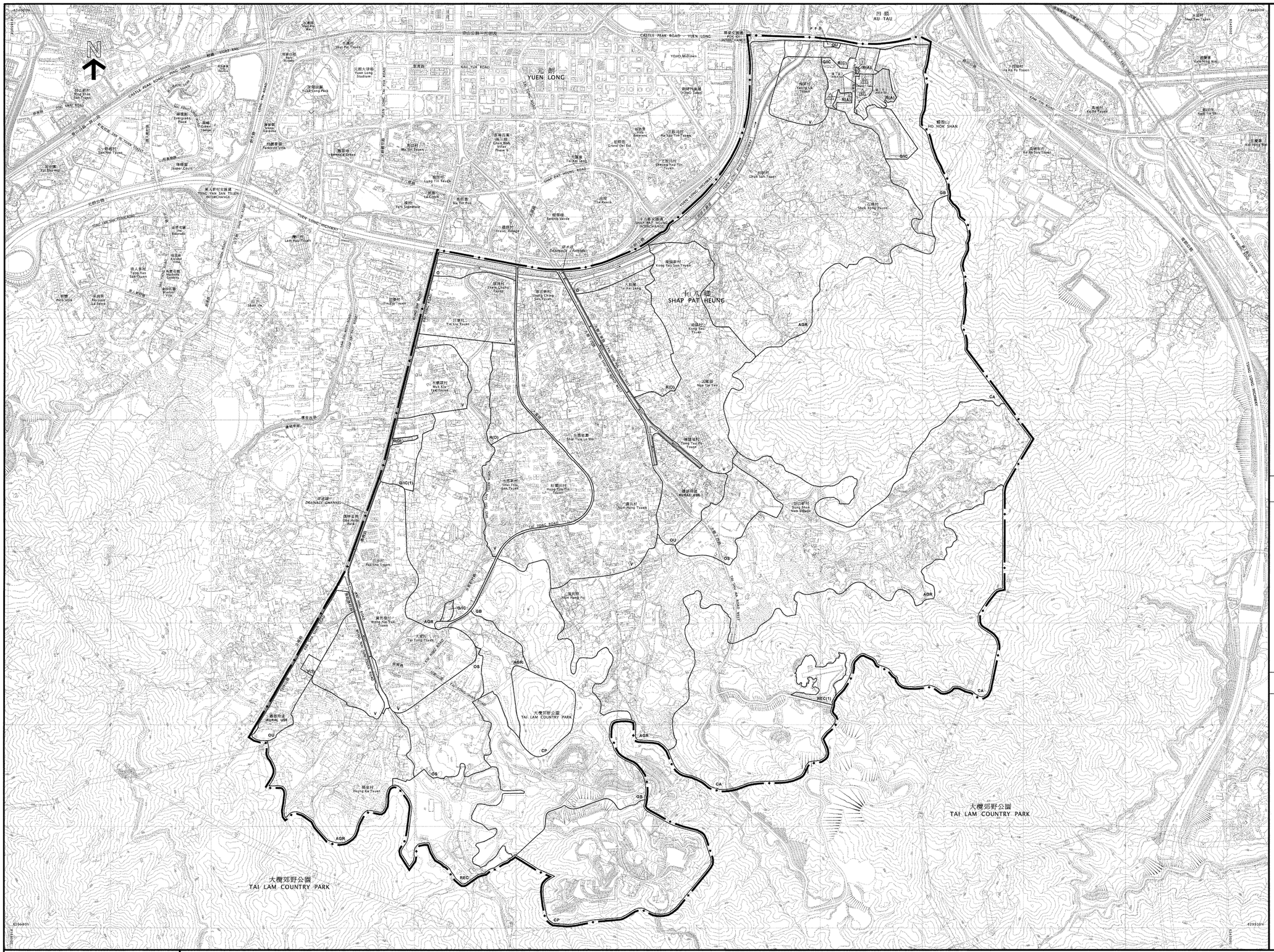


圖例
NOTATION

ZONES		地帶
RESIDENTIAL (GROUP A)	R(A)	住宅（甲類）
RESIDENTIAL (GROUP C)	R(C)	住宅（丙類）
RESIDENTIAL (GROUP D)	R(D)	住宅（丁類）
VILLAGE TYPE DEVELOPMENT	V	鄉村式發展
OPEN STORAGE	OS	露天貯物
GOVERNMENT, INSTITUTION OR COMMUNITY	G/IC	政府、機構或社區
OPEN SPACE	O	休憩用地
RECREATION	REC	康樂
OTHER SPECIFIED USES	OU	其他指定用途
AGRICULTURE	AGR	農業
GREEN BELT	GB	綠化地帶
CONSERVATION AREA	CA	自然保育區
COUNTRY PARK	CP	郊野公園

COMMUNICATIONS		交通
MAJOR ROAD AND JUNCTION		主要道路及路口

MISCELLANEOUS		其他
BOUNDARY OF PLANNING SCHEME		規劃範圍界線
BUILDING HEIGHT CONTROL ZONE BOUNDARY		建築物高度管制區界線
MAXIMUM BUILDING HEIGHT (IN METRES ABOVE PRINCIPAL DATUM)	75	最高建築物高度（在主水平基準上若干米）
MAXIMUM BUILDING HEIGHT (IN NUMBER OF STOREYS)	3	最高建築物高度（樓層數目）
PETROL FILLING STATION	P F S	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
RESIDENTIAL (GROUP A)	3.71	0.39	住宅（甲類）
RESIDENTIAL (GROUP C)	2.83	0.29	住宅（丙類）
RESIDENTIAL (GROUP D)	25.27	2.63	住宅（丁類）
VILLAGE TYPE DEVELOPMENT	194.83	20.29	鄉村式發展
OPEN STORAGE	28.22	2.94	露天貯物
GOVERNMENT, INSTITUTION OR COMMUNITY	14.39	1.50	政府、機構或社區
OPEN SPACE	7.86	0.82	休憩用地
RECREATION	22.27	2.32	康樂
OTHER SPECIFIED USES	19.67	2.05	其他指定用途
AGRICULTURE	298.85	31.13	農業
GREEN BELT	68.92	7.18	綠化地帶
CONSERVATION AREA	210.88	21.97	自然保育區
COUNTRY PARK	50.18	5.23	郊野公園
DRAINAGE CHANNEL	4.73	0.49	排水道
MAJOR ROAD ETC.	7.41	0.77	主要道路等
TOTAL PLANNING SCHEME AREA	960.02	100.00	規劃範圍總面積

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

行政長官會同行政會議於２０２１年８月１０日　根據城市規劃條例第９（１）（ａ）條核准的圖則
APPROVED BY THE CHIEF EXECUTIVE IN COUNCIL UNDER SECTION 9(1)(a) OF THE TOWN PLANNING ORDINANCE ON 10 AUGUST 2021

Ms Wendy LEUNG 梁蘊儀女士
CLERK TO THE EXECUTIVE COUNCIL 行政會議秘書

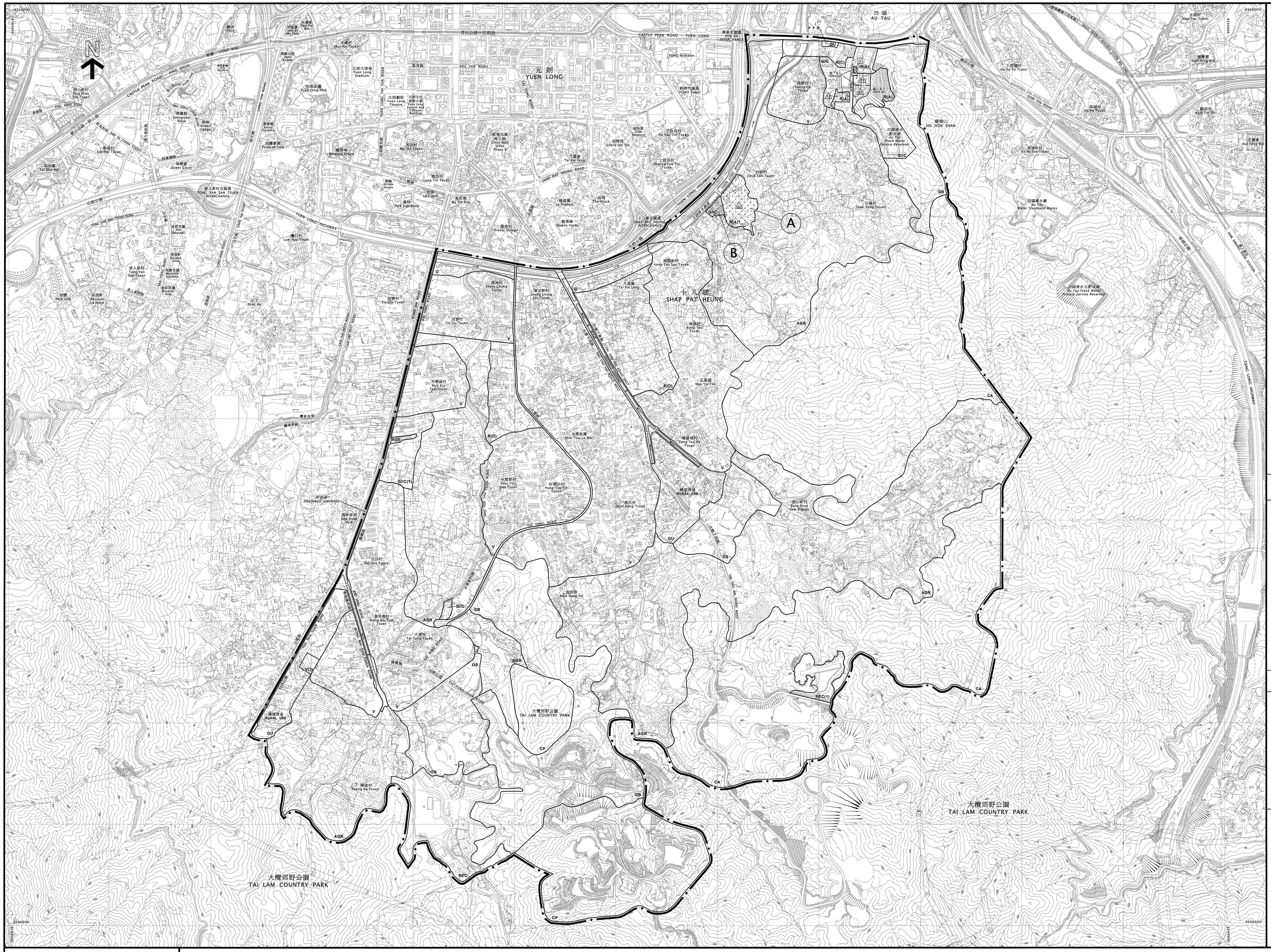
香港城市規劃委員會依據城市規劃條例擬備的大棠分區計劃大綱圖
TOWN PLANNING ORDINANCE, HONG KONG TOWN PLANNING BOARD
TAI TONG - OUTLINE ZONING PLAN

SCALE 1:7 500 比例尺

米 METRES 200 0 200 400 600 800 1 000 METRES 米

規劃署遵照城市規劃委員會指示擬備
PREPARED BY THE PLANNING DEPARTMENT UNDER THE DIRECTION OF THE TOWN PLANNING BOARD

圖則編號 PLAN No. S/YL-TT/18



圖例
NOTATION

ZONES		地帶
RESIDENTIAL (GROUP A)	R(A)	住宅（甲類）
RESIDENTIAL (GROUP C)	R(C)	住宅（丙類）
RESIDENTIAL (GROUP D)	R(D)	住宅（丁類）
VILLAGE TYPE DEVELOPMENT	V	鄉村式發展
OPEN STORAGE	OS	露天貯物
GOVERNMENT, INSTITUTION OR COMMUNITY	G/IC	政府、機構或社區
OPEN SPACE	O	休憩用地
RECREATION	REC	康樂
OTHER SPECIFIED USES	OU	其他指定用途
AGRICULTURE	AGR	農業
GREEN BELT	GB	綠化地帶
CONSERVATION AREA	CA	自然保育區
COUNTRY PARK	CP	郊野公園

COMMUNICATIONS		交通
MAJOR ROAD AND JUNCTION		主要道路及路口

MISCELLANEOUS		其他
BOUNDARY OF PLANNING SCHEME		規劃範圍界線
BUILDING HEIGHT CONTROL ZONE BOUNDARY		建築物高度管制區界線
MAXIMUM BUILDING HEIGHT (IN METRES ABOVE PRINCIPAL DATUM)	85	最高建築物高度（在主水平基準上若干米）
MAXIMUM BUILDING HEIGHT (IN NUMBER OF STOREYS)	3	最高建築物高度（樓層數目）
PETROL FILLING STATION	P F S	加油站

土地用途及面積一覽表
SCHEDULE OF USES AND AREAS

USES	APPROXIMATE AREA & % 大約面積及百分率 公頃 HECTARES	% 百分率	用途
RESIDENTIAL (GROUP A)	6.98	0.73	住宅（甲類）
RESIDENTIAL (GROUP C)	2.83	0.29	住宅（丙類）
RESIDENTIAL (GROUP D)	25.27	2.63	住宅（丁類）
VILLAGE TYPE DEVELOPMENT	194.83	20.29	鄉村式發展
OPEN STORAGE	28.22	2.94	露天貯物
GOVERNMENT, INSTITUTION OR COMMUNITY	14.91	1.55	政府、機構或社區
OPEN SPACE	7.86	0.82	休憩用地
RECREATION	22.27	2.32	康樂
OTHER SPECIFIED USES	19.67	2.05	其他指定用途
AGRICULTURE	295.07	30.74	農業
GREEN BELT	68.92	7.18	綠化地帶
CONSERVATION AREA	210.88	21.97	自然保育區
COUNTRY PARK	50.18	5.23	郊野公園
DRAINAGE CHANNEL	4.67	0.49	排水道
MAJOR ROAD ETC.	7.46	0.77	主要道路等
TOTAL PLANNING SCHEME AREA	960.02	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/YL-TT/18 的修訂
AMENDMENTS TO APPROVED PLAN No. S/YL-TT/18

AMENDMENTS EXHIBITED UNDER SECTION 5 OF THE TOWN PLANNING ORDINANCE	按照城市規劃條例第 5 條展示的修訂
AMENDMENT ITEM A	修訂項目 A 項
AMENDMENT ITEM B	修訂項目 B 項

（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大棠分區計劃大綱圖
TOWN PLANNING ORDINANCE, HONG KONG TOWN PLANNING BOARD
TAI TONG - OUTLINE ZONING PLAN

SCALE 1:7 500 比例尺

米 METRES 200 0 200 400 600 800 1 000 METRES 米

規劃署遵照城市規劃委員會指示擬備
PREPARED BY THE PLANNING DEPARTMENT UNDER THE DIRECTION OF THE TOWN PLANNING BOARD

圖則編號 PLAN No. **S/YL-TT/18A**

~~APPROVED~~ *DRAFT* TAI TONG OUTLINE ZONING PLAN NO. S/YL-TT/18*A*

(Being ~~an Approved~~ ***a 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) No action is required to make the use of any land or building which was in existence immediately before the first publication in the Gazette of the notice of the interim development permission area plan conform to this Plan, provided such use has continued since it came into existence. Any material change of such use or any other development (except minor alteration and/or modification to the development of the land or building in respect of such use which is always permitted) must be always permitted in terms of the Plan or in accordance with a permission granted by the Town Planning Board.

(4) A use or development of any land or building permitted under an earlier draft or approved plan including interim development permission area plan for the area and effected or undertaken during the effective period of that plan is always permitted under this Plan. Any material change of such use or any other development (except minor alteration and/or modification to the completed development of the land or building which is always permitted) must be always permitted in terms of the Plan or in accordance with a permission granted by the Town Planning Board.

(5) Except to the extent that paragraph (3) or (4) applies, any use or development falling within the boundaries of the Plan and also within the boundaries of the interim development permission area plan, unless always permitted in terms of the Plan, shall not be undertaken or continued on or after the date of the first publication in the Gazette of the notice of the interim development permission area plan without permission from the Town Planning Board.

(6) 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.

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

(8) The following uses or developments are always permitted on land falling within the boundaries of the Plan except (a) where the uses or developments are specified in Column 2 of the Notes of individual zones or (b) as provided in paragraph (9) in relation to areas zoned "Conservation Area":

(a) maintenance, repair or demolition of a building;

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

(c) maintenance or repair of road, railway track, watercourse, nullah, sewer and drain;

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

(e) rebuilding of New Territories Exempted House;

(f) replacement of an existing domestic building, i.e. a domestic building which was in existence on the date of the first publication in the Gazette of the notice of the interim development permission area plan, by a New Territories Exempted House; and

(g) provision, maintenance or repair of a grave of an indigenous New Territories villager or a locally based fisherman and his family members for which permission has been obtained from Government.

(9) In areas zoned "Conservation Area",

(a) the following uses or developments are always permitted:

(i) maintenance or repair of plant nursery, amenity planting, sitting out area, rain shelter, refreshment kiosk, road, watercourse, nullah, public utility pipeline, electricity mast, lamp pole, telephone booth, shrine and grave;

(ii) 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

(iii) provision of amenity planting by Government; and

(b) the following uses or developments require permission from the Town Planning Board:

provision of plant nursery, amenity planting (other than by Government), sitting out area, rain shelter, refreshment kiosk, footpath, public utility pipeline, electricity mast, lamp pole, telephone booth and shrine.

(10) In any area shown as 'Road', all uses or developments except those specified in paragraphs (8)(a) to (8)(d) and (8)(g) above and those specified below require permission from the Town Planning Board:

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

(11) (a) Except in areas zoned "Conservation Area", temporary use or development of any land or building not exceeding a period of two months is always permitted provided that no site formation (filling or excavation) is carried out and that the use or development is a use or development specified below:

structures for carnivals, fairs, film shooting on locations, festival celebrations, religious functions or sports events.

(b) Except as otherwise provided in paragraph (11)(a), and subject to temporary uses for open storage and port back-up purposes which are prohibited in areas zoned "Conservation Area", temporary use or development of any land or building not exceeding a period of three years requires permission from the Town Planning Board. Notwithstanding that the use or development is not provided for in terms of the Plan, the Town Planning Board may grant permission, with or without conditions, for a maximum period of three years, or refuse to grant permission.

(c) Temporary use or development of land or building exceeding three years requires permission from the Town Planning Board in accordance with the terms of the Plan.

(12) 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.

(13) In these Notes, unless the context otherwise requires or unless as expressly provided below, terms used in the Notes shall have the meanings as assigned under section 1A of the Town Planning Ordinance.

"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*** TAI TONG OUTLINE ZONING PLAN NO. S/YL-TT/18***A***

Schedule of Uses

	Page
RESIDENTIAL (GROUP A)	1
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VILLAGE TYPE DEVELOPMENT	7
OPEN STORAGE	9
GOVERNMENT, INSTITUTION OR COMMUNITY	10
OPEN SPACE	12
RECREATION	13
RECREATION (1)	14
OTHER SPECIFIED USES	15
AGRICULTURE	18
GREEN BELT	20
CONSERVATION AREA	22
COUNTRY PARK	23

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)1" 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
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	

(Please see next page)

RESIDENTIAL (GROUP A) (cont'd)

Planning Intention

This zone is intended primarily for medium-density ***and 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) ***On land designated "Residential (Group A)", ~~N~~n***o 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 52,100m^2 and a maximum building height in terms of metres above Principal Datum or number of storeys, as stipulated on the Plan. No building development except landscape platform and associated minor structures is permitted in Area (b) which shall be designated as a landscape area.

(b) ***On land designated "Residential (Group 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 plot ratio of 6.7 and a maximum building height of 185mPD, or the plot ratio and height of the existing building, whichever is the greater.***

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

(d) 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 public transport facilities or Government, institution or community facilities, as required by the Government, may be disregarded; and

~~(c)~~***(e)*** Based on the individual merits of a development or redevelopment proposal, minor relaxation of the GFA***, plot ratio*** and/or building height restrictions as stated in paragraph***s*** (a) ***and (b)*** 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) 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 Rural Committee/Village Office 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.

(Please see next page)

RESIDENTIAL (GROUP C) (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 a maximum plot ratio of 0.4 and a maximum building height of 3 storeys (9m) including car park, or the plot ratio and height of the building which was in existence on the date of the first publication in the Gazette of the notice of the interim development permission area plan, whichever is the greater.

(b) Based on the individual merits of a development or redevelopment proposal, minor relaxation of the plot ratio and 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.

(c) 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.

RESIDENTIAL (GROUP D)

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 (Redevelopment; Addition, Alteration and/or Modification to existing house only) On-Farm Domestic Structure 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) # Library Petrol Filling Station 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 # 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

This zone is intended primarily for improvement and upgrading of existing temporary structures within the rural areas through redevelopment of existing temporary structures into permanent buildings. It is also intended for low-rise, low-density residential developments subject to planning permission from the Town Planning Board.

(Please see next page)

RESIDENTIAL (GROUP D) (cont'd)

Remarks

(a) No addition, alteration and/or modification to or in-situ redevelopment of an existing temporary structure or an existing building (except to 'New Territories Exempted House' or to those annotated with #) shall result in a total development and/or redevelopment in excess of a maximum building area of 37.2m^2 and a maximum building height of 2 storeys (6m), or the building area and height of the building which was in existence on the date of the first publication in the Gazette of the notice of the interim development permission area plan, whichever is the greater.

(b) No development including redevelopment for 'Flat' and 'House' (except 'New Territories Exempted House') uses, other than those to which paragraph (a) above shall apply, shall result in a development and/or redevelopment in excess of a maximum plot ratio of 0.4 and a maximum building height of 3 storeys (9m).

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

(d) 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 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) Any filling of pond or excavation of land, including that to effect a change of use to any of those specified in Columns 1 and 2 above or the uses or developments always permitted under the covering Notes (except public works co-ordinated or implemented by Government, and maintenance, repair or rebuilding works), shall not be undertaken or continued on or after the date of the first publication in the Gazette of notice of the interim development permission area plan without the permission from the Town Planning Board 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	Burial Ground 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	

(Please see next page)

VILLAGE TYPE DEVELOPMENT (cont'd)

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. For land designated "Village Type Development (1)", the planning intention is to provide land considered suitable for reprovisioning of village houses affected by Government projects.

Remarks

(a) No new development, or addition, alteration and/or modification to or redevelopment of an existing building (except development or redevelopment to those annotated with #) shall result in a total development and/or redevelopment in excess of a maximum building height of 3 storeys (8.23m) or the height of the building which was in existence on the date of the first publication in the Gazette of the notice of the interim development permission area plan, 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.

~~(c) Any filling of pond or excavation of land, including that to effect a change of use to any of those specified in Columns 1 and 2 above or the uses or developments always permitted under the covering Notes (except public works co-ordinated or implemented by Government, and maintenance, repair or rebuilding works), shall not be undertaken or continued on or after the date of the first publication in the Gazette of the notice of the interim development permission area plan without the permission from the Town Planning Board under section 16 of the Town Planning Ordinance.~~

OPEN STORAGE

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 Cargo Handling and Forwarding Facility (not elsewhere specified) Eating Place (Canteen only) Government Refuse Collection Point Government Use (not elsewhere specified) On-Farm Domestic Structure Open Storage (not elsewhere specified) Public Convenience Public Utility Installation Public Vehicle Park (excluding container vehicle) Rural Workshop Shop and Services (Service Trades only) Utility Installation for Private Project Vehicle Repair Workshop Warehouse (excluding Dangerous Goods Godown)	Cargo Handling and Forward Facility (Container Freight Station, Logistics Centre only) Cement Manufacturing Concrete Batching Plant Container Storage/Repair Yard Container Vehicle Park/Container Vehicle Repair Yard Dangerous Goods Godown Eating Place (not elsewhere specified) Industrial Use (not elsewhere specified) Open Storage of Cement/Sand Open Storage of Chemical Products/ Dangerous Goods Petrol Filling Station Shop and Services (not elsewhere specified) Vehicle Stripping/Breaking Yards Wholesale Trade

Planning Intention

This zone is intended primarily for the provision of land for appropriate open storage uses and to regularize the already haphazard proliferation of open storage uses. It provides for the orderly development of land for open storage uses that cannot be accommodated in conventional godown premises.

~~Remarks~~

~~Any filling of pond or excavation of land, including that to effect a change of use to any of those specified in Columns 1 and 2 above or the uses or developments always permitted under the covering Notes (except public works co-ordinated or implemented by Government, and maintenance, repair or rebuilding works), shall not be undertaken or continued on or after the date of the first publication in the Gazette of the notice of the interim development permission area plan without the permission from the Town Planning Board under section 16 of the Town Planning Ordinance.~~

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 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 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 House (other than rebuilding of New Territories Exempted House or replacement of existing domestic building by New Territories Exempted House permitted under the covering Notes) 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 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.

(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 specified below, or the height of the existing building, whichever is the greater:

Sub-area	Maximum Number of Storeys
G/IC(1)	8 storeys

(b) In determining the relevant maximum number of storeys for the purposes of (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 Public Convenience Sitting Out Area	Eating Place Government Refuse Collection Point Government Use (not elsewhere specified) Holiday Camp 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.

~~Remarks~~

~~Any filling of pond or excavation of land, including that to effect a change of use to any of those specified in Columns 1 and 2 above or the uses or developments always permitted under the covering Notes (except public works co-ordinated or implemented by Government, and maintenance, repair or rebuilding works), shall not be undertaken or continued on or after the date of first publication in the Gazette of the notice of the interim development permission area plan without the permission from the Town Planning Board under section 16 of the Town Planning Ordinance.~~

RECREATION

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 Field Study/Education/Visitor Centre Government Use (Police Reporting Centre only) Holiday Camp On-Farm Domestic Structure Picnic Area Place of Recreation, Sports or Culture Public Convenience Rural Committee/Village Office Tent Camping Ground	Animal Boarding Establishment Broadcasting, Television and/or Film Studio Eating Place Flat Golf Course Government Refuse Collection Point Government Use (not elsewhere specified) Helicopter Landing Pad Hotel House (other than rebuilding of New Territories Exempted House or replacement of existing domestic building by New Territories Exempted House permitted under the covering Notes) Place of Entertainment Private Club Public Utility Installation Public Vehicle Park (excluding container vehicle) Religious Institution Residential Institution Shop and Services Theme Park Utility Installation for Private Project Zoo

Planning Intention

This zone is intended primarily for recreational developments for the use of the general public. It encourages the development of active and/or passive recreation and tourism/eco-tourism. Uses in support of the recreational developments may be permitted subject to planning permission.

Remarks

(a) No residential development shall result in a total development in excess of a maximum plot ratio of 0.2 and a maximum building height of 2 storeys (6m).

(b) Based on the individual merits of a development or redevelopment proposal, minor relaxation of the plot ratio and 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.

RECREATION (1)

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 Field Study/Education/Visitor Centre Government Use (Police Reporting Centre only) On-Farm Domestic Structure Picnic Area Place of Recreation, Sports or Culture (Radio Controlled Model Aeroplane Flying Site only) Public Convenience Tent Camping Ground	Golf Course Government Refuse Collection Point Government Use (not elsewhere specified) Holiday Camp Place of Recreation, Sports or Culture (not elsewhere specified) Private Club Public Utility Installation Public Vehicle Park (excluding container vehicle) Radar, Telecommunications Electronic Microwave Repeater, Television and/or Radio Transmitter Installation Religious Institution Service Reservoir Utility Installation for Private Project

Planning Intention

This zone is primarily intended for the development of a selective range of recreational uses including a radio controlled model aeroplane flying site which are commensurate with the surrounding rural environment and compatible with the natural setting of the Tai Lam Country Park to the south.

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 "Rural Use" only

Agricultural Use
Barbecue Spot
Field Study/Education/Visitor Centre
Government Use (Police Reporting Centre, Post Office only)
On-Farm Domestic Structure
Picnic Area
Place of Recreation, Sports or Culture (Horse Riding School, Hobby Farm, Fishing Ground only)
Public Convenience
Religious Institution (Ancestral Hall only)
Rural Committee/Village Office
Tent Camping Ground

Animal Boarding Establishment
Broadcasting, Television and/or Film Studio
Burial Ground
Driving School
Eating Place
Flat
Golf Course
Government Refuse Collection Point
Government Use (not elsewhere specified) #
Holiday Camp
House (other than rebuilding of New Territories Exempted House or replacement of existing domestic building by New Territories Exempted House permitted under the covering Notes)
Institutional Use (not elsewhere specified) #
Petrol Filling Station
Place of Recreation, Sports or Culture (not elsewhere specified)
Private Club
Public Clinic
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

Planning Intention

This zone is intended primarily for the preservation of the character of the rural area. Uses or developments compatible with the rural landscape, such as passive recreation uses and a selected range of rural uses, may be allowed on application to the Town Planning Board, with a view to upgrading or improving the area or providing support to the local communities.

(Please see next page)

OTHER SPECIFIED USES (cont'd)

For "Rural Use" only (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 'New Territories Exempted House' or to those annotated with #) shall result in a total development and/or redevelopment in excess of a maximum plot ratio of 0.4 and a maximum building height of 3 storeys (9m), or the plot ratio and height of the building which was in existence on the date of the first publication in the Gazette of the notice of the interim development permission area plan, whichever is the greater.

(b) Based on the individual merits of a development or redevelopment proposal, minor relaxation of the plot ratio and 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.

(c) 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.

~~(d) Any filling of pond, including that to effect a change of use to any of those specified in Columns 1 and 2 above or the uses or developments always permitted under the covering Notes (except public works co-ordinated or implemented by Government, and maintenance, repair or rebuilding works), shall not be undertaken or continued on or after the date of the first publication in the Gazette of the notice of the interim development permission area plan without the permission from the Town Planning Board 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 "Petrol Filling Station" only	
Petrol Filling Station	Government Use Public Utility Installation

Planning Intention

This zone is intended primarily for the provision of petrol filling station serving the needs of local residents as well as the general public.

AGRICULTURE

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 only) On-Farm Domestic Structure Public Convenience Religious Institution (Ancestral Hall only) Rural Committee/Village Office	Animal Boarding Establishment Barbecue Spot Burial Ground Field Study/Education/Visitor Centre Government Refuse Collection Point Government Use (not elsewhere specified) House (New Territories Exempted House only, other than rebuilding of New Territories Exempted House or replacement of existing domestic building by New Territories Exempted House permitted under the covering Notes) Picnic Area Place of Recreation, Sports or Culture (Horse Riding School, Hobby Farm, Fishing Ground only) Public Utility Installation Religious Institution (not elsewhere specified) School Utility Installation for Private Project

Planning Intention

This zone is intended primarily to retain and safeguard good quality agricultural land/farm/fish ponds for agricultural purposes. It is also intended to retain fallow arable land with good potential for rehabilitation for cultivation and other agricultural purposes.

Remarks

(a) Any filling of pond, including that to effect a change of use to any of those specified in Columns 1 and 2 above or the uses or developments always permitted under the covering Notes (except public works co-ordinated or implemented by Government, and maintenance, repair or rebuilding works), shall not be undertaken or continued on or after the date of the first publication in the Gazette of the notice of the interim development permission area plan without the permission from the Town Planning Board under section 16 of the Town Planning Ordinance.

(Please see next page)

AGRICULTURE (cont'd)

Remarks

(b) Any filling of land, including that to effect a change of use to any of those specified in Columns 1 and 2 above or the uses or developments always permitted under the covering Notes (except public works co-ordinated or implemented by Government, and maintenance, repair or rebuilding works), shall not be undertaken or continued on or after the date of the first publication in the Gazette of the notice of the draft Tai Tong Outline Zoning Plan No. S/YL-TT/12 without the permission from the Town Planning Board under section 16 of the Town Planning Ordinance. This restriction does not apply to filling of land specifically required under prior written instructions of Government department(s) or for the purposes specified below:

(i) laying of soil not exceeding 1.2m in thickness for cultivation; or

(ii) construction of any agricultural structure with prior written approval issued by the Lands Department.

GREEN BELT

Column 1 Uses always permitted	Column 2 Uses that may be permitted with or without conditions on application to the Town Planning Board
Agricultural Use Barbecue Spot Government Use (Police Reporting Centre only) Nature Reserve Nature Trail On-Farm Domestic Structure Picnic Area Public Convenience Tent Camping Ground Wild Animals Protection Area	Animal Boarding Establishment Broadcasting, Television and/or Film Studio Burial Ground 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 Firing Range Flat Golf Course Government Refuse Collection Point Government Use (not elsewhere specified) Helicopter Landing Pad Holiday Camp House (other than rebuilding of New Territories Exempted House or replacement of existing domestic building by New Territories Exempted House permitted under the covering Notes) Petrol Filling Station Place of Recreation, Sports or Culture Public Transport Terminus or Station Public Utility Installation Public Vehicle Park (excluding container vehicle) Radar, Telecommunications Electronic Microwave Repeater, Television and/or Radio Transmitter Installation Religious Institution Residential Institution Rural Committee/Village Office School Service Reservoir Social Welfare Facility Utility Installation for Private Project

(Please see next page)

GREEN BELT (cont'd)

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.

Remarks

Any filling of land/pond or excavation of land, including that to effect a change of use to any of those specified in Columns 1 and 2 above or the uses or developments always permitted under the covering Notes (except public works co-ordinated or implemented by Government, and maintenance, repair or rebuilding works), shall not be undertaken or continued on or after the date of the first publication in the Gazette of the notice of the interim development permission area plan without the permission from the Town Planning Board under section 16 of the Town Planning Ordinance.

CONSERVATION AREA

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 (other than Plant Nursery) Nature Reserve Nature Trail On-Farm Domestic Structure Picnic Area Wild Animals Protection Area	Barbecue Spot Field Study/Education/Visitor Centre Government Refuse Collection Point Government Use (not elsewhere specified) Holiday Camp House (Redevelopment only) Public Convenience Public Utility Installation Radar, Telecommunications Electronic Microwave Repeater, Television and/or Radio Transmitter Installation Tent Camping Ground Utility Installation for Private Project

Planning Intention

This zoning is intended to protect and retain the existing natural landscape, ecological or topographical features of the area for conservation, educational and research purposes and to separate sensitive natural environment such as Country Park from the adverse effects of development.

There is a general presumption against development in this zone. In general, only developments that are needed to support the conservation of the existing natural landscape or scenic quality of the area or are essential infrastructure projects with overriding public interest may be permitted.

Remarks

(a) No redevelopment, including alteration and/or modification, of an existing house shall result in a total redevelopment in excess of the plot ratio, site coverage and height of the house which was in existence on the date of the first publication in the Gazette of the notice of the interim development permission area plan.

(b) Any filling of land/pond or excavation of land, including that to effect a change of use to any of those specified in Columns 1 and 2 above or the uses or developments always permitted under the covering Notes ***(except public works co-ordinated or implemented by Government, and maintenance, repair or rebuilding works)***, shall not be undertaken or continued on or after the date of the first publication in the Gazette of the notice of the interim development permission area plan without the permission from the Town Planning Board under section 16 of the Town Planning Ordinance.

COUNTRY PARK

Country Park means a country park or special area as designated under the Country Parks Ordinance (Cap. 208). All uses and developments require consent from the Country and Marine Parks Authority and approval from the Town Planning Board is not required.

Attachment IV

~~APPROVED~~ *DRAFT* TAI TONG OUTLINE ZONING PLAN NO. S/YL-TT/18*A*

EXPLANATORY STATEMENT

EXPLANATORY STATEMENT

~~APPROVED~~ ***DRAFT*** TAI TONG OUTLINE ZONING PLAN NO. S/YL-TT/18***A***

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~~APPROVED~~ *DRAFT* TAI TONG OUTLINE ZONING PLAN NO. S/YL-TT/18*A*

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

EXPLANATORY STATEMENT

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

1. INTRODUCTION

This Explanatory Statement is intended to assist an understanding of the ~~approved~~ ***draft*** Tai Tong Outline Zoning Plan (OZP) No. S/YL-TT/18***A***. It reflects the planning intentions 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 The land covered by the Tai Tong OZP was previously included in the Tai Tong Interim Development Permission Area (IDPA) Plan and Tai Tong Development Permission Area (DPA) Plan.

2.2 On 5 October 1990, the Tai Tong IDPA Plan No. IDPA/YL-TT/1 was notified in the Gazette.

2.3 On 12 July 1991, the draft Tai Tong DPA Plan No. DPA/YL-TT/1, including land previously within the IDPA Plan, was exhibited for public inspection under section 5 of the Town Planning Ordinance (the Ordinance).

2.4 On 7 June 1994, the then Governor in Council approved the draft DPA Plan under section 9(1)(a) of the Ordinance. The approved DPA Plan No. DPA/YL-TT/2 was notified in the Gazette on 17 June 1994.

2.5 On 17 May 1993, under the power delegated by the then Governor, the then Secretary for Planning, Environment and Lands directed the Board, under section 3(1)(a) of the Ordinance, to prepare an OZP for the area of Tai Tong.

2.6 On 8 July 1994, the draft Tai Tong OZP No. S/YL-TT/1 was exhibited for public inspection under section 5 of the Ordinance. The OZP was subsequently amended twice and exhibited for public inspection under section 7 of the Ordinance.

2.7 On 1 June 1999, the Chief Executive in Council (CE in C), under section 9(1)(a) of the Ordinance, approved the draft Tai Tong OZP, which was subsequently renumbered as S/YL-TT/4. On 22 June 1999, the CE in C referred the approved Tai Tong OZP No. S/YL-TT/4 to the Board for amendment under section 12(1)(b)(ii) of the Ordinance. The OZP was subsequently amended three times and exhibited for public inspection under section 5 or 7 of the Ordinance to reflect the changing circumstance**s**.

2.8 On 20 February 2001, the CE in C, under section 9(1)(a) of the Ordinance, approved the draft Tai Tong OZP, which was subsequently renumbered as S/YL-TT/8. On 28 May 2002, the CE in C referred the approved Tai Tong OZP No. S/YL-TT/8 to the Board for amendment under section 12(1)(b)(ii) of the Ordinance. On 28 June 2002, the draft Tai Tong OZP No. S/YL-TT/9 was exhibited for public inspection under section 5 of the Ordinance.

2.9 On 17 June 2003, the CE in C, under section 9(1)(a) of the Ordinance, approved the draft Tai Tong OZP, which was subsequently renumbered as S/YL-TT/10. On 9 December 2003, the CE in C referred the approved OZP No. S/YL-TT/10 to the Board for amendment under section 12(1)(b)(ii) of the Ordinance. The OZP was subsequently amended three times and exhibited for public inspection under section 5 or 7 of the Ordinance to reflect the changing circumstances.

2.10 On 17 October 2006, the CE in C, under section 9(1)(a) of the Ordinance, approved the draft Tai Tong OZP, which was subsequently renumbered as S/YL-TT/14. On 27 October 2006, the approved Tai Tong OZP No. S/YL-TT/14 was exhibited for public inspection under section 9(5) of the Ordinance.

2.11 On 6 July 2010, the CE in C referred the approved Tai Tong OZP No. S/YL-TT/14 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.

2.12 On 13 March 2012, the CE in C, under section 9(1)(a) of the Ordinance, approved the draft Tai Tong OZP, which was subsequently renumbered as S/YL-TT/16. On 23 March 2012, the approved Tai Tong OZP No. S/YL-TT/16 was exhibited for public inspection under section 9(5) of the Ordinance.

2.13 On 9 July 2019, the CE in C referred the approved Tai Tong OZP No. S/YL-TT/16 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 19 July 2019 under section 12(2) of the Ordinance.~~ ***The OZP was then amended and exhibited for public inspection under section 5 of the Ordinance on 10 July 2020.***

2.14 On 10 August 2021, the CE in C, under section 9(1)(a) of the Ordinance, approved the draft Tai Tong OZP, which was subsequently renumbered as S/YL-TT/18. On 20 August 2021, the approved Tai Tong OZP was exhibited for public inspection under section 9(5) of the Ordinance.

~~On 10 July 2020, the draft Tai Tong OZP No. S/YL-TT/17 was exhibited for public inspection under section 5 of the Ordinance. The amendments covered parts of Stage 2 of the Yuen Long South (YLS) Development, including the rezoning of (i) an area from "Other Specified Uses" annotated "Rural Use" ("OU(RU)") and "Agriculture"~~

~~("AGR") to "Government, Institution or Community (1)" ("G/IC(1)"); (ii) an area from "OU(RU)" to "Residential (Group D)" ("R(D)"); and (iii) a site from "OU(RU)" to "Village Type Development (1)" ("V(1)"). After giving consideration to the representations and comments on 31 March 2021 and 30 April 2021, the Board decided not to propose any amendment to the draft OZP to meet the representations.~~

~~On 10 August 2021, the CE in C, under section 9(1)(a) of the Ordinance, approved the draft Tai Tong OZP, which was subsequently renumbered as S/YL-TT/18. On 20 August 2021, the approved Tai Tong OZP No. S/YL-TT/18 (the Plan) was exhibited for public inspection under section 9(5) of the Ordinance.~~

2.15 On 3 May 2022, the CE in C referred the approved Tai Tong OZP No. S/YL-TT/18 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 13 May 2022 under section 12(2) of the Ordinance.

2.16 On xx 2022, the draft Tai Tong OZP No. S/YL-TT/19 (the Plan) was exhibited for public inspection under section 5 of the Ordinance. The Plan incorporates amendments mainly to rezone an area near Shap Pat Heung from "Agriculture" to "Residential (Group A)1" and "Government, Institution or Community" to facilitate a public housing development and provision of a primary school.

3. OBJECT OF THE PLAN

3.1 The object of the Plan is to indicate the broad land use zonings and major road networks for the Tai Tong area so that development and redevelopment within the area 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 and development proceed.

3.3 Since the Plan is to show broad land use zonings, there would be cases that small strips of land not intended for building development purposes and carry no development right under the lease, such as the areas restricted 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 and site coverage calculations. Development within residential zones should be restricted to building lots carrying development right in order to maintain the character and amenity of the area and not to overload the road network in this area.

4. NOTES OF THE PLAN

4.1 Attached to the Plan is a set of Notes which shows the types of uses or developments which are always permitted within the Planning Scheme Area (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 (PlanD) and can be downloaded from the Board's website at http://www.info.gov.hk/tpb.

5. THE PLANNING SCHEME AREA

5.1 The Area covered by the Plan is about 960 ha. The Area is bounded by the ridge of Ho Hok Shan and Kam Tin South in the east, Castle Peak Road (Yuen Long Section) in the north, Yuen Long Highway in the north-west, Kiu Hing Road and Pak Sha Shan Road in the west and Tai Lam Country Park in the south. The boundary of the Area is shown by a heavy broken line on the Plan.

5.2 The boundary of the Area is delineated having regard to physical and topographical features such as roads, drainage channels and hills. Therefore, the Area boundary does not necessarily follow the Heung boundaries which are used for administration purpose only. Also, the name of the Plan is to follow that of the geographical area and would not cause implications on development rights, particularly Small House applications.

5.3 The Area is traversed by the major access roads of Tai Tong Road, Tai Shu Ha Road East***,*** ~~and~~ Tai Shu Ha Road West ***and Long Ho Road***. It comprises predominantly low-lying flat land for agriculture and village development uses, rising to hilly contours near the eastern and southern boundaries. Some farmland is still under active cultivation. Rural industries, workshops and open storage sites are mainly located along parts of Kiu Hing Road and Pak Sha Shan Road, the eastern side of Tai Shu Ha Road East and to the south of Tai Tong Shan Road.

5.4 The northern part of the Area falls within the area affected by the height restriction of the Shek Kong Airfield. Details should be referred to the Plan of the Shek Kong Airfield Height Restriction No. YLM6917a prepared by Lands Department (LandsD).

5.5 Since mid-1980s, there has been widespread conversion of agricultural land and proliferation of temporary structures for open storage uses, warehouses and workshops in the New Territories. Such conversions to open storage uses, vehicle repair workshops and storage of construction machinery and

materials have occurred along major access roads in the Area. These have led to a rapid degradation of the rural environment.

6. POPULATION

Based on the 2016 Population By-census, the population of the Area was estimated by PlanD as about 25,700. It is estimated that the total planned population of the Area would be about ~~42,370~~ ***54,900***.

7. OPPORTUNITIES AND CONSTRAINTS

7.1 Opportunities

7.1.1 There are a number of agricultural lots under active cultivation in the Area. Agricultural land in the Area is classified as good to fair. Agricultural land in the less accessible areas is still under active cultivation or used for market gardening and plant nurseries. However, agricultural activities to the east of Kiu Hing Road and at the junction of Tai Shu Ha Road East and Tai Shu Ha Road West are declining. There is an opportunity for converting the derelict agricultural land into recreational or low-density residential uses which are commensurate with the rural environment.

7.1.2 Where situation warrants, existing open storage sites along Tai Tong Road, Tai Shu Ha Road East and Tai Shu Ha Road West should be encouraged to be redeveloped to more compatible uses provided that such redevelopment proposals would have minimal adverse impact on the drainage, traffic and environment of the Area.

7.1.3 The comprehensive ***Yuen Long South (***YLS***)*** Development will transform large tracts of land to the west of the Area into a sustainable, green and liveable neighborhood. New residences, employment opportunities, infrastructures, public utilities and services, open spaces and other amenities would be provided to the benefit of new residents and existing villages and settlements. It is anticipated that there would be positive knock-on impacts to the Area.

7.2 Constraints

7.2.1 There are many well-established recognized villages in the Area. Sufficient land has to be reserved for meeting the Small House demand of the indigenous villages as well as for the future expansion of the villages.

7.2.2 Yuen Long Highway, being a major highway running along the north-western boundary of the Area, would pose environmental constraints to adjacent areas especially the noise-sensitive uses.

7.2.3 Vehicular access to the Area is mainly via Tai Tong Road, Tai Shu Ha Road East, Tai Shu Ha Road West, Kiu Hing Road***,*** ~~and~~ Pak Sha Shan Road ***and Long Ho Road*** together with sub-standard local tracks. These would limit the scope for future development.

7.2.4 Except along the western and northern boundaries, there are no public sewers and ducted drainage system in the Area; urban development should be kept to a minimum in the remaining areas to avoid adverse effect on the environment.

7.2.5 The southern and north-eastern parts of the Area comprise hilly area. Therefore development would be confined to the valleys within the Area.

7.2.6 ***The Area is supplied with water from Au Tau Fresh Water Primary Service Reservoir and Ngau Tam Mei Fresh Water Primary Service Reservoir. There are mainly small size water distribution mains to convey water to local villages within the Area. For future development which may render substantial demand of water, laying of new water mains to connect with the suitable government water mains in the vicinity of Shap Pat Heung Road and Ma Tong Road should be considered.*** ~~***Part of the Area is served by the Au Tau Fresh Water Primary Service Reservoir, with t***~~***he remaining part*** ~~only served by small size water distribution mains to local villages. Existing capacity of the Tan Kwai Tsuen Service Reservoirs and the water treatment works for the North West New Territories (NWNT) could not meet the substantial increase in water demand arising from proposals for large residential development. New waterworks are proposed under the YLS Development, the details of which would be investigated in due course ***are under study***.~~

7.2.7 The places of archaeological and historical interests as mentioned in paragraph 12 are worthy to be preserved. Prior consultation with the Antiquities and Monuments Office (AMO) is required for any development or redevelopment which may affect those sites and their immediate environs.

8. GENERAL PLANNING INTENTION

8.1 The planning intention for the Area is to retain the rural characteristics by preserving active agricultural land and reserving sufficient land for village type development and for environmental and infrastructural improvements. An area to the south of Castle Peak Road – Yuen Long Section near Au Tau is intended for medium-density residential development so as to capitalize on the available infrastructure nearby.

8.2 In the designation of various zones in the Area, considerations have been given to the natural environment, physical landform, existing settlements,

availability of infrastructures, local development pressures as well as strategic studies of the Territorial Development Strategy Review and NWNT (Yuen Long District) Development Strategy Review under the NWNT Development Strategy Review. Other than the above, buildings and places of historical and archaeological interest in the Area should be preserved as far as possible.

9. LAND-USE ZONINGS

9.1 Residential (Group A) ("R(A)") : Total Area : ~~3.71~~ ***6.98*** ha

9.1.1 This zone is intended primarily for medium-density ***and high-density*** residential developments. ~~Development in this zone is subject to restrictions on the maximum total gross floor area (GFA) of 52,100m^2 and maximum building height as stipulated on the Plan.~~ Under this zoning, commercial uses are always permitted on the lowest three floors of a building or the purpose designed non-residential portion of an existing building.

9.1.2 Three parcels of land at Yau Shin Street ~~are designated as~~ ***zoned*** "R(A)" ***have been developed as a*** ~~primarily for the~~ public housing development***, i.e.*** ~~of~~ Long Shin Estate~~.~~***, which is subject to restrictions on the maximum total gross floor area (GFA) of 52,100m^2 and maximum building heights as stipulated on the Plan.*** To define the limit of development area and to protect and retain the existing slopes at the eastern and southern parts of the site, two subareas, Areas (a) and (b), are designated in the zone as shown on the Plan. The public housing development ~~will be~~ ***has been*** confined within Area (a). Area (b) ~~shall be~~ ***is*** designated as a landscape area and existing trees and landscape features within the area should be preserved as far as possible. No building development except the planned landscape platform and associated minor structures, including footbridge connection(s), is permitted in Area (b).

9.1.3 An area at the southeast of Long Ho Road and near Chuk San Tsuen in Shap Pat Heung is designated as "R(A)1" for a proposed public housing development. Development within this site is subject to a maximum plot ratio of 6.7 and a maximum building height of 185mPD. Various Government, institution or community (GIC) facilities such as kindergartens and social welfare facilities, as well as other non-domestic uses including retail and ancillary car-parking facilities and public transport interchange in support of the public housing development and nearby areas would be provided within the "R(A)1" site.

9.1.4 For the "R(A)1" zone, in determining the maximum plot ratio of the development or redevelopment, any floor space that is constructed or intended for use solely as public transport facilities and GIC facilities, as required by the Government, may be

disregarded to facilitate the provision of these facilities.

9.1.***5*** To provide flexibility for innovative design adapted to the characteristics of particular sites, minor relaxation of the GFA***, plot ratio*** and/or building height restrictions may be considered by the Board through the planning permission system. Each proposal will be considered on its individual planning merits.

9.1.6 A planning brief setting out the planning parameters and the design requirements of public housing development at the "R(A)1" zone will be provided to guide its future development.

9.1.7 An Air Ventilation Assessment – Expert Evaluation (AVA-EE) has been carried out for the "R(A)1" site. It is found that design measures, including building separations and setbacks, would alleviate the potential air ventilation impacts on the surrounding wind environment. Quantitative AVA should be carried out at the detailed design stage. Requirements of the design measures and quantitative AVA will be incorporated in the planning briefs for the implementation as appropriate.

9.1.8 The plot ratio control under "R(A)1" 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.

9.2 Residential (Group C) ("R(C)") : Total Area : 2.83 ha

9.2.1 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. Development in this zone is limited to a maximum plot ratio of 0.4 and a maximum building height of 3 storeys (9m) including car park, or the plot ratio and height of the building which was in existence on the date of the first publication in the Gazette of the notice of the IDPA plan, whichever is the greater. To provide flexibility for innovative design adapted to the characteristics of particular sites, minor relaxation of the above restrictions may be considered by the Board through the planning permission system. Each proposal will be considered on its individual planning merits.

9.2.2 An area located on the southern side of Castle Peak Road (Yuen Long Section) and another to the north of Yeung Uk Tsuen is zoned "R(C)". The area at present consists of several private community uses, houses, some temporary structures and fallow agricultural land. As the former site is subject to noise impact from Castle Peak Road, noise mitigation measures such as the use of screening structures and the adoption of self-protective building layout would need to be implemented. Besides, direct vehicular access to Castle Peak Road

should be avoided so as to minimize disturbance caused to the traffic on Castle Peak Road.

9.3 Residential (Group D) ("R(D)") : Total Area : 25.27 ha

9.3.1 This zone is intended primarily for improvement and upgrading of existing temporary structures within the rural areas through redevelopment of existing temporary structures into permanent buildings. It is also intended for low-rise, low-density residential developments subject to planning permission from the Board. Replacement housing for temporary structures shall not result in a total redevelopment in excess of a maximum building area of 37.2m^2 and a maximum building height of 2 storeys (6m), or the building area and height of the building which was in existence on the date of the first publication in the Gazette of the notice of the IDPA plan, whichever is the greater.

9.3.2 To be in line with the intensity and built form of existing domestic structures within the zone, residential development other than New Territories Exempted House (NTEH) shall not result in a total development in excess of a maximum plot ratio of 0.4 and a maximum building height of 3 storeys (9m). Generally, the applicant has to prove to the Board that the proposed development would have no or minimal adverse impacts on the environment. To provide flexibility for innovative design adapted to the characteristics of particular sites, minor relaxation of the above restrictions may be considered by the Board through the planning permission system. Each proposal will be considered on its individual planning merits.

9.3.3 Three areas are zoned "R(D)". One is located in areas around Tai Kei Leng, east of Tai Shu Ha Road East and west of Kong Tau Tsuen. Another one is located between Sham Chung Tsuen in the north and Shui Tsiu San Tsuen in the south. The remaining area is located to the east of Kiu Hing Road near Muk Kiu Tau Tsuen which is retained by the YLS Development. The areas at present are mainly occupied by temporary structures for workshops, domestic use and agricultural purpose, village houses and some fallow agricultural land.

9.4 Village Type Development ("V") : Total Area : 194.83 ha

9.4.1 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

NTEH. Other commercial, community and recreational uses may be permitted on application to the Board. For land designated "V(1)", the planning intention is primarily to provide land considered suitable for reprovisioning of village houses affected by Government projects. In order to ensure that any future development or redevelopment within the "V" zone will retain a village character, a maximum building height of 3 storeys (8.23m), or the height of the building which was in existence on the date of the first publication in the Gazette of the notice of the IDPA plan, whichever is the greater, is imposed. To provide flexibility for innovative design adapted to the characteristics of particular sites, minor relaxation of the above restriction may be considered by the Board through the planning permission system. Each proposal will be considered on its individual planning merits.

9.4.2 The boundaries of the "V" zones are drawn up having regard to the existing village environs, the approved applications for Small House development, the number of outstanding Small House applications, the anticipated Small House demand for the next ten years, topography, site constraints and the provision of public services. The recognized villages in the Area include Tin Liu Tsuen, Sham Chung Tsuen, Shung Ching San Tsuen, Kong Tau San Tsuen, Yeung Uk Tsuen, Kong Tau Tsuen, Nga Yiu Tau, Tong Tau Po Tsuen, Nam Hang Tsuen, Shui Tsiu Lo Wai, Shui Tsiu San Tsuen, Hung Tso Tin Tsuen, Tai Tong Tsuen, Wong Nai Tun Tsuen, Pak Sha Tsuen and Muk Kiu Tau Tsuen. Areas of difficult terrain, dense vegetation, stream courses and burial grounds are avoided. Village expansion areas and other infrastructural improvements will be guided by detailed layout plans whenever applicable.

9.4.3 A site of about 0.57 ha to the east of Pak Sha Shan Road near Wong Nai Tun Tsuen is zoned "V(1)" to reserve land for reprovisioning of the affected village houses under the Village Removal Terms due to the YLS Development.

9.4.4 Adequate land has been reserved to cater for ultimate population built-up within the "V" zone upon full development.

9.5 Open Storage ("OS") : Total Area : 28.22 ha

9.5.1 This zone is intended primarily for the provision of land for appropriate open storage uses and to regularize the already haphazard proliferation of open storage uses. It provides for the orderly development of land for open storage uses that cannot be accommodated in conventional godown premises.

9.5.2 Some specified open storage uses, container storage/repair yard, vehicle stripping/breaking yard, dangerous goods godown, etc. which may cause environmental nuisance, safety hazards or traffic problems require planning permission from the Board. Development

proposals for such purposes have to clearly demonstrate that they would have no adverse environmental, drainage, traffic and other impacts on the surroundings. Other open storage uses (not elsewhere specified) which are unlikely to cause adverse environmental impacts or traffic problems are always permitted in this zone. Due regard should be given to minimize the potential environmental impacts on the surrounding areas when developing these areas.

9.5.3 Two areas are zoned "OS". One is located to the south-east of Nam Hang Tsuen and it is accessible via Tai Shu Ha Road West. Another area is located to the south of Tai Tong Tsuen and it is accessible via Tai Tong Shan Road joining to Kiu Hing Road.

9.6 Government, Institution or Community ("G/IC") : Total Area : 14.~~39~~***91*** ha

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

9.6.2 ~~Three~~ ***Four*** areas have been ~~designated for GIC use~~ ***zoned "G/IC" or "G/IC(1)"***. One ***of the areas zoned "G/IC"*** is located in the north-eastern corner of the Area which consists of an electricity substation, a secondary school, a primary school, Pok Oi Hospital Tin Ka Ping Centre and the Au Tau Fresh Water Service Reservoir and its extension. ***Another one is located to the north-east of Tai Tong Tsuen which is occupied by the Scout Association of Hong Kong Choi Chee Ming Luen Kwong Scout Centre. The third one is located to the northeast of Kong Tau San Tsuen for the provision of a primary school to serve the adjoining public housing development and nearby areas. The area zoned "G/IC(1)" is subject to a maximum building height of 8 storeys.*** ~~An area~~ ***It is located*** to the east of Kiu Hing Road bounded by Muk Kiu Tau Tsuen to the north and Pak Sha Tsuen to the south ~~is zoned "G/IC(1)"~~, mainly for the provision of four primary schools primarily serving the adjacent YLS Development. ~~The "G/IC(1)" zone is subject to a maximum building height of 8 storeys.~~ For the area abutting Kiu Hing Road, an area with a width of 20m should be reserved for provision of public open space, such that a green spine connecting the open space along this main thoroughfare could be formed for visual connectivity and air ventilation purposes as proposed under the YLS Study. ~~Another one is located to the north-east of Tai Tong Tsuen which is occupied by the Scout Association of Hong Kong Choi Chee Ming Luen Kwong Scout Centre.~~

9.6.3 To allow design flexibility for developments, basement floor(s) are

not counted for the purpose of storey determination in relation to the building height restriction stipulated ***for the "G/IC(1)" zone*** under the Notes. To provide flexibility for innovative design adapted to the characteristics of particular sites, minor relaxation of the building height restriction may be considered by the Board through the planning permission system. Each proposal will be considered on its individual planning merits.

9.7 Open Space ("O") : Total Area 7.86 ha

9.7.1 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.

9.7.2 Two strips of land to the north of Tin Liu Tsuen and Sham Chung Tsuen and to the south of Yuen Long Highway at Tai Kei Leng are zoned "O" in order to provide local recreation facilities to the existing villages as well as to create a buffer from the Yuen Long Highway. At present, the majority of these areas consist of fallow agricultural land and temporary structures.

9.8 Recreation ("REC") : Total Area : 18.59 ha

9.8.1 This zone is intended primarily for recreational developments for the use of the general public. It encourages the development of active and/or passive recreation and tourism/eco-tourism. Uses in support of the recreational developments may be permitted subject to planning permission.

9.8.2 Under this zoning, residential development which should be ancillary to recreational use may be permitted on application to the Board. The development intensity should be in line with the rural setting and therefore shall not result in a total development in excess of a maximum plot ratio of 0.2 and a maximum building height of 2 storeys (6m). The applicant should demonstrate to the Board that the proposed development would have no or minimal adverse effects on the environment. To provide flexibility for innovative design adapted to the characteristics of particular sites, minor relaxation of the above restrictions may be considered by the Board through the planning permission system. Each proposal will be considered on its individual planning merits.

9.8.3 In achieving the planning objective to encourage compatible recreation activities in the Area, an area to the east of Yeung Ka Tsuen is earmarked as "REC" zone.

9.9 Recreation (1) ("REC (1)") : Total Area : 3.68 ha

9.9.1 This zone is primarily intended for the development of a selective range of recreational uses including a radio controlled model

aeroplane flying site which are commensurate with the surrounding rural environment and compatible with the natural setting of the Tai Lam Country Park to the south.

9.9.2 An area in the former Tai Tong East Borrow Area is earmarked as "REC (1)" zone. It is accessible via a local access road leading from Tai Shu Ha Road West and majority of the site has already been formed.

9.10 Other Specified Uses ("OU") : Total Area : 19.67 ha

9.10.1 "OU (Rural Use)"

Two areas of about 19.47 ha are zoned "OU(RU)". One is bounded by Pak Sha Shan Road to the west and Wong Nai Tun Tsuen to the east. The other is located at the junction of Tai Shu Ha Road East and Tai Shu Ha Road West. This zone is intended primarily for the preservation of the character of the rural area. Uses or developments compatible with the rural landscape, such as passive recreation uses and a selected range of rural uses, may be allowed on application to the Board, with a view to upgrading or improving the area or providing support to the local communities. Residential development may be permitted on application to the Board. The development intensity shall not exceed a maximum plot ratio of 0.4 and a maximum building height of 3 storeys (9m), or the plot ratio and height of the building which was in existence on the date of the first publication in the Gazette of the notice of the IDPA plan, whichever is the greater. To provide flexibility for innovative design adapted to the characteristics of particular sites, minor relaxation of the above restrictions may be considered by the Board through the planning permission system. Each proposal will be considered on its individual planning merits.

9.10.2 "OU (Petrol Filling Station)"

An area of about 0.2 ha to the south of Castle Peak Road (Yuen Long Section) at Au Tau is zoned "OU" annotated "Petrol Filling Station". This zone is intended primarily for the provision of petrol filling station serving the needs of local residents as well as the general public.

9.11 Agriculture ("AGR") : Total Area : ~~298.85~~ ***295.07*** ha

9. 11.1 This zone is intended primarily to retain and safeguard good agricultural land/farm/fish ponds for agricultural purposes. It is also intended to retain fallow arable land with good potential for rehabilitation for cultivation and other agricultural purposes. The zoned areas are generally well served by irrigation and servicing facilities as well as marketing facilities for intensive farming including livestock rearing, fish culture and horticulture.

9.11.2 According to the Agriculture, Fisheries and Conservation Department, agricultural land in the Area is classified as good to fair. Agricultural land in the less accessible areas is still under active cultivation for market gardening and plant nurseries. The active agricultural land is worthy of preservation. The areas to the south-east of Yuen Long Highway and east of Kong Tau San Tsuen, to the west of Shiu Tsiu San Tsuen and Hung Tso Tin Tsuen, at the south-western corner of the Area around Yeung Ka Tsuen and along the foothill of Tai Lam Country Park in the central and south-eastern parts of the Area are zoned "AGR".

9.11.3 As filling of land/pond may cause adverse drainage and environmental impacts on the adjacent areas, permission from the Board is required for such activities. However, filling of land specifically required under prior written instructions of Government department(s), or for the purposes of genuine agricultural practice including laying of soil not exceeding 1.2m in thickness for cultivation, and construction of agricultural structure with prior written approval from the LandsD is exempted from the control.

9.12 Green Belt ("GB") : Total Area : 68.92 ha

9.12.1 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. The "GB" areas may include foothills, lower hill slopes, spurs, isolated knolls, woodland or vegetated land at the urban fringe. There is a general presumption against development within this zone. Limited development may be permitted with or without conditions on application to the Board, and each application will be considered on its individual merits taking into account the relevant Town Planning Board Guidelines.

9.12.2 The hilly slopes of Ho Hok Shan to the south of Castle Peak Road and a site near Nam Hang Pai in close proximity to Tai Lam Country Park are zoned "GB".

9.12.3 As filling of land/pond and excavation of land may cause adverse drainage impacts on the adjacent areas and adverse impacts on the natural environment, permission from the Board is required for such activities.

9.13 Conservation Area ("CA") : Total Area : 210.88 ha

9.13.1 This zone is intended to protect and retain the existing natural landscape, ecological or topographical features of the area for conservation, educational and research purposes and to separate sensitive natural environment such as Country Park from the adverse effects of development.

9.13.2 There is a general presumption against development in this zone. In general, only developments that are needed to support the conservation of the existing natural landscape or scenic quality of the area or are essential infrastructure projects with overriding public interest may be permitted.

9.13.3 The hilly area in the eastern part of the Area to the south of Ho Hok Shan is zoned "CA" to follow recommendations made in the Territorial Development Strategy Review with a view to conserving the natural features and scenic quality of the area.

9.13.4 Filling of land/pond and excavation of land may cause adverse drainage impacts on the adjacent areas and adverse impacts on the natural environment. In view of the conservation value of the area within this zone, permission from the Board is required for such activities.

9.14 Country Park ("CP") : Total Area : 50.18 ha

9.14.1 Country Park means a country park or special area as designated under the Country Parks Ordinance (Cap. 208). All uses and developments require consent from the Country and Marine Parks Authority and approval from the Board is not required.

9.14.2 A knoll with heavy vegetation to the south-east of Tai Tong Tsuen and the slopes in the southern part of the Area, both falling within the Tai Lam Country Park, are zoned "CP".

10. COMMUNICATION

10.1 Roads

10.1.1 With the completion of a number of highway projects, the accessibility of the Area has been greatly enhanced. Castle Peak Road and Yuen Long Highway are the two major access roads providing vehicular access to the Area. Moreover, Route 3 has enhanced the inter-regional link of the Area with the main urban area. Future strategic road connections could increase the development potential of the Area and further studies may be necessary to capitalise on this potential once such strategic link(s) is confirmed.

10.1.2 Tai Tong Road, Tai Shu Ha Road East, Tai Shu Ha Road West, Kung Um Road and Kiu Hing Road are important local distributors providing pedestrian and vehicular access to the Area.

10.2 Public Transport

Apart from bus and public light bus services operating between Yuen Long

New Town through the Area, there are several green minibus routes serving the Area and its neighbourhoods.

11. UTILITY SERVICES

11.1 Water Supply

The existing water supply system with proposed upgrading works is adequate to supply water to the existing customers and the proposed developments in the Area. Further extension of the water supply system may be required if there is any substantial increase in water demand arising from other new developments in the Area. ~~The capacity of the existing water treatment works available in NWNT has already been fully committed. Future water treatment works capacity, if required, would be made available from the future extension to the water treatment works in NWNT. The existing Tan Kwai Tsuen South Fresh Water Service Reservoir could not fully meet the demand generated from the YLS Development in the long run. A new fresh water service reservoir would be required and will be further studied in due course. A new network of water mains would be laid to supply water to consumers. New reclaimed water facilities and a new reclaimed water service reservoir would also be required for providing reclaimed water for non-potable uses such as toilet flushing in the YLS Development.~~

11.2 Sewerage and Sewage Treatment

Except along the western and northern boundaries, there is no public sewer serving the Area. The Yuen Long and Kam Tin Sewerage Master Plan contains a proposal to extend the sewerage to the unsewered area of the Area. Private residential developments in the Area must contain suitable and satisfactory on-site sewage treatment facilities and make connections to a public sewer once it is in place.

11.3 Electricity

The Area has long been supplied with electricity. Adequate supply of electricity will be provided via the 400kV network to reinforce the electricity supply in the Area.

11.4 Gas

Gas pipelines have been laid from Tai Po to Yuen Long along the Fanling Highway and San Tin Highway. Piped gas supply has been made available since the pressure reduction station at Fairview Park Boulevard started its operation in 1996.

12. CULTURAL HERITAGE

Within the boundary of the Area, there are a number of graded historic buildings in the "List of the 1,444 Historic Buildings in Building Assessment". Yuen Leng Site of Archaeological Interest and part of Tai Lam Chung – Shap Pat Heung Trackway Site of Archaeological Interest are also located within the Area. All of the above graded historic buildings and sites of archaeological interest (SAIs) are worthy of preservation. The Antiquities Advisory Board (AAB) also released a list of new items in addition to the list of 1,444 historic buildings. These items are subject to grading assessment by the AAB. Details of the list of 1,444 historic buildings and the new items have been uploaded onto the website of the AAB at http://www.aab.gov.hk. Two areas with low-moderate archaeological potential near Tin Liu Tsuen and Pak Sha Tsuen identified by the Environmental Impact Assessment (EIA) Study for the YLS Development are situated within the Area. Prior consultation with the AMO should be made if any development, redevelopment or rezoning proposals might affect the above SAIs, graded historic buildings, the new items and areas with archaeological potential identified by the EIA Study for the YLS Development and their immediate environs. Reference should be made to the recommendations of the EIA report approved under the EIA Ordinance. If disturbance to the SAIs is unavoidable, prior agreement with AMO should be made on any measures for the protection of the SAIs; for example, whether detailed Archaeological Impact Assessment (AIA) is required. The AIA shall evaluate the archaeological impact imposed by the proposed works. If necessary, a qualified archaeologist shall apply for a licence under the Antiquities and Monuments Ordinance (Cap. 53) for an archaeological investigation. A proposal of the AIA shall be submitted to AMO for agreement prior to applying for the licence. Subject to the findings of AIA, appropriate mitigation measures shall be fully implemented by the project proponent in consultation with AMO.

13. IMPLEMENTATION

13.1 The Plan provides a broad land-use framework for development control and implementation of planning proposals. More detailed plans will be prepared as a basis for public works programme and to facilitate private developments.

13.2 Apart from areas covered by the YLS Development ***and the public housing development in Shap Pat Heung***, there is no overall programme for the provision of infrastructure within the Area. Implementation will be carried out in stages and may stretch over a long period of time depending on the availability of resources. It will be undertaken through the participation of both the public and private sectors.

13.3 For Stages 1 and 2 of the YLS Development, in order to achieve early delivery of land to meet the housing needs and ensure timely provision of a range of commercial, open space and GIC facilities in tandem with the population build-up, proper phasing and packaging of works for the YLS Development has been formulated. The Government will resume and clear the private land planned for public works projects, carry out site formation works and provide infrastructure before allocating land for various purposes. Subject to resource availability, detailed design, land formation and

construction works will be carried out in phases and in accordance with the development programme prepared by the Civil Engineering and Development Department for the first population intake tentatively in 2029. While the detailed phasing and packaging of works, implementation programme and the remaining stages of the development are subject to review, the whole YLS Development is expected to be completed by 2038.

13.4 The provision of infrastructure, such as road widening and laying of services, open spaces, schools, social welfare and other community facilities will be constructed by the appropriate Government departments on the basis of the Capital Works Programme, School Building Programme, other Public Works Programme and the Local Public Works Improvement Programmes. Public housing, if any, together with the supporting facilities will be built by the Housing Authority or other relevant agents. Private developments will be effected principally through private sector initiatives to develop or redevelop their properties in accordance with the zoned uses indicated on the Plan, provided that their proposals can meet Government requirements.

14. PLANNING CONTROL

14.1 The types of permitted developments and uses within the Area are listed in the Notes to the Plan. Unless otherwise specified, all building, engineering and other operations incidental to and all uses directly related and ancillary to the permitted developments and uses within the same zone are always permitted and no separate planning permission is required.

14.2 Uses of land or building which were in existence immediately before the first publication in the Gazette of the notice of the IDPA plan and which are not in compliance with the terms of the Plan may have adverse impact on the environment, drainage and traffic of the Area. Although no action is required to make such use to conform to this Plan, any material change of such use or other development (except minor alteration and/or modification to the development of the land or building in respect of such use which is always permitted) must be always permitted in terms of the Plan or, if permission is required, in accordance with a permission granted by the Board. The Board will consider these applications on their individual merits. Those alteration and/or modification works which may lead to an environmental improvement or upgrading to the Area may be considered favourably by the Board.

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

available from the Secretariat of the Board and the Technical Services Division and relevant District Planning Office of PlanD. Applications should be supported by such materials as the Board thinks appropriate to enable it to consider the applications.

14.4 Any development, other than those referred to in paragraph 14.1 above or in conformity with this Plan or with the permission of the Board, undertaken or continued on or after 5 October 1990 on land included in the Tai Tong IDPA Plan, may be subject to enforcement proceedings under the Ordinance. Any filling of land/pond and excavation of land in the relevant zones on or after the exhibition of the specific plan referred to in the Notes of the relevant zones without the permission from the Board may also be subject to enforcement proceedings.

TOWN PLANNING BOARD
~~AUGUST 2021~~ ***DECEMBER 2022***

Agreement No. CE 10/2020 (CE)

Site Formation and Infrastructure Works for Proposed Public Housing Developments at Sha Po, Shap Pat Heung and Tai Kei Leng, Yuen Long - Feasibility Study

FINAL REPORT (SHAP PAT HEUNG AND TAI KEI LENG) (ISSUE 3)

November 2022



CEDD 土木工程拓展署
Civil Engineering and Development Department

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Final Report
(Shap Pat Heung and Tai Kei Leng)

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LIST OF ABBREVIATIONS

Abbreviation	Meaning
AMO	Antiquities and Monuments Office
AOI	Area of Influence
ASR	Air Sensitive Receiver
AVA	Air Ventilation Assessment
BDTM	Base District Traffic Model
C&D	Construction & Demolition
CEDD	Civil Engineering and Development Department
CLP	China Light and Power Co Ltd.
DIA	Drainage Impact Assessment
DP	Designated Project
DSD	Drainage Services Department
EB	Eastbound
EIAO	Environmental Impact Assessment Ordinance
EFS	Engineering Feasibility Study
EPD	Environmental Protection Department
EIAO	Environmental Impact Assessment Ordinance
EPD	Environmental Protection Department
FW	Fresh Water
GEO	Geotechnical Engineering Office
GFA	Gross Floor Area
GI	Ground Investigation
GLA	Government Land Allocations
G/IC (Zoning)	Government, Institution or Community
HD	Housing Department
HKBN	Hong Kong Broadband Network Limited
HKCGC	Hong Kong and China Gas Company Limited (Towngas)
HKHA	Hong Kong Housing Authority
HKPSG	Hong Kong Planning Standards and Guidelines
HKT	Hong Kong Telecom
HyD	Highways Department
IDC	Investigation, Design and Construction
LandsD	Lands Department
LVIA	Landscape & Visual Impact Assessment
LCA	Landscape Characteristic Area
LR	Landscape Resource
NB	Northbound
NSR	Noise Sensitive Receiver
NTHS	Natural Terrain Hazard Study
OZP	Outline Zoning Plan
pcu	Passenger Car Unit

Abbreviation	Meaning
PER	Preliminary Environmental Review
PH	Public Housing
PTI	Public Transport Interchange
PTTIA	Preliminary Traffic and Transportation Impact Assessment
R (Zoning)	Residential
RC	Reserve Capacity
RFC	Ratio of Flow to Capacity
RSP	Respirable Suspended Particulates
SB	Southbound
SDM	Stormwater Drainage. Manual
SPH Site	Shap Pat Heung Site
SPS	Sewage Pumping Station
SI	Site Investigation
SSF	Subsidised Sale Flats
S/R	Service Reservoir
SW	Salt Water
SWL	Sound Power Level
TD	Transport Department
TKL Site	Tai Kei Leng Site
TML	Tuen Ma Line
TGN15	Geotechnical Engineering Office Technical Guidance Note No.15
TPDM	Transport Planning & Design Manual
TPEDM	Territorial Population and Employment Data Matrices
VSRs	Visually Sensitive Receivers
V/C Ratio	Volume to Capacity Ratio
WB	Westbound
WSD	Water Supplies Department

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1 INTRODUCTION

1.1 Background

1.1.1 In accordance with the 2019 Policy Address, the Government plans to adopt different strategies to increase land supply for development. To meet this policy objective, Planning Department (PlanD) has accorded priority to the study of 160 hectares brownfield sites that are closer to existing infrastructure and assess their suitability for public housing development based on the findings of the "Study on Existing Profile and Operations of Brownfield Sites in the New Territories – Feasibility Study" completed in 2019. Eight clusters were identified with higher development potential for public housing development and the Shap Pat Heung Site and Tai Kei Leng Site were two of them.

1.1.2 At present, there is a vast amount of agricultural land in the New Territories (NT), especially the north-eastern and north-western parts, mainly occupied by open storage yards, warehouses and other industrial/ rural workshops, which can generally be referred to as brownfield sites. The operations on brownfield sites are generally low in land utilisation efficiency, and often lead to environmental and traffic issues. Brownfield sites are scattered in different areas, vary in size, are of irregular shape and lack convenient access to highway. In the absence of comprehensive planning of these land parcels, some brownfield sites in NT are underutilised with development potential. Shap Pat Heung and Tai Kei Leng sites (the Sites) which are one of these potential sites, has been undertaken by Civil Engineering and Development Department (CEDD) to conduct an Engineering Feasibility Study to examine the engineering feasibility of developing public housing and associated G/IC facilities as required at the Sites.

1.1.3 The Sites are situated closely to Yuen Long New Town and Yuen Long Highway. The Shap Pat Heung (SPH) site is located to the East of Yuen Long Highway and next to Chuk San Tsuen which is currently zoned as "Agriculture" ("AGR") on the approved Tai Tong Outline Zoning Plan (OZP) No. S/YL-TT/18. Whilst the site at Tai Kei Leng (TKL) is currently zoned as "Open Space" ("O") and slightly encroaches upon "Residential (Group B)" ("R(B)") on the approved Yuen Long OZP No. S/YL/25. Location of the Sites are shown in **Figure No. 406041/S&T/GEN/001**.

1.1.4 The Sites are mainly intended for public housing development (Development) by the Housing Department (HD). The proposed domestic plot ratio and development parameters have been assessed, evaluated and optimized to cope with engineering/ development constraints on the housing developments and its surroundings identified during the course of this Assignment.

1.2 Scope of the Study

1.2.1 Binnies Hong Kong Limited (Binnies), formerly known as Black & Veatch Hong Kong Limited (BV), were commissioned by CEDD of the HKSAR Government under Agreement No. CE 10/2020 (CE) in July 2020 to undertake the feasibility study (the Study) for site formation and infrastructure works for supporting public housing developments at the Sites.

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1.2.2 The Study is to determine the scope of infrastructure works for supporting the public housing development; to assess the various impacts pertaining to the development and the associated infrastructure works; to recommend the mitigation measures to keep the potential impacts due to the development and infrastructure works within the acceptable level; and to establish implementation strategies and programmes for the infrastructure works.

1.3 Description of the Site

1.3.1 The Sites are shown in **Figure No. 406041/S&T/GEN/001**. A comprehensive review has been carried out to confirm the exact boundary of the Sites taking into account the relevant Departments' comments received and findings of the various technical assessments, and the site constraints/specific requirements arising from the interface with the Sites.

1.3.2 For both Sites, the boundaries have been adjusted during the course of the Assignment to cover those areas on which reviews and technical assessments were carried out due to new or upgrading of existing infrastructure works outside the Sites, which are needed for serving the proposed Development.

1.4 Purpose of this Report

1.4.1 The objectives of this Report are listed as follows:

a) A brief summary of the overall Assignment process;

b) Findings, proposals and recommendations of the Assignment;

c) Details of PELPs, vehicular, cycle track and pedestrian circulation networks for the Assessment Area and their surrounding;

d) The approach, methodology and results of the technical assessments;

e) The recommendation on implementation and phasing for the Infrastructure Works;

f) Study output including all relevant key engineering information and programme information; and

g) A3 size drawings and a set of A1 size negatives together with an electronic version in Microstation (.dgn) format for the Optimal Scheme.

1.5 Structure of the Report

1.5.1 This report is prepared in accordance with the requirements under Clauses 6.13 of the Brief.

1.5.2 This report has been divided into seventeen sections.

Section 1 introduces the project background and project description;

Section 2 presents the preliminary development proposal;

Sections 3 to 15 summarise the findings and recommendations of various technical assessments for the proposed public housing development, including air ventilation, traffic and transport, pedestrian

connectivity, geotechnical, site formation, drainage, sewerage, water supply, utilities, sustainability, land requirement, environment, landscape and visual and land contamination and remediation;

Section 16 presents a tentative implementation programme; and

Section 17 provides the conclusion to the report.

2 PROPOSED DEVELOPMENT LAYOUT PLANS AND DEVELOPMENT PARAMETERS

2.1 General

2.1.1 This chapter describes the proposed layout plans and the development parameters for the proposed development sites.

2.2 Site Description

2.2.1 The SPH site is located to the East of Yuen Long Highway and next to Chuk San Tsuen and the TKL site is located to the north of Tai Kei Leng Road and to the west of Shap Pat Heung Road. The Sites are situated closely to Yuen Long New Town and Yuen Long Highway. The notional layouts of the Sites are illustrated in **Figure Nos. 406041/S&T/FR/0201** to **0202**.

2.2.2 The existing ground level of the SPH site ranges from +6.7mPD to +11.1mPD approximately and no registered or non-registered man-made feature within the site boundary.

2.2.3 The existing ground level of the TKL site ranges from +6.0mPD to +7.0mPD approximately. Two registered fill slopes, feature nos. 6NW-D/F12 and 6NW-B/FR247, which aim to support the Tai Kei Leng Road are located outside the southern east boundary of the site.

2.3 Development Parameters and Layout

Tai Kei Leng Site

2.3.1 In the TKL Site, the proposed development comprises of three residential towers situated on top of a 4-storey retail/welfare/carpark podium with a building height of ~20m (~+27mPD). The residential towers Towers 1 to 3 are planned to have 41 to 45 domestic storeys with maximum building height of not more than +170mPD. Due to the increase in GFA concession for promotion of MiC as allowed under Joint Practice Note No. 8 promulgated in July 2022, an additional 5 domestic storeys may be proposed leading to an increase of about 15m in the building height. The maximum building height under this scenario will be 185mPD. The number of storeys of the buildings are subject to review.

Shap Pat Heung Site

2.3.2 In the SPH Site, the proposed development consists of 4 residential towers in the eastern portion of the Site. The residential towers Towers 1 to 4 are planned to have 36 to 49 domestic storeys with maximum building height of not more than +160mPD. Due to the increase in GFA concession for promotion of MiC as allowed under Joint Practice Note No. 8 promulgated in July 2022, an additional 7 domestic storeys may be proposed leading to an increase of about 25m in the building height. The maximum building height under this scenario will be 185mPD. Towers 1 to 3 shares the same 4-storey podium of carpark, retail and welfare facilities with a building height of ~20m (~+28mPD). Facing opposite the residential towers is a 4-storey welfare block cum bus-terminus with a building height of ~20m (~+28mPD) while in the western

part of the Site, area is reserved for a proposed school. The number of storeys of the buildings are subject to review.

2.3.3 The preliminary development parameters of the Sites are shown in **Tables 2.1** as below:

Table 2.1 – Proposed Development Parameters at SPH and TKL

Public Housing Development	Shap Pat Heung	Tai Kei Leng
Net Site Area	About 2.7 ha	About 1.8 ha
Max. PR - Domestic - Non-domestic[1]	6.5 Not exceed 0.2	
Max GFA - Domestic - Non-domestic • Retail • Others (including Kindergartens) • Social welfare[2]	About 178,300 m^2 About 2,400m^2(SSF)/About 3,000m^2(PRH) About 2,390m^2(SSF/About 1,790m^2(PRH) About 8,900 m^2	About 114,800 m^2 About 1,500 m^2(SSF)/About 1,950 m^2(PRH) About 1,590 m^2(SSF)/About 1,140 m^2(PRH) About 5,740 m^2
No. of Storeys - Domestic - Non-domestic	About 49 (About 56[3]) About 5	About 45 (About 50[3]) About 5
No. of Flats[4]	About 4,470 (PRH)/About 3,570 (SSF)	About 2,870 (PRH)/About 2,300 (SSF)
Population[5]	About 12,516 (PRH)/About 9,996 (SSF)	About 8,036(PRH)/About 6,440 (SSF)
Max. Building Height	+160mPD (+185mPD[3])	+170mPD (+185mPD[3])
Tentative Completion Year	2031	2031
Site area for standalone GIC facilities (GFA to be formulated by relevant B/Ds in detailed planning)		
Primary School	About 5,268 m^2	N/A

Notes

1. excluding the GIC facilities and car park which are exempted from PR calculation on OZP
2. equivalent to 5% of domestic GFA and is exempted from PR calculation
3. taken into account extra domestic storeys required to accommodate additional GFA concessions for promotion of Modular Integrated Construction as allowed under JPPN 8 promulgated in July 2022
4. the housing type is subject to further confirmation by the implementation agent and 10% design contingency is allowed in the assessments
5. assuming average household size as 2.8

3 PRELIMINARY AIR VENTILATION ASSESSMENT (AVA)

3.1 General

3.1.1 Qualitative assessment (Expert Evaluation) of wind environments with the proposed public housing development have been carried out.

3.1.2 Preliminary AVA has been conducted for the Project to establish guiding principles in air ventilation terms and evaluate the proposed developments in accordance with the Technical Guide for AVA for developments in Hong Kong (i.e. the Joint HPLB-ETWB Technical Circular on AVA No. 1/06).

3.2 Site Wind Availability

Tai Kei Leng

3.2.1 A meso-scale Regional Atmospheric Modelling System (RAMS) was used to produce a simulated 10-year wind climate at the horizontal resolution of 0.5km x 0.5km covering the whole territory of Hong Kong. The RAMS data of the grid for TKL Site (X: 051 Y: 068) has been extracted from the Site Wind Availability Data of Planning Department's website.

Shap Pat Heung

3.2.2 A RAMS system was used to provide 10-year simulated wind climate with a horizontal resolution of 0.5km x 0.5km covering the whole of Hong Kong. The RAMS data of the grid (X: 052 Y: 068) for SPH Site has been extracted from the Site Wind Availability Data of Planning Department's website.

3.3 Existing Condition

Tai Kei Leng

3.3.1 TKL Site is located in the Yuen Long district. The topography is generally flat and the Yuen Long Highway and the nullah along Long Ho Road act as a major breezeway for the winds to reach the TKL Site. Terrain of concern to air ventilation performance includes the knoll of Ho Hok Shan spanning from the east to southeast of the Site with peak heights ranging from +149.4mPD to +220.4mPD. However, the base of these knolls are at minimum around 1km away from the Site and these hilly terrain are too far away to have a significant adverse air ventilation impact on the TKL Site. Hence, influence of local topography to the wind flow pattern around the TKL Site is considered minor.

3.3.2 There are numerous existing low to high rise buildings surrounding the TKL Site to the west to northwest, while existing development to the south and southeast of the Sites is low-rise in nature.

3.3.3 The ground level elevation of the nearby Yuen Long Highway (between +10.3mPD to +14.5mPD) and the slip roads leading to Shap Pak Heung Interchange (from +10.3mPD to +16.9mPD) is higher than the site. Noise barriers of 4m high are present along Yuen Long Highway and its eastbound slip road leading to Shap Pak Heung Interchange and Shap Pak Heung Road. Some noise barriers ranging from 3m to 5m are planned along Tai Kei Leng under the Yuen Long South Development. These road

structures and noise barriers may obstruct a portion of low-level E and S winds from reaching the site. As these road structures and noise barriers are low-rise in nature, the obstruction of low level wind is considered minor, while high level wind remains unobstructed.

3.3.4 According to the wind availability data, the annual wind directions of the area include easterlies, north-easterlies and southerlies. The wind probability from the E and NNE directions are 15.8% and 15.7%, respectively, which are considered to be the dominant wind direction for the area. The S (11.8%) wind is also a dominant prevailing wind direction other than the E and NNE winds. It is anticipated that the surrounding road network would be the main air corridors under the annual conditions with E and S winds generally unobstructed. The low-rise road structures and noise barriers will have minor obstruction to low level E and S winds while high level wind remains unobstructed. The existing medium- to high-rise development of Yuen Long Town, e.g., Villa Premiere, Grand Del Sol, The Reach etc, will obstruct a portion of NNE wind from reaching the site. Due to the close proximity of The Reach and the TKL Site, obstruction of NNE wind by the Reach is more prominent, especially to the western side of the TKL Site.

3.3.5 During summer conditions, prevailing winds from the S, SSE, SSW are the dominant wind directions. As the existing development to the south and southeast of the site is low-rise in nature, the summer prevailing winds are generally unobstructed, except a portion of low-level S winds obstructed by Yuen Long Highway and its noise barrier. Yet, as the road structures and noise barriers are low-rise in nature, the obstruction to low level southerly winds would be minor, while high level wind remains unobstructed.

Shap Pat Heung

3.3.6 SPH Site is located in the Yuen Long district. The topography is generally flat with slight increased elevation towards the eastern and southeastern part of the site. Yuen Long Highway and the nullah along Long Ho Road act as a major breezeway for the winds to reach the SPH Site. The elevation of the area to the east and southeast of the site gradually increases into the hilly terrain of Ho Hok Shan with a peak elevation of about +200mPD at more than approximately 400m from the site. Even though Ho Hok Shan is closer to the SPH Site than the TKL Site, the distance of the knoll away from the SPH Site is still large enough that the terrain of Ho Hok Shan is unlikely to provide a significant shielding effect to the SPH Site and affect the wind availability adversely. Hence, the influence of local topography to the wind flow pattern around the SPH Site is considered low.

3.3.7 The SPH Site is surrounded by low-rise village houses and structures. The elevation of the nearby Yuen Long Highway is higher than the site. The elevated road structures and noise barriers along Yuen Long Highway will obstruct a portion of low-level wind from reaching the site. As these road structures and noise barriers are low-rise in nature, the obstruction of low level wind is considered minor, while high level wind remains unobstructed.

3.3.8 According to the wind availability data, the annual wind directions of the area include easterlies, north-easterlies and southerlies, same as TKL Site. The wind probability from the NNE direction is 16.20% which is considered to be the dominant wind direction for the area. The E (16.10%) and S (11.50%) wind are also dominant

prevailing wind directions other than the NNE wind. It is anticipated that the nullah and the surrounding road network will act as air corridors. The existing low-rise buildings and structures in the vicinity of SPH Site is not expected to obstruct wind availability to the SPH Site.

3.3.9 During summer conditions, prevailing winds from the S, SSE, SSW are the dominant wind directions. The low-rise village houses and structures located to the south of the site are not expected to obstruct wind availability to the site. Wind performance of SPH Site is expected to be unobstructed under annual and summer conditions.

3.4 Building Design Features

Tai Kei Leng

3.4.1 Building design features incorporated into the proposed development to improve air ventilation at the TKL Site can be seen in **Figure No. 406041/S&T/FR/0301**.

3.4.2 The building design of the proposed development in TKL Site has taken measures to improve air ventilation performance of the proposed development while simultaneously meeting target development parameters (e.g., flat production requirements) and other environmental and building constraints (e.g., prescribed window requirement, alignment of access roads to residential towers etc.). The proposed development in TKL has provided building separations of at least 15m in width between the three towers. The provided separations are generally aligned along SSE to E direction and facilitates SSE and E wind flow to downstream areas such as The Reach, Sereno Verde, village houses at Tai Kei Leng and beyond. Furthermore, building setbacks from the TKL Site boundary is implemented in all directions. There are building setbacks of minimum 3m to at least 15m from the boundary. There are also setbacks of proposed structures from the site boundary as shown in **Figure No. 406041/S&T/FR/0301** can help prevailing winds of different directions to flow pass the TKL Site. The notional layout of the TKL Site includes open area (location of open area subject to review) at the northeastern and southwestern corners of the site for wind access to The Reach and village houses at Tai Kei Leng.

Shap Pat Heung

3.4.3 Building design features incorporated into the proposed development to improve air ventilation at the site is shown in **Figure No. 406041/S&T/FR/0302**.

3.4.4 The building design of the proposed development in SPH Site has taken measures to improve air ventilation performance of the proposed development while simultaneously meeting target development parameters (e.g., flat production requirements) and other environmental and building constraints (e.g., prescribed window requirement, alignment of access roads to residential towers etc.). The proposed development in SPH Site has provided building separations of at least 15m wide between the residential towers. The provided separations are generally aligned with northeastern wind and facilitates wind flow to downstream areas of Kong Tau San Tsuen and beyond. Furthermore, building setback of at least 3m to not less than 15m from the site boundary is provided and an open area between Tower 3 and Tower 4 is reserved along the eastern boundary. The building disposition at the SPH Site also favours southern winds with the access road and the low-rise welfare block

and school providing a corridor for wind flow to downstream areas of Long Ho Road, Yuen Long Highway, Hoover Garden and beyond. With these measures, the design of the proposed development at the SPH Site alleviates the air ventilation impact on the surrounding wind environment.

3.5 Air Ventilation Assessment

Tai Kei Leng

Annual Prevailing Winds

3.5.1 Once the E wind reaches the TKL Site, high-level and pedestrian-level E wind can reach downstream areas of TKL Site by moving pass the open areas at the northern and southern boundary proposed in the TKL Site, benefiting The Reach and the village houses along Tai Kei Leng Road. The building setback of at least 15m of Tower 1 from the southern site boundary allows E wind to flow through the site at pedestrian and high levels to reach the downstream area of village houses at Tai Kei Leng. The proposed high-rise buildings within the site will obstruct some prevailing E winds from reaching areas such as Sereno Verde, The Reach and some village houses of Tai Kei Leng but with the provision of building gaps and setback, the negative impact is reduced. A building setback of 9m from the northern boundary resulting in at least 15m building separation between Tower 3 and the residential tower of The Reach would allow E wind penetration to The Reach. A building separation of not less than 15m between Tower 1 and Tower 2 (above 4/F) will facilitate E wind penetration through the site to reach the downstream village houses of Tai Kei Leng to the west of the Site. To add, the proposed high-rise buildings will be able to capture some high-level wind and create a downwash benefiting the pedestrian area near Tower 3 and Tai Kei Leng Road and the unfavourable impact on the surrounding area can be reduced. Under eastern wind, even without the proposed development, Sereno Verde would block a portion of easterlies. Hence, notable wind blockage due to the development at TKL Site to Yuen Long Town further downstream is not expected.

3.5.2 For NNE wind, a portion of the wind would be blocked by the structures in the upstream area such as Villa Premiere, a part of Grand del Sol and The Reach which causes the blockage while NNE wind can flow over the low rise Sheung Yau Tin Tsuen reaching the Site. The remaining wind would then use Shap Pat Heung Road to reach TKL Site. The proposed development diverts the wind originally flowing into the middle of the TKL Site to the sides and increases wind flow flowing through Tai Kei Leng Road. Pedestrian-level and high-level NNE winds can reach downstream areas such as Shung Ching San Tsuen and beyond using the eastern edges of the TKL Site along Tai Kei Leng Road. Therefore, the air ventilation impact of the proposed development in TKL Site on downstream areas is anticipated to be reduced. As the number of village houses to the west and southwest of the Site is low with little sensitive uses, air ventilation impact due to the blockage of NNE wind by the proposed development to downstream receivers is considered minimal. Considering that the separation distance between the TKL Site and the downstream Shung Ching San Tsuen and Tai Kei Leng to the south of Yuen Long Highway is more than 120m, wind can settle and replenish before reaching these downstream developments, therefore

the wind blockage effect on these downstream areas by the proposed development is not expected to be significant. To add, the proposed high-rise buildings will be able to capture some high-level wind and create a downwash benefiting wind flow to the pedestrian area near Tower 3 and Tai Kei Leng Road, as well as within the TKL Site.

3.5.3 Under S wind, the wind flows through Tai Kei Leng, an area with low-rise village, south of Yuen Long Highway and then it flows atop of the nullah of Long Ho Road and Yuen Long Highway. Some low-level S wind is obstructed by Yuen Long Highway and its noise barriers before reaching the TKL Site but overall, the incoming S wind to TKL Site is largely unobstructed. It is noted that the proposed residential towers would block a portion of S wind accessing downstream areas which mainly affects The Reach. Some S wind can still flow through the west side of TKL reaching downstream areas using the open area (not less than 15m wide) at the southwestern corner of the Site. High-level S wind can also penetrate over the podium (about 20m above ground) through the building gap of not less than 15m wide between Tower 2 and Tower 3 to reach The Reach. The decline of wind flowing to The Reach is expected and the setback provided on the west side of the proposed residential towers and the provision of building gap of at least 15m in width between Tower 2 and Tower 3 would alleviate the potential blockage effect. On the eastern side of the Site, pedestrian level S wind is diverted around the edge of the TKL Site and increases wind flow flowing along Tai Kei Leng Road. To add, the proposed high-rise buildings will be able to capture some high-level wind and create a downwash benefiting wind flow to the internal access road. For development further downstream of The Reach along Shap Pat Heung Road, The Reach directly to the north of the TKL Site would block a significant portion of the wind flowing from TKL Site in existing conditions to areas further downstream along Shap Pat Heung Road even without the proposed development. Consequently, the change of impact to the downstream areas from the proposed development in TKL Site in comparison to the existing condition within the Site, where the wind would already be obstructed by the Reach, is considered low.

Summer Prevailing Winds

3.5.4 SSE wind flows through the low-rise village houses and structures in Kong Tau San Tsuen and Tai Kei Leng, it then passes the nullah of Long Ho Road and the Yuen Long Highway and reaches the TKL Site. The SSE wind availability in the TKL Site is largely unobstructed except a portion of low-level wind obstructed by Yuen Long Highway and its noise barrier, as well as the planned noise barriers along Tai Kei Leng Road proposed under the Yuen Long South Development. SSE pedestrian-level and high-level wind can flow along either side of TKL Site using the outer edges of the TKL Site along Tai Kei Leng Road and open area on the west side and northeastern corner of the TKL Site to downstream areas of The Reach and Sereno Verde. High-level SSE wind can also make use of the proposed building gap between Tower 2 and Tower 3 (of not less than 15m wide) to flow into The Reach. Thus, the negative impact on the wind environment on the surroundings is predicted to be lessened. To add, the proposed high-rise buildings will be able to capture some high-level wind and create a downwash benefiting wind flow at the TKL Site.

3.5.5 Under SSW wind, the wind flows through the low-rise village houses and structures

in Tai Kei Leng, then it blows pass the nullah of Long Ho Road and Yuen Long Highway and before reaching TKL Site. The SSW wind availability in the TKL Site is largely unobstructed due to the nature of low-rise structures in the land to the south of the Site, except a portion of low-level wind obstructed by Yuen Long Highway and its noise barrier. It is noted that the proposed residential towers would block a portion of SSW wind accessing downstream areas which mainly affects The Reach. The proposed development diverts the wind originally flowing into the middle of the Site to the sides and increases wind flow flowing through the western and eastern setback and along Tai Kei Leng Road. Some SSW wind can still flow from Yuen Long Highway to the open area along the western side of the TKL Site and to The Reach while SSW wind to Sheung Yau Tin Tsuen can flow around the edge of the Site along Tai Kei Leng Road. To add, the proposed high-rise buildings will be able to capture some high-level wind and create a downwash benefiting wind flow to the open area near Tower 1.

Shap Pat Heung

Annual Prevailing Winds

3.5.6 E wind flow to the SPH Site is not expected to be affected significantly due to the nature of the surroundings upstream of the Site. Pedestrian and high-level E winds can flow pass the SPH Site using the building setback of not less than 15m wide along the access road at the south of SPH Site to reach downstream areas of Kong Tau Tsuen and the TKL Site to the west of Shap Pat Heung Interchange. The building separation between Tower 3 and Tower 4 of not less than 15m wide also provide access for the incoming E wind. High-level E wind can flow atop the low-rise welfare block with a building height of ~20m and school with a building height ~25m to reach the downstream area of Yuen Long Highway and further beyond. The open area provided between Tower 4 and the Welfare Block and the open area and ball court within the school site may provide potential flow path for E wind at pedestrian level, yet its effectiveness shall be subject to further analysis by quantitative mean at detailed design stage. Easterly wind after passing through SPH Site can take advantage of the separation provided by Yuen Long Highway, which is a major breezeway, to settle and replenish beyond the wake area before reaching the development in Yuen Long Town on the other side of Yuen Long Highway. Hence, the negative adverse impact brought by the proposed development is reduced. To add, the proposed high-rise buildings of Towers 1 to 3 will be able to capture some high-level wind and create a downwash benefiting wind flow to Chuk San Tsuen along the eastern boundary of the Site.

3.5.7 NNE wind flow is mostly unobstructed as the buildings (village houses) in the upstream area of Shek Tong Tsuen and Chuk San Tsuen are not large enough to cause significant blockage to the wind flow coming to the SPH Site. Much of the wind would flow over the vacant land between the village houses to reach the SPH Site. Pedestrian and high-level winds from the NNE directions can penetrate through the site along the building setback provided from the proposed development in the SPH Site. The majority of the wind flow at the SPH Site is expected to pass through the edges of the site boundary and through the building gaps of the towers. There is a building setback of at least 15m from the eastern boundary near Tower 4 for uninterrupted NNE wind

flow to downstream areas of Kong Tau Tsuen and Tai Kei Leng. The building setback of 11m from the eastern boundary together with the open area near Tower 3 that allows NNE wind at all levels to flow through the site to downstream areas of Kong Tau Tsuen. Furthermore, NNE high-level wind can take advantage of building gaps (above 4/F) of at least 15m between Tower 2 and Tower 3 for wind penetration atop the Welfare Block with a building height of ~20m and through the Site. As the SPH Site is surrounded by low-rise structures, there is plenty of room for northeasterly winds to divert around the proposed development and settle beyond the wake area downstream. Therefore, the potential air ventilation impact of the proposed development in SPH Site on downstream areas of Kong Tau Tsuen is reduced. To add, the proposed high-rise buildings will be able to capture some high-level wind and create a downwash benefiting wind flow to Chuk San Tsuen and the watercourse along the eastern boundary of the Site.

3.5.8 Under S wind, the wind flows through part of the structures at Kong Tau Tsuen and vacant land to reach the SPH Site. S wind availability is not expected to decrease noticeably at the SPH Site. There are several corridors that can be utilized for both high-level and pedestrian-level S wind. From the western boundary of the SPH Site to the proposed school, open area of about 14m wide is available for pedestrian-level S wind to flow to downstream area Long Ho Road, Yuen Long Highway, Hoover Garden and YOHO Town. Then in the middle of the Site between the school and the welfare block, pedestrian wind is also able to reach downstream areas along the access road providing a building separation of not less than 15m wide. Southern wind to the east of the Site would be diverted by the development (the podium and Tower 3) to the edge of the Site to the village houses of Chuk San Tsuen while high level S winds can pass through the Site freely and atop the low-rise school (building height of ~25m) and welfare block (building height of ~20m) using the western part of the Site. Adverse ventilation impact would be alleviated with the design of the proposed development at SPH Site. As the SPH Site is surrounded by low-rise structures, there is plenty of room for southern wind to divert around the proposed development and settle beyond the wake area downstream at Chuk San Tsuen. To add, the proposed high-rise buildings will be able to capture some high-level wind and create a downwash benefiting wind flow to the access road and open area adjacent to Tower 3 along the eastern boundary of the Site.

Summer Prevailing Winds

3.5.9 Some obstruction of low level SSE wind flow comes from the scattered structures on top of the largely vacant land to the southeast of the SPH Site. It is, however, negligible as the village houses are too small to pose as an effective obstruction. On the western side of the Site, SSE wind can take advantage of the SPH Site design with low-level SSE wind able to penetrate the Site through the open area to the west and east of the proposed school, as well as along the access road aligning in SSE (providing a gap of at least 15m wide between the school and welfare block cum bus-terminus) direction to downstream areas of Long Ho Road, Yuen Long Highway, Sheung Yau Tin Tsuen and Hoover Garden. High-level SSE winds can also flow uninterrupted and atop the low-rise school site (building height of ~25m) and the welfare block (building height of ~20m). Higher level wind can enter the Site through the separation between

Tower 3 and Tower 4 (not less than 15m wide) and flow above the welfare block to penetrate through the Site to Yuen Long Highway and Hoover Garden. Hence, adverse ventilation impact would be alleviated with the design of the proposed development at SPH Site. Considering the separation distance of the SPH Site with the downstream development of Hoover Garden and Sheung Yau Tin Tsuen is more than 150m, the potential wind blockage effect to development on the other side of Yuen Long Highway by the high-rise buildings at the Site is not significant. To add, the proposed high-rise buildings will be able to capture some high-level wind and create a downwash benefiting wind flow to the open area adjacent to Tower 1 and the access road. In order to improve pedestrian SSE wind flow at the Site, the bus-terminus is recommended to adopt permeable design to minimise wall structure on the sides as far as practicable and the opportunity to incorporate low level setback of the podium structure along the façade facing the bus-terminus shall be explored during the detailed design stage.

