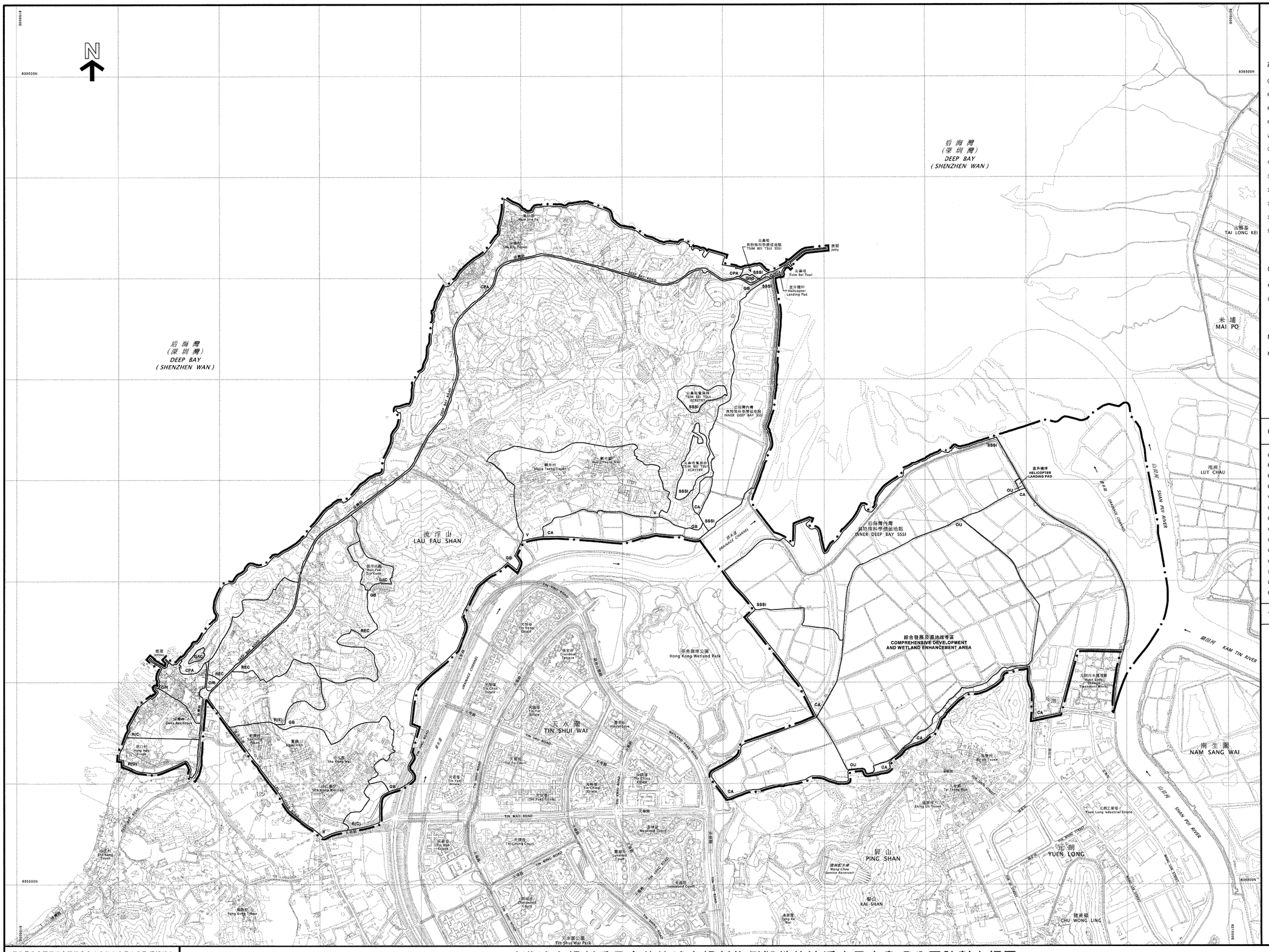


圖例
NOTATION

ZONES		地帶
COMMERCIAL / RESIDENTIAL	C/R	商業 / 住宅
RESIDENTIAL (GROUP C)	R(C)	住宅（丙類）
RESIDENTIAL (GROUP D)	R(D)	住宅（丁類）
RESIDENTIAL (GROUP E)	R(E)	住宅（戊類）
VILLAGE TYPE DEVELOPMENT	V	鄉村式發展
GOVERNMENT, INSTITUTION OR COMMUNITY	G/IC	政府、機構或社區
RECREATION	REC	康樂
OTHER SPECIFIED USES	OU	其他指定用途
GREEN BELT	GB	綠化地帶
CONSERVATION AREA	CA	自然保育區
COASTAL PROTECTION AREA	CPA	海岸保護區
SITE OF SPECIAL SCIENTIFIC INTEREST	SSSI	具特殊科學價值地點

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

MISCELLANEOUS	其他
BOUNDARY OF PLANNING SCHEME	規劃範圍界線

土地用途及面積一覽表
SCHEDULE OF USES AND AREAS

USES	大約面積及百分率 APPROXIMATE AREA & % 公頃 HECTARES	% 百分率	用途
COMMERCIAL / RESIDENTIAL	4.27	0.63	商業 / 住宅
RESIDENTIAL (GROUP C)	8.33	1.23	住宅（丙類）
RESIDENTIAL (GROUP D)	5.70	0.84	住宅（丁類）
RESIDENTIAL (GROUP E)	11.89	1.75	住宅（戊類）
VILLAGE TYPE DEVELOPMENT	53.26	7.86	鄉村式發展
GOVERNMENT, INSTITUTION OR COMMUNITY	3.38	0.50	政府、機構或社區
RECREATION	36.41	5.37	康樂
OTHER SPECIFIED USES	81.82	12.07	其他指定用途
GREEN BELT	203.21	29.98	綠化地帶
CONSERVATION AREA	78.41	11.57	自然保育區
COASTAL PROTECTION AREA	55.99	8.26	海岸保護區
SITE OF SPECIAL SCIENTIFIC INTEREST	77.91	11.50	具特殊科學價值地點
DRAINAGE CHANNEL	53.38	7.88	排水道
MAJOR ROAD ETC.	3.78	0.56	主要道路等
TOTAL PLANNING SCHEME AREA	677.74	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２０１８年１０月１６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 16 OCTOBER 2018

Ms Wendy LEUNG 梁麗儀女士
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流浮山及尖鼻咀分區計劃大綱圖
TOWN PLANNING ORDINANCE, HONG KONG TOWN PLANNING BOARD
LAU FAU SHAN & TSIM BEI TSUI - OUTLINE ZONING PLAN

SCALE 1:7500 比例尺

※ METRES 200 0 200 400 600 800 1,000 METRES ※

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

圖則編號 PLAN No. S/YL-LFS/9

圖例
NOTATION

ZONES		地帶
COMMERCIAL / RESIDENTIAL	C/R	商業 / 住宅
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）
RESIDENTIAL (GROUP E)	R(E)	住宅（戊類）
VILLAGE TYPE DEVELOPMENT	V	鄉村式發展
GOVERNMENT, INSTITUTION OR COMMUNITY	G/IC	政府、機構或社區
RECREATION	REC	康樂
OTHER SPECIFIED USES	OU	其他指定用途
GREEN BELT	GB	綠化地帶
CONSERVATION AREA	CA	自然保育區
COASTAL PROTECTION AREA	CPA	海岸保護區
SITE OF SPECIAL SCIENTIFIC INTEREST	SSSI	具特殊科學價值地點

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

MISCELLANEOUS		其他
BOUNDARY OF PLANNING SCHEME		規劃範圍界線

土地用途及面積一覽表
SCHEDULE OF USES AND AREAS

USES	大約面積及百分率 APPROXIMATE AREA & % 公頃 HECTARES	% 百分率	用途
COMMERCIAL / RESIDENTIAL	4.27	0.63	商業 / 住宅
RESIDENTIAL (GROUP A)	2.82	0.42	住宅（甲類）
RESIDENTIAL (GROUP C)	5.87	0.87	住宅（丙類）
RESIDENTIAL (GROUP D)	5.70	0.84	住宅（丁類）
RESIDENTIAL (GROUP E)	11.89	1.75	住宅（戊類）
VILLAGE TYPE DEVELOPMENT	53.26	7.86	鄉村式發展
GOVERNMENT, INSTITUTION OR COMMUNITY	3.38	0.50	政府、機構或社區
RECREATION	36.41	5.37	康樂
OTHER SPECIFIED USES	81.82	12.07	其他指定用途
GREEN BELT	202.85	29.93	綠化地帶
CONSERVATION AREA	78.41	11.57	自然保育區
COASTAL PROTECTION AREA	55.99	8.26	海岸保護區
SITE OF SPECIAL SCIENTIFIC INTEREST	77.91	11.50	具特殊科學價值地點
DRAINAGE CHANNEL	53.38	7.88	排水道
MAJOR ROAD ETC.	3.78	0.55	主要道路等
TOTAL PLANNING SCHEME AREA	677.74	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-LFS/9 的修訂
AMENDMENT TO APPROVED PLAN No. S/YL-LFS/9

AMENDMENT EXHIBITED UNDER SECTION 5 OF THE TOWN PLANNING ORDINANCE		按照城市規劃條例第 5 條展示的修訂
AMENDMENT ITEM A		修訂項目 A 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流浮山及尖鼻咀分區計劃大綱圖
TOWN PLANNING ORDINANCE, HONG KONG TOWN PLANNING BOARD
LAU FAU SHAN & TSIM BEI TSUI - 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-LFS/9A**

~~APPROVED~~ *DRAFT* LAU FAU SHAN AND TSIM BEI TSUI OUTLINE ZONING PLAN NO. S/YL-LFS/9*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 "Site of Special Scientific Interest" or "Conservation Area" or "Coastal Protection Area" or "Other Specified Uses" annotated "Comprehensive Development and Wetland Enhancement 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 "Site of Special Scientific Interest" or "Conservation Area" or "Coastal Protection Area" or "Other Specified Uses" annotated "Comprehensive Development and Wetland Enhancement 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 "Site of Special Scientific Interest" or "Coastal Protection Area" or "Conservation Area" or "Other Specified Uses" annotated "Comprehensive Development and Wetland Enhancement 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 "Site of Special Scientific Interest" or "Conservation Area" or "Coastal Protection Area" or "Other Specified Uses" annotated "Comprehensive Development and Wetland Enhancement 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*** LAU FAU SHAN AND TSIM BEI TSUI
OUTLINE ZONING PLAN NO. S/YL-LFS/9***A***

SCHEDULE OF USES

	Page
COMMERCIAL/RESIDENTIAL	1
RESIDENTIAL (GROUP A)	***3***
RESIDENTIAL (GROUP C)	~~3~~***6***
RESIDENTIAL (GROUP D)	~~5~~***8***
RESIDENTIAL (GROUP E)	~~7~~***10***
VILLAGE TYPE DEVELOPMENT	~~10~~***13***
GOVERNMENT, INSTITUTION OR COMMUNITY	~~12~~***15***
RECREATION	~~14~~***17***
OTHER SPECIFIED USES	
Comprehensive Development and Wetland Enhancement Area	~~16~~***19***
Helicopter Landing Pad	~~19~~***22***
GREEN BELT	~~20~~***23***
CONSERVATION AREA	~~22~~***25***
COASTAL PROTECTION AREA	~~23~~***26***
SITE OF SPECIAL SCIENTIFIC INTEREST	~~24~~***27***

COMMERCIAL/RESIDENTIAL

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

Planning Intention

This zone is intended primarily for commercial and/or residential development. A selected range of commercial uses are always permitted to serve the local community.

Remarks

(a) No new development, or addition, alteration and/or modification to or redevelopment of an existing building, except 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, site coverage 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.

(Please see next page)

COMMERCIAL/RESIDENTIAL (Cont'd)

Remarks (Cont'd)

(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 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)*** ***Religious Institution (Ancestral Hall only)*** ***Residential Institution*** ***Rural Committee/Village Office*** ***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*** ***Religious Institution (not elsewhere specified)*** ***School (not elsewhere specified)*** ***Shop and Services (not elsewhere specified)*** ***Training Centre***

(Please see next page)

RESIDENTIAL (GROUP A) (Cont'd)

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

Planning Intention

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

Remarks

(a) No new development, or addition, alteration and/or modification to or redevelopment of an existing building shall result in a total development and/or redevelopment in excess of a maximum plot ratio of 6.9 and a maximum building height of 165mPD, or the plot ratio and height of the existing building, whichever is the greater.

(b) In determining the maximum plot ratio for the purposes of paragraph (a), any

floor space that is constructed or intended for use solely as public vehicle parks, public transport facilities and Government, institution or community facilities, as required by the Government, may be disregarded.

(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) ***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.***

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 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.

Remarks

(a) No new development, or addition, alteration and/or modification to or redevelopment of an existing building, except to the use 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) including car park, or the plot ratio, site coverage 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.

(Please see next page)

RESIDENTIAL (GROUP C) (Cont'd)

Remarks (Cont'd)

(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 ~~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 # 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' 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 0.2 and a maximum building height of 2 storeys (6m).

(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 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.

RESIDENTIAL (GROUP E)

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

Schedule I : for open-air development or for building other than industrial building

Ambulance Depot
Government Use (Police Reporting Centre, Post Office only)
Rural Committee/Village Office
Utility Installation for Private Project

Eating Place
Educational Institution
Flat
Government Refuse Collection Point
Government Use (not elsewhere specified)
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)
Library
~~Market~~
Office
Petrol Filling Station
Place of Entertainment
Place of Recreation, Sports or Culture
Private Club
Public Clinic
Public Convenience
Public Transport Terminus or Station
Public Utility Installation
Public Vehicle Park (excluding container vehicle)
Recyclable Collection Centre
Religious Institution
Residential Institution
School #
Shop and Services
Social Welfare Facility
Training Centre

(Please see next page)

RESIDENTIAL (GROUP E) (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

Schedule II : for existing industrial development

Eating Place (Canteen only)
Government Refuse Collection Point
Government Use (not elsewhere specified)
Public Utility Installation
Recyclable Collection Centre
Rural Workshop
Utility Installation for Private Project
Warehouse (excluding Dangerous Goods Godown)
Office
Petrol Filling Station
Public Convenience
Public Vehicle Park (excluding container vehicle)
Shop and Services (ground floor only)
Vehicle Repair Workshop
Wholesale Trade

Planning Intention

This zone is intended primarily for phasing out of existing industrial uses through redevelopment for residential use on application to the Town Planning Board. Whilst existing industrial uses will be tolerated, new industrial developments are not permitted in order to avoid perpetuation of industrial/residential interface problem.

Remarks

(a) No new development, except to the use annotated with #, shall exceed a maximum plot ratio of 0.4 and a maximum building height of 3 storeys (9m) including car park.

(b) No addition, alteration and/or modification to or redevelopment of an existing building (except redevelopment to 'New Territories Exempted Houses' and to the use annotated with #) shall exceed the plot ratio and building height restrictions stated in paragraph (a) above, or the plot ratio, site coverage 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, subject to redevelopment to the plot ratio in the latter restriction shall be permitted only if the existing building is a domestic building.

(Please see next page)

RESIDENTIAL (GROUP E) (Cont'd)

Remark (Cont'd)

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

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

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) # ~~Market~~ 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.

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 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.

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 and Convention Hall Field Study/Education/Visitor Centre Government Refuse Collection Point Government Use (not elsewhere specified) Hospital Institutional Use (not elsewhere specified) Library Market Pier Place of Recreation, Sports or Culture Public Clinic Public Convenience Public Transport Terminus or Station Public Utility Installation Public Vehicle Park (excluding container vehicle) Recyclable Collection Centre Religious Institution Research, Design and Development Centre Rural Committee/Village Office School Service Reservoir Social Welfare Facility Training Centre Wholesale Trade	Animal Boarding Establishment Animal Quarantine Centre (not elsewhere specified) Columbarium Correctional Institution Crematorium Driving School Eating Place (not elsewhere specified) Firing Range Flat Funeral Facility Helicopter Fuelling Station Helicopter Landing Pad Holiday Camp 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) Marine Fuelling Station Off-course Betting Centre Office Petrol Filling Station Place of Entertainment Private Club Radar, Telecommunications Electronic Microwave Repeater, Television and/or Radio Transmitter Installation Refuse Disposal Installation (Refuse Transfer Station only) Residential Institution Sewage Treatment/Screening Plant Shop and Services ***(not elsewhere specified)*** Utility Installation for Private Project Zoo

(Please see next page)

GOVERNMENT, INSTITUTION OR COMMUNITY (Cont'd)

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.

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 Cable Car Route and Terminal Building 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.

(Please see next page)

RECREATION (Cont'd)

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.

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 "Comprehensive Development and Wetland Enhancement Area" only

Agricultural Use (Fish Pond Culture only)	Eating Place
Nature Reserve	Field Study/Education/Visitor Centre
Wetland Habitat	Flat
	Government Refuse Collection Point
	Government Use (not elsewhere specified)
	House (other than New Territories Exempted House)
	Nature Trail
	Public Clinic
	Public Convenience
	Public Transport Terminus or Station
	Public Utility Installation
	Religious Institution
	School
	Shop and Services
	Social Welfare Facility
	Utility Installation for Private Project

Planning Intention

This zone is intended for conservation and enhancement of ecological value and functions of the existing fish ponds or wetland through consideration of application for development or redevelopment under the "private-public partnership approach". Low-density private residential or passive recreational development within this zone in exchange for committed long-term conservation and management of the remaining fish ponds or wetland within the development site may be permitted subject to the "no-net-loss in wetland" principle and planning permission from the Town Planning Board. Any new building should be located farthest away from Deep Bay.

(Please see next page)

OTHER SPECIFIED USES (Cont'd)

For "Comprehensive Development and Wetland Enhancement Area" only (Cont'd)

Remarks

(a) Application for permission of use or development shall be in the form of a comprehensive development scheme with minimum pond filling and no decline in the wetland function of the fish ponds within and near the development site. An applicant shall prepare a layout plan and any other documents showing the following information for consideration of the Town Planning Board:

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

(ii) a wetland conservation and enhancement scheme, including its detailed design, wetland buffer proposals, a long-term maintenance and management plan, and monitoring and implementation mechanism;

(iii) an environmental impact study report, including but not limiting to an ecological impact assessment and a visual impact assessment, to examine any possible environmental, ecological and visual problems that may be caused to or by the proposed development or redevelopment during construction and after completion and the proposed mitigation measures to tackle them;

(iv) landscape proposals;

(v) a traffic impact study report to examine any possible traffic problems that may be caused by the proposed development or redevelopment and the proposed measures to tackle them;

(vi) a drainage and sewerage impact study report to examine any possible flooding, drainage, sewerage and associated problems that may be caused to or by the proposed development or redevelopment and the proposed mitigation measures to tackle them;

(vii) programming, phasing and implementation schedule of each component of the proposed development or redevelopment (including the wetland conservation and enhancement scheme); and

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

(b) No new development, or addition, alteration and/or modification to or redevelopment of an existing building shall result in a total development and/or redevelopment in excess of a maximum gross floor area of 148,000m^2.

(Please see next page)

OTHER SPECIFIED USES (Cont'd)

For "Comprehensive Development and Wetland Enhancement Area" only (Cont'd)

Remarks (Cont'd)

(c) In determining the maximum gross floor area 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.

(d) 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.

(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 "Helicopter Landing Pad" only	
Helicopter Landing Pad	Government Use Public Utility Installation

Planning Intention

This zone is intended primarily for the provision of helicopter landing pad serving the needs of the district.

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 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 Barbecue Spot Broadcasting, Television and/or Film Studio Burial Ground Cable Car Route and Terminal Building Columbarium (within a Religious Institution or extension of existing Columbarium only) Crematorium (within a Religious Institution or extension of existing Crematorium only) Field Study/Education/Visitor Centre 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 Zoo

(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 (Fish Pond Culture only) Nature Reserve On-Farm Domestic Structure Wetland Habitat Wild Animals Protection Area	Field Study/Education/Visitor Centre Government Refuse Collection Point Government Use (not elsewhere specified) House (Redevelopment only) Nature Trail Public Convenience Public Utility Installation Utility Installation for Private Project

Planning Intention

The planning intention of this zone is to conserve the ecological value of wetland and fish ponds which form an integral part of the wetland ecosystem. The "no-net-loss in wetland" principle is adopted for any change in use within this zone. The primary intention is to discourage new development unless it is required to support the conservation of the ecological integrity of the wetland ecosystem or the development is an essential infrastructure project with overriding public interest.

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.

COASTAL PROTECTION 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 Use Holiday Camp House (Redevelopment only) Pier 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 conserve, protect and retain the natural coastlines and the sensitive coastal natural environment, including attractive geological features, physical landform or area of high landscape, scenic or ecological value, with a minimum of built development. It may also cover areas which serve as natural protection areas sheltering nearby developments against the effects of coastal erosion.

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.

SITE OF SPECIAL SCIENTIFIC INTEREST

Column 1 Uses always permitted	Column 2 Uses that may be permitted with or without conditions on application to the Town Planning Board
Wild Animals Protection Area	Agricultural Use Field Study/Education/Visitor Centre Government Use Nature Reserve Nature Trail On-Farm Domestic Structure Picnic Area Public Convenience Public Utility Installation Tent Camping Ground Utility Installation for Private Project

Planning Intention

The planning intention of this zone is to conserve and protect the features of special scientific interest such as rare or particular species of fauna and flora and their habitats, corals, woodlands, marshes or areas of geological, ecological or botanical/biological interest which are designated as Site of Special Scientific Interest (SSSI). It intends to deter human activities or developments within the SSSI.

There is a general presumption against development in this zone. No developments are permitted unless they are needed to support the conservation of the features of special scientific interest in the SSSI, to maintain and protect the existing character of the SSSI, or for educational and research purposes.

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.

Attachment IV of
RNTPC Paper No. 4/21

~~APPROVED~~ *DRAFT* LAU FAU SHAN AND TSIM BEI TSUI OUTLINE ZONING PLAN NO. S/YL-LFS/9*A*

EXPLANATORY STATEMENT

~~APPROVED~~ ***DRAFT*** LAU FAU SHAN AND TSIM BEI TSUI
OUTLINE ZONING PLAN No. S/YL-LFS/9***A***

EXPLANATORY STATEMENT

CONTENTS

			Page
1.	INTRODUCTION		1
2.	AUTHORITY FOR THE PLAN AND PROCEDURE		1
3.	OBJECT OF THE PLAN		~~2~~***3***
4.	NOTES OF THE PLAN		3
5.	THE PLANNING SCHEME AREA		3
6.	POPULATION		4
7.	OPPORTUNITIES AND CONSTRAINTS		~~4~~***5***
8.	GENERAL PLANNING INTENTION		6
9.	LAND-USE ZONINGS		
	9.1	Commercial/Residential	7
	9.2	***Residential (Group A)***	***8***
	9.~~2~~***3***	Residential (Group C)	~~7~~***9***
	9.~~3~~***4***	Residential (Group D)	~~8~~***9***
	9.~~4~~***5***	Residential (Group E)	~~8~~***10***
	9.~~5~~***6***	Village Type Development	~~9~~***10***
	9.~~6~~***7***	Government, Institution or Community	~~10~~***11***
	9.~~7~~***8***	Recreation	~~10~~***11***
	9.~~8~~***9***	Other Specified Uses	
		Comprehensive Development ~~to include~~ ***and*** Wetland ~~Restoration~~ ***Enhancement*** Area	~~11~~***12***
		Helicopter Landing Pad	~~12~~***13***
	9.~~9~~***10***	Green Belt	~~12~~***13***
	9.~~10~~***11***	Conservation Area	~~13~~***14***
	9.~~11~~***12***	Coastal Protection Area	~~13~~***15***
	9.~~12~~***13***	Site of Special Scientific Interest	~~14~~***15***
10.	CULTURAL HERITAGE		~~15~~***16***
11.	COMMUNICATIONS		~~15~~***17***
12.	UTILITY SERVICES		~~15~~***17***
13.	IMPLEMENTATION		~~16~~***18***
14.	PLANNING CONTROL		~~16~~***18***

~~APPROVED~~ *DRAFT* LAU FAU SHAN AND TSIM BEI TSUI
OUTLINE ZONING PLAN NO. S/YL-LFS/9*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*** Lau Fau Shan and Tsim Bei Tsui Outline Zoning Plan (OZP) No. S/YL-LFS/9***A***. It reflects the planning intention and objectives of the Town Planning Board (the Board) for the various land-use zonings of the Plan.

2. AUTHORITY FOR THE PLAN AND PROCEDURE

2.1 The land covered by the approved Lau Fau Shan and Tsim Bei Tsui OZP was previously included in the Lau Fau Shan and Tsim Bei Tsui Interim Development Permission Area (IDPA) Plan and the Lau Fau Shan and Tsim Bei Tsui Development Permission Area (DPA) Plan.

2.2 On 17 August 1990, the Lau Fau Shan and Tsim Bei Tsui IDPA Plan No. IDPA/YL-LFS/1 prepared by the Director of Planning was notified in the Gazette.

2.3 On 12 July 1991, the draft Lau Fau Shan and Tsim Bei Tsui DPA Plan No. DPA/YL-LFS/1, including land previously within the IDPA Plan, was exhibited for public inspection under section 5 of the Town Planning Ordinance (the Ordinance). On 26 April 1994, the draft Lau Fau Shan and Tsim Bei Tsui DPA Plan was approved by the then Governor in Council under section 9(1)(a) of the Ordinance and renumbered as DPA/YL-LFS/2.

2.4 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 Lau Fau Shan and Tsim Bei Tsui.

2.5 On 10 June 1994, the draft Lau Fau Shan and Tsim Bei Tsui OZP No. S/YL-LFS/1 was exhibited for public inspection under section 5 of the Ordinance. Since then, the draft OZP has been amended three times and exhibited for public inspection under section 7 of the Ordinance to reflect the changing circumstances including the excision of an area near Shing Uk Tsuen from the draft OZP No. S/YL-LFS/2 for incorporation into the Ping Shan OZP. On 19 June 2001, the Chief Executive in Council (CE in C), under

section 9(1)(a) of the Ordinance, approved the draft Lau Fau Shan and Tsim Bei Tsui OZP, which was subsequently renumbered as S/YL-LFS/5.

2.6 On 8 July 2003, the CE in C referred the approved OZP No. S/YL-LFS/5 to the Board for amendment under section 12(1)(b)(ii) of the Ordinance. The OZP was subsequently amended and exhibited for public inspection under section 5 of the Ordinance.

2.7 On 1 February 2005, the CE in C, under section 9(1)(a) of the Ordinance, approved the draft Lau Fau Shan and Tsim Bei Tsui OZP, which was subsequently renumbered as S/YL-LFS/7. ~~On 18 February 2005, the approved Lau Fau Shan and Tsim Bei Tsui OZP No. S/YL-LFS/7 was exhibited for public inspection under section 9(5) of the Ordinance.~~ ***On 6 December 2016, the CE in C referred the approved OZP No. S/YL-LFS/7 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.***

~~2.8 On 6 December 2016, the CE in C referred the approved OZP No. S/YL-LFS/7 to the Board for amendment under section 12(1)(b)(ii) of the Ordinance. The reference back of the OZP was notified in the Gazette on 16 December 2016 under section 12(2) of the Ordinance.~~

~~2.9 On 26 May 2017, the draft OZP No. S/YL-LFS/8 was exhibited for public inspection under section 5 of the Ordinance. The major amendment on the Plan was the excision of an area to the south of the roundabout at the junction of Lau Fau Shan Road and Deep Bay Road (the Lau Fau Shan Roundabout) from the planning scheme area for incorporation into the draft Hung Shui Kiu and Ha Tsuen OZP No. S/HSK/1. During the two-month exhibition period, a total of 2 valid representations were received. On 25 August 2017, the representations were published for three weeks for public comments and a total of 1 valid comment on the representations (comment) was received. On 17 April 2018, the Chief Executive, under section 8(2) of the Ordinance, agreed to extend the statutory time limit for the Board to submit the draft OZP to the CE in C for approval for a period of six months. After giving considerations to the representations and comment, the Board on 25 May 2018 decided not to propose any amendment to the draft OZP to meet the representations.~~

2.~~10~~***8*** On 16 October 2018, the CE in C, under section 9(1)(a) of the Ordinance, approved the draft Lau Fau Shan and Tsim Bei Tsui OZP, which was subsequently renumbered as S/YL-LFS/9. On 26 October 2018, the approved Lau Fau Shan and Tsim Bei Tsui OZP No. S/YL-LFS/9 ~~(the Plan)~~ was exhibited for public inspection under section 9(5) of the Ordinance.

2.9 On 25 August 2020, the CE in C referred the approved Lau Fau Shan and Tsim Bei Tsui OZP No. S/YL-LFS/9 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 4 September 2020 under section 12(2) of the Ordinance.

2.10 On xx xx 2021, the draft Lau Fau Shan and Tsim Bei Tsui OZP No. S/YL-LFS/10 (the Plan), incorporating amendments to rezone an area near the junction of Tin Wah Road and Man Tak Road from "Residential (Group C)" and "Green Belt" to "Residential (Group A)" for public housing development, and corresponding amendments to the Notes of the Plan, was exhibited for public inspection under section 5 of the Ordinance.

3. OBJECT OF THE PLAN

3.1 The object of the Plan is to indicate the broad land-use zonings and transport networks for the Lau Fau Shan and Tsim Bei Tsui 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 only the broad principles of development and control only. It is a small-scale plan and the transport alignments and boundaries between the land-use zones may be subject to minor adjustments as detailed planning proceeds.

3.3 Since the Plan is to show broad land use zonings on the OZP, there would be situations in which some small strips of land not intended for building development purposes and carry no development right under the lease, such as the areas restricted as non-building area or for garden, slope maintenance and access road purposes, are included in the residential zones. The general principle is that such areas should not be taken into account in plot ratio and site coverage calculation. Development within residential zones should be restricted to building lots carrying development right in order to maintain the character and amenity of Lau Fau Shan and Tsim Bei Tsui 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 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 is about 677.74 ha in size. It is situated at the northwestern corner of the North West New Territories (NWNT) and extends eastward from Lau Fau Shan along the Deep Bay coast to Shan Pui River. The boundary of the Area is shown in a heavy broken line on the Plan. The southern boundary is demarcated by Sha Kong Wai, Hung Shui Kiu***/Ha Tsuen*** New Development Area (NDA), Tin Shui Wai New Town, Ng Uk Tsuen and Yuen Long Industrial Estate while the north is bounded by Deep Bay.

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 geographical in nature and would not cause implications on development rights, particularly Small House applications.

5.3 The Area is largely rural in character. It comprises two distinct parts, the coastal peninsula and fish ponds. The peninsula is distinguished by a natural coastline in the northwest and rocky outcrops in Tsim Bei Tsui and Lau Fau Shan interspersed with villages, temporary industrial/residential structures and agricultural plots. The fish ponds stretch across the north of the Yuen Long Industrial Estate to the drainage channels. These fish ponds in the Area are part of the wetland ecosystem in the Deep Bay Area worthy of preservation. A large portion of the fish ponds in the north falls within the Wetland of International Importance under the Ramsar Convention.

5.4 There are five recognized villages, namely San Hing Tsuen, Ngau Hom Tsuen, Mong Tseng Tsuen, Sha Kong Wai and Mong Tseng Wai. Several buildings/structures which are of historical, architectural and archaeological significance are located within the Area~~, including Yuen Kwan Tai Temple in Mong Tseng Wai, which is a Grade 2 archaeological site~~. The Lau Fau Shan Site of Archaeological Interest***,*** ~~and~~ Mong Tseng Site of Archaeological Interest ~~also~~ ***and a number of graded historic buildings*** fall within the Area. These sites of archaeological and historical interest~~s~~ are worthy of preservation and thus any ***works/***developments***/redevelopment or rezoning proposals*** affecting them should be avoided.

6. POPULATION

6.1 Based on the 2016 Population by-census, the population of the Area estimated by the Planning Department was about 4,550 persons and was concentrated in the recognized villages.

6.2 Future expansion of population will be in the proposed residential areas. It is estimated that the planned population in the Area will be about ~~13,500~~ ***19,970*** persons.

7. OPPORTUNITIES AND CONSTRAINTS

7.1 Opportunities

7.1.1 The "Study on Ecological Values of Fish Ponds in Deep Bay Area" (the Fish Pond Study) completed in 1997 has confirmed the unique international and regional importance of the fish pond system in the Deep Bay Area particularly for ardeids. It has established that the three Sites of Special Scientific Interest (SSSI) namely, the Tsim Bei Tsui SSSI, the Tsim Bei Tsui Egretry and the Inner Deep Bay SSSI, and contiguous fish pond areas in the Area form an integral part of the Deep Bay Area wetland ecosystem, and have significant ecological value. With the support of scientific surveys and analysis, the Fish Pond Study sets out the "precautionary approach" and "no-net-loss in wetland" principle which present opportunities to preserve/enhance these natural resources.

7.1.2 Lau Fau Shan has long been the local centre for oyster farming. It is the distribution centre for oyster and other seafood and well known for its seafood market and restaurant trade. The oyster and fish market at Lau Fau Shan is known throughout the territory and attracts numerous visitors and tourists.

7.1.3 Rural townships in the New Territories, which are among the earliest settlements in the territory, form part of the heritage of Hong Kong. Lau Fau Shan, being one of the rural townships in the NWNT, has both the heritage value and potential to develop into a major tourism and recreational attraction. The "Study on the Enhancement of the Lau Fau Shan Rural Township and Surrounding Areas" (the LFS Study) completed in mid-2011 proposes to develop the tourism and recreational potential of Lau Fau Shan with the emphasis on local heritage and its people, and respect and conserve the natural environment, with no large-scale development.

7.1.4 With the completion of the road widening scheme for Ping Ha Road coupled with the provision of adequate infrastructure and supporting facilities in the proposed Hung Shui Kiu***/Ha Tsuen*** NDA, there could be opportunity for development in the Area.

7.2 Development Constraints

7.2.1 Over the past decades, there has been substantial development and modification of the floodplain in the Area which has reduced the flood storage capacity and affected floodways and watercourses. These changes have caused substantial increase in flooding hazards. Unless remedial drainage and flood protection are in place, new development in the Area should not be encouraged.

7.2.2 Since the Area consists of extensive areas of fish ponds which constitute an important ecosystem in the Deep Bay Area, the principle

on conservation of the wetland habitat is adopted as a major constraint on future development of the Area.

7.2.3 At present, the main external road connection to the Area is via Lau Fau Shan Road, which is surrounded by temporary open storage and container yards clustering on both sides. Branching off Lau Fau Shan Road is Deep Bay Road which is a narrow single carriageway giving limited vehicular access to the waterfront and other rural settlements. Furthermore, the junction of Lau Fau Shan Road and Deep Bay Road is at present a roundabout with bus stops around a section of its perimeter. Both the roundabout and adjacent parking access are subject to serious congestion during market times, weekends and public holidays. Hence, prior to the implementation of the land use proposals and road networks under the Hung Shui Kiu***/Ha Tsuen*** NDA, the traffic network capacity pose constraints on future development in the Area.

7.2.4 There is no comprehensive and separate stormwater or foul sewerage system. At present, sewage disposal is by way of open drains into Deep Bay. Poor drainage is due to low levels and gradients, with some localized flooding at times of high rainfall. ~~However, the trunk sewer system will only be available in the Area in 2009.~~ ***Construction of trunk sewer at Lau Fau Shan was completed in December 2015.*** To uphold the principle of "no-net-increase in pollution load to Deep Bay", development should be kept to a minimum in the interim to avoid generating adverse impacts on the environment.

7.2.5 It is expected that preservation in totality and in-situ of the cultural heritage resources would impose an insurmountable constraint on future development of the Area. There ~~is one~~ ***are a number of graded*** historic ***buildings*** ~~temple~~ and two sites of archaeological interest in the Area. Prior consultation with the Antiquities and Monuments Office (AMO) is required for any ***works/***development***/redevelopment or rezoning proposals*** affecting these sites of archaeological and historical interest~~s~~.

8. GENERAL PLANNING INTENTION

8.1 In the light of the findings and recommendations of the Fish Pond Study, the planning intention of the Area is to conserve the ecological value of the fish ponds which form an integral part of the wetland ecosystem in the Deep Bay Area. The existing and contiguous, active or abandoned fish ponds in the Deep Bay Area should all be conserved. Moreover, the loss of fish ponds and habitat fragmentation should be avoided and any negative impacts arising from undesirable land uses and human disturbance should be mitigated.

8.2 In order to achieve the conservation objectives, a "precautionary approach" and the principle of "no-net-loss in wetland" have been adopted. New

development within the fish pond areas would not be allowed unless it is required to support/enhance the ecological value of the area, or the development is an essential infrastructural project with overriding public interest.

8.3 The planning intention of the area further away from the fish ponds is to protect the ecological integrity of the wetland ecosystem, and prevent development that would have a negative off-site disturbance impact on the ecological value of fish ponds. Application for new open storage or container back-up uses would normally not be allowed.

8.4 Since the area of Lau Fau Shan has long been a tourist centre and is of territorial significance for its oyster and fish marketing functions which attract quite a number of visitors and tourists, eco-tourism and compatible recreational uses for the general public are preferred around the Lau Fau Shan area.

8.5 According to the LFS Study, it is proposed to preserve the natural and cultural resources of the Area and large-scale development is not encouraged. The natural setting of wetlands, including ponds in the vicinity to Hong Kong Wetland Park, would be preserved.

8.6 In the designation of various zones in the Area, other than the recommendations of the Fish Pond Study, considerations have been given to the presence of the ecologically sensitive areas, physical landform, existing settlements, land status, availability of infrastructure, local development pressures, Territorial Development Strategy, NWNT Development Strategy Review, the LFS Study and the Hung Shui Kiu New Development Area Planning and Engineering Study. In addition, buildings and ~~places~~ ***sites*** of historical and archaeological interest in the Area should be preserved as far as possible.

9. LAND-USE ZONINGS

9.1 Commercial/Residential ("C/R") (Total Area 4.27 ha)

9.1.1 The planning intention of this zone is primarily for commercial and/or residential development. A selected range of commercial uses are always permitted to serve the local community.

9.1.2 Under this zoning, sites may be redeveloped for either residential or commercial use, or composite building containing both commercial and residential uses. To be compatible with the rural character of the surrounding areas, developments in this zone are restricted to a maximum plot ratio of 0.4 and a maximum building height of 3 storeys (9m). 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.

9.1.3 Land under this zoning covers areas around the Lau Fau Shan Roundabout. They are predominantly occupied by restaurants, stores and shops with associated residential component. Most of the commercial activities are located alongside the main pedestrian street which links the roundabout with the seafood market and the pier on the shore of Deep Bay. Lau Fau Shan has long been the local centre for oyster farming and the centre is well known for its seafood market and restaurant trade. The zoning aims to retain these functions in the centre which gives the settlement its character and attraction.

9.2 Residential (Group A) ("R(A)") (Total Area 2.82 ha)

9.2.1 The "R(A)" zone is intended primarily for high-density residential developments. Under this zoning, 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.

9.2.2 An area north of Tin Wah Road near Sha Kong Wai is designated for "R(A)" use. It is intended for public housing development. Development within this zone is restricted to a maximum plot ratio of 6.9 and a maximum building height of 165 mPD.

9.2.3 In determining the maximum plot ratio of the development and/or redevelopments, any floor space that is constructed or intended for use solely as public vehicle parks, public transport facilities and Government, institution or community facilities, as required by the Government, may be disregarded to facilitate the provision of these facilities.

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

9.2.6 A planning brief setting out the planning parameters and the design requirements of public housing development at this zone will be provided to guide its future development.

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

~~9.2~~***9.3*** Residential (Group C) ("R(C)") (Total Area ~~8.33~~ ***5.87*** ha)

9.~~2~~***3***.1 The "R(C)" zone is intended primarily for low-rise, low-density residential development where commercial uses serving the residential neighbourhood may be permitted on application to the Board.

9.~~2~~***3***.2 Under this zoning, residential developments are restricted to a maximum plot ratio of 0.4 and a maximum building height of 3 storeys (9m) including car park. All commercial developments within this zone are subject to the approval of the Board under the planning permission system. Development will be in accordance with layout plans to ensure that the nature and scale of new development will be in keeping with the natural landscape of the Deep Bay Area. 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~~***3***.3 ~~Two~~ ***One*** site~~s in the Area are within this zone. The first one is~~ located to the further south of Lau Fau Shan Roundabout along Deep Bay Road ***is within this zone*** where most existing rural settlements are found. ~~The second one is located to the south-east of Sha Kong Wai Tsai.~~

~~9.3~~***9.4*** Residential (Group D) ("R(D)") (Total Area 5.70 ha)

9.~~3~~***4***.1 The planning intention of this zone is primarily to improve and upgrade the existing temporary structures within the rural area to permanent buildings. 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).

