*Adenanthera microsperma*	海紅豆	9	260	4	M	A	A	A	L	2,5	No	Retain	LandsD	LandsD	Dead branches
FT-362	*Bauhinia purpurea*	紅花羊蹄甲	8	200	4	M	A	A	A	L	2,5	No	Retain	LandsD	LandsD	-
FT-363	*Peltophorum pterocarpum*	盾柱木	9	240	5	M	A	A	A	L	2,5	No	Retain	LandsD	LandsD	-
FT-364	*Schefflera heptaphylla*	鴨腳木	2	120	2	M	A	A	A	L	2,5	No	Retain	LandsD	LandsD	DBH measured at 0.1m
FT-365	*Acacia confusa*	台灣相思	8	150	4	M	A	A	A	L	2,5	No	Retain	LandsD	LandsD	-
FT-366	*Acacia mangium*	大葉相思	8	480	8	M	A	A	A	L	2,5	No	Retain	LandsD	LandsD	-
FT-367	*Adenanthera microsperma*	海紅豆	7	200	4	M	A	A	A	L	1,2,5	No	Retain	LandsD	LandsD	-
FT-368	*Acacia confusa*	台灣相思	10	340	6	L	P	A	A	L	1,2,4,5	No	Retain	LandsD	LandsD	Included bark
FT-369	*Peltophorum pterocarpum*	盾柱木	6	180	3	L	P	A	A	L	1,2,4,5	No	Retain	LandsD	LandsD	Crossed branches
FT-370	*Adenanthera microsperma*	海紅豆	8	230	4	M	A	A	A	L	2,5	No	Retain	LandsD	LandsD	-
FT-373	*Acacia confusa*	台灣相思	5	180	3	L	P	A	A	L	1,2,4,5	No	Retain	LandsD	LandsD	Crooked trunk
FT-375	*Acacia confusa*	台灣相思	8	150	2	L	P	P	P	L	1,9	No	Retain	LandsD	LandsD	Dead tree
FT-376	*Acacia confusa*	台灣相思	8	230	4	M	A	A	A	L	2,5	No	Retain	LandsD	LandsD	Leaning trunk
FT-378	*Acacia confusa*	台灣相思	9	230	4	M	A	A	A	L	2,5	No	Retain	LandsD	LandsD	-
FT-379	*Acacia confusa*	台灣相思	8	330	4	L	P	A	A	L	1,2,4,5	No	Retain	LandsD	LandsD	Leaning trunk, included bark
FT-380	*Dead Tree*	死樹	8	360	4	L	P	P	P	L	1,9	No	Remove	LandsD	-	Dehydrated trunk
FT-382	*Wodyetia bifurcata*	狐尾椰子	6	230	3.5	M	A	A	A	M	-	No	Retain	LCSD	LCSD	On central divider
FT-383	*Wodyetia bifurcata*	狐尾椰子	6	230	3.5	M	A	A	A	M	-	No	Retain	LCSD	LCSD	On central divider

Tree Assessment Schedule - Individual Tree Survey
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Date of Tree Survey: : Oct 2021 to Dec 2021

Tree No.	Species		Tree Size			Amenity value	Form	Health Condition	Structural condition	Suitability for transplanting		Conservation status (Yes/Yes(Culvated)/No)	Recommendation	Maintenance department to provide comments on TPRP		Remarks
	Scientific name	Chinese Name	Height (m)	DBH (mm)	Crown Spread (m)	(high(H)/ medium(M) /low(L))	(good G)/average (A)/poor (P))			(high(H)/ medium(M)/ low(L))	Remarks		(Retain/Transplant/ Remove)	Before	After	
FT-384	*Wodyetia bifurcata*	狐尾椰子	6	230	3.5	M	A	A	A	M	-	No	**Retain**	LCSD	LCSD	On central divider
FT-385	*Wodyetia bifurcata*	狐尾椰子	6	240	3.5	M	A	A	A	M	-	No	**Retain**	LCSD	LCSD	On central divider
FT-386	*Wodyetia bifurcata*	狐尾椰子	6	280	3.5	M	A	A	A	M	-	No	**Retain**	LCSD	LCSD	On central divider
FT-387	*Wodyetia bifurcata*	狐尾椰子	6	250	3.5	M	A	A	A	M	-	No	**Retain**	LCSD	LCSD	On central divider
FT-388	*Wodyetia bifurcata*	狐尾椰子	6	260	3.5	M	A	A	A	M	-	No	**Retain**	LCSD	LCSD	On central divider
FT-389	*Lagerstroemia indica*	紫薇	4	130	2.5	L	P	A	A	L	1,4	Yes - Culvated	**Retain**	Private lot	Private lot	Leaning trunk, on planter, cavity at lower trunk, no tag
FT-390	*Ficus benjamina*	垂葉榕	4.5	240	3	M	A	A	A	L	2	No	**Retain**	Private lot	Private lot	On tree pit, restricted root, no tag
FT-391	*Melaleuca cajuputi*	白千層	9	260	4	M	A	A	A	L	2	No	**Retain**	Private lot	Private lot	On tree pit, restricted root, no tag
FT-392	*Melaleuca cajuputi*	白千層	9	550	4	L	P	A	A	L	1,2,4,5	No	**Retain**	Private lot	Private lot	Slightly leaning trunk, no tag
FT-393	*Melaleuca cajuputi*	白千層	9	610	6	L	P	A	A	L	1,2,4,5,8	No	**Retain**	Private lot	Private lot	Imbalanced crown, no tag
FT-394	*Melaleuca cajuputi*	白千層	7	450	4	M	A	A	A	L	2	No	**Retain**	Private lot	Private lot	On tree pit, restricted root, no tag
FT-395	*Thevetia peruviana*	黃花夾竹桃	5	220	4	L	P	A	A	L	1,4	No	**Retain**	Private lot	Private lot	Wound at middle trunk, no tag
FT-396	*Koelreuteria bipinnata*	複羽葉欒樹	9	380	6	M	A	A	A	L	2	No	**Retain**	Private lot	Private lot	No tag
FT-397	*Melaleuca cajuputi*	白千層	8	360	4	M	A	A	A	L	2	No	**Retain**	Private lot	Private lot	On tree pit, restricted root, no tag
FT-398	*Melaleuca cajuputi*	白千層	7	340	4.5	L	P	A	A	L	1,2,4,5	No	**Retain**	LCSD	LCSD	Imbalanced crown
FT-399	*Melaleuca cajuputi*	白千層	12	590	7	M	A	A	A	L	2	No	**Retain**	LCSD	LCSD	Included bark
FT-400	*Melaleuca cajuputi*	白千層	7.5	390	5	M	A	A	A	L	2	No	**Retain**	LCSD	LCSD	Exposed root
FT-401	*Ficus binnendijkii*	阿里垂榕	6	180	5	M	A	A	A	M	-	No	**Transplant**	LCSD	LCSD	-
FT-402	*Ficus binnendijkii*	阿里垂榕	6	200	4	M	A	A	A	M	-	No	**Transplant**	LCSD	LCSD	-
FT-403	*Ficus binnendijkii*	阿里垂榕	5	200	4	M	A	A	A	M	-	No	**Transplant**	LCSD	LCSD	DBH measured at 1m
FT-404	*Roystonea regia*	王棕	12	350	4	M	A	A	A	M	-	No	**Retain**	LCSD	LCSD	-
FT-405	*Bischofia javanica*	秋楓	8	280	4	M	A	A	A	L	2	No	**Retain**	Private lot	Private lot	On slope, no tag
FT-406	*Bischofia javanica*	秋楓	8	280	4	M	A	A	A	L	2	No	**Retain**	Private lot	Private lot	On planter, restricted root, no tag
FT-410	*Livistona chinensis*	蒲葵	5	150	2	M	A	A	A	L	2	No	**Retain**	LCSD	LCSD	On planter, close to other trees
FT-411	*Livistona chinensis*	蒲葵	5	150	2	M	A	A	A	L	2	No	**Retain**	LCSD	LCSD	On planter, close to other trees
FT-412	*Livistona chinensis*	蒲葵	4	160	2	M	A	A	A	L	2	No	**Retain**	LCSD	LCSD	On planter, close to other trees
FT-413	*Livistona chinensis*	蒲葵	4	140	2	M	A	A	A	L	2	No	**Retain**	LCSD	LCSD	On planter, close to other trees
FT-414	*Acacia confusa*	台灣相思	6	160	3	L	P	A	A	L	1,2,4	No	**Remove**	LCSD	-	On slope, imbalanced crown
FT-415	*Acacia confusa*	台灣相思	8	230	4	L	P	A	A	L	1,2,4	No	**Remove**	LCSD	-	On slope, leaning trunk
FT-416	*Acacia confusa*	台灣相思	9	200	4	L	P	A	A	L	1,2,4	No	**Remove**	LCSD	-	On slope, leaning trunk
FT-417	*Acacia confusa*	台灣相思	8	230	4	L	P	A	A	L	1,2,4,5	No	**Retain**	LCSD	LCSD	On slope, leaning trunk, wound at trunk base
FT-418	*Acacia confusa*	台灣相思	9	200	4	L	P	A	A	L	1,2,4,5	No	**Retain**	LCSD	LCSD	On slope, leaning trunk
FT-419	*Acacia confusa*	台灣相思	8	200	4	M	A	A	A	L	2	No	**Retain**	LCSD	LCSD	On slope
FT-420	*Acacia confusa*	台灣相思	7	100	2	L	P	A	A	L	1,2,4,5	No	**Retain**	LCSD	LCSD	On slope, leaning trunk
FT-421	*Acacia confusa*	台灣相思	8	240	4	L	P	A	A	L	1,2,4	No	**Remove**	LCSD	-	On slope, leaning trunk
FT-422	*Acacia confusa*	台灣相思	8	320	6	M	A	A	A	L	2	No	**Retain**	LCSD	LCSD	On slope, Codominant branches
FT-423	*Acacia confusa*	台灣相思	9	360	8	M	A	A	A	L	2	No	**Retain**	LCSD	LCSD	On slope, codominant branches
FT-424	*Acacia confusa*	台灣相思	4	150	2	L	P	A	A	L	1,2,4,5	No	**Retain**	LCSD	LCSD	On slope, leaning trunk, wound at middle trunk
FT-428	*Acacia confusa*	台灣相思	7	180	3	L	P	A	A	L	1,2,4,5	No	**Retain**	LCSD	LCSD	On slope, leaning trunk
FT-430	*Acacia confusa*	台灣相思	7	180	4	L	P	A	A	L	1,2,4,5	No	**Retain**	LCSD	LCSD	On slope, leaning trunk
FT-431	*Acacia confusa*	台灣相思	8	235	6	L	P	A	A	L	1,2,4,5	No	**Retain**	LCSD	LCSD	On slope, codominant trunk
FT-432	*Acacia confusa*	台灣相思	6	180	3	L	P	A	A	L	1,2,4,5	No	**Retain**	LCSD	LCSD	On slope, leaning trunk
FT-436	*Acacia confusa*	台灣相思	6	180	2	L	P	A	A	L	1,2,4,5	No	**Retain**	LCSD	LCSD	On slope, wound at middle trunk

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Tree No.	Species		Tree Size			Amenity value	Form	Health Condition	Structural condition	Suitability for transplanting		Conservation status (Yes/Yes(Culvated)/No)	Recommendation	Maintenance department to provide comments on TPRP		Remarks
	Scientific name	Chinese Name	Height (m)	DBH (mm)	Crown Spread (m)	(high(H)/ medium(M) /low(L))	(good G)/average (A)/poor (P))			(high(H)/ medium(M)/ low(L))	Remarks		(Retain/Transplant/ Remove)	Before	After	
FT-438	*Acacia confusa*	台灣相思	8	280	4	M	A	A	A	L	2	No	**Retain**	LCSD	LCSD	On slope
FT-439	*Livistona chinensis*	蒲葵	3.5	220	4	L	P	A	A	L	1,4	No	**Retain**	LCSD	LCSD	On slope, leaning trunk
FT-440	*Livistona chinensis*	蒲葵	3	200	3	L	P	A	A	L	1,4	No	**Retain**	LCSD	LCSD	On slope, leaning trunk
FT-441	*Livistona chinensis*	蒲葵	4.5	250	4	M	A	A	A	L	2	No	**Retain**	LCSD	LCSD	On slope
FT-442	*Livistona chinensis*	蒲葵	4	220	4	L	P	A	A	L	1,4	No	**Retain**	LCSD	LCSD	On slope, leaning trunk
FT-443	*Livistona chinensis*	蒲葵	5	110	4	L	P	A	A	L	1,4	No	**Retain**	LCSD	LCSD	On slope, leaning trunk
FT-444	*Livistona chinensis*	蒲葵	5	260	4	M	A	A	A	L	2	No	**Retain**	LCSD	LCSD	On slope
FT-445	*Livistona chinensis*	蒲葵	5.5	230	4	M	A	A	A	L	2	No	**Retain**	LCSD	LCSD	On slope
FT-446	*Livistona chinensis*	蒲葵	5.5	240	4	M	A	A	A	L	2	No	**Retain**	LCSD	LCSD	On slope
FT-447	*Livistona chinensis*	蒲葵	3.5	260	3.5	M	A	A	A	L	2	No	**Retain**	LCSD	LCSD	On slope
FT-448	*Tabebuia chrysantha*	黃鐘木	5	160	4	L	P	A	A	L	1,4	No	**Retain**	LCSD	LCSD	On slope, bending trunk
FT-449	*Melaleuca cajuputi*	白千層	8	300	4	M	A	A	A	L	2	No	**Retain**	LCSD	LCSD	On slope

Suitability for transplanting:

1. Tree of low amenity value.
2. Preparation of intact and sufficient-sized root ball is not practical due to the topography (e.g. steep slope, shallow substratum, structures)
3. Weedy species without special ecological significance or species creating maintenance problems.
4. Tree with poor health and/or form and/or structural condition for transplantation.
5. Lack of access for transplantation machinery or vehicle.
6. Species of low post-transplantation survival rate.
7. Tree has structural problem and may create hazard to the public during root ball preparation and/or after transplantation, and auxiliary support will not be practical.
8. Senescent tree with low post-transplantation survival rate
9. A dead tree

Tree Group Assessment Schedule - Tree group survey
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Tree Group No.	Total Number of Trees in Individual Tree Group	Estimated No. of Trees	Main tree Species			Size of tree			General Form Condition (Good/ Average / Poor)	General Health Condition (Good/ Average/ Poor)	General Structural Condition (Good/ Average/ Poor)	Presence of Protected / Rare Tree Species (Yes/No)	Maintenance		Recommendation		
			Scientific Name	Common Chinese Name	Species Origin	Range of Height (m)	Range of DBH (mm)	Range of Crown Spread (m)					Before	After	Retain	Transplant	Remove
TG01	46	1	*Aglaia odorata*	小葉米仔蘭	Exotic	4	100	3	A	A	A	N	LandsD	-	0%	0%	100% (46 nos.)
		3	*Averrhoa carambola*	楊桃	Exotic	5-6	140-160	3-5	A	A	A	N					
		2	*Artocarpus heterophyllus*	菠蘿蜜	Exotic	4-8	120-270	4	A	A	A	N					
		2	*Carica papaya*	番木瓜	Exotic	4-6	150	3	A	A	A	N					
		10	*Clausena lansium*	黃皮	Exotic	4-7	110-160	3-5	A	A	A	N					
		2	*Cratoxylum cochinchinense*	黃牛木	Native	6	160	4	P	A	A	N					
		10	*Dimocarpus longan*	龍眼	Exotic	7-10	140-300	5-10	A	A	A	N					
		1	*Dracaena fragrans*	巴西鐵樹	Exotic	4	110	1	A	A	A	N					
		2	*Ficus hispida*	對葉榕	Native	4-6	120-140	3-4	P	A	A-P	N					
		1	*Ligustrum lucidum*	女貞	Native	3	130	1	A	A	A	N					
		2	*Litchi chinensis*	荔枝	Exotic	6	120-180	3	A	A	A	N					
		3	*Macaranga tanarius* var. *tomentosa*	血桐	Native	5	140-160	3-4	P	A	A-P	N					
		3	*Mallotus paniculatus*	白楸	Native	4-6	100-150	2-4.5	P	A	P	N					
		3	*Schefflera heptaphylla*	鵝掌柴	Native	6-8	150-200	4-6	A	A	A	N					
		1	*Zanthoxylum avicennae*	簕欓花椒	Native	3	130	2	P	A	A	N					
TG02	39	2	*Averrhoa carambola*	楊桃	Exotic	5-6	140-160	3-5	A	A	A	N	LandsD	-	5% (2 nos.)	0%	95% (37 nos.)
		2	*Artocarpus heterophyllus*	菠蘿蜜	Exotic	4-8	120-270	4	A	A	A	N					
		2	*Carica papaya*	番木瓜	Exotic	4-6	150	3	A	A	A	N					
		8	*Clausena lansium*	黃皮	Exotic	4-7	110-160	3-5	A	A	A	N					
		2	*Cratoxylum cochinchinense*	黃牛木	Native	6	160	4	P	A	A	N					
		8	*Dimocarpus longan*	龍眼	Exotic	7-10	140-300	5-10	A	A	A	N					
		1	*Dracaena fragrans*	巴西鐵樹	Exotic	4	110	1	A	A	A	N					
		2	*Ficus hispida*	對葉榕	Native	4-6	120-140	3-4	P	A	A-P	N					
		1	*Ligustrum lucidum*	女貞	Native	3	130	1	A	A	A	N					
		2	*Litchi chinensis*	荔枝	Exotic	6	120-180	3	A	A	A	N					
		2	*Macaranga tanarius* var. *tomentosa*	血桐	Native	5	140-160	3-4	P	A	A-P	N					
		3	*Mallotus paniculatus*	白楸	Native	4-6	100-150	2-4.5	P	A	P	N					
		3	*Schefflera heptaphylla*	鵝掌柴	Native	6-8	150-200	4-6	A	A	A	N					
		1	*Zanthoxylum avicennae*	簕欓花椒	Native	3	130	2	P	A	A	N					
TG03	39	2	*Averrhoa carambola*	楊桃	Exotic	5-6	140-160	3-5	A	A	A	N	LandsD	-	0%	0%	100% (39 nos.)
		2	*Artocarpus heterophyllus*	菠蘿蜜	Exotic	4-8	120-270	4	A	A	A	N					
		2	*Carica papaya*	番木瓜	Exotic	4-6	150	3	A	A	A	N					
		8	*Clausena lansium*	黃皮	Exotic	4-7	110-160	3-5	A	A	A	N					
		3	*Cratoxylum cochinchinense*	黃牛木	Native	6	160	4	P	A	A	N					
		8	*Dimocarpus longan*	龍眼	Exotic	7-10	140-300	5-10	A	A	A	N					
		2	*Ficus hispida*	對葉榕	Native	4-6	120-140	3-4	P	A	A-P	N					
		3	*Litchi chinensis*	荔枝	Exotic	6	120-180	3	A	A	A	N					
		3	*Macaranga tanarius* var. *tomentosa*	血桐	Native	5	140-160	3-4	P	A	A-P	N					
		3	*Mallotus paniculatus*	白楸	Native	4-6	100-150	2-4.5	P	A	P	N					
		3	*Schefflera heptaphylla*	鵝掌柴	Native	6-8	150-200	4-6	A	A	A	N					
TG04	32	2	*Averrhoa carambola*	楊桃	Exotic	5-6	140-160	3-5	A	A	A	N	LandsD	-	0%	0%	100% (32 nos.)
		2	*Artocarpus heterophyllus*	菠蘿蜜	Exotic	4-8	120-270	4	A	A	A	N					
		2	*Carica papaya*	番木瓜	Exotic	4-6	150	3	A	A	A	N					
		6	*Clausena lansium*	黃皮	Exotic	4-7	110-160	3-5	A	A	A	N					
		3	*Cratoxylum cochinchinense*	黃牛木	Native	6	160	4	P	A	A	N					
		6	*Dimocarpus longan*	龍眼	Exotic	7-10	140-300	5-10	A	A	A	N					

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Tree Group No.	Total Number of Trees in Individual Tree Group	Estimated No. of Trees	Main tree Species			Size of tree			General Form Condition (Good/ Average / Poor)	General Health Condition (Good/ Average/ Poor)	General Structural Condition (Good/ Average/ Poor)	Presence of Protected / Rare Tree Species (Yes/No)	Maintenance		Recommendation		
			Scientific Name	Common Chinese Name	Species Origin	Range of Height (m)	Range of DBH (mm)	Range of Crown Spread (m)					Before	After	Retain	Transplant	Remove
		2	*Ficus hispida*	對葉榕	Native	4-6	120-140	3-4	P	A	A-P	N					
		2	*Litchi chinensis*	荔枝	Exotic	6	120-180	3	A	A	A	N					
		2	*Macaranga tanarius* var. *tomentosa*	血桐	Native	5	140-160	3-4	P	A	A-P	N					
		2	*Mallotus paniculatus*	白楸	Native	4-6	100-150	2-4.5	P	A	P	N					
		3	*Schefflera heptaphylla*	鵝掌柴	Native	6-8	150-200	4-6	A	A	A	N					
TG05	50	1	*Aleurites moluccana*	石栗	Exotic	9	350	5.5	A	A	A	N	LandsD	-	0%	0%	100% (50nos.)
		1	*Araucaria columnaris*	柱狀南洋杉	Exotic	11	450	5	P	A	A	N					
		1	*Archontophoenix alexandrae*	假檳榔	Exotic	6	340	4	A	A	A	N					
		4	*Artocarpus heterophyllus*	菠蘿蜜	Exotic	5-9	170-250	4-6.5	A	A	A	N					
		1	*Averrhoa carambola*	楊桃	Exotic	5	160	4	A	A	A	N					
		1	*Carica papaya*	番木瓜	Exotic	5	150	3	P	A	A	N					
		6	*Clausena lansium*	黃皮	Exotic	4-5	180	3-5	A	A	A	N					
		9	*Dimocarpus longan*	龍眼	Exotic	5-10	140-310	4-7	P	A	A	N					
		2	*Ficus hispida*	對葉榕	Native	4-6	120-160	4	A	A	A-P	N					
		5	*Litchi chinensis*	荔枝	Exotic	5-9	150-300	4-7	A	A	A	N					
		1	*Litsea glutinosa*	潺槁樹	Native	6	160	4	A	A-P	A	N					
		2	*Macaranga tanarius* var. *tomentosa*	血桐	Native	6-9	130-210	5-6	P	A	A	N					
		1	*Machilus breviflora*	短序潤楠	Native	8	230	5	A	A	A	N					
		2	*Machilus pauhoi*	刨花潤楠	Native	8	230	5	A	A	A	N					
		3	*Mangifera indica*	芒果	Exotic	6-8	210-350	3-5	A	A	A	N					
		1	*Michelia x alba*	白蘭	Native	5	170	2	A	A	A	Y					
		1	*Reevesia thyrsoidea*	梭羅樹	Native	4	170	3	A	A	A	N					
		8	*Sterculia lanceolata*	假蘋婆	Native	5-8	120-250	4-6	P	A	A	N					
TG06	48	1	*Aleurites moluccana*	石栗	Exotic	9	350	5.5	A	A	A	N	LandsD	-	0%	0%	100% (48nos.)
		1	*Araucaria columnaris*	柱狀南洋杉	Exotic	11	450	5	P	A	A	N					
		1	*Archontophoenix alexandrae*	假檳榔	Exotic	6	340	4	A	A	A	N					
		4	*Artocarpus heterophyllus*	菠蘿蜜	Exotic	5-9	170-250	4-6.5	A	A	A	N					
		1	*Averrhoa carambola*	楊桃	Exotic	5	160	4	A	A	A	N					
		2	*Carica papaya*	番木瓜	Exotic	4-6	150	2-4	P	A	A	N					
		6	*Clausena lansium*	黃皮	Exotic	4-5	180	3-5	A	A	A	N					
		9	*Dimocarpus longan*	龍眼	Exotic	5-10	140-310	4-7	P	A	A	N					
		2	*Ficus hispida*	對葉榕	Native	4-6	120-160	4	A	A	A-P	N					
		5	*Litchi chinensis*	荔枝	Exotic	5-9	150-300	4-7	A	A	A	N					
		1	*Litsea glutinosa*	潺槁樹	Native	6	160	4	A	A-P	A	N					
		2	*Macaranga tanarius* var. *tomentosa*	血桐	Native	6-9	130-210	5-6	P	A	A	N					
		1	*Machilus breviflora*	短序潤楠	Native	8	230	5	A	A	A	N					
		2	*Machilus pauhoi*	刨花潤楠	Native	8	230	5	A	A	A	N					
		2	*Mangifera indica*	芒果	Exotic	6-8	210-350	3-5	A	A	A	N					
		1	*Reevesia thyrsoidea*	梭羅樹	Native	4	170	3	A	A	A	N					
		7	*Sterculia lanceolata*	假蘋婆	Native	5-8	120-250	4-6	P	A	A	N					
TG07	46	4	*Artocarpus heterophyllus*	菠蘿蜜	Exotic	5-9	170-250	4-6.5	A	A	A	N	LandsD	-	0%	0%	100% (46nos.)
		1	*Averrhoa carambola*	楊桃	Exotic	5	160	4	A	A	A	N					
		2	*Carica papaya*	番木瓜	Exotic	4-6	150	2-4	P	A	A	N					
		6	*Clausena lansium*	黃皮	Exotic	4-5	180	3-5	A	A	A	N					
		9	*Dimocarpus longan*	龍眼	Exotic	5-10	140-310	4-7	P	A	A	N					
		3	*Ficus hispida*	對葉榕	Native	4-6	120-160	4	A	A	A-P	N					

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Tree Group No.	Total Number of Trees in Individual Tree Group	Estimated No. of Trees	Main tree Species			Size of tree			General Form Condition (Good/ Average / Poor)	General Health Condition (Good/ Average/ Poor)	General Structural Condition (Good/ Average/ Poor)	Presence of Protected / Rare Tree Species (Yes/No)	Maintenance		Recommendation		
			Scientific Name	Common Chinese Name	Species Origin	Range of Height (m)	Range of DBH (mm)	Range of Crown Spread (m)					Before	After	Retain	Transplant	Remove
TG07	46	6	*Litchi chinensis*	荔枝	Exotic	5-9	150-300	4-7	A	A	A	N	LandsD	-	0%	0%	100% (46nos.)
		1	*Litsea glutinosa*	潺槁樹	Native	6	160	4	A	A-P	A	N					
		2	*Macaranga tanarius* var. *tomentosa*	血桐	Native	6-9	130-210	5-6	P	A	A	N					
		2	*Machilus pauhoi*	刨花潤楠	Native	8	230	5	A	A	A	N					
		2	*Mangifera indica*	芒果	Exotic	6-8	210-350	3-5	A	A	A	N					
		8	*Sterculia lanceolata*	假蘋婆	Native	5-8	120-250	4-6	P	A	A	N					
TG08	42	4	*Artocarpus heterophyllus*	菠蘿蜜	Exotic	5-9	170-250	4-6.5	A	A	A	N	LandsD	-	0%	0%	100% (42nos.)
		1	*Averrhoa carambola*	楊桃	Exotic	5	160	4	A	A	A	N					
		1	*Carica papaya*	番木瓜	Exotic	5	150	2	P	A	A	N					
		5	*Clausena lansium*	黃皮	Exotic	4-5	180	3-5	A	A	A	N					
		9	*Dimocarpus longan*	龍眼	Exotic	5-10	140-310	4-7	P	A	A	N					
		3	*Ficus hispida*	對葉榕	Native	4-6	120-160	4	A	A	A-P	N					
		6	*Litchi chinensis*	荔枝	Exotic	5-9	150-300	4-7	A	A	A	N					
		1	*Litsea glutinosa*	潺槁樹	Native	6	160	4	A	A-P	A	N					
		2	*Macaranga tanarius* var. *tomentosa*	血桐	Native	6-9	130-210	5-6	P	A	A	N					
		1	*Machilus pauhoi*	刨花潤楠	Native	8	230	5	A	A	A	N					
		1	*Mangifera indica*	芒果	Exotic	7	250	4	A	A	A	N					
		8	*Sterculia lanceolata*	假蘋婆	Native	5-8	120-250	4-6	P	A	A	N					
TG09	42	4	*Artocarpus heterophyllus*	菠蘿蜜	Exotic	5-9	170-250	4-6.5	A	A	A	N	LandsD	LandsD	10% (4 nos.)	0%	90% (38 nos.)
		1	*Averrhoa carambola*	楊桃	Exotic	5	160	4	A	A	A	N					
		1	*Carica papaya*	番木瓜	Exotic	5	150	3	P	A	A	N					
		5	*Clausena lansium*	黃皮	Exotic	4-5	180	3-5	A	A	A	N					
		9	*Dimocarpus longan*	龍眼	Exotic	5-10	140-310	4-7	P	A	A	N					
		3	*Ficus hispida*	對葉榕	Native	4-6	120-160	4	A	A	A-P	N					
		6	*Litchi chinensis*	荔枝	Exotic	5-9	150-300	4-7	A	A	A	N					
		1	*Litsea glutinosa*	潺槁樹	Native	6	160	4	A	A-P	A	N					
		2	*Macaranga tanarius* var. *tomentosa*	血桐	Native	6-9	130-210	5-6	P	A	A	N					
		1	*Machilus pauhoi*	刨花潤楠	Native	8	230	5	A	A	A	N					
		1	*Mangifera indica*	芒果	Exotic	7	250	4	A	A	A	N					
		8	*Sterculia lanceolata*	假蘋婆	Native	5-8	120-250	4-6	P	A	A	N					
TG10	40	2	*Averrhoa carambola*	楊桃	Exotic	3-4	140	2-2.5	P	A	A	N	LandsD	LandsD	5% (2 nos.)	0%	95% (38 nos.)
		3	*Artocarpus heterophyllus*	菠蘿蜜	Exotic	4-6	130-170	3-4	A	A	A	N					
		1	*Carica papaya*	番木瓜	Exotic	3	150	1.5	A	A	A	N					
		2	*Celtis sinensis*	朴樹	Native	6-7	180-210	5	A	A	A	N					
		12	*Clausena lansium*	黃皮	Exotic	4-6	110-210	3-5	A	A	A-P	N					
		3	*Dimocarpus longan*	龍眼	Exotic	8	170	5	A	A	A-P	N					
		4	*Ficus hispida*	對葉榕	Native	4	130	2.5-4	P	A	A	N					
		5	*Macaranga tanarius* var. *tomentosa*	血桐	Native	3-6	110-190	3-5	P	A	A	N					
		3	*Machilus pauhoi*	刨花潤楠	Native	7-8	210-230	5-6	A	A	A	N					
		5	*Sterculia lanceolata*	假蘋婆	Native	4-7	150-180	3-5	A	A	A	N					
TG11	37	1	*Averrhoa carambola*	楊桃	Exotic	4	140	2.5	P	A	A	N	LandsD	LandsD	5% (1 no.)	0%	95% (36 nos.)
		3	*Artocarpus heterophyllus*	菠蘿蜜	Exotic	4-6	130-170	3-4	A	A	A	N					
		1	*Carica papaya*	番木瓜	Exotic	3	150	1.5	A	A	A	N					
		1	*Celtis sinensis*	朴樹	Native	7	180	5	A	A	A	N					
		12	*Clausena lansium*	黃皮	Exotic	4-6	110-210	3-5	A	A	A-P	N					
		2	*Dimocarpus longan*	龍眼	Exotic	8	170	5	A	A	A-P	N					

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			Scientific Name	Common Chinese Name	Species Origin	Range of Height (m)	Range of DBH (mm)	Range of Crown Spread (m)					Before	After	Retain	Transplant	Remove
		4	*Ficus hispida*	對葉榕	Native	4	130	2.5-4	P	A	A	N					
		5	*Macaranga tanarius* var. *tomentosa*	血桐	Native	3-6	110-190	3-5	P	A	A	N					
		3	*Machilus pauhoi*	刨花潤楠	Native	7-8	210-230	5-6	A	A	A	N					
		5	*Sterculia lanceolata*	假蘋婆	Native	4-7	150-180	3-5	A	A	A	N					
TG12	50	2	*Averrhoa carambola*	楊桃	Exotic	6	170	4	A	A	A	N	LandsD	LandsD	20% (10 nos.)	0%	80% (40 nos.)
		1	*Bauhinia variegata*	宮粉羊蹄甲	Native	5	160	5	A-P	A	A-P	N					
		2	*Carica papaya*	番木瓜	Exotic	4-5	150	3	A	A	A	N					
		6	*Celtis sinensis*	朴樹	Native	4-12	120-350	2-8	A	A	A	N					
		1	*Clausena lansium*	黃皮	Exotic	6	180	5	A	A	A	N					
		1	*Ficus elastica*	印度榕	Exotic	6	160	4	A	A	A	N					
		3	*Ficus hispida*	對葉榕	Native	4-7	120-170	3-5.5	A-P	A	A	N					
		7	*Ficus microcarpa*	細葉榕	Native	8-12	250-480	5-10	A	A	A	N					
		3	Leucaena leucocephala	銀合歡	Exotic	5-9	170	4-5	A	A	A	N					
		2	*Ligustrum sinense*	山指甲	Exotic	4-6	130	4-5	A	A	A	N					
		2	*Litchi chinensis*	荔枝	Exotic	6-7	170	5	A	A	A	N					
		5	*Macaranga tanarius* var. *tomentosa*	血桐	Native	4-10	120-170	4-8	A	A	A	N					
		3	*Machilus breviflora*	短序潤楠	Native	10-14	260-340	8	A	A	A	N					
		2	Machilus chekiangensis	浙江潤楠	Native	8-10	200-250	6	A	A	A	N					
		3	*Machilus pauhoi*	刨花潤楠	Native	8-14	200-250	6	A	A	A	N					
		5	*Sterculia lanceolata*	假蘋婆	Native	4-6	150	4-5	A	A	A	N					
		2	*Zanthoxylum avicennae*	簕欓花椒	Native	3-4	130	2-3	A	A	A	N					
TG13	50	2	*Averrhoa carambola*	楊桃	Exotic	6	170	4	A	A	A	N	LandsD	LandsD	80% (40 nos.)	0%	20% (10 nos.)
		1	*Bauhinia variegata*	宮粉羊蹄甲	Native	5	160	5	A-P	A	A-P	N					
		1	*Carica papaya*	番木瓜	Exotic	5	150	3	A	A	A	N					
		6	*Celtis sinensis*	朴樹	Native	4-12	120-350	2-8	A	A	A	N					
		2	*Clausena lansium*	黃皮	Exotic	6-7	180	5	A	A	A	N					
		3	*Ficus hispida*	對葉榕	Native	4-7	120-170	3-5.5	A-P	A	A	N					
		7	*Ficus microcarpa*	細葉榕	Native	8-12	250-480	5-10	A	A	A	N					
		3	Leucaena leucocephala	銀合歡	Exotic	5-9	170	4-5	A	A	A	N					
		2	*Ligustrum sinense*	山指甲	Exotic	4-6	130	4-5	A	A	A	N					
		2	*Litchi chinensis*	荔枝	Exotic	6-7	170	5	A	A	A	N					
		5	*Macaranga tanarius* var. *tomentosa*	血桐	Native	4-10	120-170	4-8	A	A	A	N					
		3	*Machilus breviflora*	短序潤楠	Native	10-14	260-340	8	A	A	A	N					
		2	Machilus chekiangensis	浙江潤楠	Native	8-10	200-250	6	A	A	A	N					
		4	*Machilus pauhoi*	刨花潤楠	Native	8-14	200-250	6	A	A	A	N					
		6	*Sterculia lanceolata*	假蘋婆	Native	4-6	150	4-5	A	A	A	N					
		1	*Zanthoxylum avicennae*	簕欓花椒	Native	4	130	3	A	A	A	N					
TG14	41	1	*Carica papaya*	番木瓜	Exotic	5	150	3	A	A	A	N	LandsD	LandsD	30% (12 nos.)	0%	70% (29 nos.)
		4	*Celtis sinensis*	朴樹	Native	4-12	120-350	2-8	A	A	A	N					
		4	*Ficus hispida*	對葉榕	Native	4-7	120-170	3-5.5	A-P	A	A	N					
		7	*Ficus microcarpa*	細葉榕	Native	8-12	250-480	5-10	A	A	A	N					
		2	Leucaena leucocephala	銀合歡	Exotic	5-9	170	4-5	A	A	A	N					
		1	*Ligustrum sinense*	山指甲	Exotic	5	130	4	A	A	A	N					
		1	*Litchi chinensis*	荔枝	Exotic	7	170	5	A	A	A	N					
		7	*Macaranga tanarius* var. *tomentosa*	血桐	Native	4-10	120-170	4-8	A	A	A	N					
		3	*Machilus breviflora*	短序潤楠	Native	10-14	260-340	8	A	A	A	N					

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			Scientific Name	Common Chinese Name	Species Origin	Range of Height (m)	Range of DBH (mm)	Range of Crown Spread (m)					Before	After	Retain	Transplant	Remove
		2	Machilus chekiangensis	浙江潤楠	Native	8-10	200-250	6	A	A	A	N					
		3	*Machilus pauhoi*	刨花潤楠	Native	8-14	200-250	6	A	A	A	N					
		5	*Sterculia lanceolata*	假蘋婆	Native	4-6	150	4-5	A	A	A	N					
		1	*Zanthoxylum avicennae*	簕欓花椒	Native	4	130	3	A	A	A	N					
TG15	22	7	*Clausena lansium*	黃皮	Exotic	2-6	100-300	2-8	P-A	P-A	P-A	N	LandsD	LandsD	50% (11 nos.)	0%	50% (11 nos.)
		6	*Dimocarpus longan*	龍眼	Exotic	2-8	120-350	2-8	P-A	P-A	P-A	N					
		2	*Litchi chinensis*	荔枝	Exotic	6-8	150-400	2-4	P-A	P-A	P-A	N					
		1	*Macaranga tanarius* var. *tomentosa*	血桐	Native	5	150-250	3	P	P-A	P-A	N					
		2	*Machilus pauhoi*	刨花潤楠	Native	2-4	200-300	2-4	P	A	A	N					
		2	*Schefflera heptaphylla*	鵝掌柴	Native	4-8	150-250	2-6	P-A	P-A	P-A	N					
		2	*Syzygium jambos*	蒲桃	Exotic	7-8	200-450	4-8	P	A	A	N					
TG16	21	6	*Clausena lansium*	黃皮	Exotic	2-6	100-300	2-8	P-A	P-A	P-A	N	LandsD	LandsD	45% (9 nos.)	0%	55% (12 nos.)
		5	*Dimocarpus longan*	龍眼	Exotic	2-8	120-350	2-8	P-A	P-A	P-A	N					
		2	*Litchi chinensis*	荔枝	Exotic	6-8	150-400	2-4	P-A	P-A	P-A	N					
		1	*Macaranga tanarius* var. *tomentosa*	血桐	Native	5	150-250	3	P	P-A	P-A	N					
		3	*Machilus pauhoi*	刨花潤楠	Native	2-4	200-300	2-4	P	A	A	N					
		2	*Schefflera heptaphylla*	鵝掌柴	Native	4-8	150-250	2-6	P-A	P-A	P-A	N					
		2	*Syzygium jambos*	蒲桃	Exotic	7-8	200-450	4-8	P	A	A	N					
TG17	26	9	*Clausena lansium*	黃皮	Exotic	2-6	100-300	2-8	P-A	P-A	P-A	N	LandsD	LandsD	40% (10 nos.)	0%	60% (16 nos.)
		7	*Dimocarpus longan*	龍眼	Exotic	2-8	120-350	2-8	P-A	P-A	P-A	N					
		2	*Litchi chinensis*	荔枝	Exotic	6-8	150-400	2-4	P-A	P-A	P-A	N					
		1	*Macaranga tanarius* var. *tomentosa*	血桐	Native	5	150-250	3	P	P-A	P-A	N					
		3	*Machilus pauhoi*	刨花潤楠	Native	2-4	200-300	2-4	P	A	A	N					
		2	*Schefflera heptaphylla*	鵝掌柴	Native	4-8	150-250	2-6	P-A	P-A	P-A	N					
		2	*Syzygium jambos*	蒲桃	Exotic	7-8	200-450	4-8	P	A	A	N					
TG18	44	14	*Clausena lansium*	黃皮	Exotic	2-6	100-300	2-8	P-A	P-A	P-A	N	LandsD	LandsD	20% (8 nos.)	0%	80% (35 nos.)
		12	*Dimocarpus longan*	龍眼	Exotic	2-8	120-350	2-8	P-A	P-A	P-A	N					
		4	*Litchi chinensis*	荔枝	Exotic	6-8	150-400	2-4	P-A	P-A	P-A	N					
		2	*Macaranga tanarius* var. *tomentosa*	血桐	Native	4-6	150-250	2-5	P	P-A	P-A	N					
		4	*Machilus pauhoi*	刨花潤楠	Native	2-4	200-300	2-4	P	A	A	N					
		4	*Schefflera heptaphylla*	鵝掌柴	Native	4-8	150-250	2-6	P-A	P-A	P-A	N					
		4	*Syzygium jambos*	蒲桃	Exotic	7-8	200-450	4-8	P	A	A	N					
TG19	40	12	*Clausena lansium*	黃皮	Exotic	2-6	100-300	2-8	P-A	P-A	P-A	N	LandsD	-	10% (4 nos.)	0%	90% (36 nos.)
		10	*Dimocarpus longan*	龍眼	Exotic	2-8	120-350	2-8	P-A	P-A	P-A	N					
		4	*Litchi chinensis*	荔枝	Exotic	6-8	150-400	2-4	P-A	P-A	P-A	N					
		2	*Macaranga tanarius* var. *tomentosa*	血桐	Native	4-6	150-250	2-5	P	P-A	P-A	N					
		4	*Machilus pauhoi*	刨花潤楠	Native	2-4	200-300	2-4	P	A	A	N					
		4	*Schefflera heptaphylla*	鵝掌柴	Native	4-8	150-250	2-6	P-A	P-A	P-A	N					
		4	*Syzygium jambos*	蒲桃	Exotic	7-8	200-450	4-8	P	A	A	N					
TG20	40	12	*Clausena lansium*	黃皮	Exotic	2-6	100-300	2-8	P-A	P-A	P-A	N	LandsD	-	20% (8 nos.)	0%	80% (32 nos.)
		10	*Dimocarpus longan*	龍眼	Exotic	2-8	120-350	2-8	P-A	P-A	P-A	N					
		4	*Litchi chinensis*	荔枝	Exotic	6-8	150-400	2-4	P-A	P-A	P-A	N					
		2	*Macaranga tanarius* var. *tomentosa*	血桐	Native	4-6	150-250	2-5	P	P-A	P-A	N					
		4	*Machilus pauhoi*	刨花潤楠	Native	2-4	200-300	2-4	P	A	A	N					
		4	*Schefflera heptaphylla*	鵝掌柴	Native	4-8	150-250	2-6	P-A	P-A	P-A	N					
		4	*Syzygium jambos*	蒲桃	Exotic	7-8	200-450	4-8	P	A	A	N					

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			Scientific Name	Common Chinese Name	Species Origin	Range of Height (m)	Range of DBH (mm)	Range of Crown Spread (m)					Before	After	Retain	Transplant	Remove
TG21	41	9	Bridelia tomentosa	土蜜樹	Native	2-3	100-150	1-2	A	A	A	N	LandsD	-	20% (9 nos.)	0%	80% (33 nos.)
		5	*Choerospondias axillaris*	南酸棗	Native	4-6	200-250	2-5	A	P	A	N					
		3	*Cleistocalyx nervosum*	水翁	Native	6-8	200-250	3-4	A	A	A	N					
		6	*Macaranga tanarius* var. *tomentosa*	血桐	Native	4-6	200-350	4-6	P-A	A	A	N					
		5	Machilus chekiangensis	浙江潤楠	Native	2-8	95-300	1-4	A	A	A	N					
		5	*Schefflera heptaphylla*	鵝掌柴	Native	3-6	100-150	2-3	A	A	A	N					
		5	*Schima superba*	木荷	Native	8-10	300-450	6-8	P-A	A	A	N					
		3	Garcinia oblongifoli	嶺南山竹子	Native	2-4	95-150	1-3	P-A	A	A	N					
TG22	45	9	Bridelia tomentosa	土蜜樹	Native	2-3	100-150	1-2	A	A	A	N	LandsD	LandsD	30% (13 nos.)	0%	70% (32 nos.)
		6	*Choerospondias axillaris*	南酸棗	Native	4-6	200-250	2-5	A	P	A	N					
		3	*Cleistocalyx nervosum*	水翁	Native	6-8	200-250	3-4	A	A	A	N					
		6	*Macaranga tanarius* var. *tomentosa*	血桐	Native	4-6	200-350	4-6	P-A	A	A	N					
		6	Machilus chekiangensis	浙江潤楠	Native	2-8	95-300	1-4	A	A	A	N					
		6	*Schefflera heptaphylla*	鵝掌柴	Native	3-6	100-150	2-3	A	A	A	N					
		6	*Schima superba*	木荷	Native	8-10	300-450	6-8	P-A	A	A	N					
		3	Garcinia oblongifoli	嶺南山竹子	Native	2-4	95-150	1-3	P-A	A	A	N					
TG23	39	12	*Clausena lansium*	黃皮	Exotic	2-6	100-300	2-8	P-A	P-A	P-A	N	LandsD	LandsD	100% (39 nos.)	0%	0%
		10	*Dimocarpus longan*	龍眼	Exotic	2-8	120-350	2-8	P-A	P-A	P-A	N					
		4	*Litchi chinensis*	荔枝	Exotic	6-8	150-400	2-4	P-A	P-A	P-A	N					
		1	*Macaranga tanarius* var. *tomentosa*	血桐	Native	5	150-250	3	P	P-A	P-A	N					
		4	*Machilus pauhoi*	刨花潤楠	Native	2-4	200-300	2-4	P	A	A	N					
		4	*Schefflera heptaphylla*	鵝掌柴	Native	4-8	150-250	2-6	P-A	P-A	P-A	N					
		4	*Syzygium jambos*	蒲桃	Exotic	7-8	200-450	4-8	P	A	A	N					
TG24	41	13	*Clausena lansium*	黃皮	Exotic	2-6	100-300	2-8	P-A	P-A	P-A	N	LandsD	LandsD	100% (41 nos.)	0%	0%
		12	*Dimocarpus longan*	龍眼	Exotic	2-8	120-350	2-8	P-A	P-A	P-A	N					
		4	*Litchi chinensis*	荔枝	Exotic	6-8	150-400	2-4	P-A	P-A	P-A	N					
		2	*Macaranga tanarius* var. *tomentosa*	血桐	Native	4-6	150-250	2-5	P	P-A	P-A	N					
		4	*Machilus pauhoi*	刨花潤楠	Native	2-4	200-300	2-4	P	A	A	N					
		3	*Schefflera heptaphylla*	鵝掌柴	Native	4-8	150-250	2-6	P-A	P-A	P-A	N					
		3	*Syzygium jambos*	蒲桃	Exotic	7-8	200-450	4-8	P	A	A	N					
TG25	39	13	*Clausena lansium*	黃皮	Exotic	2-6	100-300	2-8	P-A	P-A	P-A	N	LandsD	LandsD	100% (39 nos.)	0%	0%
		11	*Dimocarpus longan*	龍眼	Exotic	2-8	120-350	2-8	P-A	P-A	P-A	N					
		4	*Litchi chinensis*	荔枝	Exotic	6-8	150-400	2-4	P-A	P-A	P-A	N					
		1	*Macaranga tanarius* var. *tomentosa*	血桐	Native	5	150-250	3	P	P-A	P-A	N					
		4	*Machilus pauhoi*	刨花潤楠	Native	2-4	200-300	2-4	P	A	A	N					
		3	*Schefflera heptaphylla*	鵝掌柴	Native	4-8	150-250	2-6	P-A	P-A	P-A	N					
		3	*Syzygium jambos*	蒲桃	Exotic	7-8	200-450	4-8	P	A	A	N					
Total	**1000**														**263**	**0**	737

APPENDIX E

PLANT SPECIES RECORDED WITHIN THE STUDY AREA

Scientific Name [12 13 14 15 16]	Chinese Name	Growth Form	Origin	Rarity in Hong Kong [1]	Protection/Conservation Status [2 3 4 5 6 7 8 9 10]	Relative Abundance													
						Within Proposed Site Boundary						Outside the Proposed Site Boundary but within Study Area							
						DA	PL	SG	VO	WO	SNW	DA	PL	SG	VO	WO	CH	SNW	NW
Abrus mollis	毛相思子	Climber	Native	Restricted	-											S			
Acacia confusa	台灣相思	Tree	Exotic	-	-							C	C			S			
Acorus gramineus	石菖蒲	Herb	Native	Very common	-						C							S	C
Acronychia pedunculata	山油柑	Tree	Native	Very common	-					S						O			S
Adiantum flabellulatum	扇葉鐵線蕨	Herb	Native	Very common	-					O						C			
Adina pilulifera	水團花	Tree	Native	Very common	-											S			O
Ageratum conyzoides	藿香薊	Herb	Exotic	Common	-													C	
Alchornea trewioides	紅背山麻桿	Shrub	Native	Common	-											S			
Aleurites moluccana	石栗	Tree	Exotic	-	-							C				S			
Allamanda blanchetii	紫蟬	Shrub	Exotic	-	-							S							
Alocasia macrorrhizos	海芋	Herb	Native	Very common	-				C		S	S			C	S		C	
Alpinia zerumbet	豔山薑	Herb	Native	Very common	-							S							
Alternanthera dentata f. *rubiginosa*	紅龍莧	Herb	Exotic	-	-							S							
Alternanthera sessilis	蝦鉗菜	Herb	Native	Common	-				O			O							

Scientific Name [12 13 14 15 16]	Chinese Name	Growth Form	Origin	Rarity in Hong Kong [1]	Protection/Conservation Status [2 3 4 5 6 7 8 9 10]	Relative Abundance													
						Within Proposed Site Boundary						Outside the Proposed Site Boundary but within Study Area							
						DA	PL	SG	VO	WO	SNW	DA	PL	SG	VO	WO	CH	SNW	NW
Alyxia sinensis	鏈珠藤	Climber	Native	Common	-									S		O			
Ampelopsis cantoniensis	廣東蛇葡萄	Climber	Native	Very common	-				S							O			
Ania hongkongensis	**香港安蘭**	**Herb**	**Native**	**Very common**	**Cap. 96A [10]** **Cap. 586 [8]** **CITES: Appendix II [3]**											**S**			
Annona squamosa	番荔枝	Tree	Exotic	-	-				S										
Antidesma japonicum	日本五月茶	Tree	Native	Common	-											S			
Antirhea chinensis	毛茶	Tree	Native	Very common	-									S					
Aporusa dioica	銀柴	Tree	Native	Very common	-				O	C		S			O	C			
Aquilaria sinensis	**土沉香**	**Tree**	**Native**	**Common**	**IUCN Red List of Threatened Species: Vulnerable [2]** **Appendix II of CITES [3]** **Threatened Species List of China's Higher Plants: Vulnerable [4]** **China Plant Red Data Book: Vulnerable [5]** **Included in Illustrations of Rare & Endangered Plant in Guangdong Province [6]** **Listed in Rare and Precious Plants of Hong Kong [7]** **Cap. 586 [8]**									**S**		**S**			

Scientific Name [12 13 14 15 16]	Chinese Name	Growth Form	Origin	Rarity in Hong Kong [1]	Protection/Conservation Status [2 3 4 5 6 7 8 9 10]	Relative Abundance													
						Within Proposed Site Boundary						Outside the Proposed Site Boundary but within Study Area							
						DA	PL	SG	VO	WO	SNW	DA	PL	SG	VO	WO	CH	SNW	NW
					State Protection (Category II) [9]														
Archontophoenix alexandrae	假檳榔	Tree	Exotic	-	-							O							
Ardisia crenata	朱砂根	Shrub	Native	Common	-					S									
Ardisia lindleyana	山血丹	Shrub	Native	Common	-					S						O			
Ardisia quinquegona	羅傘樹	Shrub	Native	Very common	-					O						O			
Artocarpus heterophyllus	菠蘿蜜	Tree	Exotic	-	-				C						S				
Artocarpus hypargyreus	**白桂木**	**Tree**	**Native**	**Common**	**IUCN Red List of Threatened Species: Vulnerable [2]** **Listed in Rare and Precious Plants of Hong Kong: Near Threatened [7]** **Recorded in China Plant Red Data Book [5]** **Threatened Species List of China's Higher Plants: Endangered in China [4]** **Included in Illustrations of Rare & Endangered Plant in Guangdong Province [6]**											**S**			
Arundinella setosa	刺芒野古草	Herb	Native	Very common	-									O					
Asparagus cochinchinensis	天門冬	Herb	Native	Common	-							S							
Aspidistra sp.	蜘蛛抱蛋屬	Herb	Native	-	-											S			
Asystasia micrantha	小花十萬錯	Herb	Exotic	-	-	O	S					O	C		C	S		C	
Atalantia buxifolia	酒餅簕	Shrub	Native	Common	-											S			
Averrhoa carambola	楊桃	Tree	Exotic	-	-				C			S							

Scientific Name [12 13 14 15 16]	Chinese Name	Growth Form	Origin	Rarity in Hong Kong [1]	Protection/Conservation Status [2 3 4 5 6 7 8 9 10]	Relative Abundance													
						Within Proposed Site Boundary						Outside the Proposed Site Boundary but within Study Area							
						DA	PL	SG	VO	WO	SNW	DA	PL	SG	VO	WO	CH	SNW	NW
Axonopus compressus	地毯草	Herb	Exotic	Common	-	S						C							
Bambusa sp.	竹屬	Tree	Exotic	-	-				O			S	O		O	C			
Bambusa vulgaris cv. *Vittata*	黃金間碧竹	Bamboo	Exotic	-	-				S										
Bauhinia championii	缺葉藤	Climber	Native	Common	-										S	S			
Bauhinia corymbose [12]	首冠藤	Climber	Exotic	Very rare	-								S			O			
Bauhinia glauca	粉葉羊蹄甲	Climber	Native	Very common	-					C									
Bauhinia purpurea	紅花羊蹄甲	Tree	Exotic	-	-							O	C						
Bauhinia variegata	宮粉羊蹄甲	Tree	Exotic	-	-								O						
Bauhinia x blakeana	洋紫荊	Tree	Native	-	-							O							
Begonia cucullata var. *hookeri*	四季秋海棠	Herb	Exotic	-	-				S		S								
Benincasa hispida var. *chieh-qua*	節瓜	Climber	Exotic	-	-										S				
Berchemia floribunda	多花勾兒茶	Climber	Native	Common	-					S						S			
Bidens alba	白花鬼針草	Herb	Exotic	Very common	-	C	C		C		S	C	C		C		S	C	
Bischofia javanica	秋楓	Tree	Native	Common	-							O							
Blechnum orientale	烏毛蕨	Herb	Native	Very common	-									O		O			O
Boehmeria nivea var. *tenacissima*	青葉苧麻	Shrub	Native	-	-				O		C	S				S		C	
Bougainvillea spectabilis	葉子花	Climber	Exotic	-	-											S			
Breynia fruticosa	黑面神	Shrub	Native	Very common	-					S				O		S			

Scientific Name [12 13 14 15 16]	Chinese Name	Growth Form	Origin	Rarity in Hong Kong [1]	Protection/Conservation Status [2 3 4 5 6 7 8 9 10]	Relative Abundance													
						Within Proposed Site Boundary						Outside the Proposed Site Boundary but within Study Area							
						DA	PL	SG	VO	WO	SNW	DA	PL	SG	VO	WO	CH	SNW	NW
Bridelia tomentosa	土蜜樹	Shrub	Native	Very common	-				S	S		O	C		O	O			
Broussonetia kaempferi var. *australis*	藤構	Climber	Native	Restricted	-											S			
Broussonetia papyrifera	構樹	Tree	Native	Very common	-				O						O				
Brucea javanica	鴉膽子	Shrub	Native	Common	-									S					
Byttneria grandifolia	刺果藤	Climber	Native	Very common	-								S						
Caesalpinia crista	華南雲實	Climber	Native	Very common	-				S	O					S	O			
Calamus tetradactylus	白藤	Climber	Native	Common	-											S			
Callistemon viminalis	串錢柳	Tree	Exotic	-	-							S							
Canarium album	橄欖	Tree	Exotic	Restricted	-											S			
Canarium pimela [12]	烏欖	Tree	Exotic	Rare	-											O			
Cansjera rheedii	山柑藤 , 山柑	Climber	Native	Restricted	-											S			
Canthium dicoccum	**魚骨木**	**Tree**	**Native**	**Common**	**IUCN Red List of Threatened Species: Vulnerable [2]**											**O**			
Capsicum annuum	辣椒	Herb	Exotic	-	-				S										
Carica papaya	番木瓜	Tree	Exotic	-	-				C			S			O				
Caryota mitis	短穗魚尾葵	Tree	Exotic	-	-										S	S			
Cassytha filiformis	無根藤	Climber	Native	Very common	-									S					
Castanopsis fissa	黧蒴錐	Tree	Native	Common	-											S			
Casuarina equisetifolia [12]	木麻黃	Tree	Exotic	Rare	-								S						

Scientific Name [12 13 14 15 16]	Chinese Name	Growth Form	Origin	Rarity in Hong Kong [1]	Protection/Conservation Status [2 3 4 5 6 7 8 9 10]	Relative Abundance													
						Within Proposed Site Boundary						Outside the Proposed Site Boundary but within Study Area							
						DA	PL	SG	VO	WO	SNW	DA	PL	SG	VO	WO	CH	SNW	NW
Catharanthus roseus	長春花	Shrub	Exotic	-	-							S							
Celastrus hindsii	青江藤	Climber	Native	Very common	-											O			
Celtis sinensis	朴樹	Tree	Native	Common	-							S	O	S		O			
Celtis timorensis	假玉桂	Tree	Native	Restricted	-											S			
Centella asiatica	積雪草	Herb	Native	Very common	-							S							
Centotheca lappacea	假淡竹葉	Herb	Native	Common	-				S	S	O								S
Chloris virgata	虎尾草	Herb	Native	-	-	S						S							
Choerospondias axillaris	南酸棗	Tree	Native	Common	-											S			
Cibotium barometz	**金毛狗**	**Herb**	**Native**	**Very common**	**Appendix II of CITES [3] Listed in Rare and Precious Plants of Hong Kong: Vulnerable in China [7] Cap. 586 [8] State Protection (Category II) [9]**				**S**	**O**						**S**			
Cinnamomum burmannii	陰香	Tree	Native	-	-					S		S				O			
Cinnamomum camphora	樟	Tree	Native	Common	-				O				C		O				
Cinnamomum parthenoxylon	黃樟	Tree	Native	Common	-											S			
Citrus maxima	柚	Tree	Exotic	-	-										S	O			
Clausena lansium	黃皮	Tree	Exotic	-	-				C			S			C	S			
Cleistocalyx nervosum	水翁	Tree	Native	Common	-				O			S			O			S	C

Scientific Name [12 13 14 15 16]	Chinese Name	Growth Form	Origin	Rarity in Hong Kong [1]	Protection/Conservation Status [2 3 4 5 6 7 8 9 10]	Relative Abundance													
						Within Proposed Site Boundary						Outside the Proposed Site Boundary but within Study Area							
						DA	PL	SG	VO	WO	SNW	DA	PL	SG	VO	WO	CH	SNW	NW
Cleome rutidosperma	皺子白花菜	Herb	Exotic	Restricted	-							S	S						
Clerodendrum myricoides	楊梅葉大青	Shrub	Exotic	-	-							S							
Cocculus orbiculatus	木防己	Climber	Native	Common	-											S			
Colocasia esculenta	芋	Herb	Exotic	-	-						C	S						S	
Commelina diffusa	節節草	Herb	Native	Common	-							S				S		C	
Conyza canadensis	小蓬草，小白酒草	Herb	Exotic	Very common	-							O							
Coptosapelta diffusa	**流蘇子**	**Climber**	**Native**	**Rare**	**-**							**S**							
Cordyline fruticosa	朱蕉	Shrub	Exotic	-	-							S							
Cratoxylum cochinchinense	黃牛木	Tree	Native	Very common	-				O	S						C			
Cucumis sativus	黃瓜	Climber	Exotic	-	-										S				
Cyclea hypoglauca	粉葉輪環藤	Climber	Native	Common	-											S			
Cyclosorus latipinnus	寬羽毛蕨	Herb	Native	Common	-								S						
Cyclosorus parasiticus	華南毛蕨	Herb	Native	Very common	-		S			S	C		C			C		O	
Cynodon dactylon	狗牙根	Herb	Native	Very common	-							O	O						
Daemonorops jenkinsiana	黃藤	Climber	Native	Very common	-											S			
Dalbergia benthamii [16]	兩廣黃檀	Climber	Native	Common	Cap. 586 [8] CITES: Appendix II [3]				S							O		S	

Scientific Name [12 13 14 15 16]	Chinese Name	Growth Form	Origin	Rarity in Hong Kong [1]	Protection/Conservation Status [2 3 4 5 6 7 8 9 10]	Relative Abundance													
						Within Proposed Site Boundary						Outside the Proposed Site Boundary but within Study Area							
						DA	PL	SG	VO	WO	SNW	DA	PL	SG	VO	WO	CH	SNW	NW
Dalbergia millettii [16]	香港黃檀	Climber	Native	Common	Cap. 586 [8] CITES: Appendix II [3]									S					
Delonix regia	鳳凰木	Tree	Exotic	-	-							S	O						
Dendrotrophe varians	寄生藤	Climber	Native	Very common	-			S						C					
Desmodium heterocarpon	假地豆	Shrub	Native	Very common	-								S						
Desmos chinensis	假鷹爪	Shrub	Native	Common	-				O	S			S			C			
Dianella ensifolia	山菅蘭	Herb	Native	Very common	-											C			
Dicranopteris pedata	芒萁	Herb	Native	Very common	-			O		S				C		S			
Dieffenbachia seguine	花葉萬年青	Herb	Exotic	-	-													S	
Digitaria spp.	馬唐屬	Herb	Native	Very common	-							C					S	S	
Dimocarpus longan [12]	龍眼	Tree	Exotic	Restricted	Threatened Species List of China's Higher Plants: Vulnerable [4] China Plant Red Data Book: Vulnerable [5] State Protection (Category II) [9]				C	O		S	S		C				
Dioscorea bulbifera	黃獨	Climber	Native	Common	-											S			
Diospyros vaccinioides	**小果柿**	**Shrub**	**Native**	**Very common**	**IUCN Red List of Threatened Species: Critically Endangered [2]** **Threatened Species List of China's Higher Plants: Endangered [4]**					**O**				**S**	**S**	**S**			
Diploclisia glaucescens	蒼白秤鈎風	Climber	Native	Common	-				S							O			
Dracaena fragrans	巴西鐵樹	Shrub	Exotic	-	-				O										

Scientific Name [12 13 14 15 16]	Chinese Name	Growth Form	Origin	Rarity in Hong Kong [1]	Protection/Conservation Status [2 3 4 5 6 7 8 9 10]	Relative Abundance													
						Within Proposed Site Boundary						Outside the Proposed Site Boundary but within Study Area							
						DA	PL	SG	VO	WO	SNW	DA	PL	SG	VO	WO	CH	SNW	NW
Dracaena sanderiana	辛氏龍樹	Shrub	Exotic	-	-						S								
Drymaria cordata	荷蓮豆	Herb	Native	Common	-							S						O	
Dypsis lutescens	散尾葵	Shrub	Exotic	-	-				C			O	O						
Elaeocarpus chinensis	中華杜英	Tree	Native	Common	-											S			
Elephantopus scaber	地膽草	Herb	Native	Common	-									S					
Eleusine indica	牛筋草	Herb	Native	Very common	-	C						C							
Embelia laeta	酸藤子	Climber	Native	Very common	-											O			
Embelia ribes	白花酸藤子	Climber	Native	Common	-				S						S	O			
Emilia sonchifolia	一點紅	Herb	Native	Very common	-							O	S				S	S	
Epipremnum aureum	綠蘿	Climber	Exotic	-	-				S						S	S			
Eragrostis tenella	鯽魚草	Herb	Native	Very common	-	S	O				C	C	C				S	O	
Eriobotrya japonica	枇杷	Tree	Exotic	-	-								S						
Euphorbia hirta	飛揚草	Herb	Exotic	Very common	-							C	O				O		
Euphorbia thymifolia	千根草	Herb	Native	Very common	-							C					O		
Eurya nitida	細齒葉柃	Shrub	Native	Very common	-					O				O		O			
Fagraea ceilanica	灰莉	Shrub	Exotic	-	-							O							
Ficus benjamina	垂葉榕	Tree	Exotic	-	-							S							
Ficus elastica	印度榕	Tree	Exotic	-	-							O							

Scientific Name [12 13 14 15 16]	Chinese Name	Growth Form	Origin	Rarity in Hong Kong [1]	Protection/Conservation Status [2 3 4 5 6 7 8 9 10]	Relative Abundance													
						Within Proposed Site Boundary						Outside the Proposed Site Boundary but within Study Area							
						DA	PL	SG	VO	WO	SNW	DA	PL	SG	VO	WO	CH	SNW	NW
Ficus fistulosa	水同木	Tree	Native	Common	-											S			
Ficus formosana	台灣榕	Shrub	Native	Restricted	-														S
Ficus hirta	粗葉榕	Shrub	Native	Common	-										S	O			
Ficus hispida	對葉榕	Shrub	Native	Very common	-					S	S	O	S		S	S		S	S
Ficus microcarpa	榕樹	Tree	Native	Common	-							O				S			
Ficus pumila	薜荔	Climber	Native	Very common	-								S						
Ficus subpisocarpa	筆管榕	Tree	Native	-	-											S			
Ficus variegata var. *chlorocarpa*	青果榕	Tree	Native	Common	-						S	S			S	S		O	
Ficus variolosa	變葉榕	Tree	Native	Very common	-									S		S		S	
Ficus virens var. sublanceolata	黃葛樹	Tree	Native	Common	-											S			
Fimbristylis sp.	飄拂草屬	Herb	-	-	-														S
Floscopa scandens	聚花草	Herb	Native	Common	-													S	
Flueggea virosa	白飯樹	Shrub	Native	Common	-										S				
Gahnia tristis	黑莎草	Herb	Native	Very common	-											S			
Garcinia oblongifolia	嶺南山竹子	Tree	Native	Very common	-									S		O			S
Gardenia jasminoides	梔子	Shrub	Native	Common	-			S						O		C			
Glochidion eriocarpum	毛果算盤子	Shrub	Native	Very common	-					S				S		S			
Glochidion zeylanicum	香港算盤子	Shrub	Native	Common	-													S	

Scientific Name [12 13 14 15 16]	Chinese Name	Growth Form	Origin	Rarity in Hong Kong [1]	Protection/Conservation Status [2 3 4 5 6 7 8 9 10]	Relative Abundance													
						Within Proposed Site Boundary						Outside the Proposed Site Boundary but within Study Area							
						DA	PL	SG	VO	WO	SNW	DA	PL	SG	VO	WO	CH	SNW	NW
Gnetum luofuense	羅浮買麻藤	Climber	Native	Very common	-				S	S				S		C			
Grevillea robusta	銀樺	Tree	Exotic	-	-							S							
Handroanthus chrysanthus	黃花風鈴木	Tree	Exotic	-	-							S							
Hedychium coronarium	薑花	Herb	Exotic	-	-						O								
Hedyotis acutangula	金草	Herb	Native	Very common	-									O					
Hedyotis corymbosa	傘房花耳草	Herb	Native	Very common	-							O					S		
Hedyotis verticillata	粗葉耳草	Herb	Native	Common	-											S			
Helicteres angustifolia	山芝麻	Shrub	Native	Very common	-									C		S			
Heterosmilax japonica	肖菝葜	Climber	Native	Common	-				S							O			
Hibiscus rosa-sinensis	朱槿	Shrub	Exotic	-	-				O			O	S		O				
Homalium cochinchinensis	天料木	Tree	Native	Common	-					S						S			
Hylocereus undatus	量天尺	Herb	Exotic	-	-							S							
Hypserpa nitida	夜花藤	Climber	Native	Very common	-									O					
Ilex asprella	梅葉冬青	Shrub	Native	Very common	-											O			
Ilex memecylifolia	谷木葉冬青	Tree	Native	Common	-			S						C					
Ilex pubescens	毛冬青	Shrub	Native	Very common	-											S			
Ilex rotunda	鐵冬青	Tree	Exotic	Common	-											S			
Impatiens walleriana	非洲鳳仙	Herb	Exotic	-	-						S								

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						DA	PL	SG	VO	WO	SNW	DA	PL	SG	VO	WO	CH	SNW	NW
Imperata cylindrica	大白茅	Herb	Native	Very common	-											S			
Indocalamus sinicus	水銀竹	Bamboo	Native	very common	-					S									
Ipomoea cairica	五爪金龍	Climber	Exotic	Very common	-	O	S					C	O						
Ipomoea mauritiana	七爪龍	Climber	Exotic	Restricted	-							S							
Ipomoea nil	牽牛	Climber	Exotic	Common	-							S							
Ipomoea triloba	三裂葉薯，三裂葉牽牛	Herb	Native	-	-								S						
Itea chinensis	老鼠刺	Shrub	Native	Very common	-					S				O		O			
Juniperus chinensis	圓柏, 檜	Tree	Exotic	-	-											S			
Kyllinga nemoralis	單穗水蜈蚣	Herb	Native	Very common	-				S							S			
Kyllinga polyphylla	水蜈蚣	Herb	Exotic	Common	-							C			O	S			
Lagerstroemia speciosa [13]	大花紫薇	Tree	Exotic	-	Cap. 96A [10]							O							
Lantana camara	馬纓丹	Shrub	Exotic	Very common	-							C	O		O				
Lasianthus chinensis	粗葉木	Shrub	Native	Common	-											S			
Lepidagathis incurva	鱗花草	Herb	Native	Common	-						O								
Lepidosperma chinense	鱗子莎	Herb	Native	Very common	-									S					
Leucaena leucocephala	銀合歡	Tree	Exotic	Common	-	O	O					C	C	S	C	S	S	S	
Ligustrum sinense	山指甲	Tree	Native	Common	-							O	O			O			

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						DA	PL	SG	VO	WO	SNW	DA	PL	SG	VO	WO	CH	SNW	NW
Lindsaea ensifolia	劍葉鱗始蕨	Herb	Native	Very common	-											O			
Lindsaea orbiculata	團葉鱗始蕨	Herb	Native	Very common	-											O			
Liriope spicata	山麥冬	Herb	Native	Very common	-				S	C					S	C			
Litchi chinensis [12]	荔枝	Tree	Exotic	Restricted	Threatened Species List of China's Higher Plants: Endangered [4] China Plant Red Data Book: Vulnerable [5] State Protection (Category II) [9]				C			S			C				
Litsea cubeba	木薑子	Shrub	Native	Common	-					O				O		O			
Litsea glutinosa	潺槁樹	Tree	Native	Very common	-				S					S		S			
Litsea rotundifolia var. *oblongifolia*	豺皮樟	Shrub	Native	Very common	-			S		S				O	S	O			
Livistona chinensis	蒲葵	Tree	Exotic	-	-								O						
Lonicera macrantha	大花忍冬	Climber	Native	Common	-											S			
Lophatherum gracile	淡竹葉	Herb	Native	Very common	-					S						O			
Ludwigia hyssopifolia	草龍	Herb	Native	-	-													S	
Ludwigia perennis	細花丁香蓼	Herb	Native	Restricted	-													S	
Lygodium japonicum	海金沙	Herb	Native	Very common	-					O						C			
Macaranga sampsonii	鼎湖血桐	Shrub	Native	Restricted	-								S			S		S	
Macaranga tanarius var. *tomentosa*	血桐	Tree	Native	Common	-				C	S		C	C		C	O		S	
Machilus chekiangensis	浙江潤楠	Tree	Native	Very common	-				S	C			S		O	C			

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						DA	PL	SG	VO	WO	SNW	DA	PL	SG	VO	WO	CH	SNW	NW
Machilus pauhoi	刨花潤楠	Tree	Native	-	-					C						O			
Macrothelypteris torresiana	普通針毛蕨	Herb	Native	Very common	-						S								
Maesa japonica	杜莖山	Shrub	Native	Common	-					O						O			
Maesa perlarius	鯽魚膽	Shrub	Native	Common	-				S										
Magnolia grandiflora [13]	荷花玉蘭	Tree	Exotic	-	Cap. 96A [10]							S							
Mallotus apelta	白背葉	Shrub	Native	Common	-											S			
Mallotus paniculatus	白楸	Tree	Native	Very common	-										S	C			
Mallotus repandus	石岩楓	Climber	Native	Common	-					S									
Malvaviscus penduliflorus	垂花懸鈴花	Shrub	Exotic	-	-								S						
Mangifera indica	芒果	Tree	Exotic	-	-				O			S			O				
Manihot esculenta	木薯	Shrub	Exotic	-	-				S			S							
Maranta arundinacea	竹芋	Herb	Exotic	-	-				S										
Mariscus cyperoides	磚子苗	Herb	Native	Very common	-							S							
Melaleuca cajuputi subsp. cumingiana	白千層	Tree	Exotic	-	-							C							
Melastoma malabathricum	野牡丹	Shrub	Native	Common	-									O				S	S
Melastoma sanguineum	毛蒽	Shrub	Native	Common	-					S				O		O			S
Melia azedarach	苦楝	Tree	Exotic	Common	-								S			S			
Melicope pteleifolia	三椏苦	Shrub	Native	Common	-					S						S			

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						DA	PL	SG	VO	WO	SNW	DA	PL	SG	VO	WO	CH	SNW	NW
Melinis repens	紅毛草	Herb	Exotic	Very common	-							S							
Melodinus suaveolens	山橙	Climber	Native	Common	-				S										
Memecylon ligustrifolium	谷木	Tree	Native	Common	-											S			
Merremia umbellata subsp. *orientalis*	山貓菜	Climber	Native	Common	-					O						S			
Microcos nervosa	破布葉	Shrub	Native	Common	-											O			
Microstegium ciliatum	剛莠竹	Herb	Native	Very common	-				C					O	C	O		C	
Mikania micrantha	薇甘菊	Herb	Exotic	Very common	-	S	C		C		S		C		C	S		C	S
Millettia nitida	亮葉崖豆藤	Climber	Native	Very common	-					S						O			
Millettia pulchra	印度崖豆	Shrub	Native	Restricted	-											S			
Mimosa pudica	含羞草	Herb	Exotic	Very common	-								S						
Mirabilis jalapa	紫茉莉	Herb	Exotic	-	-							S							
Miscanthus floridulus	五節芒	Herb	Native	Common	-								S						
Miscanthus sinensis	芒	Herb	Native	Very common	-			O						C		S			
Monstera deliciosa	龜背竹	Climber	Exotic	-	-							S							
Morinda parvifolia	雞眼藤	Climber	Native	Very common	-											O			
Murraya paniculata	九里香	Tree	Exotic	-	-				C							S			
Musa acuminata cv. *Cavendishii*	香蕉	Herb	Exotic	-	-				C		S				C				
Musa x paradisiaca	大蕉	Herb	Exotic	-	-				C			S	S		C				

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						DA	PL	SG	VO	WO	SNW	DA	PL	SG	VO	WO	CH	SNW	NW
Mussaenda pubescens	玉葉金花	Climber	Native	Very common	-					S									
Nephrolepis auriculata	腎蕨	Herb	Native	Common	-							S							
Neyraudia reynaudiana	類蘆	Herb	Native	Very common	-			O				S		C					O
Odontonema tubiforme	紅樓花	Shrub	Exotic	-	-						S								
Ophiopogon jaburan	花葉沿階草	Herb	Exotic	-	-							S							
Oplismenus compositus	竹葉草	Herb	Native	Very common	-				C		S		C					O	
Opuntia stricta var. *dillenii*	仙人掌	Herb	Exotic	Common	-				S										
Ormosia emarginata	**凹葉紅豆**	**Tree**	**Native**	**Common**	**State Protection (Category II)[8]**									**S**		**S**			
Osmunda vachellii	華南紫箕	Herb	Native	Common	-														O
Paederia scandens	雞矢藤	Climber	Native	Very common	-							C	C			S	S		
Pandanus austrosinensis	露兜草	Herb	Native	-	-					O						S			
Panicum brevifolium	短葉黍	Herb	Native	Very common	-													O	S
Panicum maximum	大黍	Herb	Exotic	Common	-	C	C					C	C			S		S	
Paspalum conjugatum	兩耳草	Herb	Native	Common	-							C						S	
Paspalum scrobiculatum var. *orbiculare*	圓果雀稗	Herb	Native	Very common	-								S						
Paspalum sp.	海濱雀稗草	Herb	-	-	-							S							
Passiflora edulis	雞蛋果	Climber	Exotic	-	-				S						S				
Pavetta hongkongensis	**香港大沙葉**	**Tree**	**Native**	**Common**	**Cap. 96A [10]**							**S**				**S**			

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						DA	PL	SG	VO	WO	SNW	DA	PL	SG	VO	WO	CH	SNW	NW
Peltophorum tonkinense	銀珠	Tree	Exotic	-	-							S							
Pennisetum alopecuroides	狼尾草	Herb	Native	Common	-							S							
Pericampylus glaucus	細圓藤	Climber	Native	Restricted	-											S			
Persicaria barbata	毛蓼	Herb	Native	Common	-													S	
Persicaria chinensis	火炭母	Herb	Native	Common	-				O		O				O				
Phlogacanthus curviflorus	火焰花	Shrub	Exotic	-	-				S										
Phoenix roebelenii	江邊刺葵	Tree	Exotic	-	-							O							
Phyllanthus cochinchinensis	越南葉下珠	Shrub	Native	Very common	-				S							O			
Phyllanthus debilis	銳尖葉下珠	Herb	Native	Common	-							O							
Phyllanthus reticulatus	小果葉下珠	Shrub	Native	Common	-					S						O			
Phyllanthus tenellus	纖梗葉下珠	Herb	-	-	-							O	S				S		
Phyllanthus urinaria	葉下珠	Herb	Native	Common	-							S					O		
Pilea microphylla	小葉冷水花	Herb	Exotic	Very common	-						O	S				S			
Pinus massoniana [14]	馬尾松	Tree	Native	Common	China Plant Red Data Book (Endangered) [5]									S					
Piper sarmentosum	假蒟	Herb	Native	Restricted	-				S										
Platycladus orientalis	側柏	Tree	Exotic	-	-				S										
Plumeria rubra	紅雞蛋花	Tree	Exotic	-	-							S							
Podocarpus macrophyllus [15]	羅漢松	Tree	Native	Restricted	Threatened Species List of China's Higher Plants: Vulnerable [4]											S			

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						DA	PL	SG	VO	WO	SNW	DA	PL	SG	VO	WO	CH	SNW	NW
Pogonatherum crinitum	金絲草	Herb	Native	Common	-														C
Polyspora axillaris	大頭茶	Shrub	Native	Very common	-											S			
Praxelis clematidea	假臭草	Herb	Exotic	Very common	-								S	S					
Prunus persica	桃	Tree	Exotic	-	-											S			
Psychotria asiatica	九節	Tree	Native	Very common	-					S						C			
Psychotria serpens	蔓九節	Climber	Native	Very common	-					C				O		C			
Pteris biaurita	狹眼鳳尾蕨	Herb	Native	Common	-				S									S	
Pteris ensiformis	劍葉鳳尾蕨	Herb	Native	Common	-				S	S	S	S	S			C			
Pteris semipinnata	半邊旗	Herb	Native	Very common	-				O	O						C			
Pteris vittata	蜈蚣草	Herb	Native	Very common	-							C		S					
Pueraria lobata var. *montana*	葛麻姆	Climber	Native	Common	-		S		C	S			O		O	O		O	
Pueraria lobata var. *thomsonii*	粉葛	Climber	Exotic	-	-				S			S	S						
Pueraria phaseoloides	三裂葉野葛	Climber	Native	Very common	-						S								
Pyrrosia adnascens	貼生石韋	Herb	Native	Common	-						S	S							
Quisqualis indica	使君子	Climber	Exotic	Restricted	-							S							
Reevesia thyrsoidea	梭羅樹	Tree	Native	Common	-											S			
Rhaphiolepis indica	石斑木	Shrub	Native	Very common	-							S		S		S			
Rhaphiolepis lanceolata	細葉石斑木	Tree	Native	-	-											S			

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						DA	PL	SG	VO	WO	SNW	DA	PL	SG	VO	WO	CH	SNW	NW
Rhapis excelsa	棕竹	Shrub	Native	Common	-							S							
Rhododendron pulchrum [13]	錦繡杜鵑	Shrub	Exotic	-	Cap. 96A [10]							S							
Rhododendron simsii	**紅杜鵑**	**Shrub**	**Native**	**Very common**	**Cap. 96A [10]**											**S**			
Rhodomyrtus tomentosa	桃金娘	Shrub	Native	Very common	-									C		S			
Rhus succedanea	木蠟樹	Shrub	Native	Common	-									S		S			
Rhynchosia volubilis	鹿藿	Climber	Native	Restricted	-									S					
Rourea microphylla	小葉紅葉藤	Climber	Native	Common	-											O			
Rubus leucanthus	白花懸鉤子	Climber	Native	Common	-					S									
Rubus reflexus	鏽毛莓	Climber	Native	Very common	-											O			
Sansevieria trifasciata	虎尾蘭	Herb	Exotic	-	-											S			
Sapium discolor	山烏桕	Tree	Native	Very common	-											S			
Sapium sebiferum	烏桕	Tree	Native	Common	-							S				S		S	
Sarcandra glabra	草珊瑚	Shrub	Native	Very common	-					C									
Saurauia tristyla	水東哥，米花樹	Tree	Native	Common	-											S			
Schefflera actinophylla	輻葉鵝掌柴	Tree	Exotic	-	-								S						
Schefflera arboricola	鵝掌藤	Climber	Exotic	-	-							O							
Schefflera heptaphylla	鵝掌柴	Tree	Native	Very common	-				S				S			C			

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						DA	PL	SG	VO	WO	SNW	DA	PL	SG	VO	WO	CH	SNW	NW
Schima superba	木荷	Tree	Native	Common	-				S					C		O			
Scleria ciliaris	緣毛珍珠茅	Herb	Native	Very common	-			O						C		S			
Scleria spp.	珍珠茅屬	Herb	-	-	-													S	
Scolopia saeva	廣東刺柊	Tree	Native	Common	-											O			
Selaginella moellendorffii	江南卷柏	Herb	Native	Common	-											S			
Setaria palmifolia	棕葉狗尾草	Herb	Native	Common	-						S							S	
Sinosideroxylon wightianum	革葉鐵欖	Tree	Native	Common	-											S			
Smilax glabra	土茯苓	Climber	Native	Very common	-					O				S		S			
Solanum americanum	少花龍葵	Herb	Exotic	-	-							O							
Solanum torvum	水茄	Shrub	Exotic	Common	-							S	S						
Spathodea campanulata	火焰樹	Tree	Exotic	-	-								O						
Spermacoce remota	光葉豐花草	Herb	Exotic	-	-							O				S	S	S	
Sphenomeris chinensis	烏蕨	Herb	Native	Very common	-											S			S
Sporobolus fertilis	鼠尾粟	Herb	Native	Very common	-												S		
Stephania longa	糞箕篤	Climber	Native	Common	-					S						S			
Sterculia lanceolata	假蘋婆	Tree	Native	Very common	-				O			S	S		S	C		S	S
Sterculia nobilis	蘋婆	Tree	Exotic	-	-										S				
Strophanthus divaricatus	羊角拗	Climber	Native	Common	-			S						O		O			

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						DA	PL	SG	VO	WO	SNW	DA	PL	SG	VO	WO	CH	SNW	NW
Strychnos angustiflora	牛眼馬錢	Climber	Native	Common	-											S			
Symplocos cochinchinensis var. *laurina*	黃牛奶樹	Tree	Native	Common	-											S			
Synedrella nodiflora	金腰箭	Herb	Exotic	Very common	-								S			S			
Syngonium podophyllum	合果芋	Herb	Exotic	-	-				O			S			O			O	
Syngonium sp.	白蝴蝶	Herb	Exotic	-	-				S									S	
Syzygium hancei	韓氏蒲桃	Tree	Native	Common	-											O			
Syzygium jambos	蒲桃	Tree	Exotic	Common	-				O	C						O			
Syzygium levinei	山蒲桃	Tree	Native	Common	-				S	S						O			
Syzygium myrtifolium	鐘花蒲桃	Shrub	Exotic	-	-							S							
Tadehagi triquetrum	葫蘆茶	Shrub	Native	Very common	-								S	S					
Tarenna attenuata	假桂烏口樹	Tree	Native	Common	-											S			
Tarenna mollissima	白花苦燈籠	Tree	Native	Common	-											S			
Terminalia mantaly `Triciolor`	花葉欖仁	Tree	Exotic	-	-							S							
Tetracera asiatica	錫葉藤	Climber	Native	Very common	-					S				S		C			
Tetradium glabrifolium	楝葉吳茱萸	Tree	Native	Common	-											O			
Thevetia peruviana	黃花夾竹桃	Shrub	Exotic	-	-							S							
Thunbergia grandiflora	大花老鴉嘴	Climber	Exotic	Common	-								S						

Scientific Name [12 13 14 15 16]	Chinese Name	Growth Form	Origin	Rarity in Hong Kong [1]	Protection/Conservation Status [2 3 4 5 6 7 8 9 10]	Relative Abundance												
						Within Proposed Site Boundary						Outside the Proposed Site Boundary but within Study Area						
						DA	PL	SG	VO	WO	SNW	DA	PL	SG	VO	WO	CH	SNW	NW
Thysanolaena latifolia	粽葉蘆	Herb	Native	Common	-						S	S	S					S	O
Tinospora sinensis	中華青牛膽	Climber	Native	Common	-											S			
Trachelospermum jasminoides 'Flame'	花葉絡石	Climber	-	-	-							S							
Trema tomentosa	山黃麻	Shrub	Native	Common	-								S			S			
Tridax procumbens	羽芒菊	Herb	Exotic	Very common	-	S						C					S		
Urena lobata	肖梵天花	Herb	Native	Common	-				S										
Uvaria grandiflora	大花紫玉盤	Climber	Native	Restricted	-											O			
Uvaria macrophylla	紫玉盤	Climber	Native	Common	-				S										
Vernonia cinerea	夜香牛	Herb	Native	Very common	-							O							
Viburnum odoratissimum	珊瑚樹	Shrub	Native	Very common	-							S				O			
Vigna unguiculata subsp. *sesquipedalis*	長豇豆	Climber	Exotic	-	-				S										
Wedelia trilobata	三裂葉蟛蜞菊	Herb	Exotic	Common	-								C			S		C	
Zanthoxylum avicennae	簕欓花椒, 簕欓	Tree	Native	Common	-					S						C			
Zanthoxylum nitidum	兩面針	Climber	Native	Very common	-					S									
Zea mays	玉蜀黍	Herb	Exotic	-	-				S										
Zingiber officinale	薑	Herb	Exotic	-	-				O										
Total number of species						11	9	9	75	58	27	116	63	49	47	179	14	45	20

Notes:

1. Corlett *et al*. (2000). Hong Kong Vascular Plants: Distribution and Status.
2. IUCN (2021). IUCN Red List Version 2021-1.
3. Convention on International Trade in Endangered Species of Wild Flora and Fauna (2021). Appendices I, II and III.
4. Qin *et al*. (2017). Threatened Species List of China's Higher Plants.
5. Fu & Chin (1992). China Plant Red Data Book – Rare and Endangered Plants.
6. Wu & Hu (1988). Illustration of Rare & endangered plant in Guangdong Province.
7. Hu *et al*. (2003). Rare and Precious Plants of Hong Kong.
8. Cap. 586 Protection of Endangered Species of Animals and Plants Ordinance
9. State Forestry Administration & Ministry of Agriculture (2021). List of Wild Plants under State Protection.
10. Cap. 96A Forestry Regulations under Cap. 96 Forests and Countryside Ordinance
11. **Species in bold are considered of conservation importance**
12. *Bauhinia corymbosa, Canarium pimela, Casuarina equisetifolia, Dimocarpus longan,* and *Litchi chinensis* were exotic to Hong Kong and not considered of conservation importance, despite being considered rare/ very rare by Corlett et al. (2000), listed as vulnerable/endangered in Threatened Species List of China's Higher Plants, listed as vulnerable in China Plant Red Data Book and/or listed under Category II in the List of Wild Plants under State Protection (Part 1).
13. *Lagerstroemia speciosa*, *Magnolia grandiflora* and *Rhododendron pulchrum* are protected under Cap. 96 Forests and Countryside Ordinance, however, the recorded individuals were cultivated thus they are not considered of conservation importance. In additional, these species are exotic to Hong Kong.
14. *Pinus massoniana* is a native tree species considered as endangered in China Plant Red Data Book. However, this species is widely cultivated and common in Hong Kong, thus, it is not considered as species of conservation importance in the current Study.
15. *Podocarpus macrophyllus* is a native species considered as vulnerable in Threatened Species List of China's Higher Plants. The recorded individuals are located close to the Developed Area though they are recorded in the Woodland. According to the form of the individuals, they are considered to be cultivated, thus it is not considered as species of conservation importance in the current Study.
16. *Dalbergia* spp. are listed under Appendix II of CITES and protected under Cap. 586 Protection of Endangered Species of Animals and Plants Ordinance in Hong Kong as species in this genus is facing threat due to the overexploitation for its valuable wood (known as rosewood). In the current study, *Dalbergia benthamii* and *Dalbergia millettii* were recorded. As the recorded *Dalbergia* species are climber which is not relevant to the timber exploitation. In addition, these species is very common in Hong Kong. Thus, it is not considered as species of conservation importance in the current Study.

Abbreviations:

- Habitats: DA: Developed Area; PL: Plantation; SG: Shrubland/Grassland; VO: Village/Orchard; WO: Woodland; CH: Channel; SNW: Semi-natural Watercourse; NW: Natural Watercourse
- Relative abundance: C = Common; O = Occasional; S = Scarce

APPENDIX F

BIRD SPECIES RECORDED WITHIN THE STUDY AREA

Common Name[1]	Scientific Name[1]	Rarity & Distribution in Hong Kong[1]	Conservation Status[23456]	Within the Proposed Site Boundary			Outside the Proposed Site Boundary but within the Study Area						
				SNW	VO	WO	CH	DA	PL	SNW	WO	S/G	VO
Black Kite	***Milvus migrans***	**Common resident and winter visitor. Widely distributed in Hong Kong.**	**Fellowes et al. (2002): (RC); Appendix 2 of CITES**					**1**			**1**		
Rock Dove	*Columba livia*	Locally common resident. Widely distributed in urban area throughout Hong Kong.	-					5					
Spotted Dove	*Spilopelia chinensis*	Abundant resident. Widely distributed in Hong Kong.	-		3	10	7	44	8		15		4
Common Emerald Dove	*Chalcophaps indica*	Uncommon but widespread resident. Widely distributed in woodland throughout Hong Kong.	-								2		
Greater Coucal	***Centropus sinensis***	**Common resident. Widely distributed in Hong Kong.**	**Class 2 Protected Animal of China**						**1**		**1**		
Collared Scops Owl	***Otus lettia***	**Common resident. Widely distributed in shrubland throughout Hong Kong.**	**Cap. 586; Class 2 Protected Animal of China; Appendix 2 of CITES**		**1**								
Scarlet Minivet	*Pericrocotus speciosus*	Common resident. Found in Tai Po Kau, the Peak, Lam Tsuen, Cape D'Aguilar Road, Peel Rise, Shing Mun.	-						1		1		
Red-billed Blue Magpie	*Urocissa erythroryncha*	Common resident. Widely distributed in woodland edges throughout Hong Kong.	-								8		
Large-billed Crow	*Corvus macrorhynchos*	Common resident. Widely distributed in Hong Kong.	-								10		

Common Name[1]	Scientific Name[1]	Rarity & Distribution in Hong Kong[1]	Conservation Status[23456]	Within the Proposed Site Boundary			Outside the Proposed Site Boundary but within the Study Area						
				SNW	VO	WO	CH	DA	PL	SNW	WO	S/G	VO
Cinereous Tit	*Parus cinereus*	Common resident. Widely distributed in Hong Kong.	-								4		
Red-whiskered Bulbul	*Pycnonotus jocosus*	Abundant resident. Widely distributed in Hong Kong.	-		32	14		26	17		114	8	
Chestnut Bulbul	*Hemixos castanonotus*	Common resident and winter visitor. Widely distributed in woodland throughout Hong Kong.	-								3		
Mountain Tailorbird	*Phyllergates cucullatus*	Uncommon resident and locally common winter visitor. Found in woodland throughout Hong Kong.	-								1		
Yellow-browed Warbler	*Phylloscopus inornatus*	Abundant winter visitor and migrant. Widely distributed in woodland throughout Hong Kong.	-								4		
Common Tailorbird	*Orthotomus sutorius*	Common resident. Widely distributed in Hong Kong.	-		14	11					37		
Streak-breasted Scimitar Babbler	*Pomatorhinus ruficollis*	Common resident. Widely distributed in shrubland and woodland throughout Hong Kong.	-								1		
Rufous-capped Babbler	***Cyanoderma ruficeps***	**Common resident. Found in Shing Mun, Tai Po Kau, Tai Mek Tuk, Ng Tung Chai, Fo Tan, Tai Mo Shan, The Peak, Kadoorie Agricultural Research Centre.**	**Fellowes et al. (2002): LC**		**1**								**1**
Masked Laughingthrush	*Pterorhinus perspicillatus*	Abundant resident. Widely distributed in shrubland throughout Hong Kong.	-		6	4							
Black-throated Laughingthrush	***Pterorhinus chinensis***	**Common resident. Widely distributed in woodland and shrubland throughout Hong Kong.**	**Class 2 Protected Animal of China**			**3**					**8**		
Blue-winged Minla	*Actinodura cyanouroptera*	Locally common resident. Found in Shing Mun, Tai Po Kau, Ng Tung Chai, Kowloon Hills, Ho	-								1		

Common Name[1]	Scientific Name[1]	Rarity & Distribution in Hong Kong[1]	Conservation Status[23456]	Within the Proposed Site Boundary			Outside the Proposed Site Boundary but within the Study Area						
				SNW	VO	WO	CH	DA	PL	SNW	WO	S/G	VO
		Chung, Tai Lam Country Park, Lam Tsuen Country Park, Hong Kong Island.											
Silver-eared Mesia	***Leiothrix argentauris***	**Common resident. Widely distributed in woodland throughout Hong Kong.**	**Cap. 586; Class 2 Protected Animal of China; Appendix 2 of CITES**								**1**		
Japanese White-eye	*Zosterops simplex*	Abundant resident. Widely distributed in Hong Kong.	-		28	12		5	8		43	3	
Crested Myna	*Acridotheres cristatellus*	Abundant resident. Widely distributed in Hong Kong.	-					5					
Black-collared Starling	*Gracupica nigricollis*	Common resident. Widely distributed in Hong Kong.	-								3		
Oriental Magpie-Robin	*Copsychus saularis*	Abundant resident. Widely distributed in Hong Kong.	-	1	7	6		3		2	22		
Asian Brown Flycatcher	*Muscicapa dauurica*	Common autumn passage migrant and winter visitor. Widely distributed in Hong Kong.	-		1								
Blue Whistling Thrush	*Myophonus caeruleus*	Common resident. Widely distributed in shrubland and woodland throughout Hong Kong.	-		1	1					9		
Daurian Redstart	*Phoenicurus auroreus*	Common winter visitor. Widely distributed in Hong Kong.	-					1					
Scarlet-backed Flowerpecker	*Dicaeum cruentatum*	Common resident. Widely distributed in wooded area throughout Hong Kong.	-			1					10		
Fork-tailed Sunbird	*Aethopyga christinae*	Common resident and winter visitor. Widely distributed in Hong Kong.	-		4						11		3
Eurasian Tree Sparrow	*Passer montanus*	Abundant resident. Widely distributed in Hong Kong.	-		3			51	11				12
Eastern Yellow Wagtail	*Motacilla tschutschensis*	Common passage migrant and winter visitor. Widely distributed in	-				1						

Common Name[1]	Scientific Name[1]	Rarity & Distribution in Hong Kong[1]	Conservation Status[23456]	Within the Proposed Site Boundary			Outside the Proposed Site Boundary but within the Study Area						
				SNW	VO	WO	CH	DA	PL	SNW	WO	S/G	VO
		agricultural fields and marsh edges throughout Hong Kong.											
Grey Wagtail	*Motacilla cinerea*	Common passage migrant and winter visitor. Widely distributed in hill streams throughout Hong Kong.	-	1			1			4			
White Wagtail	*Motacilla alba*	Resident, common passage migrant and winter visitor. Widely distributed in Hong Kong.	-	4			4			1			

Notes:

1. Agriculture, Fisheries and Conservation Department. (2022). Species Database of the Hong Kong Biodiversity Information Hub.
2. Cap. 170 Wild Animals Protection Ordinance.
3. Cap. 586 Endangered Species of Animals and Plants Ordinance.
4. Convention on International Trade in Endangered Species of Wild Flora and Fauna. Appendices I, II and III.
5. Fellowes *et al*. (2002). Wild animals to watch: Terrestrial and freshwater fauna of conservation concern in Hong Kong.
    - For conservation status listed by Fellowes *et al*. (2002), letters in parentheses indicate that the assessment is on the basis of restrictedness in breeding and/or roosting sites rather than in general occurrence.
6. List of State Protected Wild Animals, promulgated by the State Council.

- **Species in bold are considered of conservation importance.**

Abbreviations:

- Conservation Status in Fellowes et al. (2002): LC = Local Concern, RC = Regional Concern
- Habitats: DA: Developed Area; PL: Plantation; VO: Village/Orchard; WO: Woodland; CH: Channel; SNW: Semi-natural Watercourse; S/G: Shrubland/Grassland

APPENDIX G

BUTTERFLY SPECIES RECORDED WITHIN THE STUDY AREA

Common Name[1]	Scientific Name[1]	Rarity & Distribution in Hong Kong[1]	Conservation Status[2]	Within the Proposed Site Boundary			Outside the Proposed Site Boundary but within the Study Area						
				SNW	VO	WO	DA	NW	PL	SNW	WO	S/G	VO
Formosan Swift	*Borbo cinnara*	Common. Widely distributed throughout Hong Kong.	-								1		
Contiguous Swift	*Polytremis lubricans*	Common. Widely distributed throughout Hong Kong.	-								1		
Common Hedge Blue	*Acytolepis puspa*	Common. Widely distributed throughout Hong Kong.	-						1		2	1	
Forget-me-not	***Catochrysops strabo***	**Very Rare/Species of Conservation Concern. Pui O, Tai Po Kau, Fung Yuen, Shing Mun, Sha Lo Wan.**	**-**						**1**		**1**		
Lime Blue	*Chilades lajus*	Common. Widely distributed throughout Hong Kong.	-								3		
Plains Cupid	*Chilades pandava*	Uncommon. Widely distributed throughout Hong Kong.	-						1		1		
Purple Sapphire	*Heliophorus epicles*	Common. Widely distributed throughout Hong Kong.	-	1			1				1		
Common Onyx	***Horaga onyx***	**Rare. Widely distributed throughout Hong Kong.**	**-**								**1**		
Metallic Cerulean	***Jamides alecto***	**Very Rare. Victoria Peak, Fung Yuen, Chuen Lung, Mui Wo.**	**-**	**1**	**1**				**2**	**1**	**5**		
Dark Cerulean	*Jamides bochus*	Common. Widely distributed throughout Hong Kong.	-	1							1		
Transparent 6-line Blue	*Nacaduba kurava*	Common. Widely distributed throughout Hong Kong.	-		1				3				
Tailless Line Blue	*Prosotas dubiosa*	Vagrant. North Lantau Island.	-								2		

Common Name[1]	Scientific Name[1]	Rarity & Distribution in Hong Kong[1]	Conservation Status[2]	Within the Proposed Site Boundary			Outside the Proposed Site Boundary but within the Study Area						
				SNW	VO	WO	DA	NW	PL	SNW	WO	S/G	VO
Pale Grass Blue	*Zizeeria maha*	Very Common. Widely distributed throughout Hong Kong.	-				7						
Slate Flash	*Rapala manea*	Common. Widely distributed throughout Hong Kong.	-						1				
Tiny Grass Blue	***Zizula hylax***	**Very Rare/Species of Conservation Concern. Lung Kwu Tan, Fung Yuen, Sha Lo Wan.**	**-**				**3**				**2**		
Plum Judy	*Abisara echerius*	Very Common. Widely distributed throughout Hong Kong.	-			2					3		
Punchinello	*Zemeros flegyas*	Common. Widely distributed throughout Hong Kong.	-								1		
Common Indian Crow	*Euploea core*	Common. Widely distributed throughout Hong Kong.	-	4	6	8					11		
Blue-spotted Crow	*Euploea midamus*	Very Common. Widely distributed throughout Hong Kong.	-	4	7	1	3				10		
Ceylon Blue Glassy Tiger	*Ideopsis similis*	Very Common. Widely distributed throughout Hong Kong.	-		3	6					15		1
Angled Castor	*Ariadne ariadne*	Common. Widely distributed throughout Hong Kong.	-		2						3		
Colour Sergeant	*Athyma nefte*	Common. Widely distributed throughout Hong Kong.	-							1	2		
Tawny Rajah	*Charaxes bernardus*	Common. Widely distributed throughout Hong Kong.	-								2		
Rustic	*Cupha erymanthis*	Very Common. Widely distributed throughout Hong Kong.	-	5		7	6		1		30	3	
Common Mapwing	*Cyrestis thyodamas*	Common. Widely distributed throughout Hong Kong.	-				2		2				
Green Skirt Baron	***Cynitia whiteheadi***	**Rare. North New Territories.**	**-**								**2**		
White-edged Blue Baron	*Euthalia phemius*	Common. Widely distributed throughout Hong Kong.	-	1					1		3		
Red Ring Skirt	*Hestina assimilis*	Common. Widely distributed throughout Hong Kong.	-	1									

Common Name[1]	Scientific Name[1]	Rarity & Distribution in Hong Kong[1]	Conservation Status[2]	Within the Proposed Site Boundary			Outside the Proposed Site Boundary but within the Study Area						
				SNW	VO	WO	DA	NW	PL	SNW	WO	S/G	VO
Great Eggfly	*Hypolimnas bolina*	Common. Widely distributed throughout Hong Kong.	-	3	2	2	1		1		4		
Danaid Eggfly	***Hypolimnas misippus***	**Uncommon. Ngau Ngak Shan, Lung Kwu Tan, Hong Kong Wetland Park, Mount Parker, Cloudy Hill, Lin Ma Hang.**	**Fellowes et al. (2002): LC**			**1**							
Chocolate Pansy	*Junonia iphita*	Common. Widely distributed throughout Hong Kong.	-	5	2					2	4		
Lemon Pansy	*Junonia lemonias*	Common. Wu Kau Tang, Shan Liu, Shui Long Wo, Tong Fuk, Pak Tam Chung.	-	1	4	1	1	1			1		
Blue Admiral	*Kaniska canace*	Common. Widely distributed throughout Hong Kong.	-							1			
Common Archduke	*Lexias pardalis*	Suspected species. Widely distributed throughout Hong Kong.	-	2	2		1				2		2
Commander	***Moduza procris***	**Very Rare/Species of Conservation Concern. Ma On Shan, Pak Tam Chung, Kap Hang Tun, Aberdeen, Shek Lei Pui.**	**Fellowes et al. (2002): LC**								**2**		
Southern Sullied Sailer	*Neptis clinia*	Common. Widely distributed throughout Hong Kong.	-	1		3							
Common Sailer	*Neptis hylas*	Very Common. Widely distributed throughout Hong Kong.	-	1	4	3		2					
Common Lascar	*Pantoporia hordonia*	Uncommon. Widely distributed throughout Hong Kong.	-								1		
Five-dot Sergeant	*Limenitis sulpitia*	Common. Widely distributed throughout Hong Kong.	-		1								
Short-banded Sailer	*Phaedyma columella*	Common. Widely distributed throughout Hong Kong.	-	2									
Black Prince	*Rohana parisatis*	Common. Widely distributed throughout Hong Kong.	-		1								

Common Name[1]	Scientific Name[1]	Rarity & Distribution in Hong Kong[1]	Conservation Status[2]	Within the Proposed Site Boundary			Outside the Proposed Site Boundary but within the Study Area						
				SNW	VO	WO	DA	NW	PL	SNW	WO	S/G	VO
Common Jester	*Symbrenthia lilaea*	Common. Widely distributed throughout Hong Kong.	-	2		2					3		
Painted Lady	***Vanessa cardui***	**Rare. Widely distributed throughout Hong Kong.**	**Fellowes et al. (2002): LC**								**1**		
Common Duffer	*Discophora sondaica*	Uncommon. Widely distributed throughout Hong Kong.	-								1		
Large Faun	*Faunis eumeus*	Common. Widely distributed throughout Hong Kong.	-	2						2			
Common Palmfly	*Elymnias hypermnestra*	Common. Widely distributed throughout Hong Kong.	-		1						2		
Banded Tree Brown	*Lethe confusa*	Common. Widely distributed throughout Hong Kong.	-							2	3		
Dark Evening Brown	*Melanitis phedima*	Common. Widely distributed throughout Hong Kong.	-			1					5		
Dark-brand Bush Brown	*Mycalesis mineus*	Uncommon. Widely distributed throughout Hong Kong.	-		3	10	2		2	2	17		
South China Bush Brown	*Mycalesis mucianus*	Common. Widely distributed throughout Hong Kong.	-		7	4			4		14		
Common Five-ring	*Ypthima baldus*	Very Common. Widely distributed throughout Hong Kong.	-	2		2			2		2		
Common Mime	*Papilio clytia*	Common. Widely distributed throughout Hong Kong.	-								2		
Tailed Jay	*Graphium agamemnon*	Common. Widely distributed throughout Hong Kong.	-		1						3		
Common Jay	*Graphium doson*	Common. Widely distributed throughout Hong Kong.	-					1					
Common Bluebottle	*Graphium sarpedon*	Very Common. Widely distributed throughout Hong Kong.	-				2				2		
Chinese Peacock	*Papilio bianor*	Common. Widely distributed throughout Hong Kong.	-	3						1			
Red Helen	*Papilio helenus*	Very Common. Widely distributed throughout Hong Kong.	-	2	1						1		

Common Name[1]	Scientific Name[1]	Rarity & Distribution in Hong Kong[1]	Conservation Status[2]	Within the Proposed Site Boundary			Outside the Proposed Site Boundary but within the Study Area						
				SNW	VO	WO	DA	NW	PL	SNW	WO	S/G	VO
Great Mormon	*Papilio memnon*	Very Common. Widely distributed throughout Hong Kong.	-			2		3	1		5		1
Paris Peacock	*Papilio paris*	Very Common. Widely distributed throughout Hong Kong.	-	4	1		1	4		2	1	1	2
Common Mormon	*Papilio polytes*	Very Common. Widely distributed throughout Hong Kong.	-	1	10	10	12	2	13	3	21		
Spangle	*Papilio protenor*	Very Common. Widely distributed throughout Hong Kong.	-	12	4	9	2	12	10	11	32		1
Lemon Emigrant	*Catopsilia pomona*	Common. Widely distributed throughout Hong Kong.	-		1	1			2				
Painted Jezebel	*Delias hyparete*	Uncommon. Widely distributed throughout Hong Kong.	-			1					2		
Red-base Jezebel	*Delias pasithoe*	Very Common. Widely distributed throughout Hong Kong.		4			5		6		7		
Common Grass Yellow	*Eurema hecabe*	Very Common. Widely distributed throughout Hong Kong.	-	18	21	22	27	12	27	10	44	4	
Indian Cabbage White	*Pieris canidia*	Very Common. Widely distributed throughout Hong Kong.	-		5	4	4	2	2		13		

Notes:

1. Agriculture, Fisheries and Conservation Department. (2022). Species Database of the Hong Kong Biodiversity Information Hub.
2. Fellowes *et al*. (2002). Wild animals to watch: Terrestrial and freshwater fauna of conservation concern in Hong Kong.
    - For conservation status listed by Fellowes *et al*. (2002), letters in parentheses indicate that the assessment is on the basis of restrictedness in breeding and/or roosting sites rather than in general occurrence.