3.5.10 Potential obstruction of SSW wind flow comes from the scattered structures on top of the largely vacant land to the southeast of the SPH Site. It is, however, negligible as the village houses are too small to pose as an effective obstruction. For SSW wind conditions, similar to other southern winds, much of SSW winds can flow to downstream areas of Long Ho Road and Yuen Long Highway at the western side of the SPH Site and along the edge of the site boundary. Lower-level winds may either flow to downstream areas using the open area to the west of the proposed school (9m wide) or the space between the school and the welfare block (at least 15m wide). Some higher-level SSW winds should also be able to flow atop the low-rise school and welfare block to reach the downstream areas. On the eastern part of the Site, SSW wind can flow through the Site via the open area and building setback of Tower 3 along the eastern boundary (10m wide) to the downstream area of Chuk San Tsuen. Adverse ventilation impact would be alleviated with the design of the proposed development at SPH Site. To add, the proposed high-rise buildings will be able to capture some high-level wind and create a downwash benefiting wind flow to the access road and open area between the residential towers and the welfare block.

3.5.11 A summary of prevailing winds is shown in **Appendix A**.

3.5.12 The two housing sites are located at approximately 370m apart aligning to E-W direction and separated by the major breezeway of Yuen Long Highway. Under the E wind condition, SPH Site is located at the upstream of TKL Site. Easterly wind after passing through SPH Site can take advantage of the separation provided by Yuen Long Highway, which is a major a breezeway, to settle and replenish beyond the wake area before reaching TKL Site and Yuen Long Town. The potential cumulative impact posed by the two Sites is therefore expected to be insignificant.

3.6 Summary

3.6.1 A qualitative assessment of the wind performance of the Developments has been carried out. Annual prevailing wind directions were found to be NNE, E and S while summer prevailing wind directions were found to be SSW, S, SSE. The notional layout of the Sites has carefully considered designs to aid air ventilation while balancing the need to provide adequate domestic and non-domestic GFA and ancillary facilities to

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achieve the target development need. The key design features include the followings:

TKL Site

- Building separation of at least 15m wide between Tower 1 and Tower 2 to facilitate the penetration of E wind;
- Building separation of at least 15m wide between Tower 2 and Tower 3 to facilitate the penetration of SSE and S winds;
- Building setback of at least 9m wide from the northern boundary and at least 15m wide from the southern boundary to facilitate the penetration of E wind; and
- Open areas located at the northeastern and southwestern corners of the Site to facilitate the penetration of E wind and S and SSE wind, respectively.

SPH Site

- Building separation of at least 15m wide between Tower 2 and Tower 3 to facilitate the penetration of NNE wind;
- Building separation of at least 15m wide between Tower 3 and Tower 4 to facilitate the penetration of E and SSE winds;
- Building setback of at least 10m wide from the eastern boundary and at least 15m wide from the southern boundary to facilitate the penetration of NNE, SSW and E, winds;
- Open area located south of Tower 3 to facilitate the penetration of NNE, SSW and E winds; and
- The S wind aligned access road to facilitate the penetration of S, SSE and SSW wind between the school and the welfare block.

3.6.2 It is considered that the potential impact to the wind environment of the surroundings would be alleviated and overall no significant adverse air ventilation impact is anticipated from the proposed development with the incorporation of mitigation measures mentioned in this report.

3.6.3 The two housing sites are located at approximately 370m apart aligning to E-W direction and separated by Yuen Long Highway, which is a major breezeway. The SPH and TKL Sites are not located directly upstream or downstream from one another in most of the prevailing summer and annual wind directions, with the exception being E wind. Under the E wind condition, TKL Site is located at the downstream of SPH Site, therefore potentially causing a cumulative impact of a larger wind wake to the downstream area west of TKL Site. However, considering the separation distance between the two Sites and the presence of Yuen Long Highway acting as a major breezeway, it is expected that the wind wake created from SPH Site under E wind will be able to recover and replenish beyond the wake area before reaching TKL Site. Hence, the potential cumulative impact posed by the two Sites is therefore expected to be insignificant.

3.6.4 The potential concerned areas identified in the AVA-EE would be area to the immediate north of the TKL Site where a portion of the incoming southerlies are

blocked by the proposed development. In particular, the wake area produced by the blockage of the tall residential towers would affect The Reach to the immediate north of the development. For SPH Site, potential concerned area would be Chuk San Tsuen to the immediate northeast of the Site. The residential towers would be blocking some incoming SSW and S winds to Chuk San Tsuen, but on the other hand would also be able to capture some high level NNE and E wind as downwash to Chuk San Tsuen. Mitigation measures as recommended below shall be critically considered during the detailed design stage of the housing development to further alleviate the potential air ventilation impact.

3.6.5 The Development shall not be limited to the proposed design and shall include other features as far as possible at the detailed design stage, including the provision of effective building separation(s) and setback in alignment with the prevailing wind, to facilitate penetration of wind across the Site. Mitigation measures for air ventilation will be reviewed again at the next stage with detail architectural layout design. For instance, the following recommendations shall be considered:

- Building Permeability equivalent to 20% to 33.3% of total frontal area with reference to PNAP APP-152;
- Minimisation of podium bulk with ground coverage;
- Building setback with reference to PNAP APP-152;
- Site Coverage of Greenery with reference to PNAP APP-152;
- Avoidance of long continuous façades;
- Adopt permeable podium design such as communal podium garden, void podiums, terraced podium etc;
- Adopt permeable design of carpark and bus-terminus by architectural features e.g. maximising the use of railing to minimise wall structure; and
- Reference can also be made to recommendations of design measures in the Hong Kong Planning Standards and Guidelines.

3.6.6 In addition to the above list of recommendations, it is recommended that a quantitative AVA (in form of Initial Study) shall be conducted, if required, for the public housing development by HKHA at the detailed design stage to review the building design, quantify the potential air ventilation impact and assess the effectiveness of the proposed mitigation measures to optimise the building arrangement.

3.6.7 From the air ventilation point of view, no insurmountable issue is anticipated for the purpose development with the incorporation of good building design features.

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4 PRELIMINARY TRAFFIC AND TRANSPORT IMPACT ASSESSMENT (TTIA)

4.1 General

4.1.1 This chapter provides a summary of the key findings in the Preliminary TTIA. The existing and planned road networks and traffic impacts due to the proposed developments are presented.

4.2 Methodologies

Existing Traffic Condition

4.2.1 In order to determine the existing traffic demand within the AOI during peak periods, a traffic survey in the form of manual classified counts were carried out during the periods from 0730 to 0930 and from 1700 to 1900 of typical weekdays on 16th and 22nd October of Year 2020. The locations of the surveyed junctions / links are illustrated in **Figure No. 406041/S&T/FR/0401**.

4.2.2 In order to determine the existing traffic demand within the AOI during Saturday peak periods, a traffic survey in the form of manual classified counts were also carried out during the periods from 1430 to 1730 of typical Saturday on 28th November of Year 2020 for the selected critical junctions. The locations of the surveyed junctions are also illustrated in **Figure No. 406041/S&T/FR/0401**.

Design Year

4.2.3 The population intake of the proposed development will likely occur in years 2031 upon completion in 2030/31. Thus, the design years adopted for the PTTIA will be years 2036 (5 years after population intake's year). The years of population intake will be subject to further confirmation. A buffer of 10% will be added to the flat no. or population for public housing site for technical assessment purpose.

Traffic Model Methodology for Base Year Model

4.2.4 Transport Department's 2015-based Base District Traffic Model (BDTM) "NTW1" covering Yuen Long and Tin Shui Wai were adopted to develop the LAM. The "NTW1" traffic model were cordoned off and fine-tuned for providing traffic flows within the AOI to improve the efficiency of modelling run time.

4.2.5 The base year model network of the 2015-based BDTM provides a basis for developing 2020 base year LAM network. The model network will be checked and updated to 2020 condition.

Traffic Model Methodology for Future Design Year

4.2.6 Similar to base year model development, MVCTS for future years adopted the latest 2016-based TPEDM planning data. Cordon matrices were provided by MVCTS for building up the initial matrices for future year LAM.

4.3 Existing Road Networks

4.3.1 The Sites are located in closed proximity to Yuen Long New Town and Yuen Long Highway. Shap Pat Heung is located next to the Long Ho Road, east of the Yuen Long Highway, north of the Kong Tau San Tsuen and west of the Shek Tong Tsuen. Tai Kei

Leng is located next to Tai Kei Leng Road, east of the Sereno Verde, north of the Yuen Long Highway, south of The Reach and west of the Shap Pat Heung Road.

4.3.2 The location of the Shap Pat Heung presents a critical issue in providing proper accesses to site since it is currently situated in locations that is only accessible by substandard single track road of Long Ho Road via a bridge. Long Ho Road is connected to Yuen Long Town via either Tai Shui Ha Road West or Yau Tin West Road only.

4.3.3 The location of the Tai Kei Leng also presents a critical issue in providing proper accesses to site since the traffic on Tai Kei Leng Road may be significantly congested during peak hours due to the existing traffic. Traffic queue may tail back on Tai Kei Leng Road from the junction of Shap Pat Heung Road and Tai Kei Leng Road during peak hours.

4.3.4 Long Ho Road is a local single track road, connecting local villages along Long Ho Road to Yau Tin West Road, Tai Shu Ha Road West and Tai Shu Ha Road East.

4.3.5 Tai Shu Ha Road East is a one-way road from the north to the south connecting Yuen Long Town Center and Shap Pat Heung. Local widening to single track road after the junction with Long Ho Road is provided. Tai Shu Ha Road West is a local road in single-2 configuration with one traffic lane running both northbound and southbound traffic. It is the key road connecting Yuen Long Town Centre and Shap Pat Heung area.

4.3.6 Yau Tin West Road is a local one-way road between the junction with Yuen Lung Street and Kong Yau Road. Local widening to single track road between Kong Yau Road and Long Ho Road is provided. It connects the local villages along Long Ho Road to Yuen Long Center.

4.3.7 Kong Yau Road is a local single track road, connecting Yau Tin West Road and Fung Cheung Road.

4.3.8 Fung Cheung Road is a local single-2 configuration road, connecting the local residential development and traffic from Yuen Long Town South and Yuen Long Town Center where by majority of the traffic to/from Yuen Long Town Center from/to Yuen Long Town South will utilize this road. Local widening to single-4 configuration road at junctions are generally observed at the interstation with Fung Ki Road and Ma Tong Road. Junctions along Fung Cheung Road are currently operating within its capacity, in which some movements are operating closed to its capacity during normal peaks hours.

4.3.9 Fung Ki Road is a single-2 configuration road, connecting Shap Pat Heung Road to Fung Cheung Road, where by majority of the traffic to/from Yuen Long Town Center from/to Yuen Long Town South will utilize this road.

4.3.10 Shap Pat Heung Road is a dual carriageway for the section between Tai Tong Road and Shap Pat Heung Interchange. The remaining section at the west of Tai Tong Road is a single 2-lane carriageway. Local widening to dual-3 lane at junctions are provided at the intersection with Tai Tong Road and Fung Ki Road. Shap Pat Heung Road currently serves a major connecting between Yuen Long Highway and the portion of Yuen Long Town to the south of Castle Peak Road – Yuen Long. Eastern part of Shap

Pat Heung Road is currently operating within its capacity, in which some movements are operating closed to its capacity during normal peaks hours.

4.3.11 Tai Kei Leng Road is a single-2 configuration road, connecting Shap Pat Heung Road to Tai Tong Road providing southern corridor for motorize heading from/to Shap Pat Heung Road to/from Yuen Long South. Local widening to dual carriageway at junctions are provided at the intersection with Shap Pat Heung Road.

4.3.12 Tai Tong Road between Ma Tong Road and Tai Tong Tsuen is a single-2 configuration road, connecting Yuen Long South and Yuen Long Town Center, where by majority of the traffic to/from Tai Tong area from/to Yuen Long Town Center will utilize this road.

4.3.13 Shap Pat Heung Interchange is located at the junction amongst Yuen Long Highway and Shap Pat Heung Road, whereby majority of the traffic to the southern part of Yuen Long from Yuen Long Highway will utilize this interchange. Shap Pat Heung Interchange is currently operating within its capacity, in which some movements are operating closed to its capacity during normal peaks hours.

4.3.14 Yuen Long Highway is an expressway in a mainly dual-3 configuration and partly dual-2 configuration, running in the east-west direction at the south of Yuen Long Town. It connects Tsing Long Highway in the east and Tuen Mun Road in the west. It caters mainly for the traffic between New Territories West and Kowloon. Pok Oi Interchange is located at the junction amongst Yuen Long Highway and Castle Peak Road – Yuen Long Section, whereby majority of the traffic to Yuen Long Town from Kowloon will utilise this interchange.

4.4 Existing Traffic Conditions

4.4.1 Analysis of the observed traffic data indicates that the AM and PM peak hour flows for weekday occurred from 0815 to 0915 and from 1715 to 1815 respectively and day peak hour flow for Saturday occurred from 1630 to 1730. The observed weekday peak hour traffic flows are summarized and presented in **Figure No. 406041/S&T/FR/0402**.

4.4.2 Existing operational performance of the key junctions were assessed by calculating the reserve capacity (RC) for signal-controlled junctions, and the Design Flow / Capacity Ratio (DFC) for priority junctions and roundabouts. The existing junction and road link performance are summarized in **Table 4.1** and **Table 4.2** respectively.

Table 4.1 Existing Junction Performance

Ref.	Junction	Method of Control	Drawing	2020 RC / DFC (1)		
				AM Peak	PM Peak	Weekend
J1	Pok Oi Interchange	Roundabout	B1	0.72	0.71	0.68
J2	Castle Peak Road-Yuen Long / Long Yat Road / Long Lok Road	Signal	B2	28%	51%	61%
J3	Long Yat Road / Long Wo Road	Signal	B3	34%	44%	-
J4	Long Yat Road / Yuen Long Kau Hui Road	Priority	B4	0.23	0.21	-
J5	Castle Peak Road – Yuen Long / Yuen Long On Lok Road / Long Lok Road	Signal	B5	30%	35%	-

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Ref.	Junction	Method of Control	Drawing	2020 RC / DFC (1)		
				AM Peak	PM Peak	Weekend
J6	Castle Peak Road – Yuen Long / Fung Cheung Road	Signal	B6	31%	54%	-
J7A	Fung Cheung Road / Kin Lok St / Fung Yau Street North	Priority	B7	0.76	0.71	-
J7B				0.83	0.61	-
J8	Kong Yau Road / Yau Tin West Road	Priority	B8	0.11	0.29	-
J9	Fung Cheung Road / Kong Yau Road	Priority	B9	0.70	0.44	-
J10	Ma Tong Road / Fung Cheung Road / Fung Ki Road	Signal	B10	26%	28%	22%
J11	Tai Tong Road / Ma Tong Road	Signal	B11	28%	15%	-
J12	Yau Tin West Road / Long Ho Road	Priority	B12	0.12	0.19	-
J13	Long Ho Road / Bridge near the Site	Priority	B13	0.09	0.06	-
J14	Shap Pat Heung Interchange	Roundabout	B14	0.93	0.91	0.87
J15	Shap Pat Heung Road / Tai Kei Leng Road	Signal	B15	12%	41%	-
J16	Shap Pat Heung Road / Fung Ki Road	Signal	B16	32%	41%	-
J17	Shap Pat Heung Road / Tai Tong Road	Signal	B17	43%	40%	40%
J18A	Shap Pat Heung Road / Tai Shu Ha Road East / Tai Shu Ha Road West	Priority	B18	0.33	0.26	-
J18B				0.35	0.42	-
J19A	Tai Tong Road / Tai Shu Ha Road East / Tai Shu Ha Road West	Priority	B19	0.39	0.38	-
J19B				0.34	0.44	-
J20A	Tai Kei Leng Road / Tai Shu Ha Road East / Tai Shu Ha Road West	Priority	B20	0.76	**1.08**	0.76
J20B				0.46	0.56	0.45
J21	Tai Shu Ha Road East / Tai Shu Ha Road West / Long Ho Road	Roundabout	B21	0.38	0.47	-

Note: (1) RC = Reserve Capacity, DFC = Design Flow / Capacity Ratio

4.4.3 The results in **Table 4.1** indicate that all the key junctions are currently operating within capacities during weekday peak periods (i.e. RC >0% and DFC <1.0), except J20A – Tai Kei Leng Road / Tai Shu Ha Road East / Tai Shu Ha Road West is currently operating over its capacity. During weekend peak period, all selected critical junctions are currently operating within capacities and the traffic condition is better than weekday peak periods, except J10 – Ma Tong Road / Fung Cheung Road / Fung Ki Road is currently operating worse than that in weekday peak periods.

Table 4.2 Existing Road Links Performance

Ref.	Road	Direction	Capacity (pcu/hr)	2020 Observed Flow (pcu/hr)		V/C Ratio	
				AM Peak	PM Peak	AM Peak	PM Peak
L1	Yuen Long Highway (Between Pok Oi Interchange and Shap Pat Heung Interchange)	NB	4,000	4,065	3,550	**1.02**	0.89
		SB	4,000	3,270	3,225	0.82	0.81
L2	Yuen Long Highway (Between Shap Pat Heung Interchange and Tong Yan San Tsuen Interchange)	EB	6,100	5,660	4,935	0.93	0.81
		WB	6,100	4,775	4,895	0.78	0.80

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Ref.	Road	Direction	Capacity (pcu/hr)	2020 Observed Flow (pcu/hr)		V/C Ratio	
				AM Peak	PM Peak	AM Peak	PM Peak
L3	Shap Pat Heung Road (Between Shap Pat Heung Interchange and Fung Ki Road)	EB	2,000	1,050	960	0.53	0.48
		WB	2,000	755	950	0.38	0.48
L4	Shap Pat Heung Road (Between Fung Ki Road and Tai Tong Road)	EB	2,000	745	620	0.37	0.31
		WB	2,000	455	500	0.23	0.25
L5	Tai Lam Tunnel	NB	5,400	1,915	3,535	0.35	0.65
		SB	5,400	5,120	2,280	0.95	0.42
L6	Yuen Long Highway (North of Pok Oi Interchange)	NB	8,200	6,430	5,500	0.78	0.67
		SB	6,100	4,635	4,735	0.76	0.78
L7	Slip Road next to the mainline of Yuen Long Highway (Between Shap Pat Heung Interchange and Pok Oi Interchange)	NB	4,000	2,080	1,660	0.52	0.42
L8	Slip Road next to the mainline of Yuen Long Highway (Between Shap Pat Heung Interchange and Pok Oi Interchange)	SB	4,000	1,645	1,935	0.41	0.48
L9	Yau Tin West Road	NB	920	130	80	0.14	0.09
		SB	920	65	105	0.07	0.11
L10	Long Ho Road	EB	920	60	60	0.07	0.07
		WB	920	45	80	0.05	0.09
L11	Bridge near Shap Pat Heung Site	NB	920	55	40	0.06	0.04
		SB	920	45	40	0.05	0.04

4.4.4 The results in **Table 4.2** indicate that all the above road links are currently operating within capacity (i.e. V/C ratios below 1.0) except L1 - Yuen Long Highway (Between Pok Oi Interchange and Shap Pat Heung Interchange).

4.5 Proposed Access Arrangements and Public Transport Facilities

4.5.1 SPH and TKL are located at Long Ho Road and Tai Kei Leng Road respectively. Long Ho Road will be widened to standard single-2 lanes carriageway and Tai Kei Leng Road will be widened to dual-2 lane carriageway under Yuen Long South Development Study. It is assumed that the widening of Long Ho Road and Tai Kei Leng Road will be completed before the population intake of the proposed developments. The exact date of the implementation and completion date will be further reviewed in later design stage.

4.5.2 Currently, there is only a sub-standard single track access road connecting SPH to Long Ho Road via a bridge. Therefore, it is proposed to widen the section of this single track access road within SPH to standard 7.3m single-2 lanes carriageway to improve the accessibility of SPH. The proposed local road network serving for SPH and TKL is shown in **Figure No. 406041/S&T/FR/0403**.

4.5.3 Based on the estimated public transport demand, a bus-terminus with sawtooth bus bay design is proposed at SPH to provide a minimum of 3 bus bays and 6 stacking spaces for 3 terminal routes subject to actual bus service route planning at the later stage. In addition, 1 urban taxi stand and 1 NT taxi stand will also be provided at the new access road at SPH.

4.5.4 For TKL, 4 double-width bays will be provided at Tai Kei Leng Road eastbound and total 50m layby will be provided at Tai Kei Leng Road westbound (with a general layby and 2 bus bays).

4.5.5 The preliminary layout of the bus-terminus and layby is illustrated in **Figure Nos. 406041/S&T/FR/0404** and **0405**. The exact size, layout and arrangement would be carried out in detailed design stage.

4.6 Operation Traffic Impact Assessment

4.6.1 Traffic forecasts were developed for Design Year 2036. The operational TIA would identify the critical issues and recommend any associated traffic improvement schemes to alleviate the identified traffic problem as necessary.

Road Capacity Assessment

4.6.2 The operational performance of the identified critical junctions and road links were assessed for Design Year 2036. The results are summarized in **Tables 4.3** to **4.4** respectively.

Table 4.3 Junction Performance in Design Year 2036

Ref.	Junction	Method of Control	Drawing	RC / DFC (1)			
				2036 Reference Case		2036 Design Case	
				AM Peak	PM Peak	AM Peak	PM Peak
J1	Pok Oi Interchange	Roundabout	B22(2)	0.70	0.71	0.78	0.77
J2	Castle Peak Road-Yuen Long / Long Yat Road / Long Lok Road	Signal	B2	25%	44%	21%	41%
J3	Long Yat Road / Long Wo Road	Signal	B3	27%	40%	24%	36%
J4	Long Yat Road / Yuen Long Kau Hui Road	Priority	B4	0.33	0.21	0.33	0.21
J5	Castle Peak Road – Yuen Long / Yuen Long On Lok Road / Long Lok Road	Signal	B23(2)	16%	15%	**13%**	**13%**
J6	Castle Peak Road – Yuen Long / Fung Cheung Road	Signal	B29(3)	67%	87%	57%	81%
J7A J7B	Fung Cheung Road / Kin Lok St / Fung Yau Street North	Signal	B30(3)	**13%**	**11%**	**13%**	**11%**
J8	Kong Yau Road / Yau Tin West Road	Priority	B8	0.11	0.29	0.11	0.29
J9	Fung Cheung Road / Kong Yau Road	Priority	B9	0.50	0.33	0.50	0.33
J10	Ma Tong Road / Fung Cheung Road / Fung Ki Road	Signal	B10	21%	**11%**	19%	**10%**
J11	Tai Tong Road / Ma Tong Road	Signal	B11	24%	17%	23%	15%
J12	Yau Tin West Road / Long Ho Road	Priority	B12	0.17	0.22	0.45	0.45
J13	Long Ho Road / Bridge near the SPH	Priority	B13/B37	0.10	0.07	0.68	0.48
J14	Shap Pat Heung Interchange	Roundabout	B33(2)	**0.99**	**1.14**	**1.36**	**1.23**
J15	Shap Pat Heung Road / Tai Kei Leng Road	Signal	B25(2)	39%	71%	17%	51%
J16	Shap Pat Heung Road / Fung Ki Road	Signal	B16	38%	27%	38%	27%
J17	Shap Pat Heung Road / Tai Tong Road	Signal	B17	40%	32%	38%	30%
J18A	Shap Pat Heung Road / Tai Shu Ha Road East / Tai Shu Ha Road West	Priority	B18	0.44	0.34	0.44	0.34
J18B				0.46	0.35	0.47	0.35

Ref.	Junction	Method of Control	Drawing	RC / DFC (1)			
				2036 Reference Case		2036 Design Case	
				AM Peak	PM Peak	AM Peak	PM Peak
J19A	Tai Tong Road / Tai Shu Ha Road East / Tai Shu Ha Road West	Priority	B19	0.15	0.18	0.15	0.18
J19B				0.18	0.23	0.20	0.24
J20A	Tai Kei Leng Road / Tai Shu Ha Road East / Tai Shu Ha Road West	Signal	B26(2)	35%	47%	**-3%**	**13%**
J20B		Priority		0.20	0.25	0.20	0.25
J21	Tai Shu Ha Road East / Tai Shu Ha Road West / Long Ho Road	Roundabout	B27(2)	0.60	0.45	0.76	0.53
J22	Yuen Ching Road / Yau Tin West Road	Priority	B28(2)	0.21	0.17	0.43	0.35

Note:
(1) RC = Reserve Capacity, DFC = Design Flow / Capacity Ratio
(2) Planned junction layout under other studies
(3) Proposed junction layout under other studies

4.6.3 The assessment results in **Table 4.3** indicate that all the critical junctions would be operated within their capacities except J5 – Castle Peak Road – Yuen Long / Yuen Long On Lok Road / Long Lok Road, J7 – Fung Cheung Road / Kin Lok St / Fung Yau Street North, J10 – Ma Tong Road / Fung Cheung Road / Fung Ki Road, J14 – Shap Pat Heung Interchange and J20A – Tai Kei Leng Road / Tai Shu Ha Road East / Tai Shu Ha Road West would be operated over its capacities in Design Year 2036.

Table 4.4 Road Links Performance in Design Year 2036

Ref.	Road	Dir.	Capacity[(1)] (pcu/hr)	2036 Reference Case				2036 Design Case			
				Traffic Flow (pcu/hr)		V/C Ratio		Traffic Flow (pcu/hr)		V/C Ratio	
				AM	PM	AM	PM	AM	PM	AM	PM
L1	Yuen Long Highway Between Pok Oi Interchange and Shap Pat Heung Interchange)	NB	4,000	3,575	3,395	0.89	0.85	4,090	3,810	**1.02**	0.95
		SB	4,000	3,565	3,095	0.89	0.77	3,565	3,095	0.89	0.77
L2	Yuen Long Highway (Between Shap Pat Heung Interchange and Tong Yan San Tsuen Interchange)	EB	6,100	5,595	5,160	0.92	0.85	6,380	5,790	**1.05**	0.95
		WB	6,100	5,640	4,975	0.92	0.82	6,415	5,415	**1.05**	0.89
L3	Shap Pat Heung Road (Between Shap Pat Heung Interchange and Fung Ki Road)	EB	2,000	1,240	1,130	0.62	0.57	1,240	1,130	0.62	0.57
		WB	2,000	865	985	0.43	0.49	870	990	0.44	0.50
L4	Shap Pat Heung Road (Between Fung Ki Road and Tai Tong Road)	EB	2,000	835	735	0.42	0.37	840	740	0.42	0.37
		WB	2,000	480	490	0.24	0.25	490	495	0.25	0.25
L5	Tai Lam Tunnel	NB	5,400	2,230	3,580	0.41	0.66	2,535	3,865	0.47	0.72
		SB	5,400	4,945	2,185	0.92	0.40	5,395	2,370	1.00	0.44
L6	Yuen Long Highway (North of Pok Oi Interchange)	NB	8,200	6,985	5,735	0.85	0.70	7,690	6,240	0.94	0.76
		SB	6,100	5,260	5,265	0.86	0.86	5,870	5,640	0.96	0.92
L7	Slip Road next to the mainline of Yuen Long Highway (Between Shap Pat Heung Interchange and Pok Oi Interchange)	NB	4,000	2,675	1,980	0.67	0.50	2,895	2,150	0.72	0.54
L8	Slip Road next to the mainline of Yuen Long Highway (Between Shap Pat Heung Interchange and Pok Oi Interchange)	SB	4,000	2,145	2,100	0.54	0.53	2,810	2,550	0.70	0.64
L9	Yau Tin West Road	NB	920	225	170	0.24	0.18	385	295	0.42	0.32
		SB	920	90	120	0.10	0.13	325	270	0.35	0.29
L10	Long Ho Road	EB	920	160	155	0.17	0.17	380	325	0.41	0.35
		WB	920	85	115	0.09	0.13	325	270	0.35	0.29
L11	Bridge near Shap Pat Heung Site	NB	920	60	45	0.07	0.05	535	400	0.58	0.43
		SB	920	45	40	0.05	0.04	490	420	0.53	0.46

4.6.4 The results in **Table 4.4** indicate that all the above road links will still operate within capacity (i.e. V/C ratios below 1.0.) in design year 2036 except L1 – Yuen Long Highway (Between Pok Oi Interchange and Shap Pat Heung Interchange) and L2 – Yuen Long Highway (Between Shap Pat Heung Interchange and Tong Yan San Tsuen Interchange).

4.6.5 Due to site constraint, L1- Yuen Long Highway (Between Pok Oi Interchange and Shap Pat Heung Interchange) is bounded by existing northbound and southbound slip roads on both sides. There is no space to widen this section of Yuen Long Highway.

4.6.6 To improve the operational performance of L2 – Yuen Long Highway (Between Shap Pat Heung Interchange and Tong Yan San Tsuen Interchange), the feasibility of road widening of this section of Yuen Long Highway would be investigated.

4.6.7 In view that the concerned road links are strategic roads supporting the district-based transport network, the improvement works of the overloaded strategic roads shall be considered and implemented by strategic highway projects. Manageable congestion on the concerned overloaded strategic roads would be expected before the commissioning of the strategic roads improvement works.

Road Capacity Assessment

Castle Peak Road – Yuen Long / Yuen Long On Lok Road / Long Lok Road (J5)

4.6.8 Based on the planned junction layout under "Yuen Long Town Land Lot No. 510", it is proposed to modify the junction layout of Castle Peak Road – Yuen Long westbound to provide two "turn left" traffic lanes, one "straight ahead" traffic land and one "turn right" traffic lane as illustrated in **Appendix B**, which is similar to the current junction layout.

Ma Tong Road / Fung Cheung Road / Fung Ki Road (J10)

4.6.9 It is proposed to extend the flare lane section of Fung Ki Road north to 60m as illustrated in **Appendix B**.

Shap Pat Heung Interchange (J14) and Shap Pat Heung Road / Tai Kei Leng Road (J15)

4.6.10 It is proposed to widen the traffic lane at Shap Pat Heung Interchange eastbound from 2 lanes to 3 lanes and provide an exclusive left turn traffic lane (connecting to Tai Kei Leng Road) as illustrated in **Appendix B**.

4.6.11 In addition, it is also proposed to provide an exclusive straight ahead traffic lane at the slip road from Yuen Long Highway westbound as illustrated in **Appendix B**.

Tai Kei Leng Road / Tai Shu Ha Road East / Tai Shu Ha Road West (J20)

4.6.12 Based on the planned junction layout under Yuen Long South's Study, it is further proposed to convert the whole junction (including J20A and J20B) into a signalized junction as illustrated in Appendix B. In order to maximise the junction capacities and simplify the method of control, it is also proposed to convert Tai Shu Ha Road West from two-way to one-way northbound operation as illustrated in Appendix B. The alternative routes for the banned Tai Shu Ha Road West southbound traffic are illustrated in Appendix B.

Tai Shu Ha Road East / Tai Shu Ha Road West / Long Ho Road (J21)

4.6.13 To facilitate the one-way operation at J20A, hatched road marking would be proposed at Tai Shu Ha Road West southbound as illustrated in **Appendix B**.

4.6.14 With the improvement measures, the operational performance of the junctions were reassessed with the proposed improvement schemes and the results are summarized in **Table 4.5**.

Table 4.5 Junction Performance under Proposed Improvement Scheme in Design Year 2036

Ref.	Junction	Method of Control	Drawing	RC / DFC (1) 2036 Design Case	
				AM Peak	PM Peak
J5	Castle Peak Road – Yuen Long / Yuen Long On Lok Road / Long Lok Road	Signal	B31	22%	28%
J10	Ma Tong Road / Fung Cheung Road / Fung Ki Road	Signal	B32	29%	24%
J14	Shap Pat Heung Interchange	Roundabout	B33	0.78	**0.91**
J15	Shap Pat Heung Road / Tai Kei Leng Road	Signal	B33	17%	51%
J20	Tai Kei Leng Road / Tai Shu Ha Road East / Tai Shu Ha Road West	Signal	B34	19%	41%
J21	Tai Shu Ha Road East / Tai Shu Ha Road West / Long Ho Road	Roundabout	B36	0.76	0.53

Note: (1) RC = Reserve Capacity, DFC = Design Flow / Capacity Ratio

4.6.15 As shown in **Table 4.5**, J5 – Castle Peak Road – Yuen Long / Yuen Long On Lok Road / Long Lok Road, J10 – Ma Tong Road / Fung Cheung Road / Fung Ki Road, J15 – Shap Pat Heung Road / Tai Kei Leng Road, J20 – Tai Kei Leng Road / Tai Shu Ha Road East / Tai Shu Ha Road West and J21 – Tai Shu Ha Road East / Tai Shu Ha Road West / Long Ho Road would operate with DFC ≤ 0.85 or RC ≥15% in Design Year 2036 with the proposed improvement schemes, except J14 – Shap Pat Heung Interchange would operate with DFC ≤ 0.95.

4.6.16 Due to limitation of site constraints with sightline and safety issue, it has difficulty to provide exclusive left turn left for Yuen Long Highway Slip Road eastbound to Shap Pat Heung Road. In addition, the junction performance of J14 have been improved from DFC of 1.14 to 0.91, under design scenario with proposed improvement scheme comparing with reference scenario, there is no further improvement scheme proposed for J14.

4.6.17 Due to limitation of site constraints and the adjacent area of the junction are bounded by development, there are no improvement schemes proposed for J7 Fung Cheung Road / Kin Lok Street / Fung Yau Street North.

4.7 Construction Traffic Impact

4.7.1 The major construction traffic generation from the proposed Development during construction are mainly from site formation cut/fill works, transporting the construction/ demolition materials and etc. According to the latest construction programe, it is estimated that the peak construction traffic generated from the proposed Development will generate and attract 17 pcu/hr per direction in AM and PM peak in 2026. The excavated materials generated from the site formation works will be transported to the available public fill reception facilities via Yuen Long Highway. Considering the relatively low volume of construction traffic generated by the proposed Development, it is anticipated that no insurmountable impact on the existing road network due to the proposed Development during construction stage in 2026.

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4.8 Parking Provisions

4.8.1 Private car, motor-cycle, light good vehicle parking spaces and loading/unloading bays will be provided inside the Site.

4.8.2 Based on the assumed latest development parameters and the requirements as stipulated in the Hong Kong Planning Standard and Guidelines (HKPSG), the proposed parking provisions for the public housing developments are summarized in **Tables 4.6** to **4.8**. HD will liaise with TD on the parking provision at detailed design stage.

Table 4.6 Parking and Loading/Unloading Bays Requirements

Parking Facilities	Requirement
Domestic	
Car Parking Spaces	1 per 8-14 flats (outside 500m radius of rail station) R1 = 0.52 R2 = 1 (outside 500m radius of a rail station) Parking Requirement = GPS (1/4 or 1/7) x R1 x R2
Accessible Car Parking Spaces	1 space for 1-50 car parking spaces; 2 spaces for 51-150 car parking spaces; 3 spaces for 151-250 car parking spaces; 4 spaces for 251-350 car parking spaces; 5 spaces for 351-450 car parking spaces; 6 spaces for more than 450 car parking spaces
Motorcycle Parking Spaces	1 per 110-250 flats
Bicycle Parking Spaces	1 per 15 flats
"Shared Use " LGV and Light Bus Space	1 per 260 flats
Goods Vehicle Loading/Unloading Bays	2 per block for overnight parking
Visitor Car Parking Spaces	Up to 5 per block
Retail	
Car Parking Spaces	1 per 150-300 sq.m GFA
Goods Vehicle Loading/Unloading Bays	1 per 800-1,200 sq.m GFA
Primary Schools	
Car Parking Spaces	1 per 4-6 classrooms
Lay-By for Taxis and Private Cars	1 per 2-3 classrooms
Lay-By for School Buses	min. 3 lay-bys
Kindergartens (parking provisions subject to the requirements of Housing Authority)	
Car Parking Spaces	0-1 per 4-6 classrooms
Lay-By for Taxis and Private Cars	1 per 5-8 classrooms
Lay-By for School Buses	min. 2 lay-bys

Note: For public rental housing development, one person/two person flats are excluded from the calculation of the overall parking provision of private carparking spaces, motorcycle parking spaces and shared-use spaces for LGV and Light Bus.

Table 4.7 Parking and Loading/Unloading Bays Requirements - SPH

Parking Facilities	Requirement	
	Subsidised Sale Flat (SSF)	Public Rental Housing (PRH)
Domestic		
Car Parking Spaces (Accessible Car Parking Spaces)	266-465 (4-6)	333-582 (4-6)
Motorcycle Parking Spaces	15-33	18-41
Bicycle Parking Spaces	238	298
"Shared Use " LGV and Light Bus Space	14	18
Goods Vehicle Loading/Unloading Bays	2 per block	2 per block
Visitor Car Parking Spaces	5 per block	5 per block

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Parking Facilities	Requirement	
	Subsidised Sale Flat (SSF)	Public Rental Housing (PRH)
Retail		
Car Parking Spaces	8-16	10-20
Goods Vehicle Loading/Unloading Bays	2-3	3-4
Primary school (classroom)		
Car Parking Spaces	4-6	
Lay-By for Taxis and Private Cars	8-12	
Lay-By for School Buses	min. 3 lay-bys	
Kindergartens (parking provisions subject to the requirements of Housing Authority)		
Car Parking Spaces	0-3	
Lay-By for Taxis and Private Cars	1-3	
Lay-By for School Buses	min. 2 lay-bys	

Note: Housing Department will liaise with Transport Department on the parking provision at detailed design stage.

Table 4.8 Parking and Loading/Unloading Bays Requirements - TKL

Parking Facilities	Requirement	
	Subsidised Sale Flat (SSF)	Public Rental Housing (PRH)
Domestic		
Car Parking Spaces (Accessible Car Parking Spaces)	171-299 (3-4)	214-374 (3-5)
Motorcycle Parking Spaces	10-21	12-27
Bicycle Parking Spaces	154	192
LGV Parking Spaces	9	12
Goods Vehicle Loading/Unloading Bays	2 per block	2 per block
Visitor Car Parking Spaces	5 per block	5 per block
Retail		
Car Parking Spaces	5-10	7-13
Goods Vehicle Loading/Unloading Bays	2	2-3
Kindergartens (parking provisions subject to the requirements of Housing Authority)		
Car Parking Spaces	0-3	
Lay-By for Taxis and Private Cars	1-2	
Lay-By for School Buses	min. 2 lay-bys	

Note: Housing Department will liaise with Transport Department on the parking provision at detailed design stage.

4.9 Review on Additional Demand on Tuen Ma Line (TML)

4.9.1 It is estimated that both Developments would generate 3,504 patronage/hr peak public transport trips at the AM Peak. Model split for the PT trips has made reference to MVA's in-house Public Transport Model. It is estimated that about 57% of the PT demand would be Bus-to-Rail, which equivalent to 1,997 patronage/hr generated to Tuen Ma Line from the Development. The PT demand distributed to the urban direction and loaded onto the critical section (from Kam Sheung Road Station to Tsuen Wan West Station) of Tuen Ma Line would be 1,698 patronage/hr (i.e. 85%).

4.9.2 According to LC Paper No. CE(4)712/20-21(03), the maximum carrying capacities of TML will be 56,200 pphpd based on a loading density of 6ppsm (i.e. 6ppl/m^2) and therefore about 37,500 pphpd based on a loading density of 4ppsm (i.e. 4ppl/m^2).

4.9.3 Having taken into consideration of the additional demand from the Development, the forecasted additional v/c at the critical section of TML at the AM peak would be

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increased by 0.045 (4ppl/m^2) or 0.030 (6ppl/m^2).

4.10 Summary

4.10.1 With the implementation of the proposed improvement works, it is anticipated that the proposed development will not induce insurmountable problem to the traffic network from traffic point of view.

5 PRELIMINARY GEOTECHNICAL ASSESSMENT (GA)

5.1 General

5.1.1 This chapter aims to summarize the geological and geotechnical information about the housing sites and their vicinity, identify potential geotechnical impacts that may arise from the proposed developments, and recommend the necessary improvements or upgrading works, if any.

5.2 Ground Condition

5.2.1 As shown on the Geological Map Sheet No.6 – Solid and Superficial Geology, the geological stratum of the proposed Sites is generally covered by Holocene Alluvium (Qa) and Pleistocene Terraced Alluvium (Qpa). The Shap Pat Heung site is dominated by metamorphosed Lapilli lithic-bearing coarse ash crystal tuff of Tai Mo Shan Formation (Jts_cat), superficial deposits are mainly consisting of terraced alluvium (Qpa) with little Debris flow deposits (Qpd) at southern corner. Tai Kei Leng site is underlain by metamorphosed fine- to medium-grained crystalline marble with minor chert (Csyl) and medium- to coarse-grained crystalline marble (Csym) of Long Ping member and Ma Tin member, Yuen Long Formation, superficial deposits are mainly Terraced alluvium (Qpa).

Shap Pat Heung Site

5.2.2 The available site investigation records in the vicinity of the site were retrieved from the GIU at the time of information search. The interpreted geological profile based on the retrieved GI are shown in **Figure Nos. 406041/S&T/FR/0501** to **0503***.* A general geological profile of the site is summarized as follows:

a) The upper most layer is fill with thickness up to 3m.
b) Underlying the fill is alluvium with thickness up to 10.1m.
c) Below the alluvium is mainly completely to highly decomposed tuff.
d) Bedrock (tuff) is encountered at a depth of 35m below ground level.

Tai Kei Leng Site

5.2.3 The available site investigation records in the vicinity of the site were retrieved from the GIU at the time of information search. The interpreted geological profile based on the retrieved GI are shown in **Figure Nos. 406041/S&T/FR/0504** to **0506***.* A general geological profile of the site is summarized as follows:

a) The upper most layer is fill with thickness up to 7.4m.
b) Underlying the fill is alluvium with thickness up to 25.25m or karst deposit with thickness up to 8m.
c) Below the alluvium or karst deposit is mainly completely to highly decomposed rock, consist of metasiltstone or quartz porphyry.
d) Bedrock (metasiltstone, quartz porphyry or marble) is encountered at a depth up to 135m below ground level. The rockhead level varied.

5.2.4 Part of TKL site falls within the Scheduled Area No.2. The extend of the Scheduled Areas No.2 is added to **Figure No. 406041/S&T/FR/0507**.

5.3 Groundwater Regime

5.3.1 Groundwater monitoring records for relevant vertical drillholes have been retrieved and inspected. Existing and Site-specific Records are summarized in **Table 5.1**.

Table 5.1 – Groundwater Monitoring Records

Site	Highest Groundwater Level (mPD)	Highest Groundwater Level (meter below ground level)
SPH	+5.74	1.05
TKL	+4.51	0.64

5.4 Preliminary Geotechnical Assessment

Geotechnical Appraisal Related to Man-made Features

5.4.1 A review of existing slopes and retaining walls within and in the vicinity of the Sites that may affect or be affected by the proposed works is carried out.

5.4.2 Guidance given in the Geotechnical Engineering Office Technical Guidance Note No. 15 (TGN 15) regarding the travel angle of landslide debris and the crest influence zones for slopes and retaining walls is adopted for determining if any geotechnical features affect or is affected by the proposed works. The crest influence zone is taken as the feature height. If the proposed works at toe of a feature is within the extreme travel distance of the potential landslide debris of the feature, the failure of the feature is considered to be affecting the proposed works and shall be considered in the Geotechnical Assessment.

5.4.3 3 unregistered features and 3 registered features are identified in proximity to the SPH Site and 4 registered features are identified in proximity to the TKL Site; these features will affect the proposed site formation works. Further assessment is recommended. The findings of the review for 3 unregistered and 2 registered features are summarised in **Table 5.2**.

Table 5.2 – Findings of Features

Site	Feature No.	Affected by/ Affecting proposed works	Proposed to be Further Assessed or Demolished /Modified	CTL Category (Future)	Required Factors of Safety
SPH	S2*	Affecting	Further Assessment	1	1.4
	S3*	Affecting	Further Assessment	1	1.4
	S4*	Affecting	Further Assessment	1	1.4

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Site	Feature No.	Affected by/ Affecting proposed works	Proposed to be Further Assessed or Demolished /Modified	CTL Category (Future)	Required Factors of Safety
	6NW-B/F6	Affecting	Further Assessment	1	1.4
	6NW-B/FR12	Affecting	Further Assessment	1	1.4
	6NW-B/FR20	Affecting	Further Assessment	1	1.4
TKL	6NW-B/FR247	Affecting	Further Assessment	1	1.4
	6NW-D/F12	Affecting	Further Assessment	1	1.4
	6NW-D/F129	Affecting	Further Assessment	1	1.4
	6NW-D/F14	Affecting	Further Assessment	1	1.4

*S2, S3 and S4 comprises a concrete retaining wall sits on sloping ground.

5.4.4 Review of existing geotechnical information indicates that there are no significant geotechnical constraints on features affected or affecting the proposed developments and that common modification measures could be employed to provide the required factors of safety as stipulated in WBTC No. 13/99.

5.4.5 To facilitate the future development, new features will be constructed within the Sites; the features shall be designed in accordance to Geotechnical Manual for Slopes, Geoguide 1 – Guide to Retaining wall Design and other relevant circulars and standards as promulgated by the Hong Kong Government.

Geotechnical Consideration and Geotechnical Constraints

5.4.6 GI was carried out within and outside of the site boundary; therefore, the geological profile is interpreted based on existing and site-specific GI.

5.4.7 Based on the review of existing data, SPH Site is covered by approximate 1.00m to 3.00m thick of fill layer and 7.00m to 10.10m of alluvium layer. Thickness of completely decomposed to highly decomposed tuff (CD/HDT) ranged from 3.50m to 21.35m and bedrock lies at a depth of 35m below ground level. According to existing geological information, the southern portion of site is cut by NW SE-trending fault. The ground profile shall be verified by site specific ground investigation in later stage of project.

5.4.8 TKL Site is covered by 0.40m to 7.40m thick of fill layer. Alluvium with thickness up to 25.25m or karst deposit with thickness up to 8m were found in the existing GI records. Underlying the alluvium or karst deposit is completely to highly decomposed rock (metasiltstone or quartz porphyry). Bedrock (Metasiltstone, quartz porphyry or marble) lies at -9.44mPD to beyond -123.78mPD. The ground

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profile shall be verified by site specific ground investigation in later stage of project.

5.4.9 Such complex geology induced variable underground profile and affects the foundation works design. The choice of piles will be affected by the need to cope with variable ground conditions and the feasibility of the differ pile types will be dependent on the capability of the drilling equipment or driveability considerations. From economic point of view, the housing block layout may need to adjust to avoid the complex ground alignment. Special care should be paid on the ground Investigation in later stage.

5.4.10 According to the latest site formation design, no substantial retaining structures are proposed. Hence no significant consolidation settlement is expected. Settlement due to the proposed works are expected to be controllable and will not affect the feasibility of the proposed development. As part of the proposed Tai Kei Leng site is located within Scheduled Area No. 2, the design and construction of foundation works in the Scheduled Area would comply with the requirements for the submissions laid down in ETWB TC(W) No. 4/2004. All design of permanent foundations works including GI proposals in the Scheduled Area would be submitted to GEO for checking. The nomination of geotechnical site supervision for GI and foundation works in the Scheduled Area would be subject to the agreement by GEO.

5.4.11 Due to the access problem and land issue of this project, only limited site-specific GI could be carried out, this limited GI information cannot provide comprehensive ground information for the site. According to available geological information, deep bedrock levels, presence of marble and related geological features such as marble cavities, inferred fault zone are the potential geological constraints of the site. Further GI works would aim on addressing these uncertainties.

Feasibility of the Infrastructure

5.4.12 This report presented a general description of the existing topography, geological conditions, and man-made features at the Sites. From the current available information, geological and geotechnical constraints are noted. Nevertheless, no substantial site formation works were required for the housing development. A detailed ground model supported by a thoughtful ground investigation could assist the designer selecting a suitable foundation system to overcome such constraints. Geological constraints could be identified by further GI in later stage. As such, the proposed development is considered feasible.

5.5 Natural Terrain Hazard Study (NTHS)

5.5.1 Preliminary screening to determine the need for NTHS with reference to GEO Report No. 138 (Second Edition, 2016) has been conducted. The results are listed in **Table 5.3** below.

Table 5.3 – Preliminary Screening for NTHS

Location	Proposed Facility	Inclusion Guidelines		Need for NTHS [Satisfying (1) AND (2) => Yes; otherwise => No]
		(1) Group 1, 2 or 3 Facility [Table 2.2, GEO Report No. 138]	(2) Presence of an undisturbed 'hillside' sloping at more than 15° within 100m horizontally upslope of the facility	
SPH	Residential Building	Group 1	No	No
TKL	Residential Building	Group 1	N/A	N/A

5.5.2 The SPH Site is indicated in **Figure No. 406041/S&T/FR/0508***.* No natural terrain is overlooking TKL Site.

5.5.3 According to the findings, the catchment overlooking SPH Site unsatisfied the "Alert Criteria" and therefore further NTHS is not required.

5.6 Summary

5.6.1 This report presented a general description of the existing topography, geological conditions, and man-made features at the Sites. From the current available information, geological and geotechnical constraints are noted. A detailed ground model supported by a thoughtful ground investigation could assist the designer selecting a suitable foundation system to overcome such constraints. Geological constraints could be identified by further GI in later stage. As such, the proposed development is considered feasible.

5.6.2 In view of the preliminary findings from the geotechnical assessment, no insurmountable issue is anticipated for the proposed development in the geotechnical aspect.

6 PRELIMINARY SITE FORMATION ASSESSMENT (SFA)

6.1 General

6.1.1 This section is to recommend suitable formation level, profile and designs of the proposed sites and recommend the works required for the proposed sites.

6.2 Site Formation Design Consideration and Constraints

Unsuitable Material Disposal

6.2.1 Since most of the Sites are inaccessible and site specific GI for private land cannot be conducted at this stage, reference is made to the existing GI record and observation during site inspection for estimation of quantities of unsuitable and top soil materials. As the Sites and the associated infrastructure works are not located in low lying area and no deep excavation had been observed from the aerial photos, an average depth of 0.5m unsuitable and top soil material is assumed. The exact quantities of unsuitable and top soil materials will require further confirmation after site specific GI had been completed.

Imported Fill Material

6.2.2 The estimated amount of inert C&D material generated during site formation would be approximately 9,790m^3 for SPH site and 4,440m^3 for TKL site, of which all are expected to be reused on sites. All inert material is proposed to be reused on site as much as possible while the non-inert material will be disposed offsite. Inert C&D material generated from the Sites are not adequate to cover the total volume of fill. Therefore, imported fill material is required under this Study.

6.3 Proposed Site Formation Works

Proposed Site Formation Works at SPH Site

6.3.1 Subject to the gentle topographic nature of the site, the proposed site formation level will be formed at the level between +11.00mPD at the south vicinity of the site to +7.50mPD at the north vicinity of the site. The proposed site formation level plan and cross sections are shown in **Figure Nos. 406041/S&T/FR/0601** to **0603**.

Proposed Site Formation Works at TKL Site

6.3.2 Subject to the gentle topographic nature of the site, the proposed site formation level will be formed at the level between +7.00mPD at the southwest vicinity of the site to +6.00mPD at the northeast vicinity of the site. The proposed site formation level plan and cross sections are shown in **Figure Nos. 406041/S&T/FR/0604** to **0606**.

6.4 Earthwork Inventory

6.4.1 The earthwork inventories for the Sites and the associated roadwork are shown in **Table 6.1**.

Table 6.1 – Summary of Estimated Quantities of C&D Materials Generated during Site Formation

Phases	Inert C&D Material (m^3)	Non-inert C&D Material (m^3)	Reused on Site (m^3)	Disposed Offsite (m^3)		Tentative Disposal Period
				Inert	Non-inert	
SPH	9,790	12,000	9,790	0	12,000	2026/27
TKL	4,440	6,300	4,440	0	6,300	2026/27
Total	**14,230**	**18,300**	**14,230**	**0**	**18,300**	2026/27

6.4.2 In view of the need of importing a huge volume of suitable material from the fill bank, it is recommended to acquire the filling materials from concurrent projects with huge volume of excavation in the vicinity so as to minimize construction traffic and burden to the fill bank. Further liaison with the excavation-required projects is recommended.

6.4.3 It is recommended that comprehensive site-specific ground investigation should be carried out in later stage of this Project in order to review the volume of unsuitable material to be removed.

6.5 Summary

6.5.1 According to the findings of the preliminary site formation assessment, no insurmountable issue is anticipated for the proposed site formation works of the proposed developments.

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7 PRELIMINARY DRAINAGE IMPACT ASSESSMENT (DIA)

7.1 General

7.1.1 This chapter aims to assess potential drainage impacts that may arise from the proposed developments, and recommends the necessary improvement or upgrading works, if any.

7.2 Methodologies

7.2.1 Drainage record sheets within the Study Area were obtained from Mainland North Division of Drainage Services Department (DSD). The network of the existing drainage is shown at **Figure No. 406041/S&T/FR/0701**. The information is adopted to assess the potential drainage impact arising from the proposed Development under this Assignment.

7.2.2 InfoWorks ICM Version 6.0 has been adopted for assessing the potential drainage impact arising from the Development and verifying the effectiveness of the proposed mitigation measures under this Assignment.

7.2.3 The software has the benefit of being able to model unsteady, gradually varied flow in looped network with flat or reverse gradients where the direction of flow may reverse. It is therefore well-suited for modelling the study area where the pipes have minimal gradients and are subject to tidal intrusion or backwater effects from the high tidal levels.

Assessment Criteria

7.2.4 According to the SDM, 50-year design return period is recommended for the design of urban branch system. This will be adopted for the design of the proposed drainage works in/near the proposed Development site.

7.3 Existing Drainage Condition

7.3.1 The existing drainage network for SPH Catchment A is shown on **Figure No. 406041/S&T/FR/0702**. The rainfall collected by the existing stream running along the SPH Site north east boundary and it flows to the existing twin-cell 3000mm x 2500mm box culvert that connects to the Yuen Long Bypass Floodway.

7.3.2 The existing drainage network for SPH Catchment B is shown on **Figure No. 406041/S&T/FR/0702**. The rainfall collects by the existing stream that enters the SPH Site from south west of the site boundary. The stream connects to the existing 2500mm x 1700mm box culvert that connects to the Yuen Long Bypass Floodway.

7.3.3 The existing drainage network for TKL Catchment C is shown on **Figure No. 406041/S&T/FR/0702**. The rainfall collects by the existing 1050mm stormwater drain on the north of the site and it flows to the 2500mm x 2250mm box culvert. The rainfall eventually enters the channel located along Yau Tin West Road.

7.4 Potential Drainage Impacts and Proposed Drainage Schemes

7.4.1 All drainage load generated by the Sites are assumed to be discharged to the nearest existing drainage system from the terminal stormwater manhole of each site.

Detailed design of internal drainage system within each Site will be conducted in the later design stage.

7.4.2 For SPH Site within Catchment A, it is proposed to construct a collection point and a 900mm diameter drainage pipe to connect the existing Yuen Long Bypass Floodway at the north west vicinity of the SPH Site as shown in **Figure No. 406041/S&T/FR/0703**. After considering the flow of YLBF, no flooding risk is expected. Therefore, no mitigation measures are required within the housing site.

7.4.3 For SPH Site within Catchment B, it is proposed to redirect the existing stream within the catchment to the Yuen Long Bypass Floodway through a proposed twin 1800mm diameter drainage pipes as shown in **Figure No. 406041/S&T/FR/0703**. The reason for redirecting the existing stream that pass through the SPH Site is because it will interrupt with the housing development area.

7.4.4 For TKL Site, it is proposed to construct a collection point and a 750mm diameter drainage pipe to connect the existing storm water manhole (SMH1048023) with 1050mm diameter located on the north east vicinity of the site as shown in **Figure No. 406041/S&T/FR/0704**.

Table 7.1 Proposed Drainage Works

Site	Proposed Drainage Works
SPH	Drainage Pipe: 900mm in 1:100
	Twin Drainage Pipe: 1,800mm in 1:100
TKL	Drainage Pipe: 750mm in 1:100

7.5 Summary

7.5.1 Based on the hydraulic assessment, the proposed drainage works could support the development of the Site whilst there will be no increase in runoff of all catchments after the Development, it is anticipated that there will be no adverse drainage impact on the existing drainage system. Thus, the Development is considered technically feasible from drainage impact point of view.

7.5.2 Detailed DIA with the detailed design of the proposed drainage works and mitigation measures will be submitted when more information is available at the detailed design stage.

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8 PRELIMINARY SEWERAGE IMPACT ASSESSMENT (SIA)

8.1 General

8.1.1 This chapter aims to assess potential sewerage impacts that may arise from the proposed developments, and recommends the necessary improvement or upgrading works, if any.

8.2 Methodologies

8.2.1 This Preliminary SIA has been carried out in accordance with the following standards, Code of Practice and Design Manuals:

- Environmental Protection Department's (EPD's) "Guidelines for Estimating Sewerage Flows for Sewerage Infrastructure Planning" (GESF);
- Drainage Services Department's (DSD's) Sewerage Manual (Part 1) – Key Planning Issues and Gravity Collection System; and
- DSD's Sewerage Manual (Part 2) – Pumping Stations and Rising Mains.

8.3 Existing and Planned Sewerage System

8.3.1 EPD advised that this development is within the catchment of San Wai Sewage Treatment Works (SWSTW), which is being upgraded, and that sufficient capacity will be timely provided in phase with the TPEDM forecasted population to be accommodated by all existing and planned development within its catchment.

8.3.2 Existing sewer near SPH Site convey sewage to Lung Tin Sewage Pumping Station (LT-SPS) and then conveyed to the Ha Tsuen Sewage Pumping Station (HT-SPS) and transferred to SWSTW as shown in **Table 8.1**. Meanwhile the existing sewer near Tai Kei Leng Site collects sewage to the Ping Shun Street Sewage Pumping Station (PSS-SPS) and then to either San Wai Sewage Treatment Works (SW STW) or Yuen Long Sewage Treatment Works (YL STW) or discharge to the existing sewerage network along Long Ho Road to LT SPS and further connects to SW STW as shown in **Tables 8.2** and **8.3**.

Table 8.1 – Summary of Major Existing Sewerage Pipes near Shap Pat Heung connect to San Wai Sewage Treatment Works

Sewerage Pipe Location	Pipe Diameter (mm)
Long Ho Road	500
Shung Ching Road	900
LT SPS Outlet	700
HT SPS Inlet	1500
SW STW Inlet	1200

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Table 8.2 – Summary of Existing Sewerage Pipes near TKL connect to SW STW

Sewerage Pipe Location	Pipe Diameter (mm)
Shap Pat Heung Road	350-750
Tai Shu Ha Road East	750
Chung Sing Path	850-900
Sewer Chamber Outlet	900-1000
HT SPS Inlet	1500
SW STW Inlet	1200

Table 8.3 – Summary of Existing Sewerage Pipes near TKL connect to LT SPS

Sewerage Pipe Location	Pipe Diameter (mm)
Long Ho Road	500
Shung Ching Road	900
Sham Chung Tsuen Road	900
Sham Chung Road	900

8.4 Sewerage Impact and Proposed Sewerage Scheme

8.4.1 The total ADWF generated from the proposed Developments are estimated to be 0.0597m^3/s. At the current stage of the Study, all the public facility is assumed to be located at the non-domestic block for the sewage estimation. Detailed ADWF estimation is provided in **Table 8.4**.

Table 8.4 – Estimation of Sewage Generated from the Development

Sewage Type	Quantity	Unit
Shap Pat Heung Site		
Residential		
Design residential population *	9,996	person
Unit flow factor	0.27	m^3/person/day
ADWF for residential (SSF)	**0.0312**	**m^3/s**
Public Facility		
Design "retail & others" population (1)	212	person
Unit flow factor	0.28	m^3/employee/day
ADWF for retail and others	**0.0007**	**m^3/s**
Design "welfare" population (2)	294	person
Unit flow factor	0.28	m^3/employee/day
ADWF for welfare	**0.001**	**m^3/s**
Design student population (Primary School)	612	person

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Unit flow factor for students	0.04	m^3/person/day
ADWF for students	**0.0003**	**m^3/s**
Total ADWF from Shap Pat Heung	**0.0332**	**m^3/s**
Tai Kei Leng Site		
Residential		
Design residential population*	6,440	person
Unit flow factor	0.27	m^3/person/day
ADWF for residential	**0.0201**	**m^3/s**
Public Facility		
Design "retail & others" population (3)	108	person
Unit flow factor	0.28	m^3/employee/day
ADWF for retail and others	**0.0003**	**m^3/s**
Design "welfare" population (4)	189	person
Unit flow factor	0.28	m^3/employee/day
ADWF for welfare	**0.0006**	**m^3/s**
Total ADWF from Tai Kei Leng	**0.0211**	**m^3/s**
Total ADWF from Shap Pat Heung and Tai Kei Leng	**0.0543**	**m^3/s**
Total ADWF from Shap Pat Heung and Tai Kei Leng (with 10% contingency)	**0.0597**	**m^3/s**

(1) The floor area adopted to calculate design "retail and others" population is about 4,790m^2 and primary school teachers of 44 have been included.

(2) The floor area adopted to calculate design "welfare" population is about 8,900m^2.

(3) The floor area adopted to calculate design "retail and others" population is 3,090m^2.

(4) The floor area adopted to calculate design "welfare" population is 5,740m^2.
* SSF scenario is adopted as a worst-case scenario design.

Proposed Sewerage Works

8.4.2 There is no public sewer in the proposed development sites, and instead of upgrading the existing sewer along Long Ho Road, new sewer route will be proposed for collecting the sewage from the proposed development sites. The proposed sewer route is provided in **Figure No. 406041/S&T/FR/0801.** The proposed terminal manholes and relevant pipes are based on the notional layout of the Sites for the purpose of this EFS. The detailed location and the alignment of the proposed sewers and manholes are subject to review at detailed design stage.

8.4.3 For SPH Site, the DN450 proposed sewers laid along Long Ho Road then it connects to the proposed sewers laid from TKL Site at Tai Shu Ha Road East and Long Ho Road Roundabout. The DN560 proposed sewers further laid along the east of the Yuen

Long Bypass Floodway (YLBF) to LT SPS as shown in **Figure No. 406041/S&T/FR/0801** and eventually it connects to the SW STW.

8.4.4 For TKL Site, the DN400 proposed sewers laid along Tai Kei Leng Road and Tai Shu Ha Road East. Then, it connects with the proposed sewers from SPH Site and further laid along the east of the Yuen Long Bypass Floodway with DN560 proposed sewers to LT SPS as shown in **Figure No. 406041/S&T/FR/0801** and eventually it connects to the SW STW.

Impact to Existing/Planned Sewage Pumping Station

8.4.5 Under the proposal on sewerage, LTSPS has been considered and the sewerage from the Sites will be delivered to LT SPS. Then, the sewer pipe further connects to HT SPS and eventually conveyed to SW STW.

Table 8.5 – Estimated Flow intake to LTSPS in 2031

Source of Sewerage	Estimated average dry weather flow (m^3/day)
Estimated flow from LTSPS catchment and other developments	16,274
SPH & TKL	5,156
Total	21,430

8.4.6 As shown in **Table 8.5**, the LTSPS with design capacity of 24,744 m^3/day has sufficient capacity to cater for the additional sewage from the Sites.

8.5 Mitigation Measures

8.5.1 New sewerage pipes with 400mm, 450mm and 560mm diameter for Tai Kei Leng Site and Shap Pat Heung Site are proposed along Tai Kei Leng Road and Long Ho Road to cater the sewage generated from the proposed development sites to the existing infrastructures.

8.6 Management and Maintenance Matrix for Proposed Drainage Works

8.6.1 The parties responsible for construction and maintaining the proposed sewerage works are listed in **Table 8.6** which will be further reviewed in later stage.

Table 8.6 - Management and Maintenance Matrix

Description of Proposed Sewerage Works	Construction Party	Maintenance Party
Proposed new sewerage	CEDD	DSD
Internal sewerage for the proposed housing site	HD	HD
Internal sewerage for the proposed school sites	To be confirmed	EDB

8.7 Summary

8.7.1 Following the implementation of the proposed sewerage works, no insurmountable issue is anticipated for the proposed developments from sewerage viewpoints.

8.7.2 Detailed SIA will be conducted at the next stage by looking into the existing developments at upstream/downstream of the proposed housing development. A more accurate assessment on the cumulative impact of the flows from the proposed and existing developments on the capacity of the existing sewerage system will be provided.

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9 PRELIMINARY WATER SUPPLY IMPACT ASSESSMENT (WSIA)

9.1 General

9.1.1 This chapter aims to assess potential water supply impacts that may arise from the proposed developments, and recommends the necessary improvement or upgrading works, if any.

9.1.2 The capacity of the existing water supply facilities was assessed taken into account the additional water demand generated from the Sites.

9.2 Methodologies

Technical Approach

9.2.1 The estimated water demands for the Sites are based on the latest development parameters as indicated in the next section. The estimation is generally with reference to the unit water demands as recommended under WSD's Departmental Instruction (DI) No. 1309 and "Guidelines for Estimating Sewage Flows for Sewage Infrastructure Planning" published by the Environmental Protection Department (EPD)

9.2.2 This report has been undertaken in accordance with the following standards, Code of Practice and Design Manuals:

- Civil Engineering Design Manual (WSD);
- EPD's Guidelines for Estimating Sewage Flows for Sewage Infrastructure Planning (GESF);
- Manual of Mainlaying Practice (2012 Edition); and
- WSD's Departmental Instruction (DI) No.1309.

Design Parameters

9.2.3 In accordance with WSD's DI No.1309, the following design parameters and peak demand factors are adopted for the design of proposed water supply system of the Site. **Table 9.1** lists out the relevant design parameter to be used for the assessment.

Table 9.1 – Design Parameters

Waterworks/Facilities	Requirements
Service Reservoir Capacity	• Fresh water system – 75% of mean daily demand for interconnected supply zones. • Fresh water system – 85% of mean daily demand for isolated supply zones. • Flushing water system – 25% and 64% of mean daily demand for salt water and reclaimed water respectively.
Peak Flow Rates in Distribution Main	• Fresh water system – 3 times mean

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	daily demand • Flushing water system – 2 times mean daily demand
Residual Head	• Fresh water system – 20m • Fresh water system for firefighting – 17m • Flushing water system – 15m
Fire Fighting	• 6,000m^3/day for residential zones with a discharge pressure of 17m head assuming a draw-off rate of 3,000m^3/day through any single pedestal hydrant • Fire-fighting requirements for Zone R1=9,900m^3/day for 12 hours; Zone R2 = 6,600m^3/day for 8 hours & Zone R3 =3,300m^3/day for 6 hours.

9.3 Existing and Planned Water Supply Facilities

Existing Fresh Water Supply Facilities

9.3.1 The fresh water supply for the existing area within the proposed Development Area is presently fed by Au Tau Primary Fresh Water Service Reservoir (ATPSR) via a network of mains.

9.3.2 Au Tau Water Treatment Works (ATWTW) are the source of fresh water supply to ATPSR.

9.3.3 The existing fresh water service reservoir supply zones that the Sites fall into are shown in **Figure No. 406041/S&T/FR/0901.**

9.3.4 The details of the service reservoir that related to the Sites are listed in **Table 9.2** below:

Table 9.2 – Details of the Relevant SRs

	AT FW PSR
Existing Capacity (m^3)	100,548
Top Water Level (mPD)	+96.00
Invert Level (mPD)	+87.22

Existing Salt Water Supply Facilities

9.3.5 Salt water supply for the Northwest New Territories presently fed by Lok On Pai Salt Water Pumping Station (LOPSW P/S) and Tan Kwai Tsuen Salt Water Service Reservoir (TKT SWSR) via a network of trunk mains and distribution mains.

9.3.6 LOPSW P/S was commissioned in mid-2015 with a capacity of 18,100m^3, meanwhile the salt water supply only covers as far as part of Yuen Long New Town. SPH site has

no salt water supply from LOPSW P/S; However, the existing salt water supply zone of LOPSW P/S covers the TKL Site. SPH Site is using Temporary Mains - water for Flushing (TMF) to replace salt water for flushing. The existing salt water mains at/ in the vicinity of the Sites are shown in **Figure No. 406041/S&T/FR/0902**.

Planned Water Supply Facilities

9.3.7 According to the Plan of Supply of reclaimed water to Tin Shui Wai, Yuen Long Town and Tuen Mun, it shows that the Wang Chau Reclaimed Water Service Reservoir (WC RWSR) is proposed to supply the flushing water. It is also anticipated that the planned reservoir is able to accommodate the flushing water demand by the proposed development. The details of the flushing water supply was subject to further review by relevant departments, such as CEDD, WSD and DSD.

9.4 Water Demand of the Development

9.4.1 The fresh and salt water unit demands generated from domestic users and service trades in the developments are estimated based on WSD Departmental Instruction No. 1309 (DI No. 1309). The unit demands for fresh water and salt water are shown in **Tables 9.3** and **9.4** respectively.

Table 9.3 - Summary of Fresh Water Unit Demand

Consumer Class	Value	Unit
Residential	230	l/h/d
Service Trade	40	l/h/d
School	25	l/h/d

Table 9.4 - Summary of Salt Water Unit Demand

Consumer Class	Value	Unit
Residential	70	l/h/d
Service Trade	40	l/h/d
School	25	l/h/d

9.4.2 The estimated fresh water and salt water demands of the Sites are summarized in **Table 9.5**. The fresh and salt water demands have been calculated in accordance with DI No. 1309.

Table 9.5 - Summary of Estimated Water Demand

Site	Fresh Water Demand	Salt Water Demand
SPH	3,735m^3/day	1,003m^3/day
TKL	2,387m^3/day	632m^3/day

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9.5 Recommendations for Fresh Water Supply

Proposed Scheme – Au Tau Fresh Water Primary Service Reservoir (AT FW PSR)

9.5.1 According to available information, an existing DN700 distribution mains tee-off from an existing DN1200 trunk main from AT FW PSR that provides fresh water supply to Yuen Long Town area including the Sites via the existing DN700 mains along Castle Peak Road.

9.5.2 The capacity assessment and residual head calculation stated that numerous existing pipes could not cater the demand generated from the Sites. Therefore, upgrade of the existing pipes is required which will be mentioned in later section.

9.5.3 The proposed fresh water supply schemes to the Sites is shown in **Figure No. 406041/S&T/FR/0903** and summarized in **Table 9.6** below.

Table 9.6 – Summary of Proposed Fresh Water Supply Schemes

Source of FW Supply	Formation Level (mPD)	Residual Head at Connection Point (m)[1]	Invert Level (mPD)	Top Water Level (mPD)	MDD Factor[2]	Design/ Spare Capacity (m^3)	Required Capacity (m^3)
Proposed Scheme • AT FW PSR	7.0	58.1/57.5	87.22	96	0.85	100,548	5,204

Notes:
[1] a minimum residual pressure of 20-metre head should be provided for fresh water supply
[2] Required Capacity of FWSR = 0.75 MDD for non-isolated supply zone with critical consumers
[2] Required Capacity of FWSR =0.85 MDD for isolated supply zone without critical consumers

9.6 Recommendations for Flushing Water Supply

Proposed Scheme – Planned WC RWSR

9.6.1 The proposed flushing water supply for the Sites will be supplied from existing flushing water main network fed by WC RWSR. The existing 300mm and 400mm diameter flushing water mains along Shap Pat Heung Road is required to be upgraded to 700mm diameter and the pipe size for the flushing water mains that connects to SPH Site and TKL Site is proposed to be DN150.

9.6.2 In case there is any programme mismatch between the population intake of the Development and the commissioning of the planned WC RWSR, TKT SWSR is proposed as an interim measure by the time of population intake of the Developments as agreed with WSD/System Planning.

9.6.3 The proposed salt water supply scheme to the Sites is shown in **Figure No. 406041/S&T/FR/0904** and summarized in **Table 9.7** below.

Table 9.7 – Summary of Proposed Flushing Water Supply Schemes

Site	Source of SW Supply	Formation Level (mPD)	Residual Head at Connection Point (m)[1]	Invert Level (mPD)	Top Water Level (mPD)	MDD Factor[2]	Design/ Spare Capacity (m^3)	Required Capacity (m^3)
SHP	Planned WC RWSR	7.0	17.1	60.845	67.00	0.25	40,000	251
TKL		7.0	27.2					158

Note:
[1] a minimum residual pressure of 15-metre head should be provided for salt water supply
[2] Required Capacity of SWSR =0.25 MDD

9.6.4 The above mentioned fresh and flushing water supply schemes are proposed based on the latest information available and are subject to change due to potential intensification of future development and assessments, adjustments and assumptions are subject to further study and verification.

9.7 Smart Water Initiatives and Automatic Meter Readings

9.7.1 The application of the smart water supply initiatives for the proposed housing developments should be explored and implemented as far as possible. Details of the smart water supply initiatives will be taken into consideration in the Detailed Design Stage.

9.8 Grey Water / Rainwater for Non-potable Purposes

9.8.1 The application of the grey water or rainwater for non-potable purposes for the proposed housing developments should be explored and implemented as far as possible. Details of the grey water or rainwater for non-potable purposes will be taken into consideration in the Detailed Design Stage.

9.9 Summary

9.9.1 The results of this Preliminary WSIA have confirmed that the proposed fresh/flushing water supply networks can accommodate the additional demand of the proposed Development and no adverse impact to the existing water supply systems is anticipated.

10 PRELIMINARY UTILITIES IMPACT STUDY (UIS)

10.1 General

10.1.1 This chapter aims to assess potential utility impacts that may arise from the proposed developments, and recommends the necessary improvement or upgrading works, if any.

10.2 General Requirements for Utility Installation

10.2.1 Following the general requirements for various utility installations stipulated in HKPSG, Highways Department Technical Circular 3/90, Drainage Services Department Technical Circular No. 4/2019 "Handling of Utility Services Encroaching upon Public Drainage Facilities" and Public Lighting Design Manual by HyD, the cover and separation requirements for various utility installations are summarized below in **Table 10.1**.

Table 10.1 General Requirement for Underground Utility Installation

Common Utility	Minimum Cover		Separation from Other Utilities & Planting
	Footpath / Areas without Vehicular Traffic	Road / Areas with Vehicular Traffic	
HyD public lighting cables	450mm	900mm	-
CLP cables - 132kV - 11kV	1000mm 750mm	1200mm 900mm	Working clearance of 300mm from other utilities for 132kV cables and 150mm from other utilities for 11 kV cables (1m working clearance between 132kV and 11kV)
HKCGC pipes - Low pressure - Intermediate pressure	700mm 1000mm	1100mm 1100mm	Working clearance of 600mm for steel gas pipes, 300mm for other gas pipes
PCCW cables HGC cables HKBN cables Wharf T&T cables NWT cables CTV cables	450mm 450mm 450mm 450mm 450mm 450mm	900mm 900mm 900mm 900mm 900mm 900mm	Working clearance of 300mm from other utilities or as required by the service provider
WSD Watermains	600mm	1000mm	300mm from other utilities

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			No trees or shrub with penetrating roots within 3m from the centre line of the water mains.
DSD Drainage Facilities	450mm	900mm	300mm from the outer face of the existing public drainage facilities, includes sewers, drains and manholes etc.

10.3 Existing Utility

Electricity Supply

10.3.1 CLP Power Hong Kong Limited (CLP) has been consulted regarding their existing transmission and distribution network in the vicinity of the Sites.

10.3.2 SPH Site has a small section of 11kV cable located in the south east of the site. For TKL Site, a 11kV cable is located along Tai Kei Leng Road and a section of the cable is presented in the south east of the site. Both of the Sites have 400kV cable inside the boundary and diversion or removal of the existing transmission cables are therefore required.

10.3.3 Some low voltage power cables are presented in both sites supplying electricity to the existing facilities such as warehouses and car washing site. Diversion or removal of the existing transmission cables are therefore required. The arrangement will be further liaised with CLP in later design stages.

Gas Supply

10.3.4 Hong Kong and China Gas Company Limited (HKCGC) has been consulted regarding the gas supply issue.

10.3.5 Currently there are no existing gas mains within the Sites. For SPH Site, the closest gas main is located on the opposite side of the nullah. For TKL Site, the closest gas main is located in The Reach which is close to the north vicinity of the site boundary. Since there is high pressure gas main in the vicinity of the Sites, Quantitative Risk Assessment for high pressure gas pipe is necessary.

10.3.6 There is no planned or ongoing gas pipe network to be laid within and in close proximity to the SPH Site. However, a planned gas pipe is proposed to laid along the north vicinity of TKL Site and a small part of the proposed gas main is laid within the site boundary. The arrangement will be further liaised with HKCGC in the later design stages.

Telecommunication

10.3.7 Telecommunication companies including providers of telephone, broadband and television services have been consulted.

10.3.8 Hong Kong Telecommunications (HKT) Limited has telecommunication service feeds running within the Sites. These existing cables are all laid underground. The cable diversion works and actual connection points would be further liaised with the telecom services undertakers in later design stages.

Street Lighting

10.3.9 There are existing street lights and cables located within the Sites. No planned or ongoing street lighting network to be laid within the Sites.

10.4 Findings and Recommendations on Utilities

Electricity Supply

10.4.1 CLP has been consulted on the power supply to the proposed housing development sites. They have preliminary confirmed that the current available supply capacity from near primary substation can meet the demand generated from the Sites. The constraint of laying cable will be laying across the nullah and Yuen Long Highway.

Gas Supply

10.4.2 As advised by HKCGC, to cater the increased gas demand arising from the Development, a series of works are proposed to be implemented.

10.4.3 For SPH Site, it is proposed to extend the medium pressure gas main along Fung Yau Street North (from Yuen Long Town) and installation of a governor kiosk within the site area.

10.4.4 For TKL Site, it is proposed to extend the medium pressure gas main from Castle Peak Road – Hung Shui Kiu and install a governor kiosk within the site area.

10.4.5 The exact alignment and the town gas supply arrangement will be further liaised and determined with HKCG in later stage.

10.4.6 It is noted that the provision of utilities from some utility undertakers, such as telecommunication service providers, could not be confirmed at this stage of the Study. Further liaison and coordination with relevant Government departments and utility undertakers should be carried out during the later detailed design stage to ensure that sufficient utility services would be provided before the population intakes of the developments.

10.5 Summary

10.5.1 From utilities viewpoints, no insurmountable issue is anticipated for the proposed development.

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11 PRELIMINARY SUSTAINABILITY ASSESSMENT (SA)

11.1 General

11.1.1 The objectives of the Preliminary SA are listed as follows:

a) Use the Computer-Aided Sustainability Evaluation Tool (CASET) as evaluation framework to evaluate and assess the Infrastructure;

b) Devise and modify the set of guiding principles, indicators and evaluation criteria to assess/update the sustainability implications;

c) Conduct assessment on cost effectiveness and possible environmental impacts during construction and operational stages;

d) Conduct assessment on the social implications to the local community as well as to Hong Kong at large;

e) Evaluate and analyse the sustainability implications; and

f) Identify the key sustainability issues.

11.1.2 A summary of various aspects of the review are presented in the section below.

11.2 Approaches for Sustainability Assessment

11.2.1 An application namely "CASET Version 5.0" developed by Planning Department is adopted as an evaluation framework to assess the sustainability implications of the Project in a structured manner.

11.2.2 A set of guiding principles extracted from the CASET is listed as follows:

- Economy
- Health and Hygiene
- Natural Resources
- Society and Social Infrastructure
- Biodiversity
- Leisure and Cultural Vibrancy
- Environmental Quality; and
- Mobility

11.2.3 A list of characterization includes:

- Art / Culture / Recreation / Entertainment
- Conservation, Environment and Agriculture
- Demographics
- Economics
- Education
- Energy
- Health and Living Conditions
- Housing
- Industry
- Land and Infrastructure
- Transport

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- Waste and Waste Water

11.3 Scenario

11.3.1 Considerations are compared between the "with the proposal" and "without the proposal" scenarios. For instance, the "without" scenario represents the baseline condition of the indicator prior to the implementation of the project while the "with" scenario includes the implementation of the Development and the associated site formation and infrastructure works under this Project.

11.4 Results of the Sustainability Assessment

11.4.1 The CASET parameters have been assessed qualitatively and quantitatively where possible. The results are summarized in **Table 11.1** below:

Table 11.1 - Results of Parameter Assessment Under "Without Development" and "With Development" Scenario

Economic / Environmental Parameters	Qualitative Changes ("without Development")	Variation ("without Development")	Qualitative Changes ("with Development")	Variation ("with Development")
Carbon Dioxide Emitted Per Year	Remain	Remain unchanged	Increase	Very small deterioration
Construction Waste	Remain	Remain unchanged	Increase	Very small deterioration
Cost-benefit	Remain	Remain unchanged	Increase	Very small improvement
Criteria Air Pollutants	Remain	Remain unchanged	Increase	Very small deterioration
Eco-value Habitats	Remain	Remain unchanged	Remain	Remain unchanged
Education Expenditure	Remain	Remain unchanged	Increase	Small deterioration
Energy Consumption	Remain	Remain unchanged	Increase	Very small deterioration
Excessive Noise	Remain	Remain unchanged	Increase	Small deterioration
Fixed Capital	Remain	Remain unchanged	Increase	Small improvement
Freight Costs	Remain	Remain unchanged	Remain	Remain unchanged
Freshwater Supplied and Consumed	Remain	Remain unchanged	Increase	Small improvement
Income Differential	Remain	Remain unchanged	Decrease	Small improvement
Job Creation/ Loss (Other Occupations)	Remain	Remain unchanged	Increase	Very small improvement

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Economic / Environmental Parameters	Qualitative Changes ("without Development")	Variation ("without Development")	Qualitative Changes ("with Development")	Variation ("with Development")
Landfill Capacity	Remain	Remain unchanged	Decrease	Very small deterioration
Local Freshwater	Remain	Remain unchanged	Remain	Remain unchanged
Municipal Solid Waste	Remain	Remain unchanged	Increase	Very small deterioration
Open Space Shortfall	Remain	Remain unchanged	Decrease	Small improvement
Protected and Managed Habitats	Remain	Remain unchanged	Remain	Remain unchanged
River Water Quality	Remain	Remain unchanged	Remain	Remain unchanged
Significant Landscape Features (Area)	Remain	Remain unchanged	Decrease	Small deterioration
Significant Landscape Features (Point)	Remain	Remain unchanged	Decrease	Very small deterioration
Toxic Air Pollutants	Remain	Remain unchanged	Increase	Very small deterioration
Travel Speed	Remain	Remain unchanged	Remain	Remain unchanged

11.4.2 The sustainability assessment at this stage indicates that with the implementation of the Project, the main benefits would be improvement in housing and living conditions, economy, leisure and society and social infrastructure. These benefits come in the form of improved health and well-being of residents, positive economic return, and enhancement to social involvement. Also, the associated transport infrastructure would improve connectivity between the Development and the periphery regions to the rest of Hong Kong. On the other hand, negative impacts come mainly in the form of environmental degradation, with deterioration in natural resources.

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12 PRELIMINARY LAND REQUIREMENT STUDY (LRS)

12.1 General

12.1.1 This chapter aims to summarize the key land requirement issues due to the proposed developments.

12.2 Land Resumption

12.2.1 The number of affected licenses and total area of affected licenses within the Sites and associated infrastructure works are shown in **Tables 12.1** and **12.2** below. The affected license types include Government Land Allocation (GLA), Modification of Tenancy (MOT), Letter of Approval (LOA) and Short Term Tenancy (STT).

Table 12.1– Existing Licenses to be Affected

License Type / Site	GLA	MOT	LOA	STT	Total
SPH	4	16	4	2	**26**
TKL	-	3	1	-	**4**

Table 12.2– Total Area of Licenses to be affected

Lot Type	Approx. Area of Licenses Affected (m^2)	
	SPH	TKL
MOT	632.7	296.3
LOA	577.7	10.5
GLA	626.5	-
STT	446.9	-
Total	**2,283.8**	**306.8**

12.3 Affected Burial Grounds/Graves/Urns

12.3.1 Permitted Burial Ground No. 32 is located at the southeast of SPH Site. Existing graves and urns are also identified around the Permitted Burial Ground No. 32. The permitted burial ground and graves and urns are at some distance away from the SPH Site so it does not have significant effect on the Sites.

12.4 Affected Land Lots

12.4.1 For SPH Site, there are total 119 of private lots will be affected by the proposed site formation and associated infrastructure works, with a total area of about 3.5 ha.

12.4.2 For TKL Site, there are total 46 of private lots will be affected by the proposed site formation and associated infrastructure works, with a total area of about 1.8 ha.

12.5 Affected Orchards and Lands for Agricultural Activities

12.5.1 Based on the observation during site visits, agricultural activities such as fruit trees within the inaccessible areas were identified within the land resumption boundary of the Sites.

12.6 Summary

12.6.1 A preliminary land requirement is estimated based on the preliminary design and will be subject to review during the detailed design stage. It will be revised and updated, if necessary, in accordance with the latest development of the Project.

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13 PRELIMINARY ENVIRONMENTAL REVIEW (PER)

13.1 General

13.1.1 The purpose of this PER is to:

a) Identify the important environmental factors of the Development and Infrastructure Works;

b) Identify elements of the Development and Infrastructure Works which are DP(s) under EIAO (Caps. 499);

c) Identify existing and planned sensitive receivers (including those within Development) and sensitive parts of natural environment which may subject to impact by Development and Infrastructure Works;

d) Assess the possible impacts of the Development and infrastructure Works on the environment and vice versa;

e) Identify, assess and specify methods, measures and standards, to be included in the detailed design, construction and operation of Development and Infrastructure Works which are necessary to mitigate these impacts and reduce them to established levels;

f) Identify alternatives/options/alignments of the Development and Infrastructure Works to minimize the potential environmental impacts including but not limited to ecological, landscape and visual impacts; and

g) Assess the environmental impacts arising from the Development and Infrastructure Works and to recommend mitigation measures to keep the potential impacts within the acceptable levels of the current standards/regulations.

13.2 Air Quality

Air Sensitive Receiver (ASR)

13.2.1 The first layer of ASRs (i.e. nearest to the Project boundary) are selected as representative ASRs. The 500m assessment areas as well as the representative existing ASRs during construction phase are identified.

13.2.2 Based on the notional layout, air sensitive uses such as residential buildings, welfare facilities and school will be provided within the Development Sites, which are considered as planned ASRs during the operation phase of the Project.

Air Quality Impacts during Construction Phase

13.2.3 Potential sources of air quality impacts would be dust emissions generated during construction activities related to the movement of vehicles along unpaved roads, material handling and wind erosion of exposed area during site formation.

13.2.4 Some existing ASRs are located close to the Sites and will potentially be affected by the site formation work and infrastructure works of the Project. The size of the TKL Site is small and the site is generally flat, the volume of material to be handled is expected to be small. Significant dust emission is not expected from the construction works at TKL Site. Given the size of the SPH Site, site formation work will be conducted in phases. Since part of the Project Site for housing development will require site investigation and potential land decontamination work after land resumption, site formation work of the Project Site will be constructed by phases

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subject to the planning of the land contamination investigation and decontamination work to be carried out. Hence, it is expected that the size of workfront areas at one time will be limited. The sub-phase work arrangement will be implemented such that the active workfront at one time will be minimised and thus to minimise potential dust emissions during the site formation works. With the minimisation of workfront area, phasing of construction works and implementation of dust control measures recommended in **Sections 13.2.15 and 13.2.16**, potential dust impacts would be controlled and the dust impact onto the ASRs is expected to be acceptable. In particular, the air quality impacts during construction phase will be reviewed in subsequent IDC stage to ensure that no adverse air quality impact would be imposed on the nearby ASRs and a dust monitoring and audit programme will be recommended to be implemented during the construction stage.

13.2.5 Other types of infrastructure works proposed for the Project include road / junction improvement and pipe laying works. These types of work are relatively small in scale and the volume of material to be handled is expected to be limited. Dust emission from the infrastructure works is expected to be low.

13.2.6 Dust control measures stipulated under the Air Pollution Control (Construction Dust) Regulation, together with proper site management/practice and good housekeeping are required to mitigate the potential dust impacts on the nearby ASRs. Requirements stipulated in the Air Pollution Control (Non-road Mobile Machinery) (Emission) Regulation and Fuel Restriction Regulations will also be followed to control the type of fuel used and potential emissions from non-road mobile machinery during construction phase. "Recommended Pollution Control Clauses for Construction Contracts" available on EPD website also contains the recommended control measures to be implemented during construction. Appropriate dust suppression measures proposed in **Sections 13.2.15 and 13.2.16** are to be followed as far as practicable to control dust emission. In consideration of the above, no unacceptable dust impact on nearby ASRs is anticipated.

Air Quality Impacts during Operation Phase

13.2.7 During operation phase, road traffic emissions (e.g. NO_2, RSP and FSP) from existing open roads (e.g. Yuen Long Highway) and new access road, industrial emissions (e.g. SO_2, NO_2, RSP and FSP) from the active chimney within the assessment area are of concern to the Development.

Vehicular Emissions

13.2.8 The planned ASRs will potentially be affected by vehicular traffic emissions (e.g. NO_2, RSP and FSP) from existing open roads, in particular Yuen Long Highway, which is classified as an Expressway in the Annual Traffic Census 2020 published by Transport Department. Shap Pat Heung Road is a Primary Distributor while Tai Kei Leng Road and Long Ho Road are Local Distributors. The design of the Development has incorporated appropriate setback distance from the road network. It is recommended that no air sensitive uses, including fresh air intake of ventilation system or openable windows of the buildings, and active recreational uses should be located within the buffer zones. With the implementation of this design measure at the Welfare Building at SPH Site, sufficient separation between the planned ASRs and

the nearby roads can be provided and no adverse air quality impact on the planned ASRs of the Development is anticipated from vehicular emissions. The existing structures located within the buffer zones from the proposed access road to the SPH site will be resumed by this Project and they are not considered as existing ASRs.

13.2.9 As junctions J5, J10 and J21 only involve modification of road markings and/or road divider without physical change to the road kerbs, change in air quality impact is not anticipated. The ASRs closest to the junctions with modified road kerb of junctions J14 and J20 have been chosen for analysis. Shap Pat Heung Interchange and Shap Pat Heung Road are Primary Distributors while Tai Shu Ha Road East and Tai Kei Leng Road are Local Distributors. The required minimum buffer distances between the ASRs near J14 and the modified Shap Pat Heung Road and Shap Pat Heung Interchange can comply with HKPSG's requirements. Given that the distance between the ASRs near J14 is more than 70m, adverse air quality impact on ASRs near Junction J14 due to the junction improvement works at J14 is not anticipated. For junction J20, the section with road kerb modification is proposed along southbound Tai Shu Ha Road East where the road kerb is shifted away from the ASRs, and road kerb setback along westbound Tai Kei Leng Road under the Yuen Long Highway viaduct where there are no ASRs located. The shift of road kerb towards A51, A52 and A53 near J20 is proposed under YLS road improvement works and is not covered under this Project. The road modification works along eastbound Tai Kei Leng Road near these ASRs include the addition of pedestrian crossing facilities and modification of traffic lane without shifting of road kerb. Adverse air quality impact from the junction improvement at J20 is not expected.

Public Transport Interchange

13.2.10 A mechanical ventilation system will be provided (if required subject to future detailed design) for the bus-terminus at SPH Site to ensure that the air quality inside the bus-terminus would comply with the requirement of the EPD. Should a mechanical ventilation system be provided in future, the exhaust louver of the ventilation fan would be located facing away from the any nearby ASRs within the Site, e.g. facing Yuen Long Highway. The ventilation system will be designed based on the considerations as specified in EPD's ProPECC PN1/98. Therefore, adverse air quality impact due to the bus-terminus is not anticipated.

Car Park

13.2.11 The design and operation of the car park at the SPH and TKL Sites shall follow EPD's ProPECC PN2/96 on Control of Air Pollution in Car Parks and comply the air quality guidelines set out in the PN.

Chimney Emissions

13.2.12 Site visits were carried out in September and December 2020 to identify industrial emission sources within the 500m assessment area. As mentioned, one chimney and a number of chimneys, which are located approximately 465m northwest and 320m west from TKL Site respectively, were identified during the site visits.

13.2.13 These chimneys are abandoned. Hence, no adverse air quality impact on the planned ASRs of the Development is anticipated from chimney emissions.

Odour Sources

13.2.14 Odour from the nullah nearby the SPH Site was not detected during site surveys and no other odour emission sources have been identified within the assessment areas of the Development Sites.

Mitigation Measures

Construction Phase

13.2.15 Under the Air Pollution Control (Construction Dust) Regulation, the Contractor is required to ensure that dust control measures stipulated in the Regulation are implemented to control dust emissions. Dust control measures shall be incorporated into the Works Contract Specification where practicable as an integral part of good construction practice, including:

- Use of regular watering to reduce dust emissions from exposed site surfaces and unpaved roads, particularly during dry weather;
- Use of frequent watering for particularly dusty construction areas and areas close to ASRs;
- Side enclosure and covering of any aggregate or dusty material storage piles to reduce emissions. Where this is not practicable owing to frequent usage, watering shall be applied to aggregate fines;
- Open stockpiles (if any) shall be avoided or covered. Prevent placing dusty material storage piles near ASRs;
- Tarpaulin covering of all dusty vehicle loads transported to, from and between site locations;
- Establishment and use of vehicle wheel and body washing facilities at the exit points of the site;
- Imposition of speed controls for vehicles on unpaved site roads, 8 km per hour is the recommended limit;
- Routing of vehicles and position of construction plant should be at the maximum possible distance from ASRs;
- Every stock of more than 20 bags of cement or dry pulverized fuel ash (PFA) should be covered entirely by impervious sheeting or placed in an area sheltered on the top and the 3 sides;
- Cement or dry PFA delivered in bulk should be stored in a closed silo fitted with an audible high-level alarm which is interlocked with the material filling line and no overfilling is allowed;
- Loading, unloading, transfer, handling or storage of bulk cement or dry PFA should be carried out in a totally enclosed system or facility, and any vent or exhaust should be fitted with an effective fabric filter or equivalent air pollution control system; and
- Electric power supply shall be provided for on-site machinery during the

construction stage as far as possible to minimise any gaseous emissions.

13.2.16 Some ASRs are in close proximity to the site boundary (<5m) and the following mitigation measures are recommended to minimise the construction dust impact to these ASRs:

- Erect hoarding of sufficient height along the section of the site boundary close to these ASRs;
- Carefully plan the construction works so that machinery and dust causing activities (e.g. haul roads and stockpiling areas) are located away from these ASRs as far as possible; and
- Erect solid screens or barriers around dusty activities.

Operation Phase

13.2.17 Provided that any air sensitive uses, including fresh air intake of ventilation system or openable windows of the buildings, active recreational uses at the Development Sites are designed to satisfy HKPSG's recommended minimum buffer distance from existing road network and future access road within the Sites, as well as the ventilation system of the bus-terminus and carpark to be designed in compliance with the requirement stipulated in EPD's ProPECC PN1/98 and ProPECC PN2/96 with exhaust facing away from ASRs, adverse air quality impact on the Development is not anticipated during the operation phase of the Project.

13.3 Noise

Noise Sensitive Receiver

13.3.1 The assessment area for noise impact assessment is defined as the area within 300m from the Project boundary. The representative NSRs as shown in **Tables 13.1** and **13.2** are identified with reference to the latest information provided on the survey maps, topographic maps, aerial photos, land status plans and are verified by various site surveys. Planned NSRs are identified based on the notional layout adopted in the assessment. The location of the NSRs are showing in **Figure Nos. 406041/S&T/FR/1302** to **1310**.

Table 13.1 Representative Existing NSRs during Construction Phase

NSR	Descriptions	Nature of Use	No. of Storeys	Approx. Horizontal distance to the nearest boundary of the worksites (m)
N01	106D Hang Mei Tsuen	Residential	3	17
N02	111-112 Hang Mei Tsuen	Residential	1	7
N03	34-35 Tong Fong Tsuen	Residential	3	<5
N04	1 Tong Fong Tsuen	Residential	3	5
N05	179 Hang Mei Tsuen	Residential	3	<5
N06	408 Tong Fong Tsuen	Residential	3	15
N07	Green Orchid Tower 1	Residential	5	36
N08	Park Royale Tower 10	Residential	10	<5
N09	Park Royale Tower 7	Residential	10	<5
N10	Park Royale Tower 2	Residential	10	<5

NSR	Descriptions	Nature of Use	No. of Storeys	Approx. Horizontal distance to the nearest boundary of the worksites (m)
N11	Scenic Gardens Block 1	Residential	37	8
N12	Po Leung Kik Law's Foundation School	Educational	7	9
N13	Yuen Long Public Secondary School	Educational	7	15
N14	Scenic Gardens Block 7	Residential	14	10
N15	Parkside Villa Block 6	Residential	10	5
N16	Villa Art Deco Block 1	Residential	11	<5
N17	Villa Art Deco Block 2	Residential	11	<5
N18	Gertrude Simon Lutheran College	Educational	7	15
N19	Greenery Place Towe 1	Residential	11	5
N20	Emerald Green Block 1	Residential	24	5
N21	Village House at Ma Tin Tsuen	Residential	1	16
N22	Atrium House	Residential	21	14
N23	455 Ma Tin Tsuen	Residential	3	23
N24	197B Ma Tin Tsuen	Residential	3	9
N25	La Grove Block 2	Residential	17	6
N26	50 Ma Tin Pok	Residential	3	12
N27	46 Ma Tin Pok	Residential	4	19
N28	Village House at Ma Tin Pok	Residential	2	12
N29	Village House at Ma Tin Pok	Residential	3	17
N30	627 Tai Kei Leng	Residential	1	52
N31	Park Reach	Residential	7	10
N32	166 Tai Kei Leng	Residential	3	14
N33	214 Tai Kei Leng	Residential	2	11
N34	225 Tai Kei Leng	Residential	3	15
N35	290A Tai Kei Leng	Residential	2	14
N36	290L Tai Kei Leng	Residential	3	22
N37	110 Tai Kei Leng	Residential	3	24
N38	The Reach Tower 6	Residential	24	8
N39	The Reach Tower 7	Residential	24	7
N40	311 Tai Kei Leng	Residential	3	<5
N41	348 Tai Kei Leng	Residential	3	<5
N42	677 Tai Kei Leng	Residential	3	33
N43	448 Sheung Ching San Tsuen	Residential	2	11
N44	704 Sheung Ching San Tsuen	Residential	2	14
N45	35 Shung Ching San Tsuen	Residential	2	14
N46	60 Sheung Ching San Tsuen	Residential	3	40
N47	689 Sheung Ching San Tsuen	Residential	1	30
N48	Temporary Structure at Sheung Ching San Tsuen	Residential	1	33
N49	Temporary Structure at Sheung Ching San Tsuen	Residential	1	36
N50	Temporary Structure at Kong Tau Tsuen	Residential	1	49
N51	58A Kong Tau Tsuen	Residential	3	62
N52	59 Kong Tau Tsuen	Residential	3	57
N53	61 Kong Tau Tsuen	Residential	3	37
N54	Village House at Sheung Yau Tin Tsuen	Residential	1	9
N55	267 Sheung Yau Tin Tsuen	Residential	1	15
N56	Village House at Sheung Yau Tin Tsuen	Residential	1	<5

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NSR	Descriptions	Nature of Use	No. of Storeys	Approx. Horizontal distance to the nearest boundary of the worksites (m)
N57	Temporary Structure at Sheung Yau Tin Tsuen	Residential	1	23
N58	Village House at Sheung Yau Tin Tsuen	Residential	1	<5
N59	77 Chuk San Tsuen	Residential	1	25
N60	30A Chuk San Tsuen	Residential	3	40
N61	Temporary Structure at Sheung Yau Tin Tsuen	Residential	2	39
N62	Temporary Structure at Sheung Yau Tin Tsuen	Residential	1	34
N63	Village House at Ha Yau Tin Tsuen	Residential	2	5
N64	Village House at Ha Yau Tin Tsuen	Residential	1	26
N65	Hoover Garden Block 20	Residential	3	12
N66	Yoho Town Block 6	Residential	34	24
N67	Yoho Town Block 7	Residential	32	20
N68	S.K.H Bishop Baker Secondary School	Educational	7	<5
N69	C.C.C. Kei Yuen College	Educational	7	5
N70	Lin Fat Building	Residential	10	<5
N71	Ho Shun Yee Building Block 1	Residential	19	16
N72	Yoho Town Block 9	Residential	35	<5
N73	Yoho Town Block 1	Residential	37	24
N74	Yoho Midtown Block 9	Residential	38	8
N75	Kwong Ming Ying Loi School	Educational	7	26
N76	Yoho Midtown Block 6	Residential	40	23
N77	Pearl House, On Lok Road	Residential	4	33
N78	Wai Fat Building, Fung Cheung Road	Residential	19	58
N79	Cheong Wai Building, Fung Yau Street North	Residential	19	37
N80	Yik Fat Building	Residential	19	90
N81	80-84 Tai Kei Leng	Residential	3	13
N82	Residence 88 Tower 1	Residential	24	8
N83	112 Sham Chung Tsuen	Residential	3	40
N84	Temporary Structure at Sham Chung Tsuen	Residential	2	25
N85	Kong Tau San Tsuen	Residential	2	<5

Table 13.2 Representative NSRs for Road Traffic Noise Impact Assessment

NSR	Descriptions	Nature of Use	No. of Storeys
Tai Kei Leng Site			
TN01-01 to TN01-05	Planned NSRs of Block 1 (TKL Site)	Residential	41(1)
TN02-01 to TN02-06	Planned NSRs of Block 2 (TKL Site)	Residential	45(1)
TN03-01 to TN03-06	Planned NSRs of Block 3 (TKL Site)	Residential	41(1)
WF01-01 to WF01-06	Planned NSRs of Welfare Facility in Podium (TKL Site)	Institutional	1
Shap Pat Heung Site			
SN01-01 to SN01-07	Planned NSRs of Block 1 (SPH Site)	Residential	36(1)
SN02-01 to SN02-03	Planned NSRs of Block 2 (SPH Site)	Residential	38(1)
SN03-01 to SN03-05	Planned NSRs of Block 3 (SPH Site)	Residential	41(1)
SN04-01 to SN04-07	Planned NSRs of Block 4 (SPH Site)	Residential	49(1)
WF02-01 to WF02-06	Welfare Building at SPH Site	Institutional	1
WF03-01 to WF03-07	Welfare Facility in Podium	Institutional	2
PS01 to PS04	School at SPH Site	Educational	7

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NSR	Descriptions	Nature of Use	No. of Storeys
E07	120 Kong Tau San Tsuen	Residential	2
E08	Village House at Sheung Yau Tin Tsuen	Residential	1
E09	267 Sheung Yau Tin Tsuen	Residential	2
E10	Village House at Sheung Yau Tin Tsuen	Residential	1
E11	Village House at Sheung Yau Tin Tsuen	Residential	1
Junction J14			
E01	110 Sheung Yau Tin Tsuen	Residential	4
E02	The Reach Tower 6	Residential	24
E03	The Reach Tower 7	Residential	24
E04	61 Kong Tau Tsuen	Residential	3
E05	59 Kong Tau Tsuen	Residential	3
E06	58A Kong Tau Tsuen	Residential	3

Notes:
(1) It refers to residential floors on 5/F - 40/F at Block 1, 5/F - 42/F at Block 2, 5/F - 45/F at Block 3, and 1/F - 49/F at Block 4 for Shap Pat Heung Site; 5/F - 45/F at Block 1, 5/F - 49/F at Block 2, and 4/F - 44/F at Block 3 for Tai Kei Leng Site.