9.~~3~~***4***.2 Apart from the intention of residential upgrading, very low-rise and low-density residential development may be permitted on application to the Board. To be in line with the development intensity of existing domestic accommodation within the area, residential development 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). Generally, the applicant has to prove to the Board that the proposed development would have no or minimal adverse impact 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~~***4***.3 Land under this zoning lies between Deep Bay Road to the east and Deep Bay to the west, to the further south of Lau Fau Shan Roundabout. It is mixed with fallow agricultural land, fish ponds and scattered temporary structures.

~~9.4~~***9.5*** Residential (Group E) ("R(E)") (Total Area 11.89 ha)

9.4***5***.1 This zone is intended primarily for phasing out of existing industrial uses through redevelopment for residential use on application to the Board. Whilst existing industrial uses will be tolerated, new industrial developments are not permitted in order to avoid perpetuation of industrial/residential (I/R) interface problem.

9.4***5***.2 An area to the immediate east of Lau Fau Shan Roundabout and in between Deep Bay Road and Lau Fau Shan Road is zoned "R(E)". The area is at present intermixed with structures for residential use, open storage yards and workshops. Since it may not be possible to phase out all the industrial uses at once, it is important to ensure that the residential development will be environmentally acceptable and not subject to I/R interface problems. The applicant will be required to submit adequate information to demonstrate that the new development will be environmentally acceptable, and suitable mitigation measures, if required, will be implemented to address the potential I/R interface problems. In addition, the applicant will have to prove to the Board that the proposed development would have no or minimal adverse impact on the area in terms of environmental quality, land-use compatibility, infrastructural provision and traffic requirement.

9.4***5***.3 New development within this zone is restricted to a maximum plot ratio of 0.4 and a maximum building height of 3 storeys (9m) including car park. 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.

9.4***5***.4 Part of Lau Fau Shan Site of Archaeological Interest falls within this zone. Prior consultation with ~~the~~ AMO is required for any ***works/***development***/*** ~~or~~ redevelopment ***or rezoning proposals*** affecting this site of archaeological interest.

~~9.5~~***9.6*** Village Type Development ("V") (Total Area 53.26 ha)

9.5***6***.1 The planning intention of this zone is to designate both existing recognized villages and areas of land considered suitable for village expansion. Land within this zone is primarily intended for development of Small Houses by indigenous villagers. It is also intended to concentrate village type development within this zone for a more orderly development pattern, efficient use of land and provision of infrastructures and services. Selected commercial and community uses serving the needs of the villagers and in support of the village development are always permitted on the ground floor of a New Territories Exempted House. Other commercial, community and recreational uses may be permitted on application to the Board.

9.5*6*.2 The recognized villages in the Area include Mong Tseng Tsuen, Mong Tseng Wai, Ngau Hom Tsuen, San Hing Tsuen and Sha Kong Wai.

9.5*6*.3 The boundaries of the "V" zones are drawn up having regard to the existing village "environs", outstanding Small House demands for the next ten years, topography and site constraints. Areas of difficult terrain, dense vegetation, stream courses and burial grounds have been avoided. Village expansion areas and other infrastructural improvements will be guided by detailed layout plans whenever applicable.

9.5*6*.4 Part of the Mong Tseng Site of Archaeological Interest is located to the east of Mong Tseng Wai. ***A number of graded historic buildings are located at Sha Kong Wai, San Hing Tsuen and Mong Tseng Wai.*** For any ***works***/development/redevelopment ***or rezoning*** proposal***s*** affecting ~~the~~***this*** site ***of archaeological interest***, prior consultation with ~~the~~ AMO is required.

~~9.6~~***9.7*** Government, Institution or Community ("G/IC") (Total Area 3.38 ha)

9.~~6~~***7***.1 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.

9.~~6~~***7***.2 The ex-Lau Fau Shan sub-divisional police station, Tsim Bei Tsui sub-divisional police station and Wan Fau Sin Koon are zoned "G/IC".

9.~~6~~***7***.3 Part of Lau Fau Shan Site of Archaeological Interest ***and Former Lau Fau Shan Police Station, a grade 3 historic building,*** falls within this zone. Prior consultation with ~~the~~ AMO is required for any ***works***/development/~~ or~~ redevelopment ***or rezoning proposals*** affecting this site of archaeological interest.

~~9.7~~***9.8*** Recreation ("REC") (Total Area 36.41 ha)

9.~~7~~***8***.1 The planning intention of this zone is 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.~~7~~***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 plot ratio of 0.2 and a building height of 2 storeys (6m). Generally, the

applicant has to demonstrate to the Board that the proposed development would have no or minimal adverse effects on the environment including the ecology of the area and infrastructural provision. 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.~~7~~***8***.3 The areas under this zoning are located to the northeast of the Lau Fau Shan Roundabout and along both sides of Deep Bay Road and to the southwest of Wan Fau Sin Koon. A large portion of the Lau Fau Shan Site of Archaeological Interest is located to the south***west*** of Wan Fau Sin Koon. For any ***works/***development/redevelopment ***or rezoning*** proposal***s*** affecting ~~the~~***this*** site ***of archaeological interest***, prior consultation with ~~the~~ AMO is required.

9.~~8~~***9*** Other Specified Uses ("OU") (Total Area 81.82 ha)

The sites zoned "OU" on the Plan include the following as annotated on the Plan:

"OU" annotated "Comprehensive Development and Wetland Enhancement Area" ("OU(CDWEA)") (Total Area 81.67 ha)

9.~~8~~***9***.1 Within the "OU(CDWEA)" zone, the ecological value of the existing continuous and contiguous fish ponds should be conserved and the "precautionary approach" and the "no-net-loss in wetland" principle shall apply. According to the "precautionary approach", these existing continuous and contiguous fish ponds are to be protected and conserved in order to maintain the ecological integrity of the Deep Bay wetland ecosystem as a whole. "No-net-loss in wetland" can refer to both loss in area and function. No decline in wetland or ecological functions served by the existing fish ponds should occur.

9.~~8~~***9***.2 Having regard to the "precautionary approach" and the "no-net-loss in wetland" principle, the planning intention of the "OU(CDWEA)" zone is to conserve and enhance the ecological value and functions of the existing fish ponds or wetland through consideration of application for development or redevelopment under a "private-public partnership approach". Under the "private-public partnership approach", the Board may, subject to the "no-net-loss in wetland" principle, allow limited low-density private residential or passive recreational development within this zone in exchange for committed long-term conservation and management of the remaining fish ponds or wetland within a development site. Development of this nature should involve minimum pond filling and no decline in the wetland function of the fish ponds within and near the development site. Any new development should be located as far away from the Deep Bay and/or adjoining to existing developments in the area. Compensation for loss of wetland area and its ecological functions is required for any

development involving pond filling.

9.~~8~~*9*.3 New development or redevelopment should be developed in a comprehensive manner and would require planning permission from the Board under section 16 of the Ordinance to ensure that such development or redevelopment would adhere to the "precautionary approach" and "no-net-loss in wetland" principle. An applicant should submit such a development or redevelopment proposal to the Board in the form of a comprehensive development scheme to include a layout plan with supporting documents, including an environmental impact study report which should include, inter alia, an ecological impact assessment (EcoIA) and a visual impact assessment; and traffic impact, drainage and sewerage impacts study reports as well as information on programming, phasing and implementation schedule of the development. The applicant should also submit a wetland conservation and enhancement scheme, including its detailed design, wetland buffer proposals to mitigate the potential impacts on the existing wetland, a maintenance and management plan with implementation details, arrangements of funding and monitoring programme to ensure the long-term management of the wetland. The EcoIA should demonstrate that such development or redevelopment proposal would not result in, or be able to fully compensate for, any loss of the total ecological function of the original fish ponds within this zone as well as the ponds nearby, and that the development or redevelopment impact can be fully mitigated through positive measures. The submission should demonstrate that the development or redevelopment would not cause a net increase of pollution load into Deep Bay.

9.~~8~~*9*.4 Under this zoning, any development shall not result in a total development or redevelopment in excess of a maximum total gross floor area of 148,000 m^2.

9.~~8~~*9*.5 The area located to the north of Shing Uk Tsuen is zoned "OU(CDWEA)". This area comprises fish ponds which form an integral part of the Deep Bay wetland ecosystem.

"OU" annotated "Helicopter Landing Pad" (Total Area 0.15 ha)

9.~~8~~*9*.6 An "OU" zone of about 0.15 ha lying to the immediate west of the Kam Tin and Yuen Long Main Drainage Channels is designated for a helicopter landing pad.

9.~~9~~*10* Green Belt ("GB") (Total Area ~~203.21~~ ***202.85*** ha)

9.~~9~~*10*.1 The planning intention of this zone is primarily for defining the limits of urban and sub-urban development areas by natural features and to contain urban sprawl as well as to provide passive recreational outlets. There is a general presumption against development within this zone. However, 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 relevant Town Planning Board Guidelines.

9.~~9~~***10***.2 The area under this zoning is located to the south and east of Deep Bay Road. This area comprises lower hill slopes, vegetated and gardening land, fallow agricultural land and some isolated ponds.

9.~~9~~***10***.3 Part of Lau Fau Shan Site of Archaeological Interest and Mong Tseng Site of Archaeological Interest fall within this zone. Prior consultation with ~~the~~ AMO is required for any ***works/***development~~/ or~~ redevelopment ***or rezoning proposals*** affecting these sites of ~~cultural heritage~~ ***archaeological interest***.

9.~~10~~11 Conservation Area ("CA") (Total Area 78.41 ha)

9.~~10~~***11***.1 The planning intention of this zone is to conserve the ecological value of the wetland and fish ponds which form an integral part of the wetland ecosystem in the Deep Bay Area and function as a substantial source of food supply for birds and as an important habitat for roosting and foraging of waterbirds. The "no-net-loss in wetland" principle is adopted for any change in use within this zone. "No-net-loss in wetland" can refer to both loss in area and function. No decline in wetland or ecological functions served by the existing fish ponds should occur. Fragmentation of continuous and contiguous fish pond habitats within the "CA" zone should be avoided.

9.~~10~~***11***.2 The existing fish pond culture within this zone should be maintained and its continuous operation is encouraged. Conservation management activities which will enhance the overall Deep Bay wetland ecosystem are also promoted. The primary intention of this zone is to discourage new development unless it is required to support the conservation of the ecological integrity of the wetland ecosystem or the development is an essential infrastructure project with overriding public interest. Alternative beneficial uses to fish ponds such as nature reserve or wetland habitat are permitted as of right within the zone. For those developments which may be permitted on application to the Board, such application should be supported by an EcoIA and a management plan to demonstrate that the development would not result in any net loss in wetland function and negative disturbance impact. Such development should also be compatible with the conservation objectives of the wetland in the Deep Bay Area and should be appropriate as well as be able to enhance the visual and landscape quality of the area. Wetland compensation is required for any development involving pond filling and mitigation measures against any disturbance would be necessary. Certain uses/facilities that are of small scale or necessary to serve the local needs may also be considered on application to the Board.

9.~~10~~***11***.3 There are three areas under this zone. Two areas near Mong Tseng Tsuen and Tsim Bei Tsui Egrety and an area located to the

immediate south of the Inner Deep Bay SSSI are zoned "CA". They all consist of existing contiguous and continuous fish ponds.

9.~~11~~*12* Coastal Protection Area ("CPA") (Total Area 55.99 ha)

9.~~11~~*12*.1 This zone is intended to conserve, protect and retain the natural coastlines and the sensitive coastal natural environment, including attractive geological features, physical landform or area of high landscape, scenic or ecological value, with a minimum of built development. It may also cover areas which serve as natural protection areas sheltering nearby developments against the effects of coastal erosion. 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.~~11~~*12*.2 The area under this zoning stretches westward from the Tsim Bei Tsui SSSI along Deep Bay Road to ex-Lau Fau Shan sub-divisional police station and extends from Deep Bay Road northward to the coast.

9.~~11~~*12*.3 Part of Lau Fau Shan Site of Archaeological Interest falls within this zone. Prior consultation with AMO is required for any ***works/***development~~/ or~~ redevelopment ***or rezoning proposals*** affecting this site of ~~cultural heritage~~ ***archaeological interest***.

9.~~12~~*13* Site of Special Scientific Interest ("SSSI") (Total Area 77.91 ha)

9.~~12~~*13*.1 The planning intention of this zone is to conserve and protect the features of special scientific interest such as rare or particular species of fauna and flora and their habitats, corals, woodlands, marshes or areas of geological, ecological or botanical/biological interest which are designated as Site of Special Scientific Interest (SSSI). It intends to deter human activities or developments within the SSSI. There is a general presumption against development in this zone. No developments are permitted unless they are needed to support the conservation of the features of special scientific interest in the SSSI, to maintain and protect the existing character of the SSSI, or for educational and research purposes.

9.~~12~~*13*.2 There are three SSSIs in the Area. The Tsim Bei Tsui SSSI is situated next to ex-Tsim Bei Tsui sub-divisional police station. It comprises mainly a mature mangrove community which provides the only known habitat in Hong Kong for the large mangrove pulmonate snail. The Tsim Bei Tsui Egretry, which is located to the east of Mong Tseng Wai, is another important SSSI in Hong Kong. Egretries are ecologically important sites which provide resting and breeding place***s*** for egrets and herons. The birds generally congregate at egretries around March to end of August each year for breeding and

raising the young. The Inner Deep Bay SSSI, which is located adjacent to the Tsim Bei Tsui Egretry, contains the largest and most important dwarf mangrove communities in Hong Kong. It provides the resting and roosting ground for over 250 species of birds including visitors or passage migrants to Hong Kong. The mudflats and shallow water habitats also support a wide variety of organisms which are of ecological value and scientific importance.

9.~~12~~***13***.3 Part of Mong Tseng Site of Archaeological Interest falls within this ~~zoning~~ ***zone***. Prior consultation with ~~the~~ AMO is required for any ***works/***development***/*** ~~or~~ redevelopment ***or rezoning proposals*** affecting this site of ~~cultural heritage~~ ***archaeological interest***.

10. CULTURAL HERITAGE

10.1 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" and "List of new items and new categories with assessment results", as well as two sites of archaeological interest, namely Lau Fau Shan ***Site of Archaeological Interest*** and Mong Tseng ***Site of Archaeological Interest***. All of the above graded historic buildings, new items and sites of archaeological interest are worthy of preservation. Details of the list of 1,444 historic buildings and the new items have been uploaded onto the website of the Antiquities Advisory Board (AAB) at http://www.aab.gov.hk.

10.2 ~~Prior consultation with the AMO of Leisure and Cultural Services Department (LCSD) should be made if any development, redevelopment or rezoning proposals might affect the above graded historic buildings, new items, sites of archaeological interest and their immediate environs. An assessment shall be conducted to evaluate the archaeological impact imposed by the proposed works if there is any development within the site of archaeological interest.~~ ***If disturbance to the site of archaeological interest is unavoidable, prior agreement with AMO should be made on any measures for the protection of the site of archaeological interest. 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 ~~professional~~ ***qualified*** archaeologist shall be engaged to apply for a licence from the Antiquities Authority under the Antiquities and Monuments Ordinance (Cap. 53) for an archaeological field investigation ~~to evaluate whether the proposed works is acceptable from an archaeological preservation point of view and propose appropriate mitigation measures in prior agreement with the AMO.~~" ***A proposal of the AIA shall be submitted to AMO for agreement prior to applying for the licence. Subject to the findings of the AIA, appropriate mitigation measures shall be fully implemented by the project proponent in consultation with AMO.***

11. COMMUNICATIONS

11.1 Road Network

The main external road connection to the Area is via Lau Fau Shan Road. Branching off Lau Fau Shan Road is Deep Bay Road, which is a narrow single carriageway giving limited vehicular access to the waterfront and other rural settlement areas. With the timely provision of adequate infrastructure in the proposed Hung Shui Kiu NDA, including the widening of Ping Ha Road, accessibility to the Area will be further improved.

11.2 Public Transport

There are green minibus, one MTRCL feeder bus and taxis serving the Area and its neighbourhoods.

12. UTILITY SERVICES

12.1 Water Supply

Fresh water to the area is provided by the Wang Chau Service Reservoir and Tan Kwai Tsuen North Fresh Water Service Reservoir. The existing water treatment works capacity available in the NWNT will soon be fully committed. Further increase in the capacity of the existing water treatment works, if required, would be made available from the future extension to Ngau Tam Mei Water Treatment Works. Extension of water supply system will be required if there is a substantial increase in the future water demand arising from development proposals for large residential developments.

12.2 Sewerage and Sewage Treatment

~~12.2.1 According to the Yuen Long and Kam Tin Sewerage and Sewage Disposal Package 2A-3T, the Mong Tseng Trunk Sewerage is under review and is anticipated for commencement of construction in end 2018 and completion in late 2022.~~

~~12.2.2 The local sewerage system in the Lau Fau Shan area will be implemented under PWP Item No. 471CL/B – "Lau Fau Shan Development – Remaining Engineering Works" which is under review.~~

There is a trunk sewer at Lau Fau Shan for connection to the San Wai Sewage Treatment Plant in Ha Tsuen.

12.3 Electricity

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

12.4 Gas

At present, there is no gas supply to the Area since it is predominantly occupied by areas of fish ponds, agricultural land and rural settlements with temporary structures.

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 planning and private developments.

13.2 The provision of infrastructure, e.g. road widening and laying of services, will be implemented through the Public Works Programme and the Rural Public Works as and when resources are available. Private developments and redevelopments will be effected principally through private sector initiatives in accordance with the zoned uses indicated on the Plan, provided that their proposals 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 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 conform to this Plan, 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, 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.

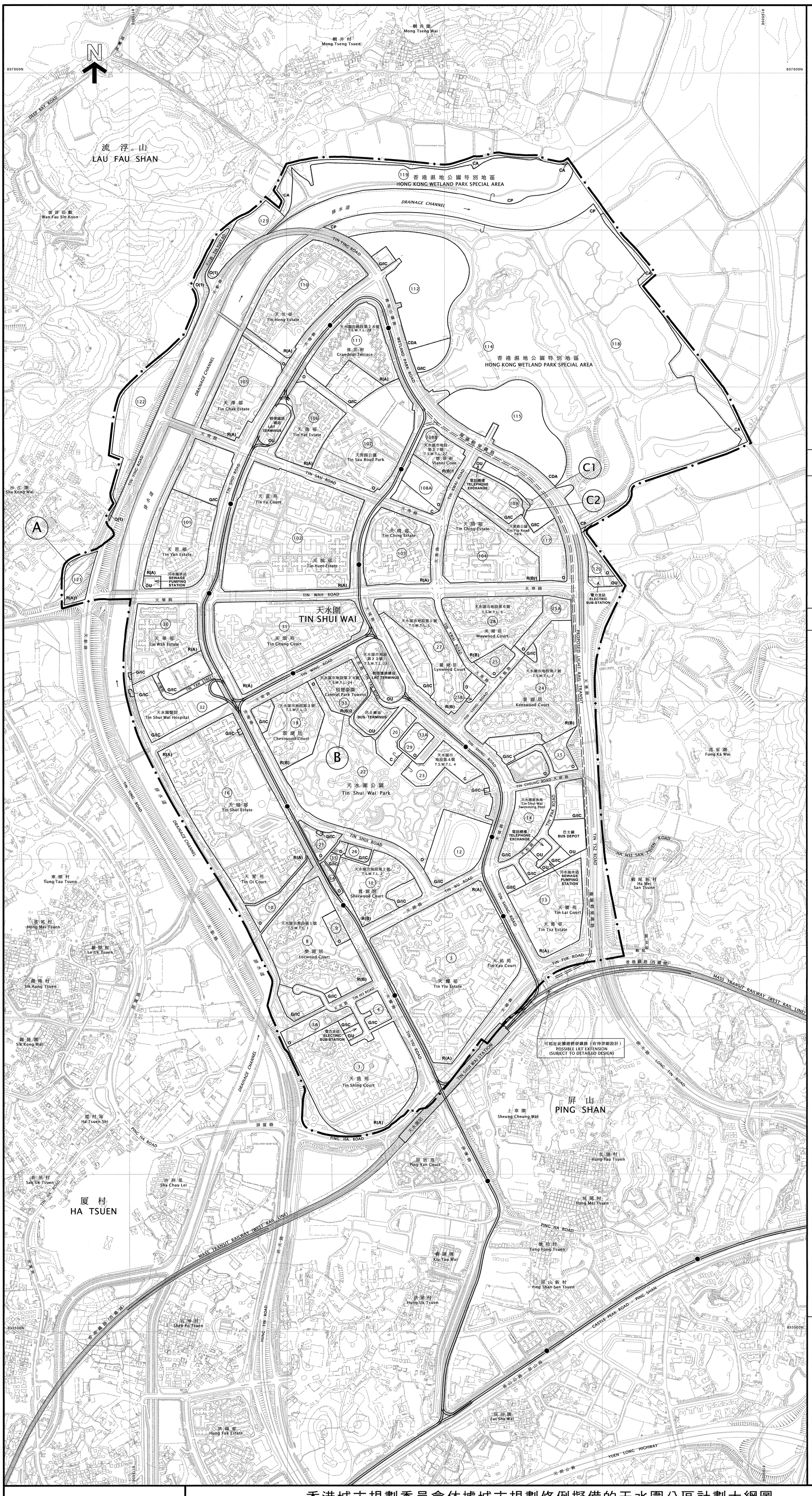
14.3 Planning applications to the Board will be assessed on individual merits. In general, the Board, in considering the planning applications, will take into account all relevant planning considerations which may include the departmental outline development plans and layout plans, and guidelines published by the Board. The outline development plans and layout plans are available for public inspection at the Planning Department. Guidelines published by the Board are available from the Board's website, the Secretariat

of the Board, and the Technical Services Division of the Planning Department. Application forms and Guidance Notes for planning applications can be downloaded from the Board's website and are available from the Secretariat of the Board, the Technical Services Division and relevant District Planning Office of the Planning Department. Applications should be supported by such materials as the Board thinks appropriate to enable it to consider the applications.

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 17 August 1990 on land included in a plan of the Lau Fau Shan and Tsim Bei Tsui IDPA may be subject to enforcement proceedings under the Ordinance.

TOWN PLANNING BOARD
~~OCTOBER 2018~~ ***MAY 2021***

N
837500N
819500E
DEEP BAY ROAD
流浮山
LAU FAU SHAN
灣背仙廟
Wan Fau Sin Koon
香港濕地公園特別地區
HONG KONG WETLAND PARK SPECIAL AREA
DRAINAGE CHANNEL
排水道
CP
CA
TIN YING ROAD
天英路
TIN SHUI ROAD
天水圍
TIN SHUI WAI
天恒邨
Tin Heng Estate
天澤邨
Tin Chak Estate
天逸邨
Tin Yat Estate
天富苑
Tin Fu Court
天恩邨
Tin Yan Estate
天悅邨
Tin Yuet Estate
天慶邨
Tin Hing Estate
天華邨
Tin Wah Estate
天頌苑
Tin Chung Court
天瑞邨
Tin Shui Estate
天愛苑
Tin Oi Court
天榮邨
Tin Wing Estate
天朗邨
Tin Long Estate
天盛苑
Tin Shing Court
天耀邨
Tin Yiu Estate
天乾苑
Tin Yau Court
天來邨
Tin Lai Court
天慈邨
Tin Tsz Estate
天水圍公園
Tin Shui Wai Park
天水圍體育館
Tin Shui Wai Sports Ground
天水圍游泳池
Tin Shui Wai Swimming Pool
天秀路公園
Tin Sau Road Park
天耀路公園
Tin Yiu Road Park
天慶路公園
Tin Hing Road Park
TIN WAH ROAD
TIN WING ROAD
TIN SHING ROAD
TIN CHUNG ROAD
TIN PAK ROAD
TIN SAU ROAD
TIN CHING ROAD
TIN KWAI ROAD
TIN LAN STREET
TIN HO ROAD
TIN WU ROAD
TIN FUK ROAD
TIN TSZ ROAD
TIN YUET ROAD
TIN YAT ROAD
TIN YIU ROAD
TIN SHUI ROAD
TIN SHUN ROAD
TIN YAU ROAD
TIN SHUN ROAD
TIN YIP ROAD
TIN YAN ROAD
TIN YUEN ROAD
TIN HAU ROAD
TIN YUEN STREET
TIN YUET ROAD
TIN SHUI WAI STATION
LRT TERMINUS
BUS TERMINUS
BUS DEPOT
SEWAGE PUMPING STATION
ELECTRIC SUB-STATION
TELEPHONE EXCHANGE
LRT STATION
WETLAND PARK ROAD
濕地公園道
HONG KONG WETLAND PARK
香港濕地公園
HONG KONG WETLAND PARK SPECIAL AREA
PROPOSED LIGHT RAIL TRANSIT
擬建輕鐵
可能在底層建輕便鐵路（有待詳細設計）
POSSIBLE LRT EXTENSION (SUBJECT TO DETAILED DESIGN)
MASS TRANSIT RAILWAY (WEST RAIL LINE)
港鐵西鐵線
HA MEI LAN TUNNEL ROAD
夏美蘭隧道
LONG TIN ROAD
朗天路
PING HA ROAD
屏山
PING SHAN
厦村
HA TSUEN
CASTLE PEAK ROAD – PING SHAN
青山公路—屏山段
YUEN LONG HIGHWAY
元朗公路
833500N
819500E
837500N
833500N
833500E
833500E
833500N
833500E
833500N
833500E
833500N



圖例
NOTATION

ZONES		地帶
COMMERCIAL	C	商業
COMPREHENSIVE DEVELOPMENT AREA	CDA	綜合發展區
RESIDENTIAL (GROUP A)	R(A)	住宅（甲類）
RESIDENTIAL (GROUP B)	R(B)	住宅（乙類）
GOVERNMENT, INSTITUTION OR COMMUNITY	G/IC	政府、機構或社區
OPEN SPACE	O	休憩用地
OTHER SPECIFIED USES	OU	其他指定用途
CONSERVATION AREA	CA	自然保育區
COUNTRY PARK	CP	郊野公園

COMMUNICATIONS		交通
RAILWAY AND STATION (ELEVATED)	鐵路及車站（高架）	
LIGHT RAIL AND STOP	輕鐵及車站	
MAJOR ROAD AND JUNCTION	主要道路及路口	
ELEVATED ROAD	高架道路	
RAILWAY RESERVE	鐵路專用範圍	

MISCELLANEOUS		其他
BOUNDARY OF PLANNING SCHEME	規劃範圍界線	
PLANNING AREA NUMBER	3	規劃區編號

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 & %		用途
	公頃 HECTARES	% 百分率	
COMMERCIAL	3.44	0.85	商業
COMPREHENSIVE DEVELOPMENT AREA	13.98	3.44	綜合發展區
RESIDENTIAL (GROUP A)	102.73	25.29	住宅（甲類）
RESIDENTIAL (GROUP B)	39.65	9.76	住宅（乙類）
GOVERNMENT, INSTITUTION OR COMMUNITY	26.91	6.62	政府、機構或社區
OPEN SPACE	42.69	10.51	休憩用地
OTHER SPECIFIED USES	5.86	1.44	其他指定用途
CONSERVATION AREA	3.75	0.92	自然保育區
COUNTRY PARK	61.52	15.14	郊野公園
DRAINAGE CHANNEL	17.21	4.24	排水道
MAJOR ROAD ETC.	88.49	21.79	主要道路等
TOTAL PLANNING SCHEME AREA	406.23	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/TSW/14 的修訂
AMENDMENTS TO APPROVED PLAN No. S/TSW/14

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
AMENDMENT ITEM C1		修訂項目 C 1 項
AMENDMENT ITEM C2		修訂項目 C 2 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天水圍分區計劃大綱圖
TOWN PLANNING ORDINANCE, HONG KONG TOWN PLANNING BOARD
TIN SHUI WAI - OUTLINE ZONING PLAN

SCALE 1:5000 比例尺

米 METRES 100 0 200 400 600 800 METRES 米

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

圖則編號 PLAN No. **S/TSW/14A**

~~APPROVED~~ *DRAFT* TIN SHUI WAI OUTLINE ZONING PLAN NO. S/TSW/14*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) (a) No action is required to make the existing use of any land or building conform to this Plan until there is a material change of use or the building is redeveloped.

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

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

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

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

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

(ii) after the publication of the first plan,

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

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

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

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

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

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

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

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

(c) maintenance or repair of watercourse and grave.

(8) In 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; and

(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

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

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

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

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

~~(10) In the "Undetermined" zone, all uses or developments except those specified in paragraph (7) above require permission from the Town Planning Board.~~

(~~11~~)***(10)*** 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.

(~~12~~)***(11)*** In these Notes, "existing building" means a building, including a structure, which is physically existing and is in compliance with any relevant legislation and the conditions of the Government lease concerned.

APPROVED ***DRAFT*** TIN SHUI WAI OUTLINE ZONING PLAN NO. S/TSW/14***A***

Schedule of Uses

	Page
COMMERCIAL	1
COMPREHENSIVE DEVELOPMENT AREA	3
RESIDENTIAL (GROUP A)	6
RESIDENTIAL (GROUP B)	~~8~~***9***
GOVERNMENT, INSTITUTION OR COMMUNITY	~~10~~***12***
OPEN SPACE	~~11~~***13***
OTHER SPECIFIED USES	
LRT Terminus	~~12~~***14***
Bus Terminus	~~13~~***15***
For All Other Sites (Not Listed Above)	~~14~~***16***
CONSERVATION AREA	~~15~~***17***
COUNTRY PARK	~~17~~***19***

COMMERCIAL

Column 1 Uses always permitted	Column 2 Uses that may be permitted with or without conditions on application to the Town Planning Board
Ambulance Depot Commercial Bathhouse/Massage Establishment Eating Place Educational Institution Exhibition or Convention Hall Government Use (not elsewhere specified) Hotel Information Technology and Telecommunications Industries Institutional Use (not elsewhere specified) Library ~~Market~~ Off-course Betting Centre Office Place of Entertainment Place of Recreation, Sports or Culture Private Club Public Clinic Public Convenience Public Transport Terminus or Station Public Utility Installation Public Vehicle Park (excluding container vehicle) Recyclable Collection Centre Religious Institution Rural Committee/Village Office School Shop and Services Social Welfare Facility Training Centre Utility Installation for Private Project Wholesale Trade	Broadcasting, Television and/or Film Studio Flat Government Refuse Collection Point Hospital Petrol Filling Station Residential Institution

(Please see next page)

COMMERCIAL (Cont'd)

Planning Intention

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

Remarks

(a) On land designated "Commercial" at Tin Shui Wai Town Lot (TSWTL) No. 4, no new development, or addition, alteration and/or modification to or redevelopment of an existing building:

(i) shall result in a total development and/or redevelopment in excess of a maximum gross floor area of 135,000m^2; and

(ii) the distribution of the non-domestic gross floor area amongst the sites under this zone and the "Residential (Group B)" sites at TSWTLs No. 1, 2, 3, 5, 6 and 7 would be controlled by the submission of Master Layout Plans.

(b) In determining the maximum gross floor area 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, provided such uses and facilities are ancillary and directly related to the development or redevelopment, may be disregarded.

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

COMPREHENSIVE DEVELOPMENT AREA

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

(Please see next page)

COMPREHENSIVE DEVELOPMENT AREA (Cont'd)

Planning Intention

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

Remarks

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

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

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

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

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

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

(vi) programmes of development in detail;

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

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

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

(Please see next page)

COMPREHENSIVE DEVELOPMENT AREA (Cont'd)

Remarks (Cont'd)

(x) an air ventilation assessment report to examine any possible air ventilation problems that may be caused by the proposed development and the proposed mitigation measures to tackle them;

(xi) an ecological impact assessment report to examine any impact on the ecological value of the wetland park and the conservation areas, and the proposed mitigation measures to tackle them; and

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

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

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

Site	Maximum Plot Ratio	Maximum Building Height
"CDA" site in Planning Area 112	1.5	10 storeys over one storey car park
"CDA" site in Planning Area 115		

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

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

RESIDENTIAL (GROUP A)

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

(Please see next page)

RESIDENTIAL (GROUP A) (Cont'd)

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

Planning Intention

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

Remarks

(a) 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 6.9 and a maximum building height of 165mPD, or the plot ratio and height of the existing building, whichever is the greater.

(b) In determining the maximum plot ratio for the purposes of paragraph (a), any floor space that is constructed or intended for use solely as public vehicle parks, public transport facilities and Government, institution or community facilities, as required

by the Government, may be disregarded.

(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) ***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.***

RESIDENTIAL (GROUP B)

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

(Please see next page)

RESIDENTIAL (GROUP B) (Cont'd)

Planning Intention

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

Remarks

(a) On land designated "Residential (Group B)", no new development, or addition, alteration and/or modification to or redevelopment of an existing building shall result in a total development and/or redevelopment in excess of the maximum gross floor area (GFA) specified below, or the GFA of the existing building, whichever is the greater:

Town Lot No.	Planning Area No.	Maximum Domestic GFA	Maximum Non-domestic GFA
TSWTL 1	8	209,718m^2	The total non-domestic GFA of TSWTLs No. 1, 2, 3, 5, 6 & 7 and the sites zoned "Commercial" at TSWTL No. 4 shall not exceed 135,000m^2. The distribution of non-domestic GFA amongst these sites would be controlled by the submission of Master Layout Plans.
TSWTL 2	11	107,248m^2	
TSWTL 3	19	92,781m^2	
TSWTL 5	27	} The total domestic	
TSWTL 6	28	} GFA of TSWTLs	
TSWTL 7	24	} No. 5, 6 & 7 shall not exceed 562,253m^2	

(b) On land designated "Residential (Group B)1", no new development, or addition, alteration and/or modification to or redevelopment of an existing building shall result in a total development and/or redevelopment in excess of a maximum plot ratio of 5.

(c) On land designated "Residential (Group B)2", no new development, or addition, alteration and/or modification to or redevelopment of an existing building shall result in a total development and/or redevelopment in excess of a maximum domestic gross floor area of 159,206m^2, a maximum non-domestic gross floor area of 9,051m^2 and a maximum building height of 159mPD, or the gross floor area and height of the existing building, whichever is the greater.

~~(c)~~***(d)*** In determining the maximum plot ratio/gross floor area for the purposes of paragraphs (a) ~~and (b)~~ ***to (c)*** above, any floor space that is constructed or intended for use solely as car park, loading/unloading bay, plant room and caretaker's office, or caretaker's quarters and recreational facilities for the use and benefit of all the owners 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)~~***(e)*** Based on the individual merits of a development or redevelopment proposal, minor relaxation of the plot ratio/gross floor area restrictions stated in paragraphs (a) ~~and (b)~~ ***to (c)*** above may be considered by the Town Planning Board on application under section 16 of the Town Planning Ordinance.

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 Boarding Establishment
Animal Quarantine Centre (in Government building only)	Animal Quarantine Centre (not elsewhere specified)
Broadcasting, Television and/or Film Studio	Columbarium
Eating Place (Canteen, Cooked Food Centre only)	Correctional Institution
Educational Institution	Crematorium
Exhibition or Convention Hall	Driving School
Field Study/Education/Visitor Centre	Eating Place (not elsewhere specified)
Government Refuse Collection Point	Flat
Government Use (not elsewhere specified)	Funeral Facility
Hospital	Holiday Camp
Institutional Use (not elsewhere specified)	Hotel
Library	House
Market	Off-course Betting Centre
Place of Recreation, Sports or Culture	Office
Public Clinic	Petrol Filling Station
Public Convenience	Place of Entertainment
Public Transport Terminus or Station	Private Club
Public Utility Installation	Radar, Telecommunications Electronic Microwave Repeater, Television and/or Radio Transmitter Installation
Public Vehicle Park (excluding container vehicle)	Refuse Disposal Installation (Refuse Transfer Station only)
Recyclable Collection Centre	Residential Institution
Religious Institution	Sewage Treatment/Screening Plant
Research, Design and Development Centre	Shop and Services ***(not elsewhere specified)***
School	Utility Installation for Private Project
Service Reservoir	Zoo
Social Welfare Facility	
Training Centre	
Wholesale Trade	

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.

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 (other than on land designated "Open Space (1)") Field Study/Education/Visitor Centre Park and Garden Pavilion Pedestrian Area Picnic Area Playground/Playing Field (other than on land designated "Open Space (1)") Promenade Public Convenience Sitting Out Area Zoo (other than on land designated "Open Space (1)")	Eating Place Government Refuse Collection Point Government Use (not elsewhere specified) Holiday Camp Place of Entertainment Place of Recreation, Sports or Culture Playground/Playing Field (on land designated "Open Space (1)" only) 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. On land designated "Open Space (1)", the site is intended for passive recreational uses with existing ponds preserved as landscape features.

Remarks

On land designated as "Open Space (1)", no filling of ponds is allowed.

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 "LRT Terminus" only	
Public Transport Terminus or Station (LRT Terminus only)	Eating Place Exhibition or Convention Hall Flat Government Use (not elsewhere specified) Hotel ~~Market~~ Off-course Betting Centre Office Place of Entertainment Private Club Public Clinic Public Utility Installation Public Vehicle Park (excluding container vehicle) Residential Institution School Shop and Services Social Welfare Facility Utility Installation for Private Project

Planning Intention

This zone is intended primarily for Light Rail Transit (LRT) terminus developments to meet the demand for LRT service in the New Town.

(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 "Bus Terminus" only	
Public Transport Terminus or Station (Bus Terminus only)	Eating Place Exhibition or Convention Hall Flat Government Use (not elsewhere specified) Hotel ~~Market~~ Off-course Betting Centre Office Place of Entertainment Private Club Public Clinic Public Utility Installation Public Vehicle Park (excluding container vehicle) Residential Institution School Shop and Services Social Welfare Facility Utility Installation for Private Project

Planning Intention

This zone is intended primarily for bus terminus development to meet the demand for bus services in the New Town. It will also serve as a transport interchange for buses, the LRT, green mini-buses and public light buses.

(Please see next page)

OTHER SPECIFIED USES (Cont'd)

For All Other Sites (Not Listed Above)

As specified on the Plan	Government Use (not elsewhere specified) Utility Installation not ancillary to the Specified Use

Planning Intention

This zone is intended for the provision of a bus depot, electric sub-stations, sewage pumping stations, and telephone exchanges.

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 Site of Special Scientific Interest or 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 existing house.

(b) 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 draft Tin Shui Wai Outline Zoning Plan No. S/TSW/2 without the permission from the Town Planning Board under section 16 of the Town Planning Ordinance.

(Please see next page)

CONSERVATION AREA (Cont'd)

Remarks (Cont'd)

(c) 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 Tin Shui Wai Outline Zoning Plan No. S/TSW/8 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 VIII of
RNTPC Paper No. 4/21

DRAFT **TIN SHUI WAI OUTLINE ZONING PLAN NO. S/TSW/14*A***

EXPLANATORY STATEMENT

~~APPROVED~~ ***DRAFT*** TIN SHUI WAI OUTLINE ZONING PLAN NO. S/TSW/14***A***

EXPLANATORY STATEMENT

CONTENTS Page

1. INTRODUCTION 1

2. AUTHORITY FOR THE PLAN AND PROCEDURES 1

3. OBJECT OF THE PLAN ~~2~~***3***

4. NOTES OF THE PLAN 3

5. BACKGROUND ~~3~~***4***

6. THE PLANNING SCHEME AREA ~~4~~***5***

7. POPULATION 5

8. OPPORTUNITIES AND CONSTRAINTS 5

9. PLANNING AND DESIGN PRINCIPLE OF THE AREA ~~5~~***6***

10. LAND USE ZONINGS

- 10.1 Commercial 6
- 10.2 Comprehensive Development Area ~~6~~***7***
- 10.3 Residential (Group A) ~~7~~***8***
- 10.4 Residential (Group B) ~~8~~***9***
- 10.5 Government, Institution or Community ~~8~~***9***
- 10.6 Open Space ~~9~~***10***
- 10.7 Other Specified Uses
  - LRT Terminus ~~9~~***11***
  - Bus Terminus ~~10~~***11***
  - Bus Depot ~~10~~***11***
  - Electric Sub-station ~~10~~***11***
  - Sewage Pumping Station ~~10~~***11***
  - Telephone Exchange ~~10~~***11***
- ~~10.8 Undetermined 10~~
- 10.~~9~~***8*** Conservation Area ~~10~~***12***
- 10.~~10~~***9*** Country Park ~~11~~***12***

11. COMMUNICATIONS ~~11~~***13***

12. UTILITY SERVICES ~~13~~***14***

13. IMPLEMENTATION ~~14~~***15***

~~APPROVED~~ *DRAFT* TIN SHUI WAI OUTLINE ZONING PLAN NO. S/TSW/14*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*** Tin Shui Wai Outline Zoning Plan (OZP) No. S/TSW/14***A***. It reflects the planning intention and objectives of the Town Planning Board (the Board) for the various land use zonings of the Plan.