- **Species in bold are considered of conservation importance.**

Abbreviations:

- Conservation Status in Fellowes et al. (2002): LC = Local Concern
- Habitats: DA: Developed Area; PL: Plantation; VO: Village/Orchard; WO: Woodland; SNW: Semi-natural Watercourse; NW: Natural Watercourse; S/G: Shrubland/Grassland

APPENDIX H

ODONATE SPECIES RECORDED WITHIN THE STUDY AREA

Common Name[1]	Scientific Name[1]	Rarity & Distribution in Hong Kong[1]	Conservation Status[2]	Within the Proposed Site Boundary			Outside the Proposed Site Boundary but within the Study Area				
				SNW	VO	WO	PL	DA	NW	SNW	WO
Tiger Hawker	***Polycanthagyna erythromelas***	**Frequents small ponds or puddles in forests. Widespread in woodlands all over Hong Kong.**	**Fellowes et al. (2002): LC**							**1**	
Common Blue Jewel	*Heliocypha perforata perforata*	Widely distributed in fast flowing streams throughout Hong Kong.	-	24					8	19	
Orange-tailed Sprite	*Ceriagrion auranticum ryukyuanum*	Widely distributed in weedy ponds, marshes, abandoned fields or grasslands adjacent to waters.	-	6			2				
Black-banded Gossamerwing	*Euphaea decorata*	Widely distributed in all streams of Hong Kong.	-	58					20	20	
Russet Percher	*Neurothemis fulvia*	Found in marshes, cultivated areas, streams, tanks and irrigation feeders, sometimes even found in nearly dried out marshy areas. Widely distributed throughout Hong Kong.	-	10					5	5	
Red-faced Skimmer	*Orthetrum chrysis*	Widely distributed in pools and marshy areas adjacent to flowing streams throughout Hong Kong.	-	14					3	10	2
Common Blue Skimmer	*Orthetrum glaucum*	Widely distributed in streams, conduits, drainage channels, seepages and road gutters throughout Hong Kong.	-	30				8	8	17	9
Marsh Skimmer	*Orthetrum luzonicum*	Widely distributed in abandoned paddies, marshy swampy and boggy locations.	-	3						2	

Common Name[1]	Scientific Name[1]	Rarity & Distribution in Hong Kong[1]	Conservation Status[2]	Within the Proposed Site Boundary			Outside the Proposed Site Boundary but within the Study Area				
				SNW	VO	WO	PL	DA	NW	SNW	WO
Common Red Skimmer	*Orthetrum pruinosum neglectum*	Widely distributed in slow streams, ponds, rain puddles and irrigation conduits.	-	27				3		7	
Lesser Blue Skimmer	*Orthetrum triangulare triangulare*	Widely distributed in ponds, marshes and slow-flowing streams adjacent to woodlands throughout Hong Kong.	-	14						10	
Wandering Glider	*Pantala flavescens*	Widely distributed all over Hong Kong.	-	22	3			5		19	36
Saddlebag Glider	*Tramea virginia*	Widely distributed in trees adjacent to ponds and lakes throughout Hong Kong.	-						2	3	
Crimson Dropwing	*Trithemis aurora*	Found in marshes, ponds, streams, andor even ornamental ponds in urban areas. Widely distributed throughout Hong Kong.	-	19					3	10	
Indigo Dropwing	*Trithemis festiva*	Favours sluggish sections of streams with a strong current or the small rock pools inof mountain streams. Widespread in Hong Kong.	-	13				2	6	4	
Emerald Cascader	***Zygonyx iris insignis***	**Widely distributed in moderately clean, rapidly flowing forested streams throughout Hong Kong.**	**Fellowes et al. (2002): PGC**							**2**	
Dingy Dusk-darter	*Zyxomma petiolatum*	Widely distributed in thick undergrowth, tree foliage and shady spots near water courses throughout Hong Kong	-	2						7	
Ochre Titan	***Philoganga vetusta***	**Widely distributed in woodland streams in the New Territories.**	**Fellowes et al. (2002): LC**							**1**	
Yellow Featherlegs	*Copera marginipes*	Widely distributed in lowland streams, ditches, and weedy	-	18						5	

Common Name[1]	Scientific Name[1]	Rarity & Distribution in Hong Kong[1]	Conservation Status[2]	Within the Proposed Site Boundary			Outside the Proposed Site Boundary but within the Study Area				
				SNW	VO	WO	PL	DA	NW	SNW	WO
		margins of pond throughout Hong Kong.									
Black Threadtail	*Prodasineura autumnalis*	Often perches on the plants near streams. Widely distributed in streams throughout Hong Kong.	-	12		2		3		2	
Dancing Shadow-emerald	***Idionyx victor***	**Found high in the forest canopy or over wooded streams. Widely distributed in wooded streams throughout Hong Kong.**	**Fellowes et al. (2002): LC**							**1**	

Notes:

1. Agriculture, Fisheries and Conservation Department. (2022). Species Database of the Hong Kong Biodiversity Information Hub.
2. Fellowes *et al.* (2002). Wild animals to watch: Terrestrial and freshwater fauna of conservation concern in Hong Kong.
    - For conservation status listed by Fellowes *et al*. (2002), letters in parentheses indicate that the assessment is on the basis of restrictedness in breeding and/or roosting sites rather than in general occurrence.
- **Species in bold are considered of conservation importance.**

Abbreviations:

- Conservation Status in Fellowes et al. (2002): LC = Local Concern; PGC = Potential Global Concern
- Habitats: DA: Developed Area; PL: Plantation; VO: Village/Orchard; WO: Woodland; SNW: Semi-natural Watercourse; NW: Natural Watercourse

APPENDIX I

AMPHIBIAN SPECIES RECORDED WITHIN THE STUDY AREA

Common Name[1]	Scientific Name[1]	Rarity & Distribution in Hong Kong[1]	Conservation Status[2345678]	Within the Proposed Site Boundary		Outside the Proposed Site Boundary but within the Study Area			
				SNW	VO	DA	NW	SNW	WO
Asian Common Toad	*Duttaphrynus melanostictus*	Widely distributed in Hong Kong.	-	8	6	8		10	12
Asiatic Painted Frog	*Kaloula pulchra*	Widely distributed in Hong Kong.	-						2
Hong Kong Cascade Frog	***Amolops hongkongensis***	**Widely distributed in mountain streams in Hong Kong, except Lantau Island.**	**Cap. 170; Fellowes et al. (2002): PGC; Red List of China's Vertebrates: (Endangered); Class 2 Protected Animal of China; IUCN Red List Status: Endangered**				**8**	**28**	
Big-headed Frog	***Limnonectes fujianensis***	**Distributed in mountain streams in central and northern New Territory, Lantau Island.**	**Fellowes et al. (2002): LC**				**5**		
Lesser Spiny Frog	***Quasipaa exilispinosa***	**Widely distributed in upland forest streams throughout Hong Kong.**	**Fellowes et al. (2002): PGC; Red List of China's Vertebrates: (Vulnerable)**				**4**		
Green Cascade Frog	*Odorrana chloronota*	Widely distributed in mountain streams in Hong Kong.	-				12	32	
Gunther's Frog	*Sylvirana guentheri*	Widely distributed throughout Hong Kong.	-	23	3	2	15	27	3
Brown Wood Frog	***Hylarana latouchii***	**Distributed in woodlands in western and central New Territories.**	**Fellowes et al. (2002): LC**					**10**	
Brown Tree Frog	*Polypedates megacephalus*	Widely distributed throughout Hong Kong.	-	25	8	9		16	18

Common Name[1]	Scientific Name[1]	Rarity & Distribution in Hong Kong[1]	Conservation Status[2345678]	Within the Proposed Site Boundary		Outside the Proposed Site Boundary but within the Study Area			
				SNW	VO	DA	NW	SNW	WO
Hong Kong Newt	***Paramesotriton hongkongensis***	**Widely distributed in mountain streams throughout New Territories, Lantau Island and Hong Kong Island.**	**Cap. 170; Cap. 586; Fellowes et al. (2002): PGC; Class 2 Protected Animal of China; Appendix 2 of CITES**				**20**	**3**	

Notes:

1. Agriculture, Fisheries and Conservation Department. (2022). Species Database of the Hong Kong Biodiversity Information Hub.
2. Cap. 170 Wild Animals Protection Ordinance.
3. Cap. 586 Endangered Species of Animals and Plants Ordinance.
4. Convention on International Trade in Endangered Species of Wild Flora and Fauna. Appendices I, II and III.
5. Fellowes *et al.* (2002). Wild animals to watch: Terrestrial and freshwater fauna of conservation concern in Hong Kong.
    - For conservation status listed by Fellowes *et al.* (2002), letters in parentheses indicate that the assessment is on the basis of restrictedness in breeding and/or roosting sites rather than in general occurrence.
6. IUCN Red List of Threatened Species.
7. Jiang, Z. G., Jiang, J. P., Wang, Y. Z., Zhang, E., Zhang, Y. Y., Li, L. L., & Dong, L. (2016). Red list of China's Vertebrates.
8. List of State Protected Wild Animals, promulgated by the State Council.

- **Species in bold are considered of conservation importance.**

Abbreviations:

- Conservation Status in Fellowes et al. (2002): LC = Local Concern; PGC = Potential Global Concern
- Habitats: DA: Developed Area; VO: Village/Orchard; WO: Woodland; SNW: Semi-natural Watercourse; NW: Natural Watercourse

APPENDIX J

REPTILE SPECIES RECORDED WITHIN THE STUDY AREA

Common Name[1]	Scientific Name[1]	Rarity & Distribution in Hong Kong[1]	Conservation Status[234567]	Within the Proposed Site Boundary			Outside the Proposed Site Boundary but within the Study Area					
				SNW	VO	WO	PL	NW	SNW	VO	WO	DA
Changeable Lizard	*Calotes versicolor*	Widely distributed throughout Hong Kong.	-		3	2	2				2	
Common Rat Snake	***Ptyas mucosus***	**Widely distributed throughout Hong Kong.**	**Cap. 586; Fellowes et al. (2002): PRC; Red List of China's Vertebrates: (Endangered); Appendix 2 of CITES**							**1**		
Many-banded Krait	***Bungarus multicinctus multicinctus***	**Common and widely distributed in Hong Kong.**	**Fellowes et al. (2002): PRC; Red List of China's Vertebrates: (Endangered)**	**1**								
Four-clawed Gecko	***Gehyra mutilata***	**Widely distributed throughout Hong Kong.**	**Red List of China's Vertebrates: (Vulnerable)**								**1**	
Chinese Gecko	*Gekko chinensis*	Widely distributed throughout Hong Kong.	-	3	4				4			4
Bowring's Gecko	*Hemidactylus bowringii*	Distributed throughout Hong Kong.	-		5							
Long-tailed Skink	*Eutropis longicaudata*	Widely distributed throughout Hong Kong.	-		2	1						
Indian Forest Skink	***Sphenomorphus indicus***	**Distributed in woodlands in eastern and central New Territories.**	**Fellowes et al. (2002): LC**			**2**					**2**	
Chinese Water Dragon*	*Physignathus cocincinus*	Distributed in the New Territories, Kowloon and Hong Kong Island.	Red List of China's Vertebrates: (Endangered); Class 2 Protected Animal of China; IUCN Red List Status: Vulnerable	8				8	35		2	

Notes:

1. Agriculture, Fisheries and Conservation Department. (2022). Species Database of the Hong Kong Biodiversity Information Hub.
2. Cap. 586 Endangered Species of Animals and Plants Ordinance.
3. Convention on International Trade in Endangered Species of Wild Flora and Fauna. Appendices I, II and III.
4. Fellowes *et al.* (2002). Wild animals to watch: Terrestrial and freshwater fauna of conservation concern in Hong Kong.
    - For conservation status listed by Fellowes *et al*. (2002), letters in parentheses indicate that the assessment is on the basis of restrictedness in breeding and/or roosting sites rather than in general occurrence.
5. IUCN Red List of Threatened Species.
6. Jiang, Z. G., Jiang, J. P., Wang, Y. Z., Zhang, E., Zhang, Y. Y., Li, L. L., & Dong, L. (2016). Red list of China's Vertebrates.
7. List of State Protected Wild Animals, promulgated by the State Council.

- **Species in bold are considered of conservation importance.**

Abbreviations:

- Conservation Status in Fellowes et al. (2002): LC = Local Concern; PRC = Potential Regional Concern
- Habitats: DA: Developed Area; VO: Village/Orchard; WO: Woodland; SNW: Semi-natural Watercourse; NW: Natural Watercourse; PL: Plantation

*Individuals of Chinese Water Dragon, *Physignathus cocincinus*, were recorded throughout the Semi-natural Watercourse both within the Proposed Site Boundary and Study Area, also recorded in the Natural Watercourse and Woodland within the Study Area. This species is listed as Class 2 Protected Animal of China, "Endangered" in Red List of China's Vertebrates and "Vulnerable" in the IUCN Red List Status. However, Chinese Water Dragon is listed as an invasive alien species by AFCD. Assessment of the risks of alien herpetofauna, including Chinese Water Dragon, that have already entered Hong Kong and those that are likely to arrive in the future have been conducted in 2018 by AFCD. Therefore, Chinese Water Dragon is not considered of conservation importance in this Study.

APPENDIX K

MAMMAL SPECIES RECORDED WITHIN THE STUDY AREA

Common Name[1]	Scientific Name[1]	Rarity & Distribution in Hong Kong[1]	Conservation Status[234567]	Within the Proposed Site Boundary	Outside the Proposed Site Boundary but within the Study Area			
				VO	DA	SNW	VO	WO
Domestic Dog	*Canis lupus familiaris*	Widely distributed in urban and countryside areas throughout Hong Kong.	-		11			
Rhesus Macaque	***Macaca mulatta***	**Mainly distributed in Kam Shan, Shing Mun and Tai Po Kau; also found in Ma On Shan, Sai Kung, Tai Lam Country Parks and the North District.**	**Cap. 170; Cap. 586; Class 2 Protected Animal of China; Appendix 2 of CITES**					**4**
Domestic Cat	*Felis catus*	Widely distributed in urban and countryside areas throughout Hong Kong.	-		2			
Leopard Cat	***Prionailurus bengalensis***	**Widely distributed in countryside areas throughout Hong Kong, except for Lantau Island.**	**Cap. 170; Cap. 586; Red List of China's Vertebrate: (Vulnerable) Class 2 Protected Animal of China; Appendix 2 of CITES**					**1**
East Asian Porcupine	***Hystrix brachyura***	**Very widely distributed in countryside areas throughout Hong Kong, except for Lantau Island.**	**Cap. 170; Fellowes et al. (2002): PGC**					**1**
Pallas's Squirrel	***Callosciurus erythraeus***	**Fairly widely distributed, with the styani subspecies found in the New Territories (e.g. Tai Lam, Shing Mun and Tai Po Kau), and the thai subspecies**	**Cap. 170**				**1**	

		found on the Hong Kong Island (e.g. Tai Tam and Pok Fu Lam).						
Eurasian Wild Pig	*Sus scrofa*	Very widely distributed in countryside areas throughout Hong Kong.	-					2
Japanese Pipistrelle	***Pipistrellus abramus***	**Widely distributed throughout Hong Kong.**	**Cap. 170**	**2**	**1**			**2**
Unidentified bat species	**-**	**-**	**Cap. 170**					**3**

Notes:

1. Agriculture, Fisheries and Conservation Department. (2022). Species Database of the Hong Kong Biodiversity Information Hub.
2. Cap. 170 Wild Animals Protection Ordinance.
3. Cap. 586 Endangered Species of Animals and Plants Ordinance.
4. Convention on International Trade in Endangered Species of Wild Flora and Fauna. Appendices I, II and III.
5. Fellowes *et al*. (2002). Wild animals to watch: Terrestrial and freshwater fauna of conservation concern in Hong Kong.
    - For conservation status listed by Fellowes *et al*. (2002), letters in parentheses indicate that the assessment is on the basis of restrictedness in breeding and/or roosting sites rather than in general occurrence.
6. Jiang, Z. G., Jiang, J. P., Wang, Y. Z., Zhang, E., Zhang, Y. Y., Li, L. L., & Dong, L. (2016). Red list of China's Vertebrates.
7. List of State Protected Wild Animals, promulgated by the State Council.

- **Species in bold are considered of conservation importance.**

Abbreviations:

- Conservation Status in Fellowes et al. (2002): PGC = Potential Global Concern
- Habitats: DA: Developed Area; VO: Village/Orchard; WO: Woodland; SNW: Semi-natural Watercourse

APPENDIX L

FRESHWATER AQUATIC FAUNA RECORDED WITHIN THE STUDY AREA

Species Name[1]	Common Name[1]	Rarity & Distribution in Hong Kong[1]	Conservation Status[234]	Relative Abundance	
				Within the Proposed Site Boundary	Outside the Proposed Site Boundary but within the Study Area
Fish					
Barbodes semifasciolatus	Chinese Barb	Widely distributed in most of local freshwater streams, rivers and reservoirs.	-	+	+++
Channa asiatica	**Small Snakehead**	**Uncommon in the wild. Records from a few streams in North district and on Lantau Island. The fish is as cultivated in some fish farms and are available from fish market.**	**Fellowes et al. (2002): LC**		**+**
*Cyprinus carpio**	Common Carp	Not common in streams but occurs in many reservoirs and cultivated in fishponds as food fish.	IUCN Red List Status: Vulnerable*		+
Macropodus hongkongensis	**Hong Kong Paradise Fish**	**Records from northern New Territories, Tai Po and Sai Kung. The fish is previously identified as *M. concolor*. The fish population from Hong Kong later considered as a new species. It is the only freshwater fish species in Hong Kong that is named after Hong Kong.**	**Fellowes et al. (2002): GC**		**+**
Parazacco spilurus	**Predaceous Chub**	**A widespread species occurring in most unpolluted**	**China Species Red List: Vulnerable**		**+**

		hill streams in both upper and lower courses.			
Poecilia reticulata	Guppy	Occurs in large number in many local streams and ponds.	-	+	+
Pseudogastromyzon myersi	Sucker-belly Loach	Widely distributed in reservoir catchments and upland streams.	-	+	+
Pterocryptis anomala	-	North District, Tai Po, Tsuen Wan, Sai Kung, and on Lantau Island.	-	+	++
Rhinogobius duospilus	-	Probably the commonest goby in Hong Kong and is widely distributed in upper and middle course of streams, sometimes occurs in lowland streams.	-	+	+
Xiphophorus hellerii	Swordtail	Occurs in large numbers in many local freshwater streams, rivers and ponds.	-		+
Invertebrate					
Caridina cantonensis	Canton Bee Shrimp	-	-	++	+++
Cryptopotamon anacoluthon	-	**-**	**Fellowes et al. (2002): PGC; IUCN Red List Status: Vulnerable**	**+**	**++**
Enithares sp.	-	-	-		+
Macrobrachium sp.	-	-	-	+	++
Ptilomera tigrina	-	-	-	+	+

Notes:

1. Agriculture, Fisheries and Conservation Department. (2022). Species Database of the Hong Kong Biodiversity Information Hub.
2. Fellowes *et al.* (2002). Wild animals to watch: Terrestrial and freshwater fauna of conservation concern in Hong Kong.
   - For conservation status listed by Fellowes *et al*. (2002), letters in parentheses indicate that the assessment is on the basis of restrictedness in breeding and/or roosting sites rather than in general occurrence.
3. IUCN Red List of Threatened Species.
4. Wang, S & Xie, Y. (2004). China Species Red List (Vol. 1 ed.). High Education Press.

- **Species in bold are considered of conservation importance.**

Abbreviations:

- Conservation Status in Fellowes et al. (2002): LC = Local Concern; PGC = Potential Global Concern; GC = Global Concern
- Relative abundance: + = Scarce; ++ = Occasional; +++ = Common

* Common Carp, *Cyprinus carpio*, is listed as “Vulnerable” in the IUCN Red List Status. However, Common Carp is not common in streams but occurs in many reservoirs and cultivated in fishponds as food fish. This recorded individual is believed to be released into the Semi-natural Watercourse, thus, it is not considered of conservation importance.

Government Property Agency
The Government of the Hong Kong Special Administrative Region of the People's Republic of China

Quotation Contract No.: PD/SSMU/P/4/20230001 Consultancy Services for Traffic Review for the JUC at Shan Mei Street, Fo Tan

Final Report of Traffic Review

Government Property Agency

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EXECUTIVE SUMMRY

1. A Traffic Review has been conducted for the proposed Joint-User Complex (JUC) located at the existing open Public Transport Interchange (PTI) at Shan Mei Street in Fo Tan.

2. The surrounding road network has been assessed and the critical junctions within the Area Of Influence would operate satisfactorily.

3. The existing open PTI currently at the subject site will be temporarily reprovisioned at the existing Short-Term Tenancy car park site near the junction between Shan Mei Street and Sui Wo Road during construction of the JUC.

4. The proposed JUC will be provided with a permanent PTI on ground level and a Public Vehicle Park (PVP) at the basement.

5. The proposed JUC and the associated PTI, PVP, and temporary PTI during construction, would not induce significant traffic impacts, and considered acceptable from traffic engineering and transport operation viewpoints.

行政摘要

1. 建議座落現時火炭山尾街公共運輸交匯處的綜合大樓，已進行了交通檢討。

2. 附近道路網絡已作出評估，受影響範圍內的繁忙路口將運作如常。

3. 現時位於發展項目地點的公共運輸交匯處，於綜合大樓施工期間，將會臨時重置在位於山尾街與穗禾路交界的現時短期租約停車場位置。

4. 建議的綜合大樓，將會在地面重置一個永久公共運輸交匯處，並在地庫提供一個公共停車場。

5. 建議的綜合大樓及相關的公共運輸交匯處、公共停車場，以及施工期間的臨時公共運輸交匯處，不會造成顯著的交通影響，從交通工程及運輸運作上是可接受的。

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1 INTRODUCTION

1.1 Background

1.1.1 The Government of the Hong Kong Special Administrative Region is planning to construct a proposed Joint-User Complex (the JUC) in Fo Tan, bounded by Fo Tan Road to the northeast, Shan Mei Street to the southeast and southwest, and Sha Tin Galleria to the northwest as shown on the site plan in **Appendix A**. The proposed facilities of the JUC will be managed by various user departments.

1.1.2 The JUC was originally proposed to be located at the northwest of Sha Tin Galleria, bounded by Sui Wo Road to the northwest and Shan Mei Street to the west as indicated on the site plan in **Appendix A.**

1.1.3 Aurecon Hong Kong Limited was commissioned by the Government Property Agency (GPA) in February 2023 to undertake a Traffic Review for the Development.

1.2 Objectives

1.2.1 The objectives of the Traffic Review are to:

- carry out a Traffic Review in order to evaluate the existing vehicular and pedestrian traffic and transport conditions of the Subject Site and to assess the traffic and transport impact of the JUC to the adjacent road network and pedestrian and transport facilities during the construction and operation phases of the JUC.
- identify any existing and potential traffic and transport problems and recommend potential traffic and transport improvement measures and advise any necessary traffic arrangement as solutions to the satisfaction of all relevant government departments including but not limited to GPA, TD, PlanD, etc.
- review the existing traffic conditions during weekday morning and evening peak periods (as well as other time periods on both weekdays and non-weekdays, i.e. Saturday, Sunday and Public Holidays, if such traffic conditions are even more critical) and examine the capacities of the existing roads, and junctions.
- assess the traffic and transport implications of the JUC on the adjacent road network and pedestrian and public transport facilities

- assess the need and requirements for the provision of ingress/egress point, parking spaces, loading/unloading bays, pedestrian crossing facilities, temporary and permanent PTIs.
- advise the feasibility of the layout plans of the temporary and permanent PTIs, and carpark based on the indicative layout for the temporary and permanent PTIs, and for carpark with indication of tentative structural elements (for permanent PTI, and carpark only) provided by ArchSD
- devise and conduct assessment of suitable vehicular and pedestrian access arrangements for the Subject Site taking into account planning and land matters, traffic and transport considerations, implementation programme, order of cost, etc.

1.3 Scope

1.3.1 The scope of the Traffic Review include the tasks to:

- determine the Area of Influence (AOI);
- review the existing and planned data (with all developments on the Site);
- conduct traffic surveys to establish both existing traffic/ pedestrian pattern;
- produce future traffic and transport forecast for design years;
- conduct parking demand study, review and recommend (a) public car parking spaces, (b) number of floors of basement and (c) its indicative layout plan provided by ArchSD;
- review the indicative layout of the temporary PTI provided by ArchSD and provide/recommend a revised layout of the temporary PTI;
- review the indicative layout with locations of tentative structural elements of the permanent PTI provided by ArchSD and provide/recommend an optimal layout of the permanent PTI;
- assess the traffic and transport impacts and recommend traffic and transport improvement measures if necessary;
- review and provide revised layout of the temporary PTI in the case that the traffic improvement measures recommended by the Consultant affect the original design of the temporary PTI;
- review and provide revised layout of the permanent PTI and carpark, based on the indicative layout with locations of tentative structural elements on the permanent PTI and carpark provided by ArchSD, in the case that the traffic improvement measures recommended by the Consultant affect the original design of the permanent PTI and carpark;
- review pedestrian facilities & public transport facilities and recommend traffic and transport improvement measures if necessary; and
- study the impact of Police Enforcement.

1.4 Purpose of Report

1.4.1 The purpose of this report is to present the results of traffic and transport impact of the Development and other developments in the vicinity area and seek for consensus among the relevant government departments prior to proceeding with the assignment.

1.5 Structure of Report

1.5.1 Following this introduction, the report is structured as below:

- Section 2 describes the details of the Development;
- Section 3 outlines the existing traffic conditions in the vicinity of the site;
- Section 4 presents the traffic forecast and assessment results;
- Section 5 addresses pedestrian assessment;
- Section 6 analyses queueing at drop-off lay-by;
- Section 7 oversees the transport facilities; and
- Section 8 concludes the Traffic Review.

2 THE DEVELOPMENT

2.1 The Site

2.1.1 The Site is located in Fo Tan, abutting Fo Tan Road as shown in **Appendix A**. It covers an area of approximately 6,000 m^2 and current uses of the site consist of basketball court, sitting-out area, public toilet, cooked food market and open PTI.

2.1.2 Reprovisioning of the open PTI currently located at the subject site will be required during the construction of the JUC. The proposed JUC will be constructed with a permanent PTI provided on ground level whereas a temporary PTI could be provided at the Original Proposed Site during the construction period of the JUC as a transitional arrangement.

2.1.3 The temporary PTI is to be located at the current STT car park site near the junction between Shan Mei Street and Sui Wo Road, such that the run-in/out of the temporary PTI is intended to be located approximately at the existing run-in/out of car park. The expected routings of the bus and GMB services involved would be unchanged, while the access point of PTI is only temporarily relocated from Shan Mei Street to a point at approximately 200m downstream.

2.1.4 The Site is currently zoned as "Industrial" ("I") on the approved Sha Tin Outline Zoning Plan No. S/ST/36.

2.2 Development Schedule

2.2.1 The tentative development schedule of the Development is listed in **Table 2.1**.

Table 2.1 Development Schedule

Proposed Floor Zone	Proposed Facilities	NOFA (m^2)
B/M	• **Users' ancillary parking and** • **Public Vehicle Park [TD]**	N/A
G/F	• **Public Transport Interchange [TD]**	NOFA is not applicable for PTI (for information, the "column-free" area of PTI on G/F of JUC is 1,980 m^2)
	• **Public Toilet [FEHD]**	119

Proposed Floor Zone	Proposed Facilities	NOFA (m^2)
above G/F	• **Community Hall [HAD]**	593 (plus 140 m^2 admission area, which is a non-NOFA and a non-SoA item)
	• **Kindergarten [EDB]**	551
	• **Welfare Facilities [SWD]**	-
	➢ On-site Pre-school Rehabilitation Services (125-p OPRS)	196
	➢ Integrated Children and Youth Services Centre (ICYSC Sub-base)	186
	➢ Day Care Centre for the Elderly (120-p) (DE)	754
	➢ Residential care home cum Day Care Unit for the Elderly (100-p RCHE cum 30-p DCU)	1444
	➢ Integrated Vocational Rehabilitation Services Centre (120-p IVRSC)	653
	➢ Hostel for Moderately Mentally Handicapped Persons (50-p HMMH)	617
	➢ Hostel for Severely Physically Handicapped Persons (50-p HSPH)	695
	➢ One team of Home Care Services (HCS) for Frail Elderly Persons (4-team size kitchen-based)	287.4
	• **Clinical/ Healthcare Facilities**	-
	➢ District Health Centre (DHC) [HHB]	1,583.1
	➢ Chinese Medicine Clinic cum Training and Research Centre (CMCTR) [HHB]	2,964.8
	➢ Elderly Health Centre (EHC) [DH]	1,030.7
	➢ Maternal and Child Health Centre (MCHC) [DH]	1,587.6
	➢ Student Health Service Centre (SHSC) & Special Assessment Centre (SAC) [DH]	979
	➢ Visiting Health Team (VHT) [DH]	206.6
	• **Town Counselling Centre [CSD]**	100
	• **Small Library (with Students' Study Room) [LCSD]**	1,062
	• **Junior Police Call (JPC) Clubhouse [HKPF]**	500
	• **Government Offices**	3,000
	• **Sports Centre** ➢ Multi-purpose Arena ➢ Secondary Hall ➢ Gymnasium Training Hall ➢ Fitness Room ➢ Multi-purpose Activity Room ➢ Dance Room ➢ Table Tennis Room ➢ Children Play Room	7,722.7 plus circulation areas, toilets, changing rooms, etc

2.2.2 The tentative parking requirements for the Development is given in **Table 2.2**. Apart from ancillary parking for user departments, a Public Vehicle Park (PVP) will be provided in the Development. The no. of PVP provision will be discussed separately.

Table 2.2 Parking Provision

Ancillary Parking for User Departments				
Private Car/ Taxi/ Van-type LGV	Light Goods Vehicle/ Private Light Bus	MGV/ HGV/ Coach/ Bus	Motorcycle	Total
56 (including 4 accessible parking spaces)	21	2	-	**79**

2.3 Access Arrangement

2.3.1 The vehicular access to the Site for both the PVP and PTI will be via Shan Mei Street (SE bound/ NW bound) in order to minimise the impact to the Fo Tan Road/ Shan Mei Street junction. The exit point for bus/GMB for the PTI located within the Development will be via Shan Mei Street (SW bound/ NE bound), same as existing arrangement.

2.4 Development Programme

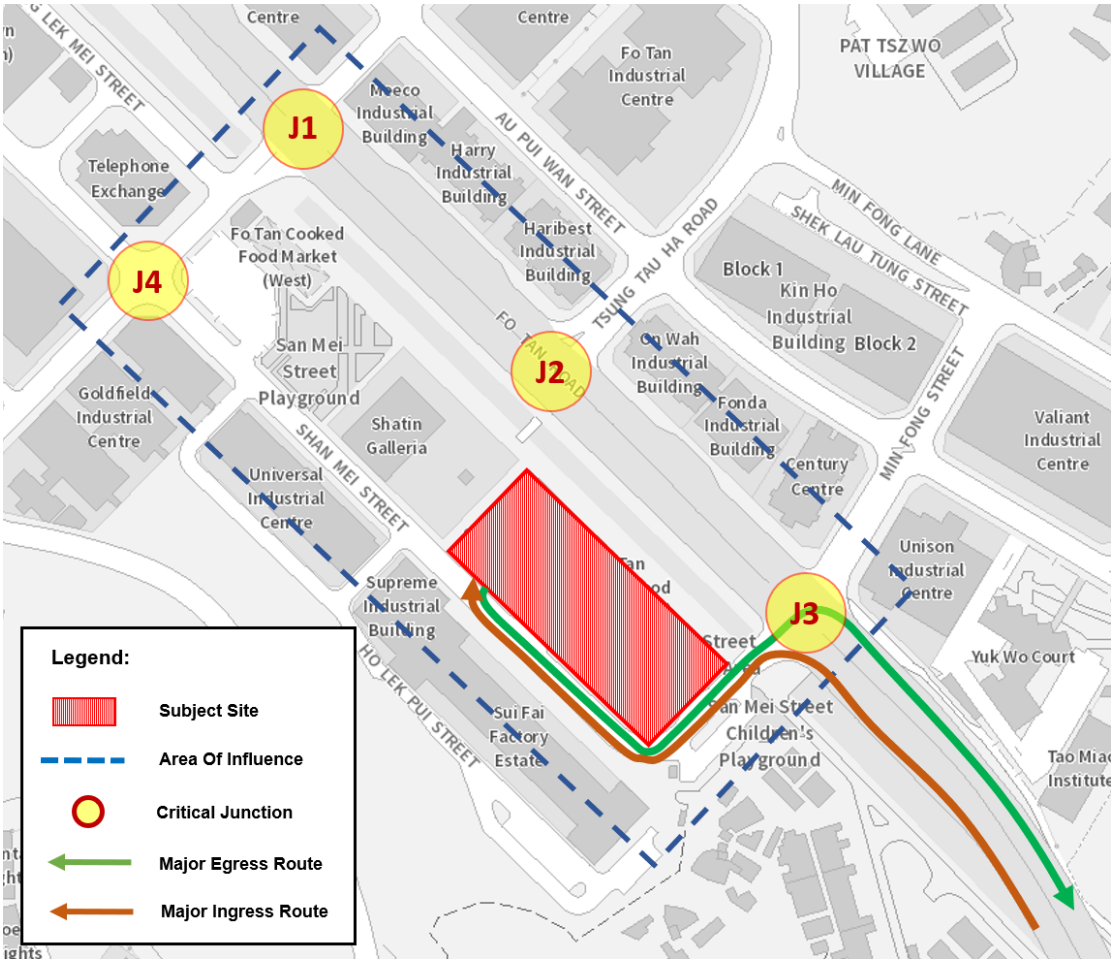
2.4.1 The construction of the Development is expected to commence in 2028 for completion by 2034 tentatively.

3 EXISTING TRAFFIC CONDITIONS

3.1 Study Area

3.1.1 The Area of Influence (AOI) of the Traffic Review is shown in **Figure 3.1**.

Figure 3.1 Area of Influence (AOI)



3.1.2 The critical junctions within the AOI to be assessed are listed in **Table 3.1**.

Table 3.1 Critical Junctions

Index	Location	Junction Type
J1	Fo Tan Road/ Sui Wo Road	Signal
J2	Fo Tan Road/ Tsung Tau Ha Road	Signal
J3	Fo Tan Road/ Shan Mei Street	Signal
J4	Shan Mei Street/ Sui Wo Road	Priority

3.2 Road Network

3.2.1 The Site is bounded by Shan Mei Street to the southwest which is a single 2-lanes carriageway. The eastbound section of Shan Mei Street is widened to 2-lanes before joining Fo Tan Road.

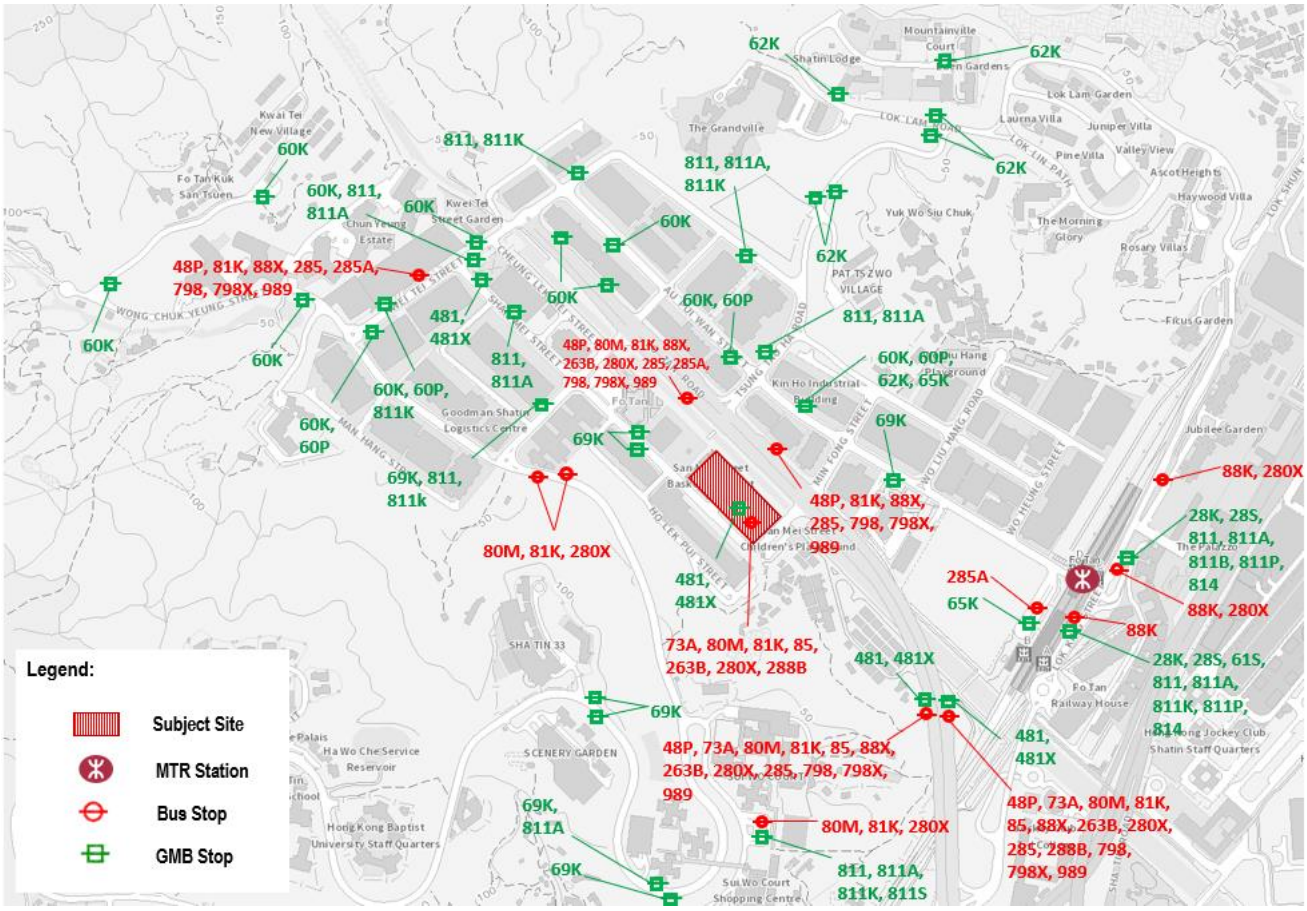
3.2.2 Fo Tan Road fronting the northeast of the Development is a dual 4-lanes primary distributor connecting the Fo Tan area to trunk roads such as Tai Po Road (Sha Tin) and Sha Tin Road.

3.2.3 The ingress / egress to / from the Site is expected to be mainly via Shan Mei Street and Fo Tan Road.

3.3 Existing Public Transport Services

3.3.1 The public transport services in the vicinity of the site are shown in **Figure 3.2**.

Figure 3.2 Existing Public Transport Services



3.3.2 The site can be served by Fo Tan Station of East Rail Line which is located within 500m catchment area of the site. A walking path along Shing Mun River that can be accessed right at the south of the site allows pedestrians to access to Fo Tan Station with approx. 5 mins walk.

3.3.3 The site is also well served by road-based public transport services, connecting between the site and the urban areas. Apart from the Public Transport Interchange (PTI) tentatively located on the ground floor of the site, there are bus routes running along Fo Tan Road and the vicinity of the site as indicated in **Figure 3.2**.

3.3.4 GMB services running in the Fo Tan area serve as feeder services to carry passengers between the site and the nearby MTR stations (Fo Tan/ Sha Tin). The GMB stop locations are also indicated in **Figure 3.2**.

3.3.5 The details of the existing bus / GMB routes in the vicinity of the site are summarized in **Table 3.2** below.

Table 3.2 Existing Road-based Public Transport Services

Route	Routing	Headway (Peak)
Franchised Bus		
48P	Fo Tan Chun Yeung Estate – Tsing Lung Tau	8 departures daily
73A	Fanling (Wah Ming) – Yu Chui Court	30
80M	Sui Wo Court – Kowloon Tong Station	25-30
81K	Sui Wo Court – Sun Tin Wai	7-20
85	Fo Tan (Shan Mei Street) – Kowloon City Ferry	20-30
88K	Royal Ascot – Hin Keng	12-30
88X	Fo Tan Chun Yeung Estate – Ping Tin	20-30
263B	Fo Tan (Shan Mei Street) – Tuen Mun Station	2 departures daily
280X	Sui Wo Court – Tsim Sha Tsui East (Mody Road)	15-30
285	Fo Tan Chun Yeung Estate – Sha Tin Central (Circular)	15-30
285A	Fo Tan Chun Yeung Estate – Fo Tan Station (Circular)	15-30
288B	Fo Tan (Shan Mei Street) ⟶ Shui Chuen O	5 departures daily
798	Fo Tan (Chun Yeung Estate) – Tiu Keng Leng Station	10-35
798X	Fo Tan (Chun Yeung Estate) – Tseung Kwan O Industrial Estate	2 departures daily
989	Fo Tan (Chun Yeung Estate) – Sai Wan Ho	8 departures daily
Green Minibus (GMB)		
28K	Tai Po Market Station – Shatin Town Centre (Circular)	6-9
28S	Pak Shek Kok – Shatin Town Centre (Circular)	35-45

Route	Routing	Headway (Peak)
60K	Kwei Tei New Village – Sha Tin Station	4-6
60P	Chun Yeung Estate – Sha Tin Station	2-3
61S	Shatin (Wo Che Estate) – Mong Kok Station	15
62K	Shatin Lodge – Sha Tin Station	7-15
65K	Fo Tan Station – Wong Nai Tau	10-20
69K	Greenwood Terrace – Sha Tin Station	4-10
481	Fo Tan Industrial Area – Tsuen Wan (Tsuen Wan Market Street)	6-15
481X	Chun Yeung Estate – Tsuen Wan (Tsuen Wan Market Street)	15-20
811	Sui Wo Court – Yu Chui Court	5-8
811A	Greenwood Terrace – Pictorial Garden	20-25
811B	Yiu On Estate – Fo Tan Industrial Area (Circular)	10-20
811K	Sui Wo Court – Fo Tan Station (Circular)	15-20
811P	Royal Ascot – City One Shatin	5-6
811S	Sui Wo Court – Yiu On Estate	20
814	Shatin (Lai Ping Rd) – Shatin Town Centre (Circular)	15

3.4 Existing Traffic Condition

3.4.1 Vehicular count survey was conducted on a typical weekday in March 2023 at the 4 critical junctions shown in **Figure 3.1** during the period of 0715-0930 for AM peak and 1730-1930 for PM peak. Results of the junction capacity assessment are shown in **Table 3.3**.

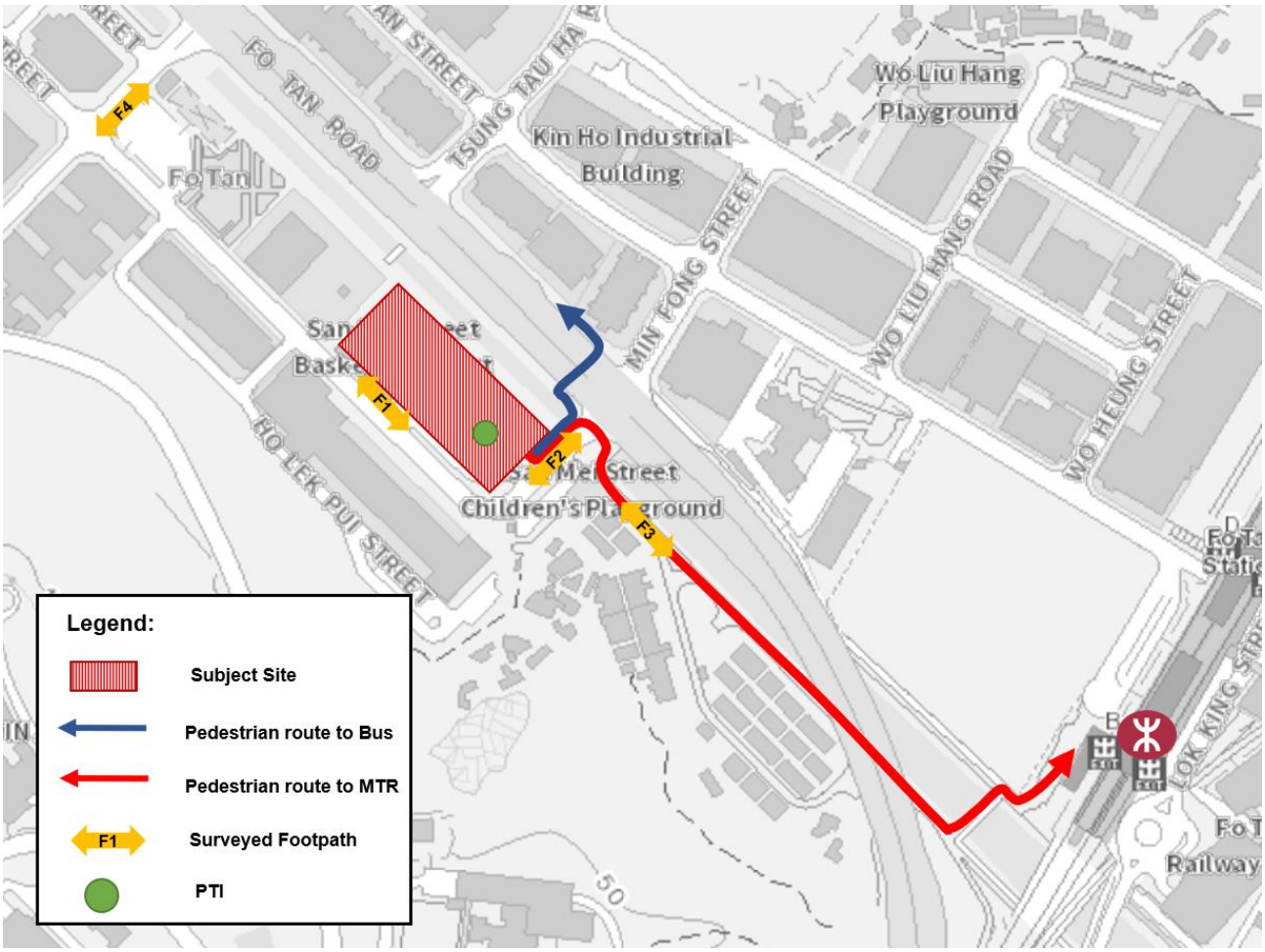
Table 3.3 Junction Performance of 2023 Existing Scenario

Index	Location	Reserved Capacity (RC)/ Design Flow Capacity (DFC)	
		AM	PM
J1	Fo Tan Road/ Sui Wo Road	9%	13%
J2	Fo Tan Road/ Tsung Tau Ha Road	69%	>100%
J3	Fo Tan Road/ Shan Mei Street	43%	58%
J4	Shan Mei Street/ Sui Wo Road	0.94	0.94

3.4.2 As shown in the above assessment, J1 and J4 have a RC of <15% and DFC of >0.85 respectively for both AM and PM peak period, indicating that the existing performance of J1 and J4 are at below satisfactory level. Junction performance will be elaborated in the next section.

3.4.3 Apart from vehicular count, pedestrian count survey has also been conducted during the same period mentioned in **Section 3.4.1** on the footpath as indicated in **Figure 3.3**.

Figure 3.3 Pedestrian Count Location



3.4.4 Pedestrian routes to access nearby public transport facilities are indicated in **Figure 3.3**. Apart from the PTI located within the Development, pedestrians may also access to the bus stops located on Fo Tan Road.

3.4.5 The pedestrian counts on the footpath shown in **Figure 3.3** above, as well as their respective footpath width are summarised in the **Table 3.4** below.

Table 3.4 Pedestrian Count and Footpath Width

Index	Location	Footpath Width (m)	Observed Pedestrian Count (both direction)	
			AM	PM
F1	Shan Mei Street (near basketball court)	3.6	866	793
F2	Shan Mei Street (near Fo Tan Road)	3	68	206
F3	Footpath along Shing Mun River	4.5	883	741
F4	Sui Wo Road (near Shan Mei Street)	3.5	464	389

3.5 Existing Car Parking Facilities

3.5.1 There are 3 public car parks currently operating within the AOI, a short term tenancy (STT) public car park located near the junction of Shan Mei Street/ Sui Wo Road with 76 parking capacity, on-street meter parking located right at the southeast side of the site with 9 parking capacity, and a public car park located within Shatin Galleria with 268 parking capacity.

3.5.2 The public car park in Sui Fai Factory Estate was closed since February 2023 due to its redevelopment to public housing.

4 TRAFFIC FORECAST AND ASSESSMENT

4.1 Growth Factor

4.1.1 The traffic forecast for the Traffic Review is primarily derived from the traffic surveys data in the existing year 2023, by applying growth factor, projecting to the design year 2034 and 2037, taking account of the traffic demand of the planned/committed major new developments in the vicinity of the AOI.

4.1.2 Reference is made to the Annual Average Traffic Data (AADT) in the recent 5 years of available Annual Traffic Census (ATC) published by Transport Department (TD) for the relevant roads in the vicinity of the site, as shown in **Table 4.1**.

Table 4.1 Annual Average Daily Traffic (AADT)

Road	Station No.	Annual Average Daily Traffic (AADT)					Average Annual Growth
		2017	2018	2019	2020	2021	
Fo Tan Road	5415	26,140	26,240	28,900	25,630	27,240	1.04%
Sui Wo Road	5645	15,260	15,500	15,400	16,080	15,550	0.47%
Kwei Tei Street	6611	8,400	8,380	8,680	7,470	8,160	-0.72%
Total Average Annual Growth							**0.57%**

4.1.3 It is revealed in **Table 4.1** that some of the major roads in the vicinity of the site such as Fo Tan Road and Sui Wo Road have an average annual growth of 1.04% and 0.47% respectively, while Kwei Tei Street has a negative growth in average. The average annual growth of the traffic flow recorded in the above stations in the recent 5 years was 0.57%.

4.1.4 Reference is also made to the future population and employment growth in Sha Tin district from the 2019-based Territorial Population and Employment Demand Matrix (TPEDM), the latest open version available from the website of Planning Department (PlanD), as given in **Table 4.2**.

Table 4.2 2019-based Territorial Population and Employment Demand Matrices (TPEDM)

District	Data	Year			Average Annual Growth
		2019	2026	2031	
Sha Tin	Population	483,000	493,750	461,100	-0.39%
	Employment	200,050	186,250	179,400	-0.90%

4.1.5 From **Table 4.2**, it is predicted from 2019-based TPEDM that the annual population and employment growth in Sha Tin district from 2019 to 2031 would be negative.

4.1.6 In view of the ATC and TPEDM data, a growth rate of +0.57% is adopted from a conservative approach to produce future year background traffic flow, by applying to the observed traffic flows from surveys.

4.2 Design Year

4.2.1 Since the Development is expected to be completed by 2034, the design year is set to be 2034 and 2037 (3 years after completion).

4.3 Other Developments

4.3.1 The known planned/ committed major developments in the vicinity of the site and their completion year are given in **Table 4.3** below. The traffic generated by those developments will be incorporated into the background traffic forecast as appropriate.

Table 4.3 Known Planned/ Committed Major Developments

Development	Development Type	Planning Parameter	Intake by 2034	Intake by 2037
Proposed Public Housing Development to the West of Ex-Fo Tan Cottage Area, Fo Tan	Residential (Public Housing)	3,415 flats(1)		✓
Hong Kong Fo Tan Data Center	Industrial	Maximum GFA 87,191 m^2	✓	✓
Redevelopment of Sui Fai Factory Estate for Public Housing Development	Residential (Public Housing)	1,360 flats	✓	✓
Proposed Comprehensive Development at Nos. 1-11 Au Pui Wan Street, Sha Tin	Residential (Private)	2,443 flats	✓	✓

Remarks: (1) Assume completion by 2034 and population intake by 2035

4.3.2 The trip generation/ attraction rates adopted for the planned/ committed developments, according to Transport Planning and Design Manual (TPDM), are summarised in below **Table 4.4**.

Table 4.4 Adopted Trip Rate for Other Planned/ Committed Developments

Development Type	AM		PM	
	GEN	ATT	GEN	ATT
SSF/ HOS/ PSPS (pcu/hr/flat)	0.0622	0.0426	0.0297	0.0401
PRH (pcu/hr/flat)	0.0432	0.0326	0.0237	0.0301
Private Housing (pcu/hr/flat)	0.0718	0.0425	0.0286	0.0370
Industrial (pcu/hr/GFA 100 m^2)	0.0926	0.1386	0.1350	0.1049

4.3.3 By adopting the above trip generation/ attraction rates in **Table 4.4**, the estimated traffic generated by the planned/ committed developments are summarised in **Table 4.5** below.

Table 4.5 Traffic Generated by Other Planned/ Committed Developments

Development Type	Traffic Generation/ Attraction (pcu/hr)			
	AM		PM	
	GEN	ATT	GEN	ATT
Proposed Public Housing Development to the West of Ex-Fo Tan Cottage Area, Fo Tan (1)	247	180	137	164
Hong Kong Fo Tan Data Center	81	121	118	91
Redevelopment of Sui Fai Factory Estate for Public Housing Development	59	44	32	41
Proposed Comprehensive Development at Nos. 1-11 Au Pui Wan Street, Sha Tin	175	104	70	90

Remarks: (1) Traffic generation/ attraction includes social welfare facilities, retail and kindergarten, by taking reference to Proposed Public Housing Development to the West of Ex-Fo Tan Cottage Area, Fo Tan – feasibility study (Agreement no. CE 47/2020 (CE)).

4.4 Development Traffic

4.4.1 The traffic generated by the proposed JUC is estimated based on relevant trip rates provided in the Transport Planning and Design Manual (TPDM) and car park surveys conducted in the vicinity of the site, as summarised in the **Table 4.6** and **Table 4.7** below.

Table 4.6 Development Trip Generation Rates

Land Use	Trip Rates (pcu/hr/GFA 100m²)			
	AM		PM	
	GEN	ATT	GEN	ATT
Office(1)	0.1703	0.2452	0.1573	0.1175

Remarks: (1) Taking reference to the trip rate of "office" in Transport Planning and Design Manual (TPDM)

4.4.2 To estimate the traffic generated by the Public Vehicle Park (PVP), vehicular counts survey was conducted at nearby car parks to obtain the traffic generation rates. The results are summarised in **Table 4.7**.

Table 4.7 PVP Trip Generation Rates

Car Park	Trip Rates (pcu/hr/space)(1)			
	AM		PM	
	GEN	ATT	GEN	ATT
SST at Shan Mei St/ Sui Wo Rd	0.105	0.263	0.211	0.053
Sha Tin Galleria Car Park	0.030	0.224	0.269	0.045
Adopted Trip Rates	**0.105**	**0.263**	**0.269**	**0.053**

Remarks: (1) SST at Shan Mei St/ Sui Wo Rd and Sha Tin Galleria Car Park consist of 76 and 268 private car parking, equivalent to 76 and 268 pcu respectively.

4.4.3 The highest trip generation rates amongst the two nearby car parks are adopted to estimate the traffic generation of the PVP in the proposed JUC. It is anticipated that the traffic generation of the Government Parking (79 parking spaces) has already been considered in the Development traffic as shown in **Table 4.6**, therefore the traffic generation for the 79 parking spaces under Government Parking were not estimated separately to not overestimate the traffic demand to be generated by the JUC.

4.4.4 The traffic generation of the proposed JUC, by adopting the trip generation rates shown in **Table 4.6** and **Table 4.7**, are summarised in **Table 4.8**.

Table 4.8 Development Traffic

Development	Parameter	Trip Rates(1)				Development Traffic (pcu/hr)			
		AM		PM		AM		PM	
		GEN	ATT	GEN	ATT	GEN	ATT	GEN	ATT
Fo Tan JUC (without PVP)	56,858 m^2 GFA	0.1703	0.2452	0.1573	0.1175	97	139	89	67
PVP	290 pcu (2)	0.105	0.263	0.269	0.053	31	76	78	15
Total Development Traffic						**128**	**215**	**167**	**82**

Remarks: (1) Unit for the trip rates: JUC- pcu/hr/ GFA 100 m^2, PVP-(pcu/hr/ space in pcu)
(2) It is assumed that the PVP consists of 200 PC, 18 LGV/PLB and 21 MGV/HGV/Coach/Bus, 15 motorcycle parking, equivalent to 290 pcu, for assessment purpose. The PVP provision is discussed separately.

4.5 Road Improvement Schemes

4.5.1 According to Sha Tin District Council Committees Meetings Discussion Papers DH 23/2021, junction of Fo Tan Road/ Min Fong Street/ Shan Mei Street (J3) would be improved by converting one of the right turn lanes at Min Fong Street to left turn lane, giving a total of 3 lanes for left turn movement. The existing refuge island at Min Fong Street would also be removed to cater the above improvement.

4.5.2 A recent study of West of Ex-Fo Tan Cottage Area has proposed junction improvement schemes on J1, J3 and J4 (details are in **Appendix B**). The proposed junction improvements will be considered in junction capacity assessment in the next section. The details of the junction improvement schemes are shown in **Table 4.9**.

Table 4.9 Proposed Junction Improvement

Junction	Junction Improvement Details(1)
J1	Widen part of Fo Tan Road for WB direction, an additional left turn lane is provided.
J3	An additional lane is provided at Fo Tan Road NB exit arm. Traffic from the nearside lane of the Fo Tan Road NB approach arm is allowed to go forward. Method of Control (MOC) will also be revised to cater the improvement by removing the split phase in Fo Tan Road NB and Left turn movement to Shan Mei Street.
J4	Providing a left turn filter lane for Sui Wo Road SB

Remarks: (1) Refer to the Proposed Public Housing Development to the West of Ex-Fo Tan Cottage Area, Fo Tan – feasibility study (Agreement no. CE 47/2020 (CE)).

4.6 Junction Capacity Assessment

4.6.1 The critical road junctions are assessed by incorporating the traffic generated by the Development and its vicinity area, assuming the junction improvements mentioned in **Section 4.5** are in place. The assessment results for the scenarios without and with the Development, as Reference Case and Design Case respectively in the design year of 2034 and 2037, are shown in **Table 4.10**. Detail calculation and flow diagrams are attached in **Appendix C** and **Appendix D** respectively.

Table 4.10 Junction Capacity Assessment Results

Index	Location	Reserve Capacity (RC) / Ratio of Flow to Capacity (RFC)							
		Year 2034				Year 2037			
		Reference		Design		Reference		Design	
		AM	PM	AM	PM	AM	PM	AM	PM
J1	Fo Tan Road/ Sui Wo Road	30%	39%	30%	39%	15%	31%	15%	31%
J2	Fo Tan Road/ Tsung Tau Ha Road	50%	82%	50%	82%	28%	57%	28%	57%
J3	Fo Tan Road/ Shan Mei Street	34%	55%	21%	39%	28%	47%	16%	32%
J4	Shan Mei Street/ Sui Wo Road	1.01	1.01	1.01	1.01	1.02	1.03	1.02	1.03

4.6.2 As shown in **Table 4.10**, all the critical junctions would operate satisfactorily except J4. The most critical movement that affecting the performance of J4 is the turning from Shan Mei Street WB to Sui Wo Road SB, however due to site constraint of Goldfield Industrial Centre, the performance of junction improvement is limited. Besides, as the major ingress/egress routes of the Development do not cover J4 as shown in **Figure 3.1**, the impact of the Development on J4 is considered to be insignificant.

5 PEDESTRIAN IMPACT ASSESSMENT

5.1 Pedestrian Generation

5.1.1 To estimate the pedestrian generation by the Development, pedestrian count survey was conducted at similar site - Sha Tin Government Office and the results are summarised in **Table 5.1**.

Table 5.1 Adopted Pedestrian Trip Rates

Location	Adopted Pedestrian Trip Rates (ped/hr/GFA)			
	AM Peak		PM Peak	
	Generation	Attraction	Generation	Attraction
Sha Tin Government Office (GFA 33,820)	0.003	0.031	0.027	0.004

5.1.2 Based on the adopted pedestrian trip rates in **Table 5.1**, the pedestrian generation of the Development are shown in **Table 5.2**.

Table 5.2 Pedestrian Generation of the Development

	Pedestrian Generation (ped/hr)			
	AM Peak		PM Peak	
	Generation	Attraction	Generation	Attraction
Adopted Pedestrian Trip Rate for Fo Tan JUC (ped/hr/GFA)	0.003	0.031	0.027	0.004
Pedestrian Generation of Fo Tan JUC with GFA 56,858 (ped/hr)	175	1,764	1,526	221

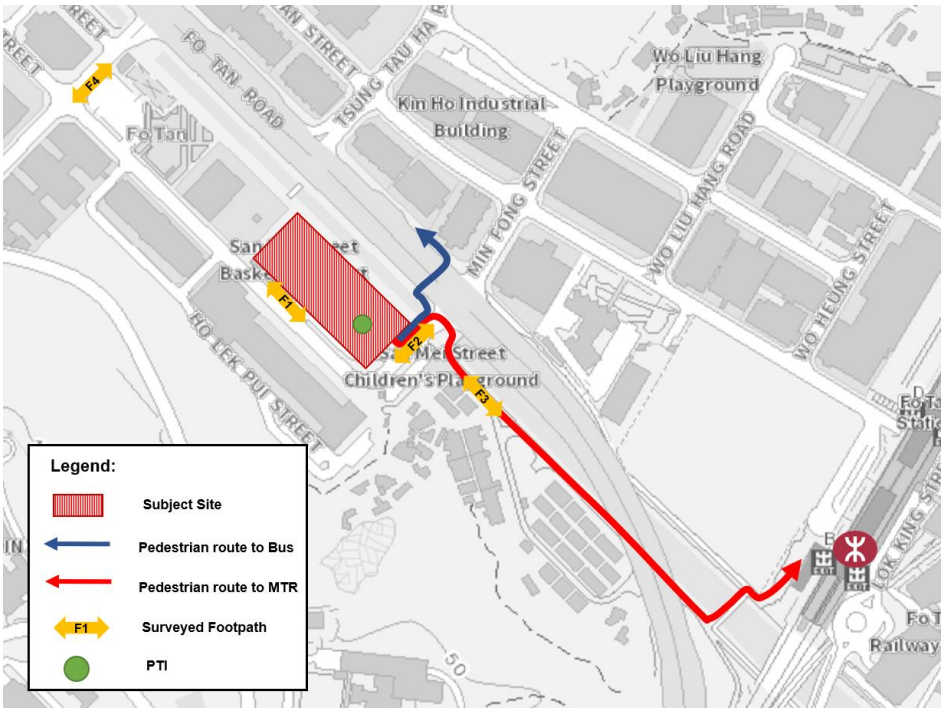
5.1.3 The definition of Level of Service (LOS) in TPDM is presented in **Table 5.3**. Generally, a walkway at LOS "C" or above is considered satisfactory.

Table 5.3 Level-of-Service Definition

LOS	Flow Rate (ped/min/m)	Description
A	⩽ 16	Pedestrians basically move in desired paths without altering their movements in response to other pedestrians. Walking speeds are freely selected, and conflicts between pedestrians are unlikely.
B	16 - 23	Sufficient space is provided for pedestrians to freely select their walking speeds, to bypass other pedestrians and to avoid crossing conflicts with others. At this level, pedestrians begin to be aware of other pedestrians and to respond to their presence in the selection of walking paths.
C	23 – 33	Sufficient space is available to select normal walking speeds and to bypass other pedestrians primarily in unidirectional stream. Where reverse direction or crossing movement exist, minor conflicts will occur, and speed and volume will be somewhat lower.
D	33 – 49	Freedom to select individual walking speeds and bypass other pedestrians is restricted. Where crossing or reverse-flow movements exist, the probability of conflicts is high and its avoidance requires changes of speeds and position. The LOS provides reasonable fluid flow; however considerable friction and interactions between pedestrians are likely to occur.
E	49 – 75	Virtually, all pedestrians would have their normal walking speeds restricted. At the lower range of this LOS, forward movement is possible only by shuffling. Space is insufficient to pass over slower pedestrians. Cross- and reverse-movement are possible only with extreme difficulties. Design volumes approach the limit of walking capacity with resulting stoppages and interruptions to flow.
F	> 75	Walking speeds are severely restricted. Forward progress is made only by shuffling. There are frequent and unavoidable conflicts with other pedestrians. Cross- and reverse-movements are virtually impossible. Flow is sporadic and unstable. Space is more characteristics of queued pedestrians than of moving pedestrian streams.

5.1.4 The footpaths to be assessed are shown in **Figure 5.1**. Pedestrian counts surveys have been conducted on the footpaths to observe the existing pedestrian flow, growth factor of +0.57% p.a., with reference to TPEDM growth derived in **Section 4.1**, is applied on existing pedestrian flows to project background pedestrian flow of year 2037, before topping up with development flows mentioned in **Table 5.2**.

Figure 5.1 Footpaths to be Assessed



5.1.5 The main pedestrian entry/exit point of the JUC development is expected to be via the footpath on Shan Me Street at the eastern side of the building as shown in **Figure 5.1**, subject to detailed design.

5.1.6 The JUC development pedestrian flows, both generation and attraction (two-way flows), were estimated based on transport model split with reference to 2021 Population Census, and assigned onto the footpaths along the desire paths to/from the public transport facilities in the vicinity, given summarized in **Table 5.4**.

Table 5.4 Development Pedestrian Trip by Transport Mode

Main Transport Mode	Modal Split(1)	AM Pedestrian Flow (ped/hr)	PM Pedestrian Flow (ped/hr)	Assumed Route
Rail(1)	43%	834	751	F2 + F3
Bus/ Public Light Bus	35%	679	611	F2
Others(2)	22%	426	385	F2 + F3
Total	**100%**	**1,939**	**1,747**	**-**

Note:
(1) The modal splits are referenced from 2021 Population Census Table C204 (Sha Tin District)
(2) Other mode includes walk, taxi, etc.

5.1.7 Based on the modal split and predicted pedestrian routes mentioned in **Table 5.4**, the Level of LOS of the key pedestrian walkways in the year of 2037, taking the pedestrian of the Redevelopment of Sui Fai Factory Estate into account, are given in **Table 5.5**.

Table 5.5 Pedestrian Walkways LOS

Walkway	Location	Walkway width (m)	Effective width (m)	Pedestrian Flow (ped/hr)		LOS	
				AM	PM	AM	PM
F1	Shan Mei Street (near basketball court)	3.6	2.6	938	859	A	A
F2	Shan Mei Street (near Fo Tan Road)	2	2	2,013	1,970	B	B
F3	Footpath along Shing Mun River	3.5	3.5	3,008	2,315	B	A
F4	Sui Wo Road	2.2	2.5	502	421	A	A

5.1.8 From **Table 5.5**, all the identified key pedestrian walkways would operate satisfactorily with LOS "C" or above, indicating that the assessed pedestrian footpath are capable to cater the future demand of the Development.

6 QUEUING ASSESSMENT

6.1 Queuing Assessment Factors

6.1.1 According to the indicative plan from ArchSD, layby area of about 24m long is provided on G/F for visitor to enter/leave the lobby. Queue length arising from the visiting vehicles is estimated to assess the sufficiency of the queuing area.

6.1.2 Based on the estimated peak hour trip generations by the JUC (without PVP) as indicated in **Table 4.8**, the higher demand in AM is adopted in the assessment. It is expected that the 79 ancillary parking (equivalent to 92 PCU) mentioned in **Section 2** would enter the basement car park directly and should be excluded in the assessment.

6.1.3 The assumptions/ factors used in the queuing assessment are summarised in **Table 6.1**.

Table 6.1 Queuing Factors / Assumptions

Factors	Value
Peak Hour Demand	144 PCU/hour
Service time(1)	180 PCU/hour
No. of vehicles allowed to board/alight at the layby area	4

Note:
(1) Assume on average 20 seconds for each pcu to board/alight at the layby.

6.2 Queuing Assessment Results

6.2.1 The assessment is based on multi-servers queuing (M/M/N) theory to determine the queue induced due to the vehicles visiting the lobby of JUC. According to the assumptions/ factors defined in **Table 6.1**, the queuing assessment results are summarised in **Table 6.2**.

Table 6.2 Queuing Assessment Results

No. of Vehicles in the System, *n*	Probability of Having *n* Vehicle in the System, P(x=*n*)	P(x⩽*n*)
0	0.449	0.449
1	0.358	0.807
2	0.143	0.950

6.2.2 As suggested in **Table 6.2**, there will be 2 vehicles or less at the layby area at a 95% level of confidence following the M/M/N queuing theory. Therefore, it is expected that the designed layby area is sufficient to cope with the visiting vehicles.

7 TRANSPORT FACILITES

7.1 Public Transport Interchange

7.1.1 As mentioned in **Section 2.1**, a temporary PTI would be provided at the Original Proposed Site during the construction period of the Development as a transitional arrangement before the completion of the JUC where a permanent PTI will be provided on ground level. Both the permanent and temporary PTI shall be able to cater the operational needs of the existing buses/ GMB routes.

7.1.2 The Government Property Agency is responsible for taking forward the implementation of the proposed JUC together with both the permanent and temporary PTI. The detailed implementation programme would be formulated in later design stage. The layout of the permanent and temporary PTI will be discussed separately.

7.2 Car Park

7.2.1 Apart from the PTI, a car park will also be provided on the basement levels of the JUC to provide parking spaces for public vehicle parking and the users of the JUC as mentioned in **Section 2.2.2**. The provision and layout of the PVP will be discussed separately.

7.2.2 As mentioned in **Section 5.1**, the current STT car park located near Shan Mei Street/ Sui Wo Road will be replaced by the temporary PTI, causing reduction of parking spaces in the area. Nevertheless, the current occupancy of the STT car park and the car park in Sha Tin Galleria are about 70% according to car park surveys, which indicates that the current available spaces in Sha Tin Galleria should be able to accommodate the current STT users. Besides, Fo Tan data centre mentioned in **Section 4.3** located about 250m from the STT is expected to complete in 2025 which will also provide extra parking spaces.

7.2.3 Alternatively, an area located next to Cheung Lek Mei Street Public Toilet with a size of 350m^2 (currently zoned as OU) may also be considered as a relocation site of the current STT. The current STT is sized as approximately 1,380m^2 providing 76 parking spaces. By adopting similar layout design of the current STT, it is expected that the relocated STT, with a size of 350m^2, can provide approximately 20 private car parking spaces.

8 CONCLUSION

8.1 Summary

8.1.1 A Traffic Review has been conducted for Joint-User Complex (JUC) in Fo Tan, abutting Shan Mei Street.

8.1.2 The surrounding road network has been assessed and the critical junctions within the AOI would operate satisfactorily except J4 in which the improvement of the junction is limited by site constraint. It is also anticipated that the major ingress/egress routes of the Development do not cover J4, thus its impact should be insignificant.

8.1.3 The JUC would be well served by the current public transport services in the close proximity.

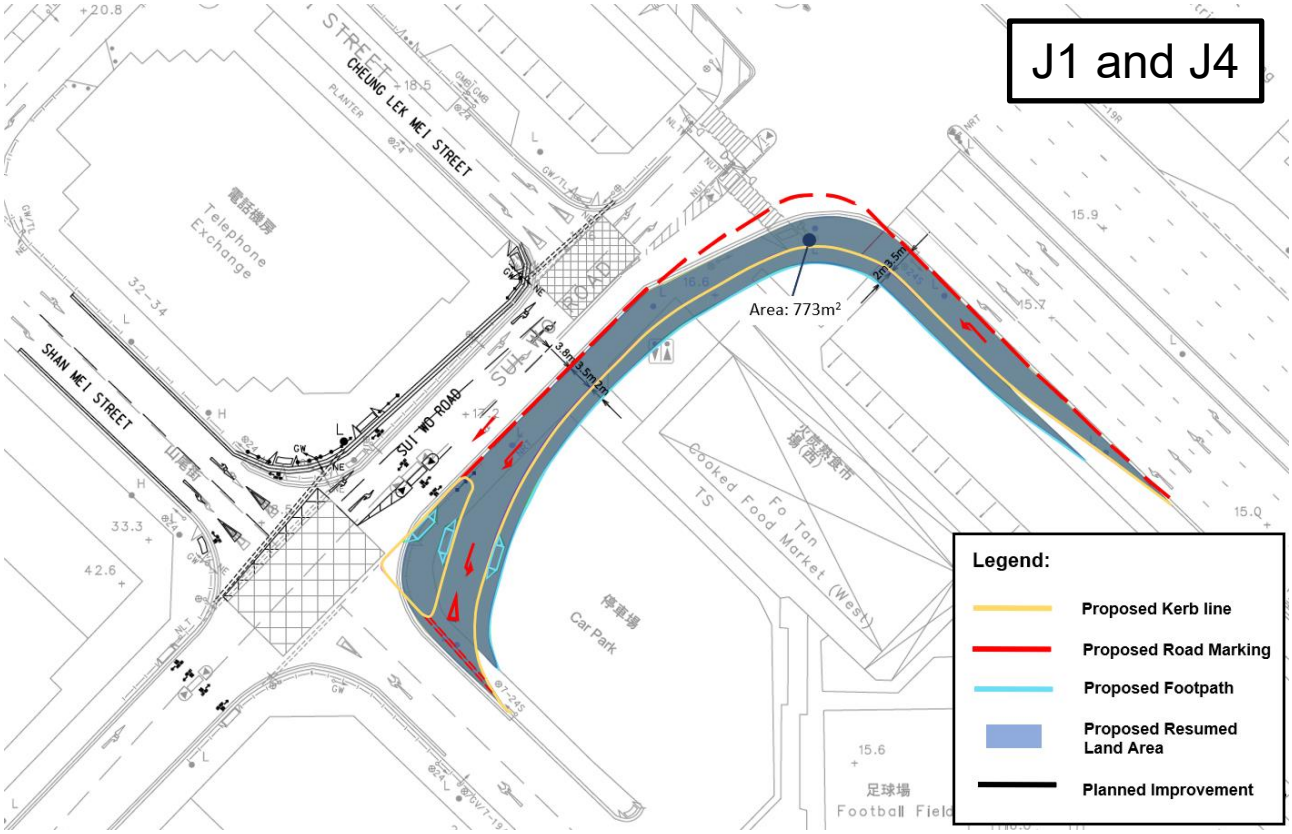
8.2 Conclusion

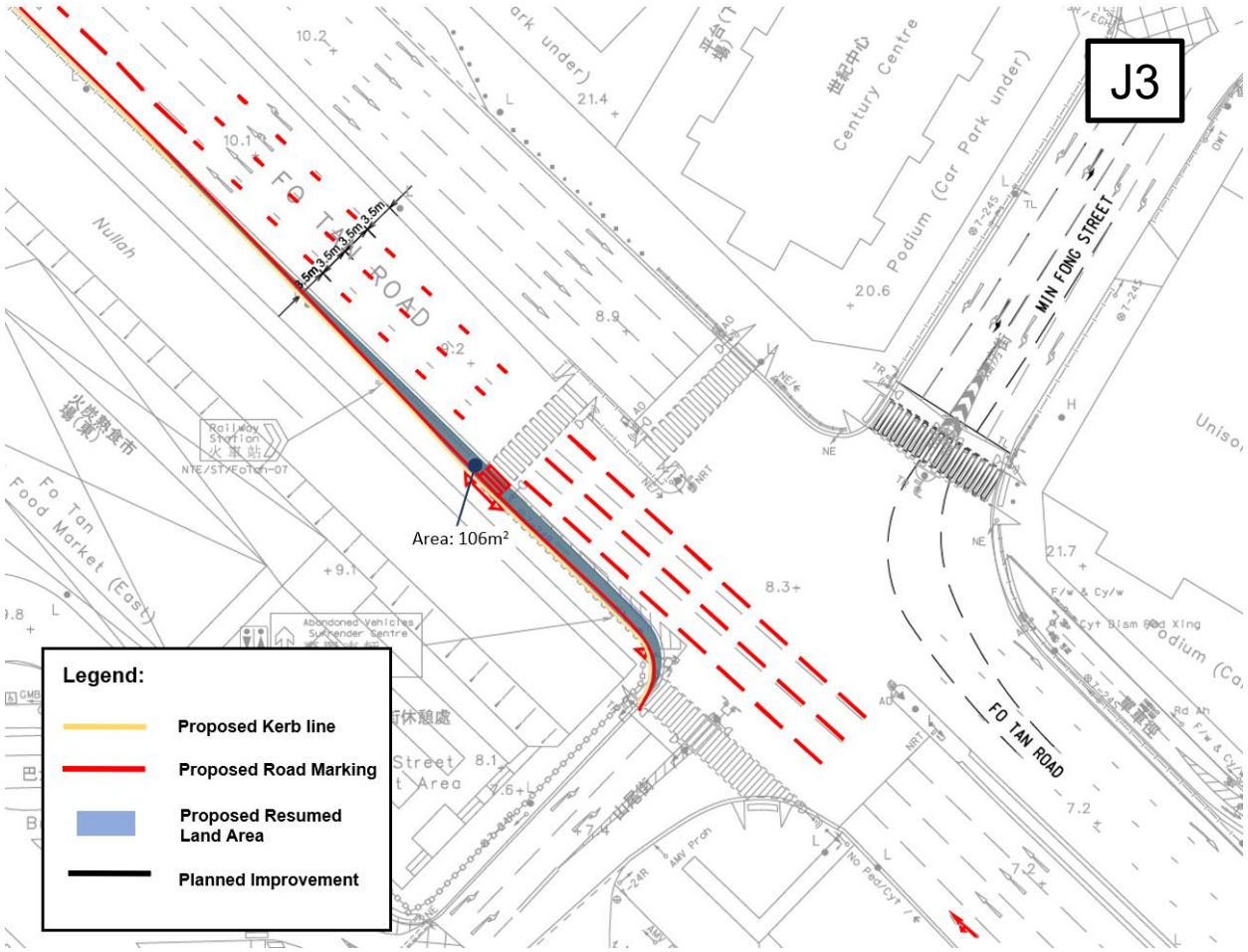
8.2.1 It is concluded the proposed JUC in Fo Tan, abutting Shan Mei Street would not induce significant traffic impacts and considered acceptable from traffic engineering and transport operation viewpoints.

Appendix A Site Plan



Appendix B Junction Improvement Scheme





Appendix C Junction Calculation Sheet

TRAFFIC SIGNAL CALCULATION SHEET

aurecon

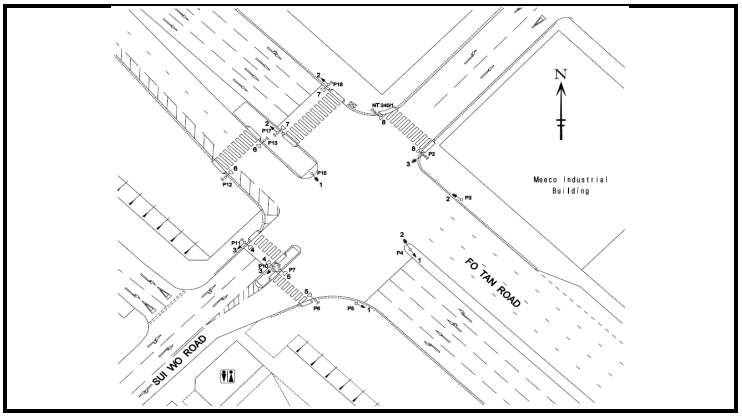
Quotation Ref.: PD/SSMU/P/4/20230001

Job Title : Traffic Review for the Proposed Joint-User Complex at Shan Mei Street, Fo Tan — **Job No.** : **P523543**

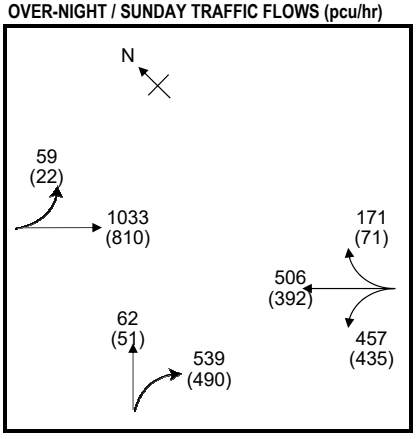
Junction : Fo Tan Road / Sui Wo Road — **Junction Index** : J1

Description : Existing — **Design Year** : 2023

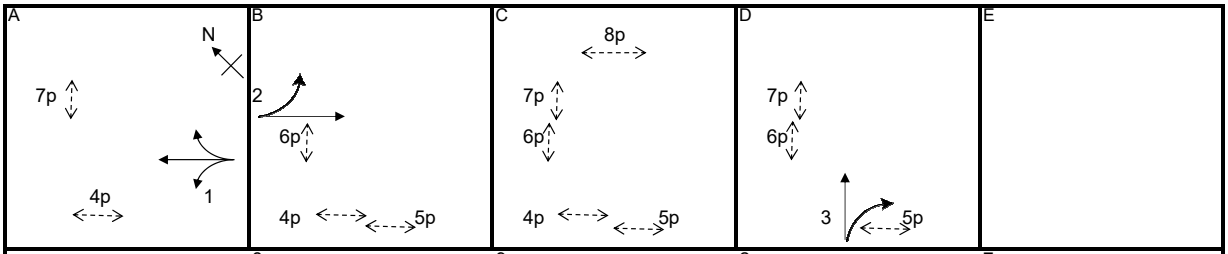
JUNCTION LAYOUT



OVER-NIGHT / SUNDAY TRAFFIC FLOWS (pcu/hr)



STAGE / PHASE DIAGRAM



1+2+8p+3	G =	I/G = 8	G =	I/G = 9	G = 15	I/G = 2	G =	I/G = 7	G =	I/G =
1+2+8p+3	G =	I/G = 8	G =	I/G = 9	G = 15	I/G = 2	G =	I/G = 7	G =	I/G =

CAPACITY CALCULATION

Phase	Stage	Lane Width *w* (m)	Nearside Lane? (Y/N)	Turning Radius *r* (m)	Opposed Turn? (Y/N)	Uphill Gradient *g* (%)	AM Peak Design Flow *q* (pcu/hr)	AM Peak Turning Proportion *f*	AM Peak Saturation Flow *S* (pcu/hr)	AM Peak Flow Factor *y*	PM Peak Design Flow *q* (pcu/hr)	PM Peak Turning Proportion *f*	PM Peak Saturation Flow *S* (pcu/hr)	PM Peak Flow Factor *y*
Fo Tan Road WB														
1(1)	A	3.20	Y	15			457	100%	1759	**0.260**	435	100%	1759	**0.247**
1(2)	A	3.40	N				252		2095	0.120	195		2095	0.093
1(3)	A	3.50	N	23			254	0%	2105	0.121	197	0%	2105	0.094
1(4)	A	3.70	N	20			171	100%	1977	0.087	71	100%	1977	0.036
Fo Tan Road EB														
2(1)	B	3.30	Y	15			255	23%	1901	**0.134**	196	11%	1923	**0.102**
2(2)	B	3.30	N				279		2085	0.134	212		2085	0.102
2(3)	B	3.30	N				279		2085	0.134	212		2085	0.102
2(4)	B	3.30	N				279		2085	0.134	212		2085	0.102
Sui Wo Road NB														
3(1)	D	3.40	Y	30			327	81%	1879	**0.174**	295	83%	1877	**0.157**
*3(2)	D	3.30	N	25			274	100%	1574	0.174	246	100%	1574	0.156
4p	A,B,C		5GM+	6FG=	11	sec								
5p	B,C,D		5GM+	8FG=	13	sec								
6p	B,C,D		5GM+	9FG=	14	sec								
7p	A,C,D		6GM+	12FG=	18	sec								
8p	C		5GM+	10FG=	**15**	sec								
*Site factor adopted														

Notes :

AM Peak		1+2+8p+3	PM Peak		1+2+8p+3
Sum of Critical *y* ***Y***		0.568	Sum of Critical *y* ***Y***		0.506
Lost Time ***L*** (sec)		38	Lost Time ***L*** (sec)		38
Cycle Time ***c*** (sec)		121	Cycle Time ***c*** (sec)		105
Practical *Y* ***Ypr***		0.617	Practical *Y* ***Ypr***		0.574
Reserve Capacity ***RC***		**9%**	Reserve Capacity ***RC***		**13%**

Designed by : Rico Wong — **Date** : _____ — **Junction Index** : J1

Checked by : _____ — **Date** : _____ — **Sheet No.** : _____

TRAFFIC SIGNAL CALCULATION SHEET

aurecon

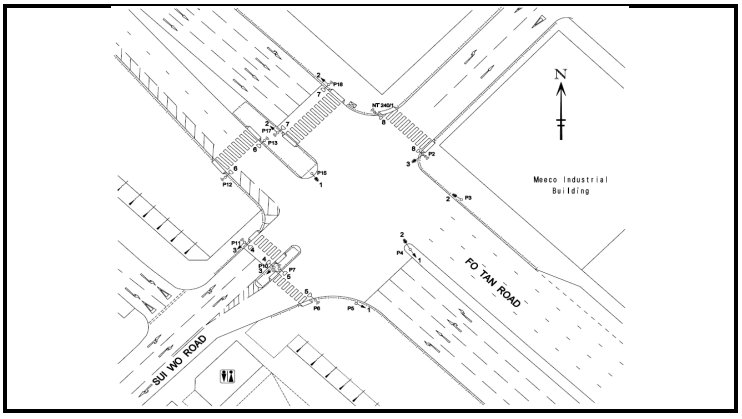
Quotation Ref.: PD/SSMU/P/4/20230001

Job Title : Traffic Review for the Proposed Joint-User Complex at Shan Mei Street, Fo Tan — **Job No.** : **P523543**

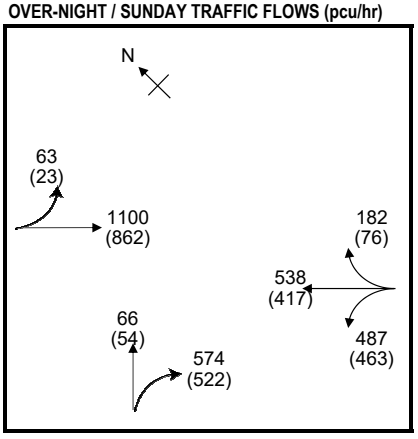
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Description : Reference — **Design Year** : 2034

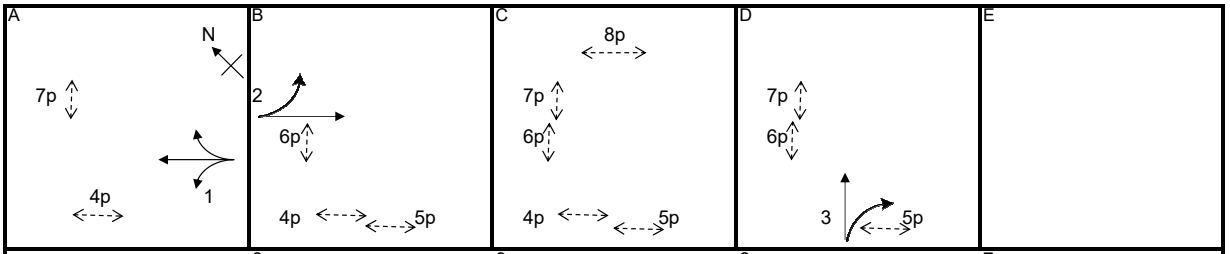
JUNCTION LAYOUT



OVER-NIGHT / SUNDAY TRAFFIC FLOWS (pcu/hr)



STAGE / PHASE DIAGRAM



1+2+8p+3	G =	I/G = 8	G =	I/G = 9	G = 15	I/G = 2	G =	I/G = 7	G =	I/G =
1+2+8p+3	G =	I/G = 8	G =	I/G = 9	G = 15	I/G = 2	G =	I/G = 7	G =	I/G =

CAPACITY CALCULATION

Phase	Stage	Lane Width *w* (m)	Nearside Lane? (Y/N)	Turning Radius *r* (m)	Opposed Turn? (Y/N)	Uphill Gradient *g* (%)	AM Peak: Design Flow *q* (pcu/hr)	AM Peak: Turning Proportion *f*	AM Peak: Saturation Flow *S* (pcu/hr)	AM Peak: Flow Factor *y*	PM Peak: Design Flow *q* (pcu/hr)	PM Peak: Turning Proportion *f*	PM Peak: Saturation Flow *S* (pcu/hr)	PM Peak: Flow Factor *y*
Fo Tan Road WB														
*1(1)	A	3.20	Y	15			206	100%	1407	**0.146**	196	100%	1407	**0.139**
1(2)	A	3.20	N	18			281	100%	1915	0.147	267	100%	1915	0.139
1(3)	A	3.40	N				267		2095	0.128	207		2095	0.099
1(4)	A	3.50	N	23			271	0%	2105	0.129	210	0%	2105	0.100
1(5)	A	3.70	N	20			182	100%	1977	0.092	76	100%	1977	0.038
Fo Tan Road EB														
2(1)	B	3.30	Y	15			271	23%	1901	**0.143**	208	11%	1923	**0.108**
2(2)	B	3.30	N				298		2085	0.143	226		2085	0.108
2(3)	B	3.30	N				297		2085	0.142	226		2085	0.108
2(4)	B	3.30	N				297		2085	0.142	226		2085	0.108
Sui Wo Road NB														
3(1)	D	3.40	Y	30			348	81%	1879	**0.185**	313	83%	1877	**0.167**
*3(2)	D	3.30	N	25			292	100%	1574	0.186	263	100%	1574	0.167
4p	A,B,C		5GM+	6FG=	11	sec								
5p	B,C,D		5GM+	8FG=	13	sec								
6p	B,C,D		5GM+	9FG=	14	sec								
7p	A,C,D		6GM+	12FG=	18	sec								
8p	C		5GM+	10FG=	**15**	sec								
*Site factor adopted														

Notes :

AM Peak		1+2+8p+3	**PM Peak**		1+2+8p+3
Sum of Critical *y* ***Y***		0.474	Sum of Critical *y* ***Y***		0.414
Lost Time ***L*** (sec)		38	Lost Time ***L*** (sec)		38
Cycle Time ***c*** (sec)		121	Cycle Time ***c*** (sec)		105
Practical *Y* ***Ypr***		0.617	Practical *Y* ***Ypr***		0.574
Reserve Capacity ***RC***		**30%**	Reserve Capacity ***RC***		**39%**

Designed by : Rico Wong — **Date** : _____ — **Junction Index** : J1

Checked by : _____ — **Date** : _____ — **Sheet No.** : _____

TRAFFIC SIGNAL CALCULATION SHEET

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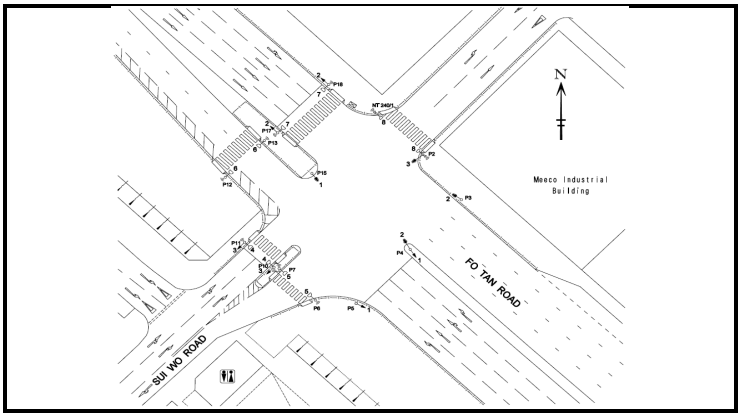
Quotation Ref.: PD/SSMU/P/4/20230001

Job Title : Traffic Review for the Proposed Joint-User Complex at Shan Mei Street, Fo Tan — **Job No.** : P523543

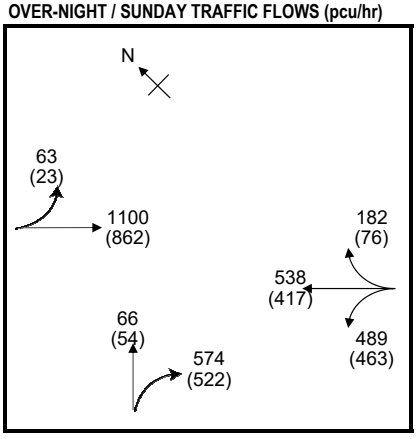
Junction : Fo Tan Road / Sui Wo Road — **Junction Index** : J1

Description : Design — **Design Year** : 2034

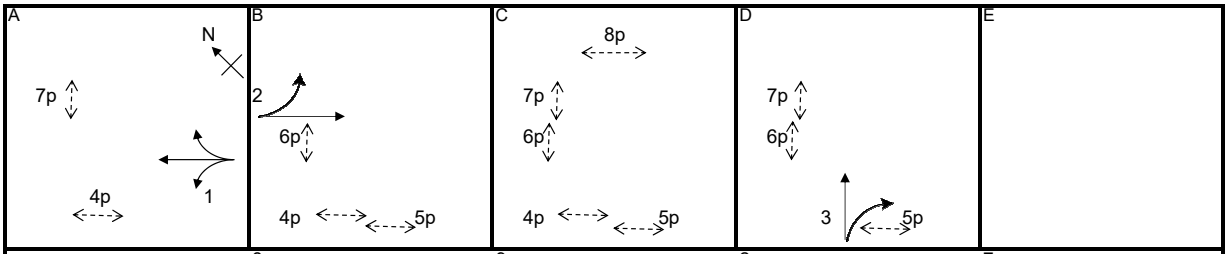
JUNCTION LAYOUT



OVER-NIGHT / SUNDAY TRAFFIC FLOWS (pcu/hr)



STAGE / PHASE DIAGRAM



1+2+8p+3 G =	I/G = 8	G =	I/G = 9	G = 15	I/G = 2	G =	I/G = 7	G =	I/G =
1+2+8p+3 G =	I/G = 8	G =	I/G = 9	G = 15	I/G = 2	G =	I/G = 7	G =	I/G =

CAPACITY CALCULATION

Phase	Stage	Lane Width *w* (m)	Nearside Lane? (Y/N)	Turning Radius *r* (m)	Opposed Turn? (Y/N)	Uphill Gradient *g* (%)	AM Peak: Design Flow *q* (pcu/hr)	AM Peak: Turning Proportion *f*	AM Peak: Saturation Flow *S* (pcu/hr)	AM Peak: Flow Factor *y*	PM Peak: Design Flow *q* (pcu/hr)	PM Peak: Turning Proportion *f*	PM Peak: Saturation Flow *S* (pcu/hr)	PM Peak: Flow Factor *y*
Fo Tan Road WB														
*1(1)	A	3.20	Y	15			207	100%	1407	**0.147**	196	100%	1407	**0.139**
1(2)	A	3.20	N	18			282	100%	1915	0.147	267	100%	1915	0.139
1(3)	A	3.40	N				267		2095	0.128	207		2095	0.099
1(4)	A	3.50	N	23			271	0%	2105	0.129	210	0%	2105	0.100
1(5)	A	3.70	N	20			182	100%	1977	0.092	76	100%	1977	0.038
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2(3)	B	3.30	N				297		2085	0.142	226		2085	0.108
2(4)	B	3.30	N				297		2085	0.142	226		2085	0.108
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*3(2)	D	3.30	N	25			292	100%	1574	0.186	263	100%	1574	0.167
4p	A,B,C		5GM+	6FG=	11	sec								
5p	B,C,D		5GM+	8FG=	13	sec								
6p	B,C,D		5GM+	9FG=	14	sec								
7p	A,C,D		6GM+	12FG=	18	sec								
8p	C		5GM+	10FG=	**15**	sec								
*Site factor adopted														

Notes :

AM Peak		1+2+8p+3	PM Peak		1+2+8p+3
Sum of Critical *y* ***Y***		0.474	Sum of Critical *y* ***Y***		0.414
Lost Time ***L*** (sec)		38	Lost Time ***L*** (sec)		38
Cycle Time ***c*** (sec)		121	Cycle Time ***c*** (sec)		105
Practical *Y* ***Ypr***		0.617	Practical *Y* ***Ypr***		0.574
Reserve Capacity ***RC***		**30%**	Reserve Capacity ***RC***		**39%**

Designed by : Rico Wong — **Date** : _____ — **Junction Index** : J1

Checked by : _____ — **Date** : _____ — **Sheet No.** : _____

TRAFFIC SIGNAL CALCULATION SHEET

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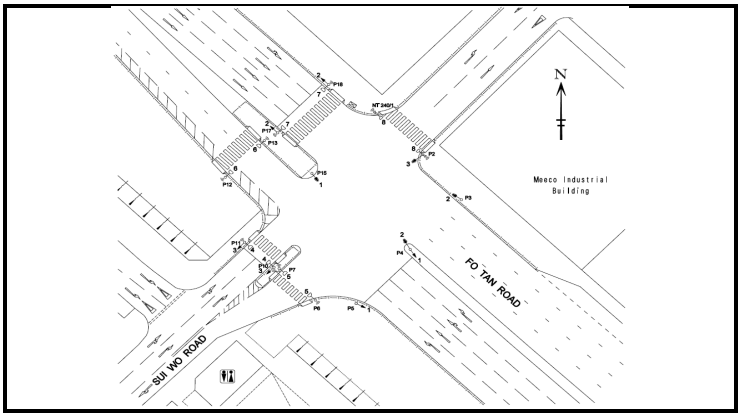
Quotation Ref.: PD/SSMU/P/4/20230001

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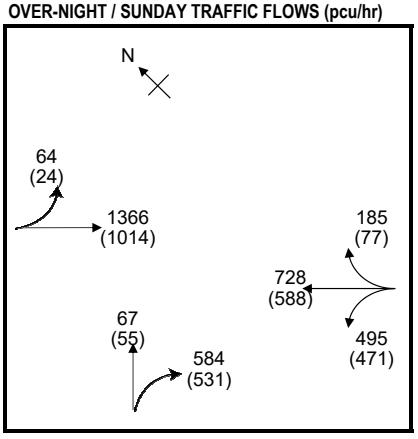
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Description : Reference — **Design Year** : 2037