Construction Noise Impact

13.3.2 Key construction activities of the proposed site formation and infrastructure works have been identified for noise assessment. The major construction works would include the following activities:

- Site clearance;
- Excavation works;
- Filling works;
- Formation of internal access road;
- Infrastructure works such as sewerage works, water supply works, drainage works, and utilities construction; and
- Road/junction improvement works.

13.3.3 These construction activities will involve the use of Powered Mechanical Equipment (PME) including air compressor, excavators, lorries, concrete lorry mixers, pokers, rollers, etc. However, blasting works will not be involved in the construction sites/ activities.

13.3.4 The use of PMEs for the construction works would likely cause potential noise impact on the existing NSRs located in the vicinity of the Sites. As the size of the Development Sites is not of large scale and the two Sites are more than 300m apart, the active works area at one time is considered to be small. The infrastructure works outside the Sites will mainly be typical utility installation/upgrading works of small scale and road construction/widening works, which will be conducted in sequence. Considering that active work site and the scale of work at one time would not be significant, with the implementation of appropriate mitigation measures (e.g. use of quiet plant, noise barrier/enclosure for PMEs, limiting number of PMEs, etc.) and good site practices,

the potential construction noise impact are considered manageable. As such, no adverse construction noise impact is anticipated.

13.3.5 Good site practices listed below should be followed during construction:

- Only well-maintained plant should be operated on-site and plants should be serviced regularly during the construction period;
- Mobile plant, if any, should be sited as far from NSRs as possible;
- Plant known to emit noise strongly in one direction should, wherever possible, be properly orientated so that the noise is directed away from the nearby NSRs;
- Use of site hoarding as a noise barrier to screen noise at low level NSRs;
- Machines and plant that may be in intermittent use should be shut down between works periods or should be throttled down to a minimum; and
- Any material stockpiles and other structures should be effectively utilized, wherever practicable, to screen the noise from on-site construction activities.

13.3.6 At locations where the existing NSRs are close to the Project works, quieter construction methods should be adopted as far as practicable.

13.3.7 Since the detailed information on construction activities of the Project is not yet confirmed and finalised at this feasibility study stage, a quantitative construction noise impact assessment will be carried out in the investigation, design and construction stage by the Project Proponent to assess construction noise impact and define the mitigation measures required for implementation.

<u>Operation Noise Impact – Traffic Noise Impact Assessment</u>

13.3.8 The road traffic noise impact imposed on the representative existing NSRs and planned NSRs would be generated by the roads within 300m from the Development boundary, including the new access road, and the junction improvement locations at J14 and J20 where changes to the road kerb are proposed. All existing and planned public roads within 300m assessment area are considered for the road traffic noise assessment. The road networks are classified as the following categories for the purpose of the road traffic noise assessment:

- Existing Road – the existing open roads and planned open roads (committed by other project proponent) within the 300m assessment area; and
- Project Road –the proposed access road at SPH Site.

13.3.9 Results revealed that generally, worse road traffic noise impact would occur in AM peak hour. According to the results shown, the "Overall" road traffic noise levels at all existing NSRs near the access road in SPH Site would comply with noise criteria with a predicted maximum noise level of 70dB(A).

13.3.10 For the planned residential and welfare NSRs at the TKL Site, the assessment results indicate that there would be exceedances at all planned NSRs due to noise from the surrounding existing road network, with a predicted maximum noise level of 78dB(A) at Block 1 and Block 3 and 75dB(A) at Block 2 and the Welfare Facilities. Mitigation measures would be required at the Development Site to alleviate the adverse noise

impact to the affected areas.

13.3.11 For the planned residential and school NSRs at the SPH Site, the assessment results indicate that there would be exceedances at most of the planned NSRs facing Yuen Long Highway due to noise from existing road. The predicted maximum noise level is 77dB(A) at Block 1 and 78dB(A) at the school. The noise exceedance at the NSRs is caused by noise from existing roads and the contribution of noise from Project Road (ie the access road) to the overall noise level is less than 1.0dB(A). For these NSRs mainly affected by existing roads, mitigation measures at the residential blocks and school will be required.

13.3.12 As advised by HD, the maximum building height are further increased by 25m for SPH Site and 15m for TKL Site. Based on the predicted traffic noise levels for the planned NSRs at the Sites, the worst affected heights are at the mid-floors and the traffic noise levels are predicted to drop for higher floors. Hence, it is anticipated that the traffic noise levels at the additional residential floors higher up would be similar or less than those predicted at the top floors. For the façades predicted with noise exceedance which requires mitigation measures, it is likely that similar mitigation measures at the additional residential floors will be required.

13.3.13 For the planned welfare NSRs at the SPH Site, the assessment results indicate that there would be exceedances at most of the NSRs facing Yuen Long Highway and the access road, with a predicted maximum noise level of 78dB(A). The noise exceedance at the NSRs is caused by noise from existing and proposed access road. Mitigation measures are required for the affected Welfare Facilities.

13.3.14 The assessment results for NSRs in vicinity of the junction improvement are summarized for AM and PM peak hours, respectively. The results reveal that there would be minor increase in traffic noise level. Since the road traffic noise level with the junction improvement is not greater than that without the junction improvement by 1.0dB(A) or more, the change in road traffic noise impact is not considered significant. Mitigation measures are not considered necessary.

Mitigation Measures

13.3.15 In view of the noise exceedance of the traffic noise criteria of up to 7.7dB(A) and 6.4dB(A) at the residential blocks at TKL Site and SPH Site, respectively, the use of acoustic windows or acoustic balconies with up to 7.7dB(A) noise attenuation is recommended for the affected residential NSRs to mitigate the traffic noise impact due to the existing roads to comply with the noise criteria stipulated in the HKPSG. According to EPD's website on Innovative Noise Mitigation Designs and Measures, acoustic windows (baffle-type) applied in the Public Residential Development at San Po Kong are capable of achieving a noise reduction of 4 to 8dB(A). The use of acoustic balconies is also able to provide further noise reduction. Therefore, the use of acoustic windows or balconies are considered feasible to alleviate the predicted road traffic noise impact. There is flexibility in selection of noise mitigation measures to meet the noise criteria depending on the degree of traffic noise exceedances. For instance, acoustic windows or architectural fins may be adopted for facades with lower noise exceedances.

13.3.16 For planned welfare uses at the Sites, although the type of proposed uses cannot be

determined at this stage, based on the predicted noise levels, it is recommended that noise sensitive uses at the Welfare Facilities at TKL Site should avoid locating at facades facing Yuen Long Highway and Shap Pat Heung Road. For the Welfare Facilities above the bus-terminus at SPH Site, noise sensitive uses should avoid locating along the facades facing Yuen Long Highway and the access road, while the welfare facility in podium of SPH Site should also avoid locating along facades facing Yuen Long Highway. Should noise sensitive uses be unavoidably located at these facades, noise mitigation measures (e.g. fixed glazing windows with mechanical air ventilation, subject to further studies in detailed design stage) is proposed for these noise sensitive uses.

13.3.17 Although the predicted noise levels at the proposed school at SPH Site reveals the access road alone would cause exceedance of noise criterion of 65dB(A) at NSR PS04, the overall predicted noise level is still dominated by noise from the existing roads. The provision of window insulation with mechanical ventilation would be required to mitigate the adverse noise impact from the existing roads, which would also protect the NSRs from noise from the access road. As such, the recommendation of at-source mitigation measure along the access road is not considered. The location of the proposed mitigation measures is shown in **Figure No. 406041/S&T/FR/1301**.

13.3.18 The provision of mitigation measures (e.g. fixed glazing windows with mechanical air ventilation) for welfare uses and acoustic windows/balconies for the housing development shall be implemented by the HKHA, while the provision of window insulation with mechanical air ventilation for the proposed school following the Class Assessment Document shall be implemented by the Architectural Services Department (ArchSD) or the future project proponent of the school. The provision of such mitigation measures has been acknowledged by ArchSD.

13.3.19 With the implementation of the proposed mitigation measures, the traffic noise levels at all NSRs would comply with the noise standards of 70dB(A) for residential premises and 65/70dB(A) for education and welfare premises.

Operation Noise Impact – Fixed Noise Source Impact Assessment

13.3.20 No existing fixed noise sources have been identified within 300m from the SPH Site. The planned NSRs within the TKL Site will be affected by fixed noise impact from the industrial activities conducted in its vicinity. During the site visits, two vehicle repair workshops were identified. As access to the vehicle repair workshops were denied, on-site noise measurement was not feasible at these workshops. Thus, reference is made to the industrial noise survey undertaken in support of the approved planning application (Application No. A/YL-KTN/501), where SWLs of standard activities being carried out at a vehicle repair workshop of similar size and nature were obtained by on-site noise measurements. Since that vehicle workshop where noise measurements were undertaken is of similar nature to the workshops identified under this Study, the referenced SWLs are considered representative. The operation hours of the workshops have been established based on confirmation from the operators and observation made during the site visits.

13.3.21 A bus-terminus is planned within the SPH Site. The proposed bus-terminus at the SPH Site will be fully enclosed with ample ventilation facing away from the NSRs (e.g.

towards Yuen Long Highway) and with ingress and egress facing away from the residential towers. Potential noise nuisances arising from the bus-terminus to the planned NSRs at SPH Site (P02_FN01 to P07_FN01) and the existing NSR at Sheung Yau Tin Tsuen (E08_FN01) are therefore not anticipated. Common and practicable acoustic installations such as silencer could be installed, if required, to reduce noise emission from the ventilation louvres. With careful siting of the ventilation exhaust location and installation of acoustic treatment as necessary, adverse fixed noise impact from the bus-terminus is not expected. Hence, further quantitative assessment for noise impact from the bus-terminus is not conducted in this PER.

13.4 Water Quality

Assessment Area and Water Sensitive Receivers

13.4.1 The assessment area is defined as the area within 500m from the Project boundary. According to the desktop review and site surveys, a number of water sensitive receivers (WSRs) have been identified within the assessment area. The nullah along Long Ho Road and the watercourses adjacent to SPH Site were identified to be the key WSRs. Within the SPH Site, there is a channelised watercourse cutting through the western portion of the site. The extent of the assessment area for water quality impact assessment and the locations of the WSRs are listed as follows:

- W1: Nullah near Ping Ha Road;
- W2: Nullah and watercourses at Kiu Tau Wai and Hung Uk Tsuen;
- W3: Watercourses at Hang Tau Tsuen;
- W4: Nullah adjacent to Chun Hing San Estate and Shui Pin Wai Estate and watercourses along Long Tin Road;
- W5: Nullah along Kung Um Road, Kiu Hing Road and Tai Shu Ha Road East;
- W6: Nullah near Park Signature and Lam Hau Tsuen;
- W7: Nullah and watercourses at Ma Tin Pok and Fraser Village;
- W8: Nullah and watercourse at Tin Liu Tsuen;
- W9: Nullah adjacent to Shung Ching San Tsuen and Tai Kei Leng;
- W10: Watercourses at Kong Tau Tsuen;
- W11: Watercourses at Kong Tau Tsuen and Sheung Yau Tin Tsuen;
- W12: Watercourses at Shek Tong Tsuen;
- W13: Yuen Long Bypass Floodway;
- W14: Nullah along Yau Tin East Road and Yau Tin West Road and adjacent to Yuen Long Kau Hui; and
- W15: Watercourses at Tsoi Uk Tsuen.

Identification and Evaluation of Impact

Construction Water Quality

- General Construction Activities;
- Construction Site Runoff;
- Construction Works and near Waterbodies;
- Alteration of Watercourse;
- Accidental Spillage;
- Sewage Effluent from Construction Workforce; and
- Site Runoff or Contaminated Ground Water from Contaminated Area.

Operation Water Quality

- Sewage Discharge;
- Surface Run-off;

Mitigation Measures during Construction Phase

General Construction Activities and Site Runoff

13.4.2 The site practices outlined in ProPECC PN 1/94 Construction Site Drainage provides good practice guidelines for dealing with various types of discharge from a construction site and should be adopted as far as practicable to minimise the potential water quality impacts from various construction activities and construction site run off.

Construction Works at and near Waterbodies

13.4.3 To minimise the potential water quality impacts from construction works located near any waterbodies, the practices outlined in the ETWB TC (Works) No. 5/2005 "Protection of natural streams/rivers from adverse impacts arising from construction works" should be adopted where applicable.

Alteration of Watercourse

13.4.4 The site practices outlined in the ProPECC PN 1/94 "Construction Site Drainage" and ETWB TC (Works) No. 5/2005 "Protection of natural streams/rivers from adverse impacts arising from construction works" should be adopted for the proposed demolition of watercourses where applicable.

Accidental Spillage

13.4.5 Measures recommended in ETWB TC (Works) No. 5/2005 "Protection of natural streams/rivers from adverse impacts arising from construction works" should be adopted where applicable.

Sewage from Construction Workforce

13.4.6 Provided that sewage is not discharged directly into stormwater drain or inland waters and temporary sanitary facilities are used and properly maintained, no adverse water quality impact is anticipated provided good site practice and the

recommendation under this section will be implemented properly by the contractor.

Site Runoff and Contaminated Groundwater from Contaminated Areas

13.4.7 No direct discharge of contaminated groundwater is anticipated from the excavation of contaminated areas. The contaminated groundwater shall be properly treated to compliance level of RBRG standard and TM-DSS before recharged into the ground by soak away method.

Mitigation Measures during Operation Phase

13.4.8 All sewage effluent from the Development would be discharged into the public sewer and no discharge to the nearby watercourses would be allowed.

13.4.9 Sufficient drainage system and pollution control facilities, such as gullies, silt traps and oil interceptors, shall be provided as appropriate to handle the potentially pollution from urban runoff. These pollution control facilities should be cleaned and maintained regularly to ensure their effectiveness. Additional inspection and cleansing should be carried out before forecasted heavy rainfalls.

Operational Water Quality

13.4.10 The sewage generated from the Development will be discharged to the nearby public sewerage network. A SIA has been conducted under this Project to estimate the sewage flow generated from the Development and assess the impacts on the existing sewerage and formulate sewage disposal. As all sewage will be properly collected by public sewerage network leading to the San Wai Sewage Treatment Works for treatment before discharge, no adverse water quality impact is expected.

13.4.11 Surface run-off to be generated from the Development is known as non-point source pollution. A small amount of oil, grease and grit may be deposited on the surfaces of the proposed access roads and carpark area within the Development. These pollutants would be washed into the nearby drainage system or watercourses during rainfall events. Surface runoff generated from other paved areas within the Development would also contain debris, refuse, dust, etc., which would affect the quality of the nearby receiving water environment, if uncontrolled.

13.4.12 To mitigate the water pollution due to the contaminated surface runoff, facilities such as oil interceptors and silt traps should be installed in the drainage system for the proposed access roads, bus-terminus and carpark area to contain the contaminants possibly found in the surface runoff before discharge to the drainage system offsite. Moreover, good management measures such as regular cleaning and sweeping of road surface/ carpark area are suggested. The road surface, bus-terminus and carpark area cleaning should be carried out prior to the occurrence of rainstorm wherever practicable. Manholes, as well as stormwater gullies, ditches provided at the proposed public housing development should be regularly inspected and cleaned (e.g. monthly). Additional inspection and cleansing should be carried out before heavy rainfall forecasted. No unacceptable water quality impact is therefore envisaged.

13.5 Waste Management

Identification and Evaluation of Potential Impacts – Construction Phase

13.5.1 The construction activities to be carried out for the Project would generate a variety of wastes that can be divided into distinct categories based on their composition and ultimate method of disposal. The identified waste types include:

- Site clearance waste;
- Construction and demolition (C&D) materials;
- General refuse; and
- Chemical wastes.

13.5.2 The C&D material generated from the site formation should be sorted on-site into inert C&D material (that is, public fill) and non-inert C&D material. In order to minimise the impact resulting from collection and transportation of C&D materials for off-site disposal, the excavated material comprising fill material should be reused on-site as backfilling material as far as practicable. Non-inert C&D material such as wood, plastic, steel and other metals should be reused or recycled and, as a last resort, disposed of to landfill. Subject to further design of the Project, should offsite inert material disposal be required, direct reuse of inert C&D materials in other local concurrent projects should be explored with disposal at the public fill reception facilities as the last resort.

13.5.3 With the implementation of mitigation measures and proper waste management practices for handling, transportations and disposal of identified waste arising from the Project, no residual impacts are expected during the construction and operation phase of the Project.

13.6 Ecology

Assessment Area and Ecological Survey Methodology

13.6.1 The proposed development areas for the Sites are located in a close proximity to Yuen Long Town and Yuen Long Highway. The proposed ecological assessment area for the Preliminary Environmental Review (PER) covers 500m area from the Proposed Development Areas and 100m of the Infrastructure Works Area.

Habitat and Flora

13.6.2 No floral species of conservation importance were recorded in the Proposed Development Boundary and 500m Assessment Area from available literature.

13.6.3 The Proposed Development Boundary in SPH Site is composed of largely developed area and small areas of channelised watercourse and village area. Only one habitat type, i.e. 'developed area' was identified in TKL Site. A total of 10 different habitats were identified within the 500m Assessment Area.

13.6.4 The areas of each habitat within the Proposed Development Boundary and Assessment Area is presented in **Table 13.3** below.

Table 13.3 Area of habitats identified within the Proposed Development Boundary and Assessment Area

Habitat	Area (ha)			
	Proposed Development Boundary of SPH Site (ha)	Proposed Development Boundary of TKL Site (ha)	Infrastructure Works Area outside the Sites (ha)	Assessment Area (ha)
Channelised Watercourse	0.08; 0.09km	-	0.06; 0.08km	8.26; 5.87km
Watercourse	-	-	-	0.20; 0.69km
Agricultural Land	-	-	-	6.93
Grassland	-	-	-	7.83
Grassland/Shrubland	-	-	-	33.16
Woodland	-	-	-	6.38
Plantation	-	-	0.70	19.11
Developed Area	3.56	1.76	7.72	136.29
Village Area	0.07	-	0.03	52.53
Wasteland	-	-	-	1.97
Total	**3.71**	**1.76**	**8.51**	**272.66**

Mammals

13.6.5 An individual of rat Rattus sp. was recorded at the channelised watercourse. No species of conservation importance was recorded.

Avifauna

13.6.6 A total of 44 bird species were recorded in the Assessment Area during the surveys including eight species of conservation importance, namely Chinese Pond Heron *Ardeola bacchus*, Eastern Cattle Egret *Bubulcus coromandus,* Grey Heron *Ardea cinerea,* Great Egret *Ardea alba,* Little Egret *Egretta garzetta,* Black Kite *Milvus migrans,* Black-winged Stilt *Himantopus himantopus* and Collared Crow *Corvus torquatus*. These eight species were mainly considered as Local Concern, Regional Concern or Potential Regional Concern (Fellowes *et al.*, 2002). Collared Crow was observed inflight over the Proposed Development Boundary in SPH Site. Collared Crow is considered of Local Concern (Fellowes *et al*., 2002) and Vulnerable (IUCN, 2021). The recorded bird species in the Proposed Development Boundary are generally resident and widely distributed in Hong Kong.

13.6.7 No flightpaths were found in the Sites from the flightline surveys during the breeding season of the ardeids in April and May 2021.

Herptofauna

13.6.8 A total of six amphibian species were recorded in the Assessment Area during the surveys. No Species of conservation importance were recorded.

13.6.9 A total of seven reptile species were recorded in the Assessment Area during the survey among which a species of Four-clawed Gecko *Gehyra mutilata* was recorded in the developed area in the Assessment Area. It is considered of Vulnerable in the Red List of China's Vertebrates (Jiang *et al*. 2016).

Butterfly

13.6.10 A total of 27 butterfly species were recorded in the Assessment Area during the surveys. Most of the species recorded are Very Common and widely distributed in Hong Kong. One species, Small Cabbage White *Pieris rapae* was recorded in the village are in the Assessment Area. It is considered of Rare by AFCD (2021).

Odonate

13.6.11 A total of eleven odonate species were recorded in the Assessment Area during the surveys. All recorded species are Abundant in Hong Kong (AFCD, 2021).

Aquatic fauna

13.6.12 A total of three freshwater fish species were recorded from the Assessment Areas during the surveys. No species of conservation importance was recorded.

Mitigation Strategy

13.6.13 In the design process, avoidance measures shall be adopted as far as practicable to avoid or minimise ecological impacts. The potential measures include retention of natural watercourse and woodlands in Conservation Area, prevention of development adjacent to the egretry and careful design of development layout to minimize the work footprints. Avoidance measures will be fully investigated and developed at the detailed design stage of the Project.

13.6.14 The alignment of the infrastructure works will largely follow and lie within the existing roads. The impacts would be limited to temporary disturbance during the construction phase. Therefore, the impacts of habitat loss and disturbance would be minimised.

13.6.15 As for the potential ecological disturbance during the construction phase, it is recommended to implement all proposed mitigation measure for air, noise, water, waste aspects proposed in the approved EIA Report for Yuen Long South Potential Development Area (YLS PDA) (EIA-254/2017) and the present PER study to minimise the surface runoff from the construction site.

13.7 Cultural Heritage

Construction Stage

13.7.1 As a precautionary measure, AMO should be informed immediately in case of discovery of antiquities or supposed antiquities in the course of works, so that appropriate mitigation measures, if needed, can be timely formulated and implemented in agreement with AMO.

13.7.2 As no proposed or declared monument, proposed to be graded historic buildings, Government Historic Sites or New Items proposed for grading by AAB is identified partly or wholly within the assessment area; thus, it is anticipated that no cultural resources will be affected by the proposed development.

Operation Stage

13.7.3 As no SAI is identified partly or wholly within the assessment area, therefore, no impact is expected during the operation phase. Thus, no mitigation measure is

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required.

13.7.4 The water mains are provided underground and junction improvement works will not affect the identified built heritage resources in the operation phase, thus, no impact is expected in the operation phase. Thus, no mitigation measure is required.

13.7.5 With the implementation of the mitigation measures proposed, no residual impact is anticipated during construction and operation phases of the Project.

13.8 Summary

13.8.1 Assessments in the aspects of air quality, noise, water quality, waste management, sewerage and sewage treatment implication, ecology and cultural heritage were conducted under the study. It is anticipated that there would be no insurmountable issue from the environmental point of view.

14 PRELIMINARY LANDSCAPE AND VISUAL IMPACT (LVIA)

14.1 General

14.1.1 The purpose of the LVIA is to:

a) Brief description of the Project and any of the associated construction works/ activities which may cause potential landscape and visual impacts, both temporarily and permanently;

b) Description of the relevant legislation, standards and guidelines for assessment with due consideration;

c) Description of the assessment methodology;

d) Review of planning and development control framework;

e) Identification of the landscape character areas (LCAs), Landscape Resources (LRs), visual elements (including visual resources/ attractors and visual eyesores/ detractors) and key viewing points within the assessment areas;

f) Assessment and thorough review of the potential impacts (before mitigation), temporarily and/or permanently, and the residual impacts (after mitigation) in both construction and operation stages;

g) Evaluation and recommendation of mitigation and enhancement measures with a practicable and realistic implementation programme; and

h) Conclusion/ overall evaluation of preliminary LVIA.

14.2 Landscape Impact Assessment

Methodologies

14.2.1 Landscape Impact Assessment has been carried out under this Assignment with the steps below.

a) Review of Planning Development Control Framework;

b) Identification and Examination of Baseline Landscape Resources and Landscape Character Areas;

c) Tree and Vegetation Survey;

d) Assessment of Sensitivity of LRs/LCAs;

e) Identification of Sources and Magnitude of Potential Landscape Impacts;

f) Recommendation of Landscape Mitigation Measures; and

g) Significance of Landscape Impacts.

Landscape Resources within the Assessment Area

14.2.2 LRs within the 500m Assessment Area have been identified. A list of LRs and their sensitivity rating provided in brackets are summarised as follows.

- LR1 Village Settlement (Medium)
- LR2 Heritage Building (High)

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- LR3 Brownfield Operation (Low)
- LR4 Major Vehicular Road (Low)
- LR5 Urban Development (Medium)
- LR6 Roadside Vegetation (Medium)
- LR7 Channelised Watercourse (Low)
- LR8 Natural Watercourse (Medium)
- LR9a-c Park/ Playground/ Garden (Low to Medium)

Landscape Character Areas

14.2.3 LCAs within the Assessment Area have been identified. Below is a brief summary of the list of LCAs and their assessment shown in brackets:

- LCA1 Yuen Long Miscellaneous Rural Fringe Landscape (Medium)
- LCA2 Upland and Hillside Landscape (High)
- LCA3 Yuen Long Miscellaneous Urban Fringe Landscape (Medium)
- LCA4 Urban Peripheral Village Landscape (Medium)
- LCA5 Park Urban Landscape (Medium)

Nature and Magnitude of Landscape Impact without Mitigation

14.2.4 During the construction phase of the Project landscape impacts can be resulted from the following sources:

- Site clearance works including removal of structures and facilities, and existing vegetation/trees;
- Site formation including slope cutting and earth filling works, as well as geotechnical works, earth retaining structures;
- Traffic improvement works (including construction of new access roads, footpaths and upgrading existing roads etc.);
- Drainage and sewerage infrastructures;
- Construction traffic (Temporary construction access);
- Presence of construction machinery and equipment; temporary parking areas, construction storage, stockpiling area, site offices and facilitates of works area(s);
- Night lighting and welding;
- Temporary works hoardings, barriers and enclosures;
- Construction dust and waste materials;
- Environmental mitigation measures including landscaping works; and
- Temporary Traffic Arrangement.

14.2.5 During the operation phase of the Project landscape impacts can be resulted from the following sources:

- Any on-going changes in the quality or quantity of LRs resulting from the Project; and
- Loss of landscape resources previously present at the Project site.

14.2.6 The anticipated magnitude of change of landscape quality without mitigation is described in **Table 14.1** below.

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Table 14.1 Magnitude of Change of Landscape Quality without Mitigation

ID	Landscape Resources / Landscape Character Areas	Source of Impact	Scale of Development (Large / Medium/ Small)	Extent of LR or LCA within Project Footprint		Compatibility with Surrounding Landscape (High/ Medium/ Low)		Duration of Impact (Long/ Medium/ Short)		Reversibility of Change (Reversible/ Irreversible)	Magnitude of Change (Large/ Intermediate/ Small/ Negligible)	
				Con.*	Op.*	Con.*	Op.*	Con.*	Op.*		Con.*	Op.*
Landscape Resources												
LR1	Village Settlement	Site formation works	Small	0.41ha (TKL) 0.44ha (SPH)	0.41ha (TKL) 0.44ha (SPH)	Low	Low	Medium	Long	Irreversible	Small	Small
		Traffic improvement works	Small	0.05ha outside Sites	0.05ha outside Sites	Medium	High	Short	Long	Irreversible	Small	Small
LR2	Heritage Buildings	None	-	-	-	-	-	-	-	-	Negligible	Negligible
LR3	Brownfield Operation	Site formation works	Medium	1.35ha (TKL) 3.19ha (SPH)	1.35ha (TKL) 3.19ha (SPH)	Medium	Medium	Medium	Long	Irreversible	Intermediate	Intermediate
		Traffic improvement works	Small	0.06 ha	0.06 ha	Medium	High	Short	Long	Irreversible	Small	Small
		Drainage improvement/ mainlaying works	Small	~160m outside Sites	~160m outside Sites	Medium	High	Short	-	Reversible	Small	Negligible

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ID	Landscape Resources / Landscape Character Areas	Source of Impact	Scale of Development (Large / Medium/ Small)	Extent of LR or LCA within Project Footprint		Compatibility with Surrounding Landscape (High/ Medium/ Low)		Duration of Impact (Long/ Medium/ Short)		Reversibility of Change (Reversible/ Irreversible)	Magnitude of Change (Large/ Intermediate/ Small/ Negligible)	
				Con.*	Op.*	Con.*	Op.*	Con.*	Op.*		Con.*	Op.*
LR4	Major Vehicular Road	Traffic improvement works	Small	0.77ha outside Sites	0.77ha outside Sites	Medium	High	Short	Long	Irreversible	Small	Small
		Drainage improvement/ mainlaying works	Medium	~5.6km outside Sites	~5.6km outside Sites	Medium	High	Short	-	Reversible	Intermediate	Negligible
LR5	Urban Development	Drainage improvement/ mainlaying works	Small	~500mm outside Sites	~500mm outside Sites	Medium	High	Short	-	Reversible	Small	Negligible
LR6	Roadside Vegetation	Traffic improvement works	Small	0.35ha outside Sites	0.35ha outside Sites	Medium	Medium	Short	Long	Irreversible	Small	Small
		Drainage improvement/ mainlaying works	Small	~750m outside Sites	~750m outside Sites	Medium	High	Short	-	Reversible	Small	Negligible
LR7	Channelised Watercourse	Site Formation	Small	0.08ha (SPH)	0.08ha (SPH)	-	-	-	-	-	Small	Small
		Traffic improvement works	Small	0.01ha outside Sites	0.01ha outside Sites	Medium	Medium	Short	Long	Irreversible	Small	Small
		Drainage improvement/ mainlaying works	Small	<20m outside Sites	<20m outside Sites	Medium	High	Short	-	Reversible	Small	Negligible

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ID	Landscape Resources / Landscape Character Areas	Source of Impact	Scale of Development (Large / Medium/ Small)	Extent of LR or LCA within Project Footprint		Compatibility with Surrounding Landscape (High/ Medium/ Low)		Duration of Impact (Long/ Medium/ Short)		Reversibility of Change (Reversible/ Irreversible)	Magnitude of Change (Large/ Intermediate/ Small/ Negligible)	
				Con.*	Op.*	Con.*	Op.*	Con.*	Op.*		Con.*	Op.*
LR8	Natural Watercourse	None	-	-	-	-	-	-	-	-	Negligible	Negligible
LR9	Park/ Playground/ Garden	None	-	-	-	-	-	-	-	-	Negligible	Negligible
Landscape Character Areas												
LCA1	Yuen Long Miscellaneous Rural Fringe Landscape	Site formation works and other infrastructure works beyond the Development boundary	Medium	1.76ha (TKL) 3.71ha (SPH)	1.76ha (TKL) 3.71ha (SPH)	Medium	Medium	Medium	Long	Irreversible	Intermediate	Intermediate
		Traffic improvement works	Small	1.09ha outside Sites	1.09ha outside Sites	Medium	High	Short	Long	Irreversible	Small	Negligible
		Drainage improvement/ mainlaying works	Medium	~5.6km outside Sites	~5.6km outside Sites	Medium	High	Short	-	Reversible	Small	Negligible
LCA2	Upland Hillside Landscape	None	-	-	-	-	-	-	-	-	Negligible	Negligible

ID	Landscape Resources / Landscape Character Areas	Source of Impact	Scale of Development (Large / Medium/ Small)	Extent of LR or LCA within Project Footprint		Compatibility with Surrounding Landscape (High/ Medium/ Low)		Duration of Impact (Long/ Medium/ Short)		Reversibility of Change (Reversible/ Irreversible)	Magnitude of Change (Large/ Intermediate/ Small/ Negligible)	
				Con.*	Op.*	Con.*	Op.*	Con.*	Op.*		Con.*	Op.*
LCA3	Yuen Long Miscellaneous Urban Fringe Landscape	Traffic improvement works	Small	0.15ha outside Sites	0.15ha outside Sites	Medium	High	Short	Long	Irreversible	Small	Negligible
		Drainage improvement/ mainlaying works	Small	~600m outside Sites	~600m outside Sites	Medium	High	Short	-	Reversible	Small	Negligible
LCA4	Urban Peripheral Village Landscape	Drainage improvement/ mainlaying works	Small	~800m outside Sites	~800m outside Sites	Medium	High	Short	-	Reversible	Small	Negligible
LCA5	Park Urban Landscape	None	-	-	-	-	-	-	-	-	Negligible	Negligible

Notes:

*Con.=Construction Phase; Op=Operation Phase

Significance of Landscape Impacts without Mitigation

14.2.7 The degree of significance of landscape impacts before implementation of mitigation measures has been derived from the combination of the anticipated magnitude of change and sensitivity/ tolerance of sensitive receivers to change listed in **Table 14.2**.

Table 14.2 Significance of Residual Landscape Impacts

ID	Landscape Resources and Landscape Character Areas	Sensitivity (High/ Medium/ Low)	Source of Impact	Magnitude of Change (Large/ Intermediate/ Small/ Negligible)		Impact Significance without Mitigation (Substantial/ Moderate/ Slight/ Insubstantial)	
				Con.	Op.	Con.	Op.
Landscape Resources							
LR1	Village Settlement	Medium	Site formation works	Small	Small	Slight to Moderate	Slight to Moderate
			Traffic improvement works	Small	Small	Slight to Moderate	Slight
LR2	Heritage Buildings	High	None	Negligible	Negligible	Insubstantial	Insubstantial
LR3	Brownfield Operation	Low	Site formation works	Intermediate	Intermediate	Slight to Moderate	Slight (Beneficial)
			Traffic improvement works	Small	Small	Slight	Slight
			Drainage improvement / mainlaying works	Small	Negligible	Slight	Insubstantial
LR4	Major Vehicular Road	Low	Traffic improvement works	Small	Small	Slight	Slight
			Drainage improvement / mainlaying works	Intermediate	Negligible	Slight to Moderate	Insubstantial
LR5	Urban Development	Medium	Drainage improvement / mainlaying works	Small	Negligible	Slight to Moderate	Insubstantial
LR6	Roadside Vegetation	Medium	Traffic improvement works	Small	Small	Slight to Moderate	Slight to Moderate
			Drainage improvement / mainlaying works	Small	Negligible	Slight to Moderate	Insubstantial
LR7	Channelised Watercourse	Low	Site formation works	Small	Small	Slight	Slight
			Traffic improvement works	Small	Small	Slight	Slight

ID	Landscape Resources and Landscape Character Areas	Sensitivity (High/ Medium/ Low)	Source of Impact	Magnitude of Change (Large/ Intermediate/ Small/ Negligible)		Impact Significance without Mitigation (Substantial/ Moderate/ Slight/ Insubstantial)	
				Con.	Op.	Con.	Op.
			Drainage improvement / mainlaying works	Small	Negligible	Slight	Insubstantial
LR8	Natural Watercourse	Low	None	Negligible	Negligible	Insubstantial	Insubstantial
LR9	Park/ Playground/ Garden	Medium	None	Negligible	Negligible	Insubstantial	Insubstantial
Landscape Character Areas							
LCA1	Yuen Long Miscellaneous Rural Fringe Landscape	Medium	Site formation works	Intermediate	Intermediate	Moderate	Moderate
			Traffic improvement works	Small	Negligible	Slight to Moderate	Insubstantial
			Drainage improvement / mainlaying works	Small	Negligible	Slight to Moderate	Insubstantial
LCA2	Upland Hillside Landscape	High	None	Negligible	Negligible	Insubstantial	Insubstantial
LCA3	Yuen Long Miscellaneous Urban Fringe Landscape	Medium	Traffic improvement works	Small	Negligible	Slight to Moderate	Insubstantial
			Drainage improvement / mainlaying works	Small	Negligible	Slight to Moderate	Insubstantial
LCA4	Urban Peripheral Village Landscape	Medium	Drainage improvement / mainlaying works	Small	Negligible	Slight to Moderate	Insubstantial
LCA5	Park Urban Landscape	Medium	None	Negligible	Negligible	Insubstantial	Insubstantial

Notes: Landscape impacts presented in **Table 10-2** are adverse impacts unless otherwise specified.

Recommended Landscape Mitigation Measures in Construction and Operation Phases

14.2.8 The project design has sought to minimise any potential landscape impact as much as possible and the alignment has been carefully considered and adjusted in order to reduce the impacts on landscape before adopting other mitigation measures with reference to EIAO GN No. 8/2010. Unavoidably, some adverse landscape impact would still be anticipated. The following approaches of landscape mitigation are proposed to alleviate the potential adverse landscape impacts. The proposed measures to mitigate impacts arising from construction phases and operation phases are labelled with "CM" and "OM" respectively in **Table 14.3**. The Landscape & Visual

Mitigation Plan (**Figure Nos. 406041/S&T/FR/1401** to **1403**) illustrates the locations of the proposed mitigation measures to be implemented.

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Table 14.3 Proposed Mitigation Measures and Management Responsibilities

ID	Mitigation Measures	Location/ Extent	Description	Funding Agency	Implementation Agency	Maintenance Agency
Mitigation Measures for Construction Phase Impacts						
CM1	Careful Site Planning and Management	All works area(s)	Careful planning of construction site layout to avoid encroachment upon sensitive receivers such as Lam Tsuen Country Park, historic buildings, TPIs and retained vegetation; and minimize disturbance impacts to sensitive landscape and visual receivers.	CEDD	CEDD (via Contractor)	CEDD (via Contractor)
CM2	Slope Greening	Slope works area(s) within Development Site	To maximize greening opportunities on all newly created slope features/ areas subject to slope improvement works through hydroseeding and or shrub/ tree planting	CEDD	CEDD (via Contractor)	HyD
CM3	Tree Preservation and Inspection of Tree Works	All (retained) existing trees within or immediately adjacent to proposed works area(s)	To implement proper tree protection measures, conduct regular tree monitoring and inspection of tree works	CEDD	CEDD (via Contractor)	LCSD/Allocatee Department(s)
CM4a	Compensatory Tree Planting	Tree planting locations	To plant at least 195 nos. of compensatory trees including 158 nos. compensatory trees within the Infrastructure Works Area outside Sites, and 37 nos. compensatory trees within Roadside Verge Greening Zone (RVGZ) along the proposed new road between the proposed school site and housing site in SPH site	CEDD	CEDD (via Contractor) -for compensatory trees (at least 158 nos.) outside Sites -for compensatory trees (at least 37 nos.) within RVGZ along new	LCSD/HyD /Allocatee Department(s)

ID	Mitigation Measures	Location/ Extent	Description	Funding Agency	Implementation Agency	Maintenance Agency
					roads	
CM4b	Newly Planted Trees by HD within HD's Site	Tree planting location	At least 54 and 115 new trees in the proposed TKL and SPH housing sites.	HD	HD (via Contractor)	HD
CM5	Minimisation of Light Impact	All works area(s)	To control night time lighting during construction phase	CEDD/ HD	CEDD/ HD (via Contractor)	CEDD/ HD (via Contractor)
CM6	Erection of Decorative Site Hoarding	All works area(s)	To erect decorative site hoarding to surround the construction site(s) to mimimise visual disturbance	CEDD/ HD	CEDD/ HD (via Contractor)	CEDD/ HD (via Contractor)
CM7	Reinstatement of Temporarily Disturbed Areas	All temporarily disturbed area(s) wherever applicable	To reinstate disturbed grounds/ landscaped area(s) through revegetation and/or re-provision of pavements/ concrete surfaces	CEDD	CEDD (via Contractor)	LCSD/HyD
Mitigation Measures for Operation Phase Impacts						
OM1	Landscape Planting	Proposed housing site(s)/ GIC site(s) of the Development	To provide aesthetic plantings including screen planting and local open space plantings in order to provide sufficient site coverage of greenery (target to provide 20% site area of TKL Housing Site and 30% site area of SPH Housing Site) in the Development in accordance with PNAP APP-152 and HKPSG. At least 242 no. of trees (54 trees in TKL Site and 115 trees in SPH Site) will be planted in the proposed housing site(s).	CEDD/ HD	HD/ Allocatee Departments (via Contractor)	HD/ Allocatee Department(s)
OM2	Rooftop Greening	Proposed housing site(s)/ GIC site(s) of the Development	OM2 will be implemented where applicable to provide rooftop planting in the Development	CEDD/ HD	HD/ Allocatee Departments (via Contractor)	HD/ Allocatee Department(s)
OM3	Vertical Greening	Proposed housing site(s)/ GIC site(s) of the Development	OM3 will be implemented where applicable to provide vertical planting in the Development	CEDD/ HD	HD/ Allocatee Departments (via Contractor)	HD/ Allocatee Department(s)e
OM4	Aesthetically Pleasing Building Design	Proposed housing site(s)/ GIC site(s) of the Development	To provide responsive designs to enhance permeability and appearance of the proposed buildings/structures to	HD/ Allocatee Department(s) (via Contractor)	HD/ Allocatee Department(s) (via Contractor)	HD/ Allocatee Department(s)

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ID	Mitigation Measures	Location/ Extent	Description	Funding Agency	Implementation Agency	Maintenance Agency
			minimize visual obstruction to key public viewing points			
OM5	Provision of Local Open Space and Recreational Facilities in Development	Proposed housing site(s)	To provide sufficient spacing between high-rise buildings and visual relief in accordance with PNAP APP-152 and HKPSG. Local open space is at least 1m^2 per person.	HD (via Contractor)	HD (via Contractor)	HD

Residual Landscape Impact with Mitigation

14.2.9 With full implementation of the proposed mitigation measures residual landscape impacts on all affected Landscape Resources and Landscape Character Areas are considered to be **Acceptable** (i.e. **Insubstantial** to **Slightly** Adverse). The predicted residual landscape impacts are provided in **Table 14.4**.

Table 14.4 Significance of Residual Landscape Impacts

ID	Landscape Resources and Landscape Character Areas	Sensitivity (High/ Medium / Low)	Source of Impact	Magnitude of Change (Large/ Intermediate/ Small/ Negligible)		Impact Significance without Mitigation (Substantial/ Moderate/ Slight/ Insubstantial)		Recommended Mitigation Measures	Impact Significance with Mitigation (Substantial/ Moderate/ Slight/ Insubstantial)		
				Con.	Op.	Con.	Op.		Con.	Op. Day 1	Op. Year 10
Landscape Resources											
LR1	Village Settlement	Medium	Site formation works	Small	Small	Slight to moderate	Slight to moderate	CM1, CM2, CM3, CM4a, CM4b, CM5, CM6, CM7, OM1, OM2, OM3, OM4, OM5	Slight	Slight	Slight
			Traffic improvement works	Small	Small	Slight to moderate	Slight	CM1, CM2, CM3, CM4a, CM4b, CM5, CM7, OM1	Insubstantial	Insubstantial	Insubstantial
LR2	Heritage Buildings	High	None	Negligible	Negligible	Insubstantial	Insubstantial	Not required	Insubstantial	Insubstantial	Insubstantial
LR3	Brownfield Operation	Low	Site formation works	Intermediate	Intermediate	Slight to Moderate	Slight (Beneficial)	CM1, CM2, CM3, CM4a, CM4b, CM5, CM6, CM7, OM1, OM2, OM3, OM4, OM5	Slight	Slight	Slight (Beneficial)

ID	Landscape Resources and Landscape Character Areas	Sensitivity (High/ Medium / Low)	Source of Impact	Magnitude of Change (Large/ Intermediate/ Small/ Negligible)		Impact Significance without Mitigation (Substantial/ Moderate/ Slight/ Insubstantial)		Recommended Mitigation Measures	Impact Significance with Mitigation (Substantial/ Moderate/ Slight/ Insubstantial)		
				Con.	Op.	Con.	Op.		Con.	Op. Day 1	Op. Year 10
			Traffic improvement works	Small	Small	Slight	Slight	CM1, CM2, CM3, CM4a, CM4b, CM5, CM7, OM1	Insubstantial	Insubstantial	Insubstantial
			Drainage improvement / mainlaying works	Small	Negligible	Slight	Insubstantial	CM1, CM3, CM5, CM7	Insubstantial	Insubstantial	Insubstantial
LR4	Major Vehicular Road	Low	Traffic improvement works	Small	Small	Slight	Slight	CM1, CM2, CM3, CM4a, CM4b, CM5, CM7, OM1	Insubstantial	Insubstantial	Insubstantial
			Drainage improvement / mainlaying works	Intermediate	Negligible	Slight to Moderate	Insubstantial	CM1, CM3, CM5, CM7	Slight	Insubstantial	Insubstantial
LR5	Urban Development	Medium	Drainage improvement / mainlaying works	Small	Negligible	Slight to Moderate	Insubstantial	CM1, CM3, CM5, CM7	Slight	Insubstantial	Insubstantial
LR6	Roadside Vegetation	Medium	Traffic improvement works	Small	Small	Slight to Moderate	Slight to Moderate	CM1, CM2, CM3, CM4a, CM4b, CM5, CM7, OM1	Slight	Insubstantial	Insubstantial

ID	Landscape Resources and Landscape Character Areas	Sensitivity (High/ Medium / Low)	Source of Impact	Magnitude of Change (Large/ Intermediate/ Small/ Negligible)		Impact Significance without Mitigation (Substantial/ Moderate/ Slight/ Insubstantial)		Recommended Mitigation Measures	Impact Significance with Mitigation (Substantial/ Moderate/ Slight/ Insubstantial)		
				Con.	Op.	Con.	Op.		Con.	Op. Day 1	Op. Year 10
			Drainage improvement / mainlaying works	Small	Negligible	Slight to Moderate	Insubstantial	CM1, CM3, CM5, CM7	Slight	Insubstantial	Insubstantial
LR7	Channelised Watercourse	Low	Site Formation Works	Small	Small	Slight	Slight	CM1, CM2, CM3, CM4a, CM4b, CM5, CM6, CM7, OM1, OM2, OM3, OM4, OM5	Insubstantial	Insubstantial	Insubstantial
			Traffic improvement works	Small	Small	Slight	Slight	CM1, CM2, CM3, CM4a, CM4b, CM5, CM7, OM1	Insubstantial	Insubstantial	Insubstantial
			Drainage improvement / mainlaying works	Small	Negligible	Slight	Insubstantial	CM1, CM3, CM5, CM7	Insubstantial	Insubstantial	Insubstantial
LR8	Watercourse	Low	None	Negligible	Negligible	Insubstantial	Insubstantial	Not required	Insubstantial	Insubstantial	Insubstantial
LR9	Park/ Playground/ Garden	Medium	None	Negligible	Negligible	Insubstantial	Insubstantial	Not required	Insubstantial	Insubstantial	Insubstantial
Landscape Character Areas											

ID	Landscape Resources and Landscape Character Areas	Sensitivity (High/ Medium / Low)	Source of Impact	Magnitude of Change (Large/ Intermediate/ Small/ Negligible)		Impact Significance without Mitigation (Substantial/ Moderate/ Slight/ Insubstantial)		Recommended Mitigation Measures	Impact Significance with Mitigation (Substantial/ Moderate/ Slight/ Insubstantial)		
				Con.	Op.	Con.	Op.		Con.	Op. Day 1	Op. Year 10
LCA 1	Yuen Long Miscellaneous Rural Fringe Landscape	Medium	Site formation works	Intermediate	Intermediate	Moderate	Moderate	CM1, CM2, CM3, CM4a, CM4b, CM5, CM6, CM7, OM1, OM2, OM3, OM4, OM5	Slight	Slight	Slight
			Traffic improvement works	Small	Negligible	Slight to Moderate	Insubstantial	CM1, CM2, CM3, CM4a, CM4b, CM5, CM7, OM1	Slight	Insubstantial	Insubstantial
			Drainage improvement / mainlaying works	Small	Negligible	Slight to Moderate	Insubstantial	CM1, CM3, CM5, CM7	Slight	Insubstantial	Insubstantial
LCA 2	Upland Hillside Landscape	High	None	Negligible	Negligible	Insubstantial	Insubstantial	Not required	Insubstantial	Insubstantial	Insubstantial
LCA 3	Yuen Long Miscellaneous Urban Fringe Landscape	Medium	Traffic improvement works	Small	Negligible	Slight to Moderate	Insubstantial	CM1, CM2, CM3, CM4a, CM4b, CM5, CM7, OM1	Slight	Insubstantial	Insubstantial
			Drainage improvement / mainlaying works	Small	Negligible	Slight to Moderate	Insubstantial	CM1, CM3, CM5, CM7	Slight	Insubstantial	Insubstantial

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ID	Landscape Resources and Landscape Character Areas	Sensitivity (High/ Medium / Low)	Source of Impact	Magnitude of Change (Large/ Intermediate/ Small/ Negligible)		Impact Significance without Mitigation (Substantial/ Moderate/ Slight/ Insubstantial)		Recommended Mitigation Measures	Impact Significance with Mitigation (Substantial/ Moderate/ Slight/ Insubstantial)		
				Con.	Op.	Con.	Op.		Con.	Op. Day 1	Op. Year 10
LCA 4	Urban Peripheral Village Landscape	Medium	Drainage improvement / mainlaying works	Small	Negligible	Slight to Moderate	Insubstantial	CM1, CM3, CM5, CM7	Slight	Insubstantial	Insubstantial
LCA 5	Park Urban Landscape	Medium	None	Negligible	Negligible	Insubstantial	Insubstantial	Not required	Insubstantial	Insubstantial	Insubstantial

Notes: Landscape impacts presented in **Table 14.4** are adverse impacts unless otherwise specified.

14.3 Visual Impact Assessment

Methodologies

14.3.1 Visual Impact Assessment has been carried out under this Assignment with the steps below.

a) Definition of Assessment Area;

b) Visual Elements;

c) Selection of Viewing Points and Evaluation of Visual Sensitivity;

d) Appraisal of Visual Change; and

e) Evaluation of Overall Visual Impact;

Assessment Area

14.3.2 The Assessment Area for VIA primarily covers an area of visual influence within which the Developments and Infrastructure Works are pronouncedly visible from key public sensitive viewers. Conventionally, the Assessment Area for VIA encompasses a radius three times of the height of the proposed development(s) from the Project site(s).

Identification of Viewpoints

14.3.3 The Preliminary VIA primarily assesses visual impacts arising from the Developments and Infrastructure Works and recommends measures to mimimize and/or mitigate impacts on public views, particularly those easily accessible and popular to the public or tourists. Key public viewing points (kinetic or static) at human eye level that would be potentially most affected by the Developments and Infrastructure Works were identified. Each of their visual sensitivity was described and evaluated. Examples of key public viewing points include:

- Key pedestrian nodes,
- Popular areas used by the public or tourists for outdoor activities, recreation, rest, sitting-out, leisure, walking, sight-seeing, and
- Prominent travel routes where travellers' visual attention may be caught by the proposed development.

14.3.4 The locations and heights of key public viewing points selected and the visual impact assessment area are identified. The viewing point locations and approximate viewing height(s) are shown in **Figure Nos. 406041/S&T/FR/1404** to **1405**. The photomontage for all VPs is presented in **Figure Nos. 406041/S&T/FR/1406** to **1420**. The visibility of the proposed Development from these VPs, and their respective visual quality and visual sensitivity are assessed and described as follows:

VP1 – Visitors of Greening Works at Tai Tong Road

14.3.5 Visual sensitivity of VP1 is considered to be Low as the Development is unlikely to be visible to VP1. The proposed housing developments of TKL Site will almost be completely blocked by these existing residential developments. The overall change in visual composition at VP1 in the presence of the Development is considered to be

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Negligible. The Development at TKL will be almost screened off by the existing medium-rise residential buildings and the sky view would only be very slightly blocked by the Development at TKL. It is not considered to introduce any perceptible visual changes to the existing view at VP1, the overall visual effect on viewers at VP1 is considered to be **Negligible**. Also, it is currently dominated by brownfield operations and some minor village settlements, which are not considered to be visually attractive. It is considered to result in very minor blockage to the sky view. The overall effect on visual resources available to viewers at VP1 as a result of the Development is considered to be **Negligible**.

VP2 – Vehicular Travelers at Shap Pat Heung Interchange (Viewing TKL Site)

14.3.6 The visual sensitivity of VP2 is considered to be Low due to existing visual blockage and highly transient nature of the views. The Development would appear like a "wall structure" in front of the existing medium rise developments, but the view of the Development is highly transient and become prominent only at limited angles when the transient viewers (in vehicles) come close to the Development. The proposed high-rise Development (TKL Site) will fill up some of the visual void spaces between the roadside plantation and the medium-rise residential buildings of The Reach. The introduction of the Development will moderately extend the area of the cluster of existing residential buildings. The extended building clusters are not incompatible with the current visual context. The Development is considered to result in an **Intermediate** change in visual composition at VP2. As the viewers at VP2 are expected to be very concentrated on the traffic conditions, the Development will mostly appear as a lateral glanced view and be very occasionally seen by the vehicular travellers. The proposed development at TKL Site will partially block the open sky view and obstruct the visual openness, resulting in an Intermediate level of visual obstruction. The overall effect of the Development on public viewers at VP2 is considered to be **Moderate**. The views at VP2 are highly transient and constrained when viewing from vehicles. The effect on visual resources available to VP2 is considered to be **Moderate**.

VP3 – Further Visitors of Open Space on Tai Shu Ha Road West

14.3.7 Visual sensitivity of VP3 is considered Medium. The existing view at VP3 is quite open with the mountain backdrop. The existing development context with low-to-medium rise neighbourhood would be changed and the contrast in height and bulk is observed. The Development (TKL) is located behind the existing low-to-medium rise developments and will extend the existing cluster of medium-rise residential buildings (Sereno Verde) at the back, filling up some of the visual void spaces of the sky view at the middle when viewing from VP3. The overall change in visual composition is **Intermediate** but not incompatible with the existing visual context. The proposed Development (TKL Site) would also block the distant view of natural ridgeline which has already been significantly blocked by existing developments. The visual openness of this viewing point will only be **slightly to moderately** affected. The visitors' view towards the Development are likely to be further screened off by screen plantings of the future open space. Overall effect on public viewers from the Development is considered **Slight to Moderate**. It will extend the existing building cluster and block a small portion of the natural ridgeline. The effect on visual

resources available to VP3 is considered to be **Slight to Moderate**.

VP4 – Pedestrians on Long Ho Road (Viewing Shap Pat Heung Interchange)

14.3.8 The visual sensitivity of VP4 is considered to be Low. VP4 is at a lower level on Long Ho Road. The views towards the Development (TKL Site) will be largely screened by the slope plantation. The overall change in visual composition at VP4 is considered to be **Small**. As VP4 is at a lower level and the Development (TKL Site) including associated road improvement/ slope works located behind the slope are almost invisible to the viewers. Visual obstruction as a result of the Development at VP4 is considered to be **Negligible**. Pedestrians at VP4 seldom stop by as there is lack of resting facilities so the duration of view is short given its transient nature. Effect on public viewers at VP4 as a result of the Development is expected to be **Negligible**. The Development does not affect any visually important resources available to viewers at VP4. The overall effect of the Development on visual resources at VP4 is considered to be **Negligible**.

VP5 – Visitors of Tai Kei Ling Sitting-Out Area

14.3.9 The visual sensitivity of VP5 is considered to be Low as use levels of this sitting-out area appeared to be low from observation, and the visibility of the Development from VP5 is highly limited by the existing visual blockage and viewing distances. Much of the lower parts of the proposed building towers will be screened off by the existing village settlements. The upper parts of the towers visible to viewers at VP5 over a distant will apparently intrude into the visual void of the open sky view and appear to be visually incompatible with the surrounding low-rise developments. The overall change in visual composition perceived by the viewers at VP5 is **Intermediate**. The blockage is very distant and only involves changes in the background view. The overall visual permeability is preserved. Only the upper parts of the nearest towers are visible to the viewers at VP5. The effect on public viewers at VP5 is considered to be **Slight**. The upper storeys of the Development will unavoidably blocking a minor portion of the sky view. The effect on visual resources arising from the Development is considered to be **Slight**.

VP6 – Visitors of Kong Tau Tsuen Gazebo

14.3.10 Visual sensitivity of VP6 is considered to be Medium given the visual openness. The existing view from VP6 comprises views of skyline and a distant view of ridgeline of Ho Hok Shan as a backdrop bounded by existing developments and roadside vegetation on both side of Long Ho Road. The rural setting of the area would be drastically changed with the Development, which is considered visually out of context due to its massive scale and outlook when viewing from VP6. The Development (SPH Site) will inevitably fill up the middle part of the open sky view, and the ridgeline will be significantly blocked. The overall change to visual composition by the Development is considered to be **Large**. The blockage will only affect the distant view. The Development is considered to result in an **Intermediate** level of visual obstruction at VP6. The overall effect on public viewers as a result of the Development is considered to be **moderately adverse**. The existing skyline view will be intruded by the Development and the distant ridgeline will be significantly blocked

when viewing from VP6. The overall effect on visual resources at VP6 is considered to be **moderately adverse**.

VP7 – Vehicular Travelers at Shap Pat Heung Interchange (Viewing SPH Site)

14.3.11 Visual sensitivity of VP7 is considered to be Low given the highly transient nature of the views. VP7 represents the passengers/ drivers travelling and looking towards the proposed Shap Pat Heung housing development at Shap Pat Heung Interchange. The view towards the Development (SPH Site) is highly constrained from vehicles, and largely screened with existing roadside vegetation along Pok Oi Interchange and Shap Pat Heung Interchange. The Development is considered to result in a **Small** change in visual composition at VP7. It will not obstruct any important views at VP7 A small portion of the sky view will be blocked by the Development. Visual obstruction by the Development is considered to be **Small**. As the viewers at VP7 are expected to be very concentrated on the traffic conditions, the proposed Development will mostly appear as a lateral glanced view and be very occasionally seen by the vehicular travellers. The overall effect of the Development on public viewers at VP7 is considered to be **Negligible.** The Development is considered to block a small portion of sky view when viewing from VP7. The overall effect on visual resources on VP7 is considered to be **Slight**.

VP8 – Pedestrians on Long Ho Road (Bridge)

14.3.12 Visual sensitivity of VP8 is considered to be Medium. The view comprises an open skyline view bounded by roadside vegetation and brownfield operations on both sides of Long Ho Road. The quality of view is typical in rural landscapes. The high-rise Development will inevitably fill up the visual void spaces in the middle of the skyline view and not compatible with the existing low-rise rural character of the area. The change to visual composition is considered to be **Small** to medium-range viewers at VP8. The blockage is distant and only involves changes in the background view. Visual permeability is largely preserved. The overall visual obstruction by the Development is considered to be **slight**. As there is lack of resting facilities nearby, the view at VP8 towards the Development (SPH Site) is generally short in duration and occasional. The overall effect on public viewers at VP8 is considered to be **slight**. The existing skyline view will be partially intruded by the proposed residential towers (SPH Site) in the middle. The overall effect on visual resources at VP8 is considered to be **Slightly adverse**.

VP9 – Visitors of Ho Hok Shan

14.3.13 Visual sensitivity of VP9 is considered to be Medium as VP9 is not a popular hiking hotspot. The Development at TKL Site will be perceived as an extension of the building clusters along the fringe of Yuen Long New Town. However, the Development at SPH Site on the south of Yuen Long Highway will appear as a high-rise element in the low-rise rural context of Shap Pat Heung. The introduction of the Development in particular that in SPH Site is considered incompatible with the existing rural landscape. The implemented mitigation measures (OM1 Landscape Planting, OM2 Rooftop Greening and OM3 Vertical Greening) during the operation phase are unlikely to be noticed by viewers at VP9 located over 1km from the Development. Overall change in visual composition at VP9 is considered to be

Intermediate. The Development will not result in significant visual obstruction to any important views. The overall visual obstruction at VP9 is considered to be **Negligible**. The Development will form a small component of the distant view in one direction. The overall visual effect on the public viewers at VP9 due to the Development is considered to be **Slight**. No important visual resources available to viewers at VP9 will be significantly affected. The effect on visual resources to viewers at VP9 is considered to be **Negligible**.

VP10 – Pedestrians on Long Ho Road (Viewing SPH Site)

14.3.14 Visual sensitivity of VP10 is considered to be Medium. From VP10 which represents short-range views of travellers on Long Ho Road towards SPH Site, the Development would be visually prominent and permanently obstruct the hilly landscape and open sky. The Development is considered to be visually incompatible with the surrounding low-rise rural landscape for short-range viewers. With the implementation of landscape plantings (OM1) along the periphery of Site, the bulky base of the Development will be slightly softened and the plantings will blend in with the existing roadside vegetation at Year 10 of operation phase. Views from VP10 are highly transient and the effect on visual composition is dynamic and vary with the viewing distance. The overall change in visual composition for viewers on Long Ho Road is considered to be **Intermediate** along most part of the road. The viewers may experience a **Large** change in visual composition when they come close enough to the Development. The extent of blockage will vary when viewers of transient nature travel along the road. The overall visual obstruction by the Development is considered to be **Intermediate**. Pedestrians seldom stop by as there is lack of resting facilities. The viewing time towards the Development is short. The overall effect on public viewers at VP10 is considered to be **Moderate**. The overall effect on visual resources as a result of the Development is considered to be **Moderate**.

VP11 – Pedestrians in Yuen Long Station

14.3.15 Visual sensitivity of VP11 is considered to be Low. The Development will be completely invisible to the pedestrians/ travellers in Yuen Long Station. Changes to visual composition by the Development at VP11 is considered to be **Negligible**.

VP12 – Users of Pok Oi Hospital

14.3.16 Visual sensitivity of VP12 is considered to be Low. The upper storeys of the Development at both Sites will be visible to the users/ visitors of Pok Oi Hospital at the hospital entrance. The Development (upper storeys of buildings) will slightly intrude into the open sky view but only affect the distant view at VP12. Overall change in visual composition at VP12 is considered to be **Small**. The Development will only affect the distant view and will not block any significant visual resources except slight intrusion into the sky view in the middle. Visual obstruction from the Development is considered to be **Small**. The users/ travellers of Pok Oi Hospital seldom stay at the hospital entrance. The effects on public viewers in the presence of the Development is considered to be **Negligible**. Overall effects on visual resources at VP12 is considered to be **Slight**.

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VP13 – Future Visitors of Open Space along Kung Um Road

14.3.17 Visual sensitivity at VP13 is considered to be **Low**. The Development will be completely invisible to the future visitors of this open space. Changes to visual composition arising from the Development at VP13 is considered to be **Negligible**.

VP14 – Visitors of Tung Tau Industrial Area Playground

14.3.18 Visual sensitivity of viewers at VP14 is considered to be Low. The Development will be invisible to the playground visitors. Changes to visual composition by the Development at VP14 is considered to be **Negligible**.

VP15 – Visitors at Yuen Long Park

14.3.19 Given the long viewing distance and the limited portions of the Development visible to the viewers, visual sensitivity of viewers at VP15 is considered to be Low. The visitors of Yuen Long Park would be able to glimpse the Development at SPH Site across a long distance (~1,500m) through the existing trees/ landscape planting of the Park. The Development of TKL will be significantly blocked by existing buildings and landscape areas of the Park. Overall change in visual composition to viewers at VP15 is considered to be **Small** given only a minor portion of the Development can be glimpsed across a long distance. The sky view will not be affected by the Development. Overall visual obstruction from the Development is considered to be **Slight**. The Park visitors are unlikely to notice the visual changes given only a glimpse view of the distant Development is visible to the park visitors from very limited locations in the Park. The effects on public viewers of the Development from VP15 is considered to be **Negligible**. The Development at SPH will block the remaining ridgeline as well as minor portion of open sky view which forms a minor portion of the existing view at VP15. Effects on visual resources at VP15 from the Development is considered to be **Slight**.

Recommended Mitigation Measures and Summary of Visual Impact

14.3.20 Most of the proposed mitigation measures for operation phase impacts presented in Section 14.2.8 and Table 14-3 aim to enhance the aesthetic value of the Development through provision of landscape planting/ screening at ground level, podium landscapes and/ or vertical greening at lower level of the buildings. These measures are usually effective in mitigating visual impacts on ground level viewers located close to the Site.

14.3.21 After taking into account the sensitivity of key public viewers/ viewing points, visual resources and visual amenities to be affected, the magnitude, extent and duration of impact and resultant improvement or degradation in the visual quality and character of the surrounding area, and the planning intention and known planned developments of the area, the visual acceptability of the proposed development is evaluated as follows. Most of the public viewers within the visual envelope will experience only **Negligible, Slightly Adverse or Slightly to Moderately Adverse** visual impacts from the Development. Only those viewers coming close enough to SPH and TKL Sites (e.g. VP2, VP6 and VP10) will experience **Moderately** or **Moderately to Substantially Adverse** visual impacts. The overall resultant visual impacts from the Development is considered to be **Acceptable** with mitigation.

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14.3.22 Due to the increase of the proposed building heights for both sites, VP2 (Vehicular Travelers at Shap Pat Heung Interchange), VP6 (Visitors of Kong Tau Tsuen Gazebo) and VP9 (Visitors of Ho Hok Shan) are the main concern due to the relatively high visibility of the project elements at these VPs. The changes to other VPs due to the increase in building heights are relatively minor. Based on the appraisal of visual changes, the assessment and evaluation for both VP are still valid. The changes in visual composition due to increase in building heights when viewing from VP2 and VP6 remain "Intermediate" and "Large" respectively. For VP9, the increase in building heights will not affect the distant ridgelines when viewing from VP9. The level of change in visual composition at VP9 due to the developments remains "Intermediate" and there is no significant blockage of important visual resources due to the increase in building heights as viewed from VP9. As such, the impact rating for VP2, VP6 and VP9 and all other VPs remain unchanged due to the proposed increase in building heights. The visual changes to VP3 (Future Visitors of Open Space on Tai Shui Ha Road West) due to the potential increase in building heights are considered to be relatively minor. The increased heights will only result in a minor addition to the proposed buildings at the distant background when viewing from VP3. The views of VP3 will be largely screened off by plantings at the future open space and restricted to road level. Photomontages with the increase of the building heights at SPH and TKL Sites are illustrated in **Figure Nos. 406041/S&T/FR/1406** to **1420**. Thus, overall resultant visual impacts from the Development is considered to be **Acceptable** with mitigation.

Table 14.5 Significance of Residual Visual Impacts

Viewing Point	Visual Sensitivity	Assessment of Visual Impacts (Based on Initial Building Design)
VP1 Visitors of Greening Works at Tai Tong Road	Low	Insubstantial/Negligible
VP2 Vehicular Travelers at Shap Pat Heung Interchange (Viewing TKL Site)	Low	Moderately Adverse
VP3 Future Visitors on Tai Shu Ha Road West	Medium	Slightly to Moderately Adverse
VP4 Pedestrians on Long Ho Road (Viewing Shap Pat Heung Interchange)	Low	Insubstantial/Negligible
VP5 Visitors of Tai Kei Ling Sitting-Out Area	Low	Slightly Adverse
VP6 Visitors of Kong Tau Tsuen Gazebo	Medium	Moderately Adverse
VP7 Vehicular Travelers at Shap Pat Heung Interchange (Viewing SPH Site)	Low	Slightly Adverse
VP8 Pedestrians on Long Ho Road (Bridge)	Medium	Slightly Adverse

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Viewing Point	Visual Sensitivity	Assessment of Visual Impacts (Based on Initial Building Design)
VP9 Visitors of Ho Hok Shan	Medium	Slightly to Moderately Adverse
VP10 Pedestrians on Long Ho Road (Viewing SPH Site)	Medium	Moderately to Substantially (Significantly) Adverse
VP11 Pedestrians in Yuen Long Station	Low	Insubstantial/ Negligible
VP12 Users of Pok Oi Hospital	Low	Slightly Adverse
VP13 Future Visitors of Open Space along Kung Um Road	Low	Insubstantial/ Negligible
VP14 Visitors of Tung Tau Industrial Area Playground	Low	Insubstantial/ Negligible
VP15 Visitors at Yuen Long Park	Low	Slightly Adverse
	Overall	• **Negligible, Slightly Adverse or Slightly to Moderately Adverse** to most public viewers in the assessment area • **Slightly to Moderately Adverse** to VP3 (Future Visitors of Open Space on Tai Shu Ha Road West) and VP9 (Visitors at hill top of Ho Hok Shan) • **Moderately Adverse** to VP2 (Vehicular Travelers at Shap Pat Heung Interchange viewing TKL Site) and VP6 (short-range viewer from Kong Tau Tsuen Gazebo) • **Moderately to Substantially (Significantly) Adverse** only to VP10 (short-range viewers/ pedestrians on Long Ho Road when coming close to the Development (SPH)

14.4 Tree Survey

14.4.1 A tree survey was conducted during January 2021 – May 2022 at the Sites and the areas to be potentially affected by proposed traffic improvement works. The

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proposed sewerage/drainage improvement works will take place along existing roads and are not expected to affect existing trees. No tree survey was conducted in the drainage/sewerage improvement works area.

14.4.2 As the Sites were still possessed by private owners with some active brownfield operations, site accessibility was highly restricted. Most of the private land lots were fenced by tall hoardings/ boundary wall. Trees and vegetation were surveyed as tree groups by walking along accessible routes and by using drones. The areas within the Sites were broadly classified into three categories according to the accessibility of the tree group locations and TPIs:

Categories within Site(s):

- The tree group is located in an inaccessible area. Broad tree assessment was conducted from a distance.
- The tree group is completely or partially fenced. Limited assessment was conducted at the tree group periphery.
- The tree group is located in a more exposed private area and visible for survey.

Categories in Infrastructure Works Area:

- Tree group is located in a visible area.
- Tree group is partially fenced. Limited assessment was conducted from a distance.
- Tree group is located in an inaccessible area. Broad tree assessment was conducted from a distance.

Categories for Tree of Particular Interest (TPI):

- Tree is located in an inaccessible area. Broad tree assessment was conducted from a distance.
- Tree is located in a visible public area.
- Tree is located in a more exposed private area and visible for survey.

14.4.3 At least **55** trees and **61** trees were identified within Tai Kei Leng Site and Shap Pat Heung Site respectively. The dominant tree species within the development boundary of Tai Kei Leng are *Dimocarpus longan*, and *Leucaena leucocephala*. Most of them were in poor to average conditions. The dominant tree species within the development boundary of Shap Pat Heung are *Dimocarpus longan*, *Macaranga tanarius* var. *tomentosa* and *Acacia auriculiformis*. Most trees are in poor to average conditions. Trees located near the hillslopes are of better conditions where fewer human disturbance is incurred. Trees located near the entrance of Shap Pat Heung/ highway with more disturbances are of poorer conditions. At least **251** trees were identified in the infrastructural works area subject to traffic improvement works outside Sites. *Acacia sp.* are the most common trees identified in this area.

14.4.4 A total of **10** large trees were identified as TPIs in the tree survey, of which only one tree (**TPI-10** *Ficus elastic*a) with poor structural condition of DBH greater than 1m was surveyed as Tree of Particular Interest within the Development Boundary of SPH Site. All the remaining 9 TPIs are outside the Project footprint and will not be affected

by the Project.

14.4.5 No Old and Valuable Tree (OVT) was identified during the survey.

14.4.6 No endangered planted species were surveyed as stipulated in the Protection of Endangered Species of Animals and Plants Ordinance (Schedule 1, Cap.586 of the Law of Hong Kong), nor protected species listed in Forestry Regulations (subsidiary legislation of the Forest and Countryside Ordinance, Cap. 96) were recorded.

14.4.7 Approximately **248** trees (out of the surveyed **251** trees) identified in the infrastructural works area subject to traffic improvement works are proposed for removal. All the trees proposed to be removed belong to common species. Most trees are in poor to average conditions. The total **364** trees to be felled will be fully compensated (not less than 1:1 in terms of tree numbers). It is proposed to plant at least **195** compensatory trees in the infrastructure works area outside Sites to provide adequate tree compensation, and approximately **54** nos. and **115** nos. of new trees within TKL and SPH Housing Site (subject to review of master layout in IDC stage) to provide sufficient greenery. Except for TPI-10, no other TPIs or OVTs or plant species of conservation interest will be affected by the Project.

14.4.8 The new tree planting plans are presented in **Figure Nos. 406041/S&T/FR/1421** to **1422** and the tree compensatory plan are presented in **Figure No. 406041/S&T/FR/1423**.

Table 14.6 Summary of Impact to Existing Trees

Location	No. of Identified Trees	No. of Trees to be Retained		No. of Trees to be Removed		No. of Trees to be Transplanted
Tree Groups within Development Boundary	116	/	0	**15** Tree Groups (**SPH-TG01** to **SPH-TG15**, including **TPI-10**)	61	0
				7 Tree Groups (**TKL-TG01** to **TKL-TG07**)	55	
Tree Groups within or closed to Infrastructure Works Area	251	Trees closed to road widening works but supposed will not be affected (**3** Trees	3	Trees will be affected by site formation works (Trees within Tree Group **ITG-1** to **ITG-**	248	0

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		within Tree Group **ITG-9**)		**11**, excluding **3** trees within Tree Group **ITG-9**)		
		Total No. of Trees to be Retained: **3**		Total No. of Trees to be Removed: **364**		Total No. of Trees to be Transplanted: **0**
Trees outside both Development Boundary and Infrastructure Works Area	9	Tree of Particular Interest (**TPI-1** to **TPI-9**)	9	/	0	0

14.5 Conclusion

14.5.1 Landscape resources to be lost due to proposed site formation works of the Development include LR1 Village Settlement (~0.85ha), LR3 Brownfield Operation (~4.54ha) and LR7 Channelized Watercourse (~0.08ha). The Development Sites (TKL & SPH Sites) are entirely within LCA1 Yuen Long Miscellaneous Rural Fringe Landscape (~5.47ha). The proposed Development at TKL (three towers ranging from 46 to 51 storeys) located mostly within "Open Space" of Yuen Long OZP will result in high-rise development outside the 'core' area of Yuen Long New Town. The Development at SPH Site (four towers ranging from 41 to 51 storeys) located within "Open Space" of Tai Tong OZP is considered visually incompatible with the surrounding low-rise rural landscape. The overall Development would inevitably intensify the development intensity at the fringe of Yuen Long Town.

14.5.2 Traffic improvement works will mainly take place along existing roads (LR4 Major Vehicular Road) and will have minor encroachment onto adjacent LRs, resulting in small changes of landscape quality to LR1 Village Settlement, LR3 Brownfield Operation, LR4 Major Vehicular Road, LR6 Roadside Vegetation and LR7 Channelized Watercourse, LCA1 Yuen Long Miscellaneous Rural Fringe Landscape and LCA3 Yuen Long Miscellaneous Urban Fringe Landscape to be encroached upon by the works.

14.5.3 The proposed drainage improvement/ mainlaying works will mainly affects existing roads and minimally encroach onto other adjacent LRs. However, the resulting impacts from mainlyaing works are considered reversible as the affected areas will be reinstated upon completion of the works.

Tai Kei Leng Site

14.5.4 At least **55** trees were surveyed within TKL Site. All these trees will be affected by the proposed site formation works and proposed for removal due to their low suitability for transplantation based on this initial tree survey.

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Shap Pat Heung Site

14.5.5 At least **61** trees were surveyed within SPH Site respectively, including one Tree of Particular Interest (TPI-10 *Ficus elastica* in poor health/ structural condition) within SPH Site. All these trees will be affected by the proposed site formation works and proposed for removal due to their low suitability for transplantation based on this initial tree survey.

14.5.6 With full implementation of the proposed mitigation measures (including compensatory plantings of a ratio of at least 1:1 in terms of tree numbers, provision of sufficient green site coverage and sufficient local open space (1m^2 per person) and other measures listed in **Table 14.3**) residual landscape impacts on all affected Landscape Resources and Landscape Character Areas are considered to be Acceptable (i.e. **Insubstantial** to **Slightly Adverse**), except for LR3 Brownfield Operation which is expected to experience potentially **Slightly Beneficial** impacts from the Development.

14.5.7 The two proposed developments would alter the existing visual context and character of their localities. The proposed development at TKL will result in a high-rise development outside the 'core' area of Yuen Long New Town. The proposed development at SPH is considered visually incompatible with the surrounding low-rise rural landscape.

14.5.8 The resultant overall visual impact of the Development is generally **Negligible, Slightly Adverse or Slightly to Moderately Adverse** to most of the key public viewers in the Assessment Area, except for those coming close to SPH and TKL Sites who may experience **Moderately or Moderately to Substantially Adverse** visual impacts. The most visually affected viewers are confined to Long Ho Road and are mostly highly transient passers-by. The overall visual impacts will be mitigated through the provision of landscape planting, vertical greening, rooftop greening, aesthetically pleasing building design and provision of local open space and recreational facilities. The preliminary landscape design will be presented in the Outline Landscape Plan to be formulated at a later stage of the Study. The overall residual visual impacts of the Project are considered **Acceptable** with mitigation measures.

14.5.9 Due to the increase in GFA concession for buildings adopting modular integrated construction promulgated under Joint Practice Note No. 8 issued in July 2022, the maximum building height for SPH site and TKL site will be increased by 25mPD and 15mPD respectively.

15 PRELIMINARY LAND CONTAMINATION AND REMEDIATION STUDY (LCRS)

15.1 General

15.1.1 The purpose of the LCRS is to:

(a) Evaluate and assess the potential land contamination impacts due to previous land uses and the existing operations; and

(b) Determine the extent of the Site Investigation works required for the potentially land-contaminated areas.

15.2 Site Appraisal Findings

15.2.1 A site appraisal, in the form of desktop review and site inspection, was carried out to identify the potential land contamination issues for the Assignment.

15.2.2 A Contamination Assessment Plan (CAP) which comprises the findings of the site appraisal and the sampling and testing proposal was prepared.

15.2.3 Nine (9) potentially contaminated areas have been identified as Proposed SI Areas as shown in **Figure No. 406041/S&T/FR/1501**. A total of eighty-three (83) sampling locations in regular grid pattern are proposed to be adopted within the Proposed SI Areas and the associated potential Chemical of Concerns (COCs), including metals, volatile organic compounds (VOCs), semi-volatile organic compounds (SVOCs), petroleum carbon ranges (PCRs) and polyaromatic hydrocarbons (PAHs) (based on the relevant past and current land use) are considered as the testing parameters for all soil and groundwater samples at the Proposed SI Areas. However, since the Proposed SI Areas are within private premises, it is recommended that SI should be conducted upon successful land resumption. Once land resumption has been completed, further site re-appraisal shall be conducted for the whole Assessment Area to assess any changes in land usage which may give rise to potential land contamination issues and to ascertain the contaminative sources, hotspots of contamination, the associated COCs within the Assessment Area. The sampling and testing plan should be updated based on the future site re-appraisal and submitted in the supplementary CAP for EPD's endorsement. Therefore, the proposed sampling strategies are tentative only and subject to further review in the future site re-appraisal after land resumption.

15.2.4 A Contamination Assessment Report (CAR) will be prepared to present the findings of the future SI and laboratory analytical results. The analytical results will be compared against the Risk-Based Remediation Goals (RBRGs) standards.

15.2.5 If soil or groundwater contamination is detected, the CAR will be supported by a RAP and will be submitted to EPD for approval. The Remediation Action Plan (RAP) will examine the proposed remedial options and relevant issues of soil treatment versus disposal, the proposed future land uses of potential risks based upon the soil, contamination type and concentrations and any further SI required during the execution of the remediation work.

15.2.6 Upon completion of remediation works (if necessary), a Remediation Report (RR) will be prepared and submitted to EPD to demonstrate that the decontamination works

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are adequate and are carried out in accordance with the approved CAR and RAP prior to commencement of any proposed construction works. No construction works will be carried out before the EPD's endorsement of the RR.

15.3 Site Investigation and Sampling Plan

15.3.1 In the CAP, nine (9) potentially contaminated areas and seven (7) non-contaminated areas have been identified within TKL Site and SPH Site. Sixteen (16) areas within the TKL Site and SPH Site are unidentifiable from site observations, as those areas are inaccessible, and there are no clear signage outside the structures. No information on the use of the structures is provided on maps and the uses are not identifiable from recent aerial photos since those areas are roofed. Therefore, the land use, thus land contamination condition of those areas is undeterminable at this stage of the Project. Further inspection is recommended to identify the conditions of those areas at later stage of the Project. Areas proposed for infrastructure works are considered non-contaminated.

15.3.2 Further site re-appraisal should be conducted for the whole Assessment Area to assess any changes in land usage which may give rise to potential land contamination issues and to ascertain the contaminative sources and hotspots of contamination within the Assessment Area. After site re-appraisal, a supplementary CAP will be prepared and agreed with EPD before site investigation. The necessary site investigation to assess the land and groundwater contamination will be conducted.

15.4 Remediation

15.4.1 The actual remediation methods should be confirmed after completion of the site re-appraisal and EPD's agreement on the CAR and RAP at the later stage of the development within the Assessment Area. The RAP will provide details of the remedial actions for any identified contaminated soil and groundwater.

15.4.2 Based on the past and current land uses of the Proposed SI Areas, the associated potential COCs for the Proposed SI Areas (metals, PCRs, SVOCs & VOCs and PAHs) have been identified. Soil within the Proposed SI Areas for the LCRS may be contaminated with the potential COCs due to previous and current industrial activities. For soil, there are several technologies commercially available to treat these contaminants. Technologies that are commonly used in Hong Kong include biopiling and cement solidification/stabilization. These ex-situ remediation methods were proven to be effective in treating the target COCs (cement solidification/stabilization on metals and biopiling on hydrocarbons). Given the size of the Site, there would be enough available space for handling and treating of the contaminated soil and the two methods are considered to be appropriate.

15.4.3 Contaminants in groundwater exceeding the RBRGs were not commonly found in Hong Kong. Some examples of remediation techniques of contaminated groundwater (e.g. air sparging, recovery trenches / wells, in-ground containment/capping and permeable reactive barriers) are shown in the PG from EPD.

16 IMPLEMENTATION PROGRAMME

16.1 General

16.1.1 This summarize the key milestones of the implementation programme for the proposed development.

16.2 Implementation Programme

16.2.1 The preliminary programme and phasing is summarized in **Tables 16.1** and **16.2** below.

Table 16.1 – Milestone Dates of the Key Activities for SPH Site

Key Activities	Milestone Dates
Commencement of IDC Consultancy Study	July 2022
Submission of Final CAF	Q4 2022
Gazettal of plan and scheme for public consultation under Cap. 370	Q2 2023
Completion of the Gazettal of OZP Amendment/Rezoning which includes CE-in-C's Approval	Q4 2023
Submission of ExCo Paper regarding Cap. 370 to CE-in-C for approval	Q2/Q3 2024
FC Approval	Q3 2024
Completion of Land Resumption and Clearance	Q2 2025
Commencement of Site Formation and Infrastructure Works	Q2 2025
Completion Date of Infrastructure Works	Q1 2031
Site Handover from CEDD to HD	Q2 2026
Completion Year	2031

Table 16.2 – Milestone Dates of the Key Activities for TKL Site

Key Activities	Milestone Dates
Commencement of IDC Consultancy Study	July 2022
Submission of Final CAF	Q4 2022
Gazettal of plan and scheme for public consultation under Cap. 370	Q2 2023
Completion of the Gazettal of OZP Amendment/Rezoning which includes CE-in-C's Approval	Q4 2023
Submission of ExCo Paper regarding Cap. 370 to CE-in-C for approval	Q2/Q3 2024
FC Approval	Q3 2024
Completion of Land Resumption and Clearance	Q2 2025
Commencement of Site Formation and Infrastructure Works	Q2 2025

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Completion Date of Infrastructure Works	Q1 2031
Site Handover from CEDD to HD	Q2 2026
Completion Year	2031

17 CONCLUSION AND RECOMMENDATION

17.1 General

17.1.1 The Government plans to adopt different strategies to increase land supply for development. To meet the objective of the 2019 Policy Address, Planning Department (PlanD) has accorded priority to the study of 160 hectares brownfield sites and the Sites are among these potential sites. This Final Report summarised the findings and other salient issues of relevant technical assessments for the Development in terms of infrastructures, utilities, geotechnical, site formation, environmental, landscape, visual and operation and maintenance requirements. According to the assessments and as summarized below, there are no insurmountable constraints for the Development at the recommended development parameters with mitigation measures. The detailed design of the Development and mitigation measures are subject to further study and review in IDC stage.

17.2 Air Ventilation

17.2.1 On basis of the notional layout plan, an expert evaluation of wind performance on the Project is carried out.

17.2.2 A qualitative assessment of the wind performance of the Developments has been carried out. Annual prevailing wind directions were found to be NNE, E and S while summer prevailing wind directions were found to be SSW, S and SSE. The site layout of the Sites has carefully considered designs to aid air ventilation while balancing the need to provide adequate domestic and non-domestic GFA and ancillary facilities to achieve the target development need.It is considered that the potential impact to the wind environment of the surroundings would be alleviated and overall no significant adverse air ventilation impact is anticipated from the proposed development with the incorporation of mitigation measures mentioned in this report.

17.3 Traffic and Transportation

17.3.1 To support the Project, upgrading of existing facilities are recommended. Junction improvement proposals as shown in **Table 17.1** are formulated and listed below. With the proposed junction improvement schemes, the assessment revealed that all key junctions will be operating within capacity in design year 2036.

17.3.2 For SPH site, there is only a sub-standard single track access road connecting SPH to Long Ho Road via a bridge. Therefore, it is proposed to widen the section of this single track access road within SPH to standard 7.3m single-2 lanes carriageway to improve the accessibility of SPH. The existing track road next to Tai Kei Leng Road is the existing footpath leading to the concerned houses next to the Reach. Therefore, only the footpath will be reprovided for the existing track road.

17.3.3 A bus-terminus with sawtooth bus bay design is proposed at SPH to provide a minimum of 3 bus bays and 6 stacking spaces for 3 terminal routes subject to actual bus service route planning at the later stage. In addition, 1 urban taxi stand and 1 NT taxi stand will also be provided at the new access road at SPH.

17.3.4 For TKL, 4 double-width bays will be provided at Tai Kei Leng Road eastbound and

total 50m layby will be provided at Tai Kei Leng Road westbound (with a general layby and 2 bus bays).

17.3.5 With the implementation of proposed junction improvement works and enhancement on public transport services, it is anticipated that the proposed developments would not induce insurmountable traffic impact onto the adjacent road network. The proposed development is acceptable in traffic point of view.

17.4 Geotechnical and Site Formation

17.4.1 A review of the existing GI records available was conducted. The findings indicate that SPH site is covered by approximate 1.00m to 3.00m thick of fill layer and 7.00m to 10.10m of alluvium layer. Thickness of completely decomposed to highly decomposed tuff (CD/HDT) ranged from 3.50m to 21.35m and bedrock lies at a depth of 35m below ground level. According to existing geological information, the southern portion of SPH Site is cut by NW SE-trending fault. It also indicates that TKL site is covered by 0.40m to 7.40m thick of fill layer. Alluvium with thickness up to 25.25m or karst deposit with thickness up to 8m were found in the existing GI records. Underlying the alluvium or karst deposit is completely to highly decomposed rock (metasiltstone or quartz porphyry). Bedrock (Metasiltstone, quartz porphyry or marble) lies at -9.44 to beyond -123.78mPD. The ground profile shall be verified by site specific ground investigation in later stage of project.

17.4.2 A total of 3 unregistered slopes and 3 registered features (Feature nos. 6NW-B/F6, 6NW-B/FR12 and 6NW-B/FR20) are identified in proximity to the Shap Pat Heung Site and 4 registered slopes (Feature nos. 6NW-D/F129, 6NW-D/F14, 6NW-B/FR 247 and 6NW-D/F12) are identified in proximity to the Tai Kei Leng Site; these features will affect the proposed site formation works.

17.4.3 After the reviewing of existing information, geological, geotechnical and hydrogeological information are found being insufficient. Therefore, site-specific ground investigation, which comprises sinking of vertical/inclined drillholes are recommended.

17.4.4 Due to the limited GI information, the geological model is considered as preliminary, further assessment would be carried out after the completion of the site-specific ground investigation works to ascertain physical soil properties and facilitate design of the proposed works.

17.4.5 A detailed ground model supported by a thoughtful ground investigation could assist the designer selecting a suitable foundation system to overcome such constraints. Geological constraints could be identified by further GI in later stage.

17.4.6 Preliminary screening to determine the need for NTHS with reference to GEO Report No. 138 (Second Edition, 2016) has been conducted. According to the findings, the catchment overlooking Shap Pat Heung Site unsatisfied the "Alert Criteria" and therefore further NTHS is not required.

17.4.7 Subject to the gentle topographic nature of the SPH site, the proposed site formation level will be formed at the level between +11.00mPD at the south vicinity of the site to +7.50mPD at the north vicinity of the site.

17.4.8 Subject to the gentle topographic nature of the TKL site, the proposed site formation level will be formed at the level between +7.00mPD at the southwest vicinity of the site to +6.00mPD at the northeast vicinity of the site.

17.5 Drainage, Sewerage, Water Supply and Utilities

17.5.1 The technical assessments have identified the needs for new provision of infrastructure and upgrading of existing utilities as shown in **Table 17.1**. Preliminary arrangements have been proposed to support the proposed developments and mitigate impacts arising from the proposed developments. With these infrastructure provisions in place, adverse impacts with respect to drainage, sewerage, water supply and utilities are not envisaged.

17.6 Environmental, Landscape and Visual, Land Contamination and Sustainability

17.6.1 The technical assessments have examined the environmental impacts and planning considerations. Preliminary mitigation measures are proposed to mitigate or minimize adverse impacts as much as practicable. With the recommended measures in place, it is envisaged that there would be no insurmountable issue from the environmental and planning aspects. Further liaison with relevant authorities at the detailed design stage is required to confirm proper implementation of these mitigation measures.

17.7 Land Requirement

17.7.1 Based on the proposed extent of land required for the implementation of the proposed developments, the Study has identified the extent of existing land use and numbers of facilities or properties that may be affected by the proposed developments. Further liaison with LandsD will need to be carried out at later detailed design stage.

Table 17.1 Proposed Infrastructure Works

Traffic	• Junction improvement at Castle Peak Road – Yuen Long / Yuen Long On Lok Road / Long Lok Road (J5)
	• Junction improvement at Ma Tong Road / Fung Cheung Road / Fung Ki Road (J10)
	• Junction improvement at Shap Pat Heung Interchange (J14) and Shap Pat Heung Road / Tai Kei Leng Road (J15)
	• Junction improvement at Tai Kei Leng Road / Tai Shu Ha Road East / Tai Shu Ha Road West (J20)
	• Junction improvement at Tai Shu Ha Road East / Tai Shu Ha Road West / Long Ho Road (J21)
	• Bus-terminus at SPH Site
Drainage	• Proposed 750mm Drainage Pipe at TKL Site

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	• Proposed Twin 1800mm Drainage Pipes at SPH Site near the school site
	• Proposed 900mm Drainage Pipes near housing site of SPH Site
Sewerage	• Proposed 400mm, 450mm and 560mm Gravity Sewers along Long Ho Road, Tai Kei Leng Road and along Yuen Long Bypass Floodway
Water Supply	• 150mm to 300mm fresh water mains upgrade to 300mm to 450mm along Yuen Ching Road, Yuen Lung Street, Fung Yau Street South, Yau Tin West Road and Long Ho Road
	• Proposed 150mm fresh water mains at TKL Site
	• 300mm to 400mm salt water mains upgrade to 700mm along Shap Pat Heung Road
	• Proposed 150mm salt water mains for TKL Site and SPH Site

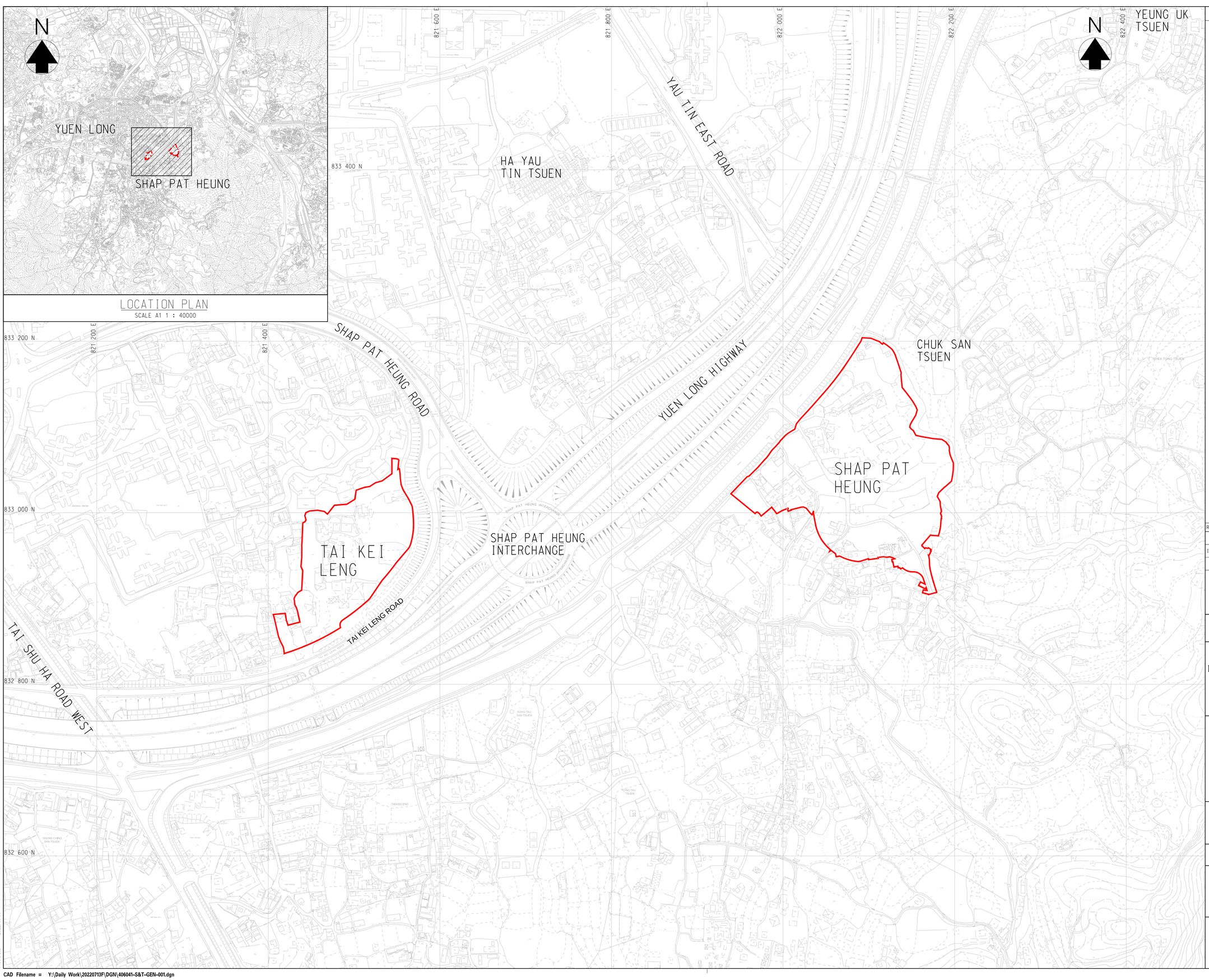
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FIGURES

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recycled paper

LOCATION PLAN
SCALE A1 1 : 40000



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NOTES:

1. GRID LINES ARE HONG KONG METRIC GRID 1980.
2. THE EXACT LOCATION AND LAYOUT OF THE SITES ARE SUBJECT TO CHANGE AND CONFIRMATION WITH RELEVANT PARTIES.