2. AUTHORITY FOR THE PLAN AND PROCEDURES

2.1 On 27 May 1993, the Board was directed under section 3(1)(a) of the Town Planning Ordinance (the Ordinance) to prepare a draft statutory plan for Tin Shui Wai.

2.2 The draft Tin Shui Wai OZP No. S/TSW/1 was exhibited under section 5 of the Ordinance for public inspection on 21 October 1994. Subsequently, the OZP was amended and the draft Tin Shui Wai OZP No. S/TSW/2 was exhibited for public inspection on 18 July 1997. On 1 December 1998, the Chief Executive in Council (CE in C), under section 9(1)(a) of the Ordinance, approved the draft Tin Shui Wai OZP, which was subsequently renumbered as S/TSW/3.

2.3 On 10 October 2000, the CE in C referred the approved Tin Shui Wai OZP No. S/TSW/3 to the Board for amendment under section 12(1)(b)(ii) of the Ordinance. Subsequently, the OZP was amended three times and exhibited for public inspection under section 5 or 7 of the Ordinance. On 30 April 2002, the CE in C, under section 9(1)(a) of the Ordinance, approved the draft Tin Shui Wai OZP, which was subsequently renumbered as S/TSW/7.

2.4 On 9 December 2003, the CE in C referred the approved Tin Shui Wai OZP No. S/TSW/7 to the Board for amendment under section 12(1)(b)(ii) of the Ordinance. On 28 May 2004, the draft Tin Shui Wai OZP No. S/TSW/8 was exhibited for public inspection under section 5 of the Ordinance. On 15 April 2005, the draft Tin Shui Wai OZP No. S/TSW/9 was exhibited for public inspection under section 7 of the Ordinance.

2.5 On 8 November 2005, the CE in C, under section 9(1)(a) of the Ordinance, approved the draft Tin Shui Wai OZP, which was subsequently renumbered as

S/TSW/10. ***On 26 June 2007, the CE in C referred the approved Tin Shui Wai OZP No. S/TSW/10 to the Board for amendment under section 12(1)(b)(ii) of the Ordinance. Subsequently, the OZP was amended and exhibited for public inspection under section 5 of the Ordinance.***

~~2.6 On 26 June 2007, the CE in C referred the approved Tin Shui Wai OZP No. S/TSW/10 to the Board for amendment under section 12(1)(b)(ii) of the Ordinance. Subsequently, the OZP was amended and exhibited for public inspection under section 5 of the Ordinance.~~

2.~~7~~***6*** On 15 July 2008, the CE in C, under section 9(1)(a) of the Ordinance, approved the draft Tin Shui Wai OZP, which was subsequently renumbered as S/TSW/12. ~~On 12 September 2008, the approved Tin Shui Wai OZP No. S/TSW/12 was exhibited under section 9(5) of the Ordinance.~~ ***On 2 November 2010, the CE in C referred the approved Tin Shui Wai OZP No. S/TSW/12 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.***

~~2.8 On 2 November 2010, the CE in C referred the approved Tin Shui Wai OZP No. S/TSW/12 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 12 November 2010 under section 12(2) of the Ordinance.~~

~~2.9 On 26 May 2017, the draft Tin Shui Wai OZP No. S/TSW/13 was exhibited for public inspection under section 5 of the Ordinance. The major amendment on the Plan was the excision of the western and south-western parts from the planning scheme area for incorporation into the draft Hung Shui Kiu and Ha Tsuen OZP No. S/HSK/1. During the two-month exhibition period, a total of 2 valid representations were received. On 25 August 2017, the representations were published for three weeks for public comments and a total of 1 valid comment on the representations (comment) was received. On 17 April 2018, the Chief Executive, under section 8(2) of the Ordinance, agreed to extend the statutory time limit for the Board to submit the draft OZP to the CE in C for approval for a period of six months. After giving considerations to the representations and comment, the Board on 25 May 2018 decided not to propose any amendment to the draft OZP to meet the representations.~~

2.~~10~~***7*** On 16 October 2018, the CE in C, under section 9(1)(a) of the Ordinance, approved the draft Tin Shui Wai OZP, which was subsequently renumbered as S/TSW/14. On 26 October 2018, the approved Tin Shui Wai OZP No. S/TSW/14 ~~(the Plan)~~ was exhibited under section 9(5) of the Ordinance.

2.~~11~~***8*** ***On 25 August 2020, the CE in C referred the approved Tin Shui Wai OZP No. S/TSW/14 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 4 September 2020 under section 12(2) of the Ordinance.***

2.~~1~~2***9*** ***On xx xx 2021, the draft Tin Shui Wai OZP No. S/TSW/15 (the Plan), incorporating amendments to rezone an area near the junction of Tin Wah Road and Tin Ying Road from "Government, Institution or Community" ("G/IC") and an area shown as 'Road' to "Residential (Group A)1" for public housing development, to rezone a site from "Undetermined" to "Residential (Group B)2" and to rezone two strips of land from the area shown as 'Road' to "G/IC" as well as from "G/IC" to the area shown as 'Road', and corresponding amendments to the Notes of the Plan, was exhibited for public inspection under section 5 of the Ordinance.***

3. OBJECT OF THE PLAN

3.1 The object of the Plan is to indicate the broad land-use zonings and the transport networks for the Tin Shui Wai area so that development and redevelopment within the Planning Scheme Area (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 control. It is a small-scale plan and the transport alignments and boundaries between the land-use zones may be subject to minor adjustments as detailed planning proceeds.

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

4. NOTES OF THE PLAN

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

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

5. BACKGROUND

5.1 In July 1982, the Government and a private developer - Mightycity Co Ltd. (MCL) reached a joint venture agreement to proceed with an urban development in Tin Shui Wai, Yuen Long. Under the agreement, the Government would acquire the 488 ha Tin Shui Wai landholding (Lot 665 in DD 126) from Tin Shui Wai Development Ltd., a wholly owned subsidiary of MCL, for the development of a new town. This development, however, would initially be concentrated within an area of 169 ha in size, which together with some land bank sites south of Tin Wah Road were known as the Development Zone (DZ).

5.2 According to the 1982 Agreement, a Master Development Plan (MDP) was to be prepared for the purposes of delineating the boundaries of the 169 ha of land and to provide a framework for the preparation of detailed layout plans. A planning consultant was commissioned by the Government to prepare the MDP in December 1982. The MDP was endorsed by the then Development Progress Committee (DPC) in June 1984 and adopted by the then Secretary for Lands and Works on 22 June 1984.

5.3 The northern part of Tin Shui Wai, known as the Reserve Zone (RZ), has been reserved as land bank to cater for strategic growth. It was subsequently identified by the Government as a solution space to meet the demand for public and private housing in Hong Kong. In September 1994, the Government commissioned a consultancy study to prepare layout plans for the RZ. The study was completed in July 1995 and endorsed by the Committee on Planning and Land Development (CPLD) in August 1995. A Master Development Plan, Layout Plans and a Preferred Development Concept (PDC) showing how the proposed land uses within the RZ are planned to relate to the existing New Town in the DZ in a coherent manner were prepared under the study.

5.4 Following the completion of the preparation of the layout plans, the Study on Engineering Investigations for Development of Areas 3, 30 and 31 of the DZ and the RZ (the Engineering Investigations Study) was commissioned by the Government in November 1995. The objective of the Engineering Investigations Study was to develop in sufficient detail the preliminary design for the provision of a multiplicity of engineering infrastructure, including a feasible implementation programme, to allow further development in Tin Shui Wai to proceed.

5.5 The Engineering Investigations Study had concluded that there would be no insurmountable environmental constraints to the further development of Tin Shui Wai, following the implementation of the recommended mitigation measures.

6. THE PLANNING SCHEME AREA

6.1 The Area is located in the north-western part of the North West New Territories (NWNT). It is bounded by the Inner Deep Bay Site of Special Scientific Interest (SSSI) and Tin Tsz Road to the north-east and east, Mong Tseng Tsuen and Mong Tseng Wai to the north, Lau Fau Shan to the north-west, the Hung Shui Kiu***/Ha Tsuen*** New Development Area (NDA) to the west and Sheung Cheung Wai to the south. The boundary of the Area is shown in a heavy broken line on the Plan. The Area is about 406.23 ha in size.

6.2 The Area consists of flat land which was reclaimed from fish ponds. It is divided into a DZ and a RZ separated by Tin Wah Road. Most of the areas in the DZ have been developed, and population intake in the whole of the DZ has been completed. All the necessary infrastructure, commercial and community facilities in support of the development in the DZ have been in service. The RZ is being developed mainly for residential purposes with the Hong Kong Wetland Park (HKWP) Special Area in the eastern portion serving as a buffer to the environmentally and ecologically sensitive areas of SSSI and fish ponds in the Deep Bay area to its east and north-east, which have been designated for inclusion in the Ramsar List of Wetlands of International Importance (Ramsar Site).

7. POPULATION

Based on the 2016 Population by-census, the population of the Area was estimated by Planning Department as about 286,150 persons. It is estimated that the total planned population will be about ~~298,200~~ ***298,600*** persons.

8. OPPORTUNITIES AND CONSTRAINTS

8.1 Opportunities

Since the Area is reclaimed from fish ponds, opportunities exist for the development of a well-designed new town which is planned comprehensively with little difficulties in meeting the standards stipulated in the Hong Kong Planning Standards and Guidelines (HKPSG).

8.2 Development Constraints

The Area is in close proximity to the environmentally and ecologically sensitive areas of Inner Deep Bay and Mai Po Nature Reserve (MPNR) which have been designated as a Ramsar site for wetland conservation. The northern and eastern portions of the RZ fall within the Wetland Buffer Area, where the proponent for development will have to demonstrate to the Board that it would have no negative impact on the ecological value of the Deep Bay wetland ecosystem and the MPNR.

9. PLANNING AND DESIGN PRINCIPLE OF THE AREA

9.1 In order to achieve an open character of the New Town and to maximize views of the residential units, residential developments in the DZ and RZ are built around the district parks. The district parks provide ample opportunities for both passive and active recreation. Moreover, amenity areas are provided at the sides of the drainage channel to maximize the use of the water features for recreational purposes.

9.2 Tin Shui Wai provides a mix of different housing to meet forecast demand. Sufficient open space and community facilities are provided to serve the residents. Higher density development areas are concentrated to the south and west of the RZ and lower density development and conservation areas including the HKWP Special Area are located adjacent to the north and east. The development concept is to provide a buffer to the ecologically sensitive areas of Inner Deep Bay and MPNR. Two distributor roads provide the primary means of vehicular access to the RZ. As a feeder system to the West Rail, the Light Rail Transit (LRT) serves both the DZ and the RZ.

9.3 Developments in the RZ are fully integrated with the DZ to the south to ensure that development of the New Town proceeds in a coherent and well planned manner.

9.4 According to the Environmental Impact Assessment of the Engineering Investigations Study, there is a general presumption against development for petrol filling station and chemical storage facilities in Tin Shui Wai especially in the RZ to avoid petrol and chemicals entering the stormwater system and causing potential contamination to the nearby water bodies, including Inner Deep Bay.

10. LAND USE ZONINGS

10.1 Commercial ("C") : Total Area: 3.44 ha

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

10.1.2 In the DZ, sites zoned "C" are located in Areas 20 and 23 south of the LRT Terminus. They are known as Tin Shui Wai Town Lot (TSWTL) No. 4. The sites are developed as the town centre providing retail and other commercial facilities to serve Tin Shui Wai New Town. ~~A hotel has also been~~. The development and future redevelopment of the zone was governed by the Conditions of Grant and the Master Layout Plan approved under the lease. To provide flexibility for innovative design adapted to the characteristics of particular sites, minor relaxation of the

restrictions stated in the Notes may be considered by the Board through the planning permission system. Each proposal will be considered on its individual planning merits.

10.1.3 In the RZ, a site located in Area 108A is zoned "C" and is served by the LRT. Within the zone, retail, office, hotel and other commercial uses are always permitted. This zone has been developed to a hotel with retail facilities.

10.2 Comprehensive Development Area ("CDA") : Total Area: 13.98 ha

10.2.1 This zone is intended for comprehensive development/redevelopment of the area for residential and/or commercial uses with the provision of open space and other supporting facilities. The zoning is to facilitate appropriate planning control over the development mix, scale, design and layout of development, taking account of various environmental, traffic, infrastructure and other constraints. One site in Area 112 and another one in Area 115 in the RZ, which are for comprehensive lower density development, are zoned "CDA" and were sold in 2014. The "CDA" zoning is to ensure proper planning control over the development of the sites, taking into account their proximity to the HKWP Special Area and the conservation areas to the north-east, as well as the landscape character and traffic and infrastructural capacities of the surrounding areas.

10.2.2 The development restrictions for the "CDA" sites in terms of maximum plot ratio and maximum building height are stipulated in the Notes for the zone. The "CDA" sites in Areas 112 and 115 are restricted to a maximum plot ratio of 1.5 and a maximum building height of 10 storeys over one storey car park. A stepped-height principle should be applied within the "CDA" sites so that building heights should decrease gradually towards the "Country Park" zone to the north-east. Government, institution or community (GIC) facilities, open space and other facilities are required to be provided to serve the residents. To provide flexibility for innovative design adapted to the characteristics of particular sites, minor relaxation of the above plot ratio and building height restrictions may be considered by the Board through the planning permission system. Each proposal will be considered on its individual planning merits.

10.2.3 Pursuant to section 4A(1) of the Ordinance, any development/ redevelopment in this zone would require the approval of the Board. Pursuant to section 4A(2) of the Ordinance, and except as otherwise expressly provided that it is not required by the Board, the applicant should prepare a Master Layout Plan (MLP) together with the information specified in the Notes for consideration of the Board. The approved MLP shall be made available for public inspection in the Land Registry pursuant to section 4A(3) of the Ordinance.

10.3 Residential (Group A) ("R(A)") : Total Area: ~~101.6~~ ***102.73*** ha

This zone is intended primarily for high-density residential developments. Commercial uses are always permitted on the lowest three floors of a building or in the purpose-designed non-residential portion of an existing building. Most sites zoned "R(A)" in the DZ and RZ have been developed into residential uses. There are 10 existing Public Rental Housing estates, including Tin Heng Estate, Tin Chak Estate, Tin Yat Estate, Tin Yan Estate, Tin Yuet Estate, Tin Ching Estate, Tin Wah Estate, Tin Shui Estate, Tin Yiu Estate and Tin Tsz Estate. There are also 6 Home Ownership Scheme (namely Tin Fu Court, Tin Chung Court, Tin Oi Court, Tin Shing Court, Tin Yau Court and Tin Lai Court)***,*** ~~and~~ a Private Sector Participation Scheme (PSPS) development (namely Grandeur Terrace). A wide range of facilities including primary and secondary schools, community centres, children and youth centres, public transport interchanges and local open spaces have been provided within this zone to serve the residents. ***There is one sub-area within this zone:***

Residential (Group A) 1 ("R(A)1") : Total Area: 1.13 ha

(a) The "R(A)1" zone near the junction of Tin Wah Road and Tin Ying Road is intended for public housing development. GIC facilities, including kindergarten(s), local open space as well as retail facility will be provided within the site. The area is subject to a maximum plot ratio of 6.9 and a maximum building height of 165 mPD.

(b) In determining the maximum plot ratio of the development and/or redevelopments, any floor space that is constructed or intended for use solely as public vehicle parks, public transport facilities and GIC facilities, as required by the Government, may be disregarded to facilitate the provision of these facilities.

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

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

(e) To provide flexibility for innovative design adapted to the characteristics of particular sites, minor relaxation of the plot ratio and building height restrictions may be considered by the Board

through the planning permission system. Each proposal will be considered on its individual merits.

10.4 Residential (Group B) ("R(B)") : Total Area: ~~37.78~~ ***39.65*** ha

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

10.4.2 The private residential development sites zoned "R(B)" within the DZ are divided into 6 lots, namely TSWTLs No. 1, 2, 3, 5, 6 and 7, which are developed into Kingswood Villas. Private residential developments in these 6 lots are restricted to a maximum domestic gross floor area (GFA) of 972,000m^2. The total non-domestic GFA of these 6 lots and the sites zoned "C" at TSWTL No. 4 shall not exceed 135,000m^2. The distribution of the permitted GFA is governed by the MLPs under the lease and future redevelopment will also be governed by conditions set out in the Conditions of Grant.

10.4.3 Two sites are zoned "R(B)1" in Areas 104 and 108B in the RZ. They are restricted to a maximum plot ratio of 5. Area 108B has been developed into Vianni Cove, a private residential development. Area 104 has been developed into a public rental housing named Tin Ching Estate.

10.4.4 ***A site is zoned "R(B)2" in Area 33 in the DZ. It is restricted to a maximum domestic GFA of 159,206m^2, a maximum non-domestic GFA of 9,051m^2 and a maximum building height of 159mPD. The site has been developed into a private residential development named Central Park Towers.***

10.4.5 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.

10.5 Government, Institution or Community ("G/IC") : Total Area: ~~27.91~~ ***26.91*** ha

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

10.5.2 Major existing facilities include a sports ground in Area 12, an indoor recreation centre, a swimming pool and a special school in Area 14, an indoor recreation centre in Area 101, a community health centre and a

sand court in Area 109, a health centre in Area 26, a divisional police station in Area 4, a Food and Environmental Hygiene Department Vehicle Depot, an electric sub-station and a hospital in Area 32 and two fire and ambulance stations in Areas 4 and 112 respectively, as well as primary and secondary schools in various Planning Areas.

10.5.3 Major proposed facilities include ~~an indoor recreation centre in Area 109,~~ a divisional police station in Area 101, a special school in Area 32, ***a swimming pool in Area 107,*** a planned Heritage Conservation and Resource Centre ***cum Sports Centre*** in Area 109***,*** and primary and secondary schools in various Planning Areas.

10.6 Open Space ("O") : Total Area: 42.69 ha

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

10.6.2 Major visual corridors have also been reserved in the Area to provide a visual linkage between the New Town and the surrounding rural landscape.

10.6.3 Major open space provisions include the existing Tin Shui Wai Park in Area 22, Tin Yip Road Park in Area 117 and Tin Sau Road Park in Area 107 incorporating a visual corridor running in a north-west to south-east direction to provide the visual link with Lau Fau Shan and Wang Chau. Areas 29 and 33A have been developed to a district square and Area 25B has been developed to an open space. Area 108A is developed to a temporary rugby field. A swimming pool has been planned in Area 107.

10.6.4 Local open spaces and amenity areas are provided within developments in the residential or commercial zones to enhance the landscape character of the New Town.

10.6.5 Two sites in Areas 122 and 123 are zoned "O(1)" and reserved for passive recreational uses. There are some existing ponds on site which should be preserved as landscape features and incorporated into the open space design in order to minimize the adverse impact on the wetland habitats of the existing ponds. No filling of ponds shall be undertaken within the "O(1)" zone.

10.7 Other Specified Uses ("OU") : Total Area: 5.86 ha

As part of the infrastructure of the New Town and to provide public services to the wider region of NWNT, certain sites are reserved for specific uses. The sites zoned "OU" on the Plan include the following as annotated on the Plan:

(a) LRT Terminus

Two LRT termini are located at TSWTL No. 23 (adjacent to Area 33) and in Area 106 respectively. A residential development above the LRT terminus at TSWTL No. 23 has been approved ~~with conditions~~ by the Board in June 2016 ***and being implemented***. The LRT terminus in Area 106 should be covered for noise mitigation purpose. In view of the central location of Area 106 in the RZ, there is potential for retail/office development above the LRT terminus. A low-rise retail/commercial complex above the LRT terminus in Area 106 may be permitted on application to the Board, provided that such development would have insignificant impacts on the environment and traffic and infrastructural capacities of the area.

(b) Bus Terminus

A bus terminus has been constructed in Area 33 to meet the demand for bus services in the New Town. It also serves as a transport interchange for buses, the LRT, green mini-buses and public light buses.

(c) Bus Depot

A bus depot has been developed in Area 14 at the south-eastern part of the New Town.

(d) Electric Sub-Station

An electric sub-station in Area 3 is already in operation. Another electric sub-station has also been proposed in Area 120 to serve the RZ.

(e) Sewage Pumping Station

Two sewage pumping stations in Areas 14 and 101 are in operation to handle sewage disposal of the New Town.

(f) Telephone Exchange

A telephone exchange in Area 14 at the south-eastern part of the New Town to meet the demand for telecommunications services of Tin Shui Wai is already in operation and another one is proposed in Area 109 to serve the RZ.

~~10.8 Undetermined ("U") : Total Area: 1.86 ha~~

~~A site west of the LRT terminus in Area 33 is designated "U". The site has been developed into a residential development.~~

10.~~9~~***8*** Conservation Area ("CA") : Total Area: 3.75 ha

10.~~9~~***8***.1 The planning intention of this zone is 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 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.

10.~~9~~***8***.2 Uses in support of the conservation purposes such as nature reserve and nature trail are permitted as of right. Only a selective range of uses such as public convenience and tent camping ground which would have insignificant impact on the ecology, environment and infrastructural provision of the area may be permitted with or without conditions on application to the Board.

10.~~9~~***8***.3 The areas under the zoning comprise mature trees and topographical features, which are of landscape and ecological value. They also serve to separate environmentally and ecologically sensitive areas of the Inner Deep Bay SSSI and fish ponds in the Deep Bay area, which have been designated as a Ramsar Site, from the impacts of urban developments and human activities.

10.~~9~~***8***.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.

10.~~10~~***9*** Country Park ("CP") : Total Area: 61.52 ha

This area covers the HKWP Special Area in the north-eastern portion of the RZ. The HKWP Special Area is proposed as a replacement habitat for the wetland lost from the engineering works in the RZ and to act as a buffer to minimize human disturbance to the ecologically sensitive areas of the Inner Deep Bay SSSI, the adjoining fish ponds and MPNR to its east and north-east which have been designated as a Ramsar Site. The HKWP Special Area was designated under the Country Parks Ordinance (Cap. 208) and its development is under the monitoring of the Country and Marine Parks Board. All uses and developments require consent from the Country and Marine Parks Authority and approval from the Board is not required. The HKWP was opened to the public in May 2006.

11. COMMUNICATIONS

11.1 Roads

11.1.1 Major links to the Area include Long Tin Road which connects the eastern part of Tin Shui Wai New Town to Yuen Long, Hung Tin Road which connects the western part of Tin Shui Wai New Town to Castle Peak Road, and Ping Ha Road which connects Tin Shui Wai New Town to the Ping Shan area and the surrounding areas of Ha Tsuen. Hung Tin Road has been further extended from Castle Peak Road to connect to Yuen Long Highway via a flyover.

11.1.2 The two north-south primary distributors serving the New Town are Tin Ying Road in the west running along the existing drainage channel and Tin Tsz Road in the east. Tin Ying Road and Tin Tsz Road are connected to Yuen Long Highway via Hung Tin Road and Long Tin Road respectively. Tin Tsz Road is also connected to the Route 3 via Castle Peak Road and Wang Tat Road/Ma Wang Road.

11.1.3 The east-west distributors include Ping Ha Road and Tin Fuk Road, which run along the southern boundary of the New Town and link up with Yuen Long and Lau Fau Shan. Tin Wah Road also connects Tin Shui Wai New Town to the nearby villages of Sha Kong Wai and Lo Uk Tsuen in the west and Lau Fau Shan to the north-west.

11.1.4 Within the Hung Shui Kiu***/Ha Tsuen*** NDA which is located to the immediate west of Tin Shui Wai New Town, a hierarchy of primary and district distributors and local roads is planned to provide convenient connection between various developments and surrounding areas. New roads are introduced to connect Tin Shui Wai New Town to Kong Sham Western Highway and Ping Ha Road to Hung Tin Road so as to ease traffic congestion near the Tin Shui Wai Station. Besides, Ping Ha Road will further be widened to improve the traffic conditions of Tin Shui Wai.

11.2 Railways

11.2.1 Tin Shui Wai New Town is served by a LRT system which is in operation and connects to Tuen Mun and Yuen Long New Towns. A LRT terminus is located to the north of the town square in Area 33. It is adjacent to a bus terminus to provide convenient public transport interchange. Another LRT terminus is located in Area 106.

11.2.2 Tin Shui Wai is also served by the West Rail, with a station located just outside the Area to the south of Tin Yiu Estate. A LRT stop is located underneath the station, providing interchanges between the West Rail and the LRT.

11.3 Bus Services

Tin Shui Wai is also served by public bus services. Bus termini are provided in both the private and public residential developments. A bus terminus is located adjacent to the LRT terminus near Area 33 to provide transport interchange.

11.4 Footpaths and Cycleways

11.4.1 A footpath network has been provided to facilitate pedestrian movement around the New Town. Extensive tree planting is provided in major routes to separate pedestrian and vehicular traffic and to provide shade for pedestrian comfort. It also enhances the character of the New Town. Footpaths are also provided along the drainage channel with amenity areas.

11.4.2 Taking advantage of the flat terrain, segregated cycleways are planned in the New Town to provide convenient movement and recreational opportunity along the drainage channel.

11.5 Off-street Parking

Sufficient car-parking spaces have been provided or planned for in major developments to cater for the local demand as well as for visitors to the New Town.

12. UTILITY SERVICES

12.1 Water Supply

Fresh water to the area is via the Wang Chau Service Reservoir and Tan Kwai Tsuen North Service Reservoir. The existing water treatment works capacity available in the NWNT will soon be fully committed. Further treatment works capacity, if required, would be made available from the future extension to Ngau Tam Mei Water Treatment Works. Extension of water supply system will be required if there is a substantial increase in the future water demand arising from development proposals for large residential developments.

12.2 Drainage

The drainage of Tin Shui Wai and the surrounding areas is diverted into the existing drainage channel in the west and the box culverts in the east. Storm water is discharged into the water body of Deep Bay. Intercepting devices have been constructed to ensure that the water in the open channel can be kept relatively clean. Desilting works is also carried out to ensure that the drainage flow will not be affected.

12.3 Waste Water Disposal

Waste water generated from the developments in Tin Shui Wai New Town is collected by sewerage connected to the two pumping stations in Areas 14 and 101 for diversion to the San Wai Sewage Treatment Plant in Hung Shui Kiu NDA. The waste water collected will then be treated and pumped through a trunk main pipeline to a submarine outfall in the Urmston Road for disposal.

12.4 Electricity, Telephone and Gas Supply

12.4.1 The power supply for Tin Shui Wai New Town is served by a 132 kV network connecting the electric sub-stations in Areas 3 and 32 where the supply is then redistributed to serve the developments in the New Town. Another electric sub-station is planned in Area 120.

12.4.2 A main telephone exchange is in operation in Area 14 to provide telecommunications services to the New Town. Another one is proposed in Area 109 to cater for the future demand.

12.4.3 The New Town is served by town gas. Gas supply is provided through a pipeline connected to the pigging-station in Au Tau which receives and diverts the gas supply transported from the gas plant in Tai Po Industrial Estate.

13. IMPLEMENTATION

13.1 The Plan has been and will be implemented in stages. The developments in the DZ and RZ have been largely completed.

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

13.3 The Plan provides a broad land use framework within which more detailed non-statutory plans for the Area are prepared by the Planning Department. These detailed plans are used as the basis for public works planning and site reservation within the Government departments. Disposal of sites is undertaken by the Lands Department. Public works projects are undertaken by the Civil Engineering and Development Department and some are in conjunction mainly with the Architectural Services Department. In the course

of implementing the Plan, the Yuen Long District Council would also be consulted as appropriate.

13.4 Planning applications to the Board will be assessed on individual merits. In general, the Board in considering the planning applications will take into account all relevant planning considerations which may include the departmental outline development plans and layout plans, and the guidelines published by the Board. The outline development plans and the layout plans are available for public inspection at the Planning Department. Guidelines published by the Board are available from the Board's website, the Secretariat of the Board and the Technical Services Division of the Planning Department. Application forms and Guidance Notes for planning applications can be downloaded from the Board's website and are available from the Secretariat of the Board and the Technical Services Division and relevant District Planning Office of the Planning Department. Applications should be supported by such materials as the Board thinks appropriate to enable it to consider the applications.

TOWN PLANNING BOARD
~~**OCTOBER 2018**~~ ***MAY 2021***

Agreement No. CE 41/2016 (CE)

Site Formation and Infrastructural Works for Proposed Public Housing Developments in Yuen Long North – Feasibility Study

FINAL REPORT (FINAL)

(AS-03 TR14)

196529/B&V/076/Issue 1

March 2021

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

BLACK & VEATCH

Agreement No. CE 41/2016 (CE)

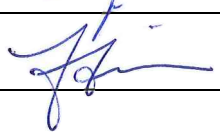
Site Formation and Infrastructural Works for Proposed Public Housing Developments in Yuen Long North – Feasibility Study

---

Final Report (Final)
(AS-03 TR14)

196529/B&V/076/Issue 1

March 2021

	Name	Signature	Date
Prepared	Union YE		*March* 2021
Reviewed	Billy TANG		*March* 2021
Authorized	Edwin LO		*March* 2021

CONTENTS

1 INTRODUCTION 1

1.1 Background 1
1.2 Objectives and Scope of the Report 2

2 PRELIMINARY DEVELOPMENT PROPOSAL 4

2.1 Existing Condition 4
2.2 Statutory Provisions 4
2.3 Indicative Scheme 4
2.4 Development Parameters 4

3 TRAFFIC AND TRANSPORT IMPACT 6

3.1 Introduction 6
3.2 Traffic Impact 7
3.3 Methodologies 7
3.4 Existing Road Network 8
3.5 Proposed Development 10
3.6 Traffic Impact Assessment 11
3.7 Summary 16

4 PRELIMINARY DRAINAGE IMPACT ASSESSMENT 17

4.1 Introduction 17
4.2 Methodologies 17
4.3 Existing Drainage System 18
4.4 Potential Drainage Impacts and Proposed Drainage Schemes 18
4.5 Summary 22

5 PRELIMINARY SEWERAGE IMPACT ASSESSMENT 23

5.1 Introduction 23
5.2 Methodologies 23
5.3 Existing and Planned Sewerage System 23
5.4 Sewerage Impact and Proposed Sewerage Scheme 24
5.5 Mitigation Measures 27
5.6 Summary 27

6 PRELIMINARY WATER SUPPLY IMPACT ASSESSMENT 28

6.1 Introduction 28
6.2 Methodologies 28
6.3 Existing and Planned Water Supply Facilities 29
6.4 Water Demand of the Development 30
6.5 Impact on Existing and Planned Waterworks Facilities 31
6.6 Mitigation Measures 31
6.7 Summary 33

再造紙 recycled paper

7 PRELIMINARY UTILITIES IMPACT STUDY 34

7.1 Introduction 34
7.2 Utilities Impact 34
7.3 General Requirements for Utility Installation 34
7.4 Analysis and Findings 35

8 PRELIMINARY GEOTECHNICAL ASSESSMENT 37

8.1 Introduction 37
8.2 Geotechnical Condition 37
8.3 Groundwater Regime 38
8.4 Preliminary Geotechnical Assessment 38
8.5 Natural Terrain Hazards 40

9 PRELIMINARY SITE FORMATION ASSESSMENT 42

9.1 Introduction 42
9.2 Site Formation Design Considerations and Constraints 42
9.3 Proposed Site Formation Works 43
9.4 Evaluation of Ground Improvement Works 43
9.5 Recommendation 44

10 PRELIMINARY ENVIRONMENTAL REVIEW 45

10.1 Introduction 45
10.2 Air Quality Impact 45
10.3 Noise Impact 47
10.4 Water Quality 50
10.5 Waste Management 51
10.6 Ecological Impact 52
10.7 Cultural Heritage 54

11 PRELIMINARY LANDSCAPE AND VISUAL IMPACT 56

11.1 Introduction 56
11.2 Landscape Impact Assessment 56
11.3 Visual Impact Assessment 71
11.4 Tree Survey 75
11.5 Conclusion 76

12 PRELIMINARY LAND CONTAMINATION AND REMEDIATION STUDY 78

12.1 Introduction 78
12.2 Legislation and Guidelines 78
12.3 Identification of Land Contamination Issues 78
12.4 Site Inspection and Observation 79
12.5 Proposed Site Investigation 80

再造紙 recycled paper

13 PRELIMINARY AIR VENTILATION ASSESSMENT 82

13.1 Introduction 82
13.2 Methodology 82
13.3 Existing Condition 82
13.4 Air Ventilation Assessment 82
13.5 Building Design Features 84
13.6 Summary 85

14 PRELIMINARY LAND REQUIREMENT STUDY 86

14.1 Introduction 86
14.2 Land Requirement 86

15 PRELIMINARY SUSTAINABILITY ASSEMSSMENT 89

15.1 Introduction 89
15.2 Approach for Sustainability Assessment 89
15.3 Scenario 90
15.4 Results of the Sustainability Assessment 90

16 IMPLEMENTATION PROGRAMME 92

16.1 Implementation Programme 92

17 CONCLUSION 93

17.1 General 93
17.2 Traffic and Transportation 93
17.3 Drainage, Sewerage, Water Supply and Utilities 93
17.4 Geotechnical Assessment and Site Formation 93
17.5 Environmental, Landscape and Visual, Land contamination and Sustainability 93
17.6 Air Ventilation 93
17.7 Land Requirement 94
17.8 Implementation Programme 94

END OF TEXT

再造紙 recycled paper

LIST OF TABLES

Table 2.1	Latest Development Parameters for the Proposed Development
Table 3.1	Traffic Generations of the Proposed Development
Table 3.2	Existing Junctions Performance
Table 3.3	Existing Road Links Performance
Table 3.4	"Critical Junction Assessment in Design Year 2035 (Scenario A – With Partial HSK-NDA)"
Table 3.5	"Critical Junction Assessment in Design Year 2035 (Scenario B - With HSK-NDA)"
Table 3.6	2035 Road Links Performance (Scenario A – With Partial HSK-NDA)
Table 3.7	2035 Road Links Performance (Scenario B - With HSK-NDA)
Table 3.8	Junction Assessment in Design Year 2027 (During Construction)
Table 4.1	Determination of Flood Level in the Fluvial-Tidal Zone
Table 4.2	Node Assessment After Mitigation (10-yr Return Period - Interim)
Table 4.3	Node Assessment After Mitigation (50-yr Return Period - Interim)
Table 4.4	Node Assessment After Mitigation (10-yr Return Period - Proposed)
Table 4.5	Node Assessment After Mitigation (50-yr Return Period - Proposed)
Table 5.1	Estimated Sewage Flow from the Proposed Development
Table 5.2	Estimated Flow intake to Tin Wah Road SPS
Table 6.1	Design Parameter from WSD's DI 1309
Table 6.2	Existing information for Fresh Water Service Reservoirs
Table 6.3	Unit Demands Assumed for the Development
Table 6.4	Summary of Water Demands
Table 7.1	General Requirement for Underground Utility Installation
Table 8.1	Existing Registered Features Affected by the Project
Table 8.2	Existing Unregistered Features Affected by the Project
Table 8.3	Determination of the Need for NTHS
Table 10.1	Summary of Habitats in the Assessment Area
Table 11.1	Magnitude of Change on LRs and LCAs
Table 11.2	Significance of Impacts on LRs and LCAs
Table 11.3	Recommended Landscape Mitigation Measures
Table 11.4	Significance of Landscape Impacts
Table 11.5	Summary of Resultant Visual Impact
Table 11.6	Summary of Estimated Tree Abundances
Table 11.7	Summary of Preliminary Tree Treatment Proposal
Table 12.1	Summary of the Site Appraisal of the Assessment Area
Table 14.1	Short Term Tenancies and Government Land Allocations Affected

再造紙 recycled paper

Table 15.1 Summary of Anticipated Impacts for each Sustainability Parameter
Table 16.1 Phase 1 Development Milestone Dates of Key Activities
Table 16.2 Phase 2 Development Milestone Dates of Key Activities

再造紙
recycled paper

LIST OF FIGURES

196529/B&V/GEN/001	Site Location Plan
196529/B&V/GEN/002	Approved Tin Shui Wai OZP Plan No. S/TSW/14, Approved Hung Shui Kiu and Ha Tsuen OZP Plan No. S/HSK/2 and Approved Lau Fau Shan and Tsim Bein Tsui OZP Plan No. S/YL-LFS/9 Extract
196529/B&V/GEN/003	Master Layout Plan of Subject Site
196529/B&V/TTIA/FIG 2.1	Existing Road Network and Surveyed Junctions/ Road Links
196529/B&V/TTIA/FIG 2.2	2017 Observed Traffic Flows
196529/B&V/TTIA/FIG 2.3	Existing Junction Layout of J/O Tin Wah Road/ Lau Fau Shan Road (J1)
196529/B&V/TTIA/FIG 2.4	Existing Junction Layout of J/O Tin Wah Road/ Man Tak Road (J2)
196529/B&V/TTIA/FIG 2.5	Existing Junction Layout of J/O Tin Wah Road/ Tin Ying Road (J3)
196529/B&V/TTIA/FIG 2.6	Existing Junction Layout of J/O Tin Wah Road/ Tin Shui Road (J4)
196529/B&V/TTIA/FIG 2.7	Existing Junction Layout of J/O Tin Wah Road/ Tin Tsz Road (J5)
196529/B&V/TTIA/FIG 2.8	Existing Junction Layout of J/O Tin Tsz Road/ Tin Fuk Road (J6)
196529/B&V/TTIA/FIG 2.9	Existing Junction Layout of J/O Tin Wah Road/ Ping Ha Road/ Tin Yiu Road (J7)
196529/B&V/TTIA/FIG 2.10	Existing Junction Layout of J/O Ping Ha Road/ Tin Ying Road/ Hung Tin Road (J8)
196529/B&V/TTIA/FIG 2.11	Existing Junction Layout of J/O Ping Ha Road/ Tin Ha Road (J9)
196529/B&V/TTIA/FIG 3.1	Proposed Access Arrangement and PT Services for the Development
196529/B&V/TTIA/FIG 4.1	Proposed Conceptual Junction Layout of J/O Tin Wah Road/ Lau Fau Shan Road (J1)
196529/B&V/TTIA/FIG 3.2	Proposed Conceptual Junction Layout of Tin Wah Road/ Tin Ying Road (J3) – Straight Crossing
196529/B&V/TTIA/FIG 3.3	Proposed Conceptual Junction Layout of Tin Wah Road/ Tin Ying Road (J3) – Staggered Crossing
196529/B&V/TTIA/FIG 3.4	Existing PT, LRT Station Location and Cycle Track System
196529/B&V/DIA/001	Existing Drainage Layout
196529/B&V/DIA/003	Proposed Drainage System (Interim)
196529/B&V/DIA/004	Proposed Drainage Scheme (Proposed)
196529/B&V/SIA/001	Existing Sewerage Layout Plan
196529/B&V/SIA/002	Proposed Sewerage System
196529/B&V/WSIA/001	Existing Fresh Water Mains Record Plan
196529/B&V/WSIA/002	Existing Salt Water Mains Record Plan
196529/B&V/WSIA/003	Proposed Fresh Water System
196529/B&V/WSIA/004	Proposed Interim Fresh Water Service Reservoir
196529/B&V/WSIA/005	Proposed Flushing Water System (Salt Water)

196529/B&V/WSIA/006	Proposed Temporary Mains for Flushing System
196529/B&V/PGA/010	Existing Ground Investigation Records
196529/B&V/PGA/011	Section A-A, Section B-B and Section C-C
196529/B&V/SFA/301	Proposed Platform Layout of the Development (Option 1)
196529/B&V/SFA/304	Preferred Option (Option 1) - Section A-A, Section B-B and Section C-C
196529/B&V/SFA/305	Preferred Option (Option 1) - Section D-D and Section E-E
196529/B&V/PER/FIG 3.1	Location of Representative Air Sensitive Receivers During Construction Phase
196529/B&V/PER/FIG 3.2	Location of Representative Air Sensitive Receivers during Operation Phase and Relevant PATH-GRIDS (without HSK NDA)
196529/B&V/PER/FIG 3.3	Location of Representative Air Sensitive Receivers during Operation Phase Relevant PATH-GRIDS (with HSK NDA)
196529/B&V/PER/FIG 3.4	Location of Odour Sources and Odour Patrol Route
196529/B&V/PER/FIG 3.20	Area Prohibited for Air Sensitive Use or Fresh Air Intake
196529/B&V/PER/FIG 4.1	Location of Representative Noise Sensitive Receivers During Construction Phase
196529/B&V/PER/FIG 4.2	Location of Representative Noise Sensitive Receivers for Road Traffic Noise Impact Assessment
196529/B&V/PER/FIG 4.4	Road Links identified for Road Traffic Noise Impact Assessment
196529/B&V/PER/FIG 4.8	Proposed Mitigation Measures for Road Traffic Noise Impact Assessment
196529/B&V/PER/FIG 4.3	Location of Representative Noise Sensitive Receivers for Fixed Noise Source Impact Assessment
196529/B&V/PER/FIG 4.5	Location of Fixed Noise Sources (Without HSKNDA)
196529/B&V/PER/FIG 4.6	Location of Fixed Noise Sources (With HSKNDA)
196529/B&V/PER/FIG 4.7	Alignment of and Separation Distance from EFTS Proposed in HSKNDA
196529/B&V/PER/FIG 8.3	Preliminary Proposed Sampling Locations
196529/B&V/PER/FIG 11.1	Habitat Map and Species of Conservation Interest
196529/B&V/LVIA/FIG 4.1	Site Location Plan and Assessment Area for LIA
196529/B&V/LVIA/FIG 4.3	Landscape Resources
196529/B&V/LVIA/FIG 4.4A	Selected Photos of Landscape Resources Within the Assessment Area
196529/B&V/LVIA/FIG 4.4B	(Cont'd) Selected Photos of Landscape Resources Within the Assessment Area
196529/B&V/LVIA/FIG 4.5	Landscape Character Areas
196529/B&V/LVIA/FIG 4.6	Selected Photos of Landscape Character Areas Within the Assessment Area
196529/B&V/LVIA/FIG 4.7	Mitigation Plan
196529/B&V/LVIA/FIG 4.8	Compensatory and New Tree Planting Plan
196529/B&V/LVIA/FIG 4.9	Preliminary Landscape Master Plan (With Planting Proposal)
196529/B&V/LVIA/FIG 4.10	Demarcation of Local Open Space

196529/B&V/LVIA/FIG 5.1	Location of Viewpoints
196529/B&V/LVIA/FIG 5.4	Viewpoint 1: View from the Overpass Connecting Tin Yan and Tin Wah Estates
196529/B&V/LVIA/FIG 5.5	Viewpoint 2: View from the Footbridge in front of Tin Shui Wai Hospital
196529/B&V/LVIA/FIG 5.2	Viewpoint 3: View from the Future Open Space Zone to the South of the Site
196529/B&V/LVIA/FIG 5.6	Viewpoint 4: View from the Bike Path at Ping Ha Road
196529/B&V/LVIA/FIG 5.7	Viewpoint 5: View from the Future Open Space Zone to the Southwest of the Site
196529/B&V/LVIA/FIG 5.8	Viewpoint 6: View from the Entrance of Sha Kong Wai
196529/B&V/LVIA/FIG 5.9	Viewpoint 7: View from the Tin Shui Wai Hill Hiking Trail
196529/B&V/LVIA/FIG 5.3	Viewpoint 8: View from the Open Space Zone to the North of the Site
196529/B&V/LVIA/FIG 5.10	Viewpoint 9: View from along the Promenade in front of Tin Yan Estate
196529/B&V/TS/001	Tree Survey Plan
196529/B&V/TS/002	Preliminary Tree Treatment Plan
196529/B&V/AVA/2.2	Annual and Summer Prevailing Wind for Subject Site
196529/B&V/AVA/2.3	Illustration of Existing Annual Wind Flow
196529/B&V/AVA/2.4	Illustration of Existing Summer Wind Flow
196529/B&V/AVA/3.1	Illustration of Wind Flow from E and ENE Directions
196529/B&V/AVA/3.2	Illustration of Wind Flow from N, NNE and NE Directions
196529/B&V/AVA/3.3	Illustration of Wind Flow from SSE Direction
196529/B&V/AVA/3.4	Illustration of Wind Flow from SW and SSW Directions
196529/B&V/AVA/3.5	Illustration of Wind Flow from S Direction
196529/B&V/LRS/002	Land Requirement Plan (Key Plan)
196529/B&V/LRS/003	Land Requirement Plan (Sheet 1 of 4)
196529/B&V/LRS/004	Land Requirement Plan (Sheet 2 of 4)
196529/B&V/LRS/005	Land Requirement Plan (Sheet 3 of 4)
196529/B&V/LRS/006	Land Requirement Plan (Sheet 4 of 4)
196529/B&V/LRS/007	Location Plan of Government Land Allocation
196529/B&V/LRS/010	Location Plan of Buildings/Temporary Structures Affected

再造紙 recycled paper

1 INTRODUCTION

1.1 Background

1.1.1 Following the 2015 Policy Address, a piece of land, located at north of Tin Wah Road and west of Tin Ying Road (the Site) which is currently zoned as "Residential (Group C)" (R(C)) and "Green Belt" (GB) on the approved Lau Fau Shan & Tsim Bei Tsui Outline Zoning Plan No. S/YL-LFS/9 is identified for potential public housing development.