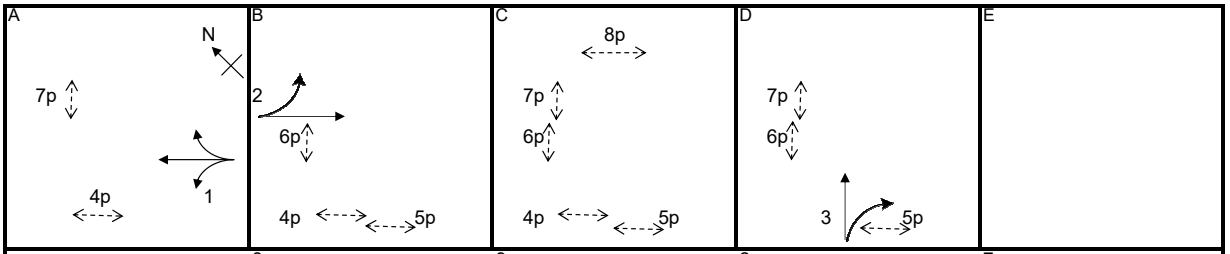
JUNCTION LAYOUT



OVER-NIGHT / SUNDAY TRAFFIC FLOWS (pcu/hr)



STAGE / PHASE DIAGRAM



1+2+8p+3	G =	I/G = 8	G =	I/G = 9	G = 15	I/G = 2	G =	I/G = 7	G =	I/G =
1+2+8p+3	G =	I/G = 8	G =	I/G = 9	G = 15	I/G = 2	G =	I/G = 7	G =	I/G =

CAPACITY CALCULATION

Phase	Stage	Lane Width *w* (m)	Nearside Lane? (Y/N)	Turning Radius *r* (m)	Opposed Turn? (Y/N)	Uphill Gradient *g* (%)	AM Peak: Design Flow *q* (pcu/hr)	AM Peak: Turning Proportion *f*	AM Peak: Saturation Flow *S* (pcu/hr)	AM Peak: Flow Factor *y*	PM Peak: Design Flow *q* (pcu/hr)	PM Peak: Turning Proportion *f*	PM Peak: Saturation Flow *S* (pcu/hr)	PM Peak: Flow Factor *y*
Fo Tan Road WB														
*1(1)	A	3.20	Y	15			209	100%	1407	0.148	199	100%	1407	**0.141**
1(2)	A	3.20	N	18			286	100%	1915	0.149	272	100%	1915	0.142
1(3)	A	3.40	N				363		2095	**0.173**	292		2095	0.140
1(4)	A	3.50	N	23			365	0%	2105	0.173	296	0%	2105	0.141
1(5)	A	3.70	N	20			185	100%	1977	0.094	77	100%	1977	0.039
Fo Tan Road EB														
2(1)	B	3.30	Y	15			334	19%	1909	**0.175**	243	10%	1926	**0.126**
2(2)	B	3.30	N				365		2085	0.175	265		2085	0.127
2(3)	B	3.30	N				365		2085	0.175	265		2085	0.127
2(4)	B	3.30	N				365		2085	0.175	265		2085	0.127
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3(1)	D	3.40	Y	30			355	81%	1879	**0.189**	319	83%	1877	**0.170**
*3(2)	D	3.30	N	25			296	100%	1574	0.188	267	100%	1574	0.170
4p	A,B,C		5GM+	6FG=	11	sec								
5p	B,C,D		5GM+	8FG=	13	sec								
6p	B,C,D		5GM+	9FG=	14	sec								
7p	A,C,D		6GM+	12FG=	18	sec								
8p	C		5GM+	10FG=	**15**	sec								
*Site factor adopted														

Notes :

AM Peak		1+2+8p+3	PM Peak		1+2+8p+3
Sum of Critical *y* ***Y***		0.537	Sum of Critical *y* ***Y***		0.437
Lost Time ***L*** (sec)		38	Lost Time ***L*** (sec)		38
Cycle Time ***c*** (sec)		121	Cycle Time ***c*** (sec)		105
Practical *Y* ***Ypr***		0.617	Practical *Y* ***Ypr***		0.574
Reserve Capacity ***RC***		**15%**	Reserve Capacity ***RC***		**31%**

Designed by : Rico Wong — **Date** : _____ — **Junction Index** : J1

Checked by : _____ — **Date** : _____ — **Sheet No.** : _____

TRAFFIC SIGNAL CALCULATION SHEET

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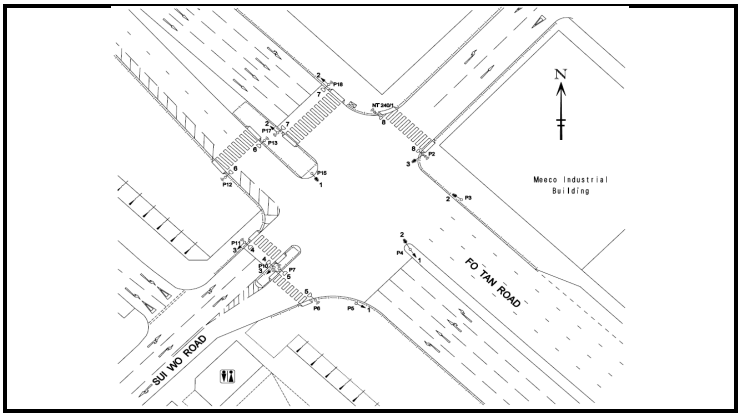
Quotation Ref.: PD/SSMU/P/4/20230001

Job Title : Traffic Review for the Proposed Joint-User Complex at Shan Mei Street, Fo Tan — **Job No.** : P523543

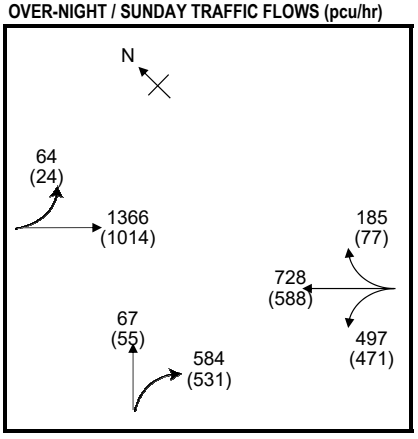
Junction : Fo Tan Road / Sui Wo Road — **Junction Index** : J1

Description : Design — **Design Year** : 2037

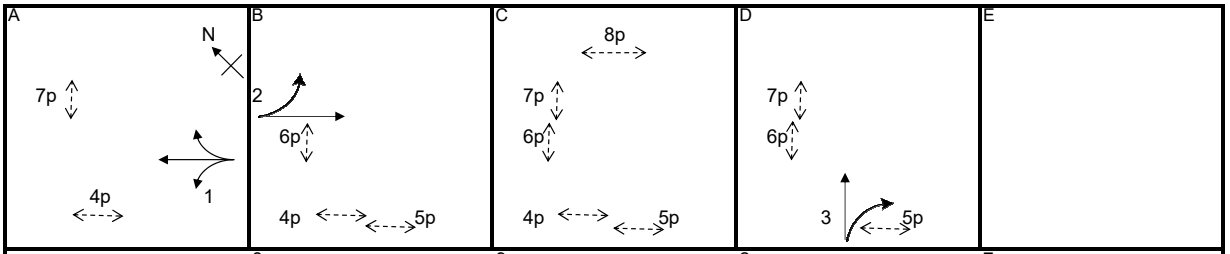
JUNCTION LAYOUT



OVER-NIGHT / SUNDAY TRAFFIC FLOWS (pcu/hr)



STAGE / PHASE DIAGRAM



1+2+8p+3	G =	I/G = 8	G =	I/G = 9	G = 15	I/G = 2	G =	I/G = 7	G =	I/G =
1+2+8p+3	G =	I/G = 8	G =	I/G = 9	G = 15	I/G = 2	G =	I/G = 7	G =	I/G =

CAPACITY CALCULATION

Phase	Stage	Lane Width *w* (m)	Nearside Lane? (Y/N)	Turning Radius *r* (m)	Opposed Turn? (Y/N)	Uphill Gradient *g* (%)	AM Peak: Design Flow *q* (pcu/hr)	AM Peak: Turning Proportion *f*	AM Peak: Saturation Flow *S* (pcu/hr)	AM Peak: Flow Factor *y*	PM Peak: Design Flow *q* (pcu/hr)	PM Peak: Turning Proportion *f*	PM Peak: Saturation Flow *S* (pcu/hr)	PM Peak: Flow Factor *y*
Fo Tan Road WB														
*1(1)	A	3.20	Y	15			211	100%	1407	0.150	199	100%	1407	**0.141**
1(2)	A	3.20	N	18			286	100%	1915	0.149	272	100%	1915	0.142
1(3)	A	3.40	N				363		2095	**0.173**	292		2095	0.140
1(4)	A	3.50	N	23			365	0%	2105	0.173	296	0%	2105	0.141
1(5)	A	3.70	N	20			185	100%	1977	0.094	77	100%	1977	0.039
Fo Tan Road EB														
2(1)	B	3.30	Y	15			334	19%	1909	**0.175**	243	10%	1926	**0.126**
2(2)	B	3.30	N				365		2085	0.175	265		2085	0.127
2(3)	B	3.30	N				365		2085	0.175	265		2085	0.127
2(4)	B	3.30	N				365		2085	0.175	265		2085	0.127
Sui Wo Road NB														
3(1)	D	3.40	Y	30			355	81%	1879	**0.189**	319	83%	1877	**0.170**
*3(2)	D	3.30	N	25			296	100%	1574	0.188	267	100%	1574	0.170
4p	A,B,C		5GM+	6FG=	11	sec								
5p	B,C,D		5GM+	8FG=	13	sec								
6p	B,C,D		5GM+	9FG=	14	sec								
7p	A,C,D		6GM+	12FG=	18	sec								
8p	C		5GM+	10FG=	**15**	sec								
*Site factor adopted														

Notes :

AM Peak		1+2+8p+3	PM Peak		1+2+8p+3
Sum of Critical *y* ***Y***		0.537	Sum of Critical *y* ***Y***		0.437
Lost Time ***L*** (sec)		38	Lost Time ***L*** (sec)		38
Cycle Time ***c*** (sec)		121	Cycle Time ***c*** (sec)		105
Practical *Y* ***Ypr***		0.617	Practical *Y* ***Ypr***		0.574
Reserve Capacity ***RC***		**15%**	Reserve Capacity ***RC***		**31%**

Designed by : Rico Wong — **Date** : _____ — **Junction Index** : J1

Checked by : _____ — **Date** : _____ — **Sheet No.** : _____

TRAFFIC SIGNAL CALCULATION SHEET

aurecon

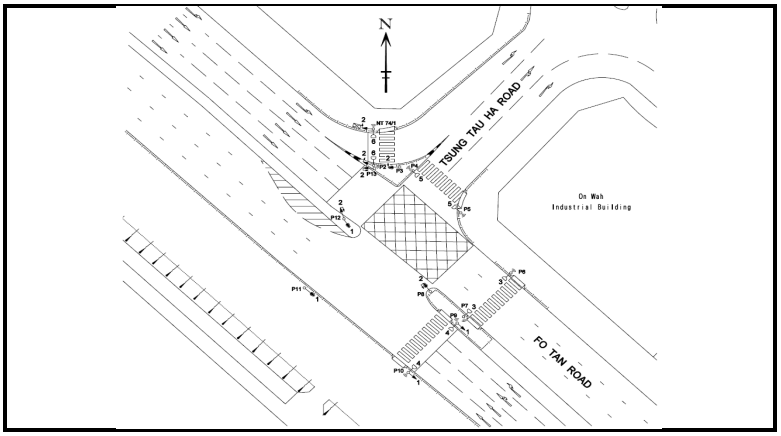
Quotation Ref.: PD/SSMU/P/4/20230001

Job Title : Traffic Review for the Proposed Joint-User Complex at Shan Mei Street, Fo Tan — **Job No.** : P523543

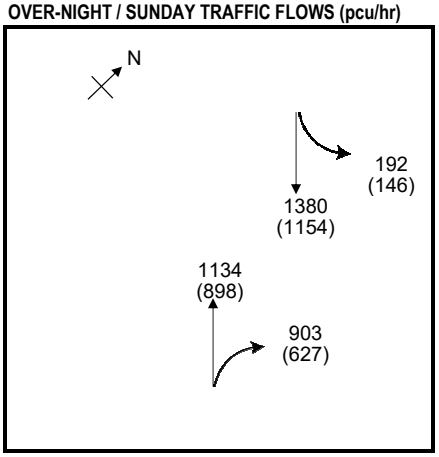
Junction : Fo Tan Road / Tsung Tau Ha Road — **Junction Index** : J2

Description : Existing — **Design Year** : 2023

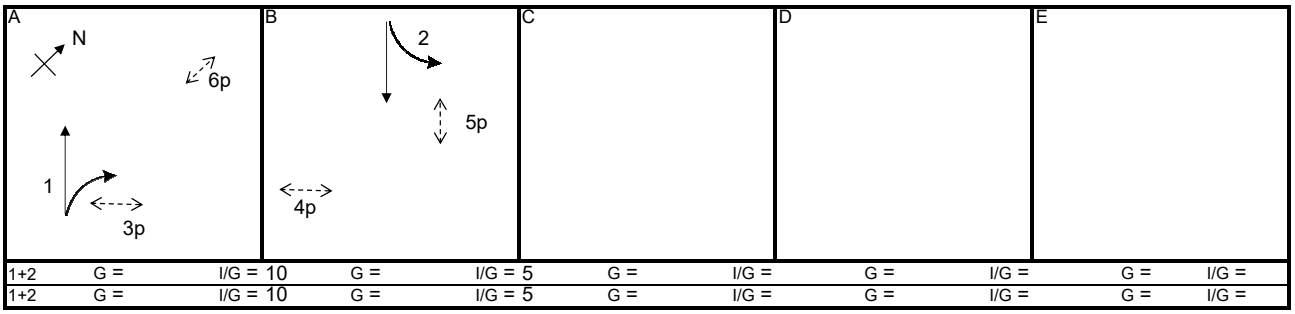
JUNCTION LAYOUT



OVER-NIGHT / SUNDAY TRAFFIC FLOWS (pcu/hr)



STAGE / PHASE DIAGRAM



1+2	G =	I/G = 10	G =	I/G = 5	G =	I/G =	G =	I/G =	G =	I/G =
1+2	G =	I/G = 10	G =	I/G = 5	G =	I/G =	G =	I/G =	G =	I/G =

CAPACITY CALCULATION

Phase	Stage	Lane Width *w* (m)	Nearside Lane? (Y/N)	Turning Radius *r* (m)	Opposed Turn? (Y/N)	Uphill Gradient *g* (%)	AM Peak Design Flow *q* (pcu/hr)	AM Peak Turning Proportion *f*	AM Peak Saturation Flow *S* (pcu/hr)	AM Peak Flow Factor *y*	PM Peak Design Flow *q* (pcu/hr)	PM Peak Turning Proportion *f*	PM Peak Saturation Flow *S* (pcu/hr)	PM Peak Flow Factor *y*
Fo Tan Road NB														
1(1)	A	3.40	Y				499		1955	**0.255**	374		1955	**0.191**
1(2)	A	3.30	N				532		2085	0.255	396		2085	0.190
1(3)	A	3.30	N	30			512	80%	2005	0.255	385	67%	2018	0.191
1(4)	A	3.30	N	20			494	100%	1940	0.255	370	100%	1940	0.191
Fo Tan Road SB														
2(1)	B	3.40	Y	15			192	100%	1777	0.108	146	100%	1777	0.082
2(2)	B	3.30	N				460		2085	**0.220**	385		2085	**0.184**
2(3)	B	3.30	N				460		2085	0.221	385		2085	0.184
2(4)	B	3.30	N				460		2085	0.221	385		2085	0.184

Notes :

AM Peak		1+2	**PM Peak**		1+2
Sum of Critical *y* ***Y***		0.476	Sum of Critical *y* ***Y***		0.376
Lost Time ***L*** (sec)		13	Lost Time ***L*** (sec)		13
Cycle Time ***c*** (sec)		121	Cycle Time ***c*** (sec)		105
Practical *Y* ***Ypr***		0.803	Practical *Y* ***Ypr***		0.789
Reserve Capacity ***RC***		**69%**	Reserve Capacity ***RC***		**110%**

Designed by : Rico Wong — **Date** : — **Junction Index** : J2

Checked by : — **Date** : — **Sheet No.** :

TRAFFIC SIGNAL CALCULATION SHEET

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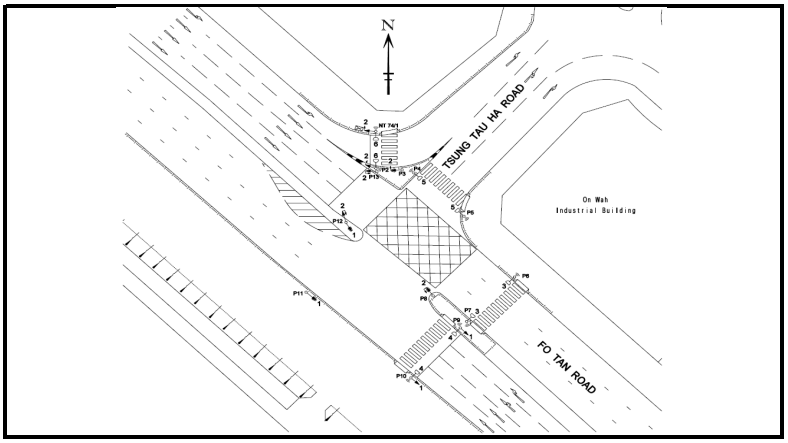
Quotation Ref.: PD/SSMU/P/4/20230001

Job Title : Traffic Review for the Proposed Joint-User Complex at Shan Mei Street, Fo Tan — **Job No.** : **P523543**

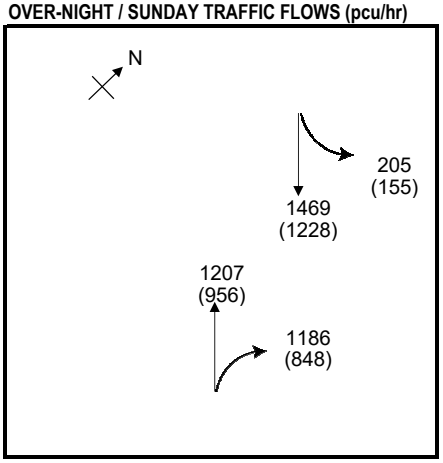
Junction : Fo Tan Road / Tsung Tau Ha Road — **Junction Index** : J2

Description : Reference — **Design Year** : 2034

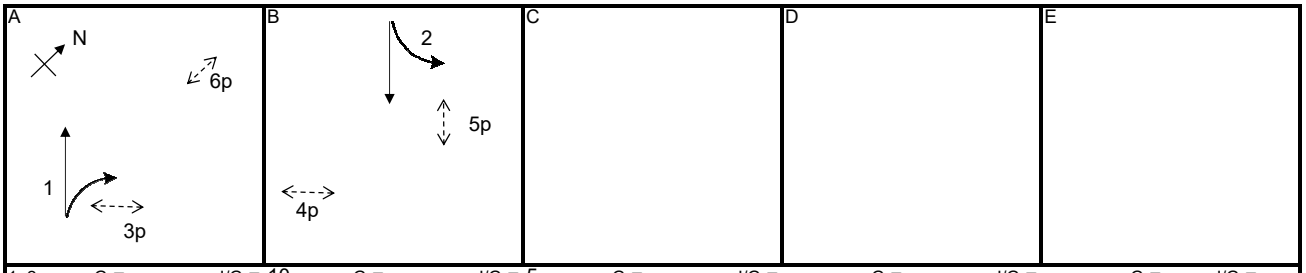
JUNCTION LAYOUT



OVER-NIGHT / SUNDAY TRAFFIC FLOWS (pcu/hr)



STAGE / PHASE DIAGRAM



1+2	G =	I/G = 10	G =	I/G = 5	G =	I/G =	G =	I/G =	G =	I/G =
1+2	G =	I/G = 10	G =	I/G = 5	G =	I/G =	G =	I/G =	G =	I/G =

CAPACITY CALCULATION

Phase	Stage	Lane Width *w* (m)	Nearside Lane? (Y/N)	Turning Radius *r* (m)	Opposed Turn? (Y/N)	Uphill Gradient *g* (%)	AM Peak Design Flow *q* (pcu/hr)	AM Peak Turning Proportion *f*	AM Peak Saturation Flow *S* (pcu/hr)	AM Peak Flow Factor *y*	PM Peak Design Flow *q* (pcu/hr)	PM Peak Turning Proportion *f*	PM Peak Saturation Flow *S* (pcu/hr)	PM Peak Flow Factor *y*
Fo Tan Road NB														
1(1)	A	3.40	Y				585		1955	0.299	461		1955	**0.236**
1(2)	A	3.30	N				622		2085	0.298	495		2085	0.237
1(3)	A	3.30	N	30			600	100%	1986	**0.302**	429	100%	1986	0.216
1(4)	A	3.30	N	20			586	100%	1940	0.302	419	100%	1940	0.216
Fo Tan Road SB														
2(1)	B	3.40	Y	15			205	100%	1777	0.115	155	100%	1777	0.087
2(2)	B	3.30	N				489		2085	**0.234**	409		2085	**0.196**
2(3)	B	3.30	N				490		2085	0.235	409		2085	0.196
2(4)	B	3.30	N				490		2085	0.235	409		2085	0.196

Notes :

AM Peak		1+2	**PM Peak**		1+2
Sum of Critical *y* ***Y***		0.537	Sum of Critical *y* ***Y***		0.432
Lost Time ***L*** (sec)		13	Lost Time ***L*** (sec)		13
Cycle Time ***c*** (sec)		121	Cycle Time ***c*** (sec)		105
Practical *Y* ***Ypr***		0.803	Practical *Y* ***Ypr***		0.789
Reserve Capacity ***RC***		**50%**	Reserve Capacity ***RC***		**82%**

Designed by : Rico Wong **Date** : _____ **Junction Index** : J2

Checked by : _____ **Date** : _____ **Sheet No.** : _____

TRAFFIC SIGNAL CALCULATION SHEET

aurecon

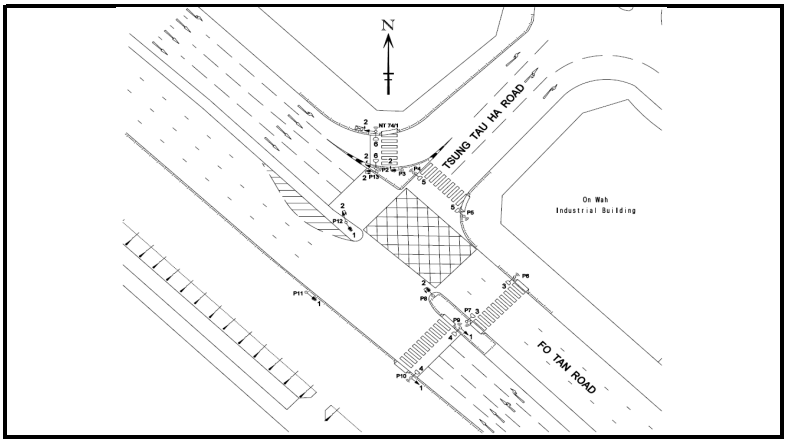
Quotation Ref.: PD/SSMU/P/4/20230001

Job Title : Traffic Review for the Proposed Joint-User Complex at Shan Mei Street, Fo Tan — **Job No.** : **P523543**

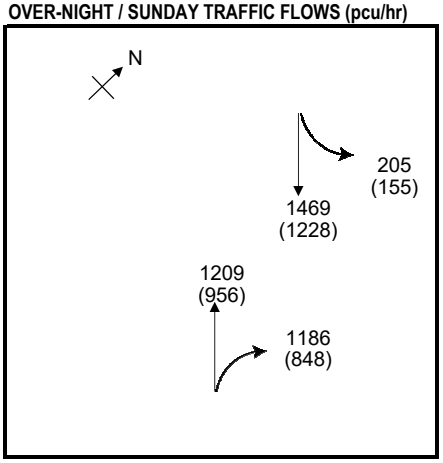
Junction : Fo Tan Road / Tsung Tau Ha Road — **Junction Index** : J2

Description : Design — **Design Year** : 2034

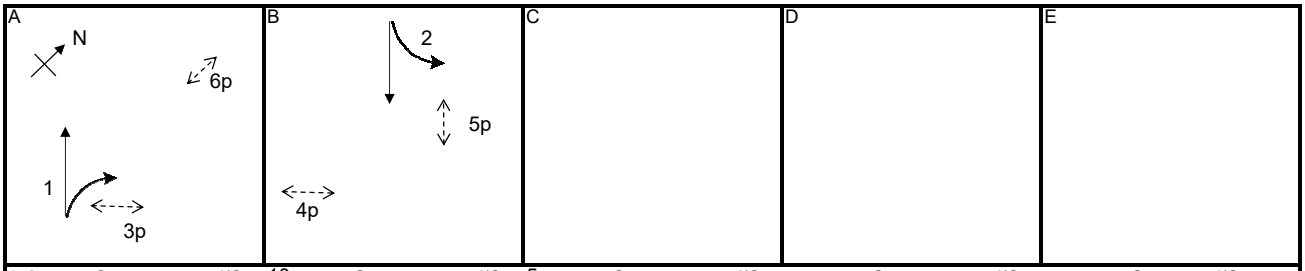
JUNCTION LAYOUT



OVER-NIGHT / SUNDAY TRAFFIC FLOWS (pcu/hr)



STAGE / PHASE DIAGRAM



1+2	G =	I/G = 10	G =	I/G = 5	G =	I/G =	G =	I/G =	G =	I/G =
1+2	G =	I/G = 10	G =	I/G = 5	G =	I/G =	G =	I/G =	G =	I/G =

CAPACITY CALCULATION

Phase	Stage	Lane Width *w* (m)	Nearside Lane? (Y/N)	Turning Radius *r* (m)	Opposed Turn? (Y/N)	Uphill Gradient *g* (%)	AM Peak Design Flow *q* (pcu/hr)	AM Peak Turning Proportion *f*	AM Peak Saturation Flow *S* (pcu/hr)	AM Peak Flow Factor *y*	PM Peak Design Flow *q* (pcu/hr)	PM Peak Turning Proportion *f*	PM Peak Saturation Flow *S* (pcu/hr)	PM Peak Flow Factor *y*
Fo Tan Road NB														
1(1)	A	3.40	Y				585		1955	0.299	461		1955	**0.236**
1(2)	A	3.30	N				624		2085	0.299	495		2085	0.237
1(3)	A	3.30	N	30			600	100%	1986	**0.302**	429	100%	1986	0.216
1(4)	A	3.30	N	20			586	100%	1940	0.302	419	100%	1940	0.216
Fo Tan Road SB														
2(1)	B	3.40	Y	15			205	100%	1777	0.115	155	100%	1777	0.087
2(2)	B	3.30	N				489		2085	**0.234**	409		2085	**0.196**
2(3)	B	3.30	N				490		2085	0.235	409		2085	0.196
2(4)	B	3.30	N				490		2085	0.235	409		2085	0.196

Notes :

AM Peak		1+2	**PM Peak**		1+2
Sum of Critical *y* ***Y***		0.537	Sum of Critical *y* ***Y***		0.432
Lost Time ***L*** (sec)		13	Lost Time ***L*** (sec)		13
Cycle Time ***c*** (sec)		121	Cycle Time ***c*** (sec)		105
Practical *Y* ***Ypr***		0.803	Practical *Y* ***Ypr***		0.789
Reserve Capacity ***RC***		**50%**	Reserve Capacity ***RC***		**82%**

Designed by : Rico Wong **Date** : _____ **Junction Index** : J2

Checked by : _____ **Date** : _____ **Sheet No.** : _____

TRAFFIC SIGNAL CALCULATION SHEET

aurecon

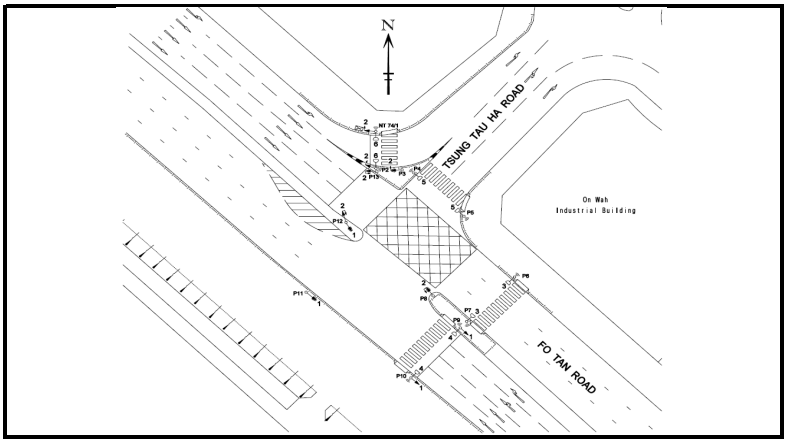
Quotation Ref.: PD/SSMU/P/4/20230001

Job Title : Traffic Review for the Proposed Joint-User Complex at Shan Mei Street, Fo Tan — **Job No.** : **P523543**

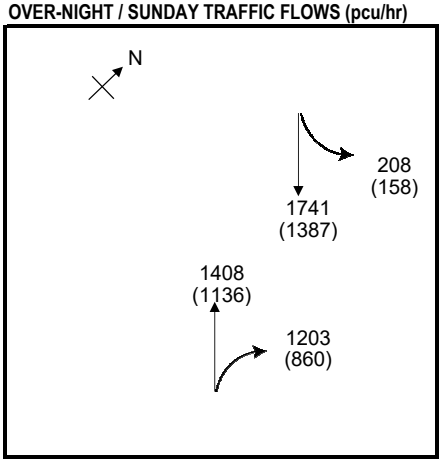
Junction : Fo Tan Road / Tsung Tau Ha Road — **Junction Index** : J2

Description : Reference — **Design Year** : 2037

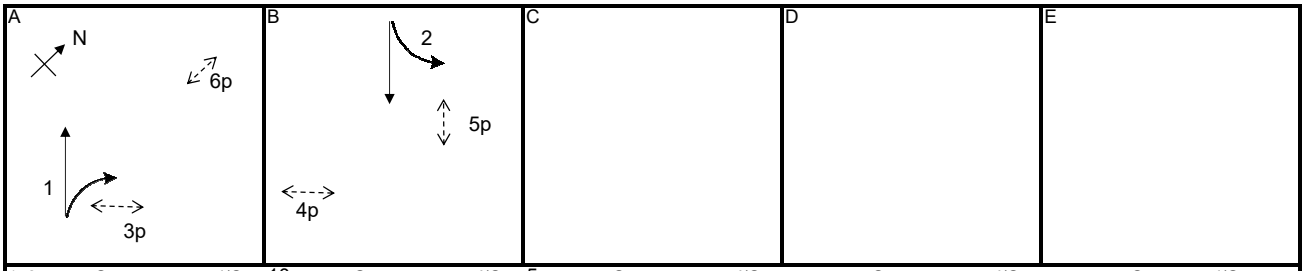
JUNCTION LAYOUT



OVER-NIGHT / SUNDAY TRAFFIC FLOWS (pcu/hr)



STAGE / PHASE DIAGRAM



1+2	G =	I/G = 10	G =	I/G = 5	G =	I/G =	G =	I/G =	G =	I/G =
1+2	G =	I/G = 10	G =	I/G = 5	G =	I/G =	G =	I/G =	G =	I/G =

CAPACITY CALCULATION

Phase	Stage	Lane Width *w* (m)	Nearside Lane? (Y/N)	Turning Radius *r* (m)	Opposed Turn? (Y/N)	Uphill Gradient *g* (%)	AM Peak Design Flow *q* (pcu/hr)	AM Peak Turning Proportion *f*	AM Peak Saturation Flow *S* (pcu/hr)	AM Peak Flow Factor *y*	PM Peak Design Flow *q* (pcu/hr)	PM Peak Turning Proportion *f*	PM Peak Saturation Flow *S* (pcu/hr)	PM Peak Flow Factor *y*
Fo Tan Road NB														
1(1)	A	3.40	Y				681		1955	**0.348**	549		1955	**0.281**
1(2)	A	3.30	N				727		2085	0.349	587		2085	0.282
1(3)	A	3.30	N	30			609	100%	1986	0.307	435	100%	1986	0.219
1(4)	A	3.30	N	20			594	100%	1940	0.306	425	100%	1940	0.219
Fo Tan Road SB														
2(1)	B	3.40	Y	15			208	100%	1777	0.117	158	100%	1777	0.089
2(2)	B	3.30	N				581		2085	**0.279**	462		2085	**0.222**
2(3)	B	3.30	N				580		2085	0.278	462		2085	0.222
2(4)	B	3.30	N				580		2085	0.278	462		2085	0.222

Notes :

AM Peak		1+2	**PM Peak**		1+2
Sum of Critical *y* ***Y***		0.627	Sum of Critical *y* ***Y***		0.503
Lost Time ***L*** (sec)		13	Lost Time ***L*** (sec)		13
Cycle Time ***c*** (sec)		121	Cycle Time ***c*** (sec)		105
Practical *Y* ***Ypr***		0.803	Practical *Y* ***Ypr***		0.789
Reserve Capacity ***RC***		**28%**	Reserve Capacity ***RC***		**57%**

Designed by : Rico Wong — **Date** : _____ — **Junction Index** : J2

Checked by : _____ — **Date** : _____ — **Sheet No.** : _____

TRAFFIC SIGNAL CALCULATION SHEET

aurecon

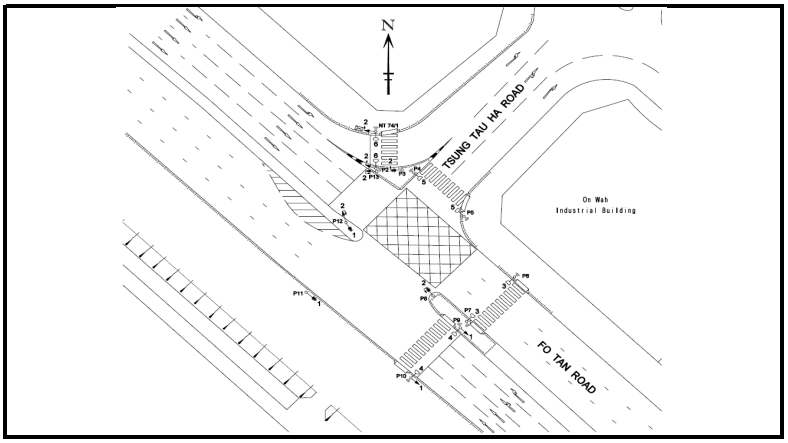
Quotation Ref.: PD/SSMU/P/4/20230001

Job Title : Traffic Review for the Proposed Joint-User Complex at Shan Mei Street, Fo Tan — **Job No.** : **P523543**

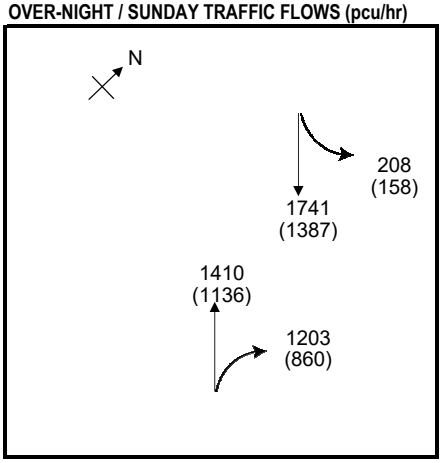
Junction : Fo Tan Road / Tsung Tau Ha Road — **Junction Index** : J2

Description : Design — **Design Year** : 2037

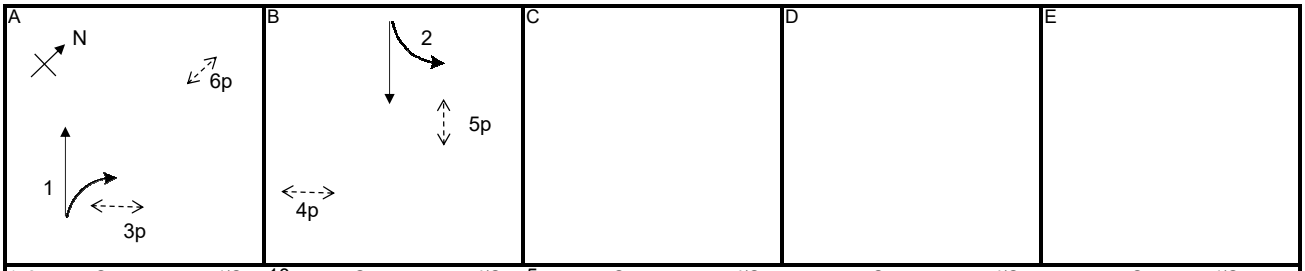
JUNCTION LAYOUT



OVER-NIGHT / SUNDAY TRAFFIC FLOWS (pcu/hr)



STAGE / PHASE DIAGRAM



1+2	G =	I/G = 10	G =	I/G = 5	G =	I/G =	G =	I/G =	G =	I/G =
1+2	G =	I/G = 10	G =	I/G = 5	G =	I/G =	G =	I/G =	G =	I/G =

CAPACITY CALCULATION

Phase	Stage	Lane Width *w* (m)	Nearside Lane? (Y/N)	Turning Radius *r* (m)	Opposed Turn? (Y/N)	Uphill Gradient *g* (%)	AM Peak Design Flow *q* (pcu/hr)	AM Peak Turning Proportion *f*	AM Peak Saturation Flow *S* (pcu/hr)	AM Peak Flow Factor *y*	PM Peak Design Flow *q* (pcu/hr)	PM Peak Turning Proportion *f*	PM Peak Saturation Flow *S* (pcu/hr)	PM Peak Flow Factor *y*
Fo Tan Road NB														
1(1)	A	3.40	Y				683		1955	**0.349**	549		1955	**0.281**
1(2)	A	3.30	N				727		2085	0.349	587		2085	0.282
1(3)	A	3.30	N	30			609	100%	1986	0.307	435	100%	1986	0.219
1(4)	A	3.30	N	20			594	100%	1940	0.306	425	100%	1940	0.219
Fo Tan Road SB														
2(1)	B	3.40	Y	15			208	100%	1777	0.117	158	100%	1777	0.089
2(2)	B	3.30	N				581		2085	**0.279**	462		2085	**0.222**
2(3)	B	3.30	N				580		2085	0.278	462		2085	0.222
2(4)	B	3.30	N				580		2085	0.278	462		2085	0.222

Notes :

AM Peak		1+2	**PM Peak**		1+2
Sum of Critical *y* ***Y***		0.628	Sum of Critical *y* ***Y***		0.503
Lost Time ***L*** (sec)		13	Lost Time ***L*** (sec)		13
Cycle Time ***c*** (sec)		121	Cycle Time ***c*** (sec)		105
Practical *Y* ***Ypr***		0.803	Practical *Y* ***Ypr***		0.789
Reserve Capacity ***RC***		**28%**	Reserve Capacity ***RC***		**57%**

Designed by : Rico Wong — **Date** : _____ — **Junction Index** : J2

Checked by : _____ — **Date** : _____ — **Sheet No.** : _____

TRAFFIC SIGNAL CALCULATION SHEET

aurecon

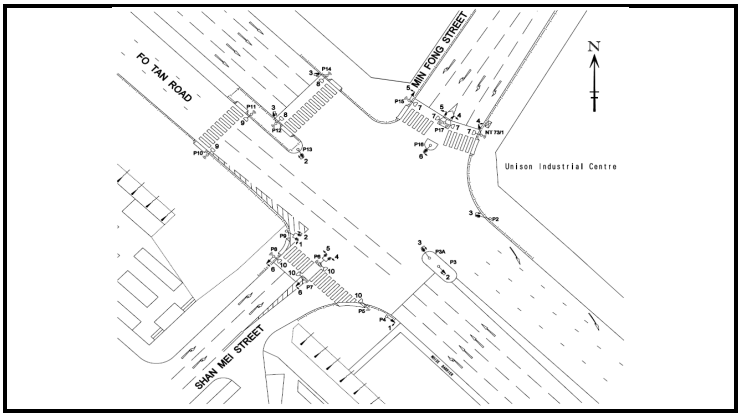
Quotation Ref.: PD/SSMU/P/4/20230001

Job Title : Traffic Review for the Proposed Joint-User Complex at Shan Mei Street, Fo Tan — **Job No.** : P523543

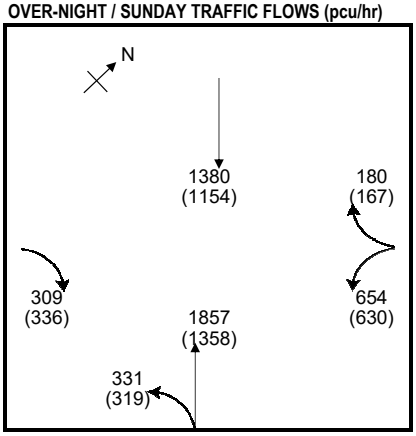
Junction : Fo Tan Road / Shan Mei Street — **Junction Index** : J3

Description : Existing — **Design Year** : 2023

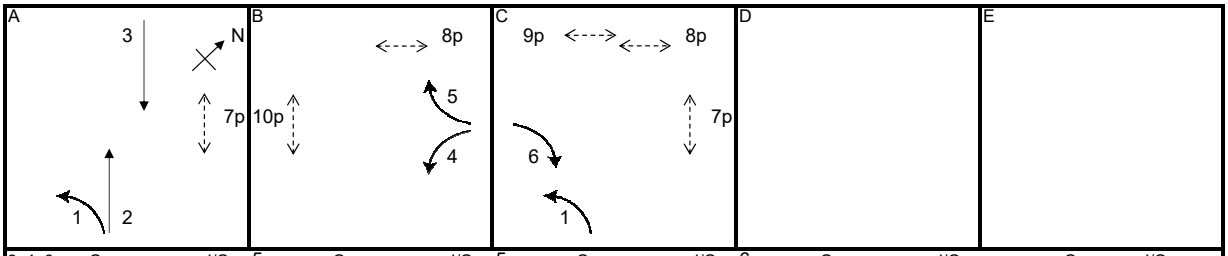
JUNCTION LAYOUT



OVER-NIGHT / SUNDAY TRAFFIC FLOWS (pcu/hr)



STAGE / PHASE DIAGRAM



2+4+6	G =	I/G = 5	G =	I/G = 5	G =	I/G = 6	G =	I/G =	G =	I/G =
2+4+6	G =	I/G = 5	G =	I/G = 5	G =	I/G = 6	G =	I/G =	G =	I/G =

CAPACITY CALCULATION

Phase	Stage	Lane Width *w* (m)	Nearside Lane? (Y/N)	Turning Radius *r* (m)	Opposed Turn? (Y/N)	Uphill Gradient *g* (%)	AM Peak: Design Flow *q* (pcu/hr)	AM Peak: Turning Proportion *f*	AM Peak: Saturation Flow *S* (pcu/hr)	AM Peak: Flow Factor *y*	PM Peak: Design Flow *q* (pcu/hr)	PM Peak: Turning Proportion *f*	PM Peak: Saturation Flow *S* (pcu/hr)	PM Peak: Flow Factor *y*
Fo Tan Road NB														
1	A,C	3.60	Y	15			331	100%	1795	0.184	319	100%	1795	0.178
2(1)	A	3.50	N				621		2105	**0.295**	453		2105	**0.215**
2(2)	A	3.50	N				618		2105	0.294	453		2105	0.215
2(3)	A	3.50	N				618		2105	0.294	452		2105	0.215
		3.50												
Fo Tan Road SB														
3(1)	A	3.40	Y				330		1955	0.169	275		1955	0.141
3(2)	A	3.30	N				350		2085	0.168	293		2085	0.141
3(3)	A	3.30	N				350		2085	0.168	293		2085	0.141
3(4)	A	3.30	N				350		2085	0.168	293		2085	0.141
Min Fong Street WB														
4(1)	B	3.40	Y	15			312	100%	1777	**0.176**	325	100%	1777	**0.183**
4(2)	B	3.60	N	18			342	100%	1952	0.175	305	100%	1952	0.156
5(1)	B	3.40	N	23			92	100%	1967	0.047	87	100%	1967	0.044
5(2)	B	3.40	Y	20			88	100%	1819	0.048	80	100%	1819	0.044
Shan Mei Street EB														
6(1)	C	3.40	Y	23			167	100%	1835	**0.091**	183	100%	1835	**0.100**
*6(2)	C	3.30	N	20			142	100%	1552	0.092	153	100%	1552	0.099
* Site factor adopted														

Notes :

AM Peak		2+4+6	PM Peak		2+4+6
Sum of Critical *y* ***Y***		0.561	Sum of Critical *y* ***Y***		0.498
Lost Time ***L*** (sec)		13	Lost Time ***L*** (sec)		13
Cycle Time ***c*** (sec)		121	Cycle Time ***c*** (sec)		105
Practical *Y* ***Ypr***		0.803	Practical *Y* ***Ypr***		0.789
Reserve Capacity ***RC***		**43%**	Reserve Capacity ***RC***		**58%**

Designed by : Rico Wong — **Date** : _____ — **Junction Index** : J3

Checked by : _____ — **Date** : _____ — **Sheet No.** : _____

TRAFFIC SIGNAL CALCULATION SHEET

aurecon

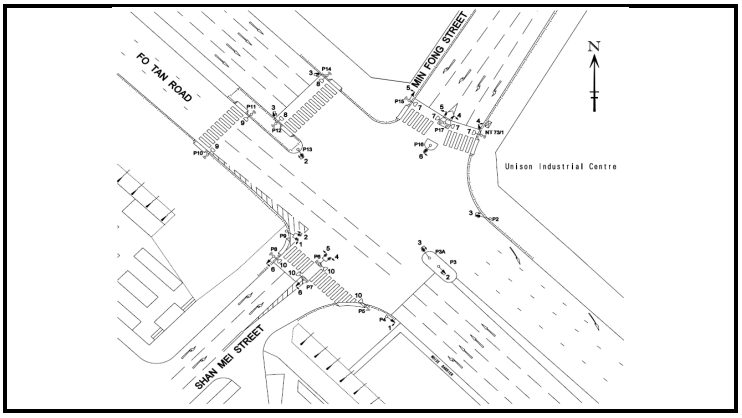
Quotation Ref.: PD/SSMU/P/4/20230001

Job Title : Traffic Review for the Proposed Joint-User Complex at Shan Mei Street, Fo Tan — **Job No.** : P523543

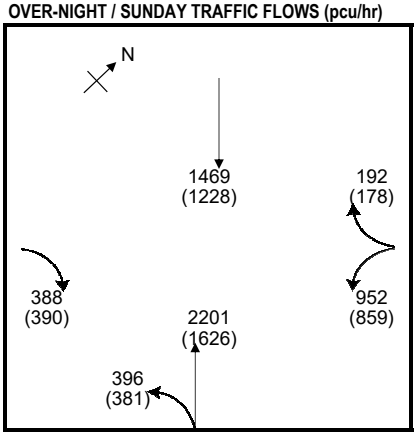
Junction : Fo Tan Road / Shan Mei Street — **Junction Index** : J3

Description : Reference — **Design Year** : 2034

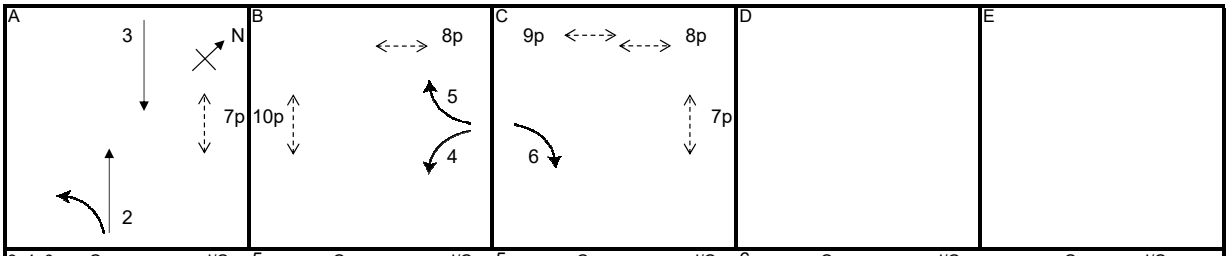
JUNCTION LAYOUT



OVER-NIGHT / SUNDAY TRAFFIC FLOWS (pcu/hr)



STAGE / PHASE DIAGRAM



2+4+6	G =	I/G = 5	G =	I/G = 5	G =	I/G = 6	G =	I/G =	G =	I/G =
2+4+6	G =	I/G = 5	G =	I/G = 5	G =	I/G = 6	G =	I/G =	G =	I/G =

CAPACITY CALCULATION

Phase	Stage	Lane Width *w* (m)	Nearside Lane? (Y/N)	Turning Radius *r* (m)	Opposed Turn? (Y/N)	Uphill Gradient *g* (%)	AM Peak Design Flow *q* (pcu/hr)	AM Peak Turning Proportion *f*	AM Peak Saturation Flow *S* (pcu/hr)	AM Peak Flow Factor *y*	PM Peak Design Flow *q* (pcu/hr)	PM Peak Turning Proportion *f*	PM Peak Saturation Flow *S* (pcu/hr)	PM Peak Flow Factor *y*
Fo Tan Road NB														
2(1)	A,C	3.60	Y	18			594	67%	1871	0.317	454	84%	1846	0.246
2(2)	A	3.50	N				668		2105	**0.317**	517		2105	**0.246**
2(3)	A	3.50	N				668		2105	0.317	518		2105	0.246
2(4)	A	3.50	N				668		2105	0.317	518		2105	0.246
		3.50												
Fo Tan Road SB														
3(1)	A	3.40	Y				350		1955	0.179	292		1955	0.150
3(2)	A	3.30	N				373		2085	0.179	312		2085	0.150
3(3)	A	3.30	N				373		2085	0.179	312		2085	0.150
3(4)	A	3.30	N				373		2085	0.179	312		2085	0.150
Min Fong Street WB														
4(1)	B	3.40	Y	18			298	100%	1805	**0.165**	269	100%	1805	**0.149**
4(2)	B	3.60	N	23			327	100%	1986	0.165	295	100%	1986	0.149
4(3)	B	3.40	N	25			327	100%	1976	0.165	295	100%	1976	0.149
5(1)	B	3.40	Y	20			192	100%	1819	0.106	178	100%	1819	0.098
Shan Mei Street EB														
6(1)	C	3.40	Y	23			211	100%	1835	**0.115**	212	100%	1835	**0.115**
*6(2)	C	3.30	N	20			177	100%	1552	0.114	178	100%	1552	0.115
* Site factor adopted														

Notes :

AM Peak		2+4+6	PM Peak		2+4+6
Sum of Critical *y* ***Y***		0.598	Sum of Critical *y* ***Y***		0.510
Lost Time ***L*** (sec)		13	Lost Time ***L*** (sec)		13
Cycle Time ***c*** (sec)		121	Cycle Time ***c*** (sec)		105
Practical *Y* ***Ypr***		0.803	Practical *Y* ***Ypr***		0.789
Reserve Capacity ***RC***		**34%**	Reserve Capacity ***RC***		**55%**

Designed by : Rico Wong — **Date** : _____ — **Junction Index** : J3

Checked by : _____ — **Date** : _____ — **Sheet No.** : _____

TRAFFIC SIGNAL CALCULATION SHEET

aurecon

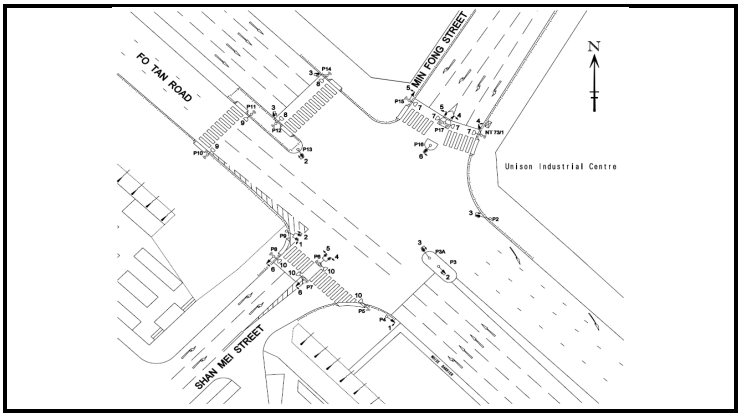
Quotation Ref.: PD/SSMU/P/4/20230001

Job Title : Traffic Review for the Proposed Joint-User Complex at Shan Mei Street, Fo Tan — **Job No.** : P523543

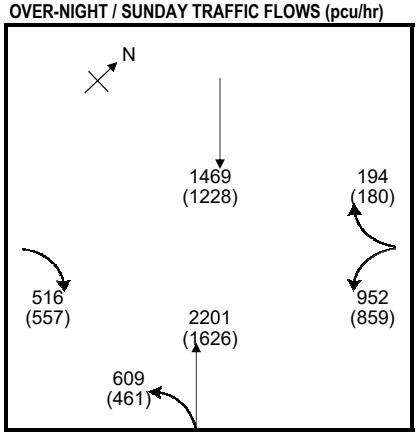
Junction : Fo Tan Road / Shan Mei Street — **Junction Index** : J3

Description : Design — **Design Year** : 2034

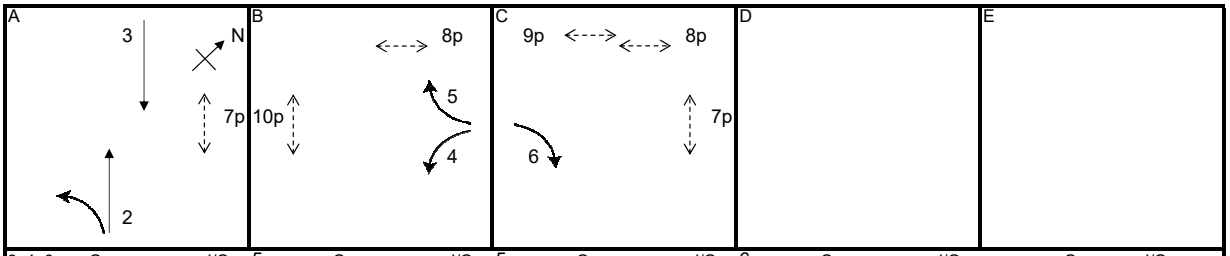
JUNCTION LAYOUT



OVER-NIGHT / SUNDAY TRAFFIC FLOWS (pcu/hr)



STAGE / PHASE DIAGRAM



2+4+6	G =	I/G = 5	G =	I/G = 5	G =	I/G = 6	G =	I/G =	G =	I/G =
2+4+6	G =	I/G = 5	G =	I/G = 5	G =	I/G = 6	G =	I/G =	G =	I/G =

CAPACITY CALCULATION

Phase	Stage	Lane Width *w* (m)	Nearside Lane? (Y/N)	Turning Radius *r* (m)	Opposed Turn? (Y/N)	Uphill Gradient *g* (%)	AM Peak Design Flow *q* (pcu/hr)	AM Peak Turning Proportion *f*	AM Peak Saturation Flow *S* (pcu/hr)	AM Peak Flow Factor *y*	PM Peak Design Flow *q* (pcu/hr)	PM Peak Turning Proportion *f*	PM Peak Saturation Flow *S* (pcu/hr)	PM Peak Flow Factor *y*
Fo Tan Road NB														
2(1)	A,C	3.60	Y	18			631	97%	1828	0.345	468	98%	1825	0.256
2(2)	A	3.50	N				726		2105	**0.345**	539		2105	**0.256**
2(3)	A	3.50	N				727		2105	0.345	540		2105	0.257
2(4)	A	3.50	N				727		2105	0.345	540		2105	0.257
		3.50												
Fo Tan Road SB														
3(1)	A	3.40	Y				350		1955	0.179	292		1955	0.150
3(2)	A	3.30	N				373		2085	0.179	312		2085	0.150
3(3)	A	3.30	N				373		2085	0.179	312		2085	0.150
3(4)	A	3.30	N				373		2085	0.179	312		2085	0.150
Min Fong Street WB														
4(1)	B	3.40	Y	18			298	100%	1805	**0.165**	269	100%	1805	**0.149**
4(2)	B	3.60	N	23			327	100%	1986	0.165	295	100%	1986	0.149
4(3)	B	3.40	N	25			327	100%	1976	0.165	295	100%	1976	0.149
5(1)	B	3.40	Y	20			194	100%	1819	0.107	180	100%	1819	0.099
Shan Mei Street EB														
6(1)	C	3.40	Y	23			279	100%	1835	**0.152**	302	100%	1835	**0.164**
*6(2)	C	3.30	N	20			237	100%	1552	0.153	255	100%	1552	0.164
* Site factor adopted														

Notes :

AM Peak		2+4+6	**PM Peak**		2+4+6
Sum of Critical *y* **Y**		0.662	Sum of Critical *y* **Y**		0.569
Lost Time ***L*** (sec)		13	Lost Time ***L*** (sec)		13
Cycle Time ***c*** (sec)		121	Cycle Time ***c*** (sec)		105
Practical *Y* ***Ypr***		0.803	Practical *Y* ***Ypr***		0.789
Reserve Capacity ***RC***		**21%**	Reserve Capacity ***RC***		**39%**

Designed by : Rico Wong — **Date** : _____ — **Junction Index** : J3

Checked by : _____ — **Date** : _____ — **Sheet No.** : _____

TRAFFIC SIGNAL CALCULATION SHEET

aurecon

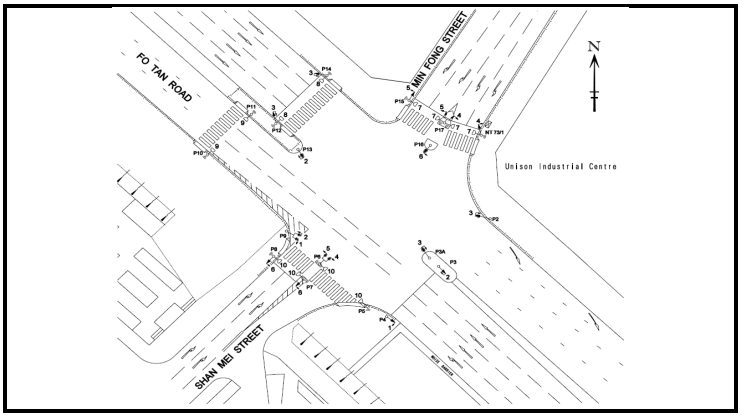
Quotation Ref.: PD/SSMU/P/4/20230001

Job Title : Traffic Review for the Proposed Joint-User Complex at Shan Mei Street, Fo Tan — **Job No.** : P523543

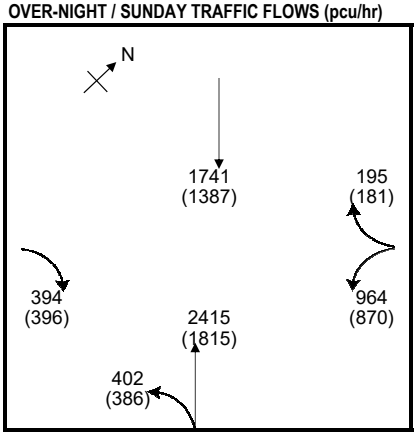
Junction : Fo Tan Road / Shan Mei Street — **Junction Index** : J3

Description : Reference — **Design Year** : 2037

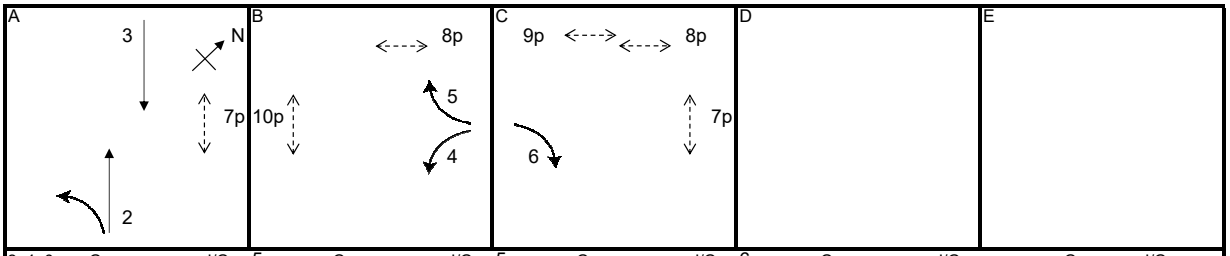
JUNCTION LAYOUT



OVER-NIGHT / SUNDAY TRAFFIC FLOWS (pcu/hr)



STAGE / PHASE DIAGRAM



2+4+6	G =	I/G = 5	G =	I/G = 5	G =	I/G = 6	G =	I/G =	G =	I/G =
2+4+6	G =	I/G = 5	G =	I/G = 5	G =	I/G = 6	G =	I/G =	G =	I/G =

CAPACITY CALCULATION

Phase	Stage	Lane Width *w* (m)	Nearside Lane? (Y/N)	Turning Radius *r* (m)	Opposed Turn? (Y/N)	Uphill Gradient *g* (%)	AM Peak Design Flow *q* (pcu/hr)	AM Peak Turning Proportion *f*	AM Peak Saturation Flow *S* (pcu/hr)	AM Peak Flow Factor *y*	PM Peak Design Flow *q* (pcu/hr)	PM Peak Turning Proportion *f*	PM Peak Saturation Flow *S* (pcu/hr)	PM Peak Flow Factor *y*
Fo Tan Road NB														
2(1)	A,C	3.60	Y	15			641	63%	1858	0.345	496	78%	1832	0.270
2(2)	A	3.50	N				726		2105	**0.345**	569		2105	**0.270**
2(3)	A	3.50	N				726		2105	0.345	569		2105	0.270
2(4)	A	3.50	N				726		2105	0.345	569		2105	0.270
		3.50												
Fo Tan Road SB														
3(1)	A	3.40	Y				415		1955	0.212	331		1955	0.169
3(2)	A	3.30	N				442		2085	0.212	352		2085	0.169
3(3)	A	3.30	N				442		2085	0.212	352		2085	0.169
3(4)	A	3.30	N				442		2085	0.212	352		2085	0.169
Min Fong Street WB														
4(1)	B	3.40	Y	18			302	100%	1805	**0.167**	272	100%	1805	**0.151**
4(2)	B	3.60	N	23			332	100%	1986	0.167	300	100%	1986	0.151
4(3)	B	3.40	N	25			330	100%	1976	0.167	298	100%	1976	0.151
5(1)	B	3.40	Y	20			195	100%	1819	0.107	181	100%	1819	0.100
Shan Mei Street EB														
6(1)	C	3.40	Y	23			214	100%	1835	**0.116**	214	100%	1835	**0.117**
*6(2)	C	3.30	N	20			180	100%	1552	0.116	182	100%	1552	0.117
* Site factor adopted														

Notes :

AM Peak		2+4+6	PM Peak		2+4+6
Sum of Critical *y* ***Y***		0.628	Sum of Critical *y* ***Y***		0.538
Lost Time ***L*** (sec)		13	Lost Time ***L*** (sec)		13
Cycle Time ***c*** (sec)		121	Cycle Time ***c*** (sec)		105
Practical *Y* ***Ypr***		0.803	Practical *Y* ***Ypr***		0.789
Reserve Capacity ***RC***		**28%**	Reserve Capacity ***RC***		**47%**

Designed by : Rico Wong — **Date** : _____ — **Junction Index** : J3

Checked by : _____ — **Date** : _____ — **Sheet No.** : _____

TRAFFIC SIGNAL CALCULATION SHEET

aurecon

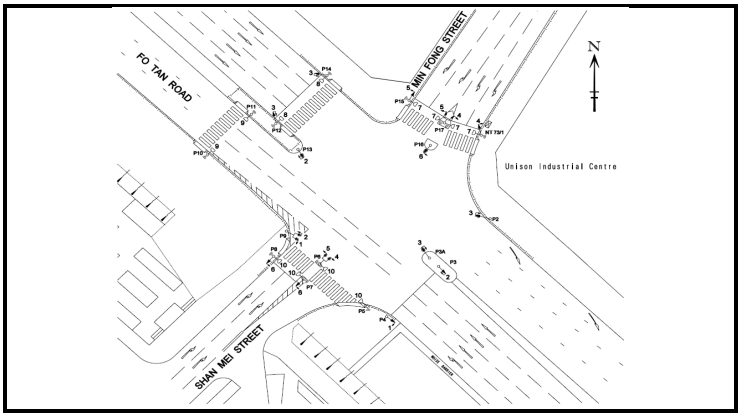
Quotation Ref.: PD/SSMU/P/4/20230001

Job Title : Traffic Review for the Proposed Joint-User Complex at Shan Mei Street, Fo Tan — **Job No.** : P523543

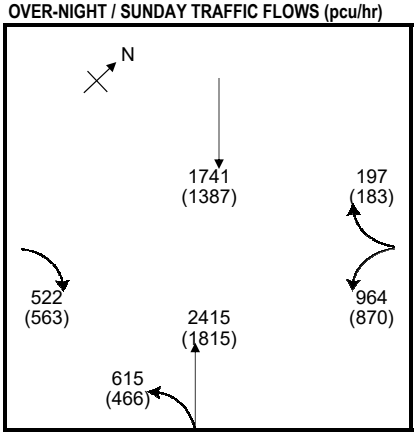
Junction : Fo Tan Road / Shan Mei Street — **Junction Index** : J3

Description : Design — **Design Year** : 2037

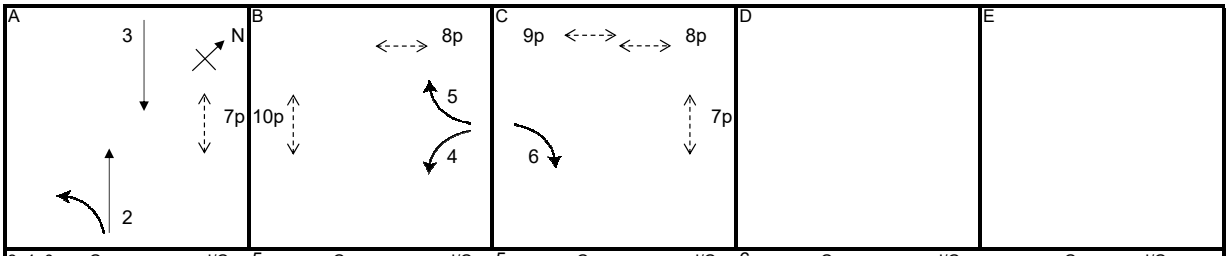
JUNCTION LAYOUT



OVER-NIGHT / SUNDAY TRAFFIC FLOWS (pcu/hr)



STAGE / PHASE DIAGRAM



2+4+6	G =	I/G = 5	G =	I/G = 5	G =	I/G = 6	G =	I/G =	G =	I/G =
2+4+6	G =	I/G = 5	G =	I/G = 5	G =	I/G = 6	G =	I/G =	G =	I/G =

CAPACITY CALCULATION

Phase	Stage	Lane Width *w* (m)	Nearside Lane? (Y/N)	Turning Radius *r* (m)	Opposed Turn? (Y/N)	Uphill Gradient *g* (%)	AM Peak Design Flow *q* (pcu/hr)	AM Peak Turning Proportion *f*	AM Peak Saturation Flow *S* (pcu/hr)	AM Peak Flow Factor *y*	PM Peak Design Flow *q* (pcu/hr)	PM Peak Turning Proportion *f*	PM Peak Saturation Flow *S* (pcu/hr)	PM Peak Flow Factor *y*
Fo Tan Road NB														
2(1)	A,C	3.60	Y	15			674	91%	1810	0.373	507	92%	1809	0.280
2(2)	A	3.50	N				786		2105	**0.373**	592		2105	**0.281**
2(3)	A	3.50	N				786		2105	0.373	592		2105	0.281
2(4)	A	3.50	N				786		2105	0.373	592		2105	0.281
		3.50												
Fo Tan Road SB														
3(1)	A	3.40	Y				415		1955	0.212	331		1955	0.169
3(2)	A	3.30	N				442		2085	0.212	352		2085	0.169
3(3)	A	3.30	N				442		2085	0.212	352		2085	0.169
3(4)	A	3.30	N				442		2085	0.212	352		2085	0.169
Min Fong Street WB														
4(1)	B	3.40	Y	18			302	100%	1805	**0.167**	272	100%	1805	**0.151**
4(2)	B	3.60	N	23			332	100%	1986	0.167	300	100%	1986	0.151
4(3)	B	3.40	N	25			330	100%	1976	0.167	298	100%	1976	0.151
5(1)	B	3.40	Y	20			197	100%	1819	0.109	183	100%	1819	0.101
Shan Mei Street EB														
6(1)	C	3.40	Y	23			283	100%	1835	**0.154**	305	100%	1835	**0.166**
*6(2)	C	3.30	N	20			239	100%	1552	0.154	258	100%	1552	0.166
* Site factor adopted														

Notes :

AM Peak		2+4+6	PM Peak		2+4+6
Sum of Critical *y* **Y**		0.695	Sum of Critical *y* **Y**		0.598
Lost Time ***L*** (sec)		13	Lost Time ***L*** (sec)		13
Cycle Time ***c*** (sec)		121	Cycle Time ***c*** (sec)		105
Practical *Y* ***Ypr***		0.803	Practical *Y* ***Ypr***		0.789
Reserve Capacity ***RC***		**16%**	Reserve Capacity ***RC***		**32%**

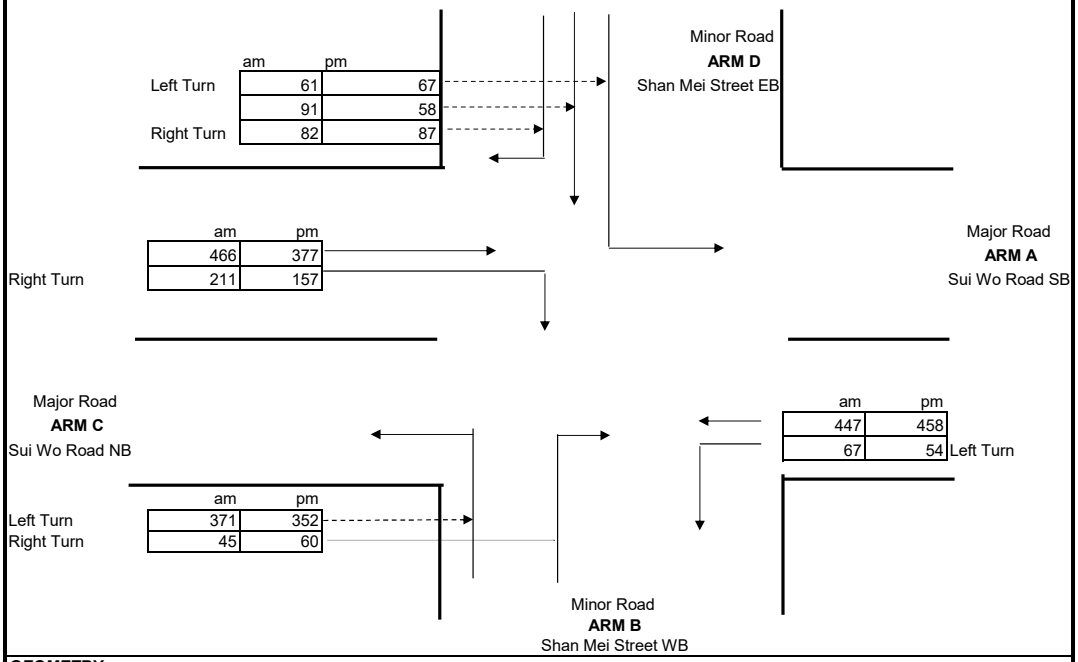
Designed by : Rico Wong — **Date** : _____ — **Junction Index** : J3

Checked by : _____ — **Date** : _____ — **Sheet No.** : _____

Simplified Priority Junction Capacity Calculation

aurecon

Job Title:	Quotation Ref.: PD/SSMU/P/4/20230001 Traffic Review for the Proposed Joint-User Complex at Shan Mei Street, Fo Tan				
Junction:	J4 Shan Mei Street / Sui Wo Road			Designed by:	Rico Wong
Scheme:				Checked by:	
Design Year:	2023	Job No.:	P523543	Date :	
ARM A:	Sui Wo Road SB	ARM C:	Sui Wo Road NB		
ARM B:	Shan Mei Street WB	ARM D:	Shan Mei Street EB		



GEOMETRY

Major road width		W	9.60				
Central Reserve width		Wcr	1.50				
Arm B				**Arm D**			
Lane widths		w(b-a)	2.00	Lane widths		w(d-c)	2.00
		w(b-c)	2.00			w(d-a)	2.00
		w(c-b)	2.20			w(a-d)	2.20
Visibilities	Vr(b-a)	34 D	0.73	Visibilities	Vr(d-c)	26 D	0.73
	Vl(b-a)	40 E	0.78		Vl(d-c)	51 E	0.77
	Vr(b-c)	34 F	0.80		Vr(d-a)	26 F	0.77
	Vr(c-b)	40 Y	0.67		Vr(a-d)	Y	0.67

ANALYSIS

Arm B				**Arm D**			
		AM PEAK	**PM PEAK**			**AM PEAK**	**PM PEAK**
TRAFFIC FLOWS	q(c-a)	466	377	TRAFFIC FLOWS	q(a-c)	447	458
	q(c-b)	211	157		q(a-d)	0	0
	q(a-b)	67	54		q(c-d)	0	0
	q(a-c)	447	458		q(c-a)	466	377
	q(b-a)	45	60		q(d-c)	82	87
	q(b-c)	371	352		q(d-a)	61	67
	q(b-d)	0	0		q(d-b)	91	58
	f	0.89	0.85		f	0.43	0.44
CAPACITIES	Q(b-a)	248	275	CAPACITIES	Q(d-c)	232	258
	Q(b-c)	491	490		Q(d-a)	488	505
	Q(c-b)	497	497		Q(a-d)	430	461
	Q(b-ac)	444	440		Q(d-ca)	299	328
	Q(b-d)	282	305		Q(d-b)	294	320
	Q(c-a)	1034	1232		Q(a-c)	1800	1800
DFC's	b-a	0.181	0.218	DFC's	d-c	0.354	0.337
	b-c	0.756	0.719		d-a	0.125	0.133
	c-b	0.426	0.315		d-b	0.309	0.181
	c-a	0.451	0.306		d-ac	0.478	0.470
	b-ac	0.937	0.937		d-abc	0.788	0.651
DFC		**0.94**	**0.94**	**DFC**		**0.79**	**0.65**

	AM PEAK	**PM PEAK**
Critical DFC	0.94	0.94

Where Vl and Vr are visibility distances to the left or right of the respective streams
D = (1+0.094(w(b-a)-3.65))(1+0.0009(Vr(b-a)-120))(1+0.0006(Vl(b-a)-150))
E = (1+0.094(w(b-c)-3.65))(1+0.0009(Vr(b-c)-120))
F = (1+0.094(w(c-b)-3.65))(1+0.0009(Vr(c-b)-120))
Y = 1-0.0345W
f = proportion of minor traffic turning left
Q (b-ac) = Q(b-c)*Q(b-a)/(1-f)*Q(b-c)+f*Q(b-a) Capacity of combined streams

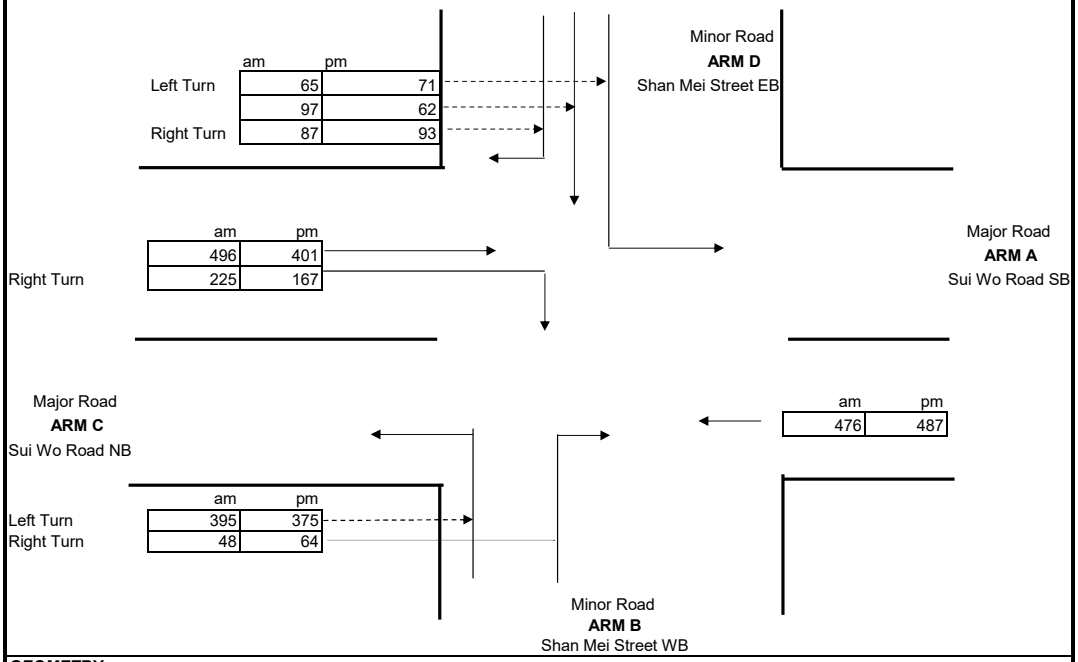
T.P.D.M.V.2.4
Appendix 1

- In accordance with TPDM V2.4

Simplified Priority Junction Capacity Calculation

aurecon

Job Title:	Quotation Ref.: PD/SSMU/P/4/20230001 Traffic Review for the Proposed Joint-User Complex at Shan Mei Street, Fo Tan				
Junction:	J4 Shan Mei Street / Sui Wo Road			Designed by:	Rico Wong
Scheme:				Checked by:	
Design Year:	2034 Reference	Job No.:	P523543	Date :	
ARM A:	Sui Wo Road SB	ARM C:	Sui Wo Road NB		
ARM B:	Shan Mei Street WB	ARM D:	Shan Mei Street EB		



GEOMETRY

Major road width		W	9.60				
Central Reserve width		Wcr	1.50				
Arm B				**Arm D**			
Lane widths		w(b-a)	2.00	Lane widths		w(d-c)	2.00
		w(b-c)	2.00			w(d-a)	2.00
		w(c-b)	2.20			w(a-d)	2.20
Visibilities	Vr(b-a)	34 D	0.73	Visibilities	Vr(d-c)	26 D	0.73
	Vl(b-a)	40 E	0.78		Vl(d-c)	51 E	0.77
	Vr(b-c)	34 F	0.80		Vr(d-a)	26 F	0.77
	Vr(c-b)	40 Y	0.67		Vr(a-d)	Y	0.67

ANALYSIS

Arm B				**Arm D**			
		AM PEAK	**PM PEAK**			**AM PEAK**	**PM PEAK**
TRAFFIC FLOWS	q(c-a)	496	401	TRAFFIC FLOWS	q(a-c)	476	487
	q(c-b)	225	167		q(a-d)	0	0
	q(a-b)	0	0		q(c-d)	0	0
	q(a-c)	476	487		q(c-a)	496	401
	q(b-a)	48	64		q(d-c)	87	93
	q(b-c)	395	375		q(d-a)	65	71
	q(b-d)	0	0		q(d-b)	97	62
	f	0.89	0.85		f	0.43	0.44
CAPACITIES	Q(b-a)	239	267	CAPACITIES	Q(d-c)	216	244
	Q(b-c)	490	488		Q(d-a)	483	501
	Q(c-b)	504	502		Q(a-d)	421	454
	Q(b-ac)	440	436		Q(d-ca)	283	314
	Q(b-d)	275	298		Q(d-b)	291	317
	Q(c-a)	997	1202		Q(a-c)	1800	1800
DFC's	b-a	0.201	0.240	DFC's	d-c	0.403	0.379
	b-c	0.805	0.768		d-a	0.135	0.142
	c-b	0.446	0.332		d-b	0.333	0.195
	c-a	0.498	0.334		d-ac	0.538	0.521
	b-ac	1.006	1.008		d-abc	0.871	0.716
DFC		**1.01**	**1.01**	**DFC**		**0.87**	**0.72**

	AM PEAK	**PM PEAK**
Critical DFC	1.01	1.01

Where Vl and Vr are visibility distances to the left or right of the respective streams
D = (1+0.094(w(b-a)-3.65))(1+0.0009(Vr(b-a)-120))(1+0.0006(Vl(b-a)-150))
E = (1+0.094(w(b-c)-3.65))(1+0.0009(Vr(b-c)-120))
F = (1+0.094(w(c-b)-3.65))(1+0.0009(Vr(c-b)-120))
Y = 1-0.0345W
f = proportion of minor traffic turning left
Q (b-ac) = Q(b-c)*Q(b-a)/(1-f)*Q(b-c)+f*Q(b-a) Capacity of combined streams

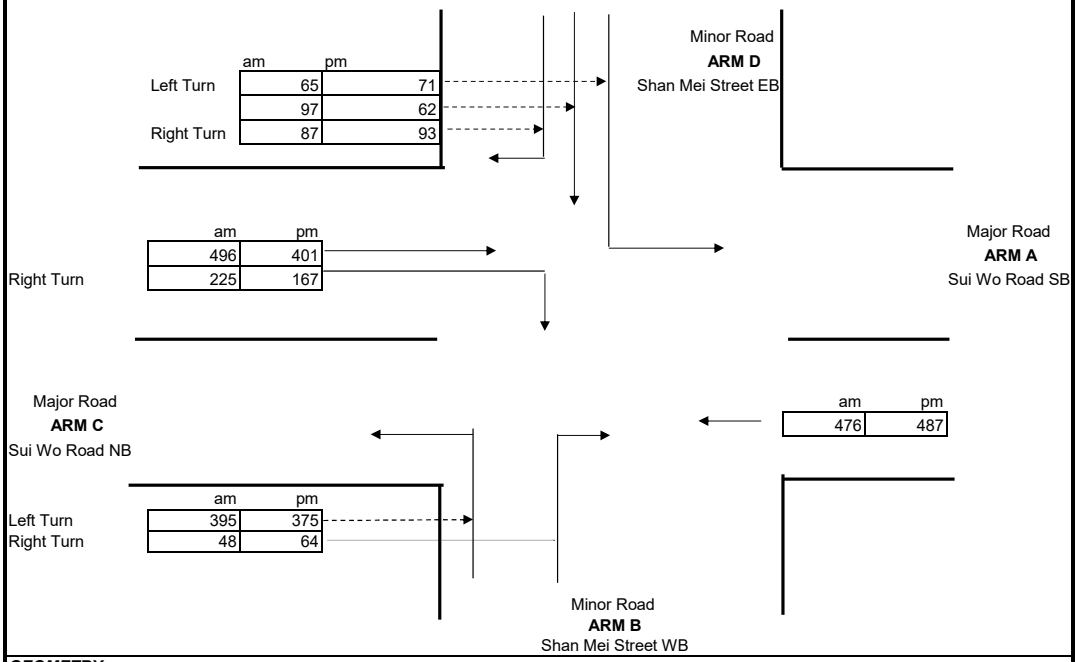
T.P.D.M.V.2.4
Appendix 1

- In accordance with TPDM V2.4

Simplified Priority Junction Capacity Calculation

aurecon

Job Title:	Quotation Ref.: PD/SSMU/P/4/20230001 Traffic Review for the Proposed Joint-User Complex at Shan Mei Street, Fo Tan				
Junction:	J4 Shan Mei Street / Sui Wo Road			Designed by:	Rico Wong
Scheme:				Checked by:	
Design Year:	2034 Design	Job No.:	P523543	Date :	
ARM A:	Sui Wo Road SB	ARM C:	Sui Wo Road NB		
ARM B:	Shan Mei Street WB	ARM D:	Shan Mei Street EB		



GEOMETRY

Major road width		W	9.60				
Central Reserve width		Wcr	1.50				
Arm B				**Arm D**			
Lane widths		w(b-a)	2.00	Lane widths		w(d-c)	2.00
		w(b-c)	2.00			w(d-a)	2.00
		w(c-b)	2.20			w(a-d)	2.20
Visibilities	Vr(b-a)	34 D	0.73	Visibilities	Vr(d-c)	26 D	0.73
	Vl(b-a)	40 E	0.78		Vl(d-c)	51 E	0.77
	Vr(b-c)	34 F	0.80		Vr(d-a)	26 F	0.77
	Vr(c-b)	40 Y	0.67		Vr(a-d)	Y	0.67

ANALYSIS

Arm B				**Arm D**			
		AM PEAK	**PM PEAK**			**AM PEAK**	**PM PEAK**
TRAFFIC FLOWS	q(c-a)	496	401	TRAFFIC FLOWS	q(a-c)	476	487
	q(c-b)	225	167		q(a-d)	0	0
	q(a-b)	0	0		q(c-d)	0	0
	q(a-c)	476	487		q(c-a)	496	401
	q(b-a)	48	64		q(d-c)	87	93
	q(b-c)	395	375		q(d-a)	65	71
	q(b-d)	0	0		q(d-b)	97	62
	f	0.89	0.85		f	0.43	0.44
CAPACITIES	Q(b-a)	239	267	CAPACITIES	Q(d-c)	216	244
	Q(b-c)	490	488		Q(d-a)	483	501
	Q(c-b)	504	502		Q(a-d)	421	454
	Q(b-ac)	440	436		Q(d-ca)	283	314
	Q(b-d)	275	298		Q(d-b)	291	317
	Q(c-a)	997	1202		Q(a-c)	1800	1800
DFC's	b-a	0.201	0.240	DFC's	d-c	0.403	0.379
	b-c	0.805	0.768		d-a	0.135	0.142
	c-b	0.446	0.332		d-b	0.333	0.195
	c-a	0.498	0.334		d-ac	0.538	0.521
	b-ac	1.006	1.008		d-abc	0.871	0.716
DFC		**1.01**	**1.01**	**DFC**		**0.87**	**0.72**

	AM PEAK	**PM PEAK**
Critical DFC	1.01	1.01

Where Vl and Vr are visibility distances to the left or right of the respective streams
D = (1+0.094(w(b-a)-3.65))(1+0.0009(Vr(b-a)-120))(1+0.0006(Vl(b-a)-150))
E = (1+0.094(w(b-c)-3.65))(1+0.0009(Vr(b-c)-120))
F = (1+0.094(w(c-b)-3.65))(1+0.0009(Vr(c-b)-120))
Y = 1-0.0345W
f = proportion of minor traffic turning left
Q (b-ac) = Q(b-c)*Q(b-a)/(1-f)*Q(b-c)+f*Q(b-a) Capacity of combined streams

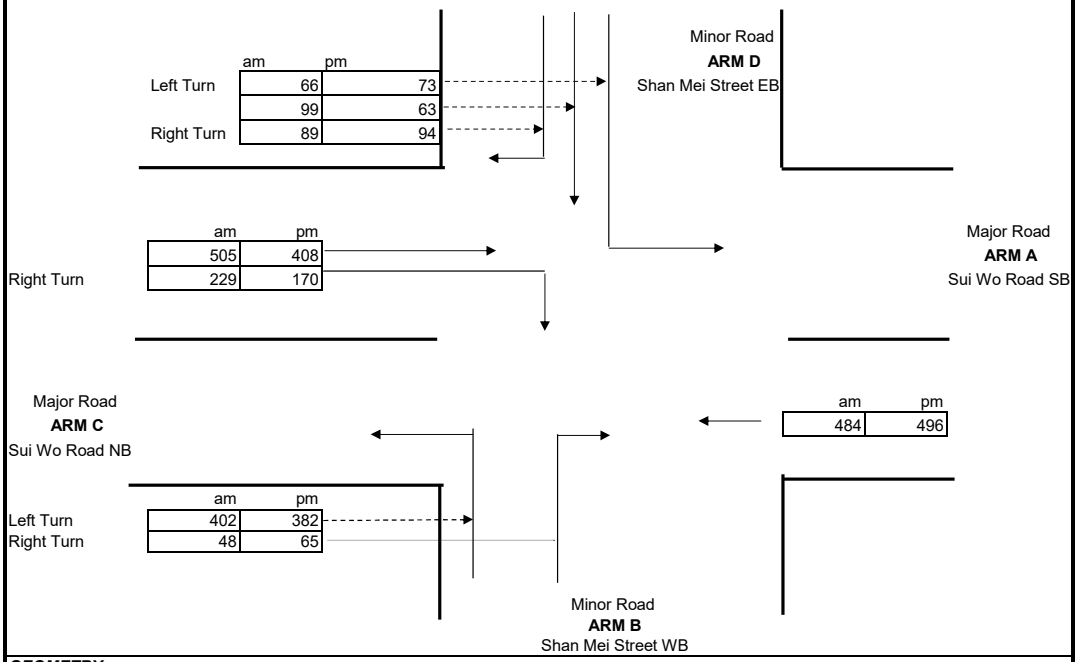
T.P.D.M.V.2.4
Appendix 1

- In accordance with TPDM V2.4

Simplified Priority Junction Capacity Calculation

aurecon

Job Title:	Quotation Ref.: PD/SSMU/P/4/20230001 Traffic Review for the Proposed Joint-User Complex at Shan Mei Street, Fo Tan				
Junction:	J4 Shan Mei Street / Sui Wo Road			Designed by:	Rico Wong
Scheme:				Checked by:	
Design Year:	2037 Reference	Job No.:	P523543	Date :	
ARM A:	Sui Wo Road SB	ARM C:	Sui Wo Road NB		
ARM B:	Shan Mei Street WB	ARM D:	Shan Mei Street EB		



GEOMETRY

Major road width		W	9.60				
Central Reserve width		Wcr	1.50				
Arm B				**Arm D**			
Lane widths		w(b-a)	2.00	Lane widths		w(d-c)	2.00
		w(b-c)	2.00			w(d-a)	2.00
		w(c-b)	2.20			w(a-d)	2.20
Visibilities	Vr(b-a)	34 D	0.73	Visibilities	Vr(d-c)	26 D	0.73
	Vl(b-a)	40 E	0.78		Vl(d-c)	51 E	0.77
	Vr(b-c)	34 F	0.80		Vr(d-a)	26 F	0.77
	Vr(c-b)	40 Y	0.67		Vr(a-d)	Y	0.67

ANALYSIS

Arm B				**Arm D**			
		AM PEAK	**PM PEAK**			**AM PEAK**	**PM PEAK**
TRAFFIC FLOWS	q(c-a)	505	408	TRAFFIC FLOWS	q(a-c)	484	496
	q(c-b)	229	170		q(a-d)	0	0
	q(a-b)	0	0		q(c-d)	0	0
	q(a-c)	484	496		q(c-a)	505	408
	q(b-a)	48	65		q(d-c)	89	94
	q(b-c)	402	382		q(d-a)	66	73
	q(b-d)	0	0		q(d-b)	99	63
	f	0.89	0.85		f	0.43	0.44
CAPACITIES	Q(b-a)	235	263	CAPACITIES	Q(d-c)	212	241
	Q(b-c)	489	487		Q(d-a)	481	499
	Q(c-b)	503	500		Q(a-d)	418	452
	Q(b-ac)	438	433		Q(d-ca)	279	311
	Q(b-d)	272	295		Q(d-b)	288	314
	Q(c-a)	980	1189		Q(a-c)	1800	1800
DFC's	b-a	0.203	0.247	DFC's	d-c	0.418	0.392
	b-c	0.821	0.784		d-a	0.137	0.145
	c-b	0.455	0.339		d-b	0.343	0.200
	c-a	0.515	0.343		d-ac	0.556	0.537
	b-ac	1.025	1.031		d-abc	0.898	0.737
DFC		**1.02**	**1.03**	**DFC**		**0.90**	**0.74**

	AM PEAK	**PM PEAK**
Critical DFC	1.02	1.03

Where Vl and Vr are visibility distances to the left or right of the respective streams
D = (1+0.094(w(b-a)-3.65))(1+0.0009(Vr(b-a)-120))(1+0.0006(Vl(b-a)-150))
E = (1+0.094(w(b-c)-3.65))(1+0.0009(Vr(b-c)-120))
F = (1+0.094(w(c-b)-3.65))(1+0.0009(Vr(c-b)-120))
Y = 1-0.0345W
f = proportion of minor traffic turning left
Q (b-ac) = Q(b-c)*Q(b-a)/(1-f)*Q(b-c)+f*Q(b-a) Capacity of combined streams

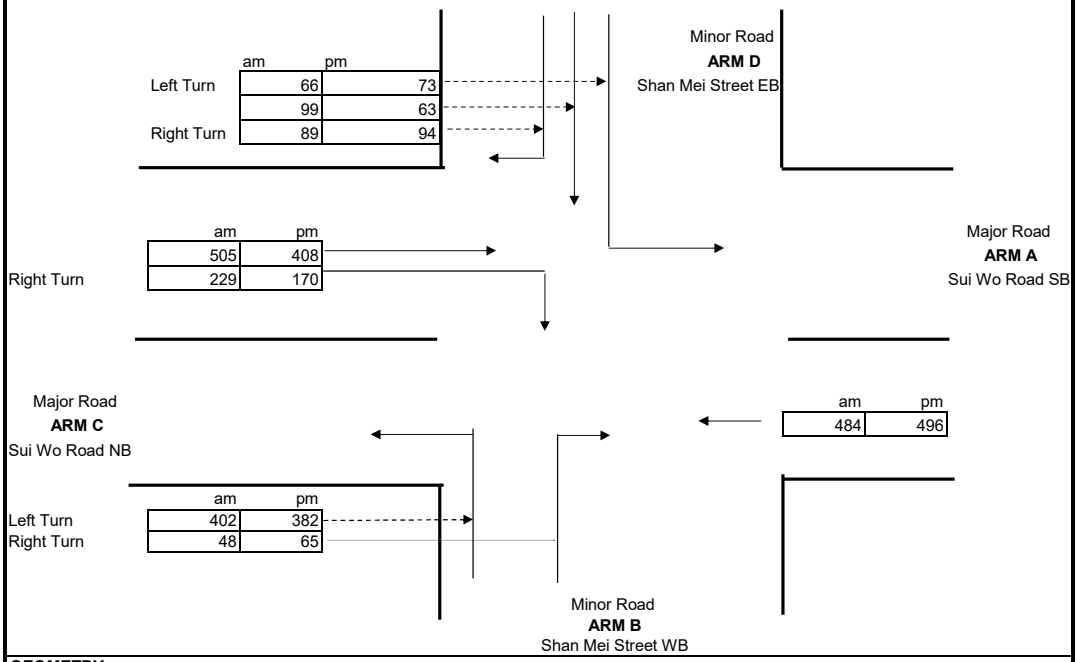
T.P.D.M.V.2.4
Appendix 1

- In accordance with TPDM V2.4

Simplified Priority Junction Capacity Calculation

aurecon

Job Title:	Quotation Ref.: PD/SSMU/P/4/20230001 Traffic Review for the Proposed Joint-User Complex at Shan Mei Street, Fo Tan		
Junction:	J4 Shan Mei Street / Sui Wo Road	Designed by:	Rico Wong
Scheme:		Checked by:	
Design Year:	2037 Design	Job No.: P523543	Date :
ARM A:	Sui Wo Road SB	ARM C:	Sui Wo Road NB
ARM B:	Shan Mei Street WB	ARM D:	Shan Mei Street EB



GEOMETRY

Major road width		W	9.60				
Central Reserve width		Wcr	1.50				
Arm B				**Arm D**			
Lane widths		w(b-a)	2.00	Lane widths		w(d-c)	2.00
		w(b-c)	2.00			w(d-a)	2.00
		w(c-b)	2.20			w(a-d)	2.20
Visibilities	Vr(b-a)	34 D	0.73	Visibilities	Vr(d-c)	26 D	0.73
	Vl(b-a)	40 E	0.78		Vl(d-c)	51 E	0.77
	Vr(b-c)	34 F	0.80		Vr(d-a)	26 F	0.77
	Vr(c-b)	40 Y	0.67		Vr(a-d)	Y	0.67

ANALYSIS

Arm B				**Arm D**			
		AM PEAK	**PM PEAK**			**AM PEAK**	**PM PEAK**
TRAFFIC FLOWS	q(c-a)	505	408	TRAFFIC FLOWS	q(a-c)	484	496
	q(c-b)	229	170		q(a-d)	0	0
	q(a-b)	0	0		q(c-d)	0	0
	q(a-c)	484	496		q(c-a)	505	408
	q(b-a)	48	65		q(d-c)	89	94
	q(b-c)	402	382		q(d-a)	66	73
	q(b-d)	0	0		q(d-b)	99	63
	f	0.89	0.85		f	0.43	0.44
CAPACITIES	Q(b-a)	235	263	CAPACITIES	Q(d-c)	212	241
	Q(b-c)	489	487		Q(d-a)	481	499
	Q(c-b)	503	500		Q(a-d)	418	452
	Q(b-ac)	438	433		Q(d-ca)	279	311
	Q(b-d)	272	295		Q(d-b)	288	314
	Q(c-a)	980	1189		Q(a-c)	1800	1800
DFC's	b-a	0.203	0.247	DFC's	d-c	0.418	0.392
	b-c	0.821	0.784		d-a	0.137	0.145
	c-b	0.455	0.339		d-b	0.343	0.200
	c-a	0.515	0.343		d-ac	0.556	0.537
	b-ac	1.025	1.031		d-abc	0.898	0.737
DFC		**1.02**	**1.03**	**DFC**		**0.90**	**0.74**

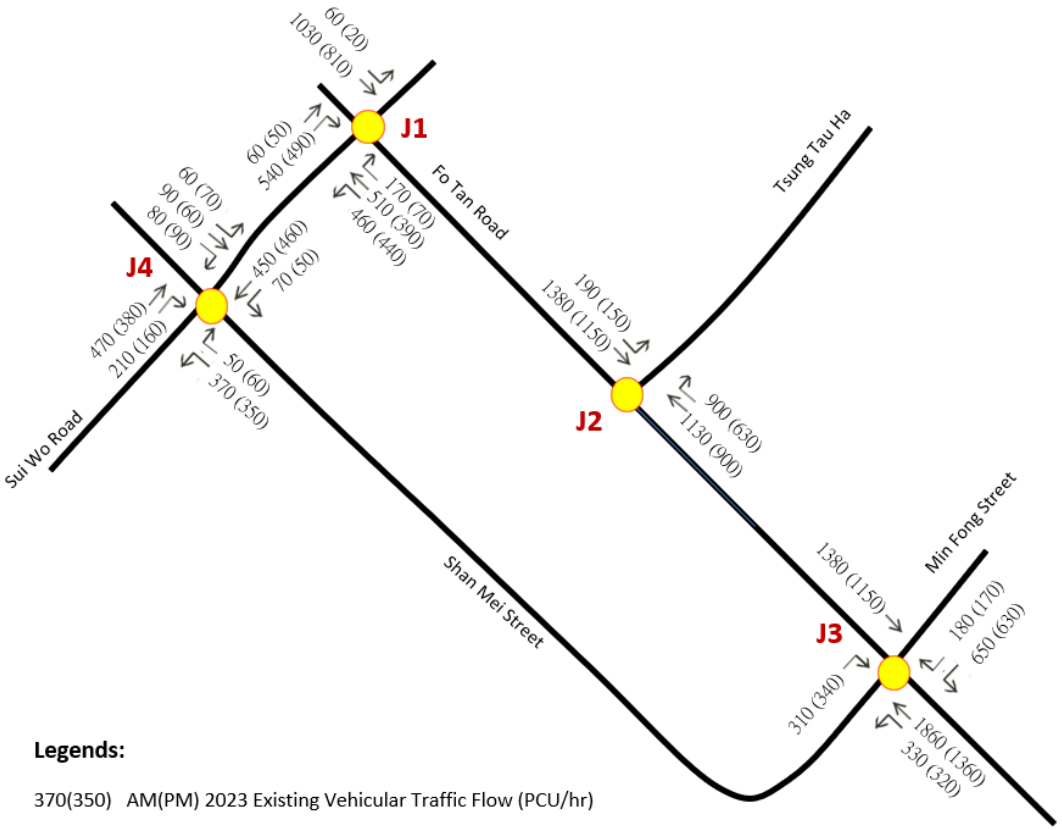
	AM PEAK	**PM PEAK**
Critical DFC	1.02	1.03

Where Vl and Vr are visibility distances to the left or right of the respective streams
D = (1+0.094(w(b-a)-3.65))(1+0.0009(Vr(b-a)-120))(1+0.0006(Vl(b-a)-150))
E = (1+0.094(w(b-c)-3.65))(1+0.0009(Vr(b-c)-120))
F = (1+0.094(w(c-b)-3.65))(1+0.0009(Vr(c-b)-120))
Y = 1-0.0345W
f = proportion of minor traffic turning left
Q (b-ac) = Q(b-c)*Q(b-a)/(1-f)*Q(b-c)+f*Q(b-a) Capacity of combined streams

T.P.D.M.V.2.4
Appendix 1

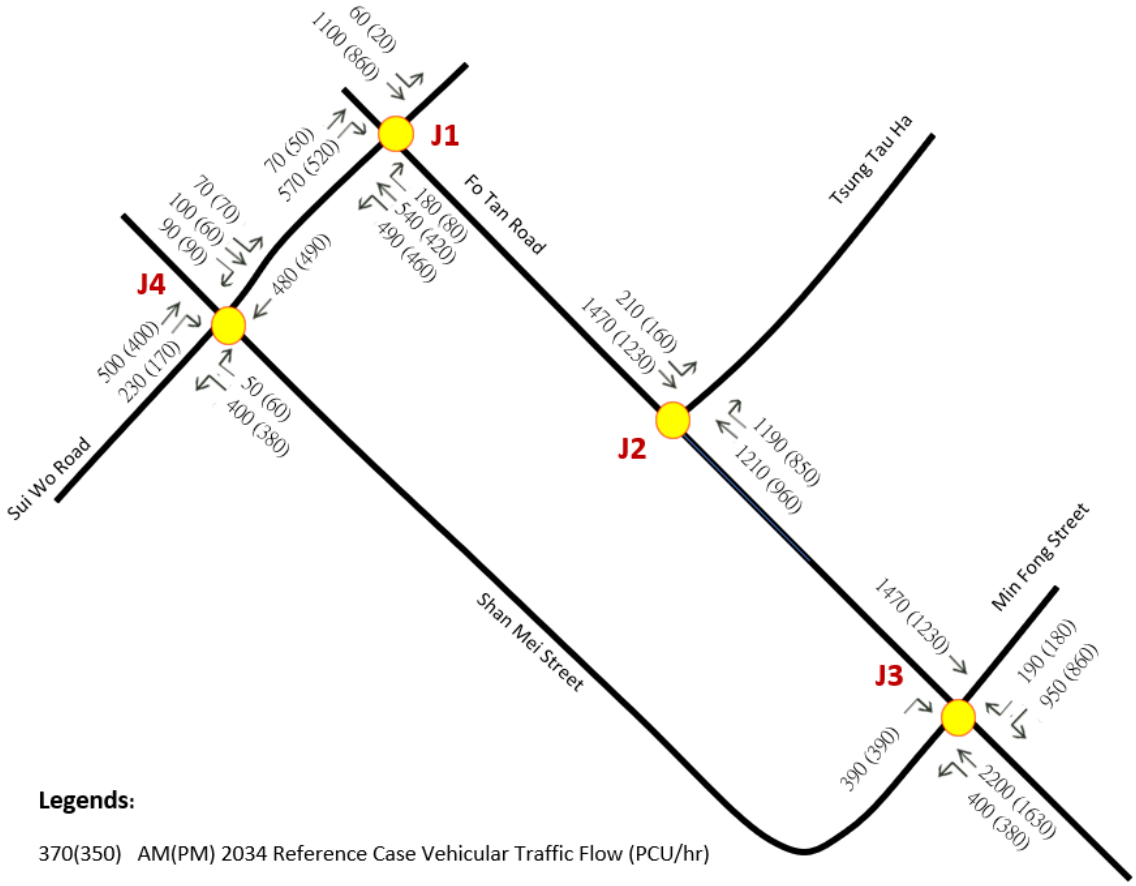
- In accordance with TPDM V2.4

Appendix D Flow Diagram



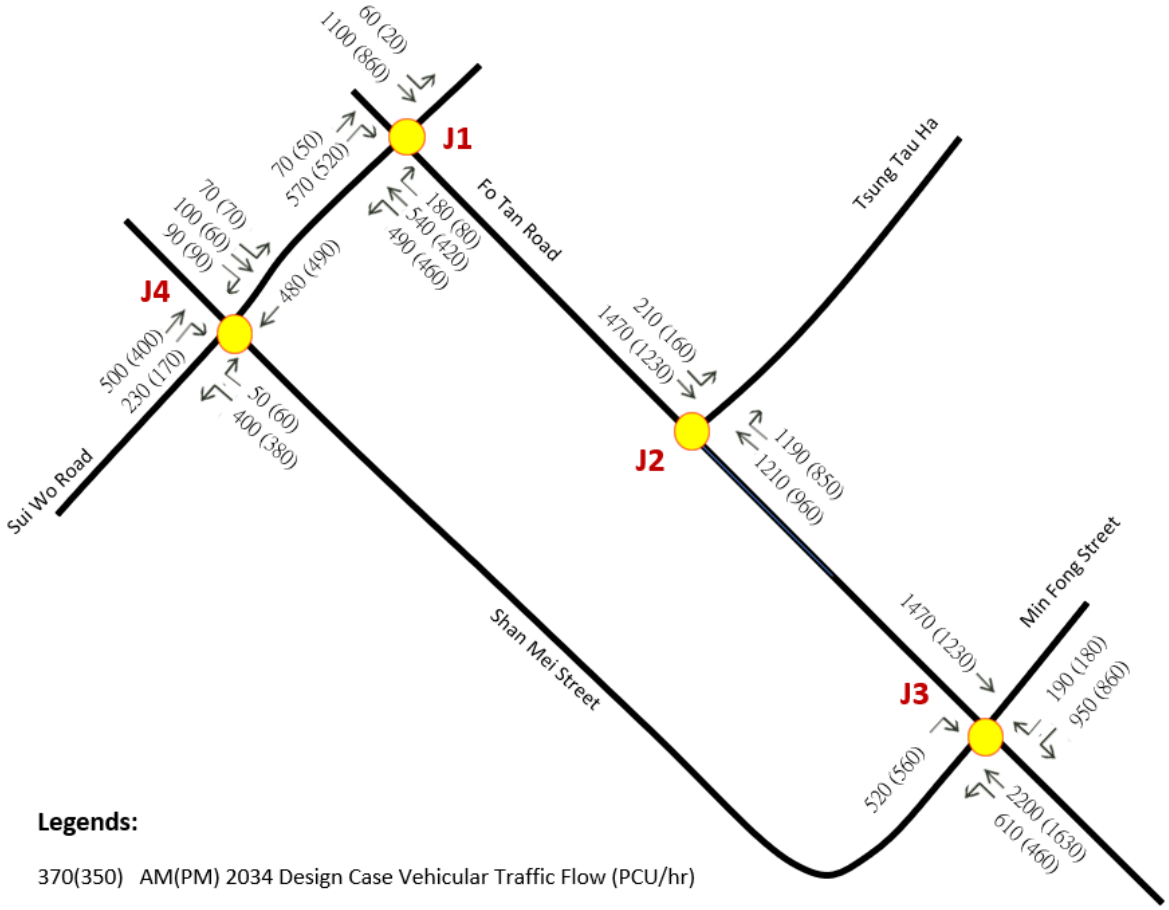
Legends:

370(350) AM(PM) 2023 Existing Vehicular Traffic Flow (PCU/hr)



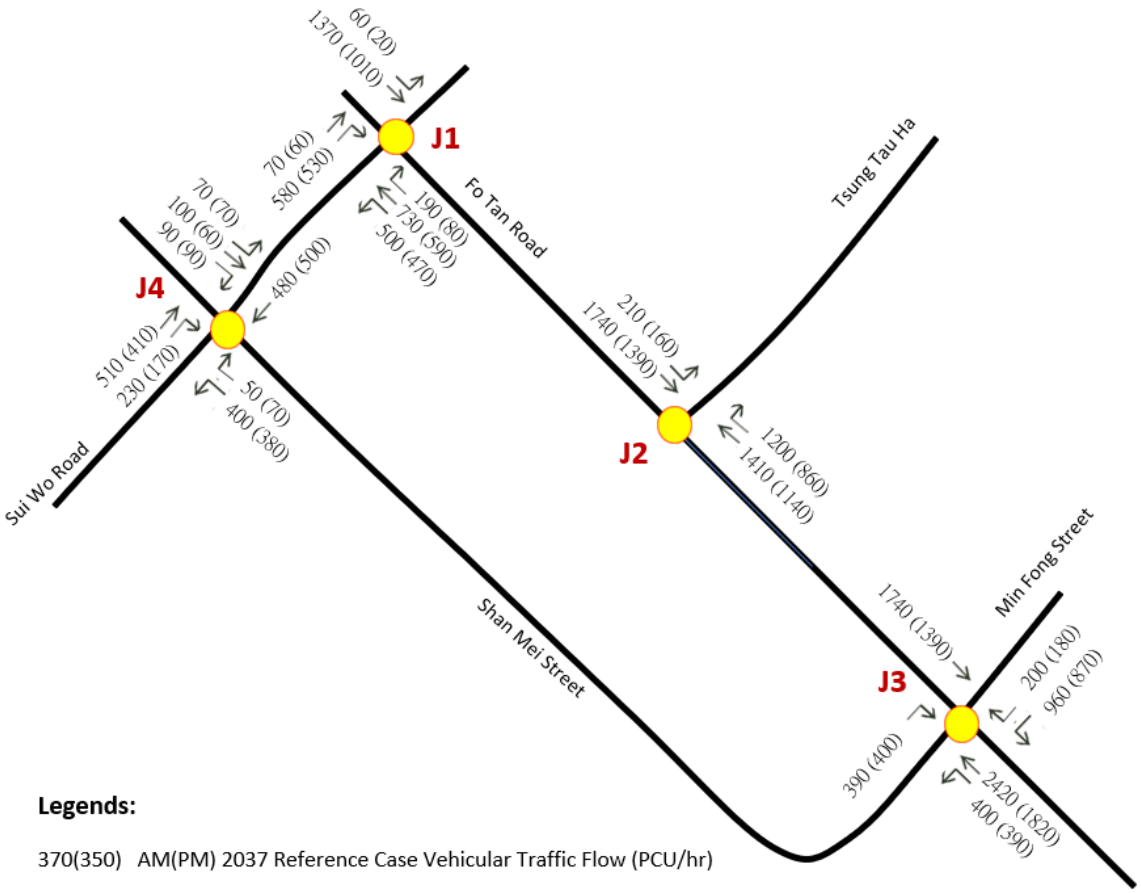
Legends:

370(350) AM(PM) 2034 Reference Case Vehicular Traffic Flow (PCU/hr)



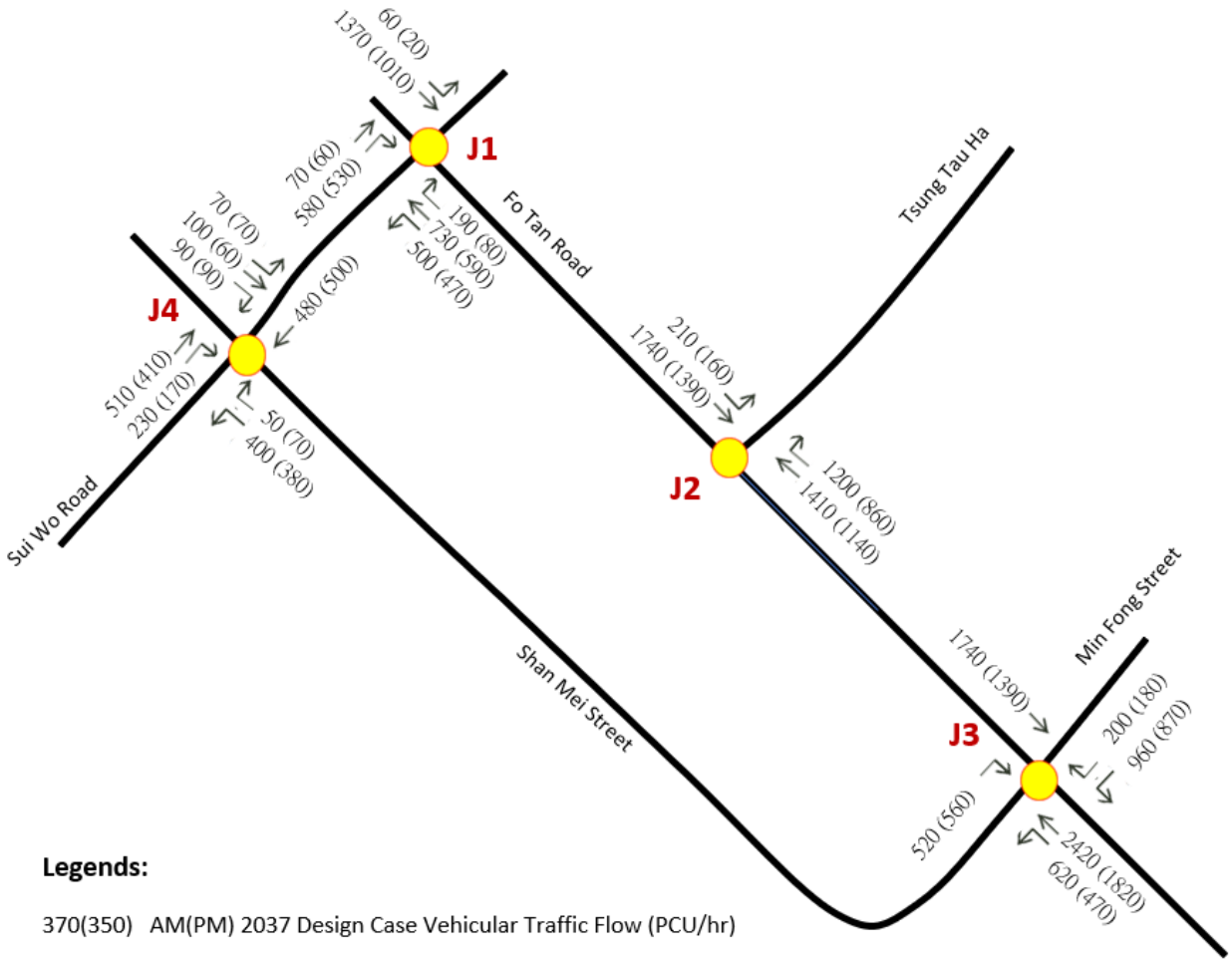
Legends:

370(350) AM(PM) 2034 Design Case Vehicular Traffic Flow (PCU/hr)



Legends:

370(350) AM(PM) 2037 Reference Case Vehicular Traffic Flow (PCU/hr)


J1
J2
J3
J4
Fo Tan Road
Tsung Tau Ha
Sui Wo Road
Shan Mei Street
Min Fong Street
60 (20)
1370 (1010)
70 (60)
580 (530)
190 (80)
730 (590)
500 (470)
70 (70)
100 (60)
90 (90)
480 (500)
510 (410)
230 (170)
50 (70)
400 (380)
210 (160)
1740 (1390)
1200 (860)
1410 (1140)
1740 (1390)
200 (180)
960 (870)
520 (560)
2420 (1820)
620 (470)
Legends:
370(350) AM(PM) 2037 Design Case Vehicular Traffic Flow (PCU/hr)

Appendix E Responses to Comments

Responses to Comments on Final Report of Traffic Review (Revision 0) dated 27June 2023

Item	Comments	Responses
	Traffic Engineering (NTE) Division of Transport Department, by email dated 13 July 2023	
1.	Our previous comment item 15 via memo ref. (NMZFP) in TD NR157/161/STDD-176 dated 18 May 2023 remain valid. Figure 5.1 refers. Please advise the entrance of the JUC at Shan Mei Street and review the pedestrian routing accordingly. Table 5.4 and 5.5 refers. Please provide detail calculation and methodology of the pedestrian flow. Please be reminded that the pedestrian flow should not only take into account the pedestrian flow towards downhill but also uphill to and from various destinations should also be taken into account in the assessment;	The main pedestrian entry/exit point of the JUC development is expected to be via the footpath on Shan Me Street at the eastern side of the building as shown in Figure 5.1, subject to detailed design. The pedestrian demand was predicted based on the observed pedestrian flow from traffic survey, applying growth factor of +0.57% projected to Design Year 2037, with reference to TPEDM growth derived in Section 4.1. The JUC development pedestrian flows, both generation and attraction (two-way flows), were estimated based on transport model split with reference to 2021 Population Census, and assigned onto the footpaths along the desire paths to/from the public transport facilities in the vicinity.
2.	Our previous comment item 16 via memo ref. (NMZFP) in TD NR157/161/STDD-176 dated 18 May 2023 remain valid. Table 4.8 refers. As the number of PVP is reduced based on the car park with 2-level basement, the assumption of PVP should be reviewed accordingly. Furthermore, the trip generation/attraction in Table 4.8 should be consistent with Appendix D. For instance, the trip generation in Appendix D (i.e. 160 pcu in afternoon peak hour) is less than the estimation in Table 4.8 (i.e. 167 pcu in afternoon peak hour). Please review;	For assessment purpose, the assumptions of traffic generation / attraction of the PVP is on high side from a conservative approach. The traffic flows shown on the flows diagrams in Appendix D have been rounded up to the nearest 10 for easy presentation. Nevertheless junction calculations were carried put based on the exact traffic forecast flows.
3.	Our previous comment item 21 via memo ref. (NMZFP) in TD NR157/161/STDD-176 dated 18 May 2023 remain valid. Please advise the status to develop the government land near Cheung Lek Mei Street Public Toilet as STT public car park. Meanwhile, please also explore if the government land next to temporary PTI would be feasible to develop STT public car park; and	Identification of potential STT public car park sites is beyond the scope of this study, and subject to land status under LandsD's jurisdiction.