LEGEND:

PROPOSED DEVELOPMENT BOUNDARY

Revision	Date	Description			Initial
	Designed	Checked	Drawn	Checked	
Initial					
Date					

Approved

Agreement no.
CE10/2020 (CE)

Project title
SITE FORMATION AND INFRASTRUCTURE WORKS FOR PROPOSED PUBLIC HOUSING DEVELOPMENTS AT SHA PO, SHAP PAT HEUNG AND TAI KEI LENG, YUEN LONG - FEASIBILITY STUDY

Drawing title
LOCATION PLAN OF THE SITES - SHAP PAT HEUNG AND TAI KEI LENG

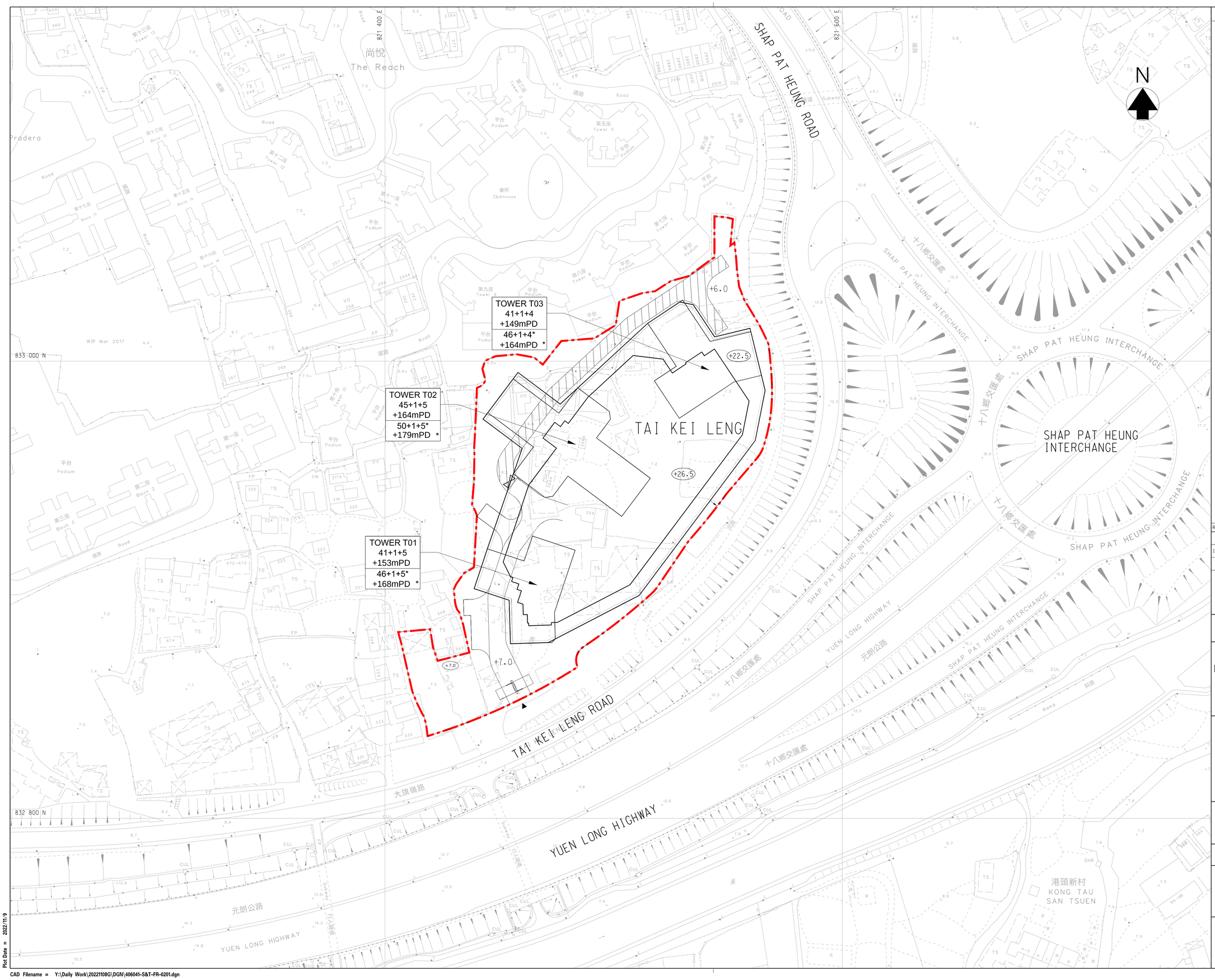
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A3 1 : 4000

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CEDD Civil Engineering and Development Department

BINNIES HONG KONG LIMITED
賓尼斯工程顧問有限公司

Plot Date = 2022/7/14
CAD Filename = Y:\Daily Work\20220713F\DGN\406041-S&T-GEN-001.dgn



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LEGEND:

- INDICATIVE HOUSING DEVELOPMENT SITE BOUNDARY
- +148.79mPD — APPROX BUILDING HEIGHT
- 46+1+4 — NO. OF DOMESTIC STOREYS (EXCLUDE PODIUM / LOBBY) + REFUGE FLOOR + PODIUM
- +22.5 — PODIUM LEVEL(IN mPD)

*BUILDING HEIGHT AND DOMESTIC STOREYS WITH MIC CONSTRUCTION

*The notional layout is for study purpose and may change subject to detailed design

Revision	Date	Description		Initial
	Designed	Checked	Drawn	Checked
Initial	–	–	SZ	–
Date	09/22	09/22	09/22	09/22

Approved

Agreement no.
CE10/2020 (CE)

Project title
SITE FORMATION AND INFRASTRUCTURE WORKS FOR PROPOSED PUBLIC HOUSING DEVELOPMENTS AT SHA PO, SHAP PAT HEUNG AND TAI KEI LENG, YUEN LONG - FEASIBILITY STUDY

Drawing title
PRELIMINARY SITE LAYOUT - TAI KEI LENG

Drawing no.
406041/S&T/FR/0201

Revision
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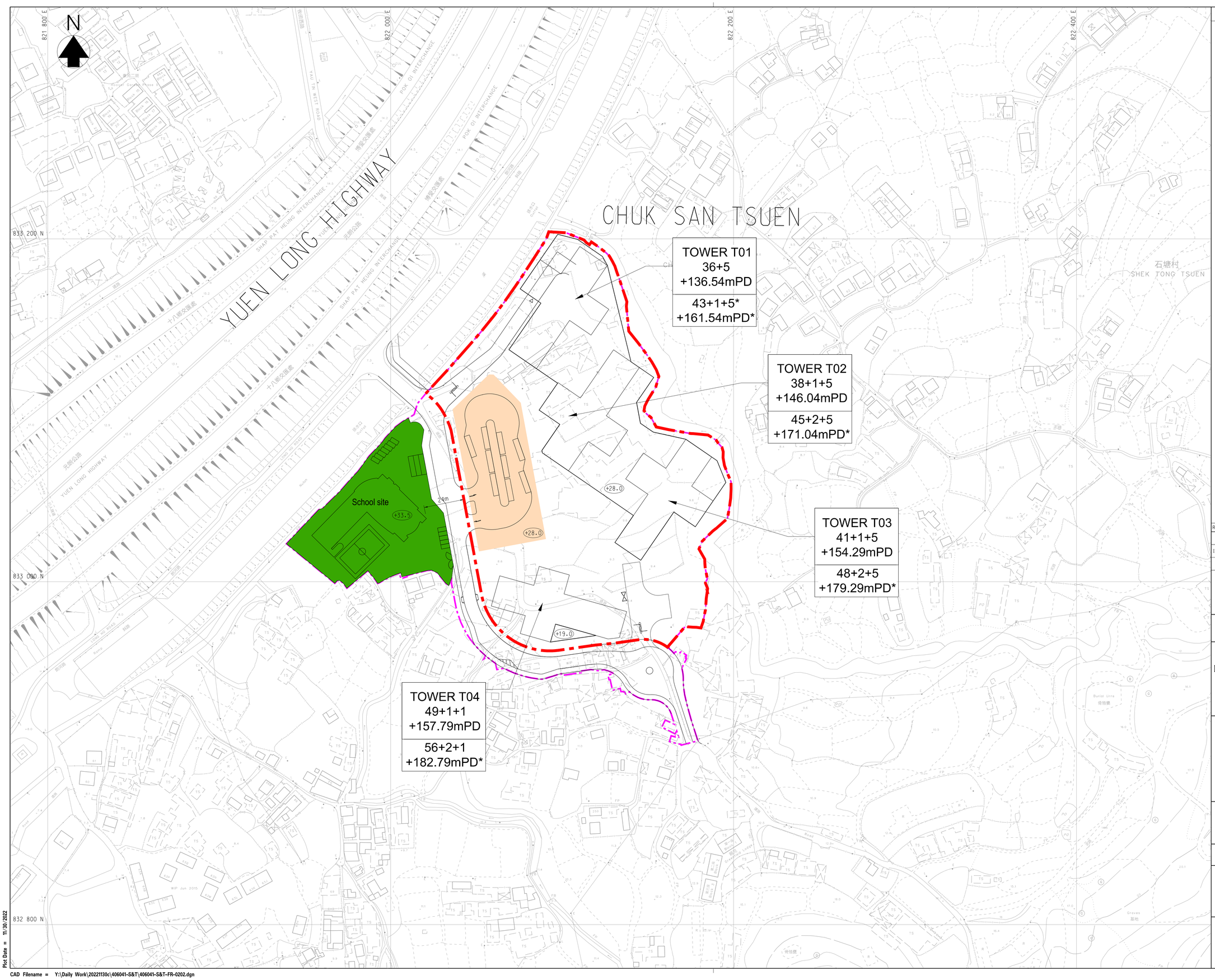
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A3 1 : 1500

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Plot Date = 2022/11/9

CAD Filename = Y:\Daily Work\20221108G\DGN\406041-S&T-FR-0201.dgn



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LEGEND:

- INDICATIVE HOUSING DEVELOPMENT SITE BOUNDARY
- PROPOSED DEVELOPMENT BOUNDARY (REVISED)
- PRIMARY SCHOOLS
- SOCIAL WELFARE FACILITIES
- 49+1+1 — NO. OF DOMESTIC STOREYS (EXCLUDE PODIUM / LOBBY) + REFUGE FLOOR + PODIUM
- +136.54mPD — APPROX BUILDING HEIGHT
- +22.5 — PODIUM LEVEL(IN mPD)

*BUILDING HEIGHT AND DOMESTIC STOREYS WITH MIC CONSTRUCTION

*The notional layout is for study purpose and may change subject to detailed design

Revision	Date	Description		Initial
	Designed	Checked	Drawn	Checked
Initial	–	–	SZ	–
Date	06/22	06/22	06/22	06/22

Approved

Agreement no.
CE10/2020 (CE)

Project title
SITE FORMATION AND INFRASTRUCTURE WORKS FOR PROPOSED PUBLIC HOUSING DEVELOPMENTS AT SHA PO, SHAP PAT HEUNG AND TAI KEI LENG, YUEN LONG - FEASIBILITY STUDY

Drawing title
PRELIMINARY SITE LAYOUT
SHAP PAT HEUNG

Drawing no.: 406041/S&T/FR/0202
Revision: –

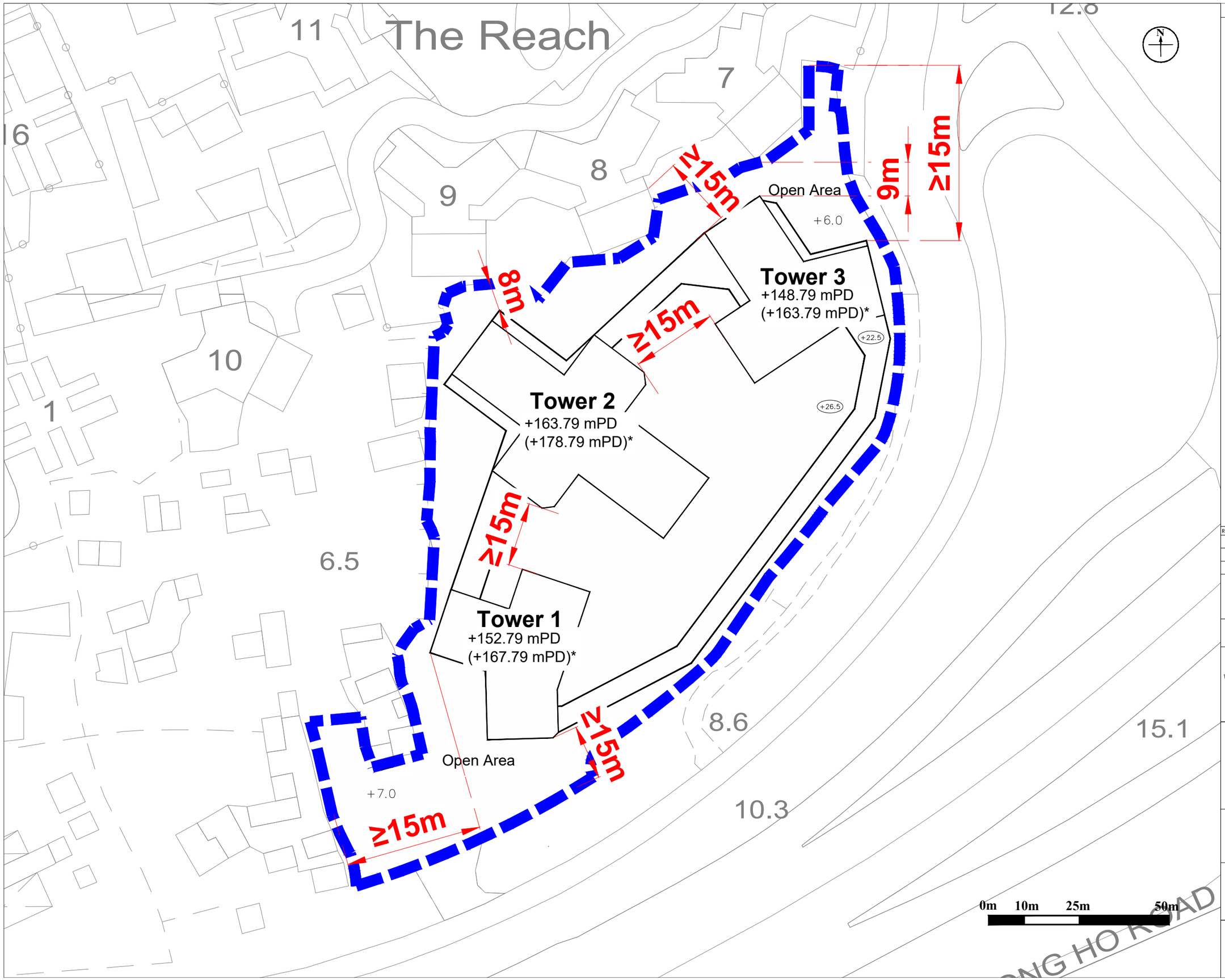
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Plot Date = 11/30/2022

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LEGEND:

SITE BOUNDARY

(+22.5) PODIUM LEVEL (IN mPD)

*ADDITIONAL BUILDING HEIGHT TO CATER FOR THE POSSIBLE ADOPTION OF MODULAR INTEGRATED CONSTRUCTION PROMULGATED UNDER JOINT PRACTICE NOTE NO. 8 ISSUED IN JULY 2022

NOTE:
THE NOTIONAL LAYOUT IS FOR STUDY PURPOSE, THE BUILDING DISPOSITION IS SUBJECT TO DETAILED DESIGN AND FURTHER AVA STUDY

Revision	Date	Description			Initial
	Designed	Checked	Drawn	Checked
Initial			RS	KY
Date			11/22	11/22

Approved

Contract no.
CE 10/2020 (CE)

Contract title
SITE FORMATION AND INFRASTRUCTURE WORKS FOR PROPOSED PUBLIC HOUSING DEVELOPMENT AT SHA PO, SHAP PAT HEUNG AND TAI KEI LENG, YUEN LONG FEASIBILITY STUDY

Drawing title
BUILDING DESIGN FEATURES – TAI KEI LENG SITE

Drawing No.
406041/S&T/FR/0301

Scale

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Civil Engineering and Development Department

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LEGEND:

SITE BOUNDARY

EXISTING AIR CORRIDOR

*ADDITIONAL BUILDING HEIGHT TO CATER FOR THE POSSIBLE ADOPTION OF MODULAR INTEGRATED CONSTRUCTION PROMULGATED UNDER JOINT PRACTICE NOTE NO. 8 ISSUED IN JULY 2022

NOTE:
THE NOTIONAL LAYOUT IS FOR STUDY PURPOSE, THE BUILDING DISPOSITION IS SUBJECT TO DETAILED DESIGN AND FURTHER AVA STUDY

Revision	Date	Description		Initial
	Designed	Checked	Drawn	Checked
Initial			RS	KY
Date			11/22	11/22

Approved

Contract no.
CE 10/2020 (CE)

Contract title
SITE FORMATION AND INFRASTRUCTURE WORKS FOR PROPOSED PUBLIC HOUSING DEVELOPMENT AT SHA PO, SHAP PAT HEUNG AND TAI KEI LENG, YUEN LONG FEASIBILITY STUDY

Drawing title
BUILDING DESIGN FEATURES – SHAP PAT HEUNG SITE

Drawing No.
406041/S&T/FR/0302

Scale

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BINNIES HONG KONG LIMITED
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YUEN LONG HIGHWAY

YUEN LONG BYPASS FLOODWAY

Nullah

4 storeys Carpark & Welfare

2 Storeys Welfare Facilities Above PTI

Tower 1
+136.54 mPD
(+161.54 mPD)*

Tower 2
+146.04 mPD
(+171.04 mPD)*

Tower 3
+154.29 mPD
(+179.29 mPD)*

Tower 4
+157.79 mPD
(+182.79 mPD)*

School site
+33.5 mPD

Open Area

≥15m

14m

10m

5.6

15.2

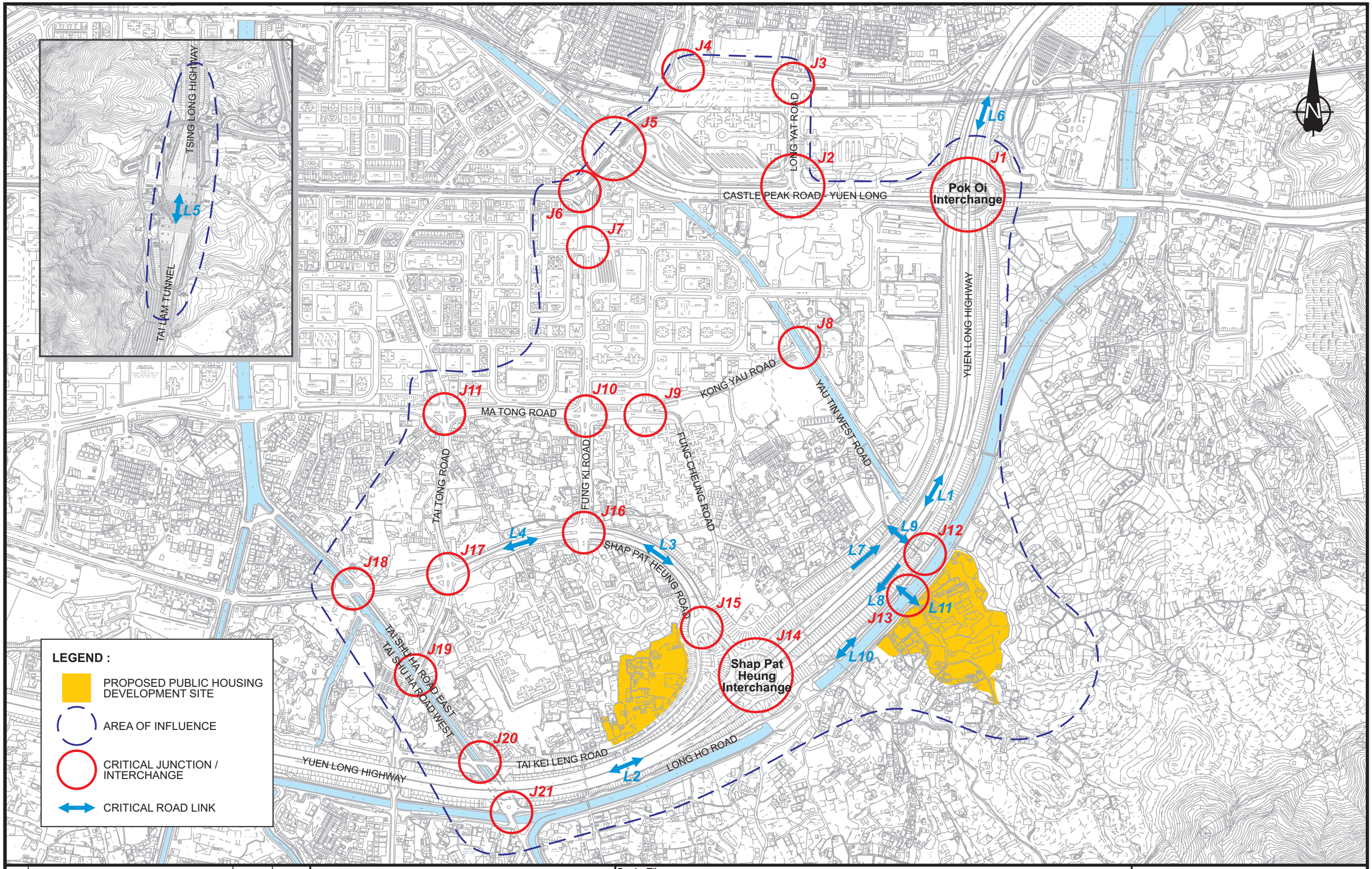
15.5

8.4

8.9

10.5

0m 20m 50m 100m



Rev.	Description	Checked	Date
-	-	-	-
-	-	-	-
B	MINOR AMENDMENT	YKP	26JUL22
A	TD'S COMMENTS INCORPORATED	YKP	10DEC21

Project Title

AGREEMENT NO. CE 10/2020 (CE) - SITE FORMATION AND INFRASTRUCTURE WORKS FOR PROPOSED PUBLIC HOUSING DEVELOPMENTS AT SHA PO, SHAP PAT HEUNG AND TAI KEI LENG, YUEN LONG - FEASIBILITY STUDY

Drawing Title

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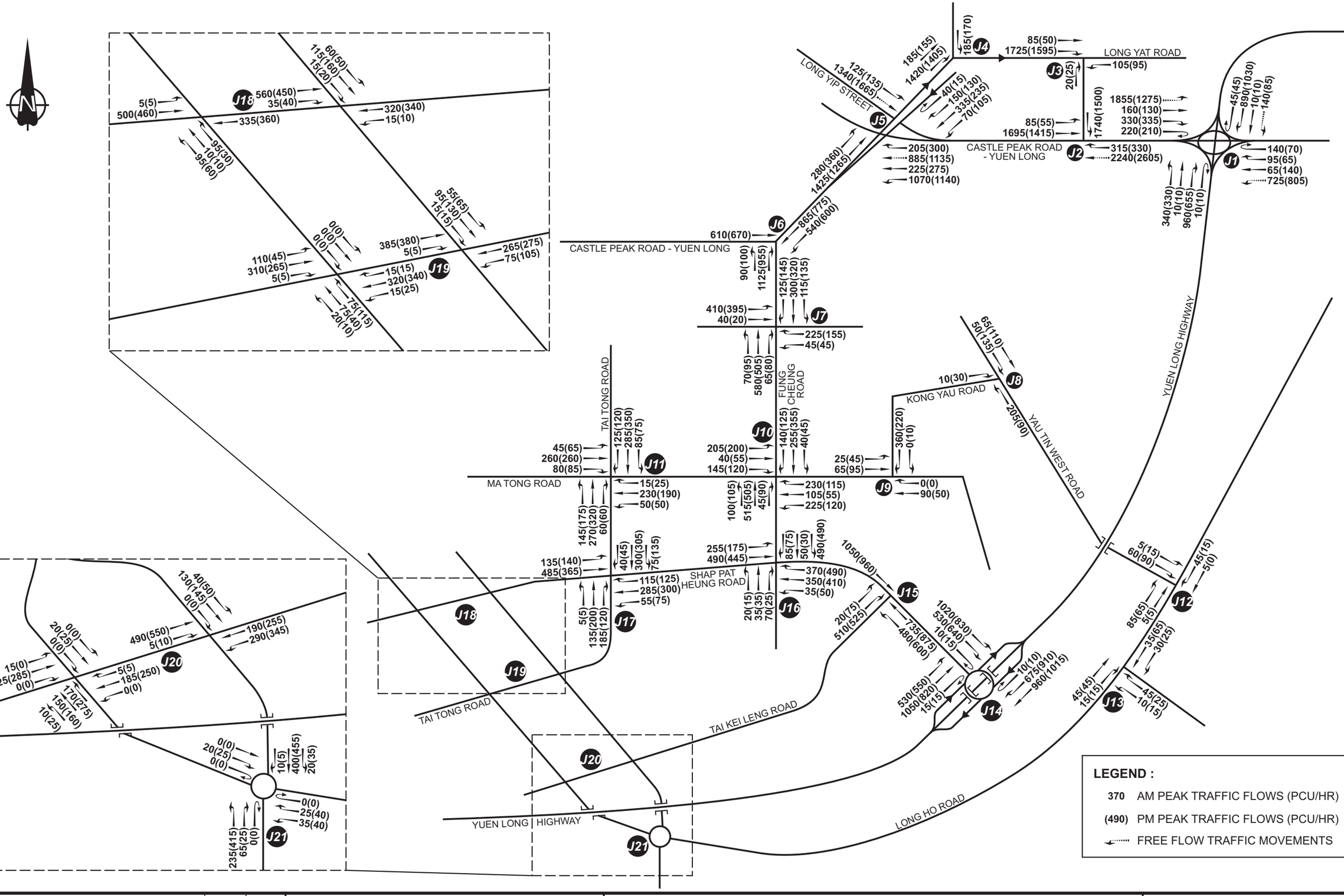
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CEDD 土木工程拓展署 Civil Engineering and Development Department

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SYSTRA MVA

CHK50518210/TIA_S&T/F21-B.CDR/LLH/26JUL22



Rev.	Description	Checked	Date
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-	-	-	-
B	TD'S COMMENTS INCORPORATED	YKP	26JUL22
A	TD'S COMMENTS INCORPORATED	YKP	30DEC21

Project Title

AGREEMENT NO. CE 10/2020 (CE) -
SITE FORMATION AND INFRASTRUCTURE WORKS
FOR PROPOSED PUBLIC HOUSING DEVELOPMENTS
AT SHA PO, SHAP PAT HEUNG AND TAI KEI LENG,
YUEN LONG - FEASIBILITY STUDY

Drawing Title

2020 OBSERVED TRAFFIC FLOWS

Designed	Checked	Scale	Date	Drawing No.	Rev.
CNS	YKP	NTS	APR 2021	406041/S&T/FR/0402	B

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SYSTRA MVA

CHK50518210/TIA_S&T/F22-B.CDR/LLH/26JUL22

TAI KEI LENG
(SITE C)

SHAP PAT HEUNG
(SITE B)

School site

*The notional layout is for study purpose and may change subject to detailed design

LEGEND:

- PROPOSED PUBLIC HOUSING DEVELOPMENT
- PROPOSED ROAD INFRASTRUCTURE UNDER THIS STUDY
- PROPOSED CYCLE TRACK AND / OR FOOTPATH UNDER PLANNING AND ENGINEERING STUDY FOR HOUSING SITE IN YUEN LONG SOUTH
- PROPOSED ROAD NETWORK UNDER PLANNING AND ENGINEERING STUDY FOR HOUSING SITE IN YUEN LONG SOUTH
- 12.8m VEHICLE

SWEPT PATH ANALYSIS FOR 12.8m LONG VEHICLE

Rev.	Description	Checked	Date
-	-	-	-
-	-	-	-
B	MINOR AMENDMENT	YKP	14SEP22
A	MINOR AMENDMENT	YKP	20DEC21

Project Title

AGREEMENT NO. CE 10 / 2020 (CE) -
SITE FORMATION AND INFRASTRUCTURE WORKS FOR PROPOSED PUBLIC HOUSING DEVELOPMENTS AT SHA PO, SHAP PAT HEUNG AND TAI KEI LENG, YUEN LONG - FEASIBILITY STUDY

Drawing Title

PROPOSED LOCAL ROAD NETWORK AND PROPOSED ROAD INFRASTRUCTURE SCHEME

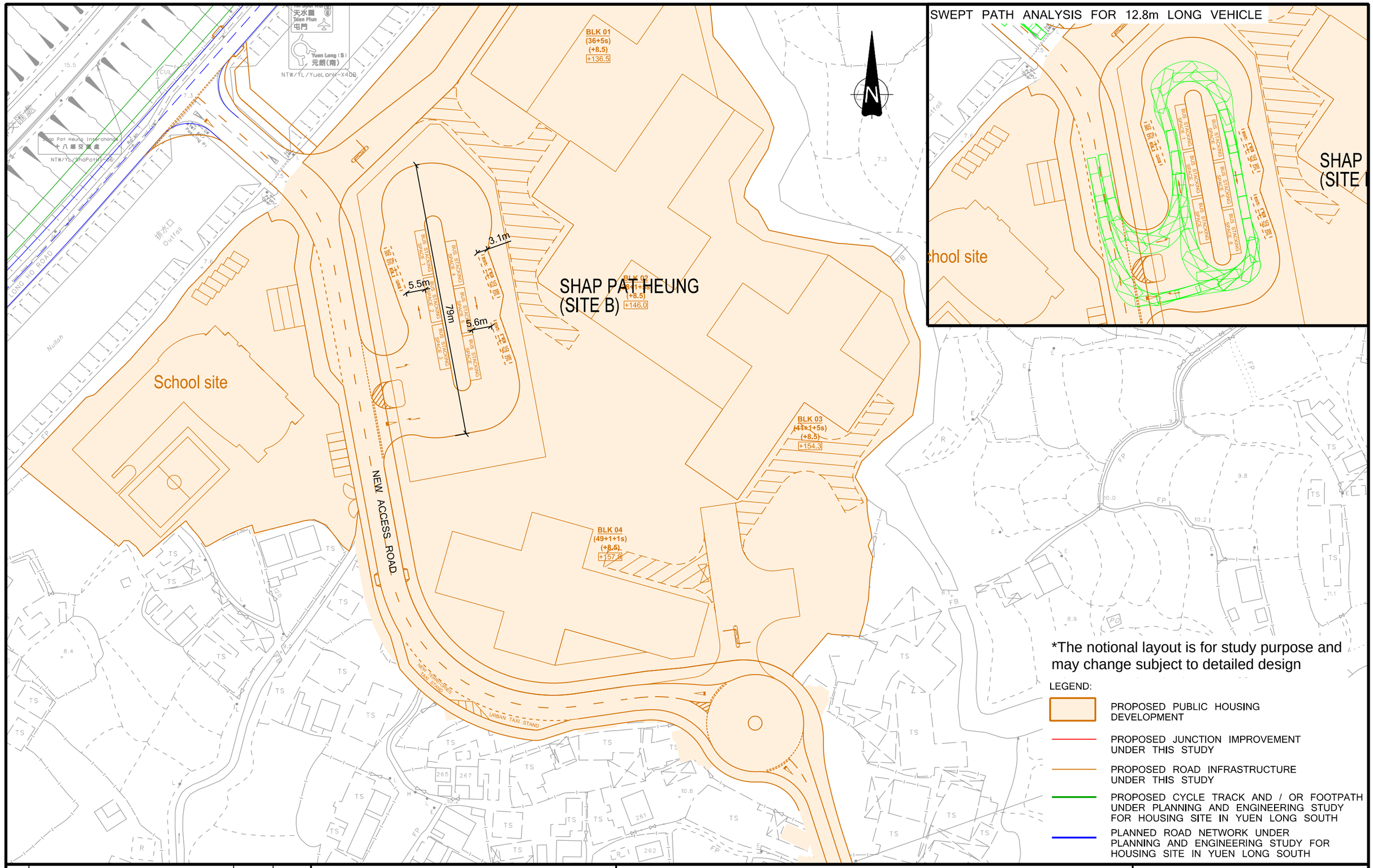
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土木工程拓展署
Civil Engineering and Development Department

BINNIES HONG KONG LIMITED
賓尼斯工程顧問有限公司

SYSTRA MVA

CHK50518210/TIA_S&T/F31-B.DGN/CNS/14SEP22



Rev.	Description	Checked	Date
-	-	-	-
-	-	-	-
-	-	-	-
-	-	-	-

Project Title

AGREEMENT NO. CE 10 / 2020 (CE) -
SITE FORMATION AND INFRASTRUCTURE WORKS FOR PROPOSED PUBLIC HOUSING DEVELOPMENTS AT SHA PO, SHAP PAT HEUNG AND TAI KEI LENG, YUEN LONG - FEASIBILITY STUDY

Drawing Title

PROPOSED NEW ACCESS ROAD WITH PUBLIC TRANSPORT INTERCHANGE

Designed	Checked	Scale	Date	Drawing No.	Rev.
CNS	YKP	1:1000(A3)	JUL 2022	406041/S&T/FR/0404	-

土木工程拓展署
CEDD Civil Engineering and Development Department

BINNIES HONG KONG LIMITED
賓尼斯工程顧問有限公司

SYSTRA MVA

CHK50518210/TIA_S&T/F33.DGN/CNS/30AUG22

TAI KEI LENG
(SITE C)

BLK 01

BLK 02

BLK 03

50m

50m

TAI KEI LENG ROAD

YUEN LONG HIGHWAY

SHAP PAT HEUNG INTERCHANGE

*The notional layout is for study purpose and may change subject to detailed design

LEGEND:

- PROPOSED PUBLIC HOUSING DEVELOPMENT
- PROPOSED JUNCTION IMPROVEMENT UNDER THIS STUDY
- PROPOSED ROAD INFRASTRUCTURE UNDER THIS STUDY
- PROPOSED CYCLE TRACK AND / OR FOOTPATH UNDER PLANNING AND ENGINEERING STUDY FOR HOUSING SITE IN YUEN LONG SOUTH
- PLANNED ROAD NETWORK UNDER PLANNING AND ENGINEERING STUDY FOR HOUSING SITE IN YUEN LONG SOUTH

Rev.	Description	Checked	Date
-	-	-	-
-	-	-	-
-	-	-	-
-	-	-	-

Project Title

AGREEMENT NO. CE 10 / 2020 (CE) -
SITE FORMATION AND INFRASTRUCTURE WORKS FOR PROPOSED PUBLIC HOUSING DEVELOPMENTS AT SHA PO, SHAP PAT HEUNG AND TAI KEI LENG, YUEN LONG - FEASIBILITY STUDY

Drawing Title

PROPOSED PUBLIC TRANSPORT INFRASTRUCTURE

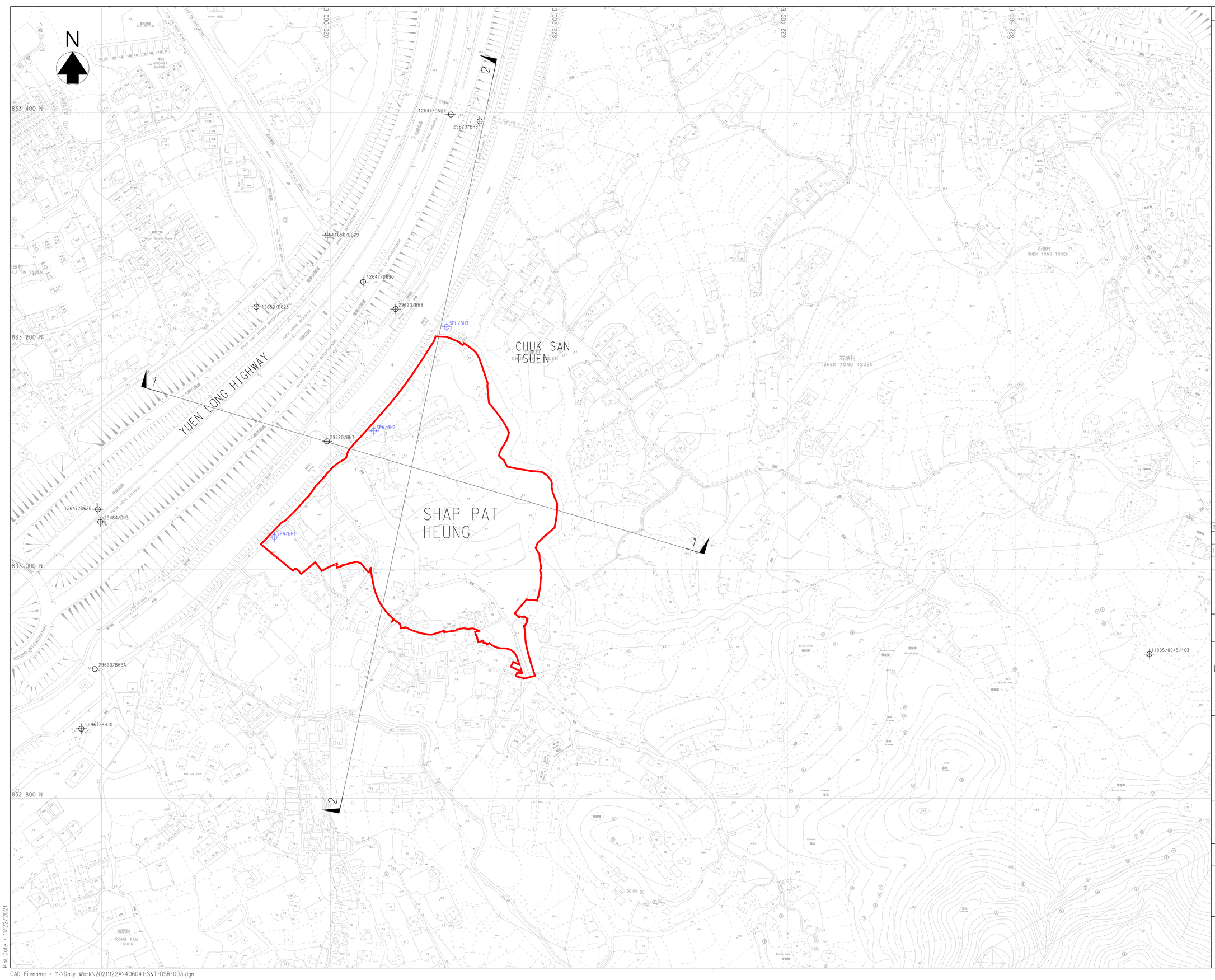
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土木工程拓展署
CEDD Civil Engineering and Development Department

BINNIES HONG KONG LIMITED
賓尼斯工程顧問有限公司

SYSTRA MVA

CHK50518210/TIA_S&T/F34.DGN/CNS/14SEP22



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NOTES:

1. GRID LINES ARE HONG KONG METRIC GRID 1980.
2. THE EXACT LOCATION AND LAYOUT OF THE SITES ARE SUBJECT TO CHANGE AND CONFIRMATION WITH RELEVANT PARTIES.

LEGEND:

- PROPOSED DEVELOPMENT BOUNDARY
- EXISTING GROUND INVESTIGATION STATIONS
- SPH/BH3 — SITE-SPECIFIC GI

Revision	Date	Description		Initial
	Designed	Checked	Drawn	Checked
Initial	–	–	SZ	–
Date	NOV2020	NOV2020	NOV2020	NOV2020

Approved

Agreement no.
CE10/2020 (CE)

Project title
SITE FORMATION AND INFRASTRUCTURE WORKS FOR PROPOSED PUBLIC HOUSING DEVELOPMENTS AT SHA PO, SHAP PAT HEUNG AND TAI KEI LENG, YUEN LONG - FEASIBILITY STUDY

Drawing title
EXISTING GROUND INVESTIGATION STATIONS - SHAP PAT HEUNG

Drawing no.
406041/S&T/FR/0501

Revision
–

Scale
A1 1 : 1500
A3 1 : 3000

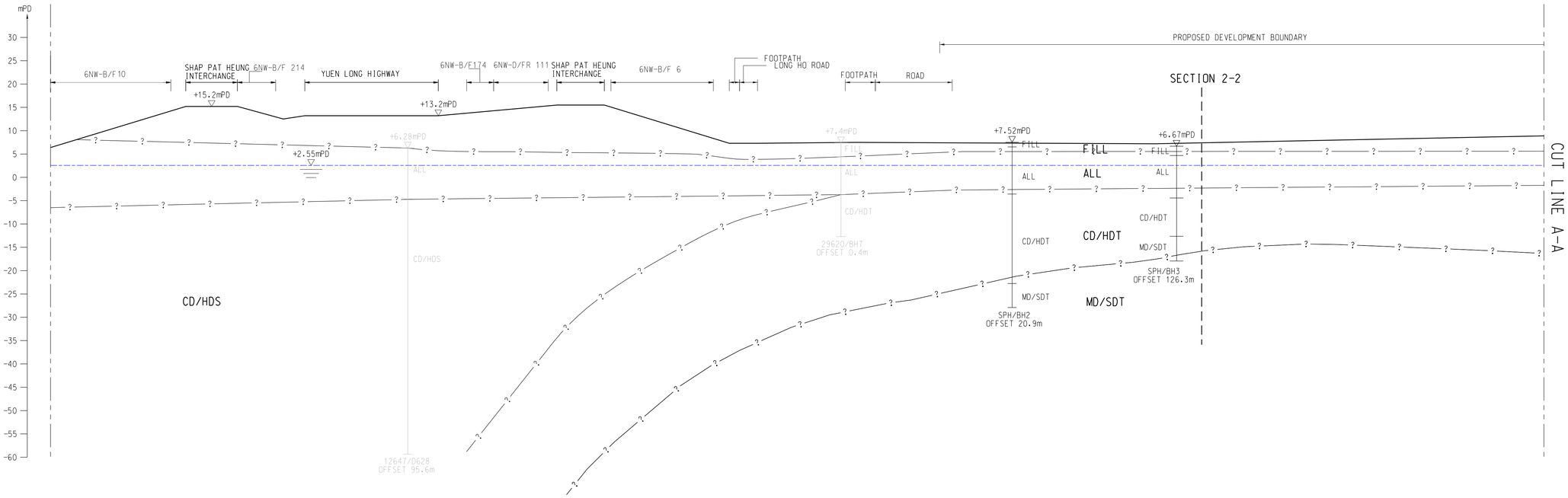
土木工程拓展署
CEDD Civil Engineering and Development Department

BINNIES HONG KONG LIMITED
賓尼斯工程顧問有限公司

Plot Date = 11/22/2021

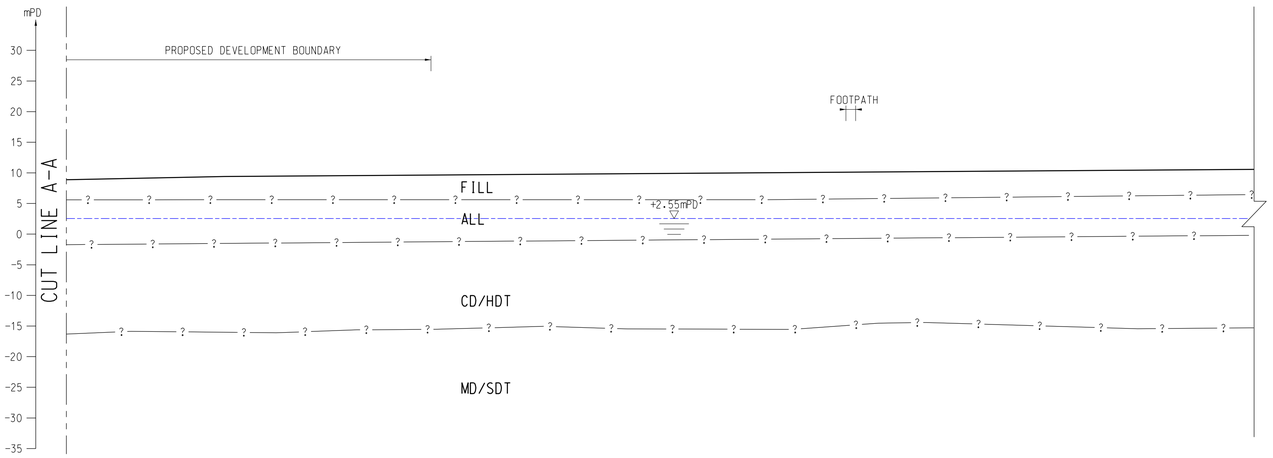
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SECTION 1-1

SCAEL A1 1:500
A3 1:1000



SECTION 1-1

SCAEL A1 1:500
A3 1:1000

TYPE OF ROCK :

FILL	FILL
CONCRETE	CONCRETE
TS/OTS	TOP SOIL/OLD TOP SOIL
RS	RESIDUAL SOIL
ND	NULLAH DEPOSIT
MD	MARINE DEPOSIT
KD	KARST DEPOSIT
QP	QUARTZ PORPHYRY
ALL	ALLUVIUM
COLL	COLLUVIUM
CD/HDT	COMPLETELY/HIGHLY DECOMPOSED TUFF
MD/SDT	MODERATELY/SLIGHTLY DECOMPOSED TUFF
CD/HDS	COMPLETELY/HIGHLY DECOMPOSED SILTSTONE
CD/HDMS	COMPLETELY/HIGHLY DECOMPOSED METASILTSTONE
CD/HDM	COMPLETELY/HIHGLY DECOMPOSED MARBLE
MD/SDM	MODERATELY/SLIGHTLY DECOMPOSED MABLE
-------	INFERRED GROUND WATER PROFILE

Revision	Date	Description		Initial
	Designed	Checked	Drawn	Checked
Initial	–	–	SZ	–
Date	NOV2020	NOV2020	NOV2020	NOV2020

Approved

Agreement no.
CE10/2020 (CE)

Project title
SITE FORMATION AND INFRASTRUCTURE WORKS FOR PROPOSED PUBLIC HOUSING DEVELOPMENTS AT SHA PO, SHAP PAT HEUNG AND TAI KEI LENG, YUEN LONG - FEASIBILITY STUDY

Drawing title
GEOLOGICAL SECTION PROFILE - SECTION 1-1

Drawing no.
406041/S&T/FR/0502

Revision
–

Scale
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A3 1 : 1000

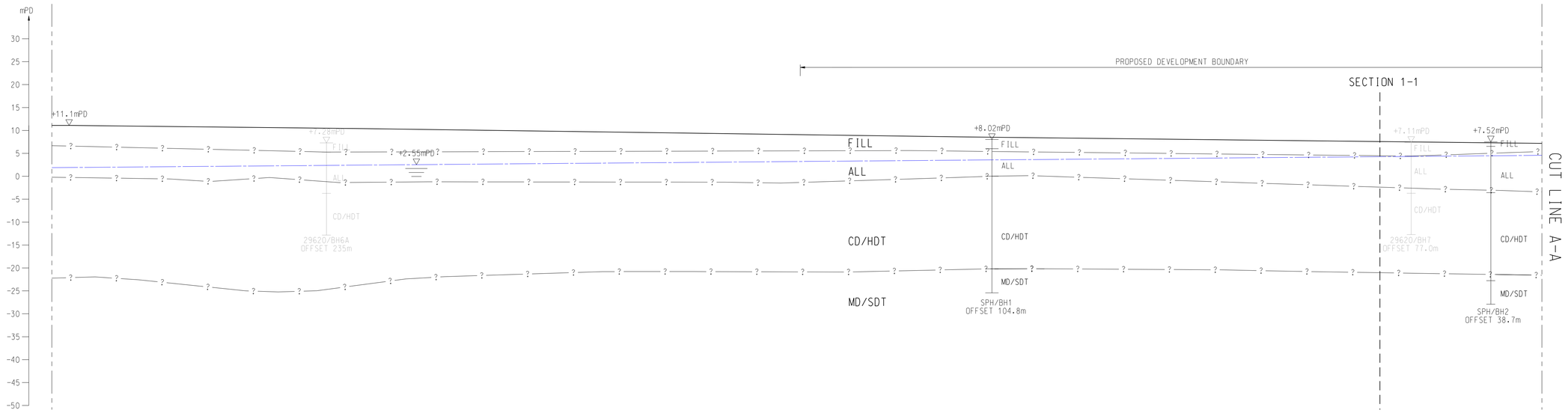
土木工程拓展署
CEDD Civil Engineering and Development Department

BINNIES HONG KONG LIMITED
賓尼斯工程顧問有限公司

Plot Date = 5/26/2022

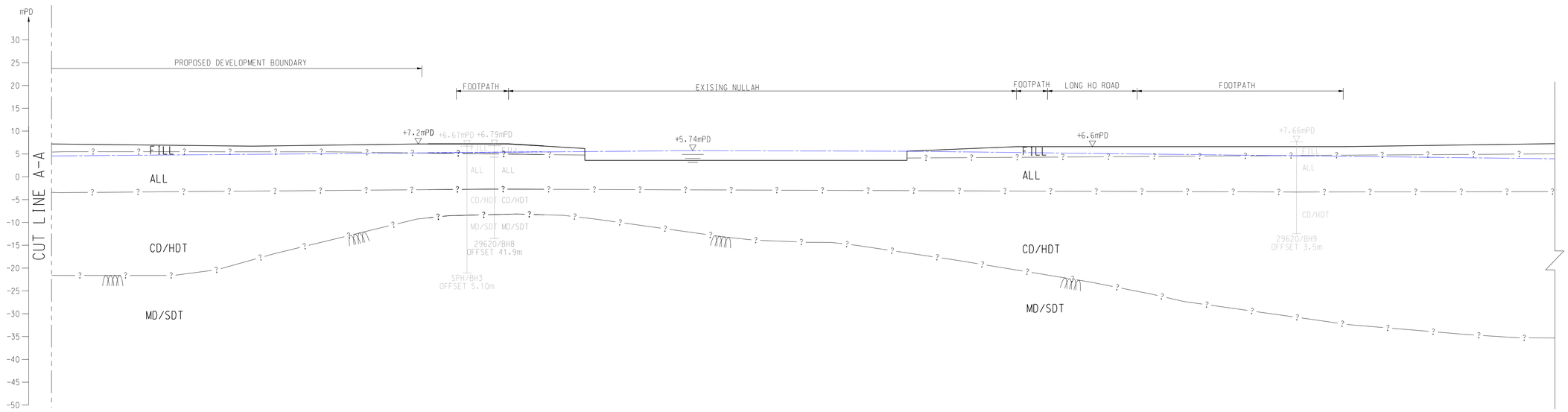
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SECTION 2-2

SCAEL A1 1:500
A3 1:1000



SECTION 2-2

SCAEL A1 1:500
A3 1:1000

TYPE OF ROCK :

FILL	FILL
CONCRETE	CONCRETE
TS/OTS	TOP SOIL/OLD TOP SOIL
RS	RESIDUAL SOIL
ND	NULLAH DEPOSIT
MD	MARINE DEPOSIT
KD	KARST DEPOSIT
QP	QUARTZ PORPHYRY
ALL	ALLUVIUM
COLL	COLLUVIUM
CD/HDT	COMPLETELY/HIGHLY DECOMPOSED TUFF
MD/SDT	MODERATELY/SLIGHTLY DECOMPOSED TUFF
CD/HDS	COMPLETELY/HIGHLY DECOMPOSED SILTSTONE
CD/HDMS	COMPLETELY/HIGHLY DECOMPOSED METASILTSTONE
CD/HDM	COMPLETELY/HIHGLY DECOMPOSED MARBLE
MD/SDM	MODERATELY/SLIGHTLY DECOMPOSED MABLE
	INFERRED GROUND WATER PROFILE

Revision	Date	Description		Initial
	Designed	Checked	Drawn	Checked
Initial	–	–	SZ	–
Date	NOV2020	NOV2020	NOV2020	NOV2020

Approved

Agreement no.
CE10/2020 (CE)

Project title
SITE FORMATION AND INFRASTRUCTURE WORKS FOR PROPOSED PUBLIC HOUSING DEVELOPMENTS AT SHA PO, SHAP PAT HEUNG AND TAI KEI LENG, YUEN LONG - FEASIBILITY STUDY

Drawing title
GEOLOGICAL SECTION PROFILE - SECTION 2-2

Drawing no.
406041/S&T/FR/0503

Revision
–

Scale
A1 1 : 500
A3 1 : 1000

土木工程拓展署
CEDD Civil Engineering and Development Department

BINNIES HONG KONG LIMITED
賓尼斯工程顧問有限公司

Plot Date = 11/22/2021
CAD Filename = Y:\Daily Work\20211122A\406041-S&T-DSR-006.dgn

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NOTES:

1. GRID LINES ARE HONG KONG METRIC GRID 1980.
2. THE EXACT LOCATION AND LAYOUT OF THE SITES ARE SUBJECT TO CHANGE AND CONFIRMATION WITH RELEVANT PARTIES.

LEGEND:

- PROPOSED DEVELOPMENT BOUNDARY
- EXISTING GROUND INVESTIGATION STATIONS
- TKL/BH1 SITE-SPECIFIC GROUND INVESTIGATION STATIONS

Revision	Date	Description			Initial
		Designed	Checked	Drawn	Checked
Initial	–	–	SZ	–	
Date	NOV2020	NOV2020	NOV2020	NOV2020	

Approved

Agreement no.
CE10/2020 (CE)

Project title
SITE FORMATION AND INFRASTRUCTURE WORKS FOR PROPOSED PUBLIC HOUSING DEVELOPMENTS AT SHA PO, SHAP PAT HEUNG AND TAI KEI LENG, YUEN LONG - FEASIBILITY STUDY

Drawing title
EXISTING GROUND INVESTIGATION STATIONS - TAI KEI LENG

Drawing no.
406041/S&T/FR/0504

Revision
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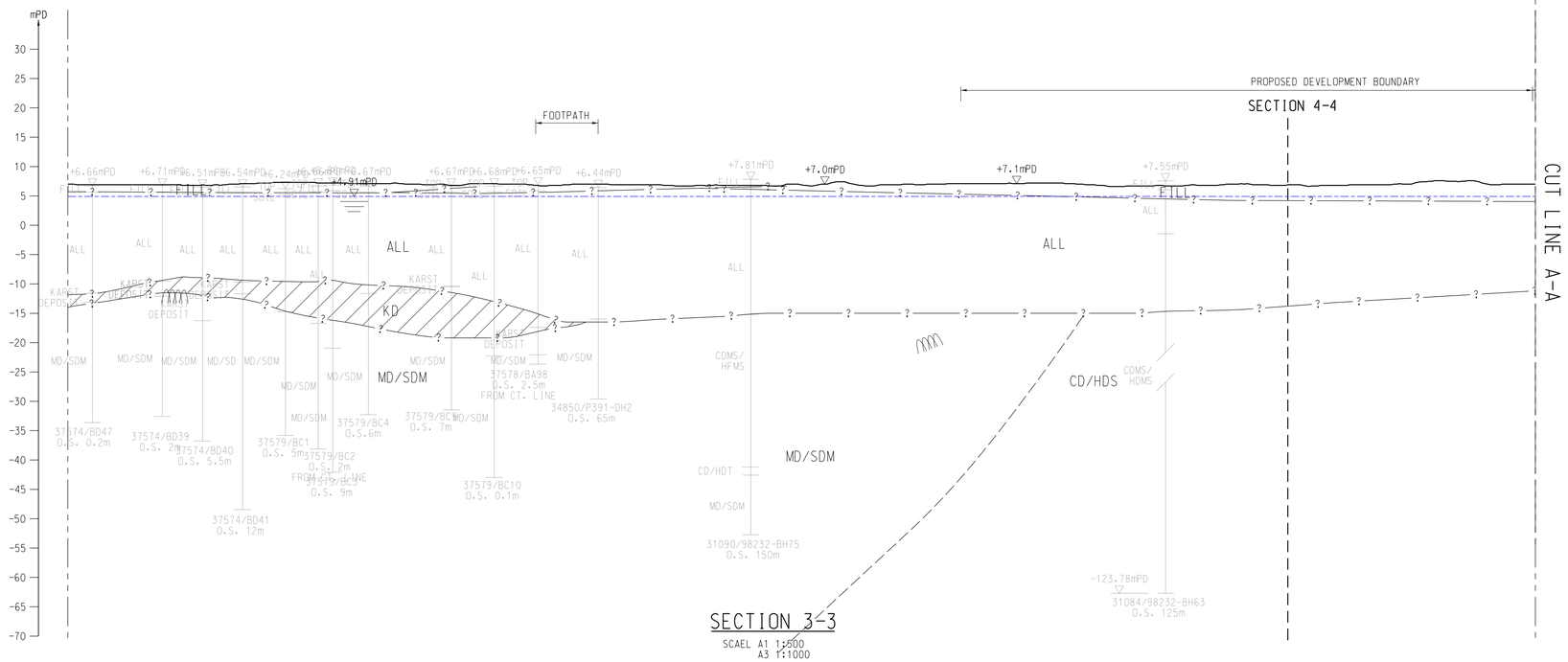
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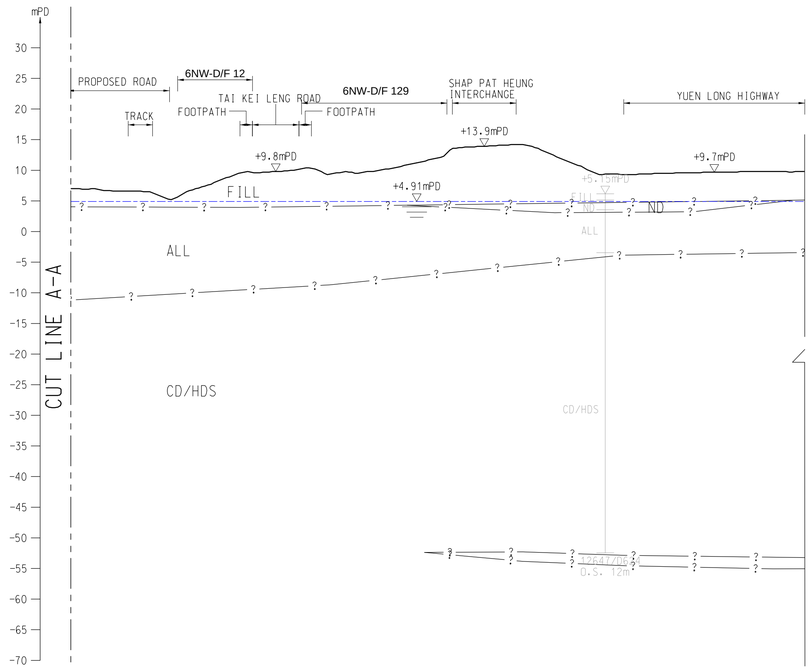
土木工程拓展署
CEDD Civil Engineering and Development Department

BINNIES HONG KONG LIMITED
賓尼斯工程顧問有限公司

Plot Date = 11/4/2021

CAD Filename = Y:\Daily Work\20211103E\406041-S&T-DSR-004.dgn





SECTION 3-3
SCAEL A1 1:500
A3 1:1000

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TYPE OF ROCK :

FILL	FILL
CONCRETE	CONCRETE
TS/OTS	TOP SOIL/OLD TOP SOIL
RS	RESIDUAL SOIL
ND	NULLAH DEPOSIT
MD	MARINE DEPOSIT
KD	KARST DEPOSIT
QP	QUARTZ PORPHYRY
ALL	ALLUVIUM
COLL	COLLUVIUM
CD/HDT	COMPLETELY/HIGHLY DECOMPOSED TUFF
MD/SDT	MODERATELY/SLIGHTLY DECOMPOSED TUFF
CD/HDS	COMPLETELY/HIGHLY DECOMPOSED SILTSTONE
MD/SDS	MODERATELY/SLIGHTLY DECOMPOSED SILTSTONE
CD/HDMS	COMPLETELY/HIGHLY DECOMPOSED METASILTSTONE
CD/HDM	COMPLETELY/HIHGLY DECOMPOSED MARBLE
MD/SDM	MODERATELY/SLIGHTLY DECOMPOSED MABLE
----------	INFERRED GROUND WATER PROFILE
— — —	INFERRED FAULT

Revision	Date	Description		Initial
	Designed	Checked	Drawn	Checked
Initial	–	–	SZ	–
Date	NOV2020	NOV2020	NOV2020	NOV2020

Approved

Agreement no.
CE10/2020 (CE)

Project title
SITE FORMATION AND INFRASTRUCTURE WORKS FOR PROPOSED PUBLIC HOUSING DEVELOPMENTS AT SHA PO, SHAP PAT HEUNG AND TAI KEI LENG, YUEN LONG - FEASIBILITY STUDY

Drawing title
GEOLOGICAL SECTION PROFILE - SECTION 3-3

Drawing no.
406041/S&T/FR/0505

Revision
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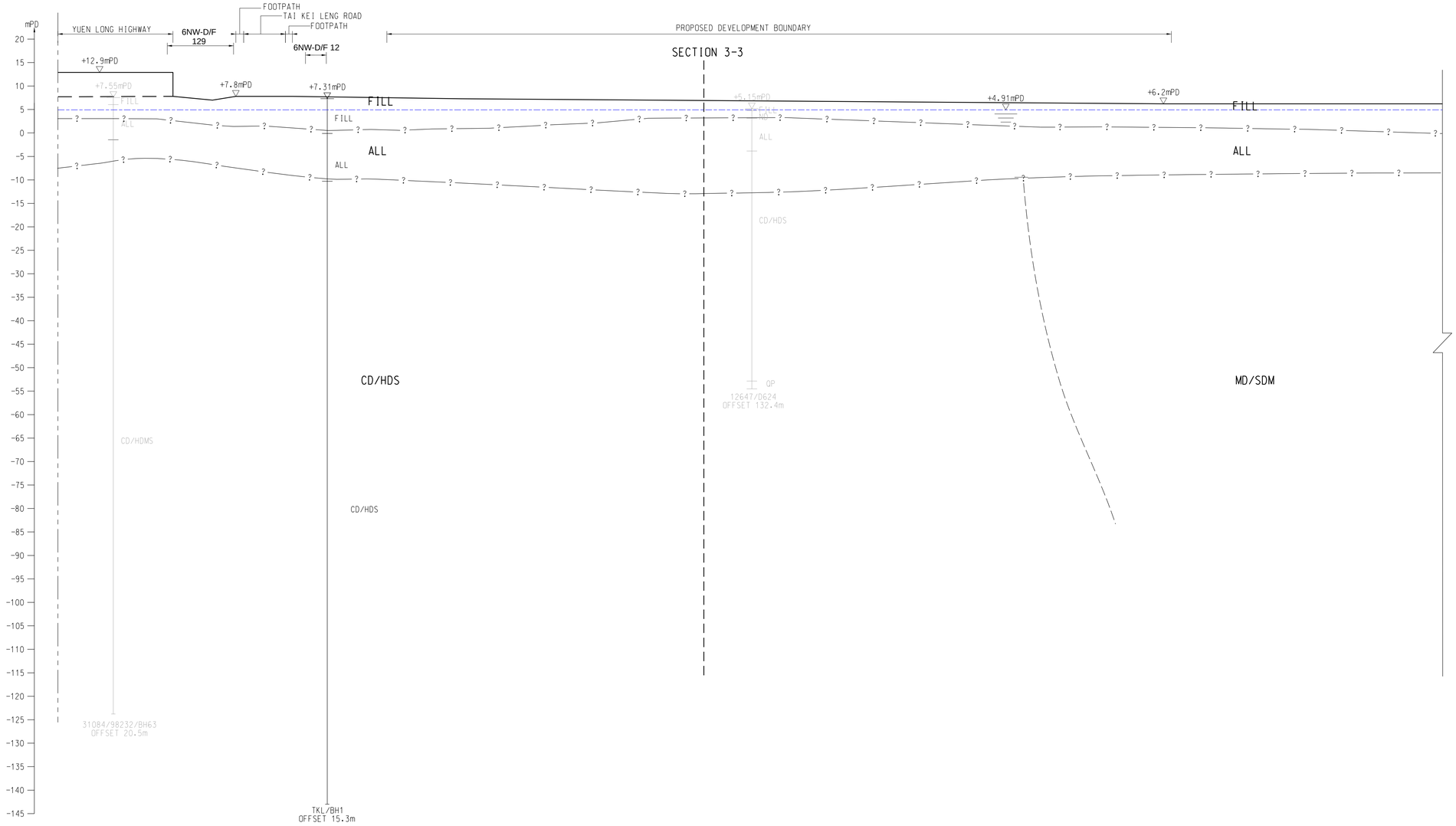
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土木工程拓展署
CEDD Civil Engineering and Development Department

BINNIES HONG KONG LIMITED
賓尼斯工程顧問有限公司

Plot Date = 9/14/2022

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SECTION 4-4

SCAEL A1 1:500
A3 1:1000

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TYPE OF ROCK :

FILL	FILL
CONCRETE	CONCRETE
TS/OTS	TOP SOIL/OLD TOP SOIL
RS	RESIDUAL SOIL
ND	NULLAH DEPOSIT
MD	MARINE DEPOSIT
KD	KARST DEPOSIT
QP	QUARTZ PORPHYRY
ALL	ALLUVIUM
COLL	COLLUVIUM
CD/HDT	COMPLETELY/HIGHLY DECOMPOSED TUFF
MD/SDT	MODERATELY/SLIGHTLY DECOMPOSED TUFF
CD/HDS	COMPLETELY/HIGHLY DECOMPOSED SILTSTONE
CD/HDMS	COMPLETELY/HIGHLY DECOMPOSED METASILTSTONE
CD/HDM	COMPLETELY/HIHGLY DECOMPOSED MARBLE
MD/SDM	MODERATELY/SLIGHTLY DECOMPOSED MABLE
- - - - -	INFERRED GROUND WATER PROFILE
— — — —	INFERRED FAULT

Revision	Date	Description		Initial
	Designed	Checked	Drawn	Checked
Initial	-	-	SZ	-
Date	NOV2020	NOV2020	NOV2020	NOV2020

Approved

Agreement no.
CE10/2020 (CE)

Project title
SITE FORMATION AND INFRASTRUCTURE WORKS FOR PROPOSED PUBLIC HOUSING DEVELOPMENTS AT SHA PO, SHAP PAT HEUNG AND TAI KEI LENG, YUEN LONG - FEASIBILITY STUDY

Drawing title
GEOLOGICAL SECTION PROFILE - SECTION 4-4

Drawing no.
406041/S&T/FR/0506

Revision
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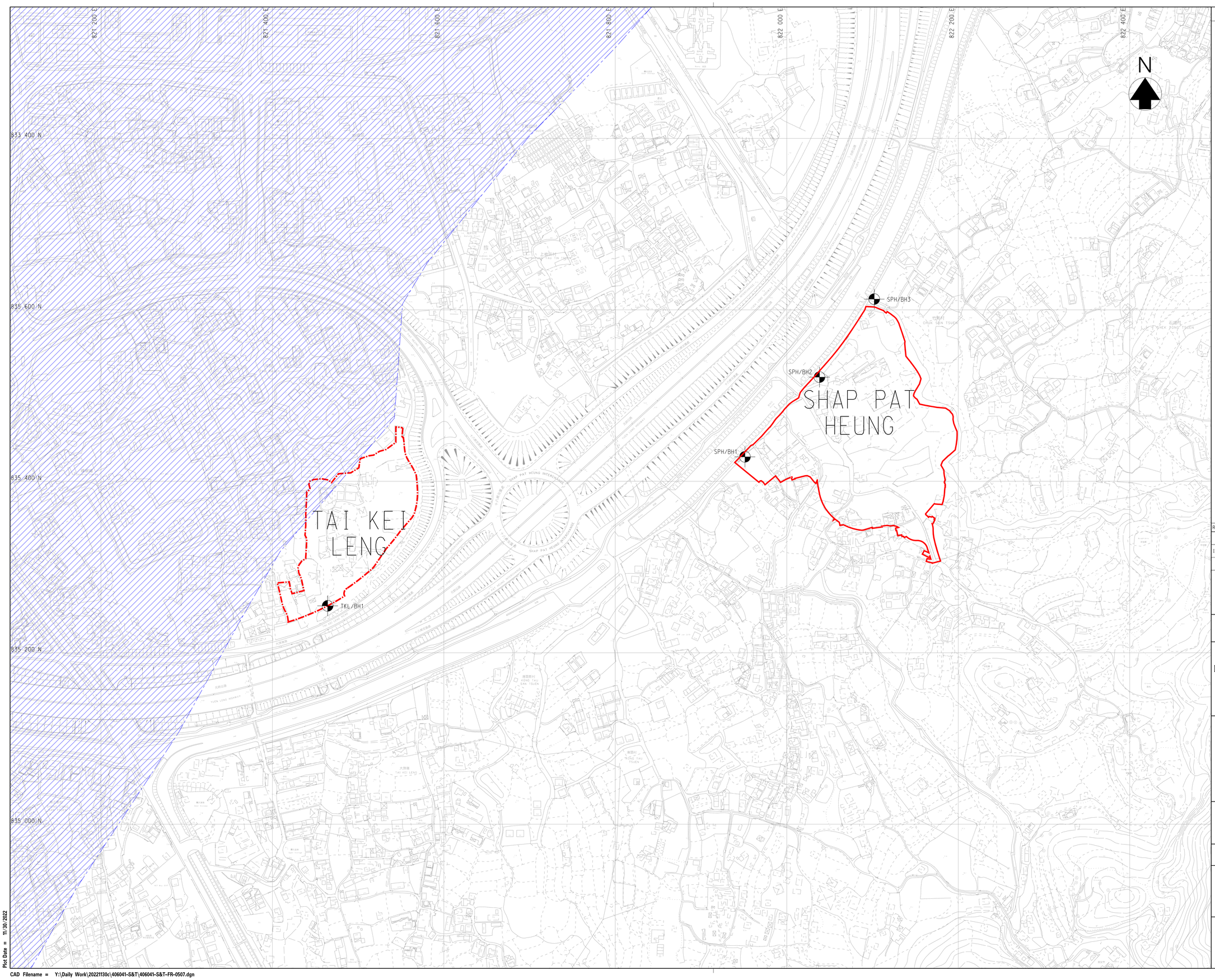
Scale
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土木工程拓展署
CEDD Civil Engineering and Development Department

BINNIES HONG KONG LIMITED
賓尼斯工程顧問有限公司

Plot Date = 9/14/2022

CAD Filename = Y:\Daily Work\20220913\20220526\406041-S&T-FR-0506.dgn



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LEGEND:

- PROPOSED DRILLHOLE
- SITE BOUNDARY
- SCHEDULED AREA NO.2

Revision	Date	Description			Initial
	Designed	Checked	Drawn	Checked	
Initial	–	–	SZ	–	
Date	SEP20	SEP20	SEP20	SEP20	

Approved

Agreement no.
CE10/2020 (CE)

Project title
SITE FORMATION AND INFRASTRUCTURE WORKS FOR PROPOSED PUBLIC HOUSING DEVELOPMENTS AT SHA PO, SHAP PAT HEUNG AND TAI KEI LENG, YUEN LONG - FEASIBILITY STUDY

Drawing title
SCHEDULED AREA NO.2

Drawing no.
406041/S&T/FR/0507

Revision
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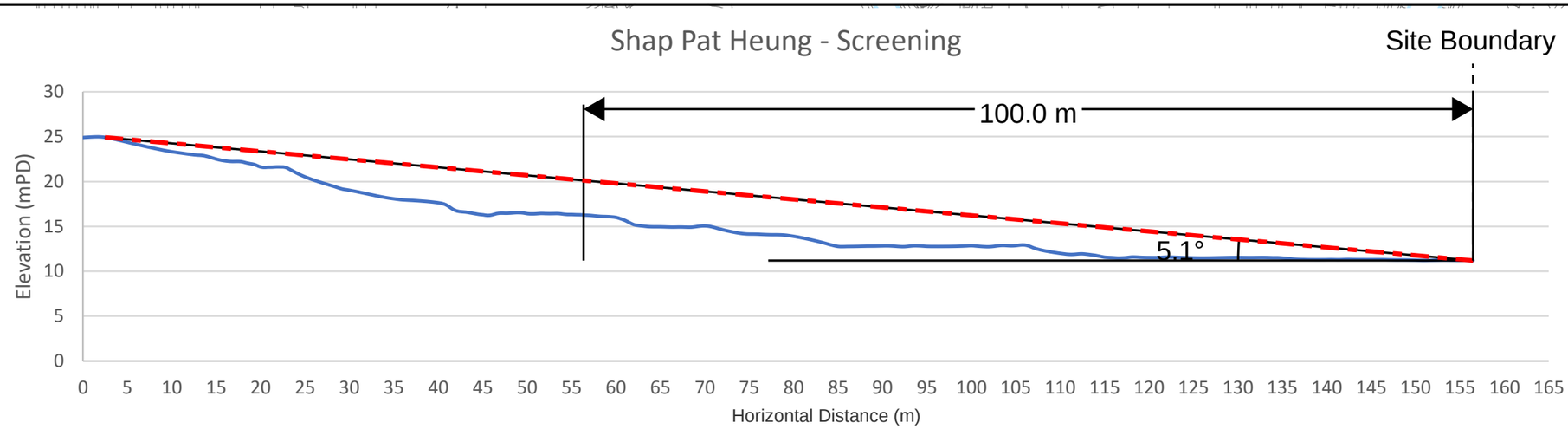
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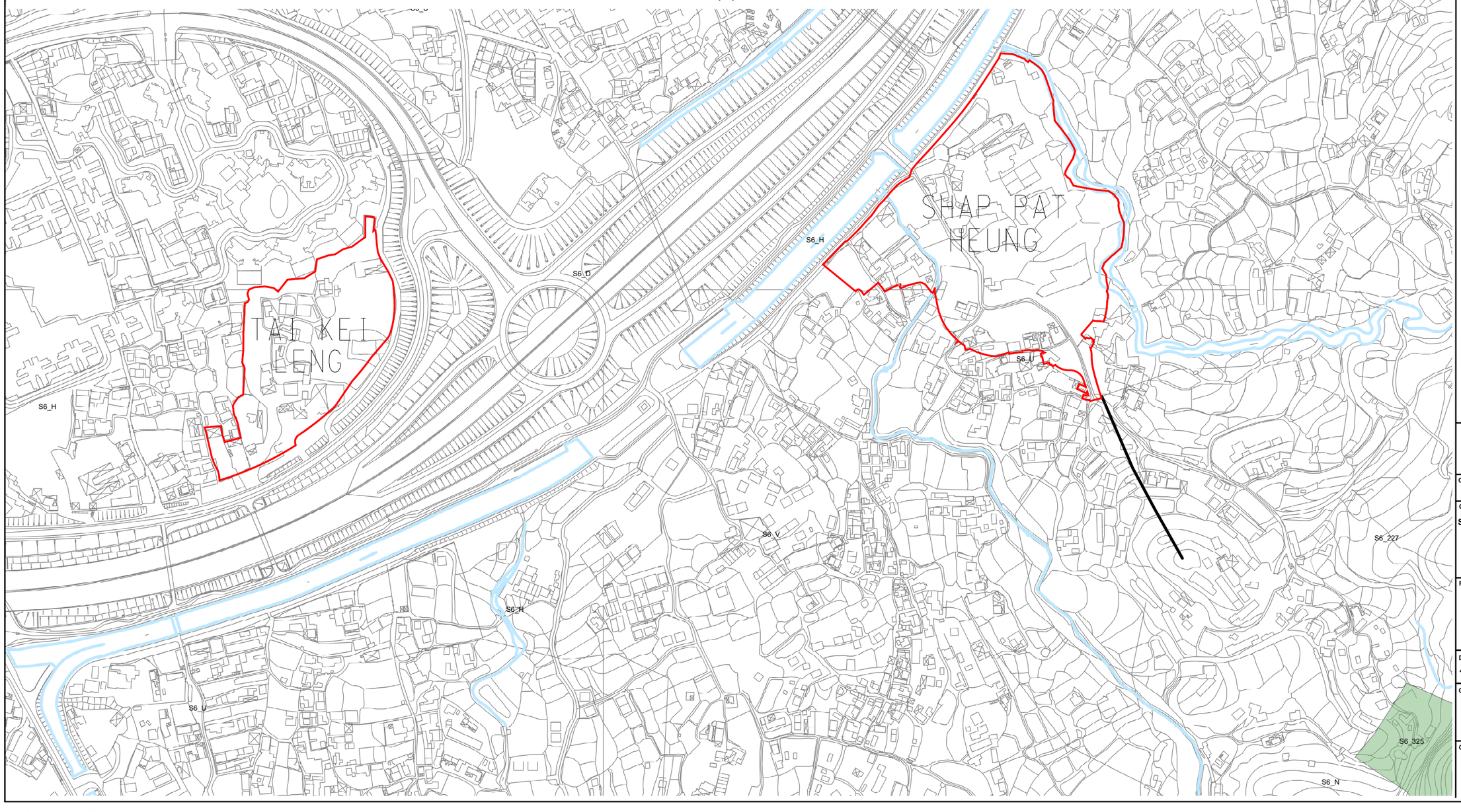
土木工程拓展署
CEDD Civil Engineering and Development Department

BINNIES HONG KONG LIMITED
賓尼斯工程顧問有限公司

Plot Date = 11/30/2022

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	Designed	Reviewed	Drawn	Checked
Initial	AN	YLC	AN	KHL
Date	Sep 2020	Sep 2020	Sep 2020	Sep 2020

Revision	Date	Description	Initial

Legend

- Section

ENTLI

- Recent
- A1
- A2
- B1
- B2
- C1
- C2
- Site Boundary

Boulder Field Inventory

Percentage Area Covered

- <10%
- 10-20%
- 20-50%
- 50-75%
- >75%
- no boulders
- reclamation
- vegetation

Approved

Contract no.
CE 10/2020 (CE)

Contract Title
SITE FORM AND INFRASTRUCTURE WORKS FOR PROPOSED PUBLIC HOUSING DEVELOPMENTS AT SHA PO, SHAP PAT HEUNG AND TAI KEI LENG, YUEN LONG - FEASIBILITY STUDY

Figure Title
Natural Terrain Hazard Study Map

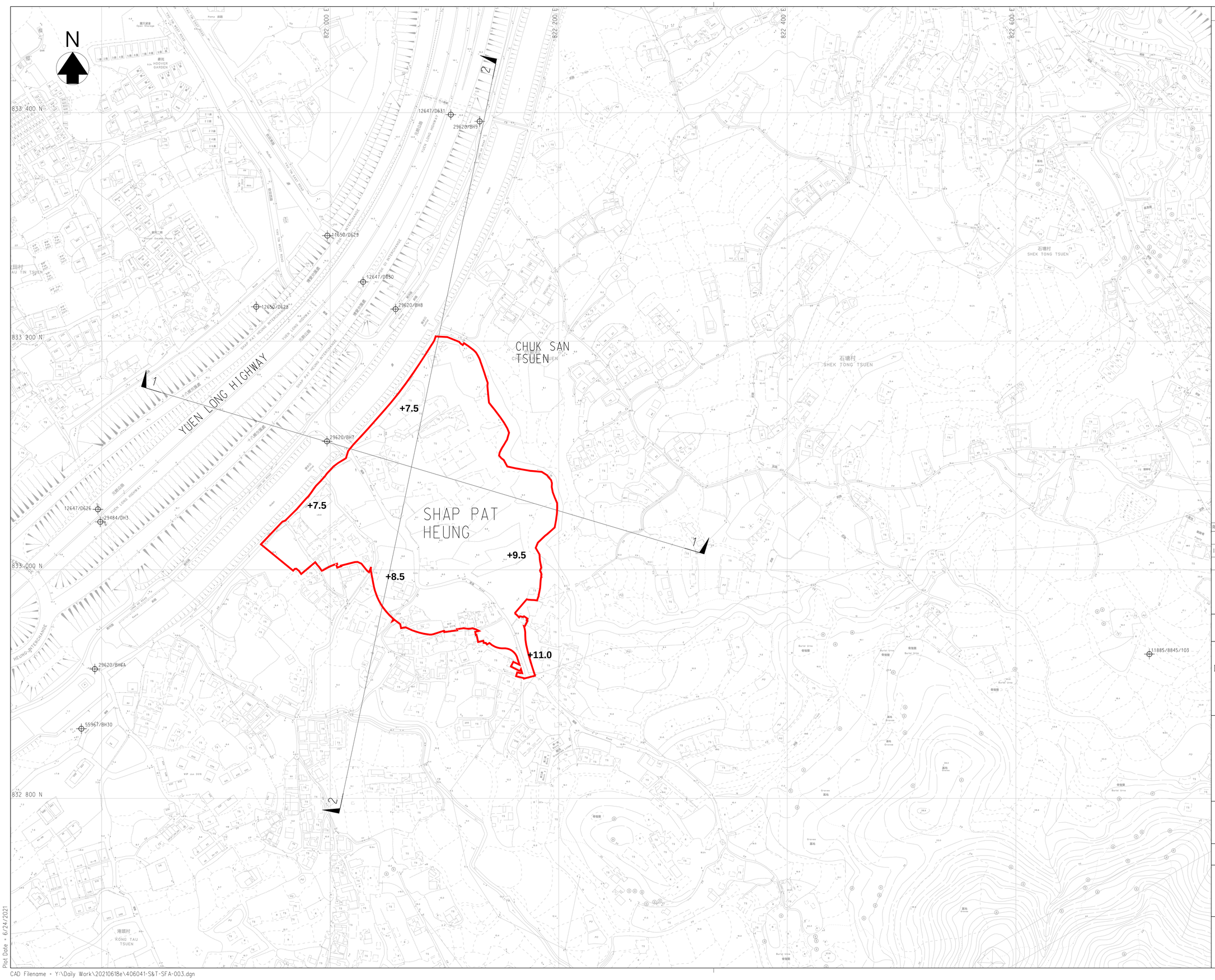
Drawing No.
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Scale
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Client
土木工程拓展署
CEDD Civil Engineering and Development Department

Consultant
BINNIES HONG KONG LIMITED
賓尼斯工程顧問有限公司

MXD: B:\Project\198170\MXD



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NOTES:

1. GRID LINES ARE HONG KONG METRIC GRID 1980.
2. THE EXACT LOCATION AND LAYOUT OF THE SITES ARE SUBJECT TO CHANGE AND CONFIRMATION WITH RELEVANT PARTIES.

LEGEND:

- PROPOSED DEVELOPMENT BOUNDARY
- EXISTING GROUND INVESTIGATION STATIONS
- +7.0 PROPOSED FORMATION LEVEL (INDICATIVE)

Revision	Date	Description			Initial
	Designed	Checked	Drawn	Checked	
Initial	–	–	SZ	–	
Date	NOV2020	NOV2020	NOV2020	NOV2020	

Approved

Agreement no.
CE10/2020 (CE)

Project title
SITE FORMATION AND INFRASTRUCTURE WORKS FOR PROPOSED PUBLIC HOUSING DEVELOPMENTS AT SHA PO, SHAP PAT HEUNG AND TAI KEI LENG, YUEN LONG – FEASIBILITY STUDY

Drawing title
PROPOSED SITE FORMATION PLAN - SHAP PAT HEUNG

Drawing no.
406041/S&T/FR/0601

Revision
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Scale
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A3 1 : 3000

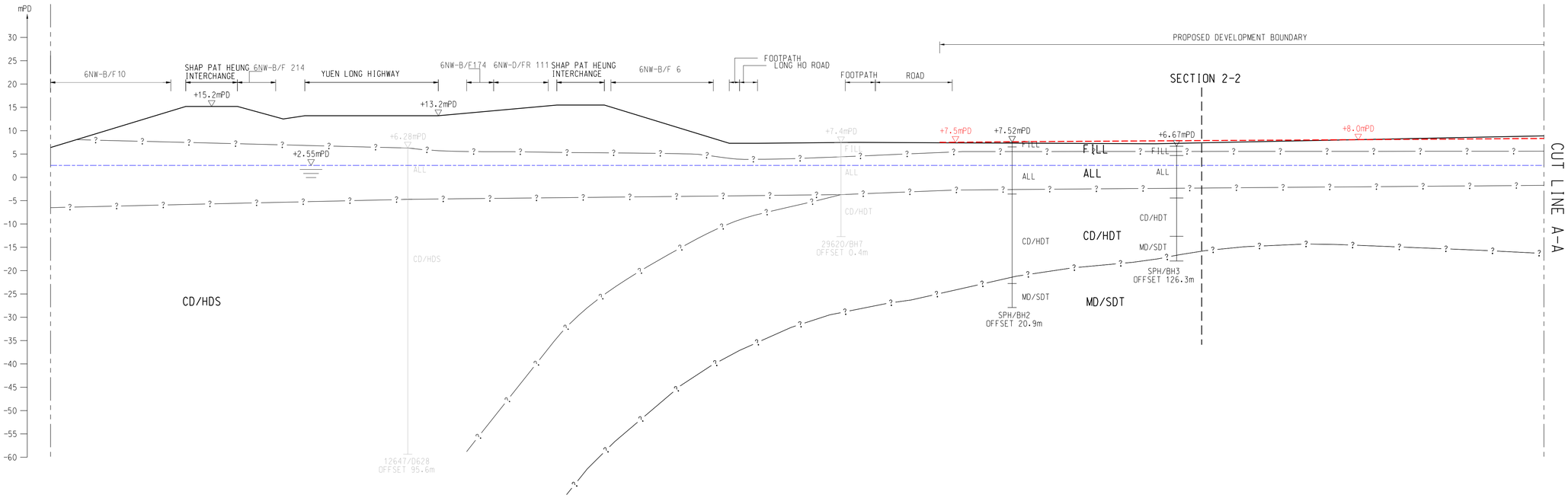
土木工程拓展署
CEDD Civil Engineering and Development Department

BINNIES HONG KONG LIMITED
賓尼斯工程顧問有限公司

Plot Date = 6/24/2021

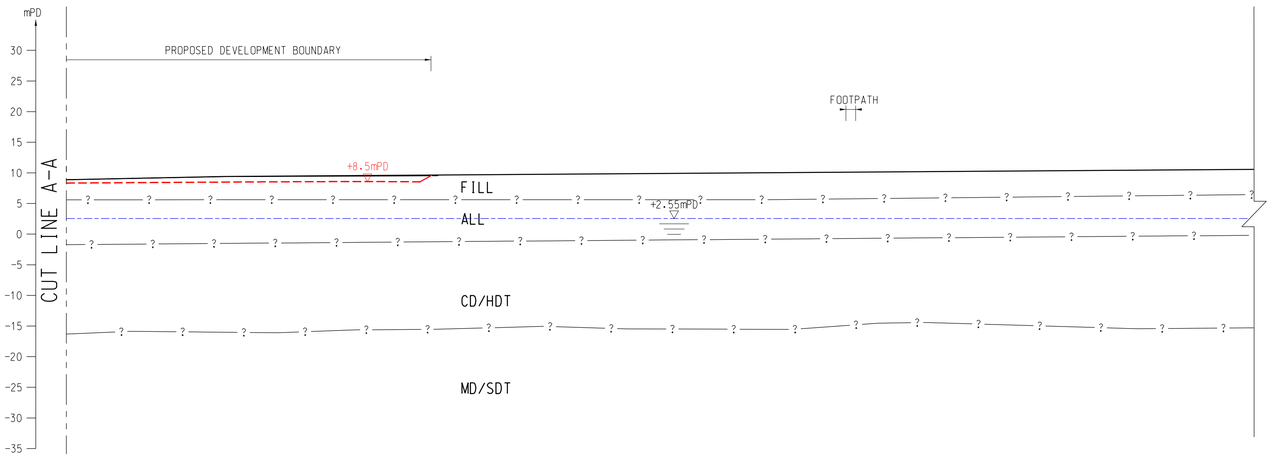
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SECTION 1-1

SCAEL A1 1:500
A3 1:1000



SECTION 1-1

SCAEL A1 1:500
A3 1:1000

TYPE OF ROCK :

FILL	FILL
CONCRETE	CONCRETE
TS/OTS	TOP SOIL/OLD TOP SOIL
RS	RESIDUAL SOIL
ND	NULLAH DEPOSIT
MD	MARINE DEPOSIT
KD	KARST DEPOSIT
QP	QUARTZ PORPHYRY
ALL	ALLUVIUM
COLL	COLLUVIUM
CD/HDT	COMPLETELY/HIGHLY DECOMPOSED TUFF
MD/SDT	MODERATELY/SLIGHTLY DECOMPOSED TUFF
CD/HDS	COMPLETELY/HIGHLY DECOMPOSED SILTSTONE
CD/HDMS	COMPLETELY/HIGHLY DECOMPOSED METASILTSTONE
CD/HDM	COMPLETELY/HIHGLY DECOMPOSED MARBLE
MD/SDM	MODERATELY/SLIGHTLY DECOMPOSED MABLE
----------	INFERRED GROUND WATER PROFILE
————	PROPOSED GROUND LEVEL

Revision	Date	Description		Initial
	Designed	Checked	Drawn	Checked
Initial	–	–	SZ	–
Date	NOV2020	NOV2020	NOV2020	NOV2020

Approved

Agreement no.
CE10/2020 (CE)

Project title
SITE FORMATION AND INFRASTRUCTURE WORKS FOR PROPOSED PUBLIC HOUSING DEVELOPMENTS AT SHA PO, SHAP PAT HEUNG AND TAI KEI LENG, YUEN LONG - FEASIBILITY STUDY

Drawing title
PROPOSED SITE FORMATION PLAN - SECTION 1-1

Drawing no.
406041/S&T/FR/0602

Revision
–

Scale
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A3 1 : 1000

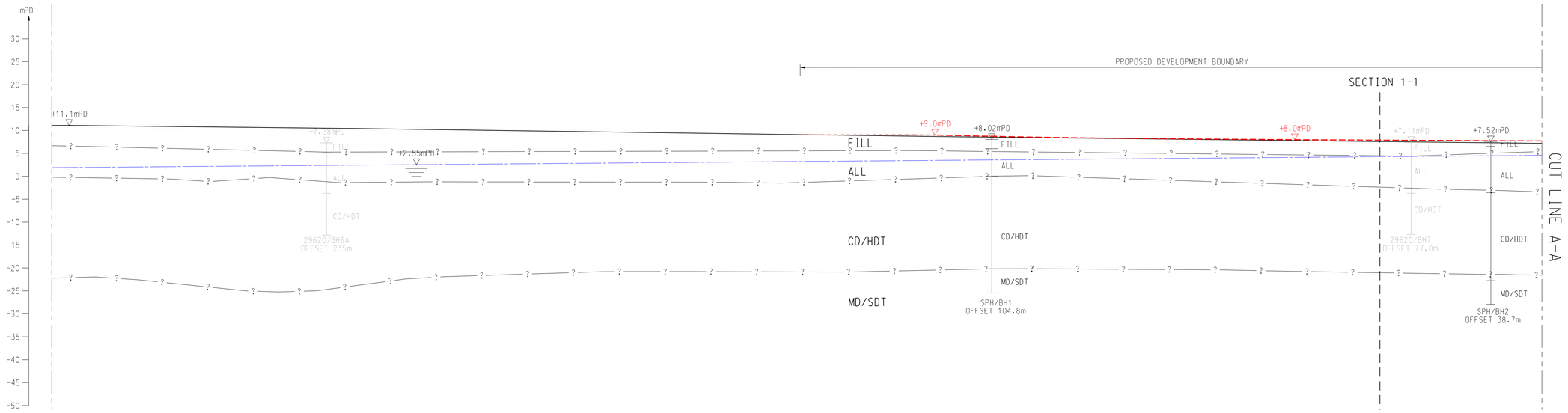
土木工程拓展署
CEDD Civil Engineering and Development Department

BINNIES HONG KONG LIMITED
賓尼斯工程顧問有限公司

Plot Date = 5/26/2022

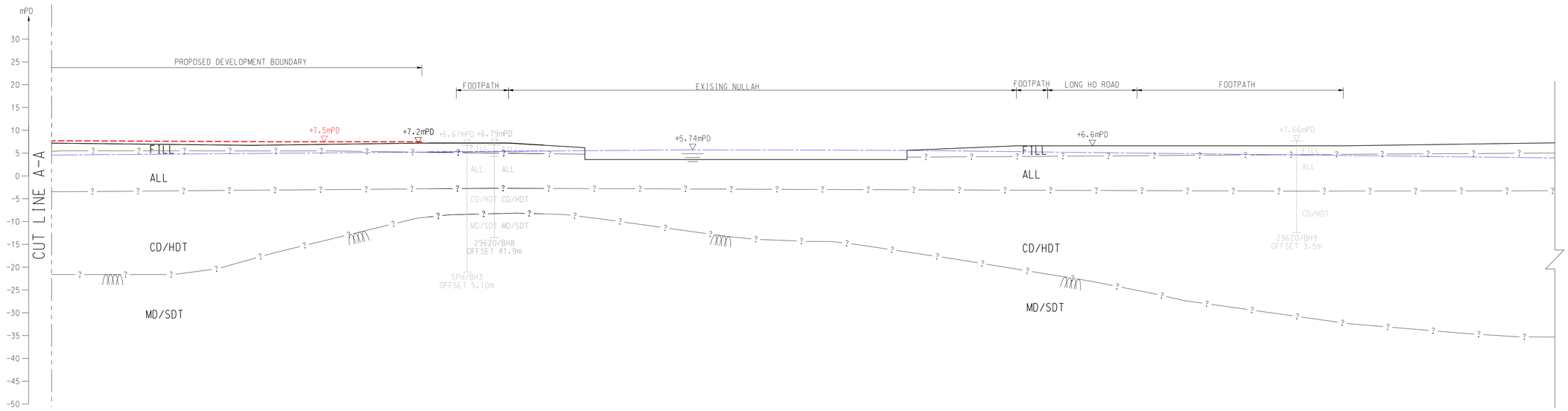
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SECTION 2-2

SCAEL A1 1:500
A3 1:1000



SECTION 2-2

SCAEL A1 1:500
A3 1:1000

TYPE OF ROCK :

FILL	FILL
CONCRETE	CONCRETE
TS/OTS	TOP SOIL/OLD TOP SOIL
RS	RESIDUAL SOIL
ND	NULLAH DEPOSIT
MD	MARINE DEPOSIT
KD	KARST DEPOSIT
QP	QUARTZ PORPHYRY
ALL	ALLUVIUM
COLL	COLLUVIUM
CD/HDT	COMPLETELY/HIGHLY DECOMPOSED TUFF
MD/SDT	MODERATELY/SLIGHTLY DECOMPOSED TUFF
CD/HDS	COMPLETELY/HIGHLY DECOMPOSED SILTSTONE
CD/HDMS	COMPLETELY/HIGHLY DECOMPOSED METASILTSTONE
CD/HDM	COMPLETELY/HIHGLY DECOMPOSED MARBLE
MD/SDM	MODERATELY/SLIGHTLY DECOMPOSED MABLE
----------	INFERRED GROUND WATER PROFILE
----------	PROPOSED GROUND LEVEL

Revision	Date	Description		Initial
	Designed	Checked	Drawn	Checked
Initial	–	–	SZ	–
Date	NOV2020	NOV2020	NOV2020	NOV2020

Approved

Agreement no.
CE10/2020 (CE)

Project title
SITE FORMATION AND INFRASTRUCTURE WORKS FOR PROPOSED PUBLIC HOUSING DEVELOPMENTS AT SHA PO, SHAP PAT HEUNG AND TAI KEI LENG, YUEN LONG - FEASIBILITY STUDY

Drawing title
PROPOSED SITE FORMATION PLAN - SECTION 2-2

Drawing no.
406041/S&T/FR/0603

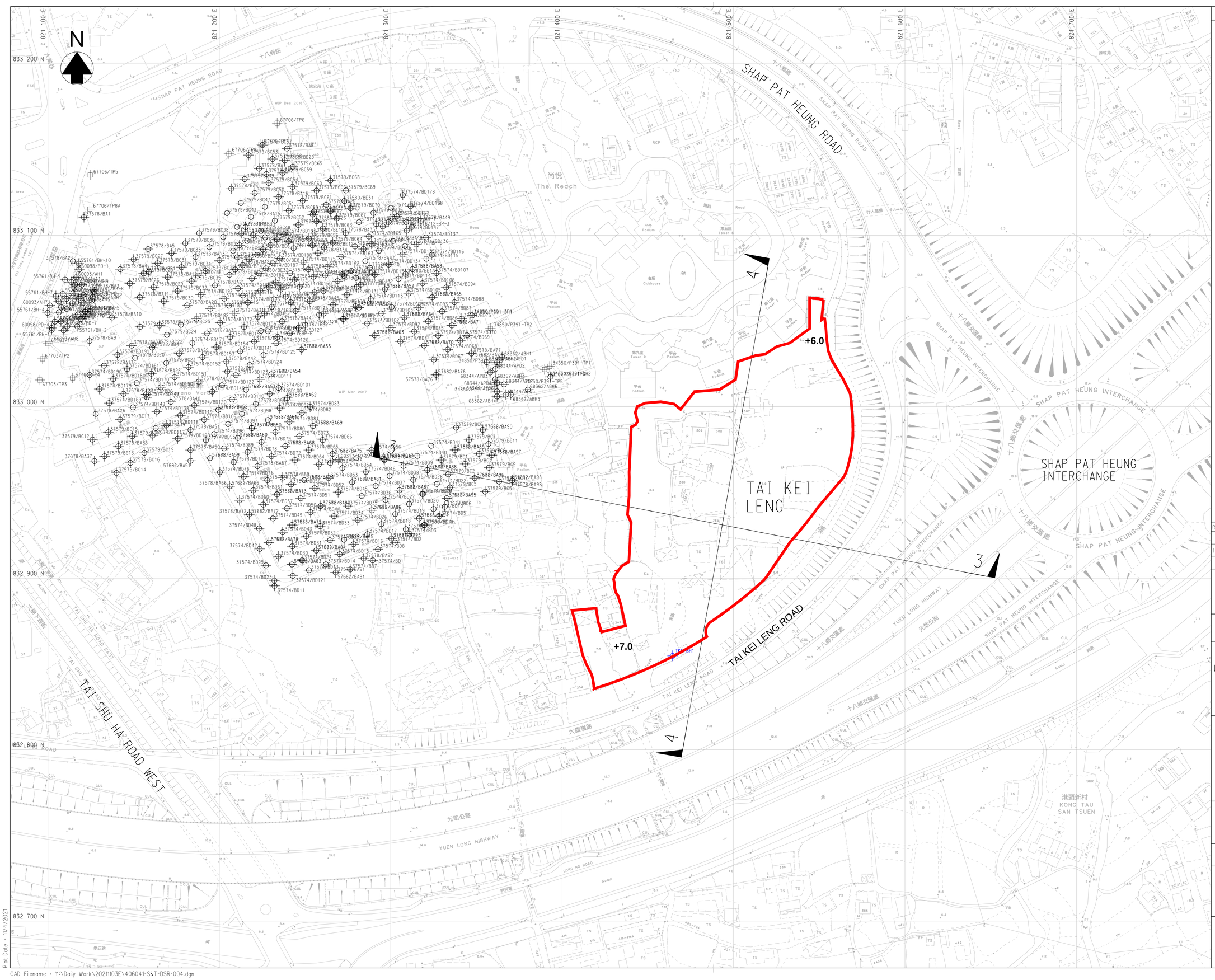
Revision
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Scale
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Plot Date = 11/22/2021
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NOTES:

1. GRID LINES ARE HONG KONG METRIC GRID 1980.
2. THE EXACT LOCATION AND LAYOUT OF THE SITES ARE SUBJECT TO CHANGE AND CONFIRMATION WITH RELEVANT PARTIES.