1.1.2 Black & Veatch Hong Kong Limited (B&V) was commissioned by the Civil Engineering and Development Department (CEDD) of the Hong Kong Special Administrative Region (HKSAR) under Agreement No. CE 41/2016 (CE) in July 2017 to undertake the Feasibility Study (the Study) of site formation and infrastructural works for supporting the proposed public housing development (the Development) at the Site, as well as conducting technical assessments to facilitate the ensuing zoning amendments for the Site by the Planning Department.

1.1.3 The Site is planned to be developed in two phases, namely Phase 1 and Phase 2. Phase 1 Development aims to develop the Government land within the Site, whilst Phase 2 Development is to carry out the development on the government land and private land within the Site after land resumption.

1.1.4 The target population intake years of Phase 1 and Phase 2 are by 2030 and 2032 respectively, subject to future review at the subsequent detailed design stage of this development project.

1.1.5 Under the original planning proposal, the current "G/IC" site adjacent to the Project Site would be developed for the Hospital Authority (HA)'s Supporting Services Centre (SSC). Nevertheless, in November 2018, the adjacent G/IC site would not be developed as SSC and could be released for other purposes, such as public housing development. Therefore, the G/IC site has been included for the public housing development under this Project

1.1.6 B&V was instructed by CEDD on 11 March 2019 to carry out technical assessments for the new scheme, i.e. to adopt the adjacent G/IC site as part of the Project Site, with a domestic plot ratio of 6.5 and a non-domestic plot ratio of 0.5 as the development parameter for the Project Site. The revised site boundary is presented in ***Figure No. 196529/B&V/GEN/001***.

1.1.7 The enlarged Site with an approximate area of 3.72 ha is bounded by Tin Ying Road to the east and Tin Wah Road to the south. The Site is currently zoned as "R(C)" and "GB" on the approved Lau Fau Shan & Tsim Bei Tsui Outline Zoning Plan No. S/YL-LFS/9 and "Government, Institution or Community" ("G/IC") with a minor portion on the area shown as "Road" on the approved Tin Shui Wai Outline Zoning Plan No. S/TSW/14.

再造紙 recycled paper

1.2 Objectives and Scope of the Report

1.2.1 The purpose of this Final Report is to:

a) Provide a summary of the overall Assignment;

b) Set out key findings, proposals and recommendations of the Assignment;

c) Present the approach, methodology and results of the technical assessments; and

d) Propose the implementation strategy and framework, including cost estimation, recommendation on implementation and phasing for the Infrastructure works.

1.2.2 The structure of the report is as follows:

- Section 1 introduces the project background, the main tasks and purpose of this report.
- Section 2 discusses the latest development proposal in the Development;
- Section 3 summarises the findings in the Traffic and Transport Impact Assessment;
- Section 4 summarises the findings in the Preliminary Drainage Impact Assessment;
- Section 5 summarises the findings in the Preliminary Sewerage Impact Assessment;
- Section 6 summarises the findings in the Preliminary Water Supply Impact Assessment;
- Section 7 summarises the findings in the Preliminary Utilities Impact Study Report;
- Section 8 summarises the findings in the Preliminary Geotechnical Assessment;
- Section 9 summarises the findings in the Preliminary Site Formation Assessment;
- Section 10 summarises the findings in the Preliminary Environmental Review;
- Section 11 summarises the findings in the Landscape and Visual Impact Assessment;
- Section 12 summarises the findings in the Land Contamination Assessment;

- Section 13 summarises the findings in the Preliminary Air Ventilation Assessment;
- Section 14 summarises the findings in the Preliminary Land Requirement Study;
- Section 15 summarises the findings in the Preliminary Sustainability Assessment;
- Section 16 presents the Implementation Programme; and
- Section 17 provides the conclusion to the report.

再造紙 recycled paper

2 PRELIMINARY DEVELOPMENT PROPOSAL

2.1 Existing Condition

2.1.1 The Site is located at north of Tin Wah Road and west of Tin Ying Road (the Site) which is currently zoned as "Residential (Group C)'' (R(C)) and "Green Belt" (GB) on the approved Lau Fau Shan & Tsim Bei Tsui Outline Zoning Plan No. S/YL-LFS/9 and "Government, Institution or Community" ("G/IC") with a minor portion on the area shown as "Road" on the approved Tin Shui Wai Outline Zoning Plan No. S/TSW/14. The Site was identified for potential public housing development. The zoning of the Site is presented in ***Figure No. 196529/B&V/GEN/002.***

2.1.2 The Site is approximately 3.72ha in area and relatively flat with existing ground level at about +3.9mPD to +4.8mPD.

2.1.3 The Site comprises unallocated government land and private lands. In addition, two private car parks with approved planning applications (i.e. Applications No. A/YL-LFS/333 and A/YL-LFS/339 with validity up to 1.2.2022 and 17.5.2022 respectively) are located within the Site area. Private land resumption is required for the Development.

2.1.4 The surrounding land use pattern around the Site is characterised by a mixture of residential, G/IC and rural industrial uses (open storage).

2.2 Statutory Provisions

2.2.1 The housing site boundary is predominantly zoned R(C) under the LFS OZP with small portions falling within a GB zone to the north and G/IC (under TSW OZP) to the east.

2.2.2 As the Development deviates from the statutory planning intentions of the R(C), GB and G/IC zones, plan amendments to both OZPs are required to tally the statutory planning intention with the Development. The housing site boundary is required to be rezoned to Residential (Group A).

2.3 Indicative Scheme

2.3.1 The Development will be constructed into 2 phases, where Phase 1 Site consists of Government Land and Phase 2 Site consists of Private Lands and Government Land.

2.3.2 The preliminary housing layout plan provided by Housing Department is presented in ***Figure No. 196529/B&V/GEN/003***. An indicative scheme including a total of five [5] residential blocks for public housing development and a multi-storey block of ancillary facilities/car park is used as basis for technical assessments.

2.4 Development Parameters

2.4.1 The development parameters of the Study are shown below in ***Table 2.1***. The figures are subject to further review.

Table 2.1 – Latest Development Parameters for the Proposed Development

	Phase 1	Phase 2	Total
Site Area (m^2) Gross Site Area	about 9,500	about 19,660	about 29,160
Plot Ratio Maximum Domestic Maximum Non-domestic	6.5 0.5		
Zoning on the current Outline Zoning Plan (OZP)	GB, R(C), G/IC, Road		
Proposed Land Use / Proposed Zoning	Residential / R(A)		
Housing Type	Public Housing Development (1)		
Domestic			
Domestic GFA (m^2)	about 61,750	about 127,790	about 189,540
Flat production (2)	1,300	2,690	3,990
Design Population (3)	3,640	7,532	11,172
Non-domestic			
Total non-domestic GFA (m^2) (4)	about 4,750	about 9,830	about 14,580
Retail			
Retails Area (m^2) (5)	about 4,750	about 9,830	about 14,580
No. of employees per GFA (in 100m^2) (6)	3.5		
Design Population	166	344	510
Community Facility			
GFA (m^2) (7)	0	about 2,906	About 2,906
No. of employees per GFA (in 100m^2)	3.3		
Design Population	0	96	96

Note:
(1) Housing type would cover Public Rental Housing (PRH), Subsidised Sale Flats (SSF) and Green Form Subsidised Home Ownership Scheme (GSH). For conservative purpose, it is assumed all housing type of the Development would be SSF. The exact allocation of each housing type is subject to further review.
(2) An additional 10% variation of flat production and design population is allowed for flexibility in detailed design stage of the housing development. Hence, the estimated flat production for technical assessments is assumed to be 1,430 for Phase 1 and 2,959 for Phase 2.
(3) A person per flat ratio of 2.8 is adopted.
(4) GIC facilities and proposed ancillary facilities/ car park, as required by the Government, will not be included in the calculation of plot ratio under the Outline Zoning Plan.
(5) Assume that 100% of non-domestic GFA for commercial uses and appropriate amount of GFA for other facilities are used for conservative assessment purpose. The exact non-domestic GFA will be subjected to further review at later stage.
(6) Reference data is obtained from Table 8, Commercial and Industrial Floor Space Utilization Survey (Economic Activities: Retail Trade; All Types).
(7) Reference data is obtained from Table 8, Commercial and Industrial Floor Space Utilization Survey (Economic Activities: Community, Social & Personal Services; All Types).

3 TRAFFIC AND TRANSPORT IMPACT

3.1 Introduction

3.1.1 The objectives of the Preliminary Traffic and Transport Impact Assessment (TTIA) include the following:

- To assess the traffic implication in different design scenarios and formulate mitigation measure / improvement schemes within Area of Influence (AOI);
- To conduct a comprehensive review of the traffic and transport data presently available, and to collect data to supplement the existing information;
- To identify all those roads and junctions that will have capacity problems in the road network within the AOI which are affected by the construction and operation of the Development and the Infrastructural Works, and recommend necessary improvement measures;
- To review the public transport demand arising from the Development and recommend the required public transport services and the associated public transport facilities;
- To investigate different road schemes and future pedestrian flows and develop the Optimal Scheme for:

  (i) connecting the Project Site to the existing road networks,

  (ii) provision of necessary public transport facilities including roadside laybys; and

  (iii) pedestrian crossing facilities including but not limited to at-grade crossings and/or footbridges and/or subways taking into account the transport need for residents entering/leaving the Project Site;
- To assess the traffic implications of carrying out the works at the various stages and phases throughout the construction period, taking into account other related roadworks projects and developments in the AOI;
- To determine appropriate temporary traffic management/measures to ameliorate the traffic impact on the road network;
- To review the existing footpath and access road to nearby villages and graveyards and propose diversion/re-provision;
- To review if the existing public access road leading to the western edge of the Project Site is still necessary and the proposed diversion details if so required;
- To assess if the location of future diverted public local access road and drainage channels could be outside the housing site boundary;
- To propose vehicular and pedestrian accesses for Phase 1 and Phase 2 Developments of the Project Site and determine the need for widening of existing Tin Wah Road and provision of roadside laybys; and

- To review the capacity of the existing pedestrian circulation network to/from the Project Site and any required improvement works.

3.1.2 The modelling methodology and the future year traffic forecasts with partial HSK-NDA (Scenario A) and with HSK-NDA (Scenario B) are conducted.

3.1.3 Findings and recommendation of the TTIA are presented in Preliminary Traffic and Transport Impact Assessment. A summary is presented in the sections below.

3.2 Traffic Impact

3.2.1 Traffic to be generated from the Development will cause an increase in junction flows and link flows. To cater for the additional trips, the operational performance of critical junctions and road links should be reviewed, and junction improvement schemes should be proposed if necessary. Also, the Development will generate significant demand on other modes of transportation including pedestrian and public transportation. Pedestrian connectivity and capacity of transportation facilities should be addressed.

3.3 Methodologies

Existing Traffic Condition

3.3.1 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 0700 to 1000 and from 1700 to 2000 of a typical weekday in November 2017. The locations of the surveyed junctions / links are illustrated in ***Figure No. 196529/B&V/TTIA/FIG 2.1***.

3.3.2 Existing operational performance of the key junctions were assessed by calculating the reserve capacity (RC) for signal-controlled junctions, and the design flow to capacity (DFC) for priority junctions and roundabouts.

Design Year

3.3.3 The Development is targeted for population intake years of Phase 1 and Phase 2 are by 2030 and 2032 respectively, subject to future review at the subsequent detailed design stage of this development project. In order to assess the impact of the traffic in relation to the Development on the local road network, it is necessary to forecast the traffic flows for year 2035, which is 3 years upon the target population intake.

Traffic Model Methodology for Base Year Model

3.3.4 TD's 2008-based Base District Traffic Model (BDTM) "NTW1" covering Yuen Long and Tin Shui Wai was adopted for the study. The NTW1 traffic model was cordoned off and fine-tuned to produce a Local Area Model (LAM) for providing traffic flows within the agreed AOI to improve the efficiency of modelling run time.

3.3.5 The base year and future year local area models for weekday AM & PM peaks using the latest 2014-based Territorial Population and Employment Data Matrices

(TPEDM) planning assumption released by Planning Department in March 2017 are developed for providing traffic forecast for traffic impact assessment.

3.3.6 As the current 2008-based BDTM NTW1 models are not developed based on the latest 2014-based TPEDM planning assumptions, in view of the Project is located immediately to the Hung Shui Kiu New Development Area (HSK-NDA) development. Information from the Traffic and Transport Impact Assessment (Final) Report (ref. 118-04) of Hung Shui Kiu New Development Area Planning and Engineering Study – Investigation (agreement no. CE 2/2011 (CE)) HSK-NDA were taken into reference during the traffic forecast which was based on 2011-based TPEDM with the full planned population and employment in HSK-NDA.

Development Traffic Generation

3.3.7 Trip generation rates for the Development are referenced to TPDM Volume 1 Chapter 3 Annex D Traffic Generation and Attraction Rates. The total traffic generations of the proposed housing development is computed and summarized in ***Table 3.1***.

Table 3.1 - Traffic Generations of the Proposed Development

Portion	Proposed Land Use	Flat Nos. / GFA	Traffic Generations (pcus/hr)			
			AM Peak		PM Peak	
			Generation	Attraction	Generation	Attraction
Phase 1	SSF	1,430 flats*	89	61	43	58
	Retail	4,750 m²	11	12	15	17
		Sub-total	100	73	58	75
Phase 2	SSF	2,960 flats*	185	127	88	119
	Retail	9,830 m²	23	24	31	36
	GIC	2,906 m²	7	8	10	11
		Sub-total	215	159	129	166
Proposed Ancillary Facilities/ Car Park		Sub-total	85	55	45	100
Total**			**400**	**287**	**232**	**341**

(*) An additional 10% variation of flat production and design population is allowed for flexibility in later stages.
(**) The figure will be round to nearest 5 in the traffic model.

Traffic Model Methodology for Future Design Year

3.3.8 Similar to base year model development, to derive a growth rate to estimate future traffic flow, reference was made to 2014 – based TPEDM published by the Planning Department. The model methodology in general follows the BDTM forecasting methodology, except that the cordoned matrices and some of the traffic flows / network were referenced to the HSK-NDA Project

3.4 Existing Road Network

Existing Road Network

3.4.1 The proposed housing development is bounded by Tin Ying Road to the East, Tin Wah Road to the south and Man Tak Road to the west. There is an access road located at Tin Wah Road (in between of Man Tak Road and Tin Ying Road) for providing access

to the private land lots and part of the access road falls into the area of Phase 1. At present, the Site can be accessed from Tin Wah Road, Tin Ying Road, and Ping Ha Road as the major access to different destinations. The existing road network in the vicinity of the proposed development is shown in ***Figure No. 196529/B&V/TTIA/FIG 2.1***.

3.4.2 Tin Wah Road – is a single 2-lane (with local widening to 3 lanes)/ dual 2-lane district distributor road running as major east-west corridor in Tin Shui Wai area.

3.4.3 Tin Ying Road – is a dual 2-lane district distributor road running as a north-south corridor in the AOI and also major road link from the Site to Yuen Long Highway (New Territories Circular Road) via Hung Tin Road.

3.4.4 Ping Ha Road – is a single carriageway rural road, with traffic lanes varies from 2 lanes to 4 lanes at different road sections, running north-south direction. It is also the major access of the truck vehicles to the warehouse / port back up and open storage facilities in the area.

Existing Traffic Condition

3.4.5 Analysis of the observed traffic data indicates that the AM and PM peak hour flows occurred from 0730 to 0830 and from 1715 to 1815 respectively. The observed peak hour traffic flows are summarized and presented in ***Figure No. 196529/B&V/TTIA/FIG 2.2***.

3.4.6 Existing operational performance of the key junctions were assessed by calculating the reserve capacity (RC) for signal-controlled junctions, and the design flow to capacity (DFC) for priority junctions and roundabouts. The existing junction layouts of these key junctions are shown in ***Figure Nos. 196529/B&V/TTIA/FIG 2.3 to 2.11*** respectively. The assessment results are listed in ***Table 3.2*** below.

Table 3.2 - Existing Junctions Performance

Ref.	Junction	Method of Control	2017 RC/DFC(1)	
			AM Peak	PM Peak
J1	Tin Wah Road/ Ping Ha Road / Lau Fau Shan Road	Priority	0.89	1.05
J2	Tin Wah Road/ Man Tak Road	Priority	0.13	0.16
J3	Tin Wah Road/ Tin Ying Road	Signal	40%	57%
J4	Tin Wah Road/ Tin Shui Road	Roundabout	0.43	0.49
J5	Tin Wah Road/ Tin Tsz Road	Signal	85%	108%
J6	Tin Tsz Road/ Tin Fuk Road	Signal	59%	59%
J7	Tin Fuk Road/ Ping Ha Road/ Tin Yiu Road	Signal	35%	26%
J8	Ping Ha Road/ Tin Ying Road/ Hung Tin Road	Signal	26%	28%
J9	Ping Ha Road/ Tin Ha Road	Signal	27%	13%

Note: (1) RC = Reserve Capacity, RFC = Design Flow to Capacity

3.4.7 The results in ***Table 3.2*** indicate that all the key junctions are currently operating within capacities (i.e. RC >0% and DFC <1.0), except for J/O Tin Wah Road/Ping Ha Road/Lau Fau Shan Road (junction no. J1), which is operating at capacity during PM peak hour. Junction improvement for J/O Tin Wah Road/Ping Ha Road/Lau Fau Shan Road (junction no. J1) should be considered to improve the current situation.

3.4.8 Existing road link performances of critical links are summarized in below ***Table 3.3***.

Table 3.3 - Existing Road Links Performance

Ref.	Road	Direction	Capacity(1)(2) (pcu/hr)	2017 Observed Flow (pcu/hr)		V/C Ratio	
				AM Peak	PM Peak	AM Peak	PM Peak
L1	Tin Ying Road	NB	3,360	1,290	1,455	0.39	0.44
		SB	3,360	1,600	1,075	0.48	0.32
L2	Tin Tsz Road	NB	3,360	745	1,100	0.23	0.33
		SB	3,360	1,030	795	0.31	0.24
L3	Tin Wah Road	EB	1,020	915	880	0.90	0.87
		WB	1,020	865	910	0.85	0.90

Note:(1) The capacity for road sections is referring to Volume 2 of the TPDM.
(2) A factor of 1.2 is adopted to convert the capacity from veh/hr to pcu /hr.

3.4.9 The results in ***Table 3.3*** indicate that all the above road links are currently operating within capacity (i.e. V/C ratios below 1.0).

3.5 Proposed Development

Proposed Road Network

3.5.1 The Project Site is located next to Tin Wah Road and occupies part of the existing access road. For facilitating the Site formation of Phase 1, the affected access road will be modified and upgraded up to the design standard and form the standard priority junction with Tin Wah Road. The access arrangement of the new junction will be left-in/left-out only and the proposed housing site access (for Phase 1 and 2) is located around the mid-way of the new access road. The junction and access road arrangement are shown in ***Figure No. 196529/B&V/TTIA/FIG 3.1***.

3.5.2 In order to provide access to the users of proposed ancillary facilities/ car park building, the existing residents to the west of the Project Site and an alternative access to the proposed housing development, an access road with roundabout at Man Tak Road with a single-sided footpath is proposed. The proposed access road with roundabout is shown in ***Figure No. 196529/B&V/TTIA/FIG 3.1***.

3.5.3 Local improvement scheme for J/O Tin Wah Road/ Ping Ha Road/ Lau Fau Shan Road (junction no. J1) is required as interim measure before the completion of HSK NDA. It is proposed to convert J/O Tin Wah Road/ Ping Ha Road/ Lau Fau Shan Road (junction no. J1) from priority to roundabout. The proposed layout is shown in ***Figure No. 196529/B&V/TTIA/FIG 4.1***.

Proposed Pedestrian / Cycling Connectivity

3.5.4 Before the full implementation of the HSK-NDA, it is considered the proposed development is relatively remote and far away from the existing public transport facilities at Tin Shui Wai, i.e Chung Fu Station light rail transit (LRT) Station with

around 750m walking distance, and currently the public transport (PT) services in the area is very limited by serving few green minibus (GMB) and one shuttle bus running within 500m walking distance. Therefore, it is anticipated that the majority pedestrian activities of the proposed developments will be connection between Phase 1 and Phase 2 to the proposed bus layby on both Tin Wah Road eastbound and westbound.

3.5.5 In view of the above, it is proposed to provide at-grade pedestrian crossing across Tin Ying Road at J/O Tin Wah Road/Tin Ying Road to facilitate the east-west pedestrian movements connecting the Project Site with the existing public transport facilities at Tin Shui Wai. Two options are being proposed, one by straight crossings and one by staggered crossings. The proposed layouts are shown in ***Figure No. 196529/B&V/TTIA/FIG 3.2 and 3.3***.

3.5.6 Currently, there is a cycle track system located along southern part of Tin Wah Road. Cyclists could via the said cycle track system and reach the cautionary crossing Tin Wah Road and along the new footpath to access the Project Site. The location plan of the existing PT, LRT station and cycle track system is shown in ***Figure No. 196529/B&V/TTIA/FIG 3.4***.

3.5.7 For the pedestrian and cycling connectivity, both of them are highly dependent on the detail design of the HSK-NDA, especially in Stage 3 of completion of infrastructure works. Therefore, further review of the said connectivity should be carried out once more information is available.

Public Transport Facilities

3.5.8 In view of the long walking distance (over 500m) from the Project Site to the nearest railway station, it is recommended to provide sufficient road based public transportation to cater for the public transport demand.

3.5.9 It is estimated that approximately 671 passengers per hour would be generated by the proposed development during peak hour to use West Rail Line. As this is only an insignificant fraction of the carrying capacity of the West Rail Line, it is considered that the proposed development would not cause significant impact to the West Rail Line.

3.5.10 Laybys of 39m are proposed at both bounds of Tin Wah Road. The location of the bus layby illustrated in ***Figure No. 196529/B&V/TTIA/FIG 3.1***. Also, a bus layby with 39m long will be provided on Tin Wah Road westbound for inbound traffic. It is recommended that a minimum of 3.0m clear width of footpath should be provided connecting to the proposed bus laybys on Tin Wah Road.

3.6 Traffic Impact Assessment

3.6.1 The TTIA would identify the critical issues and recommend any associated traffic improvement schemes to alleviate the identified traffic problem as necessary.

Assessment of Major Junctions

3.6.2 The operational performance of the identified critical junctions was assessed for design year 2035. The results are summarized in ***Table 3.4*** and ***Table 3.5.*** The

detailed design of improvement works at some junctions would have interface with Hung Shui Kiu/ Ha Tsuen New Development Area (HSK/HT NDA) which is subject to further review.

Table 3.4 – Critical Junction Assessment in Design Year 2035 (Scenario A – With Partial HSK-NDA)

Ref.	Junction	Method of Control	RC/DFC(1)			
			2035 Reference Scenario (Without Development)		2035 Design Scenario (With Development)	
			AM	PM	AM	PM
J1(2)	Tin Wah Road/ Ping Ha Road / Lau Fau Shan Road	Priority	1.11	1.10	1.52	1.57
		Roundabout(2)	0.49	0.56	0.63	0.79
J2	Tin Wah Road/ Man Tak Road	Priority	0.16	0.18	0.40	0.23
J3(3)	Tin Wah Road/ Tin Ying Road	Signal	29%	46%	11%	27%
		Signal (With Straight Crossing)(4)	3%	16%	-12%	1%
		Signal (With Staggered Crossing)(4)	27%	44%	9%	25%
J4	Tin Wah Road/ Tin Shui Road	Roundabout	0.47	0.52	0.53	0.56
J5	Tin Wah Road/ Tin Tsz Road	Signal	69%	91%	45%	64%
J6	Tin Tsz Road/ Tin Fuk Road	Signal	50%	51%	50%	51%
J7(5)	Tin Fuk Road/ Ping Ha Road/ Tin Yiu Road	Signal	21%	34%	21%	34%
J8(3)	Ping Ha Road/ Tin Ying Road/ Hung Tin Road	Signal	19%	20%	19%	20%
J9(3)	Ping Ha Road/ Tin Ha Road	Signal	19%	6%	19%	6%
J11	Access Road / Tin Wah Road	Priority	-	-	Free Flow	

Note: (1) RC = Reserve Capacity, DFC = Design Flow to Capacity
(2) Based on Proposed Junction Improvement as shown in ***Drawing 4.1***.
(3) The detailed design of the junction would be developed under HSK/HT NDA and no insurmountable problem is anticipated.
(4) Based on Proposed junction improvement in ***Drawing 3.2*** for straight crossing and ***Drawing 3.3*** for staggered crossing. The proposed junction improvement at the junction will be interfaced with HSK/HT NDA. Further improvement measures, such as banning of right turn from Tin Wah Road eastbound and westbound, will be explored in the next stage.
(5) Based on proposed junction improvement to increase cycle time from 90s to 108s.

再造紙 recycled paper

Table 3.5 – Critical Junction Assessment in Design Year 2035 (Scenario B - With HSK-NDA)

Ref.	Junction	Method of Control	RC/DFC(1)			
			2035 Reference Scenario (Without Development)		2035 Design Scenario (With Development)	
			AM	PM	AM	PM
J1(2)	Proposed Conceptual Junction Layout of Tin Wah Road / Lau Fau Shan Road / Road D1 / Road D2	Roundabout	0.36	0.29	0.36	0.29
J2	Tin Wah Road/ Man Tak Road	Priority	0.19	0.11	0.37	0.22
J3	Tin Wah Road/ Tin Ying Road	Signal	88%	140%	53%	105%
J4	Tin Wah Road/ Tin Shui Road	Roundabout	0.52	0.44	0.70	0.55
J5	Tin Wah Road/ Tin Tsz Road	Signal	32%	80%	6%	53%
J6	Tin Tsz Road/ Tin Fuk Road	Signal	48%	49%	48%	49%
J7	Tin Fuk Road/ Ping Ha Road/ Tin Yiu Road	Signal	23%	13%	23%	13%
J8(2)	Proposed Conceptual Junction Layout of Ping Ha Road / Hung Tin Road / Road D2	Roundabout	0.65	0.57	0.65	0.64
J9(2)	Proposed Conceptual Junction Layout of Road D2 / Road L1 / Road L3	Roundabout	0.59	0.61	0.78	0.83
J10(2)	Proposed Conceptual Junction Layout of Road D2 / Road D4	Signal	37%	20%	27%	12%
J11	Access Road / Tin Wah Road	Priority	-	-	Free Flow	

Note: (1) RC = Reserve Capacity, DFC = Design Flow to Capacity
(2) Based on Proposed Junction Improvement under Hung Shui Kiu NDA Study. The detailed design of the junction would be developed under HSK/HT NDA and no insurmountable problem is anticipated.

再造紙 recycled paper

Assessment of Road Links

3.6.3 The operational performance of the identified road links are assessed for design year 2035. The results are summarized in ***Table 3.6*** and ***Table 3.7***.

Table 3.6 – 2035 Road Links Performance (Scenario A – With Partial HSK-NDA)

Ref.	Road	Direction	Capacity[1][2] (pcu/hr)	2035 Flow (pcu/hr)		V/C Ratio	
				AM Peak	PM Peak	AM Peak	PM Peak
2035 Reference							
L1	Tin Ying Road	NB	3,360	1,365	1,540	0.41	0.46
		SB	3,360	1,690	1,135	0.51	0.34
L2	Tin Tsz Road	NB	3,360	1,030	1,765	0.31	0.53
		SB	3,360	1,270	1,180	0.38	0.36
L3	Tin Wah Road (between Man Tak Road & Access Road)	EB	1,020	970	930	0.96	0.92
		WB	1,020	915	965	0.90	0.95
2035 Design							
L1	Tin Ying Road	NB	3,360	1,510	1,780	0.45	0.53
		SB	3,360	1,970	1,300	0.59	0.39
L2	Tin Tsz Road	NB	3,360	1,100	1,840	0.33	0.55
		SB	3,360	1,400	1,255	0.42	0.38
L3	Tin Wah Road (between Man Tak Road & Access Road) [Without Improvements]	EB	1,020	1,300	1,230	1.28	1.21
		WB	1,020	1,130	1,315	1.11	1.29
	Tin Wah Road (between Man Tak Road & Access Road) [With Improvements]	EB	3,360[3]	1,300	1,230	0.39	0.37
		WB	3,360[3]	1,130	1,315	0.34	0.40

Note: (1)The capacity for road sections is referring to Volume 2 of the TPDM.
(2)A factor of 1.2 is adopted to convert the capacity from veh/hr to pcu/hr.
(3)The capacity of Tin Wah Road is increased due to the proposed road widening works.

再造紙 recycled paper

Table 3.7 – 2035 Road Links Performance (Scenario B - With HSK-NDA)

Ref.	Road	Direction	Capacity[1][2] (pcu/hr)	2035 Flow (pcu/hr)		V/C Ratio	
				AM Peak	PM Peak	AM Peak	PM Peak
2035 Reference							
L2	Tin Tsz Road	NB	3,360	765	1,025	0.23	0.31
		SB	3,360	1,495	1,130	0.45	0.34
L3	Tin Wah Road	EB	3,360[3]	645	760	0.20	0.23
		WB	3,360[3]	730	575	0.22	0.18
2035 Design							
L2	Tin Tsz Road	NB	3,360	765	1,025	0.23	0.31
		SB	3,360	1,905	1,370	0.57	0.41
L3	Tin Wah Road	EB	3,360[3]	980	1,065	0.30	0.32
		WB	3,360[3]	730	575	0.22	0.18

Note: (1)The capacity for road sections is referring to Volume 2 of the TPDM.
(2)A factor of 1.2 is adopted to convert the capacity from veh/hr to pcu /hr.
(3)The capacity of Tin Wah Road is increased due to the proposed road widening works to be carried under HSK-NDA works.

3.6.4 The results of ***Table 3.4*** to ***Table 3.7*** indicate that all the above critical junction and road links will be operating within capacity (i.e. RC >0%, DFC <1.0 and V/C ratios below 1.0.

Construction Traffic Impact Assessment

3.6.5 During the peak construction year in 2027, it is anticipated that there will be about 30 pcu/hr/direction, i.e. 60 pcu/hr two-way. Since J/O Tin Wah Road/ Ping Ha Road / Lau Fau Shan Road (junction no. J1) is operating near capacity under the existing scenario, it is recommended that construction traffic should make use of Ting Ying Road and Tin Wah Road to go to/leave from the Site

3.6.6 The operational performance of the critical junctions on Tin Wah Road was assessed for design year 2027. The results are summarized in ***Table 3.8***.

Table 3.8 – Junction Assessment in Design Year 2027 (During Construction)

Ref.	Junction	Method of Control	RC/DFC[1]			
			2027 Reference Scenario (Without Development)		2027 Design Scenario (With Development)	
			AM	PM	AM	PM
J2	Tin Wah Road/ Man Tak Road	Priority	0.15	0.17	0.13	0.07
J3	Tin Wah Road/ Tin Ying Road	Signal	35%	50%	32%	48%

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

3.6.7 To minimize the traffic impact, all construction traffic should avoid using J/O Tin Wah Road/ Ping Ha Road / Lau Fau Shan Road (junction no. J1) and make use of Tin Wah Road and Tin Ying Road. The assessment results showed that the junction would be able to cope with the construction traffic of the proposed development.

3.7 Summary

3.7.1 Traffic and Transport Impact Assessment has been conducted and its results have confirmed that with the proposed road network and pedestrian network, the highway and transport systems can accommodate the traffic demand from the proposed Development and no insurmountable traffic impact on the nearby road links, junctions and transport facilities is anticipated.

再造紙
recycled paper

4 PRELIMINARY DRAINAGE IMPACT ASSESSMENT

4.1 Introduction

4.1.1 The objective of the Preliminary Drainage Impact Assessment (DIA) are to:

- Review the relevant drainage master plan and drainage works completed, and other completed, on-going or planned studies as appropriate and take note of the completed, on-going or any scheduled developments and improvement works in the vicinity of the Development;
- Prepare and submit the project profile for the DIA;
- Assess the impact due to the Development and the associated infrastructure on the existing drainage system, particularly due to any discharge of effluent to the existing drainage system;
- Recommend all necessary measures to mitigate adverse drainage impacts arising from the Development and the associated site formation and infrastructural works and identified by the DIA;
- Prepare preliminary drainage layout plan for the Development to illustrate the hydraulic feasibility of the proposed connection points; and
- Study possible schemes to divert existing streams, watercourses, drains, box culverts and drainage reserves away from the housing site of the Development.

4.1.2 Findings and recommendation of the DIA are presented in Preliminary Drainage Impact Assessment. A summary of various aspects of the review are presented in the sections below.

4.2 Methodologies

Technical Approach

4.2.1 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.

4.2.2 Drainage record plans, as-built drawings, topographic information, and site inspection were used in examining the adequacy of the drainage system when developing the hydraulic model.

4.2.3 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 of lowland, flat areas in the Site where the pipes have minimal gradients and are subject to tidal intrusion or backwater effects from the main river channels.

Assessment Criteria

4.2.4 According to the 5th edition of Stormwater Drainage Manual (SDM), a 50-year design return period with a minimum of 500mm freeboard is recommended for the design

再造紙 recycled paper

and checking of urban drainage branch system, while a 10-year design return period is recommended for the design and checking of the village drainage system.

Determination of Flood Level Combinations

4.2.1 The design criteria for flood level depend on a combination of rainstorm event and tidal level, as well as the catchment characteristics. With reference to the SDM, the determination of the flood level is provided in ***Table 4.1***.

Table 4.1 - Determination of Flood Level in the Fluvial-Tidal Zone

Flood Level Return Period	Case A	Case B
50-yr	50-yr rain + 10-yr sea level	10-yr rain + 50-yr sea level
10-yr	10-yr rain + 2-yr sea level	2-yr rain + 10-yr sea level

4.3 Existing Drainage System

4.3.1 Based on the drainage record provided by DSD and site investigation, a 1,650mm channel, which is converted to 2,000mm channel, is laid from southwest to the south of the Site. The channel is then converted to a 1,650mm drainage pipe and discharge to Tin Shui Wah Nullah.

4.3.2 A 1,200mm U-channel is laid along the access road to the northeast of the Site. Together with the stormwater discharged from northeast side of the Site, the gathered stormwater is discharged to the Tin Shui Wai Nullah by a 1,650mm stormwater pipe.

4.3.3 A 1,500mm diameter drainage pipe is located within the G/IC site, adjacent to the 2,000mm channel and discharge to Tin Shui Wai Nullah.

4.3.4 The existing drainage system is presented in ***Figure No. 196529/B&V/DIA/001.***

4.4 Potential Drainage Impacts and Proposed Drainage Schemes

4.4.1 All watercourses within the Site would be demolished during the site formation works. The proposed drainage scheme and mitigation measures are shown as follows:

Interim Scenario

4.4.2 During the Interim Scenario (i.e. between Phase 1 site handover and completion of Phase 2 site formation), a 2,000mm wide channel is proposed, adjacent to the proposed access road to serve as temporary drainage system. The existing 2,000mm channel will be re-directed to the proposed 2,000mm temporary channel by a twin 1,650mm diameter drainage pipes. The 2,000mm temporary channel will be connected to a proposed twin 1,650mm pipes and discharge the stormwater to Tin Shui Wai Nullah.

4.4.3 In view of the existing 1,500mm diameter drainage pipe located adjacent to the Phase 1 housing site, it is proposed that the drainage pipe could be served for collecting surface runoff of Phase 1 housing site and discharge to Tin Shui Wai Nullah. The

condition of the existing drainage pipe would be further reviewed in the subsequent stage of the Project.

4.4.4 The proposed drainage layouts for Interim Scenario is are presented in ***Figure No. 196529/B&V/DIA/003***.

4.4.5 The results of the estimated maximum water levels after implementation of mitigation measures at Interim Scenario are summarised in ***Table 4.2*** and ***Table 4.3***.