Item	Comments	Responses
4.	Our previous comment item 22 via memo ref. (NMZFP) in TD NR157/161/STDD-176 dated 18 May 2023 remain valid. Please be clarified that our main concern is about the queuing length for the vehicle waiting to enter the PVP instead of entering the lay-by. Please reassess if the queuing area is sufficient to cope with vehicles waiting to enter the PVP.	In normal practice, the control point of vehicular access to car park, both user car park and PVP, shall be set back inwards such that the vehicle, including a typical goods vehicle or coach, detecting the smart card at drop bar would not block the drop-off driveway as well as the public carriageway, subject to detailed design.
	Transport Operation (TOTE) Transport Department, by email dated 13 July 2023	
1.	Table 2.1 • Please replace "Bus Terminal [TD]" under the column "Proposed Facilities" with "Public Transport Interchange [TD]". • The Consultant should fill in the column-free floor area of the PTI on the ground level of the JUC upon confirmation of the final layout of the permanent PTI among all relevant government departments.	• Noted. The description of "Public Transport Interchange [TD]" has been updated in Table 2.1 accordingly. • Referring to GPA's email to TD dated 13 July 2023 in response to this comment, GPA's advised that, there was no particular Net Operational Floor Area (NOFA) requirement for the PTI. For reference purpose, the "column-free floor area of the PTI" on the ground level of the JUC at 1980 m2 has been stated with remarks in Table 2.1.
2.	Section 7.1.1 • The TD will be the user department and take up the day-to-day management of the permanent PTI on the ground level of the JUC upon its completion and commissioning provided that the PTI is licensed to Financial Secretary Incorporated via GPA. Please seek GPA's confirmation of the above arrangement.	• Referring to GPA's email to TD dated 13 July 2023 in response to this comment, GPA's advised that, for PTI with private development on top (i.e. on private lot), the undivided shares of the lot belong to the PTI will normally be assigned to the Government (in the name of Financial Secretary Incorporated) via GPA, and the subject JUC will be held under government land allocation instead of private lot. Under such circumstance, such arrangement is not applicable to the subject JUC. As advised by GPA, there is no need to mention the land status/ land holding arrangement in the Traffic Review Report.
	Planning Department, by email dated 13 July 2023	
	<u>General Comments</u>	
1.	The report is to assess the traffic and transport implications of the proposed Joint-user Complex on the adjacent road and pedestrian network, and the public transport facilities, and to identify potential mitigation measures.	The Traffic Review has been conducted accordingly.

Item	Comments	Responses
2.	Please include a paragraph between Para. 2.1.2 and 2.1.3 to highlight the facilities to be affected by the temporary PTI, and the corresponding arrangements for these facilities.	A paragraph has been supplemented between Para. 2.1.2 and 2.1.3 to address the facilities to be affected by the temporary PTI.
	Specific Comments	
3.	Re: Para. 1.1.1 - Please revise as "...Shan Mei Street to the southeast and southwest, ..."	The text has been amended accordingly.
4.	Re: Para. 8.2.1 - It should read "... considered acceptable from traffic engineering and transport operation viewpoints".	The text has been amended accordingly.
	Architectural Services Department, by email dated 13 July 2023	
1.	The comments of Architectural Services Department were marked up on the Final Report of Traffic Review (Revision 0)	The mark-up comments of Architectural Services Department have been incorporated into the Final Report of Traffic Review (Revision 1) accordingly.
	Government Property Agency, by email dated 13 July 2023	
1.	Section 1.1.3 • Please add "the" in front of "Government Property Agency (GPA)…"	The text has been amended accordingly.
2.	Section 1.4.1 • Please delete the full stop "." between "in the vicinity area" and "and seek for.." in line 2.	The text has been amended accordingly.
3.	Table 2.1 • Please delete the full note behind "4 –team size kitchen-based" of row 5 in table of page. 6. • Please delete the full note behind "DH" of row 12 in table of page 6.	The text has been amended accordingly.
4.	Section 2.2.2 • Please delete "within the site" in line 3.	The text has been amended accordingly.
5.	Table 6.1 • Please replace "3"with "1" in the Note of the table.	The text has been amended accordingly.
6.	Section 7.1.2 • Please replace the first sentence in line 1 and 2 with "The Government Property Agency is responsible for taking forward the implementation of the proposed JUC together with both the permanent and temporary PTI."	The text has been amended accordingly.

Responses to Comments on Draft Report of Traffic Review (Revision 0) dated 04 May 2023

Item	Comments	Responses
	Traffic Engineering (NTE) Division of Transport Department, by fax dated 18 May 2023	
	Layout Plan for Temporary and Permanent Public Transport Interchange (PTI):	
7.	Appendix E refers. Please provide clear drawings including but not limited to the following: a) Columns, walls and lane line should be shown; b) Pedestrian crossing facilities should be proposed to connect the bus bay; c) Size of footpath, waiting area and vehicular run-in/out should be indicated; d) Irrelevant based map should be removed for clarity; e) Swept path analysis should be provided in separate drawing;	As agreed in the meeting among GPA/ArchSD/TD on 8 June 2023, the Perm/Temp PTI layout has been provided in the "Technical Note on PTI and PVP" submitted in tandem.
2.	Appendix E refers. Please advise if the layout plan of the permanent PTI has been agreed by Architectural Services Department. Please also demonstrate the layout plan complies with the Guidelines on Designating Column-Free Area in New Covered Public Transport Interchanges.	Ditto.
3.	Appendix E refers. Please indicate all the existing/proposed traffic aids (i.e. traffic signs, road marking and etc.) and street furniture (i.e. railings, lamp pole and etc.) on plan. Please also indicate the status of existing traffic aids and street furniture (i.e. to be removed, retained or modified) in drawing;	Ditto.
4.	Appendix E refers. Please provide sufficient swept path analysis for both 12.8m buses and GMB to demonstrate the adequacy of circulation within the PTI;	Ditto.
5.	Appendix E refers. The staff toilets, bus and GMB operator's office in permanent PTI and the existing cooked food market in temporary PTI completely occupy the footpath which is unacceptable. The width of the footpath next to the GMB layby is insufficient in permanent PTI. Please review;	Ditto.
	Layout Plan for Car Park:	

Item	Comments	Responses
6.	Appendix F refers. Please demarcate the extent of public vehicle park and ancillary parking in drawing. The number of LGV, MGV and HGV parking spaces is found to be insufficient in the car park. Furthermore, the number of ancillary parking in the report is found to be inconsistent with the brief. Please confirm the exact number of ancillary parking with relevant user departments.	As agreed in the meeting among GPA/ArchSD/TD on 8 June 2023, the car park layout has been discussed in the "Technical Note on PTI and PVP" submitted in tandem.
7.	Appendix E and F refer. Please demonstrate sufficient visibility area at the vehicular run-in/out;	Ditto.
8.	Appendix F refers. Please advise whether barrier would be erected across the vehicular run-in/out. If affirmative, please indicate the location of barrier on plan;	Ditto.
9.	Appendix F refers. Please provide sufficient swept path analysis to demonstrate the adequacy of circulation, entering/leaving the parking spaces and entering/leaving the vehicular run-in/out;	Ditto.
10.	Appendix F refers. Please indicate the clear width of the car park aisle/driveway concerned on the attached plan;	Ditto.
11.	Appendix F refers. Please demonstrate sufficient headroom is provided for different type of vehicles in drawing;	Ditto.
12.	Appendix F refers. Accessible parking spaces should be located in proximity and with an accessible route to the lobby with an accessible lift or entrance in accordance with Design Manual Barrier Free Access;	Ditto.
13.	Appendix F refers. The numbering for private car parking space is found to be duplicated at B2/F and B3/F. Please adopt unique numbering system for car parking spaces;	Ditto.
	<u>Traffic Impact Assessment (TIA) Report:</u>	
14.	Table 3.3 refers. The existing road junction performance at Fo Tan Road/Sui Wo Road (i.e. J1) and Fo Tan Road/Shan Mei Street (i.e. J3) in Year 2023 at morning peak hour should be much poor based on our record and observation. Please explain for such difference;	Noted. The cycle time of junction Fo Tan Road/Sui Wo Road (J1) and Fo Tan Road/Shan Mei Street (J3) have increased from 110 sec to 121 sec recently according to our record, causing the improvement of the junction performance.
15.	Table 3.4 refers. Please assess the pedestrian flow in current year, completion year and design year in terms of level of service so as to demonstrate the sufficient capacity of the footpath;	Noted. Pedestrian assessment has been included in Section 5.

Item	Comments	Responses
16.	Table 4.8 and Appendix D refer. The trip generation/attraction in Table 4.8 is not the same in Appendix D by comparing the reference and design case of road junction at Fo Tan Road/Shan Mei Street (i.e. J3). For instance, the trip generation in Appendix D (i.e. 160 pcu in afternoon peak hour) is less than the estimation in Table 4.8 (i.e. 167 pcu in afternoon peak hour). Please review.	Noted. The values of the flow diagrams in Appendix D are rounded to the nearest 10 for clear presentation. Slight discrepancy between the values in the diagrams and Table 4.8 may exist due to this reason.
17.	Section 7 refers. In view of road safety concern, it is not desirable that the vehicular run-in/out for the JUC located in close proximity to the vehicular run-in/out for Sui Fai Factory Estate. As such, please liaise with the project office for Redevelopment of Sui Fai Factory Estate under Housing Department to determine the location vehicular run-in/out;	The G/F layout with PTI has been provided in the "Technical Note on PTI and PVP" submitted in tandem, and the vehicular run-in/out has been discussed.
18.	Section 7.1 refers. For the design of temporary PTI, please liaise with Civil Engineering and Development Department to formulate the revised design in particular the footpath and carriageway adjacent to the temporary PTI;	The Temp PTI layout has been provided in the "Technical Note on PTI and PVP" submitted in tandem, and the associated modification to footpath and carriageway have been indicated.
19.	Section 7.1 refers. Please state the responsible party to construct the temporary and permanent PTI in the report;	Noted. Section 7.1.2 has been revised.
20.	Section 7.2.2 refers. Please carry out sensitivity analysis to review the number and type of the parking provision for car park with 2-level basement only;	As agreed, the layout of car park will be discussed separately.
21.	Section 7.2.4 refers. Please provide the layout plan of car park and liaise with relevant government department if the government land near Cheung Lek Mei Street Public Toilet is available for short term tenancy public car park;	Noted. Section 7.2.4 has been revised accordingly.
22.	Please provide queuing assessment for the vehicular run-in/out and demonstrate the queuing area sufficient to cope with the traffic flow.	Noted. It has been included in Section 6.
	TONT of Transport Department, by email dated 23 May 2023	
1.	The bus regulators' offices should comply with the latest requirements in TPDM;	As agreed, the Perm/Temp PTI layout has been provided in the "Technical Note on PTI and PVP" submitted in tandem, and the bus regulators' offices have been incorporated.
2.	The new PTIs should be able to cater all the existing functions in the current PTI (e.g., enough space to meet all the pick-up/set-down activities for all routes, enough space for stacking idle buses and PLBs);	Ditto.
3.	For the new permanent PTI, the consultant may need to liaise with EPD on the requirement of providing charger facilities for electric franchised buses, public light buses and taxis.	Ditto.

Item	Comments	Responses
	Architectural Services Department, by email dated 18 May 2023	
1.	The scenario of omitting B3/F which would reduce 128 nos. carpark spaces is subject to GPA/TD/users' comment/acceptance. Meanwhile, the feasibility of APS adoption is suggested to be explored to minimise the provision of basement floors/depth of basement as far as possible.	Noted. As advised by GPA in the meeting on 8 June 2023. The adoption of APS will be further explored in later stage and not covered in this study.
2.	The following critical/major concerns on PTI layout are noted: - It is considered the Main Lobby and drop off area for the building should be located on G/F as shown in ArchSD's layout, which is now omitted; - If the E&M provisions have to be relocated to upper floor(s), the building may exceed the 140mPD B.H. limit as proposed in the rezoning exercise; - The area of the Public Toilet appears to be less than that as shown ArchSD's layout and should be clarified/indicated in the proposed layout; - 232sq.m. greenery still could not fulfill min. at-grade greenery (602 sq.m., 10% of site area) under Devb TC(W) no. 3/2012.	As agreed, the Perm/Temp PTI layout has been provided and discussed in the "Technical Note on PTI and PVP" submitted in tandem.

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Philippines, Qatar, Singapore, South Africa,
Swaziland, Tanzania, Thailand, Uganda,
United Arab Emirates, Vietnam.

Visual Appraisal for the Proposed Joint User Complex at Shan Mei Street, Fo Tan

1. Introduction

1.1. This Visual Appraisal (VA) is prepared for proposed amendment to the approved Sha Tin Outline Zoning Plan (OZP) No. S/ST/36 in support of the proposed development of a Joint User Complex (JUC).

1.2. The objective of this appraisal is to evaluate the visual impact of the proposed development of a JUC, under Government, Institution or Community (G/IC) use, with about 18-storey (excluding basement floor(s)) development with building height of not more than +140mPD.

Methodology

1.3. This VA evaluates the visual acceptability of the proposed development. The methodology adopted is summarised as follows.

- To identify the existing and future visual context and visual elements of the Site and its surrounding taking into account the relevant planning and development framework for the area;
- To identify the potential key public viewpoints (VPs);
- To evaluate the potential visual impacts when viewing from the selected key public VPs; and
- To recommend mitigation measures where appropriate.

2. Visual Context and Visual Elements

2.1. Key visual elements surrounding the Site is summarised as below:

- To the immediate northwest of the Site is Shatin Galleria with building height (BH) of 82.7mPD.
- To the immediate northeast of the Site is Fo Tan Nullah and Fo Tan Road.

.

- To the southeast across Shan Mei Street is Fo Tan Village, characterised by low-rise village houses.
- To the southwest across Shan Mei Street is Supreme Industrial Building (BH 57mPD) and Sui Fai Factory Estate (SFFE) (to be redeveloped as two public housing blocks with building height of 140mPD).

3. The Development Proposal

3.1. It is proposed to develop the site into a JUC of about 18 storeys (excluding basement floor(s)). A plot ratio of 9.5 has been adopted as a working target in formulation of the development proposal.

3.2. The key development parameters of the proposed development are summarised in **Table 1** below. The layout and section plans are shown in **Drawings 1** and **2**.

Net Site Area	About 6,000 m^2
Plot Ratio	9.5
Building Height	Not more than 140 mPD
Site Coverage	About 80% (Below 15m) Not more than 62.5% (Above 15m)

Table 1 – Key development parameters

3.3. The key design elements of the proposed development are summarised below:

- The design of the proposed development shall strictly comply with the Sustainable Building Design Guidelines under Practice Note for Authorized Persons, Registered Structural Engineers and Registered Geotechnical Engineers (PNAP) No. APP-152 issued by Buildings Department to ensure the environmental quality in the vicinity of the Site could be maintained by provision of adequate building separation / setback and air ventilation. For example:

  - around 5m building setback from Shan Mei Street facing Sui Fai Factory Estate;

  - around 20m building setback above the 15m ground level from the southeastern boundary; and

  - around 10m building separation between Shatin Galleria and the proposed development.

- The facade of the proposed development shall be carefully designed with appropriate colour scheme, texture and articulation in order to maintain the visual harmony to the surrounding environment.

- In connection to compliance with PNAP No. APP-152, adequate green coverage shall be attained through providing landscape elements at various levels. Vertical greening shall be introduced to enhance the aesthetic value of the proposed development.

- Measures to reduce the building bulk shall further be explored as far as practicable at the detailed design stage.

4. Assessment Area

4.1. An Assessment Area (i.e. Visual Envelope (VE)) is delineated for the VA to cover the area of visual influence within which the proposed development is visible from the identified key public VPs. The assessment boundary is set out with regard to the size of the development, site context and the distance and location of the visual sensitive receivers (VSRs).

4.2. With reference to the Town Planning Board Guidelines on 'Submission of Visual Impact Assessment for Planning Applications to the Town Planning Board' (TPB PG-No. 41), the VE should be determined having regard to the size of the proposed development, its potential visibility from the selected key public VPs and the actual site and surrounding topographical conditions by ground inspection. When the viewer is at a distance equal to three times of the height of a building, the viewer will tend to see the building as part of a group rather than as a single building. Since the proposed BH of the proposed development is about 140mPD with mean street level at about 9mPD (i.e. the absolute height of 122.35m), a radius of about 367.05m (i.e. 122.35m x 3) from the closest point of the proposed development has been set as a starting point in defining the boundary of the VE.

5. Identification and Visual Sensitivity of Viewpoints

5.1. As per Para. 4.5 of the TPB PG – No. 41, key kinetic and static VPs that are popular and easily accessible by the public will be selected. In this regard, a total of five viewpoints (VPs) in different directions are selected which represent the view of pedestrian nodes and from key public spaces as shown in **Figure 1**:

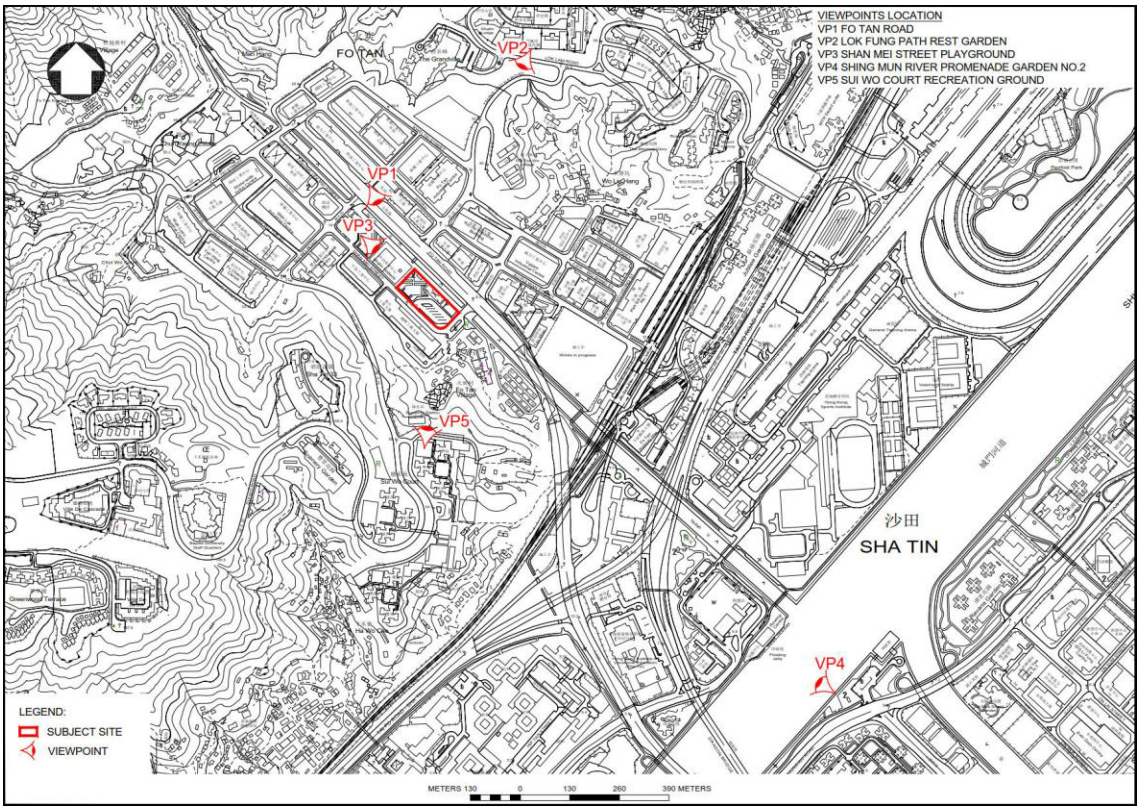


Figure 1 – Location of VPs

- VP1: View from Fo Tan Road
- VP2: View from Lok Fung Path Rest Garden
- VP3: View from Shan Mei Street Playground
- VP4: View from Shing Mun River Promenade Garden No. 2
- VP5: View from Sui Wo Court Recreation Ground

VP1: View from Fo Tan Road

5.2. This VP is located at about 74m to the north of the proposed development the junction of Fo Tan Road and Tsung Tau Ha Road. The existing view is dominated by high rise commercial and industrial buildings with Fo Tan Road and street plantings in the foreground and mountain backdrop and open sky view in the background. This VP mainly presents pedestrians crossing Fo Tan Road to other destinations, which is transient in nature. The sensitivity of this VP is considered low.

VP2: View from Lok Fung Path Rest Garden

5.3. This VP is located at about 510m to the northeast of the proposed development at Lok Fung Path Rest Garden. The existing view from this VP is dominated by high rise residential and industrial buildings, with trees of the garden in the foreground, open sky view and broken ridge line in the background. This VP mainly represents users of Lok Fung Path Rest Garden, who engage in passive recreational and social activities. The sensitivity of this VP is considered medium.

VP3: View from Shan Mei Street Playground

5.4. This VP is located at about 190m to the northwest of the proposed development at Shan Mei Street Playground. The existing view from this VP is dominated by high rise commercial and industrial buildings with a football field in the foreground. This VP mainly represents users of Shan Mei Street Playground, who engage in both active and passive recreational and social activities. The sensitivity of this VP is considered high.

VP4: View from Shing Mun River Promenade Garden No. 2

5.5. The VP is located at about 1070m to the southeast of the proposed development at Shing Mun River Promenade Garden No. 2 across the Shing Mun River. The existing view consists of industrial and residential buildings in Fo Tan with the river channel and riverside plantings in the foreground, and mountain backdrop and open sky view in the background. This VP mainly represents recreational users at the open space along Shing Mun River Channel. The sensitivity of this VP is considered high.

VP5: View from Sui Wo Court Recreation Ground

5.6. This VP is located at about 250m to the south of the proposed development at Shui wo Court. The existing view from this VP are dominated by the recreational ground and trees in the foreground, with industrial buildings in Fo Tan in the background which are partly covered by the foliage of the said trees. This VP mainly represents users at the open space in Shui Wo Court, who engage in passive recreational and social activities. The sensitivity of this VP is considered high.

6. Visual Appraisal

6.1. This Section evaluates the visual impact of the proposed development by comparing it with the existing condition with reference to TPB PG-No. 41. Five photomontages in **Appendix I** are prepared to illustrate the visual changes between the proposed scheme and the existing condition at the proposed viewpoints.

VP1: View from Fo Tan Road

6.2. The visual composition comprises high rise commercial and industrial buildings with BH of about 82mPD. As shown in the photomontage, the proposed development will be partly screened off by Shatin Galleria and will be perceived as a part of the building cluster.

6.3. The articulation of the proposed development will block a portion of the open sky and a small section of ridgeline in the background which slightly reduces the visual openness.

6.4. The proposed development will be visually perceived to be part of the urban built environment. As such, the development will constitute a moderate magnitude of change on public viewers. With the low sensitivity of the public viewer, the visual impact would be considered as slightly adverse with the implementation of visual mitigation measures.

VP2: View from Lok Fung Path Rest Garden

6.5. The visual composition comprises high rise residential and industrial buildings with BH ranging from 140mPD to 163.5mPD. As shown in the photomontage, the proposed JUC will be mostly screened off by existing industrial buildings and the housing blocks of the planned redevelopment of SFFE.

6.6. The existing ridgeline in the background as seen from the VP is fragmented; the proposed JUC does not protrude into the open sky and the ridgeline, causing little obstruction.

6.7. The proposed JUC will be largely screened off the existing industrial and residential cluster, blending in well with the surroundings with similar building height levels. The visual impact from this VP is considered slightly adverse.

VP3: View from Shan Mei Street Playground

6.8. The visual composition comprises high rise commercial and industrial buildings with BH ranging from 69 to 82 mPD. As shown in the photomontage, the proposed JUC will be completely screened off by Shatin Galleria.

6.9. The development will not cause blockage of the open sky view which will not reduce the visual openness from this VP.

6.10. The public perception towards the view as an urban built environment would remain unchanged as the proposed development is completely screened off by existing

buildings. It is considered that there would be no visual impact arising from the proposed development.

VP4: View from Shing Mun River Promenade Garden No. 2

6.11. The visual composition comprises industrial and residential buildings in Fo Tan with BH ranging from 67 to 165 mPD as well as Shing Mun River Channel and riverside plantings in the foreground. The proposed JUC will be of similar height level with the SFFE Redevelopment (140mPD) and be seen as a part of the taller building cluster.

6.12. The visual resource at the VP includes river view in the foreground, mountain backdrop and open sky view in the background. The view towards the mountain backdrop will be obstructed by the planned SFFE Redevelopment and the proposed JUC.

6.13. Despite the obstruction of green mountain backdrop, the public perception of the view towards Fo Tan from the VP at Shing Mun River Promenade as an urban built environment would remain unchanged. The open sky view will not be blocked by the proposed development. The building mass is considered not incompatible with the neighbouring industrial buildings, SFFE redevelopment to its west and the Arles to its east. In light of the high visual sensitivity of the viewers at VP4, the visual impact would be considered as moderately adverse with the implementation of visual mitigation measures.

VP5: View from Sui Wo Court Recreation Ground

6.14. The visual composition comprises a playground in the foreground, followed by industrial buildings and the SFFE Redevelopment with BH ranging from 69 to 140mPD that are partially blocked by trees. The proposed JUC will be mostly screened off by the planned SFFE Redevelopment and the dense foliage from the peripheral planting in Shui Wo Court.

6.15. The impact on the open sky view at the VP will be negligible as most of the proposed JUC would be screened off by SFFE Redevelopment.

6.16. As the proposed JUC would mostly be screened off by SFFE Redevelopment as well as vegetation, the public perception of the view as an open space in the urban built environment would remain. The visual impact from this VP is considered negligible.

7. Conclusion

7.1. The VA is prepared in support of the proposed amendment to Sha Tin OZP No. S/ST/36 for the proposed Fo Tan Joint-user Complex with a proposed BH of 140mPD. Five VPs, representing the easily accessible pedestrian nodes and recreational spaces in different directions, were chosen to demonstrate the visual impact of the proposed development. Comparing with the baseline condition, the visual impacts on most of the VPs would range from "negligible" to "slightly adverse", with "moderately adverse" on one VP. The high-rise JUC blends in with the surrounding building environment which is predominantly occupied with high-rise developments, and is considered as a continuation with the surroundings forming part of the high-density urban built

environment. The overall visual impact is considered not incompatible with the surrounding environment with the implementation of the proposed mitigation measures and good-design features.

LEGEND

SITE BOUNDARY

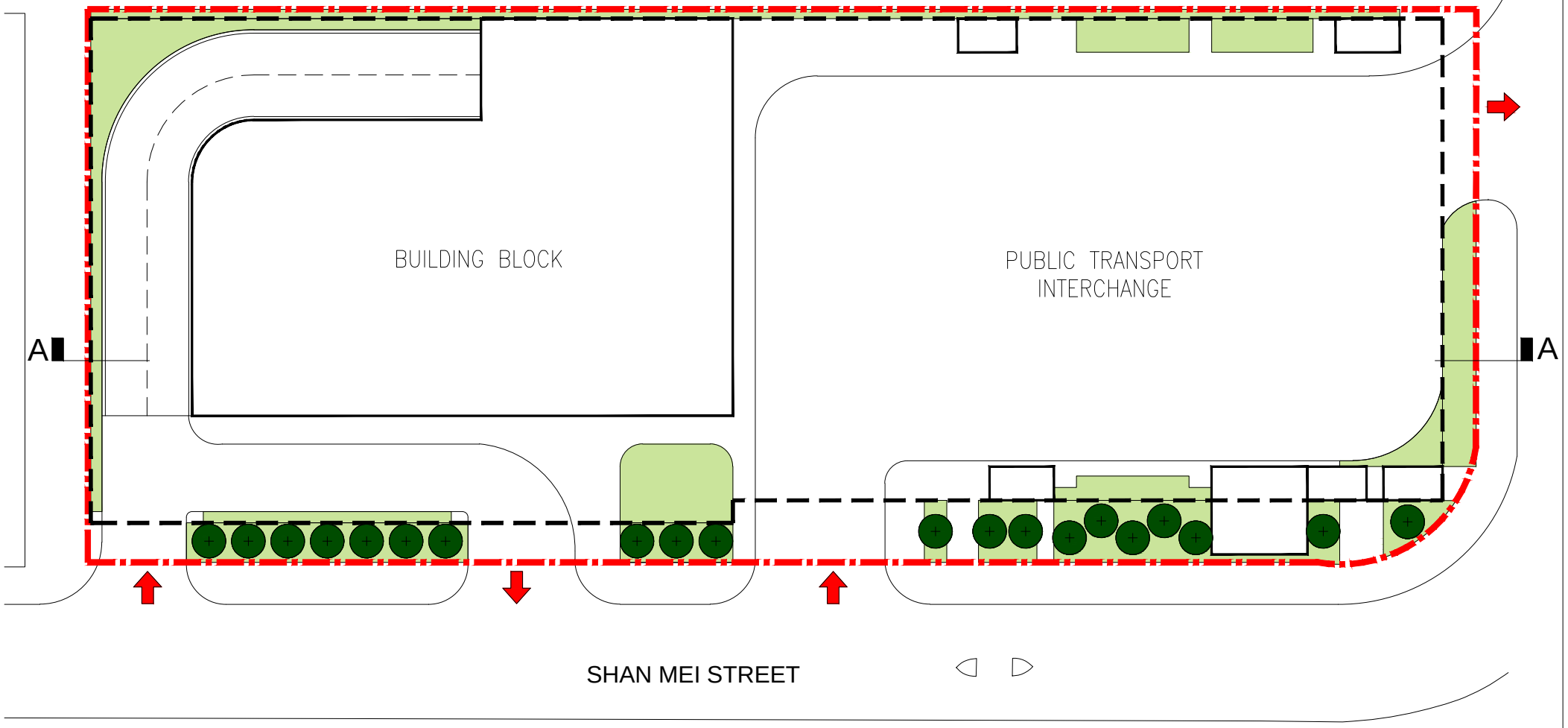
BUILDING LINE ABOVE

VEHICULAR INGRESS / EGRESS

COMPENSATORY TREE

LANDSCAPED AREA

NOTE :
This indicative layout is for diagrammatic purpose only and is subject to design development.



PROPOSED JOINT-USER COMPLEX AT SHAN MEI STREET, FO TAN

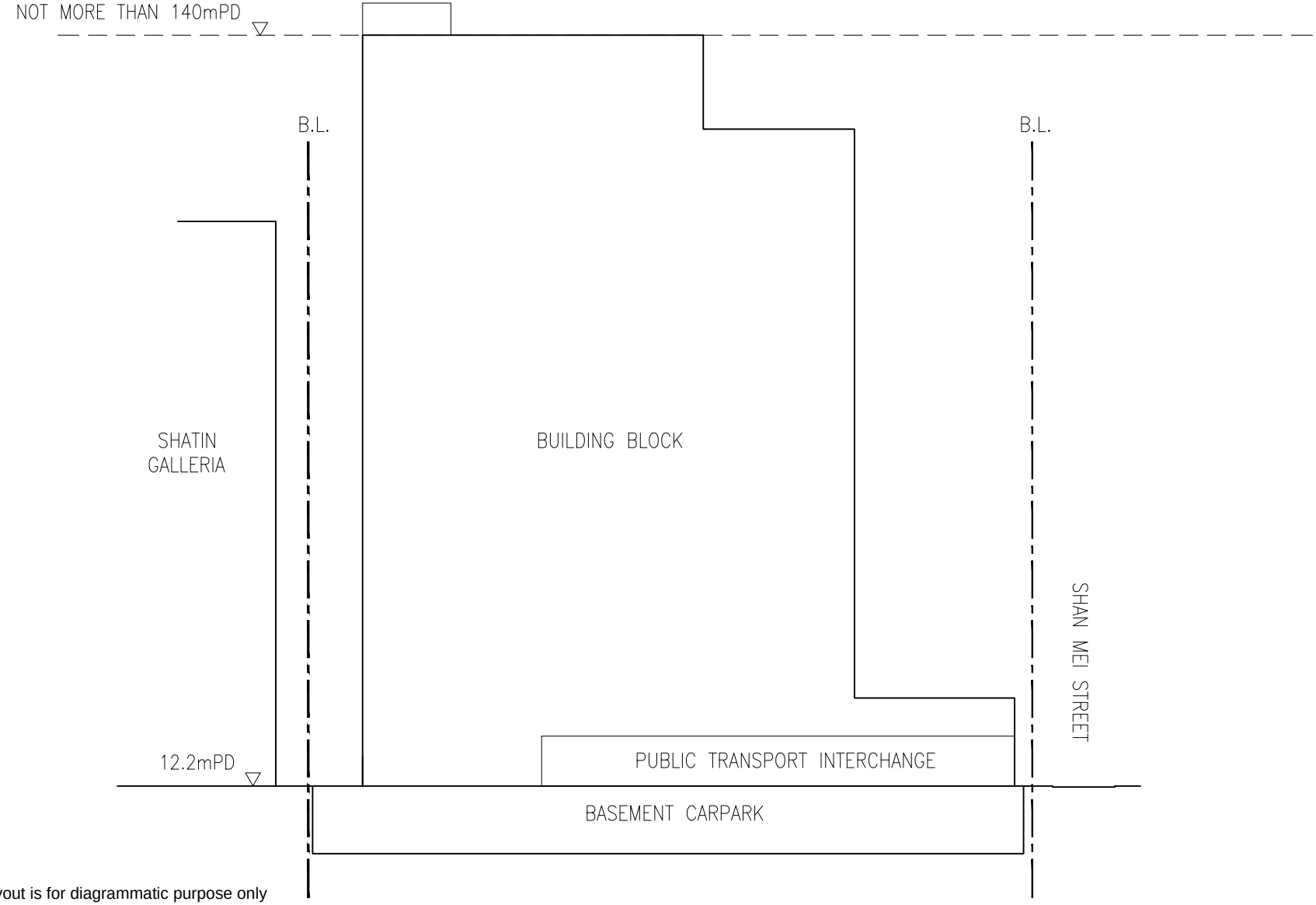
drawing title

MASTER LAYOUT PLAN – G/F

scale 1:500

Drawing 1

0m 5m 10m 20m



NOTE :
This indicative layout is for diagrammatic purpose only and is subject to design development.

PROPOSED JOINT-USER COMPLEX AT SHAN MEI STREET, FO TAN

drawing title

SECTIONAL DIAGRAM A-A

scale 1:1000

Drawing 2

0m 10m 20m 40m

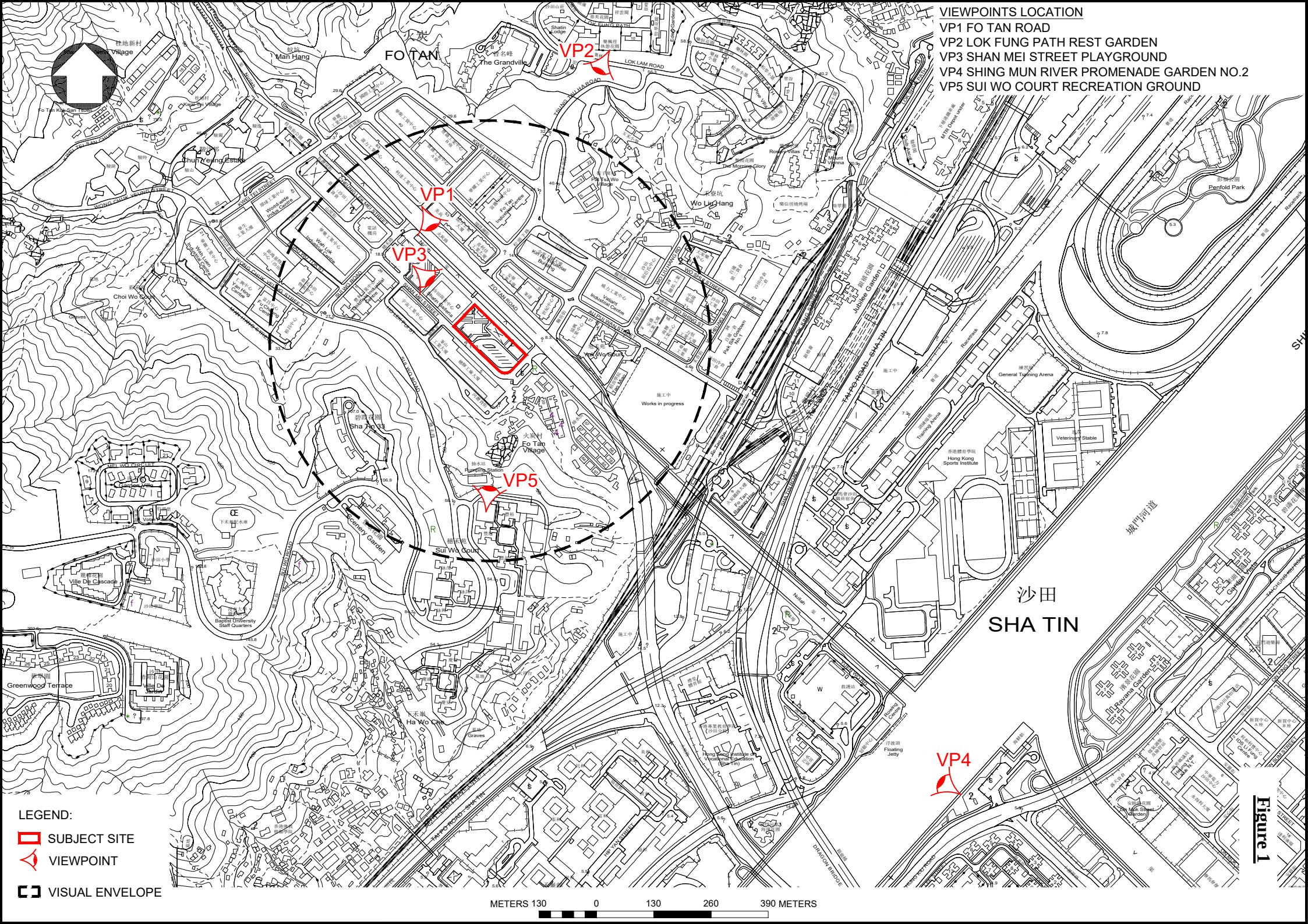
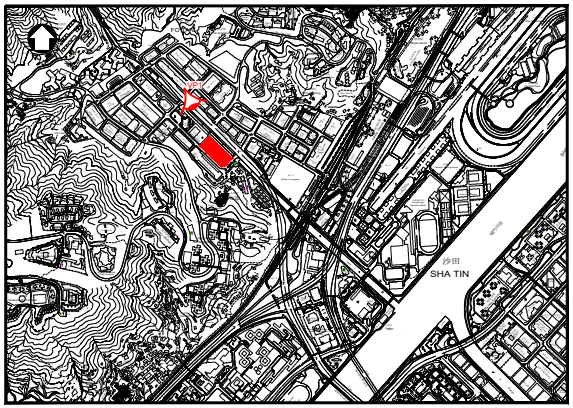

VIEWPOINTS LOCATION
VP1 FO TAN ROAD
VP2 LOK FUNG PATH REST GARDEN
VP3 SHAN MEI STREET PLAYGROUND
VP4 SHING MUN RIVER PROMENADE GARDEN NO.2
VP5 SUI WO COURT RECREATION GROUND
FO TAN
SHA TIN
沙田
VP1
VP2
VP3
VP4
VP5
LEGEND:
SUBJECT SITE
VIEWPOINT
VISUAL ENVELOPE
METERS 130 0 130 260 390 METERS

Figure 1

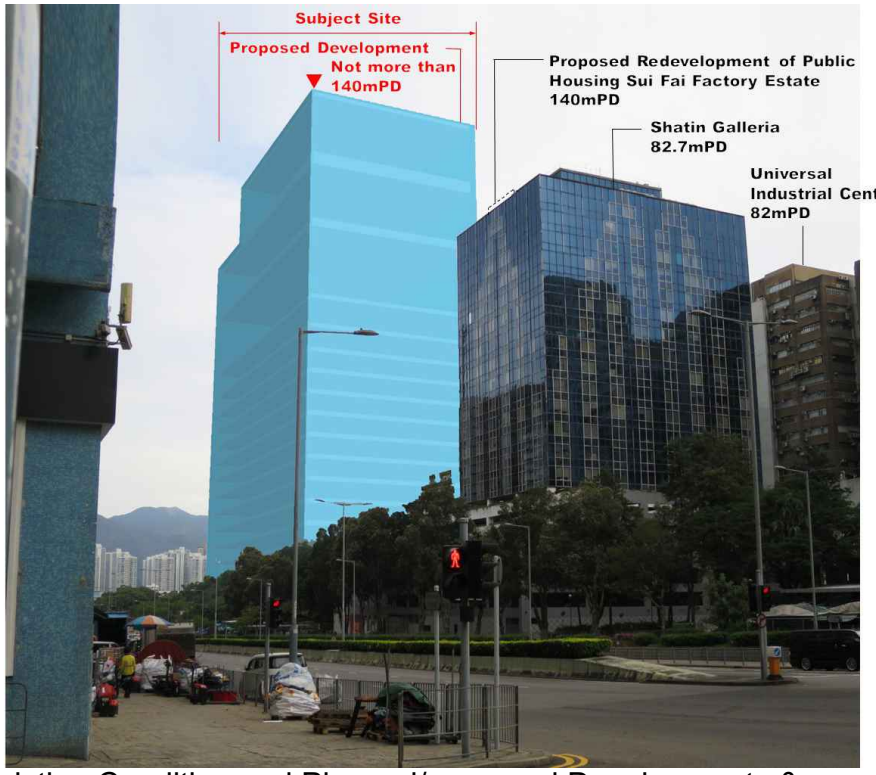
APPENDIX I



Key Plan



A. Existing Condition and Planned/approved Developments

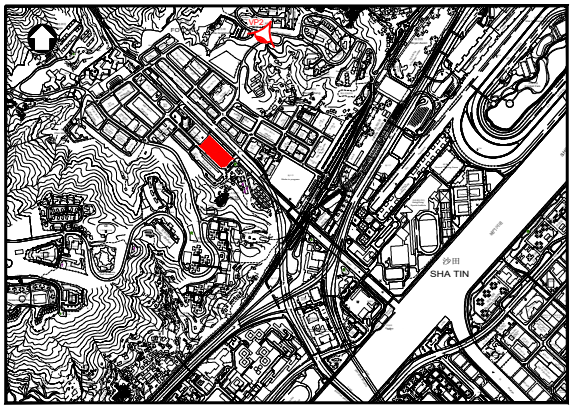


B. Existing Condition and Planned/approved Developments & Proposed Development

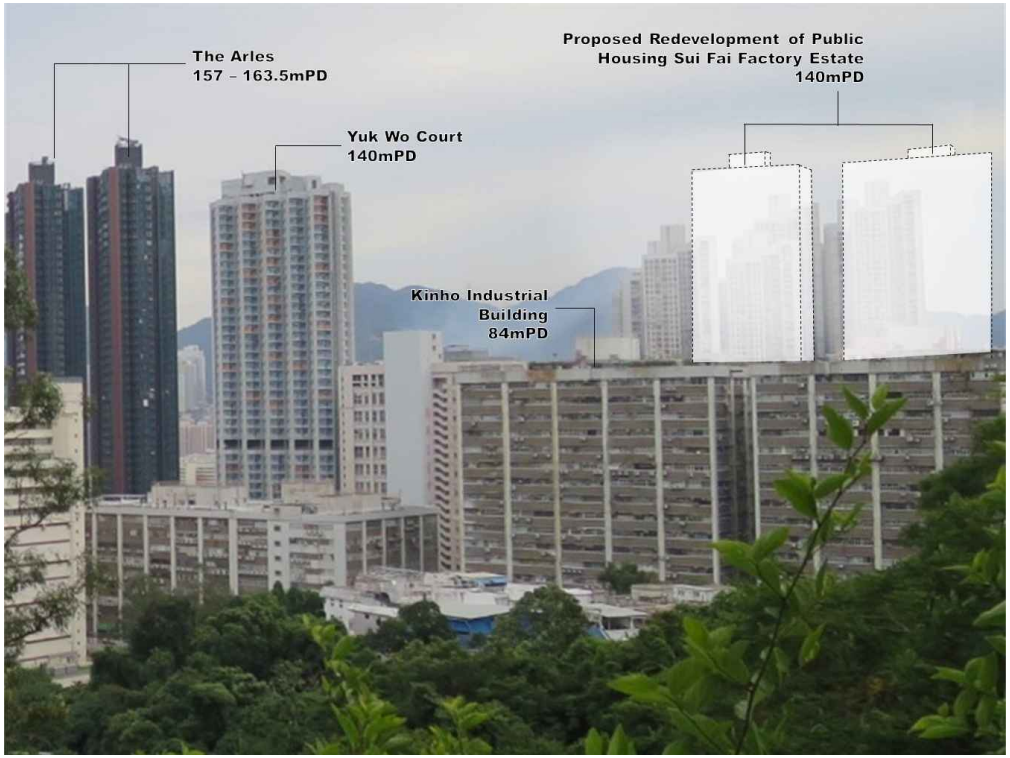
VP 1 - View From Fo Tan Road

Visual Appraisal

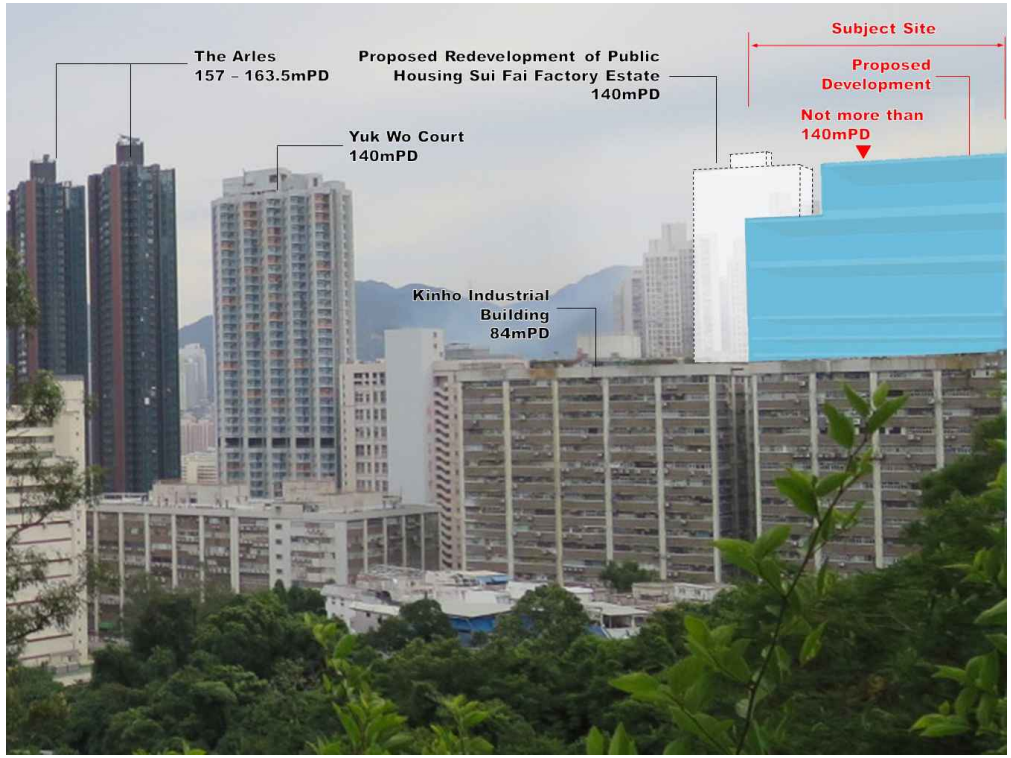
Date: 14 - 09 - 2023



Key Plan



A. Existing Condition and Planned/approved Developments

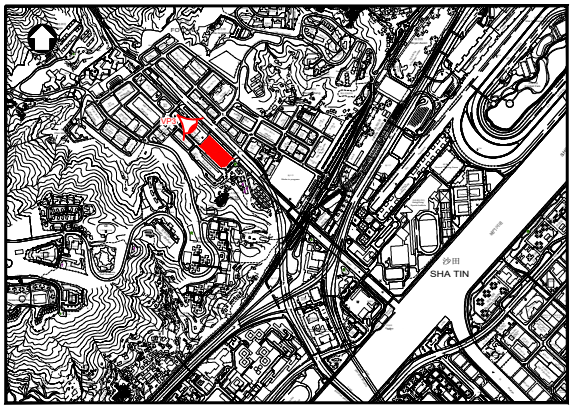


B. Existing Condition and Planned/approved Developments &
Proposed Development

VP 2 - View From Lok Fung Path Rest Garden

Visual Appraisal

Date: 14 - 09 - 2023



Key Plan



A. Existing Condition and Planned/approved Developments

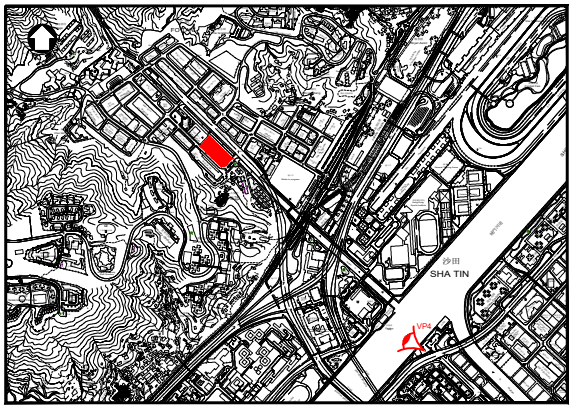


B. Existing Condition and Planned/approved Developments & Proposed Development

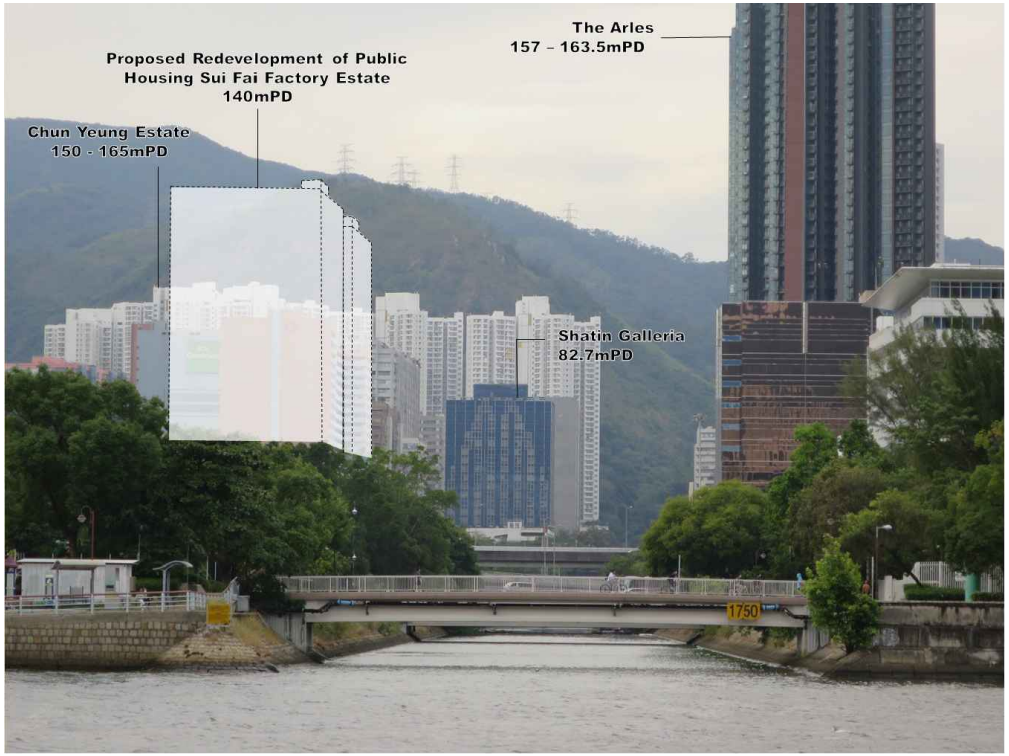
VP 3 - View From Shan Mei Street Playground

Visual Appraisal

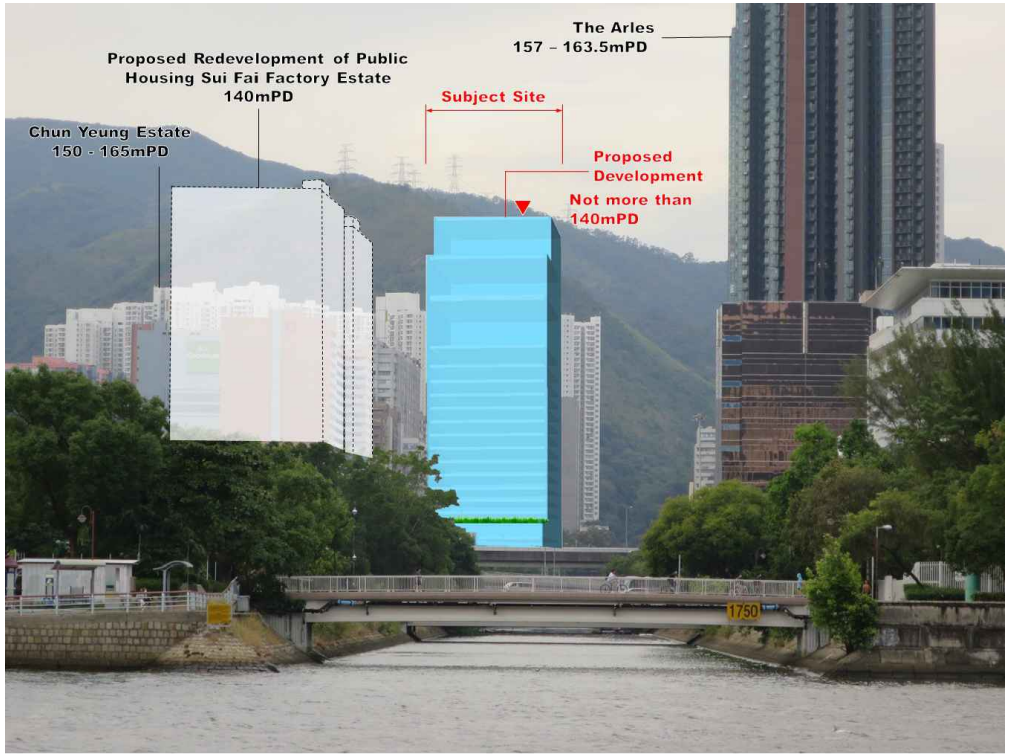
Date: 14 - 09 - 2023



Key Plan



A. Existing Condition and Planned/approved Developments

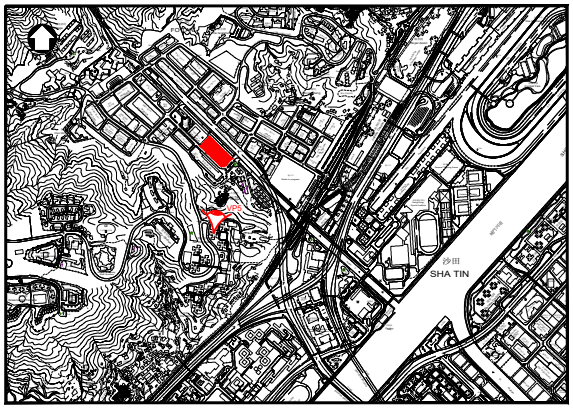


B. Existing Condition and Planned/approved Developments & Proposed Development

VP 4 - View From Shing Mun River Promenade Garden No. 2

Visual Appraisal

Date: 14 - 09 - 2023



Key Plan



A. Existing Condition and Planned/approved Developments



B. Existing Condition and Planned/approved Developments &
Proposed Development

VP 5 - View From Sui Wo Court

Visual Appraisal

Date: 14 - 09 - 2023

Landscape Assessment for Rezoning of Site B for the
Proposed Joint User Complex at Shan Mei Street, Fo Tan

1. Site Description

The Site designated for the proposed development encompasses an area of approx. 6,000m². Currently, the location accommodates a bus terminal managed by Kowloon Motor Bus (KMB), an open space, a sitting-out area, a cooked food market, and a public toilet. A variety of existing trees can be found within the Site, predominantly situated in the open space to the northwest and the sitting-out area to the northeast of the Site.

2. Source of landscape impact

Considering the existing topography and the scale of the proposed development, it is anticipated that extensive site clearance, bulk excavation and basement construction, among other tasks, will be necessary to facilitate the building construction and associated works to accommodate the proposed development.

3. Potential impact on existing landscape resources and characters

Open Space and Recreational Area

Based on the most recent development layout, an open space of approx. 2,120m² within the Site is anticipated to be affected. This open space comprises a basketball court (i.e. Sai Mei Street Basketball Court) accompanied by seating areas, barrier-free access connecting Shan Mei Street and Fo Tan Nullah, and a sitting-out area adjacent to the cooked food market. In view of the existing landscape resources and recreational facilities within the open space, it is regarded as having moderate landscape sensitivity and value.

Existing Trees within the Assessment Area

A total of 62 existing trees have been surveyed, with 56 located within the Site and 6 situated in the roadside planting area outside the Site along the northern site boundary. The Tree Survey Plan, Tree Assessment Schedule and Photographic Records can be found in **APPENDIX A to C**.

The dominant tree species found within the Site include *Delonix regia*, *Schefflera heptaphylla, Sterculia lanceolata*, *Cinnamomum camphora*, and *Celtis sinensis* etc. The roadside planting area outside the Site is mainly dominated by *Melaleuca cajuputi subsp. Cumingiana*. Generally, all surveyed trees are of common species, with low to high amenity value and poor to fair health conditions.

5 *Cleidiocarpon cavaleriei* with medium to high amenity value and fair health conditions are found within the Site. These trees are an exotic tree species not

commonly found in Hong Kong. Yet, *Cleidiocarpon cavaleriei* is not classified as a rare tree species listed in 'Rare and Precious Plants of Hong Kong', an endangered plant species protected under the Protection Endangered Species of Animals and Plants Ordinance (Cap. 586), or a tree species listed in the Forestry Regulations (Cap 96A) under the Forests and Countryside Ordinance (Cap. 96).

Based on the proposed development layout, 6 existing trees (T57 to T62) outside the Site are not anticipated to be affected by the development and are proposed to be retained. The 56 existing trees within the Site are in conflict with and will be affected by the proposed development; their removal is deemed inevitable.

4. Landscape Mitigation Measures

Tree preservation and compensatory tree planting

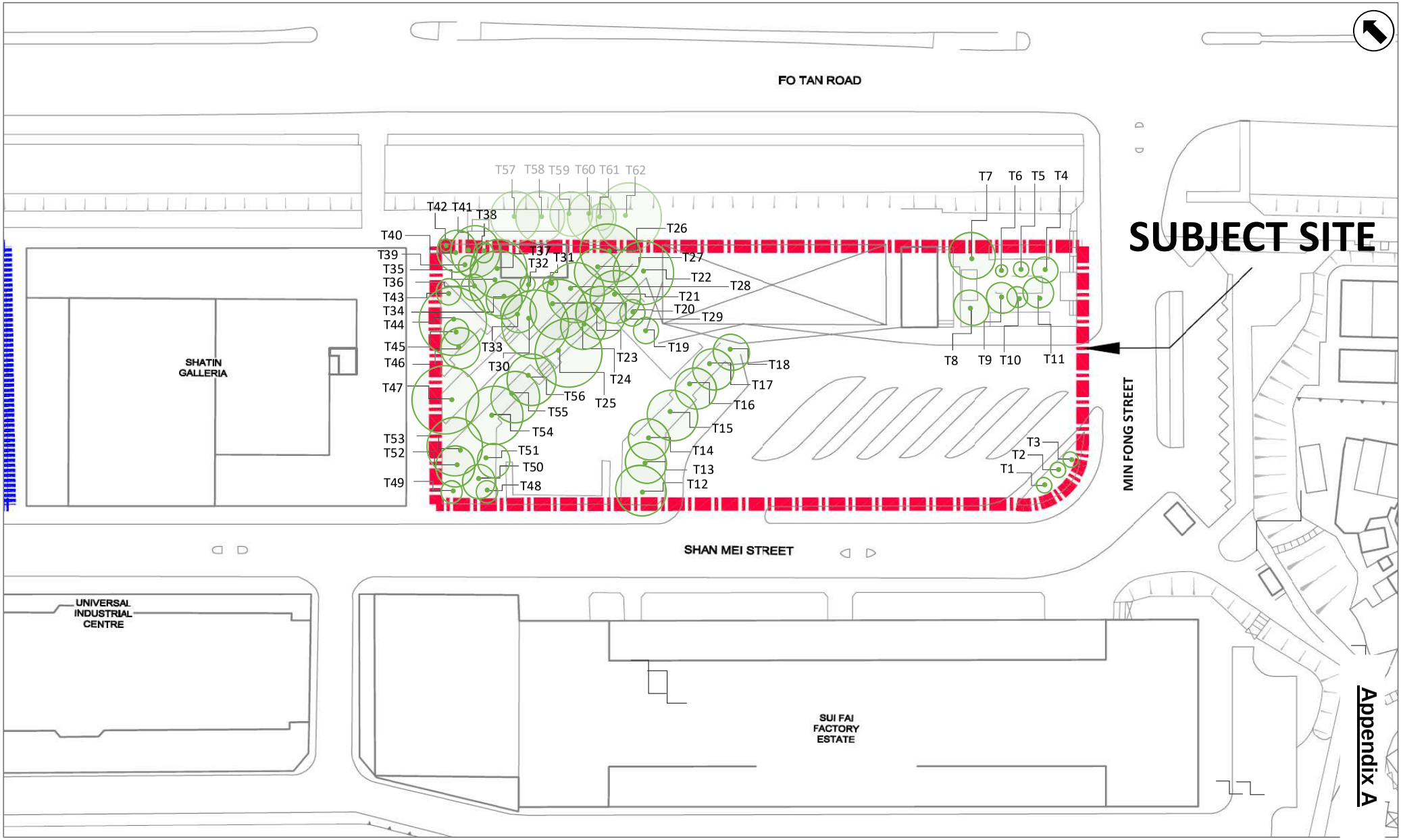
To minimize landscape impact arising from the proposed development, and taken into account the proposed removal of 56 existing trees in conflict with the development, it is proposed to plant 56 compensatory trees within the Site to mitigate the loss of existing landscape resources. Preliminary landscape provisions within the Site are illustrated in **APPENDIX D**.

Green coverage and other quality landscape design

In addition to the proposed tree planting mentioned above, greenery areas within the Site will be provided in accordance with DEVB TC(W) No. 3/2012 – Site Coverage of Greenery for Government Building Projects. A minimum 20% of greenery area will be allocated within the Site, of which, half of the required greenery area will be at-grade. Apart from the proposed tree planting, other vegetation, such as shrub/groundcover planting, will also be considered within the Site to further mitigate landscape impact arising from the proposed development. Site coverage of greenery within the Site is illustrated in **APPENDIX D.**

Furthermore, during the detailed design stage, due consideration will be given to the selection of native and/or indigenous plant species within the Site.

Project Title:
JUC at Fo Tan Shan Mei Street
Location : Subject Site (Shan Mei Street and Min Fong Street)
Tree Survey Plan
Tree Survey Date: 05 September 2022



Appendix A

SCALE 1:1000 (A4)

Appendix B

ARCHITECTURAL SERVICES DEPARTMENT

QUEENSWAY GOVERNMENT OFFICES, 66 QUEENSWAY, HONG KONG

建築署

香港金鐘道六十六號金鐘道政府合署

InForm No.: 8704 **Project No.: ZX609** **Surveyed on :** 05-Sep-22 **Surveyed by :** FOI/LA/2(Ag.)

Project Title: Proposed Joint-user Complex at Shan Mei Street, Fo Tan (Subject Site) **LA** Team 2 **Division :** LD

TREE ASSESSMENT SCHEDULE

Cluster I (Individual)

Tree ID No.	Existing tree lag No.	Location	Species		Measurements			Amenity value	Form	Health condition	Structural condition	Suitability for transplanting	Additional Remarks
			Scientific name	Chinese name	height (m)	DBH (mm)	crown spread (m)	(high/medium/low)	(Good / Average / Poor)			(high/medium/low)	
1	15	Within Site	*Roystonea regia*	王棕	4	112	3	M	A	A	A	M	
2	16	Within Site	*Roystonea regia*	王棕	4	140	3	M	A	A	A	M	
3		Within Site	*Roystonea regia*	王棕	4	125	3	M	A	A	A	M	
4	70	Within Site	*Sterculia lanceolata*	假蘋婆	7	232	5	M	A	A	A	L	crooked trunk, epicormics, restricted root
5	71	Within Site	*Sterculia lanceolata*	假蘋婆	5	192	3	L	P	P	A	L	sparse foliage, climber, crooked trunk, restricted roots
6	72	Within Site	*Lagerstroemia speciosa*	大花紫薇	5	160	4	M	A	A	A	L	restricted root
7	73	Within Site	*Aleurites moluccana*	石栗	12	405	9	M	A	P	P	L	wound and cavity at branches union, leaning, restricted root
8	74	Within Site	*Sterculia lanceolata*	假蘋婆	11	495	7	L	P	P	A	L	burls in the trunk, root collar, restricted roots
9	75	Within Site	*Lagerstroemia speciosa*	大花紫薇	6	160	6	M	P	A	A	L	crooked trunk, restricted root
10	76	Within Site	*Sterculia lanceolata*	假蘋婆	6	217	4	M	P	A	P	L	crooked trunk, epicormics, cavity on trunk union, restricted root
11	77	Within Site	*Sterculia lanceolata*	假蘋婆	10	315	6	M	A	A	A	L	girdling root
12	135	Within Site	*Liquidambar formosana*	楓香	15	430	10	M	P	A	P	L	leaning, crooked trunk, restricted root
13	134	Within Site	*Liquidambar formosana*	楓香	15	440	8	M	P	A	A	L	low live crown ratio, wound at the trunk, restricted root
14	133	Within Site	*Liquidambar formosana*	楓香	13	400	8	M	P	A	P	L	leaning, cavity at the trunk, restricted root
15	132	Within Site	*Delonix regia*	鳳凰木	10	425	10	M	P	A	A	L	codominant trunk, restricted root
16	131	Within Site	*Delonix regia*	鳳凰木	10	308	8	M	P	A	P	L	low live crwon ratio, abrupt bends, leaning, restricted root
17	130	Within Site	*Delonix regia*	鳳凰木	10	394	8	M	P	P	A	L	low live crown ratio, leaning, restricted root
18	129	Within Site	*Delonix regia*	鳳凰木	9	373	7	M	P	A	A	L	leaning, restricted root
19	156	Within Site	*Erythrina variegata*	刺桐	8	425	5	M	P	P	A	L	sparse foliage, restricted root
20	155	Within Site	*Schefflera heptaphylla*	鴨腳木	6	192	5	M	P	P	P	L	low live crown ratio, codominant trunk (106 mm + 160 mm), restricted root
21	154	Within Site	*Delonix regia*	鳳凰木	13	550	12	M	P	A	A	L	leaning, codominant trunk, restricted root

ARCHITECTURAL SERVICES DEPARTMENT

QUEENSWAY GOVERNMENT OFFICES, 66 QUEENSWAY, HONG KONG

建築署

香港金鐘道六十六號金鐘道政府合署

InForm No.: 8704 **Project No.:** ZX609 **Surveyed on :** 05-Sep-22 **Surveyed by :** FOI/LA/2(Ag.)

Project Title: Proposed Joint-user Complex at Shan Mei Street, Fo Tan (Subject Site) **LA** Team 2 **Division :** LD

TREE ASSESSMENT SCHEDULE

Cluster I (Individual)

Tree ID No.	Existing tree lag No.	Location	Species		Measurements			Amenity value	Form	Health condition	Structural condition	Suitability for transplanting	Additional Remarks
			Scientific name	Chinese name	height (m)	DBH (mm)	crown spread (m)	(high/medium/low)	(Good / Average / Poor)			(high/medium/low)	
22	153	Within Site	*Delonix regia*	鳳凰木	12	445	10	M	P	P	A	L	low live crown ratio, burls in the trunk, restricted roots
23	152	Within Site	*Delonix regia*	鳳凰木	12	450	10	M	P	P	A	L	low live crown ratio, leaning, abrupt bends, restricted roots
24	151	Within Site	*Delonix regia*	鳳凰木	12	300	9	M	P	P	A	L	low live crown ratio, codominant trunk, restricted root
25	150	Within Site	*Delonix regia*	鳳凰木	12	453	10	M	A	A	A	L	restricted root
26	163	Within Site	*Delonix regia*	鳳凰木	12	440	10	M	P	P	A	L	leaning, burls in the trunk, restricted root
27	164	Within Site	*Delonix regia*	鳳凰木	11	450	9	M	P	A	P	L	leaning, abrupt bends, restricted root
28	165	Within Site	*Delonix regia*	鳳凰木	12	400	10	M	A	A	A	L	codominant trunk, restricted root
29	166	Within Site	*Delonix regia*	鳳凰木	13	460	10	M	A	A	A	L	low live crown ratio, restricted roots
30	169	Within Site	*Delonix regia*	鳳凰木	14	560	13	M	A	A	A	L	leaning, restricted roots
31		Within Site	*Schefflera heptaphylla*	鴨腳木	6	142	3	M	A	A	A	L	restricted roots
32	168	Within Site	*Sterculia lanceolata*	假蘋婆	7	130	4	M	A	A	A	L	restricted roots
33	170	Within Site	*Celtis sinensis*	朴樹	9	277	7	M	A	A	A	L	codominant trunk, leaning, wound at the trunk, restricted root
34	171	Within Site	*Cleidiocarpon cavaleriei*	蝴蝶果	14	195	8	H	A	A	A	L	low live crown ratio, restricted root
35	172	Within Site	*Cinnamomum camphora*	樟樹	16	500	14	M	A	A	A	L	leaning, restricted root
36	173	Within Site	*Cleidiocarpon cavaleriei*	蝴蝶果	6	140	5	M	P	A	A	L	leaning, restricted root
37	174	Within Site	*Cinnamomum camphora*	樟樹	10	290	12	M	A	A	P	L	codominant trunk, leaning, restricted root
38	175	Within Site	*Celtis sinensis*	朴樹	9	270	6	M	A	P	A	L	wilted top, low live crown ratio, restricted root
39	176	Within Site	*Schefflera heptaphylla*	鴨腳木	6	140	5	M	A	A	A	L	wound at the trunk, low live crown ratio, restricted root
40	177	Within Site	*Cleidiocarpon cavaleriei*	蝴蝶果	14	282	8	H	A	A	A	L	codominant trunk, restricted root
41	179	Within Site	*Cleidiocarpon cavaleriei*	蝴蝶果	15	410	10	H	A	A	A	L	leaning, codominant trunk,
42	178	Within Site	*Schefflera heptaphylla*	鴨腳木	5	145	4	M	A	P	P	L	wilted top, low live crown ratio, leaning, restricted root
43	149	Within Site	*Sterculia lanceolata*	假蘋婆	6	117	5	M	P	P	A	L	Multi trunk,(67mm + 75mm+ 60 mm), restricted root
44	148	Within Site	*Cinnamomum camphora*	樟樹	13	385	12	M	A	A	A	L	codominant trunk, restricted root

InForm No.: 8704 **Project No.:** ZX609 **Surveyed on :** 05-Sep-22 **Surveyed by :** FOI/LA/2(Ag.)

Project Title: Proposed Joint-user Complex at Shan Mei Street, Fo Tan (Subject Site) **LA** Team 2 **Division :** LD

TREE ASSESSMENT SCHEDULE

Cluster I (Individual)

Tree ID No.	Existing tree lag No.	Location	Species		Measurements			Amenity value	Form	Health condition	Structural condition	Suitability for transplanting	Additional Remarks
			Scientific name	Chinese name	height (m)	DBH (mm)	crown spread (m)	(high/medium/low)	(Good / Average / Poor)			(high/medium/low)	
45	147	Within Site	*Sterculia lanceolata*	假蘋婆	6	141	5	M	P	P	A	L	Multi trunk, wound at the branches union, restricted root
46	146	Within Site	*Cleidiocarpon cavaleriei*	蝴蝶果	15	327	8	M	P	A	A	L	codominant trunk, restricted root
47	145	Within Site	*Delonix regia*	鳳凰木	15	510	14	L	P	A	P	L	leaning, crooked trunk, cavity at the trunk, restricted root
48	143	Within Site	*Sterculia lanceolata*	假蘋婆	6	155	5	M	P	P	A	L	low live crown ratio, leaning, wound at the trunk, epicormics, restricted root
49		Within Site	*Sterculia lanceolata*	假蘋婆	6	175	4	M	P	A	A	L	restricted root
50	142	Within Site	*Cinnamomum camphora*	樟樹	10	317	7	M	P	A	A	L	imbalanced crown, restricted root
51	141	Within Site	*Celtis sinensis*	朴樹	8	215	7	M	P	A	A	L	abrupt bends, restricted root
52	140	Within Site	*Cinnamomum camphora*	樟樹	10	340	8	M	P	A	A	L	leaning, restricted root
53	139	Within Site	*Delonix regia*	鳳凰木	13	367	11	M	P	A	A	L	low live crown ratio, crooked trunk, cavity at the trunk, restricted root
54	138	Within Site	*Delonix regia*	鳳凰木	15	530	12	M	P	A	A	L	restricted root
55	137	Within Site	*Delonix regia*	鳳凰木	12	360	10	M	P	A	A	L	low live crown ratio, crooked trunk, cavity at the trunk, restricted root
56	136	Within Site	*Delonix regia*	鳳凰木	12	350	10	M	P	A	A	L	burls at the trunk, restricted root
57	160	Outside Site	*Melaleuca cajuputi subsp. Cumingiana*	白千層	14	550	10	M	A	A	A	L	restricted root
58	159	Outside Site	*Melaleuca cajuputi subsp. Cumingiana*	白千層	14	550	10	M	A	A	A	L	restricted root
59	158	Outside Site	*Melaleuca cajuputi subsp. Cumingiana*	白千層	13	450	9	M	A	A	A	L	codominant trunk, restricted root
60	157	Outside Site	*Melaleuca cajuputi subsp. Cumingiana*	白千層	14	550	10	M	A	A	A	L	restricted root, exposed root
61	161	Outside Site	*Litsea glutinosa*	潺槁樹	7	105	6	M	A	A	A	M	
62	162	Outside Site	*Melaleuca cajuputi subsp. Cumingiana*	白千層	20	690	14	M	A	A	A	L	restricted root, exposed root

Photographic Records of Existing Trees

Appendix C

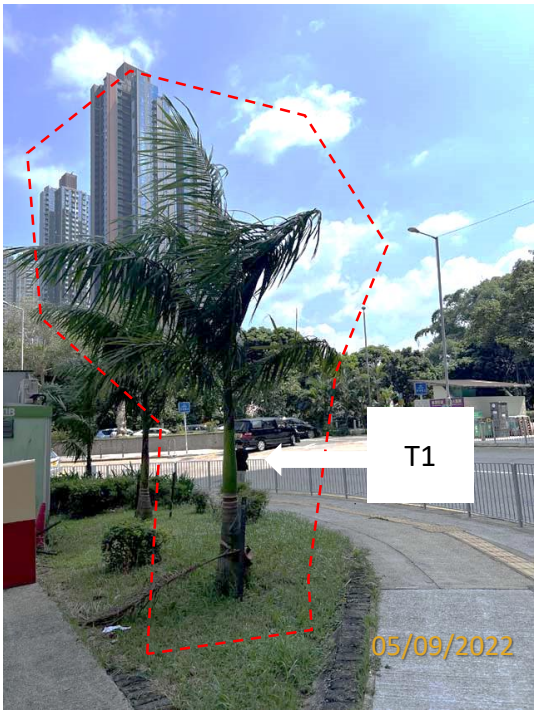
Project Title: Proposed Joint-user Complex at Shan Mei Street, Fo Tan
Location: Subject Site (Shan Mei Street and Min Fong Street)

InForM No.: 8704 Date of Tree Survey / Photo Taken: 05/09/2022
Project No.: ZX609

Tree No.: T1

Species: *Roystonea regia*

Location: Within site



Overview of the tree



Crown



Trunk



Root

Photographic Records of Existing Trees

Project Title: Proposed Joint-user Complex at Shan Mei Street, Fo Tan
Location: Subject Site (Shan Mei Street and Min Fong Street)

InForM No.: 8704 Date of Tree Survey / Photo Taken: 05/09/2022
Project No.: ZX609

Tree No.: T2

Species: *Roystonea regia* Location: Within site



Overview of the tree



Crown



Trunk



Root

Photographic Records of Existing Trees

Project Title: Proposed Joint-user Complex at Shan Mei Street, Fo Tan
Location: Subject Site (Shan Mei Street and Min Fong Street)

InForM No.: 8704 Date of Tree Survey / Photo Taken: 05/09/2022
Project No.: ZX609

Tree No.: T3

Species: *Roystonea regia*

Location: Within site



Overview of the tree



Crown



Trunk



Root

Photographic Records of Existing Trees

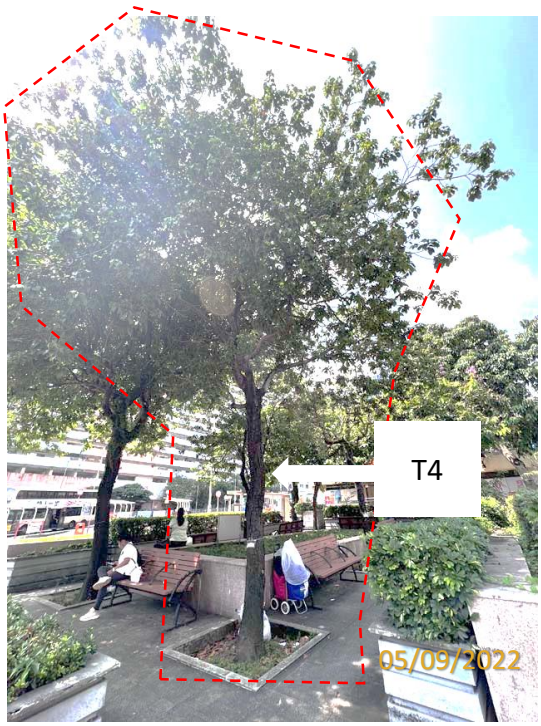
Project Title: Proposed Joint-user Complex at Shan Mei Street, Fo Tan
Location: Subject Site (Shan Mei Street and Min Fong Street)

InForM No.: 8704 Date of Tree Survey / Photo Taken: 05/09/2022
Project No.: ZX609

Tree No.: T4

Species: *Sterculia lanceolata*

Location: Within site



Overview of the tree



Crown (crooked trunk, epicormics)



Trunk



Root (restricted root)

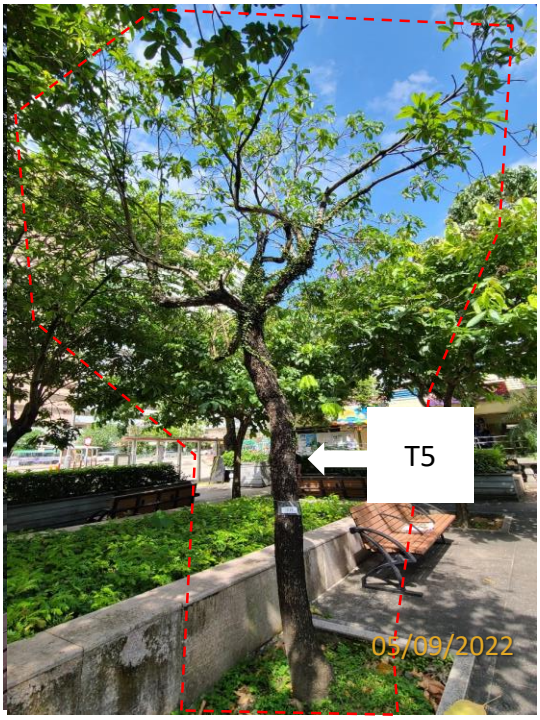
Photographic Records of Existing Trees

Project Title: Proposed Joint-user Complex at Shan Mei Street, Fo Tan
Location: Subject Site (Shan Mei Street and Min Fong Street)

InForM No.: 8704 Date of Tree Survey / Photo Taken: 05/09/2022
Project No.: ZX609

Tree No.: T5

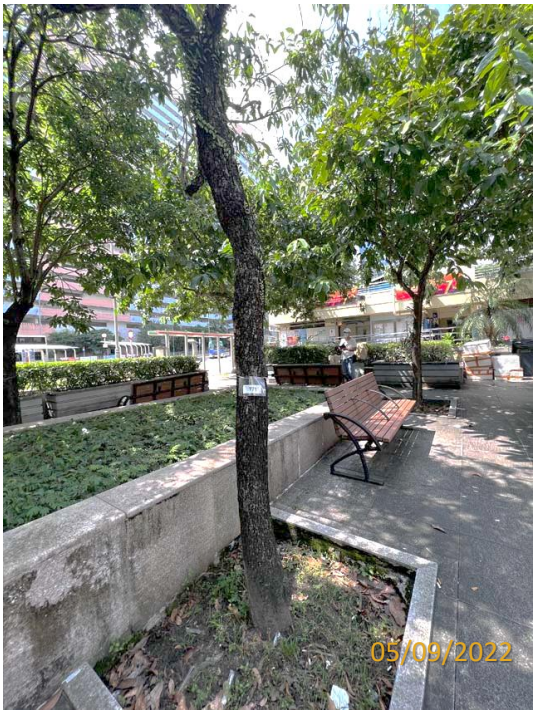
Species: *Sterculia lanceolata* Location: Within site



Overview of the tree



Crown (sparse foliage)



Trunk (crooked trunk, climber)



Root (restricted root)

Photographic Records of Existing Trees

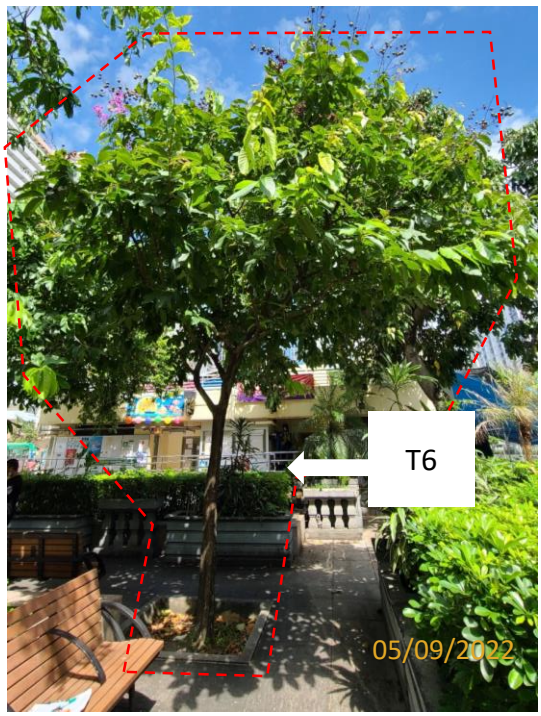
Project Title: Proposed Joint-user Complex at Shan Mei Street, Fo Tan
Location: Subject Site (Shan Mei Street and Min Fong Street)

InForM No.: 8704 Date of Tree Survey / Photo Taken: 05/09/2022
Project No.: ZX609

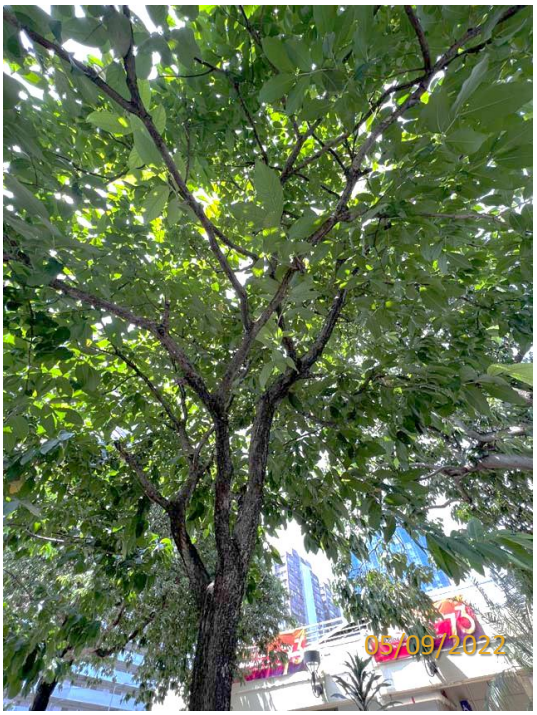
Tree No.: T6

Species: *Lagerstroemia speciosa*

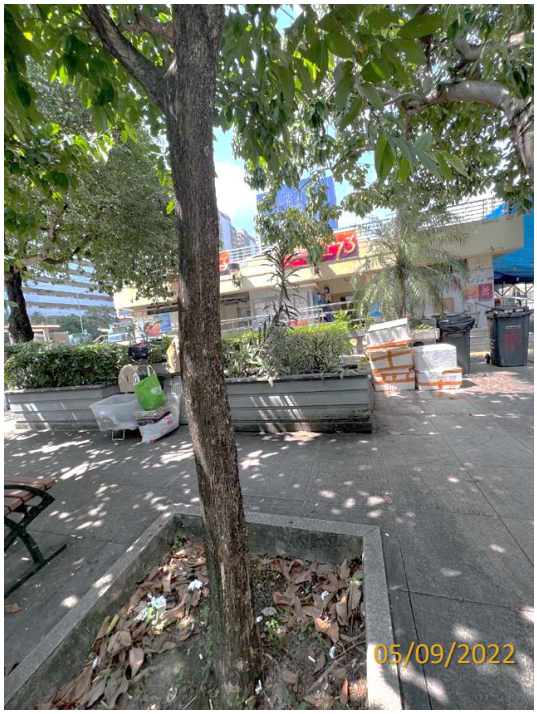
Location: Within site



Overview of the tree



Crown



Trunk



Root (Restricted root)

Photographic Records of Existing Trees

Project Title: Proposed Joint-user Complex at Shan Mei Street, Fo Tan
Location: Subject Site (Shan Mei Street and Min Fong Street)

InForM No.: 8704 Date of Tree Survey / Photo Taken: 05/09/2022
Project No.: ZX609

Tree No.: T7

Species: *Lagerstroemia speciosa*

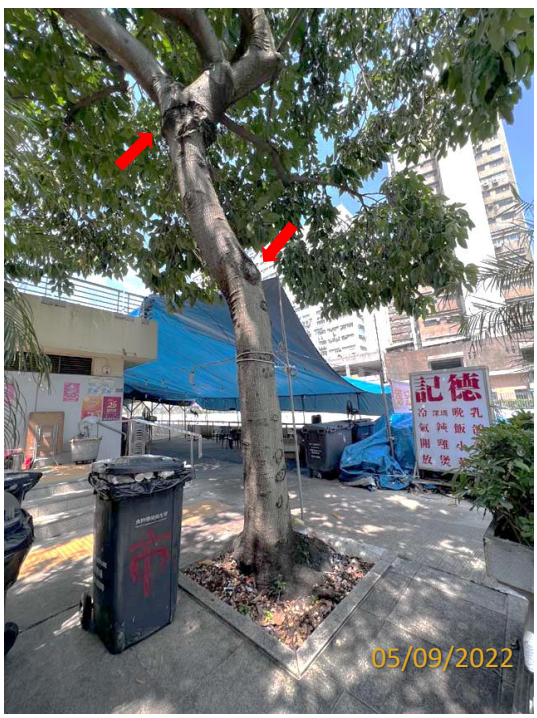
Location: Within site



Overview of the tree



Crown



Trunk (leaning, wound and cavity at branches union)



Root (restricted root)

Photographic Records of Existing Trees

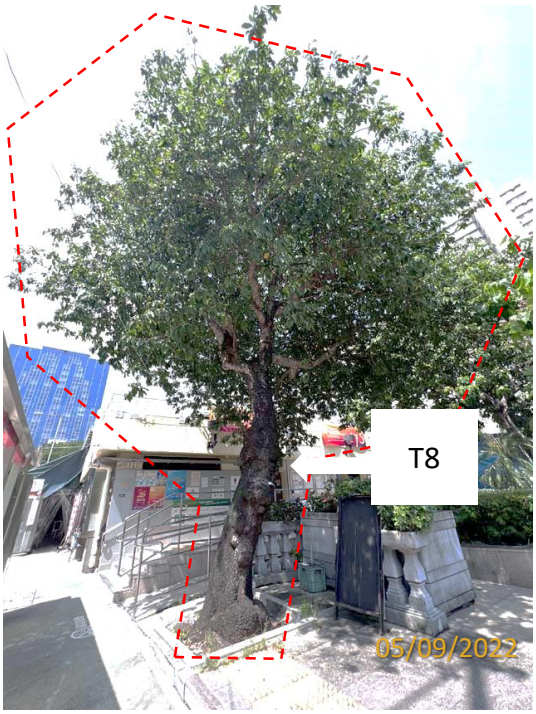
Project Title: Proposed Joint-user Complex at Shan Mei Street, Fo Tan
Location: Subject Site (Shan Mei Street and Min Fong Street)

InForM No.: 8704 Date of Tree Survey / Photo Taken: 05/09/2022
Project No.: ZX609