LEGEND:

- PROPOSED DEVELOPMENT BOUNDARY
- EXISTING GROUND INVESTIGATION STATIONS
- TKL/BH1 SITE-SPECIFIC GROUND INVESTIGATION STATIONS
- +7.0 PROPOSED FORMATION LEVEL (INDICATIVE)

Revision	Date	Description			Initial
	Designed	Checked	Drawn	Checked	
Initial	–	–	SZ	–	
Date	NOV2020	NOV2020	NOV2020	NOV2020	

Approved

Agreement no.
CE10/2020 (CE)

Project title
SITE FORMATION AND INFRASTRUCTURE WORKS FOR PROPOSED PUBLIC HOUSING DEVELOPMENTS AT SHA PO, SHAP PAT HEUNG AND TAI KEI LENG, YUEN LONG - FEASIBILITY STUDY

Drawing title
PROPOSED SITE FORMATION PLAN - TAI KEI LENG

Drawing no.
406041/S&T/FR/0604

Revision
–

Scale
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A3 1 : 2000

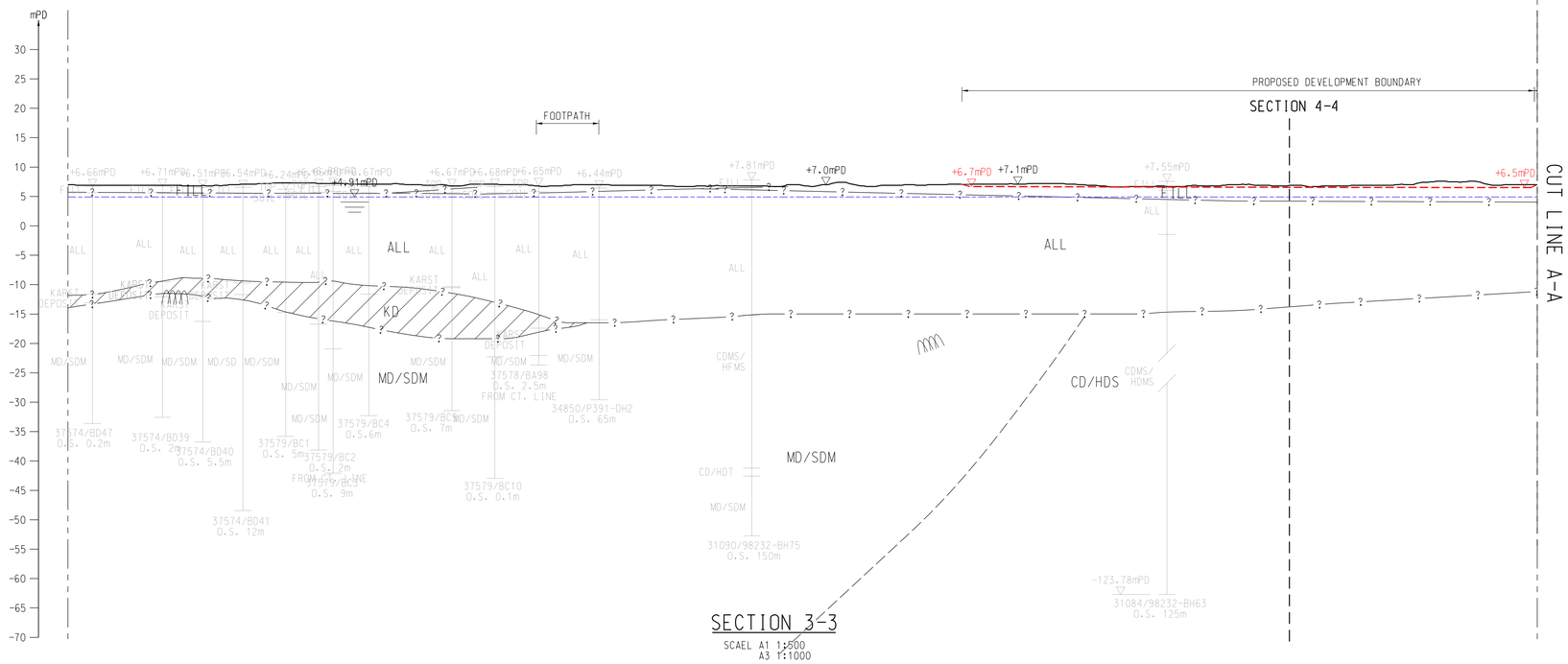
土木工程拓展署
CEDD Civil Engineering and Development Department

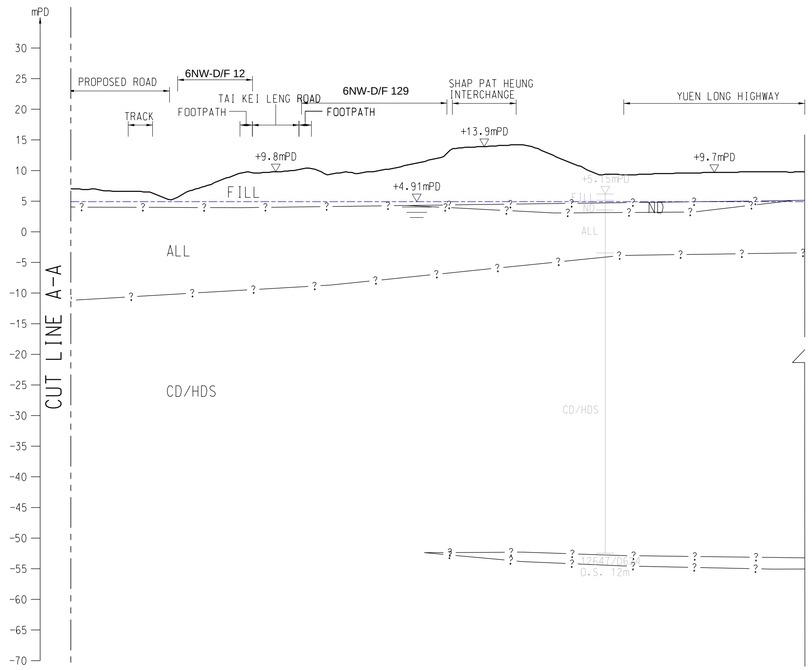
BINNIES HONG KONG LIMITED
賓尼斯工程顧問有限公司

Plot Date = 11/4/2021

CAD Filename = Y:\Daily Work\20211103E\406041-S&T-DSR-004.dgn

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SECTION 3-3
SCAEL A1 1:500
A3 1:1000

TYPE OF ROCK :

FILL	FILL
CONCRETE	CONCRETE
TS/OTS	TOP SOIL/OLD TOP SOIL
RS	RESIDUAL SOIL
ND	NULLAH DEPOSIT
MD	MARINE DEPOSIT
KD	KARST DEPOSIT
QP	QUARTZ PORPHYRY
ALL	ALLUVIUM
COLL	COLLUVIUM
CD/HDT	COMPLETELY/HIGHLY DECOMPOSED TUFF
MD/SDT	MODERATELY/SLIGHTLY DECOMPOSED TUFF
CD/HDS	COMPLETELY/HIGHLY DECOMPOSED SILTSTONE
MD/SDS	MODERATELY/SLIGHTLY DECOMPOSED SILTSTONE
CD/HDMS	COMPLETELY/HIGHLY DECOMPOSED METASILTSTONE
CD/HDM	COMPLETELY/HIHGLY DECOMPOSED MARBLE
MD/SDM	MODERATELY/SLIGHTLY DECOMPOSED MABLE
	INFERRED GROUND WATER PROFILE
	INFERRED FAULT
	PROPOSED GROUND LEVEL

Revision	Date	Description		Initial
	Designed	Checked	Drawn	Checked
Initial	–	–	SZ	–
Date	NOV2020	NOV2020	NOV2020	NOV2020

Approved

Agreement no.
CE10/2020 (CE)

Project title
SITE FORMATION AND INFRASTRUCTURE WORKS FOR PROPOSED PUBLIC HOUSING DEVELOPMENTS AT SHA PO, SHAP PAT HEUNG AND TAI KEI LENG, YUEN LONG - FEASIBILITY STUDY

Drawing title
PROPOSED SITE FORMATION PLAN - SECTION 3-3

Drawing no.
406041/S&T/FR/0605

Revision
–

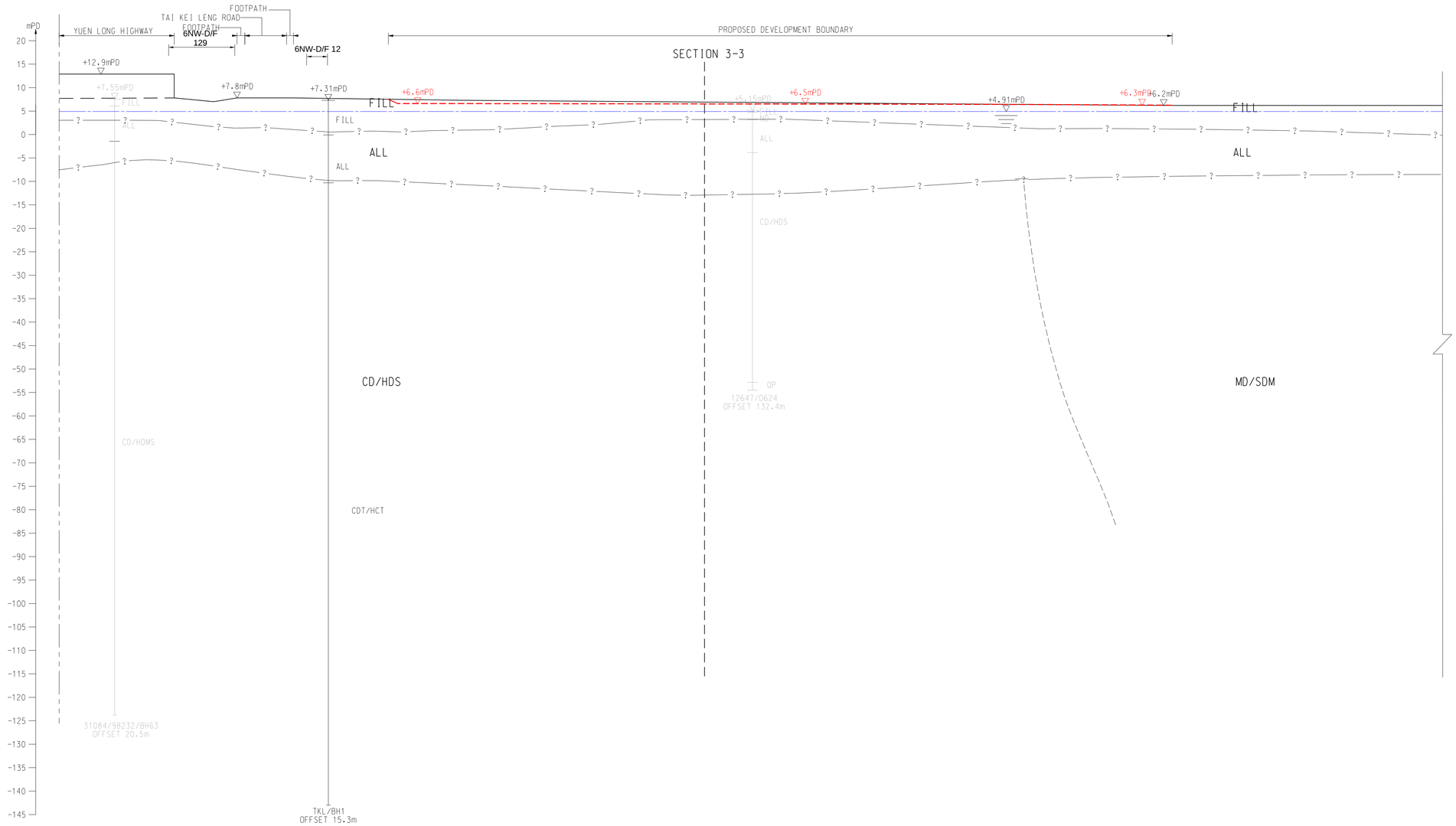
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A3 1 : 1000

土木工程拓展署
CEDD Civil Engineering and Development Department

BINNIES HONG KONG LIMITED
賓尼斯工程顧問有限公司

Plot Date = 5/26/2022

CAD Filename = Y:\Daily Work\20220526\406041-S&T-DSR-007.dgn



SECTION 4-4

SCAEL A1 1:500
A3 1:1000

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TYPE OF ROCK :

FILL	FILL
CONCRETE	CONCRETE
TS/OTS	TOP SOIL/OLD TOP SOIL
RS	RESIDUAL SOIL
ND	NULLAH DEPOSIT
MD	MARINE DEPOSIT
KD	KARST DEPOSIT
QP	QUARTZ PORPHYRY
ALL	ALLUVIUM
COLL	COLLUVIUM
CD/HDT	COMPLETELY/HIGHLY DECOMPOSED TUFF
MD/SDT	MODERATELY/SLIGHTLY DECOMPOSED TUFF
CD/HDS	COMPLETELY/HIGHLY DECOMPOSED SILTSTONE
CD/HDMS	COMPLETELY/HIGHLY DECOMPOSED METASILTSTONE
CD/HDM	COMPLETELY/HIHGLY DECOMPOSED MARBLE
MD/SDM	MODERATELY/SLIGHTLY DECOMPOSED MABLE
———	INFERRED GROUND WATER PROFILE
– – – –	INFERRED FAULT

Revision	Date	Description		Initial
	Designed	Checked	Drawn	Checked
Initial	–	–	SZ	–
Date	NOV2020	NOV2020	NOV2020	NOV2020

Approved

Agreement no.
CE10/2020 (CE)

Project title
SITE FORMATION AND INFRASTRUCTURE WORKS FOR PROPOSED PUBLIC HOUSING DEVELOPMENTS AT SHA PO, SHAP PAT HEUNG AND TAI KEI LENG, YUEN LONG - FEASIBILITY STUDY

Drawing title
PROPOSED SITE FORMATION PLAN - SECTION 4-4

Drawing no.
406041/S&T/FR/0606

Revision
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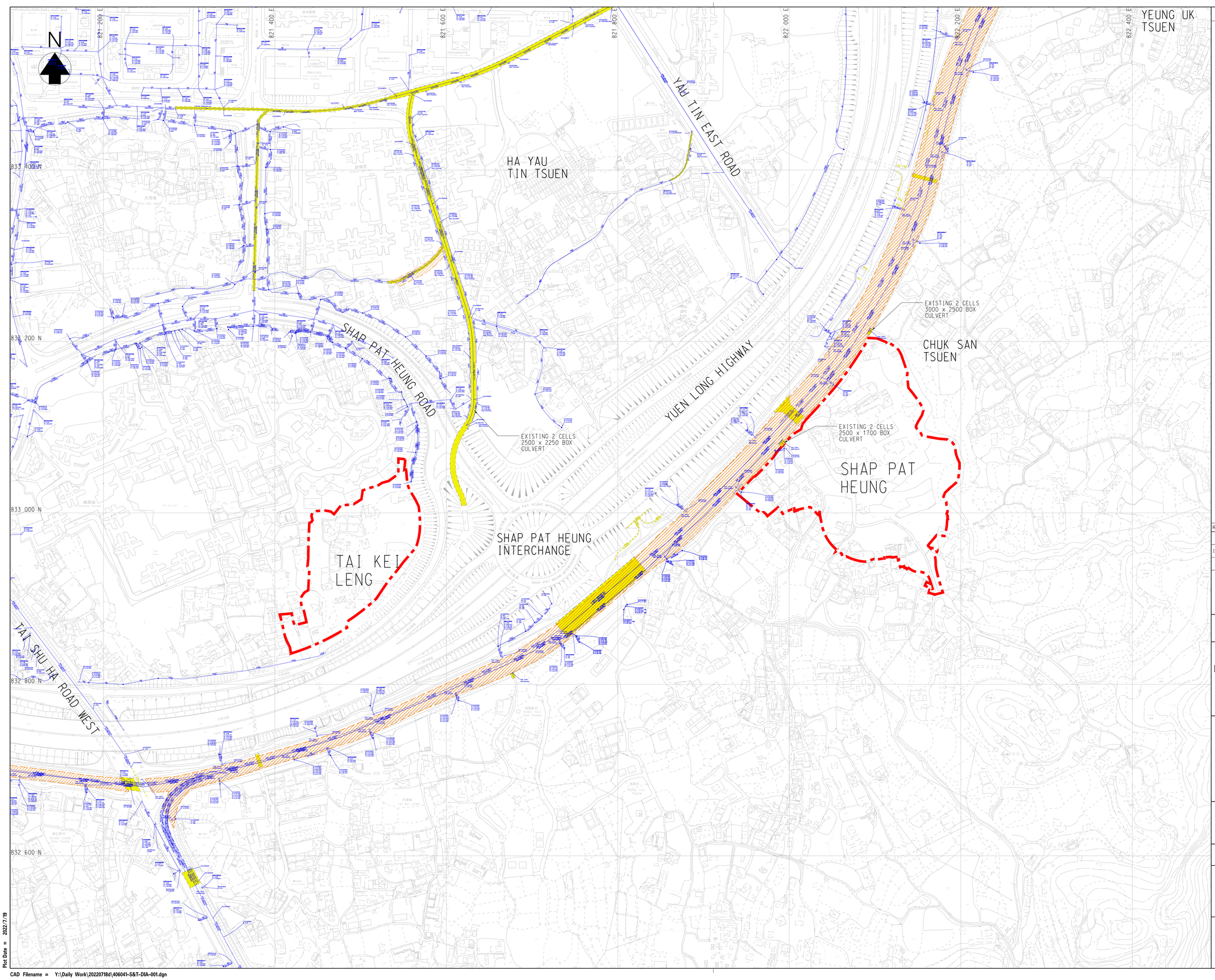
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A3 1 : 1000

土木工程拓展署
CEDD Civil Engineering and Development Department

BINNIES HONG KONG LIMITED
賓尼斯工程顧問有限公司

Plot Date = 11/5/2021

CAD Filename = Y:\Daily Work\20211104d\406041-S&T-DSR-008.dgn



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LEGEND:

- PROPOSED DEVELOPMENT BOUNDARY
- STORM WATER MANHOLE
- STORM WATER TERMINAL MANHOLE
- DESILTING OPENING
- TUNNEL/BOX CULVERT (STORM)
- DRAINAGE RESERVE
- EXISTING DRAINAGE PIPE

Revision	Date	Description		Initial
	Designed	Checked	Drawn	Checked
Initial	–	–	SZ	–
Date	09/20	09/20	09/20	09/20

Approved

Agreement no.
CE10/2020 (CE)

Project title
SITE FORMATION AND INFRASTRUCTURE WORKS FOR PROPOSED PUBLIC HOUSING DEVELOPMENTS AT SHA PO, SHAP PAT HEUNG AND TAI KEI LENG, YUEN LONG - FEASIBILITY STUDY

Drawing title
EXISTING DRAINAGE LAYOUT PLAN

Drawing no.
406041/S&T/FR/0701

Revision
–

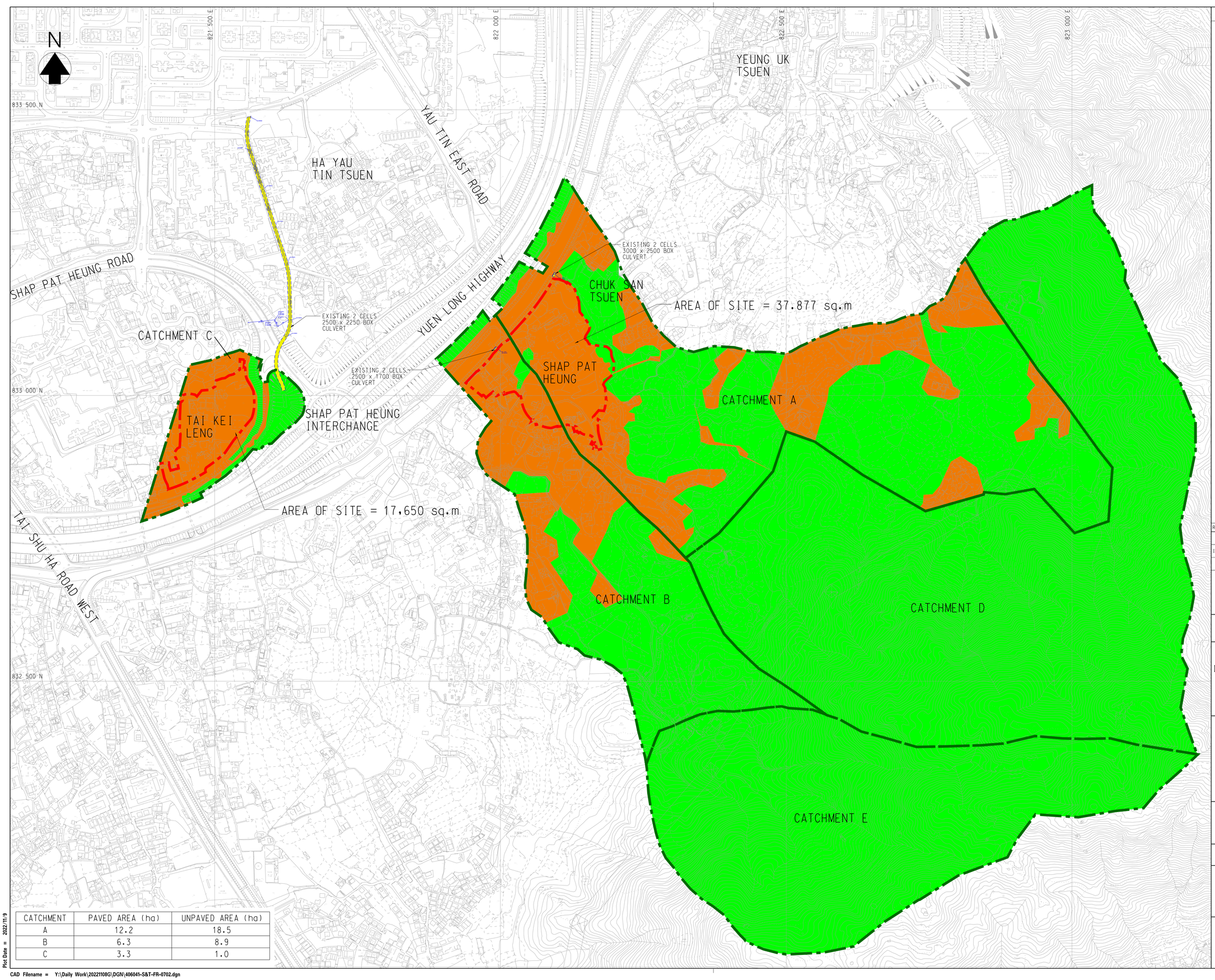
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土木工程拓展署
CEDD Civil Engineering and Development Department

BINNIES HONG KONG LIMITED
賓尼斯工程顧問有限公司

Plot Date = 2022/7/19

CAD Filename = Y:\Daily Work\20220718d\406041-S&T-DIA-001.dgn



CATCHMENT	PAVED AREA (ha)	UNPAVED AREA (ha)
A	12.2	18.5
B	6.3	8.9
C	3.3	1.0

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LEGEND:

- PROPOSED DEVELOPMENT BOUNDARY
- CATCHMENT BOUNDARY
- PAVED AREA
- UNPAVED AREA
- TUNNEL/BOX CULVERT (STORM)
- EXISTING DRAINAGE PIPE

Revision	Date	Description		Initial
	Designed	Checked	Drawn	Checked
Initial	–	–	SZ	–
Date	09/20	09/20	09/20	09/20

Approved

Agreement no.
CE10/2020 (CE)

Project title
SITE FORMATION AND INFRASTRUCTURE WORKS FOR PROPOSED PUBLIC HOUSING DEVELOPMENTS AT SHA PO, SHAP PAT HEUNG AND TAI KEI LENG, YUEN LONG - FEASIBILITY STUDY

Drawing title
CATCHMENT PLAN

Drawing no.
406041/S&T/FR/0702

Revision
–

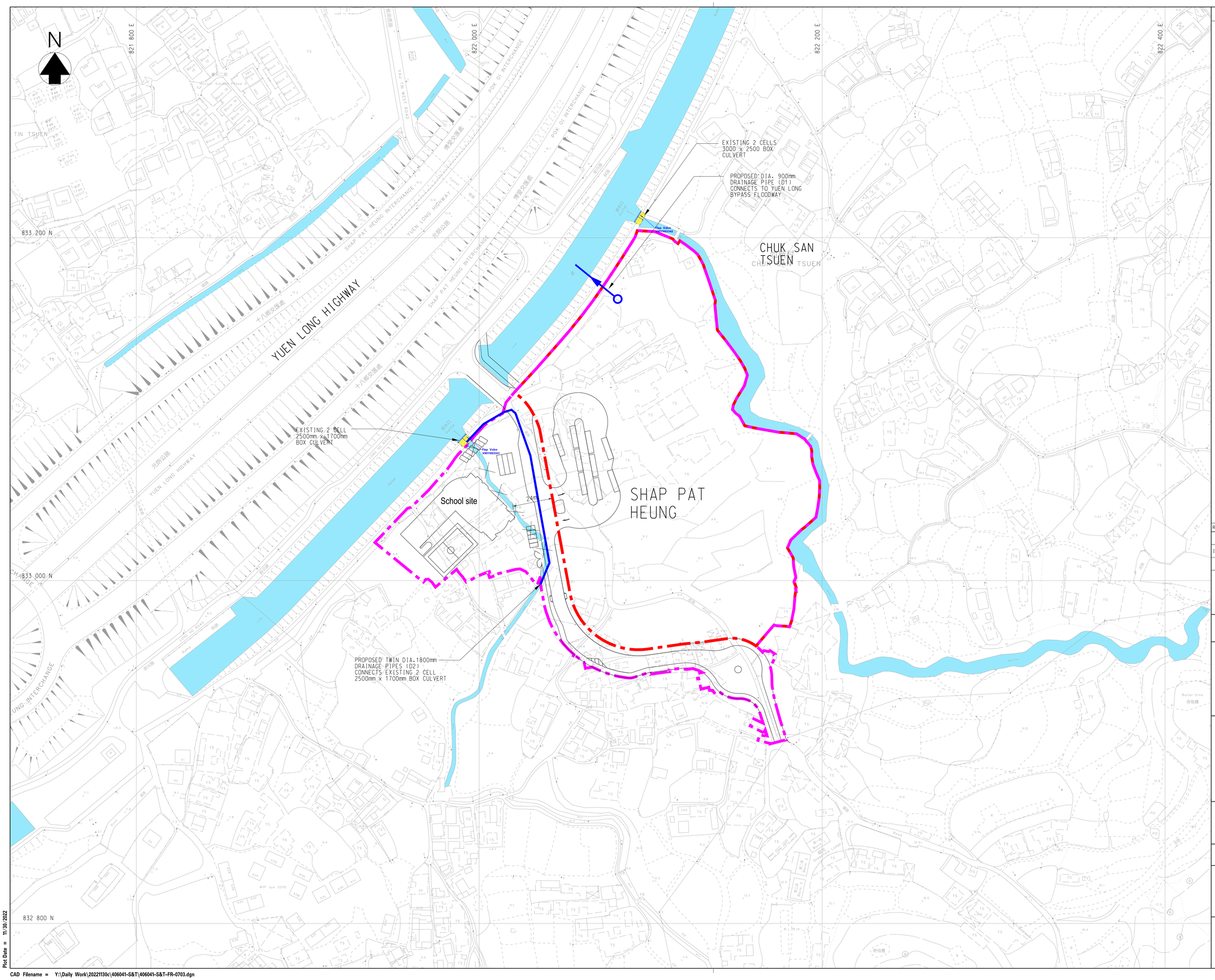
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土木工程拓展署
CEDD Civil Engineering and Development Department

BINNIES HONG KONG LIMITED
賓尼斯工程顧問有限公司

Plot Date = 2022/11/9

CAD Filename = Y:\Daily Work\20221108G\DGN\406041-S&T-FR-0702.dgn



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NOTES:

1. GRID LINES ARE HONG KONG METRIC GRID 1980.
2. THE EXACT LOCATION AND LAYOUT OF THE SITES ARE SUBJECT TO CHANGE AND CONFIRMATION WITH RELEVANT PARTIES.

LEGEND:

- INDICATIVE HOUSING DEVELOPMENT SITE BOUNDARY
- PROPOSED DEVELOPMENT BOUNDARY
- TUNNEL/BOX CULVERT (STORM)
- EXISTING STREAM
- STREAMS TO BE DIVERTED/ABANDONED
- PROPOSED DRAINAGE PIPE

Revision	Date	Description			Initial
		Designed	Checked	Drawn	Checked
Initial	–	–	SZ	–	
Date	09/20	09/20	09/20	09/20	

Approved

Agreement no.
CE10/2020 (CE)

Project title
PROPOSED DRAINAGE LAOUT
(TAI KEI LENG)

Drawing title
PROPOSED DRAINAGE LAYOUT
- SHAP PAT HEUNG

Drawing no.	Revision
406041/S&T/FR/0703	–

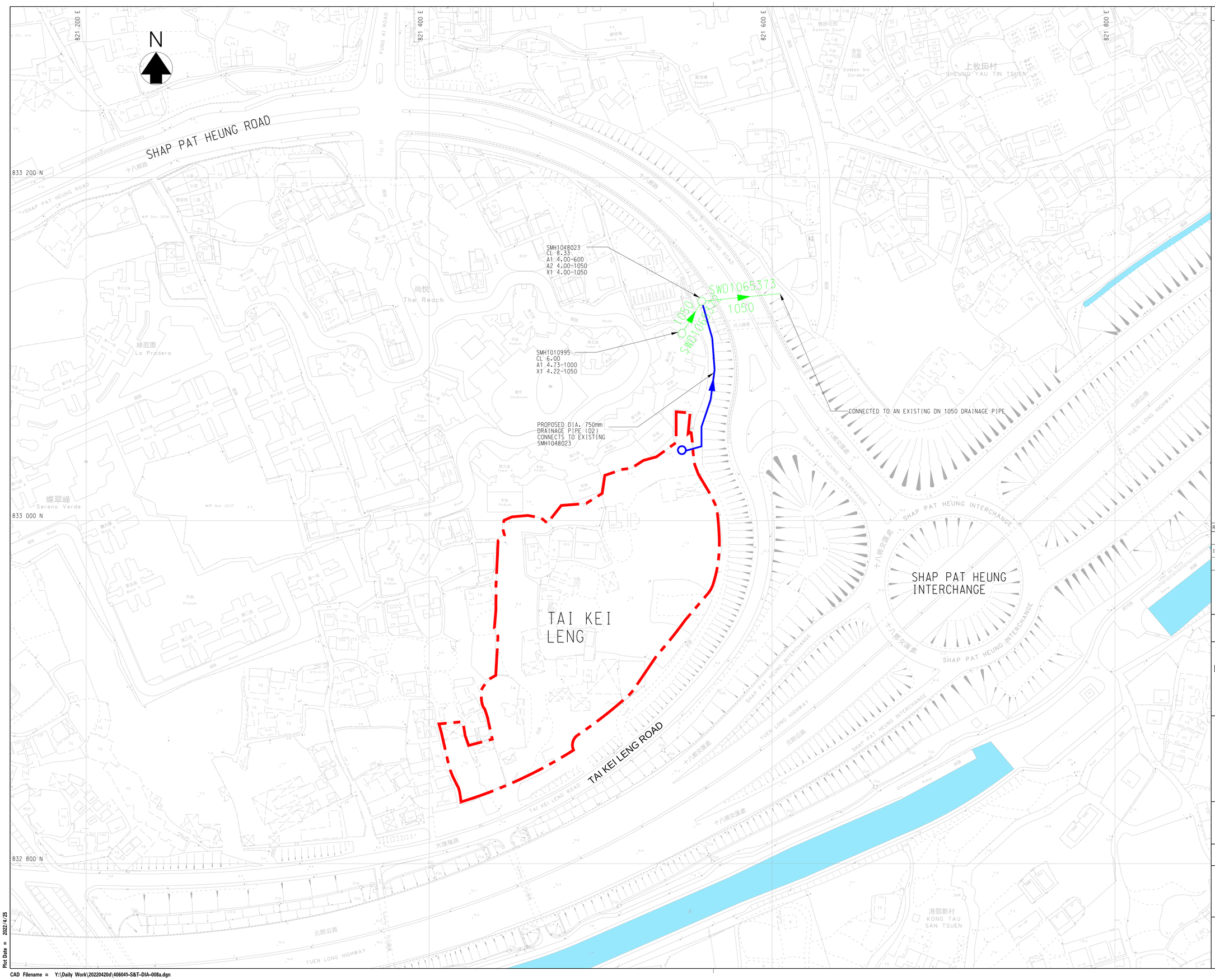
Scale
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A3 1 : 2000

土木工程拓展署
CEDD Civil Engineering and Development Department

BINNIES HONG KONG LIMITED
賓尼斯工程顧問有限公司

Plot Date = 11/30/2022

CAD Filename = Y:\Daily Work\20221130c\406041-S&T\406041-S&T-FR-0703.dgn



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NOTES:

1. GRID LINES ARE HONG KONG METRIC GRID 1980.
2. THE EXACT LOCATION AND LAYOUT OF THE SITES ARE SUBJECT TO CHANGE AND CONFIRMATION WITH RELEVANT PARTIES.

LEGEND:

- INDICATIVE HOUSING DEVELOPMENT SITE BOUNDARY SUBJECT TO EFS STUDIES AND RELEVANT B/D'S DECISION
- EXISTING STREAM
- PROPOSED DRAINAGE PIPE
- EXISTING DRAINAGE PIPE

Revision	Date	Description			Initial
	Designed	Checked	Drawn	Checked	
Initial	–	–	SZ	–	
Date	09/20	09/20	09/20	09/20	

Approved

Agreement no.
CE10/2020 (CE)

Project title
SITE FORMATION AND INFRASTRUCTURE WORKS FOR PROPOSED PUBLIC HOUSING DEVELOPMENTS AT SHA PO, SHAP PAT HEUNG AND TAI KEI LENG, YUEN LONG - FEASIBILITY STUDY

Drawing title
PROPOSED DRAINAGE LAYOUT - TAI KEI LENG

Drawing no.
406041/S&T/FR/0704

Revision
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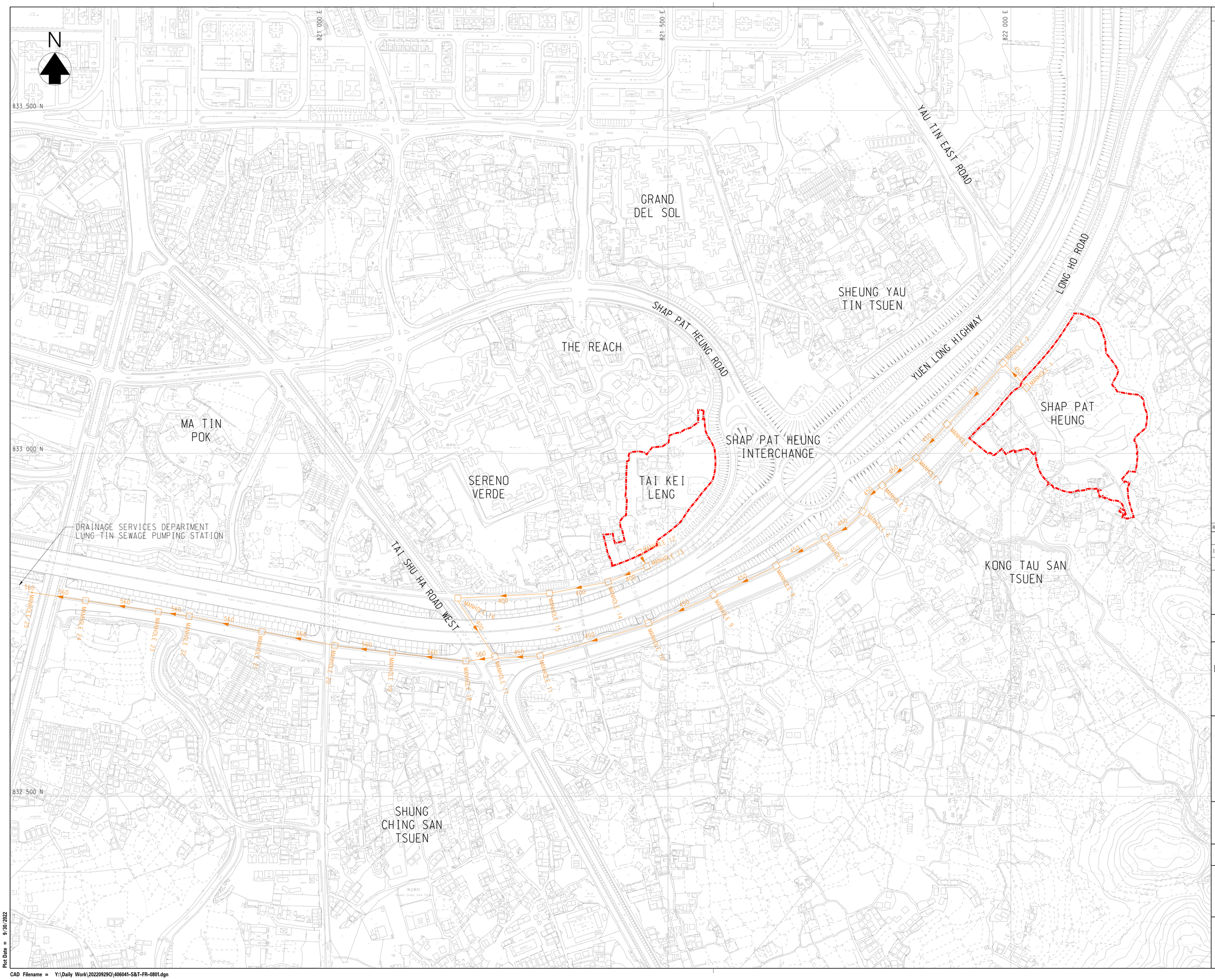
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土木工程拓展署
CEDD Civil Engineering and Development Department

BINNIES HONG KONG LIMITED
賓尼斯工程顧問有限公司

Plot Date = 2022/4/25

CAD Filename = Y:\Daily Work\20220420d\406041-S&T-DIA-008a.dgn



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LEGEND:

PROPOSED DEVELOPMENT BOUNDARY

PROPOSED SEWERS

Revision	Date	Description		Initial
	Designed	Checked	Drawn	Checked
Initial	BW	YKL	SZ	LCH
Date	11/20	11/20	11/20	11/20

Approved

Agreement no.

CE10/2020 (CE)

Project title

SITE FORMATION AND INFRASTRUCTURE WORKS FOR PROPOSED PUBLIC HOUSING DEVELOPMENTS AT SHA PO, SHAP PAT HEUNG AND TAI KEI LENG, YUEN LONG - FEASIBILITY STUDY

Drawing title

PROPOSED SEWERAGE LAYOUT PLAN

Drawing no.

406041/S&T/FR/0801

Revision

-

Scale

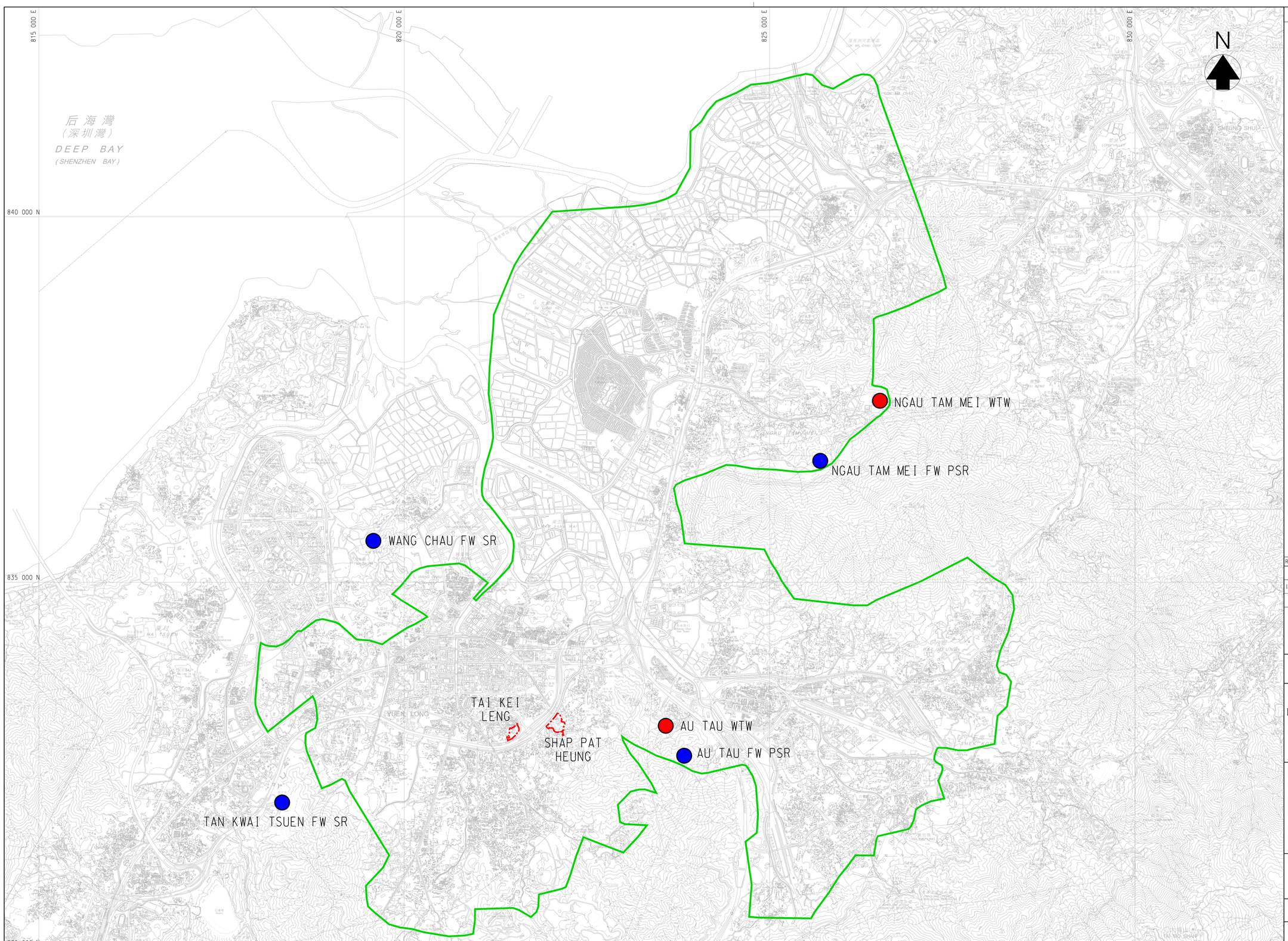
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土木工程拓展署
CEDD Civil Engineering and Development Department

BINNIES HONG KONG LIMITED
賓尼斯工程顧問有限公司

Plot Date = 9/30/2022

CAD Filename = Y:\Daily Work\20220929Q\406041-S&T-FR-0801.dgn



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LEGEND:

- PROPOSED DEVELOPMENT BOUNDARY (SUBJECT TO EFS FINDINGS)
- NGAU TAM MEI AND AU TAU
- WATER TREATMENT WORKS
- FW SERVICE RESERVOIRS

Revision	Date	Description		Initial
	Designed	Checked	Drawn	Checked
Initial	–	–	SZ	–
Date	12/20	12/20	12/20	12/20

Approved

Agreement no.
CE10/2020 (CE)

Project title
SITE FORMATION AND INFRASTRUCTURE WORKS FOR PROPOSED PUBLIC HOUSING DEVELOPMENTS AT SHA PO, SHAP PAT HEUNG AND TAI KEI LENG, YUEN LONG - FEASIBILITY STUDY

Drawing title
FRESH WATER SUPPLY ZONE

Drawing no.
406041/S&T/FR/0901

Revision
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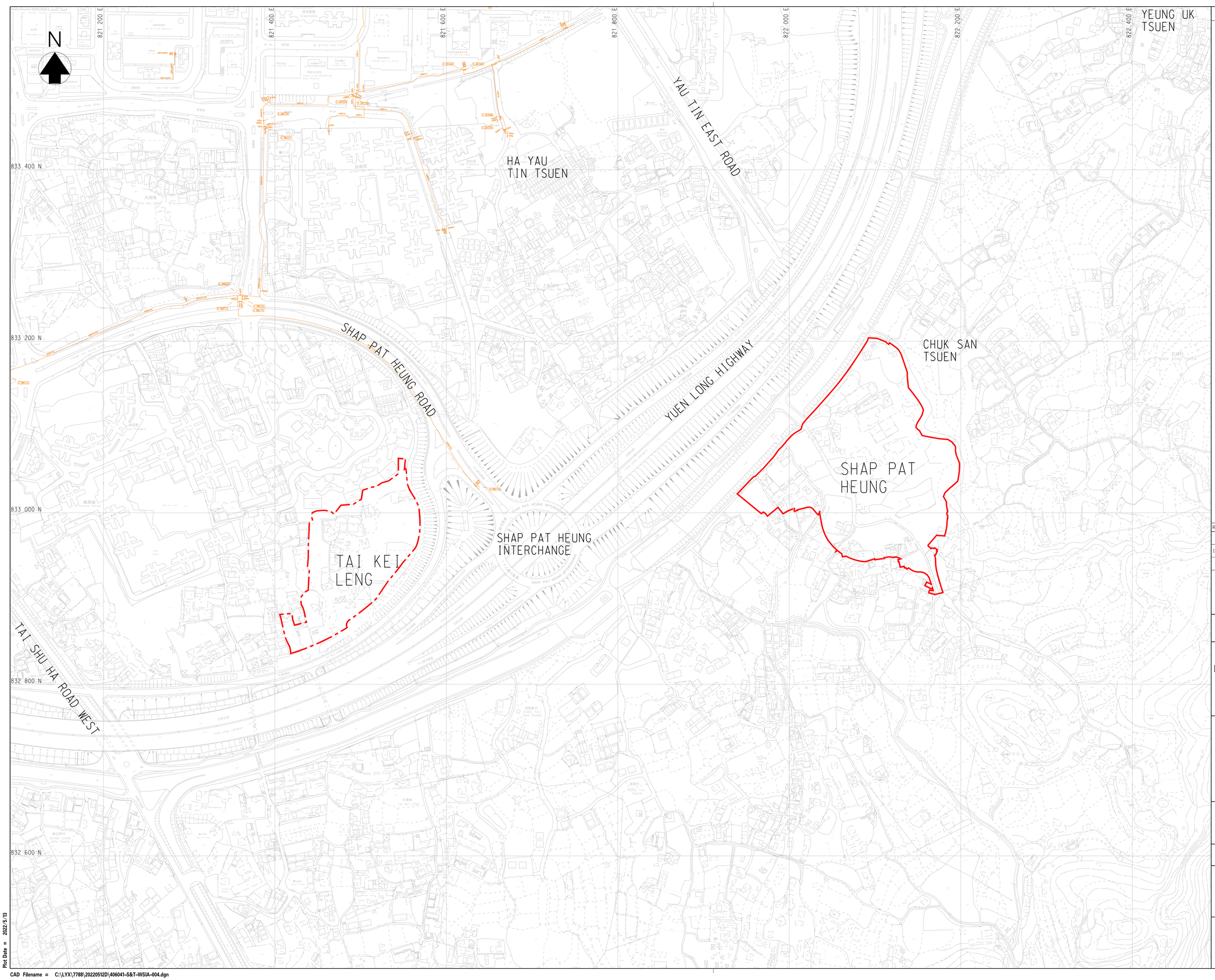
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土木工程拓展署
CEDD Civil Engineering and Development Department

BINNIES HONG KONG LIMITED
賓尼斯工程顧問有限公司

Plot Date = 2022/5/13

CAD Filename = C:\LYX\7788\20220512D\406041-S&T-WSIA-001.dgn



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LEGEND:

PROPOSED DEVELOPMENT BOUNDARY (SUBJECT TO EFS FINDINGS)

SALT WATER MAIN

Revision	Date	Description		Initial
	Designed	Checked	Drawn	Checked
Initial	–	–	SZ	–
Date	12/20	12/20	12/20	12/20

Approved

Agreement no.
CE10/2020 (CE)

Project title
SITE FORMATION AND INFRASTRUCTURE WORKS FOR PROPOSED PUBLIC HOUSING DEVELOPMENTS AT SHA PO, SHAP PAT HEUNG AND TAI KEI LENG, YUEN LONG - FEASIBILITY STUDY

Drawing title
EXISTING SALT WATER SUPPLY NETWORK

Drawing no.
406041/S&T/FR/0902

Revision
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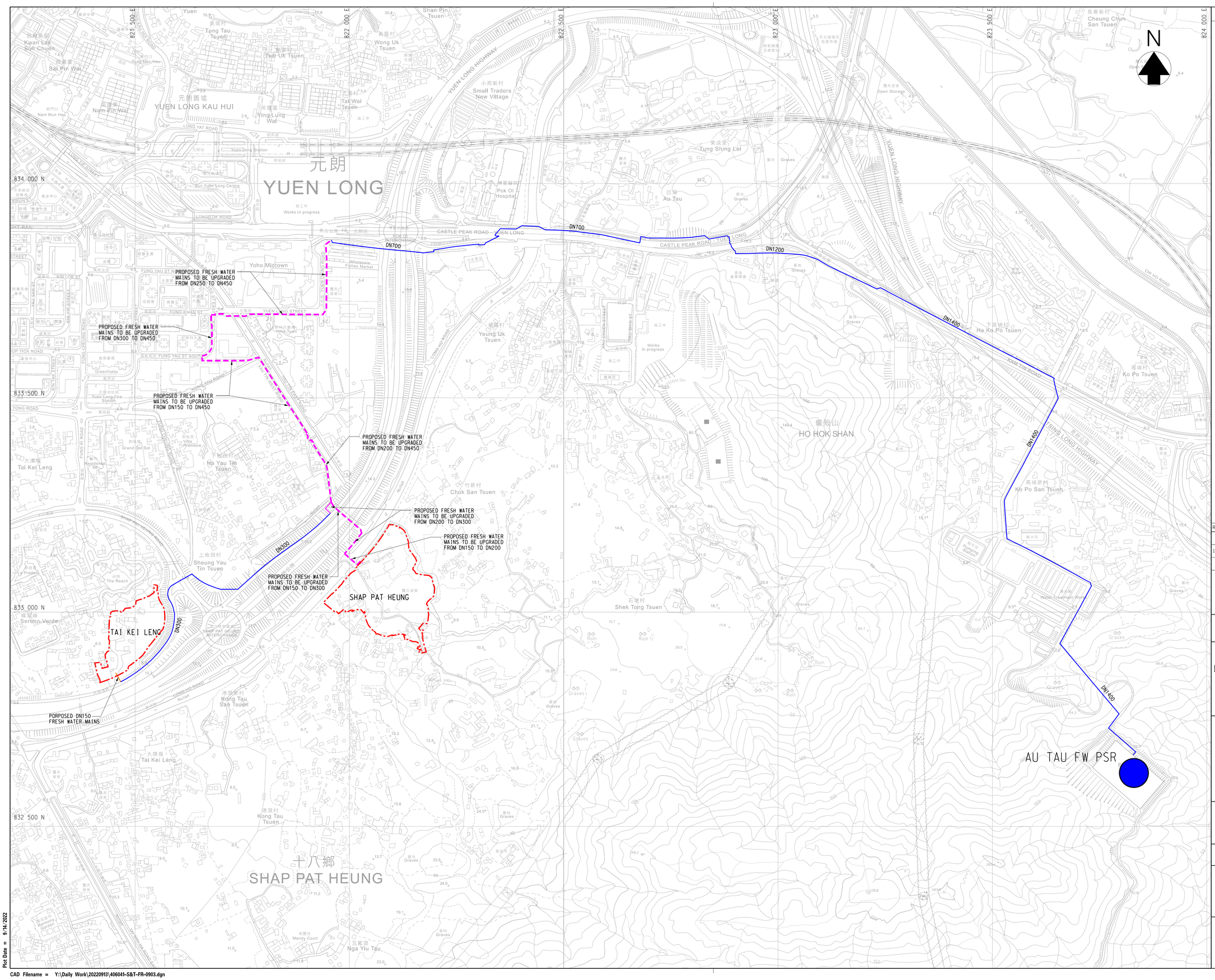
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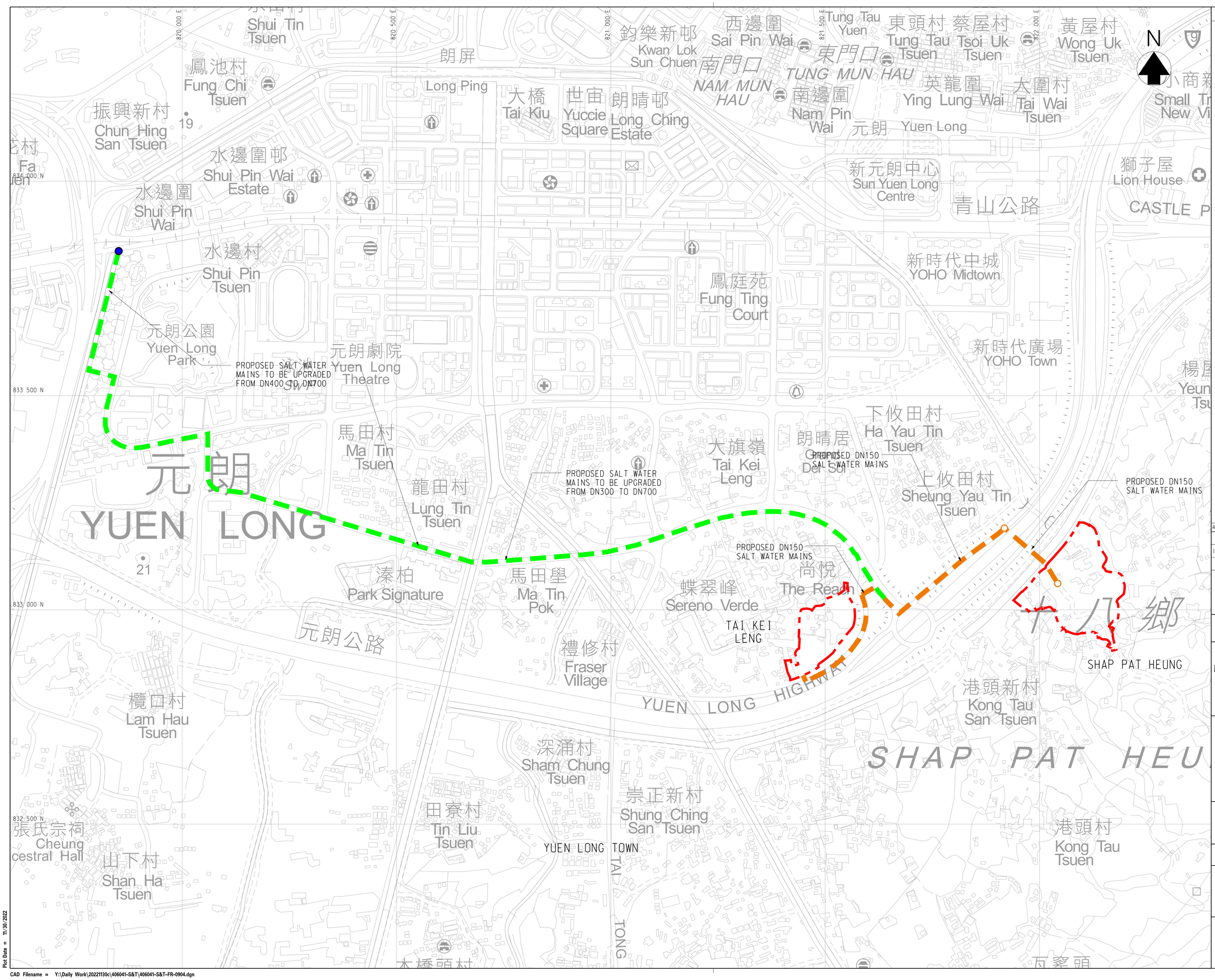
土木工程拓展署
CEDD Civil Engineering and Development Department

BINNIES HONG KONG LIMITED
賓尼斯工程顧問有限公司

Plot Date = 2022/5/13

CAD Filename = C:\LYX\7788\20220512D\406041-S&T-WSIA-004.dgn


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824 000 E
834 000 N
833 500 N
833 000 N
832 500 N
N
元朗
YUEN LONG
十八鄉
SHAP PAT HEUNG
YUEN LONG KAU HUI
Yuen
Tung Tau Tsuen
Kwan Lok Sun Chuen
Sai Pin Wai
Nam Pin Wai
Shan Pin Tsuen
Wong Uk Tsuen
Tsat Uk Tsuen
Tai Wai Tsuen
Ying Lung Wai
Small Traders New Village
Cheung Chun San Tsuen
Tung Shing Lei
Pok Oi Hospital
Au Tau
Yeung Uk Tsuen
Ha Ko Po Tsuen
Ko Po Tsuen
Ko Po San Tsuen
HO HOK SHAN
Chuk San Tsuen
Shek Tong Tsuen
Sheung Yau Tin Tsuen
Ha Yau Tin Tsuen
Kong Tau San Tsuen
Kong Tau Tsuen
Tai Kei Leng
Nga Yiu Tau
Yoho Midtown
Greenfields
Grand Central
Serene Verde
The Reach
Villa Premiere
Residence Bel-Air
Mandy Court
Marvel View Garden
Yuen Long Fire Station
Yuen Long Station
Sun Yuen Long Centre
Wholesale Fishes Market
Open Storage
Water Treatment Works
Works in progress
Graves
Ruin
YUEN LONG HIGHWAY
CASTLE PEAK ROAD - YUEN LONG
CASTLE PEAK ROAD - TSUEN WAN
HOK OI INTERCHANGE
SHAP PAT HEUNG INTERCHANGE
LONG YAT ROAD
LONG LOK ROAD
FUNG YAU ST NTH
FUNG YAU ST SOUTH
FUNG KWAN ST
YUEN LONG STREET
WONG YAU ROAD
TUNG YUEN ROAD
TUNG YAU ROAD
TUNG MING ROAD
TUNG HEI ROAD
TUNG KI ROAD
TUNG CHUNG ROAD
TUNG TAU ROAD
TUNG TAU INDUSTRIAL AREA
TUNG TAU INDUSTRIAL ROAD
TUNG TAU INDUSTRIAL ROAD WEST
TUNG TAU INDUSTRIAL ROAD EAST
TUNG TAU INDUSTRIAL ROAD NORTH
TUNG TAU INDUSTRIAL ROAD SOUTH
TUNG TAU INDUSTRIAL ROAD SOUTH WEST
TUNG TAU INDUSTRIAL ROAD SOUTH EAST
TUNG TAU INDUSTRIAL ROAD NORTH WEST
TUNG TAU INDUSTRIAL ROAD NORTH EAST



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LEGEND:

- PROPOSED DEVELOPMENT BOUNDARY (SUBJECT TO EFS FINDINGS)
- PROPOSED SALT WATER MAINS UPGRADE
- PROPOSED SALT WATER MAINS
- CONNECTION POINT CONNECTING TO THE PLANNED WANG CHAU RECLAIMED WATERSERVICE RESERVOIR

Revision	Date	Description		Initial
	Designed	Checked	Drawn	Checked
Initial	–	–	SZ	–
Date	12/20	12/20	12/20	12/20

Approved

Agreement no.
CE10/2020 (CE)

Project title
SITE FORMATION AND INFRASTRUCTURE WORKS FOR PROPOSED PUBLIC HOUSING DEVELOPMENTS AT SHA PO, SHAP PAT HEUNG AND TAI KEI LENG, YUEN LONG - FEASIBILITY STUDY

Drawing title
PROPOSED SALT WATER MAINS LAYOUT PLAN

Drawing no.
406041/S&T/FR/0904

Revision
–

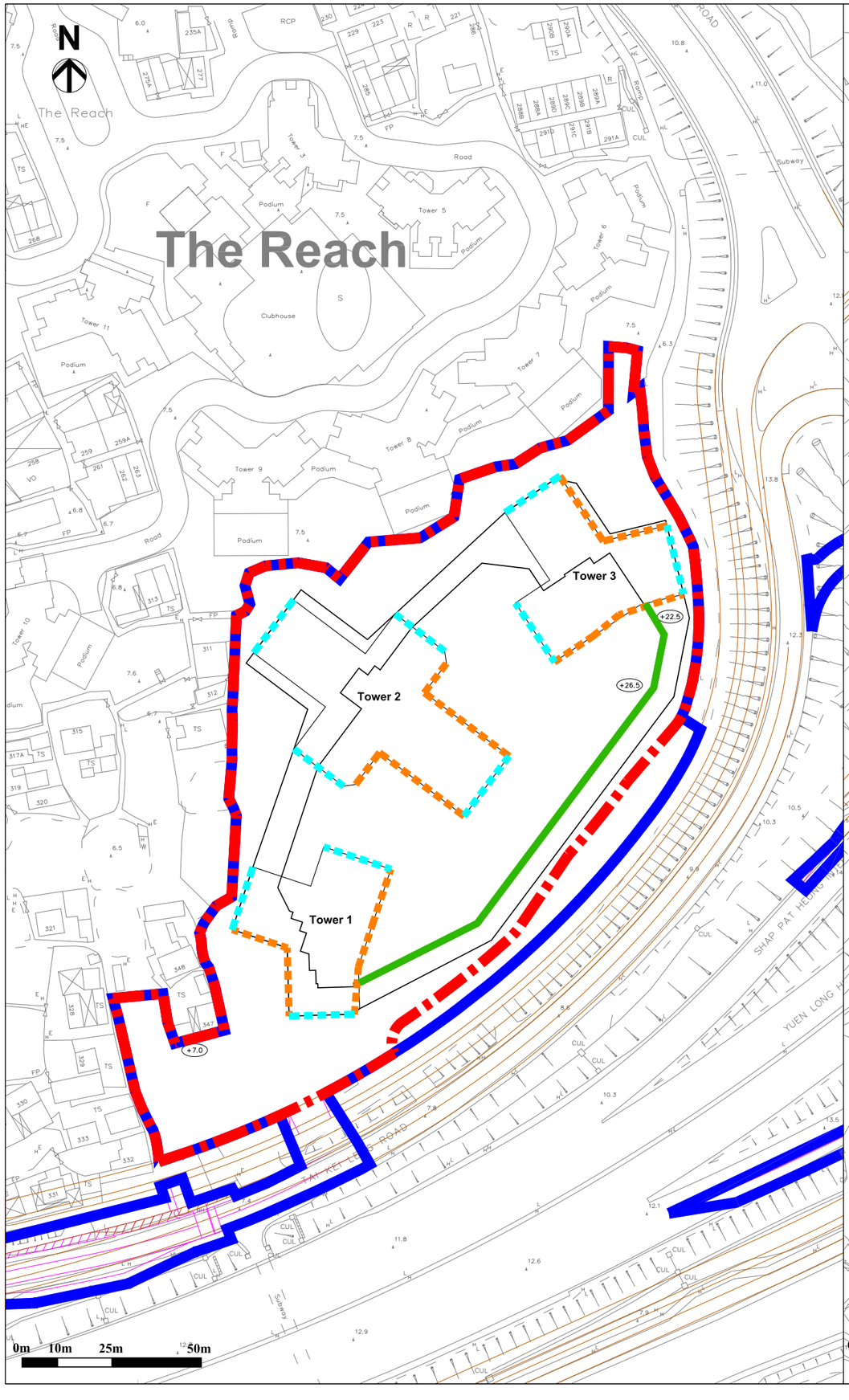
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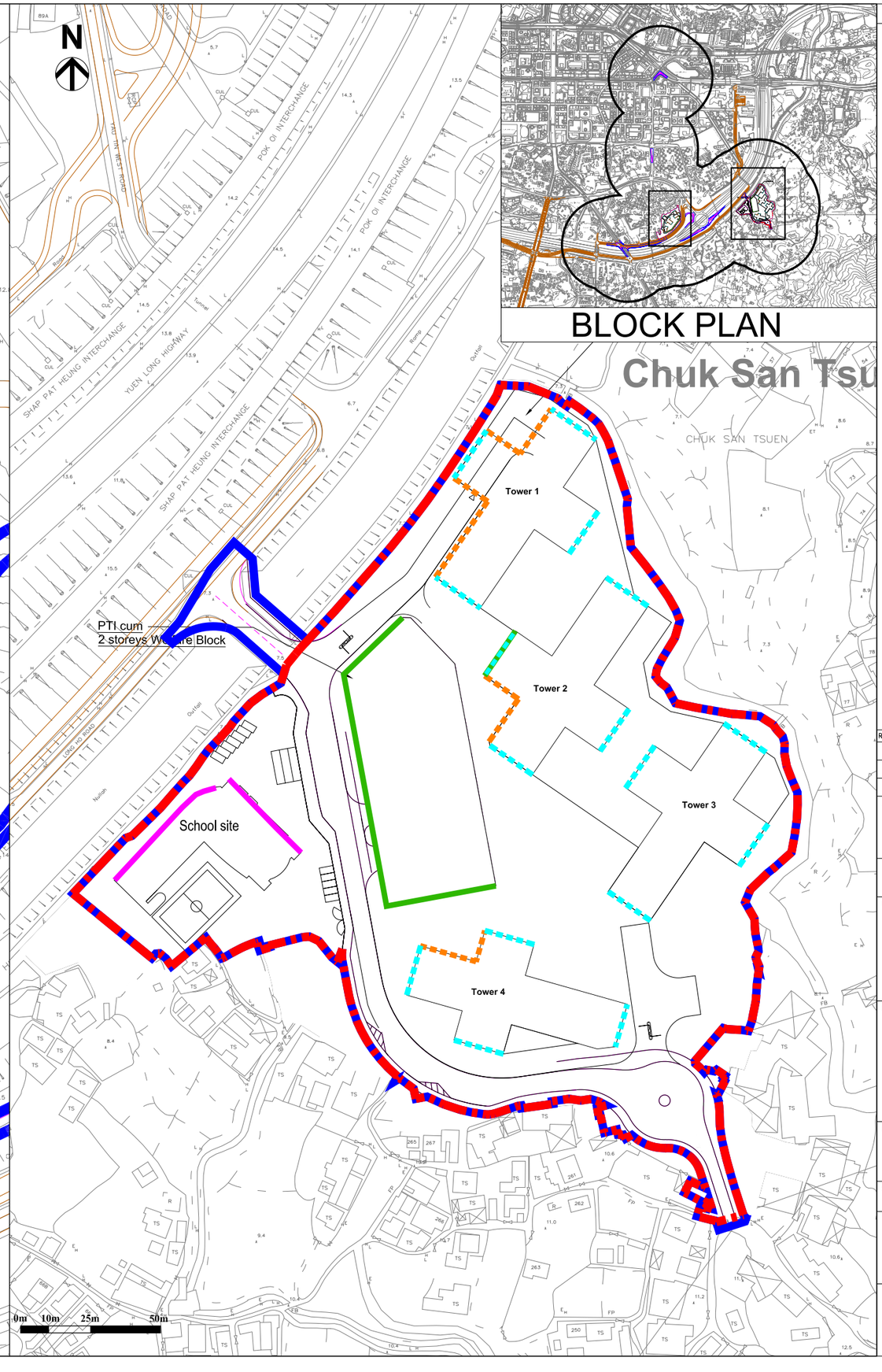
土木工程拓展署
CEDD Civil Engineering and Development Department

BINNIES HONG KONG LIMITED
賓尼斯工程顧問有限公司

Plot Date = 11/30/2022

CAD Filename = Y:\Daily Work\20221130c\406041-S&T\406041-S&T-FR-0904.dgn





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LEGEND:

- 300M ASSESSMENT AREA (OPERATION PHASE)
- PROJECT SITE
- DEVELOPMENT SITE
- YUEN LONG SOUTH DEVELOPMENT ROAD ALIGNMENT
- ACOUSTICS WINDOWS / BALCONIES
- MITIGATION MEASURES e.g. FIXED GLAZING WINDOWS WITH MECHANICAL AIR VENTILATION) FOR WELFARE FACILITIY
- WINDOW INSULATION WITH MECHANICAL AIR VENTILATION (FOR SCHOOL)
- NO OPENED WINDOW FOR VENTILATION

*The notional layout is for study purpose and may change subject to detailed design

Revision	Date	Description			Initial
	Designed	Checked	Drawn	Checked
Initial			SM	KY
Date			08/22	08/22

Approved

Agreement no.
CE 10/2020 (CE)

Project title
SITE FORMATION AND INFRASTRUCTURE WORKS FOR PROPOSED PUBLIC HOUSING DEVELOPMENT AT SHA PO, SHAP PAT HEUNG AND TAI KEI LENG, YUEN LONG FEASIBILITY STUDY

Drawing title
PROPOSED MITIGATION MEASURES FOR ROAD TRAFFIC NOISE IMPACTS

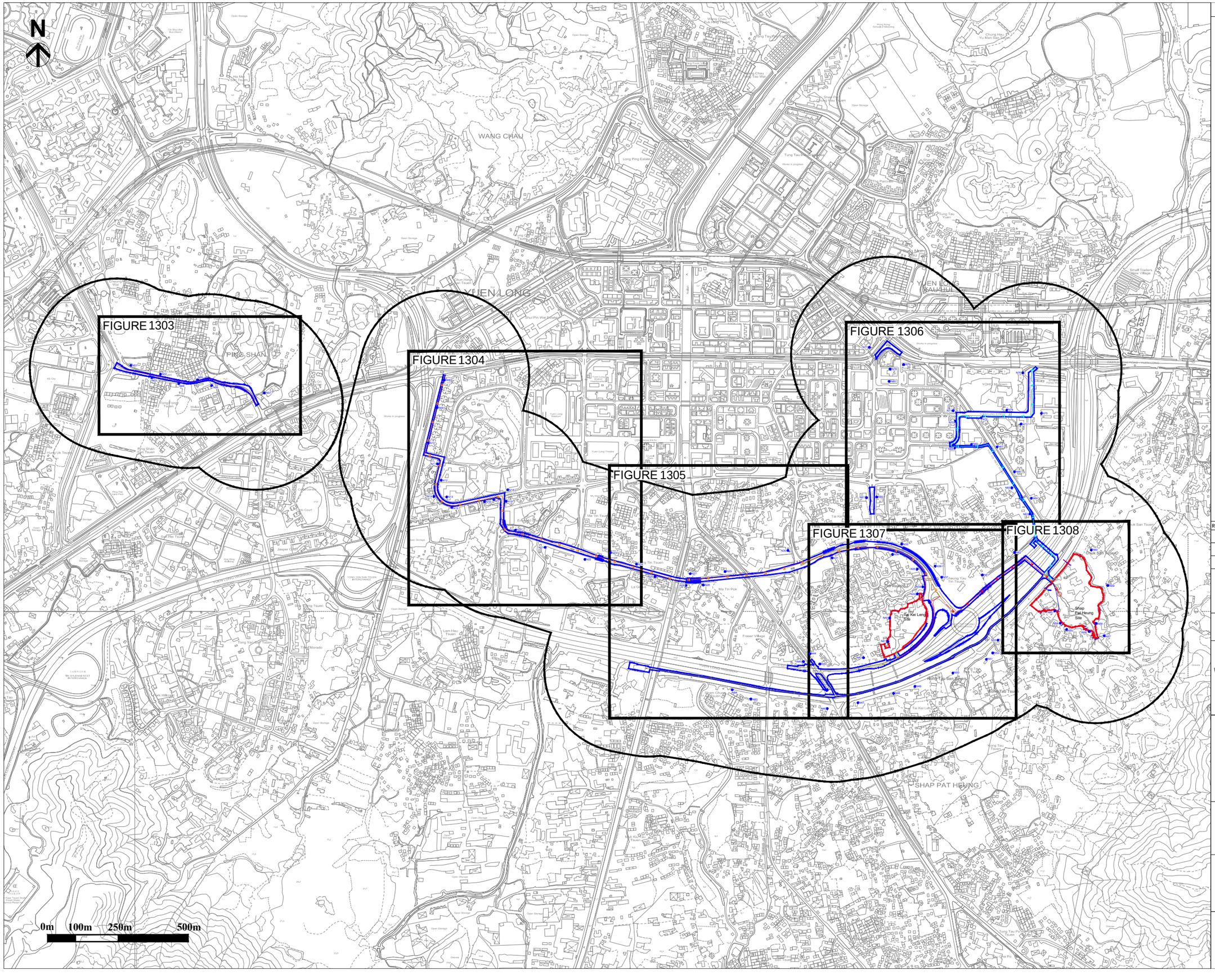
Drawing no.
406041/S&T/FR/1301

Revision

Scale

土木工程拓展署
CEDD Civil Engineering and Development Department

BINNIES HONG KONG LIMITED
賓尼斯工程顧問有限公司



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LEGEND:

- 300M ASSESSMENT AREA
- PROJECT SITE
- DEVELOPMENT SITE
- REPRESENTATIVE NOISE SENSITIVE RECEIVER

Revision	Date	Description		Initial	
	Designed	Checked	Drawn	Checked	
Initial			KL	KY	
Date			05/22	05/22	

Approved

Contract no.

CE 10/2020 (CE)

Contract title

SITE FORMATION AND INFRASTRUCTURE WORKS FOR PROPOSED PUBLIC HOUSING DEVELOPMENT AT SHA PO, SHAP PAT HEUNG AND TAI KEI LENG, YUEN LONG FEASIBILITY STUDY

Drawing title

LOCATIONS OF REPRESENTATIVE NOISE SENSITIVE RECEIVERS FOR CONSTRUCTION NOISE IMPACT ASSESSMENT (SHEET 1 OF 7)

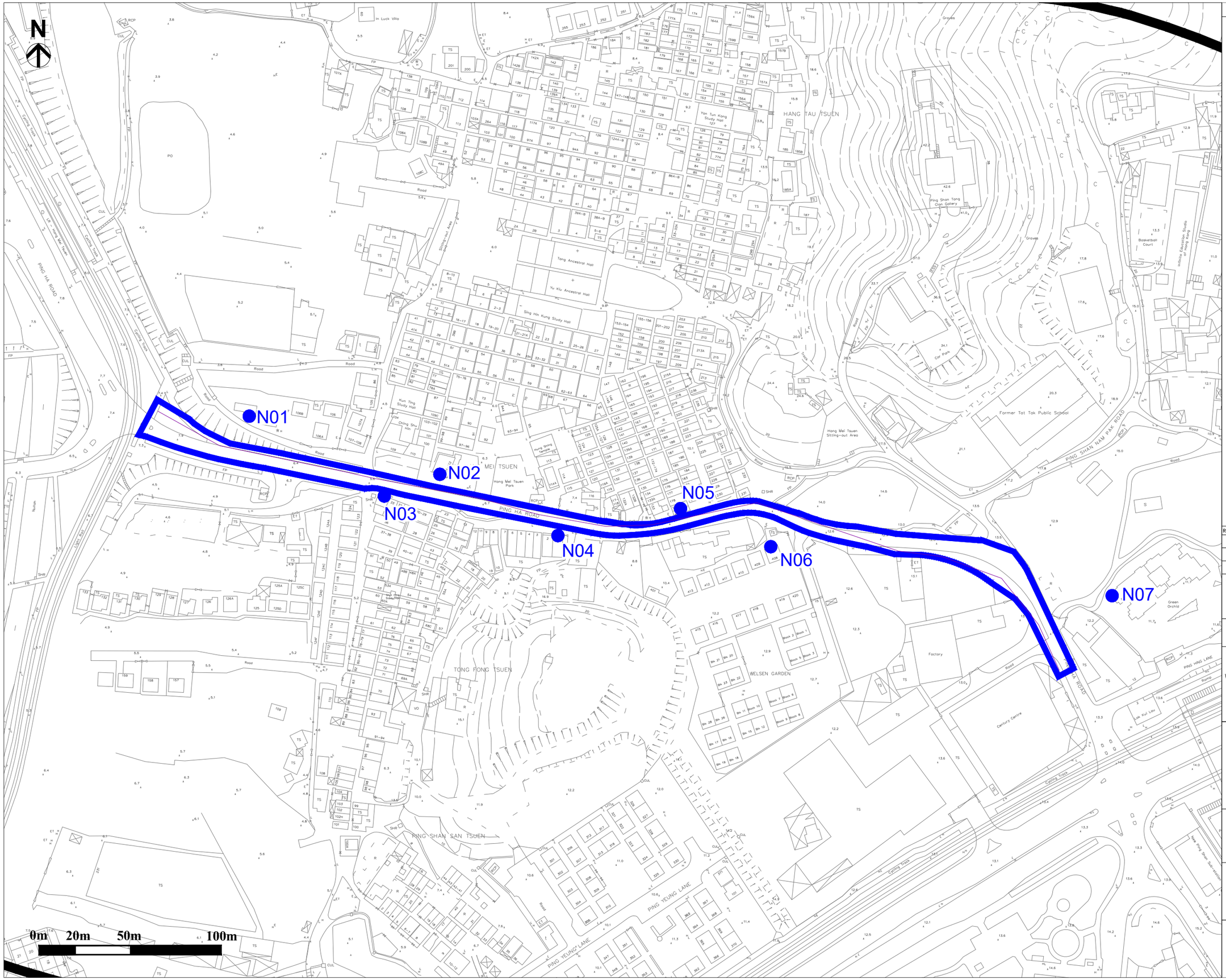
Drawing No.

406041/S&T/FR/1302

Scale

土木工程拓展署
CEDD Civil Engineering and Development Department

BINNIES HONG KONG LIMITED
賓尼斯工程顧問有限公司



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LEGEND:

- 300M ASSESSMENT AREA
- PROJECT SITE
- DEVELOPMENT SITE
- REPRESENTATIVE NOISE SENSITIVE RECEIVER

Revision	Date	Description		Initial
	Designed	Checked	Drawn	Checked
Initial			KL	KY
Date			05/22	05/22

Approved

Contract no.

CE 10/2020 (CE)

Contract title

SITE FORMATION AND INFRASTRUCTURE WORKS FOR PROPOSED PUBLIC HOUSING DEVELOPMENT AT SHA PO, SHAP PAT HEUNG AND TAI KEI LENG, YUEN LONG FEASIBILITY STUDY

Drawing title

LOCATIONS OF REPRESENTATIVE NOISE SENSITIVE RECEIVERS FOR CONSTRUCTION NOISE IMPACT ASSESSMENT (SHEET 2 OF 7)

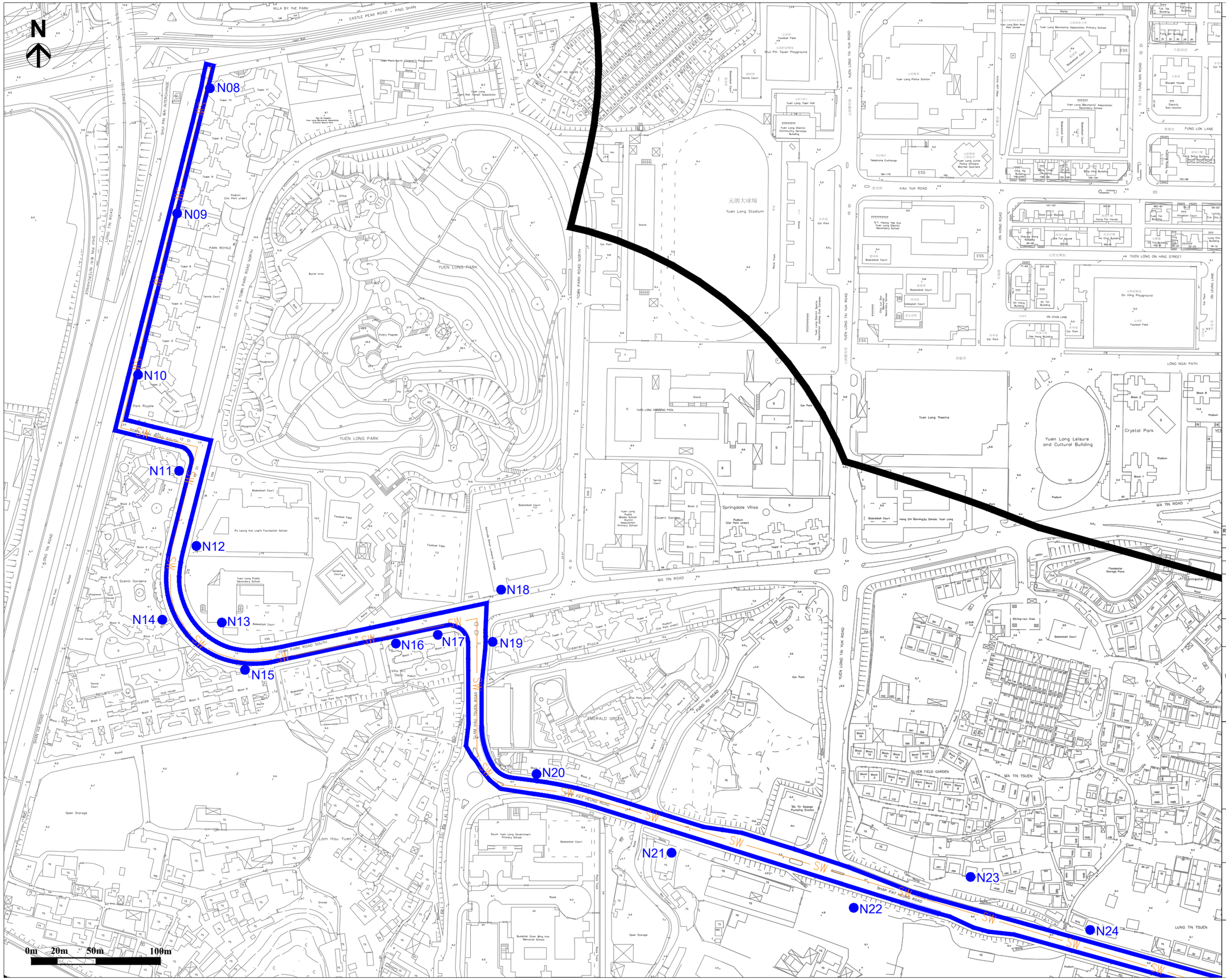
Drawing No.

406041/S&T/FR/1303

Scale

土木工程拓展署
CEDD Civil Engineering and Development Department

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LEGEND:

- 300M ASSESSMENT AREA
- PROJECT SITE
- DEVELOPMENT SITE
- REPRESENTATIVE NOISE SENSITIVE RECEIVER

Revision	Date	Description		Initial
	Designed	Checked	Drawn	Checked
Initial			KL	KY
Date			05/22	05/22

Approved

Contract no.

CE 10/2020 (CE)

Contract title

SITE FORMATION AND INFRASTRUCTURE WORKS FOR PROPOSED PUBLIC HOUSING DEVELOPMENT AT SHA PO, SHAP PAT HEUNG AND TAI KEI LENG, YUEN LONG FEASIBILITY STUDY

Drawing title

LOCATIONS OF REPRESENTATIVE NOISE SENSITIVE RECEIVERS FOR CONSTRUCTION NOISE IMPACT ASSESSMENT (SHEET 3 OF 7)

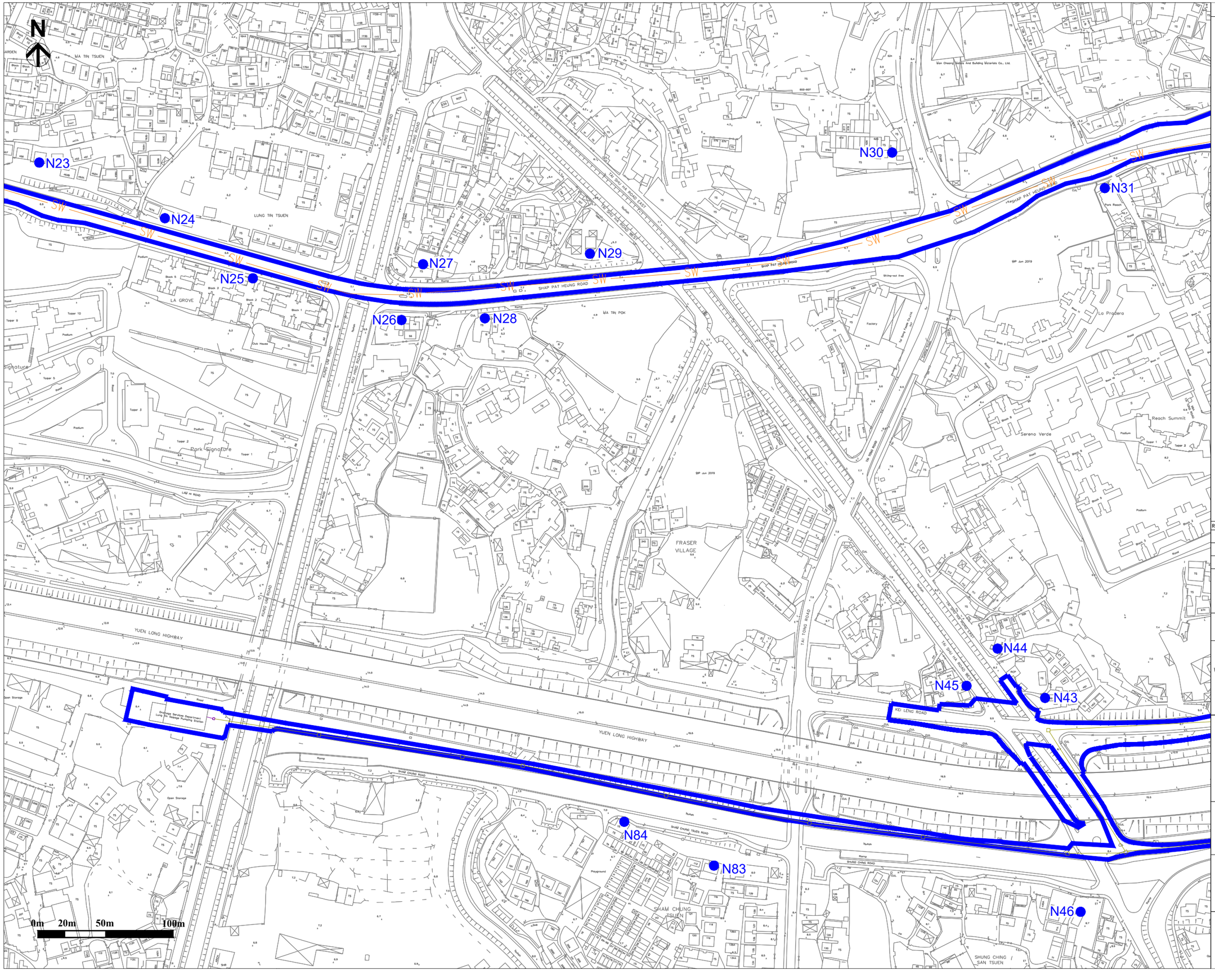
Drawing No.

406041/S&T/FR/1304

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LEGEND:

- 300M ASSESSMENT AREA
- PROJECT SITE
- DEVELOPMENT SITE
- REPRESENTATIVE NOISE SENSITIVE RECEIVER

Revision	Date	Description		Initial
	Designed	Checked	Drawn	Checked
Initial			KL	KY
Date			05/22	05/22

Approved

Contract no.

CE 10/2020 (CE)

Contract title

SITE FORMATION AND INFRASTRUCTURE WORKS FOR PROPOSED PUBLIC HOUSING DEVELOPMENT AT SHA PO, SHAP PAT HEUNG AND TAI KEI LENG, YUEN LONG FEASIBILITY STUDY

Drawing title

LOCATIONS OF REPRESENTATIVE NOISE SENSITIVE RECEIVERS FOR CONSTRUCTION NOISE IMPACT ASSESSMENT (SHEET 4 OF 7)

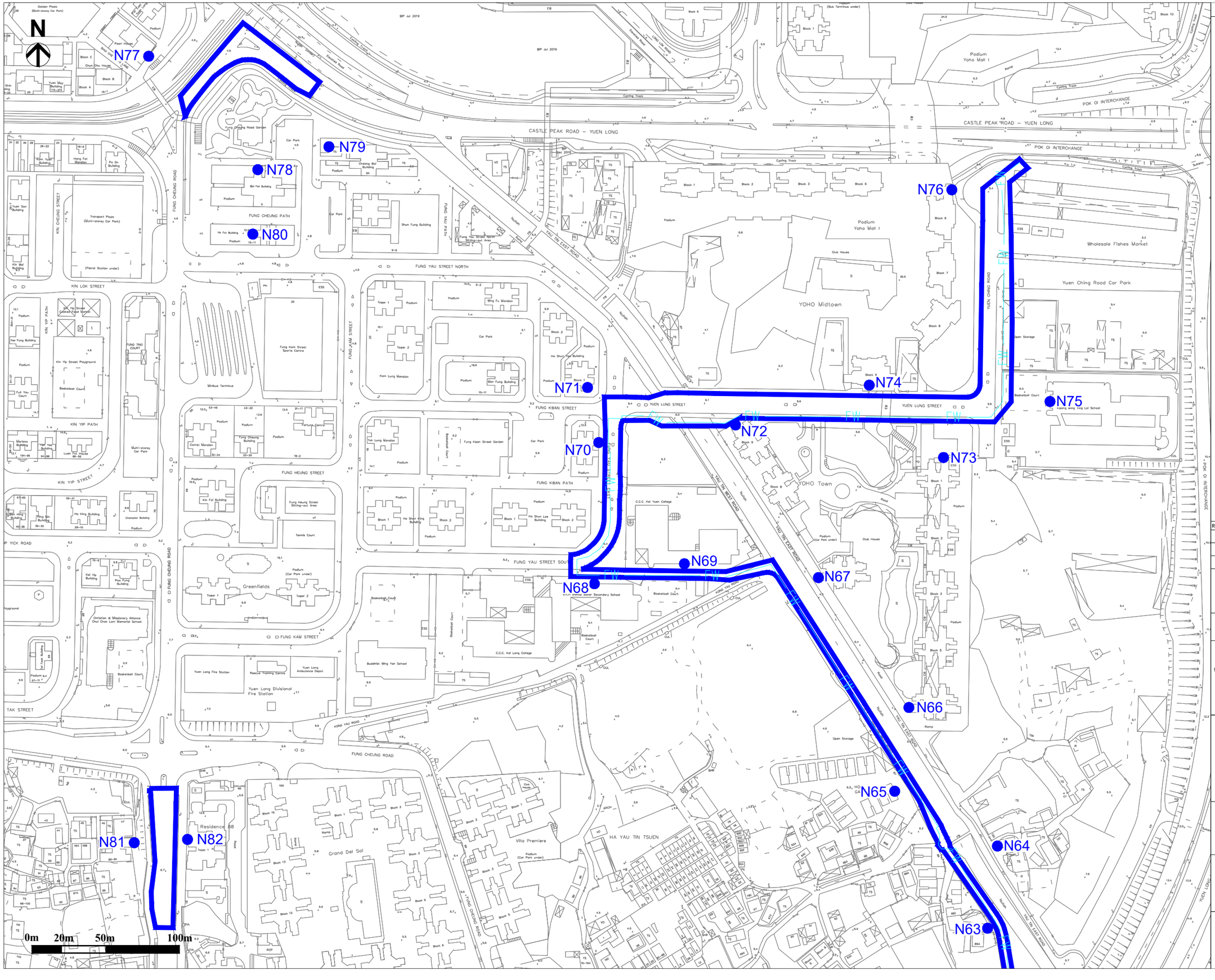
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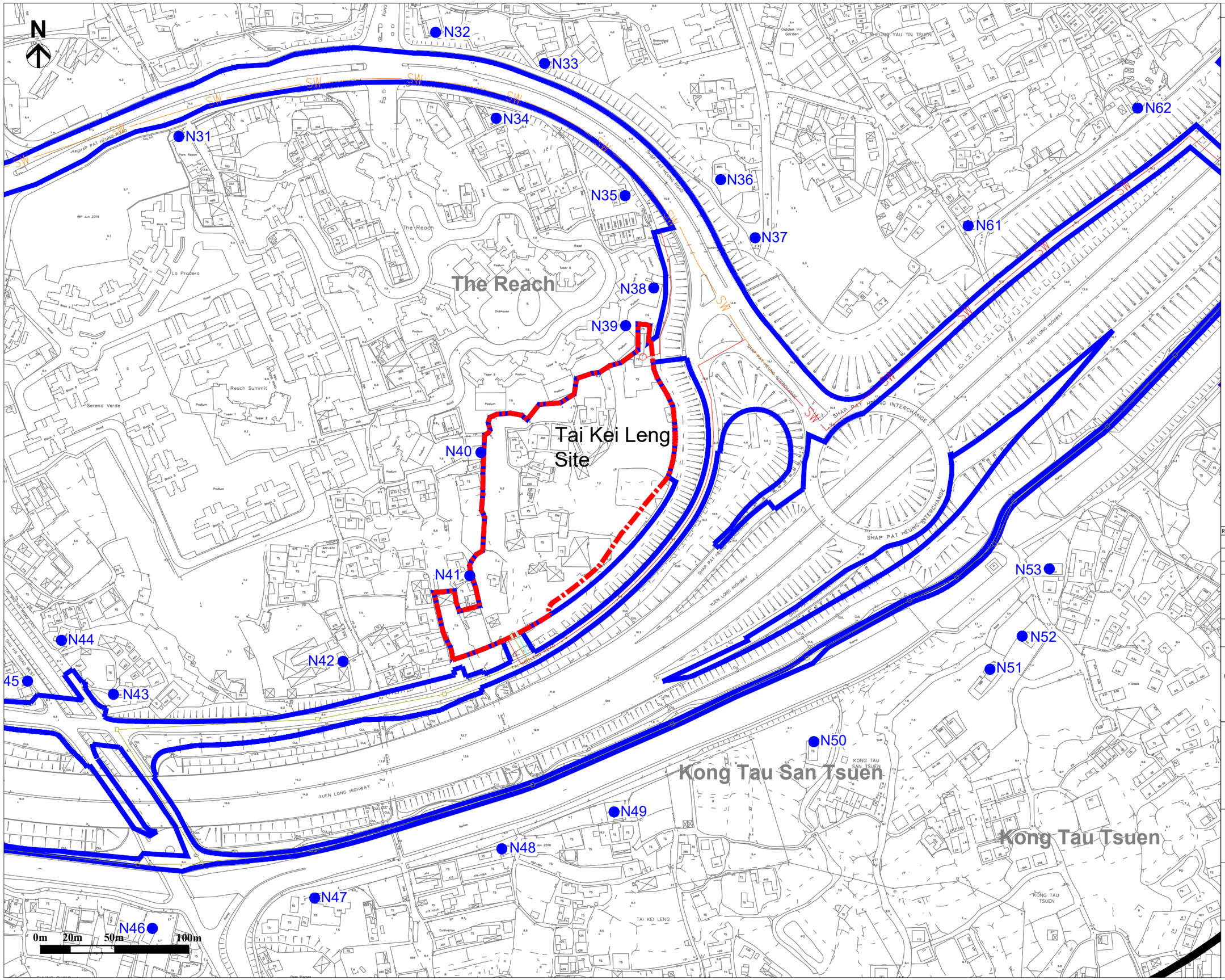
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Scale

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CEDD Civil Engineering and Development Department

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0m 20m 50m 100m
CASTLE PEAK ROAD – YUEN LONG
POK OI INTERCHANGE
FUNG CHEUNG ROAD
FUNG CHEUNG PATH
FUNG YAU STREET NORTH
FUNG KAM STREET
FUNG KWAN STREET
FUNG KWAN PATH
FUNG HEUNG STREET
KIN LOK STREET
KIN YIP PATH
KIN YIP STREET
TAK STREET
HONG YAU ROAD
YUEN LUNG STREET
YUEN CHING ROAD
HA YAU TIN TSUEN
YOHO Midtown
YOHO Town
Podium Yoho Mall I
Wholesale Fishes Market
Yuen Ching Road Car Park
Transport Plaza (Multi-storey Car Park)
Multi-storey Car Park
Yuen Long Divisional Fire Station
Yuen Long Ambulance Depot
Residence 88
Grand Del Sol
Villa Premiere
Greenfields
Fung Kom Street Sports Centre
Kin Yip Street Cooked Food Market
Kin Yip Street Playground
Basketball Court
Tennis Court
Minibus Terminus
Fung Cheung Road Garden
Fung Heung Street Sitting-out Area
Fung Kwan Street Garden
Yuen Long Fire Station
Rescue Training Centre
Buddhist Wing Yan School
C.C.C. Kei Yuen College
a.n.h. siranoo sioner Secondary School
Transport Plaza (Multi-storey Car Park)
(Petrol Station under)
Podium (Car Park under)
Podium (Bus Terminus under)
Cycling Track
Nullah
Ramp
Open Storage
Club House
Basketball Court
Block 1
Block 2
Block 3
Block 5
Block 6
Block 7
Block 8
Block 9
Block 10
Toaer 1
Toaer 2
Podium
Car Park
Shun Fung Building
Cheung Biot Building
Biot Fat Building
Yih Fat Building
Hong Fat Mansion
Pu Qu Building
Yuen Son Building
Kim Yuen Building
Kim Biot Building
Kom Lung Mansion
Wing Fu Mansion
Ho Shun Yee Building
Man Fung Building
Ho Shun Lee Building
Fung Cheung Building
Fung Heung Building
Fung Kwan Building
Tsuk Lung Mansion
Comee Mansion
Fortune Centre
Kin Fai Building
Kai Yip Building
Pao Fung Building
Christian & Missionary Alliance Chui Chak Lam Memorial School
Yuen Long Kau Yee Lau Primary School
Block 13
Block 15
Block 19
Villa Premiere
Podium (Car Park under)
Golden Plaza (Multi-storey Car Park)
Pearl House
Shui Cheung Lau
Chun Chu House
Block A
Block B
Block C
Yuen Mayo Building
Luen Fat House
Champion Building
Ho Kiling Building
Hang Sin Building
Mariana Building
Yee Fung Building
Yee Yee Building
Fuk Yau Court
Tak Yick Road
Cheung Yuen Road
Castle Peak Road
Yau Tin East Road
Yau Tin West Road
Yuen Long Creek
Yuen Long Kau Yee Lau Primary School
Hong Yau Road
Fung Yau Street North
Fung Yau Street South
Fung Yau Street North Sitting-out Area
Fung Kwan Street Garden
Fung Heung Street Sitting-out Area
Kin Yip Street Playground
Basketball Court
Tennis Court
Open Storage
Ramp
Nullah
Cycling Track
Footbridge
Podium
Block 1
Block 2
Block 3
Block 5
Block 6
Block 7
Block 8
Block 9
Block 10
Club House
Basketball



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LEGEND:

- 300M ASSESSMENT AREA
- PROJECT SITE
- DEVELOPMENT SITE
- REPRESENTATIVE NOISE SENSITIVE RECEIVER

Revision	Date	Description		Initial
	Designed	Checked	Drawn	Checked
Initial			KL	KY
Date			05/22	05/22

Approved

Contract no.

CE 10/2020 (CE)

Contract title

SITE FORMATION AND INFRASTRUCTURE WORKS FOR PROPOSED PUBLIC HOUSING DEVELOPMENT AT SHA PO, SHAP PAT HEUNG AND TAI KEI LENG, YUEN LONG FEASIBILITY STUDY

Drawing title

LOCATIONS OF REPRESENTATIVE NOISE SENSITIVE RECEIVERS FOR CONSTRUCTION NOISE IMPACT ASSESSMENT (SHEET 6 OF 7)

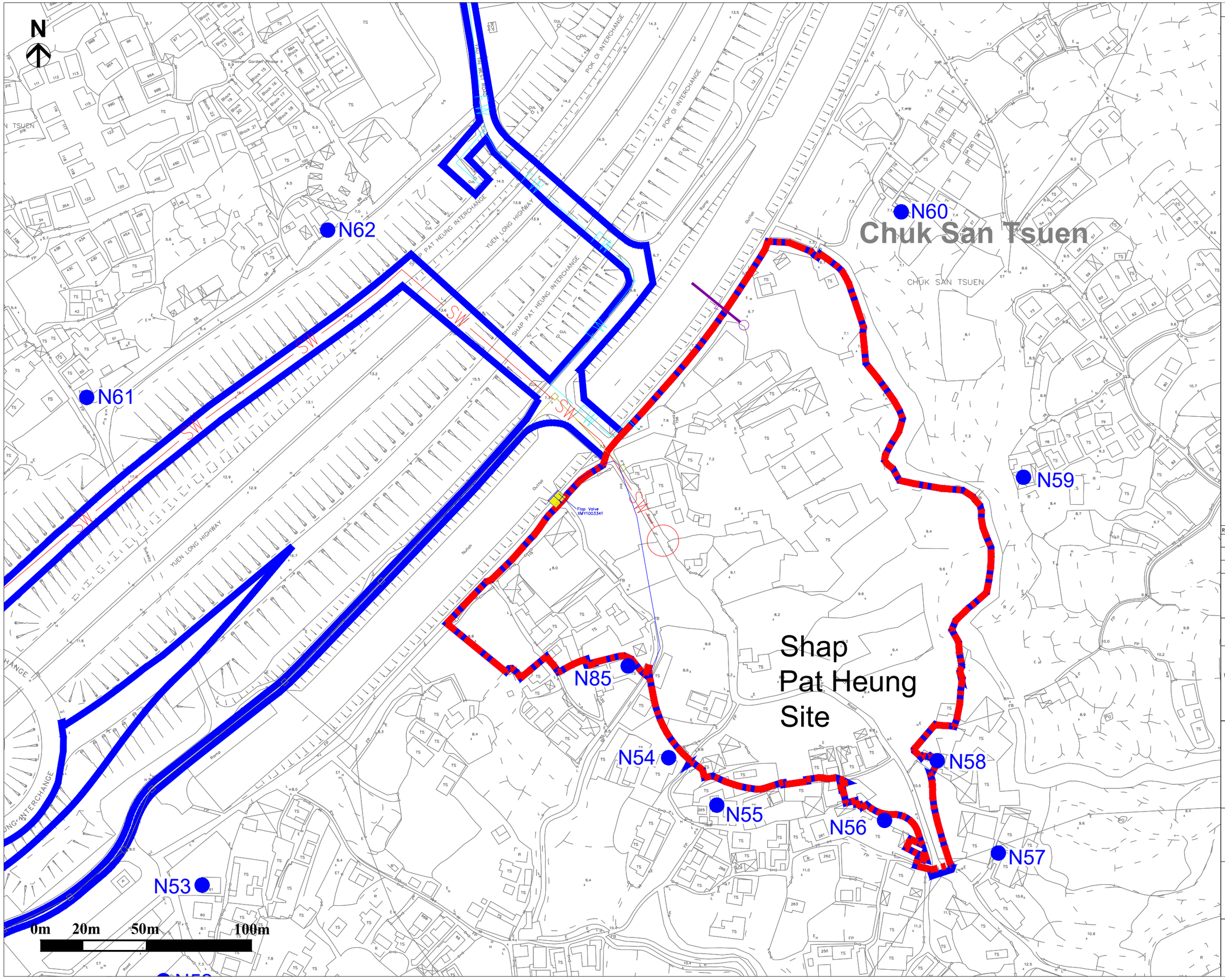
Drawing No.

406041/S&T/FR/1307

Scale

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CEDD Civil Engineering and Development Department

BINNIES HONG KONG LIMITED
賓尼斯工程顧問有限公司



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LEGEND:

- 300M ASSESSMENT AREA
- PROJECT SITE
- DEVELOPMENT SITE
- REPRESENTATIVE NOISE SENSITIVE RECEIVER

Revision	Date	Description		Initial
	Designed	Checked	Drawn	Checked
Initial			KL	KY
Date			05/22	05/22

Approved

Contract no.
CE 10/2020 (CE)

Contract title
SITE FORMATION AND INFRASTRUCTURE WORKS FOR PROPOSED PUBLIC HOUSING DEVELOPMENT AT SHA PO, SHAP PAT HEUNG AND TAI KEI LENG, YUEN LONG FEASIBILITY STUDY

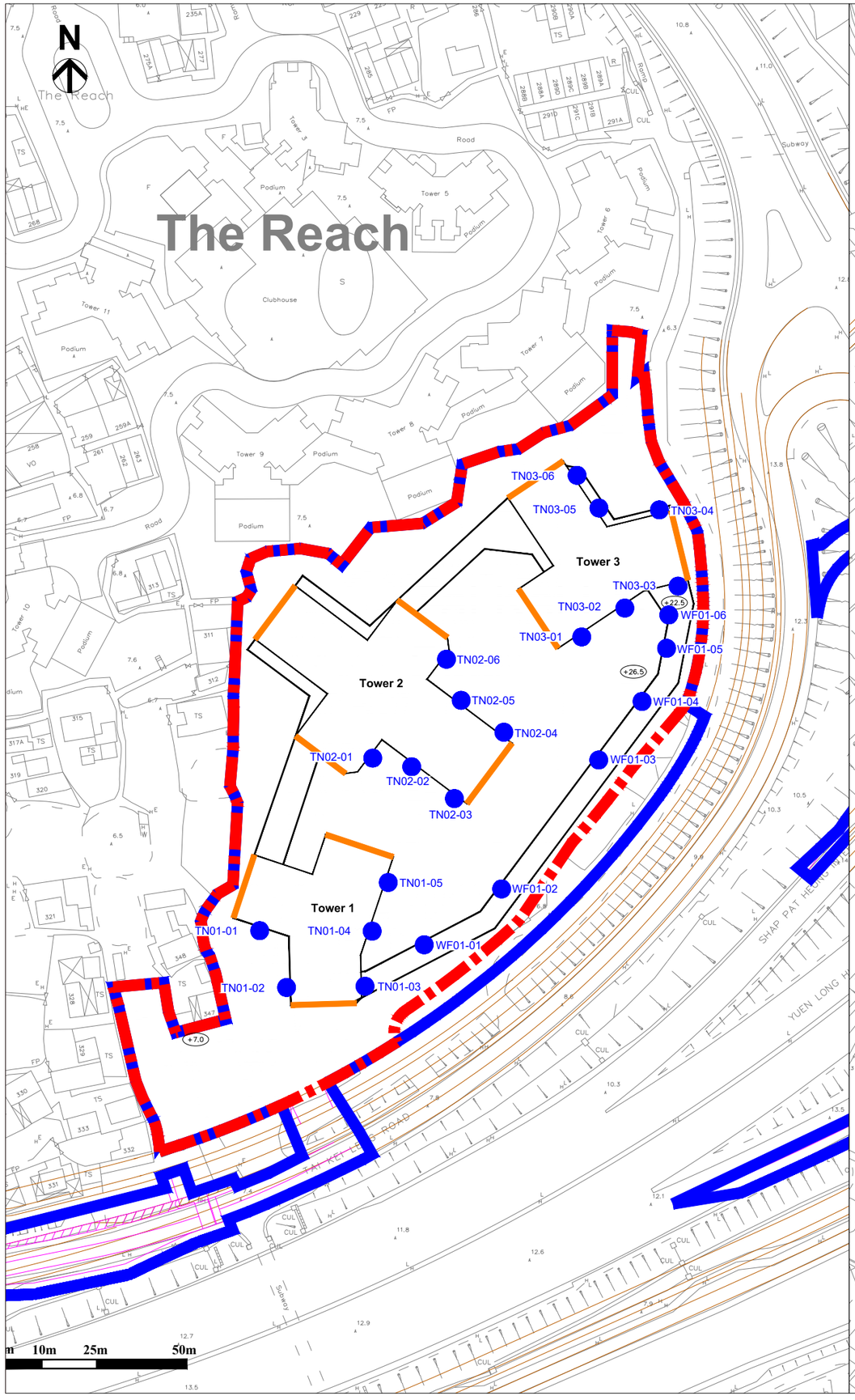
Drawing title
LOCATIONS OF REPRESENTATIVE NOISE SENSITIVE RECEIVERS FOR CONSTRUCTION NOISE IMPACT ASSESSMENT (SHEET 7 OF 7)

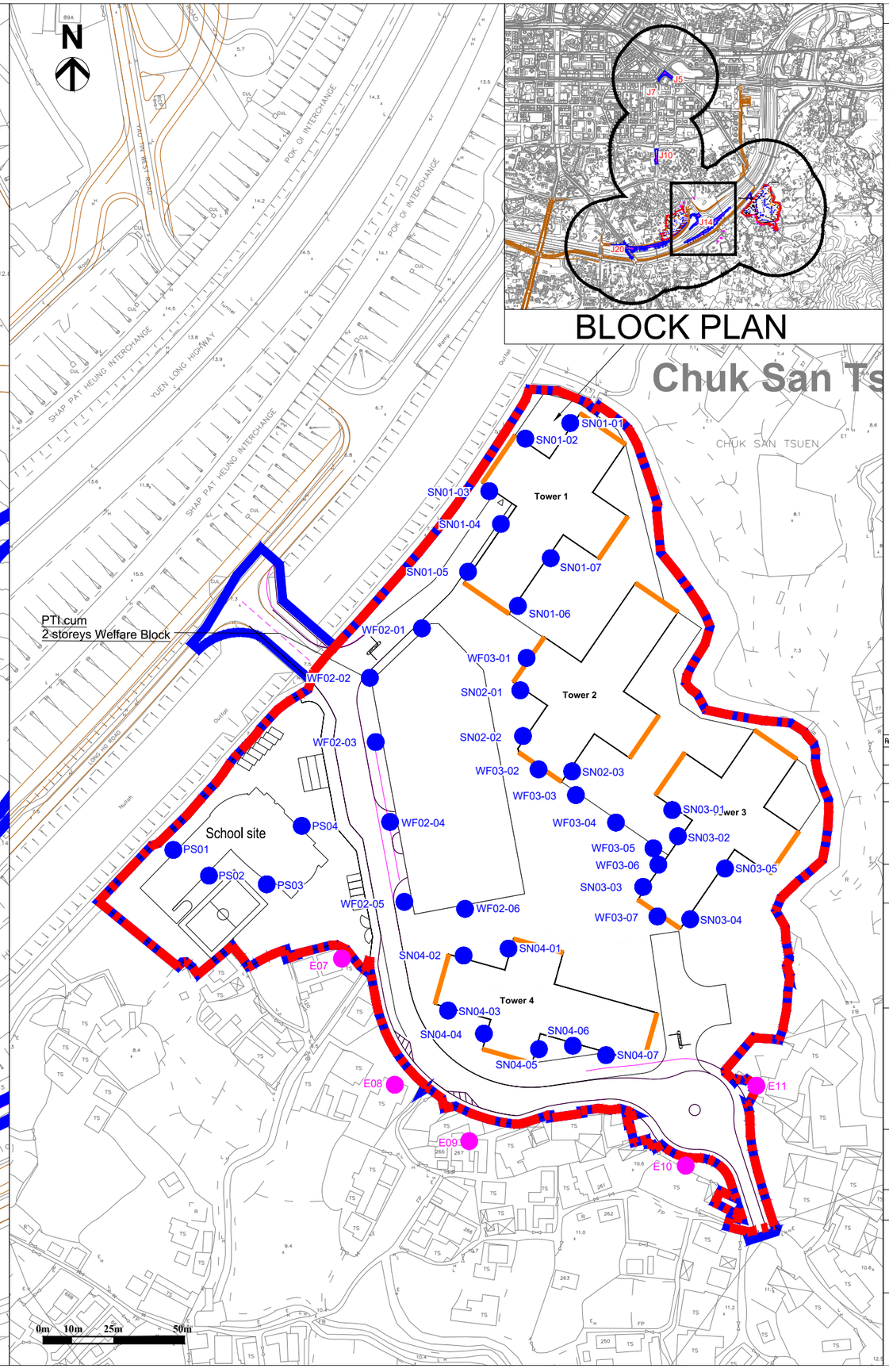
Drawing No.
406041/S&T/FR/1308

Scale

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賓尼斯工程顧問有限公司





BLOCK PLAN

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LEGEND:

- 300M ASSESSMENT AREA (OPERATION PHASE)
- PROJECT SITE
- DEVELOPMENT SITE
- YUEN LONG SOUTH DEVELOPMENT ROAD ALIGNMENT
- J5 JUNCTION IMPROVEMENT
- REPRESENTATIVE NOISE SENSITIVE RECEIVER (PLANNED)
- REPRESENTATIVE NOISE SENSITIVE RECEIVER (EXISTING)
- NO NSR USING OPENABLE WINDOW FOR VENTILATION

NOTE:
THE NOTIONAL LAYOUT IS FOR STUDY PURPOSE AND IS SUBJECT TO HD'S DETAILED DESIGN

Revision	Date	Description		Initial
	Designed	Checked	Drawn	Checked
Initial			SM	KY
Date			09/22	09/22

Approved

Agreement no.
CE 10/2020 (CE)

Project title
SITE FORMATION AND INFRASTRUCTURE WORKS FOR PROPOSED PUBLIC HOUSING DEVELOPMENT AT SHA PO, SHAP PAT HEUNG AND TAI KEI LENG, YUEN LONG FEASIBILITY STUDY

Drawing title
LOCATIONS OF REPRESENTATIVE NOISE SENSITIVE RECEIVERS FOR ROAD TRAFFIC NOISE IMPACT ASSESSMENT (SHEET 1 OF 2)

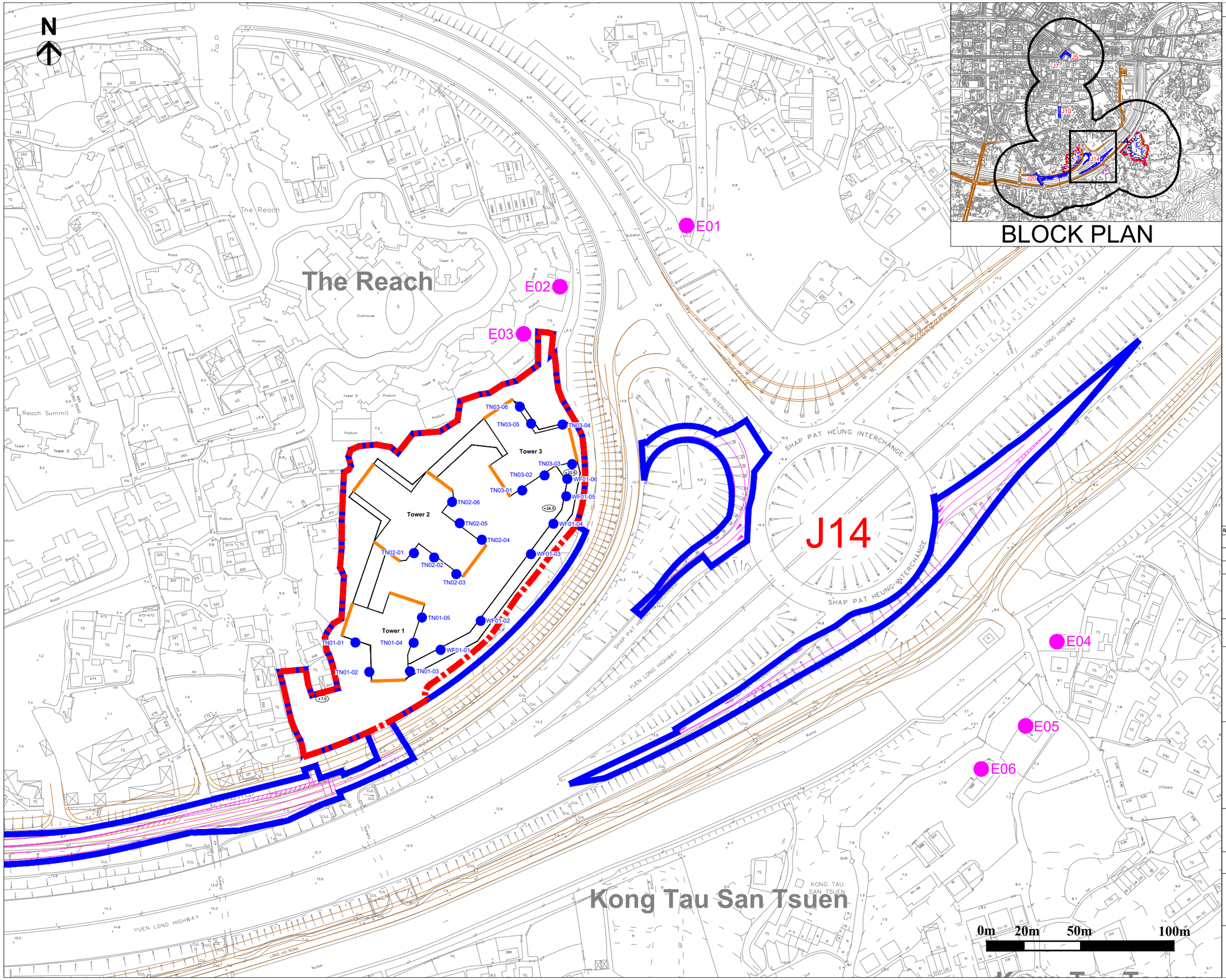
Drawing no.
406041/S&T/FR/1309

Revision

Scale

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BLOCK PLAN

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LEGEND:

- 300M ASSESSMENT AREA (OPERATION PHASE)
- PROJECT SITE
- DEVELOPMENT SITE
- YUEN LONG SOUTH DEVELOPMENT ROAD ALIGNMENT
- J5 JUNCTION IMPROVEMENT
- REPRESENTATIVE NOISE SENSITIVE RECEIVER (PLANNED)
- REPRESENTATIVE NOISE SENSITIVE RECEIVER (EXISTING)
- NO NSR USING OPENABLE WINDOW FOR VENTILATION

Revision	Date	Description		Initial
	Designed	Checked	Drawn	Checked
Initial			SM	KY
Date			09/22	09/22

Approved

Agreement no.
CE 10/2020 (CE)

Project title
SITE FORMATION AND INFRASTRUCTURE WORKS FOR PROPOSED PUBLIC HOUSING DEVELOPMENT AT SHA PO, SHAP PAT HEUNG AND TAI KEI LENG, YUEN LONG FEASIBILITY STUDY

Drawing title
LOCATIONS OF REPRESENTATIVE NOISE SENSITIVE RECEIVERS FOR ROAD TRAFFIC NOISE IMPACT ASSESSMENT (SHEET 2 OF 2)

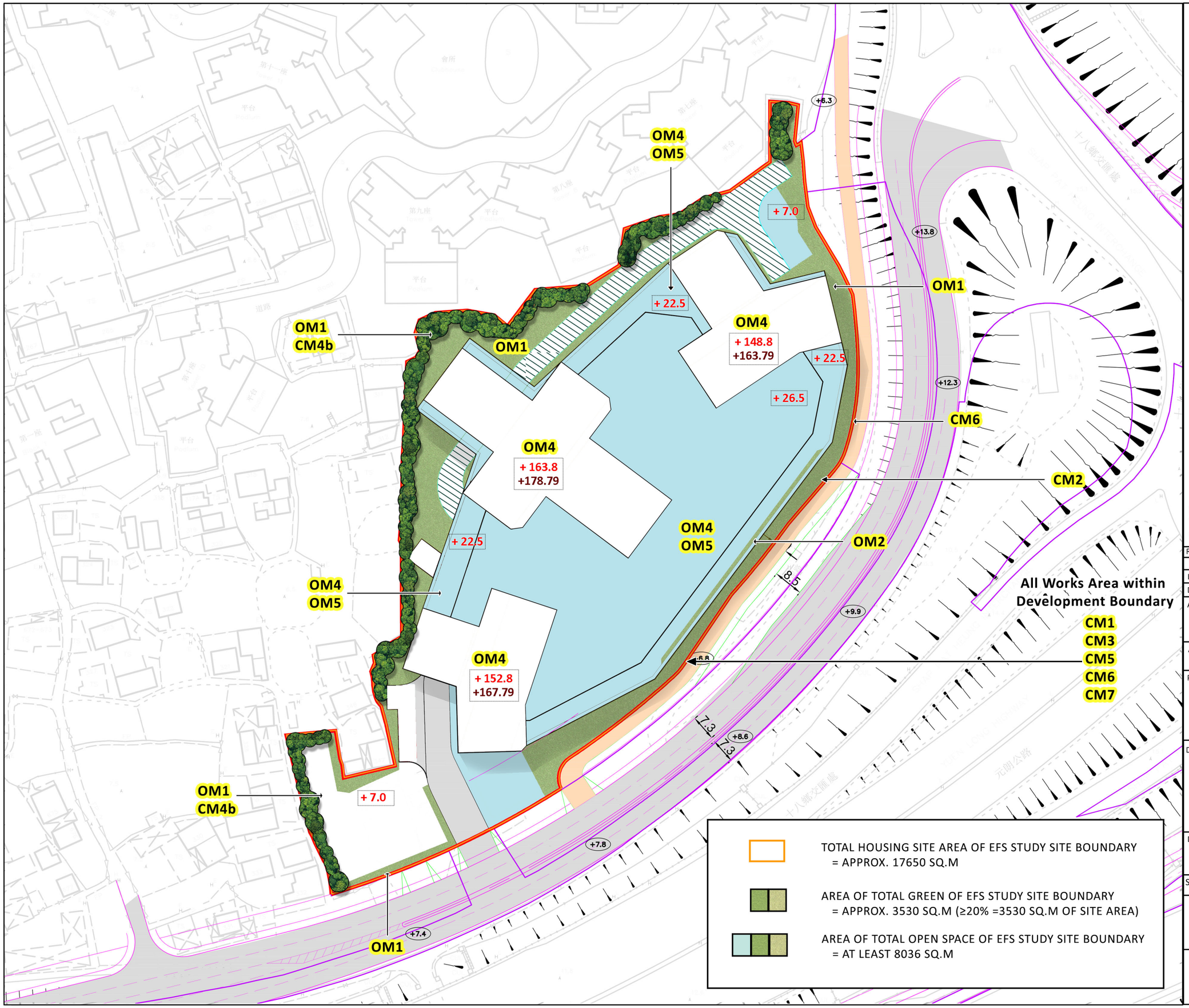
Drawing no.
406041/S&T/FR/1310

Revision

Scale

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Development Boundary
Housing Site
New Tree

Housing Site Open Space

Proposed At-grade Planting Area
Proposed Rooftop Greening
Recreation Open Space
Footpath

Emergency Vehicular Access (EVA)

Construction Phase

CM1	Careful Site Planning and Management*
CM2	Slope Greening
CM3	Tree Preservation and Inspection of Tree Works*
CM4b	Newly Planted Trees by HD within HD's Site
CM5	Minimisation of Light Impact*
CM6	Erection of Decorative Site Hoarding*
CM7	Reinstatement of Temporarily Disturbed Areas*

* All Works Area

Operation Phase

OM1	Landscape Planting
OM2	Rooftop Greening
OM4	Aesthetically Pleasing Building Design
OM5	Provision of Local Open Space and Recreational Facilities in Development

Note:
The notional layout is for study purpose and may change subject to detailed design.