Table 4.2 Node Assessment After Mitigation (10-yr Return Period - Interim) (1)

Node ID	Ground Level (mPD)	Water Depth (Baseline) (mPD)	Baseline Flood Level (m)	Water Depth (Interim) (mPD)	Interim Flood Level (m)	Flood Rise (m)
10-year Case A						
Ex_ChnlA_001(2)	-	4.760	+4.760	4.532	+4.532	-0.228
SIH1003320(3)	2.497	3.864	+1.367	-	-	-
PMH009	5.000	-	-	4.639	-0.361	-
859	5.722	4.376	-1.346	4.377	-1.345	+0.001
181	5.695	4.369	-1.326	4.370	-1.325	+0.001
860	5.503	4.345	-1.158	4.346	-1.157	+0.001
Int_Manhole	8.2000	-	-	4.315	-3.885	-
10-year Case B						
Ex_ChnlA_001(2)	-	4.592	+4.592	4.252	+4.252	-0.340
SIH1003320(3)	2.497	3.666	+1.169	-	-	-
PMH009	5.000	-	-	4.209	-0.791	-
859	5.722	4.222	-1.500	4.223	-1.499	+0.001
181	5.695	4.219	-1.476	4.219	-1.476	0
860	5.503	4.206	-1.297	4.206	-1.297	0
Int_Manhole	8.2000	-	-	3.795	-4.405	-

Note:
(1) Positive flood depth indicates an occurrence of flooding.
(2) For Ex_ChnlA_001, water level is presented but ground level.
(3) SIH1003320 is no longer existing in Interim Scenario

Table 4.3 Node Assessment After Mitigation (50-yr Return Period - Interim) (1)

Node ID	Ground Level (mPD)	Water Depth (Baseline) (mPD)	Baseline Flood Level (m)	Water Depth (Interim) (mPD)	Interim Flood Level (m)	Flood Rise (m)
50-year Case A						
Ex_ChnlA_001(2)	-	4.895	+4.895	4.542	+4.542	-0.353
SIH1003320(3)	2.497	3.990	+1.493	-	-	-
PMH009	5.000	-	-	4.558	-0.442	-
859	5.722	4.801	-0.921	4.803	-0.919	+0.002
181	5.695	4.795	-0.900	4.797	-0.898	+0.002
860	5.503	4.776	-0.727	4.777	-0.726	+0.001
Int_Manhole	8.2000	-	-	3.827	-4.373	-

Node ID	Ground Level (mPD)	Water Depth (Baseline) (mPD)	Baseline Flood Level (m)	Water Depth (Interim) (mPD)	Interim Flood Level (m)	Flood Rise (m)
50-year Case B						
Ex_ChnlA_001(2)	-	5.169	+5.169	4.895	+4.895	-0.274
SIH1003320(3)	2.497	4.176	+1.679	-	-	-
PMH009	5.000	-	-	4.957	-0.043	-
859	5.722	4.925	-0.797	4.926	-0.796	+0.001
181	5.695	4.923	-0.772	4.923	-0.772	0
860	5.503	4.914	-0.589	4.914	-0.589	0
Int_Manhole	8.2000	-	-	4.521	-3.679	-

Note:
(1) Positive flood depth indicates an occurrence of flooding.
(2) For Ex_ChnlA_001, water level is presented but ground level.
(3) SIH1003320 is no longer existing in Interim Scenario.

Proposed Scenario

4.4.6 The existing channel (1,650mm wide channel) next to Man Tak Road will be converted to a single-cell 2.5m (W) x 2.0 (H) box culvert and it would be laid along the proposed pedestrian road from Man Tak Road, along Tin Wah Road. It then connects to proposed twin 1,650mm pipes and discharges to Tin Shui Wai Nullah.

4.4.7 A 2,000mm channel will be laid along the northwest boundary of Phase 2 site. The channel next to the access road with roundabout at Man Tak Road and along Phase 2 housing site will be connect by a twin 1650mm drainage pipe. In the northeast of the Site, together with the stormwater collected from the northeast side of the Site, the stormwater from nearby village area will be discharged to Tin Shui Wai Nullah by a proposed twin 1,650mm drainage pipes.

4.4.8 The runoff generated by each housing sites will be diverted to proposed drainage measures via a 900mm diameter drainage pipe, laid along the proposed access road. For Phase 1 Housing Site, the proposed 900mm diameter drainage pipe will be laid towards the proposed twin 1650mm diameter drainage pipe on Tin Wah Road, while for Phase 2 Housing Site, the proposed 900mm diameter drainage pipe will be connected to the twin 1650mm diameter drainage pipes at the end of the proposed access road.

4.4.9 It is noted that there is an existing 1,650mm pipe (SIH1003320) adjacent to proposed drainage pipes. Since the ground level where the inlet of the pipe is will be backfilled, it is expected that no stormwater will be conveyed by the existing 1,650mm pipe. There is potential to utilize the existing 1,650mm pipe into proposed drainage scheme, but further site investigation on the condition of the existing drainage pipe is required in the subsequent stage of the Project.

4.4.10 Flap valves are proposed at all the outfalls of proposed drainage pipes and existing pipes in the relevant catchment area due to the relatively high water level of Tin Shui Wai Nullah.

4.4.11 The proposed drainage layouts for Proposed Scenario are presented in ***Figure No. 196529/B&V/DIA/004***.

4.4.12 The results of the estimated maximum water levels after implementation of mitigation measures at Proposed Scenario are summarised in ***Table 4.4*** and ***Table 4.5***.

Table 4.4 Node Assessment After Mitigation (10-yr Return Period - Proposed) (1)

Node ID	Ground Level (mPD)	Water Depth (Baseline) (mPD)	Baseline Flood Level (m)	Water Depth (Proposed) (mPD)	Proposed Flood Level (m)	Flood Rise (m)
10-year Case A						
Ex_ChnlA_001(2)	-	4.760	+4.760	4.601	+4.601	-0.159
SIH1003320(3)	2.497	3.864	+1.367	-	-	-
PMH009	5.000	-	-	4.597	-0.403	-
859	5.722	4.376	-1.346	4.378	-1.344	+0.002
181	5.695	4.369	-1.326	4.371	-1.324	+0.002
860	5.503	4.345	-1.158	4.346	-1.157	+0.001
P1_001	6.500	-	-	4.529	-1.971	-
P2_002	6.500	-	-	4.526	-1.974	-
10-year Case B						
Ex_ChnlA_001(2)	-	4.592	+4.592	4.147	+4.147	-0.445
SIH1003320(3)	2.497	3.666	+1.169	-	-	-
PMH009	5.000	-	-	3.945	-1.055	-
859	5.722	4.222	-1.500	4.223	-1.499	+0.001
181	5.695	4.219	-1.476	4.219	-1.476	0
860	5.503	4.206	-1.297	4.206	-1.297	0
P1_001	6.500	-	-	3.991	-2.509	-
P2_002	6.500	-	-	3.958	-2.542	-

Note:
(1) Positive flood depth indicates an occurrence of flooding.
(2) For Ex_ChnlA_001, water level is presented but ground level.
(3) SIH1003320 is no longer existing in Proposed Scenario.

Table 4.5 Node Assessment After Mitigation (50-yr Return Period - Proposed) (1)

Node ID	Ground Level (mPD)	Water Depth (Baseline) (mPD)	Baseline Flood Level (m)	Water Depth (Proposed) (mPD)	Proposed Flood Level (m)	Flood Rise (m)
50-year Case A						
Ex_ChnlA_001(2)	-	4.895	+4.895	4.470	+4.470	-0.425
SIH1003320(3)	2.497	3.990	+1.493	-	-	-
PMH009	5.000	-	-	4.186	-0.814	-
859	5.722	4.801	-0.921	4.803	-0.919	+0.002
181	5.695	4.795	-0.900	4.797	-0.898	+0.002
860	5.503	4.776	-0.727	4.777	-0.726	+0.001
P1_001	6.500	-	-	4.334	-2.166	-
P2_002	6.500	-	-	4.264	-2.236	-

Node ID	Ground Level (mPD)	Water Depth (Baseline) (mPD)	Baseline Flood Level (m)	Water Depth (Proposed) (mPD)	Proposed Flood Level (m)	Flood Rise (m)
50-year Case B						
Ex_ChnlA_001(2)	-	5.169	+5.169	4.942	+4.942	-0.227
SIH1003320(3)	2.497	4.169	+1.672	-	-	-
PMH009	5.000	-	-	5.192	+0.192	-
859	5.722	4.925	-0.797	4.927	-0.795	+0.002
181	5.695	4.923	-0.772	4.926	-0.769	+0.003
860	5.503	4.914	-0.589	4.915	-0.588	+0.001
P1_001	6.500	-	-	5.036	-1.464	-
P2_002	6.500	-	-	4.981	-1.519	-

Note:
(1) Positive flood depth indicates an occurrence of flooding.
(2) For Ex_ChnlA_001, water level is presented but ground level.
(3) SIH1003320 is no longer existing in Proposed Scenario

4.5 Summary

4.5.1 The hydraulic assessment indicates that the Development would not induce adverse drainage impact upon commissioning of the following proposed drainage works: -

(i) Construction of a single-cell 2.5m (W) × 2.0m (H) box culvert and a twin 1,650mm diameter drainage pipes underneath the segment of proposed footpath along Tin Wah Road towards Tin Shui Wai Nullah;

(ii) Construction of a temporary 2,000mm wide rectangular channel adjacent to the proposed access road and a twin 1,650mm diameter drainage pipes towards Tin Shui Wai Nullah for a period between Phase 1 handover and completion of Phase 2 site formation;

(iii) Construction of a permanent 2,000mm wide rectangular channel along the western perimeter of Phase 2 site connecting the as-built inlet of the two 1,650mm diameter drainage pipes;

(iv) Construction of two 900mm diameter drainage pipes along the proposed access road for collecting the runoff generated by Phase 1 and Phase 2 Housing Sites; and

(v) Installation of flat valves at all outfalls of proposed drainage pipes and existing pipes in the relevant catchment area.

4.5.2 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.

5 PRELIMINARY SEWERAGE IMPACT ASSESSMENT

5.1 Introduction

5.1.1 The objective of Preliminary Sewerage Impact Assessment (SIA) is to: -

- Determine the scope of infrastructural works for supporting the Development;
- Assess the various impacts pertaining to the Development and the associated infrastructural works;
- Recommend mitigation measures to keep the potential impacts due to the Development and its associated infrastructural works within an acceptable level; and
- Establish implementation strategies and programme for the Development and its associated infrastructural works.

5.1.2 Findings and recommendation of the SIA are presented in Preliminary Sewerage Impact Assessment. A summary of various aspects of the review are presented in the sections below.

5.2 Methodologies

5.2.1 The assessment has been undertaken in accordance with the following standards, Code of Practice and Design Manuals:-

- Environmental Protection Department (EPD)'s "Guidelines for Estimating Sewage Flows for Sewage Infrastructure Planning" (GESF);
- Drainage Services Department (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.

5.2.2 The sewerage system is designed to cater for the Development based on flows estimated from the proposed population and employment figures. The proposed sewers are designed to provide sufficient capacities to accommodate peak flow without surcharge and follow respective design criteria.

5.2.3 To account for the effect of sedimentation, a 5% reduction in flow area if the gradient is greater than 1 in 25 and a 10% reduction in flow area is adopted in other cases for this SIA.

5.3 Existing and Planned Sewerage System

Existing Sewerage System

5.3.1 A 600mm diameter sewer from the Lau Fau Shan area was laid along Tin Wah Road to the south of the Site. A 300mm diameter sewer was laid across Tin Ying Road, and connected with the 600mm diameter sewer at the western embankment of Tin Shui Wai Nullah. The collected sewage was then conveyed to Tin Wah Road Sewage Pumping Station (SPS) via a 750mm diameter sewer across Tin Shui Wai Nullah, and ultimately discharged to San Wai Sewage Treatment Works (STW) via Ha Tsuen SPS

for treatment and disposal. ***Figure No. 196529/B&V/SIA/001*** shows the existing sewerage system in the vicinity of the Site.

Planned Sewerage System

5.3.2 Under HSK NDA study, a diversion of the existing twin 800mm diameter rising mains along Tin Ying Road is proposed. New twin 800mm rising mains will be constructed to convey sewerage from Tin Wah Road SPS to proposed SPS No.4 (SPS4) and eventually to proposed HSK STW, while the existing twin rising mains along Tin Ying Road will be abandoned. The completion of the diversion was targeted at 2031, subject to further review.

5.3.3 Under HSK NDA Stage 1 Works, a proposed sewer will be constructed along Fung Kong Tsuen Road and Ping Ha Road, connecting to the existing manhole FMH1041512 to convey the sewage generated from village re-sites 2-18 and 2-19 will convey to Tin Wah Road SPS via a 600mm sewer along Tin Wah Road.

5.4 Sewerage Impact and Proposed Sewerage Scheme

5.4.1 Upon the proposed population intake by 2030 and 2032 for Phase 1 and Phase 2 of the Development respectively, the overall volume of sewage that will be generated by the Development is approximately 2,515m^3/day. The estimation of sewage flow to be generated from the Development is presented in ***Table 5.1.***

Table 5.1 - Estimated Sewage Flow from the Proposed Development

Sewage Type	Phase 1	Phase 2	Total
Residential			
Design Population(6)	4,004	8,285	12,289
Unit flow factor (m^3/person/day) (1)		0.19	
ADWF (m^3/day)	**760.76**	**1,574.15**	**2,334.91**
Retail			
No. of Employee	166	344	510
Unit flow factor (m^3/person/day) (2)		0.28	
ADWF (m^3/day)	**46.48**	**96.32**	**142.8**
Community Facility			
No. of Employee	0	96	96
Unit flow factor (m^3/person/day) (3)		0.28	
ADWF (m^3/day)	**0**	**26.88**	**26.88**
Proposed Ancillary Facilities / Car Park Building (4)			
No. of Employee	0	37	37
Unit flow factor (m^3/person/day) (5)		0.28	
ADWF (m^3/day)	**0**	**10.36**	**10.36**
Total			
ADWF from the Development (m^3/day)	**807.24**	**1707.71**	**2,514.95**

Note:
(1) Reference data is obtained from Table T-1, Guidelines for Estimating Sewage Flows for Sewage Infrastructure Planning (Domestic: Public rental and Private R1).
(2) Reference data is obtained from Table T-2, Guidelines for Estimating Sewage Flows for Sewage Infrastructure Planning (Commercial activities: J4 Wholesale & Retail).
(3) Reference data is obtained from Table T-2, Guidelines for Estimating Sewage Flows for Sewage Infrastructure Planning (Commercial activities: J11 Community, Social & Personal Services).
(4) The footprint of the proposed ancillary facilities / car park building is subject to detailed design stage of the Project.
(5) Reference data is obtained from Table T-2, Guidelines for Estimating Sewage Flows for Sewage Infrastructure Planning (Commercial activities: General – Territorial Average).
(6) An additional 10% variation of flat production and design population is allowed for flexibility in detailed design stage of the housing development.

Proposed Sewerage Works

5.4.2 A 450mm diameter gravity sewer is proposed to be laid along the proposed public road to the east of the Site and laid under the proposed pavement and connect to existing sewage system. The existing sewer will be upgraded to 450mm diameter to cater the additional sewage. The sewage will then be conveyed to Tin Wah Road SPS,

Ha Tsuen SPS and ultimately San Wai STW for treatment. The proposed alignment of the new sewers is shown in ***Figure No. 196529/B&V/SIA/002.***

Impact Assessment on Existing Sewers

5.4.3 All tapping point and existing sewers within the Site will be demolished/abandoned and affected sewer requires diversion outside the Housing Site. The sewage generated from the Development is proposed to be discharged to existing sewage manhole FMH1023841. By analyzing the catchment area of Tin Wah Road SPS and existing sewerage system, the sewage flow generated under the population intake year (i.e. 2032) using 2016-based TPEDM has been estimated.

5.4.4 Based on the analysis, it revealed that the existing sewer pipes close to Tin Wah Road SPS would be under surcharge. Improvement works on the captioned sewer pipes would be required (i.e. upgrading the existing sewers and modification of existing manhole). The proposed upgrading works are shown in ***Figure No. 196529/B&V/SIA/002***.

Impact Assessment on Existing Sewage Pumping Station

5.4.5 As advised by DSD, the capacity and peaking flow of the Tin Wah Road SPS are about 43,546 m^3/day and 129,600 m^3/day (1.5 m^3/s) respectively. By analyzing the catchment of Tin Wah Road SPS and existing sewage network, the Tin Wah Road SPS will have capacity to cater for the sewage flow generated under population intake of the Development (i.e. in year 2032). The flow estimation to the Tin Wah Road SPS is summarised in ***Table 5.2*** below.

Table 5.2 – Estimated Flow intake to Tin Wah Road SPS

Source of Sewage	ADWF (m^3/day)
The Development	2,515
HSK NDA Stage 1	55
Existing developments	38,948
Total ADWF:	41,518
Design ADWF of Tin Wah Road SPS:	**43,546**
Peak Flow	
Contribution Population	153,771
Peaking Factor (1)	2.81
Peak Flow (m^3/s)	1.35
Design Peaking Flow of Tin Wah Road SPS (m^3/s)	**1.5**

Note:
(1) Peaking Factor for Sewage Pumping Station is adopted for calculation.
(2) The source of sewage produced from " HSK NDA Stage 1" e.g. the flows are from the two village resites (Site 2-18 and Site 2-19), information is provided by CEDD, the future arrangement is subject to further advice from CEDD, etc.

5.4.6 Since San Wai STW has enough capacity to cater for the sewage from the Development, it is anticipated that Ha Tsuen SPS will also have capacity for the sewage from the Development. Hence, upgrading work is not required

5.5 Mitigation Measures

5.5.1 A 450mm diameter sewer is proposed to collect the sewage from the proposed Development to Tin Wah Road SPS and ultimately discharged to San Wai STW for treatment and disposal.

5.5.2 The existing gravity sewer from manhole located near Tin Ying Road and Tin Wah Road SPS are proposed to be upgraded from 300mm to 450mm and from 1200mm to 1650mm respectively to cater for the additional sewage flow from the Development.

5.5.3 The existing DN600 trunk sewer will be diverted under the proposed footpath in order to maintain its service for Lau Fau Shan area and HSK NDA Stage 1 Development.

5.6 Summary

5.6.1 A Final Preliminary Sewerage Impact Assessment Report (March 2020) was submitted and have confirmed that with the proposed sewerage works and sewerage strategy, the sewerage networks can accommodate the additional sewage flow generated from the Development and that there would be no adverse sewerage impact due to the Development.

5.6.2 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 existing sewerage system will be provided.

再造紙 recycled paper

6 PRELIMINARY WATER SUPPLY IMPACT ASSESSMENT

6.1 Introduction

6.1.1 The objective of Preliminary Water Supply Impact Assessment (WSIA) is to: -

- Assess the water demands for the proposed Development;
- Take cognisance of the existing and proposed studies and projects which may have a bearing on the Preliminary WSIA;
- Identify needs for provision of any new waterworks, reserves and other improvement works to cope with the proposed Development;
- Assess the short-term and long-term impacts on the existing and planned water supply systems arising from the proposed Development;
- Identify need of any mitigation and protective measures such as diversion, re-provisioning and modification of waterworks facilities to cope with the proposed Development;
- Protect existing waterworks facilities and keep minimum disturbance to their normal operation during construction and in operation stage of the proposed Development; and
- Enable an agreement in principle to be reached between WSD and CEDD in respect of the abovementioned issues.

6.1.2 Findings and recommendation of the WSIA are presented in Preliminary Water Supply Impact Assessment. A summary of various aspects of the review are presented in the sections below.

6.2 Methodologies

Technical Approach

6.2.1 The estimate of the fresh and flushing water demands for the Development is based on the latest development parameters identified in Baseline Review Report under this Assignment. The estimates are calculated 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 EPD.

6.2.2 The water supply impact assessment has been undertaken in accordance with the following standards, Code of Practice and Design Manuals:-

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

Design Parameters

6.2.3 In accordance with WSD's DI 1309, the following design parameters and peak demand factors are adopted for the design of proposed water supply system of the housing sites. ***Table 6.1*** lists the relevant design parameter to be used for the assessment.

Table 6.1 – Design Parameter from WSD's DI 1309

Waterworks / Facilities	Requirements
Service Reservoir Capacity	• Fresh water system – 80% of mean daily demand for interconnected 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 daily demand • Flushing water system – 2 times mean daily demand
Residual Head	• Fresh water system – 20m *(for developments on or after 1 April 2008)* (1) • Fresh water system for firefighting – 17m • Flushing water system – 15m
Fire Fighting	• 6,000m^3/d for residential zones with a discharge pressure of 17m head and assuming a draw-off rate of 3,000m^3/d through any single pedestal hydrant • Fire-fighting requirements for Zone R1 = 9,900m^3/d for 12 hours; Zone R2 = 6,600m^3/d for 8 hours & Zone R3 = 3,300m^3/d for 6 hours.

Note:
(1) In accordance with WSD's instruction of 26 June 2017, fresh water supply infrastructure for new developments should be planned for a minimum residual head of 20m (instead of 30m) with immediate effect, except for village supplies and situations where such reduction would adversely affect the supply to the adjacent existing buildings / developments which have been designed for a residual head of 30m..

6.3 Existing and Planned Water Supply Facilities

Existing Fresh Water Facilities

6.3.1 The Site is located within the distribution zone of Ngau Tam Mei Water Treatment Works (WTW). Treated fresh water is transferred from Ngau Tam Mei WTW via Ngau Tam Mei Fresh Water Primary Service Reservoir to Tan Kwai Tsuen North Fresh Water Service Reservoir (FWSR).

6.3.2 The Site is located in the fresh water supply zone served by the existing Tan Kwai Tsuen North FWSR. Currently, the Tan Kwai Tsuen South FWSR and the Tan Kwai Tsuen North FWSR supply fresh water together to the Yuen Long area. The key waterworks and fresh water service reservoir supply zone. Existing fresh water and salt water supply system are presented in ***Figure No. 196529/B&V/WSIA/001.***

6.3.3 ***Table 6.2*** summarizes the information as advised by WSD on the ultimate mean daily demand (MDD), the capacity and water level of the existing Tan Kwai Tsuen North FWSR and South FWSR.

Table 6.2 – Existing information for Fresh Water Service Reservoirs

Service Reservoir	Capacity (m^3)	Ultimate Mean Daily Demand (MDD) (m^3/day)	Top Water Level (mPD)	Invert Level (mPD)
Tan Kwai Tsuen North FWSR	81,516	197,220	65.00	56.00
Tan Kwai Tsuen South FWSR	77,742		67.00	60.00

Existing Flushing Water Supply Facilities

6.3.4 As advised by WSD, the Site is located outside the flushing water supply zone served by the existing Tan Kwai Tsuen Salt Water Service Reservoir (TKT SWSR), which is sourced from the Lok On Pai Salt Water Pumping Station (LOPSW P/S). There are barely any spare capacities in the existing or planned salt water supply system to cater for the additional flushing water demand arising from the Development. Existing salt water supply system are presented in ***Figure No. 196529/B&V/WSIA/002.***

Planned Water Supply Facilities

6.3.5 Based on the available information and the WSD's responses, there is no major interface or planned water supply facilities to be carried out at / in the vicinity of the Site.

6.4 Water Demand of the Development

6.4.1 In accordance with WSD's DI No. 1309 and EPD's Guidelines for Estimating Sewage Flows for Sewage Infrastructure Planning (GESF), the fresh water and flushing water unit demand adopted for the estimation of water demands by the Development is presented in ***Table 6.3.***

Table 6.3 – Unit Demands Assumed for the Development

User	Unit Demand		Unit
Domestic			
R1	Fresh Water Unit Demand	230	l/head/day
	Flushing Water Unit Demand	70	l/head/day
Service Trade Unit	Fresh Water Unit Demand	40	l/head/day
Retail	Fresh Water Unit Demand	287.5	l/employee/day
	Flushing Water Unit Demand	109	l/employee/day
Social Welfare	Fresh Water Unit Demand	287.5	l/employee/day
	Flushing Water Unit Demand	109	l/employee/day
Proposed Ancillary Facilities / Car Park Building	Fresh Water Unit Demand	287.5	l/employee/day
	Flushing Water Unit Demand	109	l/employee/day

6.4.2 According to the development parameter, the water demands are summarized in ***Table 6.4.***

Table 6.4 – Summary of Water Demands

Development	Intake Year	Fresh Water (m^3/day)	Flushing Water (m^3/day)
Phase 1(1)	2030	1,134	300
Phase 2(1)	2032	2,388	637
Total(1)		**3,521**	**937**

Note:
(1) The fresh and flushing water demand shown in the table has included 10% contingency for design flexibility.

6.5 Impact on Existing and Planned Waterworks Facilities

Impacts to Existing and Planned Fresh Water Supply System

6.5.1 There would be deficit storage in TKT North & South FWSR due to several large housing developments in Yuen Long Area, including this Development. As such, alternatives have been studied to secure the fresh water supply for the Development.

Impacts to Existing and Planned Flushing Water Supply System

6.5.2 There is no salt water supply in the vicinity of the Site since the Site is located outside the salt water supply zone served by the existing Tan Kwai Tsuen Salt Water Reservoir, which is sourced from LOPSW P/S.

6.6 Mitigation Measures

Fresh Water Supply Scheme

6.6.1 Based on the hydraulic calculation, fresh water mains with sizes of DN300 and DN400 are proposed to be laid along the proposed access road for Phase 1 and Phase 2 Housing Site respectively and connect to the proposed DN400 fresh water main.

6.6.2 The DN400 fresh water main along the proposed access road and Tin Wah Road are proposed to be branched off from the existing DN700 fresh water main next to Chung Fu Plaza Phase 2 which is supplied by Tan Kwai Tsuen North FWSR and South FWSR.

6.6.3 Trenchless method is recommended as a conservative approach to pass across Tin Shui Wai Nullah and the roundabout of Tin Shui Road and Tin Wah Road. The exact construction method should be subject to further review in later stage.

6.6.4 The preliminary layout of the proposed fresh water system is shown in ***Figure No. 196529/B&V/WSIA/003***.

6.6.5 Temporary Fresh Water Service Reservoir (FWSR) catering the water demand arisen by the Development, is proposed as an interim measure before the completion of the permanent one in cavern. The capacity of the temporary FWSR is approximately 3,500m^3. The TFWSR would be located next to the existing TKT North FWSR (presented in ***Figure No. 196529/B&V/WSIA/004***) and interconnected with TKT North FWSR. The need for the TFWSR will be thoroughly reviewed in the Investigation Stage of the Project.

Flushing Water Supply Scheme

Treated Sewage Effluent (TSE) [(1)] – Possibly from HSK NDA

6.6.6 Based on the flushing water network proposed under HSK NDA, a DN250 flushing water main is planned to be laid along the Tin Wah Road. In order to supply flushing water to the Development, a section of DN150 flushing water main is proposed to be connected to the planned DN250 flushing water main.

Salt Water (SW) – From the Salt Water Supply System in Tin Shui Wai

6.6.7 Upon the upgrading works of pump in LOPSW P/S, a section of DN150 salt water main is proposed to be connected to the existing DN200 salt water mains along Tin Wah Road near Tin Shui Wai Tin Wah Road Sewage Pumping Station. The detail of the proposed salt water mains is presented in ***Figure No. 196529/B&V/WSIA/005***. Detailed connection point of proposed salt water mains would be liaised with NTW Region of WSD during Design Phase of the Development.

Temporary Mains Water for Flushing (TMF) – From NTM WTW and Tan Kwai Tsuen North FWSR

6.6.8 While TMF is considered as last resort measure, fresh water mains with sizes of DN100 and DN150 are proposed to be laid along the proposed access road for Phase 1 and Phase 2 Housing Site respectively and to be branched off from the planned DN400 fresh water main. The preliminary layouts of the proposed TMF alignment are shown in ***Figure No. 196529/B&V/WSIA/006***.

Evaluation of three options

6.6.9 TSE is recommended as the flushing medium in long term due to the lowest unit life-cycle costs. However, TSE could only be supplied to the Development by 2037/38,

[(1)] Treated Sewage Effluent (TSE): To be converted to reclaimed water from water reclamation facilities and conveying to reclaimed water service reservoirs and flushing water supply network.

which will be further confirmed and liaised with relevant departments in later stage, the use of salt water is recommended as an interim measure for the Development before TSE is available. TMF will only be used for emergency situations.

Smart Water Initiatives and Automatic Meter Readings

6.6.10 The provision of Smart Water Initiatives and Automatic Meter Readings will be investigated in the subsequent stages of the Development.

6.7 Summary

6.7.1 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.

再造紙
recycled paper

7 PRELIMINARY UTILITIES IMPACT STUDY

7.1 Introduction

7.1.1 The objective of the Preliminary Utilities Impact Study (UIS) is to identify the existing and planned capacity of electricity supply, gas supply, telephone service system and street lighting.

7.1.2 Findings and recommendation of the UIS are presented in the Preliminary Utilities Impact Study Report. A summary of various aspects of the review are presented in the sections below.

7.2 Utilities Impact

7.2.1 The increase of population arising from the Development may pose the need to upgrade existing utilities. Utilities required for assessment for the Development include power supply, highway lighting, gas supply and telecommunication service.

7.3 General Requirements for Utility Installation

7.3.1 The general requirements for various utility installations as stipulated in Hong Kong Planning Standards and Guidelines (HKPSG), DSD Technical Circular No. 1/2011 and HyD Technical Circular 3/90 will be followed and summarized below in ***Table 7.1***.

Table 7.1 – 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	
WSD watermains	600mm	1000mm	300mm from other utilities. 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.
CLP cables - 132 kV - 11 kV	 1000mm 750mm	 1200mm 900mm	Working clearance of 300mm from other utilities 150mm (1m between 132 kV and 11 kV)
HKCGC pipes - Low pressure - Intermediate pressure	 700mm 1000mm	 1100mm 1100mm	600mm for steel gas pipes, 300mm for other gas pipes
PCCW cables HKBN cables Wharf T&T cables CTV cables HKC cables	450mm 450mm 450mm 450mm 450mm	900mm 900mm 900mm 900mm 900mm	

再造紙 recycled paper

7.4 Analysis and Findings

Impacts to Existing and Planned Electricity Supply Network

7.4.1 CLP Power Hong Kong Limited (CLP) has been consulted regarding their existing transmission and distribution network in the vicinity of the Site. The existing CLP cables within the Site will be affected by the Development, especially the existing 11 kV overhead line and 132 kV underground cables. Diversion of the cables is required and should be completed before the commencement of construction works.

7.4.2 According to the P&E Study of HSK NDA, 4 electricity substations are proposed to provide electricity supply to HSK NDA. Nevertheless, the details of the proposed electricity supply network in the vicinity of the Site are yet to be confirmed at this Stage. Liaison with the project proponent of HSK NDA Development will be maintained.

7.4.3 As advised by CLP, it was noted that there would be adequate electricity supply to the Site. Further discussion with CLP on the electricity supply and the associated network, as well as the cable diversion arrangement, will be required in the detailed Design stage of this Project.

Impacts to Existing and Planned Gas Supply Network

7.4.4 The Hong Kong and China Gas Company Limited (HKCGC) has been consulted regarding the gas supply network. Currently there are a low-pressure gas pipe and medium pressure gas pipe laid across Tin Wah Road and Tin Ying Road respectively. There is no planned or ongoing gas pipe network to be laid within the Site. There is no planned or ongoing gas pipe network to be laid within the Site.

7.4.5 According to the P&E Study, a medium pressure gas main network is proposed for HSK NDA gas supply. However, the programme and commencement of the proposed gas main network are yet to be confirmed at this stage. Liaison with the project proponent of HSK NDA Development will be maintained.

7.4.6 As advised with HKCGC, it was noted that there would be adequate gas supply to the Site by extending the existing gas main system in Tin Shui Wai or planned gas main system in HSK NDA. The exact alignment and the town gas supply arrangement will be further discussed and determined with HKCGC in the later stage of this Project.

Impacts to Existing and Planned Telecommunication Network

7.4.7 Telecommunication companies including providers of telephone, broadband and television services have been consulted. Existing underground telecommunication cables owned by Hong Kong Telecommunications (HKT) Limited are identified along the existing track road and footpath of Tin Wah Road and Man Tak Road.According to the drawings from HKBN, telecommunication cables are proposed to be laid along the cycle track near Tin Wah Road.

7.4.8 There is no existing cable for Hong Kong Broadband Network Ltd (HKBN), Wharf T&T Limited, Hong Kong Cable Television Limited (CTV), Hong Kong Communication (HKC) Network Limited and TraxComm Limited within or in the vicinity of the Site.

再造紙 recycled paper

7.4.9 All telecommunication cables and facilities within the housing sites will be abandoned and diverted. The proposed telecommunication cables for the Development will be connected via the existing network in the vicinity of the Site.

7.4.10 The existing underground telecommunication cables owned by HKT and planned cable by HKBN will be affected by the proposed road improvement works. Diversion of these affected cables will be required.

7.4.11 The exact alignment and the telecommunication service arrangement, as well as the diversion works will be further discussed and determined with telecommunication service providers in the later stage of this Project.

7.4.12 Further consultation with the mobile network operators shall be carried out in the later stage of this Project in order to confirm the site coverage and requirements of possible new base stations.

Impacts to Existing and Planned Street Lighting Network

7.4.13 Existing lighting and the associated cables are found within or in the vicinity of the Site along track road, Tin Ying Road, Tin Wah Road and Man Tak Road. There are total 7 lighting columns located within or in the vicinity of the Site: four along Tin Wah Road, one on the entrance of the existing track road and two along the northeast side of the Site.

7.4.14 There is no planned or ongoing street lighting network to be laid within the Site.

7.4.15 Since the existing cycling track and footpath adjacent to Tin Wah Road will be affected by the proposed road improvement works, the existing lighting located along the footpath will be relocated to the proposed footpath.

7.4.16 Details and alignment of the proposed street lighting along the proposed public road to be maintained by HyD shall be agreed with HyD Lighting Division in the later stage of this Project.

7.4.17 The exact street lighting arrangement and relocation will be further discussed and determined with HyD/Lighting Division in later stage of this Project.

Potential Hazardous Installations

7.4.18 There are no potential hazardous installations within or in the vicinity of the Site.

Summary

7.4.19 There are no insurmountable problems for supply of utilities to the Development.

8 PRELIMINARY GEOTECHNICAL ASSESSMENT

8.1 Introduction

8.1.1 The objective of Preliminary Geotechnical Assessment (PGA) is to: -

- Determine the scope of infrastructural works for supporting the Development;
- Assess the various impacts pertaining to the Development and the associated infrastructural works;
- Recommend mitigation measures to keep the potential impacts due to the Development and its associated infrastructural works within an acceptable level; and
- Establish implementation strategies and programme for the Development and its associated infrastructural works.

8.1.2 Findings and recommendation of the PGA are presented in Preliminary Geotechnical Assessment. A summary of various aspects of the review are presented in the sections below.

8.2 Geotechnical Condition

8.2.1 The solid geology of the Site consists of metasiltstone, phyllite and quartzose metasandstone of Mai Po Member under Lok Ma Chau Formation of San Tin Group (Cmp). The Site is generally underlain by Terraced Alluvium (Qpa) under Pleistocene Group of Quaternary age, partly Fill and Alluvium (Qa) under Holocene Group of Quaternary age.

8.2.2 The Site does not fall within Scheduled Area No. 2, which is recognized as an area of complex geology where karst features such as an uneven upper surface and dissolution cavities are known to occur within the marble.

8.2.3 The existing ground investigation (GI) records in the vicinity of the Site are used to establish the geological profiles for the Site. A number of drillholes were sunk adjacent to the Site for the Hung Shui Kiu Development. Due to lack of GI records within the Site, a GI has been conducted to obtain adequate geological information within the boundary of the Site. The locations of the existing GI stations are illustrated in ***Figure No. 196529/B&V/PGA/010***.

8.2.4 Further ground investigation (GI) has been recommended with reference to the existing GI information available in GEO at the early stage of this Project. In view of the previous land use of the Site, it is critical to review the extent of soil materials and content of organic and soft/loose materials, e.g. pond deposit, within the Site. The site formation works and extent of removal of unsuitable material will be proposed based on the GI results.

8.2.5 The Completed GI works include 5 boreholes (BH1 to BH5) as shown in ***Figure No. 196529/B&V/PGA/010.*** Due to site constraint, GI works were carried out only in Government land and no GI works was carried out in private land in this stage.

8.2.6 According to the site-specific GI records within the government land, part of the Site is underlain by a layer of fill (various from 2.0m to 4.85m thick), alluvium (various from 1.1m to 3.1m thick) and decomposed Metasilitstone (various from 35.2m to 45.8m thick). Bedrock is encountered at a depth varying from 40.3m to 50.8m below ground. Three cross sections (Sections A-A, B-B and C-C) have been developed for the Site. Locations of these sections are illustrated in ***Figure No. 196529/B&V/PGA/010.*** The inferred geological profiles of the Site are presented in ***Figure No. 196529/B&V/PGA/011.***

8.3 Groundwater Regime

Technical Approach

8.3.1 Groundwater monitoring records from relevant existing vertical drillholes had been retrieved and inspected. It is found that limited groundwater monitoring records was identified of the Site.

8.3.2 It is anticipated that groundwater may be encountered during construction of the site formation and infrastructural works. Shoring or properly designed excavation with lateral support system will be required to maintain stability of the trenches or working pits. Dewatering and working pits may also be necessary.

8.4 Preliminary Geotechnical Assessment

Geotechnical Appraisal Related to Man-made Features

8.4.1 A review of existing man-made slopes and retaining walls within and in the vicinity to the proposed sites that may affect or be affected by the Development is carried out.

8.4.2 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 man-made slopes and retaining walls is adopted for determining if any geotechnical feature affects or is affected by the proposed woks. 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.

8.4.3 4 registered geotechnical features (Feature No. 6NW-A/F 73, 6NW-A/F 65, 6NW A/F 72 and 2SW-C/F 25) will be affected by the Development/proposed road works. All registered man-made features will be modified during the site formation works, except Feature No. 6NW-A/F 73 which will be completely reconstructed to a RC retaining wall during site formation works. Failure of these man-made features may affect the Development. Therefore, further assessment is recommended. The following registered features are identified to affect or be affected by the Development/proposed road works shown in ***Table 8.1.***

Table 8.1: Existing Registered Features Affected by the Project

Feature No.	Failure Affect the Development/proposed road work	Proposed to be Further Assessed/Demolished/Modified
6NW-A/F 65	Affect the proposed road work	Modified
6NW-A/F 73	Be affected	Demolished
6NW-A/F 72	Affect the proposed road work	Modified
2SW-C/F 25	Affect housing site	Modified

8.4.4 5 existing unregistered geotechnical features are also identified within or in the vicinity of the Site. Investigation and studies of the affected existing unregistered geotechnical features will be required in the subsequent stage of the Project, to determine its consequence of failure. The following unregistered features are identified to affect or be affected by the Development/proposed road works as shown in ***Table 8.2.***

Table 8.2 Existing Unregistered Features Affected by the Project

Feature No.	Failure Affect the Development/proposed road work	Proposed to be Further Assessed/Demolished/Modified
US1	Affect housing site	Modified
US2	Affect the proposed road work	Further assessment
US3	Affect the proposed road work	Modified
US4	Affect the proposed road work	Modified
US5	Be affected	Demolished

8.4.5 The existing man-made slope described above (both registered and unregistered) should be studied and necessary geotechnical works should be proposed in the later Investigation and Design Stage of the Project. A geotechnical assessment should also be carried out for the preferred development option at later Investigation and Design Stage for the necessary geotechnical works to be carried out under the Project. The necessary studies on the existing man-made slopes/retaining walls and assessment for necessary geotechnical works may affect the cost and programme of the Project. The exact extent of effect on the cost and programme should be determined by the detailed study results in the later stage.

Geotechnical Considerations and Geotechnical Constraints

8.4.6 Due to site constraint, only limited GI works were carried out at part of the Site (i.e. government land). Further GI works on private land is required in the subsequent stage of the Project to determine the exact depth and extent of soft and compressible soil layer i.e. pond deposit, if present.

8.4.7 Based on the review of GI records from limited GI works at part of the Site, the Site are covered by fill and alluvium layer, together up to 5.1m thick. No soft material was identified within the Phase 1 Housing Site. Since majority of the Phase 2 Housing Site are owned by private sectors, the site-specific GI records may not be able to reflect the existing geology of this area. Furthermore, as observed from the aerial photos, part of the Site was once covered with fish ponds and no major construction works were conducted at Phase 2 Housing Site for replacing the soft materials. Hence, it is foreseen that Phase 2 Housing Site may be overlain by soft materials. Removal of the soft and compressible layer or on-site ground treatment is recommended during the site formation works to accelerate the readiness of the site for subsequent building and foundation works.