Tree No.: T8

Species: *Sterculia lanceolata*

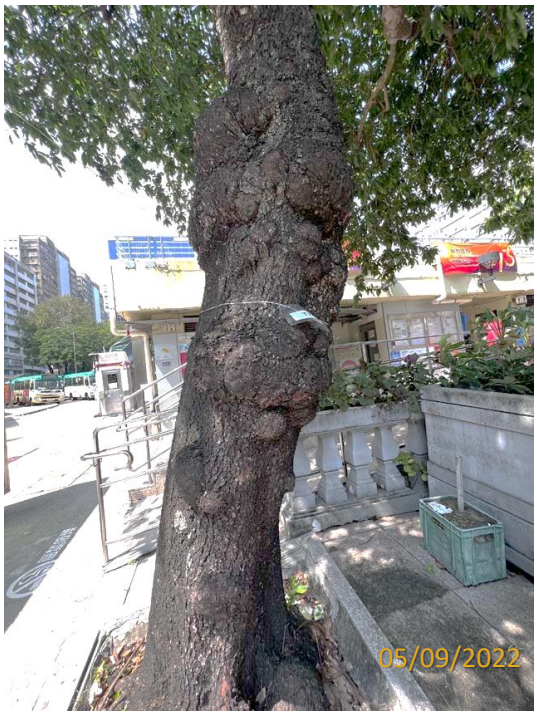
Location: Within site



Overview of the tree



Crown



Trunk (burls in the trunk)



Root (root collar, restricted root)

Photographic Records of Existing Trees

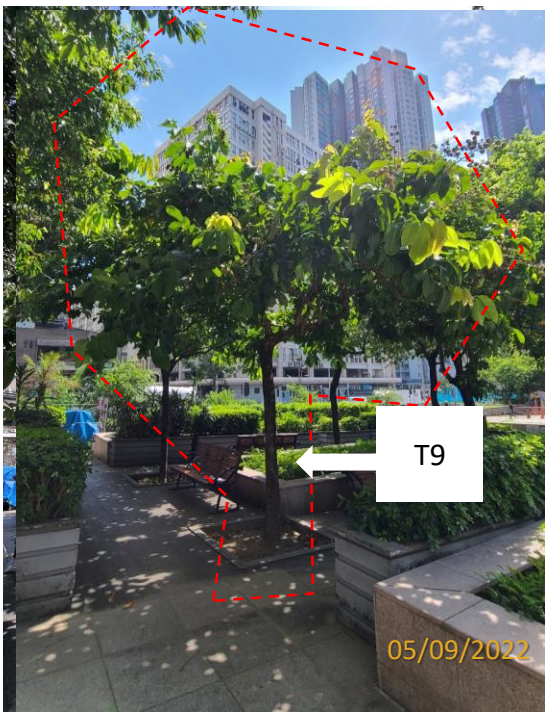
Project Title: Proposed Joint-user Complex at Shan Mei Street, Fo Tan
Location: Subject Site (Shan Mei Street and Min Fong Street)

InForM No.: 8704 Date of Tree Survey / Photo Taken: 05/09/2022
Project No.: ZX609

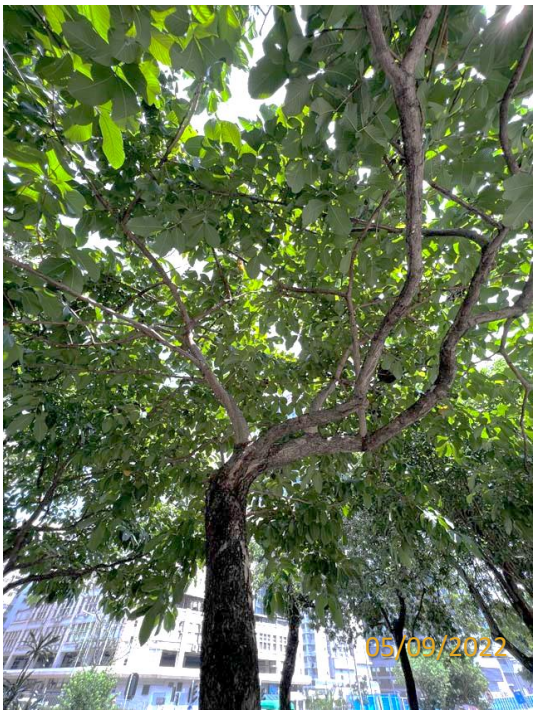
Tree No.: T9

Species: *Lagerstroemia speciosa*

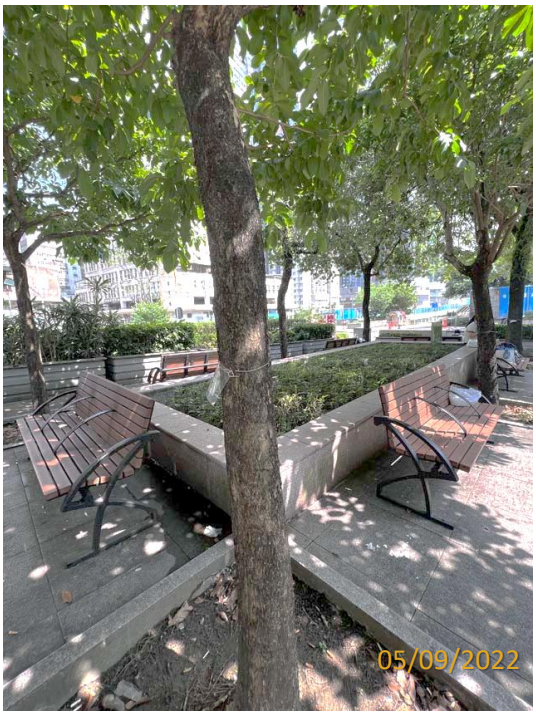
Location: Within site



Overview of the tree



Crown (crooked trunk)



Trunk



Root (restricted root)

Photographic Records of Existing Trees

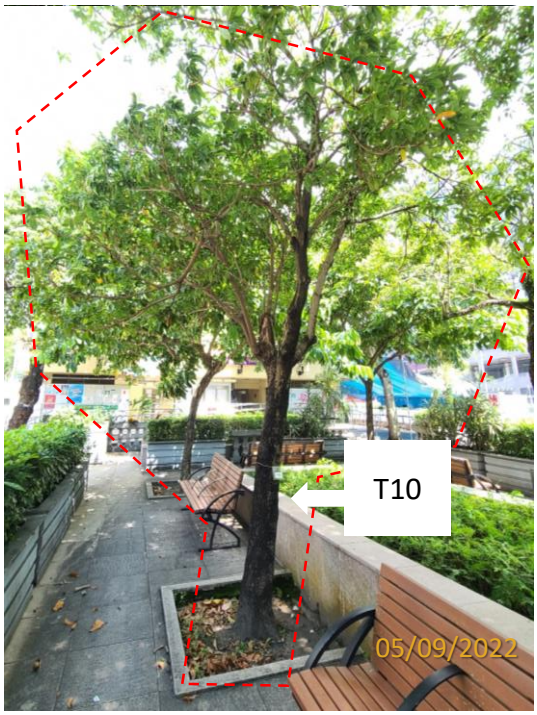
Project Title: Proposed Joint-user Complex at Shan Mei Street, Fo Tan
Location: Subject Site (Shan Mei Street and Min Fong Street)

InForM No.: 8704 Date of Tree Survey / Photo Taken: 05/09/2022
Project No.: ZX609

Tree No.: T10

Species: *Sterculia lanceolata*

Location: Within site



Overview of the tree



Crown (crooked trunk, epicormics)



Trunk (cavity on trunk union)



Root (restricted root)

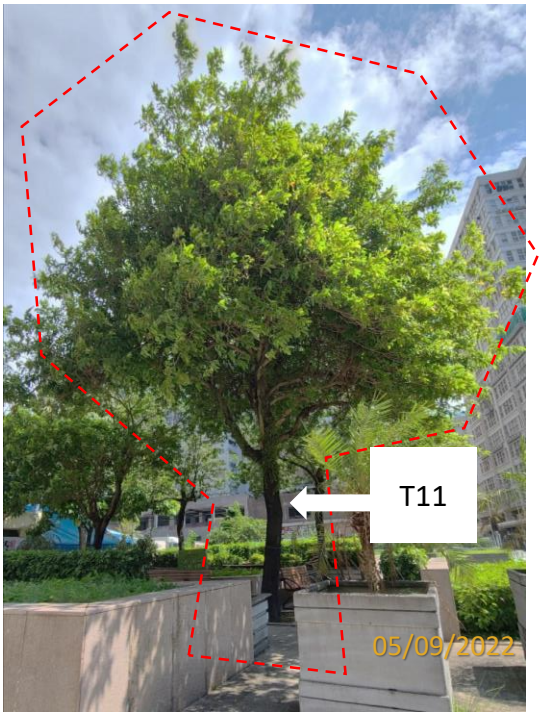
Photographic Records of Existing Trees

Project Title: Proposed Joint-user Complex at Shan Mei Street, Fo Tan
Location: Subject Site (Shan Mei Street and Min Fong Street)

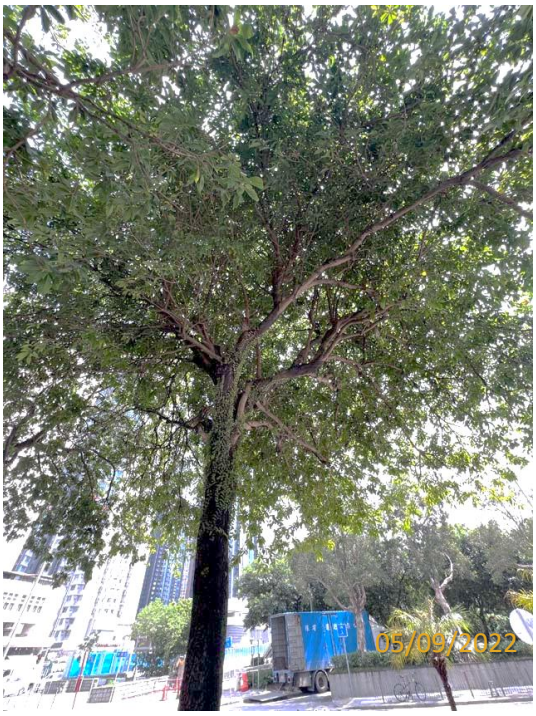
InForM No.: 8704 Date of Tree Survey / Photo Taken: 05/09/2022
Project No.: ZX609

Tree No.: T11

Species: *Sterculia lanceolata* Location: Within site



Overview of the tree



Crown



Trunk



Root (girdling root)

Photographic Records of Existing Trees

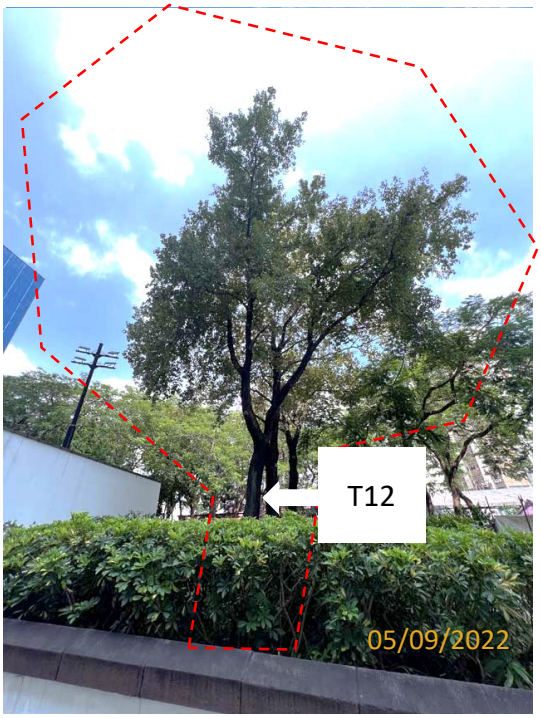
Project Title: Proposed Joint-user Complex at Shan Mei Street, Fo Tan
Location: Subject Site (Shan Mei Street and Min Fong Street)

InForM No.: 8704 Date of Tree Survey / Photo Taken: 05/09/2022
Project No.: ZX609

Tree No.: T12

Species: *Liquidambar formosana*

Location: Within site



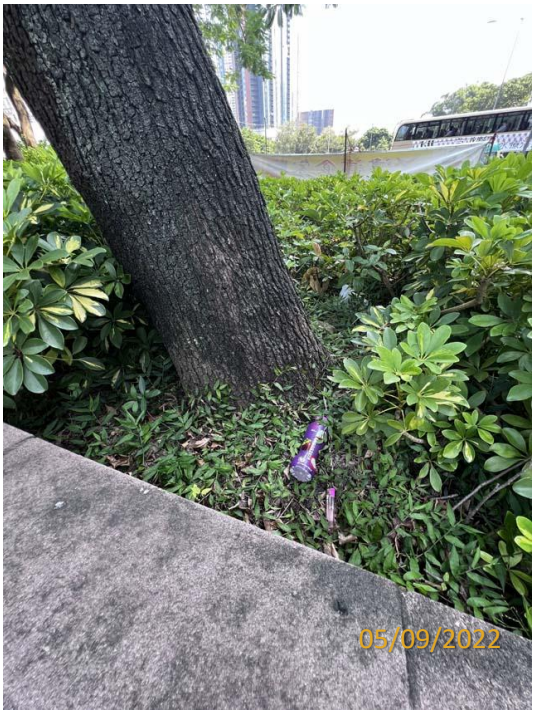
Overview of the tree



Crown (crooked trunk)



Trunk (leaning)



Root (restricted root)

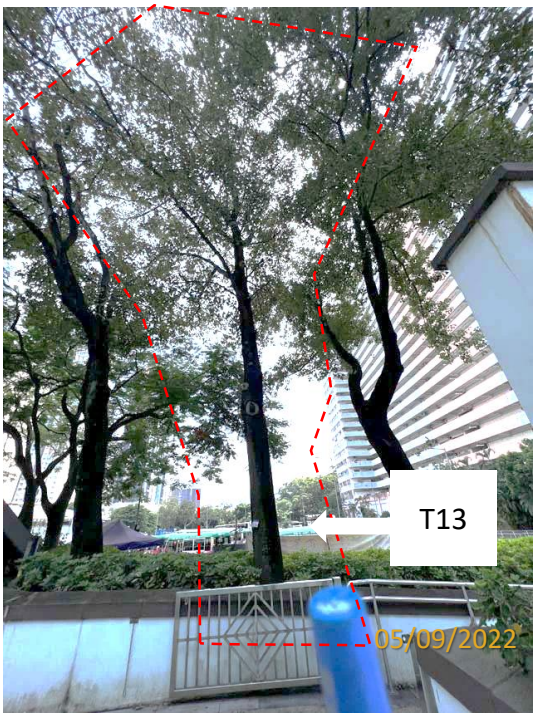
Photographic Records of Existing Trees

Project Title: Proposed Joint-user Complex at Shan Mei Street, Fo Tan
Location: Subject Site (Shan Mei Street and Min Fong Street)

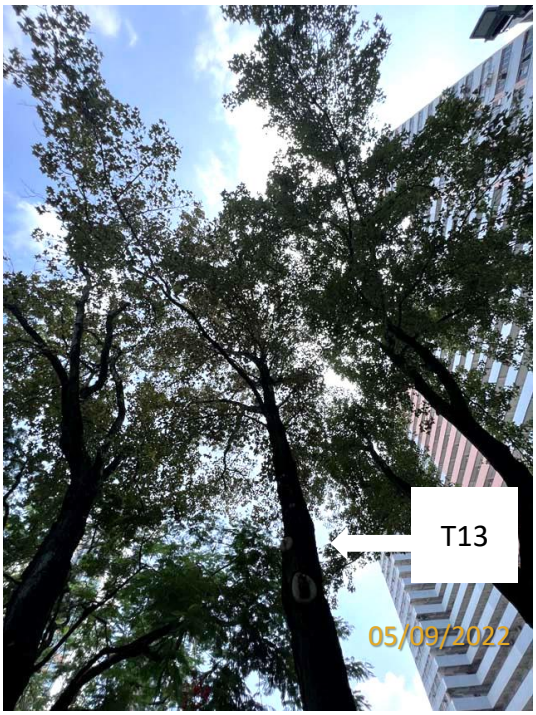
InForM No.: 8704 Date of Tree Survey / Photo Taken: 05/09/2022
Project No.: ZX609

Tree No.: T13

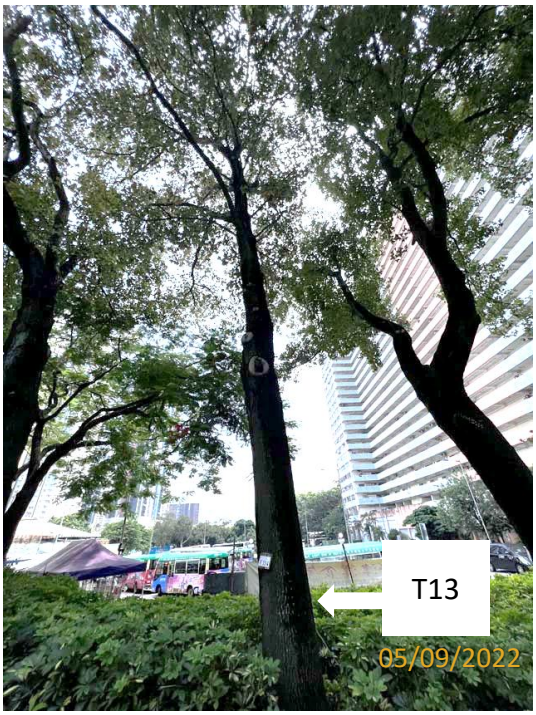
Species: *Liquidambar formosana* Location: Within site



Overview of the tree



Crown (low live crown ratio)



Trunk (wound at the trunk)



Root (restricted root)

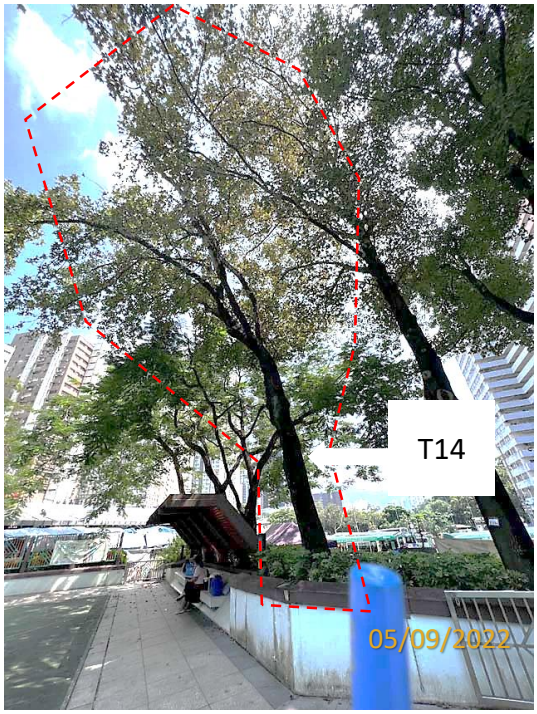
Photographic Records of Existing Trees

Project Title: Proposed Joint-user Complex at Shan Mei Street, Fo Tan
Location: Subject Site (Shan Mei Street and Min Fong Street)

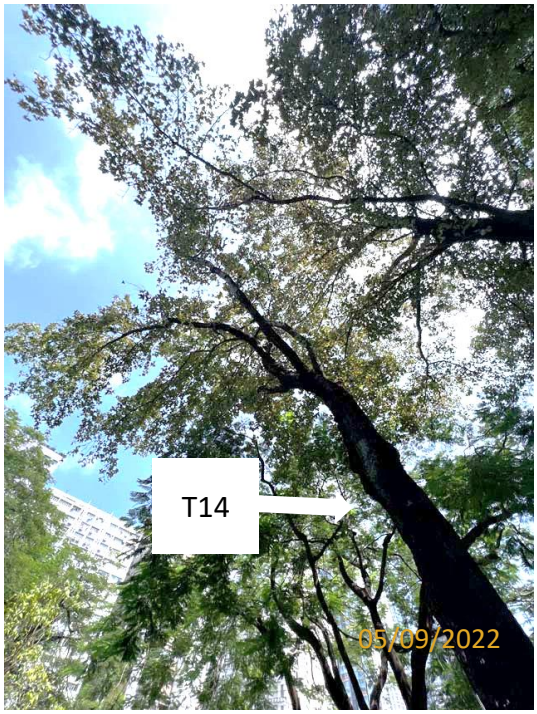
InForM No.: 8704 Date of Tree Survey / Photo Taken: 05/09/2022
Project No.: ZX609

Tree No.: T14

Species: *Liquidambar formosana* Location: Within site



Overview of the tree



Crown



Trunk (leaning, cavity at the trunk)



Root (restricted root)

Photographic Records of Existing Trees

Project Title: Proposed Joint-user Complex at Shan Mei Street, Fo Tan
Location: Subject Site (Shan Mei Street and Min Fong Street)

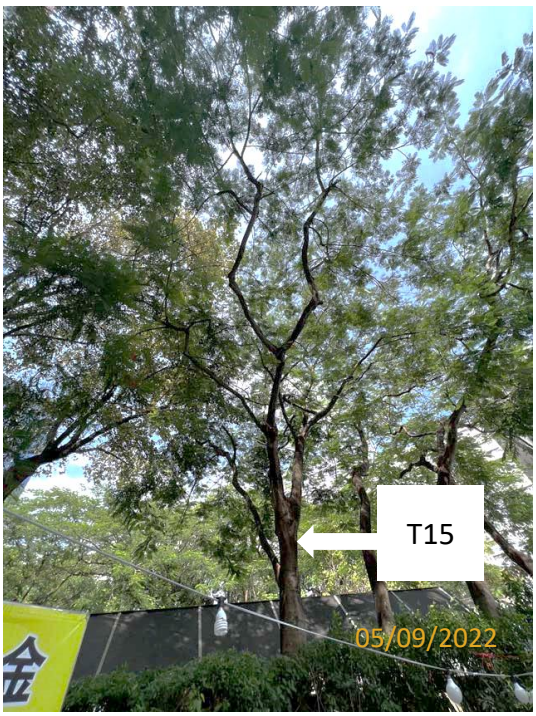
InForM No.: 8704 Date of Tree Survey / Photo Taken: 05/09/2022
Project No.: ZX609

Tree No.: T15

Species: *Delonix regia* Location: Within site



Overview of the tree



Crown



Trunk (codominant trunk)



Root (restricted root)

Photographic Records of Existing Trees

Project Title: Proposed Joint-user Complex at Shan Mei Street, Fo Tan
Location: Subject Site (Shan Mei Street and Min Fong Street)

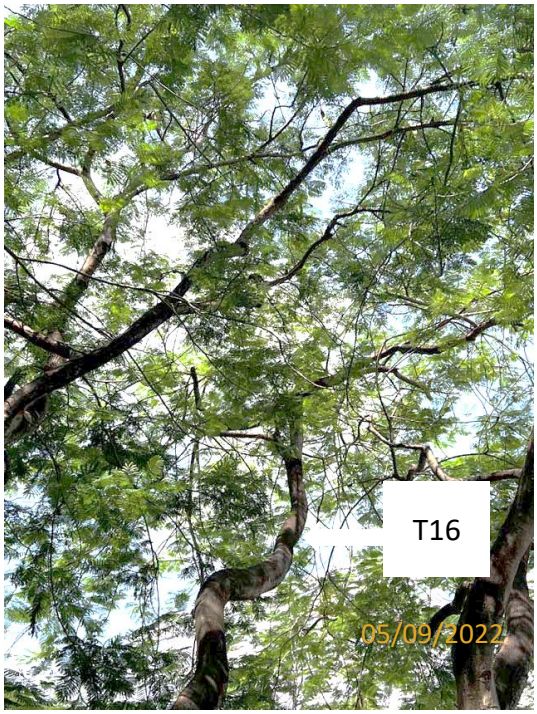
InForM No.: 8704 Date of Tree Survey / Photo Taken: 05/09/2022
Project No.: ZX609

Tree No.: T16

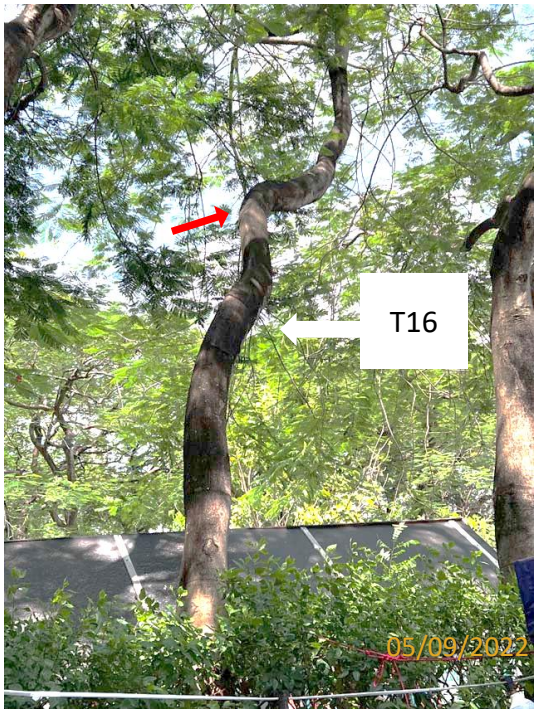
Species: *Delonix regia* Location: Within site



Overview of the tree



Crown (low live crown ratio)



Trunk (abrupt bends, leaning)



Root (restricted root)

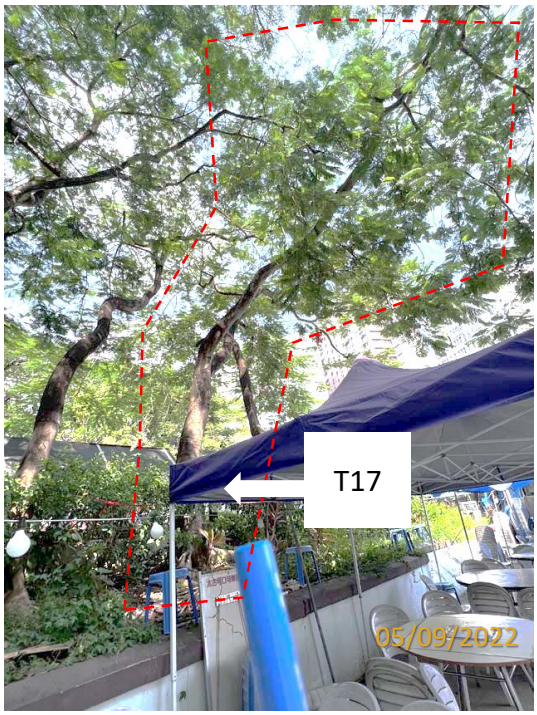
Photographic Records of Existing Trees

Project Title: Proposed Joint-user Complex at Shan Mei Street, Fo Tan
Location: Subject Site (Shan Mei Street and Min Fong Street)

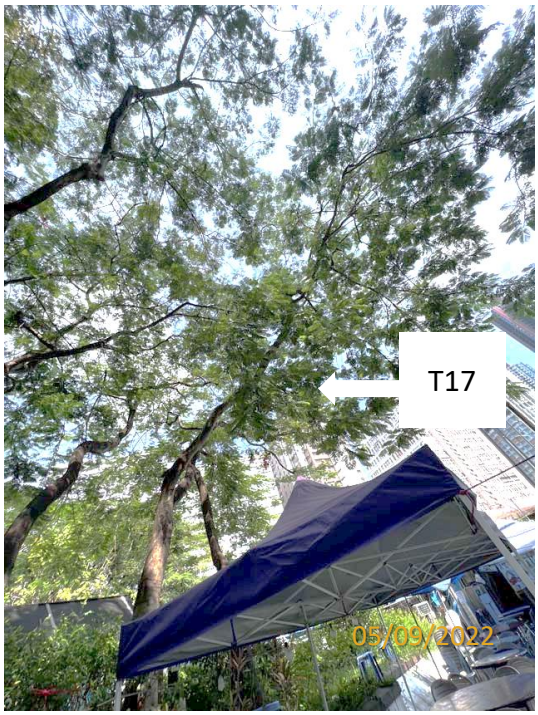
InForM No.: 8704 Date of Tree Survey / Photo Taken: 05/09/2022
Project No.: ZX609

Tree No.: T17

Species: *Delonix regia* Location: Within site



Overview of the tree



Crown (low live crown ratio, leaning)



Trunk



Root (restricted root)

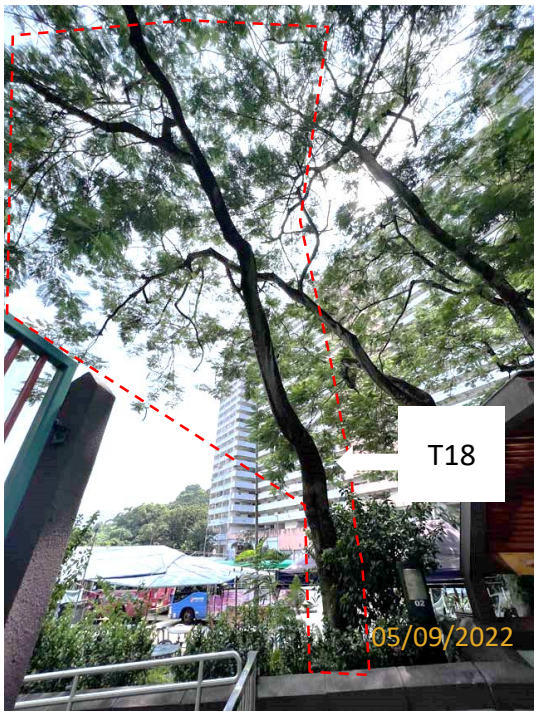
Photographic Records of Existing Trees

Project Title: Proposed Joint-user Complex at Shan Mei Street, Fo Tan
Location: Subject Site (Shan Mei Street and Min Fong Street)

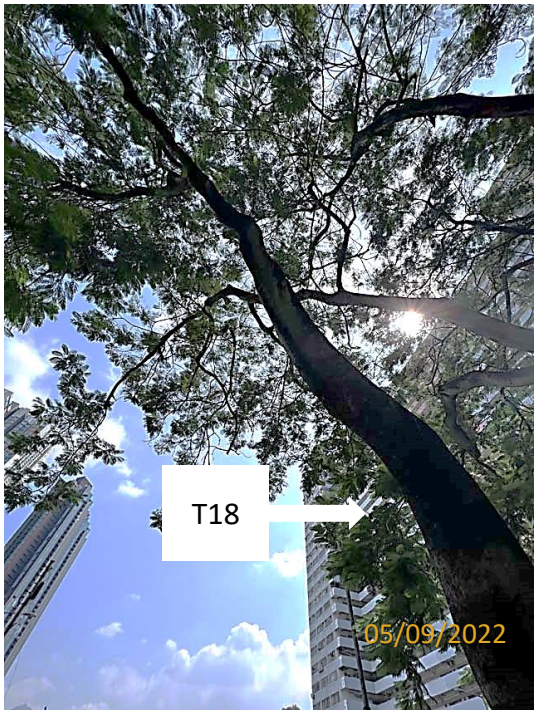
InForM No.: 8704 Date of Tree Survey / Photo Taken: 05/09/2022
Project No.: ZX609

Tree No.: T18

Species: *Delonix regia* Location: Within site



Overview of the tree



Crown (leaning)



Trunk



Root (restricted root)

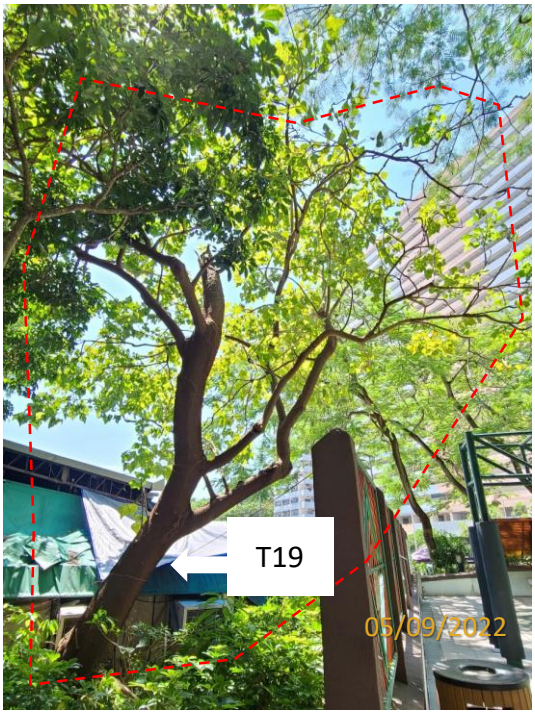
Photographic Records of Existing Trees

Project Title: Proposed Joint-user Complex at Shan Mei Street, Fo Tan
Location: Subject Site (Shan Mei Street and Min Fong Street)

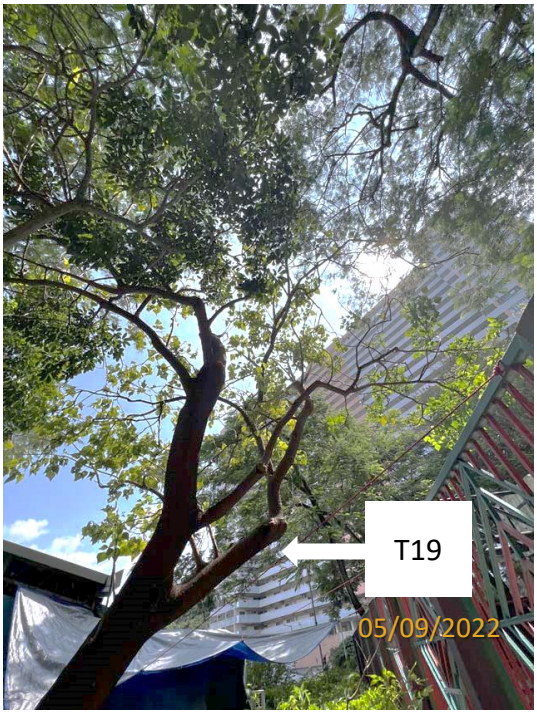
InForM No.: 8704 Date of Tree Survey / Photo Taken: 05/09/2022
Project No.: ZX609

Tree No.: T19

Species: *Erythrina variegata* Location: Within site



Overview of the tree



Crown (sparse foliage)



Trunk



Root (restricted root)

Photographic Records of Existing Trees

Project Title: Proposed Joint-user Complex at Shan Mei Street, Fo Tan
Location: Subject Site (Shan Mei Street and Min Fong Street)

InForM No.: 8704 Date of Tree Survey / Photo Taken: 05/09/2022
Project No.: ZX609

Tree No.: T20

Species: *Schefflera heptaphylla* Location: Within site



Overview of the tree



Crown (low live crown ratio)



Trunk (codominant trunk)



Root (restricted root)

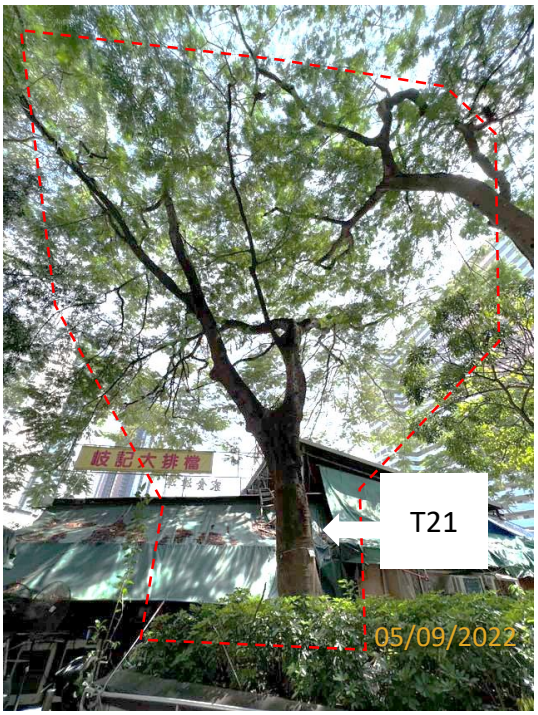
Photographic Records of Existing Trees

Project Title: Proposed Joint-user Complex at Shan Mei Street, Fo Tan
Location: Subject Site (Shan Mei Street and Min Fong Street)

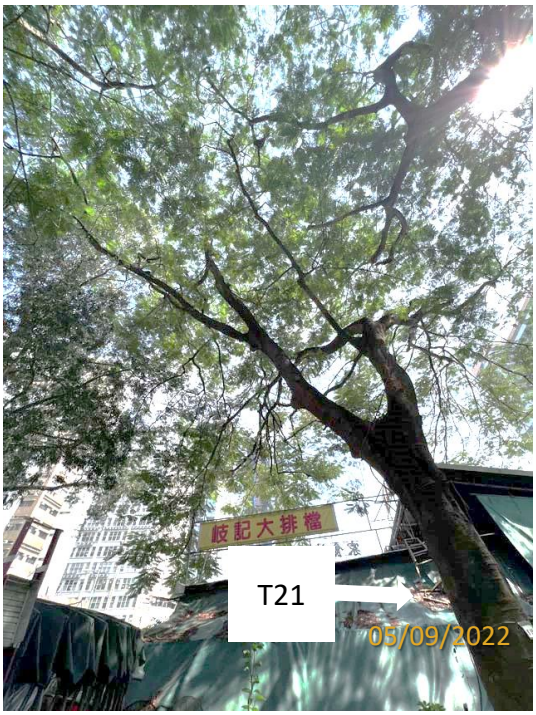
InForM No.: 8704 Date of Tree Survey / Photo Taken: 05/09/2022
Project No.: ZX609

Tree No.: T21

Species: *Delonix regia* Location: Within site



Overview of the tree



Crown



Trunk (leaning, codominant trunk)



Root (restricted root)

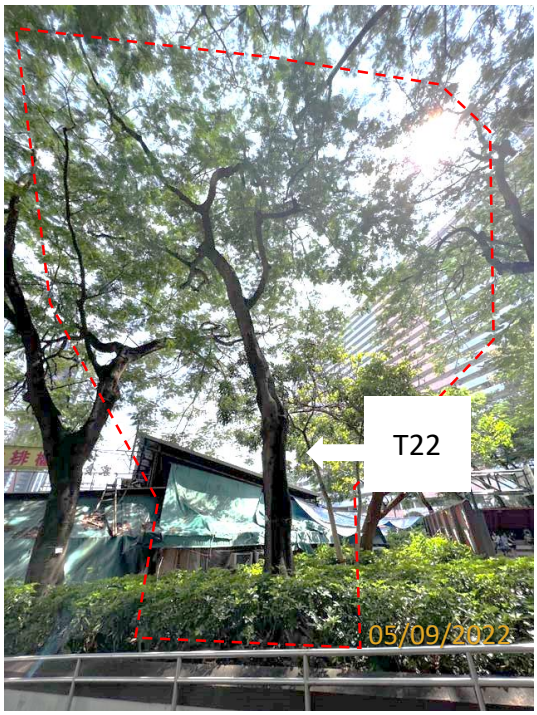
Photographic Records of Existing Trees

Project Title: Proposed Joint-user Complex at Shan Mei Street, Fo Tan
Location: Subject Site (Shan Mei Street and Min Fong Street)

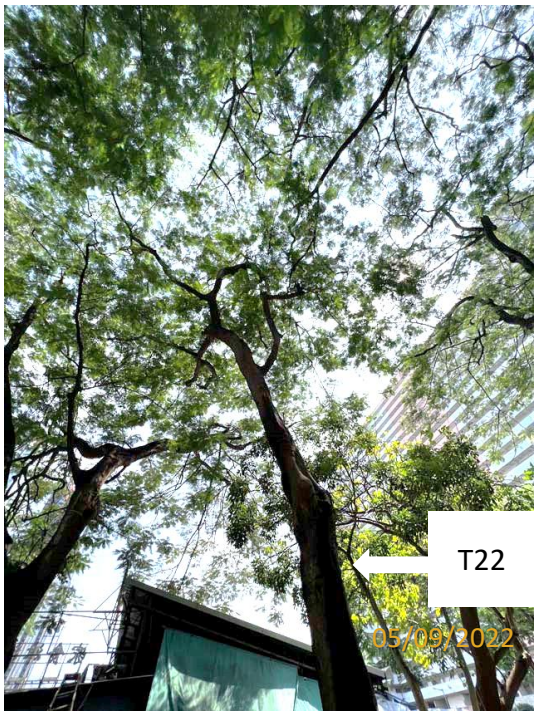
InForM No.: 8704 Date of Tree Survey / Photo Taken: 05/09/2022
Project No.: ZX609

Tree No.: T22

Species: *Delonix regia* Location: Within site



Overview of the tree



Crown (low live crown ratio)



Trunk (burls at the trunk)



Root (restricted root)

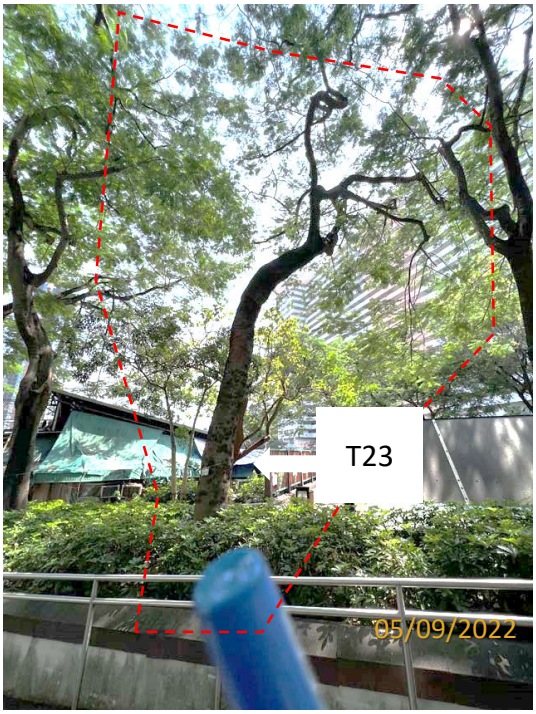
Photographic Records of Existing Trees

Project Title: Proposed Joint-user Complex at Shan Mei Street, Fo Tan
Location: Subject Site (Shan Mei Street and Min Fong Street)

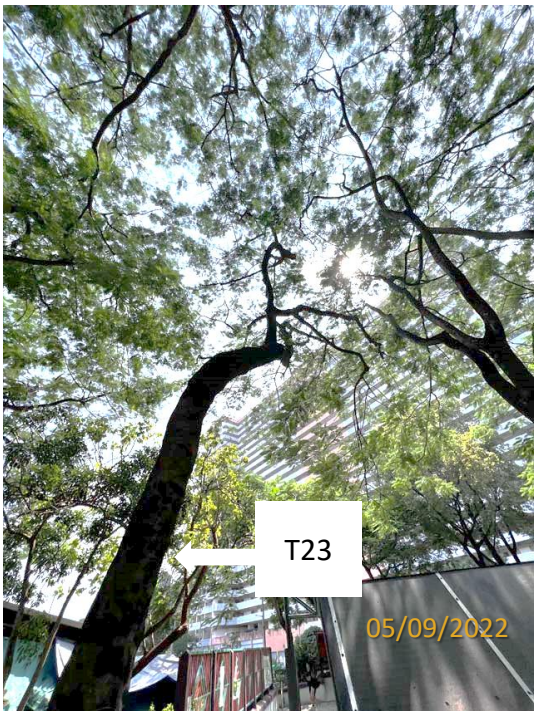
InForM No.: 8704 Date of Tree Survey / Photo Taken: 05/09/2022
Project No.: ZX609

Tree No.: T23

Species: *Delonix regia* Location: Within site



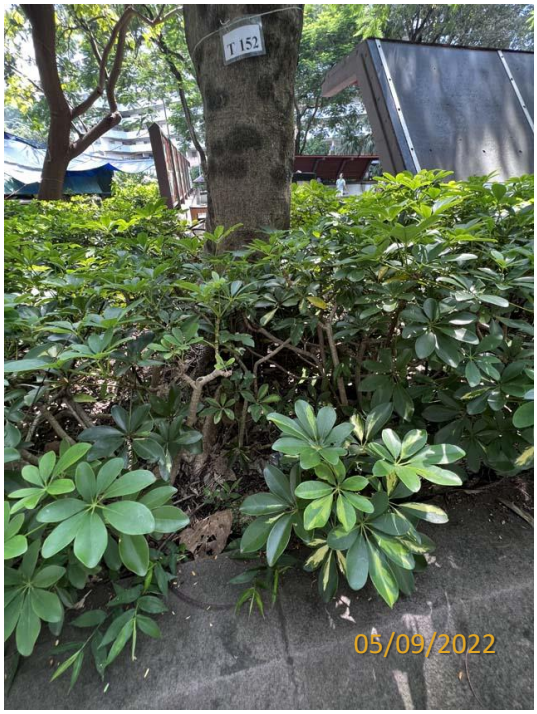
Overview of the tree



Crown (low live crown ratio)



Trunk (leaning, abrupt bends)



Root (restricted root)

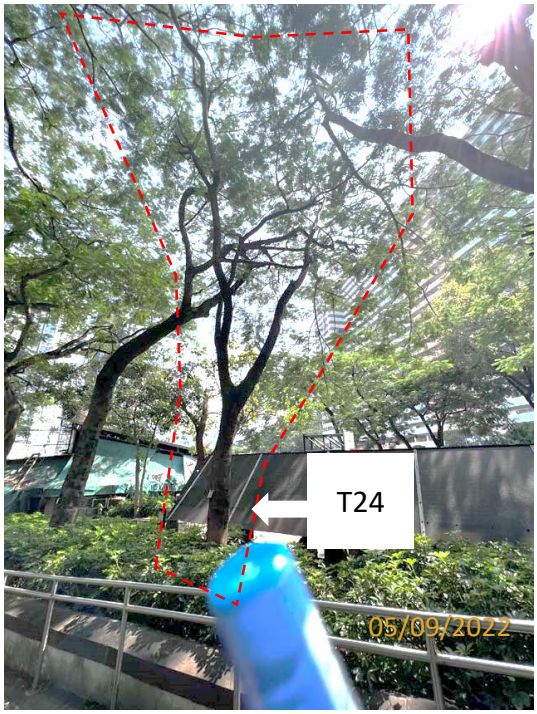
Photographic Records of Existing Trees

Project Title: Proposed Joint-user Complex at Shan Mei Street, Fo Tan
Location: Subject Site (Shan Mei Street and Min Fong Street)

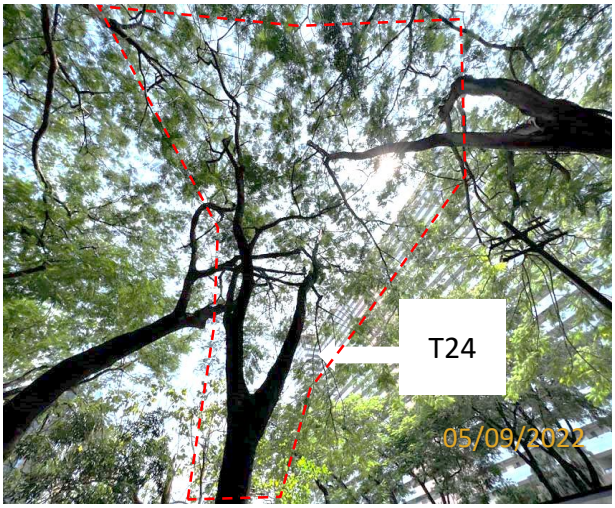
InForM No.: 8704 Date of Tree Survey / Photo Taken: 05/09/2022
Project No.: ZX609

Tree No.: T24

Species: *Delonix regia* Location: Within site



Overview of the tree



Crown (low live crown ratio)



Trunk (codominant trunk)



Root (restricted root)

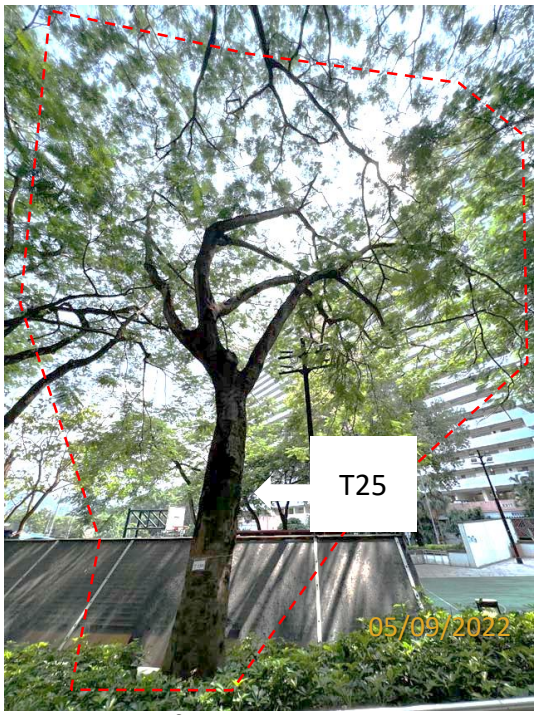
Photographic Records of Existing Trees

Project Title: Proposed Joint-user Complex at Shan Mei Street, Fo Tan
Location: Subject Site (Shan Mei Street and Min Fong Street)

InForM No.: 8704 Date of Tree Survey / Photo Taken: 05/09/2022
Project No.: ZX609

Tree No.: T25

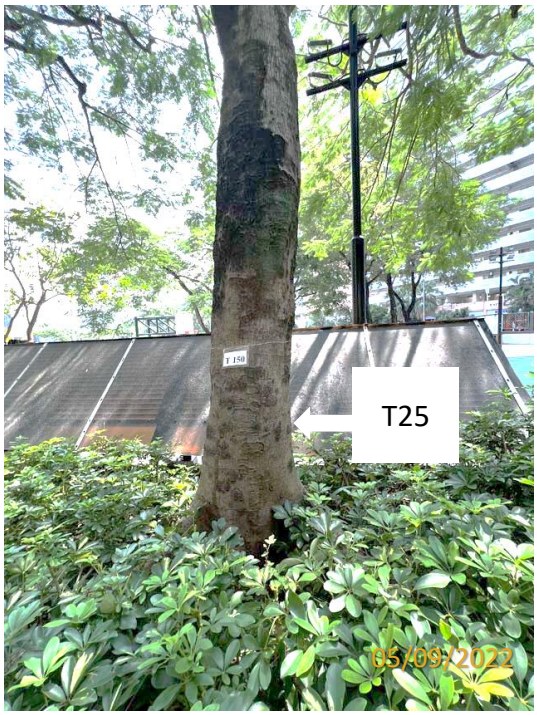
Species: *Delonix regia* Location: Within site



Overview of the tree



Crown



Trunk



Root (restricted root)

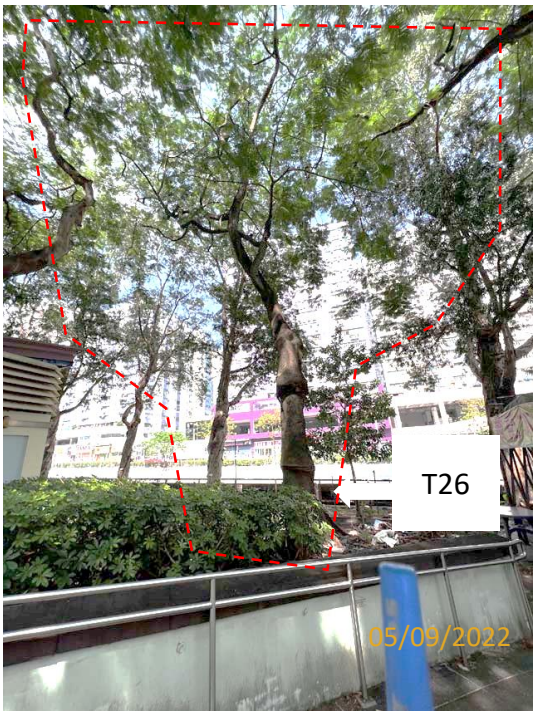
Photographic Records of Existing Trees

Project Title: Proposed Joint-user Complex at Shan Mei Street, Fo Tan
Location: Subject Site (Shan Mei Street and Min Fong Street)

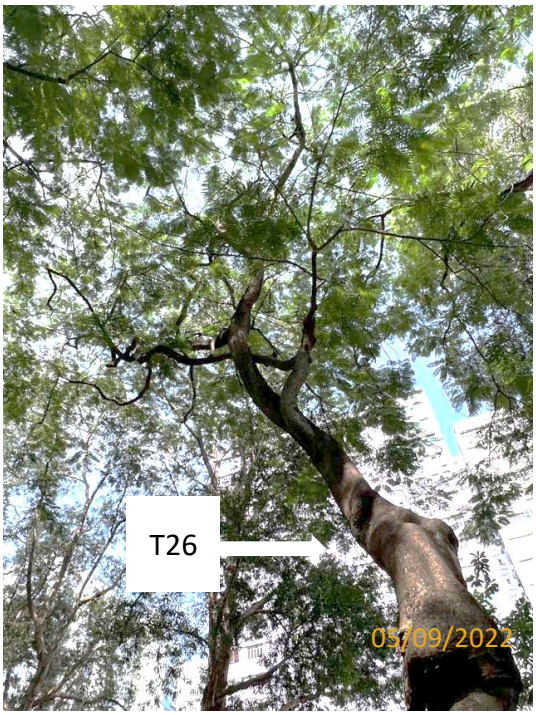
InForM No.: 8704 Date of Tree Survey / Photo Taken: 05/09/2022
Project No.: ZX609

Tree No.: T26

Species: *Delonix regia* Location: Within site



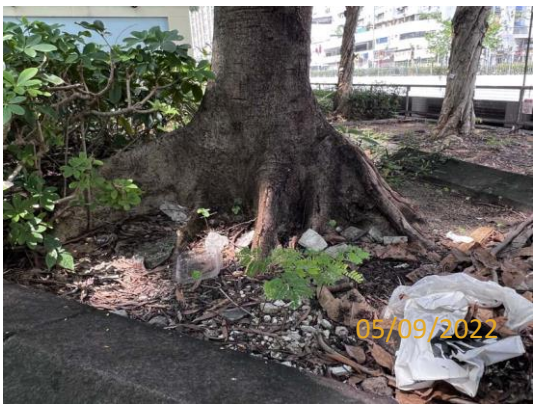
Overview of the tree



Crown



Trunk (leaning, burls in the trunk)



Root (restricted root)

Photographic Records of Existing Trees

Project Title: Proposed Joint-user Complex at Shan Mei Street, Fo Tan
Location: Subject Site (Shan Mei Street and Min Fong Street)

InForM No.: 8704 Date of Tree Survey / Photo Taken: 05/09/2022
Project No.: ZX609

Tree No.: T27

Species: *Delonix regia*

Location: Within site



Overview of the tree



Crown



Trunk (leaning, abrupt bends)



Root (restricted root)

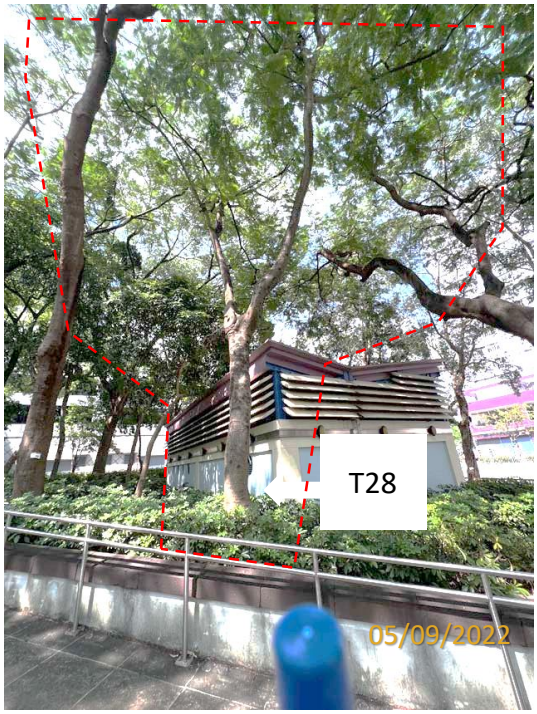
Photographic Records of Existing Trees

Project Title: Proposed Joint-user Complex at Shan Mei Street, Fo Tan
Location: Subject Site (Shan Mei Street and Min Fong Street)

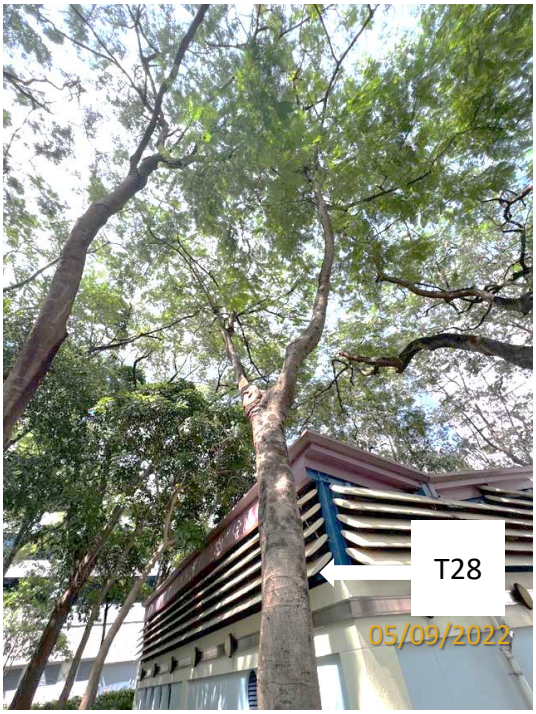
InForM No.: 8704 Date of Tree Survey / Photo Taken: 05/09/2022
Project No.: ZX609

Tree No.: T28

Species: *Delonix regia* Location: Within site



Overview of the tree



Crown



Trunk (codominant trunk)



Root (restricted root)

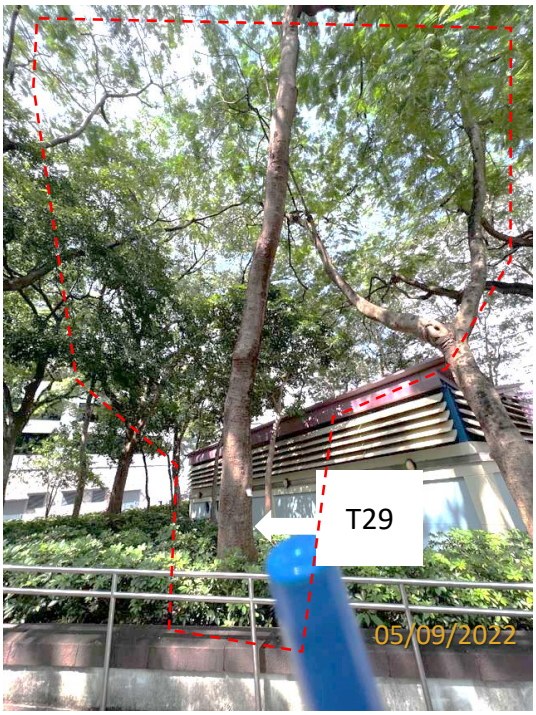
Photographic Records of Existing Trees

Project Title: Proposed Joint-user Complex at Shan Mei Street, Fo Tan
Location: Subject Site (Shan Mei Street and Min Fong Street)

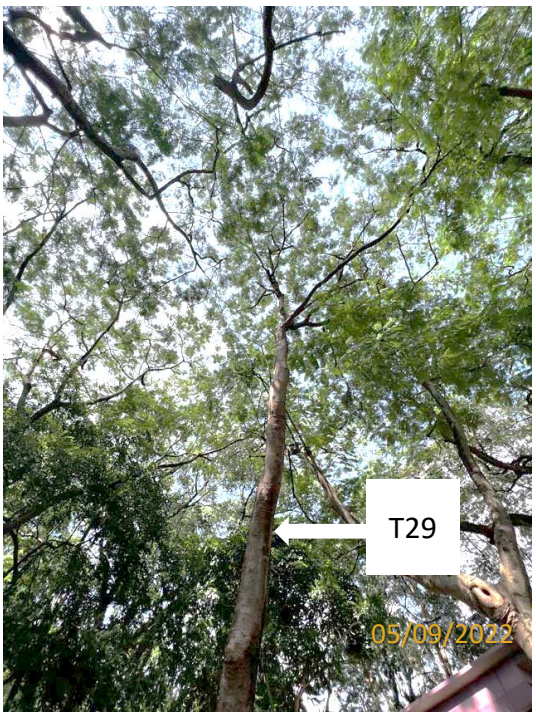
InForM No.: 8704 Date of Tree Survey / Photo Taken: 05/09/2022
Project No.: ZX609

Tree No.: T29

Species: *Delonix regia* Location: Within site



Overview of the tree



Crown (low live crown ratio)



Trunk



Root (restricted root)

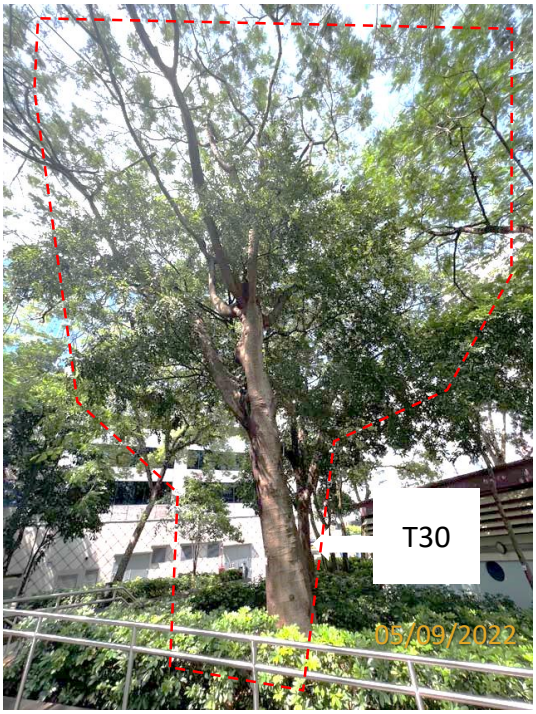
Photographic Records of Existing Trees

Project Title: Proposed Joint-user Complex at Shan Mei Street, Fo Tan
Location: Subject Site (Shan Mei Street and Min Fong Street)

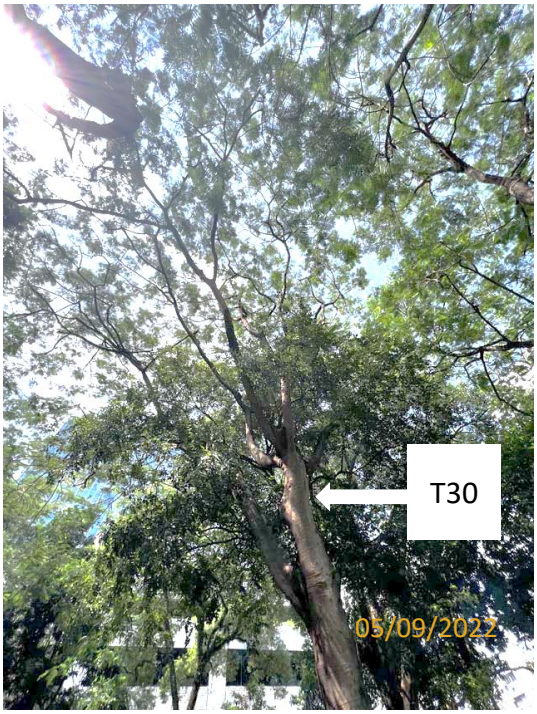
InForM No.: 8704 Date of Tree Survey / Photo Taken: 05/09/2022
Project No.: ZX609

Tree No.: T30

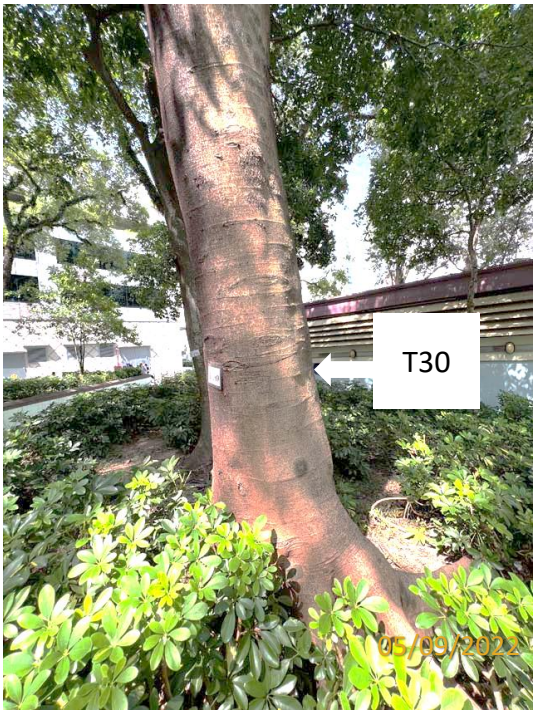
Species: *Delonix regia* Location: Within site



Overview of the tree



Crown



Trunk (leaning)



Root (restricted root)

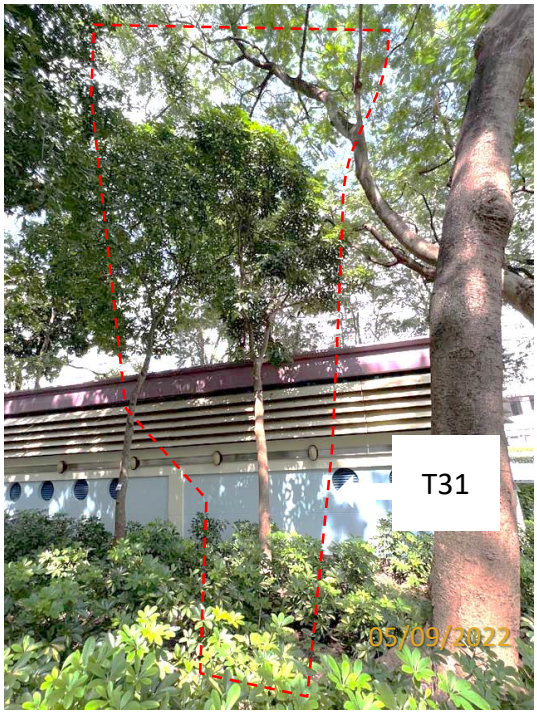
Photographic Records of Existing Trees

Project Title: Proposed Joint-user Complex at Shan Mei Street, Fo Tan
Location: Subject Site (Shan Mei Street and Min Fong Street)

InForM No.: 8704 Date of Tree Survey / Photo Taken: 05/09/2022
Project No.: ZX609

Tree No.: T31

Species: *Schefflera heptaphylla* Location: Within site



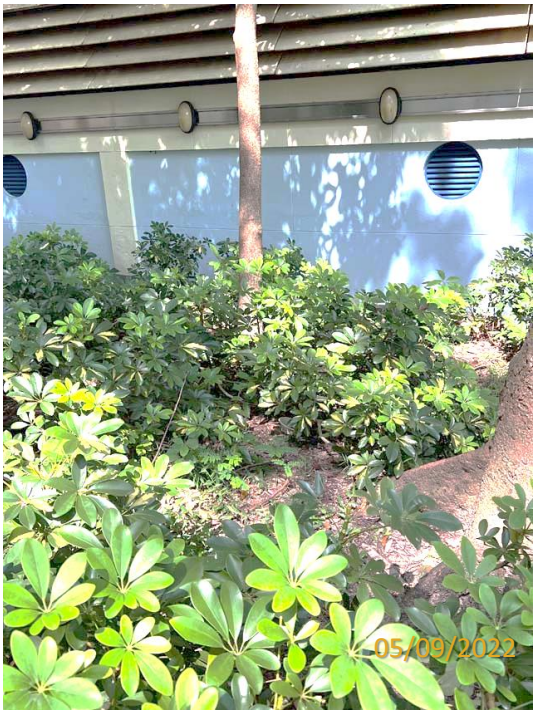
Overview of the tree



Crown



Trunk



Root

Photographic Records of Existing Trees

Project Title: Proposed Joint-user Complex at Shan Mei Street, Fo Tan
Location: Subject Site (Shan Mei Street and Min Fong Street)

InForM No.: 8704 Date of Tree Survey / Photo Taken: 05/09/2022
Project No.: ZX609

Tree No.: T32

Species: *Sterculia lanceolata* Location: Within site



Overview of the tree



Crown



Trunk



Root

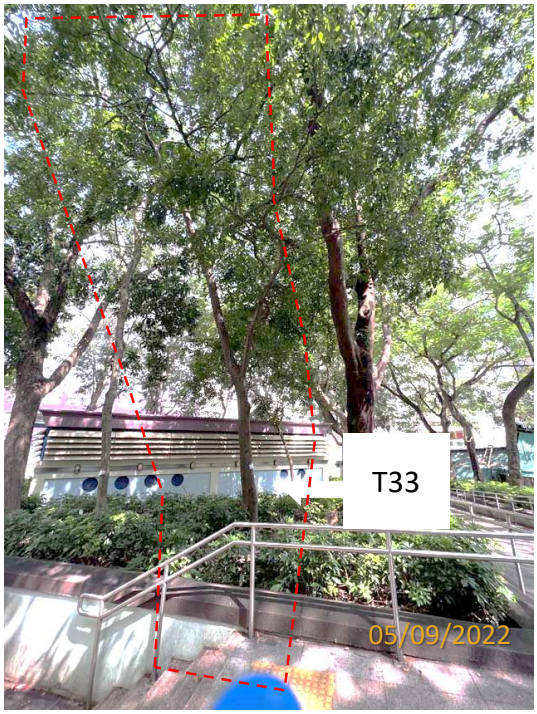
Photographic Records of Existing Trees

Project Title: Proposed Joint-user Complex at Shan Mei Street, Fo Tan
Location: Subject Site (Shan Mei Street and Min Fong Street)

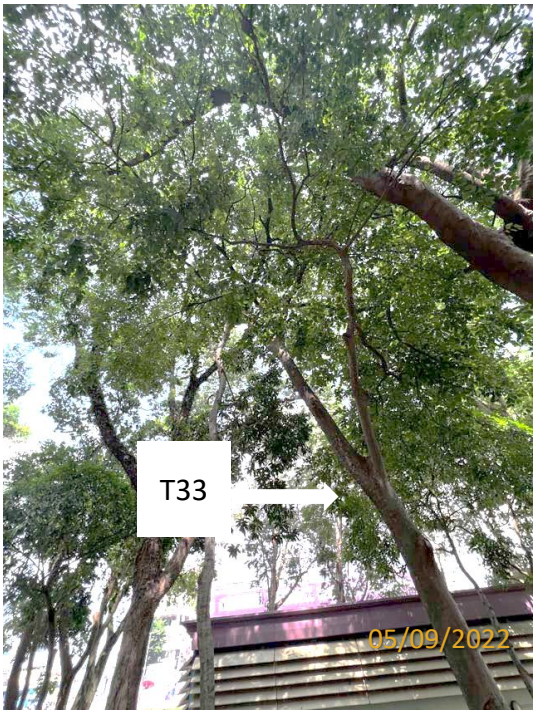
InForM No.: 8704 Date of Tree Survey / Photo Taken: 05/09/2022
Project No.: ZX609

Tree No.: T33

Species: *Celtis sinensis* Location: Within site



Overview of the tree



Crown (codominant trunk)



Trunk (leaning, wound at the trunk)



Root (restricted root)

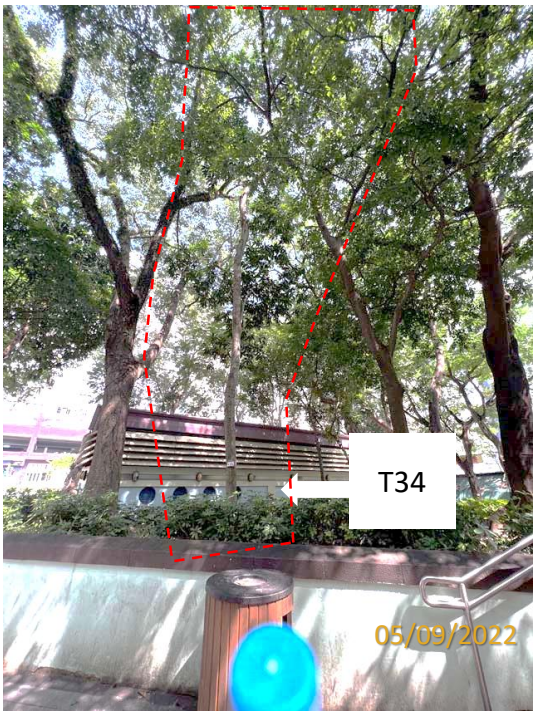
Photographic Records of Existing Trees

Project Title: Proposed Joint-user Complex at Shan Mei Street, Fo Tan
Location: Subject Site (Shan Mei Street and Min Fong Street)

InForM No.: 8704 Date of Tree Survey / Photo Taken: 05/09/2022
Project No.: ZX609

Tree No.: T34

Species: *Cleidiocarpon cavaleriei* Location: Within site



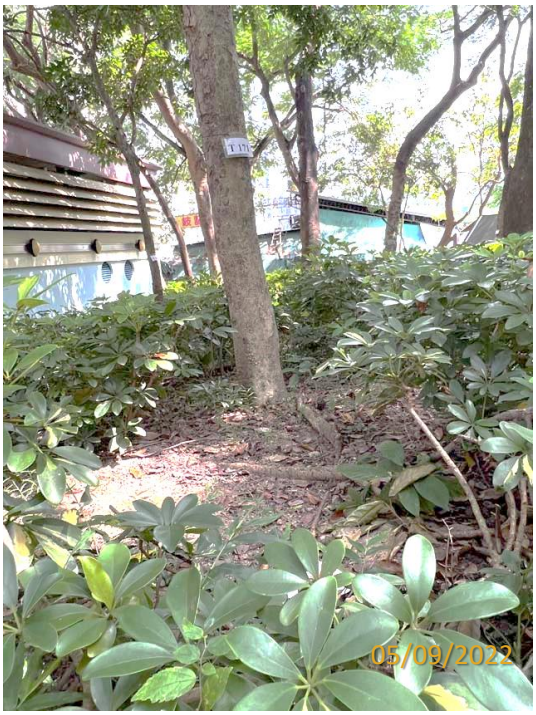
Overview of the tree



Crown (low live crown ratio)



Trunk



Root (restricted root)

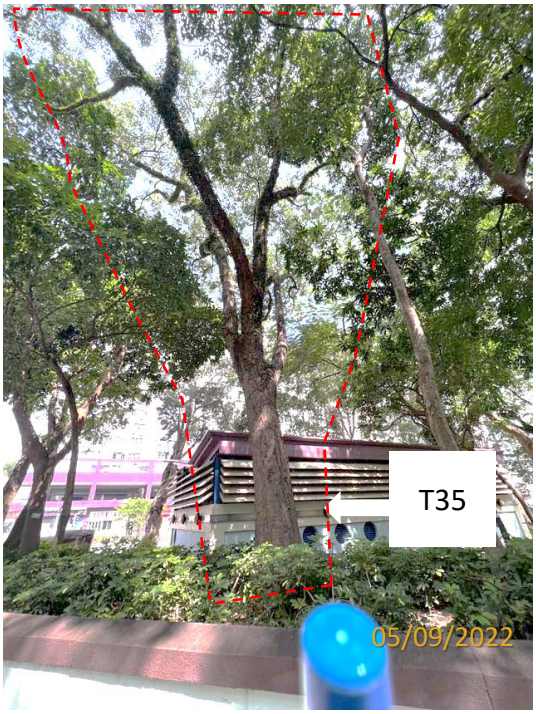
Photographic Records of Existing Trees

Project Title: Proposed Joint-user Complex at Shan Mei Street, Fo Tan
Location: Subject Site (Shan Mei Street and Min Fong Street)

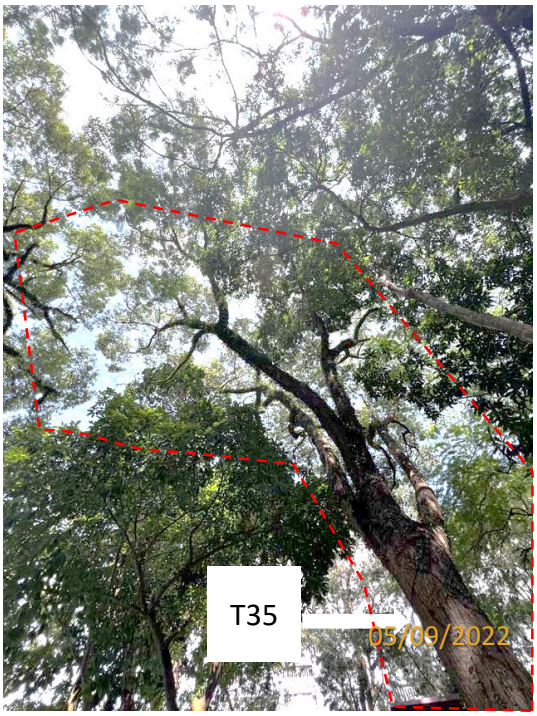
InForM No.: 8704 Date of Tree Survey / Photo Taken: 05/09/2022
Project No.: ZX609

Tree No.: T35

Species: *Cinnamomum camphora* Location: Within site



Overview of the tree



Crown



Trunk (leaning)



Root (restricted root)

Photographic Records of Existing Trees

Project Title: Proposed Joint-user Complex at Shan Mei Street, Fo Tan
Location: Subject Site (Shan Mei Street and Min Fong Street)

InForM No.: 8704 Date of Tree Survey / Photo Taken: 05/09/2022
Project No.: ZX609

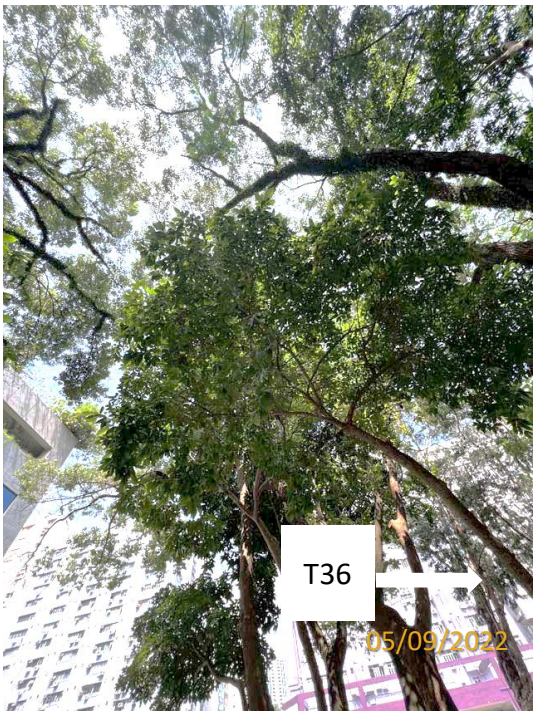
Tree No.: T36

Species: *Cleidiocarpon cavaleriei*

Location: Within site



Overview of the tree



Crown



Trunk (leaning)



Root (restricted root)

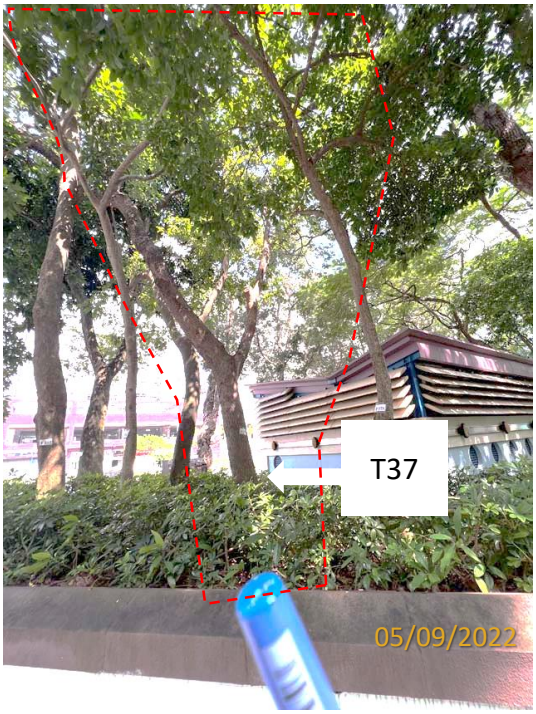
Photographic Records of Existing Trees

Project Title: Proposed Joint-user Complex at Shan Mei Street, Fo Tan
Location: Subject Site (Shan Mei Street and Min Fong Street)

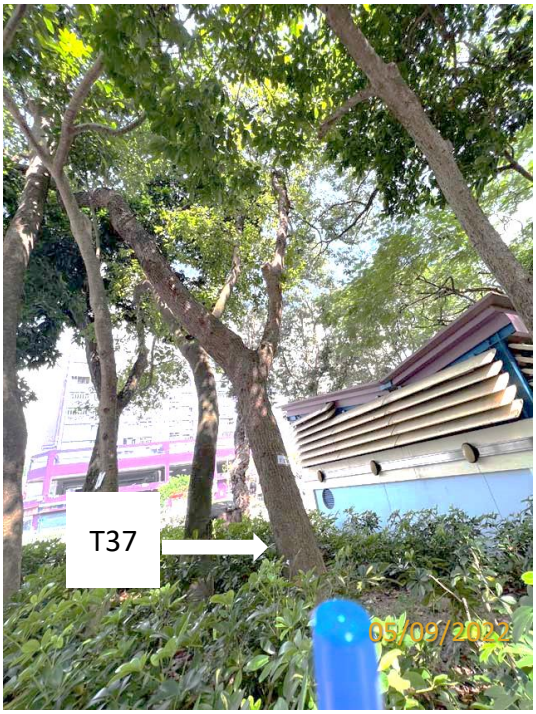
InForM No.: 8704 Date of Tree Survey / Photo Taken: 05/09/2022
Project No.: ZX609

Tree No.: T37

Species: *Cinnamomum camphora* Location: Within site



Overview of the tree



Crown



Trunk (leaning, codominant trunk)



Root (restricted root)

Photographic Records of Existing Trees

Project Title: Proposed Joint-user Complex at Shan Mei Street, Fo Tan
Location: Subject Site (Shan Mei Street and Min Fong Street)

InForM No.: 8704 Date of Tree Survey / Photo Taken: 05/09/2022
Project No.: ZX609

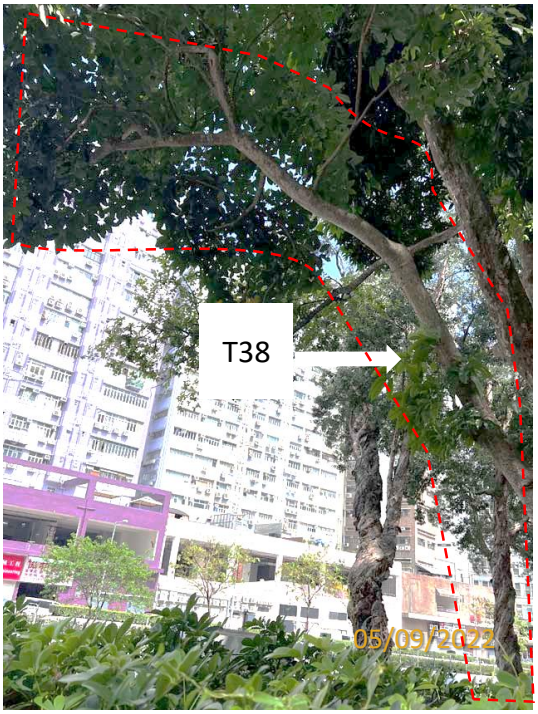
Tree No.: T38

Species: *Celtis sinensis*

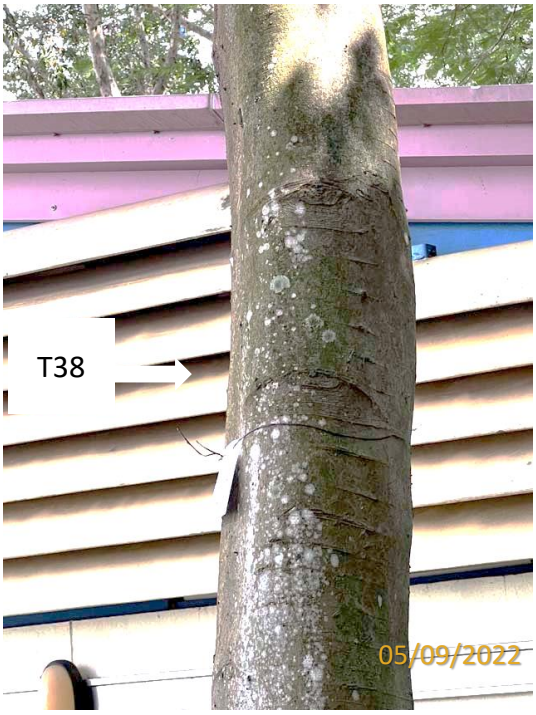
Location: Within site



Overview of the tree



Crown (wilted top, low live crown ratio)



Trunk



Root (restricted root)

Photographic Records of Existing Trees

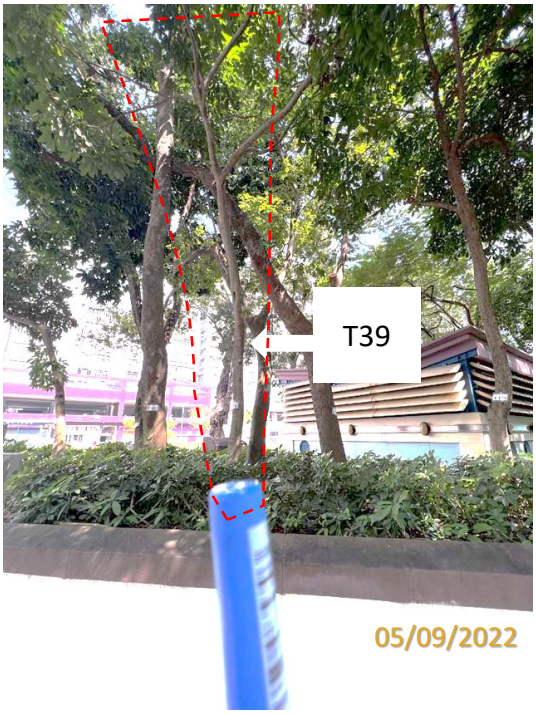
Project Title: Proposed Joint-user Complex at Shan Mei Street, Fo Tan
Location: Subject Site (Shan Mei Street and Min Fong Street)

InForM No.: 8704 Date of Tree Survey / Photo Taken: 05/09/2022
Project No.: ZX609

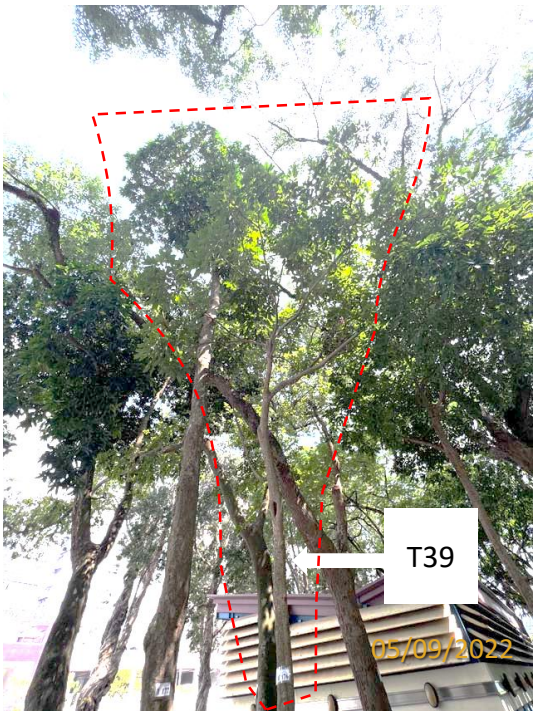
Tree No.: T39

Species: *Schefflera heptaphylla*

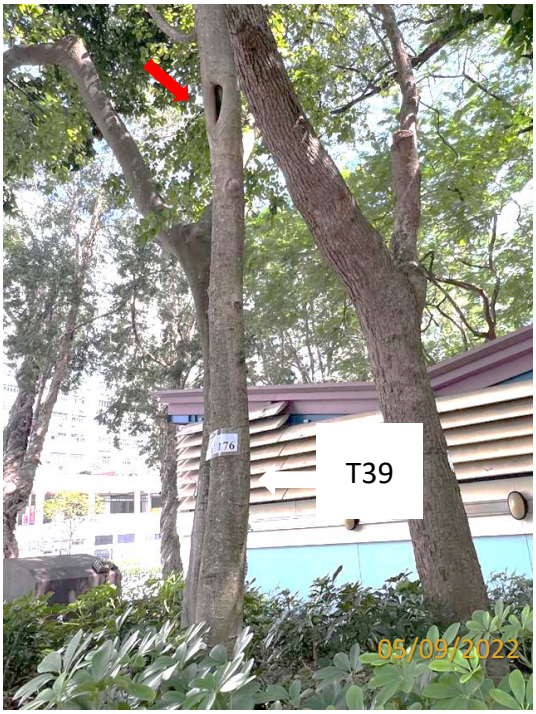
Location: Within site



Overview of the tree



Crown (low live crown ratio)



Trunk (wound at the trunk)



Root (restricted root)

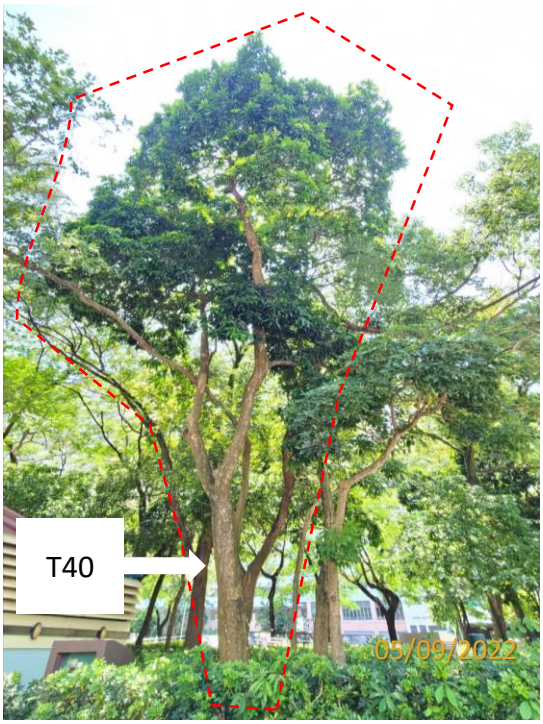
Photographic Records of Existing Trees

Project Title: Proposed Joint-user Complex at Shan Mei Street, Fo Tan
Location: Subject Site (Shan Mei Street and Min Fong Street)

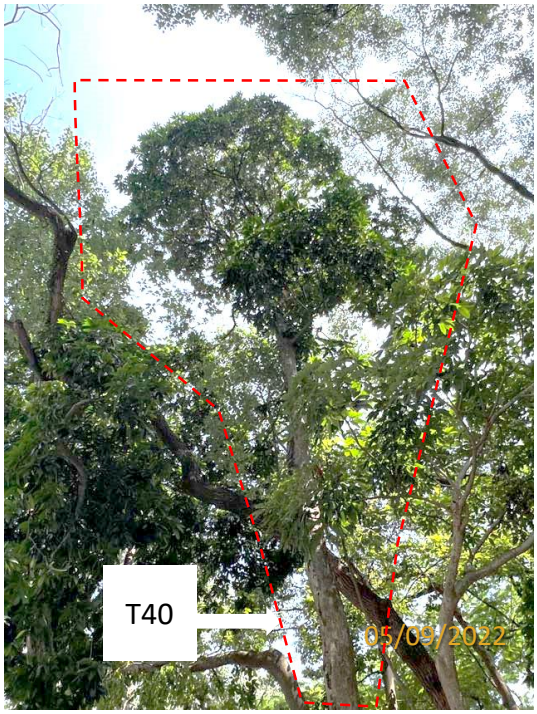
InForM No.: 8704 Date of Tree Survey / Photo Taken: 05/09/2022
Project No.: ZX609

Tree No.: T40

Species: *Cleidiocarpon cavaleriei* Location: Within site



Overview of the tree



Crown



Trunk (codominant trunk)



Root (restricted root)

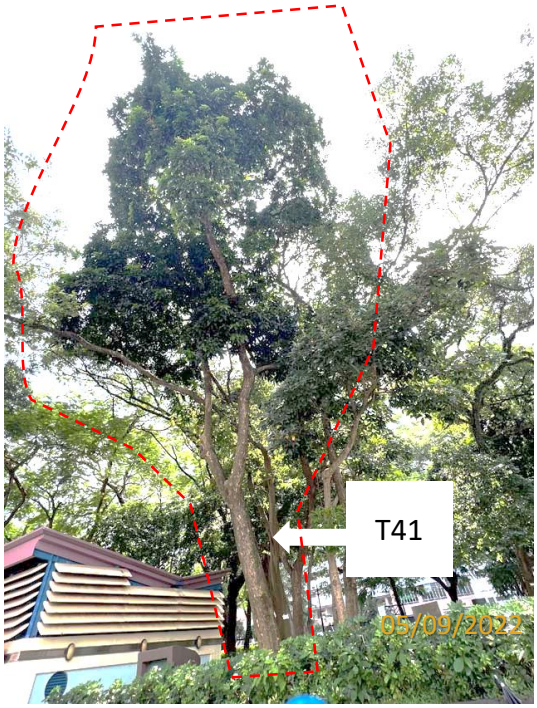
Photographic Records of Existing Trees

Project Title: Proposed Joint-user Complex at Shan Mei Street, Fo Tan
Location: Subject Site (Shan Mei Street and Min Fong Street)

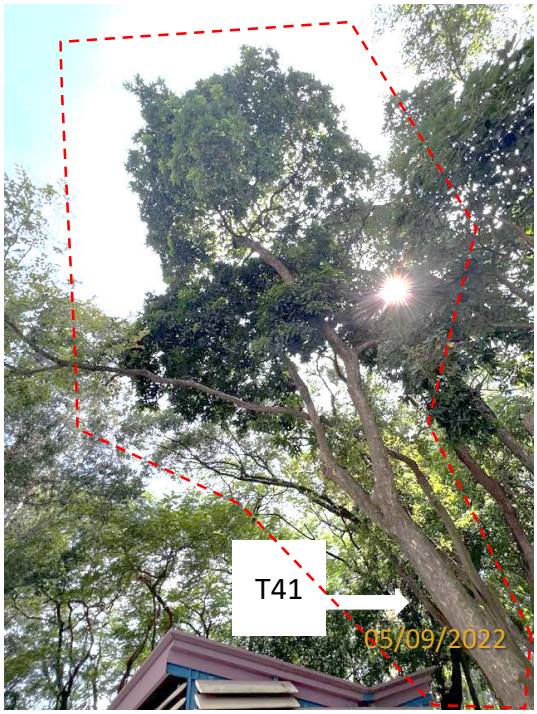
InForM No.: 8704 Date of Tree Survey / Photo Taken: 05/09/2022
Project No.: ZX609

Tree No.: T41

Species: *Cleidiocarpon cavaleriei* Location: Within site



Overview of the tree



Crown



Trunk (leaning, codominant trunk)



Root (restricted root)

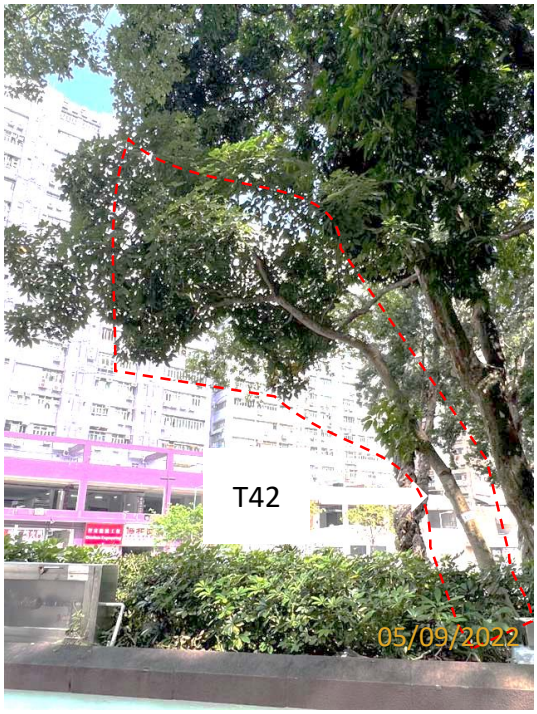
Photographic Records of Existing Trees

Project Title: Proposed Joint-user Complex at Shan Mei Street, Fo Tan
Location: Subject Site (Shan Mei Street and Min Fong Street)

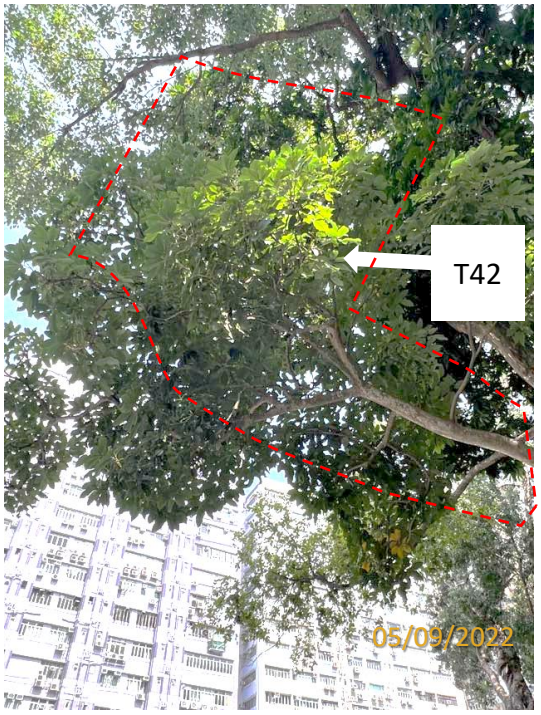
InForM No.: 8704 Date of Tree Survey / Photo Taken: 05/09/2022
Project No.: ZX609

Tree No.: T42

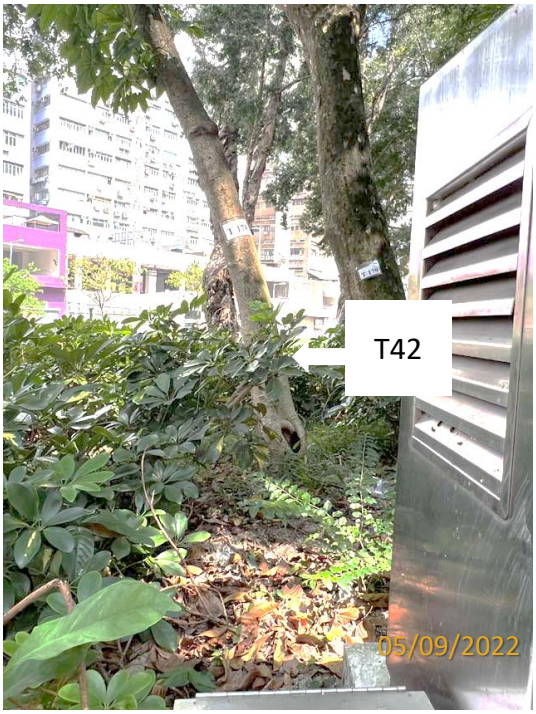
Species: *Schefflera heptaphylla* Location: Within site



Overview of the tree



Crown (wilted top, low live crown ratio)



Trunk (leaning)



Root (restricted root)

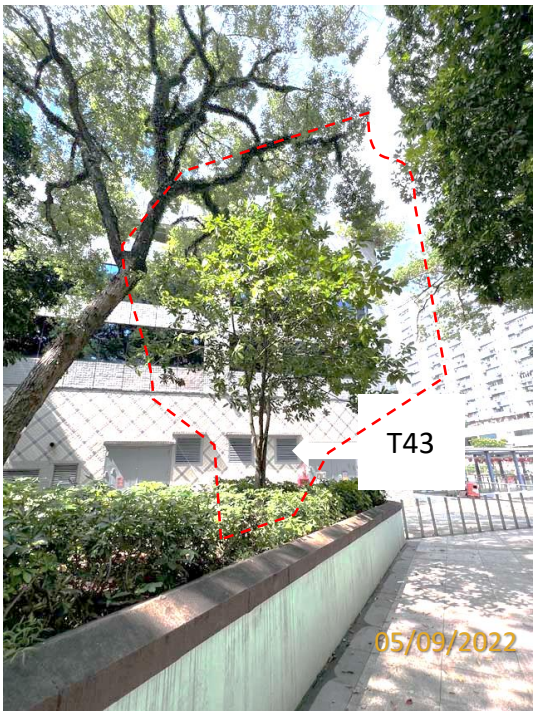
Photographic Records of Existing Trees

Project Title: Proposed Joint-user Complex at Shan Mei Street, Fo Tan
Location: Subject Site (Shan Mei Street and Min Fong Street)

InForM No.: 8704 Date of Tree Survey / Photo Taken: 05/09/2022
Project No.: ZX609

Tree No.: T43

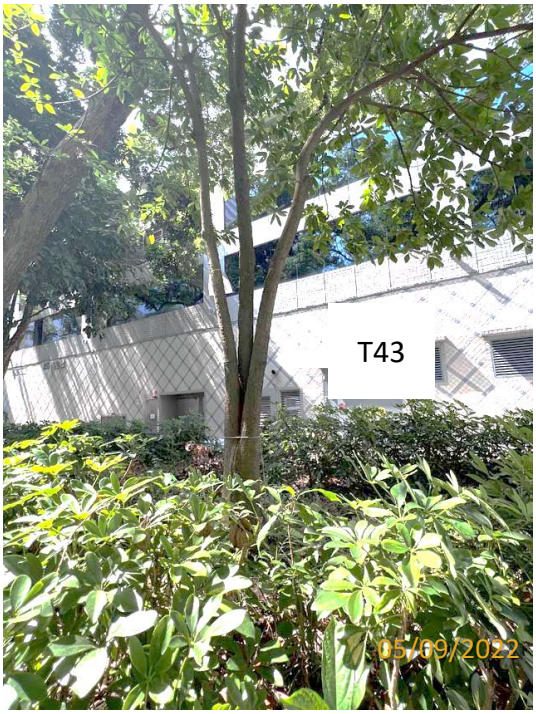
Species: *Sterculia lanceolata* Location: Within site



Overview of the tree



Crown



Trunk (multi trunk)



Root (restricted root)

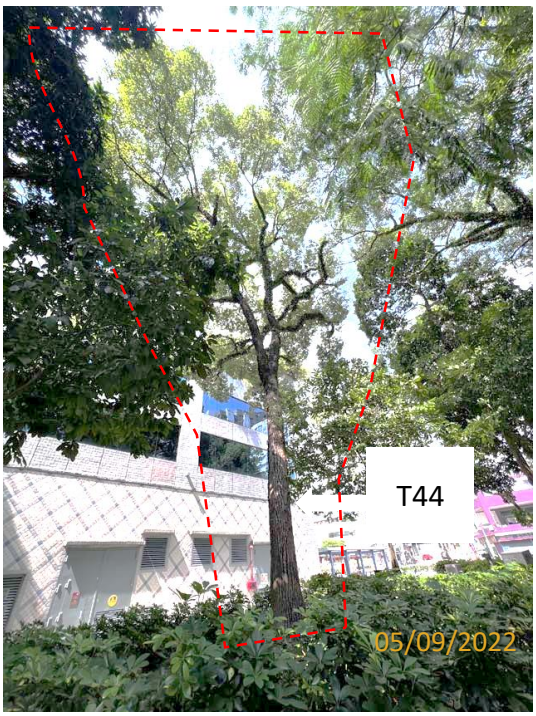
Photographic Records of Existing Trees

Project Title: Proposed Joint-user Complex at Shan Mei Street, Fo Tan
Location: Subject Site (Shan Mei Street and Min Fong Street)