Revision	Date	Description		Initial
	Designed	Checked	Drawn	Checked
Initial			CL	GL
Date			30/11/2022	30/11/2022

Approved

Agreement No.
CE 10/2020 (CE)

Project Title:
Site Formation and Infrastructure Works for Public Housing Development at Sha Po, Shap Pat Heung and Tai Kei Leng, Yuen Long – Feasibility Study

Drawing Title
LANDSCAPE AND VISUAL MITIGATION PLAN
TAI KEI LENG (TKL)

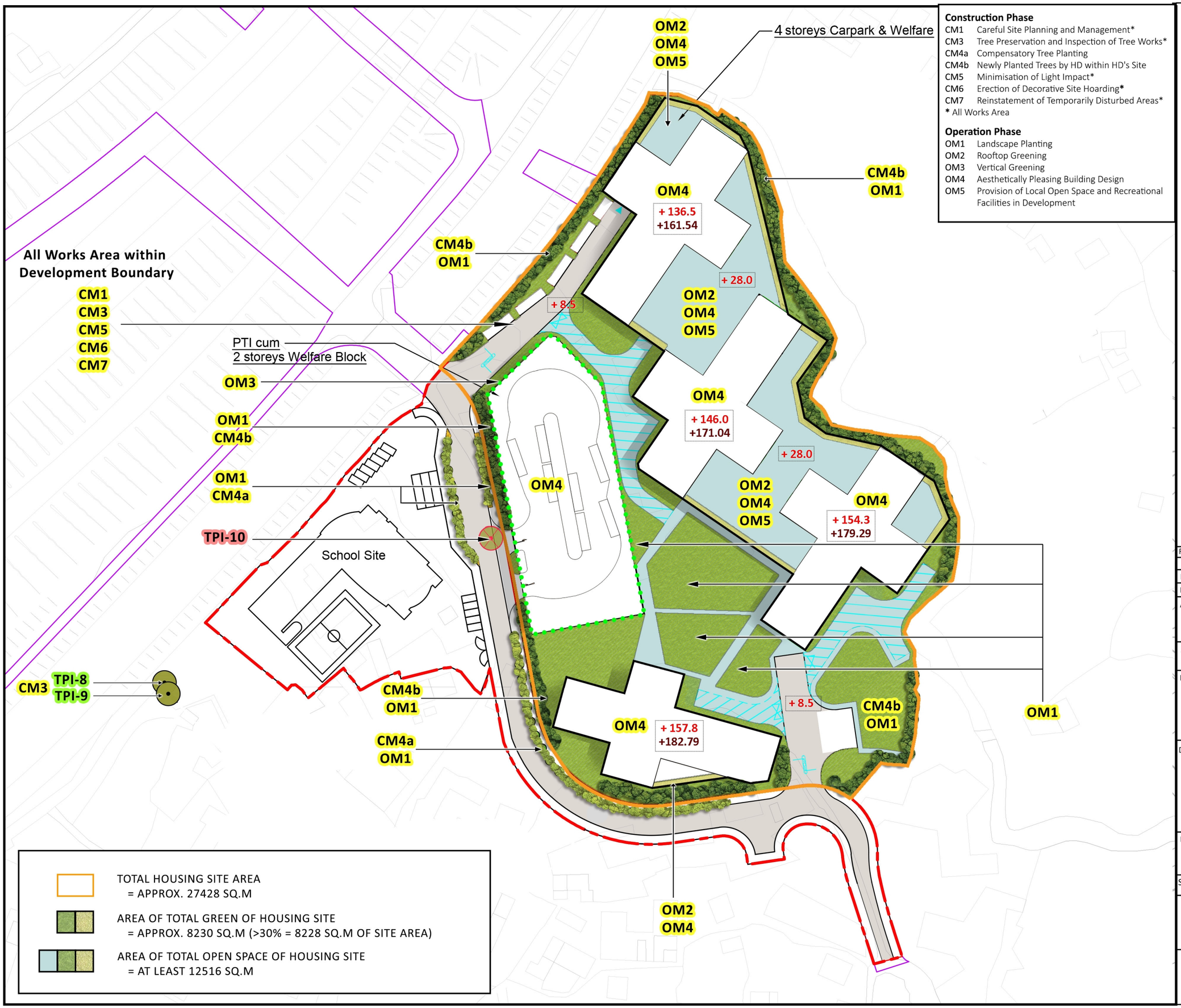
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Revision
4

Scale
N.T.S on A3

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CEDD Civil Engineering and Development Department

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Construction Phase

CM1	Careful Site Planning and Management*
CM3	Tree Preservation and Inspection of Tree Works*
CM4a	Compensatory Tree Planting
CM4b	Newly Planted Trees by HD within HD's Site
CM5	Minimisation of Light Impact*
CM6	Erection of Decorative Site Hoarding*
CM7	Reinstatement of Temporarily Disturbed Areas*

* All Works Area

Operation Phase

OM1	Landscape Planting
OM2	Rooftop Greening
OM3	Vertical Greening
OM4	Aesthetically Pleasing Building Design
OM5	Provision of Local Open Space and Recreational Facilities in Development

- Development Boundary
- Housing Site
- New Tree

Housing Site Open Space

- Proposed At-grade Planting Area
- Proposed Rooftop Greening
- Recreation Open Space
- Footpath
- Vertical Greening
- Emergency Vehicular Access (EVA)
- Compensatory Tree
- Proposed Roadside Verge Greening Zone (RVGZ)
- Tree of Particular Interest to be Retaines
- Tree of Particular Interest to be Removed

Note:
The notional layout is for study purpose and may change subject to detailed design.

*The new tree planting location within housing site boundary is indicative only and subject to detailed design

Revision	Date	Description		Initial
	Designed	Checked	Drawn	Checked
Initial			CL	GL
Date			130 11 2022	30 11 2022

Approved

Agreement No.
CE 10/2020 (CE)

Project Title:
Site Formation and Infrastructure Works for Public Housing Development at Sha Po, Shap Pat Heung and Tai Kei Leng, Yuen Long – Feasibility Study

Drawing Title
Landscape and Visual Mitigation Plan
- Shap Pat Heung Site

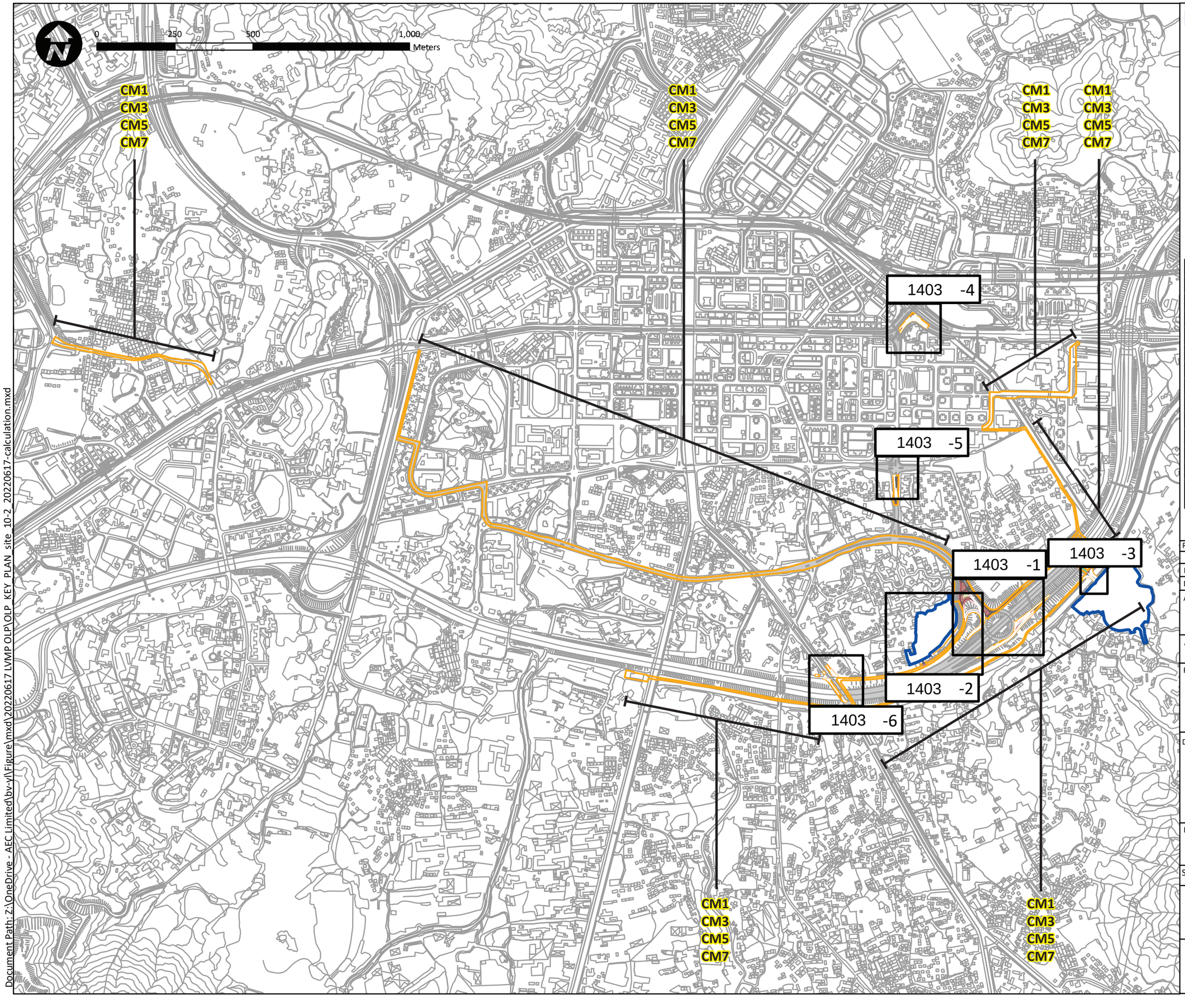
Drawing No.
406041/S&T/FR/1402

Revision
3

Scale
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Development Boundary
Infrastructure Work Buondary
Proposed Traffic Improvement Works
Existing Traffic Road
Existing Planter Area
Existing Plantation

Construction Phase	
CM1	Careful Site Planning and Management
CM2	Slope Greening
CM3	Tree Preservation and Inspection of Tree Works
CM4a	Compensatory Tree Planting
CM5	Minimisation of Light Impact
CM6	Erection of Decorative Site Hoarding
CM7	Reinstatement of Temporarily Disturbed Areas
Operation Phase	
OM1	Landscape Planting
OM2	Rooftop Greening
OM3	Vertical Greening
OM4	Aesthetically Pleasing Building Design
OM5	Provision of Local Open Space and Recreational Facilities in Development

Revision	Date	Description		Initial
	Designed	Checked	Drawn	Checked
Initial			KW/JH	GL
Date			13/09/2022	13/09/2022

Approved

Agreement No.
CE 10/2020 (CE)

Project Title:
Site Formation and Infrastructure Works for Public Housing Development at Sha Po, Shap Pat Heung and Tai Kei Leng, Yuen Long – Feasibility Study

Drawing Title
Landscape and Visual Mitigation Plan (Infrastructure Works Area)

Drawing No.
406041/S&T/FR/1403

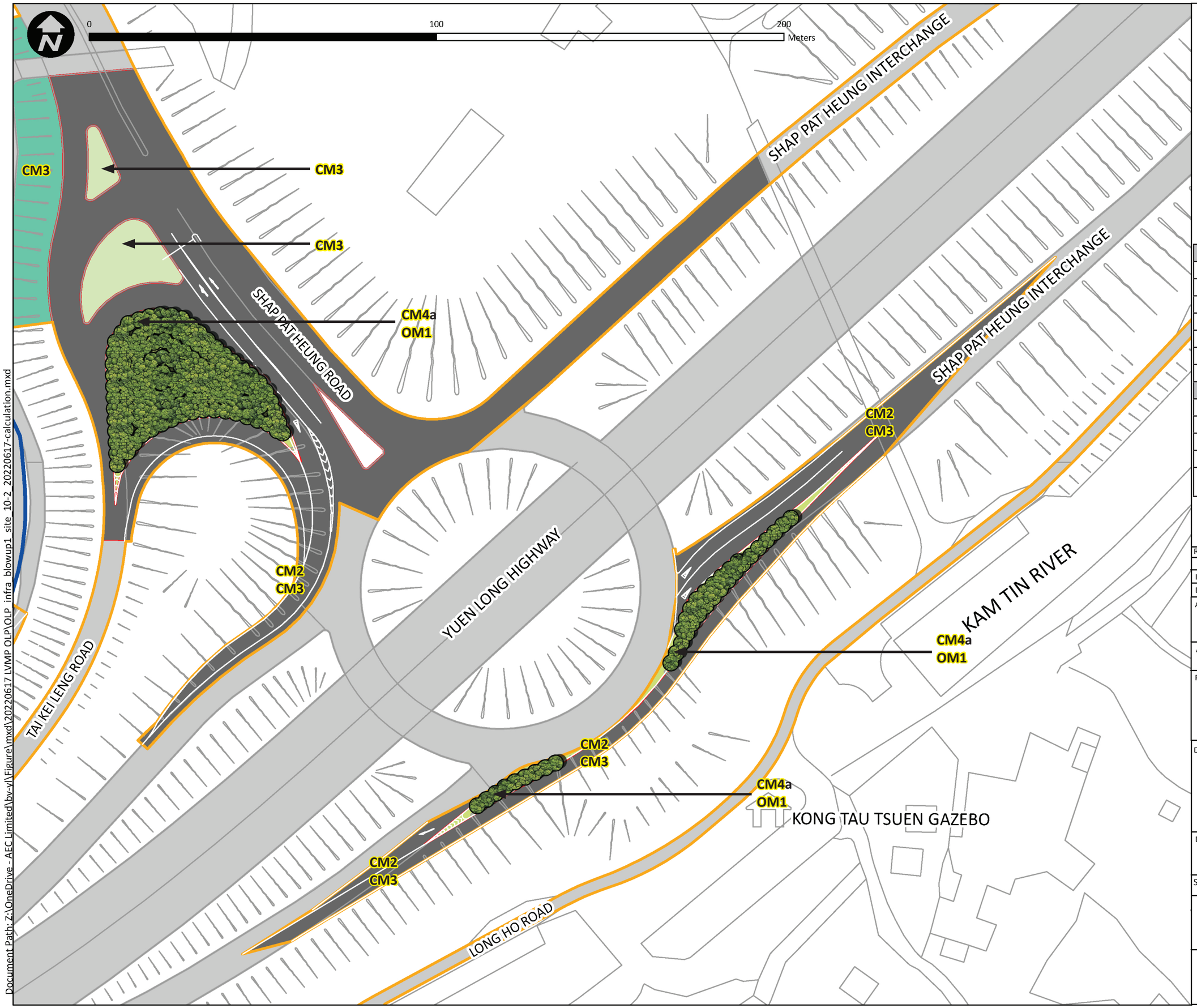
Revision
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Scale
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CEDD Civil Engineering and Development Department

BINNIES HONG KONG LIMITED
賓尼斯工程顧問有限公司

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Development Boundary
Infrastructure Work Buondary
Proposed Traffic Improvement Works
Existing Traffic Road
Existing Planter Area
Existing Plantation
Proposed Landscape Area
Heavy Standard Tree

Construction Phase	
CM1	Careful Site Planning and Management
CM2	Slope Greening
CM3	Tree Preservation and Inspection of Tree Works
CM4a	Compensatory Tree Planting
CM5	Minimisation of Light Impact
CM6	Erection of Decorative Site Hoarding
CM7	Reinstatement of Temporarily Disturbed Areas
Operation Phase	
OM1	Landscape Planting
OM2	Rooftop Greening
OM3	Vertical Greening
OM4	Aesthetically Pleasing Building Design
OM5	Provision of Local Open Space and Recreational Facilities in Development

Revision	Date	Description		Initial
	Designed	Checked	Drawn	Checked
Initial			KW/JH	GL
Date			13/09 /2022	13/09 /2022

Approved

Agreement No. CE 10/2020 (CE)

Project Title:
Site Formation and Infrastructure Works for Public Housing Development at Sha Po, Shap Pat Heung and Tai Kei Leng, Yuen Long – Feasibility Study

Drawing Title
Landscape and Visual Mitigation Plan (Infrastructure Works Area)

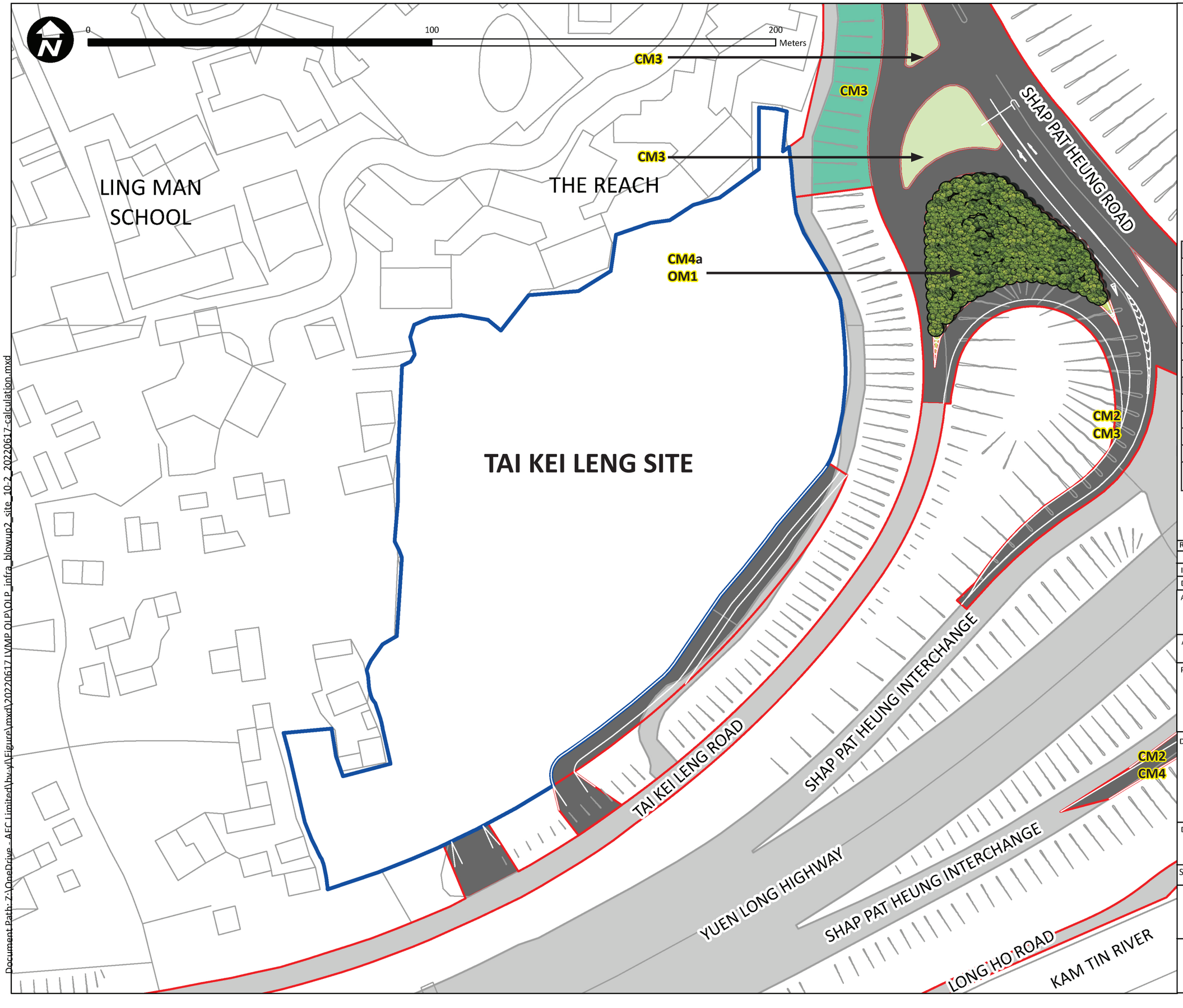
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Revision 2

Scale 1:1,000 on A3

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CEDD Civil Engineering and Development Department

BINNIES HONG KONG LIMITED
賓尼斯工程顧問有限公司

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Development Boundary
Infrastructure Work Buondary
Proposed Traffic Improvement Works
Existing Traffic Road
Existing Planter Area
Existing Plantation
Proposed Landscape Area
Heavy Standard Tree

Construction Phase	
CM1	Careful Site Planning and Management
CM2	Slope Greening
CM3	Tree Preservation and Inspection of Tree Works
CM4a	Compensatory Tree Planting
CM5	Minimisation of Light Impact
CM6	Erection of Decorative Site Hoarding
CM7	Reinstatement of Temporarily Disturbed Areas
Operation Phase	
OM1	Landscape Planting
OM2	Rooftop Greening
OM3	Vertical Greening
OM4	Aesthetically Pleasing Building Design
OM5	Provision of Local Open Space and Recreational Facilities in Development

Revision	Date	Description		Initial
	Designed	Checked	Drawn	Checked
Initial			KW/JH	GL
Date			13/09 /2022	13/09/2022

Approved

Agreement No.
CE 10/2020 (CE)

Project Title:
Site Formation and Infrastructure Works for Public Housing Development at Sha Po, Shap Pat Heung and Tai Kei Leng, Yuen Long – Feasibility Study

Drawing Title
Landscape and Visual Mitigation Plan (Infrastructure Works Area)

Drawing No.
406041/S&T/FR/1403-2

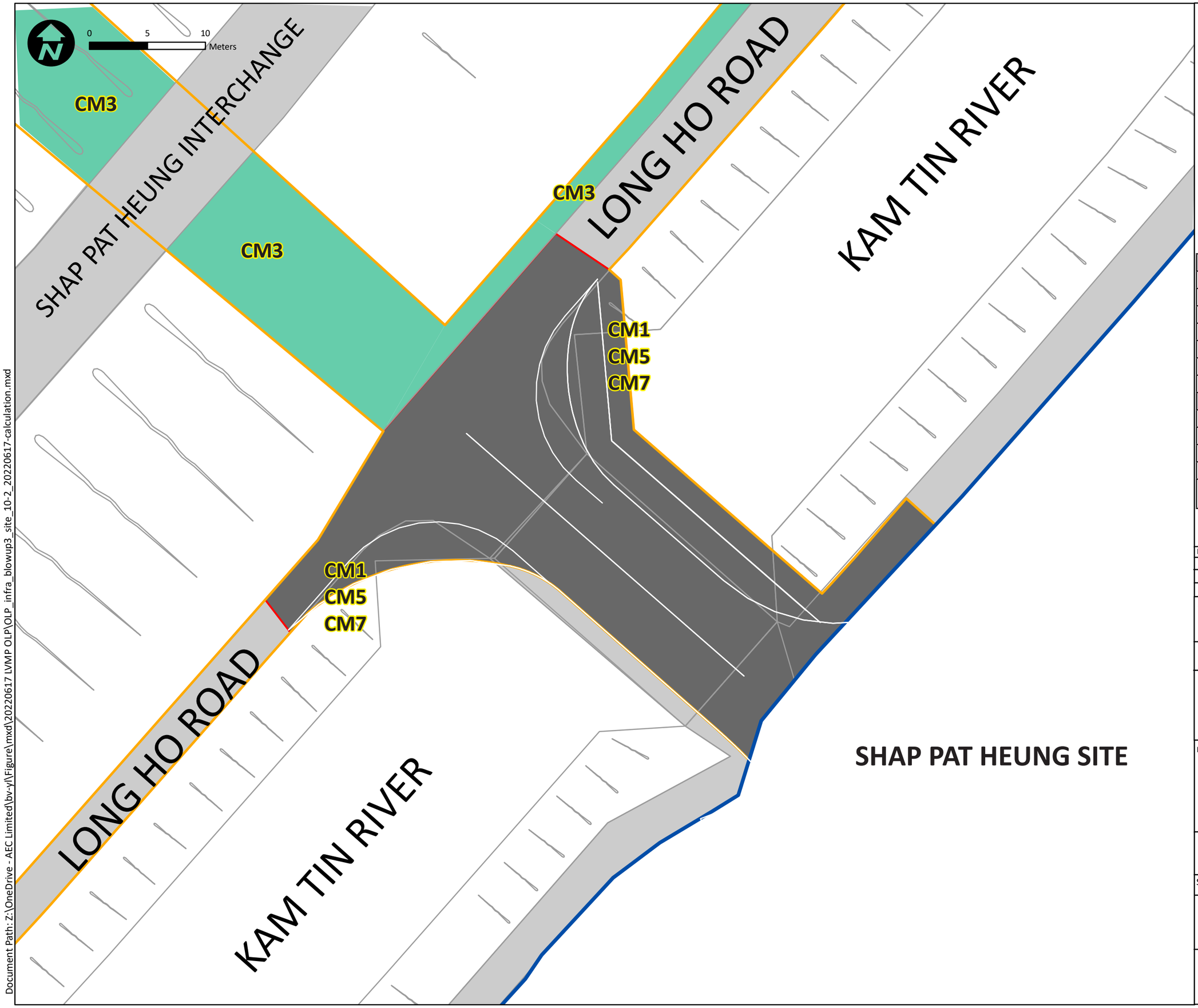
Revision
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土木工程拓展署
CEDD Civil Engineering and Development Department

BINNIES HONG KONG LIMITED
賓尼斯工程顧問有限公司

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Infrastructure Work Buondary

Proposed Traffic Improvement Works

Existing Traffic Road

Existing Plantation

Construction Phase	
CM1	Careful Site Planning and Management
CM2	Slope Greening
CM3	Tree Preservation and Inspection of Tree Works
CM4a	Compensatory Tree Planting
CM5	Minimisation of Light Impact
CM6	Erection of Decorative Site Hoarding
CM7	Reinstatement of Temporarily Disturbed Areas
Operation Phase	
OM1	Landscape Planting
OM2	Rooftop Greening
OM3	Vertical Greening
OM4	Aesthetically Pleasing Building Design
OM5	Provision of Local Open Space and Recreational Facilities in Development

Revision	Date	Description		Initial
	Designed	Checked	Drawn	Checked
Initial			KW/JH	GL
Date			17/06/2022	17/06/2022

Approved

Agreement No.
CE 10/2020 (CE)

Project Title:
Site Formation and Infrastructure Works for Public Housing Development at Sha Po, Shap Pat Heung and Tai Kei Leng, Yuen Long – Feasibility Study

Drawing Title
Landscape and Visual Mitigation Plan (Infrastructure Works Area)

Drawing No.
406041/S&T/FR/1403-3

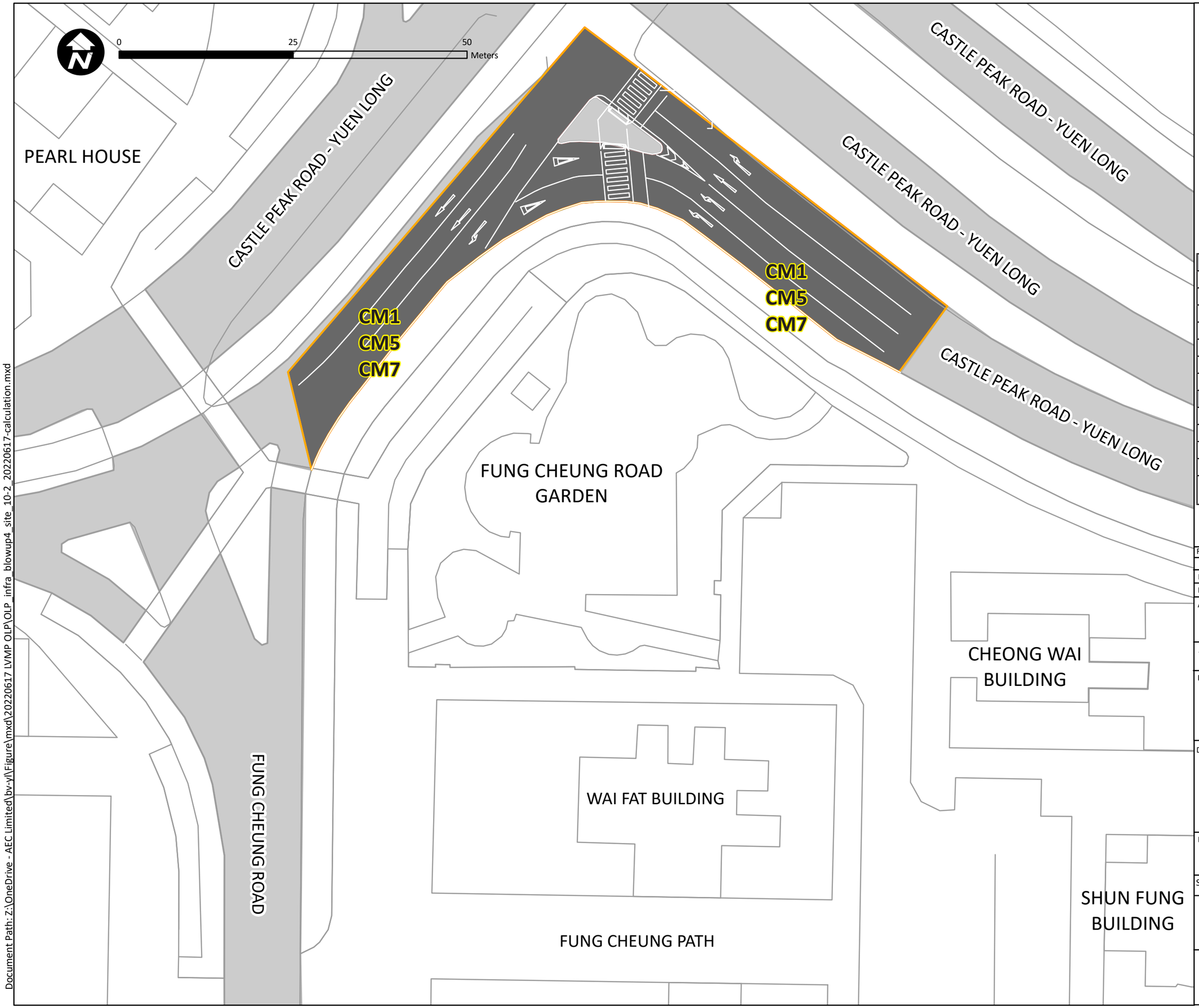
Revision
1

Scale
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土木工程拓展署
CEDD Civil Engineering and Development Department

BINNIES HONG KONG LIMITED
賓尼斯工程顧問有限公司

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Infrastructure Work Buondary

Proposed Traffic Improvement Works

Existing Traffic Road

Construction Phase	
CM1	Careful Site Planning and Management
CM2	Slope Greening
CM3	Tree Preservation and Inspection of Tree Works
CM4a	Compensatory Tree Planting
CM5	Minimisation of Light Impact
CM6	Erection of Decorative Site Hoarding
CM7	Reinstatement of Temporarily Disturbed Areas
Operation Phase	
OM1	Landscape Planting
OM2	Rooftop Greening
OM3	Vertical Greening
OM4	Aesthetically Pleasing Building Design
OM5	Provision of Local Open Space and Recreational Facilities in Development

Revision	Date	Description		Initial
	Designed	Checked	Drawn	Checked
Initial			KW/JH	GL
Date			17/06/2022	17/06/2022

Approved

Agreement No. CE 10/2020 (CE)

Project Title:

Site Formation and Infrastructure Works for Public Housing Development at Sha Po, Shap Pat Heung and Tai Kei Leng, Yuen Long – Feasibility Study

Drawing Title

Landscape and Visual Mitigation Plan (Infrastructure Works Area)

Drawing No. 406041/S&T/FR/1403-4

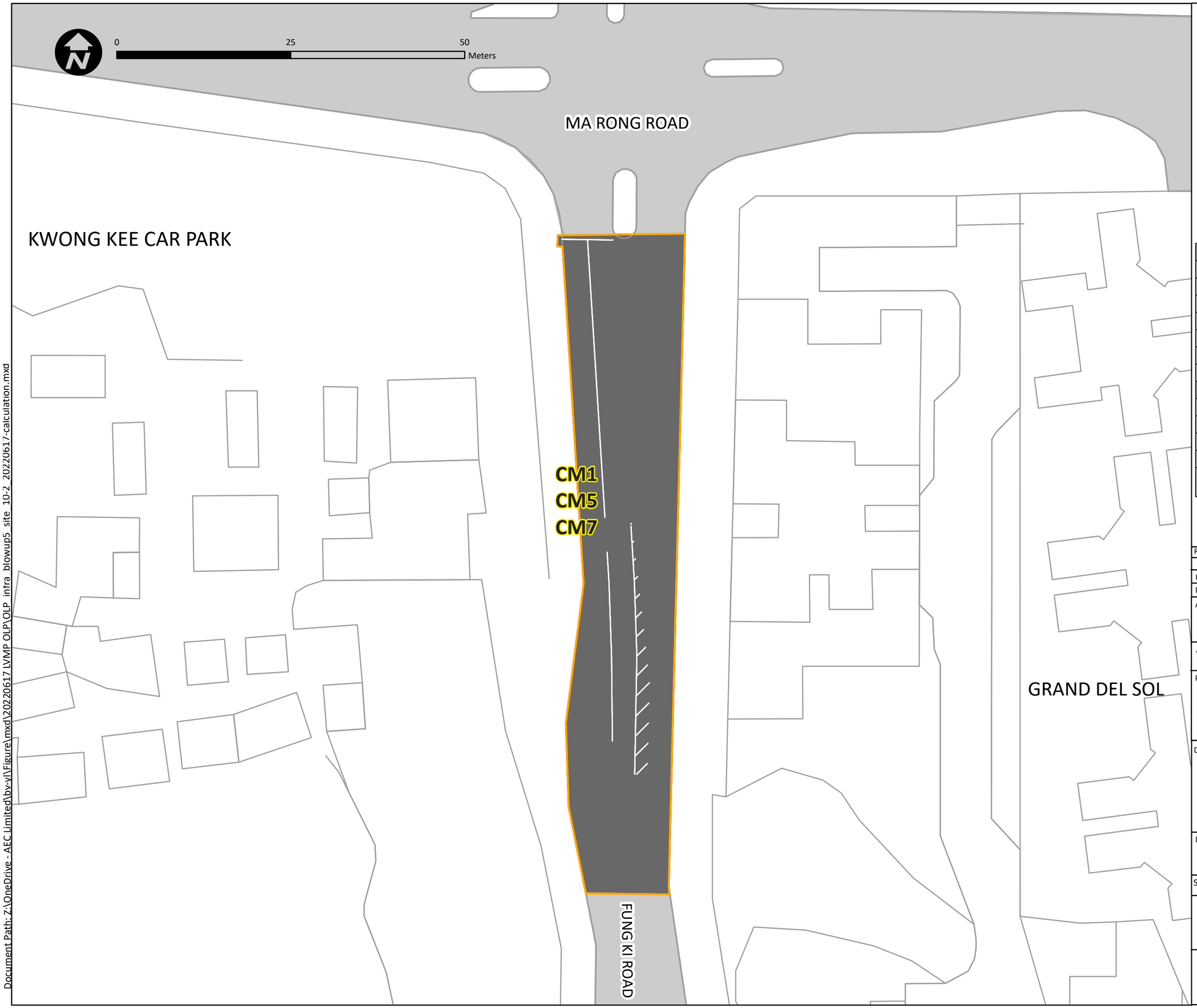
Revision 1

Scale 1:500 on A3

土木工程拓展署
CEDD Civil Engineering and Development Department

BINNIES HONG KONG LIMITED
賓尼斯工程顧問有限公司

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Infrastructure Work Buondary

Proposed Traffic Improvement Works

Existing Traffic Road

Construction Phase	
CM1	Careful Site Planning and Management
CM2	Slope Greening
CM3	Tree Preservation and Inspection of Tree Works
CM4a	Compensatory Tree Planting
CM5	Minimisation of Light Impact
CM6	Erection of Decorative Site Hoarding
CM7	Reinstatement of Temporarily Disturbed Areas
Operation Phase	
OM1	Landscape Planting
OM2	Rooftop Greening
OM3	Vertical Greening
OM4	Aesthetically Pleasing Building Design
OM5	Provision of Local Open Space and Recreational Facilities in Development

Revision	Date	Description		Initial
	Designed	Checked	Drawn	Checked
Initial			KW/JH	GL
Date			17/06/2022	17/06/2022

Approved

Agreement No.
CE 10/2020 (CE)

Project Title:
Site Formation and Infrastructure Works for Public Housing Development at Sha Po, Shap Pat Heung and Tai Kei Leng, Yuen Long – Feasibility Study

Drawing Title
Landscape and Visual Mitigation Plan (Infrastructure Works Area)

Drawing No.
406041/S&T/FR/1403-5

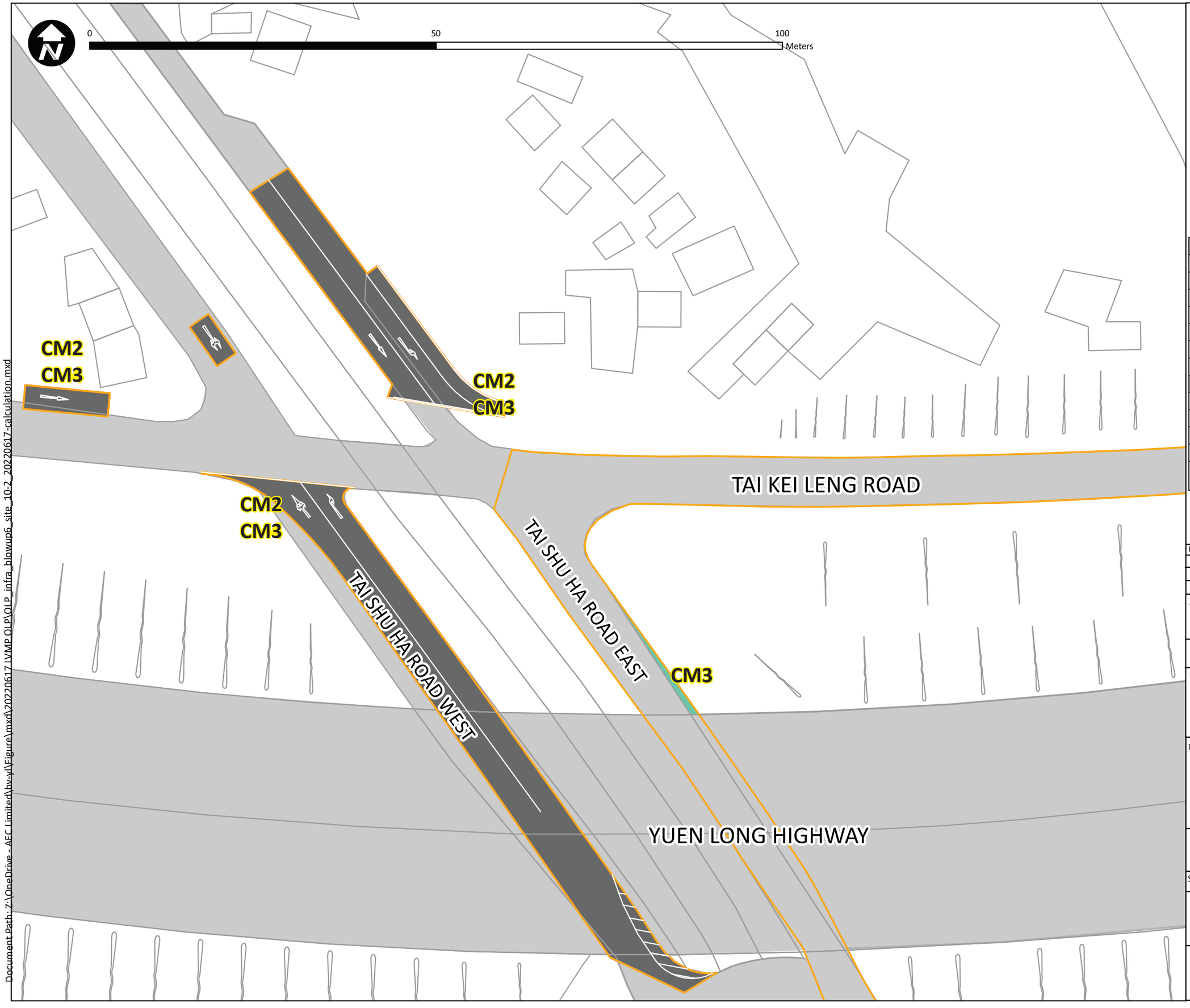
Revision
1

Scale
1:500 on A3

土木工程拓展署
CEDD Civil Engineering and Development Department

BINNIES HONG KONG LIMITED
賓尼斯工程顧問有限公司

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Infrastructure Work Buondary

Proposed Traffic Improvement Works

Existing Traffic Road

Existing Plantation

Construction Phase	
CM1	Careful Site Planning and Management
CM2	Slope Greening
CM3	Tree Preservation and Inspection of Tree Works
CM4a	Compensatory Tree Planting
CM5	Minimisation of Light Impact
CM6	Erection of Decorative Site Hoarding
CM7	Reinstatement of Temporarily Disturbed Areas
Operation Phase	
OM1	Landscape Planting
OM2	Rooftop Greening
OM3	Vertical Greening
OM4	Aesthetically Pleasing Building Design
OM5	Provision of Local Open Space and Recreational Facilities in Development

Revision	Date	Description		Initial
	Designed	Checked	Drawn	Checked
Initial			KW/JH	GL
Date			13/09 /2022	13/09 2022

Approved

Agreement No.
CE 10/2020 (CE)

Project Title:
Site Formation and Infrastructure Works for Public Housing Development at Sha Po, Shap Pat Heung and Tai Kei Leng, Yuen Long – Feasibility Study

Drawing Title
Landscape and Visual Mitigation Plan (Infrastructure Works Area)

Drawing No.
406041/S&T/FR/1403-6

Revision
2

Scale
1:500 on A3

土木工程拓展署
CEDD Civil Engineering and Development Department

BINNIES HONG KONG LIMITED
賓尼斯工程顧問有限公司

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VP1 - Visitors of Greening Works at Tai Tong Road
VP2 - Vehicular Travelers at Shap pat Heung Interchange (Viewing TKL Site)
VP3 - Pedestrains on Tai Shu Ha Road West
VP4 - Pedestrains on Long Ho Road (Viewing Shap Pat Heung Interchange)
VP5 - Visitors of Tai Kei Leung Sitting-out Area
VP6 - Visitors of Kong Tau Tsuen Gazebo
VP7 - Vehicular Travelers at Shap Pat Heung Interchange (Viewing SPH Site)

VP8 - Pedestrains on Long Ho Road (Bridge)
VP9 - Visitors of Ho Hok Shan
VP10 - Pedestrains on Long Ho Road (Viewing SPH Site)
VP11 - Pedestrains in Yuen Long Station

VP12 - Users of Pok Oi Hospital
VP13 - Future Visitors of Open Space along Kung Um Road
VP14 - Visitors at Tung Tau Industrial Area Playground
VP15 - Visitors at Yuen Long Park

0 250 500 1,000 Meters

Figure 1405

VP14 4.5
Village Development in Tung Tau Tsuen & Tai Wai Tsuen max. 9.5 (3)
VP11 5.2
VP12 9.5
Grand YoHo (26-41)
Water Channel
YoHo Midtown (33-40)
Yuen Long New Town (Combination of Low to High-rise Commerical and Residential Development)
VP15 25.0
VP8 6.9
YoHo Town (32-37)
Tai Tong Road 6.1
Grand Del Sol (1+11)
Greenery Place & Emerald Green (11/24)
VP7 13.5
VP10 6.8
VP1 6.8
Sereno Verde & La Pradera (max. 1+14)
VP4 8.0
VP2 17.7
max. 154.3 (6+41)
max. 179.29 (5+2+48)
max. 163.8 (6+45)
max. 178.79 (5+1+50)
157.8 (2+49)
182.79 (1+2+56)
VP3 8.3
VP6 8.0
Long Ho Road 7.9
VP5 9.0
Village Development max. 9.5 (3)
VP13 10.1
Ho Hok Shan 140
Ho Hok Shan
VP9 210.0
3H
5H
8H
Village Development max. 9.5 (3)
Water Channel

Development Site
Infrastructure Works Area
Proposed Building
Visual Envelope
Initial Assessment Area Boundary
- 3H= 3 Times of MAX. H of Proposed building, 480m Distance
- 5H= 5 Times of MAX. H of Proposed building, 800m Distance
- 8H= 8 Times of MAX. H of Proposed building, 1280m Distance
Key Public Viewpoint (VP)
Field of Views towards Proposed Development
148.8 163.79 — Height in mPD
(5+41) (4+1+46) — Number of Storey
Major Visual Corridor
Major Visual Elements

Revision	Date	Description		Initial
	Designed	Checked	Drawn	Checked
Initial	CL	GL	CL	GL
Date	15-11-2022	15-11-2022	15-11-2022	15-11-2022

Approved

Agreement no. CE 10/2020 (CE)

Project Title:
Site Formation and Infrastructure Works for Proposed Public Housing Developments at Sha Po, Shap Pat Heung and Tai Kei Leng, Yuen Long – Feasibility Study

Drawing Title
Visual Context

Drawing No. 406041/S&T/FR/1404
Revision 3

Scale 1:12,500 on A3

土木工程拓展署 CEDD Civil Engineering and Development Department

BINNIES HONG KONG LIMITED 賓尼斯工程顧問有限公司

*The notional layout is for study purpose and may change subject to detailed design

Document Path: Z:\OneDrive - AEC Limited\bv-y\Figure\mxd\20220831_SPHTKL_LVIA_TreeSurvey_Issue3\Fig7.1_VC_

VP1 - Visitors of Greening Works at Tai Tong Road
VP2 - Vehicular Travelers at Shap pat Heung Interchange (Viewing TKL Site)
VP3 - Pedestrains on Tai Shu Ha Road West
VP4 - Pedestrains on Long Ho Road (Viewing Shap Pat Heung Interchange)
VP5 - Visitors of Kong Tau Tsuen Gazebo
VP6 - Visitors of Kong Tau Tsuen Gazebo
VP7 - Vehicular Travelers at Shap Pat Heung Interchange (Viewing SPH Site)
VP8 - Pedestrains on Long Ho Road (Bridge)
VP9 - Visitors of Ho Hok Shan
VP10 - Pedestrains on Long Ho Road (Viewing SPH Site)
VP12 - Users in Pok Oi Hospital

VP12 9.5
VP8 6.9
YoHo Midtown (33-40)
YoHo Town (32-37)
Yuen Long New Town (Combination of Low to High-rise Commerical and Residential Development)
Tai Tong Road 6.1
Reach Summit (1+24)
Grand Del Sol (1+11)
VP7 13.5
VP10 6.8
136.5 (5+36)
161.54 (5+1+43)
146.0 (6+38)
171.04 (5+2+45)
154.3 (6+41)
179.29 (5+2+48)
157.8 (2+49)
182.79 (1+2+56)
VP1 6.8
148.8 (5+41)
163.79 (4+1+46)
163.8 (6+45)
178.79 (5+1+50)
152.8 (6+41)
167.79 (5+1+46)
Sereno Verde & La Pradera (1+14)
The Reach max.(1+24)
VP4 8.0
VP2 17.7
VP3 8.3
VP6 8.0
Long Ho Road 7.9
Village Development max. 9.5 (3)
VP5 9.0
3H
5H
0 250 500 1,000 Meters
*The notional layout is for study purpose and may change subject to detailed design

Development Site
Proposed Building
Infrastructure Works
Visual Envelope
Initial Assessment Area Boundary
- 3H= 3 Times of MAX. H of Proposed building, 480m Distance
- 5H= 5 Times of MAX. H of Proposed building, 800m Distance
Key Public Viewpoint (VP)
Field of Views towards Proposed Development
148.8 / 163.79 Height in mPD
(5+41) / (4+1+46) Number of Storey
Major Visual Corridor
Major Visual Elements

Revision	Date	Description		Initial
	Designed	Checked	Drawn	Checked
Initial	CL	GL	CL	GL
Date	15-11-2022	15-11-2022	15-11-2022	15-11-2022

Approved

Agreement no.
CE 10/2020 (CE)

Project Title:
Site Formation and Infrastructure Works for Proposed Public Housing Developments at Sha Po, Shap Pat Heung and Tai Kei Leng, Yuen Long – Feasibility Study

Drawing Title
Visual Context

Drawing No.
406041/S&T/FR/1405

Revision
3

Scale
1:7,500 on A3

土木工程拓展署
CEDD Civil Engineering and Development Department

BINNIES HONG KONG LIMITED
賓尼斯工程顧問有限公司

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VP1

Shap Pat Heung Site
+136.5-157.8 mPD (Initial scheme)
(max. 49+1+1)
+161.5-182.8 mPD (BH with 25m increase)
(max. 56+2+1)

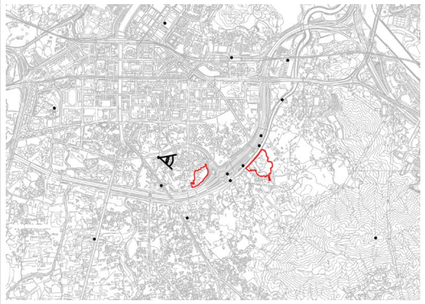
Tai Kei Leng Site
+148.8-163.8 mPD (Initial scheme)
(max. 45+1+5)
+163.8-178.8 mPD (BH with 15m increase)
(max. 50+1+5)



EXISTING CONDITION



YEAR 10 OPERATION PHASE WITH LANDSCAPE AND VISUAL MITIGATION MEASURES



- - - Maximum Building Height potentially increased by 15m in Tai Kei Leng site /25m in Shap Pat Heung site (indicative)
- - - Building Height in Initial scheme (Invisible)

Revision	Date	Description		Initial
	Designed	Checked	Drawn	Checked
Initial	CL	GL	CL	GL
Date	02-11-2022	02-11-2022	02-11-2022	02-11-2022

Approved

Agreement no.
CE 10/2020 (CE)

Project Title:
Site Formation and Infrastructure Works for Proposed Public Housing Developments at Sha Po, Shap Pat Heung and Tai Kei Leng, Yuen Long – Feasibility Study

Drawing Title
Photomontages

Drawing No.	Revision
406041/S&T/FR/1406	5

Scale
N. T. S.

土木工程拓展署
CEDD Civil Engineering and Development Department

BINNIES HONG KONG LIMITED
賓尼斯工程顧問有限公司

VP2



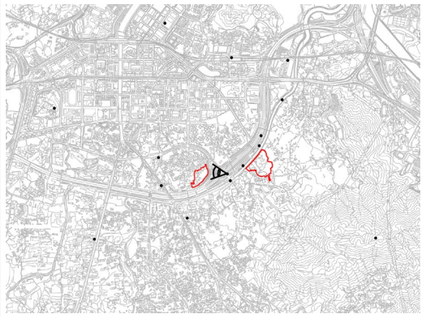
EXISTING CONDITION

Tai Kei Leng Site
+148.8-163.8 mPD (Initial scheme)
(max. 45+1+5)
+163.8-178.8 mPD (BH with 15m increase)
(max. 50+1+5)

OM4



YEAR 10 OPERATION PHASE WITH LANDSCAPE AND VISUAL MITIGATION MEASURES



Mitigation Measures for Operation Phase Impact	
OM4	Aesthetically Pleasing Building Design

Maximum Building Height potentially increased by 15m in Tai Kei Leng site /25m in Shap Pat Heung site (indicative)

Revision	Date	Description		Initial
	Designed	Checked	Drawn	Checked
Initial	CL	GL	CL	GL
Date	02-11-2022	02-11-2022	02-11-2022	02-11-2022

Approved

Agreement no.
CE 10/2020 (CE)

Project Title:
Site Formation and Infrastructure Works for Proposed Public Housing Developments at Sha Po, Shap Pat Heung and Tai Kei Leng, Yuen Long – Feasibility Study

Drawing Title
Photomontages

Drawing No.
406041/S&T/FR/1407

Revision
5

Scale
N. T. S.

土木工程拓展署
CEDD Civil Engineering and Development Department

BINNIES HONG KONG LIMITED
賓尼斯工程顧問有限公司

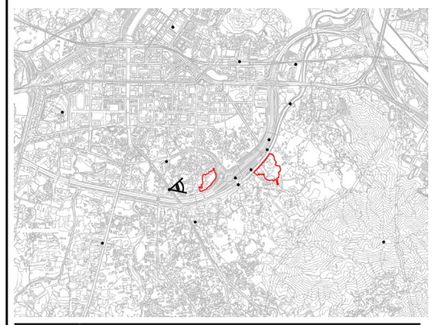
VP3



EXISTING CONDITION



YEAR 10 OPERATION PHASE WITH LANDSCAPE AND VISUAL MITIGATION MEASURES



Mitigation Measures for Operation Phase Impact	
OM4	Aesthetically Pleasing Building Design
OM5	Provision of Local Open Space and Recreational Facilities in Development

Maximum Building Height potentially increased by 15m in Tai Kei Leng site /25m in Shap Pat Heung site (indicative)

Revision	Date	Description		Initial
	Designed	Checked	Drawn	Checked
Initial	CL	GL	CL	GL
Date	02-11-2022	02-11-2022	02-11-2022	02-11-2022

Approved

Agreement no.
CE 10/2020 (CE)

Project Title:
Site Formation and Infrastructure Works for Proposed Public Housing Developments at Sha Po, Shap Pat Heung and Tai Kei Leng, Yuen Long – Feasibility Study

Drawing Title
Photomontages

Drawing No.	Revision
406041/S&T/FR/1408	5

Scale
N. T. S.

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CEDD Civil Engineering and Development Department

BINNIES HONG KONG LIMITED
賓尼斯工程顧問有限公司

VP4

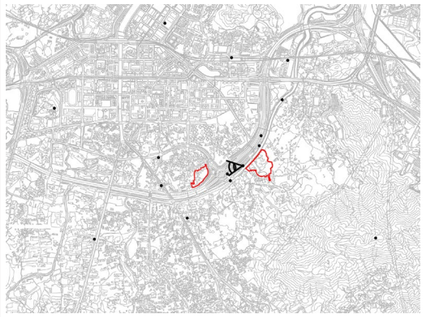


EXISTING CONDITION

Tai Kei Leng Site
+148.8-163.8 mPD (Initial scheme)
(max. 45+1+5)
+163.8-178.8 mPD (BH with 15m increase)
(max. 50+1+5)



YEAR 10 OPERATION PHASE WITH LANDSCAPE AND VISUAL MITIGATION MEASURES



Mitigation Measures for Operation Phase Impact	
OM4	Aesthetically Pleasing Building Design

Maximum Building Height potentially increased by 15m in Tai Kei Leng site /25m in Shap Pat Heung site (indicative)

Revision	Date	Description		Initial
	Designed	Checked	Drawn	Checked
Initial	CL	GL	CL	GL
Date	02-11-2022	02-11-2022	02-11-2022	02-11-2022

Approved

Agreement no.
CE 10/2020 (CE)

Project Title:
Site Formation and Infrastructure Works for Proposed Public Housing Developments at Sha Po, Shap Pat Heung and Tai Kei Leng, Yuen Long – Feasibility Study

Drawing Title
Photomontages

Drawing No.
406041/S&T/FR/1409

Revision
5

Scale
N. T. S.

土木工程拓展署
CEDD Civil Engineering and Development Department

BINNIES HONG KONG LIMITED
賓尼斯工程顧問有限公司

VP5



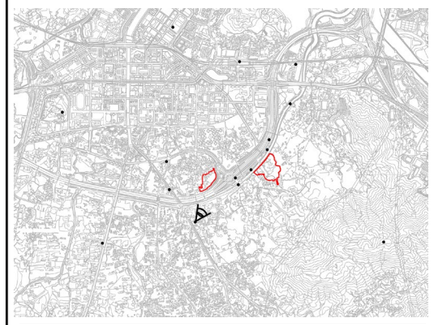
EXISTING CONDITION

Shap Pat Heung Site
+136.5-157.8 mPD (Initial scheme)
(max. 49+1+1)
+161.5-182.8 mPD (BH with 25m increase)
(max. 56+2+1)
OM4

Tai Kei Leng Site
+148.8-163.8 mPD (Initial scheme)
(max. 45+1+5)
+163.8-178.8 mPD (BH with 15m increase)
(max. 50+1+5)
OM4



YEAR 10 OPERATION PHASE WITH LANDSCAPE AND VISUAL MITIGATION MEASURES



Mitigation Measures for Operation Phase Impact	
OM4	Aesthetically Pleasing Building Design

Maximum Building Height potentially increased by 15m in Tai Kei Leng site /25m in Shap Pat Heung site (indicative)

Revision	Date	Description		Initial
	Designed	Checked	Drawn	Checked
Initial	CL	GL	CL	GL
Date	02-11-2022	02-11-2022	02-11-2022	02-11-2022

Approved

Agreement no.
CE 10/2020 (CE)

Project Title:
Site Formation and Infrastructure Works for Proposed Public Housing Developments at Sha Po, Shap Pat Heung and Tai Kei Leng, Yuen Long – Feasibility Study

Drawing Title
Photomontages

Drawing No.
406041/S&T/FR/1410

Revision
5

Scale
N. T. S.

土木工程拓展署
CEDD Civil Engineering and Development Department

BINNIES HONG KONG LIMITED
賓尼斯工程顧問有限公司

VP6

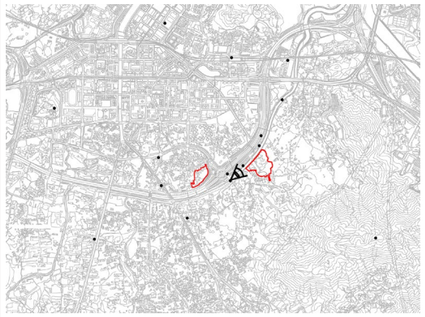


EXISTING CONDITION

Shap Pat Heung Site
+136.5-157.8 mPD (Initial scheme)
(max. 49+1+1)
+161.5-182.8 mPD (BH with 25m increase)
(max. 56+2+1)



YEAR 10 OPERATION PHASE WITH LANDSCAPE AND VISUAL MITIGATION MEASURES



Mitigation Measures for Operation Phase Impact	
OM4	Aesthetically Pleasing Building Design

Maximum Building Height potentially increased by 15m in Tai Kei Leng site /25m in Shap Pat Heung site (indicative)

Revision	Date	Description		Initial
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Date	02-11-2022	02-11-2022	02-11-2022	02-11-2022

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Site Formation and Infrastructure Works for Proposed Public Housing Developments at Sha Po, Shap Pat Heung and Tai Kei Leng, Yuen Long – Feasibility Study

Drawing Title
Photomontages

Drawing No.
406041/S&T/FR/1411

Revision
5

Scale
N. T. S.

土木工程拓展署
CEDD Civil Engineering and Development Department

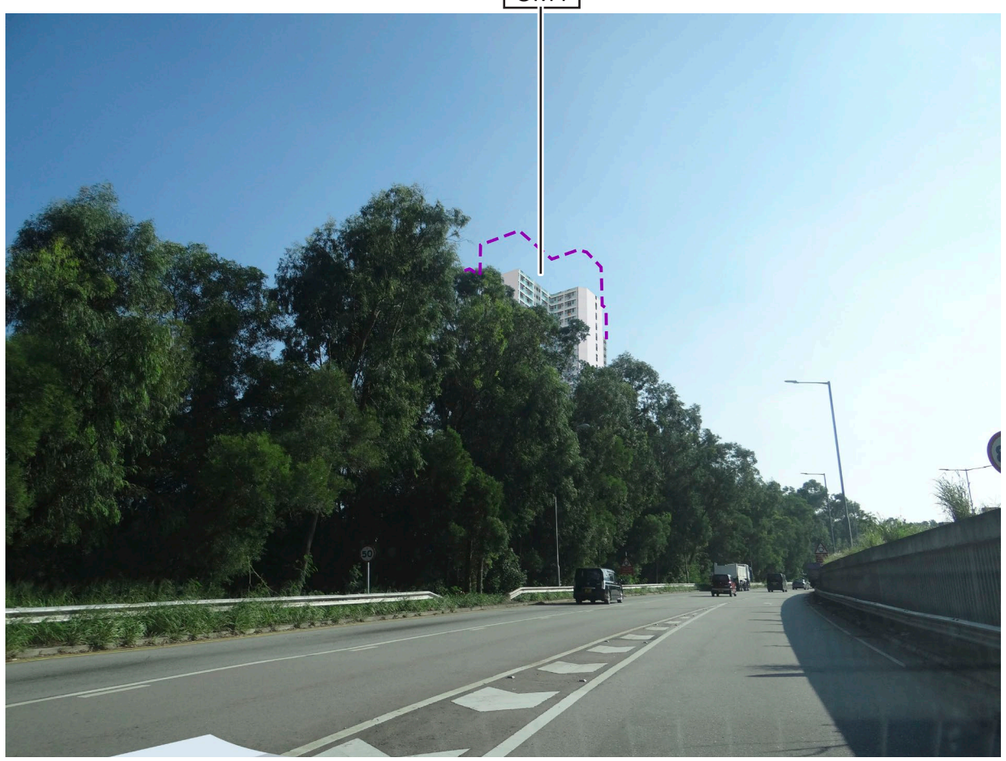
BINNIES HONG KONG LIMITED
賓尼斯工程顧問有限公司

VP7

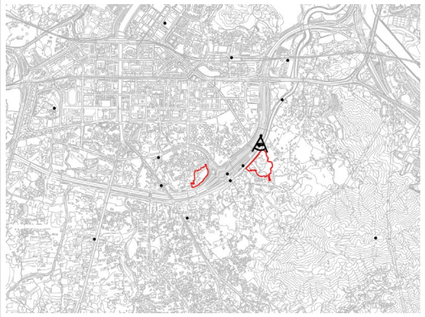


EXISTING CONDITION

Shap Pat Heung Site
+136.5-157.8 mPD (Initial scheme)
(max. 49+1+1)
+161.5-182.8 mPD (BH with 25m increase)
(max. 56+2+1)



YEAR 10 OPERATION PHASE WITH LANDSCAPE AND VISUAL MITIGATION MEASURES



Mitigation Measures for Operation Phase Impact	
OM4	Aesthetically Pleasing Building Design

Maximum Building Height potentially increased by 15m in Tai Kei Leng site /25m in Shap Pat Heung site (indicative)

Revision	Date	Description		Initial
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Date	02-11-2022	02-11-2022	02-11-2022	02-11-2022

Approved

Agreement no.
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Site Formation and Infrastructure Works for Proposed Public Housing Developments at Sha Po, Shap Pat Heung and Tai Kei Leng, Yuen Long – Feasibility Study

Drawing Title
Photomontages

Drawing No.
406041/S&T/FR/1412

Revision
5

Scale
N. T. S.

土木工程拓展署
CEDD Civil Engineering and Development Department

BINNIES HONG KONG LIMITED
賓尼斯工程顧問有限公司

VP8

Shap Pat Heung Site
+136.5-157.8 mPD (Initial scheme)
(max. 49+1+1)
+161.5-182.8 mPD (BH with 25m increase)
(max. 56+2+1)
OM4

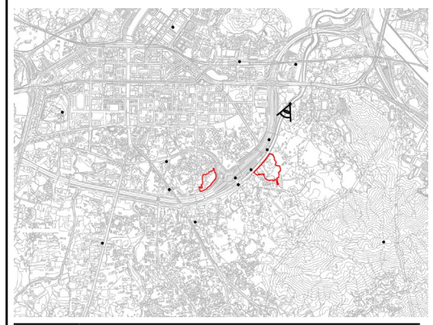
Tai Kei Leng Site
+148.8-163.8 mPD (Initial scheme)
(max. 45+1+5)
+163.8-178.8 mPD (BH with 15m increase)
(max. 50+1+5)
OM4



EXISTING CONDITION



YEAR 10 OPERATION PHASE WITH LANDSCAPE AND VISUAL MITIGATION MEASURES



Mitigation Measures for Operation Phase Impact	
OM4	Aesthetically Pleasing Building Design

Maximum Building Height potentially increased by 15m in Tai Kei Leng site /25m in Shap Pat Heung site (indicative)

Revision	Date	Description		Initial
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Site Formation and Infrastructure Works for Proposed Public Housing Developments at Sha Po, Shap Pat Heung and Tai Kei Leng, Yuen Long – Feasibility Study

Drawing Title
Photomontages

Drawing No.
406041/S&T/FR/1413

Revision
5

Scale
N. T. S.

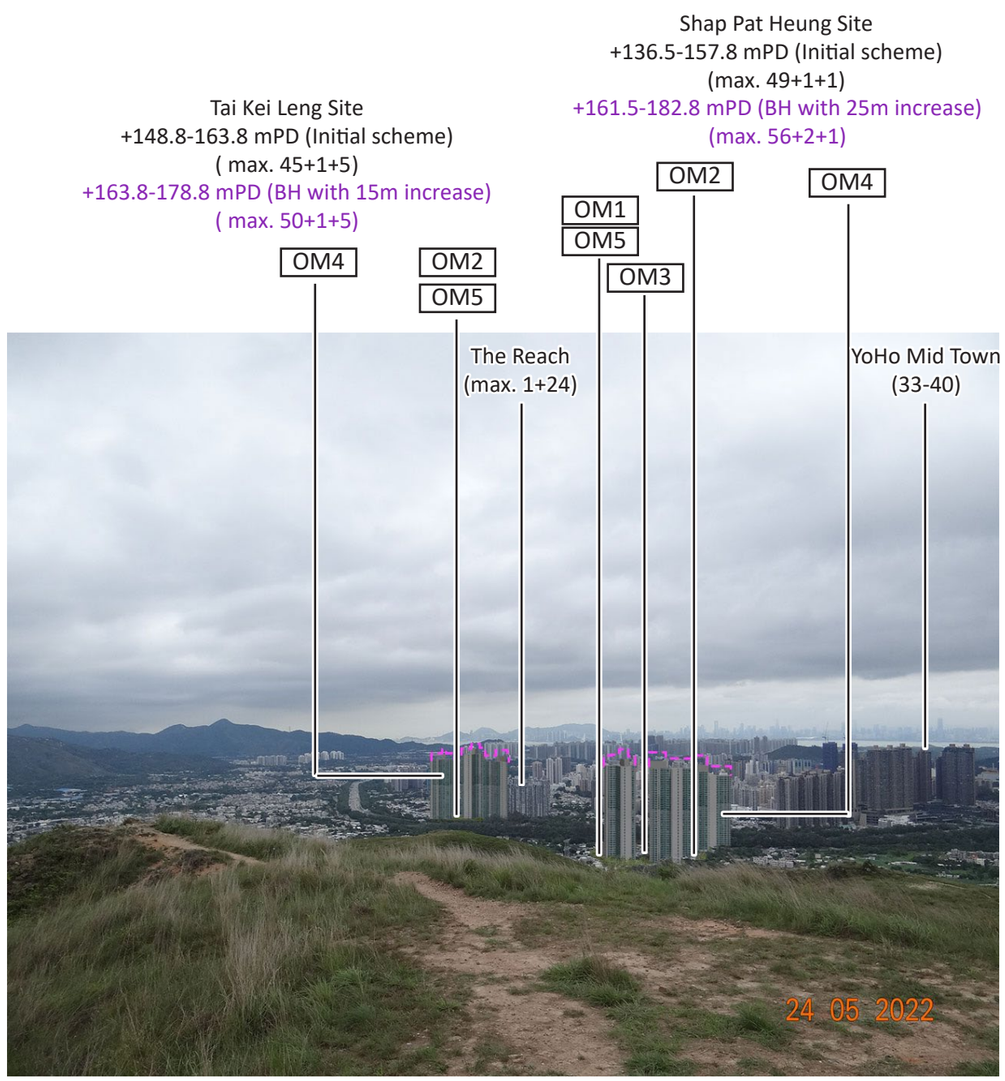
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CEDD Civil Engineering and Development Department

BINNIES HONG KONG LIMITED
賓尼斯工程顧問有限公司

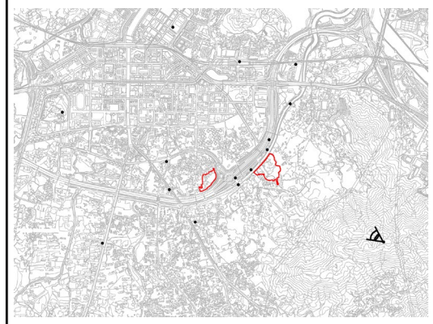
VP9



EXISTING CONDITION



YEAR 10 OPERATION PHASE WITH LANDSCAPE AND VISUAL MITIGATION MEASURES



Mitigation Measures for Operation Phase Impact	
OM1	Landscape Planting
OM2	Rooftop Greening
OM3	Vertical Greening
OM4	Aesthetically Pleasing Building Design
OM5	Provision of Local Open Space and Recreational Facilities in Development

Maximum Building Height potentially increased by 15m in Tai Kei Leng site /25m in Shap Pat Heung site (indicative)

Revision	Date	Description		Initial
	Designed	Checked	Drawn	Checked
Initial	CL	GL	CL	GL
Date	02-11-2022	02-11-2022	02-11-2022	02-11-2022

Approved

Agreement no.
CE 10/2020 (CE)

Project Title:
Site Formation and Infrastructure Works for Proposed Public Housing Developments at Sha Po, Shap Pat Heung and Tai Kei Leng, Yuen Long – Feasibility Study

Drawing Title
Photomontages

Drawing No.
406041/S&T/FR/1414

Revision
5

Scale
N. T. S.

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VP10

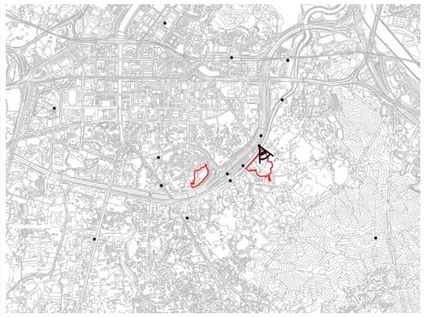


EXISTING CONDITION

Shap Pat Heung Site
+136.5-157.8 mPD (Initial scheme)
(max. 49+1+1)
+161.5-182.8 mPD (BH with 25m increase)
(max. 56+2+1)



YEAR 10 OPERATION PHASE WITH LANDSCAPE AND VISUAL MITIGATION MEASURES



Mitigation Measures for Operation Phase Impact	
OM1	Landscape Planting
OM2	Rooftop Greening
OM4	Aesthetically Pleasing Building Design
OM5	Provision of Local Open Space and Recreational Facilities in Development

Revision	Date	Description		Initial
	Designed	Checked	Drawn	Checked
Initial	CL	GL	CL	GL
Date	02-11-2022	02-11-2022	02-11-2022	02-11-2022

Approved

Agreement no.
CE 10/2020 (CE)

Project Title:
Site Formation and Infrastructure Works for Proposed Public Housing Developments at Sha Po, Shap Pat Heung and Tai Kei Leng, Yuen Long – Feasibility Study

Drawing Title
Photomontages

Drawing No.
406041/S&T/FR/1415

Revision
5

Scale
N. T. S.

土木工程拓展署
CEDD Civil Engineering and Development Department

BINNIES HONG KONG LIMITED
賓尼斯工程顧問有限公司

VP11



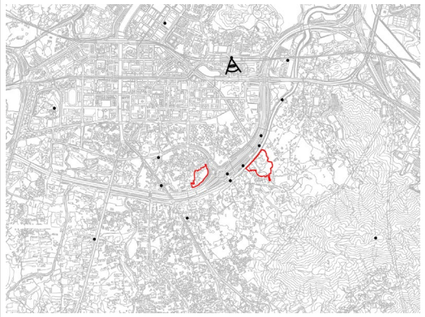
EXISTING CONDITION

Shap Pat Heung Site
+136.5-157.8 mPD (Initial scheme)
(max. 49+1+1)
+161.5-182.8 mPD (BH with 25m increase)
(max. 56+2+1)

Tai Kei Leng Site
+148.8-163.8 mPD (Initial scheme)
(max. 45+1+5)
+163.8-178.8 mPD (BH with 15m increase)
(max. 50+1+5)



YEAR 10 OPERATION PHASE WITH LANDSCAPE AND VISUAL MITIGATION MEASURES



- Maximum Building Height potentially increased by 15m in Tai Kei Leng site /25m in Shap Pat Heung site (indicative)
- Building Height in Initial scheme (Invisible)

Revision	Date	Description		Initial
	Designed	Checked	Drawn	Checked
Initial	CL	GL	CL	GL
Date	02-11-2022	02-11-2022	02-11-2022	02-11-2022

Approved

Agreement no.
CE 10/2020 (CE)

Project Title:
Site Formation and Infrastructure Works for Proposed Public Housing Developments at Sha Po, Shap Pat Heung and Tai Kei Leng, Yuen Long – Feasibility Study

Drawing Title
Photomontages

Drawing No.
406041/S&T/FR/1416

Revision
5

Scale
N. T. S.

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CEDD Civil Engineering and Development Department

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賓尼斯工程顧問有限公司

VP12

Shap Pat Heung Site
+136.5-157.8 mPD (Initial scheme)
(max. 49+1+1)
+161.5-182.8 mPD (BH with 25m increase)
(max. 56+2+1)
OM4

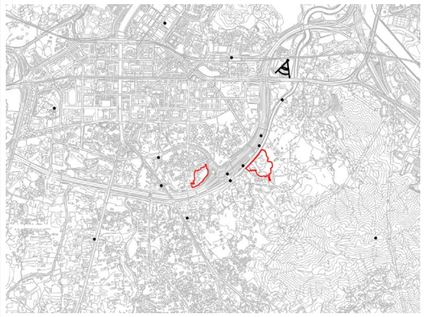
Tai Kei Leng Site
+148.8-163.8 mPD (Initial scheme)
(max. 45+1+5)
+163.8-178.8 mPD (BH with 15m increase)
(max. 50+1+5)
OM4



EXISTING CONDITION



YEAR 10 OPERATION PHASE WITH LANDSCAPE AND VISUAL MITIGATION MEASURES



Mitigation Measures for Operation Phase Impact	
OM4	Aesthetically Pleasing Building Design

Maximum Building Height potentially increased by 15m in Tai Kei Leng site /25m in Shap Pat Heung site (indicative)

Revision	Date	Description		Initial
	Designed	Checked	Drawn	Checked
Initial	CL	GL	CL	GL
Date	02-11-2022	02-11-2022	02-11-2022	02-11-2022

Approved

Agreement no.
CE 10/2020 (CE)

Project Title:
Site Formation and Infrastructure Works for Proposed Public Housing Developments at Sha Po, Shap Pat Heung and Tai Kei Leng, Yuen Long – Feasibility Study

Drawing Title
Photomontages

Drawing No.
406041/S&T/FR/1417

Revision
5

Scale
N. T. S.

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BINNIES HONG KONG LIMITED
賓尼斯工程顧問有限公司

VP13



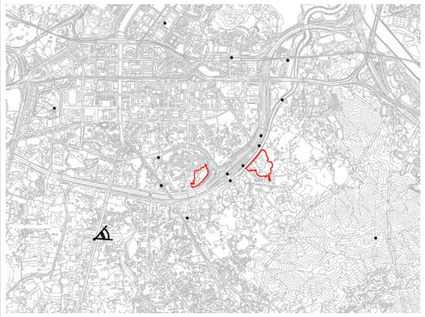
EXISTING CONDITION

Tai Kei Leng Site
+148.8-163.8 mPD (Initial scheme)
(max. 45+1+5)
+163.8-178.8 mPD (BH with 15m increase)
(max. 50+1+5)
OM4

Shap Pat Heung Site
+136.5-157.8 mPD (Initial scheme)
(max. 49+1+1)
+161.5-182.8 mPD (BH with 25m increase)
(max. 56+2+1)



YEAR 10 OPERATION PHASE WITH LANDSCAPE AND VISUAL MITIGATION MEASURES



Mitigation Measures for Operation Phase Impact	
OM4	Aesthetically Pleasing Building Design

- Maximum Building Height potentially increased by 15m in Tai Kei Leng site /25m in Shap Pat Heung site (indicative)
- Building Height in Initial scheme (Invisible)

Revision	Date	Description		Initial
	Designed	Checked	Drawn	Checked
Initial	CL	GL	CL	GL
Date	02-11-2022	02-11-2022	02-11-2022	02-11-2022

Approved

Agreement no. CE 10/2020 (CE)

Project Title:

Site Formation and Infrastructure Works for Proposed Public Housing Developments at Sha Po, Shap Pat Heung and Tai Kei Leng, Yuen Long – Feasibility Study

Drawing Title

Photomontages

Drawing No. 406041/S&T/FR/1418

Revision 5

Scale N. T. S.

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VP14

Shap Pat Heung Site
+136.5-157.8 mPD (Initial scheme)
(max. 49+1+1)
+161.5-182.8 mPD (BH with 25m increase)
(max. 56+2+1)

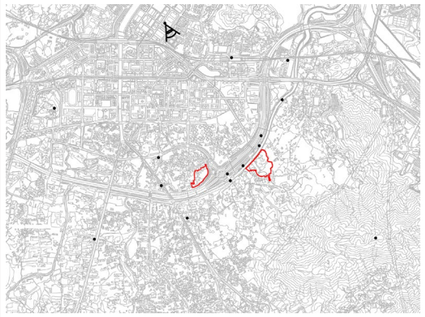
Tai Kei Leng Site
+148.8-163.8 mPD (Initial scheme)
(max. 45+1+5)
+163.8-178.8 mPD (BH with 15m increase)
(max. 50+1+5)



EXISTING CONDITION



YEAR 10 OPERATION PHASE WITH LANDSCAPE AND VISUAL MITIGATION MEASURES



- Maximum Building Height potentially increased by 15m in Tai Kei Leng site /25m in Shap Pat Heung site (indicative)
- Building Height in Initial scheme (Invisible)

Revision	Date	Description		Initial
	Designed	Checked	Drawn	Checked
Initial	CL	GL	CL	GL
Date	02-11-2022	02-11-2022	02-11-2022	02-11-2022

Approved

Agreement no.
CE 10/2020 (CE)

Project Title:
Site Formation and Infrastructure Works for Proposed Public Housing Developments at Sha Po, Shap Pat Heung and Tai Kei Leng, Yuen Long – Feasibility Study

Drawing Title
Photomontages

Drawing No.
406041/S&T/FR/1419

Revision
5

Scale
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VP15

Shap Pat Heung Site
+136.5-157.8 mPD (Initial scheme)
(max. 49+1+1)
+161.5-182.8 mPD (BH with 25m increase)
(max. 56+2+1)

OM4

Tai Kei Leng Site
+148.8-163.8 mPD (Initial scheme)
(max. 45+1+5)
+163.8-178.8 mPD (BH with 15m increase)
(max. 50+1+5)

The Reach
(max. 1+24)

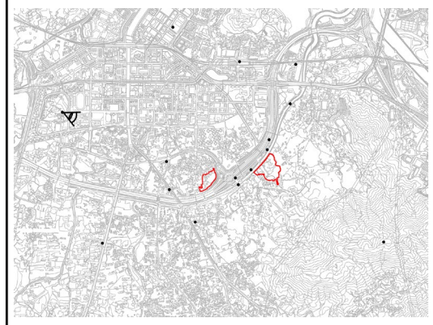


EXISTING CONDITION

The Reach
(max. 1+24)



YEAR 10 OPERATION PHASE WITH LANDSCAPE AND VISUAL MITIGATION MEASURES



Mitigation Measures for Operation Phase Impact	
OM4	Aesthetically Pleasing Building Design

- Maximum Building Height potentially increased by 15m in Tai Kei Leng site /25m in Shap Pat Heung site (indicative)
- Building Height in Initial scheme (Invisible)

Revision	Date	Description		Initial
	Designed	Checked	Drawn	Checked
Initial	CL	GL	CL	GL
Date	02-11-2022	02-11-2022	02-11-2022	02-11-2022

Approved

Agreement no.
CE 10/2020 (CE)

Project Title:
Site Formation and Infrastructure Works for Proposed Public Housing Developments at Sha Po, Shap Pat Heung and Tai Kei Leng, Yuen Long – Feasibility Study

Drawing Title
Photomontages

Drawing No.
406041/S&T/FR/1420

Revision
5

Scale
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4 storeys Carpark & Welfare

115 nos. of New Trees to be provided in Shap Pat Heung Site

*New trees locations are indication only

PTI cum
2 storeys Welfare Block

BLK01

BLK02

BLK03

BLK04

School Site

TPI-8 and TPI-9
to be Retained

37 nos. of Compensatory Trees to be provided in Proposed Roadside Verge Greening Zone (RVGZ)

Development Boundary

Infrastructure Works Area

Tree of Particular Interest to be Retained

Proposed Planting Area within Housing Site

New Tree

Proposed Roadside Verge Greening Zone (RVGZ)

Compensatory Tree

*The notional layout is for study purpose and may change subject to detailed design

*The new tree planting location within housing site boundary is indicative only and subject to detailed design

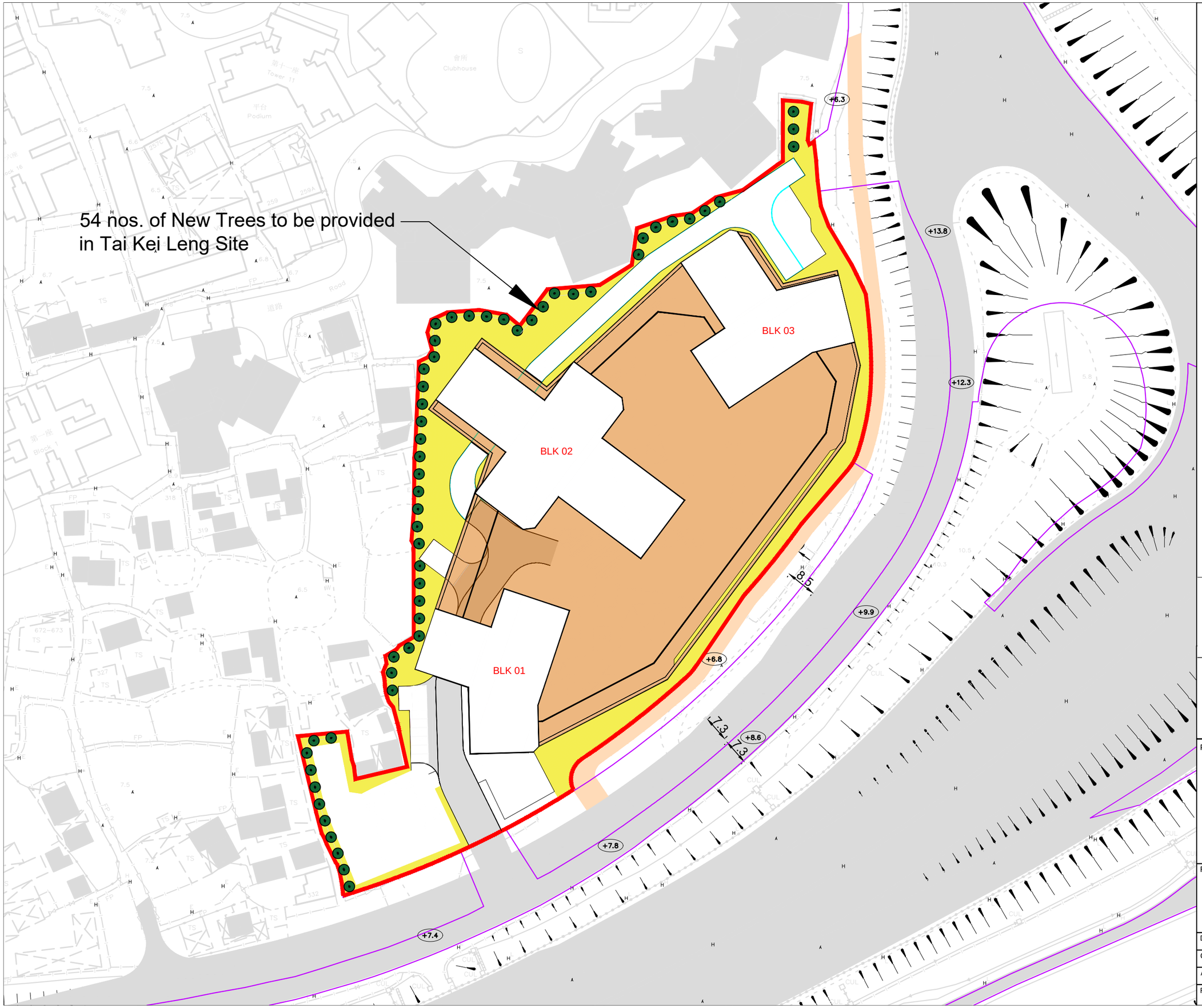
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Site Formation and Infrastructure Works for Public Housing Development at Sha Po, Shap Pat Heung and Tai Kei Leng, Yuen Long – Feasibility Study

Compensatory Trees and New Trees Planting Plan (Shap Pat Heung Site)

CL	Scale:	1:1200
GL	Date:	13 09 2022
GL		
406041/S&T/FR/1421	Revision:	2



Development Boundary

Infrastructure Works Area

Proposed Planting Area

New Tree

*The notional layout is for study purpose and may change subject to detailed design

*The new tree planting location within housing site boundary is indicative only and subject to detailed design

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Project Title:

Site Formation and Infrastructure Works for Public Housing Development at Sha Po, Shap Pat Heung and Tai Kei Leng, Yuen Long – Feasibility Study

Figure Title:

New Trees Planting Plan
(Tai Kei Leng Site)

Drawn by:	CL	Scale:	1:1000
Checked By:	GL	Date:	01 11 2022
Approved by:	GL		
Figure Number:	406041/S&T/FR/1422	Revision:	3

158 nos. of Compensatory Trees to be provided the proposed planting area within Infrastructure Works Boundary

Development Boundary

Infrastructure Works Area

Traffic Improvement Works

Proposed Planting Area

Compensatory Tree

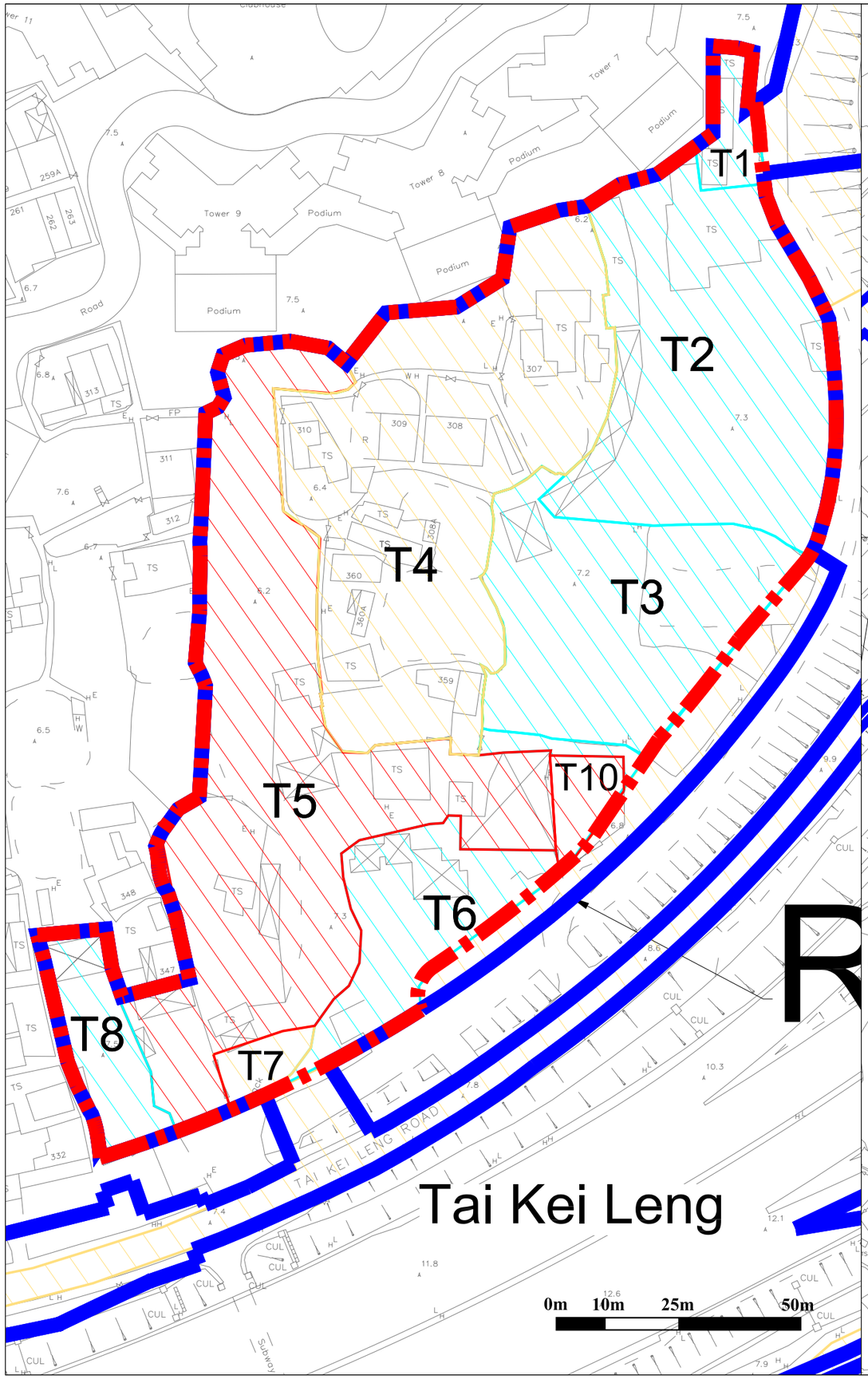
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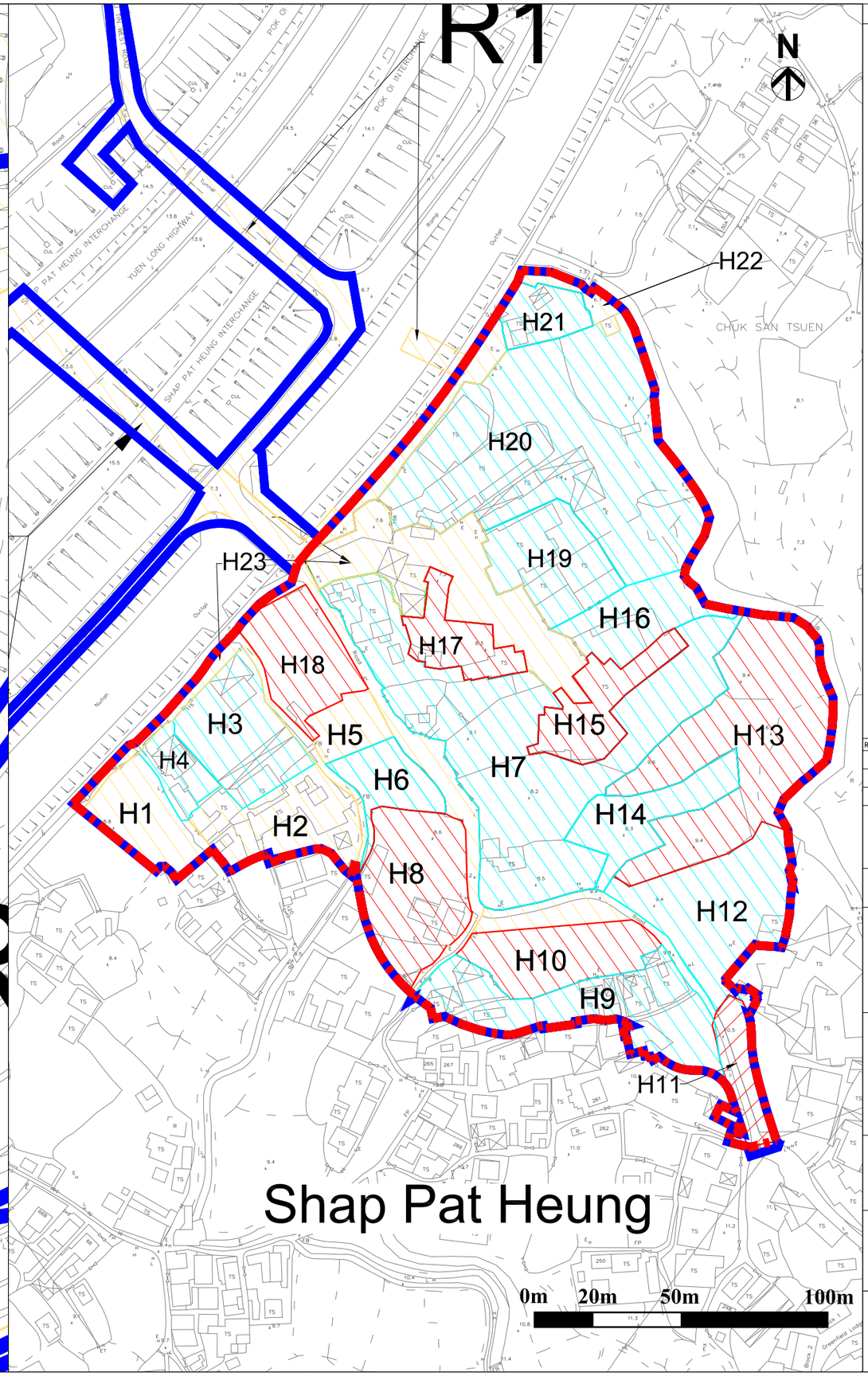
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Site Formation and Infrastructure Works for
Public Housing Development at Sha Po, Shap Pat Heung
and Tai Kei Leng, Yuen Long – Feasibility Study

Tree Compensatory Plan
(Infrastructure Works Area)

CL	Scale: 1:100	
GL	Date: 01 09 2022	
GL		
406041/S&T/FR/1423		Revision: 1





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LEGEND:

- ASSESSMENT AREA
- DEVELOPMENT SITE
- PROPOSED SITE INVESTIGATION AREA
- AREA EXCLUDED FROM THE PROPOSED SITE INVESTIGATION AREA
- AREA TO BE FURTHER INSPECTED AT LATER STAGE

Revision	Date	Description		Initial
	Designed	Checked	Drawn	Checked
Initial			SM	KY
Date			07/22	07/22

Approved

Agreement no.
CE 10/2020 (CE)

Project title
SITE FORMATION AND INFRASTRUCTURE WORKS FOR PROPOSED PUBLIC HOUSING DEVELOPMENT AT SHA PO, SHAP PAT HEUNG AND TAI KEI LENG, YUEN LONG FEASIBILITY STUDY

Drawing title
IDENTIFICATION OF POTENTIALLY CONTAMINATED AREAS PROPOSED FOR SITE INVESTIGATION

Drawing No.
406041/S&T/FR/1501

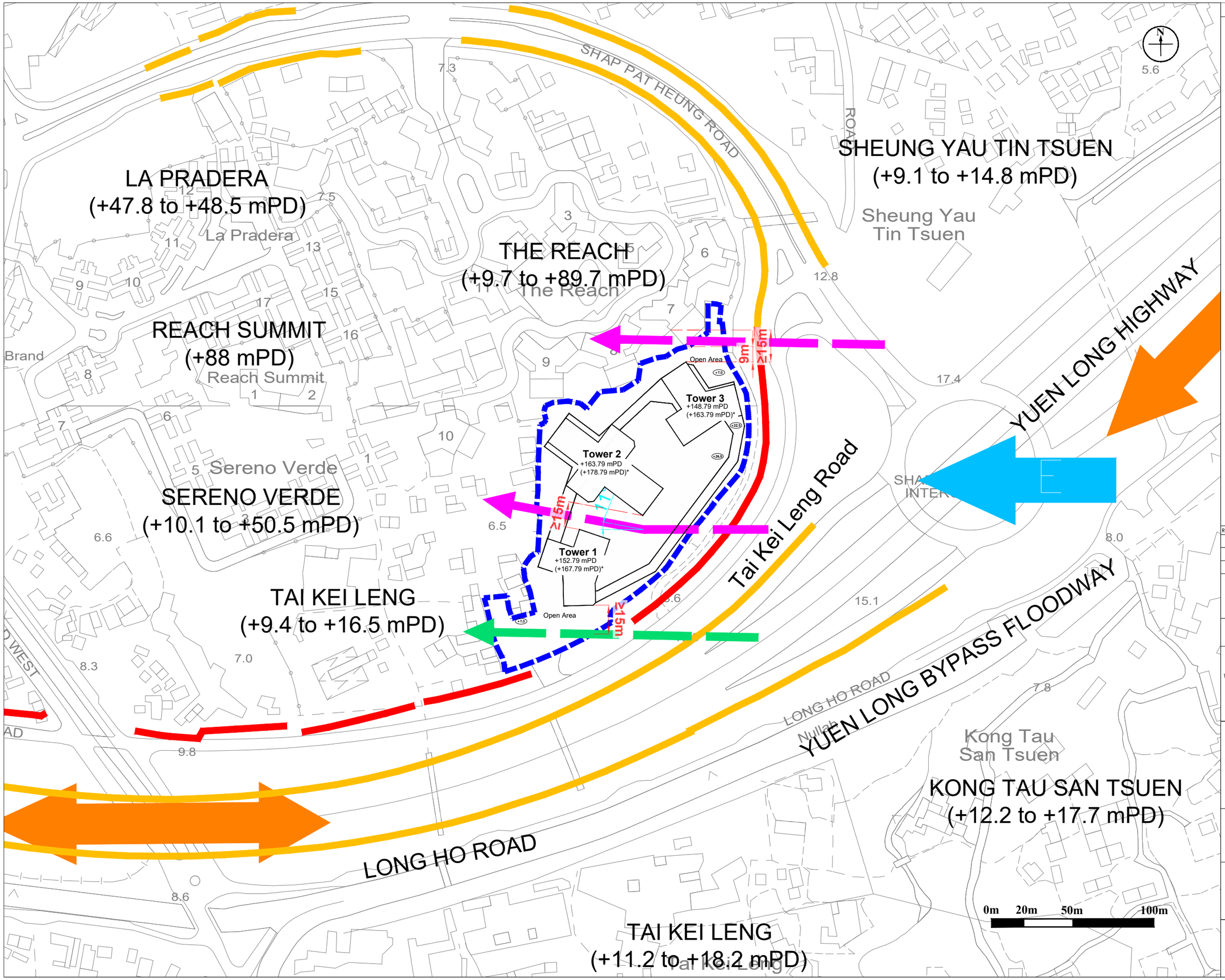
Scale

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APPENDIX A
SUMMARY OF PREVAILING WINDS