8.4.8 Feature No. 6NW-A/F 65, 6NW-A/F 72 and 2SW-C/F 25 will be modified while 6NW-A/F73 will be reconstructed as RC retaining wall during the site formation works. The man-made features are supporting Tin Wah Road and Tin Ying Road and design of modification works carrying out in later stage of the Project should take into account the settlement of Tin Wah Road and Tin Ying Road during and after the modification works. Proper settlement monitoring measure should also be implemented during the modification works.

8.4.9 High ground water table was also recorded in the site-specific GI records. The groundwater table should be taken into account in the excavation work and temporary works design. Groundwater may be encountered during construction of the proposed works. Shoring or properly designed excavation with lateral support system will be required to maintain stability of the trenches or working pits may also be necessary. Groundwater monitoring has been carried out during the proposed GI works under this Study. The groundwater table should also be investigated under the later Investigation and Design Stage of the Project.

8.4.10 In view of the close proximity of the interfacing projects, close liaison with these projects are necessary on the geotechnical design in later stage of this Project.

Feasibility of the Infrastructure

8.4.11 For structures with shallow foundations in the future development, the varying thickness of weak soil layer should be further investigated and considered in the foundation design in order to ensure the anticipated differential settlement of the structures are within allowable limits.

8.4.12 For structures with pile foundations in the future development, the location and rock conditions in the Site should be further investigated in the later Investigation Stage.

8.5 Natural Terrain Hazards

8.5.1 Initial screening to determine the need for natural terrain hazards study (NTHS) has been carried out. The results are listed in ***Table 8.3*** below.

Table 8.3: Determination of the Need 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	
Phase 1 Site	Residential Building	Group 1	No	No
Phase 2 Site	Residential Building	Group 1	No	No

8.5.2 It is anticipated that the no natural hillside sloping at more than 15° upslope of the Site is located within 100m horizontally of the Site. No screening in respect of natural terrain hazards is required.

再造紙 recycled paper

9 PRELIMINARY SITE FORMATION ASSESSMENT

9.1 Introduction

9.1.1 The objective of Preliminary Site Formation Assessment (SFA) is to recommend the most suitable formation level, profile and designs of the proposed sites and assess the works required for the proposed sites.

9.1.2 Findings and recommendation of the SFA are presented in Preliminary Site Formation Assessment. A summary of various aspects of the review are presented in the sections below.

9.2 Site Formation Design Considerations and Constraints

Unsuitable Materials Disposal

9.2.1 As observed during site inspection, part of the site is paved as carpark and vehicular access. In view of the previous land use of the Site, it is critical to review the extent of soil materials and content of organic and soft/loose materials, e.g. pond deposit, within the Site. Since part of the site is inaccessible and site-specific GI for private land cannot be conducted at this stage, an average depth of 1m unsuitable material is assumed for the overall site. The exact quantities of the unsuitable materials would require further confirmation after site-specific GI could be carried out at later stage.

Imported Fill Material

9.2.2 For preliminary design it is assumed that the major public fill source will be from the Tuen Mun Area 38 Fill Bank, which is the closest public fill reception facility to the Site. The allocation of the fill source will be subject to approval by the CEDD Public Fill Committee (PFC).

9.2.3 Alternative sources for fill materials are also identified, by using available public fill materials from other concurrent construction. This alternative arrangement is highly dependent on construction programme of the fill-export projects and fill-import projects. Programme mismatch may be partially mitigated by identifying a temporary stockpile area.

9.2.4 One of the possible nearby fill-export public works projects is the Site Formation and Infrastructural Works on Public Housing Development near Tan Kwai Tsuen. We note that this project has surplus on C&D materials. This arrangement depends on the construction programme which shall be further investigated in the later stage of this project.

9.2.5 The feasibility of receiving public fill from these public works projects is highly dependent on the fill generation rate of the nearby fill-export public works projects and the implementation programme of the Development. This would be further investigated in later stage of this Project.

Chemical Waste

9.2.6 In order to minimize the contamination on the land by the chemical waste, such as the fuel from diesel engine, the machines would be placed within a drip tray to prevent the leakage of diesel fuel in site during the construction stage. In addition, all

fuel tanks and fuel storage areas should be provided with locks and sited on bonded sealed areas of a capacity equal to 110% of the storage capacity of the largest tank.

9.3 Proposed Site Formation Works

9.3.1 A balanced cut and fill approach is adopted as far as practicable in designing the proposed site formation layout level. This could reduce the construction vehicular trips due to import or disposal of fill materials and minimize the possible dust emission during the trips.

Platform Option Assessment

9.3.2 The platform layout option shown in ***Figure No. 196529/B&V/SFA/301*** has been recommended as the preferred option for the Development. Corresponding cross sections of the preferred platform layout option are illustrated in ***Figure No. 196529/B&V/SFA/304*** and ***305***.

9.4 Evaluation of Ground Improvement Works

9.4.1 As shown in the aerial photos, the Site was covered with farmlands and fish ponds from 1963 to 1982. Farmlands and ponds were filled up starting from 1993 and the Site was then partly covered by concrete pavement and partly by vegetation. Tin Wah Road, Man Tak Road and section of Tin Ying Road which is located to the South of the site were formed in between 1982 and 1993. The remaining section of Tin Ying Road which is along the eastern boundary and to the north of the site was formed in 2003 along with the residential development at Tin Shui Wai.

9.4.2 Since most of the site-specific GI records and laboratory testings were conducted at Phase 1 Housing Site, it is anticipated that no soft materials would be identifies at this area.

9.4.3 Since majority of the Phase 2 Housing Site are owned by private sectors, the site-specific GI records may not be able to reflect the existing geology of this area. Furthermore, as observed from the aerial photos, no major construction works have been conducted at this section. In view of the previous land use, it is foreseen that this part of the Site will be overlain by soft and compressible layer.

9.4.4 The soft and compressible layer usually tends to have a low permeability and so the reduction of pore water pressure process can be very slow. In order to accelerate the consolidation, options of ground improvement work for this area are discussed.

Removal of Soft and Compressible Layer

9.4.5 The soft and compressible layer is proposed to be removed and replaced by imported fill during the site formation works. The imported fill shall be well compacted in accordance with Clauses 6.38 to 6.47 of General Specification for Civil Engineering Works.

On-site Ground Treatment

9.4.6 During the site formation filling works, the dissipation of excess pore water pressure in the soft and compressible layer will take place. The consolidation period can be reduced significantly by installation of prefabricated vertical drain (PVD) with preloading. PVD provides an additional drainage path to allow water to drain up through the center of the drain, while the preloading can accelerate the consolidation process.

9.4.7 The PVD will be installed below the soft and compressible layer strata with 2m anchor length, or in firm layer below the soft and compressible layer strata, whichever deeper anchorage of the drain is reached. Although closer spacing of PVD will increase the rate of consolidation, the installation time and cost will increase as well. Typically, PVD are spaced at 1m to 3m.

9.4.8 About 500mm thick of granular fill will be deposited over the Site for draining the groundwater horizontally from PVD to drainage system installed around the boundary of the Site.

9.4.9 Real time monitoring including pore pressures, horizontal displacement and vertical displacement, shall be monitored throughout the consolidation period by installing vertical inclinometer, magnetic probe extensometer, vibrating wire piezometer and ground settlement monitoring point. These results will be used for back analysis of the design and assess the consolidation process.

9.4.10 The cost for On-site Ground Treatment is much lower than that for Removal of Soft and Compressible Layer. Considering the sustainability and cost-effectiveness, On-site Ground Treatment is more preferred as less material will be excavated and less imported fill material is required.

9.4.11 It is recommended that comprehensive site investigation should be carried out in later stage of this Project in order to review the ground treatment method.

9.5 Recommendation

9.5.1 A detailed estimation on the earthwork inventory is recommended in later stage of this Project after the completion of a comprehensive site investigation works.

9.5.2 Early consultation with EPD and PFC is required in later stage of this Project to identify the feasible sites for dumping the unsuitable material.

9.5.3 Early consultation with concurrent fill-export projects is required in later stage of this Project to identify the feasible sites for the import of filling materials.

9.5.4 The proposed site formation works would be constructed in parallel with the associated infrastructural works for the development, including roadworks, drainage and sewerage works. Temporary drainage works with proper desilting facilities would be provided, as appropriate, during the construction to avoid possible water pollution and increase in flooding risk.

再造紙 recycled paper

10 PRELIMINARY ENVIRONMENTAL REVIEW

10.1 Introduction

10.1.1 The objectives of the Preliminary Environmental Review (PER) are to:

- Confirm, with quantitative assessment if necessary, the environmental acceptability of the proposed Development and the associated site formation and infrastructural works, and identify and ascertain the impacts and relevant mitigation measures in relation to the proposed Development and the associated site formation and infrastructural works;
- Identify the existing and planned sensitive receivers and sensitive parts of the natural environment which might be subject to the impact by the proposed Development and the associated site formation and infrastructural works;
- If required, define the environmental audit and monitoring requirements for compliance and post-project audit, which will include a review of the monitoring data both to identify compliance with regulatory requirements, policies and standard and to define any remedial works required to redress unanticipated or adverse consequential environmental impacts;
- Prescribe the specifications for detailed design, construction and operation requirements of the proposed Development and the associated site formation and infrastructural works;
- Provide with the study findings, conclusions, recommendations and a mechanism for implementation; and
- Identify if any element of the proposed infrastructure/improvement works is a designated project (DP) under the EIA Ordinance (Cap. 499) (EIAO) and the processes to be followed for the DP.

10.1.2 Findings and recommendation of the PER are presented in Preliminary Environmental Review. A summary of various aspects of the review are presented in the sections below.

10.2 Air Quality Impact

Air Sensitive Receiver

10.2.1 The assessment area for the air quality impact assessment is defined by a distance of 500m from the boundary of the Site and infrastructure works proposed for the Site.

10.2.2 The existing and planned Air Sensitive Receivers (ASRs) during construction phase, operational phase with HSK NDA and operational phase without HSK NDA have been identified with reference to the HKPSG as shown in ***Figure No. 196529/B&V/PER/FIG 3.1 to 3.3*** respectively, and their impacts to the ASRs have been assessed.

Air Quality Impact during Construction Phase

10.2.3 During the construction of the proposed Development, potential air quality impacts on the nearby ASRs are related to dust nuisance from movement of vehicles along

unpaved roads, material handling and wind erosion of exposed area and gaseous emissions (sulphur dioxide (SO_2) and nitrogen dioxide (NO_2)) from construction equipment and vehicles.

10.2.4 These air quality impacts are considered manageable provided that appropriate mitigation measures specified in Air Pollution Control (Construction Dust) Regulation are implemented. Given the limited number of construction plant required on-site for a development of this scale, the associated gaseous emissions are expected to be limited. It is therefore considered that the air quality impact arising from gaseous emissions from construction plant is minimal.

Air Quality Impact during Operation Phase

Vehicular Emissions

10.2.5 The existing ASRs outside the Site as well as planned ASRs within the Site and at the future Hung Shui Kiu Development will potentially be affected by vehicle exhausts from the existing roads, in particular Tin Ying Road, the widened Tin Wah Road and the proposed access road to the Site. Nitrogen Dioxide (NO_2), respirable and fine suspended particulates (RSP and FSP) are the major pollutants of concern from vehicle exhaust emissions, especially to low level receivers, for assessment.

Chimney Emissions

10.2.6 The planned ASRs within the Site may potentially be affected by emissions from chimney sources in the surrounding area. Based on desktop review and verification by site surveys on 30 Aug 2017, 22 Nov 2017, 10 July 2019 and 27 Dec 2019, no existing active chimneys were identified within 200m from the proposed Development.

Odour Sources

10.2.7 Based on the desktop reviews and verified by site surveys, the existing potential odour sources include Tin Shui Wai Nullah, Tin Wah Road Sewage Pumping Station, a refuse collection point at Sha Kong Wai adjacent to Lau Fau Shan Road and a small scaled animal feeding area (with 5 goats and 1 cow) for recreational use to the north of the Site, as shown in ***Figure No. 196529/B&V/PER/FIG 3.4***.

Mitigation Measures

Construction Phase

10.2.8 To mitigate fugitive dust impacts, all dust control measures recommended in the Air Pollution Control (Construction Dust) Regulation, where applicable, will be implemented.

Operation Phase

10.2.9 Air sensitive uses or fresh air intake at some ground level façades of Block 1 and Block 3 as shown in ***Figure No. 196529/B&V/PER/FIG 3.20*** are prohibited.

10.3 Noise Impact

Noise Sensitive Receivers

10.3.1 Noise sensitive receivers (NSRs) during construction and operation phase are identified with reference to the HKPSG at a distance of 300m from the boundary of the Site are shown in ***Figure No. 196529/B&V/PER/FIG 4.1 and 4.2*** respectively. The impacts to the NSRs during the construction and operational phases have been assessed.

Construction Noise Impact

10.3.2 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;
- Construction of retaining structures;
- Formation of internal access road;
- Infrastructure works such as sewerage works, water supply works, drainage works, and utilities construction; and
- Road improvement works and junction improvement works.

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

10.3.4 The use of PMEs for the construction works would likely cause potential noise impact on the NSRs located in the vicinity of the Site. As site formation will be implemented in two stages, the area of active work site at one time will be small. The infrastructure works outside the Site will mainly be typical utility installation/upgrading works of small scale and road widening works, which will be conducted section by section. Considering that active work site and the scale of work at one time is small, the potential construction noise impacts are able to be mitigated by the implementation of appropriate mitigation measures (e.g. use of quiet plant, noise barrier/enclosure for PMEs, limit number of PMEs etc.) and good site practices. As such, no adverse impact is anticipated.

10.3.5 The construction noise impact due to construction works of HSK NDA, including the improvement works of Tin Wah Road, has been assessed in the approved EIA Report for HSK NDA. The construction method and PMEs to be used for the improvement works of Tin Wah Road in the approved EIA Report for HSK NDA are still valid for implementation under this Project. Findings from the approved EIA Report is thus considered applicable for this Project. With reference to the approved EIA Report, with the implementation of noise mitigation measures, the predicted construction

noise impact to the existing NSRs adjacent to Tin Wah Road is within the criterion of 75 dB(A).

Operation Noise Impact - Traffic Noise Impact Assessment

10.3.6 The traffic noise impact imposed on the existing NSRs and planned NSRs of the Development would be generated by the roads within 300m from the boundary of the Site, road improvement works, and junction improvement works. The main roads considered for the road traffic noise assessment are shown in ***Figure No. 196529/B&V/PER/FIG 4.4*** and listed below:

- Project Roads - proposed access road to the Site, carpark access road, roads proposed for improvement works under this Assignment (i.e. section of Tin Wah Road), and proposed new or modified roads in HSK NDA; and
- Other Roads – the other open roads within 300m of the boundary of the Site that remain either completely unchanged

10.3.7 For those roads within the HSK NDA, low noise road surfacing (LNRS) and noise barriers were assumed according to the noise mitigation measures presented in the approved EIA Report for HSK NDA. Since the road works of HSK NDA within the assessment area will be completed by 2035 tentatively, the noise mitigation measures are included in the base-case scenario for this assessment.

Mitigation Measures

10.3.8 Direct mitigation measures are proposed to alleviate the road traffic noise impact from the Project Roads together with the proposed new or modified roads in HSK NDA.

10.3.9 Exceedance is predicted at existing NSRs along Tin Wah Road. While LNRS has already been proposed along Tin Wah Road under HSK NDA, a 5m vertical barrier and a section of 6m vertical barrier have also been proposed to be erected at the nearside carriageway under HSK NDA. The construction of this vertical barrier will be included in the scope of work under this Project.

10.3.10 Exceedance is also predicted due to the direct line of sight to the junction of Man Tak Road and Tin Wah Road. A 2.5m absorptive vertical barrier is proposed to be erected at the central divider of Tin Wah Road to minimize the view to the far-side carriageway. CEDD will be responsible for the design and construction of the noise barriers and the road improvement works and HyD will be responsible for the maintenance of the barriers, subject to further review and confirmation during the next stage of the Study.

10.3.11 Upon exhausting all feasible direct mitigation measures, it was found that there would still be exceedances for the overall noise levels of some NSRs at all blocks. Hence, at-receiver mitigation measures in the form of acoustic windows are proposed to alleviate the road traffic noise impacts for the NSRs. Since the assessment results at the proposed Development revealed that a noise reduction of only 5.9 dB(A) is required, acoustic windows are considered feasible to alleviate the predicted road traffic noise impact.

10.3.12 Particularly, although it is noted that Polymer Modified Friction Course (PMFC) as LNRS is not normally allowed at roundabout and junctions, and that Polymer Modified Stone Mastic Asphalt (with 6mm-size aggregate) (PMSMA6) for junctions is currently under trial and testing by HyD. The proposed traffic noise mitigation measures (i.e. LNRS) will be further reviewed with the exact extent to be agreed with HyD and updated before commencement of construction of the Project.

Residual Road Traffic Noise Impacts

10.3.13 With the implementation of direct mitigation measures such as noise barriers, LNRS, and acoustic windows, there would be no adverse road traffic noise impact on the residential blocks within the Development and existing NSRs along Tin Wah Road.

10.3.14 For the residential blocks at Site 1-2 of HSK NDA, the provision of acoustic windows has been recommended to mitigate traffic noise impact in the approved EIA Report of HSK NDA. A separate EAS will also be conducted by HKHA for the proposed housing development at Site 1-2 of HSK NDA during its detailed design stage to assess the noise impacts and review the required mitigation measures to be implemented, in accommodating the actual design of the housing blocks with a view to satisfy the noise criteria of the HKPSG. As such, no residual road traffic noise impacts are envisaged.

Operation Noise Impact - Fixed Noise Source Impact Assessment

Fixed Noise Source Impact Assessment

10.3.15 Planned NSRs at the public housing development within the Site are identified for fixed noise source impact. Locations of the representative NSRs are shown in ***Figure No. 196529/B&V/PER/FIG 4.3***.

10.3.16 The planned NSRs of the proposed development will be mostly affected by fixed noise sources from the industrial activities along Lau Fau Shan Road and Ping Ha Road. Although some existing fixed noise sources will be cleared for HSK NDA, the programme of land resumption has not yet been confirmed. Therefore, assessments based on scenarios with and without the HSK NDA are carried out. The identified fixed noise sources within the 300m assessment area of the Site for scenarios without and with HSK NDA are depicted in ***Figure Nos. 196529/B&V/PER/FIG 4.5 and 4.6*** respectively.

10.3.17 The results revealed that full compliance to the noise criteria can be achieved under both scenarios.

Noise Impact Assessment for Environmentally Friendly Transport Services (EFTS)

10.3.18 With reference to the approved EIA report of HSK NDA, the noise impact arising from the proposed EFTS would be acceptable if the NSR has a distance of 10m from the EFTS alignment. As shown in ***Figure No. 196529/B&V/PER/FIG 4.7***, since all planned NSRs within the Site are at least 10m away from the proposed EFTS, there will be no adverse noise impact for the proposed Development.

10.4 Water Quality

Assessment Area and Water Sensitive Receivers

10.4.1 The assessment area for water quality is defined as all areas within 500m from the boundary of the Site.

10.4.2 According to the desktop reviews and site surveys, the water quality sensitive receivers within the assessment area for water quality were identified as shown in ***Figure No. 196529/B&V/PER/FIG 8.3***.

Identification and Evaluation of Impact

Construction Water Quality

10.4.3 Surface runoff of the Site may cause potential water quality impacts. During construction, soil surfaces would be exposed. Surface runoff of the Site would wash away the soil particles on unpaved lands and areas with the topsoil exposed. This site runoff is characterised by high concentrations of suspended solids. Release of site runoff into the water body directly or via drainage channel could lead to increase in SS levels and turbidity in the nearby water environment. Site runoff may also wash away contaminated soil particles and therefore cause water pollution.

10.4.4 As shown in the proposed drainage system (***Figure No. 196529/B&V/DIA/003*** for interim arrangement and ***Figure No. 196529/B&V/DIA/004*** for permanent scheme), sufficient site drainage will be provided to collect site runoff for appropriate treatment before discharge. Perimeter drainage will be installed at site perimeter as well as near any watercourses passing through the construction site to avoid polluted construction site runoff from leaving the Sites or entering any nearby watercourses or drainage system without appropriate treatment. Silt removal facilities with sufficient capacity, such as silt trap, should be provided on site to handle all site runoff before discharge. Mitigation measures are to be implemented during alterations. As such, no unacceptable water quality impacts would be expected.

10.4.5 Site drainage would be well-maintained and good construction practices would be observed to ensure that litter, fuels and solvents are managed, stored and handled properly and do not enter the nearby water streams and coastal water. Therefore, it is expected that no water quality impacts caused by accidental spillage would be generated.

10.4.6 Domestic sewage would be generated from the workforce during construction stage. However, this would be collected onsite using chemical toilets and be appropriately handled by licensed contractor. No direct discharge of sewage effluent would be allowed. No adverse water quality impact from sewage effluent from construction workforce is expected.

Operational Water Quality

10.4.7 The sewage generated from the Development will be discharged to the nearby public sewers to meet the requirement as stipulated in the Technical Memorandum on Water Pollution Control Ordinance. Findings from the SIA revealed that the estimated quantity of sewage generation is about 2,515m3/day and the proposed

upgrading of sewerage infrastructure will be capable to handle and convey the sewage to the San Wai Sewerage Treatment Plant. As all sewage will be properly collected by public sewer leading to the San Wai Sewerage Treatment Plant for treatment before discharge, no adverse water quality impact is expected.

10.4.8 Surface run-off to be generated from the Development is known as non-point source pollution. At the planning and design stages, the drainage systems should be properly planned to receive road runoff. Road runoff is expected to carry silt and grit and should be properly handled before discharge. Appropriate facilities, such as gullies and silt traps should be installed to intercept the suspended solid before discharge. Appropriate facilities, such as gullies and silt traps shall be installed to intercept the suspended solid before discharge into the nearby drainage system. With the implementation of the proposed mitigation measures, no adverse water quality from road runoff would be expected.

10.4.9 Urban runoff arises from the development due to the increase in paved area. The level of contaminants in this runoff is generally limited for new development area and does not pose a significant threat to the nearby watercourses. For locations that are prone to pollution, e.g. car park, separate drainage system should be considered at these locations and the collected runoff should be treated by gullies, silt traps or oil interceptors as necessary. With the implementation of the proposed mitigation measures, no adverse water quality from surface runoff would be expected.

10.5 Waste Management

Identification and Evaluation of Potential Impacts

10.5.1 The construction activities to be carried out for the proposed 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.

10.5.2 The C&D materials generated from site formation should be sorted on-site into inert C&D materials (that is, public fill) and non-inert C&D materials. In order to minimise the impact resulting from collection and transportation of C&D materials for off-site disposal, the excavated materials comprising fill materials should be reused on-site as backfilling material as far as practicable. Non-inert C&D materials, such as wood, plastic, steel and other metals should be reused or recycled, as a last resort, before disposing of to landfill.

10.5.3 With the implementation of mitigation measures, such as maximizing the reuse of inert C&D materials, and proper waste management practices for handling, transportations and disposal of identified waste arisings from the site formation works, no residual impacts are expected during the construction phase.

10.6 Ecological Impact

Assessment Area and Ecological Survey Methodology

10.6.1 The assessment area for ecological impact is defined as areas within 500m from the boundary of the Site and associated infrastructure works, which would be potentially affected by the Development.

10.6.2 ***Figure No. 196587/B&V/PER/FIG 11.1*** has shown the ecological resources within and in the vicinity of the Site identified in literature review and verification survey.

Ecological Baseline

Literature Review

10.6.3 An Ecological Impact Assessment (EcoIA) was conducted in 2011-2016 as part of the EIA study (Register No. AEIAR-203/2016) for Hung Shui Kiu New Development Area (HSK NDA), in which part of its ecological assessment area covered the Site and most of its surroundings of this Project. This previous EIA recorded 2 floral and 10 faunal species of conservation interest (which including 8 bird species, 1 mammal species and 1 butterfly species) in areas falling within our assessment area. However, none of these species were identified within the Site boundary.

Habitats

10.6.4 A total of eight types of habitat were identified within the assessment area, viz. mixed woodland, plantation, grassland, agricultural land, pond, drainage channel, vegetated wasteland, and developed area as shown in ***Figure No. 196587/B&V/PER/FIG 11.1*** and summarised in ***Table 10.1*** below.

Table 10.1 Summary of Habitats in the Assessment Area

Habitat	Assessment Area		Project Area	
	Size (ha)	Percentage (%)	Size (ha)	Percentage (%)
Mixed Woodland	1.98	1.2	-	0.0
Plantation	9.37	5.7	1.44	26.1
Grassland	11.38	6.9	0.35	6.3
Agricultural Land	0.12	0.1	-	0.0
Pond	1.72	1.0	-	0.0
Drainage Channel	6.45 (2,245m in length)	3.9	0.13 (480m in length)	2.3
Vegetated Wasteland	0.65	0.4	0.65	11.9
Developed Area	133.91	80.9	2.93	53.4
Total	165.58	100	2.74	100

Note: Project Area refers to all areas within proposed site boundary

Vegetation Species of Conservation Interest

10.6.5 A total of 205 and 75 plant species were recorded within the assessment area and project area respectively. Two species of conservation interest were identified, which includes Aquilaria sinensis and Pavetta hongkongensis.

Fanual Species of Conservation Interest

10.6.6 One mammal species, i.e. insectivorous bat of Microchiroptera, was recorded. The site of detection is among plantation, pond and developed area outside the proposed Project Area as shown in ***Figure No. 196587/B&V/PER/FIG 11.1***. All bat is considered as species of conservation interest and is scheduled under Wild Animals Protection Ordinance (Cap 170). Species identification is unable to be made by direct observation at present surveys.

A total of 19 species of conservation interest were identified, which includes Asian Barred Owlet (*Glaucidium cuculoides*), Black Kite(*Milvus migrans*), Black-crowned Night Heron (*Nycticorax nycticorax*), Chinese Grosbeak (*Eophona migratoria*), Chinese Pond Heron(*Ardeola bacchus*), Collared Crow (*Corvus torquatus*), Common Buzzard (*Buteo japonicus*), Common Kestrel (*Falco tinnunculus*), Eurasian Wigeon (*Anas penelope*), Great Cormorant (*Phalacrocorax carbo*), Great Egret (*Ardea alba*), Grey Heron (*Ardea cinerea*), Hwamei (Garrulax canorus), Little Egret (Egretta garzetta), Northern Pintail (*Anas acuta*), Northern Shoveler (*Anas clypeata*), Silky Starling (*Spodiopsar sericeus*), White-shouldered Starling (*Sturnia sinensis*) and White-throated Kingfisher (*Halcyon smyrnensis*). Majority of the recorded bird species of conservation interest were mainly found along the Tin Shui Wai Drainage Channel (TSWDC) with few others at grassland habitat as illustrated in ***Figure No. 196587/B&V/PER/FIG 11.1***.

Construction Phase Impact

10.6.7 The Site area for the housing development is proposed on existing urban land uses including an open car park, a vacant government land and few short sections of village-type road, in which no sensitive ecological resources such as natural or semi-natural habitats, species of conservation interest (neither flora nor fauna), were identified. Therefore, significant adverse ecological impacts arising from the Development is not anticipated.

10.6.8 Two flora and 20 fauna species of conservation interest were identified, but all of them are located outside the Site area. Construction disturbance to these offsite receivers is considered very unlikely due to the physical separation and weak ecological linkage to other offsite habitats.

10.6.9 Tin Shui Wai Drainage Channel was considered to be of medium ecological value and key habitat for waterbirds within the assessment area due to the majority records of the bird species of conservation interest in this channel. Apart from the physical separation contributed by Tin Ying Road, ecological linkage between the channel and Site area was not observed. Probably due to the disturbing industrial land uses along Tin Wah Road and Lau Fau Shan Road, birds recorded in the channel were not observed flying from nor to the direction towards the Site, indicating insignificant ecological linkage between the two areas. Field surveys observed that the recorded waterbirds in this channel mainly flying along the course with few flying from and to the Tin Ying Road abandoned fishpond. This observation together with the recorded distribution of the bird species of conservation interest indicated that this channel itself was the key ecological corridor for the birds utilising the watercourse habitat (as feeding and roosting site) and moving to and from offsite favourite habitats in

Deep Bay area to the north. According to the water quality assessment under this project, there will be no adverse construction impact to the TSWDC. Disturbance impact to offsite wildlife is not anticipated.

10.6.10 Hence, potential ecological impact would be limited to the loss of low ecological habitat and removal of common roadside landscape plants and invasive weeds.

Operation Phase Impact

10.6.11 No sensitive ecological resources will be impacted by the Project's operational activities and therefore the anticipated operational impact is negligible.

Mitigation Measures

10.6.12 Since no significant adverse ecological impacts were identified, no specific ecological mitigation measures are required.

10.7 Cultural Heritage

Baseline Conditions

10.7.1 The Assessment area for the built heritage impact assessment is 50m extended form the Site boundary which includes the boundary of the proposed site formation and infrastructural works. A preliminary review on cultural heritage resources has been established in the form of desktop review.

Archaeological Background

10.7.2 There are no sites of archaeological interest within the Site.

Graded Historic Buildings

10.7.3 Referring to the "List of the 1,444 historic buildings with assessment results" and "List of new items for grading assessment with assessment results", no graded or proposed graded historic building is identified within the Site at this point of time. The nearest built heritage from the Site are:-

- Chi Hong Po Jai, Sha Kong Wai (Grade 3): The building is located to the north-west of the Site, with distance more than 150m.
- Entrance Gate, Sha Kong Wai (Grade 3): The building is located to the north-west of the Site, with distance more than 100m.

Direct Impact

10.7.4 As the declared monuments, graded historic buildings and other identified built heritage are all outside the site boundary and there was no plan of demolition of any of these heritage resources, no direct impact on the identified heritage resources is envisaged during construction and operational phases.

Indirect Impact

10.7.5 Based on the latest construction plan, the Project would not involve blasting during construction stage. Moreover, the identified heritage resources are all under the elevation of the Project area, indirect vibration impact to theses heritage resources would not be anticipated in both construction and operational phases.

Mitigation Measures

10.7.6 No cultural heritage impact due to the Project would be anticipated. Thus, no specific mitigation measures would be required.

再造紙
recycled paper

11 PRELIMINARY LANDSCAPE AND VISUAL IMPACT

11.1 Introduction

11.1.1 The objective of a landscape and visual impact assessment is to:

- Determine the scope of infrastructural works for supporting the Development;
- Assess the various impacts pertaining to the Development and the associated infrastructural works;
- Recommend mitigation measures to keep the potential impacts due to the Development and its associated infrastructural works within an acceptable level; and
- Establish implementation strategies and programme for the Development and its associated infrastructural works.

11.1.2 Findings and recommendations of the LVIA are presented in the Preliminary Landscape and Visual Impact Assessment Report. A summary of the assessment is presented in the sections below.

11.2 Landscape Impact Assessment

Methodologies

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

(a) Evaluation of the landscape impacts of the Proposed Development compared with the existing baseline condition;

(b) Identification of the baseline Landscape Resources (LRs) and Landscape Character Areas (LCAs) should be found within the assessment area, achieved by site visits and desktop studies;

(c) Assessment of the degree of rarity and sensitivity to change of the LRs and LCAs;

(d) Identification of potential sources of landscape change;

(e) Identification of the magnitude of landscape change;

(f) Identification of potential landscape mitigation measures;

(g) Prediction of the significance of landscape impacts before and after the implementation of the mitigation measures; and

(h) Classification of Landscape Impacts with mitigation measures.

11.2.2 The Assessment Area covers the Landscape Resources (LRs) and Landscape Character Areas (LCAs) within a 500m radius of the Site and the associated infrastructural upgrading works (Associated Infrastructural Works) as shown in ***Figure No. 196529/B&V/LVIA/Figure 4.1***.

Landscape Resources within the Assessment Area

11.2.3 The existing condition of the Site can be separated into two parts where the western portion mainly comprises of paved land for open-air car park with scattered vegetation, part of a private outdoor recreational area and a paved rural road; the eastern portion predominantly covered with extensive vegetation. Only the vegetated areas are reflected within the LRs. The locations and images of key LRs are illustrated in ***Figure No. 196529/B&V/LVIA/FIG 4.3 and 4.4*** respectively.

Landscape Character Areas

11.2.4 The LCAs of the Site and the Assessment Area have been defined by the Landscape Character Map of Hong Kong (produced under the Planning Department's Landscape Value Mapping of Hong Kong 2005). Four (4) LCAs are identified within the Assessment Area. The location and the extent of the LCAs are demonstrated in ***Figure No. 196529/B&V/LVIA/FIG 4.5 and 4.6***.

Nature and Magnitude of Landscape Impact without Mitigation

11.2.5 During the construction (referred as CON in the following tables **Table 11.1** and **Table 11.2**) and operation (referred as OP in the following tables **Table 11.1** and **Table 11.2**) phases of the Development, only the LRs and LCAs within the Site and the Proposed Works Area (i.e. LR1, LR2.1, LR3, LR8, LCA1 and LCA4) will experience changes. The magnitude of change on LR1, LR2.1, LR3, LR8, LCA1 and LCA4 that would occur in the construction phase and operation phase before the implementation of mitigation measures are outlined in **Table 11.1**.

再造紙
recycled paper

Table 11.1 – Magnitude of Change on LRs and LCAs

Item	LR/LCA	Approx. Area of LR/LCA within Works Limit	Compatibility of the Development/ Proposed Infrastructural Works with the Surrounding Landscape (High, Medium, Low)	Duration of Impact (Temporary, Permanent)		Reversibility of Change (Reversible/ Irreversible)		Magnitude of Change (Negligible/ Small/ Intermediate/ Large)	
				CON	OP	CON	OP	CON	OP
Section 1 - LRs									
On-Site LRs									
LR 1	Low-lying Mixed Trees, Shrubs and Grassland	17,167m²	Low	Permanent	Permanent	Irreversible	Irreversible	Large	Large
		Key Impacts during Construction and Operation Phase 1. Approximately 17,167m² (36.97%) of this LR falls within the Works Limit which is in direct conflict with the Site Formation Works. 2. During the construction phase, site clearance works, site formation works, excavation works, construction of the Development and infrastructural works will lead to a large-scale permanent loss of vegetation. A total of 280 nos. of trees (Tree Groups 01--14, 18 and 19)* within this LR will be impacted. 3. In operation, the existing vegetation will be replaced by the Development. 4. Overall, the magnitude of change is considered as large during both the construction and operation phases.						
LR 2.1	Roadside Vegetation	14,055m²	Medium	Permanent	Permanent	Irreversible	Irreversible	Large	Large
		Key Impacts during Construction and Operation Phase 1. Approximately 13,965m² (21.24%) of this LR falls within the Works Limit which is in direct conflict with the Site Formation Works, Road Widening Works and Other Infrastructural Works. 2. During the construction phase, site clearance works, site formation works, excavation works and construction of the Development and Associated Infrastructural Works will lead to a large-scale permanent loss of vegetation. A total of 251 nos. of trees within this LR will be impacted, in which 128 nos. of trees will be impacted by the Site Formation Works (Tree Groups 15-17)*, 105 nos. of trees will be impacted by the Road Widening Works (Tree Groups 45-48, 50, 51 and 53)* and 16 will be impacted by Other Infrastructural Works (Tree Groups 20 and 34)*.						

Item	LR/LCA	Approx. Area of LR/LCA within Works Limit	Compatibility of the Development/ Proposed Infrastructural Works with the Surrounding Landscape (High, Medium, Low)	Duration of Impact (Temporary, Permanent)		Reversibility of Change (Reversible/ Irreversible)		Magnitude of Change (Negligible/ Small/ Intermediate/ Large)	
				CON	OP	CON	OP	CON	OP
		3. In operation, the existing vegetation will be replaced with road network and the Development. 4. Given the above, the magnitude of change is considered as large in both construction and operation phase.							
LR 2.3	Roadside Vegetation	533m²	Medium	Permanent	Permanent	Irreversible	Irreversible	Small	Small
		Key Impacts during Construction and Operation Phase 1. Approximately 533m² (5.64%) of this LR falls within the Works Limit which is in direct conflict with the Road Widening Works 2. During the construction phase, site clearance and road works will lead to a large-scale permanent loss of vegetation. A total of 3 nos. of trees (Tree Groups 42- 44)* within this LR will be impacted. 3. In operation, the existing vegetation will be replaced with road network. 4. Given the above, the magnitude of change is considered as small in both construction and operation phase.							
LR 8	Vegetation along the Tin Shui Wai Nullah	100m²	Nil	Temporary	None	Reversible	Reversible	Negligible	Negligible
		Key Impacts during Construction and Operation Phase 1. Approximately 100m² (0.30%) of this LR falls within the Works Limit which is in direct conflict with the Other Infrastructural Works. 2. During the construction phase, there will be some site clearance works but no vegetation will be affected. None of the 172 nos. of trees (approx.) in this LR will be impacted. 3. In operation, the footpath will be restored. 4. Given the above, the magnitude of change is considered as negligible in both construction and operation phase.							

Item	LR/LCA	Approx. Area of LR/LCA within Works Limit	Compatibility of the Development/ Proposed Infrastructural Works with the Surrounding Landscape (High, Medium, Low)	Duration of Impact (Temporary, Permanent)		Reversibility of Change (Reversible/ Irreversible)		Magnitude of Change (Negligible/ Small/ Intermediate/ Large)	
				CON	OP	CON	OP	CON	OP
LR 13	Built-up Area	29,954m²	High	Permanent	Permanent	Irreversible	Irreversible	Negligible	Negligible
		Key Impacts during Construction and Operation Phase 1. Approximately 29,954m² (2.75%) of this LR falls within the Works Limit which is in direct conflict with the Site Formation Works, Road Widening Works and Other Infrastructural Works. 2. During the construction phase, site clearance works will lead to demolition of existing temporary structures but will also be replaced with man-made structure. 3. In operation, the area will be replaced by the housing development and the associated greening. 4. Given the above, the magnitude of change is considered as small and negligible in both construction and operation phase respectively.							
Section 2 – LCAs									
LCA1	Rural Coastal Plain Landscape	40,144m²	Medium	Permanent	Permanent	Irreversible	Irreversible	Large	Large
		Key Impacts during Construction and Operation Phase 1. Approximately 40,144m² (10.15%) of this LCA falls within the Works Limit which is in direct conflict with the Site Formation Works and Other Infrastructural works 2. During the construction phase, site clearance works, site formation works, excavation works, construction of the Development and infrastructural works will lead to a large-scale permanent loss of vegetation. A total of 424 nos. of trees (Tree Groups 01-20, 29, 34-35 and 40-41) within this LR will be impacted. 3. In operation, the landscape character of the area will be altered by the Development. However, the effect will be akin to shift of the LCA3 coverage to the west and no landscape incompatibility is anticipated.							

Item	LR/LCA	Approx. Area of LR/LCA within Works Limit	Compatibility of the Development/ Proposed Infrastructural Works with the Surrounding Landscape (High, Medium, Low)	Duration of Impact (Temporary, Permanent)		Reversibility of Change (Reversible/ Irreversible)		Magnitude of Change (Negligible/ Small/ Intermediate/ Large)	
				CON	OP	CON	OP	CON	OP
		4. In general, the magnitude of change is considered as large in both construction and operation phase.							
LCA3	Residential Urban Landscape	787m²	High	Temporary	None	Reversible	Reversible	Negligible	Negligible
		Key Impacts during Construction and Operation Phase 1. Approximately 787m² (0.15%) of this LCA falls within the Works Limit which is direct conflict with Other Infrastructural Works. 2. During the construction phase, site clearance works will be conducted but no vegetation will be removed . None of the 524 nos. of trees (approx.) in this LR will be impacted. 3. In general, the magnitude of change is considered as negligible in construction and operation phase.							
LCA4	Miscellaneous Rural Fringe Landscape	13,627m²	Medium	Permanent	Permanent	Irreversible	Irreversible	Intermediate	Intermediate
		Key Impacts during Construction and Operation Phase 1. Approximately 13,627m² (2.23%) of this LCA falls within the Works Limit which is direct conflict with the Road Widening Works. 2. During the construction phase, site clearance works and road works will lead to a large-scale permanent loss of vegetation. A total of 113 nos. of trees (Tree Groups 39, 42-48, 50, 51 and 53) will be impacted. The landscape quality of this LCA will be inevitably altered. 3. In operation, the landscape character of the area will be altered by the Associated Infrastructural Works, however, it is not completely incompatible with the surrounding. 4. In general, the magnitude of change is considered as intermediate in both construction and operation phase.							
*Please kindly refer to the Section 6.4 for the tree information or justifications to be felled or transplanted.									