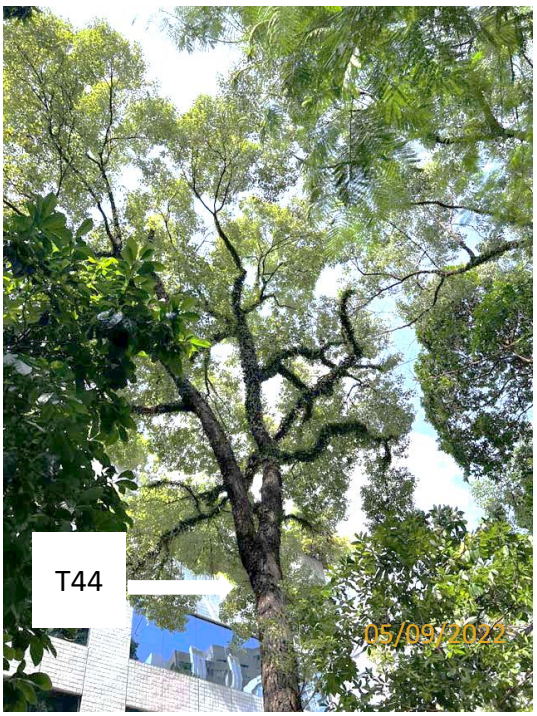
InForM No.: 8704 Date of Tree Survey / Photo Taken: 05/09/2022
Project No.: ZX609

Tree No.: T44

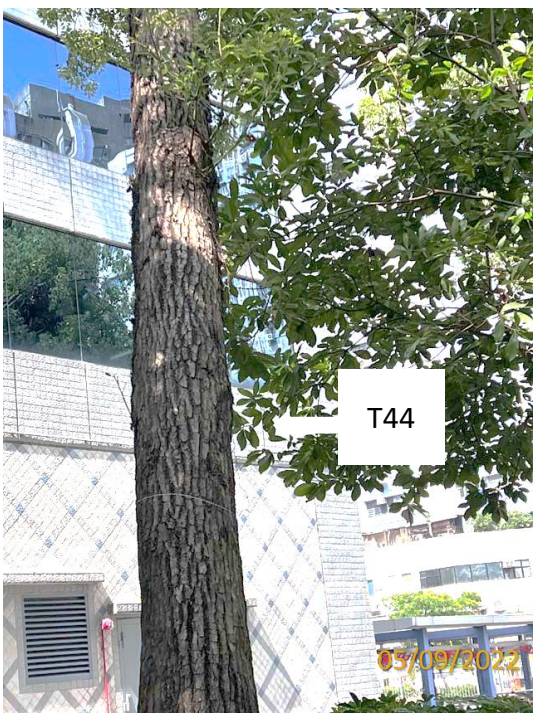
Species: *Cinnamomum camphora* Location: Within site



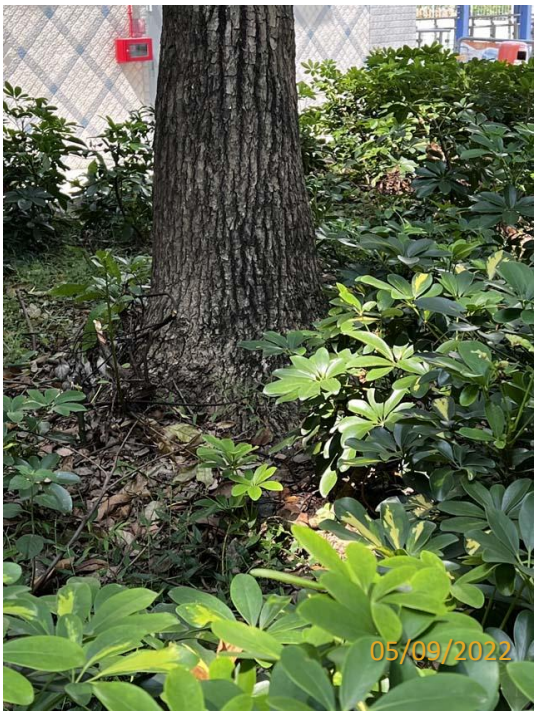
Overview of the tree



Crown (codominant trunk)



Trunk



Root (restricted root)

Photographic Records of Existing Trees

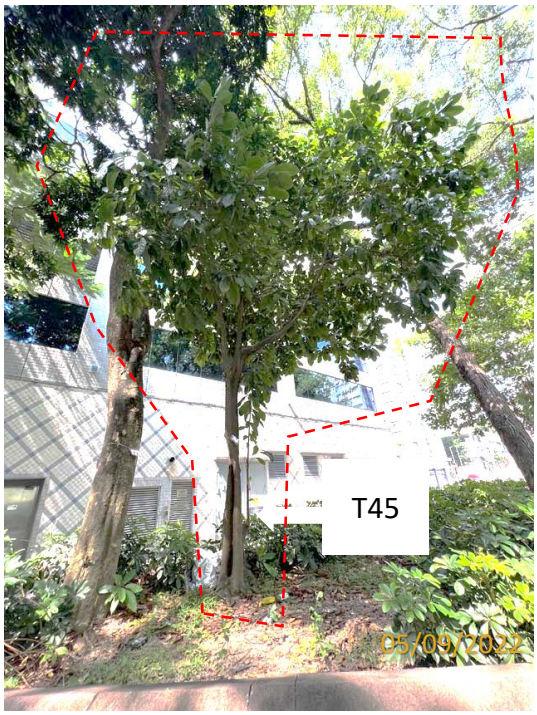
Project Title: Proposed Joint-user Complex at Shan Mei Street, Fo Tan
Location: Subject Site (Shan Mei Street and Min Fong Street)

InForM No.: 8704 Date of Tree Survey / Photo Taken: 05/09/2022
Project No.: ZX609

Tree No.: T45

Species: *Sterculia lanceolata*

Location: Within site



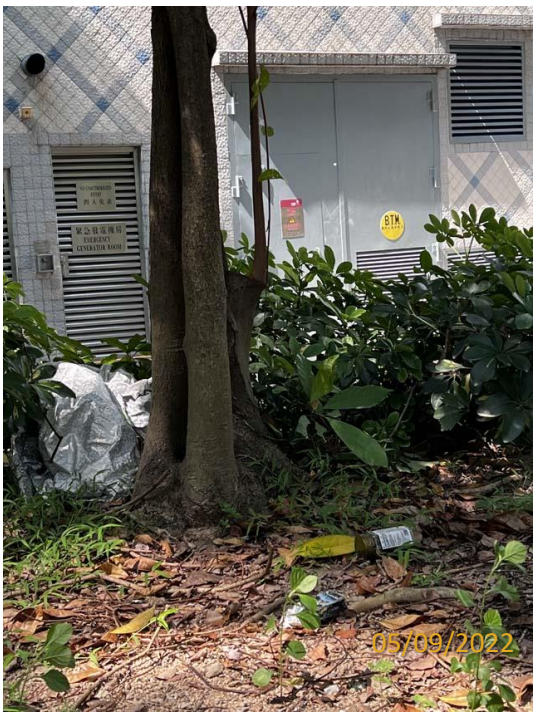
Overview of the tree



Crown



Trunk (multi trunk, wound at the branches union)



Root (restricted root)

Photographic Records of Existing Trees

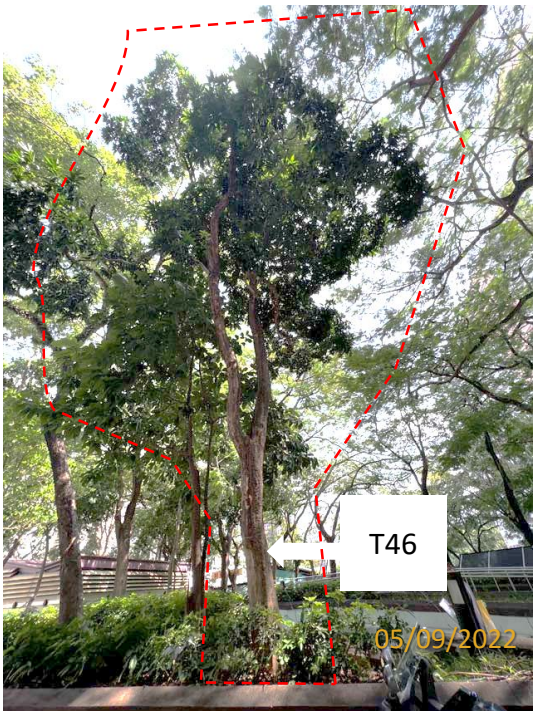
Project Title: Proposed Joint-user Complex at Shan Mei Street, Fo Tan
Location: Subject Site (Shan Mei Street and Min Fong Street)

InForM No.: 8704 Date of Tree Survey / Photo Taken: 05/09/2022
Project No.: ZX609

Tree No.: T46

Species: *Cleidiocarpon cavaleriei*

Location: Within site



Overview of the tree



Crown (codominant trunk)



Trunk



Root (restricted root)

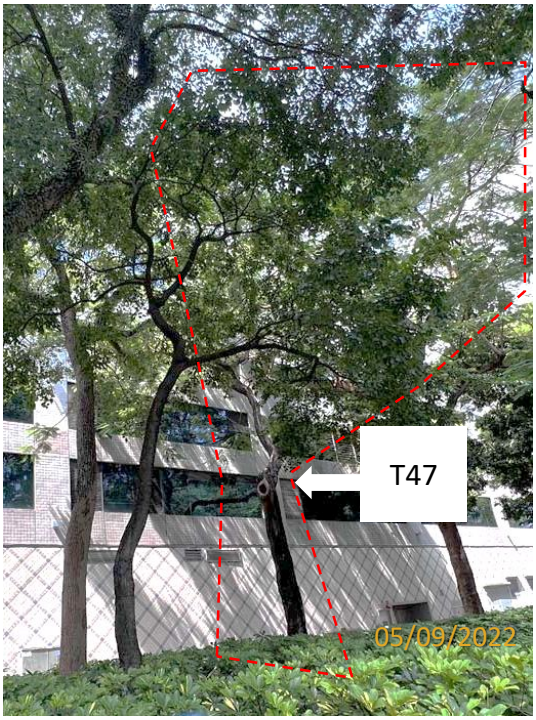
Photographic Records of Existing Trees

Project Title: Proposed Joint-user Complex at Shan Mei Street, Fo Tan
Location: Subject Site (Shan Mei Street and Min Fong Street)

InForM No.: 8704 Date of Tree Survey / Photo Taken: 05/09/2022
Project No.: ZX609

Tree No.: T47

Species: *Delonix regia* Location: Within site



Overview of the tree



Crown



Trunk (leaning, crooked trunk, cavity at the trunk)



Root (restricted root)

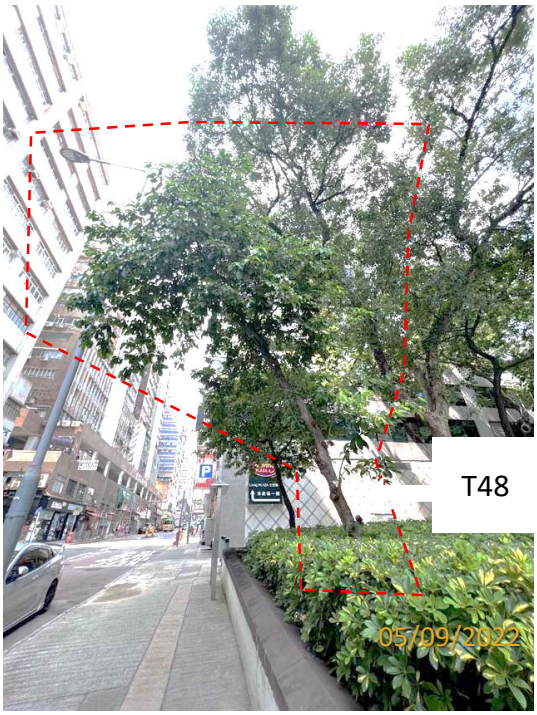
Photographic Records of Existing Trees

Project Title: Proposed Joint-user Complex at Shan Mei Street, Fo Tan
Location: Subject Site (Shan Mei Street and Min Fong Street)

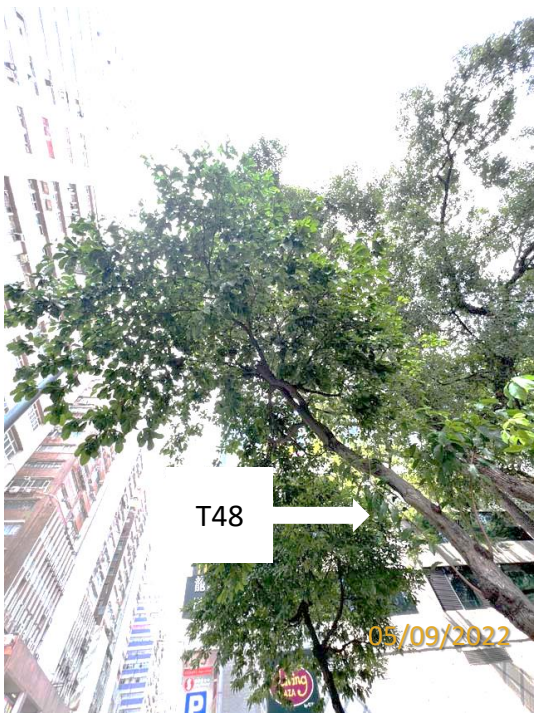
InForM No.: 8704 Date of Tree Survey / Photo Taken: 05/09/2022
Project No.: ZX609

Tree No.: T48

Species: *Sterculia lanceolata* Location: Within site



Overview of the tree



Crown (low live crown ratio)



Trunk (leaning, wound at the trunk, epicormics)



Root (restricted root)

Photographic Records of Existing Trees

Project Title: Proposed Joint-user Complex at Shan Mei Street, Fo Tan
Location: Subject Site (Shan Mei Street and Min Fong Street)

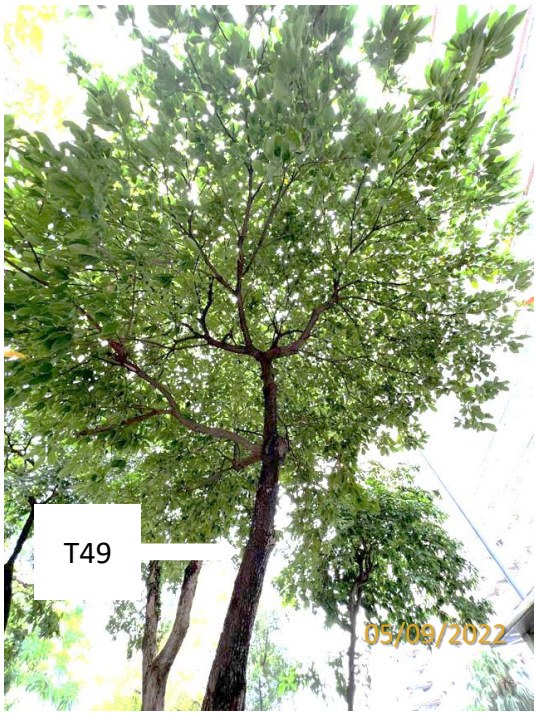
InForM No.: 8704 Date of Tree Survey / Photo Taken: 05/09/2022
Project No.: ZX609

Tree No.: T49

Species: *Sterculia lanceolata* Location: Within site



Overview of the tree



Crown



Trunk



Root (restricted root)

Photographic Records of Existing Trees

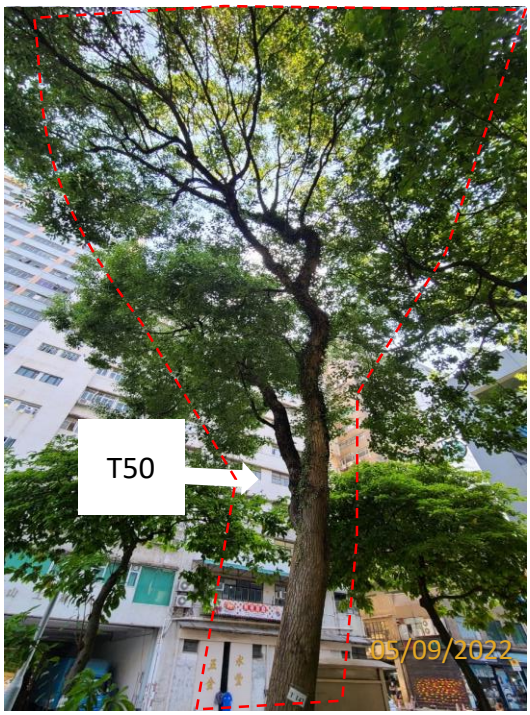
Project Title: Proposed Joint-user Complex at Shan Mei Street, Fo Tan
Location: Subject Site (Shan Mei Street and Min Fong Street)

InForM No.: 8704 Date of Tree Survey / Photo Taken: 05/09/2022
Project No.: ZX609

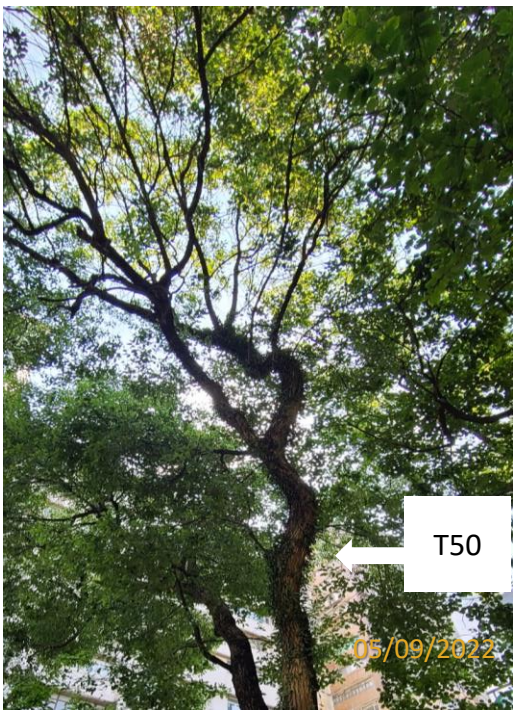
Tree No.: T50

Species: *Cinnamomum camphora*

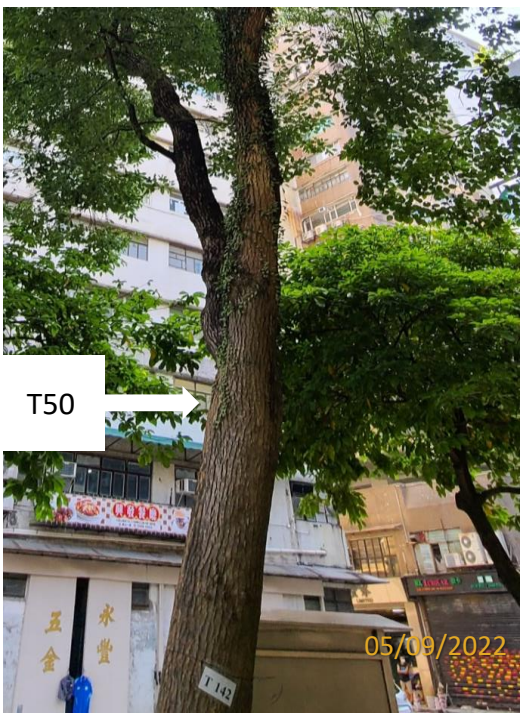
Location: Within site



Overview of the tree



Crown (imbalanced crown)



Trunk



Root (restricted root)

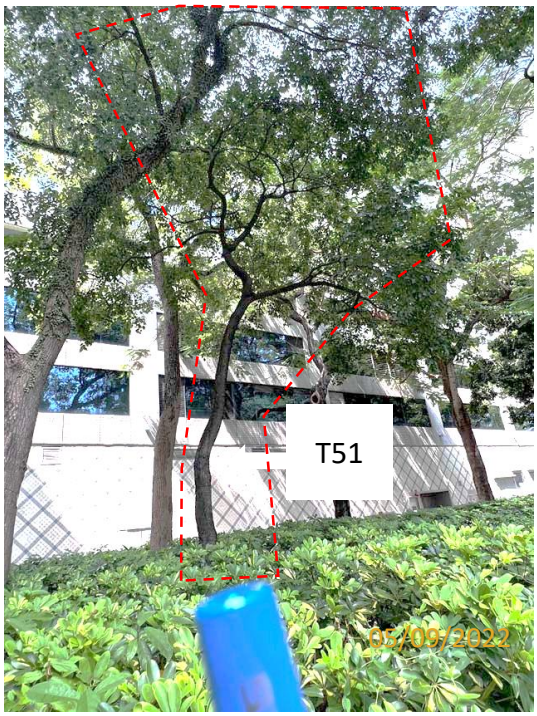
Photographic Records of Existing Trees

Project Title: Proposed Joint-user Complex at Shan Mei Street, Fo Tan
Location: Subject Site (Shan Mei Street and Min Fong Street)

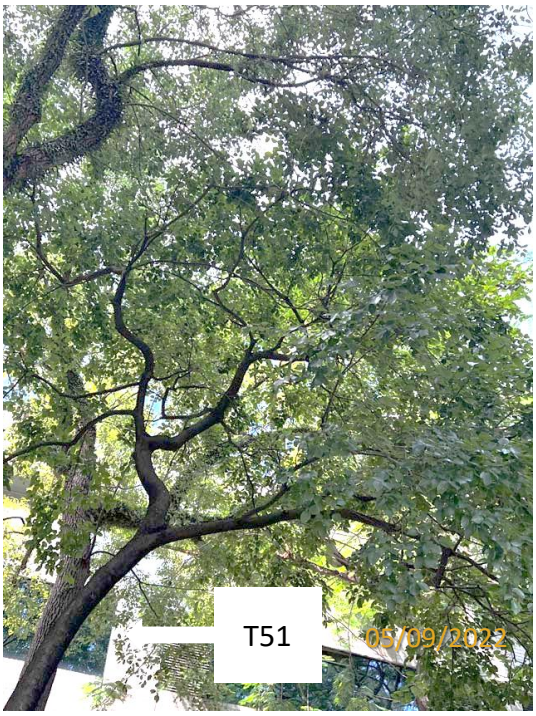
InForM No.: 8704 Date of Tree Survey / Photo Taken: 05/09/2022
Project No.: ZX609

Tree No.: T51

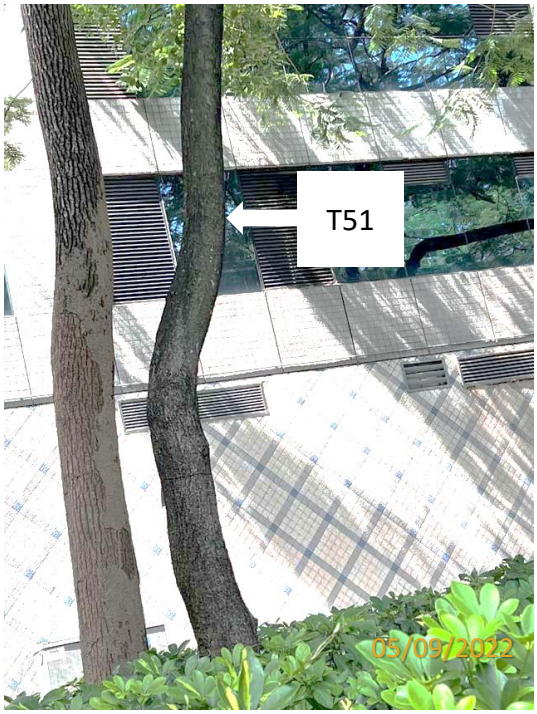
Species: *Cinnamomum camphora* Location: Within site



Overview of the tree



Crown



Trunk (abrupt bends)



Root (restricted root)

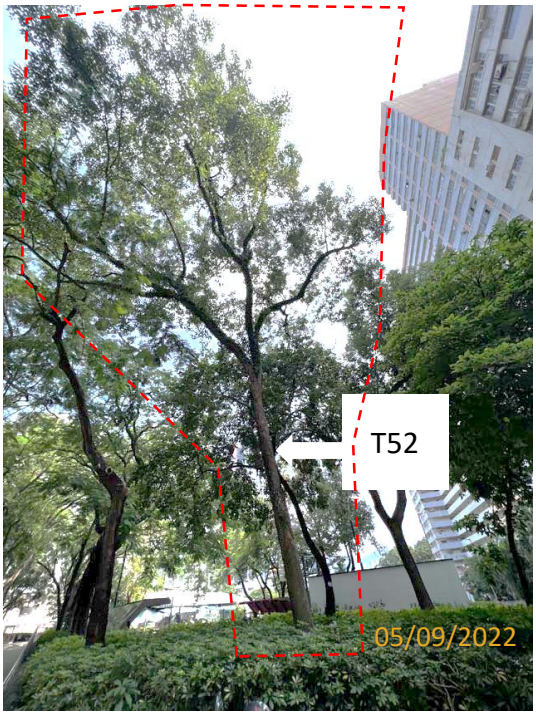
Photographic Records of Existing Trees

Project Title: Proposed Joint-user Complex at Shan Mei Street, Fo Tan
Location: Subject Site (Shan Mei Street and Min Fong Street)

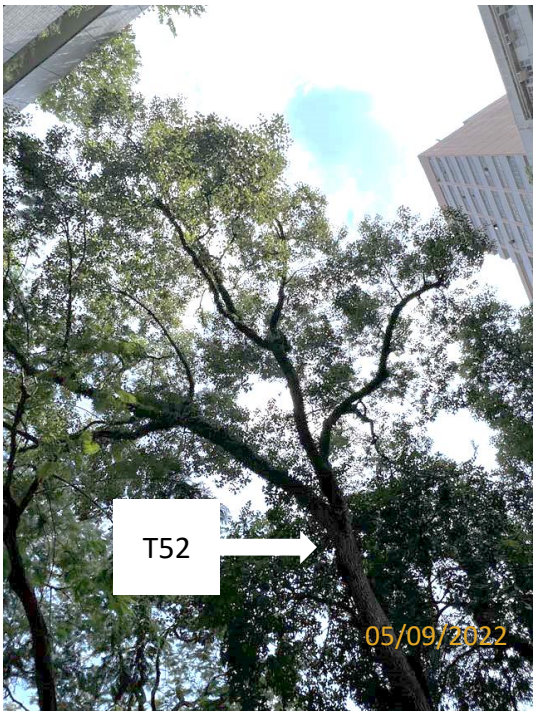
InForM No.: 8704 Date of Tree Survey / Photo Taken: 05/09/2022
Project No.: ZX609

Tree No.: T52

Species: *Cinnamomum camphora* Location: Within site



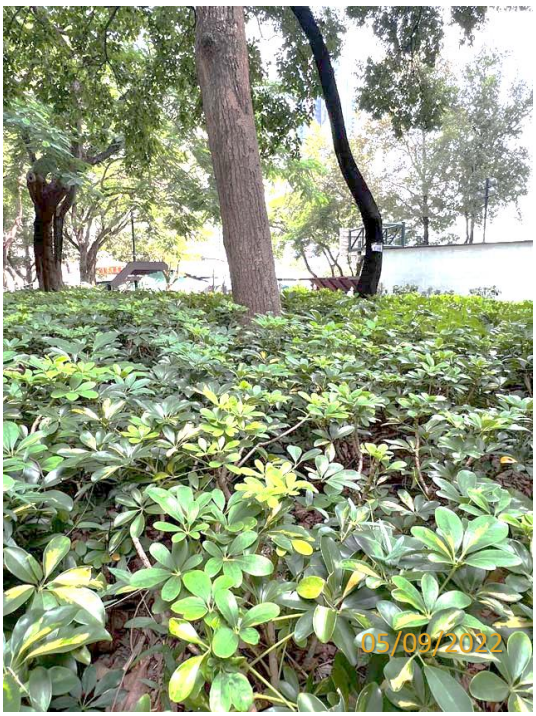
Overview of the tree



Crown



Trunk (leaning)



Root (restricted root)

Photographic Records of Existing Trees

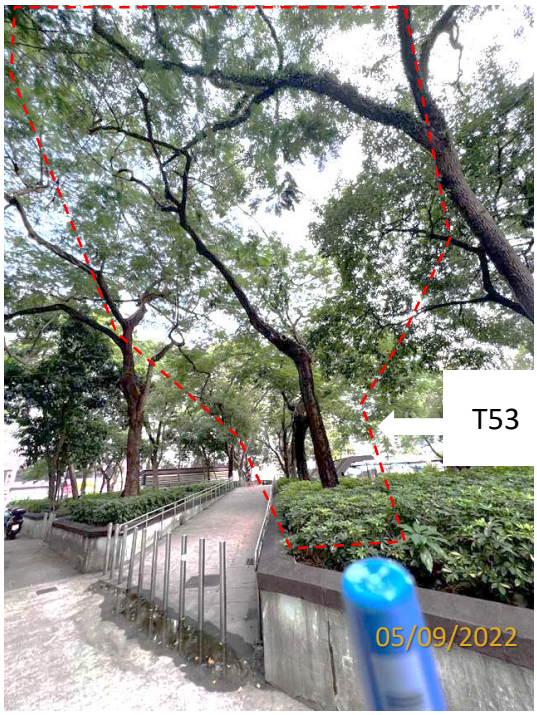
Project Title: Proposed Joint-user Complex at Shan Mei Street, Fo Tan
Location: Subject Site (Shan Mei Street and Min Fong Street)

InForM No.: 8704 Date of Tree Survey / Photo Taken: 05/09/2022
Project No.: ZX609

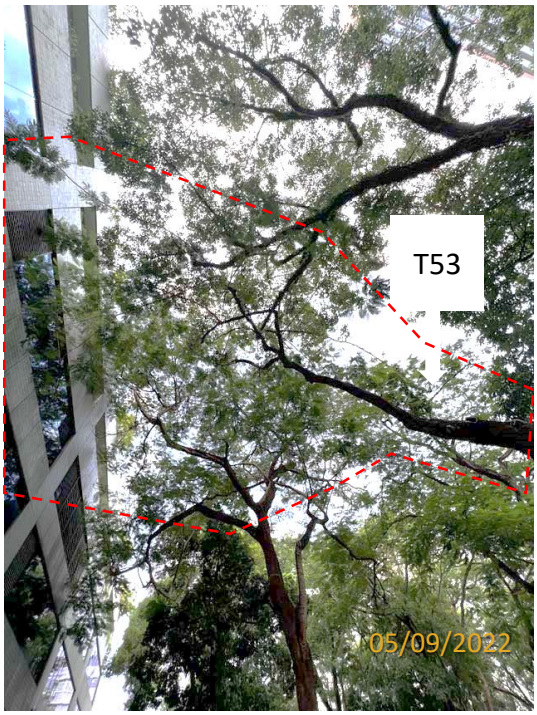
Tree No.: T53

Species: *Delonix regia*

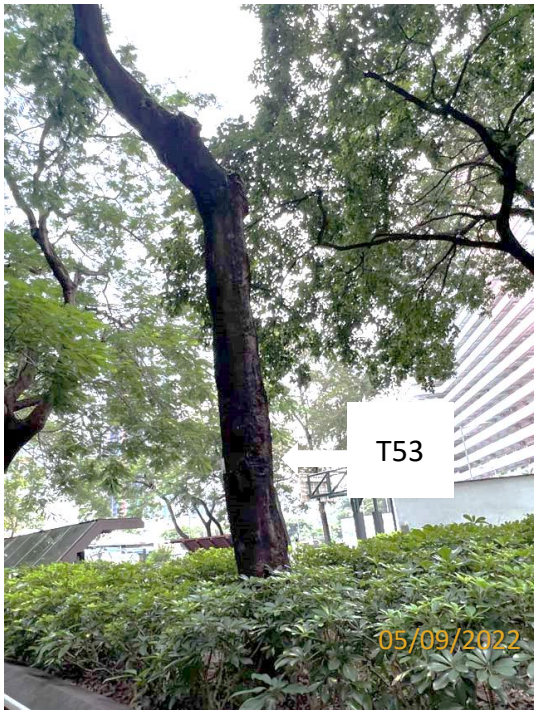
Location: Within site



Overview of the tree



Crown (low live crown ratio)



Trunk (crooked trunk,
cavity at the trunk)



Root (restricted root)

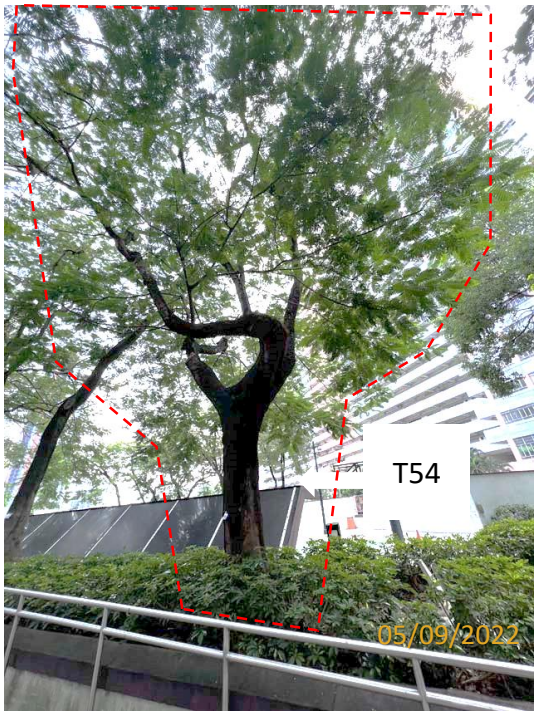
Photographic Records of Existing Trees

Project Title: Proposed Joint-user Complex at Shan Mei Street, Fo Tan
Location: Subject Site (Shan Mei Street and Min Fong Street)

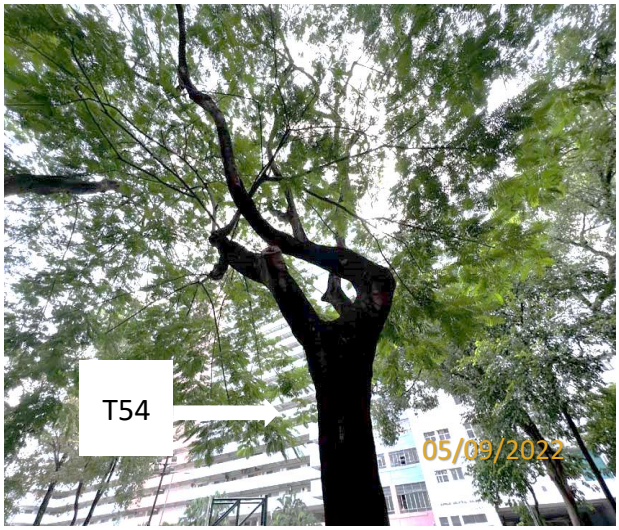
InForM No.: 8704 Date of Tree Survey / Photo Taken: 05/09/2022
Project No.: ZX609

Tree No.: T54

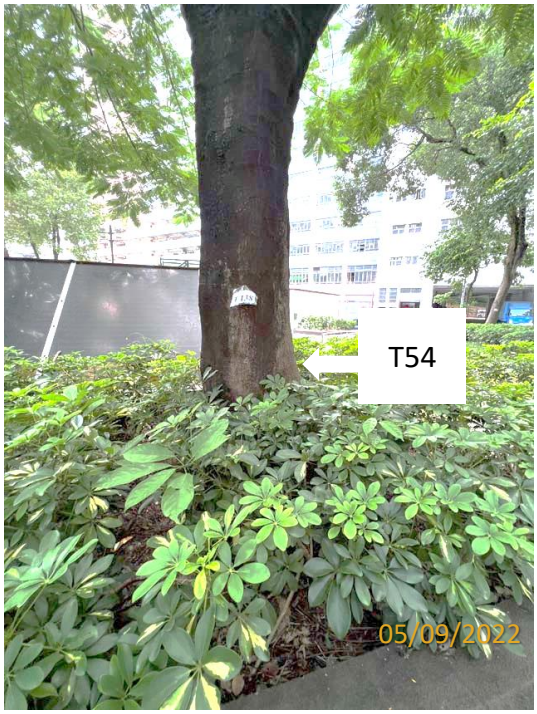
Species: *Delonix regia* Location: Within site



Overview of the tree



Crown



Trunk



Root (restricted root)

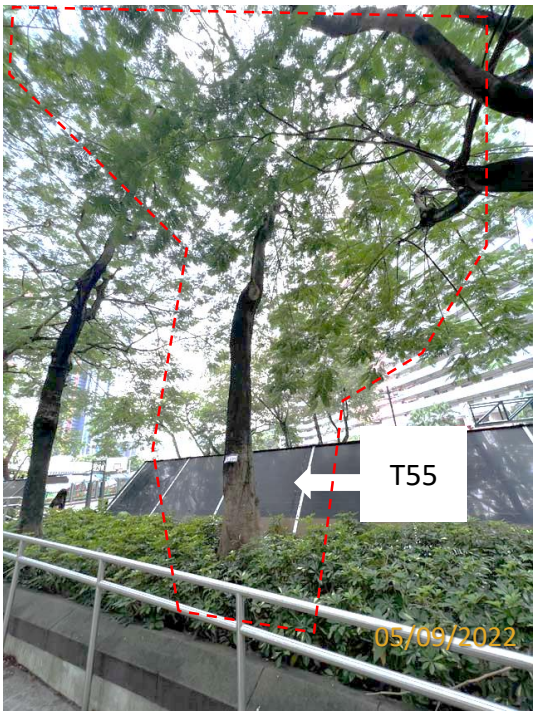
Photographic Records of Existing Trees

Project Title: Proposed Joint-user Complex at Shan Mei Street, Fo Tan
Location: Subject Site (Shan Mei Street and Min Fong Street)

InForM No.: 8704 Date of Tree Survey / Photo Taken: 05/09/2022
Project No.: ZX609

Tree No.: T55

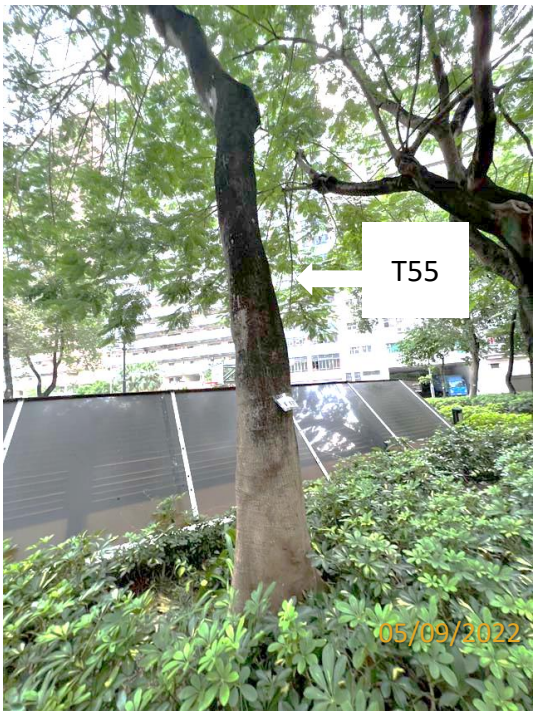
Species: *Delonix regia* Location: Within site



Overview of the tree



Crown (low live crown ratio)



Trunk (crooked trunk,
cavity at the trunk)



Root (restricted root)

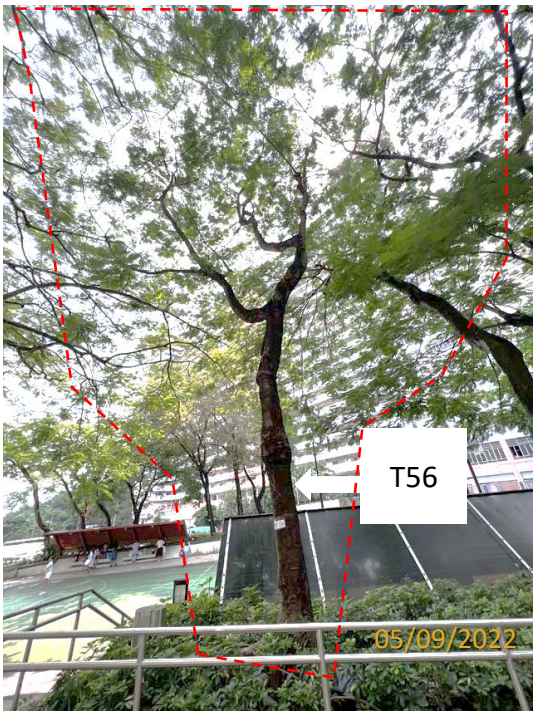
Photographic Records of Existing Trees

Project Title: Proposed Joint-user Complex at Shan Mei Street, Fo Tan
Location: Subject Site (Shan Mei Street and Min Fong Street)

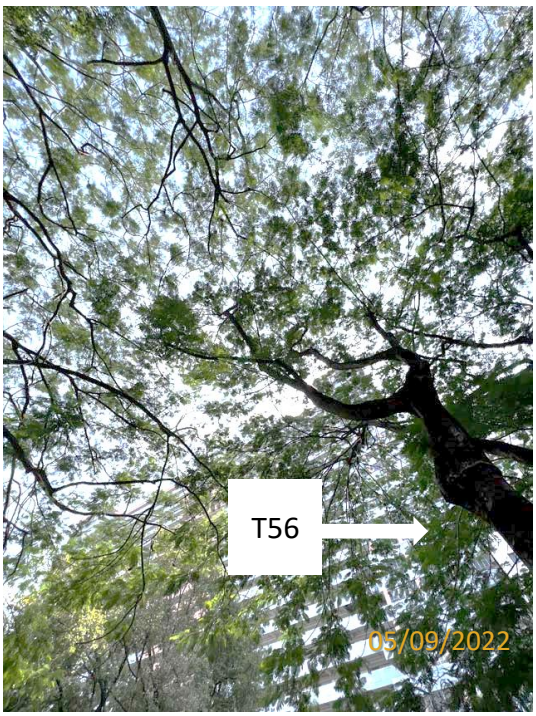
InForM No.: 8704 Date of Tree Survey / Photo Taken: 05/09/2022
Project No.: ZX609

Tree No.: T56

Species: *Delonix regia* Location: Within site



Overview of the tree



Crown



Trunk (burls at the trunk)



Root (restricted root)

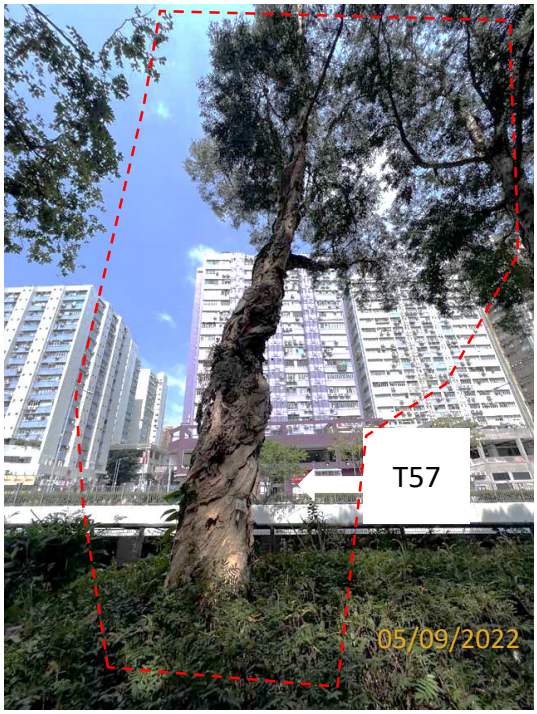
Photographic Records of Existing Trees

Project Title: Proposed Joint-user Complex at Shan Mei Street, Fo Tan
Location: Subject Site (Shan Mei Street and Min Fong Street)

InForM No.: 8704 Date of Tree Survey / Photo Taken: 05/09/2022
Project No.: ZX609

Tree No.: T57

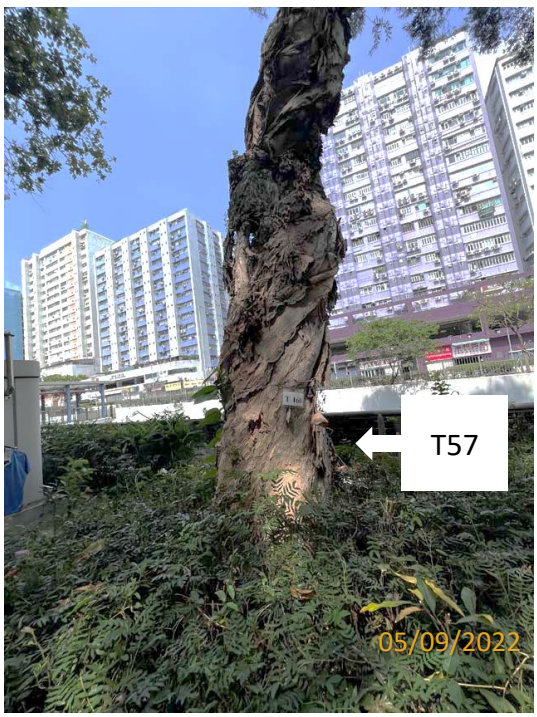
Species: *Melaleuca cajuputi subsp. Cumingiana* Location: Outside boundary



Overview of the tree



Crown



Trunk



Root (restricted root)

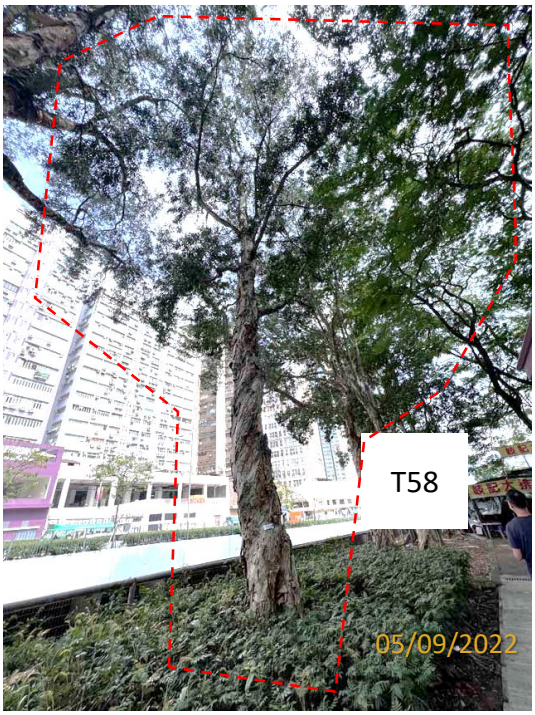
Photographic Records of Existing Trees

Project Title: Proposed Joint-user Complex at Shan Mei Street, Fo Tan
Location: Subject Site (Shan Mei Street and Min Fong Street)

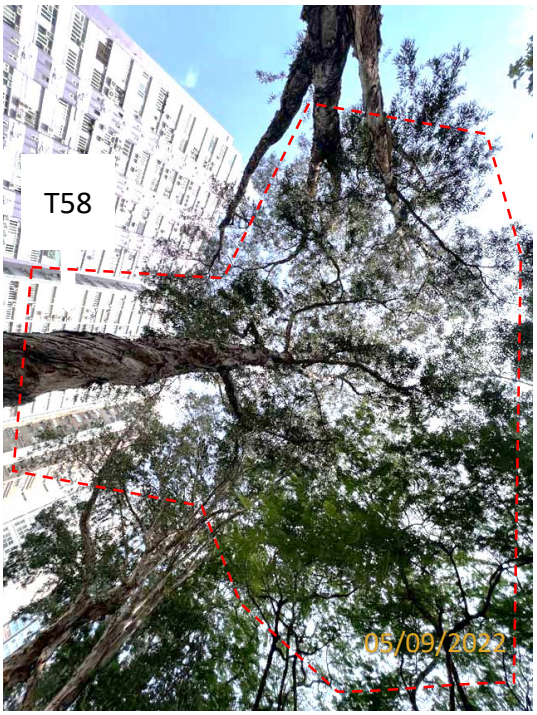
InForM No.: 8704 Date of Tree Survey / Photo Taken: 05/09/2022
Project No.: ZX609

Tree No.: T58

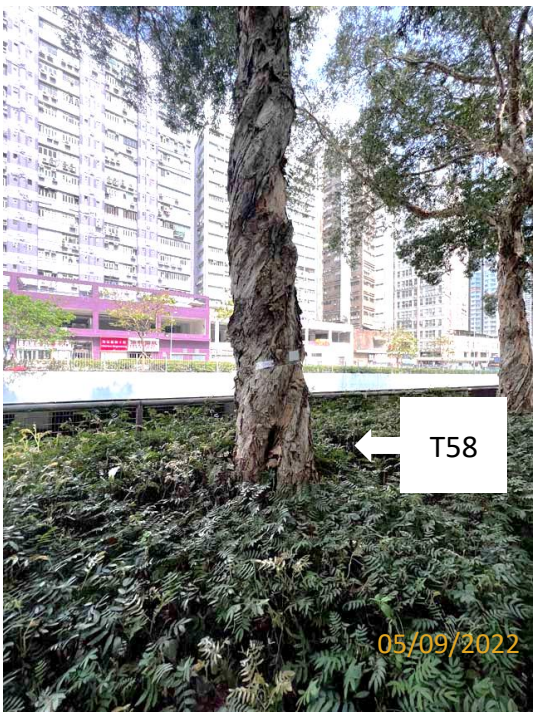
Species: *Melaleuca cajuputi subsp. Cumingiana* Location: Outside boundary



Overview of the tree



Crown



Trunk



Root (restricted root)

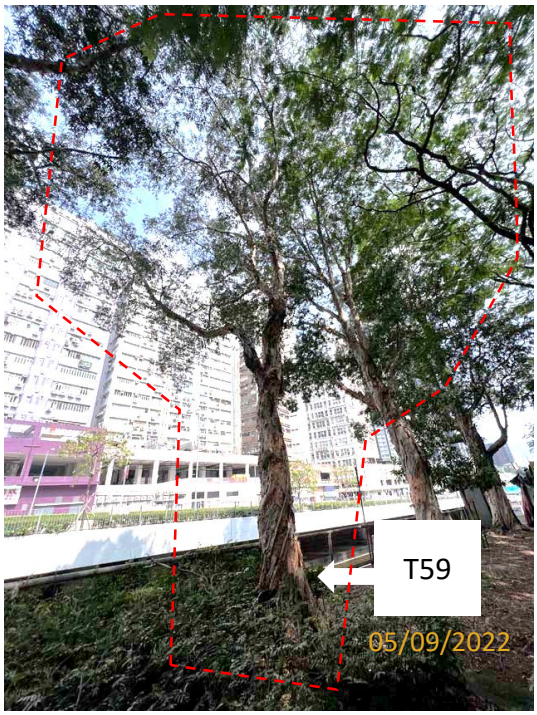
Photographic Records of Existing Trees

Project Title: Proposed Joint-user Complex at Shan Mei Street, Fo Tan
Location: Subject Site (Shan Mei Street and Min Fong Street)

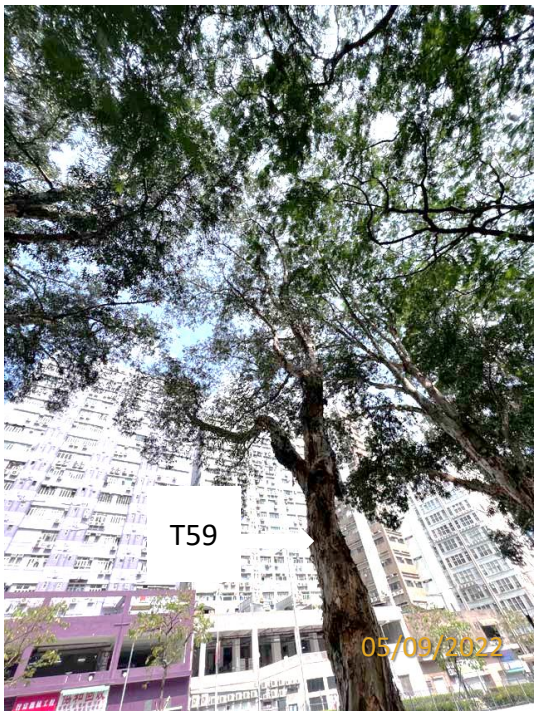
InForM No.: 8704 Date of Tree Survey / Photo Taken: 05/09/2022
Project No.: ZX609

Tree No.: T59

Species: *Melaleuca cajuputi subsp. Cumingiana* Location: Outside boundary



Overview of the tree



Crown



Trunk (codominant trunk)



Root (restricted root)

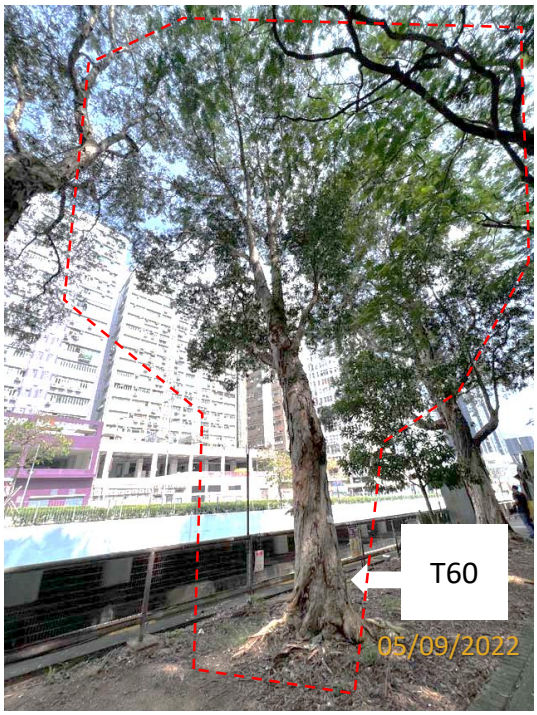
Photographic Records of Existing Trees

Project Title: Proposed Joint-user Complex at Shan Mei Street, Fo Tan
Location: Subject Site (Shan Mei Street and Min Fong Street)

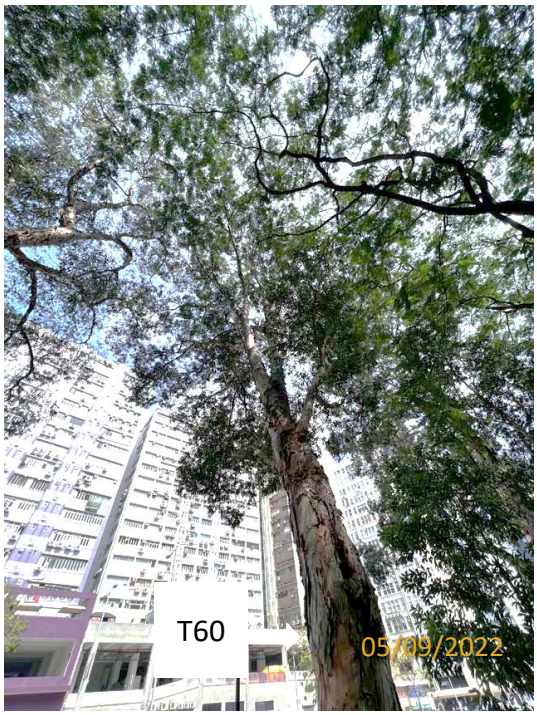
InForM No.: 8704 Date of Tree Survey / Photo Taken: 05/09/2022
Project No.: ZX609

Tree No.: T60

Species: *Melaleuca cajuputi subsp. Cumingiana* Location: Outside boundary



Overview of the tree



Crown



Trunk



Root (restricted root, exposed root)

Photographic Records of Existing Trees

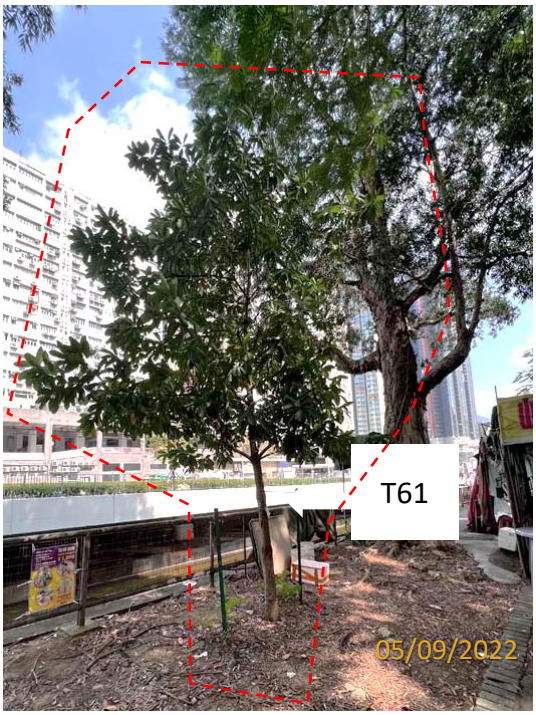
Project Title: Proposed Joint-user Complex at Shan Mei Street, Fo Tan
Location: Subject Site (Shan Mei Street and Min Fong Street)

InForM No.: 8704 Date of Tree Survey / Photo Taken: 05/09/2022
Project No.: ZX609

Tree No.: T61

Species: *Litsea glutinosa*

Location: Outside boundary



Overview of the tree



Crown



Trunk



Root

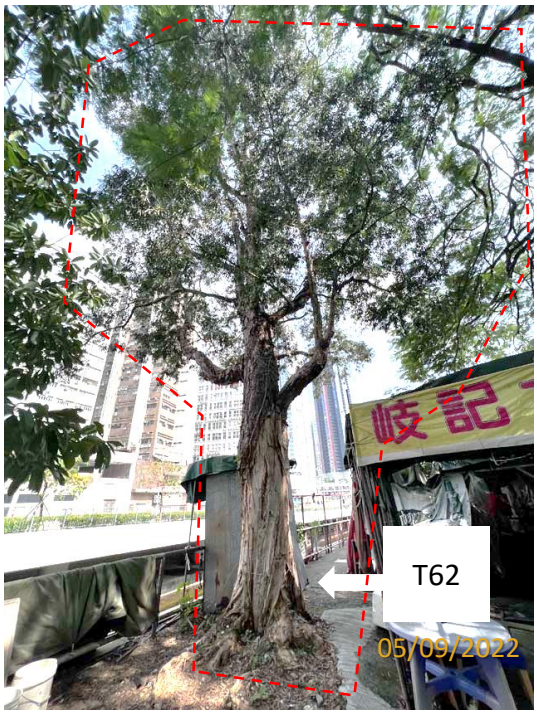
Photographic Records of Existing Trees

Project Title: Proposed Joint-user Complex at Shan Mei Street, Fo Tan
Location: Subject Site (Shan Mei Street and Min Fong Street)

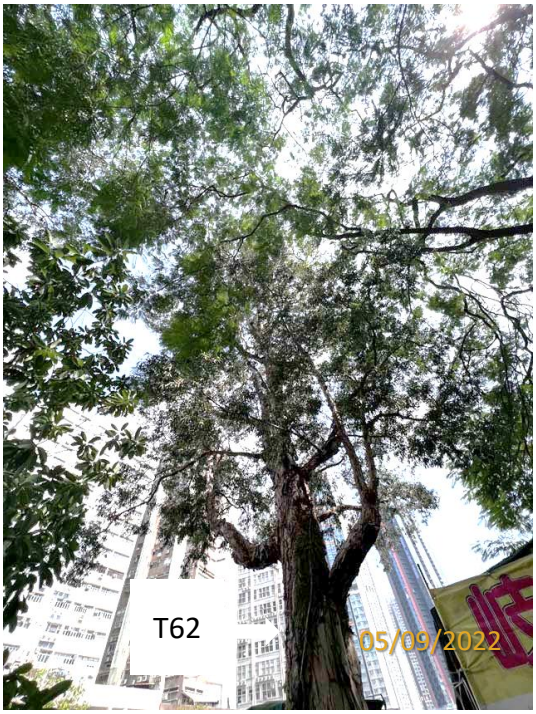
InForM No.: 8704 Date of Tree Survey / Photo Taken: 05/09/2022
Project No.: ZX609

Tree No.: T62

Species: *Melaleuca cajuputi subsp. Cumingiana* Location: Outside boundary



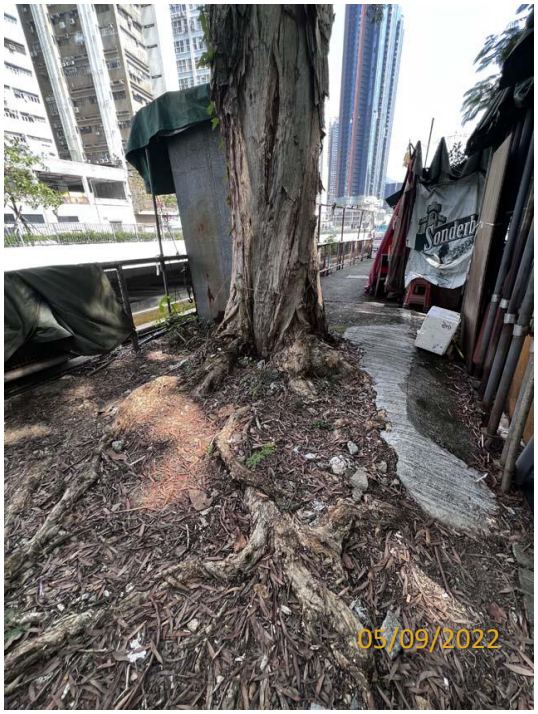
Overview of the tree



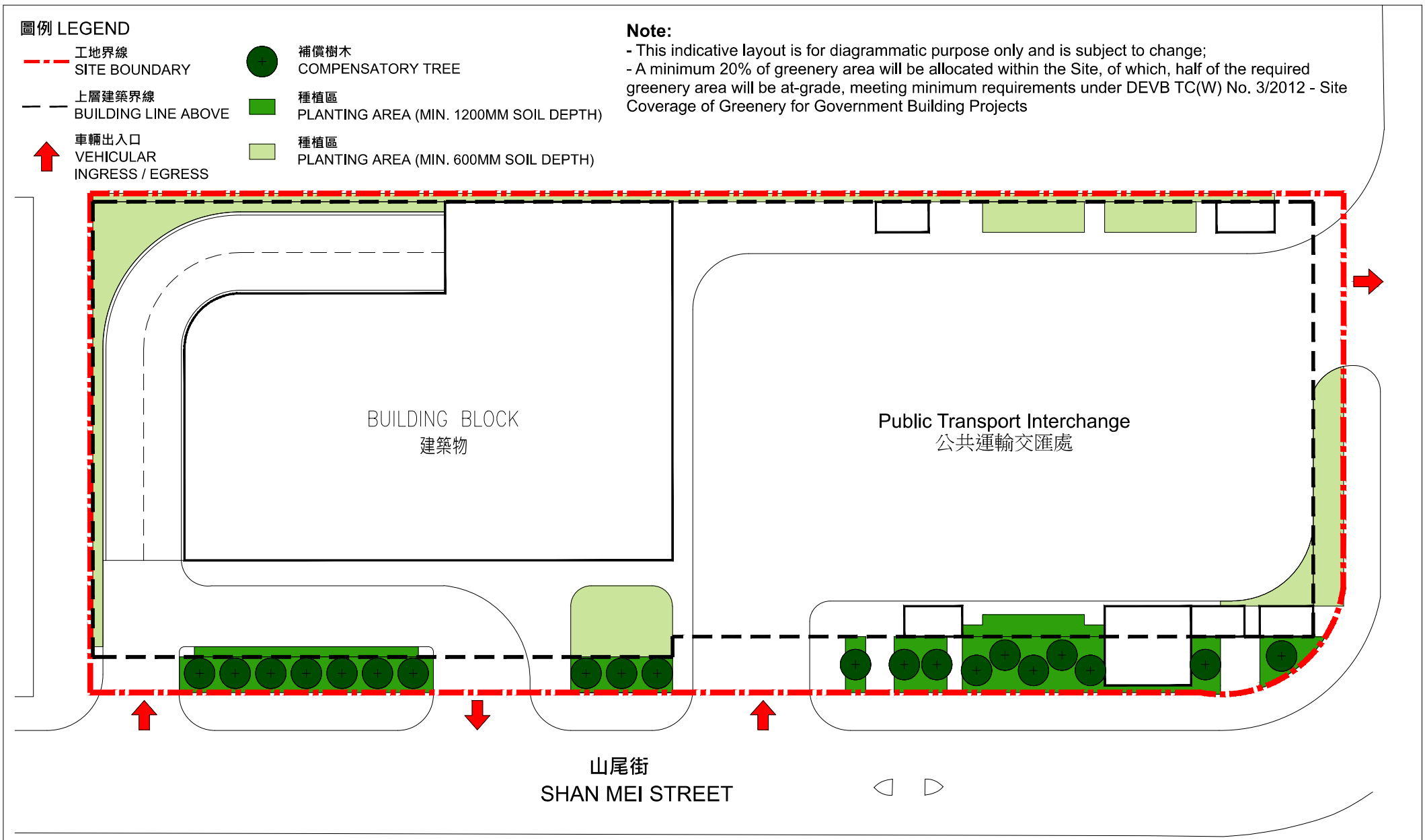
Crown



Trunk



Root (restricted root, exposed root)



PROPOSED JOINT-USER COMPLEX AT SHAN MEI STREET, FO TAN	drawing title G/F LANDSCAPE PLAN		scale 1:500

0m 5m 10m 20m

圖例 LEGEND

工地界線
SITE BOUNDARY

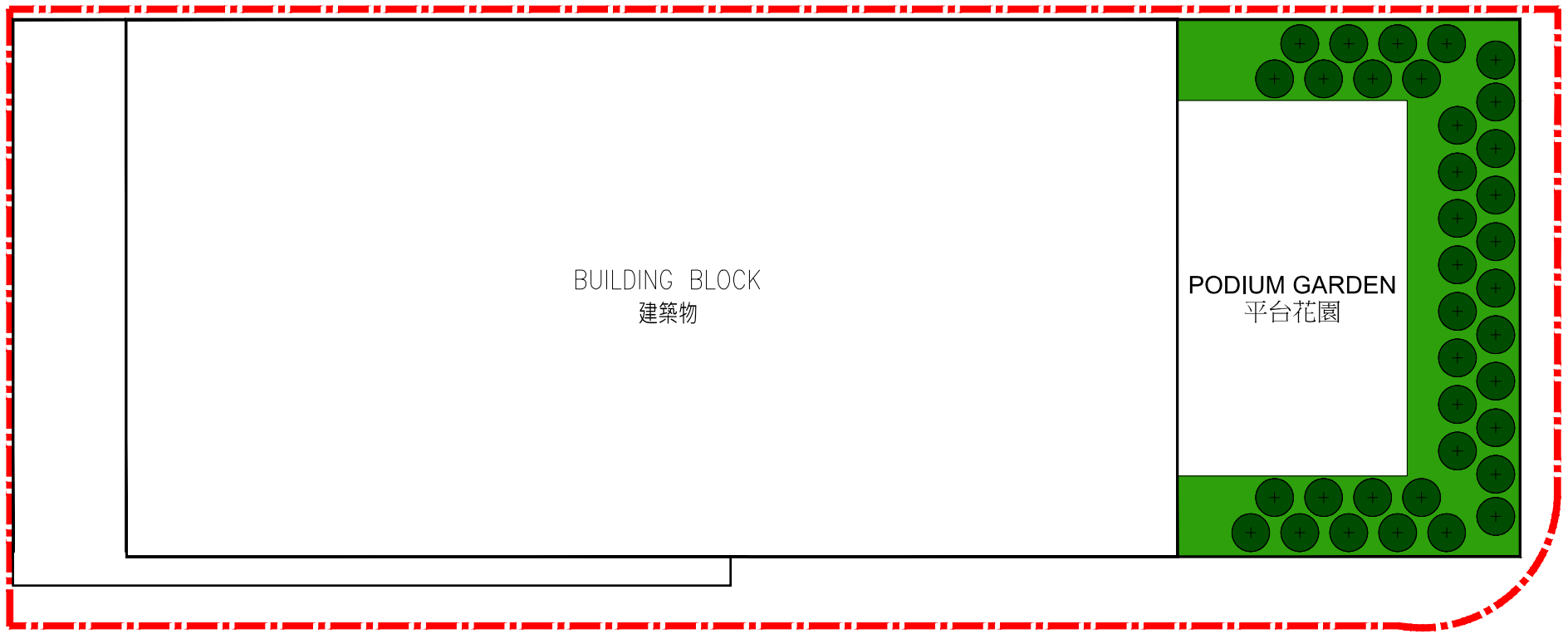
上層建築界線
BUILDING LINE ABOVE

車輛出入口
VEHICULAR
INGRESS / EGRESS

補償樹木
COMPENSATORY TREE

種植區
PLANTING AREA (MIN. 1200MM SOIL DEPTH)

Note:
- This indicative layout is for diagrammatic purpose only and is subject to change;
- A minimum 20% of greenery area will be allocated within the Site, of which, half of the required greenery area will be at-grade, meeting minimum requirements under DEVB TC(W) No. 3/2012 - Site Coverage of Greenery for Government Building Projects



PROPOSED JOINT-USER COMPLEX AT SHAN MEI STREET, FO TAN

drawing title
2/F LANDSCAPE PLAN

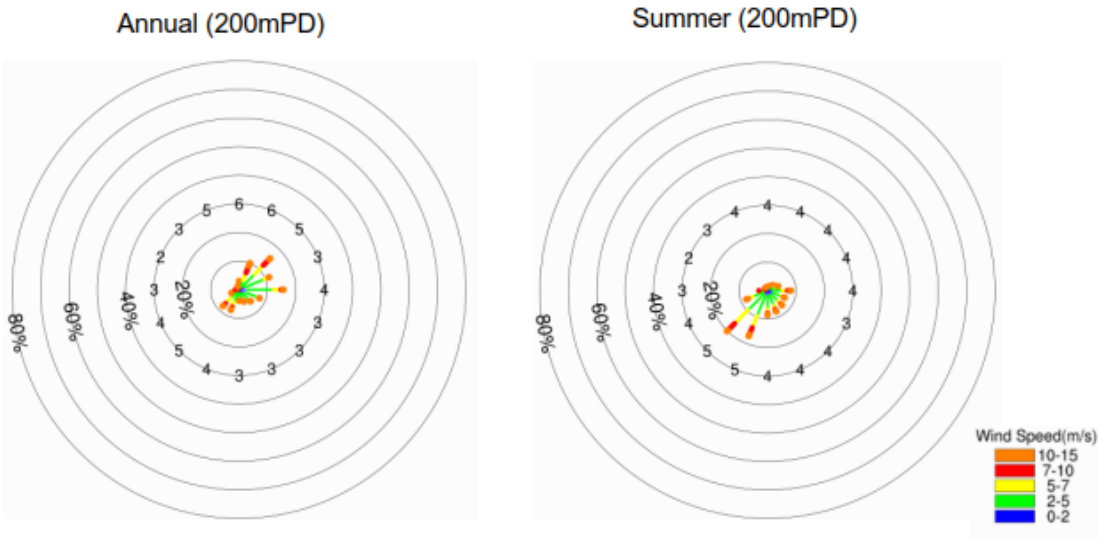
scale
1:500

0m 5m 10m 20m

Air Ventilation Performance of the Proposed Fo Tan Joint-user Complex at Shan Mei Street, Fo Tan

Prevailing Wind Directions

According to the RAMS data at grid [X084, Y059], the annual prevailing winds of the subject site are NE, ENE and E, while the summer prevailing winds are E, S, SSW and SW. The relevant wind roses are as below:



Proposed Development

According to the indicative scheme layout, the proposed joint-user complex development at the subject site is a single non-domestic tower with total plot ratio of 9.5 and a maximum building height of 140mPD.

Existing Wind Conditions

The site currently is occupied by San Mei Street Basketball Court, Fo Tan Cooked Food Market and a bus terminus, which is relatively open in nature. For the NE wind from the foothill of Cove Hill, Tsang Tau Ha Road, Min Fong Street, and Wo Liu Hang Road in the vicinity of the subject site would serve as the major wind corridors for wind penetration. For the ENE and E winds, they are obstructed by existing industrial and residential buildings to the east of the subject site. For the S, SSW and SW downhill winds from Needle Hill, they would penetrate through the subject site via the building gaps of residential developments along Sui Wo Road located at a higher topography, and enter the above-mentioned wind corridors.

Wind Conditions with Proposed Development

The proposed development would not affect the width of the major wind corridors identified above and their ventilation performances. While some localized impact on the immediate vicinity of the proposed development is expected. The proposed residential development next to the application site has a 15m building separation between its towers. Under south westerly and north easterly wind directions, the proposed development would affect the wind penetration through the building separation. The site is expected to have a localized impact in the immediate vicinity.

The design of the proposed development would comply with the Sustainable Building Design Guidelines under Practice Note for Authorized Persons, Registered Structure Engineers and Registered Geotechnical Engineers (PNAP) No. APP-152 to ensure the air quality and wind performance in the vicinity could be maintained by provision of adequate building separation/setback and to mitigate potential impact to the air ventilation. The following good design measures are proposed:

(i) around 5m building setback from Shan Mei Street facing Sui Fai Factory Estate;
(ii) around 20m building setback above the 15m ground level from the southeastern boundary; and
(iii) around 10m building separation between Shatin Galleria and the proposed development.

運輸署
Transport Department

Agreement No. TD73/2017
Traffic Impact Assessment for the Proposed Developments in Siu Lek Yuen and Shek Mun, Shatin

Executive Summary on Traffic Impact Assessment Study

(Ref. R3)

June 2023

AECOM ASIA COMPANY LIMITED

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4 TRAFFIC MODELLING METHODOLOGY AND ASSUMPTIONS 2
5 TRAFFIC IMPACT ASSESSMENT 2
6 PUBLIC TRANSPORT AND PEDESTRIAN ASSESSMENT 3
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DRAWINGS

1 INTRODUCTION

1.1.1 AECOM Asia Company Limited (AECOM) was appointed by Transport Department to undertake this Consultancy Assignment "Agreement No. TD73/2017 Traffic Impact Assessment for the Proposed Developments in Siu Lek Yuen and Shek Mun, Shatin".

1.1.2 AECOM is required to undertake a traffic impact assessment (TIA) for the Project, which consists of two commercial developments (Site A & B) at Shek Mun and three housing developments (Site C, D and E) at Siu Lek Yuen. They are collectively taken as "the Proposed Developments". The location of the proposed developments and the area of influence (AOI) are shown in **Figure 1.1**.

1.1.3 This Executive Summary is to summarize the findings of TIA under this Study.

2 PROPOSED DEVELOPMENT SITES

2.1.1 The traffic generation and attraction for the proposed developments are derived based on the development parameters provided by PlanD and the trip rates obtained from TPDM and TN439. The total traffic generation for the proposed developments are 301pcu/hour and 249pcu/hour for AM and PM peak respectively, while the total traffic attraction for the proposed developments are 336pcu/hour and 232pcu/hour for AM and PM peak respectively.

2.1.2 The provision of the internal transport facilities for each site shall be provided in accordance with the Hong Kong Planning Standards and Guidelines (HKPSG) for commercial and residential use, and based on user's operational need for G/IC use. In addition, to cater for the on-street parking demand in the close vicinity of the sites as well as the existing STT car parks, public vehicle parking (PVP) provisions to absorb/alleviate the above demand are proposed at Site A and Site E.

3 SURVEY AND DESIGN YEAR

3.1.1 To facilitate the Study, classified vehicle movement count traffic surveys at the road links and key junctions within the AOI have been conducted on typical weekday during peak hours in Year 2018 and 2022. The collected data is used for a baseline review of existing traffic conditions and subsequent for traffic modelling development. Assessment results indicate that all road links and junctions do not have any major capacity issues under existing condition.

3.1.2 The design year for the TIA is year 2031. In addition, design year 2036 (5 years upon completion of the development) for the TIA is also adopted.

4 TRAFFIC MODELLING METHODOLOGY AND ASSUMPTIONS

4.1.1 To produce robust traffic forecasts that would be responsive to dynamic changes in future land use and infrastructure development, a two-tier modelling approach is adopted for this Study. The two-tier model comprises a STM in the upper tier and a LATM in the lower tier.

5 TRAFFIC IMPACT ASSESSMENT

5.1.1 To evaluate the associated traffic impact induced by the Project in the design years 2031 and 2036, assessment scenarios include “Reference scenario” and “Design scenario”. The “Reference scenario” is the scenario reflecting traffic situation without the proposed development sites, whereas the “Design scenario” is the scenario reflecting traffic situation with the proposed development sites.

Key Road Links

5.1.2 All the key road links within the AOI will operate within capacity in both “Reference scenario” and “Design scenario” in the design years 2031 and 2036.

Key Junctions

5.1.3 All key junctions will not have any major capacity issues under “Design scenario” in year 2031 and 2036, except for junctions of Fo Tan Road / Tai Chung Kiu Road (SLY-J2), Ngau Pei Sha Street / Sha Tin Wai Road (SLY-J7), Siu Lek Yuen Road / Ngan Shing Street (SLY-J9), Siu Lek Yuen Road / Sha Tin Wai Road (SLY-J13), Tai Chung Kiu Road / On Lai Street (SM-J1) and Tai Chung Kiu Road / On Sum Street (SM-J5), that will operate near capacity (with R.C. <15% or DFC > 0.85).

5.1.4 With the proposed junction improvement, all junctions will operate within capacity. The details of the junction improvement are presented below:

Junction Improvement - Fo Tan Road / Tai Chiu Kiu Road (SLY-J2)

5.1.5 It is proposed to relocate the central divider of Fo Tan Road to provide additional southbound traffic lane. The western footpath will be set-back to provide sufficient vehicle maneuvering space for Fo Tan Road northbound. The proposed junction improvement is shown in **Figure 5.1**.

Junction Improvement – Ngau Pei Sha Street / Sha Tin Wai Road (SLY-J7)

5.1.6 It is proposed to modify the road markings at Sha Tin Wai Road westbound, as illustrated in **Figure 5.2**.

Junction Improvement – Siu Lek Yuen Road / Ngan Shing Street (SLY-J9)

5.1.7 It is proposed to modify the road marking at Ngan Shing Street and modify the method of control of the junction, and to increase the AM peak cycle time from 110 seconds to 120 seconds, as illustrated in **Figure 5.3**.

Junction Improvement – Siu Lek Yuen Road / Sha Tin Wai Road (SLY-J13)

5.1.8 It is proposed to modify the method of control to allow the Siu Lek Yuen Road eastbound left turn movement to be occurred for 2 stages. The junction approach will be slightly widened for addition of a traffic island with signal aspect, as illustrated in **Figure 5.4**.

Junction Improvement – Tai Chung Kiu Road / On Lai Street (SM-J1)

5.1.9 It is proposed to modify the method of control to allow concurrent right turn movement of Tai Chung Kiu Road northbound and southbound, as illustrated in **Figure 5.5**.

Junction Improvement – Tai Chu Kiu Road / On Sum Street (SM-J5)

5.1.10 It is proposed to widen the left turning at Tai Chung Kiu Road westbound to 5m. Also, it is proposed to remove the pedestrian crossings across both Tai Chung Kiu Road, associated with the modification of method of control. Moreover, it is proposed to widen the eastern crossing of On Sum Street to 5m and to increase the width of central island to 4m to provide sufficient crossing capacity, as illustrated in **Figure 5.6**.

6 PUBLIC TRANSPORT AND PEDESTRIAN ASSESSMENT

Public Transport Services

6.1.1 The public transport demand for each site is estimated from the pedestrian generation and percentage of the assumed mode of transport for road-based public transport during peak hour.

6.1.2 The peak public transport demand for Site A and Site B would be 1,174 people/hr and 1,513 people/hr for AM peak and PM peak respectively. As a result, the existing public transport services (with spare capacity of 3,286 and 3,973 people/hr for AM peak and PM peak respectively, based on 2018 survey) would have sufficient spare capacity to cater for the public transport demand generated from Site A and Site B.

6.1.3 For Sites C to E, the peak public transport demand for would be 259 people/hr for both AM peak and PM peak. As a result, the existing public transport services (with spare capacity of 2,575 and 2,525 people/hr for AM peak and PM peak respectively, based on 2018 survey) would have sufficient spare capacity to cater for the public transport demand generated by Site C, Site D and Site E.

6.1.4 The opening of MTR Tuen Ma Line in June 2021 and MTR East Rail Line Cross Harbour Extension in May 2022 has further enhanced the connectivity of railway network and offers more travelling options to the public. Due to the commencement of new railways, the franchised bus services in Sha Tin were adversely affected and service reduction of numbers of franchised bus routes has been implemented progressively in 2021 and 2022. Besides, the existing public transport services available in Shek Mun has been reviewed. The major franchised bus/GMB stops along Tai Chung Kiu Road both bounds near Ravana Garden and On Ming Street outside MTR Shek Mun Station are serving more than 20 franchised bus and GMB routes. The bus/GMB stops concerned would still have sufficient space to cater for additional terminating/passing franchised bus/GMB routes.

6.1.5 In view of the above, provision of new PTI is considered not necessary.

Pedestrian Assessment

6.1.6 The concerned footpath pinch points and pedestrian crossing facilities within the AOI are assessed.

6.1.7 The existing pedestrian demand at the concerned footpath pinch points are based on the pedestrian survey conducted on a typical weekday in 2022. The future pedestrian demand in year 2036 are estimated by applying growth factor to the existing pedestrian flow and superimpose pedestrian demand from the Sites based on the pedestrian routing to the attraction nodes of MTR, nearby bus/GMB stops.

6.1.8 Assessment results indicate that the LOS of all assessed footpath locations is Grade A, indicating a satisfactory servicing condition.

6.1.9 Assessment results indicate the pedestrian crossing facilities are operating at a satisfactory condition with LOS C or above, except the eastern pedestrian crossing of On Sum Street and the central island with LOS E and LOS D respectively. Hence, it is proposed to widen the eastern crossing of On Sum Street to 5m and to increase the width of central island to 4m in order to provide sufficient capacity (Refer to **Figure 5.6**). With the proposed improvement, the crossing facilities performance will improve to LOS C and A respectively for the eastern crossing of On Sum Street and the central island, indicating a satisfactory servicing condition.

7 SUMMARY

7.1.1 This TIA Report presents the findings of the traffic impact for the proposed 5 development sites.

7.1.2 The provision of the internal transport facilities for each site shall be provided in accordance with the Hong Kong Planning Standards and Guidelines (HKPSG) for commercial and residential use, and based on user's operational need for G/IC use. In addition, to cater for the on-street parking demand in the close vicinity of the sites as well as the existing STT car parks, public vehicle parking (PVP) provisions to absorb/alleviate the above demand are proposed at Site A and Site E.

7.1.3 To evaluate the associated traffic impact induced by the Proposed Developments in the design year 2031 and 2036, assessment scenarios including "Reference Scenario" (without the Proposed Developments in place) and "Design Scenario" (Reference Scenario + operation trips to/from the Proposed Developments) has been established.

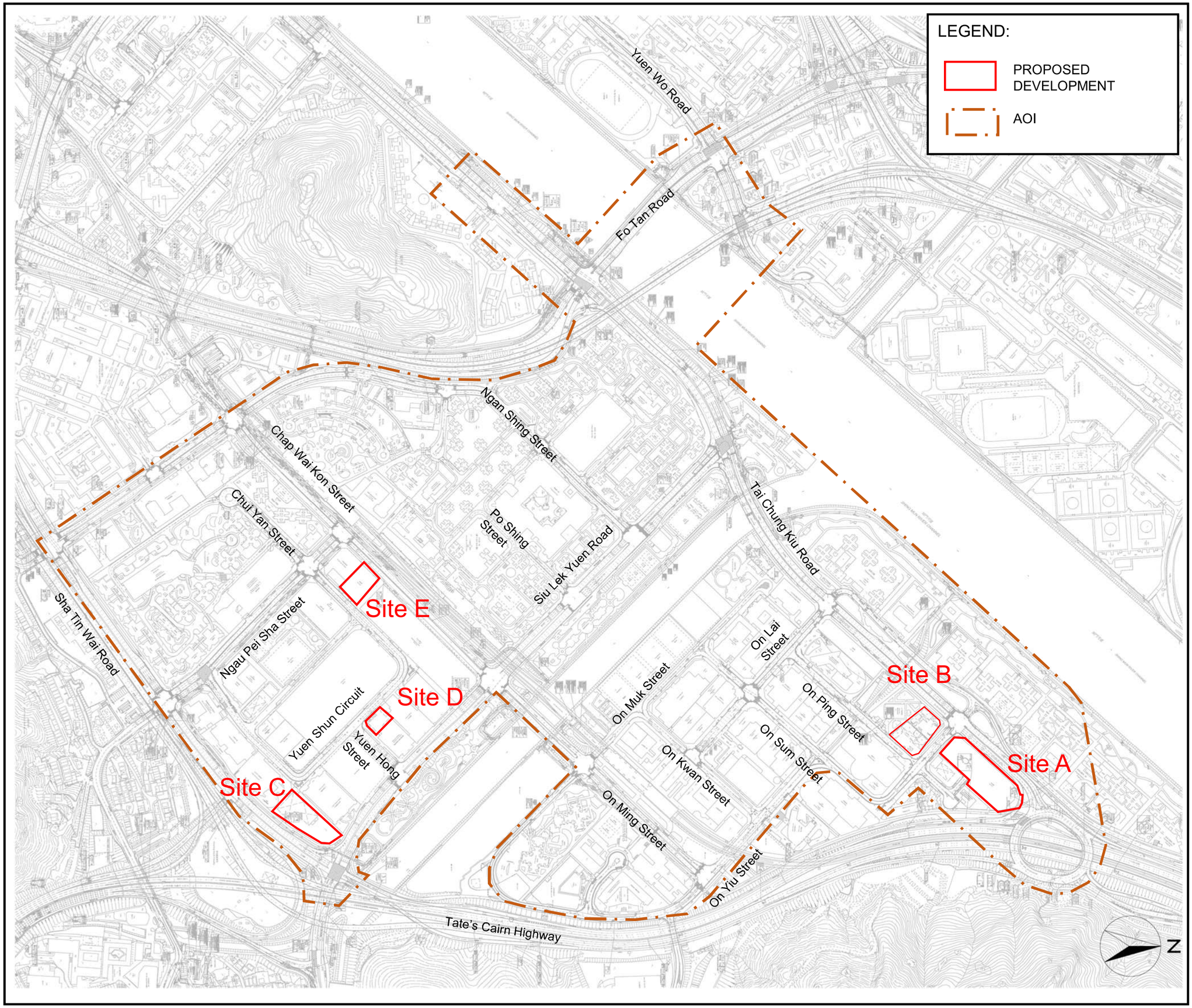
7.1.4 To improve the performance of the 6 junctions that will operate near capacity, improvement proposals are proposed on junctions Fo Tan Road / Tai Chung Kiu Road, Ngau Pei Sha Street / Sha Tin Wai Road, Siu Lek Yuen Road / Ngan Shing Street, Siu Lek Yuen Road / Sha Tin Wai Road, Tai Chung Kiu Road / On Lai Street and Tai Chung Kiu Road / On Sum Street. With the proposed junction improvement, junction performance for the above concerned junctions will be improved and operating within capacity during the AM and PM peak hours in year 2031 and 2036.

7.1.5 Assessment results indicate that the existing public transport services would still have sufficient spare capacity to cater for the public transport demand generated from the development sites. The provision of a new public transport interchange is considered not necessary

7.1.6 Pedestrian flow for the pedestrian pinch points for year 2036 has been assessed. Assessment results indicate that the LOS of the assessed locations is Grade A, indicating a satisfactory servicing condition. With the proposed improvement at eastern pedestrian crossing of On Sum Street and central island, all the crossing facilities will operate within capacity (LOS C or above) in 2036 Design Scenario.

7.1.7 In view of the above, the proposed developments will not induce insurmountable traffic impact and is considered acceptable in traffic point of view.

Drawings



AECOM

PROJECT

TRAFFIC IMPACT ASSESSMENT FOR THE PROPOSED DEVELOPMENTS IN SIU LEK YUEN AND SHEK MUN, SHATIN

CLIENT

TRANSPORT DEPARTMENT

AGREEMENT NO.

TD 73/2017

SCALE **DIMENSION UNIT**

N.T.S.

DRAWING TITLE

AREA OF INFLUENCE AND LOCATIONS OF THE PROPOSED DEVELOPMENTS

DRAWING NO.

FIGURE 1.1

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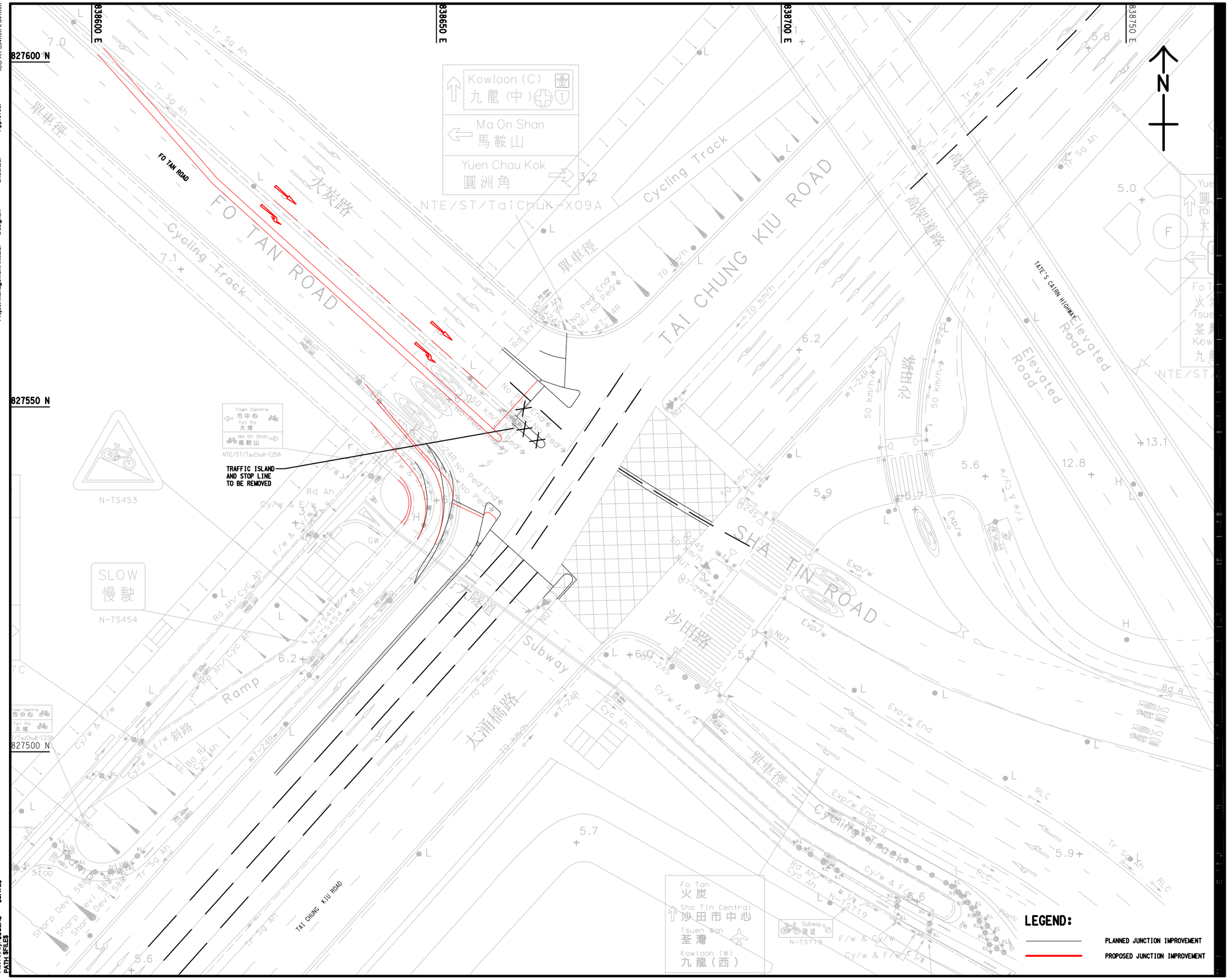
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TRAFFIC IMPACT ASSESSMENT FOR THE PROPOSED DEVELOPMENTS IN SIU LEK YUEN AND SHEK MUN, SHATIN

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AGREEMENT NO.

TD 73/2017

SCALE DIMENSION UNIT

A3 1 : 500

DRAWING TITLE

PROPOSED IMPROVEMENT AT FO TAN ROAD / TAI CHUNG KIU ROAD (SLY-J2) (OPTION 2)

DRAWING NO.

FIGURE 5.1

Project Management Initials: Designer: Checked: Approved: ISO A1 594mm x 841mm

839350 E | 839400 E | 839450 E

826850 N

826800 N

826750 N

N

NGAU PEI SHA STREET

SHA TIN WAI ROAD

SHA LEK HIGHWAY

沙田圍路

沙瀝公路

LEGEND:

PROPOSED JUNCTION IMPROVEMENT

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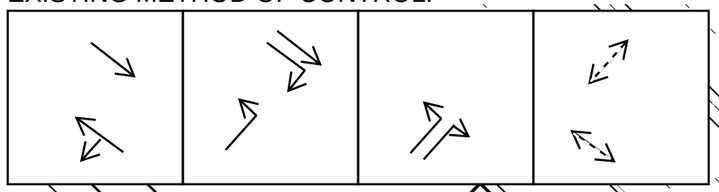
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PROPOSED IMPROVEMENT AT NGAU PEI SHA STREET / SHA TIN WAI ROAD (SLY-J7)

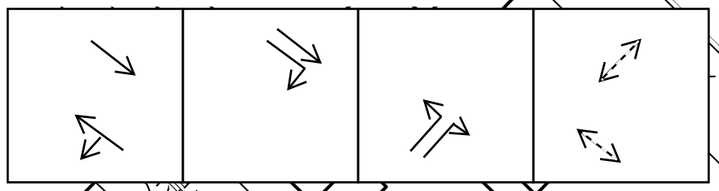
DRAWING NO.

FIGURE 5.2

EXISTING METHOD OF CONTROL:



PROPOSED METHOD OF CONTROL:



SIU LEK YUEN ROAD

小瀝源路

TAK KEI STREET

德基街

第十座 Block 10

第十一座 Block 11

第一座 Block 1

第二十四座 Block 24

網球場 Tennis Court

網球場 Tennis Court

BUS STOP 巴士站

GMB Stop/ GMB Plate

LEGEND:

PROPOSED JUNCTION IMPROVEMENT

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TRAFFIC IMPACT ASSESSMENT FOR THE PROPOSED DEVELOPMENTS IN SIU LEK YUEN AND SHEK MUN, SHATIN

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TD 73/2017

SCALE DIMENSION UNIT

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DRAWING TITLE

PROPOSED IMPROVEMENT AT SIU LEK YUEN ROAD/ NGAN SHING STREET(SLY-J9)

DRAWING NO.

FIGURE 5.3

Project Management Initials: Designer: Checked: Approved: ISO A1 594mm x 841mm

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ISO A1 594mm x 841mm

Approved:

Checked:

Designer:

Project Management Initials:

827100 N

827050 N

827000 N

839550 E

839600 E

Site C

SIU LEK YUEN ROAD

SHA TIN WAI ROAD

TATE'S CAIRN HIGHWAY

(Elevated Road)

大老山公路（高架道路）

Cycling Track

Ramp

Subway

Kowloon (E) 九龍(東) Siu Lek Yuen 小瀝源

Ma On Shan 馬鞍山 Tai Po 大埔

Yuen Chau Kok (Kowloon(W)) 圓洲角 九龍(西)

Fo Tan 火炭

Yuen Chau Kok 圓洲角

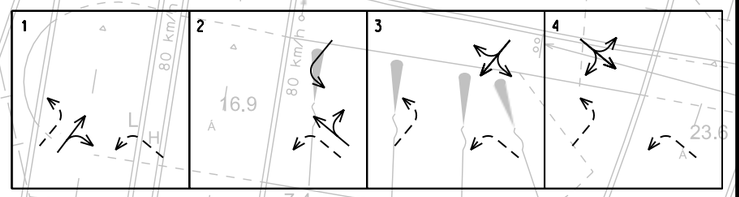
Prince of Wales Hospital 威爾斯親王醫院

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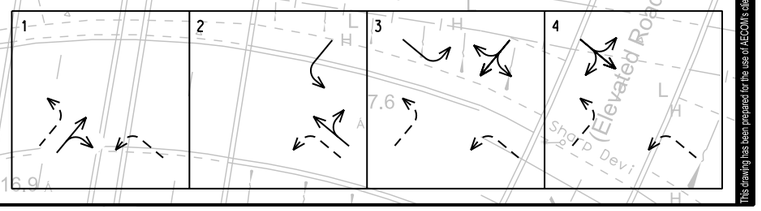
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PROPOSED JUNCTION IMPROVEMENT

EXISTING METHOD OF CONTROL:



PROPOSED METHOD OF CONTROL:



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PATH: D:\JOB BACKUP\60563690\DRAWING\TIAA\SIU LEK YUEN ROAD\FIGURE 411.dgn

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TRAFFIC IMPACT ASSESSMENT FOR THE PROPOSED DEVELOPMENTS IN SIU LEK YUEN AND SHEK MUN, SHATIN

CLIENT

TRANSPORT DEPARTMENT

AGREEMENT NO.

TD 73/2017

SCALE DIMENSION UNIT

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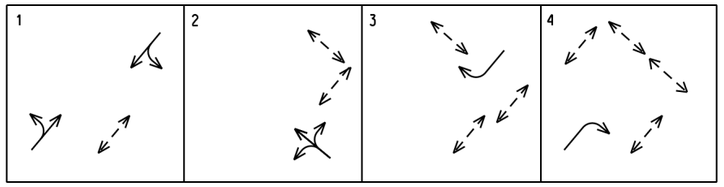
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PROPOSED IMPROVEMENT AT SIU LEK YUEN ROAD / SHA TIN WAI ROAD (SLY-J13)

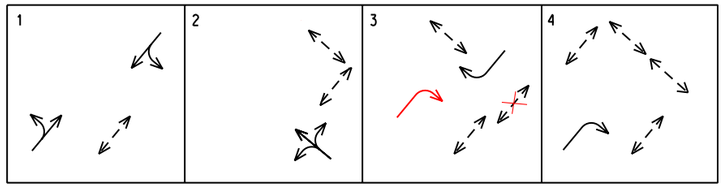
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FIGURE 5.4

PLANNED METHOD OF CONCONTROL :



PROPOSED METHOD OF CONCONTROL :



839250 E

839300 E

827950 N

827900 N

TAI CHUNG KIU ROAD

ON KING STREET

ON LAI STREET

Rd Ah Ow

LD Proh

50 km/h

Tennis Court

Car Park

Podium

Offtake And Pigging Station

LEGEND:

PLANNED JUNCTION IMPROVEMENT

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TRAFFIC IMPACT ASSESSMENT FOR THE PROPOSED DEVELOPMENTS IN SIU LEK YUEN AND SHEK MUN, SHATIN

CLIENT

TRANSPORT DEPARTMENT

AGREEMENT NO.

TD 73/2017

SCALE DIMENSION UNIT

A3 1 : 500

DRAWING TITLE

PROPOSED IMPROVEMENT AT TAI CHUNG KIU ROAD / ON LAI STREET (SM-J1)

DRAWING NO.

FIGURE 5.5

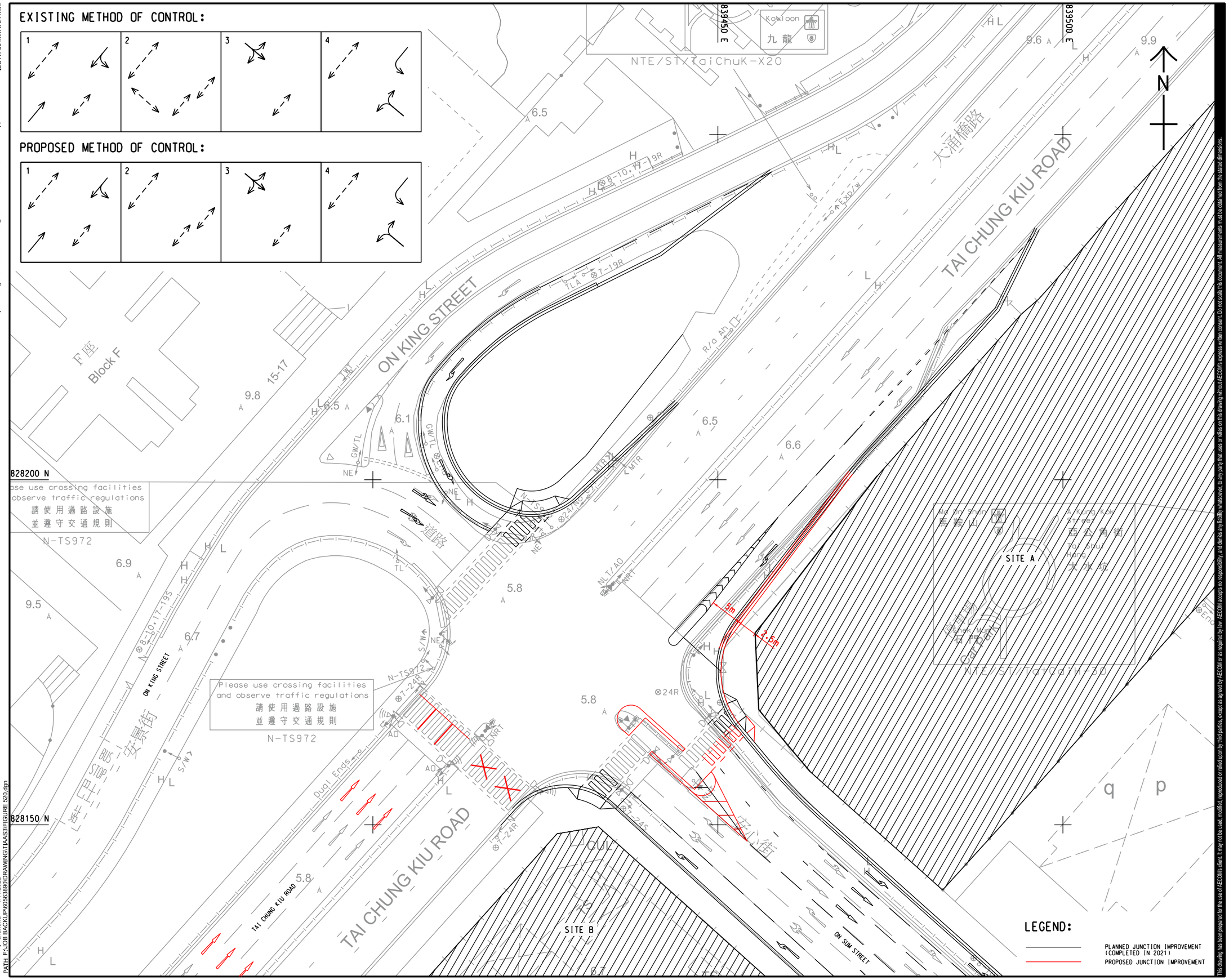
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Project Management Initials: Designer: Checked: Approved: ISO A1 594mm x 841mm

EXISTING METHOD OF CONTROL:

PROPOSED METHOD OF CONTROL:



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TRAFFIC IMPACT ASSESSMENT FOR THE PROPOSED DEVELOPMENTS IN SIU LEK YUEN AND SHEK MUN, SHATIN

CLIENT

TRANSPORT DEPARTMENT

AGREEMENT NO.

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SCALE DIMENSION UNIT

A3 1 : 500

DRAWING TITLE

PROPOSED IMPROVEMENT AT TAI CHUNG KIU ROAD / ON SUM STREET (SM-J5)

DRAWING NO.