再造紙
recycled paper



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LEGEND:

- SITE BOUNDARY
- EXISTING NOISE BARRIERS
- PLANNED NOISE BARRIERS
- EXISTING AIR CORRIDOR
- SUMMER WIND CONDITION
- ANNUAL WIND CONDITION
- WIND FLOW (PEDESTRIAN AND HIGH-LEVEL)
- WIND FLOW (HIGH-LEVEL)

*ADDITIONAL BUILDING HEIGHT TO CATER FOR THE POSSIBLE ADOPTION OF MODULAR INTEGRATED CONSTRUCTION PROMULGATED UNDER JOINT PRACTICE NOTE NO. 8 ISSUED IN JULY 2022

NOTE:
THE NOTIONAL LAYOUT IS FOR STUDY PURPOSE, THE BUILDING DISPOSITION IS SUBJECT TO DETAILED DESIGN AND FURTHER AVA STUDY

Revision	Date	Description		Initial
	Designed	Checked	Drawn	Checked
Initial			RS	KY
Date			11/22	11/22

Approved

Contract no.
CE 10/2020 (CE)

Contract title
SITE FORMATION AND INFRASTRUCTURE WORKS FOR PROPOSED PUBLIC HOUSING DEVELOPMENT AT SHA PO, SHAP PAT HEUNG AND TAI KEI LENG, YUEN LONG FEASIBILITY STUDY

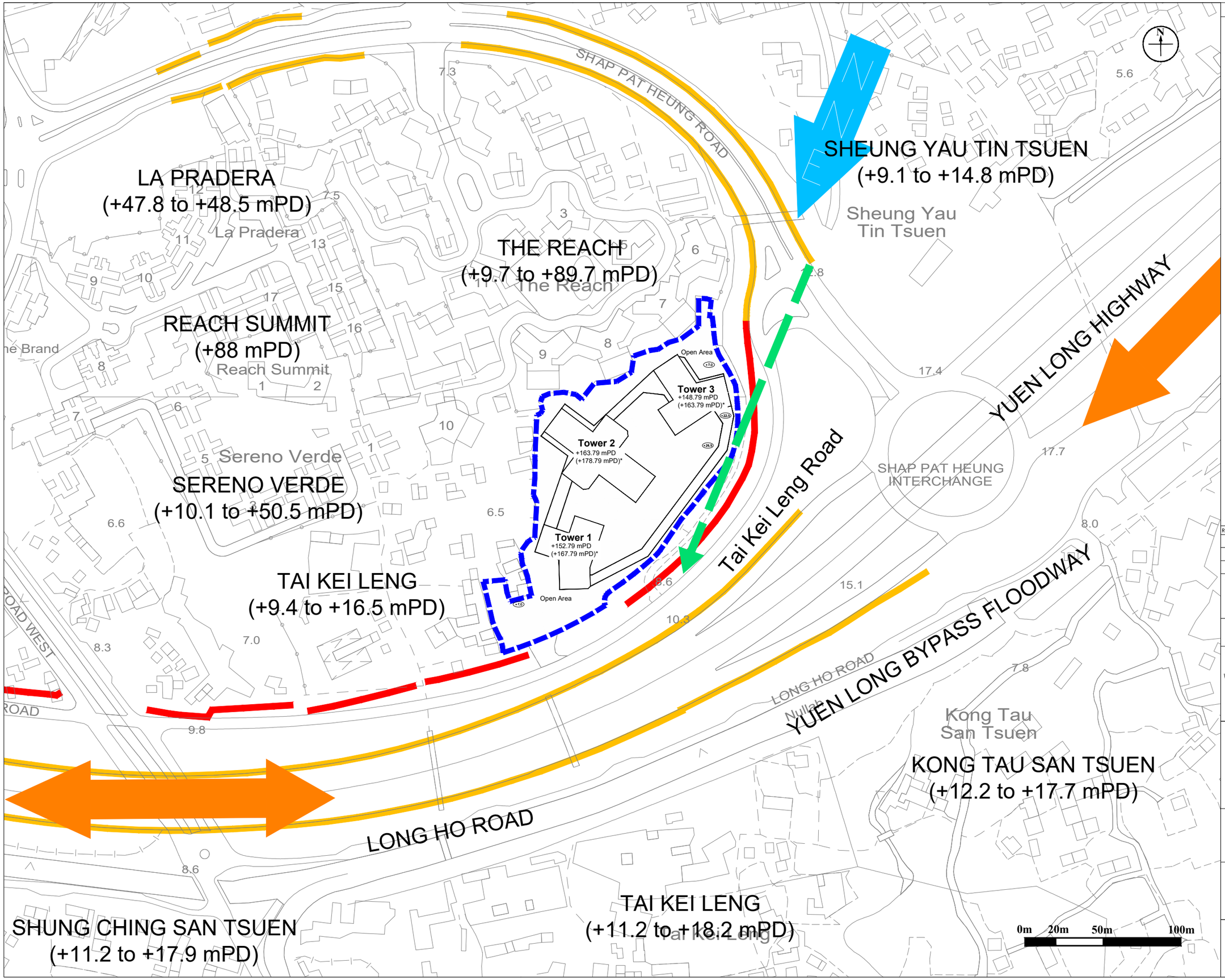
Drawing title
ILLUSTRATION OF WIND FLOW FROM E DIRECTION – TAI KEI LENG SITE

Drawing No.
FIGURE 3.2

Scale

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LEGEND:

- SITE BOUNDARY
- EXISTING NOISE BARRIERS
- PLANNED NOISE BARRIERS
- EXISTING AIR CORRIDOR
- SUMMER WIND CONDITION
- ANNUAL WIND CONDITION
- WIND FLOW (PEDESTRIAN AND HIGH-LEVEL)
- WIND FLOW (HIGH-LEVEL)

*ADDITIONAL BUILDING HEIGHT TO CATER FOR THE POSSIBLE ADOPTION OF MODULAR INTEGRATED CONSTRUCTION PROMULGATED UNDER JOINT PRACTICE NOTE NO. 8 ISSUED IN JULY 2022

NOTE:
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Revision	Date	Description		Initial
	Designed	Checked	Drawn	Checked
Initial			RS	KY
Date			11/22	11/22

Approved

Contract no.
CE 10/2020 (CE)

Contract title
SITE FORMATION AND INFRASTRUCTURE WORKS FOR PROPOSED PUBLIC HOUSING DEVELOPMENT AT SHA PO, SHAP PAT HEUNG AND TAI KEI LENG, YUEN LONG FEASIBILITY STUDY

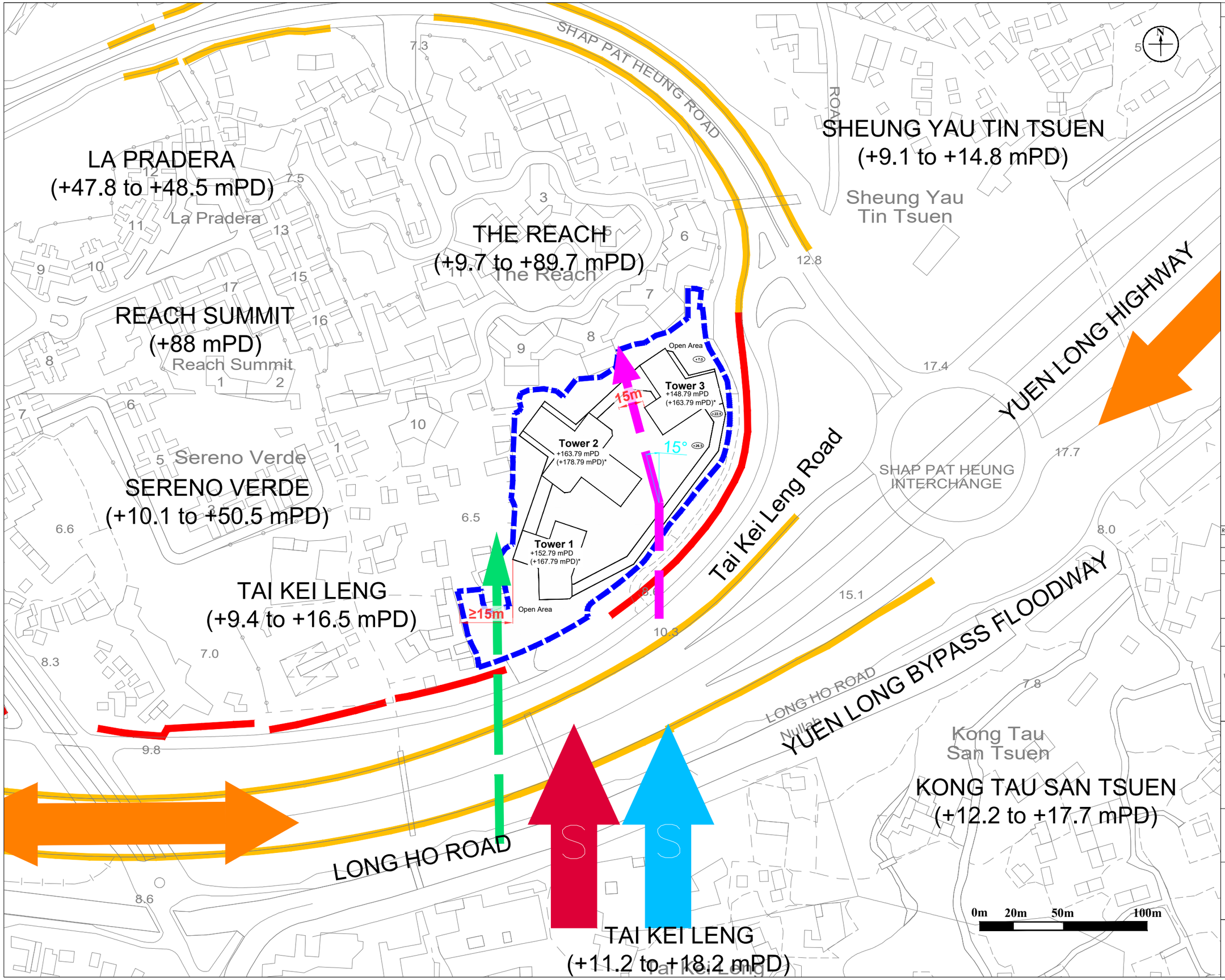
Drawing title
ILLUSTRATION OF WIND FLOW FROM NNE DIRECTION

Drawing No.
FIGURE 3.3

Scale

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LEGEND:

- SITE BOUNDARY
- EXISTING NOISE BARRIERS
- PLANNED NOISE BARRIERS
- EXISTING AIR CORRIDOR
- SUMMER WIND CONDITION
- ANNUAL WIND CONDITION
- WIND FLOW (PEDESTRIAN AND HIGH-LEVEL)
- WIND FLOW (HIGH-LEVEL)

*ADDITIONAL BUILDING HEIGHT TO CATER FOR THE POSSIBLE ADOPTION OF MODULAR INTEGRATED CONSTRUCTION PROMULGATED UNDER JOINT PRACTICE NOTE NO. 8 ISSUED IN JULY 2022

NOTE:
THE NOTIONAL LAYOUT IS FOR STUDY PURPOSE. THE BUILDING DISPOSITION IS SUBJECT TO DETAILED DESIGN AND FURTHER AVA STUDY

Revision	Date	Description		Initial
	Designed	Checked	Drawn	Checked
Initial			RS	KY
Date			11/22	11/22

Approved

Contract no.
CE 10/2020 (CE)

Contract title
SITE FORMATION AND INFRASTRUCTURE WORKS FOR PROPOSED PUBLIC HOUSING DEVELOPMENT AT SHA PO, SHAP PAT HEUNG AND TAI KEI LENG, YUEN LONG FEASIBILITY STUDY

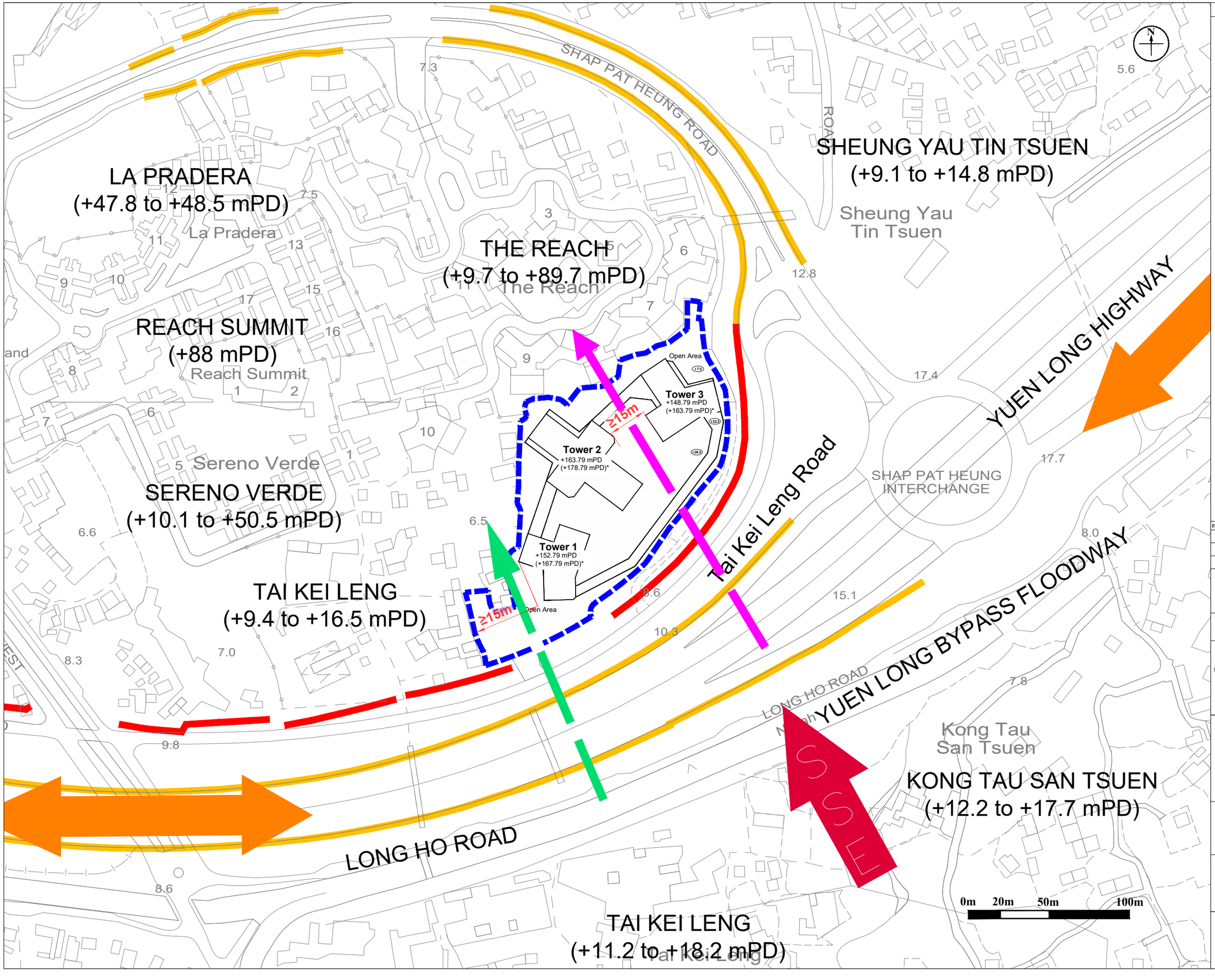
Drawing title
ILLUSTRATION OF WIND FLOW FROM S DIRECTION – TAI KEI LENG SITE

Drawing No.
FIGURE 3.4

Scale

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LEGEND:

- SITE BOUNDARY
- EXISTING NOISE BARRIERS
- PLANNED NOISE BARRIERS
- EXISTING AIR CORRIDOR
- SUMMER WIND CONDITION
- ANNUAL WIND CONDITION
- WIND FLOW (PEDESTRIAN AND HIGH-LEVEL)
- WIND FLOW (HIGH-LEVEL)

*ADDITIONAL BUILDING HEIGHT TO CATER FOR THE POSSIBLE ADOPTION OF MODULAR INTEGRATED CONSTRUCTION PROMULGATED UNDER JOINT PRACTICE NOTE NO. 8 ISSUED IN JULY 2022

NOTE:
THE NOTIONAL LAYOUT IS FOR STUDY PURPOSE, THE BUILDING DISPOSITION IS SUBJECT TO DETAILED DESIGN AND FURTHER AVA STUDY

Revision	Date	Description		Initial
	Designed	Checked	Drawn	Checked
Initial			RS	KY
Date			11/22	11/22

Approved

Contract no.
CE 10/2020 (CE)

Contract title
SITE FORMATION AND INFRASTRUCTURE WORKS FOR PROPOSED PUBLIC HOUSING DEVELOPMENT AT SHA PO, SHAP PAT HEUNG AND TAI KEI LENG, YUEN LONG FEASIBILITY STUDY

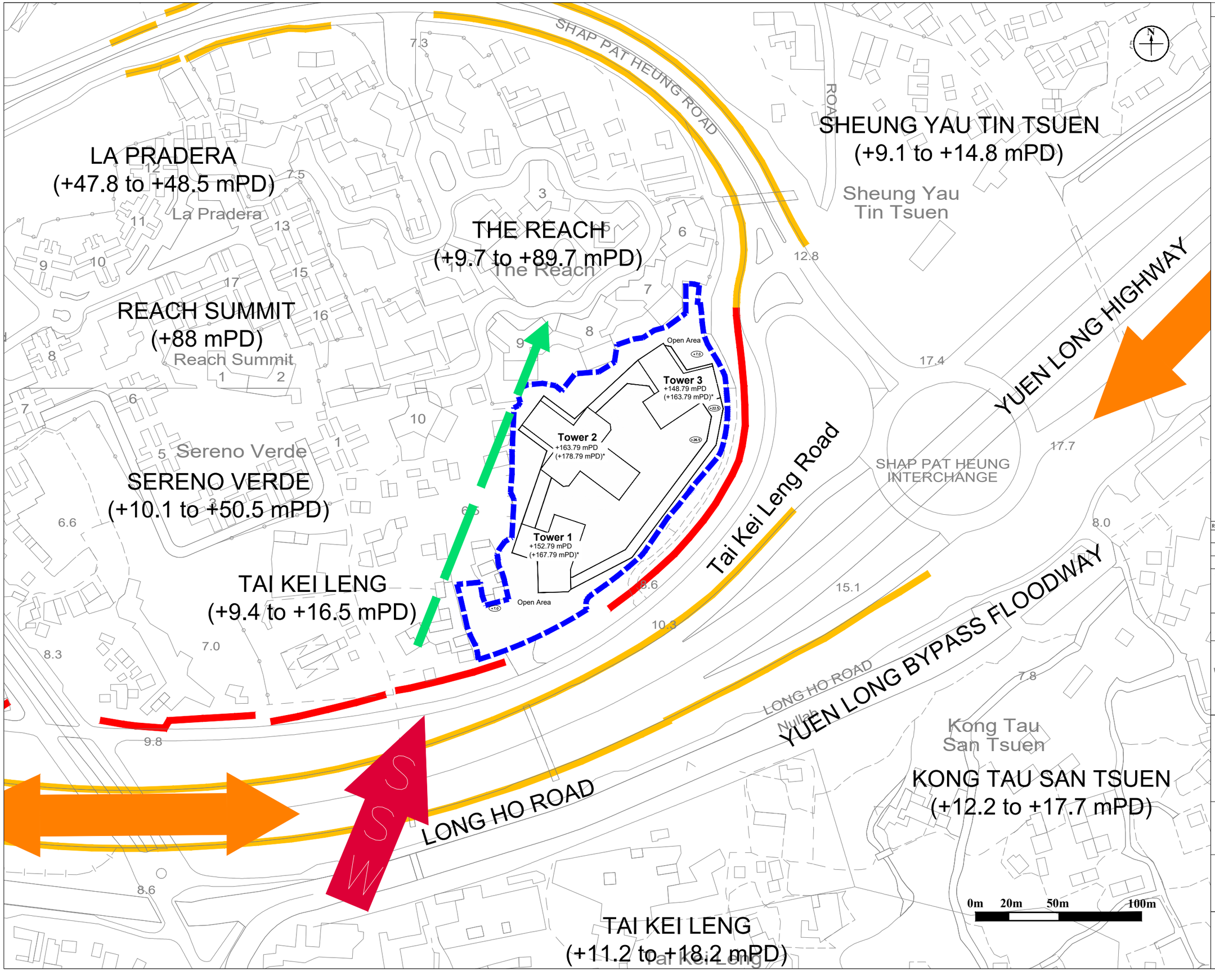
Drawing title
ILLUSTRATION OF WIND FLOW FROM SSE DIRECTION – TAI KEI LENG SITE

Drawing No.
FIGURE 3.5

Scale

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LEGEND:

- SITE BOUNDARY
- EXISTING NOISE BARRIERS
- PLANNED NOISE BARRIERS
- EXISTING AIR CORRIDOR
- SUMMER WIND CONDITION
- ANNUAL WIND CONDITION
- WIND FLOW (PEDESTRIAN AND HIGH-LEVEL)
- WIND FLOW (HIGH-LEVEL)

*ADDITIONAL BUILDING HEIGHT TO CATER FOR THE POSSIBLE ADOPTION OF MODULAR INTEGRATED CONSTRUCTION PROMULGATED UNDER JOINT PRACTICE NOTE NO. 8 ISSUED IN JULY 2022

NOTE:
THE NOTIONAL LAYOUT IS FOR STUDY PURPOSE. THE BUILDING DISPOSITION IS SUBJECT TO DETAILED DESIGN AND FURTHER AVA STUDY

Revision	Date	Description		Initial
	Designed	Checked	Drawn	Checked
Initial			RS	KY
Date			11/22	11/22

Approved

Contract no.
CE 10/2020 (CE)

Contract title
SITE FORMATION AND INFRASTRUCTURE WORKS FOR PROPOSED PUBLIC HOUSING DEVELOPMENT AT SHA PO, SHAP PAT HEUNG AND TAI KEI LENG, YUEN LONG FEASIBILITY STUDY

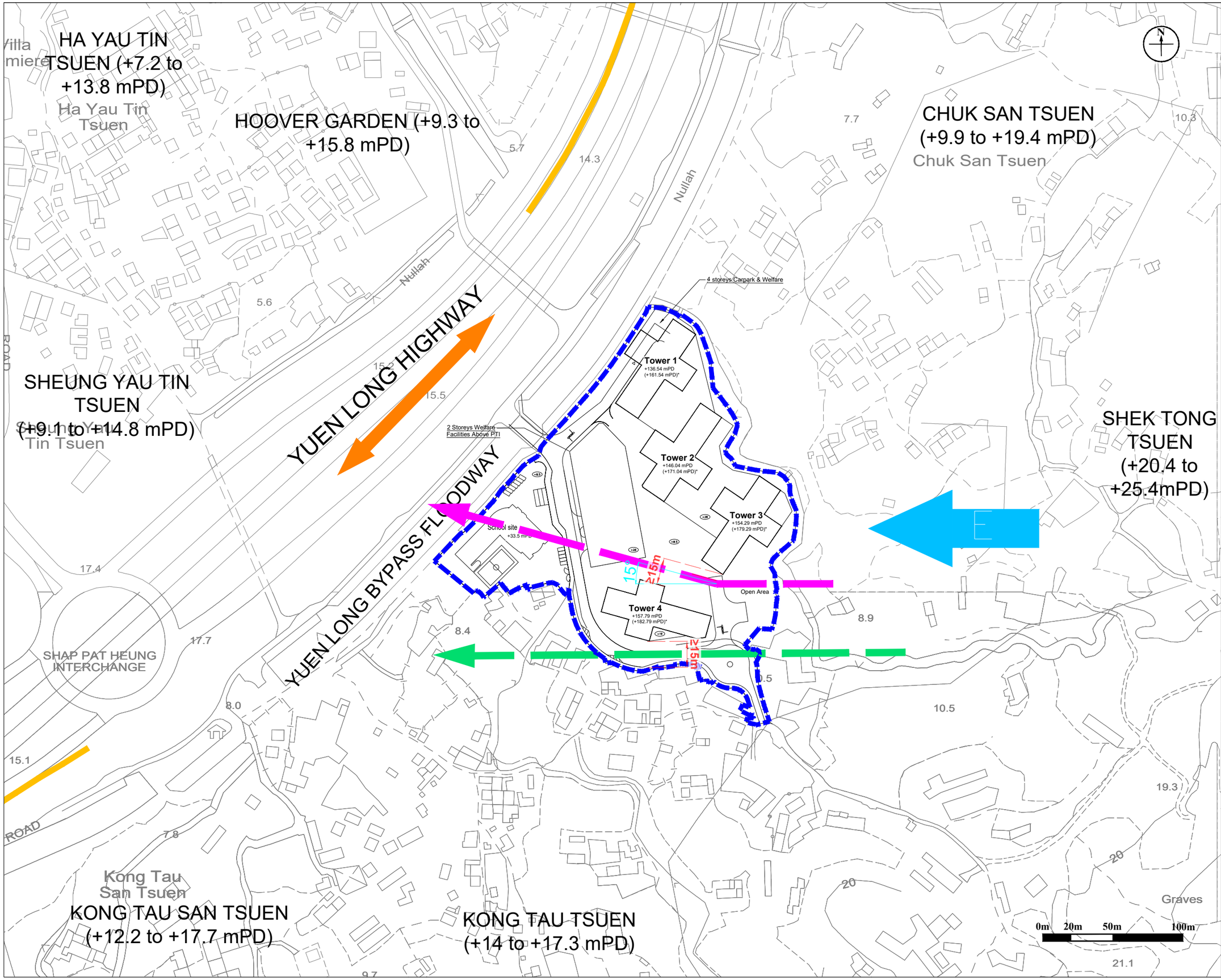
Drawing title
ILLUSTRATION OF WIND FLOW FROM SSW DIRECTION – TAI KEI LENG SITE

Drawing No.
FIGURE 3.6

Scale

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LEGEND:

- SITE BOUNDARY
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- EXISTING AIR CORRIDOR
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SITE FORMATION AND INFRASTRUCTURE WORKS FOR PROPOSED PUBLIC HOUSING DEVELOPMENT AT SHA PO, SHAP PAT HEUNG AND TAI KEI LENG, YUEN LONG FEASIBILITY STUDY

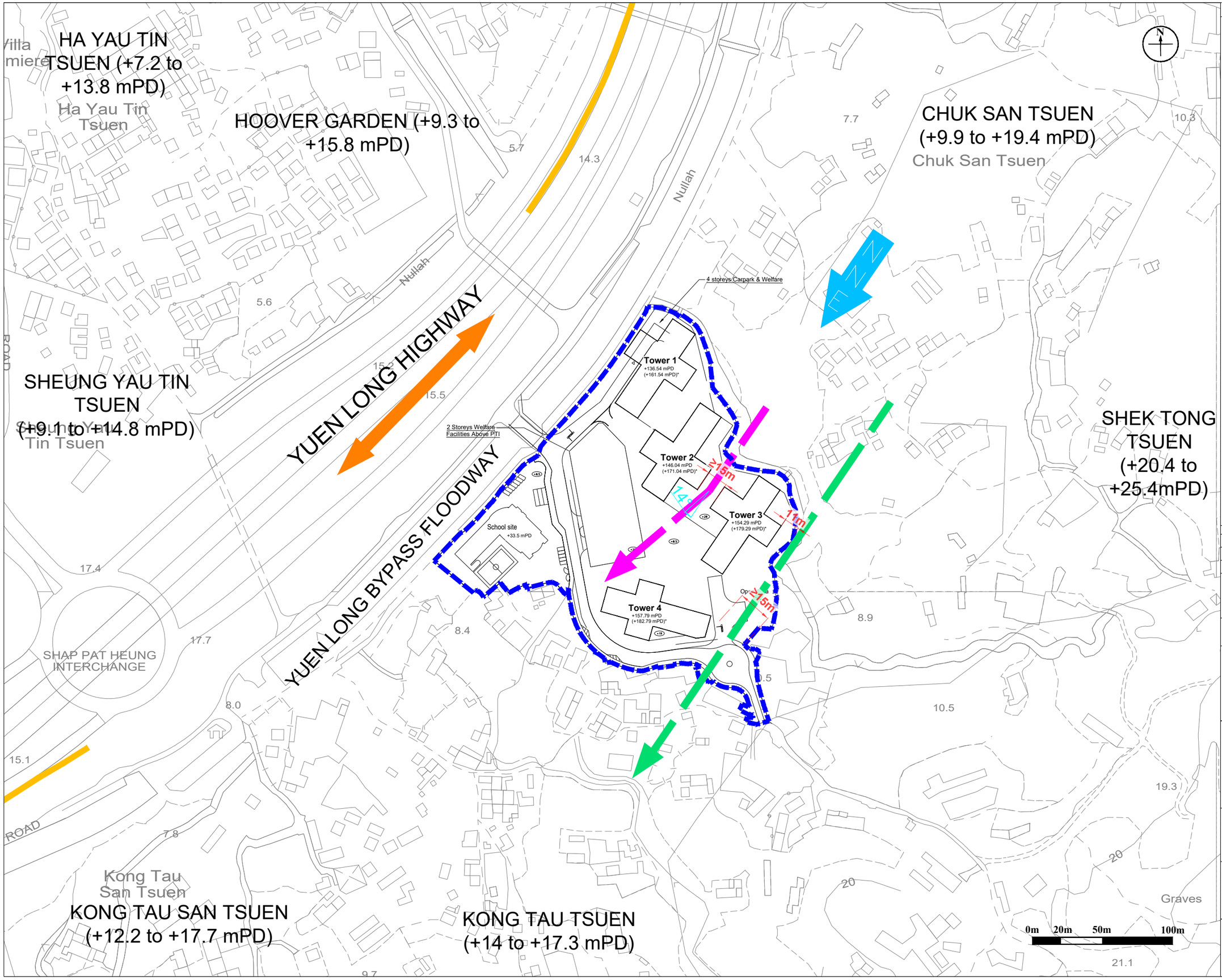
Drawing title
ILLUSTRATION OF WIND FLOW FROM E DIRECTION – SHAP PAT HEUNG SITE

Drawing No.
FIGURE 3.8

Scale

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SITE FORMATION AND INFRASTRUCTURE WORKS FOR PROPOSED PUBLIC HOUSING DEVELOPMENT AT SHA PO, SHAP PAT HEUNG AND TAI KEI LENG, YUEN LONG FEASIBILITY STUDY

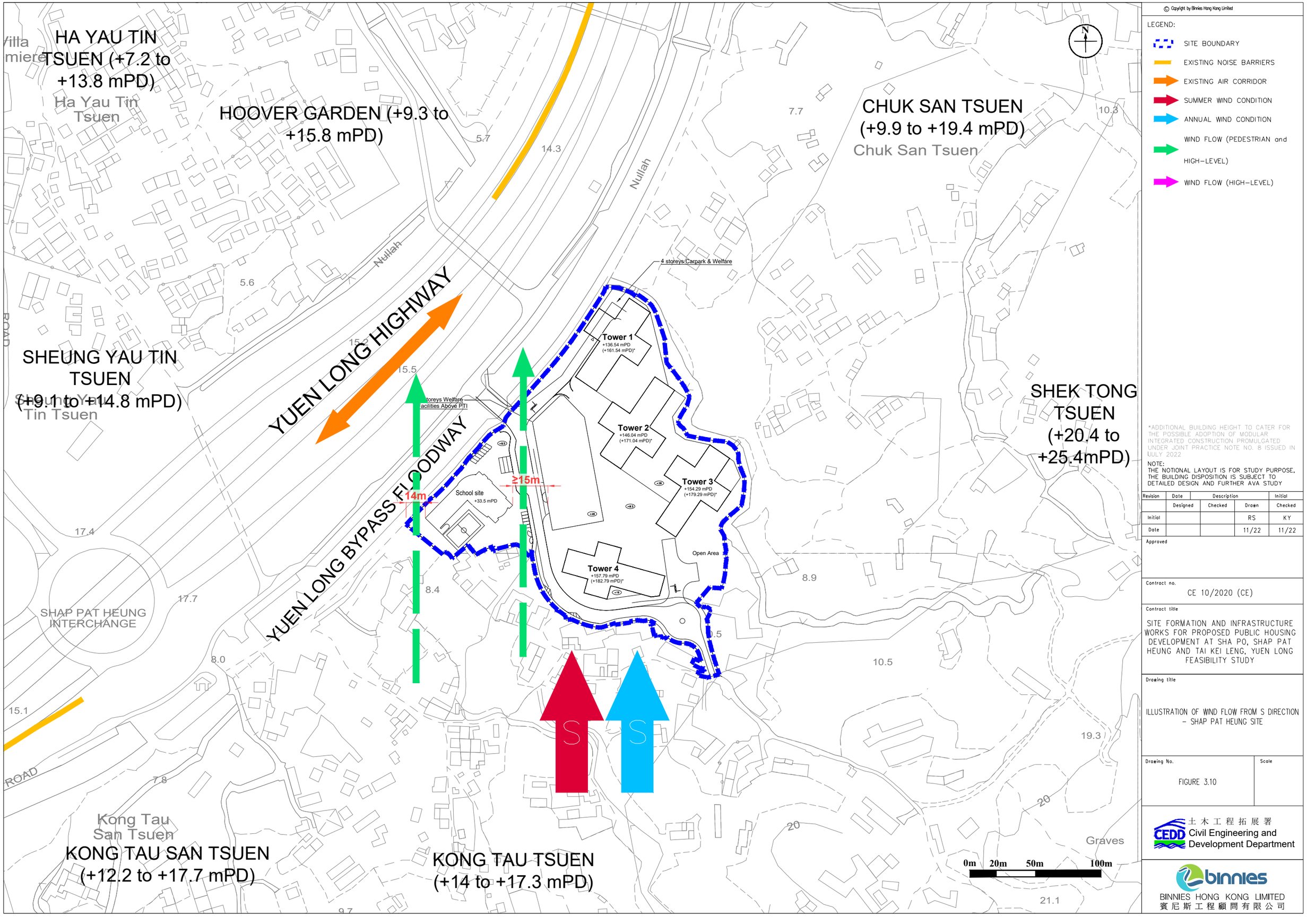
Drawing title
ILLUSTRATION OF WIND FLOW FROM NNE DIRECTION – SHAP PAT HEUNG SITE

Drawing No.
FIGURE 3.9

Scale

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- ANNUAL WIND CONDITION
- WIND FLOW (PEDESTRIAN and HIGH-LEVEL)
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CE 10/2020 (CE)

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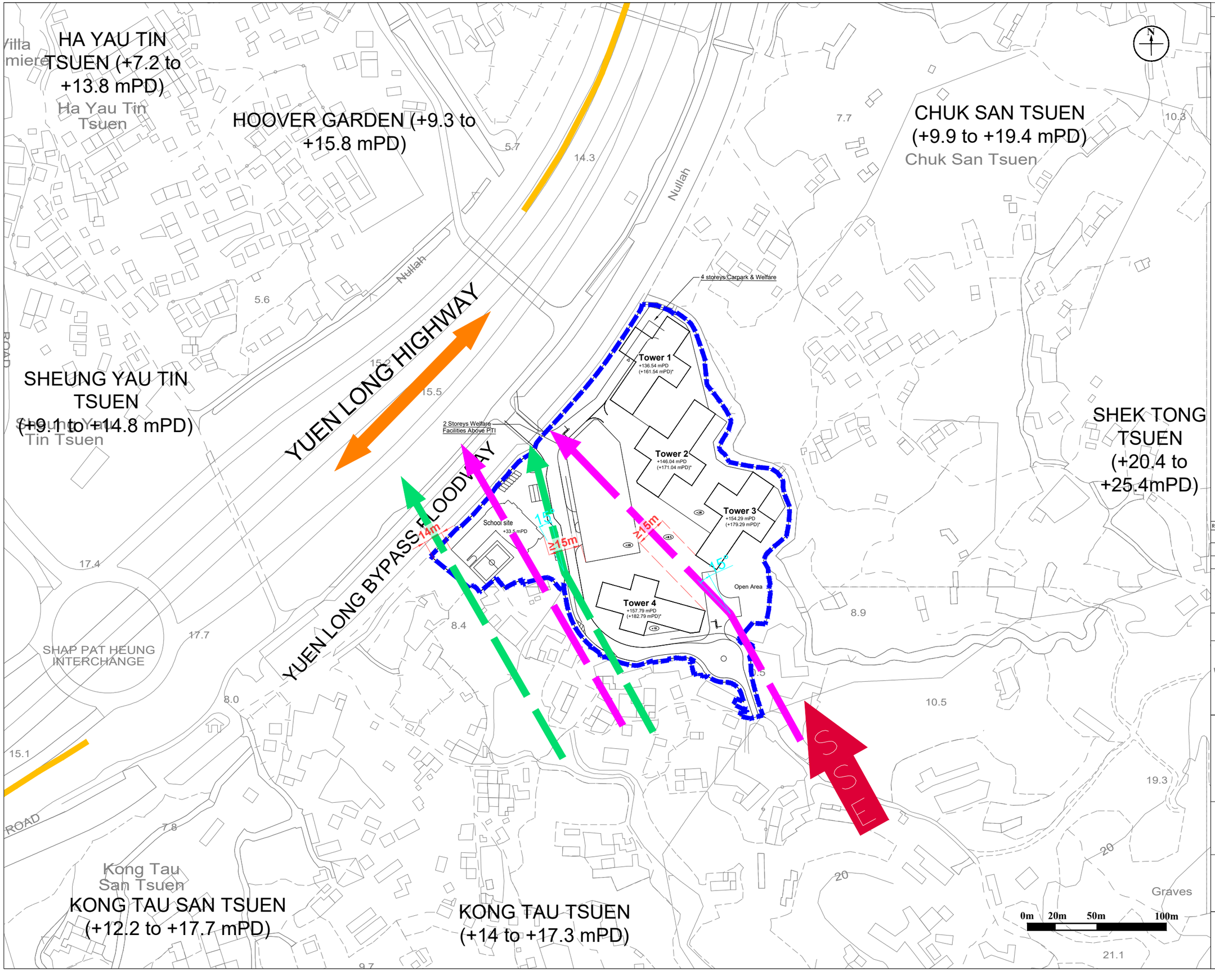
Drawing title
ILLUSTRATION OF WIND FLOW FROM S DIRECTION – SHAP PAT HEUNG SITE

Drawing No.
FIGURE 3.10

Scale

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LEGEND:

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SITE FORMATION AND INFRASTRUCTURE WORKS FOR PROPOSED PUBLIC HOUSING DEVELOPMENT AT SHA PO, SHAP PAT HEUNG AND TAI KEI LENG, YUEN LONG FEASIBILITY STUDY

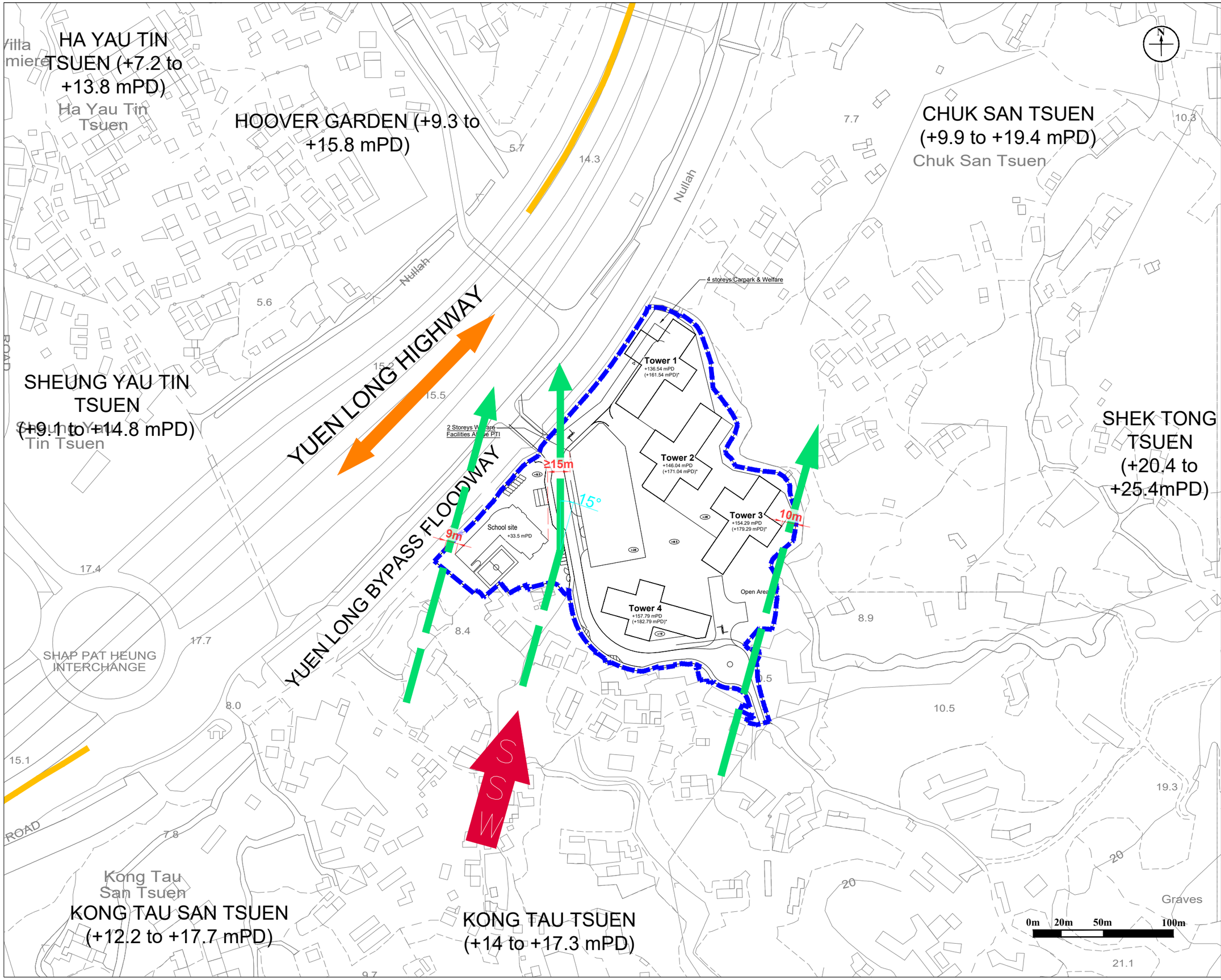
Drawing title
ILLUSTRATION OF WIND FLOW FROM SSE DIRECTION – SHAP PAT HEUNG SITE

Drawing No.
FIGURE 3.11

Scale

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- ANNUAL WIND CONDITION
- WIND FLOW (PEDESTRIAN and HIGH-LEVEL)
- WIND FLOW (HIGH-LEVEL)

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Contract title
SITE FORMATION AND INFRASTRUCTURE WORKS FOR PROPOSED PUBLIC HOUSING DEVELOPMENT AT SHA PO, SHAP PAT HEUNG AND TAI KEI LENG, YUEN LONG FEASIBILITY STUDY

Drawing title
ILLUSTRATION OF WIND FLOW FROM SSW DIRECTION – SHAP PAT HEUNG SITE

Drawing No.
FIGURE 3.12

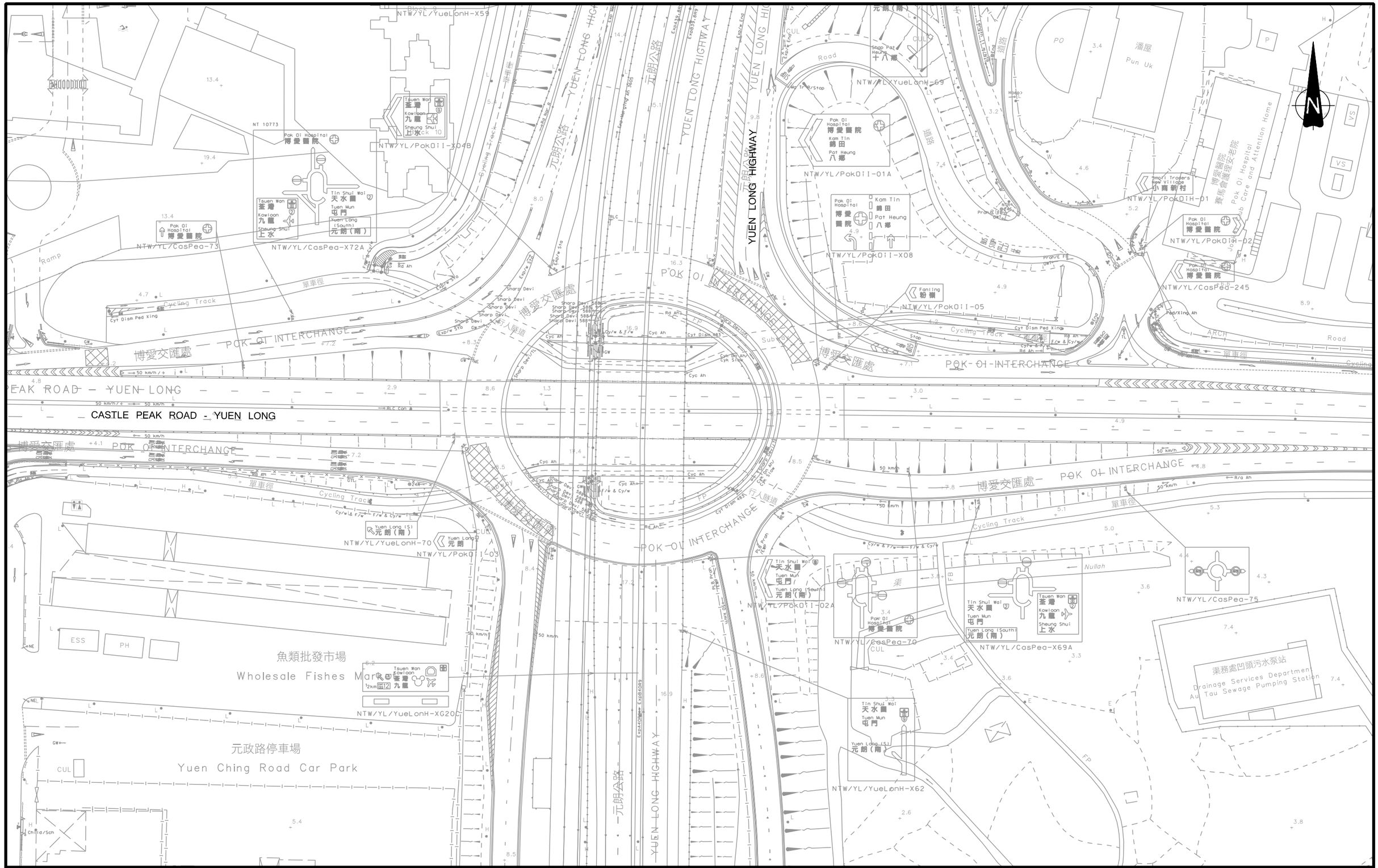
Scale

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APPENDIX B
EXISTING AND PROPOSED JUNCTION LAYOUTS

再造紙
recycled paper



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SITE FORMATION AND INFRASTRUCTURE WORKS FOR PROPOSED PUBLIC HOUSING DEVELOPMENTS AT SHA PO, SHAP PAT HEUNG AND TAI KEI LENG, YUEN LONG - FEASIBILITY STUDY

Drawing Title

EXISTING JUNCTION LAYOUT OF POK OI INTERCHANGE (J1)

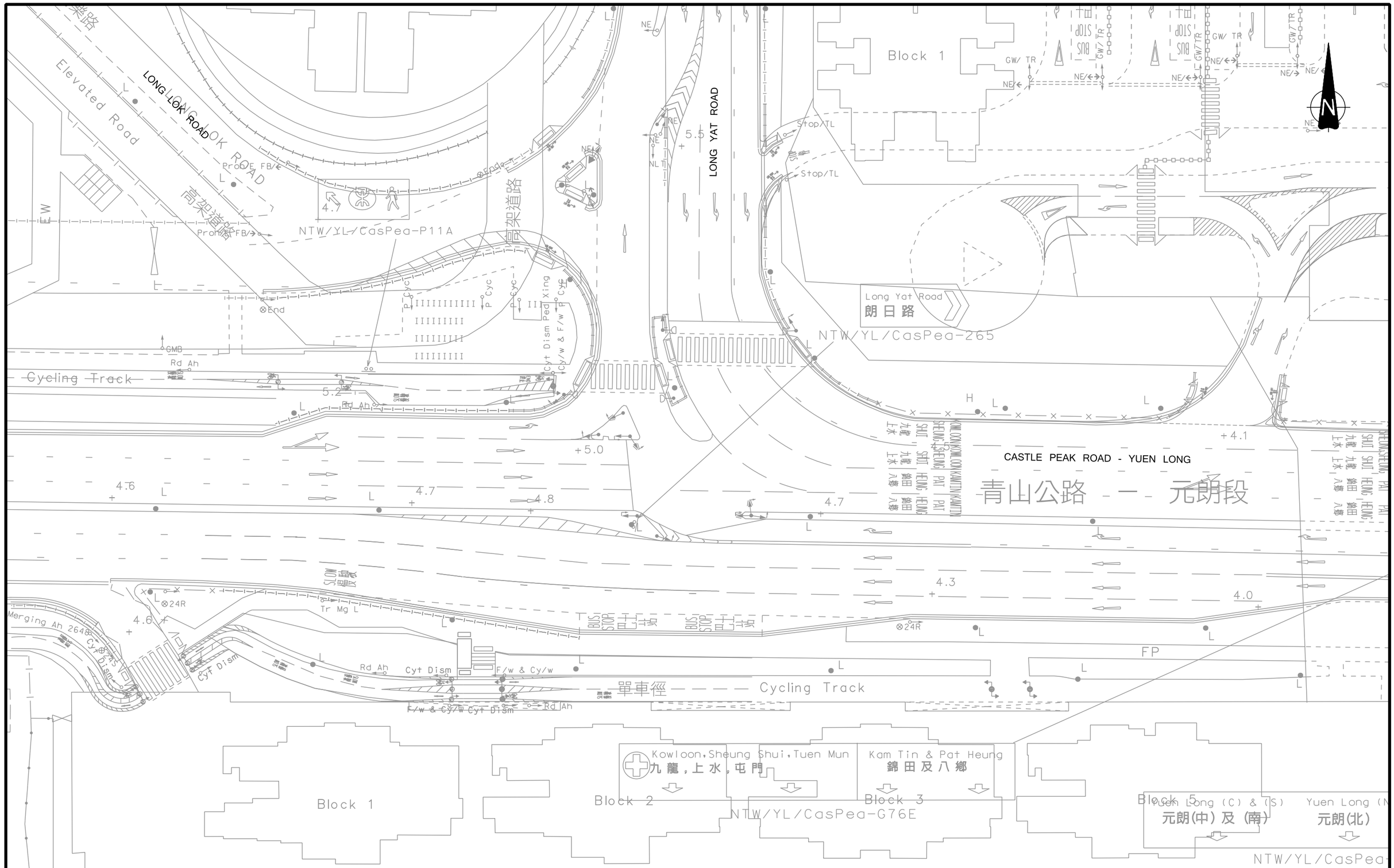
Designed	Checked	Scale	Date	Drawing No.	Rev.
CNS	YKP	1:1000(A3)	FEB 2021	B1	-

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SITE FORMATION AND INFRASTRUCTURE WORKS
FOR PROPOSED PUBLIC HOUSING DEVELOPMENTS
AT SHA PO, SHAP PAT HEUNG AND TAI KEI LENG,
YUEN LONG - FEASIBILITY STUDY

Drawing Title

EXISTING JUNCTION LAYOUT OF CASTLE PEAK ROAD - YUEN LONG / LONG YAT ROAD / PTI ACCESS (J2)

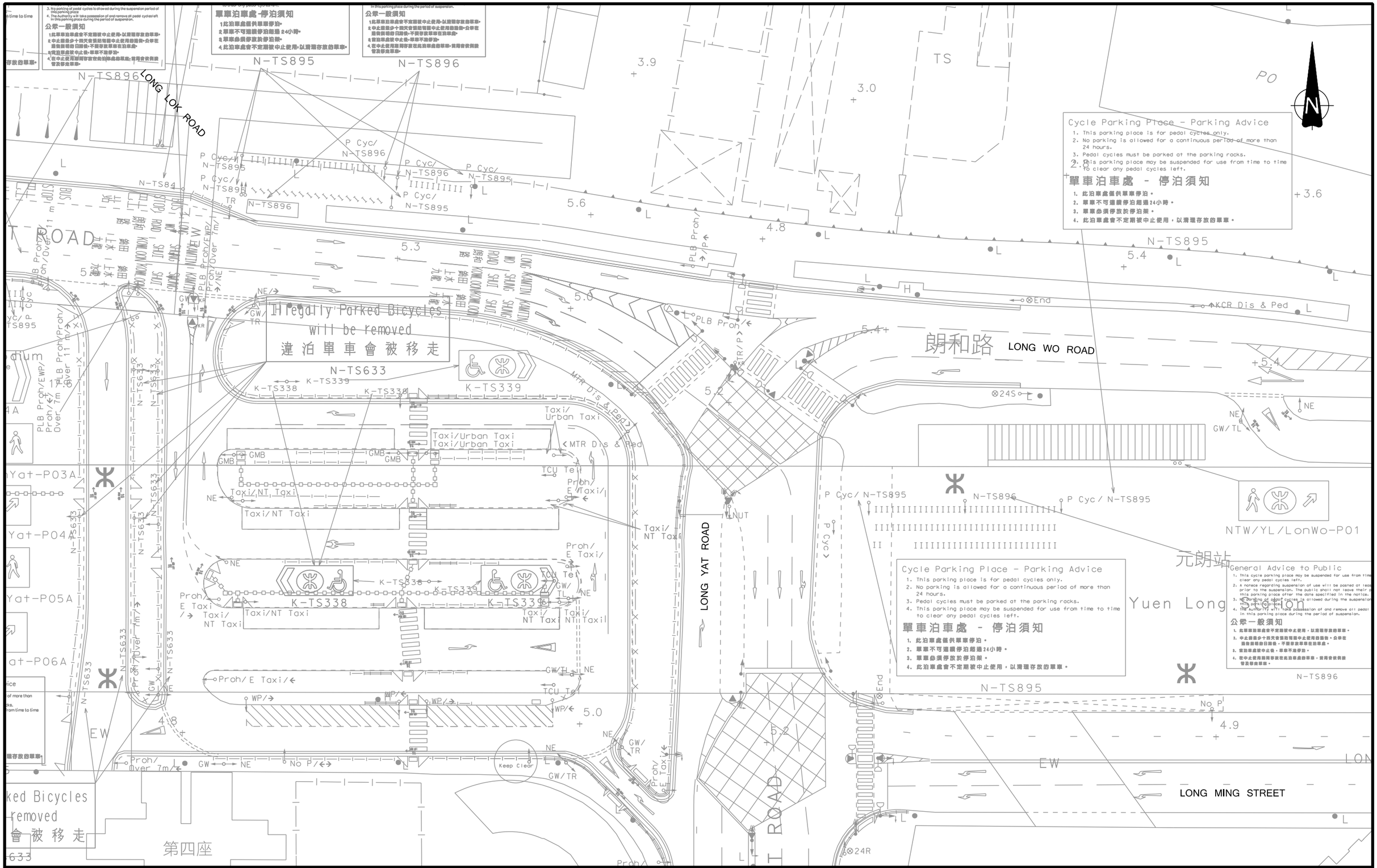
Designed	Checked	Scale	Date	Drawing No.	Rev.
CNS	YKP	1:500(A3)	FEB 2021	B2	-

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AGREEMENT NO. CE 10 / 2020 (CE) - SITE FORMATION AND INFRASTRUCTURE WORKS FOR PROPOSED PUBLIC HOUSING DEVELOPMENTS AT SHA PO, SHAP PAT HEUNG AND TAI KEI LENG, YUEN LONG - FEASIBILITY STUDY

Drawing Title

EXISTING JUNCTION LAYOUT OF LONG YAT ROAD / LONG WO ROAD / LONG MING STREET (J3)

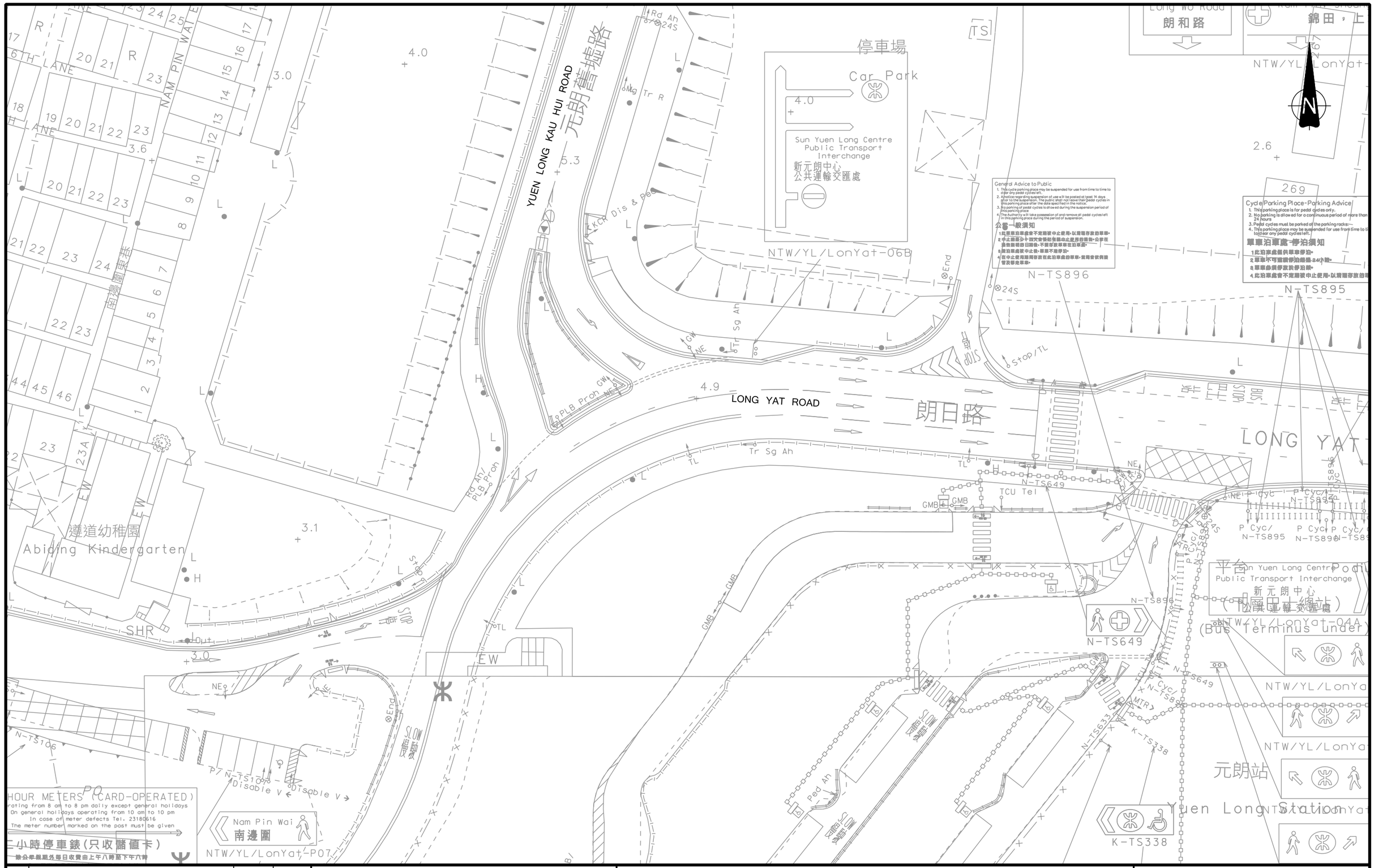
Designed	Checked	Scale	Date	Drawing No.	Rev.
CNS	YKP	1:500(A3)	FEB 2021	B3	-

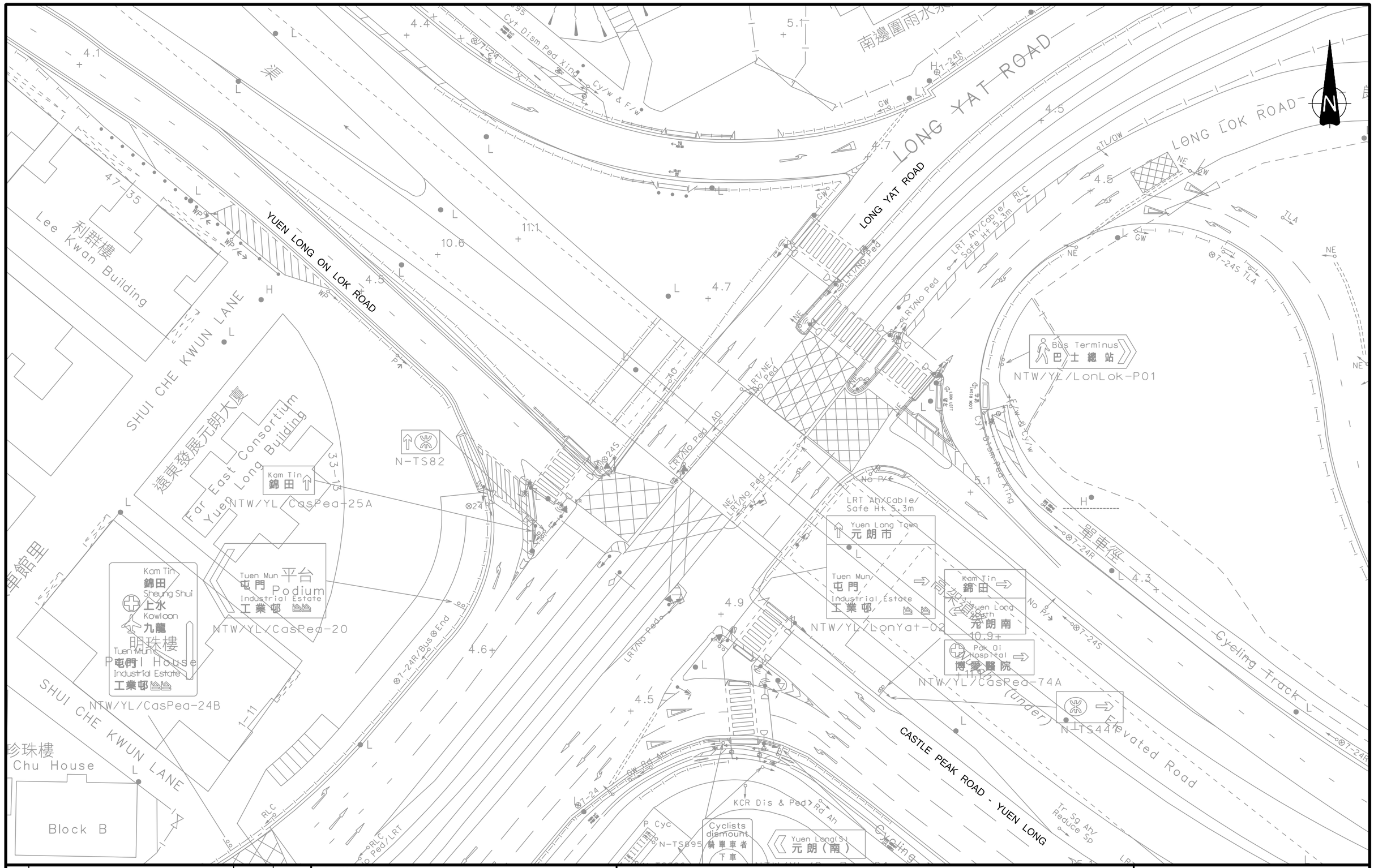
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YUEN LONG KAU HUI ROAD
元朗舊墟路
LONG YAT ROAD
朗日路
停車場
Car Park
Sun Yuen Long Centre
Public Transport
Interchange
新元朗中心
公共運輸交匯處
NTW/YL/LonYat-06B
N-TS896
N-TS895
N-TS649
K-TS338
N-TS106
P7 N-TS1066
Disable v
Nam Pin Wai
南邊圍
NTW/YL/LonYat-P07
NAM PIN WAI
南邊圍東巷
6TH LANE
遵道幼稚園
Abiding Kindergarten
元朗站
Yuen Long Station
平台
Public Transport Interchange
新元朗中心
(巴士總站下)
(Bus Terminus under)
NTW/YL/LonYat-04A
朗和路
錦田，上
NTW/YL/LonYat-
269
Cycle Parking Place-Parking Advice
1. This parking place is for pedal cycles only.
2. No parking is allowed for a continuous period of more than 24 hours
3. Pedal cycles must be parked at the parking racks.
4. This parking place may be suspended for use from time to time to clear any pedal cycles left.
單車泊車處-停泊須知
1.此泊車處僅供單車停泊。
2.單車不可連續停泊超過24小時。
3.單車必須停放於停泊架。
4.此泊車處會不定期被中止使用，以清理存放的
General Advice to Public
1. This cycle parking place may be suspended for use from time to time to clear any pedal cycles left.
2. Advice to the public on suspension of use will be posted at least 14 days prior to the suspending date. The public shall not leave their pedal cycles in this parking place after the date specified in the notice.
3. No parking of pedal cycles is allowed during the suspension period of this parking place
4. The Authority will take possession of and remove all pedal cycles left in this parking place during the period of suspension.
公眾一般須知
1.此單車泊車處會不定期被中止使用，以清理存放的單車。
2.中止單車泊車處安排前有關中止使用的單車，必須在通告指明的日期後，不得存放單車在泊車處。
3.單車泊車處被中止後，單車不准停泊。
4.在中止使用期間有關存放在此泊車處的單車，當局會收回該等非法停走單車。
HOUR METERS (CARD-OPERATED)
Operating from 8 am to 8 pm daily except general holidays
On general holidays operating from 10 am to 10 pm
In case of meter defects Tel. 23180616
The meter number marked on the post must be given
二小時停車錶(只收儲值卡)
除公眾假期外每日收費由上午八時至下午八時
4.0
3.0
5.3
4.9
3.1
3.6
2.6
3.0
SHR
EW
SLOW
STOP
Stop/TL
GMB
TCU Tel
P Cyc/
N-TS895
N-TS896
K-TS338
MTR
Ped Ad
Tr Sg Ah
Ped Ad/PLB Prohi
Sub Ped Dis & Ped
Sub Ped
Ped Ad
Sub Ped
Sub Ped
Sub Ped



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AGREEMENT NO. CE 10 / 2020 (CE) -
SITE FORMATION AND INFRASTRUCTURE WORKS
FOR PROPOSED PUBLIC HOUSING DEVELOPMENTS
AT SHA PO, SHAP PAT HEUNG AND TAI KEI LENG,
YUEN LONG - FEASIBILITY STUDY

Drawing Title

EXISTING JUNCTION LAYOUT OF CASTLE PEAK ROAD - YUEN LONG / YUEN LONG ON LOK ROAD / LONG YAT ROAD (J5)

Designed	Checked	Scale	Date	Drawing No.	Rev.
CNS	YKP	1:500(A3)	FEB 2021	B5	-

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CASTLE PEAK - YUEN LONG

SHUI CHE KWUN LANE

LONG YAT ROAD

FUNG CHEUNG ROAD

Fung Cheung Road Garden

Cycle Parking Place-Parking Advice
1. This parking place is for pedal cycles only.
2. No parking is allowed for a continuous period of more than 24 hours
3. Pedal cycles must be parked at the parking racks.
4. This parking place may be suspended for use from time to time to clear any pedal cycles left.

單車泊車處 -停泊須知
1.此泊車處僅供單車停泊。
2.單車不可連續停泊超過 24小時。
3.單車必須停放於停泊架。
4.此泊車處會不定期被中止使用，以清理存放的單車。

General Advice to Public
1. This cycle parking place may be suspended for use from time to time to clear any pedal cycles left.
2. A notice regarding suspension of use will be posted at least 14 days prior to the suspension. The public shall not leave their pedal cycles in this parking place after the date specified in the notice.
3. No parking of pedal cycles is allowed during the suspension period at this parking place
4. The Authority will take possession of and remove all pedal cycles left in this parking place during the period of suspension.

公眾一般須知
1.此單車泊車處會不定期被中止使用，以清理存放的單車。
2.中止使用前14天會張貼有關中止使用的通告。公眾在通告指明的日期後，不得存放單車在泊車處。
3.暫時中止使用期間，單車不准停放。
4.在中止使用期間存放在泊車處的單車，會被移走。

Rev.	Description	Checked	Date
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AGREEMENT NO. CE 10 / 2020 (CE) -
SITE FORMATION AND INFRASTRUCTURE WORKS FOR PROPOSED PUBLIC HOUSING DEVELOPMENTS AT SHA PO, SHAP PAT HEUNG AND TAI KEI LENG, YUEN LONG - FEASIBILITY STUDY

Drawing Title

EXISTING JUNCTION LAYOUT OF CASTLE PEAK ROAD - YUEN LONG / FUNG CHEUNG ROAD (J6)

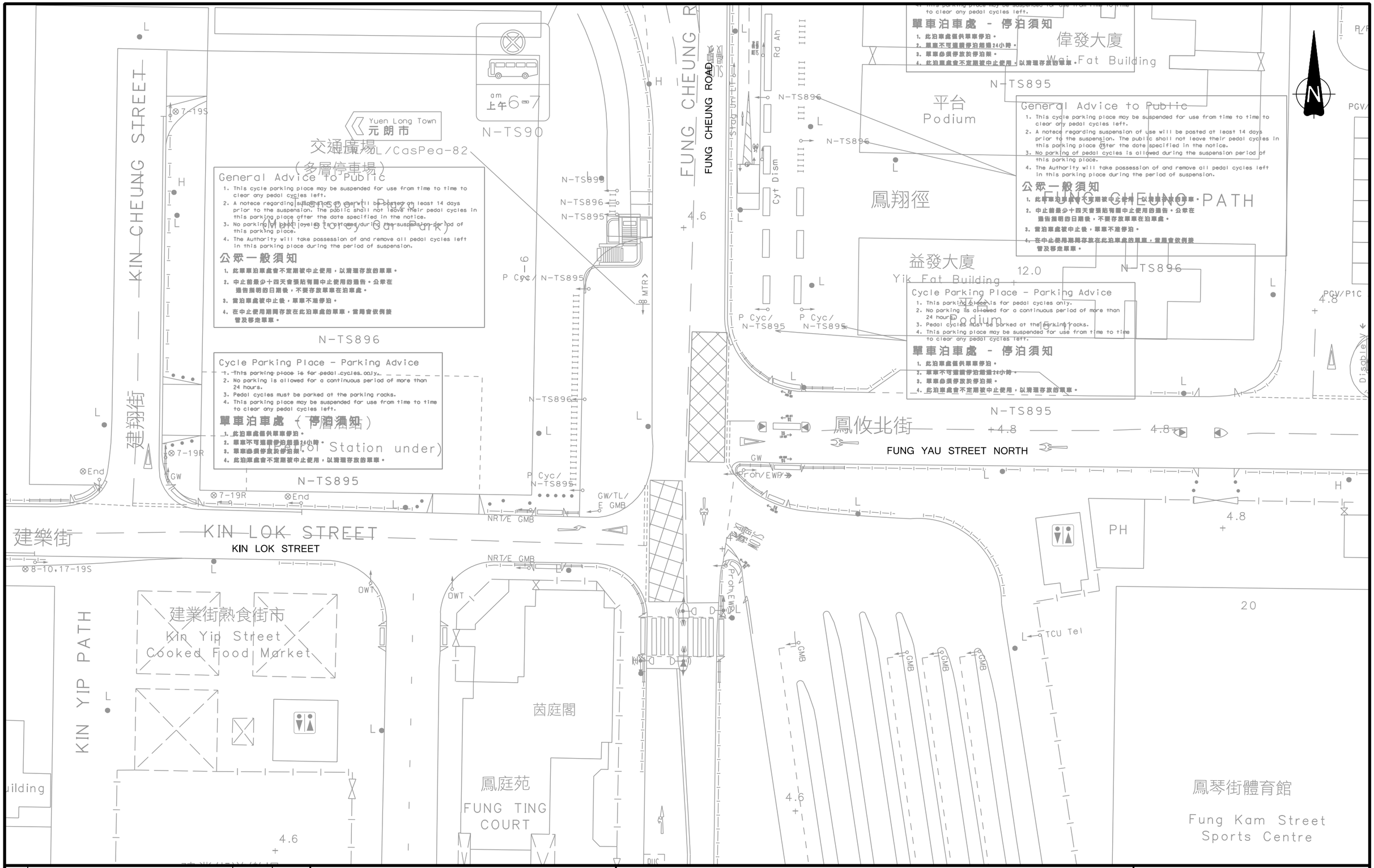
Designed	Checked	Scale	Date	Drawing No.	Rev.
CNS	YKP	1:500(A3)	FEB 2021	B6	-

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Drawing Title

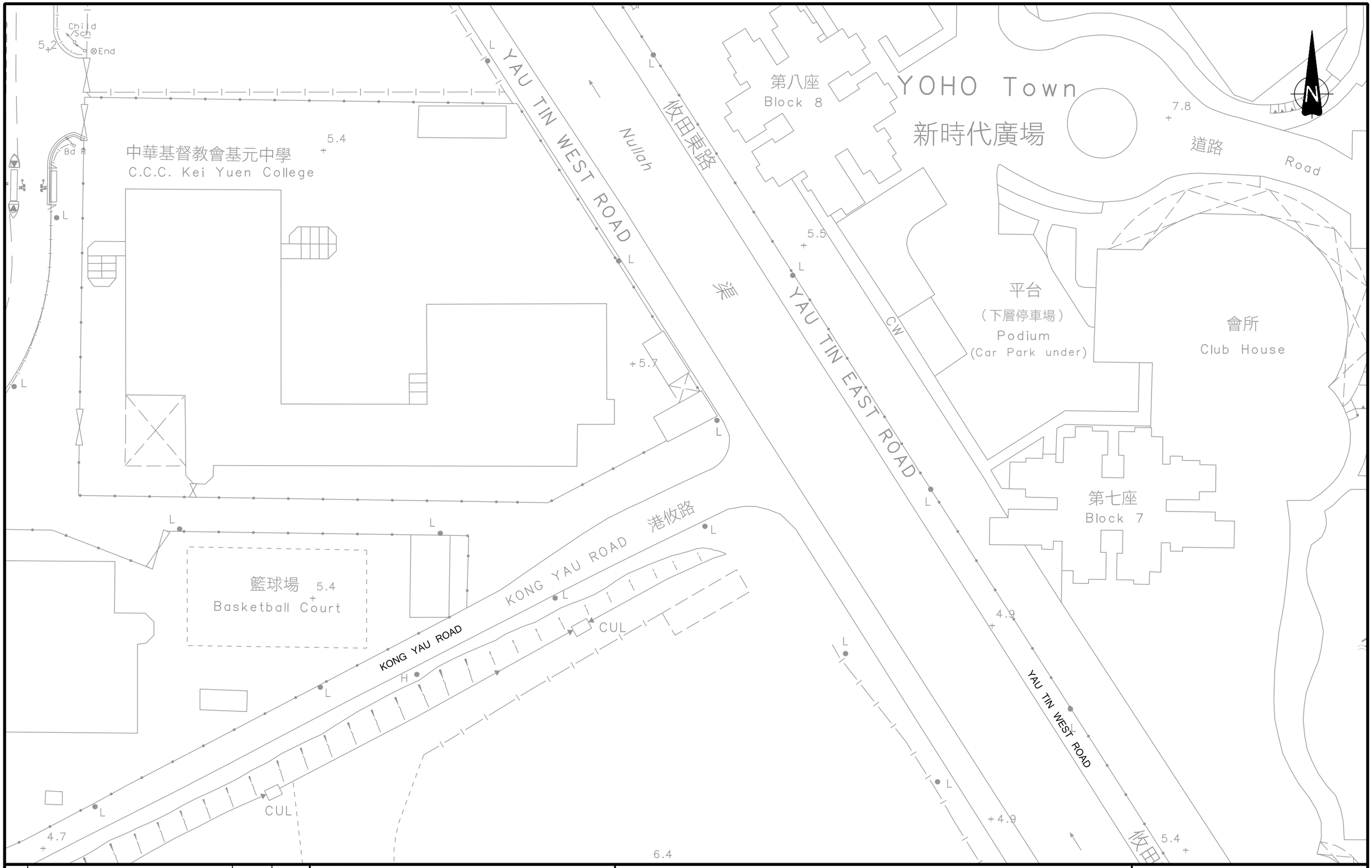
EXISTING JUNCTION LAYOUT OF FUNG CHEUNG ROAD / KIN LOK STREET / FUNG YAU STREET NORTH (J7)

Designed	Checked	Scale	Date	Drawing No.	Rev.
CNS	YKP	1:500(A3)	FEB 2021	B7	-

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AGREEMENT NO. CE 10 / 2020 (CE) -
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FOR PROPOSED PUBLIC HOUSING DEVELOPMENTS
AT SHA PO, SHAP PAT HEUNG AND TAI KEI LENG,
YUEN LONG - FEASIBILITY STUDY

Drawing Title

EXISTING JUNCTION LAYOUT OF KONG YAU ROAD / YAU TIN WEST ROAD (J8)

Designed	Checked	Scale	Date	Drawing No.	Rev.
CNS	YKP	1:500(A3)	FEB 2021	B8	-

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元朗消防局
en Long Fire Station

救援訓練中心
Rescue Training Centre

元朗救護站
Yuen Long
Ambulance Depot

佛教榮茵學校
Buddhist Wing Yan School

TS

General Advice to Public
1. This cycle parking place may be suspended for use from time to time to clear any pedal cycles left.
2. A notice regarding suspension of use will be posted at least 14 days prior to the suspension. The public shall not leave their pedal cycles in this parking place after the date specified in the notice.
3. No parking of pedal cycles is allowed during the suspension period of this parking place.
4. The Author may impound, dispose of and remove all pedal cycles left in this parking place during the period of suspension.

公眾一般須知
1. 此單車泊車處會不定期被中止使用，以清理存放的單車。
2. 中止前最少十四天會張貼有關中止使用的通告。公眾在通告指明的日期後，不得存放單車在泊車處。
3. 當泊車處被中止使，單車不准停泊。
4. 在中止使用期間存放在此泊車處的單車，當局會依例接管及移走單車。

Yuen Long Divisional Fire Station 元朗消防分區

Cycle Parking Place - Parking Advice
1. This parking place is for pedal cycles only.
2. No parking is allowed for a continuous period of more than 24 hours.
3. Pedal cycles must be parked at the parking racks.
4. This parking place may be suspended for use from time to time to clear any pedal cycles left.

單車泊車處 - 停泊須知
1. 此泊車處僅供單車停泊。
2. 單車不可連續停泊超過24小時。
3. 單車必須停放於停泊架。
4. 此泊車處會不定期被中止使用，以清理存放的單車。

N-TS895
+7.0
N-TS896
+7.1
N-TS895
5.9
5.5
5.6
5.7
5.5
4.8+
6.2
6.4
5.9
+5.3
12.6
+6.6
P Cyc/ N-TS895
P Cyc/ N-TS896
P Cyc/ N-TS895
KONG YAU ROAD
港攸路
FUNG CHEUNG ROAD
鳳翔路
End
SHR
7-24S
8-10,17-19S
WP
88
100
Tai Tong 大業
+6.6NTW/YL/FunChe-02A
YL/FunChe-01A
第十五座
Block 15
第一座
Block 1
第二座
Block 2
譽88
Residence 88

Rev.	Description	Checked	Date
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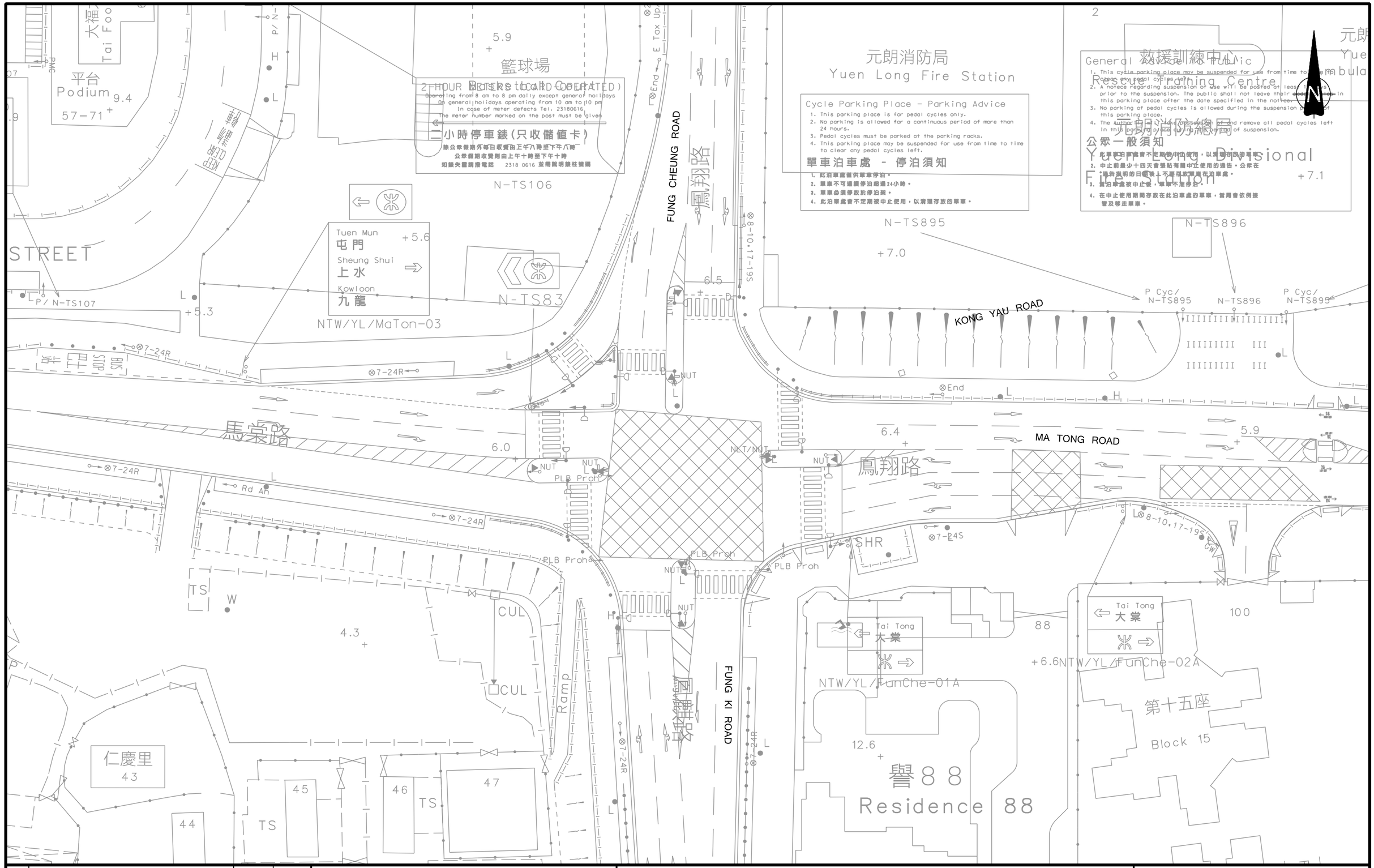
Project Title
AGREEMENT NO. CE 10 / 2020 (CE) -
SITE FORMATION AND INFRASTRUCTURE WORKS FOR PROPOSED PUBLIC HOUSING DEVELOPMENTS AT SHA PO, SHAP PAT HEUNG AND TAI KEI LENG, YUEN LONG - FEASIBILITY STUDY

Drawing Title
EXISTING JUNCTION LAYOUT OF FUNG CHEUNG ROAD / KONG YAU ROAD (J9)

Designed	Checked	Scale	Date	Drawing No.	Rev.
CNS	YKP	1:500(A3)	FEB 2021	B9	-

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Civil Engineering and Development Department
BINNIES HONG KONG LIMITED 賓尼斯工程顧問有限公司
SYSTRA MVA

CHK50518210/TIA_S&T/F211.DGN/DAL/19FEB21



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Project Title

AGREEMENT NO. CE 10 / 2020 (CE) -
SITE FORMATION AND INFRASTRUCTURE WORKS FOR PROPOSED PUBLIC HOUSING DEVELOPMENTS AT SHA PO, SHAP PAT HEUNG AND TAI KEI LENG, YUEN LONG - FEASIBILITY STUDY

Drawing Title

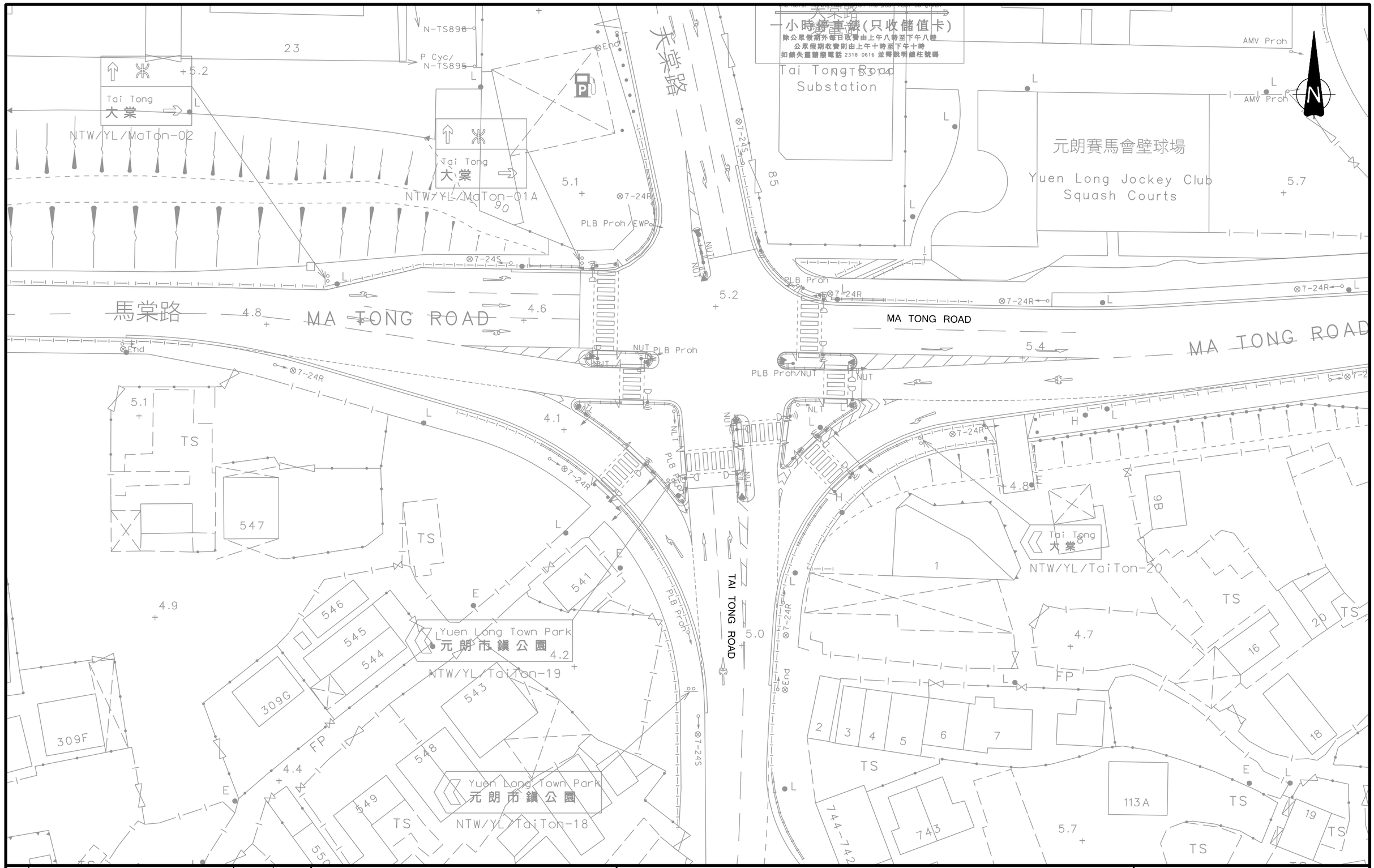
EXISTING JUNCTION LAYOUT OF FUNG CHEUNG ROAD / MA TONG ROAD / FUNG KI ROAD (J10)

Designed	Checked	Scale	Date	Drawing No.	Rev.
CNS	YKP	1:500(A3)	FEB 2021	B10	-

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Project Title

AGREEMENT NO. CE 10 / 2020 (CE) -
SITE FORMATION AND INFRASTRUCTURE WORKS
FOR PROPOSED PUBLIC HOUSING DEVELOPMENTS
AT SHA PO, SHAP PAT HEUNG AND TAI KEI LENG,
YUEN LONG - FEASIBILITY STUDY

Drawing Title

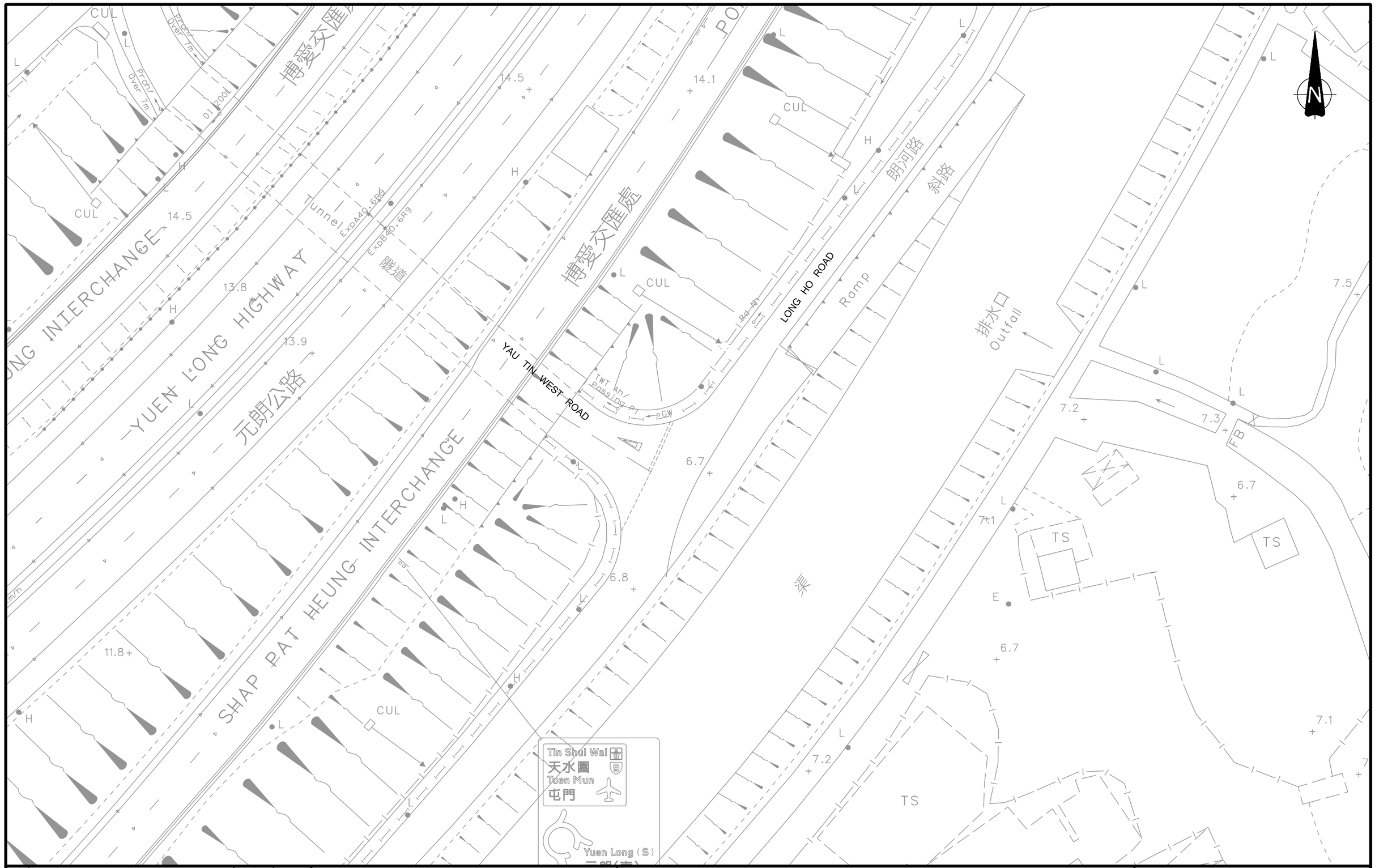
EXISTING JUNCTION LAYOUT OF TAI TONG ROAD / MA TONG ROAD (J11)

Designed	Checked	Scale	Date	Drawing No.	Rev.
CNS	YKP	1:500(A3)	FEB 2021	B11	-

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Project Title

AGREEMENT NO. CE 10 / 2020 (CE) -
SITE FORMATION AND INFRASTRUCTURE WORKS
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AT SHA PO, SHAP PAT HEUNG AND TAI KEI LENG,
YUEN LONG - FEASIBILITY STUDY

Drawing Title

EXISTING JUNCTION LAYOUT OF YAU TIN WEST ROAD / LONG HO ROAD (J12)

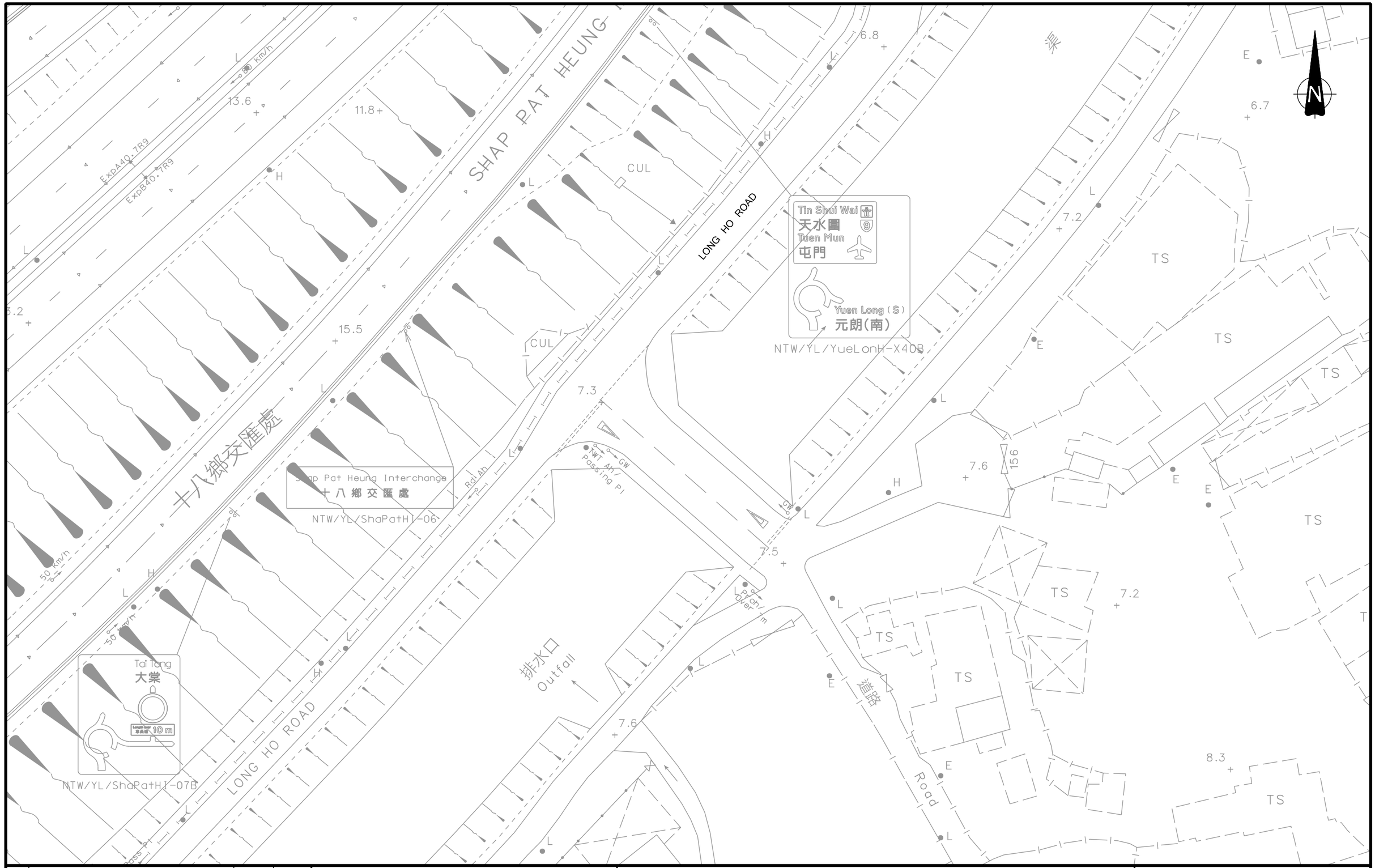
Designed	Checked	Scale	Date	Drawing No.	Rev.
CNS	YKP	1:500(A3)	FEB 2021	B12	-

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Project Title

AGREEMENT NO. CE 10 / 2020 (CE) -
SITE FORMATION AND INFRASTRUCTURE WORKS
FOR PROPOSED PUBLIC HOUSING DEVELOPMENTS
AT SHA PO, SHAP PAT HEUNG AND TAI KEI LENG,
YUEN LONG - FEASIBILITY STUDY

Drawing Title

EXISTING JUNCTION LAYOUT OF LONG HO ROAD / LOCAL ROAD (J13)

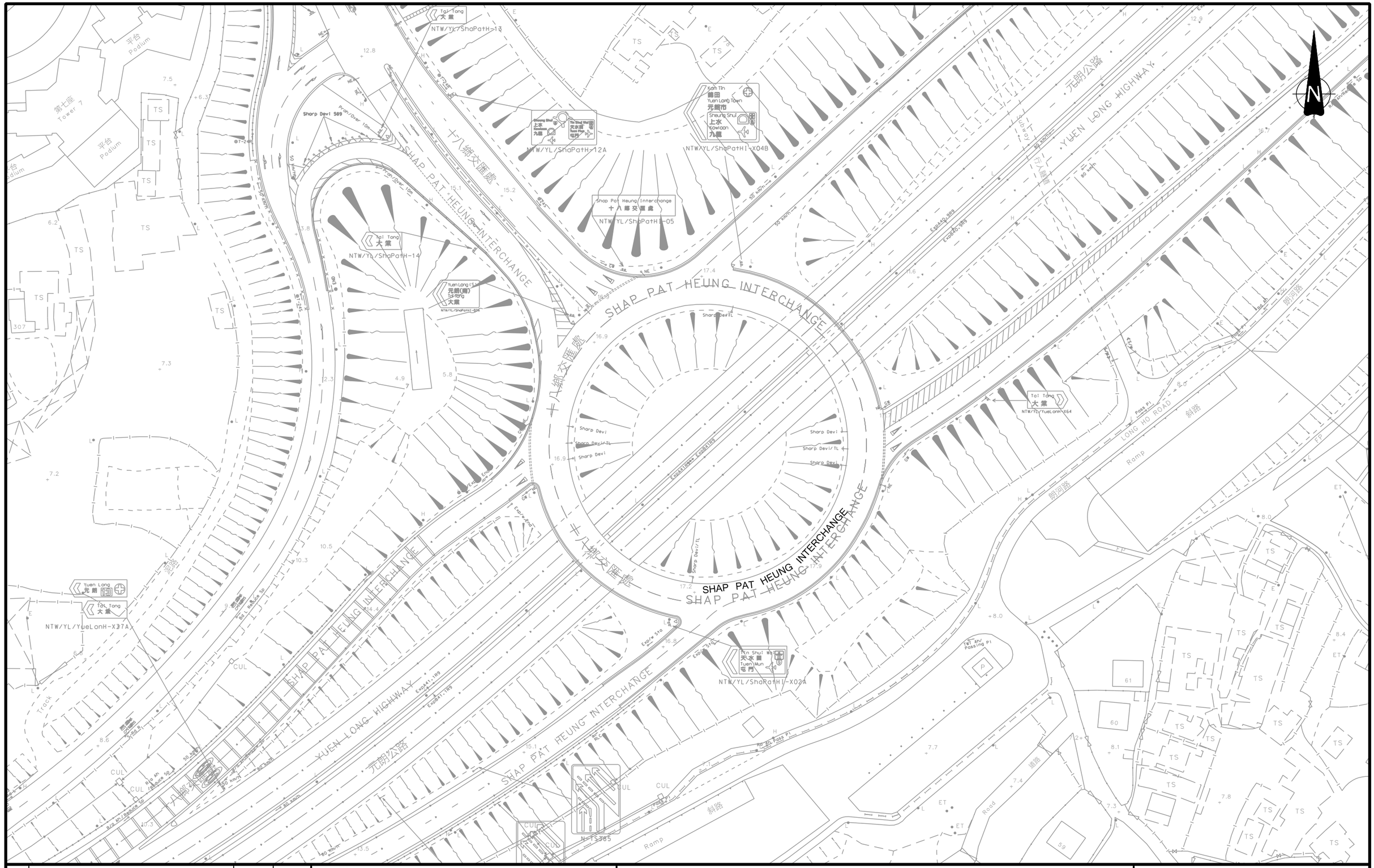
Designed	Checked	Scale	Date	Drawing No.	Rev.
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Project Title

AGREEMENT NO. CE 10 / 2020 (CE) -
SITE FORMATION AND INFRASTRUCTURE WORKS
FOR PROPOSED PUBLIC HOUSING DEVELOPMENTS
AT SHA PO, SHAP PAT HEUNG AND TAI KEI LENG,
YUEN LONG - FEASIBILITY STUDY