Significance of Landscape Impacts before Mitigation

11.2.6 As summarised in **Table 11.1**, there will be direct and physical impact by the Development on all LRs and LCAs within the Site. The significance of landscape impacts during the construction and operational phases before mitigation is tabulated in **Table 11.2**.

Table 11.2 - Significance of Impacts on LRs and LCAs

Item	LR/LCA	Sensitivity (Low, Medium, High)	Magnitude of Change (Negligible/ Small/ Intermediate/ Large)		Impact Significance Before Mitigation (Insubstantial/ Slight/ Moderate/ Substantial)	
			CON	OP	CON	OP
Section 1 - LRs						
LR1	Low-lying Mixed Trees, Shrubs and Grassland	Low	Large	Large	Moderate	Moderate
LR2.1	Roadside Vegetation	Medium	Large	Large	Substantial	Substantial
LR2.2	Roadside Vegetation	Medium	None	None	None	None
LR2.3	Roadside Vegetation	Medium	Small	Small	Slight	Slight
LR3	Low-lying Woodland	High	None	None	None	None
LR4	Hillside Woodland	High	None	None	None	None
LR5	Hillside Grassland	High	None	None	None	None
LR6	Vegetation within Rural Village	Medium	None	None	None	None
LR7	Vegetation within Residential and Institutional Developments	Medium	None	None	None	None
LR8	Vegetation along the Tin Shui Wai River	Medium	Negligible	Negligible	Insubstantial	Insubstantial
LR9	Vegetation within Industrial Developments	Low	None	None	None	None
LR10	Waterbodies	Medium	None	None	None	None
LR11.1	Watercourse	High	None	None	None	None
LR11.2	Watercourse	Medium	None	None	None	None
LR12	Active Agricultural Land	Medium	None	None	None	None
LR13	Built-up Area	Low	Negligible	Negligible	Insubstantial	Insubstantial
Section 2 - LCAs						
LCA1	Rural Coastal Plain Landscape	Medium	Large	Large	Substantial	Substantial
LCA2	Upland and Hillside Landscape	High	None	None	None	None
LCA3	Residential Urban Landscape	Low	Negligible	Negligible	Insubstantial	Insubstantial
LCA4	Misc. Urban Fringe Landscape	Medium	Intermediate	Intermediate	Moderate	Moderate

Recommended Landscape Mitigation Measures in Construction and Operation Phases

11.2.7 Given the generally undeveloped nature of the Site and the need for extensive land formation works, substantial landscape impacts are anticipated by the Development. This is mainly due to the clearance of existing vegetation (a total 537 nos. of trees will be impacted) on the Site and change in landscape character of the Site (from one of rural and natural landscape, to and urban residential and institutional landscape). However, the Development provides an opportunity for beneficial landscape impacts for areas that currently do not have any landscape value (e.g. open-air car park and paved rural roads) through increased greening opportunities, and properly designed and managed landscapes.

11.2.8 A List of Proposed Mitigation Measures in the construction and operation phases together with the associated funding, implementation, management and maintenance agencies is tabulated in **Table 11.3**. The mitigation measures are shown in the Mitigation Plan, Compensatory and New Tree Planting Plan and Preliminary Landscape Master Plan (with Planting Proposal) prepared for the assumed layout in ***Figure No. 196529/B&V/LVIA/FIG 4.7, 4.8 and 4.9*** respectively.

再造紙
recycled paper

Table 11.3 Recommended Landscape Mitigation Measures

Item	Landscape Mitigation Measures and Objectives	Funding Agency	Implementation Agency*	Management Agency**	Maintenance Agency**
During the Construction Phase					
CM1	Minimisation of Construction Area and Contractor's Temporary Works Areas The construction area and contractor's temporary works areas should be controlled to assure the landscape impacts arising from the construction activities are minimised. In principle, the temporary works areas should be restored to their former state where possible.	CEDD	CEDD (via contractor)	CEDD (via contractor)	CEDD (via contractor)
CM2	Protection of Existing Trees As the site formation works will cover the entire Site, no trees are able to be retained within the Site. However, 22 trees and 3 trees are considered to be able to be retained within the works area of the Road Widening Works and Other Infrastructure Works respectively, these trees should be carefully protected during construction. In addition, 162 trees located within 10m from the Works Limit can also be retained and should be carefully protected during construction. Detailed Tree Protection Specification shall be provided in the Contract Specification. Under this specification, the Contractor shall be required to submit, for approval, a detailed working method statement for the protection of trees prior to undertaking any works adjacent to all retained trees, including trees in contractor's works areas.	CEDD	CEDD (via contractor)	CEDD (via contractor)	CEDD (via contractor)
CM3	Transplantation of Existing Trees Trees unavoidably affected by the Project works should be transplanted where practical. Trees should be transplanted straight to their final receptor site and not held in a temporary nursery as far as possible. According to the Tree Group Survey Report, about 74 trees, 12 trees and 6 trees are considered available to be preserved by transplanting to locations outside of the Phase 1 and Phase 2 housing sites but within the a) Site Formation Works Area and Other Infrastructure Works Area and b) Road Widening Works Area c) Other Infrastructural Works Limit respectively. A detailed transplanting proposal will be submitted to relevant government departments for approval in accordance with DEVB TCW No. 6/2015 and DEVB TCW 4/2020 and final locations of transplanted trees should be agreed prior to commencement of the work***.	CEDD	CEDD (via contractor)	CEDD (via contractor)/ LCSD	CEDD (via contractor)/ LCSD

再造紙 recycled paper

Item	Landscape Mitigation Measures and Objectives	Funding Agency	Implementation Agency*	Management Agency**	Maintenance Agency**
	For trees associated with highways e.g. roadside planting along highways, that are unavoidably affected and should be transplanted, following HyD Guidelines HQ/GN/13 'Interim Guidelines for Tree Transplanting Works under Highways Department's Vegetation Maintenance Ambit'.				
During the Operation Phase					
OM1	Compensatory Planting Compensatory tree planting for felled trees shall be provided to the satisfaction of relevant Government departments. Around 179 nos. of compensatory trees can be planted outside the Housing Site but within the works limit. The quantity of trees is indicative only as the planting arrangement will be subject to further review during the detailed design. The required numbers and locations of compensatory trees shall be determined and agreed separately with Government during the Tree Removal Application process under DEVB TCW No. 4/2020. Compensatory planting is proposed at the potential open areas. Trees planting opportunities are maximised along public footpath as far as possible, however, some locations are not feasible due to sightline issue associated with run-in/out and junction. Further opportunity of off-site compensatory tree planting should be explored in the next stage of study when preparing the Tree Preservation and Removal Proposal to enhance the compensatory tree planting ratio. Yet, it should be noted that the Road Widening Works is also subject to the Proposed Mitigation Measure in the Environmental Impact Assessment for HSK New Development Area.	CEDD	CEDD (via contractor)	LCSD	LCSD
OM2	Provision of Amenity Landscape Area and New Tree Planting within the Housing Site New tree planting is proposed at the open areas within the Housing Site to enhance the landscape amenity of the Site. Tree planting along the Site boundary is also proposed to increase the landscape amenity of the Development and provide natural screening to the man-made structure. Approximate 175 nos. trees will be planted with the Housing Site.	HD	HD	HD	HD
OM3	Streetscape Enhancement Sensitive streetscape design (e.g. proper paving, signage, street furniture, lighting etc.)	CEDD	CEDD (via contractor)	HyD	HyD

再造紙
recycled paper

Item	Landscape Mitigation Measures and Objectives	Funding Agency	Implementation Agency*	Management Agency**	Maintenance Agency**
	shall be incorporated to responds to the existing context and mitigate the potential landscape impacts.				
OM4	Provision of Rooftop Greening at the Proposed Ancillary Facilities/ Car Park Opportunities to provide greening at the rooftop of the Proposed Ancillary Facilities/ Car Park should be explored.	TD	To be discussed in detailed design stage	To be discussed in detailed design stage	To be discussed in detailed design stage
OM5	Provision of Local Open Space Adequate local open space would be provided to accommodate proposed greenery and trees, to achieve pleasant landscape environment and to allow for passive recreation. The standard for provision of local open space (i.e. 1m^2 per person) as stipulated in the Chapter 4 (Recreation, Open Space and Greening) of HKPSG would be met.	HD	HD	HD	HD
*CEDD will only be responsible for construction of the site formation and essential infrastructure **Regarding the departmental responsibilities for management and maintenance of vegetation and hard landscape features, DEVB TC(W) No. 6/2015 should be adopted. *** Should on-site transplantation found infeasible, relevant Government departments should identify suitable locations for off-site transplantation.					

Design Intention of Preliminary Landscape Master Plan

11.2.9 The concept underpinning the Preliminary Landscape Master Plan for the Indicative Scheme, presented as ***Figure No. 196529/B&V/LVIA/FIG 4.9*** is to integrate the proposals within their future landscape and visual context; provide a synthesis between the proposed architecture and its landscape setting and provide high quality open in association with the development. The proposals have sought to create an attractive and convenient outdoor landscape and open spaces which are closely coordinated with indoor layout of common areas and provide legible external pedestrian access and circulation whilst also maximising the planting of trees and shrubs.

11.2.10 Courtyard Gardens are proposed as the key outdoor activity hub for residents' enjoyment. These courtyard gardens accommodate sitting-out area for various outdoor activities and encouraging social interaction, which will also create visual amenity for the indoor space of the adjacent building blocks.

11.2.11 Planting areas are maximised along boundary to enhance amenity value of the proposed development (area designated as drainage reserve will not be used for planting). It also provides at-grade tree planting opportunities to act as greening buffer to the adjacent vehicular road and to maximize the greening opportunities of site.

再造紙
recycled paper

11.2.12 The Preliminary Landscape Master Plan is described in terms of the main design objectives, followed by a description of the key landscape components and finally the landscape elements, including the proposed hard and soft landscapes, which form the palette of materials.

11.2.13 The design objectives for the Outline Landscape Plan are to:

- Integrate the Proposed Development from the landscape and visual perspectives with the existing and planned landscape context;
- Ensure the landscape design is compatible with the architectural style to establish identity for the development;
- Provide visual integration in views of the proposed building mass from the surroundings and provide vegetation screening and softening of the built-form in closer low-level views
- Create a harmonious and relaxing landscape setting for outdoor environment and a green and lush sense of place;
- Enhance the quality of the external open spaces for enjoyment and social interaction of the future occupants;
- Provide recreation spaces for the future residents;
- Provide adequate local open space to meet the standard for provision of local open space (i.e. $1m^2$ per person) as stipulated in the Chapter 4 (Recreation, Open Space and Greening) of HKPSG (see ***Figure No. 196529/B&V/LVIA/FIG* 4.10**).
- Maximise opportunities for the planting of new trees and shrubs within the development to enhance the amenity value of local landscape context;
- Maximize greening opportunity with planting proposals to enhance landscape amenity, create sense of place and to provide shade; and
- Achieve a minimum of 20% greenery coverage.

11.2.14 The following description seeks to establish some general principles that are important in realising the landscape design as part of the general mitigation for the development and ensure its feasibility. As such the design of the landscape will evolve during the detailed design stage.

11.2.15 The landscape seeks to create an attractive external area to the development, coordinating the hard and soft landscape design for residential entrances and open spaces with streetscape design requirements to provide a unified appearance to the immediate

landscape surroundings. The design also aims to create a vibrant open space which is focused on features and facilities aligned to youthful interests and activities. Key aspects of the spatial planning and features of the proposed landscape are described as follows:

Ground Floor Landscape

11.2.16 The Ground Floor landscape space is planned with a number of functions including active and passive recreational spaces for residential use. Major landscape elements proposed in Phase 1 and Phase 2 would include: (i) courtyard gardens, meandering path and pergola with seating (in both Phase 1 and Phase 2); (ii) children's play area (in both Phase 1 and Phase 2); (iii) fitness area (in both Phase 1 and Phase 2); and (iii) courtyard garden (in Phase 2).

11.2.17 Courtyard gardens and pergola with sitting are intended as an informal meeting and gathering space, which also has the potential for holding small scale events. The edge of the space has shade structures and seating set within tree and shrub planting to promote community interaction. These gardens are arranged in proximity to lobby areas. There is clear routing between each tower lobby and each garden, with meandering path connecting them together.

11.2.18 Children's play area is proposed at corner of the open space with limited entrances for better care on the children. Play equipment will be designed for different age group of the children.

11.2.19 Fitness Area at both phases is the provision of active recreation areas. A meandering path is provides a loop around the open spaces and connects to active recreational areas. All these facilities are set within a landscape framework of shrubs and trees, whilst ample seating are provided in order to encourage a lively, participatory atmosphere.

Streetscape Promenade

11.2.20 There is a new access road with landscaped footpaths on both sides between Phase 1 and Phase 2 which provide pedestrian access to the housing sites. The landscape is designed as a continuation of the pedestrian pavement beyond the housing sites with a simple, robust paved area and the introduction of the street trees in tree pits to provide shade and greener edge to the sites, where space allows.

11.2.21 The setback of the housing site edges allows the creation of a wide pedestrian boulevard along the access road. Since the combined width of the public pavement and this area of streetscape is more than adequate for pedestrian circulation some of this space has been allocated to tree and shrub planting. Trees planting opportunities are maximised as far as possible, however, some locations are not feasible due to sightline issue associated with run-in/out and junction.

再造紙
recycled paper

Roadside Planting

11.2.22 Roadside Planting is proposed along Tin Wah Road and Lau Fau Shan Road. Tree planting within the Site is also proposed to increase the landscape amenity areas and provide natural screening to the man-made structure.

11.2.23 The Preliminary Landscape Master Plan will be subject to review and HD's final architectural and landscape plan.

Residual Landscape Impact with Mitigation

11.2.24 Upon the implementation of mitigation measures, the residual impact significance can be mitigated to acceptable levels and the overall landscape impact will be beneficial as shown in ***Table 11.4***.

Table 11.4 Significance of Landscape Impacts

Item	LR/LCA	Sensitivity to Change (Low/ Medium/ High)	Magnitude of Change Without Mitigation (Negligible/ Small/ Intermediate/ Large)		Impact Significance Without Mitigation (Insubstantial/ Slight/ Moderate/ Substantial)		Recommended Mitigation Measures	Residual Impacts Significance With Mitigation (Insubstantial/ Slight/ Moderate/ Substantial)		
			CON	OP	CON	OP		CON	OP	
									DAY 1	YEAR 10
Section 1 - LRs										
LR 1	Low-lying Mixed Trees, Shrubs and Grassland	Low	Large	Large	Moderate	Moderate	CM1, 3, OM1-4	Moderate	Moderate	Slight
LR 2.1	Roadside Vegetation	Medium	Large	Large	Substantial	Substantial	CM1-3, OM1-4	Substantial	Moderate	Insignificant
LR 2.2	Roadside Vegetation	Medium	None	None	None	None	Not Required	None	None	None
LR 2.3	Roadside Vegetation	Medium	Small	Small	Slight	Slight	CM1-3, OM1-4	Slight	None	None
LR 3	Low-lying Woodland	High	None	None	None	None	Not Required	None	None	None
LR 4	Hillside Woodland	High	None	None	None	None	Not Required	None	None	None
LR 5	Hillside Grassland	High	None	None	None	None	Not Required	None	None	None
LR 6	Vegetation within Rural Village	Medium	None	None	None	None	Not Required	None	None	None
LR 7	Vegetation within Residential and Institutional Developments	Medium	None	None	None	None	Not Required	None	None	None

Item	LR/LCA	Sensitivity to Change (Low/ Medium/ High)	Magnitude of Change Without Mitigation (Negligible/ Small/ Intermediate/ Large)		Impact Significance Without Mitigation (Insubstantial/ Slight/ Moderate/ Substantial)		Recommended Mitigation Measures	Residual Impacts Significance With Mitigation (Insubstantial/ Slight/ Moderate/ Substantial)		
			CON	OP	CON	OP		CON	OP	
									DAY 1	YEAR 10
LR 8	Vegetation along the Tin Shui Wai River	Medium	Negligible	Negligible	Insubstantial	Insubstantial	Not Required	None	None	None
LR 9	Vegetation within Industrial Developments	Low	None	None	None	None	Not Required	None	None	None
LR 10	Waterbodies	Medium	None	None	None	None	Not Required	None	None	None
LR 11.1	Watercourse	High	None	None	None	None	Not Required	None	None	None
LR 11.2	Watercourse	Medium	None	None	None	None	Not Required	None	None	None
LR 12	Active Agricultural Land	Medium	None	None	None	None	Not Required	None	None	None
LR 13	Built-up Area	Low	Negligible	Negligible	Insubstantial	Insubstantial	Not Required	Insignificant	Insignificant	Insignificant
Section 2 - Landscape Character Areas										
LCA 1	Rural Coastal Plain Landscape	Medium	Large	Large	Substantial	Substantial	CM1-3, OM1-4	Substantial	Substantial	Moderate
LCA 2	Upland and Hillside Landscape	High	None	None	None	None	Not Required	None	None	None
LCA 3	Residential Urban Landscape	Low	Negligible	Negligible	Insubstantial	Insubstantial	Not Required	None	None	None
LCA 4	Miscellaneous Urban Fringe Landscape	Medium	Intermediate	Intermediate	Moderate	Moderate	CM1-3, OM4	Slight	Slight	Insubstantial

11.3 Visual Impact Assessment

Methodologies

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

(a) Evaluation of the visual impacts of the Proposed Development compared with the existing baseline condition (the planned developments of Hung Shui Kiu/Ha Tsuen New Development Area (HSK/HT NDA)[2] has been taken into account);

(b) Assessment of the visual composition, visual obstruction, effect on public viewers and effect on visual resources;

(c) Classification of overall resultant Visual Impacts; and

(d) Classification of Visual Impacts with mitigation measures.

Assessment Area

11.3.2 An initial Assessment Area is delineated for the VIA in accordance with TPB PG No. 41 which is equivalent to approximately three (3) times the overall Building Height (BH) of the Development.

11.3.3 Since the Development's BH (at main roof level) is ranged from 147.04mPD to 155.14mPD (Phase 1) and 155.29mPD to 163.39mPD (Phase 2) (ground level of assumed to be at ~6.5mPD), radii of approx. 421.62m to 470.67m from the Application Site is defined as the Assessment Area (***Figure No. 196529/B&V/LVIA/FIG 5.1*** refers). As there are limited public VPs within the Assessment Area, the location of VPs has been extended beyond the boundary of the Assessment Area to better capture local sensitive views within the wider visual envelope.

Identification of Viewpoints

11.3.4 Further to Para 4.5 of TPB PG No 41, kinetic and static Viewpoints (VPs) have been identified that are representative of all sensitive viewers and with direct sightlines to the Development.

11.3.5 The selected VPs include key pedestrian nodes, public and open space areas, recreation, rest, leisure, walking and prominent travel routes which are easily accessible by the public. ***Figure No. 196529/B&V/LVIA/FIG 5.1*** demonstrates the seven (7) out of nine (9) public VPs surveyed have been selected assessment for initial assessment. These include VPs both inside and outside the initial Assessment Area.

[2] Planned developments in Stage 3 and Stage 4 of HSK/HT NDA will be located within/near the Assessment Area. According to the proposed implementation programme set out in the Hung Shui Kiu New Development Area Planning and Engineering Study – Investigation (P&E Study) (Agreement No. CE 2/2011 (CE)), the development year (completion) of Stage 3 and Stage 4 would be 2031 onwards. Reference is made to the P&E study for the location, disposition and building footprints of the planned developments. Building heights of the planned developments are assumed to be the maximum permitted under the Approved Hung Shui Kiu and Ha Tsuen Outline Zoning Plan No. S/HSK/2.

再造紙
recycled paper

11.3.6 The identified potential VPs and Assessment Findings are outlined as below:

Viewpoint 1 (VP1): View from Overpass Connecting Tin Yan and Tin Wah Estates (***Figure No. 196529/B&V/LVIA/FIG 5.4*** refers)

This is a medium-range static VP located around 390m east of the Site on an overpass above Tin Wah Road. The overpass is frequently used by local residents of the surrounding residential developments and Light Rail travelers. Given the transient nature of pedestrians using the overpass, the visual sensitivity of the VP is considered *Medium*. Upon completion of the HSK/HT NDA, the planned residential developments in HSK/HT NDA Area 62A would be visible from this VP and appears to be extension of urban development of Tin Shui Wai. Since the Development will create a contrast with the open sky backdrop, significant visual changes for the public viewers are anticipated. However, with consideration of the planned developments which are of similar massing and the proposed mitigation measures, the resultant visual impact created by the Development is considered **moderately adverse** from VP1.

Viewpoint 2 (VP2): View from the Footbridge in front of Tin Shui Wai Hospital (***Figure No. 196529/B&V/LVIA/FIG 5.5*** refers).

11.3.7 This is a long-range static VP located around 600m southeast of the Site, on a footbridge/ cycle path in front of Tin Shui Wai Hospital. The footbridge is used by pedestrians, local residents and cyclist in the area for leisure and recreation, as well as workers travelling to open storage sites on the west side of the nullah. This VP is considered *Medium* due to its distance from the Site. Upon completion of the HSK/HT NDA, the planned residential developments in HSK/HT NDA Area 62 would be visible from this VP. Since the Development will be substantially blocked by the planned developments in the foreground, the impact to visual composition of this VP by the Development is considered insignificant. The overall visual impact created by the Development is considered **negligible** from VP2.

Viewpoint 3 (VP3): View from the Future Open Space Zone to the south of the Site (***Figure No. 196529/B&V/LVIA/FIG 5.2*** refers).

11.3.8 This is a long-range static VP located around 650m south of the Site parallel to Tin Ying Road. Although this area currently serves as open-air vehicle carpark, future development pattern under the HSK OZP at this VP is open space. Thus this VP will be frequented by local residents and workers, which has direct sightlines to the Site. The sensitivity of this VP is considered *Medium*. Upon completion of the HSK/HT NDA, the planned residential developments in HSK/HT NDA Area 61 would be located to the immediate north of this VP. As view to the Development will be entirely obstructed by the planned developments of the HSK/HT NDA in the foreground and not be visible from this VP, it has not been selected for assessment.

Viewpoint 4 (VP4): View from the Bike Path at Ping Ha Road (***Figure No. 196529/B&V/LVIA/FIG 5.6*** refers).

11.3.9 This is a long-range static VP located around 520m south of the Site along Ping Ha Road. This road is frequently used by local workers of the surrounding open storage operations and vehicle drivers. Despite there being direct sightlines to the Site, the transient use (i.e impermanent use by sensitive viewers) of this road, the visual

再造紙
recycled paper

sensitivity of the VP is considered *Low*. Upon completion of the HSK/HT NDA, the planned residential developments in HSK/HT NDA Area 62A and planned GIC developments in HSK/HT Area 62C would be visible from this VP. The planned developments of HSK/HT NDA have changed the existing rural character to urban characters and the Development will only generate limited additional visual obstruction and lead to a minor loss of the open sky view. With the proposed mitigation measures, the resultant visual impact created by the Development is considered **slightly adverse** from VP4.

Viewpoint 5 (VP5): View from the Future Open Space Zone to the Southwest of the Site (***Figure No. 196529/B&V/LVIA/FIG 5.7*** refers).

11.3.10 This is a medium-range static VP located around 300m southwest of the Site. Although this area currently serves as an open-air vehicle carpark, it zoned Open Space under the HSK OZP. Due to the distance of the VP to the Site and the future open space development, the visual sensitivity of this VP is considered *High*. Upon completion of the HSK/HT NDA, the planned residential developments in HSK/HT NDA Area 62A would only be slightly visible behind the trees to the south of the Development. As the form of Development is highly visible above the tree canopy, the visual composition will be significantly altered. The Development will also block part of the open sky and lead to apparent loss in visual openness. Overall, the effect of visual change is considered substantial. With the proposed mitigation measures, the resultant visual impact created by the Development is still considered **significantly adverse** from VP5.

Viewpoint 6 (VP6): View from the Entrance of Sha Kong Wai Temple (***Figure No. 196529/B&V/LVIA/FIG 5.8*** refers)

11.3.11 This is a short-range static VP located around 280m northwest of the Site within Sha Kong Wai Village. This VP is situated in front of the Entrance Gate of Sha Kong Wai (Grade 3 Historic Building) and a communal space in SKW village that contains seating around a pond. Due to the distance of the VP to the Site, the visual sensitivity of this VP is considered *High*. Upon completion of the HSK/HT NDA, the planned residential developments in HSK/HT NDA Area 62A would be slightly visible from this VP and form an urban back drop at this VP. Although the height and massing of the Development is not incompatible with the existing PRH and planned developments in HSK/HT NDA in the background, the Development will significantly obstruct the view towards the open sky and degrades the condition, quality and character of visual resources within this VP due to the close proximity. With the proposed mitigation measures, the resultant visual impact created by the Development is still considered **significantly adverse** from VP6.

Viewpoint 7 (VP7): View from the Tin Shui Wai Hill Hiking Trail (***Figure No. 196529/B&V/LVIA/FIG 5.9*** refers).

11.3.12 This is a long-range static VP located around 700m north of the Site on Tin Shui Wai Hill. This VP is frequented by hikers, visitors to the Wan Fau Sin Koon (雲浮仙觀) and grave sweepers. Although this VP is located far away from the Site, the visual sensitivity of the VP is considered *High* due to the leisure use of this VP and the direct

sightlines to the Site. Upon completion of the HSK/HT NDA, the planned developments in HSK/HT NDA would be visible from this VP and change the existing rural character to a vastly developed townscape. The development will only contribute to part of the visual obstruction, since the planned developments in HSK/HT NDA will also obstruct the open sky and the ridgeline backdrop. A majority of views towards the open sky and ridgeline are unaffected. Thus, the visual change is moderate. With the proposed mitigation measures, the resultant visual impact created by the Development is still considered **moderately adverse** from VP7.

Viewpoint 8 (VP8): View from the Open Space Zone near the North of the Site (***Figure No. 196529/B&V/LVIA/FIG 5.3*** refers).

11.3.13 This is a long-range static VP located around 640m north of the Site within an Open Space zone under the Approved Tin Shui Wai Outline Zoning Plan No. S/TSW/14. This area currently serves as open-air carparks with some landscape features such as ponds and plantation. Since the VP is situated in an Open Space zone, but located at a fair distance from the Site, the visual sensitivity of the VP is considered *Medium*. As the Development is not visible from this VP, it has not been selected for assessment.

Viewpoint 9 (VP9): View from along the promenade in front of Tin Yan Estate (***Figure No. 196529/B&V/LVIA/FIG 5.10*** refers).

11.3.14 This is a medium-range static VP located around 360m northeast of the Site along the promenade in front of Tin Yan Estate. This VP is frequented by local residents. As this VP has direct sightlines to the Site and is in proximity to the Site, the visual sensitivity of the VP is considered *High*. Upon completion of the HSK/HT NDA, the planned residential developments in HSK/HT NDA Area 62A would only be merely visible behind the vegetation and have no bearing to visual of the Development. As the Site is currently undeveloped, the Development will induce significant visual obstruction to the open sky view and substantially increase the presence of manmade environment, thus the visual resources within this VP will be degraded. With the proposed mitigation measures, the resultant visual impact created by the Development is still considered **significantly adverse** from VP9.

Recommended Mitigation Measures and Summary of Visual Impact

11.3.15 Mitigation measures recommended for the Landscape Impact Assessment (i.e. Compensatory tree planting, ground level greening, podium level greening and provision of local open space) will also help to mitigate against adverse visual impact in terms of screening/ softening of building edges, creating a more pedestrian scale environment and improving visual amenity. Sensitive façadetreatments can also help to create visual interest.

11.3.16 The resultant visual impact of the Development is summarized in ***Table 11.5*** below.

Table 11.5 – Summary of Resultant Visual Impact

Viewpoints Assessed	Visual Sensitivity	Resultant Visual Impact compared to existing context
VP1: View from Overpass Connecting Tin Yan and Tin Wah Estates	Medium	Moderately Adverse
VP 2: View from the Footbridge in front of Tin Shui Wai Hospital	Medium	Negligible
VP 3: View from Future Open Space Zone to the south of the Site	Medium	Negligible (Site not visible)
VP 4: View from the Bike Path at Ping Ha Road	Low	Slightly Adverse
VP 5: View from Future Open Space Zone to the Southwest of the Site	High	Significantly Adverse
VP6: View from the Entrance of Sha Kong Wai Temple	High	Significantly Adverse
VP 7: View from the Tin Shui Wai Hill Hiking Trail	High	Moderately Adverse
VP 8: View from Future Open Space Zone to the North of the Site	Medium	Negligible (Site not visible)
VP 9: View from Promenade in front of Tin Yan Estate	High	Significantly Adverse

11.4 Tree Survey

11.4.1 A board bush tree survey (in form of tree group survey) was conducted within the survey area covered the Site within the Site boundary. The tree survey plan is shown in ***Figure No. 196529/B&V/TS/001*** and the preliminary tree treatment plan is shown in ***Figure No. 196529/B&V/TS/002***. The estimated tree abundances and Preliminary Tree Treatment Proposal are presented in ***Table 11.6*** and ***11.7*** respectively.

Table 11.6 Summary of Estimated Tree Abundances

Tree Group	Estimated Quantity of Trees	Tree Group	Estimated Quantity of Trees
TG01	7	TG31	1
TG02	42	TG32	3
TG03	19	TG33	12
TG04	29	TG34	6
TG05	9	TG35	3
TG06	29	TG36	6
TG07	14	TG37	6
TG08	3	TG38	11
TG09	3	TG39	8

再造紙 recycled paper

Tree Group	Estimated Quantity of Trees	Tree Group	Estimated Quantity of Trees
TG10	48	TG40	31
TG11	5	TG41	12
TG12	7	TG42	10
TG13	10	TG43	10
TG14	13	TG44	3
TG15	31	TG45	3
TG16	72	TG46	11
TG17	25	TG47	15
TG18	19	TG48	32
TG19	23	TG49	10
TG20	10	TG50	9
TG21	11	TG51	34
TG22	8	TG52	7
TG23	3	TG53	3
TG24	4	TG54	6
TG25	3		
TG26	9		
TG27	2		
TG28	2		
TG29	2		
TG30	10		
Total: 724			

Table 11.7 - Summary of Preliminary Tree Treatment Proposal

Retain	Transplant	Fell	Total
187 *	**92**	**445**	**724**

Note * among the total 187 trees, 25 trees are located within the proposed works limit; while the other 162 trees located offsite at the 10m offset areas.

11.4.2 A total of 34 species were recorded and all of them are common plant species. No species of particular conservation status were identified.

11.4.3 Neither Old and Valuable Trees (OVTs) nor trees of particular interest were found.

11.4.4 A total of 187 trees are considered able to be retained in-situ by CEDD (via contractor), which covers 25 on-site trees and 162 off-site trees.

11.4.5 Total 537 trees are found in direct and unavoidable conflict with the proposed works. Of which 92 trees are considered suitable for transplanting. Therefore, a total of 445 trees would require felling in overall.

11.5 Conclusion

Landscape Impact Assessment

11.5.1 Given the need for extensive site formation works, road upgrading works and the existing undeveloped nature of the Site, change and disturbance to the existing landscapes is unavoidable. About 537 trees will be affected (445 trees to be felled and 92 trees to be transplanted) by the Development and the Proposed Infrastructural

Works. Nonetheless, given the generally low to medium sensitivity of landscapes within the Site, few adverse landscape impacts are anticipated by the Development. Mitigation measures (including retaining 187 existing trees, compensatory planting of 354 trees, ground level planting, podium-level greening and provision of local open space) are proposed to mitigate all disturbances to the identified LRs and LCAs. In addition, given a large portion of the Site is currently paved area for open-air car park, the Development can provide beneficial landscape impact through opportunities for increased planting and greening. Greenery area provided (i.e. 1,900m^2 at Phase 1 and 3,932m^2 at Phase 2, both subject to review at later stages) would be not less than 20% of the Site Area of the Housing Site. Also, provision of local open space provided (i.e. 5,253m^2 at Phase 1 and 7,594m^2 at Phase 2) would meet the requirement of 1m^2 per person standard as stipulated in the HKPSG.

Visual Impact Assessment

The results of the VIA indicate that due to the undeveloped nature of the Site and rural surroundings to the west and south, the proposed high-density development will create some slightly to significantly adverse visual impacts. However, some dense clusters of high-rise PRH can be found in the east of the Development across Tin Shui Wai Nullah that are similar in character. Areas to the south of the Site are also planned for high density residential communities under the development of Hung Shui Kiu/Ha Tsuen New Development Area which will change the overall built environmental context. Mitigation measures such as planting, greening, building form and disposition, façade treatment and stepped building heights can be further considered at the technical feasibility/ detailed-design stage to mitigate residual visual impacts.

再造紙
recycled paper

12 PRELIMINARY LAND CONTAMINATION AND REMEDIATION STUDY

12.1 Introduction

12.1.1 The objectives of the Preliminary Land Contamination and Remediation Study (LCRS) are to:

- Prepare the Preliminary Contamination Assessment Plan (PCAP) as the first step to assess the contamination status and identify possible remedial measures; and
- Evaluate and assess the potential land contamination impacts due to previous land uses and the existing operations.

12.1.2 Findings and recommendation of the LCRS are presented in Preliminary Land Contamination and Remediation Study. A summary of various aspects of the review are presented in the sections below.

12.2 Legislation and Guidelines

12.2.1 The preliminary land contamination and remediation study has been prepared following the guidance and steps outlined in Environmental Protection Department (EPD) published guidelines listed below:

- Guidance Manual for Use of Risk-Based Remediation Goals for Contaminated Land Management (GM), dated December 2007;
- Guidance Note for Contaminated Land Assessment and Remediation, dated 15 August 2007;
- Practice Guide for Investigation and Remediation of Contaminated Land, dated August 2011;
- Guidelines for evaluating and assessing potential land contamination issued stated in Sections 3.1 and 3.2 of Annex 19 of the TM on Environmental Impact Assessment Process, if applicable.

12.3 Identification of Land Contamination Issues

12.3.1 The site appraisal which comprises desktop review and site inspections was conducted to identify the potentially contaminated land uses that may pose adverse impact to the Development. For the desktop review, the following information was reviewed:

- Aerial photographs;
- Past site investigation (SI) records;
- Records on dangerous goods, chemical wastes, chemical spillage incidents from relevant government departments;

12.3.2 The site inspection was conducted in November 2017 and May 2019 to identify any sources of land contamination or hotspots and review the site conditions. There are no potential sources of contamination in the southern and eastern portion of the

assessment area (comprising public access road, natural vegetation, slope area with natural vegetation, drainage and sewerage system) and the northeastern portion of the assessment area (comprising the private recreational area). Potential land contamination at the southern, eastern and northwestern portion of the assessment area is unlikely to occur.

12.4 Site Inspection and Observation

12.4.1 Site inspections covering the Assessment Area was conducted in November 2017 and May 2019 to verify existing land uses and to identify potential sources and signs of contamination, such as presence of industrial activities, chemicals, oil and hazardous waste handling and storage locations, bulk storage tanks, sumps, pipelines, staining, decolouration, abnormal odours, distressed vegetation, etc.

Western Portion of the Site

12.4.2 Two open car parks paved with concrete for trucks and private cars (Open Carparks 1 & 2) were observed at the western portion of the Site. In these two open car parks, no aboveground/underground storage tank and pipe works, chemical storage, chemical waste storage and dangerous goods store were observed. Also, no other signs of obvious/ suspected contamination such as abnormal odour and/ or distress vegetation were observed, except two (2) oil stains were notified at the Open Car Park 2.

12.4.3 To be conservative, the western portion of the Site with previous and/or current land uses as open car parks is proposed to be included in the Proposed SI Area.

Northern Portion of the Site

12.4.4 Small part of a private barbecue site – Tin Shui Wai Greenfield Garden was observed at the northern portion of the Site. This small part of the barbecue site was paved with concrete in good condition. No aboveground/underground storage tank and pipe works, chemical storage, chemical waste storage and dangerous goods store were observed within this small part of the barbecue site. Also, no other signs of obvious/ suspected contamination such as abnormal odour, oil stains and distress vegetation were observed within this small part of the barbecue site.

12.4.5 Therefore, northern portion is proposed to exclude this part of the Site from the Proposed SI Area.

Remaining Portions of the Site

12.4.6 Public area, vacant lands and slopes with natural vegetation and drainage and sewerage system were observed at the remaining portions of the Site. Moreover, it was observed that a public access road, which cut through the Site along a southeast-northwest direction, were paved with concrete and in a good condition.

12.4.7 During the site inspections at the remaining portions of the Site, no aboveground/underground storage tank and pipe works, chemical storage, chemical waste storage and dangerous goods store were observed. Also, no other signs of obvious/ suspected contamination such as abnormal odour, oil stains and distress vegetation were observed.

12.4.8 Therefore, the remaining portions of the Site are excluded from the Proposed SI Area.

Areas Accommodating Associated Infrastructure Works

12.4.9 During the site inspections at the areas accommodating the associated infrastructure works, it was observed that the public access roads are paved with concrete in a good condition (i.e. no crack observed) and there were no signs of obvious/suspected contamination such as oil staining, abnormal odour, distress vegetation, dangerous goods storages and/or chemical waste storage.

12.4.10 Therefore, the areas accommodating the associated infrastructure works are excluded from the Proposed SI Area.

Summary

12.4.11 The summary of the site appraisal of the Assessment Area is presented in ***Table 12.1***.

Table 12.1 – Summary of the Site Appraisal of the Assessment Area

Historical Land Use	Current Land Use (1)	Approximate Area (m^2)	Potentially Contaminated (Yes/No)	Potential COCs (2), (3)
Western Portion of the Site				
Farmlands/ fish ponds in 1993 and before, then open car parks gradually developed	Two open car parks were observed. Two oil stains at the Open Car Park 2 were observed.	18,600	Yes	M & HC
Northern Portion of the Site				
Farmlands/ fish pond in 1998 and before, then fish pond was reclaimed in 1999, finally a private barbecue site has been developed since 2012.	Private barbecue site - Tin Shui Wai Greenfield Garden	1,980	No	N/A
Remaining Portions of the Site				
Farmlands/ fish pond in 1993 and before, then became public area, vacant lands with natural vegetation and construction sites for drainage and sewerage system or adjacent public roads and site office with temporary storage for construction material (e.g. concrete pipeline)	Public area, vacant lands, slopes with natural vegetation, drainage and sewerage system, public access roads	16,600	No	N/A
Areas Accommodating Associated Infrastructure Works				
Farmlands/ fish pond in 1972 and before, then the public access road and public area were constructed	Public access roads	16,500	No	N/A

Note:
(1) The current land use was determined based on the current aerial photos and site visit.
(2) Based on the historical and current land use, the potential of COCs are tentatively proposed for the respective area only, but subject to be review in the future site re-appraisal after land resumption.
(3) M-Metals (including Antimony, Arsenic, Barium, Cadmium, Chromium III, Chromium VI, Cobalt, Copper, Lead, Manganese, Mercury, Molybdenum, Nickel, Tin and Zinc etc.) HC-Hydrocarbons (including Petroleum Carbon Range (PCRS), VOCs, SVOCs etc.

12.5 Proposed Site Investigation

12.5.1 The proposed site investigation in regular grid pattern for land contamination within the Proposed SI Area has been determined based on recommendations given in the PG. With reference to the PG, a Proposed SI Area of 18,600m^2 should adopt the regular grid pattern with square grid size of 24m x 24m and a minimum of thirty-one (31)

sampling locations. Base on the site situation, thirty-six (36) sampling locations in regular grid pattern, namely BH1 to BH36, are preliminarily proposed to cover the whole Proposed SI Area.

12.5.2 Two (2) additional hotspots (BH37 and BH38) will be preliminarily proposed at the two identified oil stains at the Open Car Park 2.

12.5.3 Thirty-eight (38) preliminary sampling locations (BH1to BH38) including the regular grid pattern locations and hotspots are preliminary proposed as illustrate in ***Figure No. 196529/B&V/PER/FIG 8.3***.

12.5.4 The exact sampling locations are subjected to fine adjustment due to specific site conditions/constraints (e.g. presence of underground utilities, foundations, not enough head room etc.) during the actual SI. Any changes of actual SI locations will be detailed in the Contamination Assessment Report (CAR). CAR will be prepared to present the findings of the future SI and laboratory analytical results. The analytical results will be compared against the RBRGs standards.

12.5.5 Contamination Assessment Report (CAR), Remediation Action Plan (RAP) and Remediation Report (RR) (if necessary) should also be prepared and submitted to EPD for agreement and remediation (if necessary) should be finished prior to the commencement of the Development on the potential land contamination area. The potential land contamination area shall only be considered suitable for further development after completion of the remediation works according to the Remediation Action Plan approved by EPD.