FIGURE 5.6

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CIVIL ENGINEERING AND DEVELOPMENT DEPARTMENT

Agreement No. CE47/2020 (CE) –

Term Consultancy for Site Formation and Infrastructure Works for Proposed Housing Development in Zone 2 (2021-2024) – Feasibility Study

Task Order No. 5 – Proposed Housing Development at Site between 15 and 17 Yuen Shun Circuit – Feasibility Study

TO5 –

Executive Summary
Housing development at TO5 (Project) is proposed at the Site between 15 and 17 Yuen Shun Circuit, Sha Tin, New Territories, with an area of 5,641 m^2. Current land use at the Project Site is a Government land lot occupied by the truck storage and operations of Swire Coca-Cola HK bottling plant. Surrounding land use consists of logistics, freight warehouses and a hotel building.

The Project Site is located at Siu Lek Yuen Road at Sha Tin and is bounded by Sha Tin Wai Road to its southeast while Siu Lek Yuen Road to its northeast. To the north and east of the Project Site are mainly high-rise housing building blocks, while some industrial buildings are located to its immediate north, southwest and western parts.

A Preliminary Environmental Review (PER) Report has been prepared to identify and assess the environmental impacts arising from construction and operation phases of the Project, in order to determine the applicability of the proposed development.

Based on the proposed development parameters, the environmental impacts at TO5 is not insurmountable for the future residential development. The environmental impacts are summarised below:

Air Quality
With the implementation of control measures as specified in accordance with Air Pollution Control (Construction Dust) Regulation, Air Pollution Control (Non-road Mobile Machinery) (Emission) Regulation, DEVB's TC No.1/2015, Technical Circular (Works) No. 13/2020 and the good site practices as mentioned in Sections 2.5.3 to 2.5.5, adverse air quality impacts arising during the construction phase of the Project is not anticipated.

During operation phase, the separation distance for vehicular emission is illustrated in **Figure 2.2**. Potential impacts from vehicular emission distances between the road kerbs of nearby roads around the Site and the sensitive uses of the proposed development

could comply with the HKPSG buffer distance requirements (i.e., 5m for Local Distributor and 20m for Primary Distributor). The potential vehicular emission generated by the nearby road networks to the sensitive uses will be insignificant. On the other hand, the buffer distances between the chimneys around the project site and the sensitive uses of the proposed development could comply with the HKPSG requirements (i.e., >10m horizontal separation distance with height difference between an industrial chimney exit and the site greater than 40m). The air buffer zone for industrial chimney is illustrated in **Figure 2.3**. Potential impacts from emissions generated by the nearby chimneys to the sensitive uses are not anticipated.

Noise

Road traffic from nearby road network (i.e., Siu Lek Yuen Road, Sha Tin Wai Road, Sha Lek Highway and Tate's Cairn Highway) are the dominant noise sources within the 300m assessment area. Southeast façade of the residential Block 2 has been slightly tilted such that angles of view to severe traffic noise sources are minimised as far as practicable. Noise exceedances up to 9 dB(A) are predicted at the east façades of the residential units. Mitigation measures such as acoustic windows (with and without SAM) and architectural fin are proposed. The assessment has also evaluated the traffic noise impact from the operation of KMB Sha Tin Bus Depot during peak operation hours. The results indicate that potential traffic noise impact due to the operation of bus depot would not worsen the situation.

For fixed noise impacts, high noise exceedance is found in all time periods, with maximum predicted noise level of 81dB(A). The high exceedances are mainly arising from Swire Coca-Cola HK Plant and the fixed plants sources located at the northwest of the site. Single aspect design is recommended for the northwest and southwest façades to minimize the level of noise exposure. In addition, architectural fins and acoustic windows (baffle type) are also recommended for the façades less affected by the fixed plants noise.

To reduce the potential build-up noise reflection, sound absorption material is recommended for the exterior wall and its finishing when considering the building façade design. For the above-mentioned mitigation measures for noise impact assessment, the location is illustrated in **Figure 3.5**.

Water Quality – there are no adverse environmental impact during construction and operation phases of the Project provided that mitigation measures are in control.

Waste Management – C&D materials will inevitably be produced during the construction phase. Wastes generated from construction activities include inert and non-inert C&D materials, chemical waste and general refuse. Mitigation measures have been proposed following the avoidance-minimization-recycling-reuse-treatment-disposal hierarchy.

During operation phase, no significant waste implication is expected from housing residents. The quantity of general refuse arising from the operational phase can be minimised by implementing an effectual waste handling system and waste reduction

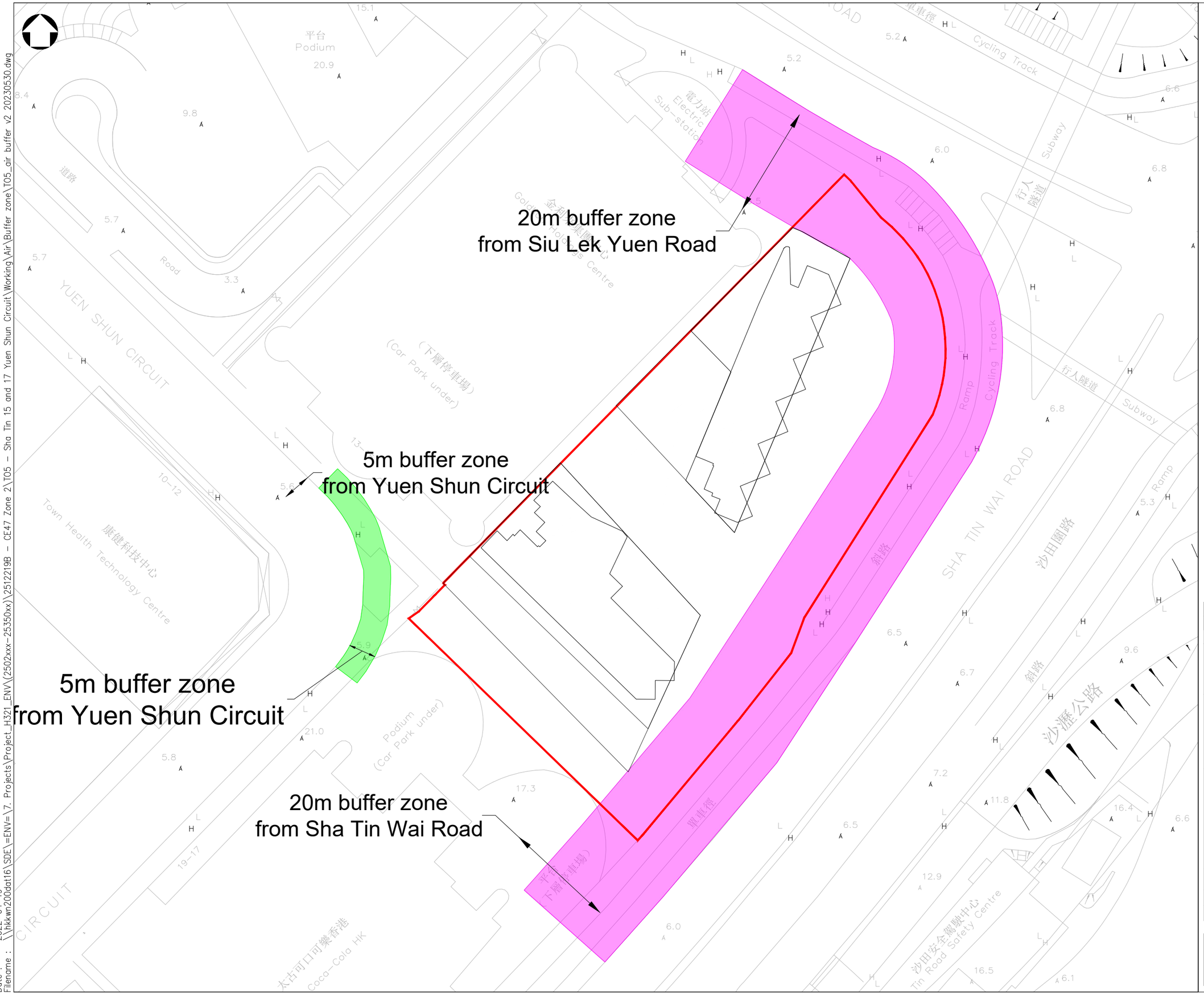
programme, and by hiring a reputable waste collector. As such it is considered to have no adverse environmental impacts.

Land Contamination – Based on the Government records and site inspection, there is no visual evidence of contamination at the Project Site; however, potential land contamination within the Project Site may be due to the land use of repairing and/or maintenance of Coca-Cola owned motor vehicles.

Since the site is currently occupied by Swire Coca-Cola, a site reconnaissance is recommended to inspect the whole Project Site upon land resumption by appropriate parties. It is anticipated that Site Investigation (SI) and laboratory testing shall commence after EPD's agreement of the CAP. If remediation is required, a Remediation Action Plan (RAP) shall be prepared and submitted to EPD for agreement prior to the remediation works followed with a Remediation Report (RR).

The relevant site re-appraisal, land contamination assessment and decontamination works (if any), shall be carried out by the future developer and submitted to the EPD in later stage.

Provided that the land contamination assessment is conducted prior to any construction and/or development works, there is no insurmountable land contamination issue for the future residential development under the proposed development parameters.



NOTES :

1. ALL DIMENSIONS ARE IN MILLIMETRES UNLESS OTHERWISE STATED.
2. ALL LEVELS ARE IN METRES (M) AND RELATIVE TO HONG KONG PRINCIPAL DATUM (mPD).

LEGEND :

- SITE BOUNDARY
- 20m BUFFER ZONE
- 5m BUFFER ZONE

Rev	Description	By	Date

Consultant

wsp

Project title

AGREEMENT NO.CE47/2020 (CE)
TERM CONSULTANCY FOR SITE FORMATION AND INFRASTRUCTURE WORKS FOR PROPOSED HOUSING DEVELOPMENTS IN ZONE 2 (2021 – 2024) – FEASIBILITY STUDY

Drawing title

AIR IMPACT ASSESSMENT
AIR BUFFER ZONE

TASK ORDER 5

Drawing no.		Rev.
	FIGURE 2.2	0

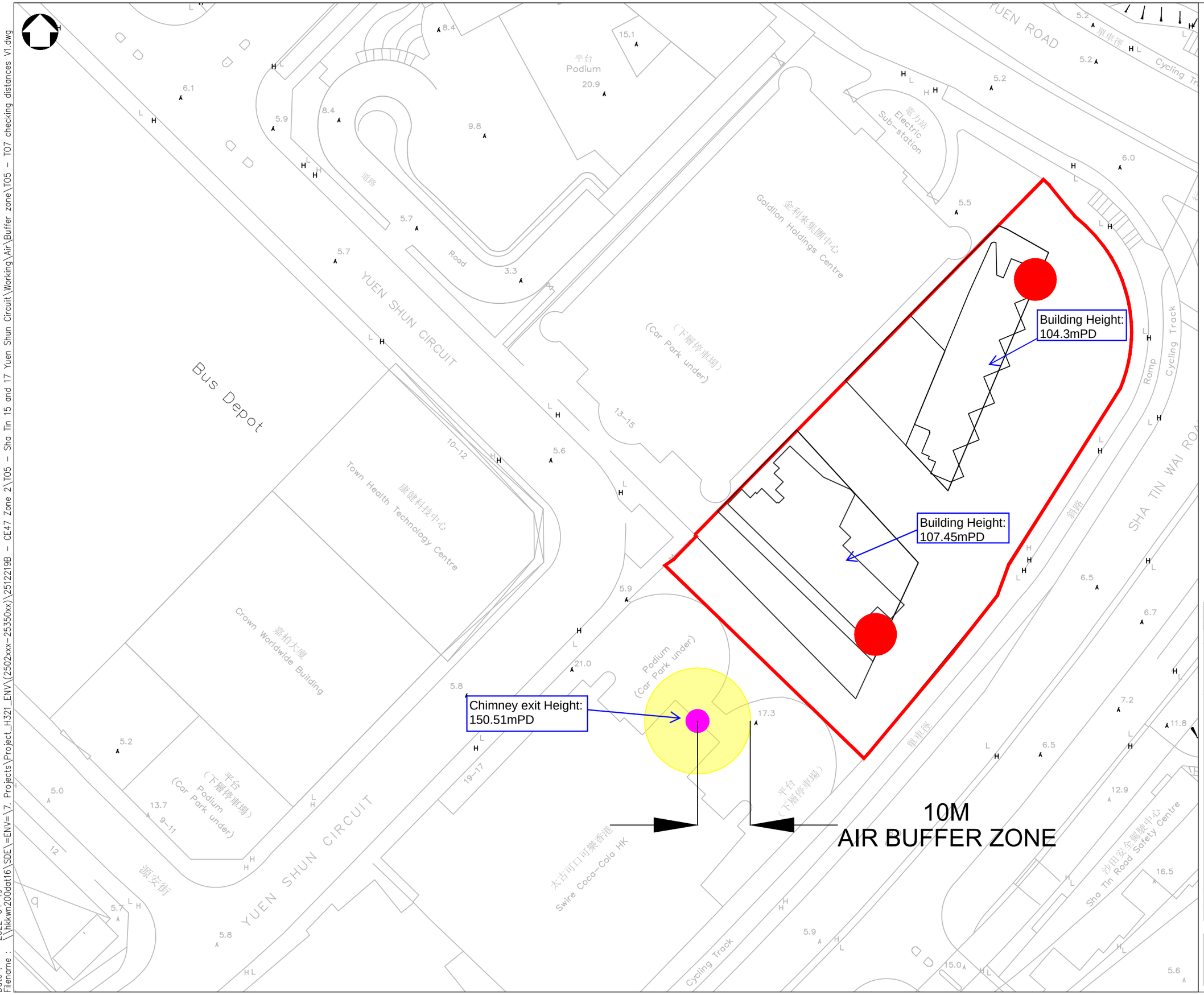
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Date : 2022-04-19
Filename : \\hkkwn200dat16\SDE\=ENV=\7. Projects\Project_H321_ENV\(2502xxx-25350xx)\25122198 - CE47 Zone 2\T05 - Sha Tin 15 and 17 Yuen Shun Circuit\Working\Air\Buffer zone\T05_air buffer v2 20230530.dwg



NOTES :

1. ALL DIMENSIONS ARE IN MILLIMETRES UNLESS OTHERWISE STATED.
2. ALL LEVELS ARE IN METRES (M) AND RELATIVE TO HONG KONG PRINCIPAL DATUM (mPD).

LEGEND :

- SITE BOUNDARY
- LOCATION OF CHIMNEY
- AIR SENSITIVE RECEIVERS
- AIR BUFFER ZONE

Rev	Description	By	Date

Consultant

wsp

Project title

AGREEMENT NO.CE47/2020 (CE)
TERM CONSULTANCY FOR SITE FORMATION AND INFRASTRUCTURE WORKS FOR PROPOSED HOUSING DEVELOPMENTS IN ZONE 2 (2021 – 2024) – FEASIBILITY STUDY

Drawing title

AIR BUFFER ZONE OF CHIMNEY

TASK ORDER 5

Drawing no. FIGURE 2.3 Rev. 0

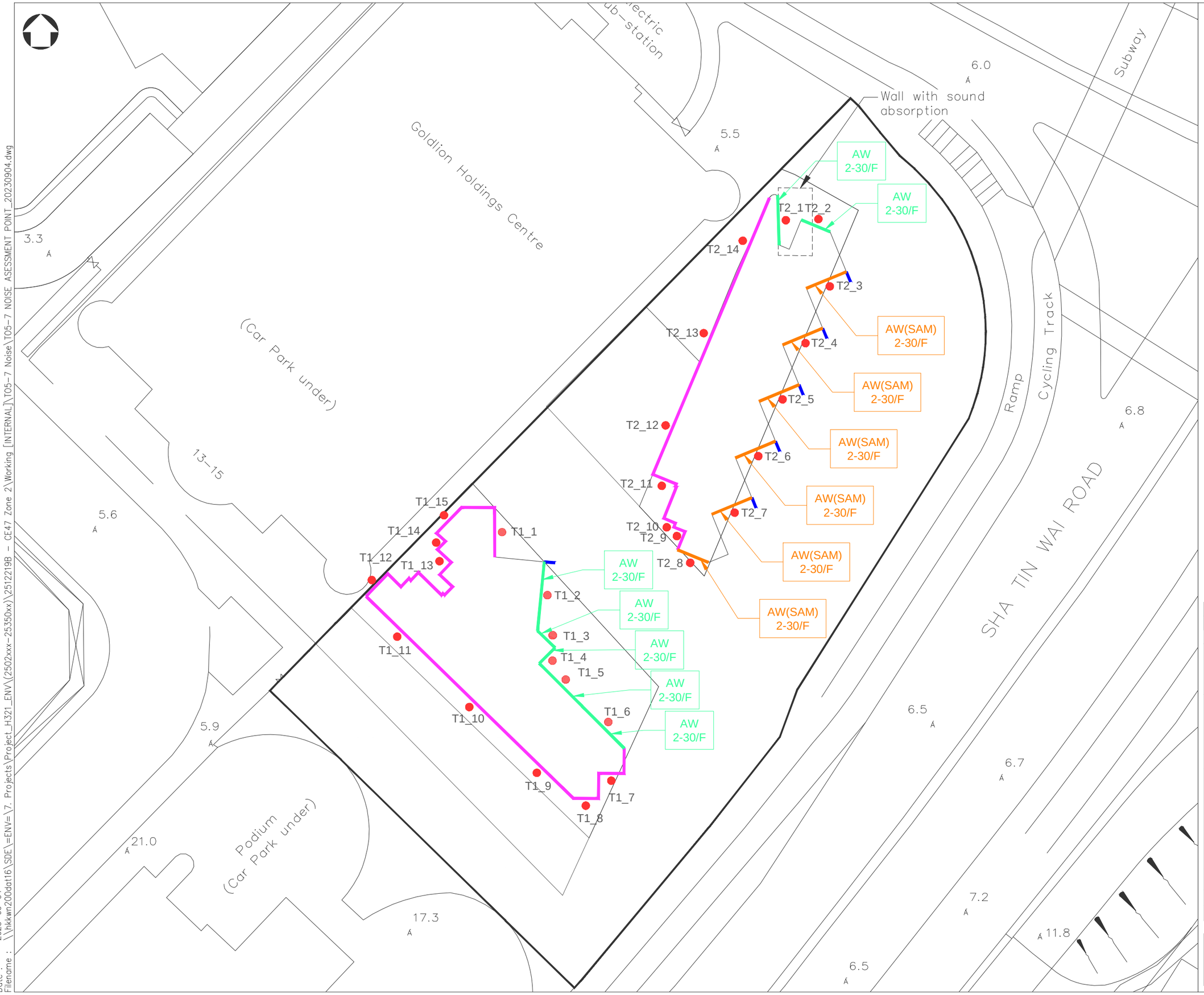
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TW	AUG2023	CY	CY

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NOTES :

1. ALL DIMENSIONS ARE IN MILLIMETRES UNLESS OTHERWISE STATED.
2. ALL LEVELS ARE IN METRES (M) AND RELATIVE TO HONG KONG PRINCIPAL DATUM (mPD).

LEGEND :

- SITE BOUNDARY
- NOISE ASSESSMENT POINTS
- ACOUSTIC WINDOW (BAFFLE TYPE)
- 1.5m ARCHITECTURAL FINS
- ACOUSTIC WINDOW WITH SOUND ABSORPTIVE MATERIAL
- SINGLE ASPECTS

Rev	Description	By	Date

Consultant

wsp

Project title

AGREEMENT NO.CE47/2020 (CE)
TERM CONSULTANCY FOR SITE FORMATION AND INFRASTRUCTURE WORKS FOR PROPOSED HOUSING DEVELOPMENTS IN ZONE 2 (2021 – 2024) – FEASIBILITY STUDY

Drawing title

LOCATION OF THE OVERALL MITIGATION MEASURES FOR NOISE IMPACT ASSESSMENT

Drawing no.	Rev.
FIGURE 3.5	0

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Filename : \\hkkwn200dat16\SDE\=ENV=\7. Projects\Project_H321_ENV\(2502xxx-25350xx)\2512219B - CE47 Zone 2\Working [INTERNAL]\T05-7 Noise\T05-7 NOISE ASESSMENT POINT_20230904.dwg

CIVIL ENGINEERING AND DEVELOPMENT DEPARTMENT

Agreement No. CE47/2020 (CE) –

Term Consultancy for Site Formation and Infrastructure Works for Proposed Housing Development in Zone 2 (2021-2024) – Feasibility Study

Task Order No. 7 – Site Formation and Infrastructure Works for Proposed Housing Development at site adjacent to Siu Lek Yuen Fire Station, Yuen Shun Circuit, Sha Tin – Feasibility Study

TO7 –

Executive Summary

Housing development at TO7 (Project) is proposed at the Site is located adjacent to the Siu Lek Yuen Fire Station at Yuen Shun Circuit in Sha Tin, New Territories, with an area of 2,826 m^2. Current land use at the Project Site is an outdoor parking lot. Surrounding land use consists of logistics and freight warehouses, fire station and the nearest residential building is approximately 250m west to the Site.

A Preliminary Environmental Review (PER) Report has been prepared to identify and assess the environmental impacts arising from construction and operation phases of the Project, in order to the determine the applicability of the proposed development.

Based on the proposed development parameters, the environmental impacts at TO7 is not insurmountable for the future residential development. The environmental impacts are summarised below:

Air Quality – With the implementation of control measures as specified in accordance with Air Pollution Control (Construction Dust) Regulation, Air Pollution Control (Non-road Mobile Machinery) (Emission) Regulation, DEVB's TC No.1/2015, Technical Circular (Works) No. 13/2020 and the good site practices, adverse air quality impacts arising during the construction phase of the Project is not anticipated.

During operation phase, the separation distances between the road kerbs of nearby roads around the Site and the sensitive uses of the proposed development could comply with the HKPSG buffer distance requirements (i.e., 5m for Local Distributor). The air buffer zone for vehicular emission is illustrated in **Figure 2.2** of the PER report. Adverse potential impacts from vehicular emissions generated by the nearby road networks to the sensitive uses is not anticipated. On the other hand, the separation distance between the

chimneys and the sensitive uses of the proposed development could comply with the HKPSG requirements (i.e., 200m between the industrial chimneys and the air sensitive uses). As such, adverse air quality impacts arising from industrial activities is not anticipated. The air buffer zone for industrial chimney is illustrated in **Figure 2.3** of the PER report**.**

Noise – Road traffic from nearby road network (i.e., Chap Wai Kon Street, Ngau Pei Sha Street & Yuen Shun Circuit) are the dominant noise sources within the 300m assessment area. Noise exceedances up to 3 dB(A) are predicted at northwest façade of Block 1 and southeast facades of Block 2. Acoustic windows (baffle type) are proposed as mitigation measures. The assessment has also evaluated the traffic noise impact of operation of the KMB Sha Tin Bus Depot during peak operation hour. The results indicate that potential traffic noise impact due to the operation of bus depot would not worsen the situation.

For fixed noise impacts, potential noise sources were identified based on desktop review and site visit. Noise exceedance up to 1dB(A) is found in the residential unit of Block 2. With the implementation of the architectural fins, no adverse fixed noise impacts are anticipated. To prevent potential fixed noise impacts from Siu Lek Yuen Fire Station and the KMB Sha Tin Bus Depot, additional 1.5m architectural fins are also recommended for screening and avoiding direct line of sight from the project site to the potential fixed noise sources.

Railway noise impact assessment has been conducted. Tuen Ma Line is running close to the western end of the site. Railway noise exceedance of up to 2 dB(A) is expected at Block 1 during night-time period. It is recommended to adopt acoustic window (baffle type) and 1.5m architectural fins to minimize the potential railway noise impacts.

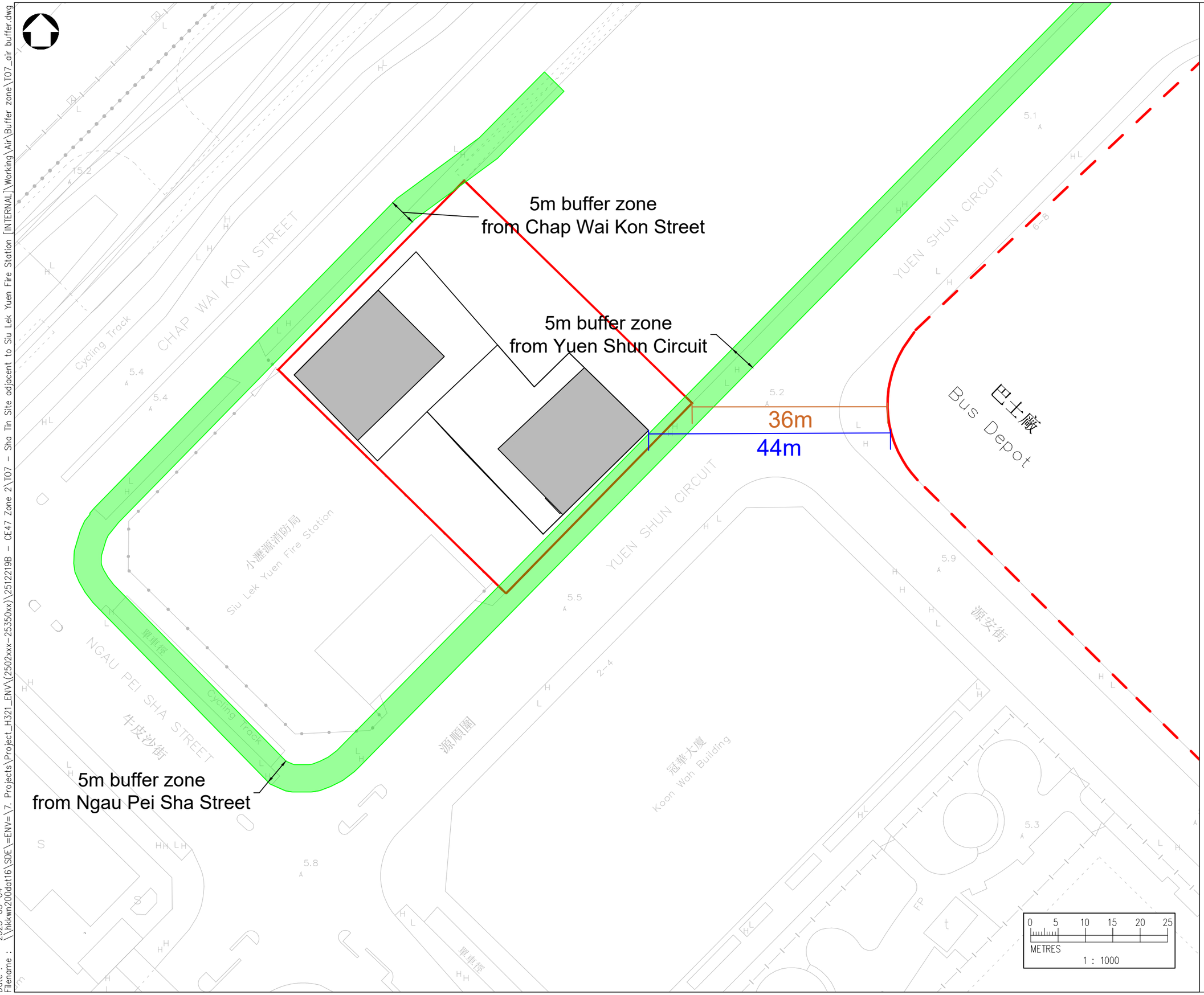
The locations of the above-mentioned noise mitigation measures are illustrated in **Figure 3.6** of the PER report.

Water Quality – there are no adverse environmental impact during construction and operation phases of the Project provided that mitigation measures and stormwater best management practices are in place.

Waste Management – C&D materials will inevitably be produced during the construction phase. Wastes generated from construction activities include inert and non-inert C&D materials, chemical waste and general refuse. Mitigation measures have been proposed following the avoidance-minimization-recycling-reuse-treatment-disposal hierarchy.

During operation phase, no significant waste implication is expected from housing residents. The quantity of general refuse arising from the operational phase can be minimised by implementing an effectual waste handling system and waste reduction programme, and by hiring a reputable waste collector. As such it is considered to have no adverse environmental impacts.

Land Contamination – potential contamination of the land is not anticipated.



NOTES :

1. ALL DIMENSIONS ARE IN MILLIMETRES UNLESS OTHERWISE STATED.
2. ALL LEVELS ARE IN METRES (M) AND RELATIVE TO HONG KONG PRINCIPAL DATUM (mPD).

LEGEND :

- SITE BOUNDARY
- 20m BUFFER ZONE
- 5m BUFFER ZONE
- KMB BUS DEPOT
- m — DISTANCE BETWEEN KMB BUS DEPOT AND PROJECT SITE BOUNDARY
- m — DISTANCE BETWEEN KMB BUS DEPOT AND NEAREST AIR SENSITIVE USE

Rev	Description	By	Date

Consultant

wsp

Project title

AGREEMENT NO.CE47/2020 (CE)
TERM CONSULTANCY FOR SITE FORMATION AND INFRASTRUCTURE WORKS FOR PROPOSED HOUSING DEVELOPMENTS IN ZONE 2 (2021 – 2024) – FEASIBILITY STUDY

Drawing title

AIR IMPACT ASSESSMENT
AIR BUFFER ZONE

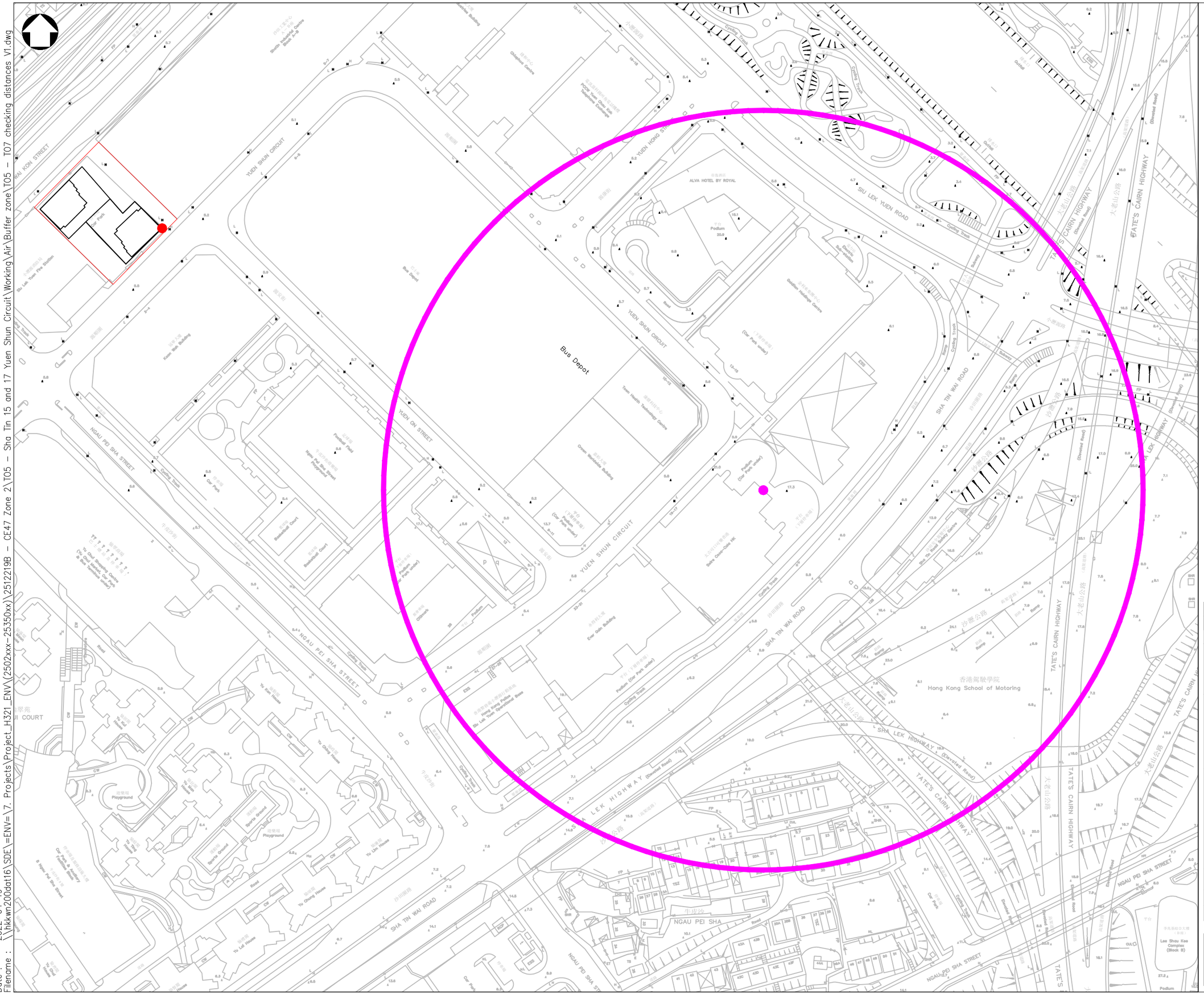
TASK ORDER 7

Drawing no.		Rev.
FIGURE 2.2		0
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Date : 2023-05-04
Filename : \\hkkwn200dat16\SDE\=ENV=\7. Projects\Project_H321_ENV\(2502xxx-25350xx)\2512219B - CE47 Zone 2\T07 - Sha Tin Site adjacent to Siu Lek Yuen Fire Station [INTERNAL]\Working\Air\Buffer zone\T07_air buffer.dwg



NOTES :

1. ALL DIMENSIONS ARE IN MILLIMETRES UNLESS OTHERWISE STATED.
2. ALL LEVELS ARE IN METRES (M) AND RELATIVE TO HONG KONG PRINCIPAL DATUM (mPD).

LEGEND :

- SITE BOUNDARY
- LOCATION OF CHIMNEY
- AIR SENSITIVE RECEIVERS
- AIR BUFFER ZONE

Rev	Description	By	Date

Consultant

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Project title

AGREEMENT NO.CE47/2020 (CE)
TERM CONSULTANCY FOR SITE FORMATION AND INFRASTRUCTURE WORKS FOR PROPOSED HOUSING DEVELOPMENTS IN ZONE 2 (2021 – 2024) – FEASIBILITY STUDY

Drawing title

AIR BUFFER ZONE OF CHIMNEY

TASK ORDER 7

Drawing no.	Rev.
FIGURE 2.3	0

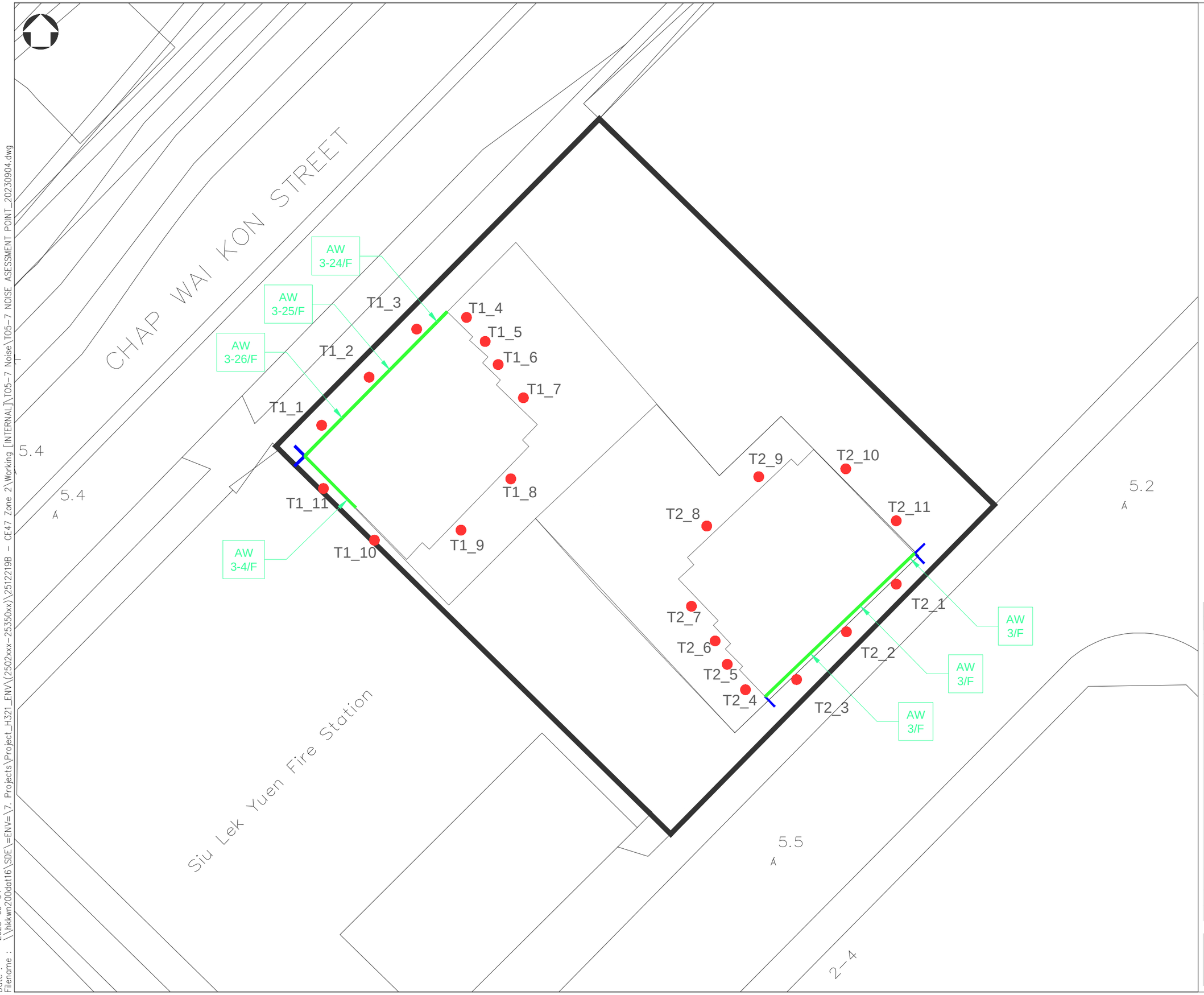
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NOTES :

1. ALL DIMENSIONS ARE IN MILLIMETRES UNLESS OTHERWISE STATED.
2. ALL LEVELS ARE IN METRES (M) AND RELATIVE TO HONG KONG PRINCIPAL DATUM (mPD).

LEGEND :

- SITE BOUNDARY
- NOISE ASSESSMENT POINTS
- ACOUSTIC WINDOW (BAFFLE TYPE)
- 1.5m ARCHITECTURAL FIN

Rev	Description	By	Date

Consultant

wsp

Project title

AGREEMENT NO.CE47/2020 (CE)
TERM CONSULTANCY FOR SITE FORMATION AND INFRASTRUCTURE WORKS FOR PROPOSED HOUSING DEVELOPMENTS IN ZONE 2 (2021 – 2024) – FEASIBILITY STUDY

Drawing title

LOCATION OF THE OVERALL MITIGATION MEASURES FOR NOISE IMPACT ASSESSMENT

Drawing no.	Rev.
FIGURE 3.6	0

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SW	SEP2023	CY	CY

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Date : 2023-09-04
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Visual Appraisal for Proposed Commercial and Residential Developments at Shen Mun and Siu Lek Yuen, Sha Tin

A. Purpose

1. This Visual Appraisal is to examine the possible visual impact of the proposed commercial and residential developments in Shek Mun Business Area (SMBA) and Siu Lek Yuen Industrial Area (SLYIA) so as to facilitate the rezoning of the sites. Two sites in Shek Mun are proposed to be rezoned from "Government, Institution or Community" ("G/IC") and "Open Space" ("O") to "Commercial (1)" ("C(1)") for commercial developments; one site in SLYIA is proposed to be rezoned from "G/IC" to C(1) for commercial development; one site in SLYIA is proposed to be rezoned from "Industrial (1)" ("I(1)") to "Commercial (2)" ("C(2)") to reflect an existing hotel development; and two sites in SLYIA are proposed to be rezoned from "O" and "G/IC" to "Residential (Group A) 9" ("R(A)9") and "Residential (Group A) 10" ("R(A)10") respectively for residential development. The visual appraisal is conducted by comparing the changes in the viewpoint between the existing condition and the proposed developments with reference to the Town Planning Board Guidelines No. 41 on 'Submission of Visual Impact Assessment for Planning Applications to the Town Planning Board' (TPB PG-No. 41).

B. Subject Site and Area Context

Sites A and B at Shen Mun Business Area

1. Sites A and B are currently zoned "G/IC" and "O" on the approved Sha Tin Outline Zoning Plan (OZP) No. S/ST/36 respectively and cover a site area of about 0.85ha and 0.41ha respectively and located at northern fringe of the SMBA. The sites are generally bounded by Shek Mun Interchange to the north, Tai Chung Kiu Road to the northwest, Shek Mun Playground to the south, and On Ping Street, petrol station and Shek Mun Fresh Water Booster Pumping Station to the east. A hotel (Courtyard Hong Kong Sha Tin) (about 109mPD) is located to its further southwest (**Plan 1**).

2. The sites are located in proximity to existing residential developments namely Ravana Garden (about 96mPD to 105mPD), Garden Vista (about 70mPD to 86mPD) and Pictorial Garden (about 80mPD to 96mPD) located to the north across Tai Chung Kiu Road. Further north of the residential developments is the Shing Mun River. The other nearby existing

industrial/industrial-office buildings across On Ping Street and On Lai Street include Grandtech Centre (about 112mPD), New Trade Plaza Tower A & B (about 91mPD to 94mPD), IDS Li Fung Centre (about 92mPD) and CLP Power Shatin Centre (about 122mPD). To the northeast of SLYIA across the river channel is Shek Mun Estate (about 140mPD).

Sites C, D, E and F at Siu Lek Yuen Industrial Area

3. Site C, covering a site area of about 0.56ha, is bounded by Siu Lek Yuen Road to the north, Sha Tin Wai Road to the east, Swire Coca-Cola HK (about 142mPD, and chimney at about 150mPD) to the southwest, and Yuen Shun Circuit and Goldlion Holdings Centre (about 40mPD) to the west and northwest. Across Sha Tin Wai Road is the elevated Sha Lek Highway (about 23 to 25mPD) and Tate's Cairn Highway (about 17mPD).

4. Site D, covering a site area of about 0.11ha, is bounded by Chiaphua Centre (about 35mPD) and PCCW Yuen Chau Kok Telephone Exchange Building (about 50mPD) to the north, Yuen Hong Street to the east, Yuen Shun Circuit to the south. To the east across Yuen Hong Street is Site F, Alva Hotel by Royal (about 101mPD) with a site area of about 0.64ha. Other nearby developments across Yuen Shun Circuit include KMB Sha Tin Depot (about 29mPD), Town Health Technology Centre (about 36mPD) and Crown Worldwide Building (about 41 mPD).

5. Site E, covering a site area of about 0.28ha, is bounded by Chap Wai Kon Street and Shatin Industrial Centre (about 40mPD) to the northeast, Yuen Shun Circuit to the southeast and Siu Lek Yuen Fire Station (about 18mPD) to the west. To the further northwest across Chap Wai Kon Street is the existing elevated MTR Tuen Ma Line viaduct (about 15mPD). Across the MTR Tuen Ma Line viaduct are T.W.G.Hs Yow Kam Yuen College (about 27mPD), S.K.H. Lam Kau Mow Secondary School (about 28mPD), Dr. Catherine F. Woo Memorial School (about 29mPD), City One Shatin (about 18mPD to 108mPD) and Sunshine Grove (118.1mPD). Other residential and industrial developments across Ngau Pei Sha Street and Yuen Chun Circuit include Prima Villa (about 133mPD), Yu Chui Shopping Centre (about 34mPD), Yu Chu Court (about 98mPD to 121mPD), Koon Wah Building (about 27mPD) and KMB Sha Tin Depot (about 28mPD).

C. The Proposed Development

1. Sites A, B and D are proposed to be rezoned to "Commercial (1)" ("C(1)") to facilitate the commercial developments. Site F is proposed to be rezoned to "Commercial (2)" ("C(2)") to reflect the existing hotel development. Sites C and E are proposed to be rezoned to "Residential (Group A) 9" ("R(A)9") and "Residential (Group A) 10" ("R(A)10") respectively to facilitate the residential developments. The proposed preliminary development parameters of are listed in the table below:

	Site A	**Site B**	**Site C**	**Site D**	**Site E**	**Site F**
Site Area (about)	0.85ha	0.41ha	0.56ha	0.11ha	0.28ha (with developable area of 0.23ha)	0.64
Proposed building height restriction	130mPD	130mPD	110mPD	120mPD	120mPD	120mPD
Proposed Zoning	"C(1)"	"C(1)"	"R(A)9"	"C(1)"	"R(A)10"	"C(2)"

2. For better understanding on the spatial relationship between the proposed developments and its surrounding environment including major residential developments in the locality, photomontages are presented at **Plans 2a to 2j**. Please note the layouts for Sites A, B, C, D and E as shown in the photomontages are indicative only, while that for Site F is of the existing development at the site. The final design and layout will be developed by private developments at the subsequent stage.

D. Visual Appraisal

1. The following viewpoints viewing from popular pedestrian nodes accessible by the public have been identified (**Plan 1**). A total of 10 photomontages (**Plan 2a to 2j**) are prepared to illustrate the possible visual impact of the proposed developments at the selected viewpoints.

- Viewpoint 1: View from riverside promenade between Sha Tin Racecourse and Sha Tin Sewage Treatment Works
- Viewpoint 2: View from riverside promenade outside Hong Kong Sports Institute
- Viewpoint 3: View from Exit C of MTR Shek Mun Station

- Viewpoint 4: View from On King Street Park
- Viewpoint 5: View from Shek Mun Playground
- Viewpoint 6: View from Shek Mun Riverside Garden
- Viewpoint 7: View from Siu Lek Yuen Village Sitting-Out Area
- Viewpoint 8: View from Ngau Pei Sha Street Playground
- Viewpoint 9: View from Exit D of MTR City One Station
- Viewpoint 10: View from Sha Tin Lion's Pavilion

Viewpoint 1: View from riverside promenade between Sha Tin Racecourse and Sha Tin Sewage Treatment Works

2. This viewpoint is located at the northern bank of Shing Mun River promenade at the junction with the Twin Bridge, between Sha Tin Racecourse and Sha Tin Sewage Treatment Works. While pedestrian flow is mostly confined to long-distance joggers/cyclists at this viewpoint due to its distance from major residential developments, this viewpoint is located next to the cycle track along Shing Mun River and is a common resting area for cyclists cycling between Sha Tin, Ma On Shan and Tai Po. The visual sensitivity of this viewpoint is considered to be medium.

3. The photomontage (**Plan 2a**) shows that the proposed development at Site B is blocked entirely by the existing residential developments of Pictorial Garden in the foreground. While the lower portion of the proposed development at Site A will be blocked by existing vegetation, the rest of the proposed development has a similar height with other nearby buildings and would create slight additional visual obstruction at the view point.

4. In view of the above, the visual impact of the proposed developments at Sites A and B on this viewpoint is considered slightly adverse.

Viewpoint 2: View from riverside promenade outside Hong Kong Sports Institute

5. This viewpoint is located at the riverside promenade outside Hong Kong Sports Institute along Shing Mun River. Similar to viewpoint 1, the pedestrian flow at this viewpoint is mainly confined to long-distance joggers/cyclists and is more characterised by frequent cyclist flow between Sha Tin, Ma On Shan and Tai Po. The visual sensitivity of this viewpoint is considered to be medium.

6. The photomontage (**Plan 2b**) shows that the proposed commercial developments at Shek Mun Business Area at Sites A and B to be largely blocked by the existing developments in the foreground, including Garden Vista, Ravana Garden and Leung Kui Kau Lutheran Primary School. The development at Site A would block part of the existing sky view and hillside. Notwithstanding, the scale of the proposed developments from this view point are comparable to the existing developments in the area.

7. In view of the above, the visual impact of the proposed developments at Sites A and B on this viewpoint is considered slightly adverse.

Viewpoint 3: View from Exit C of MTR Shek Mun Station

8. This viewpoint is located at the open area outside Exit C of MTR Shek Mun Station, Kings Wing Plaza 1 and Kings Wing Plaza 2 fronting On Kwan Street. As this open area is the major pedestrian access from MTR Shek Mun Station to various commercial/business developments of the Shek Mun Business Area, this viewpoint is characterized by heavy pedestrian flow which is transient in nature. The visual sensitivity of this viewpoint is considered to be medium.

9. The photomontage (**Plan 2c**) shows that the proposed commercial developments at Shek Mun Business Area at Sites A and B are totally blocked by various developments including Kings Wing Plaza 2 and HSBC Shek Mun Building at the foreground.

10. In view of the above, the visual impact of the proposed developments at Sites A and B on this viewpoint is considered negligible.

Viewpoint 4: View from On King Street Park

11. This viewpoint is located at the junction of Shing Mun River and Siu Lek Yuen Nullah near Ravana Garden and abutting Tai Chung Kiu Road. Locating next to major residential developments and with an existing cycle track passing through the park, this viewpoint is characterized by both heavy pedestrian and cyclist flows. The visual sensitivity of this viewpoint is considered to be medium to high.

12. The photomontage (**Plan 2d**) shows that the proposed commercial developments at Shek Mun Business Area at Sites A and B will be entirely/largely obscured by tall trees and vegetation in the On King Street Park. Due to the distance from the proposed development, the proposed developments At Sites A and B are not prominent from this viewpoint.

13. In view of the above, the visual impact of the proposed developments at Sites A and B on this viewpoint is considered slightly adverse.

Viewpoint 5: View from Shek Mun Playground

14. This viewpoint is located at the playground to the immediate southwest of Site B. While the pedestrian flow at this playground is not heavy, the users of the park are expected to be stationary users as well as recreational users in the basketball court. The visual sensitivity of this viewpoint is considered to be high.

15. The photomontage (**Plan 2e**) shows that the proposed commercial developments at Shek Mun Business Area at Site A will be blocked entirely by that at Site B. However, due to the proximity to the proposed developments, the proposed development at Site B will be very prominent and would cause visual obstruction to the existing open sky view.

16. In view of the above, the visual impact of the proposed developments at Sites A and B on this viewpoint is considered significantly adverse.

Viewpoint 6: View from Shek Mun Riverside Garden

17. This viewpoint is located at a public open space to the west of Shek Mun Estate overlooking SLYIA from the northeast across Fo Tan Nullah and Siu Lek Yuen Road Playground, and is heavily utilized by residents in the nearby residential developments as a riverside promenade. The visual sensitivity of this viewpoint is considered to be high.

18. The photomontage (**Plan 2f**) shows that the existing hotel development at Site F is highly visible from the viewpoint. The lower portion of proposed developments at Sites C, D and E will be obscured by the trees at the Siu Lek Yuen Road Playground, that at Sites C and D will also be partially obscured by the existing Godlion Holdings Centre and PCCW Yuen Chau Kok Telephone Exchange respectively. As the existing developments in SLYIA are relatively short, the top portions of the proposed developments protrude beyond the existing

developments and cause visual obstruction to the open sky view and the hillside backdrop. Nonetheless, the indicative scheme at Site C has incorporated building separation for better visual permeability and to minimize the visual impact. As the proposed development at Site E is relatively further away from the viewpoint, the proposed development is largely obscured by the existing Chiaphua Centre and Chiaphua Industries Building in the foreground. The scale of the proposed developments from the view point are comparable to the existing Alva Hotel by Royal and Swire Coca-Cola HK as shown in the photomontage.

19. In view of the above, the visual impact of the proposed developments at Sites C, D, E and F on this viewpoint is considered moderately adverse.

Viewpoint 7: View from Siu Lek Yuen Village Sitting-Out Area

20. This viewpoint is located at a public open space at the western edge of Siu Lek Yuen Village facing SLYIA from the southeast across Sha Lek Highway, and is mainly utilized by residents in the nearby residential developments. The visual sensitivity of this viewpoint is considered to be high.

21. The photomontage (**Plan 2g**) shows that the proposed developments at Sites D and E are entirely blocked by the existing vegetation around the sitting-out area and Site F cannot be seen, only the top part of the proposed development at Site C would slightly protrude the existing open sky view above the existing vegetation and playground facilities of the sitting-out area and be visible from the viewpoint.

22. In view of the above, the visual impact of the proposed developments at Sites C, D, E and F on this viewpoint is considered slightly adverse.

Viewpoint 8: View from Ngau Pei Sha Street Playground

23. This viewpoint is located at the basketball court of Ngau Pei Sha Street Playground abutting Ngau Pei Sha Street and Yuen On Street. This viewpoint is easily accessible by the residents in major residential developments in the vicinity including Yu Chui Court and Prima Villa. The visual sensitivity of this viewpoint is considered to be high.

24. The photomontage (**Plan 2h**) shows that the existing development of Site F will be visible to the right of the viewpoint and the proposed developments at Sites A and B in Shek Mun will

be blocked entirely by the KMB Bus Depot across Yuen On Street from the viewpoint. While the lower parts of the proposed developments at Sites D and E would be blocked by the existing industrial developments in the foreground, their upper portions would create visual intrusion to the existing open sky view from the viewpoint. The scale of the proposed development at Sites D and E are comparable to the existing Alva Hotel by Royal at Site F from this viewpoint.

25. In view of the above, the visual impact of the proposed developments at Sites A, B, D, E and F on this viewpoint is considered moderately to moderately adverse.

Viewpoint 9: View from Exit D of MTR City One Station

26. This viewpoint is located at the pedestrian walkway outside Exit D of MTR City One Station fronting the junction of Chap Wai Kon Street and Ngau Pei Sha Street. This viewpoint is at a major pedestrian access from MTR City One Station to Siu Lek Yuen Industrial Area and Yu Chui Court, and is characterized by heavy pedestrian flow which is transient in nature. The visual sensitivity of this viewpoint is considered to be medium.

27. The photomontage (**Plan 2i**) shows that the proposed and existing developments at Sites C and F are almost entirely blocked by the vegetation and Siu Lek Yuen Fire Station in the foreground. Due to the proximity to Site E, the proposed developments at the site is highly visible from the viewpoint, causing obvious visual instruction to the existing open sky view. Notwithstanding, the indicative scheme at Site E has incorporated building separation to enhance visual permeability and reduce the overall visual bulk at the site. The proposed development at Site D is blocked entirely by the proposed development at Site E.

28. In view of the above, the visual impact of the proposed developments at Sites C, D, E and F on this viewpoint is considered moderately adverse.

Viewpoint 10: View from Sha Tin Lion's Pavilion

29. This viewpoint is a panorama view from the upper hillside at the end of Sui Wo Road in Fo Tan to the northwest of Sites A, B, C, D, E and F across Shing Mun River. The viewpoint is of district significance overlooking Sha Tin New Town. The visual sensitivity of this viewpoint is considered to be medium, taking into account the distance between the viewpoint and the proposed developments.

30. The photomontage (**Plan 2j**) shows that the proposed developments at Sites C, D, E and F in SLYIA will be largely blocked by the dense residential developments in the foreground closer to Shing Mun River, particularly City One Sha Tin.

31. As there are less existing developments in the foreground of the proposed developments at Sites A and B in SMBA, and the sites are closer to Shing Mun River, the proposed developments at Sites A and B will be more visible at the viewpoint and as shown in the photomontage, would create slight visual obstruction to the green hillside backdrop.

32. All of the proposed developments at sites A, B, C, D, E and F are of similar scale and in keeping with their surrounding developments and the proposed developments will blend in well with densely-developed Sha Tin New Town.

33. In view of the above, the visual impact of the proposed developments at Sites A, B C, D, E and F on this viewpoint is considered slightly adverse.

E. Conclusion

34. The overall visual impact of the proposed developments at Sites A, B, C, D, E and F at SMBA and SLYIA to the surrounding visual sensitive receivers is considered mostly from negligible to moderately adverse with viewpoint 5 being significantly adverse mainly due to proximity to the proposed development sites. Nevertheless, the proposed scale of developments will be not incompatible with the existing high-density developments in Sha Tin.

F. Attachments

Plan 1a Site Location Plan
Plan 1b Major Developments around the Subject Sites
Plan 2a Viewpoint 1: View from riverside promenade between Sha Tin Racecourse and Sha Tin Sewage Treatment Works
Plan 2b Viewpoint 2: View from riverside promenade outside Hong Kong Sports Institute
Plan 2c Viewpoint 3: View from Exit C of MTR Shek Mun Station
Plan 2d Viewpoint 4: View from On King Street Park

Plan 2e Viewpoint 5: View from Shek Mun Playground
Plan 2f Viewpoint 6: View from Shek Mun Riverside Garden
Plan 2g Viewpoint 7: Siu Lek Yuen Village Sitting-Out Area
Plan 2h Viewpoint 8: View from Ngau Pei Sha Street Playground
Plan 2i Viewpoint 9: View from Exit D of MTR City One Station
Plan 2j Viewpoint 10: View from Sha Tin Lion's Pavilion

Planning Department
September 2023

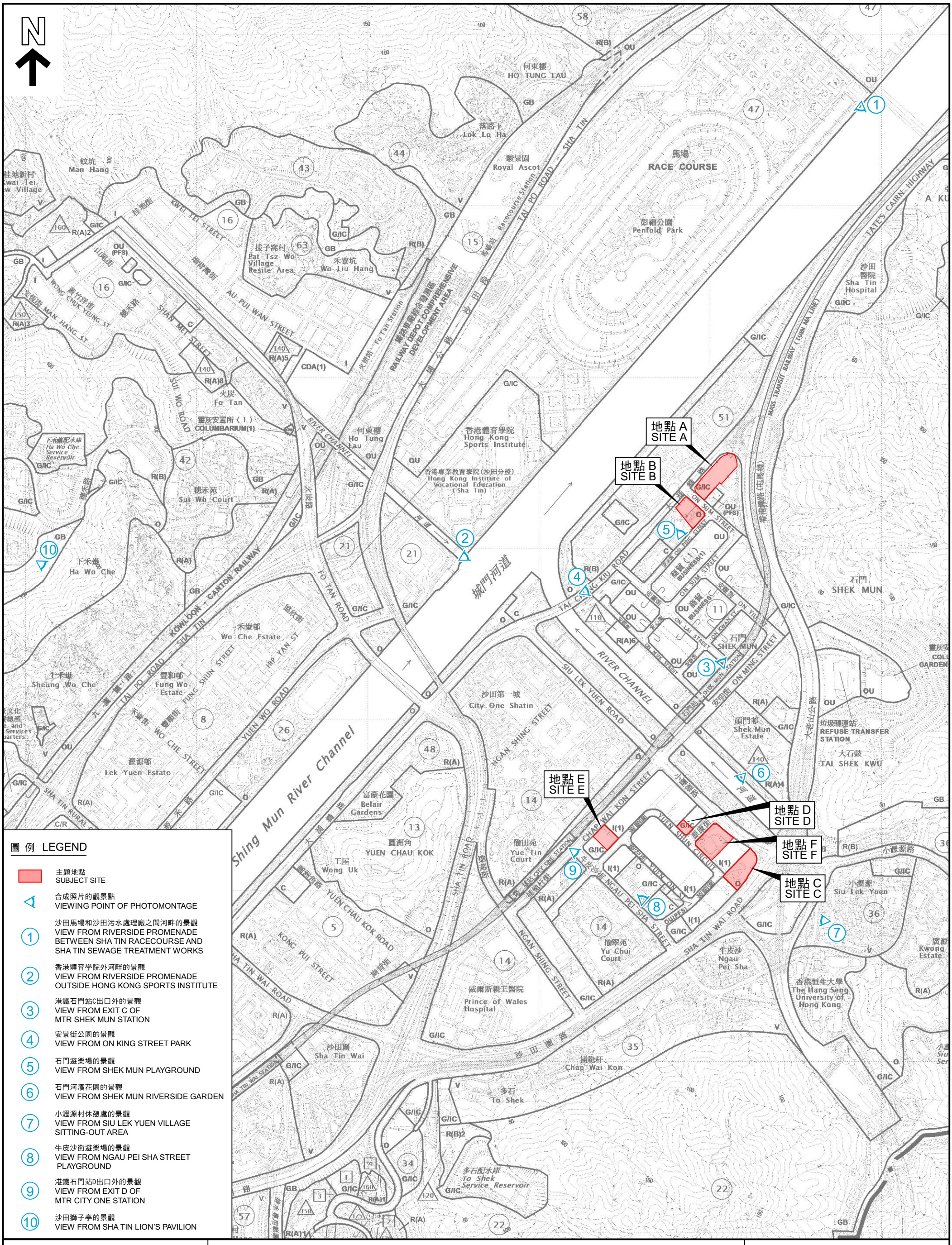


圖 例 LEGEND

- 主題地點 SUBJECT SITE
- 合成照片的觀景點 VIEWING POINT OF PHOTOMONTAGE
- ① 沙田馬場和沙田污水處理廠之間河畔的景觀 VIEW FROM RIVERSIDE PROMENADE BETWEEN SHA TIN RACECOURSE AND SHA TIN SEWAGE TREATMENT WORKS
- ② 香港體育學院外河畔的景觀 VIEW FROM RIVERSIDE PROMENADE OUTSIDE HONG KONG SPORTS INSTITUTE
- ③ 港鐵石門站C出口外的景觀 VIEW FROM EXIT C OF MTR SHEK MUN STATION
- ④ 安景街公園的景觀 VIEW FROM ON KING STREET PARK
- ⑤ 石門遊樂場的景觀 VIEW FROM SHEK MUN PLAYGROUND
- ⑥ 石門河濱花園的景觀 VIEW FROM SHEK MUN RIVERSIDE GARDEN
- ⑦ 小瀝源村休憩處的景觀 VIEW FROM SIU LEK YUEN VILLAGE SITTING-OUT AREA
- ⑧ 牛皮沙街遊樂場的景觀 VIEW FROM NGAU PEI SHA STREET PLAYGROUND
- ⑨ 港鐵石門站D出口外的景觀 VIEW FROM EXIT D OF MTR CITY ONE STATION
- ⑩ 沙田獅子亭的景觀 VIEW FROM SHA TIN LION'S PAVILION

本摘要圖於2023年9月14日擬備，
所根據的資料為於2022年11月8日
核准的分區計劃大綱圖編號S/ST/36
EXTRACT PLAN PREPARED ON 14.9.2023
BASED ON OUTLINE ZONING PLAN No.
S/ST/36 APPROVED ON 8.11.2022

位置圖 LOCATION PLAN

合成照片的觀景點
VIEW POINTS OF PHOTOMONTAGE

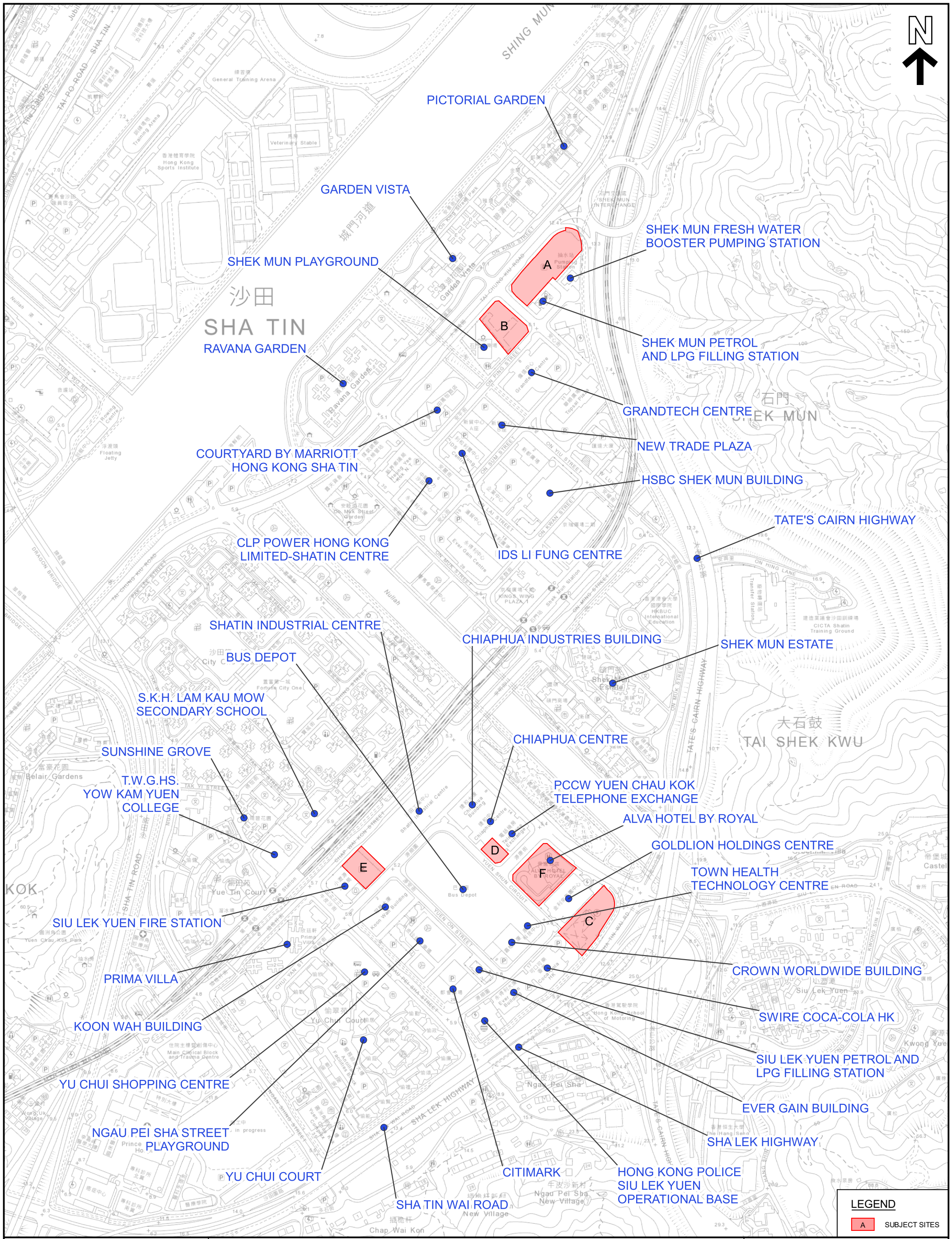
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米 METRES 100 0 100 200 300 400 500 600 700 800 900 1000 米 METRES

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M/ST/23/33

圖 PLAN
1a



EXTRACT PLAN PREPARED ON 3.10.2023
BASED ON SURVEY SHEETS No. 7-SE-A & C

MAJOR DEVELOPMENTS AROUND THE SUBJECT SITES

FOR INDICATIVE PURPOSE ONLY

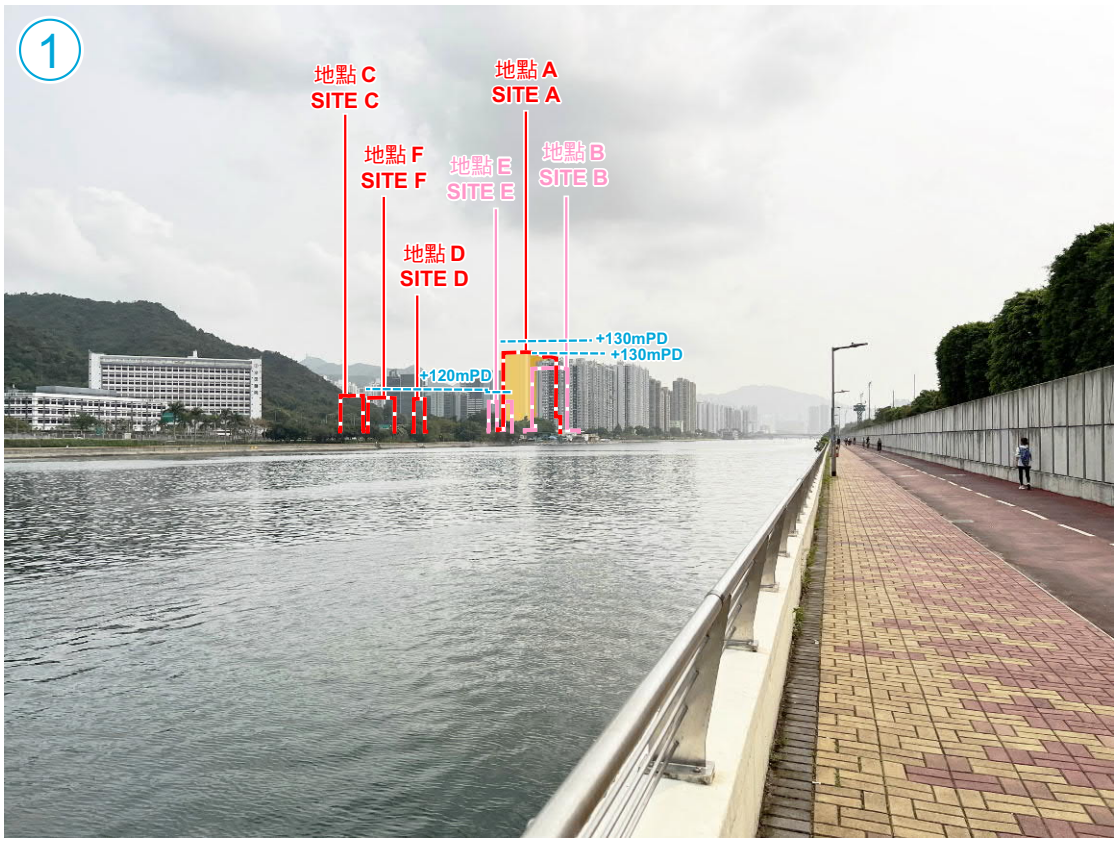
PLANNING DEPARTMENT

REFERENCE No.
M/ST/23/33

PLAN
1b



實地照片
SITE PHOTO



合成照片
PHOTOMONTAGE

本圖於2023年10月3日擬備，
所根據的資料為攝於2023年4月14日
的實地照片
PLAN PREPARED ON 3.10.2023
BASED ON SITE PHOTO
TAKEN ON 14.4.2023

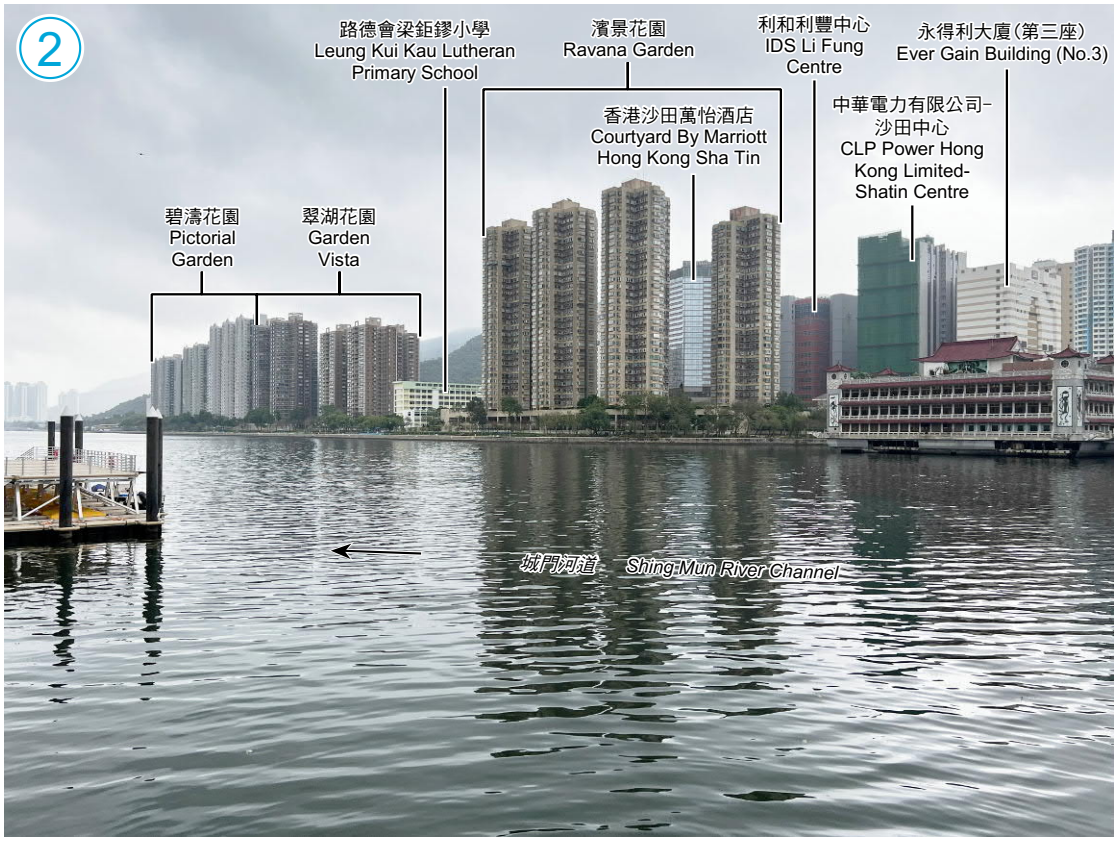
觀景點1
VIEW POINT 1

沙田馬場和沙田污水處理廠之間河畔的景觀
VIEW FROM RIVERSIDE PROMENADE
BETWEEN SHA TIN RACECOURSE AND
SHA TIN SEWAGE TREATMENT WORKS

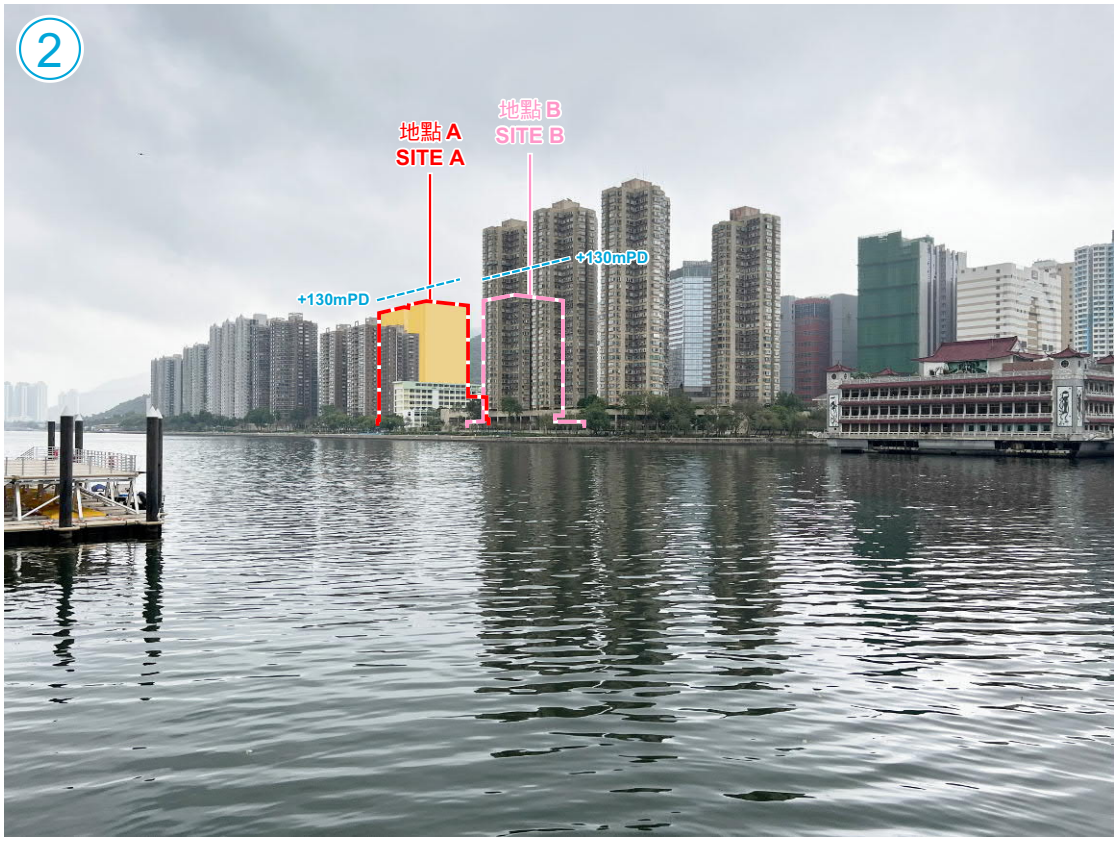
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PLANNING
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M/ST/23/33

圖 PLAN
2a



實地照片
SITE PHOTO



合成照片
PHOTOMONTAGE

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觀景點2
VIEW POINT 2

香港體育學院外河畔的景觀
VIEW FROM RIVERSIDE PROMENADE
OUTSIDE HONG KONG SPORTS INSTITUTE

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PLANNING
DEPARTMENT

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M/ST/23/33

圖 PLAN
2b



實地照片
SITE PHOTO



合成照片
PHOTOMONTAGE

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TAKEN ON 3.4.2023

觀景點3
VIEW POINT 3

港鐵石門站C出口外的景觀
VIEW FROM EXIT C OF MTR SHEK MUN STATION

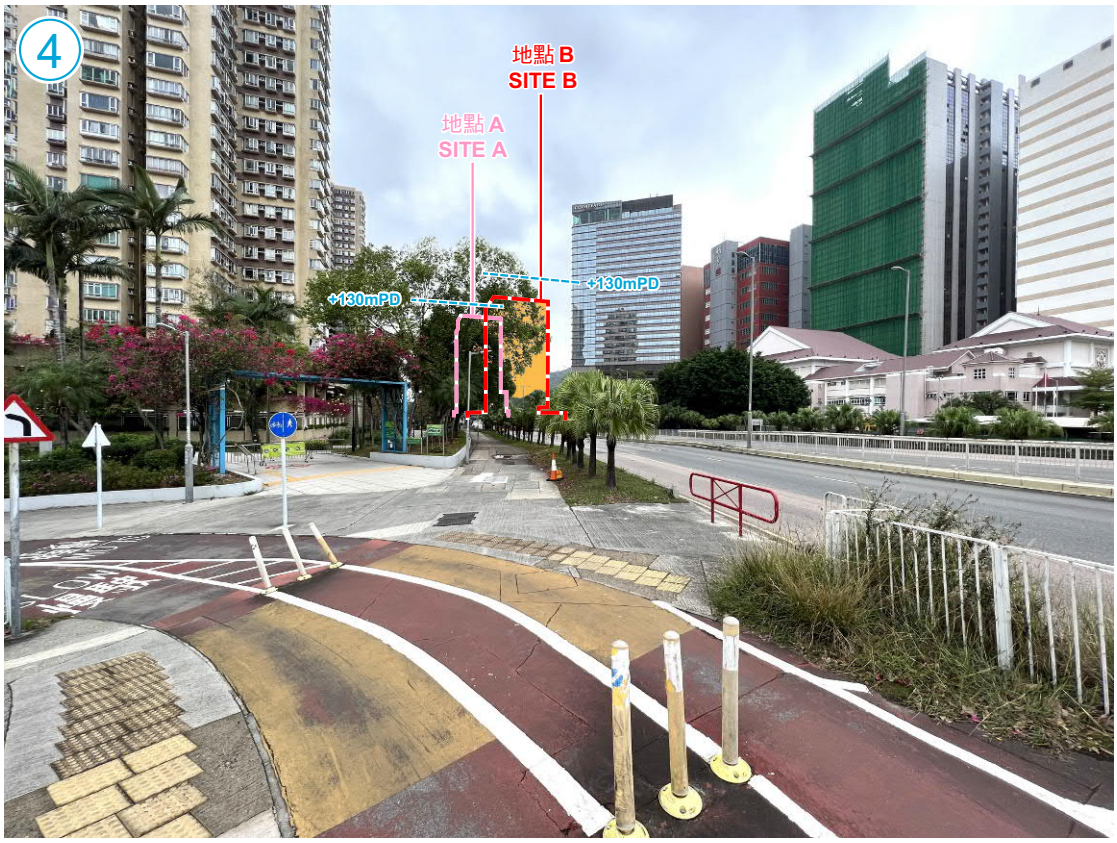
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PLANNING DEPARTMENT

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圖 PLAN
2c



實地照片
SITE PHOTO



合成照片
PHOTOMONTAGE

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TAKEN ON 3.4.2023

觀景點4
VIEW POINT 4

安景街公園的景觀
VIEW FROM ON KING STREET PARK

規劃署
PLANNING DEPARTMENT

參考編號
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M/ST/23/33

圖 PLAN
2d



實地照片
SITE PHOTO



合成照片
PHOTOMONTAGE

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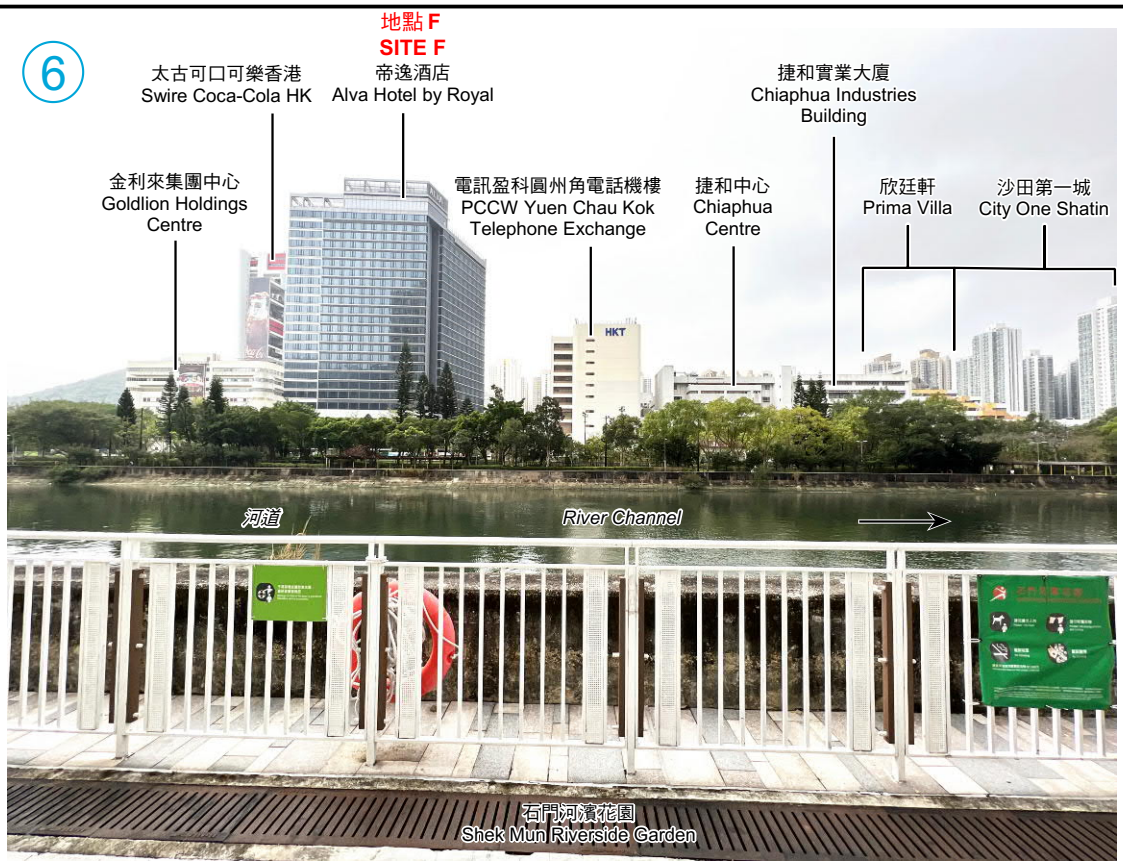
觀景點5
VIEW POINT 5

石門遊樂場的景觀
VIEW FROM SHEK MUN PLAYGROUND

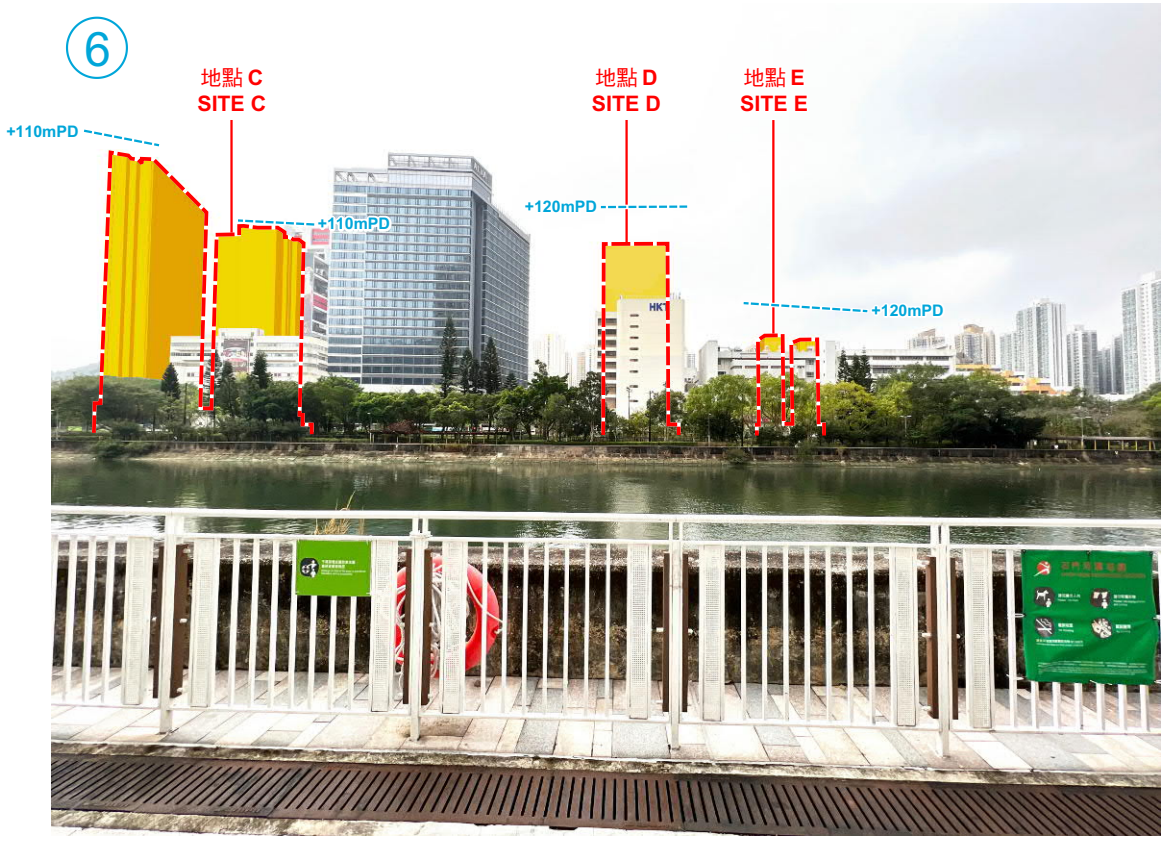
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PLANNING DEPARTMENT

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圖 PLAN
2e



實地照片
SITE PHOTO



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觀景點6
VIEW POINT 6

石門河濱花園的景觀
VIEW FROM SHEK MUN RIVERSIDE GARDEN

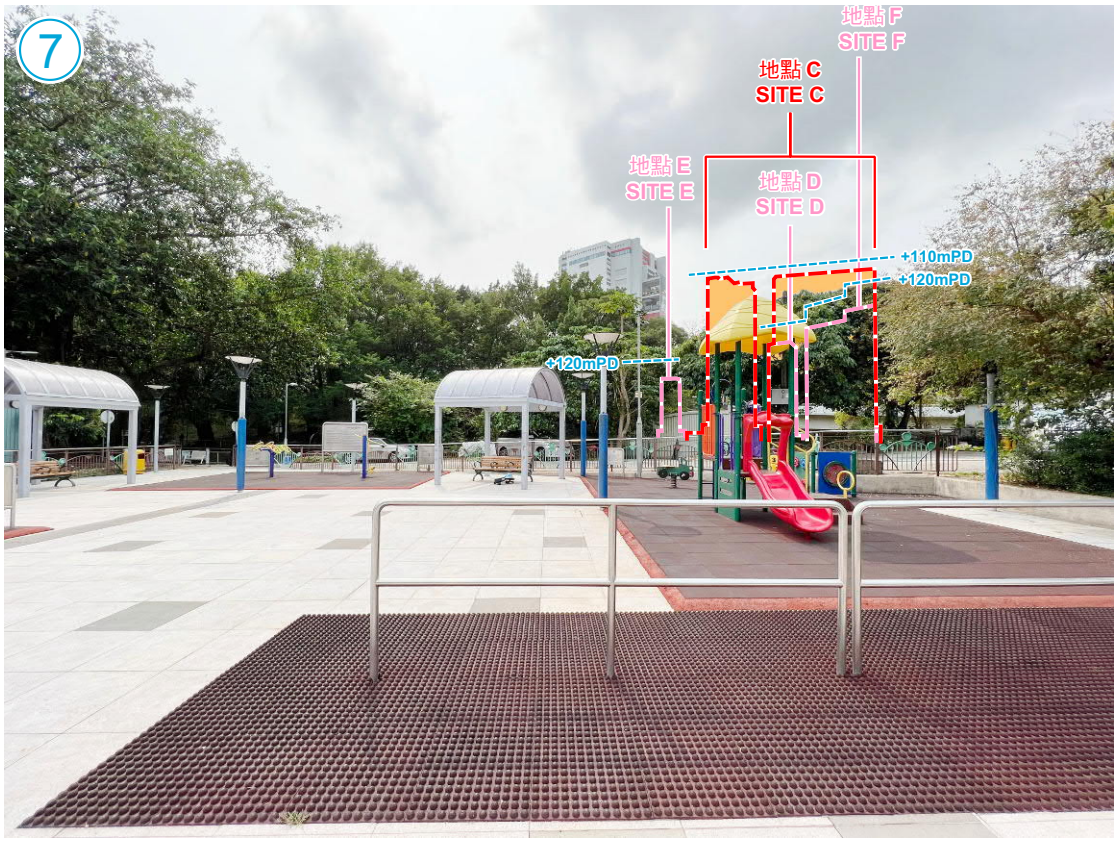
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圖 PLAN
2f



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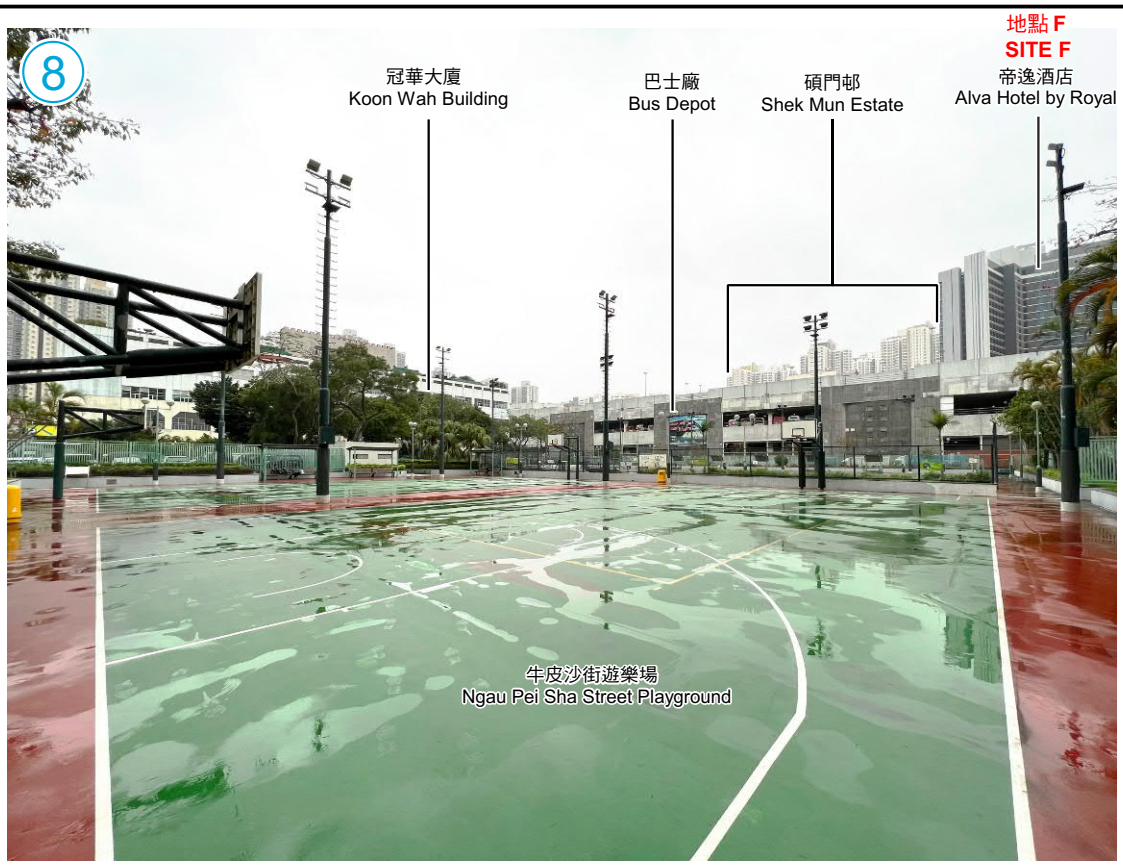
觀景點7
VIEW POINT 7

小瀝源村休憩處的景觀
SIU LEK YUEN VILLAGE SITTING-OUT AREA

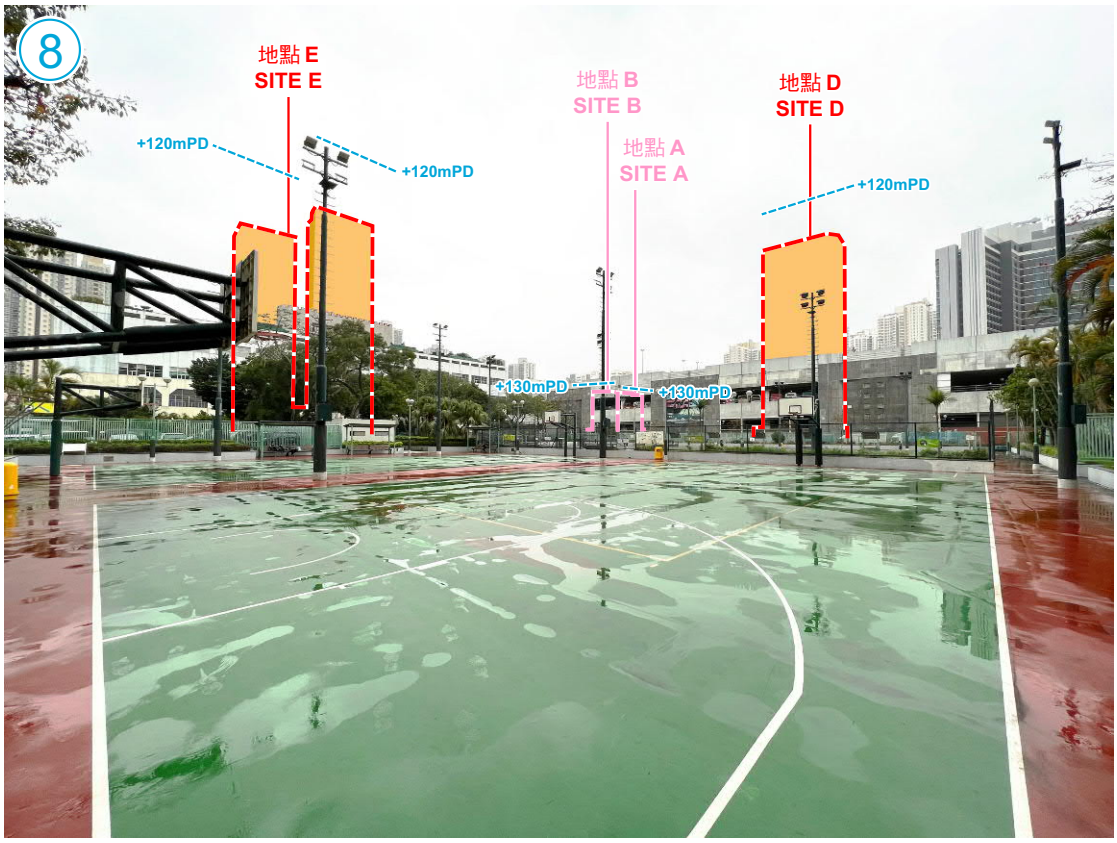
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圖 PLAN
2g



實地照片
SITE PHOTO



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觀景點8
VIEW POINT 8

牛皮沙街遊樂場的景觀
VIEW FROM NGAU PEI SHA STREET PLAYGROUND

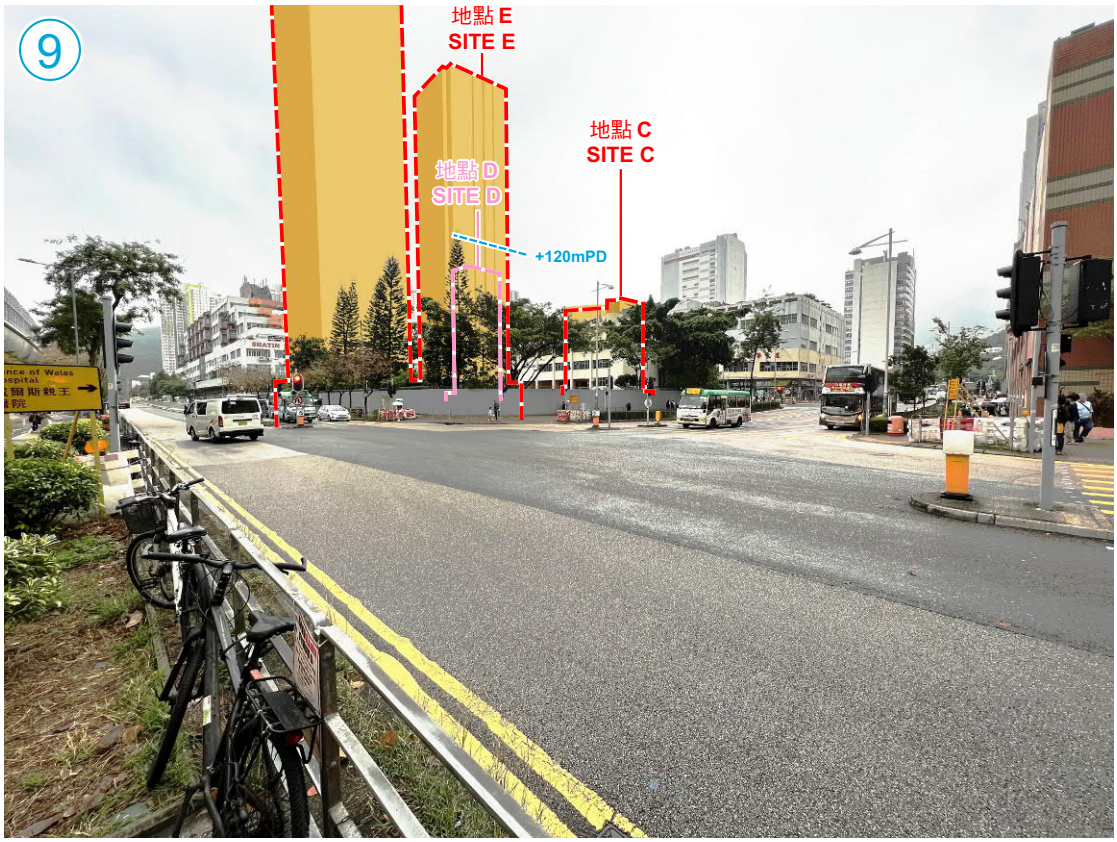
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圖 PLAN
2h



實地照片
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TAKEN ON 31.3.2023

觀景點9
VIEW POINT 9

港鐵第一城站D出口外的景觀
VIEW FROM EXIT D OF MTR CITY ONE STATION

規劃署
PLANNING DEPARTMENT

參考編號
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M/ST/23/33

圖 PLAN
2i



實地照片
SITE PHOTO



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PHOTOMONTAGE

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TAKEN ON 11.4.2023

觀景點10
VIEW POINT 10

沙田獅子亭的景觀
VIEW FROM SHA TIN LION'S PAVILION

規劃署
PLANNING
DEPARTMENT

參考編號
REFERENCE No.
M/ST/23/33

圖 PLAN
2j

Agreement No. PLN AVA 2021

Term Consultancy Category A For an Instructed Project for Shek Mun and Siu Lek Yuen, Shatin

Air Ventilation Assessment – Expert Evaluation Executive Summary

August 2023

Version: Final v1.3	Date: 30th August 2023

Disclaimer

This Executive Summary is prepared for **Planning Department (PlanD)** and is given for its sole benefit in relation to and pursuant to **Term Consultancies for Air Ventilation Assessment – Category A Expert Evaluation and Advisory Services on Air Ventilation Assessments For an Instructed Project for Shek Mun and Siu Lek Yuen, Shatin** and may not be disclosed to, quoted to or relied upon by any person (other than **PlanD)** without our prior written consent. No person other than **PlanD** into whose possession a copy of this Executive Summary comes may rely on this report without our express written consent and **PlanD** may not rely on it for any purpose other than as described above.

AECOM Asia Company Limited

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1 INTRODUCTION 2
2 WIND AVAILABILITY 3
3 THE BASELINE AND PROPOSED SCENARIOS 5
4 EXPERT EVALUATION ON THE BASELINE AND PROPOSED SCENARIOS 8
5 GOOD AIR VENTILATION FEATURES AND FURTHER OPTIMIZATION 17
6 SUMMARY AND CONCLUSION 18

1 INTRODUCTION

1.1.1 AECOM has been commissioned by Hong Kong Planning Department (PlanD) to carry out the AVA – EE for an Instructed Project for Shek Mun and Siu Lek Yuen, Shatin. The Project Area involves six sites, including two sites (Project Site 1 and Project Site 2) located in Shek Mun Business Area (SMBA) and four sites located within the Siu Lek Yuen Industrial Area (SLYIA). These Project Sites are currently zoned for "Government, Institute or Community" ("G/IC"), "Open Space" ("O") and "Industrial (I)" ("I(1)"), respectively, under the dictations of approved Sha Tin Outline Zoning Plan (OZP) No. S/ST/36. The locations of these Project Sites are indicated in **Figure 1.1**.

1.1.2 The objective of this AVA study is to assess the air ventilation impacts of the proposed developments with stipulated development parameters to support the rezoning application for the imposition of development restrictions in plot ratios and building heights of the proposed developments within the Project Sites.