Drawing Title

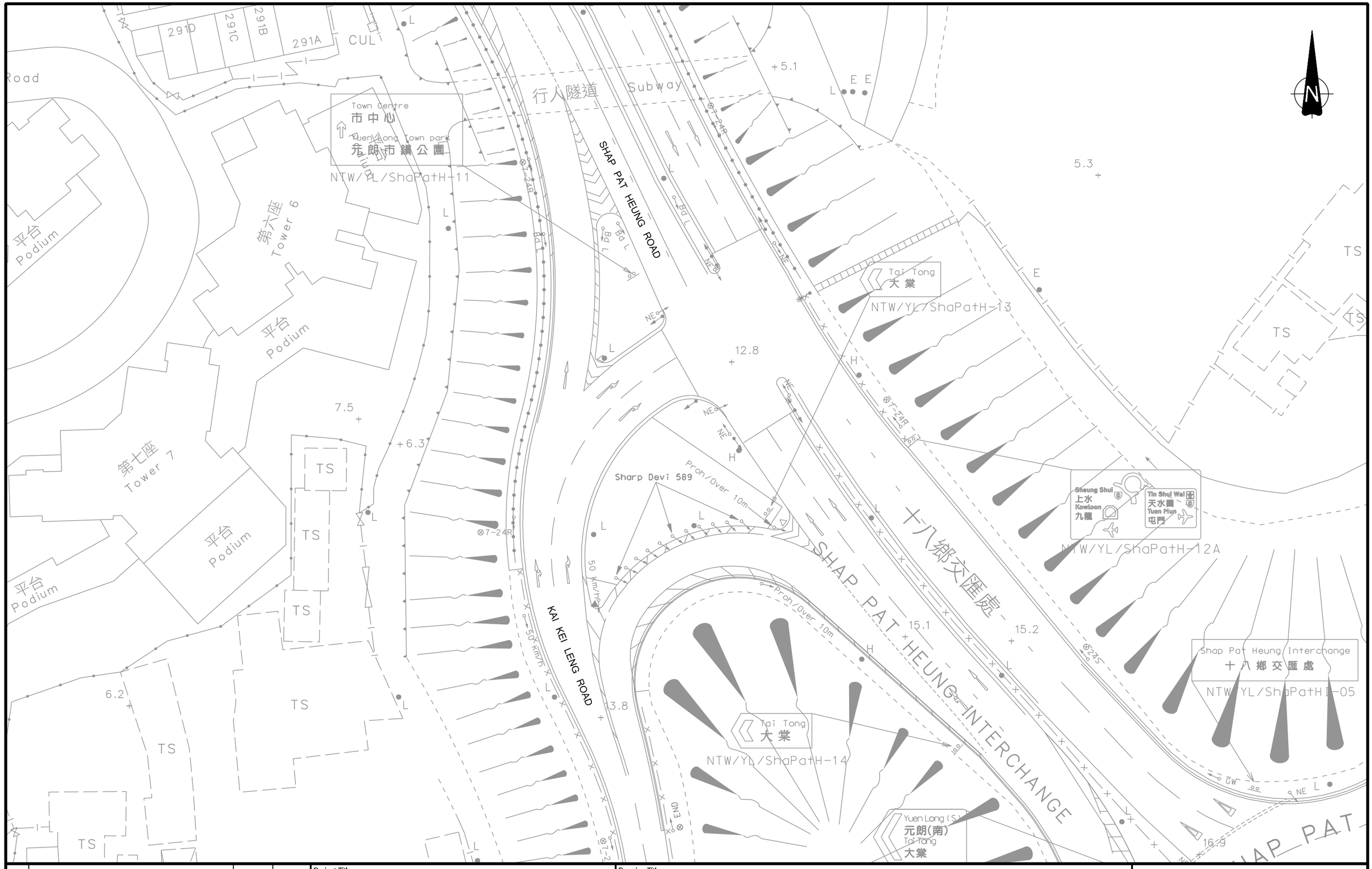
EXISTING JUNCTION LAYOUT OF SHAP PAT HEUNG INTERCHANGE (J14)

Designed	Checked	Scale	Date	Drawing No.	Rev.
CNS	YKP	1:1000(A3)	FEB 2021	B14	-

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Project Title

AGREEMENT NO. CE 10 / 2020 (CE) -
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AT SHA PO, SHAP PAT HEUNG AND TAI KEI LENG,
YUEN LONG - FEASIBILITY STUDY

Drawing Title

EXISTING JUNCTION LAYOUT OF SHAP PAT HEUNG ROAD / TAI KEI LENG ROAD (J15)

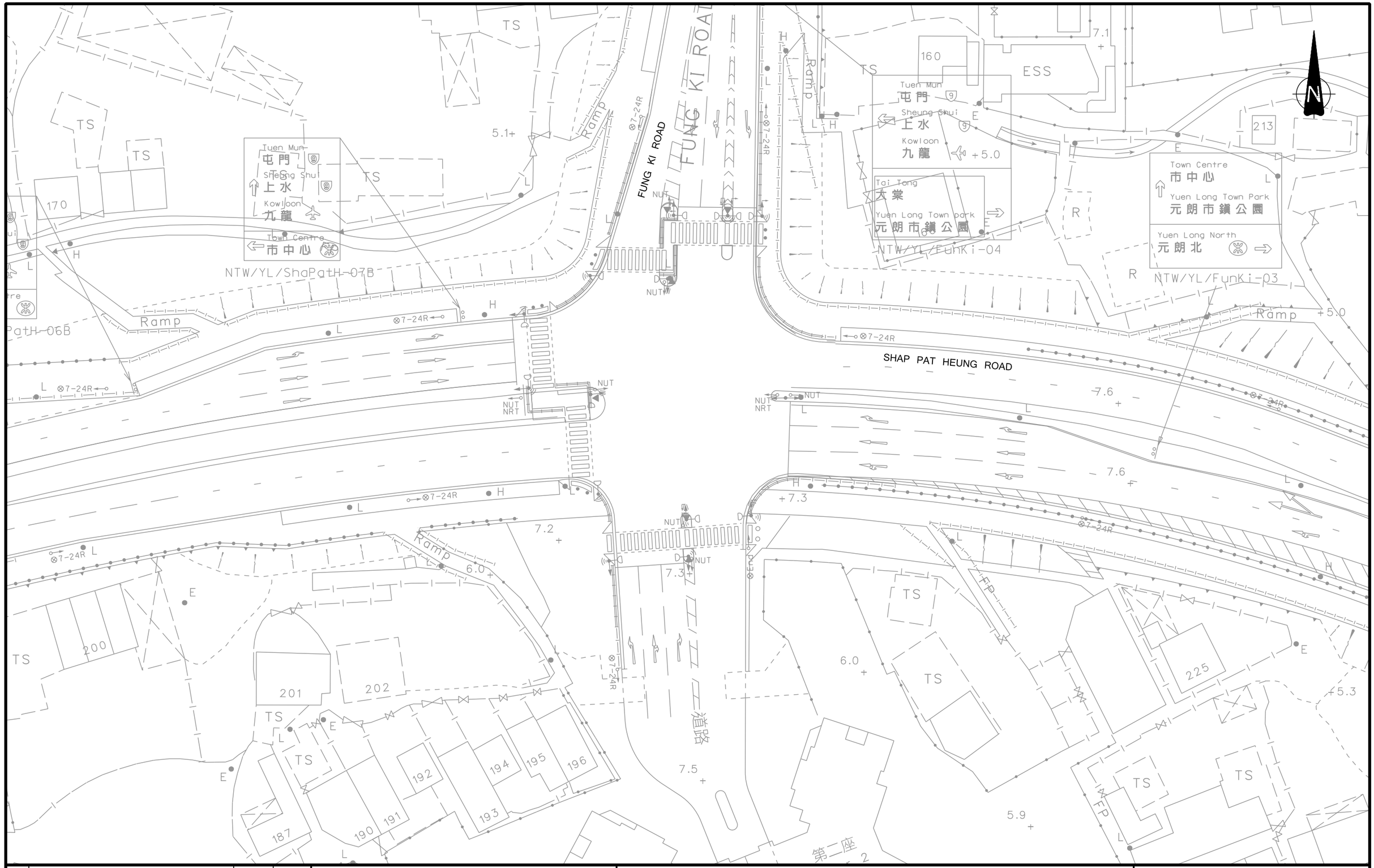
Designed	Checked	Scale	Date	Drawing No.	Rev.
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Project Title

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SITE FORMATION AND INFRASTRUCTURE WORKS
FOR PROPOSED PUBLIC HOUSING DEVELOPMENTS
AT SHA PO, SHAP PAT HEUNG AND TAI KEI LENG,
YUEN LONG - FEASIBILITY STUDY

Drawing Title

EXISTING JUNCTION LAYOUT OF SHAP PAT HEUNG ROAD / FUNG KI ROAD (J16)

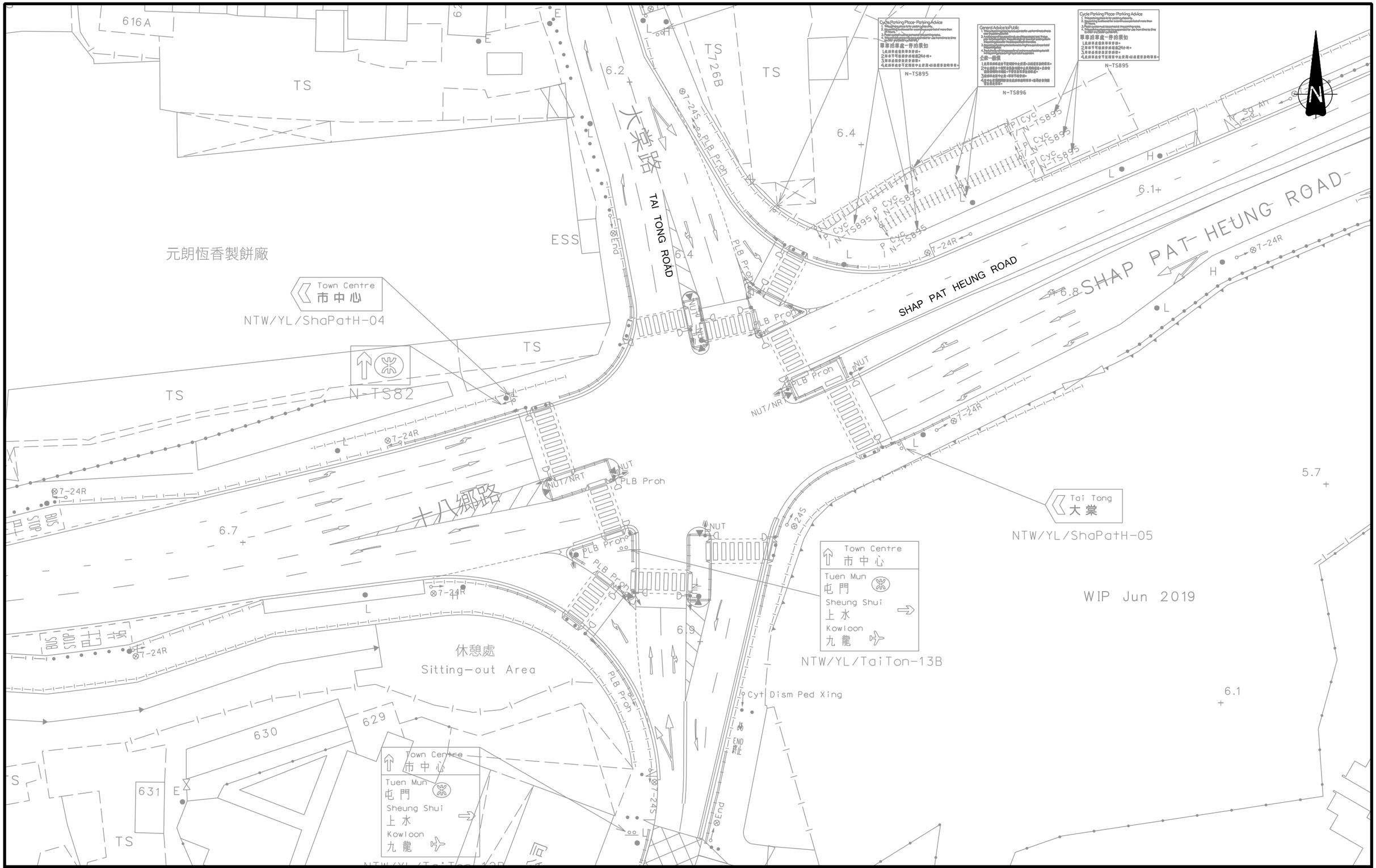
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Project Title

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SITE FORMATION AND INFRASTRUCTURE WORKS FOR PROPOSED PUBLIC HOUSING DEVELOPMENTS AT SHA PO, SHAP PAT HEUNG AND TAI KEI LENG, YUEN LONG - FEASIBILITY STUDY

Drawing Title

EXISTING JUNCTION LAYOUT OF SHAP PAT HEUNG ROAD / TAI TONG ROAD (J17)

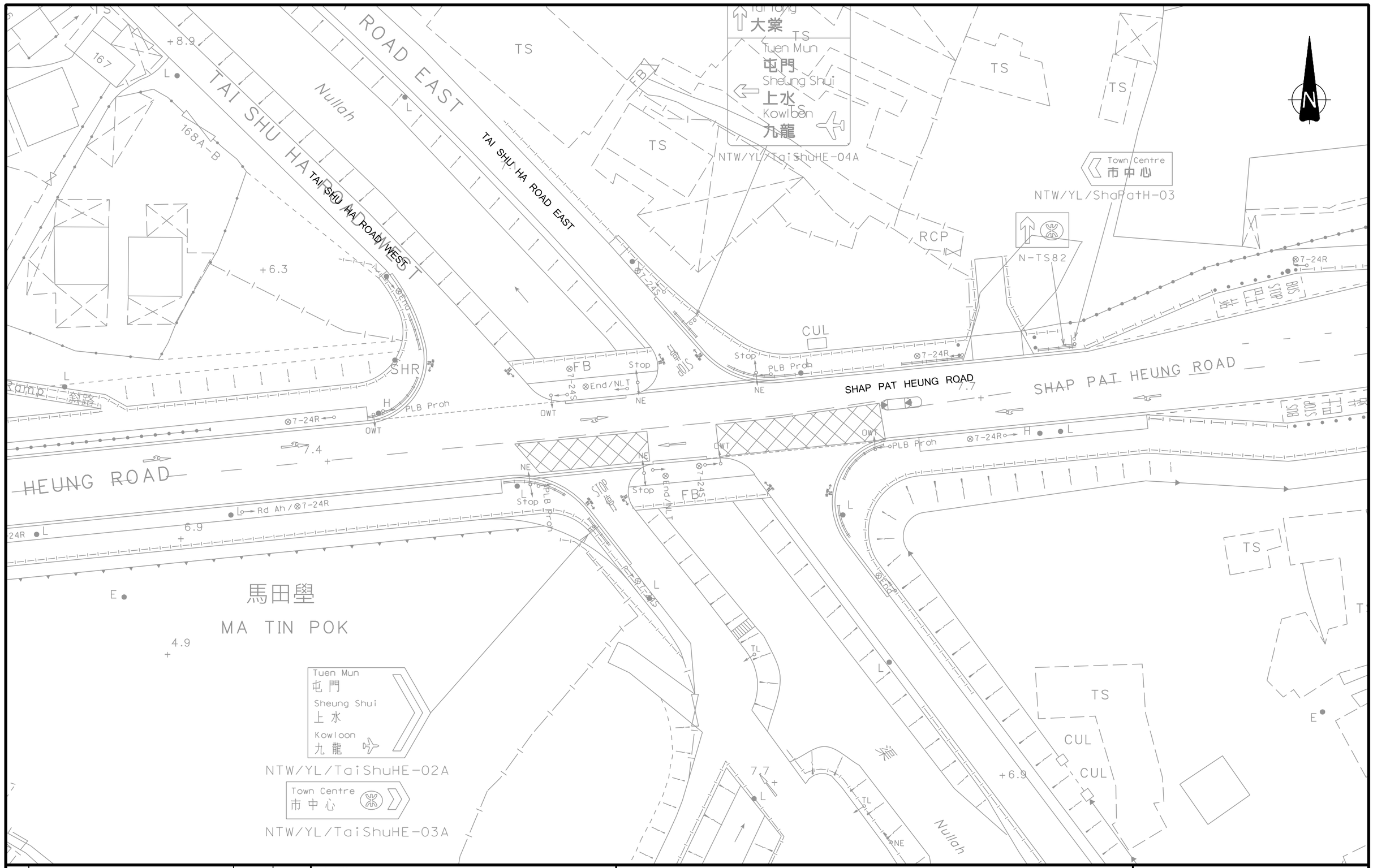
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AT SHA PO, SHAP PAT HEUNG AND TAI KEI LENG,
YUEN LONG - FEASIBILITY STUDY

Drawing Title

EXISTING JUNCTION LAYOUT OF SHAP PAT HEUNG ROAD / TAI SHU HA ROAD EAST / TAI SHU HA ROAD WEST (J18)

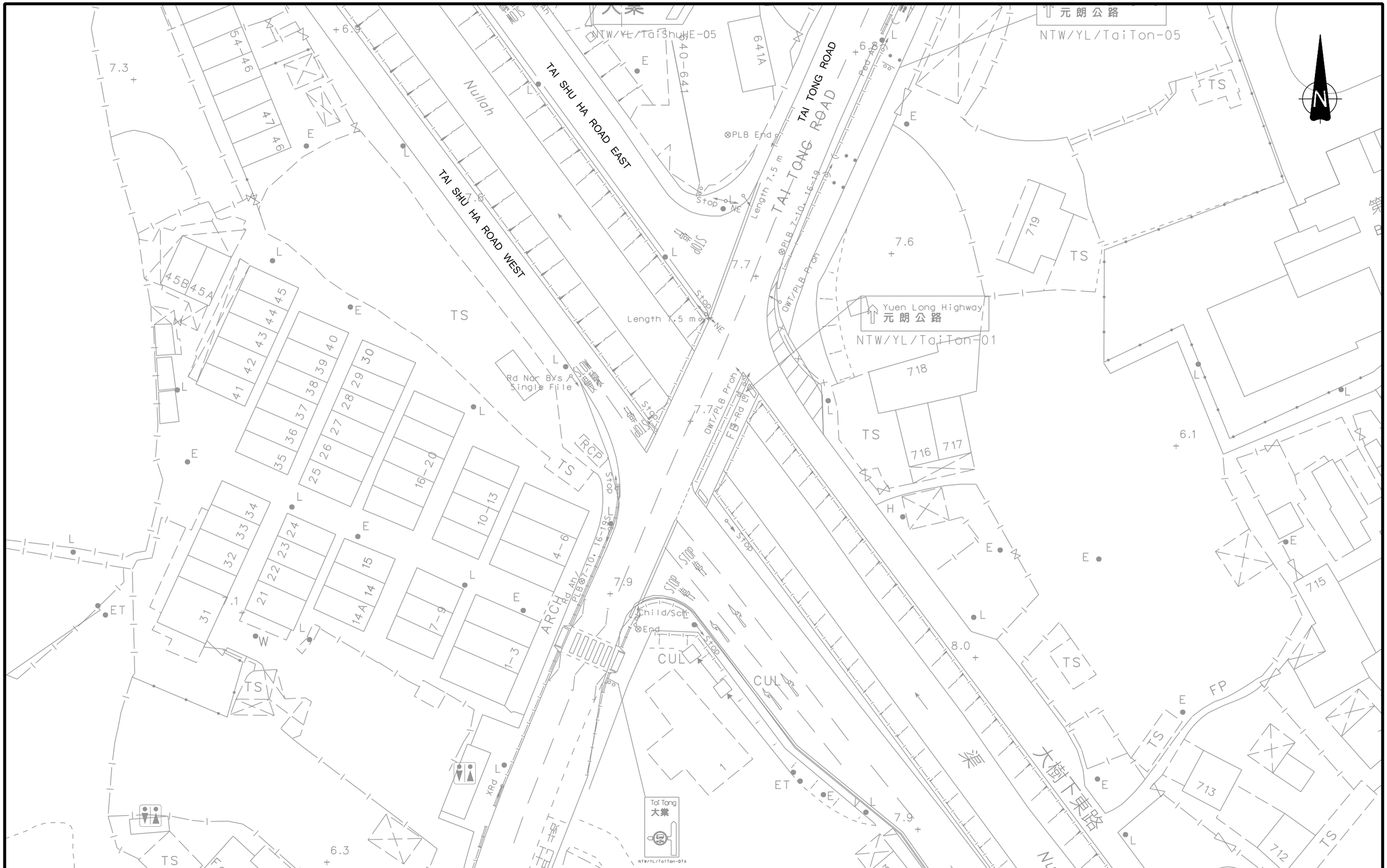
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Project Title

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SITE FORMATION AND INFRASTRUCTURE WORKS
FOR PROPOSED PUBLIC HOUSING DEVELOPMENTS
AT SHA PO, SHAP PAT HEUNG AND TAI KEI LENG,
YUEN LONG - FEASIBILITY STUDY

Drawing Title

EXISTING JUNCTION LAYOUT OF TAI TONG ROAD / TAI SHU HA ROAD EAST / TAI SHU HA ROAD WEST (J19)

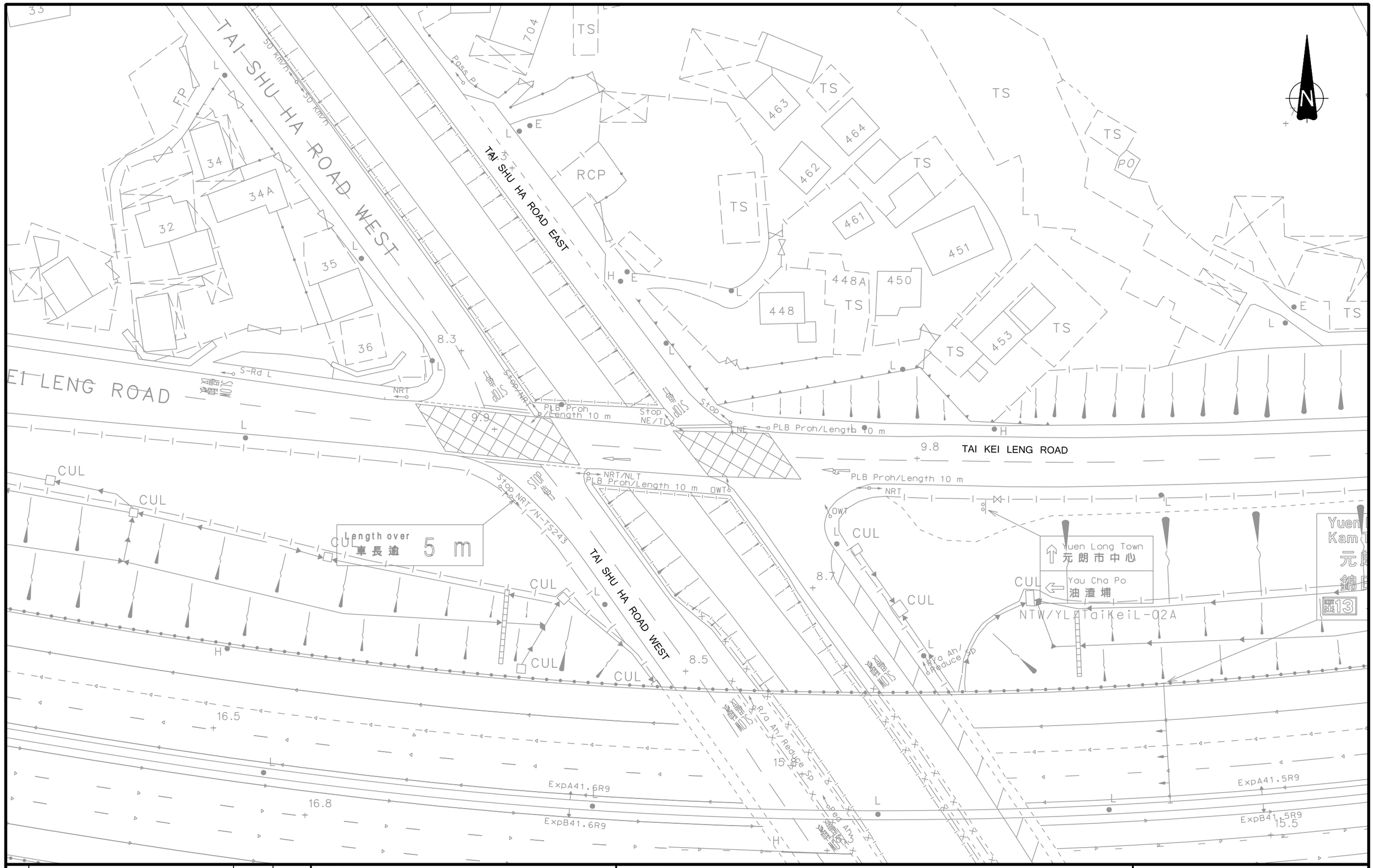
Designed	Checked	Scale	Date	Drawing No.	Rev.
CNS	YKP	1:500(A3)	FEB 2021	B19	-

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Project Title

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SITE FORMATION AND INFRASTRUCTURE WORKS
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AT SHA PO, SHAP PAT HEUNG AND TAI KEI LENG,
YUEN LONG - FEASIBILITY STUDY

Drawing Title

EXISTING JUNCTION LAYOUT OF TAI KEI LENG ROAD / TAI SHU HA ROAD EAST / TAI SHU HA ROAD WEST (J20)

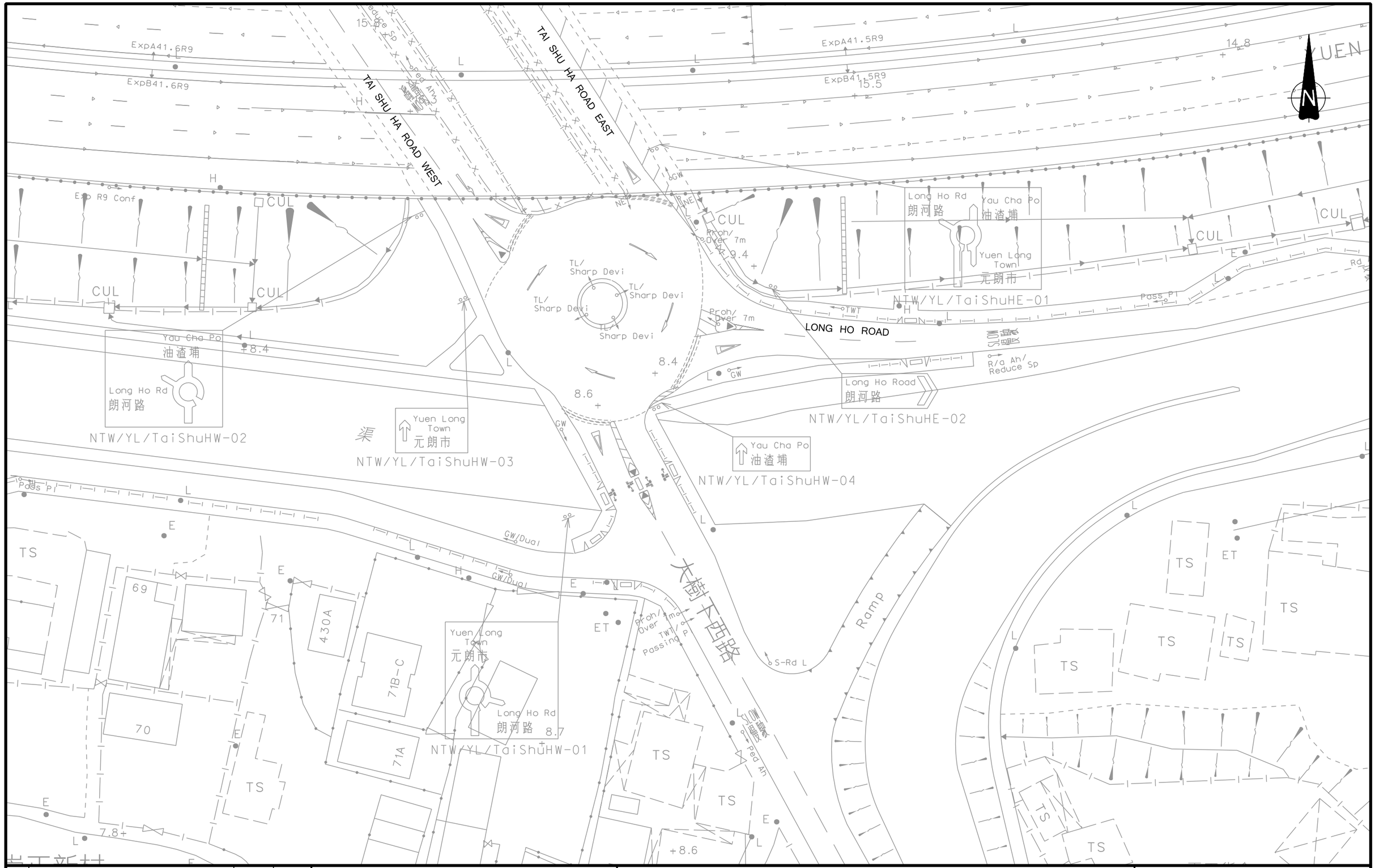
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Project Title

AGREEMENT NO. CE 10 / 2020 (CE) - SITE FORMATION AND INFRASTRUCTURE WORKS FOR PROPOSED PUBLIC HOUSING DEVELOPMENTS AT SHA PO, SHAP PAT HEUNG AND TAI KEI LENG, YUEN LONG - FEASIBILITY STUDY

Drawing Title

EXISTING JUNCTION LAYOUT OF TAI SHU HA ROAD EAST / TAI SHU HA ROAD WEST / LONG HO ROAD (J21)

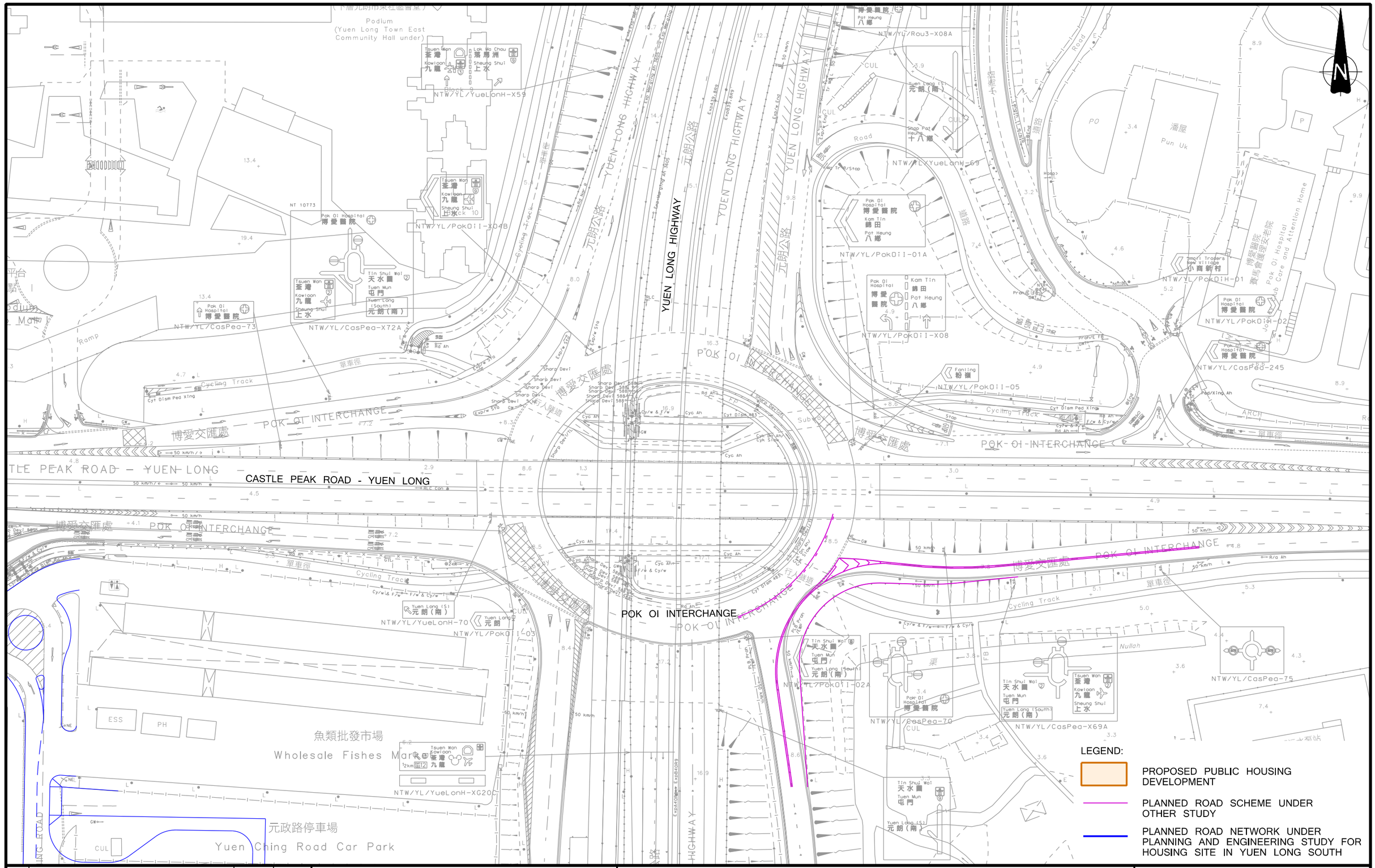
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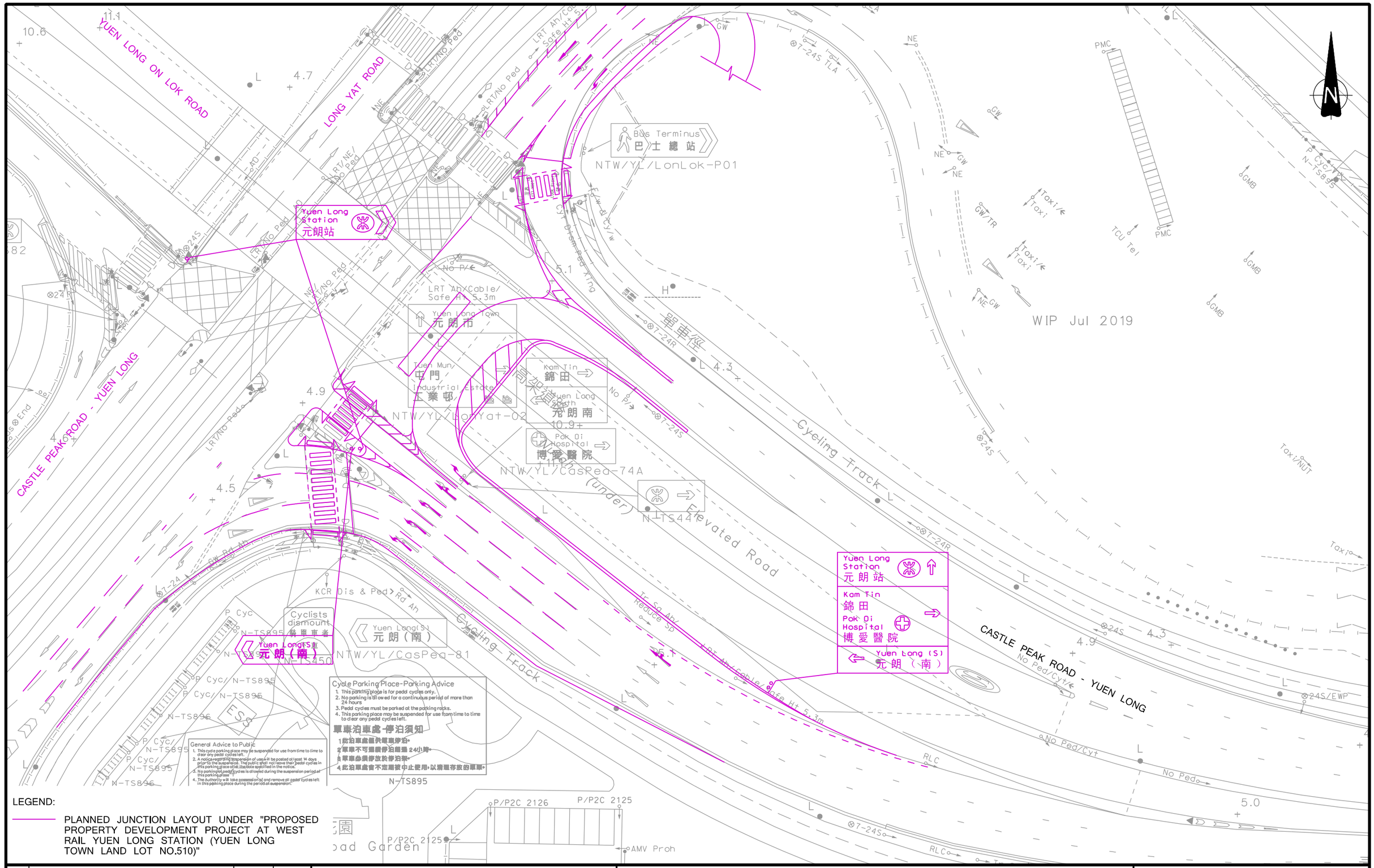
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YUEN LONG HIGHWAY
元朗公路
POK OI INTERCHANGE
博愛交匯處
CASTLE PEAK ROAD - YUEN LONG
Podium
(Yuen Long Town East
Community Hall under)
NTW/YL/YueLonH-X59
NTW/YL/PokOiI-X04B
NTW/YL/CasPea-73
NTW/YL/CasPea-X72A
NTW/YL/YueLonH-69
NTW/YL/PokOiI-01A
NTW/YL/PokOiI-X08
NTW/YL/PokOiH-01
NTW/YL/PokOiH-02
NTW/YL/CasPea-245
NTW/YL/PokOiI-05
NTW/YL/YueLonH-70
NTW/YL/PokOiI-03
NTW/YL/PokOiI-02A
NTW/YL/CasPea-70
NTW/YL/CasPea-X69A
NTW/YL/CasPea-75
NTW/YL/YueLonH-XG20C
Cycling Track
Ramp
Subway
Nullah
ARCH
ESS
PH
魚類批發市場
Wholesale Fishes Market
元政路停車場
Yuen Ching Road Car Park
Pok Oi Hospital
博愛醫院
Yuen Long (South)
元朗（南）
Yuen Long (S)
元朗（南）
Tin Shui Wai
天水圍
Tuen Mun
屯門
Tsuen Wan
荃灣
Kowloon
九龍
Sheung Shui
上水
Lok Ma Chau
落馬洲
Kam Tin
錦田
Pat Heung
八鄉
Shap Pat Heung
十八鄉
Fanling
粉嶺
Smart Traders New Village
小商新村
Pun Uk
潘屋
Pok Oi Hospital Sub Care and Attention Home
博愛醫院寧養院
Cyt Dism Ped Xing
Cyt Dism 383
Cyc Ah
Rd Ah
Ped Xing Ah
Sharp Dev!
Exp/w Sta
Exp/w End
Cyc/w & F/w
Cyk Stem
Cyk Bch Ah
Cyk Ah
Prof/E Fit
Bus Stop
Mini Bus Stop
Taxi Stop
Lay-by
Pedestrian Crossing
Footbridge
Toilet
Hosp
Police
Post Office
Fire Station
Refuse Collection Point
Public Telephone
Petrol Filling Station
Sub-station
Gas Governor
Manhole
Lamp Post
Traffic Light
Traffic Sign
Traffic Camera
Bus Terminus
Minibus Terminus
Taxi Terminus
Coach Terminus
Railway Station
Railway Line
Tramway
Tramway Stop
Ferry Pier
Ferry Route
Helicopter Landing Site
Helicopter Route
Aerial Ropeway
Aerial Ropeway Station
Aerial Ropeway Pylon
Aerial Ropeway Line
Aerial Ropeway Cable Car
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Rev.	Description	Checked	Date
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-	-	-	-
B	MINOR AMENDMENT	YKP	31AUG22
A	TD'S COMMENTS INCORPORATED	YKP	14DEC21

Project Title

AGREEMENT NO. CE 10 / 2020 (CE) - SITE FORMATION AND INFRASTRUCTURE WORKS FOR PROPOSED PUBLIC HOUSING DEVELOPMENTS AT SHA PO, SHAP PAT HEUNG AND TAI KEI LENG, YUEN LONG - FEASIBILITY STUDY

Drawing Title

PLANNED JUNCTION LAYOUT OF CASTLE PEAK ROAD - YUEN LONG / YUEN LONG ON LOK ROAD / LONG YAT ROAD (J5)

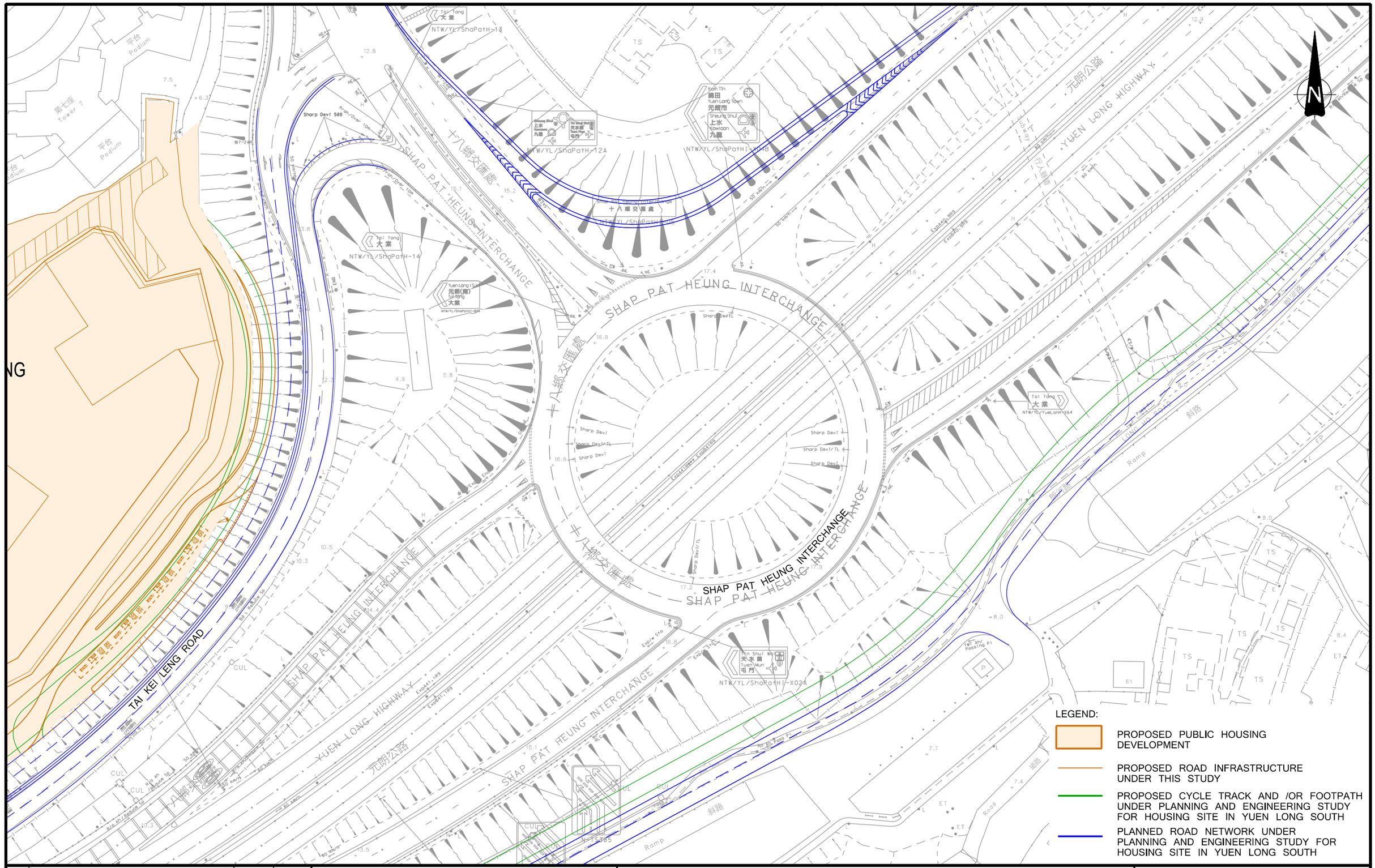
Designed	Checked	Scale	Date	Drawing No.	Rev.
CNS	YKP	1:500(A3)	FEB 2021	B23	B

土木工程拓展署 Civil Engineering and Development Department

BINNIES HONG KONG LIMITED 賓尼斯工程顧問有限公司

SYSTRA MVA

CHK50518210/TIA_S&T/F52-B.DGN/CNS/31AUG22



Rev.	Description	Checked	Date
-	-	-	-
-	-	-	-
B	MINOR AMENDMENT	YKP	14SEP22
A	MINOR AMENDMENT	YKP	20DEC21

Project Title

AGREEMENT NO. CE 10 / 2020 (CE) -
SITE FORMATION AND INFRASTRUCTURE WORKS FOR PROPOSED PUBLIC HOUSING DEVELOPMENTS AT SHA PO, SHAP PAT HEUNG AND TAI KEI LENG, YUEN LONG - FEASIBILITY STUDY

Drawing Title

PLANNED JUNCTION LAYOUT OF SHAP PAT HEUNG INTERCHANGE (J14)

Designed	Checked	Scale	Date	Drawing No.	Rev.
CNS	YKP	1:1000(A3)	FEB 2021	B24	B

土木工程拓展署
CEDD Civil Engineering and Development Department

BINNIES HONG KONG LIMITED
賓尼斯工程顧問有限公司

SYSTRA MVA

CHK50518210/TIA_S&T/F53-B.DGN/CNS/14SEP22

LEGEND:

- PROPOSED PUBLIC HOUSING DEVELOPMENT
- PROPOSED ROAD INFRASTRUCTURE UNDER THIS STUDY
- PROPOSED CYCLE TRACK AND / OR FOOTPATH UNDER PLANNING AND ENGINEERING STUDY FOR HOUSING SITE IN YUEN LONG SOUTH
- PLANNED ROAD NETWORK UNDER PLANNING AND ENGINEERING STUDY FOR HOUSING SITE IN YUEN LONG SOUTH

N

CUL
行人隧道 Subway
Town Centre 市中心
Yuen Long Town park 元朗市鎮公園
NTW/YL/ShaPatH-11
第六座 Tower 6
平台 Podium
第七座 Tower 7
TAI KEI LENG ROAD
SHAP PAT HEUNG INTERCHANGE
十八鄉交滙處
Sharp Devi 589
Proh/Over 10m
50 km/hr
Tai Tong 大棠
NTW/YL/ShaPatH-13
NTW/YL/ShaPatH-14
NTW/YL/ShaPatH-12A
Sheung Shui 上水 Kowloon 九龍
Tin Shui Wai 天水圍 Tuen Mun 屯門
Shap Pat Heung Interchange 十八鄉交滙處
Yuen Long (S) 元朗(南) Tai Tong 大棠
5.3
7.5
+6.3
12.8
15.1
15.2
13.8
16.9

Rev.	Description	Checked	Date
-	-	-	-
-	-	-	-
B	MINOR AMENDMENT	YKP	14SEP22
A	MINOR AMENDMENT	YKP	14DEC21

Project Title

AGREEMENT NO. CE 10 / 2020 (CE) -
SITE FORMATION AND INFRASTRUCTURE WORKS FOR PROPOSED PUBLIC HOUSING DEVELOPMENTS AT SHA PO, SHAP PAT HEUNG AND TAI KEI LENG, YUEN LONG - FEASIBILITY STUDY

Drawing Title

PLANNED JUNCTION LAYOUT OF SHAP PAT HEUNG ROAD / TAI KEI LENG ROAD (J15)

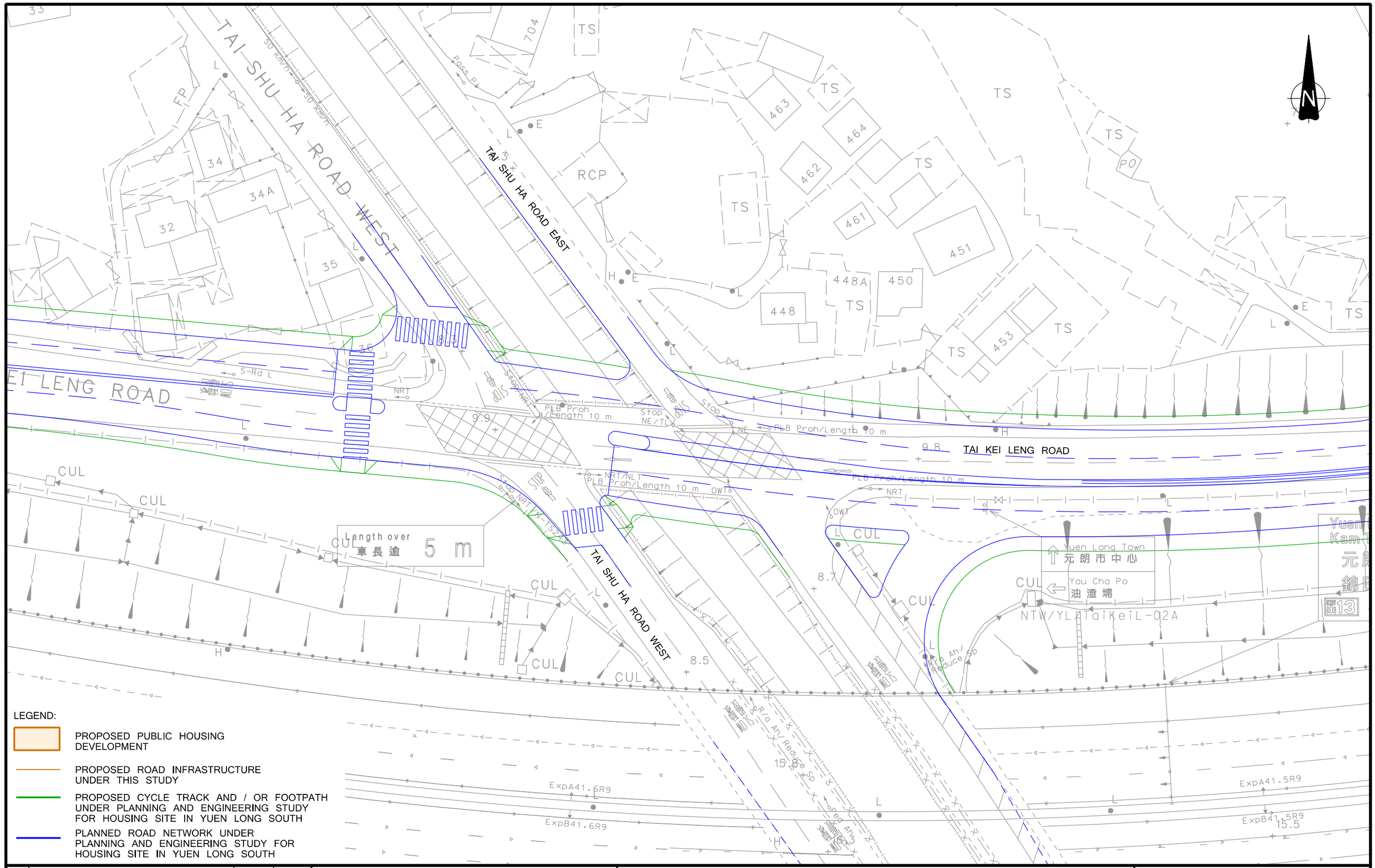
Designed	Checked	Scale	Date	Drawing No.	Rev.
CNS	YKP	1:500(A3)	FEB 2021	B25	B

土木工程拓展署 CEDD Civil Engineering and Development Department

BINNIES HONG KONG LIMITED 賓尼斯工程顧問有限公司

SYSTRA MVA

CHK50518210/TIA_S&T/F54-B.DGN/CNS/14SEP22



LEGEND:

- PROPOSED PUBLIC HOUSING DEVELOPMENT
- PROPOSED ROAD INFRASTRUCTURE UNDER THIS STUDY
- PROPOSED CYCLE TRACK AND / OR FOOTPATH UNDER PLANNING AND ENGINEERING STUDY FOR HOUSING SITE IN YUEN LONG SOUTH
- PLANNED ROAD NETWORK UNDER PLANNING AND ENGINEERING STUDY FOR HOUSING SITE IN YUEN LONG SOUTH

Rev.	Description	Checked	Date
-	-	-	-
-	-	-	-
B	MINOR AMENDMENT	YKP	31AUG22
A	TD'S COMMENTS INCORPORATED	YKP	14DEC21

Project Title

AGREEMENT NO. CE 10 / 2020 (CE) -
SITE FORMATION AND INFRASTRUCTURE WORKS FOR PROPOSED PUBLIC HOUSING DEVELOPMENTS AT SHA PO, SHAP PAT HEUNG AND TAI KEI LENG, YUEN LONG - FEASIBILITY STUDY

Drawing Title

PLANNED JUNCTION LAYOUT OF TAI KEI LENG ROAD / TAI SHU HA ROAD EAST / TAI SHU HA ROAD WEST (J20)

Designed	Checked	Scale	Date	Drawing No.	Rev.
CNS	YKP	1:500(A3)	FEB 2021	B26	B

土木工程拓展署 CEDD Civil Engineering and Development Department

BINNIES HONG KONG LIMITED 賓尼斯工程顧問有限公司

SYSTRA MVA

CHK50518210/TIA_S&T/F55-B.DGN/CNS/31AUG22

TAI SHU HA ROAD WEST

TAI SHU HA ROAD EAST

LONG HO ROAD

大樹下西路

YUEN

N

Exp A41.6R9

Exp B41.6R9

Exp A41.5R9

Exp B41.5R9

Exp R9 Conf

CUL

Prohi/ Over 7m

TL/ Sharp Devi

Yau Cha Po 油渣埔

Long Ho Rd 朗河路

Yuen Long Town 元朗市

Long Ho Road 朗河路

NTW/YL/TaiShuHW-01

NTW/YL/TaiShuHW-02

NTW/YL/TaiShuHW-03

NTW/YL/TaiShuHW-04

NTW/YL/TaiShuHE-01

NTW/YL/TaiShuHE-02

R/a Ah/ Reduce Sp

Ped Ah

Pass Pl

GW/Dual

TWT/ Passing P

S-Rd L

Ramp

TS

ET

69

71

430A

71B-C

71A

8.4

8.6

8.7

+8.6

14.8

15.5

LEGEND:

PROPOSED PUBLIC HOUSING DEVELOPMENT

PROPOSED ROAD INFRASTRUCTURE UNDER THIS STUDY

PROPOSED CYCLE TRACK AND / OR FOOTPATH UNDER PLANNING AND ENGINEERING STUDY FOR HOUSING SITE IN YUEN LONG SOUTH

PLANNED ROAD NETWORK UNDER PLANNING AND ENGINEERING STUDY FOR HOUSING SITE IN YUEN LONG SOUTH

Rev.	Description	Checked	Date
-	-	-	-
-	-	-	-
B	MINOR AMENDMENT	YKP	31AUG22
A	TD'S COMMENTS INCORPORATED	YKP	14DEC21

Project Title

AGREEMENT NO. CE 10 / 2020 (CE) - SITE FORMATION AND INFRASTRUCTURE WORKS FOR PROPOSED PUBLIC HOUSING DEVELOPMENTS AT SHA PO, SHAP PAT HEUNG AND TAI KEI LENG, YUEN LONG - FEASIBILITY STUDY

Drawing Title

PLANNED JUNCTION LAYOUT OF TAI SHU HA ROAD EAST / TAI SHU HA ROAD WEST / LONG HO ROAD (J21)

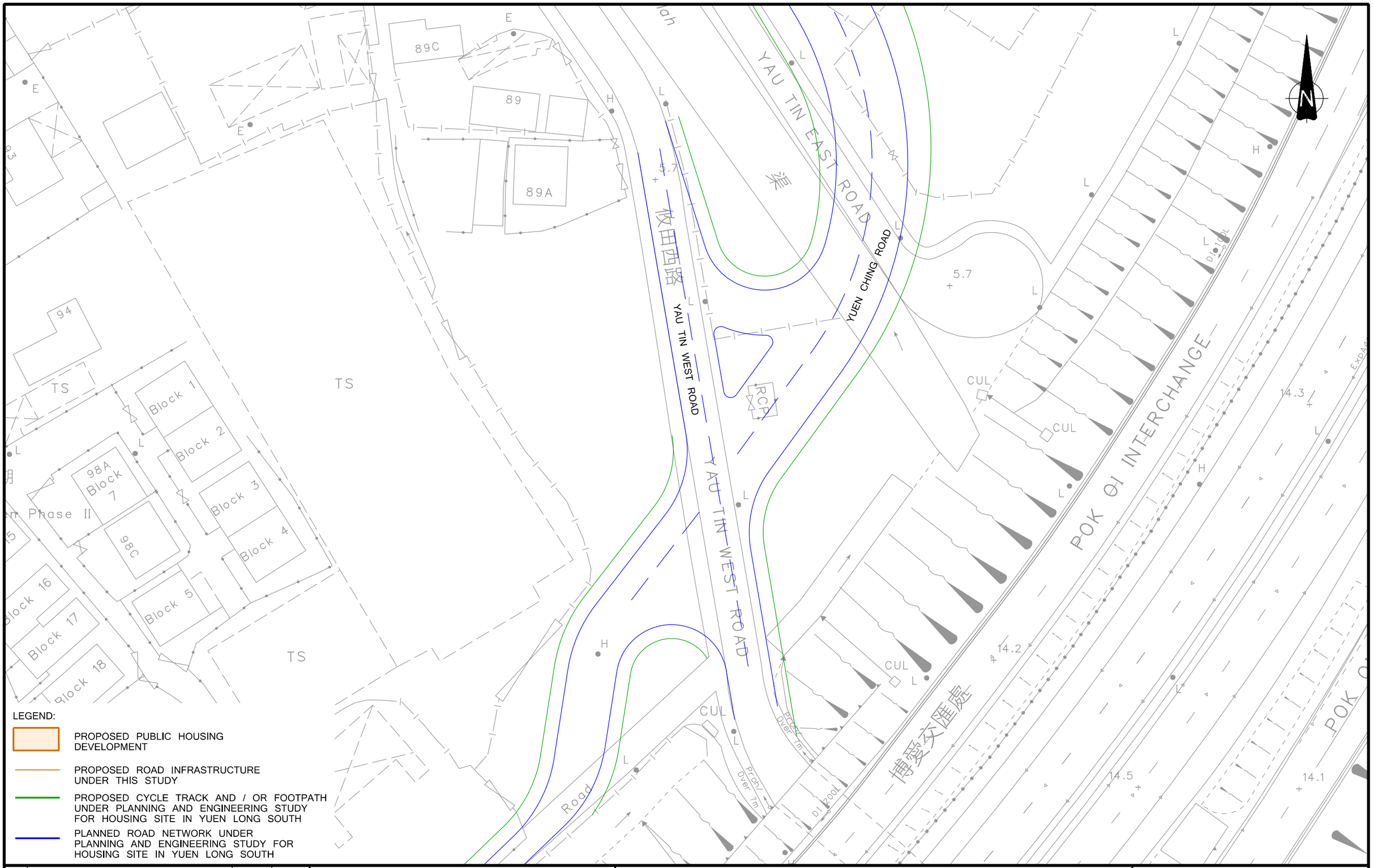
Designed	Checked	Scale	Date	Drawing No.	Rev.
CNS	YKP	1:500(A3)	FEB 2021	B27	B

土木工程拓展署 Civil Engineering and Development Department

BINNIES HONG KONG LIMITED 賓尼斯工程顧問有限公司

SYSTRA MVA

CHK50518210/TIA_S&T/F56-B.DGN/CNS/31AUG22



LEGEND:

- PROPOSED PUBLIC HOUSING DEVELOPMENT
- PROPOSED ROAD INFRASTRUCTURE UNDER THIS STUDY
- PROPOSED CYCLE TRACK AND / OR FOOTPATH UNDER PLANNING AND ENGINEERING STUDY FOR HOUSING SITE IN YUEN LONG SOUTH
- PLANNED ROAD NETWORK UNDER PLANNING AND ENGINEERING STUDY FOR HOUSING SITE IN YUEN LONG SOUTH

Rev.	Description	Checked	Date
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Project Title

AGREEMENT NO. CE 10 / 2020 (CE) -
SITE FORMATION AND INFRASTRUCTURE WORKS FOR PROPOSED PUBLIC HOUSING DEVELOPMENTS AT SHA PO, SHAP PAT HEUNG AND TAI KEI LENG, YUEN LONG - FEASIBILITY STUDY

Drawing Title

PLANNED JUNCTION LAYOUT OF YUEN CHING ROAD / YAU TIN WEST ROAD (J22)

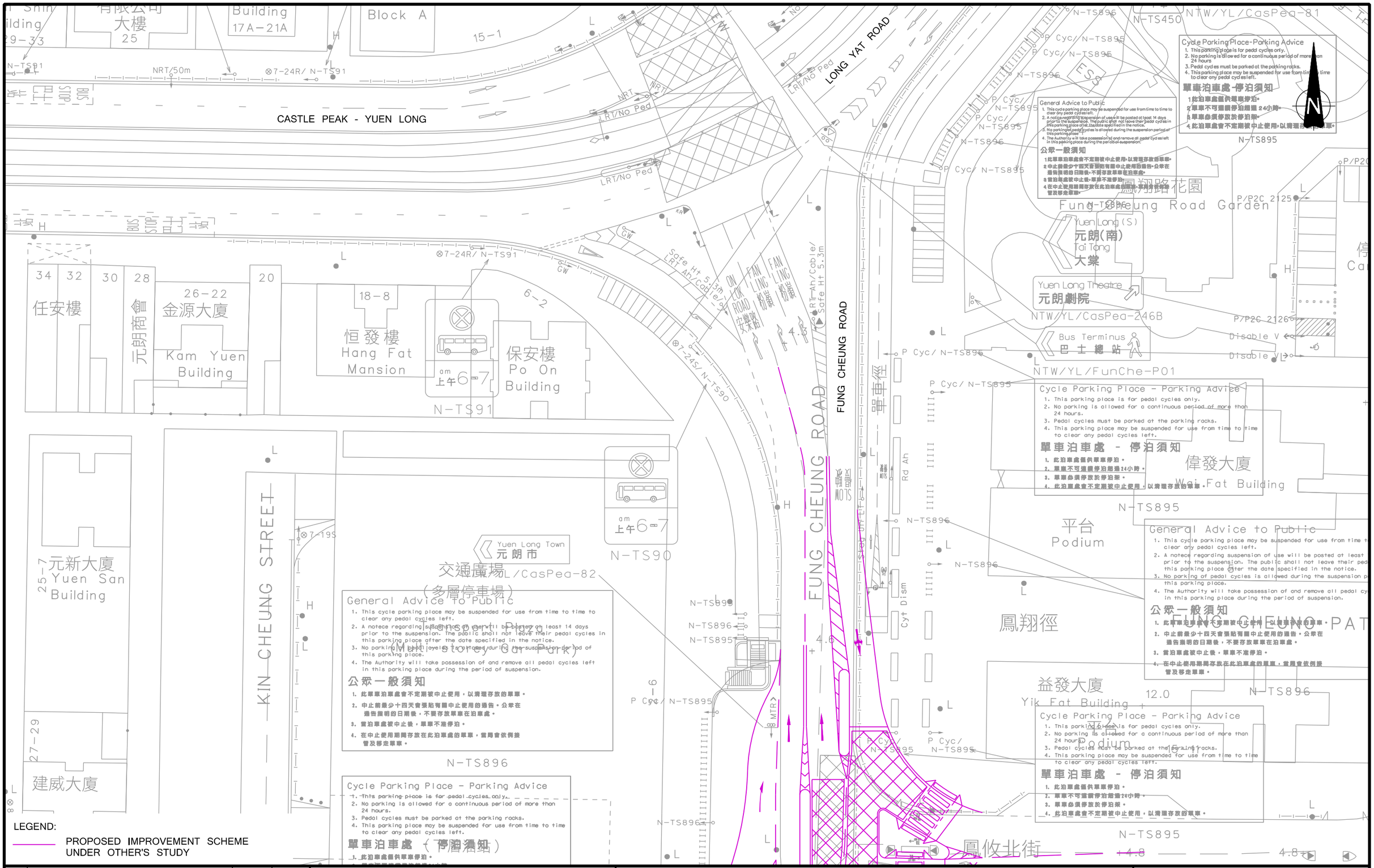
Designed	Checked	Scale	Date	Drawing No.	Rev.
CNS	YKP	1:500(A3)	JUL 2022	B28	-

土木工程拓展署
Civil Engineering and Development Department

BINNIES HONG KONG LIMITED
賓尼斯工程顧問有限公司

SYSTRA MVA

CHK50518210/TIA_S&T/F57.DGN/CNS/31AUG22



LEGEND:

PROPOSED IMPROVEMENT SCHEME UNDER OTHER'S STUDY

Rev.	Description	Checked	Date
-	-	-	-
-	-	-	-
B	MINOR AMENDMENT	YKP	31AUG22
A	MINOR AMENDMENT	YKP	30MAR22

Project Title

AGREEMENT NO. CE 10 / 2020 (CE) - SITE FORMATION AND INFRASTRUCTURE WORKS FOR PROPOSED PUBLIC HOUSING DEVELOPMENTS AT SHA PO, SHAP PAT HEUNG AND TAI KEI LENG, YUEN LONG - FEASIBILITY STUDY

Drawing Title

PROPOSED JUNCTION LAYOUT OF CASTLE PEAK ROAD - YUEN LONG / FUNG CHEUNG ROAD (J6) (UNDER OTHER'S STUDY)

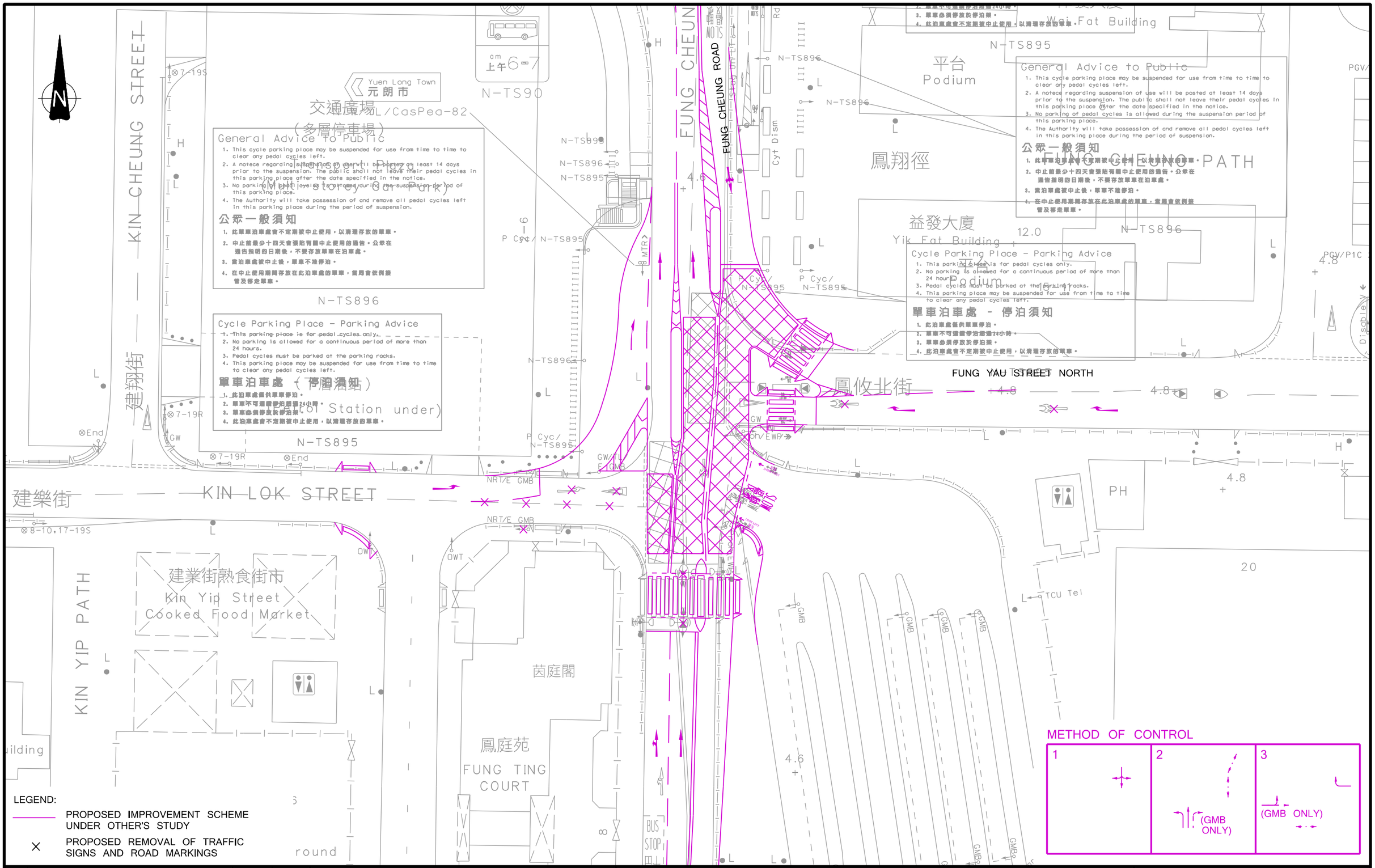
Designed	Checked	Scale	Date	Drawing No.	Rev.
CNS	YKP	1:500(A3)	MAR 2021	B29	B

土木工程拓展署 CEDD Civil Engineering and Development Department

BINNIES HONG KONG LIMITED 賓尼斯工程顧問有限公司

SYSTRA MVA

CHK50518210/TIA_S&T/F58-B.DGN/CNS/31AUG22



Rev.	Description	Checked	Date
-	-	-	-
-	-	-	-
B	MINOR AMENDMENT	YKP	31AUG22
A	MINOR AMENDMENT	YKP	30MAR22

Project Title

AGREEMENT NO. CE 10 / 2020 (CE) -
SITE FORMATION AND INFRASTRUCTURE WORKS FOR PROPOSED PUBLIC HOUSING DEVELOPMENTS AT SHA PO, SHAP PAT HEUNG AND TAI KEI LENG, YUEN LONG - FEASIBILITY STUDY

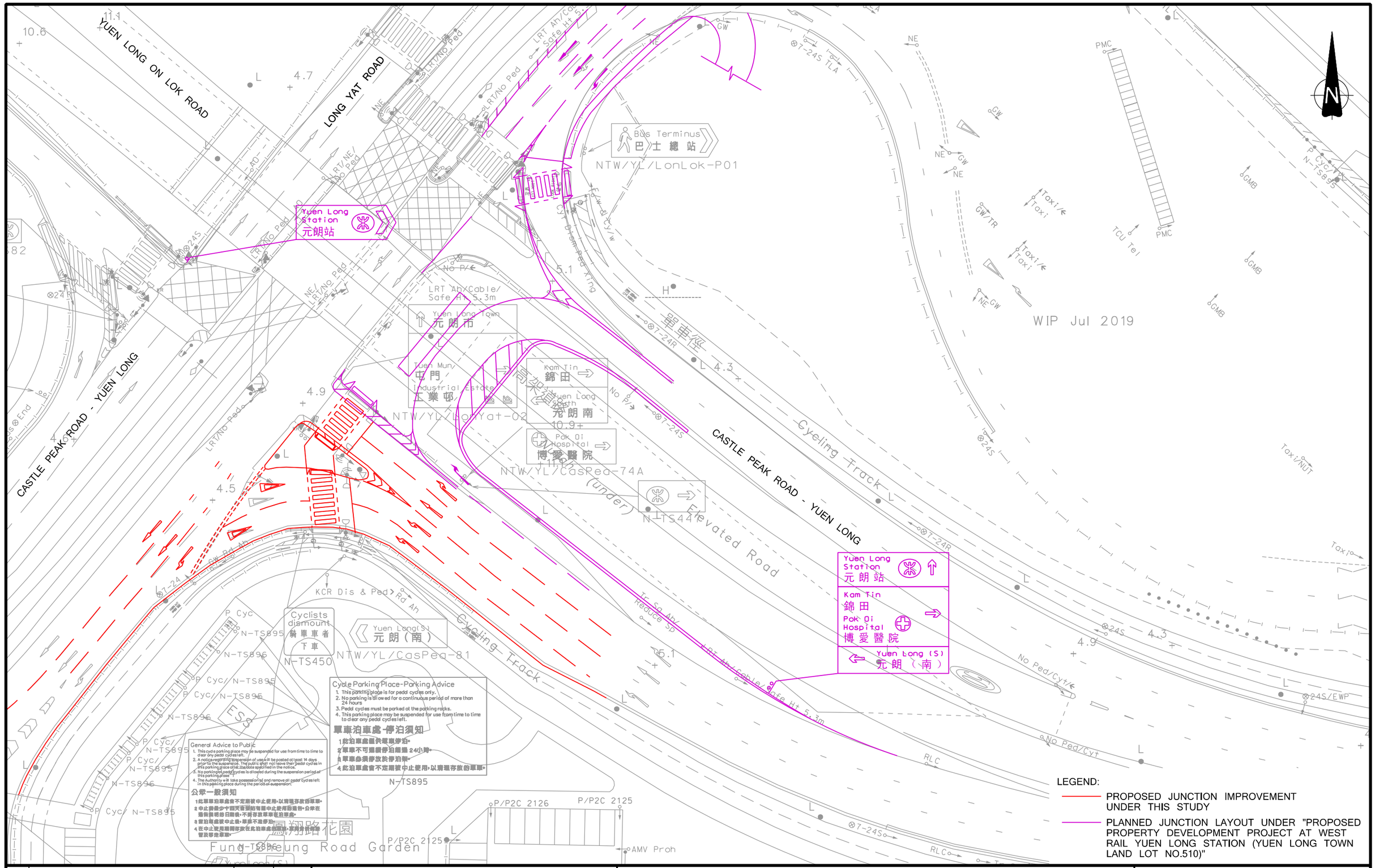
Drawing Title

PROPOSED JUNCTION LAYOUT OF FUNG CHEUNG ROAD / KIN LOK ROAD / FUNG YAU STREET NORTH (J7) (UNDER OTHER'S STUDY)

Designed	Checked	Scale	Date	Drawing No.	Rev.
CNS	YKP	1:500(A3)	MAR 2021	B30	B

土木工程拓展署 Civil Engineering and Development Department
BINNIES HONG KONG LIMITED 賓尼斯工程顧問有限公司
SYSTRA MVA

CHK50518210/TIA-S&T/F59-B.DGN/CNS/31AUG22



Rev.	Description	Checked	Date
-	-	-	-
-	-	-	-
B	MINOR AMENDMENT	YKP	31AUG22
A	TD'S COMMENTS INCORPORATED	YKP	14DEC21

Project Title

AGREEMENT NO. CE 10 / 2020 (CE) -
SITE FORMATION AND INFRASTRUCTURE WORKS FOR PROPOSED PUBLIC HOUSING DEVELOPMENTS AT SHA PO, SHAP PAT HEUNG AND TAI KEI LENG, YUEN LONG - FEASIBILITY STUDY

Drawing Title

PROPOSED JUNCTION LAYOUT OF CASTLE PEAK ROAD - YUEN LONG / YUEN LONG ON LOK ROAD / LONG YAT ROAD (J5)

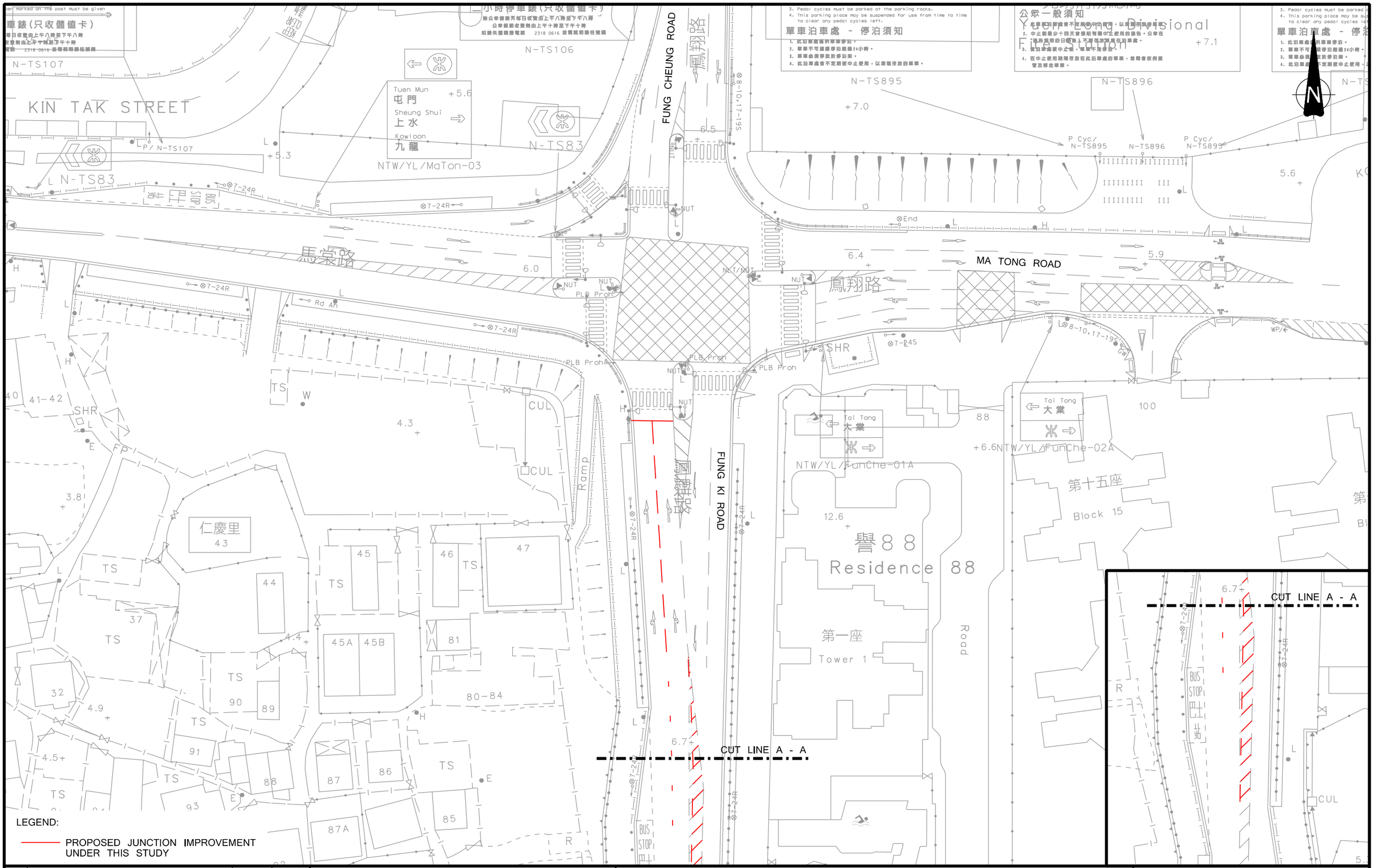
Designed	Checked	Scale	Date	Drawing No.	Rev.
CNS	YKP	1:500(A3)	MAR 2021	B31	B

土木工程拓展署
CEDD Civil Engineering and Development Department

BINNIES HONG KONG LIMITED
賓尼斯工程顧問有限公司

SYSTRA MVA

CHK50518210/TIA_S&T/F511-B.DGN/CNS/31AUG22



LEGEND:

PROPOSED JUNCTION IMPROVEMENT UNDER THIS STUDY

Rev.	Description	Checked	Date
-	-	-	-
-	-	-	-
B	MINOR AMENDMENT	YKP	31AUG22
A	TD'S COMMENTS INCORPORATED	YKP	14DEC21

Project Title

AGREEMENT NO. CE 10 / 2020 (CE) - SITE FORMATION AND INFRASTRUCTURE WORKS FOR PROPOSED PUBLIC HOUSING DEVELOPMENTS AT SHA PO, SHAP PAT HEUNG AND TAI KEI LENG, YUEN LONG - FEASIBILITY STUDY

Drawing Title

PROPOSED JUNCTION LAYOUT OF FUNG CHEUNG ROAD / MA TONG ROAD / FUNG KI ROAD (J10)

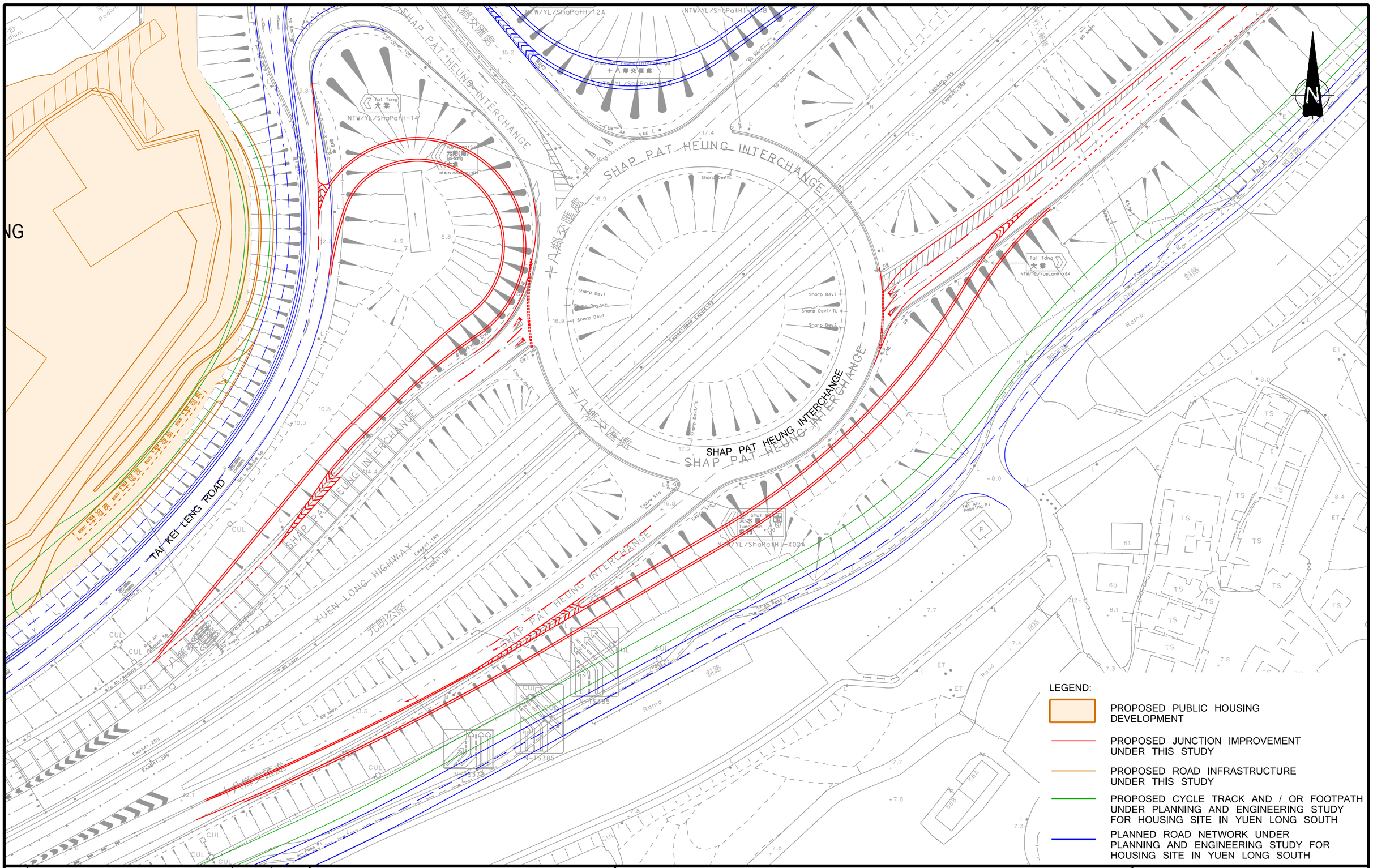
Designed	Checked	Scale	Date	Drawing No.	Rev.
CNS	YKP	1:600(A3)	MAR 2021	B32	B

土木工程拓展署 Civil Engineering and Development Department

BINNIES HONG KONG LIMITED 賓尼斯工程顧問有限公司

SYSTRA MVA

CHK50518210/TIA_S&T/F512-B.DGN/CNS/31AUG22



Rev.	Description	Checked	Date
-	-	-	-
-	-	-	-
B	MINOR AMENDMENT	YKP	14SEP22
A	MINOR AMENDMENT	YKP	29DEC21

Project Title

AGREEMENT NO. CE 10 / 2020 (CE) -
SITE FORMATION AND INFRASTRUCTURE WORKS FOR PROPOSED PUBLIC HOUSING DEVELOPMENTS AT SHA PO, SHAP PAT HEUNG AND TAI KEI LENG, YUEN LONG - FEASIBILITY STUDY

Drawing Title

PROPOSED JUNCTION LAYOUT OF SHAP PAT HEUNG INTERCHANGE (J14)

Designed	Checked	Scale	Date	Drawing No.	Rev.
CNS	YKP	1:1000(A3)	FEB 2021	B33	B

土木工程拓展署
CEDD Civil Engineering and Development Department

BINNIES HONG KONG LIMITED
賓尼斯工程顧問有限公司

SYSTRA MVA

CHK50518210/TIA_S&T/F513-B.DGN/CNS/14SEP22

SWEPT PATH ANALYSIS FOR 12.8m LONG VEHICLE

TAI SHU HA ROAD WEST

TAI SHU HA ROAD EAST

TAI KEI LENG ROAD

PROPOSED TO CONVERT
FROM TWO-WAY TO ONE-WAY
NORTHBOUND OPERATION

Length over 車長逾 5 m

LEGEND:

- PROPOSED PUBLIC HOUSING DEVELOPMENT
- PROPOSED JUNCTION IMPROVEMENT UNDER THIS STUDY
- PROPOSED CYCLE TRACK AND / OR FOOTPATH UNDER PLANNING AND ENGINEERING STUDY FOR HOUSING SITE IN YUEN LONG SOUTH
- PLANNED ROAD NETWORK UNDER PLANNING AND ENGINEERING STUDY FOR HOUSING SITE IN YUEN LONG SOUTH

Rev.	Description	Checked	Date
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-	-	-	-
B	MINOR AMENDMENT	YKP	30AUG22
A	MINOR AMENDMENT	YKP	29DEC21

Project Title

AGREEMENT NO. CE 10 / 2020 (CE) -
SITE FORMATION AND INFRASTRUCTURE WORKS
FOR PROPOSED PUBLIC HOUSING DEVELOPMENTS
AT SHA PO, SHAP PAT HEUNG AND TAI KEI LENG,
YUEN LONG - FEASIBILITY STUDY

Drawing Title

PROPOSED JUNCTION LAYOUT OF TAI KEI LENG ROAD / TAI SHU HA ROAD EAST / TAI SHU HA ROAD WEST (J20)

Designed	Checked	Scale	Date	Drawing No.	Rev.
CNS	YKP	1:500(A3)	MAR 2021	B34	B

土木工程拓展署
CEDD Civil Engineering and Development Department

BINNIES HONG KONG LIMITED
賓尼斯工程顧問有限公司

SYSTRA MVA

CHK50518210/TIA_S&T/F514-B.DGN/CNS/30AUG22

SWEPT PATH ANALYSIS FOR 16m LONG VEHICLE

SWEPT PATH ANALYSIS FOR 7m LONG VEHICLE

SHAP PAT HEUNG ROAD

TAI TONG ROAD

TAI SHU HA ROAD EAST

TAI SHU HA ROAD WEST

TAI KEI LENG ROAD

YUEN LONG HIGHWAY

FRASER VILLAGE

LEGEND:

- PROPOSED PUBLIC HOUSING DEVELOPMENT
- PROPOSED JUNCTION IMPROVEMENT UNDER THIS STUDY
- PROPOSED ROAD INFRASTRUCTURE UNDER THIS STUDY
- PROPOSED CYCLE TRACK AND / OR FOOTPATH UNDER PLANNING AND ENGINEERING STUDY FOR HOUSING SITE IN YUEN LONG SOUTH
- PLANNED ROAD NETWORK UNDER PLANNING AND ENGINEERING STUDY FOR HOUSING SITE IN YUEN LONG SOUTH
- EXISTING ROUTE
- PROPOSED ALTERNATIVE ROUTE FOR VEHICLES LENGTH LESS THAN OR EQUAL TO 7m
- PROPOSED ALTERNATIVE ROUTE FOR VEHICLES LENGTH BETWEEN 7m AND 16m

Rev.	Description	Checked	Date
-	-	-	-
-	-	-	-
-	-	-	-
-	-	-	-

Project Title

AGREEMENT NO. CE 10 / 2020 (CE) -
SITE FORMATION AND INFRASTRUCTURE WORKS FOR PROPOSED PUBLIC HOUSING DEVELOPMENTS AT SHA PO, SHAP PAT HEUNG AND TAI KEI LENG, YUEN LONG - FEASIBILITY STUDY

Drawing Title

PROPOSED JUNCTION LAYOUT OF TAI KEI LENG ROAD / TAI SHU HA ROAD EAST / TAI SHU HA ROAD WEST (J20) - ALTERNATIVE ROUTE

Designed	Checked	Scale	Date	Drawing No.	Rev.
CNS	YKP	1:2000(A3)	JUL 2022	B35	-

土木工程拓展署
CEDD Civil Engineering and Development Department

BINNIES HONG KONG LIMITED
賓尼斯工程顧問有限公司

SYSTRA MVA

CHK50518210/TIA_S&T/F515.DGN/CNS/14SEP22

TAI SHU HA ROAD WEST

TAI SHU HA ROAD EAST

LONG HO ROAD

YUEN

N

Long Ho Rd 朗河路

Yau Cha Po 油渣埔

Yuen Long Town 元朗市

NTW/YL/TaiShuHW-01

NTW/YL/TaiShuHW-02

NTW/YL/TaiShuHW-03

NTW/YL/TaiShuHW-04

NTW/YL/TaiShuHE-01

NTW/YL/TaiShuHE-02

大樹下西路

Ramp

LEGEND:

- PROPOSED PUBLIC HOUSING DEVELOPMENT
- PROPOSED JUNCTION IMPROVEMENT UNDER THIS STUDY
- PROPOSED CYCLE TRACK AND / OR FOOTPATH UNDER PLANNING AND ENGINEERING STUDY FOR HOUSING SITE IN YUEN LONG SOUTH
- PLANNED ROAD NETWORK UNDER PLANNING AND ENGINEERING STUDY FOR HOUSING SITE IN YUEN LONG SOUTH

SWEPT PATH ANALYSIS FOR 12.8m LONG VEHICLE

Rev.	Description	Checked	Date
-	-	-	-
-	-	-	-
B	MINOR AMENDMENT	YKP	31AUG22
A	MINOR AMENDMENT	YKP	30MAR22

Project Title

AGREEMENT NO. CE 10 / 2020 (CE) - SITE FORMATION AND INFRASTRUCTURE WORKS FOR PROPOSED PUBLIC HOUSING DEVELOPMENTS AT SHA PO, SHAP PAT HEUNG AND TAI KEI LENG, YUEN LONG - FEASIBILITY STUDY

Drawing Title

PROPOSED JUNCTION LAYOUT OF TAI SHU HA ROAD EAST / TAI SHU HA ROAD WEST / LONG HO ROAD (J21)

Designed	Checked	Scale	Date	Drawing No.	Rev.
CNS	YKP	1:500(A3)	DEC 2021	B36	B

土木工程拓展署 Civil Engineering and Development Department

BINNIES HONG KONG LIMITED 賓尼斯工程顧問有限公司

SYSTRA MVA

CHK50518210/TIA_S&T/F516-B.DGN/CNS/31AUG22

Attachment VI of
RNTPC Paper No. 10/22

Provision of Open Space and Major GIC Facilities in Tai Tong Area

Type of Facilities	Hong Kong Planning Standards and Guidelines (HKPSG)	HKPSG Requirement (based on planned population)	Provision		Surplus/ Shortfall (against planned provision)
			Existing Provision	Planned Provision (including Existing Provision)	
District Open Space	10 ha per 100,000 persons[#]	5.49 ha	0 ha	2.77 ha	-2.72 ha
Local Open Space	10 ha per 100,000 persons[#]	5.49 ha	1.35 ha	1.56 ha	-3.93 ha
Sports Centre	1 per 50,000 to 65,000 persons[#] (assessed on a district basis)	0	0	0	0
Sports Ground/ Sport Complex	1 per 200,000 to 250,000 persons[#] (assessed on a district basis)	0	0	0	0
Swimming Pool Complex – standard	1 complex per 287,000 persons[#] (assessed on a district basis)	0	0	0	0
District Police Station	1 per 200,000 to 500,000 persons (assessed on a regional basis)	0	0	0	0
Divisional Police Station	1 per 100,000 to 200,000 persons (assessed on a regional basis)	0	0	0	0
Magistracy (with 8 courtrooms)	1 per 660,000 persons (assessed on a regional basis)	0	0	0	0
Community Hall	No set standard	N.A.	0	0	N.A.

Type of Facilities	Hong Kong Planning Standards and Guidelines (HKPSG)	HKPSG Requirement (based on planned population)	Provision		Surplus/ Shortfall (against planned provision)
			Existing Provision	Planned Provision (including Existing Provision)	
Library	1 district library per 200,000 persons (assessed on a district basis)	0	0	0	0
Kindergarten/ Nursery	34 classrooms for 1,000 children aged 3 to 6	30 classrooms	2 classrooms	11 classrooms	-19 classrooms[&]
Primary School	1 whole-day classroom for 25.5 persons aged 6-11 (assessed by EDB on a district/school network basis)	79 classrooms	30 classrooms	54 classrooms	-25 Classrooms[&]
Secondary School	1 whole-day classroom for 40 persons aged 12-17 (assessed by EDB on a territory-wide basis)	64 classrooms	24 classrooms	24 classrooms	-40 Classrooms[&]
Hospital	5.5 beds per 1,000 persons (assessed by Hospital Authority (HA) on a regional/ cluster basis)	308 beds	90 beds	90 beds	-218 beds (will be catered in the 1st and 2nd Ten-year Hospital Development Plans based on HA's assessment on a regional/ cluster basis[^])
Clinic/Health Centre	1 per 100,000 persons (assessed on a district basis)	0	0	0	0

Type of Facilities	Hong Kong Planning Standards and Guidelines (HKPSG)	HKPSG Requirement (based on planned population)	Provision		Surplus/ Shortfall (against planned provision)
			Existing Provision	Planned Provision (including Existing Provision)	
Child Care Centre	100 aided places per 25,000 persons[#] (assessed by SWD on a local basis)	219 places	0 places	0 places	-219 places (a long-term target on a wider spatial context by SWD[~])
Integrated Children and Youth Services Centre	1 for 12,000 persons aged 6-24[#] (assessed by SWD on a local basis)	0	0	0	0
Integrated Family Services Centre	1 for 100,000 to 150,000 persons[#] (assessed by SWD on a service boundary basis)	0	0	0	0
District Elderly Community Centres	One in each new development area with a population of around 170,000 or above[#] (assessed by SWD)	N.A.	0	0	N.A.
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.	0	0	N.A.

Type of Facilities	Hong Kong Planning Standards and Guidelines (HKPSG)	HKPSG Requirement (based on planned population)	Provision		Surplus/ Shortfall (against planned provision)
			Existing Provision	Planned Provision (including Existing Provision)	
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)	223 places	22 places	52 places	-171 places (a long-term target assessed on a wider spatial context by SWD[~])
Residential Care Homes for the Elderly	21.3 subsidised beds per 1,000 elderly persons aged 65 or above[#] (assessed by SWD on a district basis)	277 beds	20 beds	120 beds	-157 beds (a long-term target assessed on a wider spatial context by SWD~)
Pre-school Rehabilitation Services	23 subvented service places per 1,000 children aged 0-6[#] (assessed by SWD on a district basis)	54 places	0 places	60 places	6 places
Day Rehabilitation Services	23 subvented service places per 10,000 persons aged 15 or above[#] (assessed by SWD on a district basis)	106 places	0 places	0 places	-106 places (a long-term target assessed on a wider spatial context by SWD~)
Residential Care Services	36 subvented service places per 10,000 persons aged 15 or above[#] (assessed by SWD on a cluster basis)	166 places	0 places	0 places	-166 places (a long-term target assessed on a wider spatial context by SWD~)

Type of Facilities	Hong Kong Planning Standards and Guidelines (HKPSG)	HKPSG Requirement (based on planned population)	Provision		Surplus/ Shortfall (against planned provision)
			Existing Provision	Planned Provision (including Existing Provision)	
Community Rehabilitation Day Centre	1 centre per 420,000 persons# (assessed by SWD on a district basis)	0	0	0	0
District Support Centre for Persons with Disabilities	1 centre per 280,000 persons# (assessed by SWD on a district basis)	0	0	0	0
Integrated Community Centre for Mental Wellness	1 standard scale centre per 310,000 persons# (assessed by SWD on a district basis)	0	0	0	0

Note:
The planned resident population in Tai Tong is about 54,882. If including transients, the overall planned population is about 56,045. 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 Hospital Authority plans its services on a cluster basis, and takes into account a number of factors in planning and developing various public healthcare services. The New Territories West Cluster (NTWC) provides services for residents in Tuen Mun and Yuen Long districts. There are a number of hospital redevelopment projects planned in the First and Second Ten-year Hospital Development Plans (HDPs), which will provide additional beds for serving the population in NTWC. The projected service demand will be catered for in the First and Second Ten-year HDPs.

~ 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 facility. 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 have to be considered. As the HKPSG requirements for these facilities are a long-term goal, 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.

& The deficit in provision is based on OZP planned population while according to the Education Bureau (EDB), general speaking, the provision of public sector primary school places is planned on a district basis and the public sector secondary school places is on a territory-wide basis. Under the prevailing mechanism, EDB will make reference to the school-age population

projections, which are compiled based on the population projections updated regularly by the Census and Statistics Department, and take into account the actual number of students at various levels as well as the latest demographic changes (including the number of newly-arrived children from the Mainland) in estimating the future demand for school places and related resources. EDB will consider factors such as the latest projections, other factors that may affect the demand for school places in certain districts, different options to increase the supply of school places in particular districts, the prevailing education policies (including to enhance teaching and learning environment through reprovisioning) etc. before deciding whether it is necessary to allocate school premises for setting up new school(s) or reprovisioning of existing school(s). According to EDB's assessment, at present, there are sufficient number of school places for the eligible school-aged population in Yuen Long District.

December 2022

Attachment VII of
RNTPC Paper No. 10/22

Provision of Major Community Facilities and Open Space in Yuen Long District Council Area

Type of Facilities	Hong Kong Planning Standards and Guidelines (HKPSG)	HKPSG Requirement (based on planned population)	Provision		Surplus/ Shortfall (against planned provision)
			Existing Provision	Planned Provision (including Existing Provision)	
District Open Space	10 ha per 100,000 persons[#]	120.84 ha	30.18 ha	140.52 ha	19.68 ha
Local Open Space	10 ha per 100,000 persons[#]	120.84 ha	112.1 ha	195.10 ha	74.26 ha
Sports Centre	1 per 50,000 to 65,000 persons[#] (assessed on a district basis)	18	8	16	–2
Sports Ground/ Sport Complex	1 per 200,000 to 250,000 persons[#] (assessed on a district basis)	4	2	3	–1
Swimming Pool Complex – standard	1 complex per 287,000 persons[#] (assessed on a district basis)	4	1	2	–2
District Police Station	1 per 200,000 to 500,000 persons (assessed on a regional basis)	2	1	2	0
Divisional Police Station	1 per 100,000 to 200,000 persons (assessed on a regional basis)	6	4	6	0
Magistracy (with 8 courtrooms)	1 per 660,000 persons (assessed on a regional basis)	1	0	1	0
Community Hall	No set standard	N.A.	9	14	N.A

Type of Facilities	Hong Kong Planning Standards and Guidelines (HKPSG)	HKPSG Requirement (based on planned population)	Provision		Surplus/ Shortfall (against planned provision)
			Existing Provision	Planned Provision (including Existing Provision)	
Library	1 district library per 200,000 persons (assessed on a district basis)	6	3	3	–3
Kindergarten/Nursery	34 classrooms for 1,000 children aged 3 to under 6	781 classrooms	489 classrooms	813 classrooms	32 classrooms
Primary School	1 whole-day classroom for 25.5 persons aged 6-11 (assessed by EDB on a district/school network basis)	1,989 classrooms	1,290 classrooms	2,172 classrooms	183 classrooms
Secondary School	1 whole-day classroom for 40 persons aged 12-17 (assessed by EDB on a territory-wide basis)	1,391 classrooms	1,157 classrooms	1,517 classrooms	126 classrooms
Hospital	5.5 beds per 1,000 persons (assessed by Hospital Authority (HA) on a regional/ cluster basis)	6,782 beds	1,070 beds	3,670 beds	–3,112 beds (will be catered in the 1st and 2nd Ten-year Hospital Development Plans based on HA's assessment on a regional/ cluster basis^)
Clinic/Health Centre	1 per 100,000 persons (assessed on a district basis)	12	5	11	–1

Type of Facilities	Hong Kong Planning Standards and Guidelines (HKPSG)	HKPSG Requirement (based on planned population)	Provision		Surplus/ Shortfall (against planned provision)
			Existing Provision	Planned Provision (including Existing Provision)	
Child Care Centre	100 aided places per 25,000 persons[#] (assessed by SWD on a local basis)	4,833 places	487 places	1,675 places	–3,158 places (a long-term target on a wider spatial context by SWD[~])
Integrated Children and Youth Services Centre	1 for 12,000 persons aged 6-24[#] (assessed by SWD on a local basis)	16	11	17	1
Integrated Family Services Centre	1 for 100,000 to 150,000 persons[#] (assessed by SWD on a service boundary basis)	8	6	10	2
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.
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.	8	16	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)	4,920 places	719 places	1,719 places	–3,201 places (a long-term target assessed on a wider spatial context by SWD[~])

Type of Facilities	Hong Kong Planning Standards and Guidelines (HKPSG)	HKPSG Requirement (based on planned population)	Provision		Surplus/ Shortfall (against 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)	6,093 beds	1,998 beds	4,082 beds	–2,011 beds (a long-term target assessed on a wider spatial context by SWD[~])
Pre-school Rehabilitation Services	23 subvented service places per 1,000 children aged 0-6[#] (assessed by SWD on a district basis)	1,187 places	280 places	640 places	–547 places (a long-term target assessed on a wider spatial context by SWD[~])
Day Rehabilitation Services	23 subvented service places per 10,000 persons aged 15 or above[#] (assessed by SWD on a district basis)	2,334 places	868 places	1,598 places	–736 places (a long-term target assessed on a wider spatial context by SWD[~])
Residential Care Services	36 subvented service places per 10,000 persons aged 15 or above[#] (assessed by SWD on a cluster basis)	3,654 places	818 places	3,128 places	–526 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)	2	0	2	0
District Support Centre for Persons with Disabilities	1 centre per 280,000 persons[#] (assessed by SWD on a district basis)	4	2	3	–1 (a long-term target assessed on a wider spatial context by SWD[~])

Type of Facilities	Hong Kong Planning Standards and Guidelines (HKPSG)	HKPSG Requirement (based on planned population)	Provision		Surplus/ Shortfall (against 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)	3.6	1.7	1.7	–1.9 (a long-term target assessed on a wider spatial context by SWD[~])

Note:

The planned resident population is about 1,208,300. If including transients, the overall planned population is about 1,233,000. 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 District Council planned population while the Hospital Authority plans its services on a cluster basis, and takes into account a number of factors in planning and developing various public healthcare services. The New Territories West Cluster (NTWC) provides services for residents in Tuen Mun and Yuen Long districts. There are a number of hospital redevelopment projects planned in the First and Second Ten-year Hospital Development Plans (HDPs), which will provide additional beds for serving the population in NTWC. The projected service demand will be catered for in the First and Second Ten-year HDPs.

[~] The deficit in provision is based on District Council planned population while the Social Welfare Department (SWD) adopts a wider spatial context/cluster in the assessment of provision for such facility. 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 have to be considered. As the HKPSG requirements for these facilities are a long-term goal, 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.

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