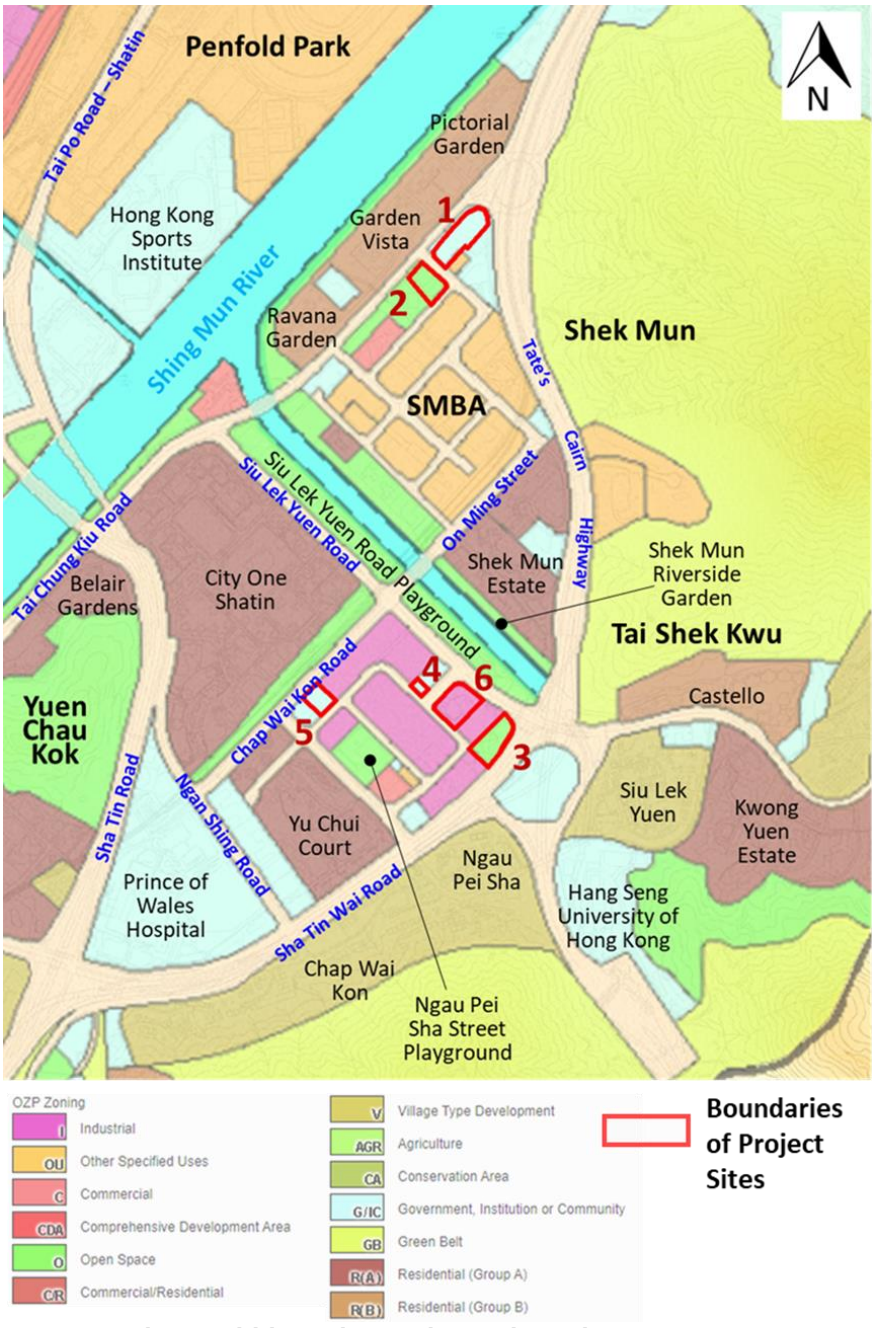


Figure 1.1 Land Use within and near the Project Sites

2 WIND AVAILABILITY

2.1.1 Wind data extracted from the PlanD's Regional Atmospheric Modelling System (RAMS), wind tunnel experimental wind data extracted from "Experimental Site Wind Availability Study for Sha Tin, Hong Kong (2009)" and wind data recorded at Shatin Hong Kong Observatory (HKO) weather station have been reviewed. Wind data from RAMS model is determined to be more representative for identification of prevailing wind directions in this Study. The prevailing wind directions identified from these sources of wind data are summarized in **Table 2.1**.

2.1.2 The wind availability data from the RAMS suggests that the annual prevailing wind towards the SMBA Project Sites (Project Sites 1 and 2) is coming from NNE, NE, and E directions, while in summer, the wind environment would heavily rely on the E, S, SSW and SW wind. For the SLYIA Project Sites (Project Sites 3, 4, 5, and 6), the annual prevailing wind is from the NNE, E, and ESE directions, while the summer prevailing wind is from the E, SSW and SW directions. **Figure 2.1(a)** and **Figure 2.1(b)** illustrate the prevailing wind directions toward the SMBA Project Sites (Project Sites 1 and 2) and SLYIA Project Sites (Project Sites 3, 4, 5, and 6) respectively.

Table 2.1 Summary of Prevailing Wind Directions towards the Project Sites from Difference Sources

	RAMS model		Wind Tunnel Experiment	HKO Shatin Weather Station
	SMBA	SLYIA		
Annual Wind	NNE, NE, E	NNE, E, ESE	ENE, E, NNW	NNE, N, E
Summer Wind	E, S, SSW, SW	E, SSW, SW	E, S, SW	WSW, SSW, E

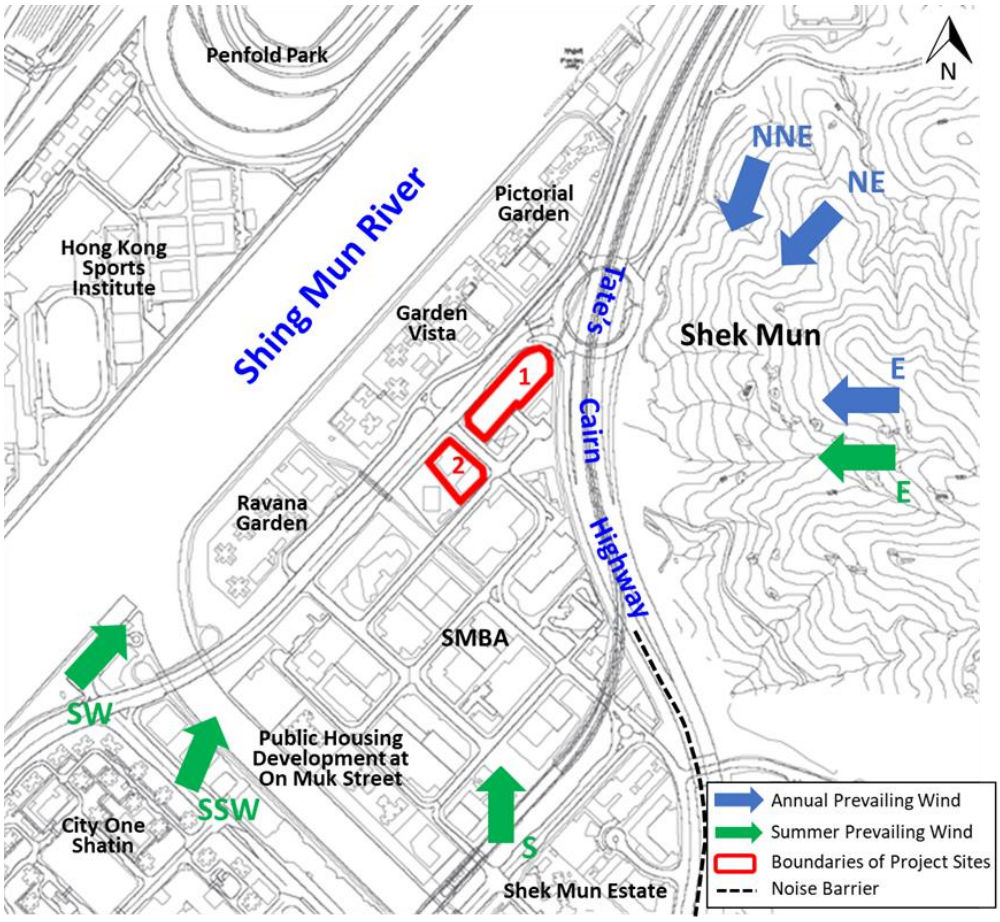


Figure 2.1(a) Illustration of Prevailing Wind Directions approaching the SMBA Project Sites

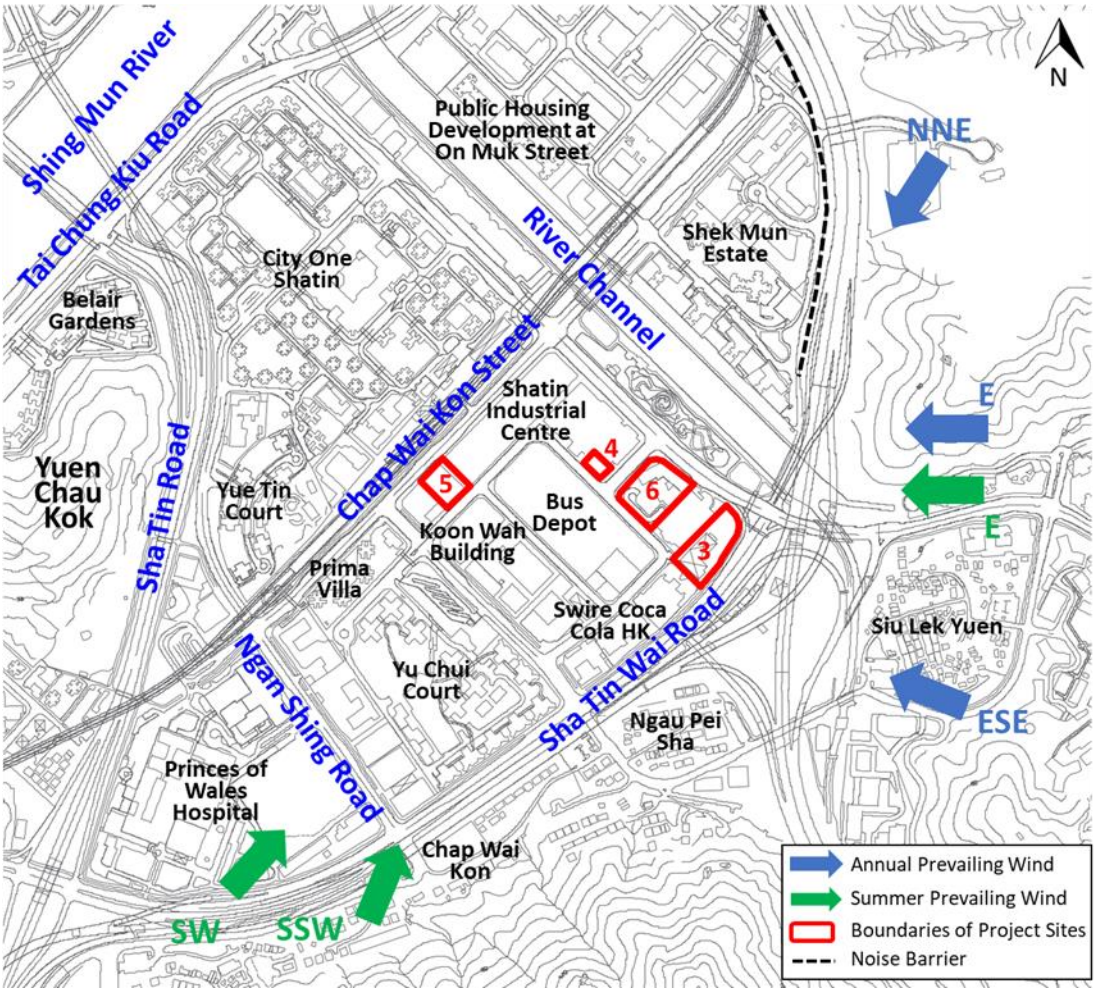


Figure 2.1(b) Illustration of Prevailing Wind Directions approaching SLYIA Project Sites

3 THE BASELINE AND PROPOSED SCENARIOS

3.1.1 Two Scenarios are examined in this AVA Study, namely the Baseline Scenario and Proposed Scenario. The Baseline Scenario would assume that the Project Sites maintain the current conditions. The existing zoning/conditions are summarized as below:

- Project Site 1 zoned "G/IC" and Project Site 2 zoned "O" are currently open ground carparks and open storage/plant nursery respectively.
- Project Site 3 within the SLYIA zoned "O" is currently occupied by low-rise temporarily structures.
- Project Site 4 next to PCCW Telephone Exchange Block zoned "G/IC" is currently vacant land.
- Project Site 5 next to Siu Lek Yuen Fire Station zoned "G/IC" is currently an open ground carpark
- Project Site 6 zoned "I(1)" is occupied by ALVA Hotel by Royal with building height of 102mPD.

3.1.2 Under the Proposed Scenario, Project Sites 1 and 2 within the SMBA would be rezoned for "C" and "G/IC" usage with Building Height Restrictions of 130mPD.

3.1.3 Project Sites 3 and 5 within the SLYIA are proposed to be rezoned for residential use, while Project Site 4 is proposed to be rezoned for commercial use. Despite that BHR of 110mPD and 120mPD are proposed to be imposed for Project Site 3 and Project Sites 4, 5 respectively, the building heights of the proposed developments within the Project Sites under the given indicative development layout have not reached the BHR.

3.1.4 BHR of 120mPD is proposed to be imposed for Project Site 6 and proposed to be rezoned for "C". Currently there is no BHR for this Project Site. Both the Baseline Scenario and the Proposed Scenario undergo evaluation would assume Project Site 6 to be the current condition occupied by ALVA Hotel by Royal.

3.1.5 The EE has been carried out based on the indicative building layouts which are presented below. The overview of the indicative layouts within the Project Sites at SMBA and SLYIA are shown in **Figure 3.1**.

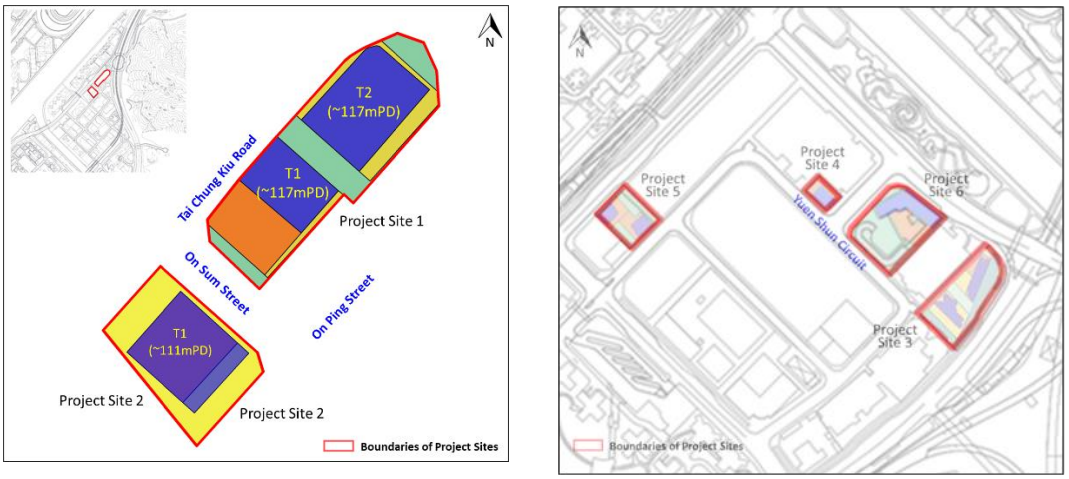


Figure 3.1 Overview of the Indicative Layouts within SMBA and SLYIA Project Sites

3.1.6 Under the Proposed Scenario, both domestic residential blocks, commercial buildings, non-domestic podiums, and ancillary buildings are to appear within the various Project Sites at the SMBA and the SLYIA. Air ventilation good design measures have been considered in the building designs of the proposed developments within the Project Sites under the Proposed Scenario, which include but not limited to the incorporation of separations in between the proposed buildings, setback from the boundaries of the Project Sites, adopt low-rise podium

designs, terraced podium designs, retain open grounds within the Project Site etc. These good air ventilation design measures considered and incorporated all target for better wind permeability and elongation of airpaths to facilitate the flow of prevailing wind. This clearly shows that air ventilation has been taken as an important factor to concern during the development process and stages. The major Development Parameters for each of the Project Sites are summarized in **Table 3.1**.

Table 3.1 Difference in Development Parameters for the Project Sites

Project Site	Current Zoning	Approximate Site Area (ha)	Proposed Zoning	Proposed Total PR and Total PR of Indicative Schemes	Proposed BHR (mPD)	Approximate Building Heights of the Indicative Schemes (mPD)
SMBA						
1	G/IC	0.74	Commercial	9.5	130	117
2	Open Space	0.41	Commercial	9.5	130	111
SLYIA						
3	Open Space	0.56	Residential	5	110	99 – 109
4	G/IC	0.11	Commercial	9.5	120	101
5	G/IC	0.23	Residential	6	120	93
6	Industrial	0.64	Commercial	N/A*	120	102

* Development in Project Site 6 will be restricted to a maximum non-domestic gross floor area (GFA) of 32,000m^2.
N/A = Not Applicable

4 EXPERT EVALUATION ON THE BASELINE AND PROPOSED SCENARIOS

Expert Evaluation on the Project Sites

General

4.1.1 Two Scenarios, namely Baseline Scenario and Proposed Scenario are examined in the Study. The evaluation of the two Scenarios is based on the potential change in anticipated wind flow patterns, the potential induced wind wake areas, building permeabilities, identification of wind sensitive and potential areas as well as major district wind corridors/local wind breezeways under identified prevailing wind directions. The major points from the directional analysis and anticipated wind flow patterns under the Baseline Scenario and Proposed Scenario for the SMBA Project Sites and SLYIA Project Sites are summarized in below sections.

Project Sites 1 and 2 within SMBA

4.1.2 The annual prevailing wind includes NNE, NE, and E, while summer prevailing wind includes E, S, SSW and SW which are identified as dominant prevailing wind directions to the two SMBA Project Sites. The key affected wind sensitive areas under identified major prevailing wind and comparison of anticipated wind flows under the two investigated Scenarios are broadly discussed as below.

Under NNE and NE Annual Prevailing Wind Directions

4.1.3 The section of On Sum Street in between and near the Project Sites 1 and 2, the portion of On Ping Street near the New Trade Plaza and Grandtech Centre, the section of On Yiu Street between the Grandtech Centre/Shatin Community Green Station and New Trade Plaza/Corporation Park, together with the Shek Mun Playground are anticipated to be under the influence of wind wakes induced by the proposed developments within the SMBA Project Sites. The NNE prevailing wind stream that is capable to penetrate the Project Sites under the Baseline Scenario towards Shek Mun Playground and Courtyard by Marriott HK would be weaken under the Proposed Scenario.

4.1.4 The proposed developments within the SMBA Project Sites would not step into the major NE/NNE wind breezeways, which are along Tai Chung Kiu Road and On Ping Street. Tai Chung Kiu Road would help to maintain the wind environment to the vicinity of the identified potential wind sensitive areas. Both wind breezeways would help to maintain the wind environment near Shek Mun Playground and Courtyard by Marriott HK Shatin (see Markers (1) and (2) in **Figure 4.1(a)**).

Under E Annual and Summer Prevailing Wind Direction

4.1.5 As the separation in between the proposed towers T1/T2 within Project Site 1 are not aligned in benefit to the penetration of the easterly wind, the easterly wind would be prevented from reaching the regions near On King Steet, Garden Vista, Pictorial Garden Phase 1, Leung Kui Kau Lutheran Primary School and On King Street Park. The wind environment at the potential wind sensitive areas is anticipated to be slightly declined under the Proposed Scenario as compared to the Baseline Scenario.

4.1.6 The easterly wind to the open space located in between Garden Vista and Leung Kui Kau Lutheran Primary School would be hindered by the proposed tower within Project Site 2. However, a stream of easterly wind can skim over the low-rise podium underneath the proposed Tower T1 within the Project Site 1 to reach existing residential developments at Garden Vista and its adjacent open space (see Marker (3) in **Figure 4.1(a)** and Marker (1) in **Figure 4.1(b)**).

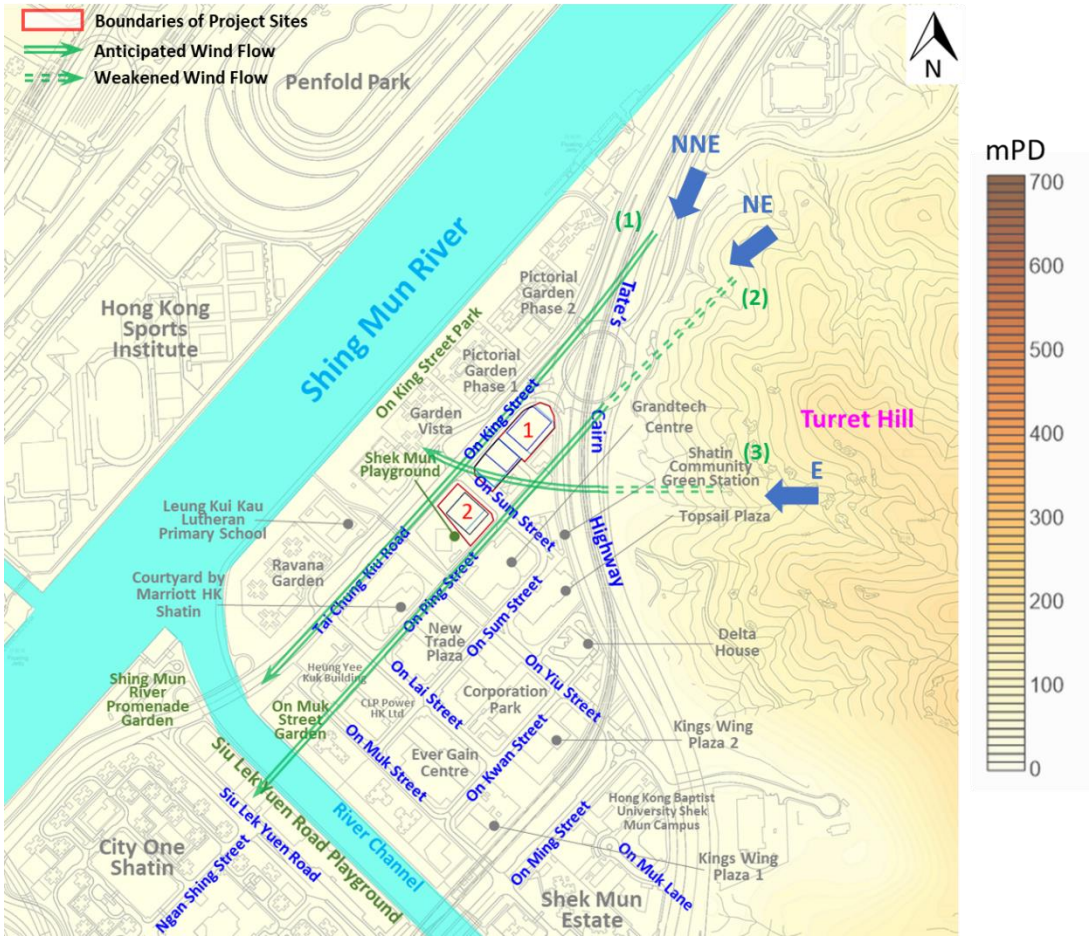


Figure 4.1(a) **Major Identified Wind Breezeways under the Annual Prevailing Wind near the SMBA Project Sites**

Under S Summer Prevailing Wind Direction

4.1.7 The southerly wind reaching the SMBA Project Sites would be weakened by the existing developments within City One Shatin and further sheltered by the upwind developments. Therefore, it is expected that the southerly wind availability towards the SMBA Project Sites is anticipated to be relatively weak. In addition, with the proposed developments in place, the southerly wind availability at the downwind potential wind sensitive areas at Garden Vista and Pictorial Garden, On King Street Park as well as along On King Street would be affected by the wind wakes induced by the proposed developments within the Project Sites and should be reduced under the Proposed Scenario as compared to the Baseline Scenario.

4.1.8 The southerly wind flowing along Tate's Cairn Highway would form a wind breezeway that helps to maintain the eastern vicinity of Project Site 1 and Pictorial Garden Phase 2 near Shek Mun Interchange under the Proposed Scenario (see Marker (2) in **Figure 4.1(b)**).

Under SW and SSW Summer Prevailing Wind Directions

4.1.9 Apart from the fact that the SSW/SW prevailing wind penetrating the SMBA Project Sites would be limited upon the appearance of the proposed developments, that would be no observable changes in the SSW/SW wind flow patterns near the Project Sites under the Proposed Scenario as compared to the Baseline Scenario. It is worthwhile to mention that there is no potential wind sensitive area identified in the vicinity of the SMBA Project Sites under SW prevailing wind.

4.1.10 The SSW/SW prevailing wind from Ngan Shing Street and Siu Lek Yuen Road would penetrate Siu Lek Yuen Road Playground and On Muk Street Garden across the river channel to approach and skim over Heung Yee Kuk Building. Limited amount of SSW/SW wind would flow along On Ping Street to approach Tate's Cairn Highway. The empty bay of 5m in height

and 7m in width above the pick-up/drop-off bay at near pedestrian level incorporated in the design of the proposed development within Project Site 2, would facilitate the SSW/SW wind along On Ping Street to reach Project Site 1 under the Proposed Scenario (see Marker (3) in **Figure 4.1(b)**).

4.1.11 In addition, the SSW/SW wind breezeway along Tai Chung Kiu Road would help to maintain the wind environment at the north-western boundaries of the Project Sites and direct the southwestern quadrant wind towards Shek Mun Interchange as well as help to maintain the wind environment at the vicinity of the identified potential wind sensitive areas under the summer prevailing wind which include On King Street, On King Street Park as well as the existing residential buildings belonging to Garden Vista and Pictorial Garden (see Marker (4) in **Figure 4.1(b)**).

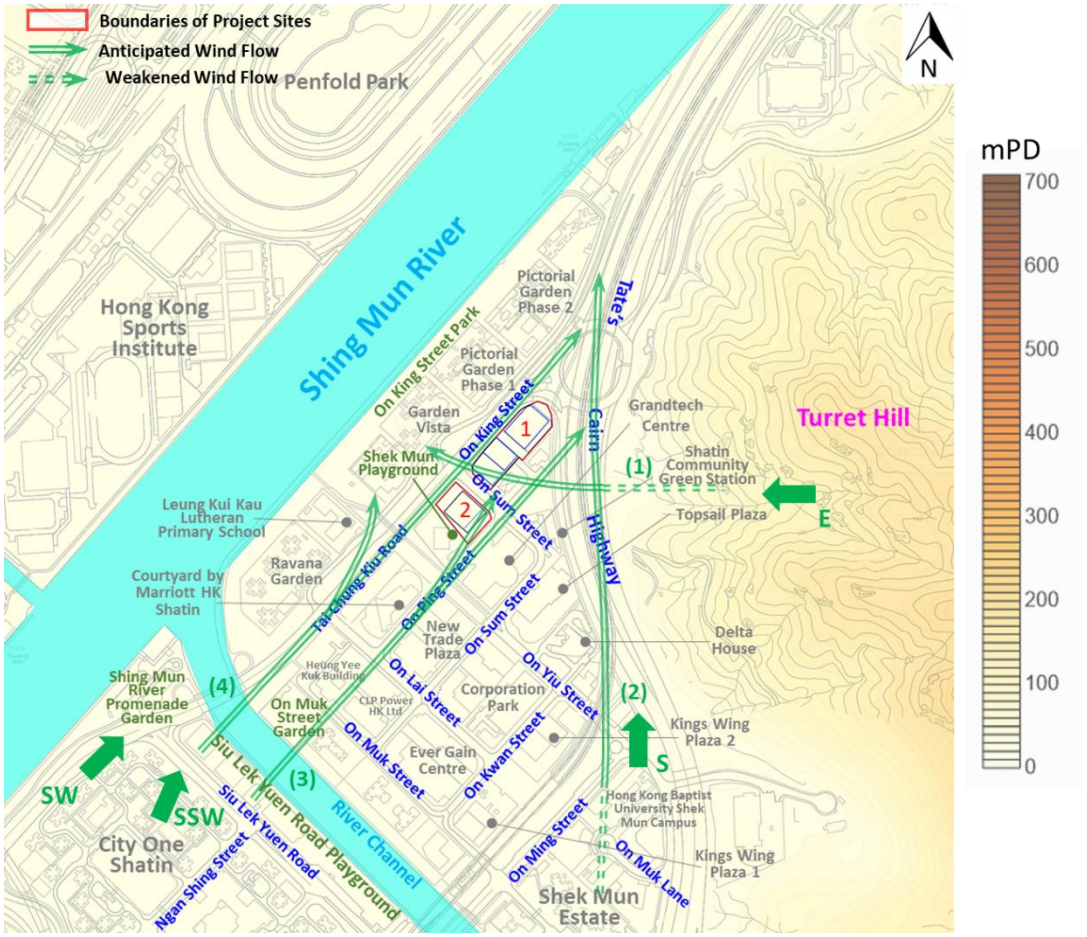


Figure 4.1(b) Major Identified Wind Breezeways under the Summer Prevailing Wind near the SMBA Project Sites

4.1.12 The proposed developments under the indicative schemes within the SMBA Project Sites under the Proposed Scenario would not obstruct the major wind breezeways that help to maintain the wind environment at the vicinity of the Project Sites and the identified potential wind sensitive areas. The proposed building designs within the Project Sites are formulated to minimize blockage effects and attempt to maintain the wind availability at the potential wind sensitive areas upon the proposed developments. From the directional analysis, it is anticipated there are no big changes in the wind flow patterns in between the Baseline Scenario and Proposed Scenario.

4.1.13 The identified potential wind sensitive areas near the SMBA Project Sites (Project Site 1 and Project Site 2) are summarized according to identified prevailing wind directions.

- ❖ NNE and NE Prevailing Wind: Section of On Sum Street in between and near Project Sites 1 and 2; Section of On Ping Street near the New Trade Plaza and Grandtech Centre;

Section of On Yiu Street in between Grandtech Centre/Shatin Community Green Station and New Trade Plaza/Corporation Park; and Shek Mun Playground

- ❖ E Prevailing Wind: On King Steet; Leung Kui Kau Lutheran Primary School; Garden Vista; Pictorial Garden Phase 1 and On King Street Park
- ❖ S Prevailing Wind: On King Steet; Garden Vista; Pictorial Garden and On King Street Park
- ❖ SSW and SW Prevailing Wind: On Sum Street in between Project Sites 1 and 2; On King Street; Garden Vista; Pictorial Garden and On King Street Park

4.1.14 The proposed building designs within Project Sites 1 and 2 have incorporated some good air ventilation design measures to enhance wind permeability and alleviate the potential wind impacts upon the proposed developments within the SMBA Project Sites. The key good design measures useful in maintaining the wind environment are marked in **Figure 7.9(a)** and summarized below.

- ❖ The 15m building separation in between proposed Towers T1 and T2 within Project Site 1 would enhance site permeability
- ❖ The low-rise podium underneath the proposed Tower T1 would minimize the blockage and allow prevailing wind to skim over the low-rise structure to reach downwind areas
- ❖ The low-rise podium underneath the proposed Tower T1 is setback 7m from the southwestern boundary which would widen On Sum Street and promote flow of prevailing wind
- ❖ The approximate 10m tower setback together with the 5m height and 7m width empty bay near pedestrian level would facilitate the flow of north easterly and southwesterly prevailing wind.

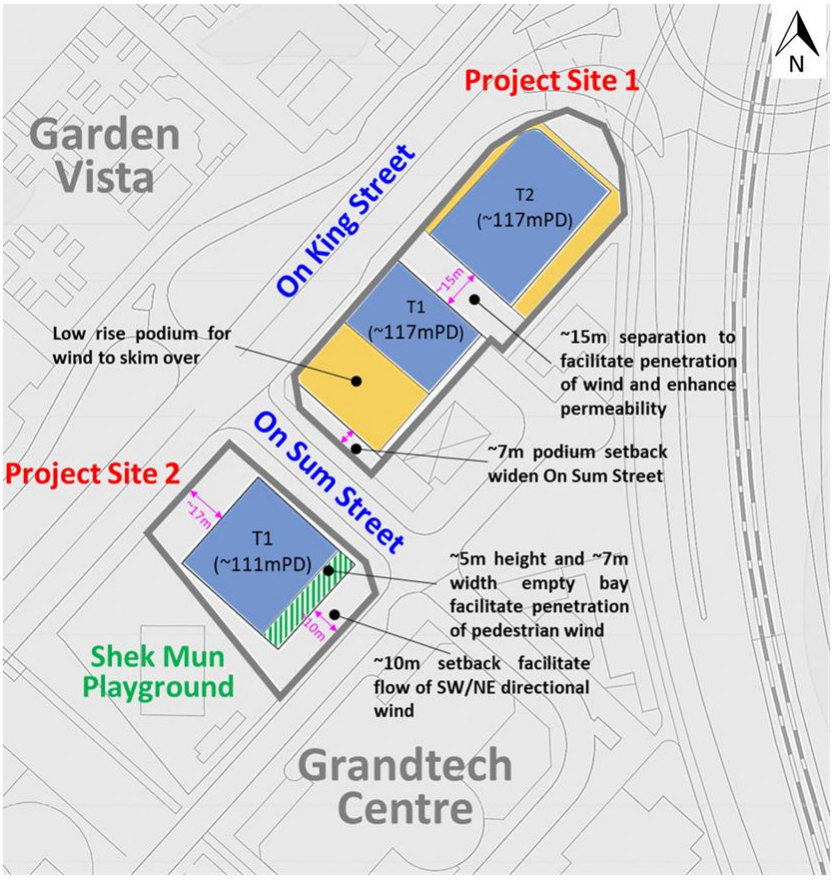


Figure 4.2 **Key Good Air Ventilation Design Measures for the Indicative Layouts within the SMBA Project Sites**

Project Sites 3 to 6 within the SLYIA

4.1.15 The annual prevailing wind includes NNE, E, and ESE, while the summer prevailing wind includes E, SSW, and SW which are identified as dominant prevailing wind directions to these nine SLYIA Project Sites being analyzed. The corresponding main potential wind sensitive areas under these prevailing winds are identified and the air ventilation performance of the existing developments in the vicinity of the proposed developments of these Project Sites are examined. The key affected wind sensitive areas under identified major prevailing wind and comparison of anticipated wind flow under the two investigated Scenarios are broadly discussed below.

Under NNE Annual Prevailing Wind Direction

4.1.16 Upon the proposed developments within the SLYIA Project Sites under the indicative layout, it is anticipated wind wakes would be induced by the proposed buildings and would likely to reach Yuen Shun Circuit, Yuen On Street as well as Ngau Pei Sha Street. In addition, the cycling track and pedestrian walkway abutting Sha Tin Wai Road/Sha Lek Highway is anticipated to be affected by the cumulative wind wakes induced by the proposed developments within its upwind Project Site 3 under the NNE prevailing wind. Apart from the local streets, villages of Ngau Pei Sha, existing residential buildings of Prima Villa and the Yu Chui Shopping Centre as well as Siu Lek Yuen Fire Station are anticipated to be under the influence of the proposed developments within the SLYIA Project Sites. The mentioned air ventilation sensitive receivers are anticipated to be weakened in the Proposed Scenario as compared to the Baseline Scenario under the NNE prevailing wind.

4.1.17 The proposed developments within the SLYIA Project Sites would not affect the NNE wind flowing along Chap Wai Kon Street as well as along Sha Tin Wai Road/Sha Lek Highway. The NNE prevailing wind would flow along On Ming Steet across the river channel and continue to flow along Chap Wai Kon Street to maintain the wind environment at places located on the two sides of the street (see Marker (1) in **Figure 4.3(a)**), while NNE wind along Sha Tin Wai Road/Sha Lek Highway would help to maintain the wind environment at the vicinity of Project Site 3 and Swire Coca Cola HK Building as well as the vicinity of villages at Ngau Pei Sha, Chap Wai Hon, residential buildings of Yu Chui Court and Hong Kong Police Siu Lek Yuen Operation Base (see Marker (3) in **Figure 4.3(a)**).

4.1.18 The NNE prevailing wind breezeway can be seen under both the Baseline and Proposed Scenarios connecting the Shek Mun Estate and the Prima Villa/Yu Chui Court. The NNE wind from Shek Mun Estate/Shek Mun Riverside Garden would flow along Yuen Hong Street, skim over the bus depot, and penetrate Ngau Pei Sha Street Playground to reach Yu Chui Court and St. Rose of Lima's College (see Marker (2) in **Figure 4.3(a)**).

Under E Annual and Summer Prevailing Wind Direction

4.1.19 The wind environment at Yuen Shun Circuit, Yuen On Street, Chap Wan Kon Street as well as the portion of City One Shatin across Chap Wai Kon Street, located to the near downwind areas of these Project Sites under the easterly wind, would be affected by the wind wakes induced by the proposed developments within the Project Sites under the Proposed Scenario.

4.1.20 Although the proposed buildings have taller building heights, long continuous frontages in the designs of the proposed indicative building layouts are avoided to enhance wind permeability and increase the amount of easterly wind to reach the identified potential wind sensitive areas. In view of the above, there are no observable changes in the easterly wind flow patterns near the Project Sites under the Proposed Scenario as compared to the Baseline Scenario.

Under ESE Annual Prevailing Wind Direction

4.1.21 The urban grid and alignments of the SLYIA Project Sites are in favor of the penetration and flow of ESE prevailing wind. Taking the advantage of this, the proposed developments within the Project Sites under the Proposed Scenario are mostly designed to be orientated and arranged to match with the alignment of the local road networks. The river channel of Shing Mun River acts as an effective wind corridor under the ESE prevailing wind direction which helps to maintain the wind environment near the SLYIA Project Sites, City One Shatin, public housing development at On Muk Street and Shek Mun Estate.

4.1.22 The ESE prevailing wind after skimming over the village houses of Siu Lek Yuen despite would be weakened by the compact structures belonging to Tate's Cairn Highway would continue its flow along Siu Lek Yuen Road towards the direction of Tai Chung Kiu Road and Shing Mun River, creating benefits to the wind environment at regions near the north-east boundaries of Chiaphua Centre/Chiaphua Industries Building, Goldlion Holdings Centre and ALVA Hotel by Royal within Project Site 6 as well as the north-east vicinity regions of the City One Shatin (see Marker (4) in **Figure 4.3(a)**).

4.1.23 With the low-rise podium underneath proposed towers within Project Site 3 under the Proposed Scenario and as well as the low-rise podium beneath Swire Coca Cola building, the ESE prevailing wind could still enter and flow along Yuen Shun Circuit towards Shatin Industrial Centre after skimming over the low-rise podium structures. However, the ESE wind reaching Chap Wai Kon Street and City One Shatin would be prevented by Shatin Industrial Centre under both studied Scenarios (see Marker (5) in **Figure 4.3(a)**).

4.1.24 Ngau Pei Sha Street serves as another ESE wind breezeway that would help in maintaining the wind environment at the surroundings of Yu Chiu Court, Prima Villa, Citimark, Ngau Pei Sha Street Playground, Siu Lek Yuen Fire Station, and Koon Wah Building (see Marker (6) in **Figure 4.3(a)**).

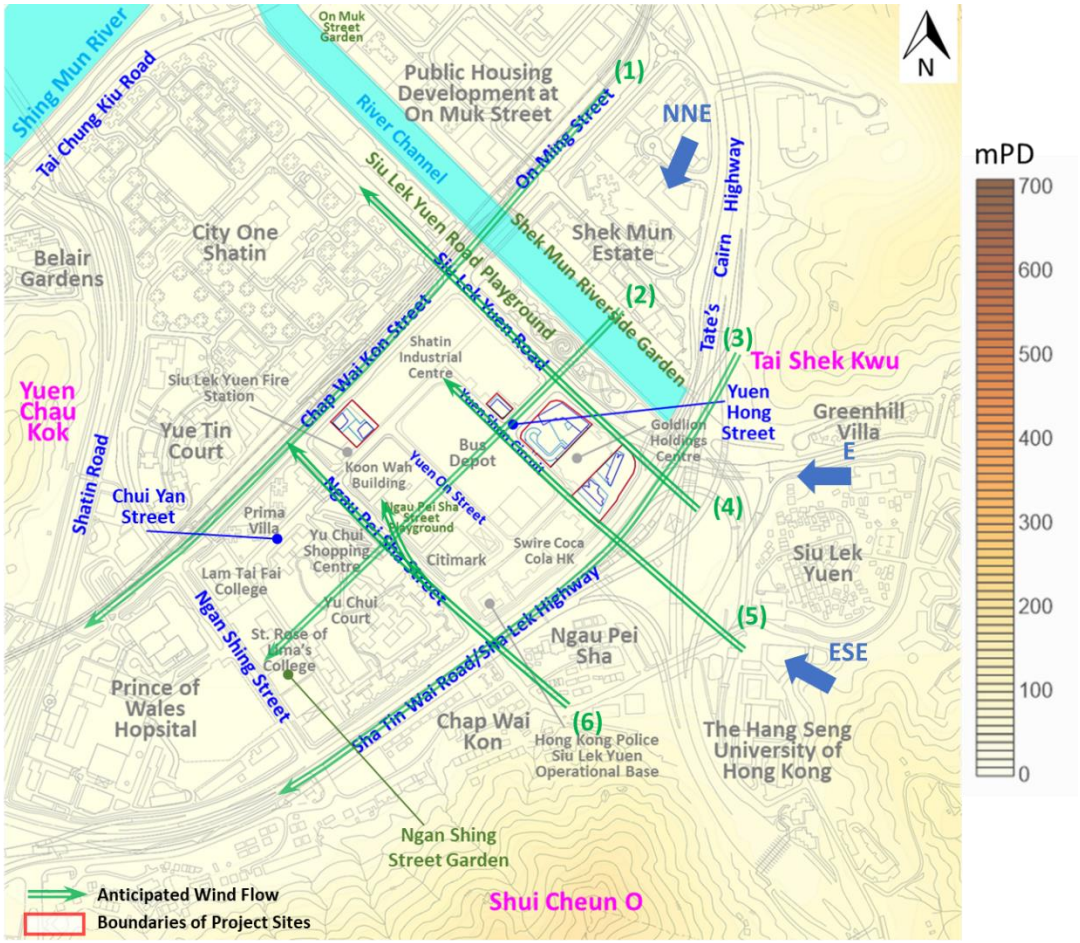


Figure 4.3(a) **Major Identified Wind Breezeways under the Annual Prevailing Wind near the SLYIA Project Sites (Proposed Scenario)**

Under SSW and SW Summer Prevailing Wind Directions

4.1.25 Potential wind sensitive areas located at the downwind of the SLYIA Project Sites under the SSW and SW summer prevailing wind are the along Siu Lek Yuen Road and the strip of Siu Lek Yuen Road Playground abutting it, Shek Mun Riverside Garden as well as residential developments of Shek Mun Estate located on the other side of the river channel.

4.1.26 The SSW/SW wind stream flowing along Sha Tin Wai Road/Sha Lek Highway connecting Tate's Cairn Highway, would act as a wind breezeway benefiting the wind environment at the regions to the near southeast directions of Swire Coca Cola HK building and Project Site 3 under the Baseline Scenario and the Proposed Scenario (see Marker (1) in **Figure 4.3(b)**).

4.1.27 The SSW/SW wind skimming over St. Rose of Lima's College to penetrate the playground within Yu Chui Court would further skim over Yu Chui Shopping Centre before approaching Ngau Pei Sha Street and Ngau Pei Sha Street Playground. The SSW/SW wind would further skim over the low-rise bus depot to flow along Yuen Hong Street before flowing across the Siu Lek Yuen Road and penetrate Siu Lek Yuen Playground as well as Shek Mun Riverside Garden towards Shek Mun Estate under the Baseline and Proposed Scenarios (see Marker (2) in **Figure 4.3(b)**).

4.1.28 The SSW/SW wind flowing along the Yuen Shun Circuit in between Project Site 5 and Koon Wah Building/bus depot would be prevented from flowing further downwind by Chiaphua Centre/Chiaphua Industries Building. The proposed building geometries within Project Site 5 consist of two proposed Towers T1 and T2 with separations in between that would promote the SSW/SW wind from Ngau Pei Street to skim over the low-rise Siu Lek Yuen Fire Station and flow via the building separation to reach Chap Wai Kon Street and City One Shatin, despite not penetrating as free under the Baseline Scenario which lacks proposed developments (see Marker (3) in **Figure 4.3(b)**)

4.1.29 Chap Wai Kon Street connecting On Ming Street is an effective SSW/SW wind breezeway that helps to maintain the wind environment at the northwest peripheral regions of Project Site 5 and the vicinity of Siu Lek Yuen Fire Station, Prima Villa and City One Shatin abutting Chap Wai Kon Street (see Marker (4) in **Figure 4.3(b)**).

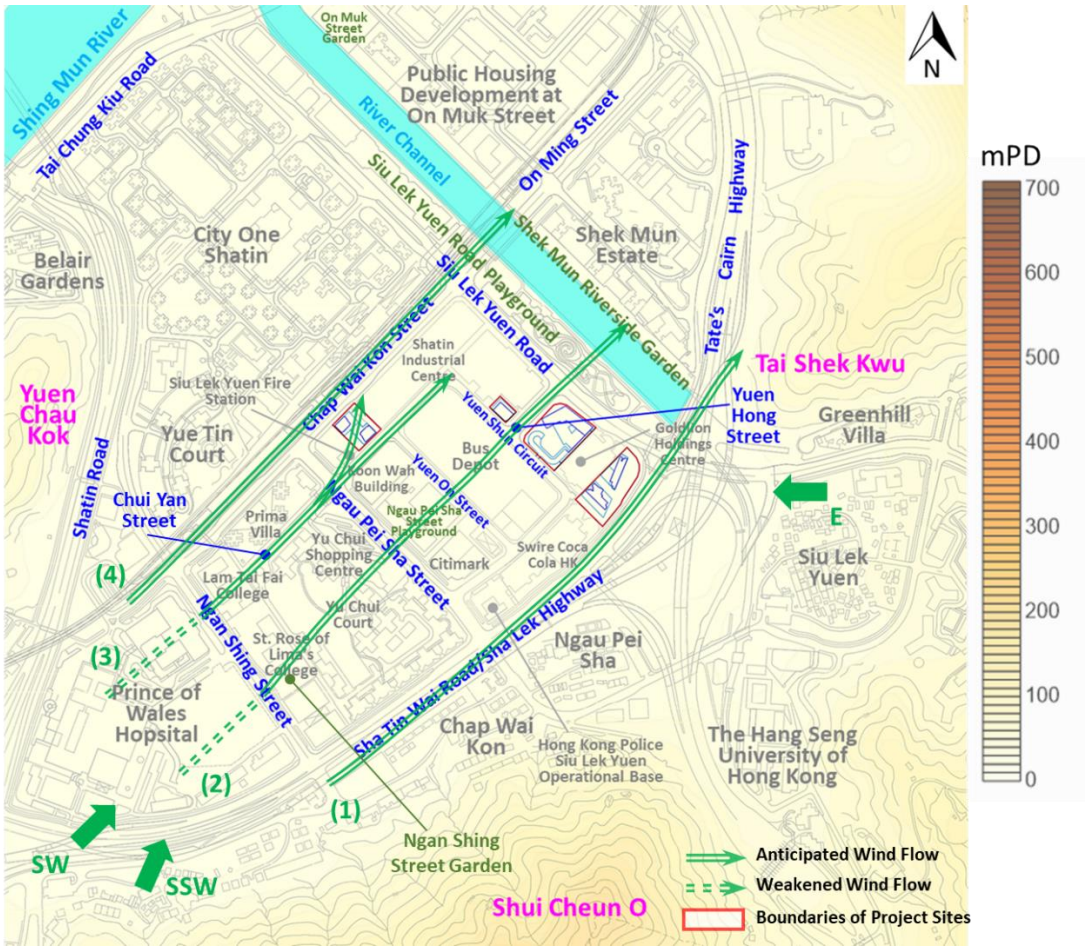


Figure 4.3(b) Major Identified Wind Breezeways under the Summer Prevailing Wind near the SLYIA Project Sites (Proposed Scenario)

4.1.30 The proposed developments within SLYIA Project Sites under the Proposed Scenario do not obstruct the major wind breezeways that help to maintain the wind environment at the vicinity of the Project Sites and the identified potential wind sensitive areas. The proposed building designs within the Project Sites are formulated to minimize blockage effects by incorporating building separation, building permeable elements as well as adapting low-rise podiums, which these good air ventilation design measures all attempt to maintain the wind availability at the potential wind sensitive areas upon the proposed developments. From the directional analysis, it is anticipated there are no big changes in the wind flow patterns in between the Baseline Scenario and Proposed Scenario.

4.1.31 The identified potential wind sensitive areas near the SLYIA Project Sites (Project Sites 3 to 6) are summarized according to identified prevailing wind directions as below.

- ❖ NNE Prevailing Wind: Yuen Shun Circuit; Yuen On Street; Ngau Pei Sha Street; cycling track and pedestrian walkway abutting Sha Tin Wai Road/Sha Lek Highway; Siu Lek Yuen Fire Station; Prima Villa; Yu Chui Shopping Centre; villages of Ngau Pei Sha
- ❖ E Prevailing Wind: Yuen On Street, Yuen Shun Circuit; Chap Wai Kon Street; portion of City One Shatin across Chap Wai Kon Street
- ❖ ESE Prevailing Wind: Chap Wai Kon Street; portion of the City One Shatin across Chap Wai Kon Street
- ❖ SSW and SW Prevailing Wind: Siu Lek Yuen Road; Siu Lek Yuen Road Playground; Shek Mun Riverside Garden and Shek Mun Estate

4.1.32 The proposed building designs within Project Sites 3 to 6 have considered a few good air ventilation design measures to enhance wind permeability and elongate the current wind breezeways, attempting to alleviate the potential wind impacts on the surrounding air ventilation sensitive receivers upon the proposed developments within the SLYIA Project Sites. The key good design measures useful in maintaining the wind environment are marked in **Figure 4.4** and summarized below.

- ❖ The low-rise podium underneath the proposed Tower T1 within Project Site 3 as well as its setback of approximately 18m from the southwestern boundary of Project Site 3 together with the low-rise podium underneath Swire Coca Cola HK would facilitate the skim over of ESE wind over these low-rise structures and promote the entry and flow of this directional prevailing wind into and along Yuen Shun Circuit towards Shatin Industrial Centre.
- ❖ The 19m building separation in between proposed Towers T1 and T2 within Project Site 5 would facilitate south westerly prevailing wind along Yuen Shun Circuit to penetration through the site.

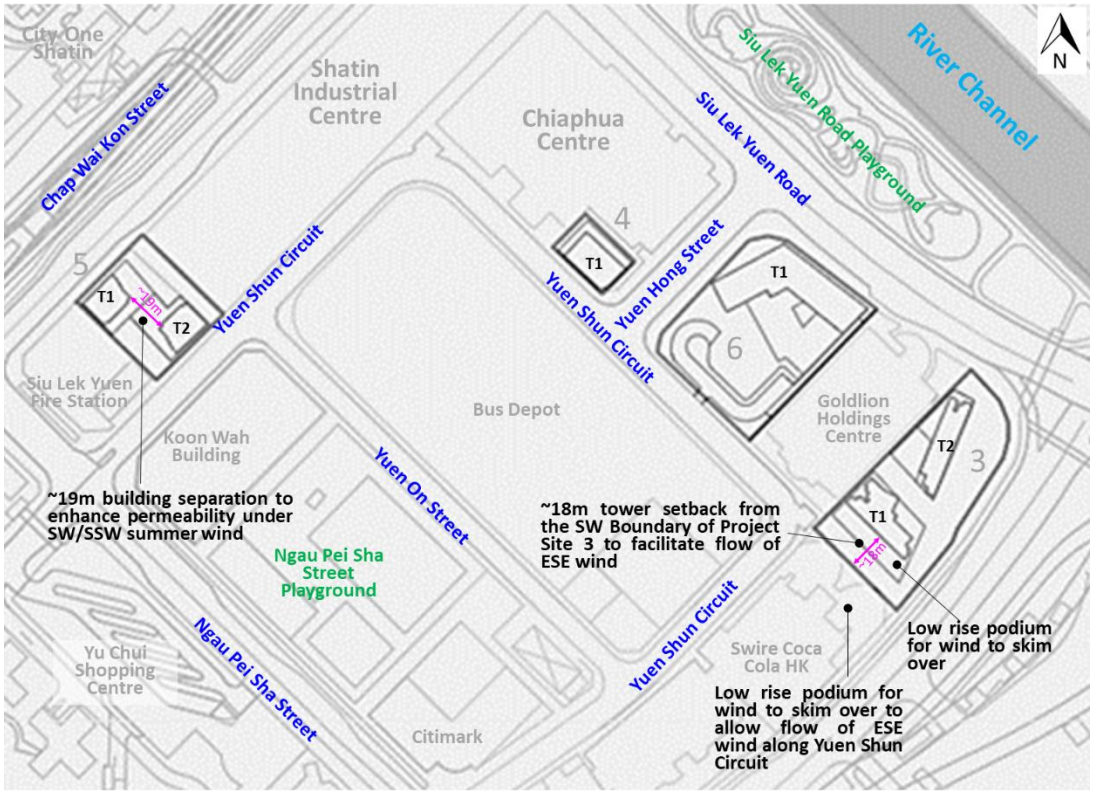


Figure 4.4 **Key Good Air Ventilation Design Measures for the Indicative Layouts within the SLYIA Project Sites**

5 GOOD AIR VENTILATION FEATURES AND FURTHER OPTIMIZATION

5.1.1 The major wind corridors/breezeways identified under the prevailing wind directions are Shing Mun River, river channel perpendicular to the main Shing Mun River, and major local roads/streets. These identified wind corridors/breezeways are useful in maintaining the wind environment within and at the surroundings of the Project Sites. These identified major wind corridors/breezeways are retained and remained non-obstructed under the proposed layouts of the Baseline Scenario as well as after the proposed developments under the Proposed Scenario.

5.1.2 Green elements such as playgrounds, parks, sitting out areas, riverside gardens can be found near the surroundings of the Project Sites. These open spaces would take up the role as breathing spaces for the Shek Mun and Siu Lek Yuen areas and are regarded as good features in the aspect of air ventilation. Retaining of these features would help in maintaining the wind environment after the proposed developments near and within the Project Sites under both the Baseline and Proposed Scenarios. The major green elements near the Project Sites include the Yuen Chau Kok Park, Ngan Shing Street Garden, Ngau Pei Sha Street Playground, Siu Lek Yuen Road Playground, Shek Mun Riverside Garden, On Muk Street Garden, Shing Mun River Promenade and Shek Mun Playground.

5.1.3 Some generic recommendations from the building level perspective are listed below to further enhance the wind permeability/ penetration and minimize the ventilation impacts within the Project Sites to their surrounding areas:

- Avoid long continuous façades and face shorter frontages of proposed buildings to the prevailing wind directions
- Increase building separations and maximize building/site permeability as far as practical
- Minimization/Break down of podium bulks with small ground coverage
- Adopt further empty bay design on the ground floor of podium or incorporate permeable elements/podium gardens to enhance the wind permeability at pedestrian level
- Adopt terraced podium designs for podia to enhance ventilation.
- Adopt full building/podium setbacks at feasible locations, with reference to PNAP APP-152.
- Reference to the recommendations of design measures in the Sustainable Building Design Guideline (SBDG) and Hong Kong Planning Standards and Guidelines (HKPSG)

6 SUMMARY AND CONCLUSION

6.1.1 The Shek Mun Business Area Project Sites 1 and 2 are currently zoned “G/IC” and “O” respectively and occupied by open ground carparks and open storage/plant nursery. The Project Site 3 within the Siu Lek Yuen Industrial Area zoned “O” is currently occupied by low-rise temporarily structures; Project Site 4 next to the PCCW Telephone Exchange Block zoned “G/IC” is currently vacant land while Project Site 5 next to Siu Lek Yuen Fire Station also zoned “G/IC” is currently an open ground carpark. The remaining Project Site within the SLYIA (Project Site 6) is currently zoned “I(1)”, occupied by ALVA Hotel by Royal.

6.1.2 Two Scenarios have been examined in this Study, namely Baseline Scenario and the Proposed Scenario. The Baseline Scenario would be investigated assuming that the Project Sites maintain the current conditions. The Proposed Scenario would be assumed the Project Sites 1 and 2 within the SMBA currently are open ground carparks and open storage/plant nursery would be rezoned for “C” and “G/IC” with BHRs of 130mPD, while the Project Sites within the SLYIA are proposed to be rezoned for residential usages except for Project Site 4, which is proposed to be rezoned for commercial usages. Project Site 6 would remain as its current condition occupied by ALVA Hotel by Royal but rezoned from “I(1)” to “C”. BHRs of 110mPD, 120mPD and 120mPD are proposed to be imposed for Project Site 3, Project Sites 4 to 5, and Project Site 6 respectively.

6.1.3 The Project Sites are in alignment with the current urban grids and the proposed building layouts within the Project Sites have made effort in maintaining the wind environment and retaining the wind breezeways by retaining the good designs measures including but not limited to the incorporation of separations in between the proposed buildings, setback from the boundaries of the Project Sites, adopt low-rise podium designs, terraced podium designs and retain open grounds within the Project Site. The good air ventilation design measures incorporated not only target for better wind permeability to minimize the potential wind impacts but also create elongation to wind breezeways and airpaths to facilitate the flow of prevailing wind towards the identified potential wind sensitive areas.

6.1.4 In view of the above, it is anticipated there is no great alteration in wind flow patterns between the Baseline Scenario and the Proposed Scenario. Instead, due to the overall increase in building heights under the Proposed Scenario as compared to the Baseline Scenario, it appears that the Proposed Scenario may induce larger wakes in the downstream area when compared with the Baseline Scenario. However, strengthened local wind channeling effects is anticipated to appear under the Proposed Scenario as compared to the Baseline Scenario. Therefore, a region wise decline in wind environment is not expected upon the proposed developments under the Proposed Scenario.

6.1.5 The studied indicative building layouts/existing building layout of the ALVA hotel have not reached the proposed BHR, and there would still be rooms for incorporation of good air ventilation design measures such as empty bays at grade or building permeable elements. The future finetuned building development designs are recommended to follow the suggested general recommendations in accordance with the SBDG and the HKPSG.

6.1.6 As such, the future applicant/project proponent for future developments at the Project Sites should take account of the findings and major mitigation/good design measures as recommended in the AVA report as far as practicable.

Landscape Assessment on Sites of Amendment Items C1, C2, D, E and F
Based on Tree Survey Carried out by Lands Department

1. Introduction

1.1 This Landscape Assessment forms part of the technical appraisal on the existing landscape character and resources within the subject sites in support of the rezoning.

1.2 The assessment is based on the information of a tree survey for the subject sites conducted by Lands Department (LandsD) in June 2023 and aerial photo of December 2022. (See **Annex 1** – Aerial Photos of Dec 2022)

2. Landscape Assessment

Amendment Items C1 and C2 - Shek Mun Commercial Sites

2.1 The sites of Item C1 (area of about 0.85ha) and C2 (area of about 0.41ha) are both located in the Shek Mun Business Area (SMBA). Item C1 and C2 sites are proposed to be rezoned from "Government, Institution or Community" ("G/IC") and "Open Space" ("O") respectively to “Commercial (1)” (“C(1)”) subject to a maximum building height (BH) of 130mPD.

2.2 According to the aerial photo of December 2022 (**Annex 1**), both sites are situated in an area of industrial urban landscape character surrounded by industrial/commercial buildings, high-rise residential buildings, open spaces, Shing Mun River Channel to the further northwest and woodlands to the further east. The sites are currently hard paved and occupied by temporary car parks.

2.3 According to LandsD’s Tree Survey Report, 39 nos. existing common trees (including 14 nos. *Leucaena leucocephala*) and 19 nos. existing common trees (including 12 nos. *Leucaena leucocephala* and 1 no. dead tree) were identified in the Item C1 and C2 sites respectively. Most of the trees are located along the boundary of the sites. Dominant species are *Macaranga tanarius* var. *tomentosa* and *Leucaena leucocephala*. No registered Old and Valuable Trees (OVTs), large tree with diameter at breast height (DBH) over 750mm, nor rare/protected species were identified in the two sites.

2.4 The proposed commercial development at both sites are not incompatible with the surrounding environment. Appropriate landscape design approach to

minimise disturbance to existing trees, maximize the greening opportunity in the sites including screen planting adjacent to the main traffic road, and mitigate the impact of existing trees in accordance with the prevailing technical circular should be adopted.

Amendment Items D, E and F - Siu Lek Yuen Private Housing Sites

2.5 The sites of Items D (area about 0.11ha), E (area about 0.56ha) and F (area about 0.28ha) are all located in the Siu Lek Yuen Industrial Area (SLYIA). The Item D Site is proposed to be rezoned from "G/IC" to "C(1)" subject to a maximum building height of 120mPD. The Item E site is proposed to be rezoned from "O" to "Residential (Group A) 9" ("R(A)9") subject to a maximum BH of 110mPD and Item F site is proposed to be rezoned from "G/IC" to "Residential (Group A) 10" ("R(A)10") subject to a maximum building height of 120mPD. Item D site is rezoned for commercial development while Items E and F sites are rezoned for private residential development.

2.6 According to the aerial photo of December 2022 (**Annex 1**), all three sites are situated in an area of industrial urban landscape character surrounded by industrial buildings, high rise residential buildings, open spaces and Shing Mun River Channel to the further northeast. The Item E site is hard paved and currently used for temporary parking, repairing and maintenance of motor vehicles. The Item D and F sites are hard paved and currently occupied by temporary car parks.

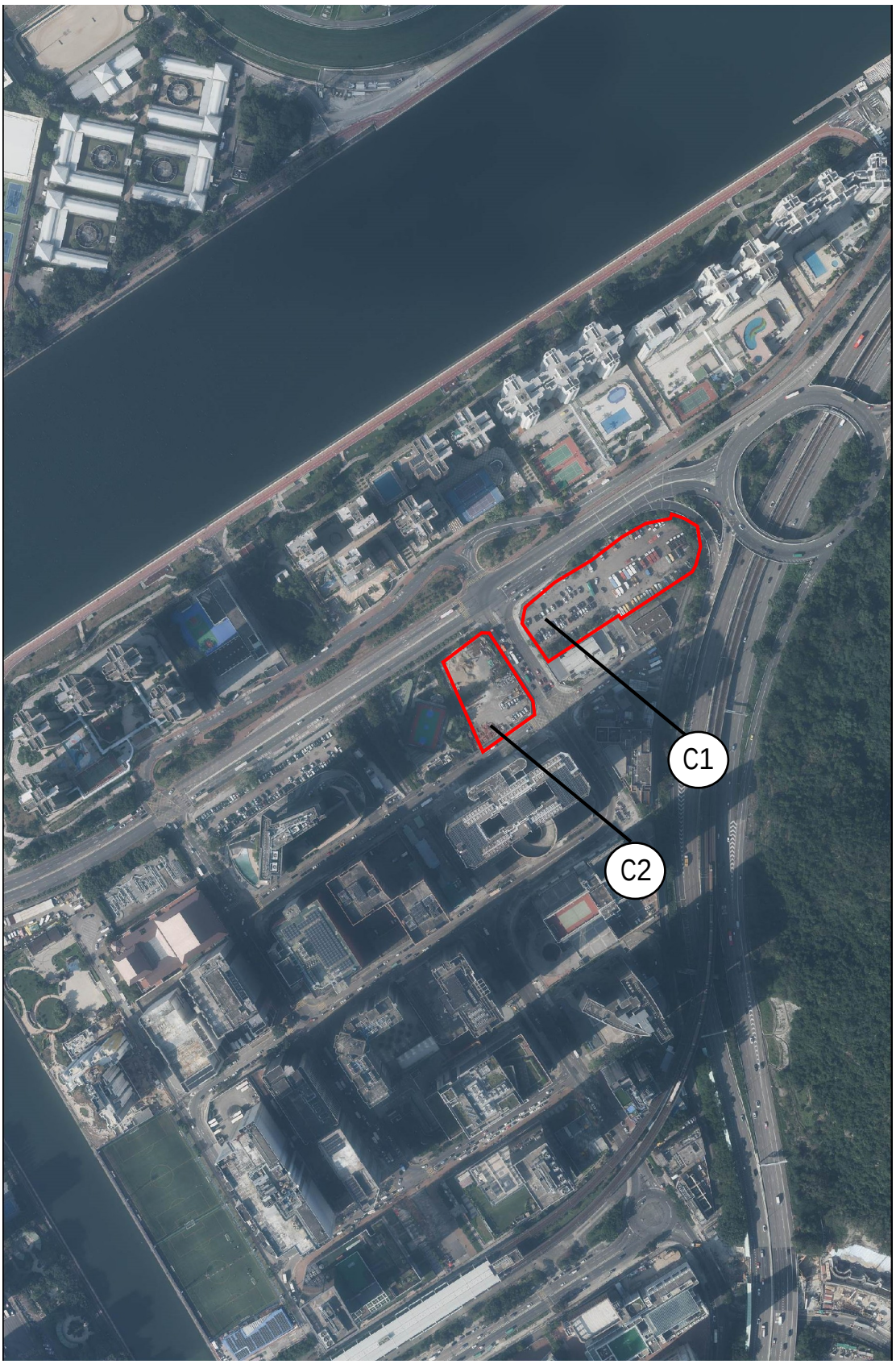
2.7 According to LandsD's Tree Survey Report, 63 nos. existing trees (including 8 nos. *Leucaena leucocephala* and 1 no. dead tree) in Item E site, 3 nos. existing trees in Item D site, and 25 nos. existing trees in Item F site were surveyed. All existing trees are common species and dominant species are fruit trees, *Ficus religiosa*, *Leucaena leucocephala* and *Macaranga tanarius* var. *tomentosa*. Most of the trees are located along the boundary of the sites. No registered OVTs nor rare species were identified in all three sites. 2 nos. of trees with DBHs over 1m (T092 *Ficus benjamina* and T100 *Ficus microcarpa*) and 1 no. of tree scheduled under Cap. 96, *Michelia* x *alba* (T113), which is commonly planted in Hong Kong are identified in the Item E Site.

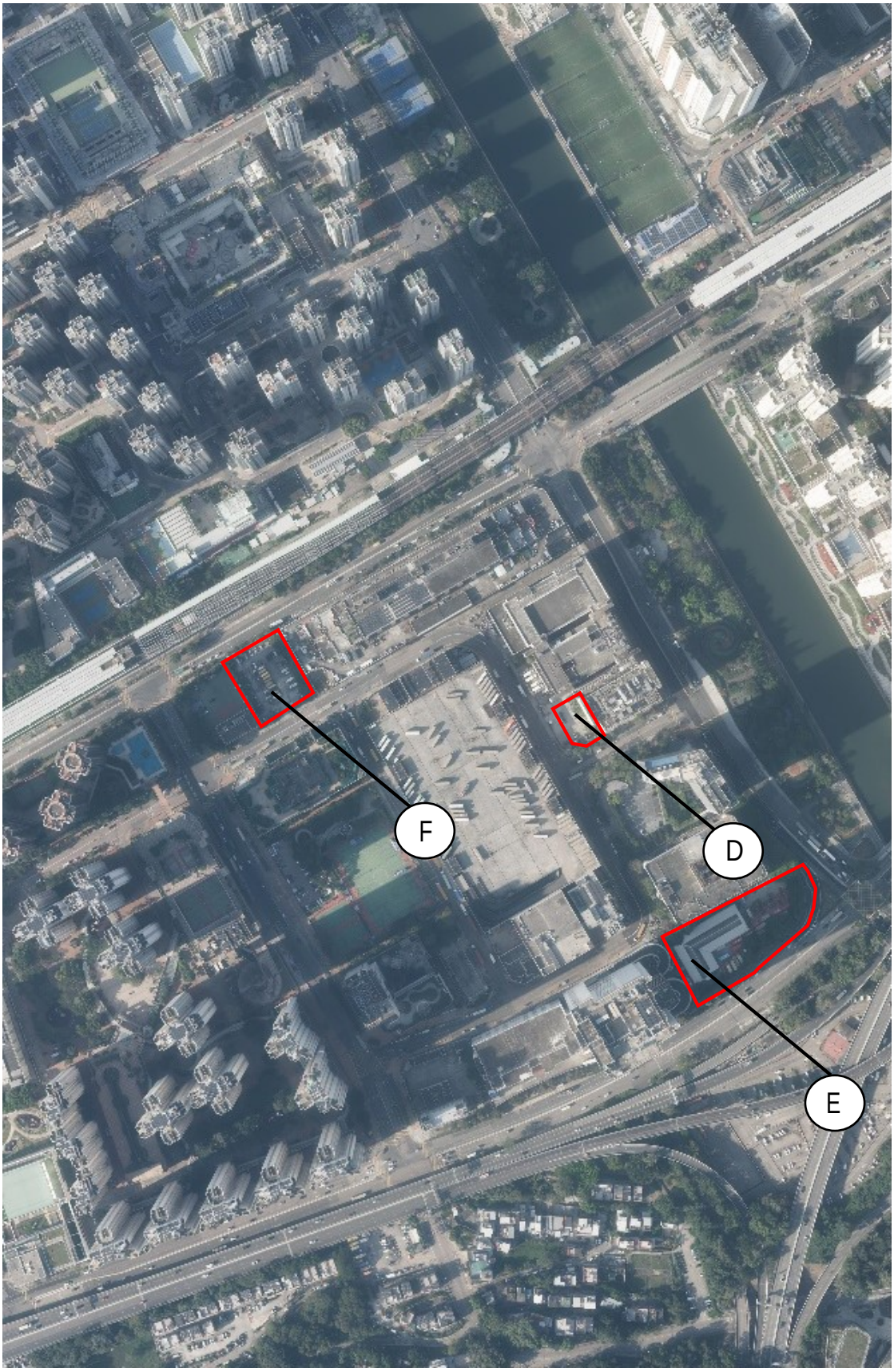
2.8 The proposed developments at the three sites are not incompatible with the surrounding environment. According to LandsD's Tree Survey Report, the 2 nos. of trees with DBH over 1m in Item E site (T092 and T100) have low amenity value and poor structural condition. Nevertheless, these trees located on government land

satisfy one of the criteria for registration as OVTs in accordance with Development Bureau Technical Circulars (Works) No. 5/2020 (DEVB TC(W) No. 5/2020), and LandsD would be in a position to identify any potentially registrable trees prior to the land sales and set out specific tree preservation requirements in the lease conditions for trees that warrant special protection pursuant to para. 12 of DEVB TC(W) No. 5/2020. Appropriate landscape design approach to minimise disturbance to existing trees, maximize the greening opportunity in the sites including screen planting adjacent to the main traffic road, and mitigate the impact of existing trees in accordance with the prevailing technical circular should be adopted.

Planning Department
September 2023

Annex 1 -Aerial Photos of 2022




F
D
E

Extracted Minutes of 711th Meeting of the Rural and New Town Planning Committee held on 13.1.2023

Agenda Item 6

Section 12A Application

[Open Meeting (Presentation and Question Sessions Only)]

Y/ST/58	Application for Amendment to the Approved Sha Tin Outline Zoning Plan No. S/ST/36, To rezone the application site from "Green Belt" and "Government, Institution or Community" to "Residential (Group B) 3", Lot 380 RP (Part) in D.D. 186, Tung Lo Wan Hill Road, Sha Tin (RNTPC Paper No. Y/ST/58A)

12. The Secretary reported that the application site (the Site) was located in Sha Tin and AECOM Asia Company Limited (AECOM) was one of the consultants. The following Members had declared interests on the item :

Professor John C.Y. Ng	-	owning a flat in Sha Tin;
Mr Vincent K.Y. Ho	-	co-owning with spouse a flat in Sha Tin and having current business dealings with AECOM;
Dr C.H. Hau	-	having past business dealings with AECOM; and

Dr Conrad T.C. Wong	-	having current business dealings with AECOM.

13. As the flats owned by Professor John C.Y. Ng and co-owned by Mr Vincent K.Y. Ho had no direct view of the Site, and Dr C.H. Hau, Dr Conrad T.C. Wong and Mr Vincent K.Y. Ho had no involvement in the application, the Committee agreed that they could stay in the meeting.

Presentation and Question Sessions

14. The following representatives from the Planning Department (PlanD) and the applicant's representatives were invited to the meeting at this point :

PlanD		
Ms Margaret H.Y. Chan	-	District Planning Officer/Sha Tin, Tai Po and North (DPO/STN)
Ms Hannah H.N. Yick	-	Senior Town Planner/Sha Tin (STP/ST)
Applicant's Representatives		
Royal Billion Investment Limited	-	Mr Richard Kan
Llewelyn-Davies Hong Kong Ltd.	-	Ms Winnie Wu
	-	Ms Amanda Yu
AEC Ltd	-	Mr Tommy Hui
AECOM	-	Mr Steven Ho
	-	Mr Simon Lam
	-	Mr Willie Wan
AXXA Group Ltd	-	Mr Jason Teo
	-	Ms Sammy Tang

Ramboll (Hong Kong) Ltd	-	Mr Henry Ng
Ronald Lu & Partners Ltd	-	Mr Anthony Cheung
	-	Ms Haydn Lo
Savills	-	Ms Anne Lam

15. The Chairman extended a welcome and explained the procedures of the meeting. He then invited PlanD's representatives to brief Members on the background of the application.

16. With the aid of a PowerPoint presentation, Ms Hannah H.N. Yick, STP/ST, briefed Members on the background of the application, the proposed rezoning of the Site, departmental and public comments, and the planning considerations and assessments as detailed in the Paper. PlanD had no objection to the application.

17. The Chairman then invited the applicant's representatives to elaborate on the application. With the aid of a PowerPoint presentation, Ms Winnie Wu, the applicant's representative, made the following main points :

The Site

(a) the Site was located in close proximity to Sha Tin New Town and MTR Sha Tin and Tai Wai stations. The application for rezoning the "Green Belt" ("GB") site to "Residential (Group B)3" ("R(B)3") with plot ratio (PR) restriction of 2.5 and building height (BH) restriction of 140mPD for a medium-density residential development was considered compatible with the surrounding residential clusters, including Pristine Villa, The Great Hill and Peak One;

(b) the development parameters and site context under the current rezoning application were comparable to or lower than the other recent zoning amendments of "GB" sites in the Sha Tin area agreed by the Committee with PRs ranging from 2.5 to 3.6;

(c) in view of the vegetation cover and woodland to the north of the Site and the rejection grounds regarding the green backdrop and adverse landscape impact of the previous application (No. Y/ST/38) in 2018, the site boundary under the current application had been confined mainly to the existing formed platform and the man-made slope areas. The site area was largely reduced by 60% by excluding the woodland area as compared with that of the previous application so as to minimize adverse landscape impact;

Planning Considerations

(d) the indicative development scheme for two residential blocks (160 flats) with BH of 16 storeys over a one-storey clubhouse and a two-storey underground carpark had incorporated sensitive building layout, building separations, greenery and landscape design;

(e) a visual impact assessment (VIA), conducted with selected viewing points including Sha Tin town centre and along Shing Mun River, demonstrated that the proposed development would blend in with the existing residential clusters. The VIA concluded that the proposed development would not cause adverse visual impact and would be compatible with the surrounding area;

(f) relevant technical assessments submitted had demonstrated that the proposed development was technically feasible with no insurmountable problems, and there was no objection nor adverse comment from relevant Government departments; and

(g) the proposed development was in line with the Government's criteria in identifying suitable "GB" sites for rezoning to residential use as well as the Government's policy to increase housing land supply.

18. As the presentations of PlanD's representative and the applicant's representative had been completed, the Chairman invited questions from Members.

Landscape and Ecological Aspects

19. Some Members raised the following questions :

(a) noting that about 115 trees would be felled with tree compensation ratio of 1:1, and some larger tree species (e.g. *Cinnamomum camphora* (樟樹), *Liquidambar formosana* (楓香)) were proposed for tree compensation in planters with only 1.2m depth, what the planting surface area and planting separation between trees were and whether the tree compensation proposal followed the principle of 'right tree for the right place';

(b) whether there was standard requirement for minimum soil depth in planters, and whether the soil area in the planters was sufficient for future tree growth;

(c) the length of the access road from Tung Lo Wan Hill Road to the Site, the number of trees to be affected by the road widening works, and whether ecological impact on the roadside trees had been taken into consideration in the technical assessments;

(d) how the ecological impact of the proposed development had been considered given that the Site was on a natural hill slope and in the midst of a woodland; and

(e) in view of the natural site context, whether there were mitigation measures to avoid light pollution and bird collisions.

20. In response, Ms Winnie Wu, the applicant's representative, with the aid of some PowerPoint slides, made the following main points :

(a) the proposed tree compensation ratio was not less than 1:1 by number of trees. Details on landscape design such as planting surface area, soil depth and planting distance would be considered at the detailed design stage and comments would be sought from relevant Government departments. Furthermore, relevant tree preservation and landscape

proposal clause could be incorporated in the land lease as appropriate;

(b) the minimum requirement of 1.2m soil depth and 1.5m soil width would be provided to ensure that there was sufficient soil provision for quality landscaping. Details on soil area for different tree species would be further reviewed and accommodated on a need basis;

(c) the existing access road to the Site that connected Tung Lo Wan Hill Road from Mei Tin Road roundabout to Sha Tin North Fresh Water Service Reservoir (about 300m long) was proposed to be widened and upgraded, and about 76 trees were proposed to be felled with tree compensation ratio of 1:1. Relevant technical assessments including the ecological and geotechnical impacts on roadside trees and slopes and traffic impact had been submitted and relevant departments had no adverse comment;

(d) the trees within the Site were of low ecological value according to the findings in the Ecological Impact Assessment (EcoIA), on which relevant Government department had no adverse comment. The concern on appropriate tree species to be compensated would be further reviewed and explored. Various species would be considered (i.e. *Cinnamomum camphora (*樟樹), *Cinnamomum burmannii* (陰香*)* for tree planting, *Melastoma malabathricum* (野牡丹) and *Rhaphiolepis indica* (車輪梅) for shrub planting) to promote blossoming and fruiting and thus enhancing the ecology. Revelant Government departments would be consulted at the detailed design stage; and

(e) night glare/light pollution could be minimized with thoughtful detailed design, e.g. adjustment of lighting angles at platforms. Appropriate use of material type and colour of glass and external walls could help to avoid bird collisions.

"GB" Review and Site Conditions

21. Some Members raised the following questions :

(a) how the rezoning application could meet the Government's criteria for identifying suitable "GB" sites for housing development as claimed by the applicant, and whether the assessment criteria should be gauged based on the conditions in the 1960s or the current site condition;

(b) how the reduction in the site area was a relevant consideration for the subject rezoning application; and

(c) the reason why the vegetated woodland on the Site was formed into a platform area.

22. In response, Ms Margaret H.Y. Chan, DPO/STN, with the aid of some PowerPoint slides, made the following main points :

(a) there were three stages of "GB" review conducted by PlanD. The first stage of "GB" review completed in 2012 mainly covered areas which were formed, deserted or not vegetated, and possessed potential for residential development. The second stage of "GB" review in 2013 covered largely the fringe of built-up areas close to existing urban areas and new towns, and those vegetated areas with relatively less buffering effect and lower conservation value. The third stage of "GB" review commenced in 2021, covering mainly sites with higher gradient and farther away from the built-up area but still with road access, including private land. Under the current application, the majority of the Site (about 98%) was zoned "GB" with a minor portion (about 2%) zoned "G/IC", and the minor portion could be considered as minor boundary adjustment between zones. The Site had generally met the criteria of "GB" review as the Site was partly devegetated and formed, and its buffering effect and conservation value were relatively low. Besides, the Site was situated at the fringe of the built-up areas and was easily accessible to the Sha Tin town centre. The proposed development was assessed based on the current site condition that about 40% of the Site was formed, and about 10% comprised man-made slopes, and that the Site was of relatively low ecological value; and

(b) taking into account the comments of the Agriculture, Fisheries and Conservation Department (AFCD) on the previous application (No. Y/ST/38) as well as the withdrawn application (No. Y/ST/54) covering a larger site with more woodland area, the site area under the current application had been reduced by 60%. About 50% the Site was mainly covered by formed platform and cut slope, and the remaining portion of the Site was covered with vegetation of invasive species (e.g. *Leucaena leucocephala* (銀合歡)) and those of lower ecological value according to the applicant's submission.

23. Ms Winnie Wu, the applicant's representative, with the aid of some PowerPoint slides, said that the Site was mainly occupied by some scattered temporary domestic structures/squatters in the 1960s and the Site was only rezoned to "GB" on the Outline Zoning Plan (OZP) in 1983. In 2005, as shown in the aerial photo, there was already a formed platform and the temporary domestic structures/squatters thereon were either demolished or vacated. Some slope strengthening and maintenance works on the Site were also conducted. Having considered the departmental comments on the previous application, the current site boundary had been reduced and mainly covered the formed area and the adjacent disturbed slope area with the surrounding existing woodland largely undisturbed.

Others

24. Some Members raised the following questions :

(a) the proposed landscape treatment of the remaining portion of the private lot covering the Site (i.e. Lot 380 RP in D.D. 186) (the Lot); and whether that remaining area would still serve the function of "GB";

(b) whether there was any tree preservation clause in the land lease of the Lot, and if not, the possibility to incorporate such clause covering the entire Lot at lease modification stage;

(c) whether the proposed road widening works would encroach onto third party's private lots; and

(d) noting that the applicant had lodged an appeal against the decision of the

Court of First Instance to dismiss the judicial review against the Committee's decision not to agree to the previous application No. Y/ST/38, involving a larger domestic gross floor area and with the hearing scheduled for May 2023, whether the applicant would pursue the development scheme under the previous application should the appeal be allowed.

25. In response, Ms Margaret H.Y. Chan, DPO/STN, said that AFCD did not support the withdrawn application No. Y/ST/54 submitted in 2022 by the applicant, which proposed to keep the adjoining woodland area (within the Lot) untouched with all trees preserved, and commented that the applicant should reconsider the size of the Site to include only the project footprint in the rezoning proposal.

26. Ms Winnie Wu, the applicant's representative, with the aid of some PowerPoint slides, made the following main points :

(a) the entire Lot was owned by the applicant but only a portion of it was proposed for rezoning to "R(B)3". The remaining portion would remain under the "GB" zone and no development was proposed thereat. The land exchange for the proposed development would only cover the Site and not the entire Lot;

(b) the Lot was an agricultural lot with no tree preservation clause under the land lease. However, the applicant would be committed to monitoring and maintaining the trees in the Lot;

(c) only Government land was involved in the road widening works and there was no impact on any third party's private lots; and

(d) the applicant might consider to withdraw the appeal should the current rezoning application be approved, subject to advice from their legal team.

27. As Members had no further question to raise, the Chairperson said that the hearing procedures of the application had been completed. The Board would further deliberate on the application in the absence of the applicant's representatives and inform the applicant of the Board's decision in due course. The Chairperson thanked PlanD's

representatives and the applicant's representatives for attending the meeting. They left the meeting at this point.

Deliberation Session

28. The Chairman invited Members to consider whether the rezoning application should be agreed, and the main considerations included whether the criteria for rezoning "GB" sites for residential development were generally met given that about 50% of the Site had been formed and with man-made slope, proximity of the Site to the Sha Tin New Town and the submitted technical assessments had demonstrated no insurmountable problem in terms of traffic, ecological, environmental and landscape aspects. The applicant had proposed road widening works to the access road and undertook to manage and maintain it. Details on tree felling/compensation and landscape proposal would be further vetted by relevant Government departments at detailed design stage of the proposed development. Furthermore, should the Committee agree to the rezoning application, the proposed amendments to the Sha Tin OZP would be submitted to the Board for consideration prior to gazetting and the statutory consultation process would be undertaken in accordance with the Town Planning Ordinance.

29. Members considered that the location and the proposed development parameters were generally acceptable in view of the medium-density residential developments in its vicinity. However, Members raised the following concerns :

(a) the compensatory planting ratio of 1:1 should be in terms of the planting surface area (i.e. by girth) rather than only in terms of tree number in order to fully compensate for the loss of trees;

(b) there were lack of details in the submitted landscape proposal e.g. the landscape proposal did not include information on the proposed soil area for the compensated trees to demonstrate that the compensatory planting proposal was satisfactory. The proposed planting area (1.5m (length) x 1.5m (width) x 1.2 (depth)) was insufficient for sustaining healthy tree growth, particularly for larger tree species;

(c) the landscape proposal had not taken account of the ecological impacts

and should be revised and submitted to relevant Government departments for consideration;

(d) whilst planting on top of tall retaining walls might be necessary due to the constraints within the Site, there was much room for enhancing the overall landscaping quality in the immediate surrounding area (i.e. within the remaining area of the Lot which was owned by the applicant). A more comprehensive landscape and tree compensation proposal covering the Lot should be proposed, and the remaining area of the Lot (for tree preservation) should preferably be included in the land exchange for the proposed development;

(e) the landscape proposal and the design intent (i.e. the proposed scheme with deep excavation and erection of tall retaining wall) were incompatible and not sensitive to the surrounding natural context, and should be further refined. The extent of proposed works including the road improvement works along the 300m-long access road and the excavation would likely extend beyond the Site and would pose additional adverse impact on the ecology and dense vegetation in the surrounding areas during the construction stage; and

(f) there was doubt on whether there was a feasible way to ensure that the burden for management and maintenance of the access road would not be shifted to the future property owners.

30. In response to a Member's enquiry on AFCD's comment on a previous rezoning application, the Secretary referred to Plan Z-5a of the Paper and said that AFCD had concern on application No. Y/ST/38 on the grounds that the north-western portion of that application site was indicated as a private garden that might not guarantee the preservation of the wooded area.

31. A Member asked whether tree preservation clause could be incorporated in the land lease of the remaining portion of the Lot (not within the Site) in the land exchange to better protect the trees therein. In response, Ms Joyce S.Y. Ng, Assistant Director/Regional 3, LandsD (Atg), said that in the event that the applicant submitted land exchange application covering the Site only, consideration could be given to incorporate tree preservation clause in

the new lease covering the Site. The remaining portion of the Lot not covered by the land exchange would still be subject to the existing lease conditions and tree preservation clause could not be added.

32. The Chairman said that Members generally considered that proposed residential use on the Site was acceptable but have concerns on some technical matters as set out above. Members could consider either (i) to not agree to the application so that the applicant could further address the above concerns and submit another application for the Committee's consideration; or (ii) to agree in-principle to the application and allow PlanD to liaise with the applicant for further information at the OZP amendment stage to endeavour to address Members' concerns. After some discussion, Members generally agreed that the application could be agreed in-principle. A Member said that the remnant "GB" zoning of the small strip of land adjoining the southern boundary of the Site should also be reviewed when considering the proposed amendment to the OZP.

33. On the general approach to consider similar s12A applications for rezoning private sites from "GB" to residential use in future, a Member opined that the requirement for compensatory planting might need to be raised. Two other Members concurred and suggested that compensatory planting for such rezoning applications should be at a ratio of 1:1 by girth rather than by number of trees to ensure no net loss of tree coverage. One of the Members said that rezoning proposals for private sites should be subject to higher compensatory planting requirement on-site as no off-site compensation would be carried out under such private projects. For tree felling for public housing, there was bigger social benefit and any net tree loss would be compensated by other territorial planting schemes by Government in country parks and public areas. The same Member further said that the Environment Act in the United Kingdom set out that a 10% biodiversity gain after development had to be demonstrated at the planning application stage, and by comparison, a compensatory planting ratio of 1:1 by girth was not stringent.

34. A Member expressed that it might be difficult to provide compensatory planting by girth on small sites, and compensatory planting proposal had to be considered on a case-by-case basis as it was necessary to allow sufficient flexibility for striking a balance between conservation and development. Another Member supplemented that more holistic and territorial approach to compensatory planting should be explored, e.g. the Government could consider identifying sites for private project proponents to carry out off-site tree

compensation. Two Members said that on a wider perspective of combating climate change, apart from compensating tree loss, developments might also try to achieve carbon neutrality through green building design or carbon trading.

35. The Chairman said that Members' views for better tree compensatory proposals and the need to achieve carbon neutrality in development were generally agreeable. The feasibility to raise the requirement for compensatory planting ratio to 1:1 by girth when considering future planning applications would need to be further explored on the policy level and compensatory planting proposal of individual cases should in the meantime be considered based on each individual merits.

36. After further deliberation, the Committee decided to agree in-principle to the application. The relevant proposed amendments to the Sha Tin OZP, together with the revised Notes and Explanatory Statement, would be submitted to the Committee for consideration prior to gazetting under section 5 of the Town Planning Ordinance upon reference back of the OZP.

Extracted Minutes of 705th Meeting of the Rural and New Town Planning Committee held on 14.10.2022

Agenda Item 4

Section 12A Application

[Open Meeting (Presentation and Question Sessions Only)]

Y/ST/48	Application for Amendment to the Draft Sha Tin Outline Zoning Plan No. S/ST/35, To rezone the application site from "Residential (Group B)" and "Green Belt" to "Other Specified Uses" annotated "Religious Institution with Columbarium", Lots 2 & 671 in D.D. 181 in Tai Wai, Sha Tin (RNTPC Paper No. Y/ST/48B)

12. The Secretary reported that the application site (the Site) was located in Tai Wai, Sha Tin. The following Members had declared interests on the item:

Professor John C.Y. Ng	-	owning a flat in Sha Tin; and
Mr Vincent K.Y. Ho	-	co-owning with spouse a flat in Sha Tin.

13. The Committee noted that Mr Vincent K.Y. Ho had tendered an apology for not being able to attend the meeting. As the flat owned by Professor John C.Y. Ng had no direct view of the Site, the Committee agreed that he could stay in the meeting.

Presentation and Question Sessions

14. The following representatives from the Planning Department (PlanD) and the applicant's representatives were invited to the meeting at this point:

PlanD

Ms Margaret H.Y. Chan	-	District Planning Officer/Sha Tin, Tai Po & North (DPO/STN)
Ms Elizabeth Ng	-	Town Planner/Sha Tin, Tai Po & North (TP/STN)

Applicant's Representatives

Good Faith Ltd.

Ms Josanne Ng

PlanPlus Consultancy Ltd.

Mr Kennith Chan

Mr Vincent Lau

CTA Consultants Ltd.

Mr Kelvin Leung

Archln

Mr Memphis Chao

Lanbase Surveyors Ltd.

Mr C.K. Chan

15. The Chairman extended a welcome and explained the procedures of the meeting. He then invited PlanD's representatives to brief Members on the background of the application.

16. With the aid of a PowerPoint presentation, Ms Margaret H.Y. Chan, DPO/STN, briefed Members on the background of the application, the proposed rezoning of the Site, departmental and public comments, and the planning considerations and assessments as detailed in the Paper. PlanD had no in-principle objection to the application.

[Miss Winnie W.M. Ng and Mr Paul Y.K. Au joined the meeting during PlanD's

presentation.]

17. The Chairman then invited the applicant's representatives to elaborate on the application. Mr Kennith Chan, the applicant's representative, stated that they had no further elaboration and stood ready to answer Members' questions. As the presentation of PlanD's representative was completed and the applicant's representatives had no further elaboration of the application, the Chairman invited questions from Members.

18. A Member raised the following questions:

(b) the details of another s.12A application (No. Y/ST/49) submitted by the same applicant covering the same Site and whether approval of the subject application would have any implication on that case; and

(c) noting that the Site was currently sharing access with the nearby squatters, whether there was information on the pedestrian circulation arrangement in the area.

19. In response, Ms Margaret H.Y. Chan, DPO/STN, made the following main points :

(a) the other application (No. Y/ST/49) under processing was submitted by the same applicant for the same site with the same set of Notes for the proposed "Other Specified Uses" annotated "Religious Institution with Columbarium" ("OU(Religious Institution with Columbarium)") zone except that the maximum gross floor area was slightly different and the total number of niches stipulated under that application was 14,483, covering all unsold niches, while that under the subject application was 1,779 covering the sold niches. A traffic impact assessment (TIA) in support of application No. Y/ST/49 was required. A clause was also proposed in the Notes of both applications to allow the Town Planning Board to consider minor relaxation of the stated development parameters, including the number of niches, under s.16 application. Whilst there were two applications covering the same Site, the Committee should consider

each application based on its own individual merits. Should the subject application be approved by the Committee, the maximum number of niches, i.e. 1,779, would be stipulated in the Notes of the relevant zone as proposed by the applicant under the statutory plan-making process in due course; and

(b) the Site had a shared pedestrian access with about 20 squatters uphill (i.e. Pak Tin Village Area 2 and Fuk Lok Tsuen), which were located about 125m and 510m to the further northwest of the Site respectively. The pedestrian flow of the concerned access so generated was insignificant.

20. As the applicant's representatives had no further points to raise and there were no further questions from Members, the Chairman informed the applicant's representatives that the hearing procedure for the application had been completed and the Committee would deliberate on the application in their absence and inform the applicant of the Committee's decision in due course. The Chairman thanked the representatives from PlanD and the applicant for attending the meeting. They left the meeting at this point.

Deliberation Session

21. The Chairman recapitulated that the current application was for rezoning the Site from "Residential (Group B)" and "Green Belt" to "OU(Religious Institution with Columbarium)" to regularise the existing religious institution and columbarium uses with the concerned 1,779 niches under the application sold before 30.6.2017, i.e. the date the Private Columbarium Ordinance, which regulated the operation of private columbaria through a licensing scheme, came into operation. Under the Government's current practice, no TIA would be required for licence application from a pre-cut-off columbarium which only involved niches sold before 30.6.2017. Such practice was applicable to the subject application and the TIA requirement could be exempted. On the other hand, a traffic management plan had been submitted by the applicant to support the application and relevant departments including the Transport Department and Hong Kong Police Force had no in-principle objection to or adverse comment on the application. Furthermore, although the Site was close to the nearby residential clusters, it was accessible by a separate footpath branching off from Mei Tin Road and did not share its pedestrian access with Mei Chung Court. The closest residential block of Mei Chung Court (about 20m away) was also

separated from the Site by a vegetated slope with no direct physical linkage. Taking into account the land use compatibility and technical feasibility aspects, PlanD had no in-principle objection to the application.

22. Members generally supported the application to regularise the existing columbarium use with 1,779 niches. Members also noted that the proposal under application No. Y/ST/49 with 14,483 niches would be considered by the Committee separately.

23. After deliberation, the Committee decided to agree to the subject application, and that the relevant proposed amendment to the Sha Tin OZP, together with the revised Notes and Explanatory Statement, would be submitted to the Committee for consideration prior to gazetting under section 5 of the Town Planning Ordinance upon reference back of the OZP.

Extracted Minutes of 722th Meeting of the Rural and New Town Planning Committee held on 14.7.2023

Agenda Item 4

Section 12A Application

[Open Meeting (Presentation and Question Sessions Only)]

Y/ST/49	Application for Amendment to the Approved Sha Tin Outline Zoning Plan No. S/ST/36, To rezone the application site from "Residential (Group B)" and "Green Belt" to "Other Specified Uses" annotated "Religious Institution with Columbarium", Lot Nos. 2 & 671 in D.D. 181 in Tai Wai, Sha Tin (RNTPC Paper No. Y/ST/49C)

18. The Secretary reported that the application site (the Site) was located in Sha Tin. The following Members had declared interests on the item:

Professor John C.Y. Ng	-	owning a property in Sha Tin;
Mr Vincent K.Y. Ho	-	co-owning with spouse a property in Sha Tin; and
Ms Carrie K.Y. Leung	-	owning a property in Sha Tin.

19. The Committee noted that Mr Vincent K.Y. Ho had tendered an apology for being unable to attend the meeting. As the properties owned by Professor John C.Y. Ng and Ms Carrie K. Y. Leung had no direct view of the Site, the Committee agreed that they could stay in the meeting.

Presentation and Question Sessions

20. The following representatives from the Planning Department (PlanD) and the applicant's representatives were invited to the meeting at this point:

PlanD

Ms Margaret H.Y. Chan	-	District Planning Officer/Sha Tin, Tai Po & North (DPO/STN)

Ms Hannah H.N. Yick	-	Senior Town Planner/Sha Tin, Tai Po & North (STP/STN)

Applicant's Representatives

Good Faith Ltd.

Mr Hong Yee Kwan

Ms Ng Pui Shan

PlanPlus Consultancy Ltd.

Mr Kennith Chan

Mr Vincent Lau

CTA Consultants Ltd.

Mr Kelvin Leung

Mr Kwong Wing Kai

21. The Chairman extended a welcome and explained the procedures of the meeting. He then invited PlanD's representatives to brief Members on the background of the application.

22. With the aid of a PowerPoint presentation, Ms Hannah Yick, STP/STN, briefed Members on the background of the application, the proposed rezoning of the Site, departmental and public comments, and the planning considerations and assessments as detailed in the Paper. PlanD had no in-principle objection to the application.

23. The Chairman then invited the applicant's representatives to elaborate on the application. Mr Kennith Chan, the applicant's representative, stated that they had no further elaboration.

24. As the presentation of PlanD's representative was completed and the applicant's representatives had no further elaboration on the application, the Chairman invited questions from Members.

25. Noting that the Site fell partly within the "Green Belt" ("GB") zone in which

there was a general presumption against development, a Member enquired whether the structure within the Site would encroach onto the "GB" zone should the application was agreed. In response, Ms Margaret H.Y. Chan, DPO/STN, said that about 27% of the Site fell within the "GB" zone. The part of the building structure in the "GB" portion concerned had existed on site, and there would not be further encroachment onto the "GB" zone according to the application.

26. As the applicant's representatives had no further points to raise and there were no further questions from Members, the Chairman said that the hearing procedures of the application had been completed. The Committee would deliberate on the application in the absence of the applicant's representatives and inform the applicant of the Committee's decision in due course. The Chairman thanked PlanD's representatives and the applicant's representatives for attending the meeting. They left the meeting at this point.

Deliberation Session

27. The Chairman recapitulated that the Site was the subject of a previously agreed section 12A application (No. Y/ST/48). As compared with the previous application, the development parameters in the current application were largely the same except that the total number of niches was increased to include an additional of 3,000 unsold niches at the Site. The Site was accessible via a separate footpath and would not share the same pedestrian access with the nearby residential development, i.e. Mei Chung Court. As shown on the aerial photo (Plan Z-3 of the Paper), the Site was segregated from the closest residential block by a vegetated slope with no direct physical connection. Concerned government departments had no objection to or no adverse comment on the application and considered that relevant technical assessments were acceptable. The Chairman remarked and Members noted that should the application be agreed, the Sha Tin Outline Zoning Plan (OZP) would be suitably amended with relevant development restrictions including the maximum number of niches stipulated in the Notes for the Site and the relevant proposed amendments to OZP would be submitted to the Committee for consideration. Members generally considered the application could be agreed.

28. After deliberation, the Committee decided to agree to the application. The relevant proposed amendments to the OZP, together with the revised Notes and Explanatory Statement, would be submitted to the Committee for consideration prior to gazetting under

section 5 of the Town Planning Ordinance upon reference back of the OZP.

Extract of Minutes of 688th Meeting of the
Rural and New Town Planning Committee held on 28.1.2022

Agenda Item 3

Section 12A Application

[Open Meeting (Presentation and Question Sessions Only)]

Y/ST/53	Application for Amendment to the Draft Sha Tin Outline Zoning Plan No. S/ST/35, to rezone the application site from "Green Belt" to "Other Specified Uses" annotated "Columbarium(1)", Lots 499 S.A RP (Part), 500 S.A RP (Part), 503, 504 (Part), 505 (Part), 506 (Part) in D.D. 42 and Adjoining Government Land, 110 Chek Nai Ping Village, Tai Po Road, Ma Liu Shui, Sha Tin (RNTPC Paper No. Y/ST/53)

4. The Secretary reported that the application was for columbarium use and Mr K.K. Cheung had declared an interest on the item for his firm being the legal advisor of the Private Columbaria Licensing Board. As the interest of Mr K.K. Cheung was indirect, the Committee agreed that he could stay in the meeting.

Presentation and Question Sessions

5. The following representatives from Planning Department (PlanD) and the applicant's representatives were invited to the meeting at this point:

PlanD

Ms Jessica Chu	- District Planning Officer/ Sha Tin, Tai Po and North District (DPO/STN)
Mr Derek Wong	- Town Planner/ Sha Tin, Tai Po and North District (TP/STN)

Applicant's Representatives

Top Century Group Holdings Ltd

Mr Bill Mok Kwai Pui

Mr Tse Yuen Ming

Mr Ng Wai Kuen

Aikon Development Consultancy Limited

Mr Thomas Luk Siu Chuen

Ms Grace Cheung Yeung Mei

6. The Chairman extended a welcome and explained the procedures of the meeting. He then invited PlanD's representatives to brief Members on the background of the application.

7. With the aid of a PowerPoint presentation, Ms Jessica Chu, DPO/STN, briefed Members on the background of the application, the proposed rezoning of the application site (the Site), departmental and public comments, and the planning considerations and assessments as detailed in the Paper. PlanD had no in-principle objection to the application.

[Miss Winnie W.M. Ng joined the meeting during PlanD's presentation.]

8. The Chairman then invited the applicant's representatives to elaborate on the application. With the aid of a PowerPoint presentation, Ms Grace Cheung Yeung Mei, the applicant's representative, made the following main points:

(a) the purpose of the current application was to regularise the existing columbarium use at the Site;

(b) as shown on the aerial photos, the existing structure on the Site was built in 1976-1978, while the Site and the surrounding area had been zoned "Green Belt" ("GB") since 1988 when the first Shatin Outline Zoning Plan (OZP) was gazetted;

(c) the Site was purchased by the applicant in 2009;

(d) all niches were placed within the existing 3-storey block, which was surrounded by existing tall trees and vegetation and the nearest domestic dwelling was at Chek Nai Ping Village located across Tai Po Road (Ma Liu Shui);

(e) the Site was located in close proximity to the permitted burial ground and ancestral graves, and hence columbarium use on the Site was compatible with the existing land uses of the surroundings;

(f) no further expansion or intrusion into the "GB" zone was intended;

(g) a management plan was submitted to provide details including site operation, crowd management and appointment system;

(h) no parking spaces would be provided and visitors were encouraged to use public transport, while shuttle services would be provided. Hence, traffic impact was not envisaged;

(i) no adverse environmental, drainage and sewerage impacts were anticipated; and

(j) the applicant agreed with PlanD's assessments as set out in paragraph 11 of the Paper.

9. As the presentations of PlanD's representative and the applicant's representatives had been completed, the Chairman invited questions from Members.

10. The Vice-chairman enquired whether there was any change in use of the Site since it was purchased by the applicant.

11. In response, Ms Grace Cheung Yeung Mei and Mr Ng Wai Kuen, the applicant's representatives, stated that the structure of the building remained unchanged and the applicant had only made minor renovation works.

12. The Chairman raised the following questions:

(a) details of the management plan currently adopted for the existing columbarium; and

(b) responses to Lands Department (LandsD)'s comments on the alleged illegal structures built on the Site as well as the illegal occupation of Government land.

13. In response, Mr Thomas Luk Siu Chuen and Mr Ng Wai Kuen, the applicant's representatives, made the following main points:

(a) a "visit-by-appointment" system for visitors of the columbarium was currently in place and an online memorial system for visitors to commemorate their ancestors in the internet was also available;

(b) regarding the alleged breach of lease conditions, the applicant noted that the concerned illegal structure was referring to the outdoor staircases and he would seek building plan approval for the structures concerned; and

(c) regarding the government land concerned, which formed part of the Site under the current application, and the applicant would apply for Short Term Tenancy from LandsD should the application be approved.

14. As the applicant's representatives had no further points to raise and there were no further questions from Members, the Chairman informed the applicant's representatives that the hearing procedure of the application had been completed and the Committee would deliberate on the application in their absence and inform the applicant of the Committee's decision in due course. The Chairman thanked the representatives from PlanD and the applicant's representatives for attending the meeting. They left the meeting at this point.

Deliberation Session

15. The Committee noted that the columbarium was already in existence for some

time, not incompatible with and would have minimal impact on the surrounding environment.

16. After deliberation, the Committee decided to agree to the application for rezoning the Site to "Other Specified Uses" annotated "Columbarium(1)". Amendments to the OZP would be submitted to the Committee for approval prior to gazetting under section 5 of the Town Planning Ordinance upon reference back of the OZP.