再造紙
recycled paper

13 PRELIMINARY AIR VENTILATION ASSESSMENT

13.1 Introduction

13.1.1 In order to demonstrate that the Development will not induce undesirable impact to various air ventilation aspects and the surrounding pedestrian wind environment, an Air Ventilation Assessment in the form of Expert Evaluation (AVA-EE) is carried out.

13.2 Methodology

13.2.1 As the preliminary air ventilation assessment is conducted in the form of expert evaluation, it is considered acceptable to use the Regional Atmospheric Modelling System (RAMS) data for site wind availability as a starting point. The RAMS data of the grid (043, 074) extracted from the Site Wind Availability Data of Planning Department's web site are used for the assessment.

13.3 Existing Condition

13.3.1 According to the urban design framework under the P&E Study for HSK NDA completed in June 2017, the annual prevailing winds for the NDA are mainly from E, ENE and N, while the summer prevailing winds are mainly from E, S and SW at the middle atmospheric boundary layers (i.e. 200m).

13.3.2 The terrain in the vicinity of the Subject Site is relatively flat. The closest hilly terrain is around 1 km far from the Subject Site in the southwest direction near Fung Kong Tsuen. The existing topography of the Subject Site is around +4.5mPD. Given the large distance between the Subject Site and the hilly terrains, the sheltering effect on the south west winds by the hills will be limited. Therefore, the wind availability will not be influenced by the slightly sloped terrains. ***Figure No. 196529/B&V/AVA/2.2*** indicates the topography features for the Subject Site.

13.3.3 Existing developments include residential buildings at Sha Kong Wai, Ngau Hom, Sha Kong Wai Tsai, Tin Yan Estate, Tin Wah Estate, Tin Fu Court and Tin Chung Court. The buildings at Sha Kong Wai and Ngau Hom are low-rise developments while others are high-rise developments.

13.3.4 As the residential buildings at Tin Yan Estate, Tin Wah Estate, Tin Fu Court and Tin Chung Court are high-rise developments, it is expected that they are possibly imposing ventilation impact on the Subject Site under NE, E and ESE wind conditions.

13.3.5 ***Figure Nos. 196529/B&V/AVA/2.3 and 2.4*** indicate the Site, the surrounding developments and the pedestrian wind flow under the annual and summer conditions under the existing site condition.

13.4 Air Ventilation Assessment

13.4.1 Based on the wind data from the Regional Atmospheric Modelling System (RAMS) and Experimental Site Wind Availability Study (SWAS), the annual prevailing winds come from NNE, NE, ENE, N and E directions. While in summer condition, the prevailing winds mainly come from E, SSE, S, SW and SSW directions.

13.4.2 Under wind flow from N, NNE, NE, E and ENE portions, the presence of high-rise buildings clusters to the south of the Site such as Tin Yan Estate and Tin Fu Court will impose wind blockage impact and thus affect the E and ENE wind availability reaching the Site and the downstream area. The Proposed Development would further obstruct E and ENE wind from penetrating into its downstream areas such as the villages in Sha Kong Wai Tsai. It may create a wind shadow in the immediate leeward regions and hence reduce the wind availability of the downstream areas. In addition, Block 1 and Block 2 of the Site will also obstruct a portion of the prevailing E wind towards Block 3, Block 4 and proposed ancillary facilities/ car park respectively in the downstream and hence affect the air ventilation performance in surrounding areas. The decline of wind environment at the downstream areas would be expected. As shown in ***Figure No. 196529/B&V/AVA/3.1***, there are building setbacks at pedestrian level from Tin Wah Road for the proposed ancillary facilities/ car park and Block 1 allowing the unfavourable to be reduced. Moreover, as shown in ***Figure No. 196529/B&V/AVA/3.2,*** the proposed development is located at the north side of the HSK NDA. The annual N prevailing winds to HSK NDA will be affected by the proposed development morphology. Building separations would facilitate some portion of N wind to penetrate through the building blocks within the Site. Furthermore, the high-level N, NNE and NE wind would penetrate atop the low-rise proposed ancillary facilities/ car park of the Subject Site and reach the downstream area at Planned 62C in HSKNDA. One wind corridor along the realigned Access Road is located between Block 2 and Block 5 and between Block 1 and Block 3. These effective building separations would enhance the penetration of wind through the Subject Site under NNE and NE wind condition. Since proposed ancillary facilities/ car park building a low-rise structure, some high level of NNE and NE wind can flow atop the proposed ancillary facilities/ car park building and reach the downstream area of HSK NDA. Therefore, the unfavourable impact in terms of wind environment on the surrounding areas is expected to be reduced.

13.4.3 Under wind flow from SSE, S, SW and SSW directions, the summer S, SW and SSW prevailing winds will be affected by the building morphology of the planned HSK NDA located to the south and southwest of the Subject Site. Tin Shui Wai Nullah and the Proposed Road D1 under the planned HSK NDA will act as wind corridors to allow effective penetration of summer wind. ***Figure No. 196529/B&V/AVA/3.3*** illustrates the prevailing wind flow from SSE direction at the Subject Site. The proposed high-rise residential buildings at HSK NDA will obstruct a portion of the SSE prevailing wind from reaching the downstream areas to the west and northwest of the Subject Site and Sha Kong Wai Tsai. The proposed high-rise residential buildings within the Site will further obstruct the SSE prevailing winds towards the northwest of the Site including Sha Kong Wai Tsai and Sha Kong Wai. When the prevailing wind comes from the SW and SSW direction, as shown in ***Figure No. 196529/B&V/AVA/3.4***, the Proposed Development will block some portion of wind on air ventilation performance. The building setback of from Tin Ying Road near Block 2 and near the proposed ancillary facilities/ car park are proposed, which allow the incoming SSE winds flow to the downstream areas such as Sha Kong Wai Tsai, Sha Kong Wai and Tin Shui Wai Greenfield Garden, and thus reducing the potential air ventilation impact from the Proposed Development. Furthermore, the proposed ancillary facilities/ car

再造紙
recycled paper

park will be a low-rise building and some portion of the high-level SSE wind can flow atop the building and reach Sha Kong Wai Tsai and its further downstream areas. As shown in ***Figure No. 196529/B&V/AVA/3.5,*** since there is a planned HSK NDA at the south and southwest of the Subject Site, the summer S prevailing winds will be affected by the building morphology. The Subject Site and its downstream areas would be under the wind shadow area and a decline of wind environment at the Subject Site and its downstream areas would be expected. With the Proposed Development, the proposed high-rise residential buildings Block 1, Block 3 and proposed ancillary facilities/ car park building will further obstruct a portion of S prevailing wind from reaching the downstream areas including Block 4 and Block 5 and the downstream areas in Sha Kong Wai. The change of impact to the downstream areas in Sha Kong Wai Tsai in comparison to the without Proposed Development condition, where prevailing SSE , S, SW and SSW wind is already limited due to the development of HSK NDA, is anticipated to be minimal. It is expected that site wind availability of the above downstream areas including Sha Kong Wai may be reduced.

13.5 Building Design Features

13.5.1 The details of the proposed mitigation measures which has been adopted in the Proposed Development for enhancing the air ventilation in the Site and the surrounding areas are summarised below and illustrated in ***Figure Nos. 196529/B&V/AVA/3.1 to 3.5***:

(i) Building setback of at least 14 and 10m width, aligning in approximately along E-W direction, is proposed to be incorporated near Block 5 and Block 1. This separation facilitates wind penetration mainly from E direction to minimise adverse air ventilation impact to its downstream areas including Phase 2 development and the adjacent Sha Kong Wai Tsai.

(ii) Building setback of at least 10m to 22m in width, aligning in approximately along NE- SW direction, is proposed to be incorporated along eastern and western boundary to facilitate wind penetration mainly from NNE, NE, SW and SSW direction to minimise adverse air ventilation impact to its downstream areas in Sha Kong Wai Tsai and planned HSK NDA development.

(iii) Building separation of at least 25m in width, aligning in approximately along NE-SW direction, is proposed to be incorporated between Block 2 and Block 5, between Block 1 and Block 3. These separations facilitate wind penetration mainly from NNE, NE, SW and SSW direction to minimise adverse air ventilation impact to its surrounding areas.

(iv) 10m and 16m in width building setback near Block 2 and proposed ancillary facilities/ car park from the boundary of the Site to facilitate wind penetration mainly from N, SSE and S quadrants to minimise adverse air ventilation impact to its surrounding areas.

(v) To further enhance the surrounding wind environment, quantitative AVA should be carried out at the detailed design stage to demonstrate that the wind performance of the future scheme is no worse off than the current scheme and for scheme design optimization.

13.6 Summary

13.6.1 A qualitative assessment of the wind performance of the proposed public housing development in Yuen Long North has been carried out. The findings of this AVA-EE, the annual prevailing wind comes from N, NNE, NE, E and ENE directions while the summer prevailing wind comes from S, SSE, SW and SSW directions. After considering the site constraints and potential environmental impacts upon the Subject Site, the layout of the Proposed Development has carefully considered the good design in air ventilation aspect. After considering the existing topography, the location of the existing built areas and provision of mitigation measures, it is considered that the Proposed Development will not have significant adverse impact to the surrounding environment. However, the Proposed 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) in alignment with the prevailing wind, to facilitate penetration of wind across the Site.

13.6.2 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, assess the effectiveness of the proposed mitigation measures to optimise the building arrangement with proposed further mitigation measures as well as demonstrate the wind performance of the future scheme no worse off than the current scheme and optimize scheme design. The current qualitative AVA is subject to change upon detail layout development. It is recommended that the design or layout options to be studied in the detailed design stage shall also take into account the integrity of the Green Spine indicated in the HSK & HT OZP, if appropriate.

再造紙 recycled paper

14 PRELIMINARY LAND REQUIREMENT STUDY

14.1 Introduction

14.1.1 The objectives of the Preliminary Land Requirement Study (LRS) are to:

- Identify the need for any resumption, creation of easements, rights of temporary occupation, closure of road, clearance and re-provisioning that may be required for the development;
- Assess the need of clearance for the area of land such as crops, livestock and fish ponds, graves, kam taps, urns or shrines;
- Examine the existing and proposed buildings, facilities and installation that may be affected by the Project;
- Identify the problem areas and structure which may cause delays of the development;
- Carry out a review on short term tenancy, Government / quasi-government facilities including temporary and permanent land allocation within the study area;
- Identify the suitable locations for works areas and site offices for contractors and resident site staff;
- Examine the feature with cultural heritage, conservation value or "Fung Shui" impact;
- Review the site boundaries and identify the need for the adjustment/rationalization of the site boundaries and propose the refined boundaries of the Site;
- Conduct a development layout plan of the proposed site formation and infrastructural works on the land status plans at 1:1000 scale; and
- Identify any old and valuable trees ('the OVT') or potential registrable will be affected or within the Project boundary.

14.1.2 Findings and recommendation of the LRS are presented in Preliminary Land Requirement Study. A summary of various aspects of the review are presented in the sections below.

14.2 Land Requirement

Land Information

14.2.1 The required infrastructure for supporting the Development will generally comprise construction of new access road connecting the Development to the existing road networks and widening the existing road to cope with the anticipated increase of traffic demand arising from the Development, as well as the provision of necessary services such as water mains, sewers and storm drains and utilities by other leading to/from the Development.

14.2.2 The land requirement plans for the Project are shown in ***Figure Nos. 196529/B&V/LRS/002 to 006.***

14.2.3 The plans contain the proposed boundaries of the works site and works area, together with the topographical details and land status details obtained from Civil Engineering and Development Department and Lands Department (LandsD) in August 2017 and October 2017 respectively.

Short Term Tenancies, Government Land Licences and Government Land Allocation Affected

14.2.4 There is no short term tenancy identified within the works area.

14.2.5 Due to the need of upgrading the existing sewer pipes near Tin Wah Road Sewerage Pumping Station, the corresponding Government Land Allocation, GLA-TSW 69 will be affected by the infrastructural work.

14.2.6 The government land allocation to be affected by the proposed site formation and associated infrastructural works are provided in ***Table 14.1***. The location of affected government land affected is shown in ***Figure No. 196529/B&V/LRS/007***.

Table 14.1 – Short Term Tenancies and Government Land Allocations Affected

Land Ownership	Status	Number	Approximate Area (m^2)
Government	Short Term Tenancy	-	-
Government	Unallocated Government Land	-	39,406
Government	Government Land Allocation	1	710
	Total	-	40,116

Cultural Heritage, Conservation Value or "Fung Shui" Impact

14.2.7 No feature with cultural heritage, conservation value or "Fung Shui" impact from the works area was identified.

Private Land and Permits of Private Land Affected

14.2.8 Total 14 of private lots will be affected by the proposed site formation and associated infrastructural works, with a total area of about 1.46 ha.

14.2.9 There is no permit of private land to be affected by the Development.

Structures / Buildings Affected

14.2.10 According to the 1:1000 land status plans from Lands Department and initial site inspection, there is no domestic structure/building within the Site which will be affected by the Development.

14.2.11 There is no open storage and rural industrial structures within the Site area.

14.2.12 According to the topographical details and land status details obtained from LandsD in October 2017 and initial site inspection, there are 11 temporary structures, in the vicinity of the works area. The locations of the non-domestic structure/building are shown in ***Figure No. 196529/B&V/LRS/010.***

Graves, Urns (Kam Taps) and Temples / Shrines Affected

14.2.13 There is no designated burial ground falls, grave and urn (kam taps) identified, temple/shrine and other built heritage resource within the Site.

Crops, Livestock Farms and Fish Ponds Affected

14.2.14 There is no crop, livestock farm and fish pond identified within the Site.

Problematic Areas or Structures

14.2.15 No problematic areas or structures, which may cause delays, were identified within the works area preliminarily.

15 PRELIMINARY SUSTAINABILITY ASSEMSSMENT

15.1 Introduction

15.1.1 The objectives of the Preliminary Sustainability Assessment (SA) are to:

- Use the Computer-Aided Sustainability Evaluation Tool (CASET) as evaluation framework to evaluate and assess the infrastructure;
- Devise and modify the set of guiding principles, indicators and evaluation criteria to assess / update the sustainability implications;
- Conduct assessment on cost effectiveness and possible environmental impacts during construction and operational stages;
- Conduct assessment on the social implications to the local community as well as to Hong Kong at large;
- Evaluate and analyze the sustainability implications; and
- Identify the key sustainability issues.

15.1.2 Findings and recommendation of the SA are presented in Preliminary Sustainability Assessment. A summary of various aspects of the review are presented in the sections below.

15.2 Approach for Sustainability Assessment

15.2.1 An application namely "Computer-Aided Sustainability Evaluation Tool (the CASET) Version 4.1" developed by Planning Department is adopted as an evaluation framework to assess the sustainability implications of the Development in a structured manner.

15.2.2 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.

15.2.3 A list of characterisation includes:

- Art / Culture / Recreation / Entertainment;
- Conservation, Environment and Agriculture;
- Demographics;
- Economics;
- Education;

再造紙 recycled paper

- Energy;
- Health and Living Conditions;
- Housing;
- Industry;
- Land and Infrastructure;
- Transport; and
- Waste and Waste Water.

15.3 Scenario

15.3.1 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 infrastructural works under this Project.

15.3.2 The Site is located within "R(C)" and "GB" zones in approved Lau Fau Shan & Tsim Bei Tsui Outline Zoning Plan No. S/YL-LFS/9 and "G/IC" zone with a minor portion on the area shown as "Road" in approved Tin Shui Wai Outline Zoning Plan No. S/TSW/14. Rezoning is required prior to the implementation of the Development.

15.4 Results of the Sustainability Assessment

15.4.1 The computer programme - CASET is adopted as evaluation framework to assess the sustainability implications of the Development. The CASET parameters have been assessed qualitatively and quantitatively where possible. The Sustainability Assessment results are summarized in **Table 15.1**.

再造紙
recycled paper

Table 15.1 – Summary of Anticipated Impacts for each Sustainability Parameter

Economic / Environmental Parameters	Qualitative Changes	Expected Range of Change in Conditions
Carbon Dioxide Emitted Per Year	Increase	Very Small Deterioration
Construction Waste	Increase	Small Deterioration
Cost-benefit	Increase	Very Small Improvement
Criteria Air Pollutants	Increase	Small Deterioration
Eco-value Habitats	Remain	-
Energy Consumption	Increase	Very Small Deterioration
Excessive Noise	Remain	-
Fixed Capital	Increase	Small Improvement
Freight Costs	Increase	Small Improvement
Job Creation/ Loss	Increase	Small Improvement
Landfill Capacity	Decrease	Very Small Deterioration
Municipal Solid Waste	Remain	-
Open Space Shortfall	Increase	Small Deterioration
Protected and Managed Habitats	Remain	-
Significant Landscape Features (Area)	Decrease	Small Deterioration
Travel Speed	Remain	-

15.4.2 The Sustainability Assessment has indicated that the proposed Development will bring about improvements to the economy and housing issues. The improvements made on the Project site are categorized as part of infrastructure upgrades and can be considered as gross domestic fixed capital investment. Meanwhile, it creates job opportunities for technical and craft workers during construction stage. Moreover, future government public housing development at the Site would have positive impacts on adequate housing, housing waiting time and living space.

15.4.3 The construction of engineering works would inevitably generate the construction waste and have limited impact on environment but due to the size of the Development and possible mitigation measures, it is considered the impacts will be relatively small.

15.4.4 Overall, the benefits produced by the Development outweigh the residual negative impacts especially considering the long term. Therefore, with the implementation of the proposed mitigation measures to minimize the negative impacts, the Development is considered sustainable.

16 IMPLEMENTATION PROGRAMME

16.1 Implementation Programme

16.1.1 The milestone dates of the key activities are summarised in ***Table 16.1*** and ***Table 16.2*** below.

Table 16.1 – Phase 1 Development Milestone Dates of Key Activities

	Duration	Start	Completion
Site formation and infrastructural works	21 months	August 2024	April 2026
Delivery of formed lands to HD	-	April 2026	-
Building works by HD	55 months	May 2026	December 2030
Anticipated completion	-	Q4 2030	-

Table 16.2 – Phase 2 Development Milestone Dates of Key Activities

	Duration	Start	Completion
Site formation and infrastructural works	27 months	February 2026	April 2028
Delivery of formed lands to HD	-	April 2028	-
Building works by HD	55 months	May 2028	December 2032
Anticipated completion	-	Q4 2032	-

再造紙 recycled paper

17 CONCLUSION

17.1 General

17.1.1 Final Report summarizes 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.

17.2 Traffic and Transportation

17.2.1 Traffic model and analysis have been undertaken and improvements on road network proposed to minimise the traffic impact induced by the proposal development. The proposed public housing development is technically feasible in traffic and transport terms

17.3 Drainage, Sewerage, Water Supply and Utilities

17.3.1 New provision of infrastructures and upgrading of existing utilities have been proposed to support the Development and mitigate impacts to be induced by the Development. No adverse impact is anticipated with respect to drainage, sewerage, water supply and utilities.

17.4 Geotechnical Assessment and Site Formation

17.4.1 From the current available information, no adverse geological and geotechnical features are observed. The proposed works is considered feasible.

17.4.2 Based on the existing topography at the Development, a site formation scheme is proposed to obtain a balanced cut and fill approach to minimize the export or import of fill materials. It is proposed to form a housing platform with +6.5mPD.

17.5 Environmental, Landscape and Visual, Land contamination and Sustainability

17.5.1 Environmental and planning considerations are reviewed, and preliminary mitigation measures are proposed to minimize adverse impacts as much as practicable. Further liaison with relevant authorities at the detailed design stage is required to confirm proper implementation of mitigation measures.

17.6 Air Ventilation

17.6.1 An expert evaluation of wind performance of the Development is carried out.

17.6.2 According to the findings of this AVA-EE, the annual prevailing winds at the Site area are from the NNE, NE, E directions, whereas the summer prevailing winds at the Site are from SSE, S, SW directions. The block layout is carefully considered incorporating good design practices in air ventilation aspect. After taking into account the existing topography, the location of the existing built areas, planned HSK NDA and provision of mitigation measures, it is considered that the Development would not have adverse air ventilation impacts to surrounding environment.

再造紙 recycled paper

17.7 Land Requirement

17.7.1 Based on the proposed extent of land required for the implementation of the Development, the number and extent of the land uses, facilities and properties that may be affected by the Development has been identified.

17.7.2 It is recommended a Clearance Application Form (CAF) be prepared and submitted in the investigation and detailed design consultancies so as to kick start the process of land resumption / land clearance for the Development. Further liaison with LandsD should be carried out at a later stage.

17.8 Implementation Programme

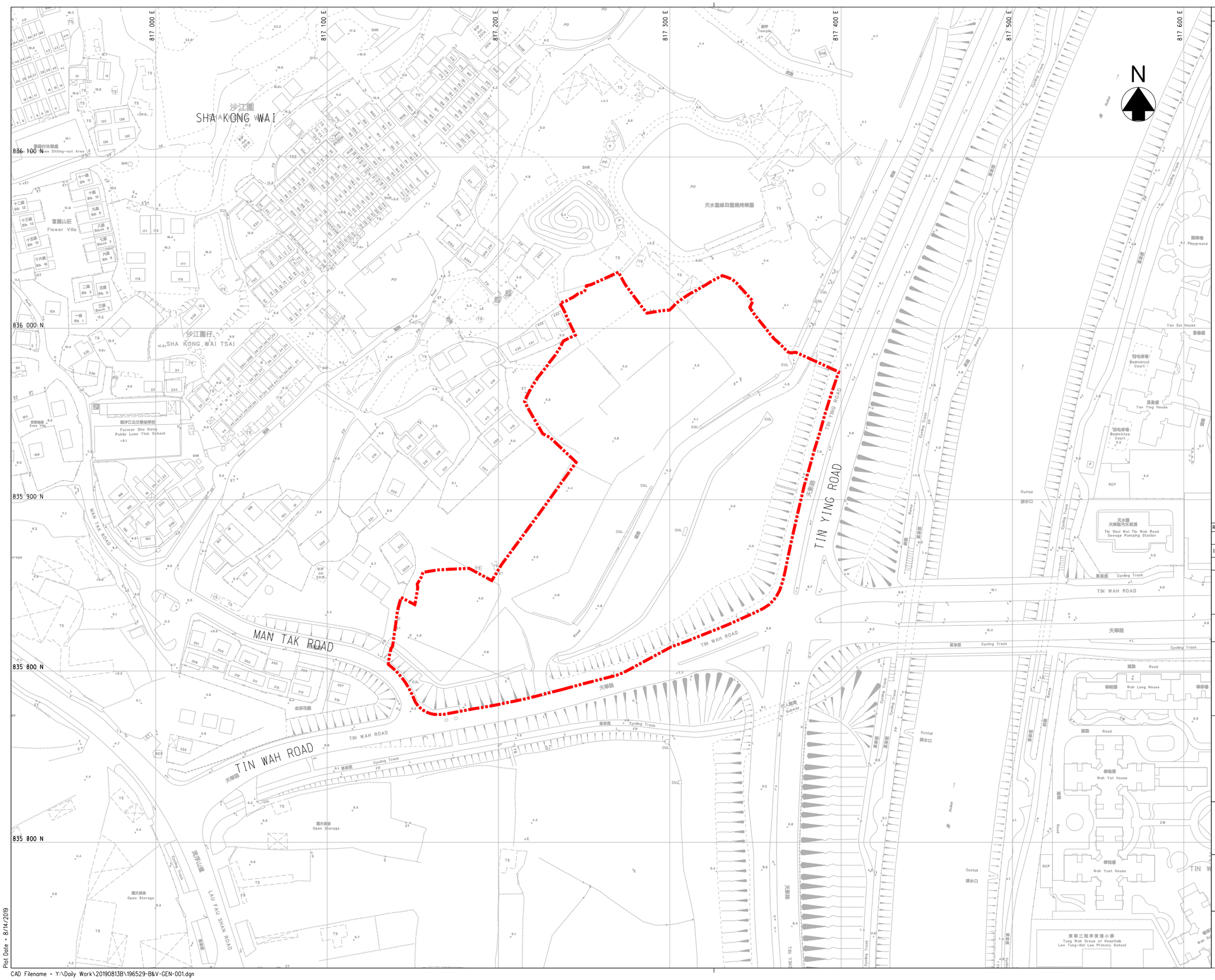
17.8.1 An implementation programme is proposed for Phase 1 and Phase 2 are recommended to be handed over to HD by Q2 2026 and Q2 2028 respectively. The anticipated completion of Phase 1 and Phase 2 Development will be Q4 2030 and Q4 2032 respectively subject to successful land resumption, funding arrangement and procurement of works contract.

END OF TEXT

再造紙
recycled paper

FIGURES

再造紙
recycled paper



© Copyright by Black & Veatch Hong Kong Limited

LEGEND:

SITE BOUNDARY

Revision	Date	Description			Initial
	Designed	Checked	Drawn	Checked	
Initial	FN	LCH	SZ	LGH	
Date	08/17	08/17	08/17	08/17	

Approved

Contract no.

CE 41/2016 (CE)

Contract title

SITE FORMATION AND INFRASTRUCTURAL WORKS FOR PROPOSED PUBLIC HOUSING DEVELOPMENTS IN YUEN LONG NORTH - FEASIBILITY STUDY

Drawing title

SITE LOCATION PLAN

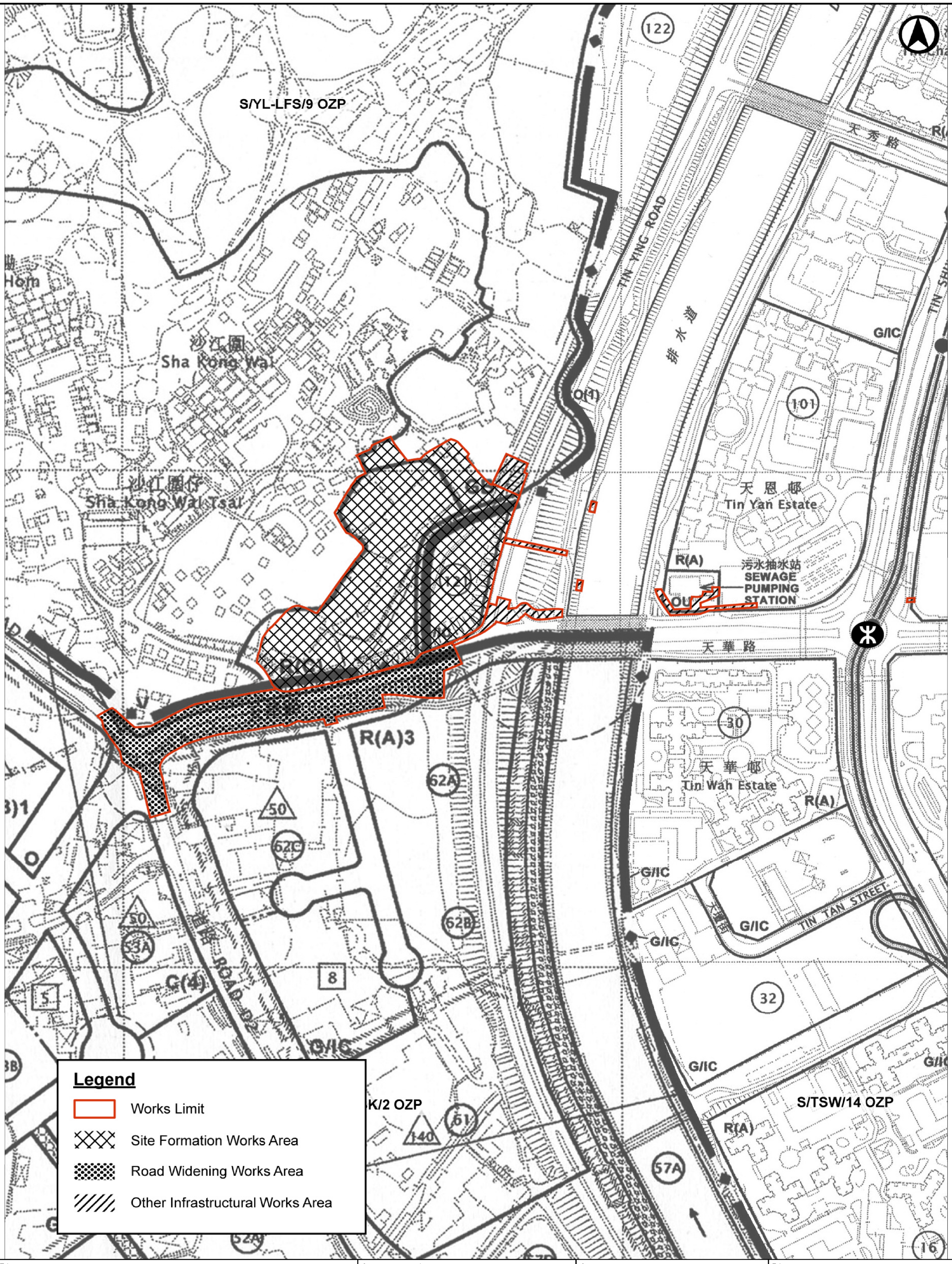
Drawing No.	Scale
196529/B&V/GEN/001	1 : 1000 (A1) 1 : 2000 (A3)

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

BLACK & VEATCH HONG KONG LIMITED
博威工程顧問有限公司

Plot Date = 8/14/2019

CAD Filename = Y:\Daily Work\20190813B\196529-B&V-GEN-001.dgn



Title APPROVED TIN SHUI WAI OZP PLAN NO. S/TSW/14, APPROVED HUNG SHUI KIU AND HA TSUEN OZP PLAN NO. S/HSK/2 AND APPROVED LAU FAU SHAN AND TSIM BEIN TSUI OZP PLAN NO. S/YL-LFS/9 EXTRACT	Contract title SITE FORMATION AND INFRASTRUCTURAL WORKS FOR PROPOSED PUBLIC HOUSING DEVELOPMENTS IN YUEN LONG NORTH - FEASIBILITY STUDY	Contract no. CE 41/2016 (CE)	Figure no. 196529/B&V/GEN/002
		土木工程拓展署 CEDD Civil Engineering and Development Department	Designed: FN; Checked: LCH
		BLACK & VEATCH HONG KONG LIMITED 博威工程顧問有限公司	Date: 11/20; Scale: N.T.S.

Plot date : 11/10/2020 Time : 1:38:05 PM User : you62537

Y:\Daily Work\20201109c\LVIA\196529-B&V-GEN-002.dgn

© Copyright by Black & Veatch Hong Kong Limited

NOTE:

1. LAYOUT SUBJECT TO REVIEW IN SUBSEQUENT DETAILED DESIGN STAGE.

LEGEND:

- PROPOSED HOUSING SITE BOUNDARY/ PHASE BOUNDARY
- DEVELOPEMENT BOUNDARY (FOR SITE FORMATION - PHASE 1 & 2)
- PROPOSED HOUSING SITE PHASE 1
- PROPOSED HOUSING SITE PHASE 2
- PROPOSED RETAINING WALL
- PROPOSED VEHICULAR ENTRANCE
- PROPOSED ANCILLARY FACILITIES/ CAR PARK (INDICATIVE)
- PROPOSED DRAINAGE RESERVE

Revision	Date	Description			Initial
	Designed	Checked	Drawn	Checked	
Initial	FN	LCH	SZ	LGH	
Date	12/17	12/17	12/17	12/17	

Approved

Contract no.

CE 41/2016 (CE)

Contract title

SITE FORMATION AND INFRASTRUCTURAL WORKS FOR PROPOSED PUBLIC HOUSING DEVELOPMENTS IN YUEN LONG NORTH - FEASIBILITY STUDY

Drawing title

MASTER LAYOUT PLAN OF SUBJECT SITE

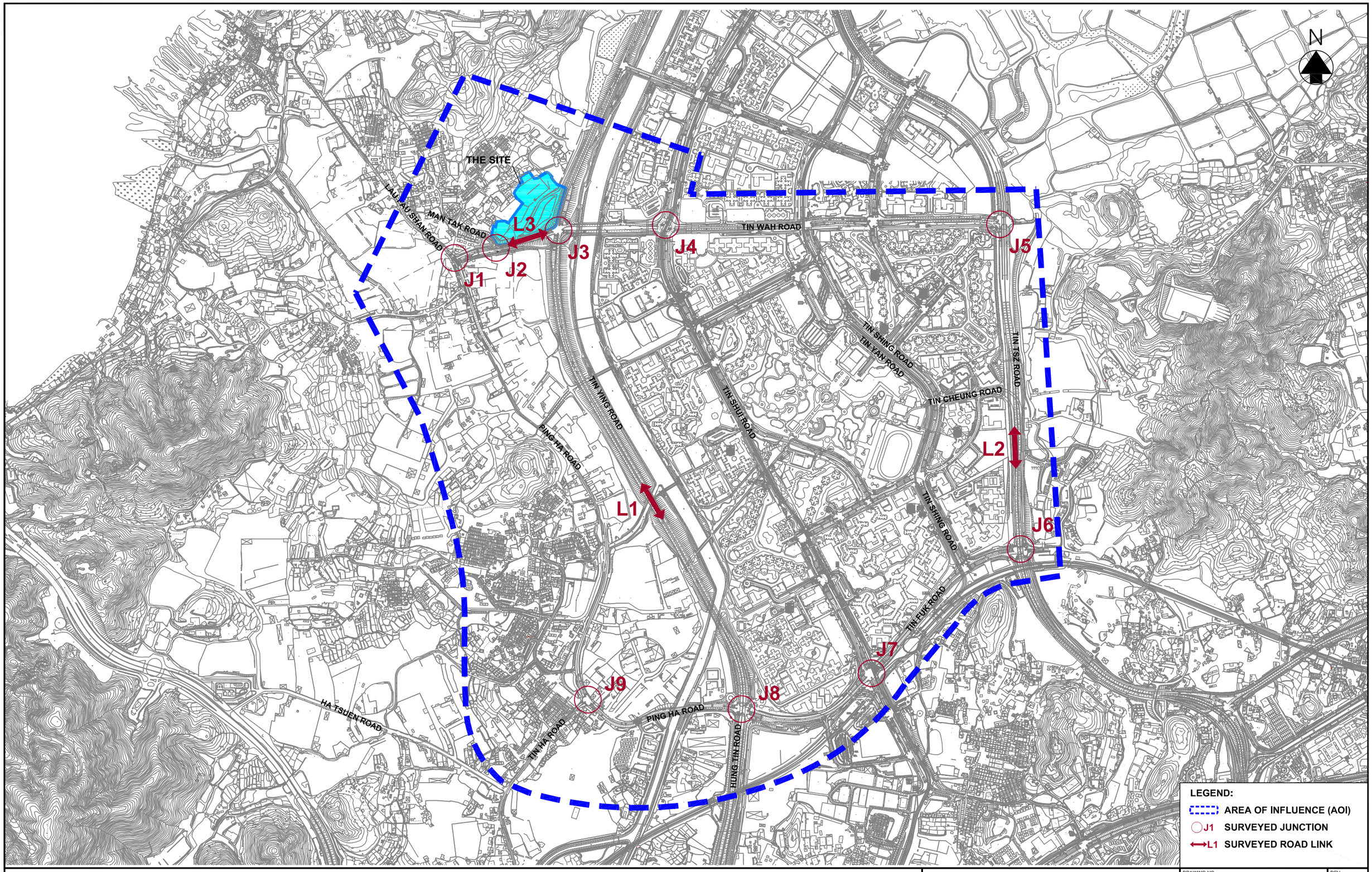
Drawing No.	Scale
196529/B&V/GEN/003	1 : 750 (A1) 1 : 1500 (A3)

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

BLACK & VEATCH HONG KONG LIMITED
博威工程顧問有限公司

Plot Date = 4/7/2021

CAD Filename = Y:\Daily Work\20210331B\196529-B&V-GEN-003.dgn



PROJECT TITLE

CE 41/2016 (CE) - SITE FORMATION AND INFRASTRUCTURAL WORKS FOR PROPOSED PUBLIC HOUSING DEVELOPMENTS IN YUEN LONG NORTH - FEASIBILITY STUDY

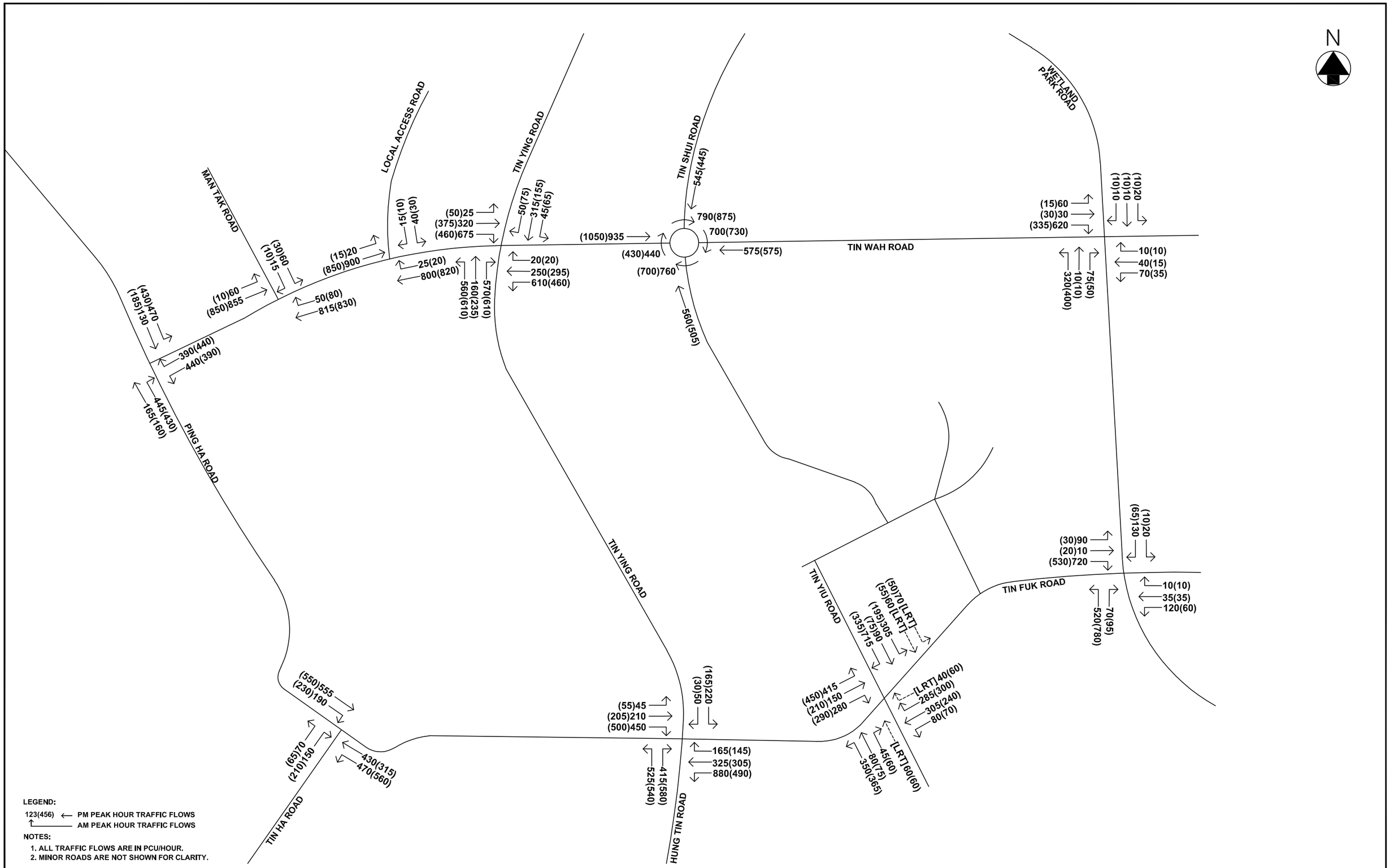
DRAWING TITLE

EXISTING ROAD NETWORK AND SURVEYED JUNCTIONS/ROAD LINKS

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

BLACK & VEATCH HONG KONG LIMITED 博威工程顧問有限公司
LLA 顧問有限公司 Consultancy Limited

DRAWING NO.	REV.
196529/B&V/TTIA/FIG 2.1	-
DESIGNED: FN	CHECKED: LCH
DATE: 11/20	SCALE: 1:12000



LEGEND:

123(456) ⟵ PM PEAK HOUR TRAFFIC FLOWS

↑——— AM PEAK HOUR TRAFFIC FLOWS

NOTES:

1. ALL TRAFFIC FLOWS ARE IN PCU/HOUR.
2. MINOR ROADS ARE NOT SHOWN FOR CLARITY.

PROJECT TITLE

CE 41/2016 (CE) - SITE FORMATION AND INFRASTRUCTURAL WORKS FOR PROPOSED PUBLIC HOUSING DEVELOPMENTS IN YUEN LONG NORTH - FEASIBILITY STUDY

DRAWING TITLE

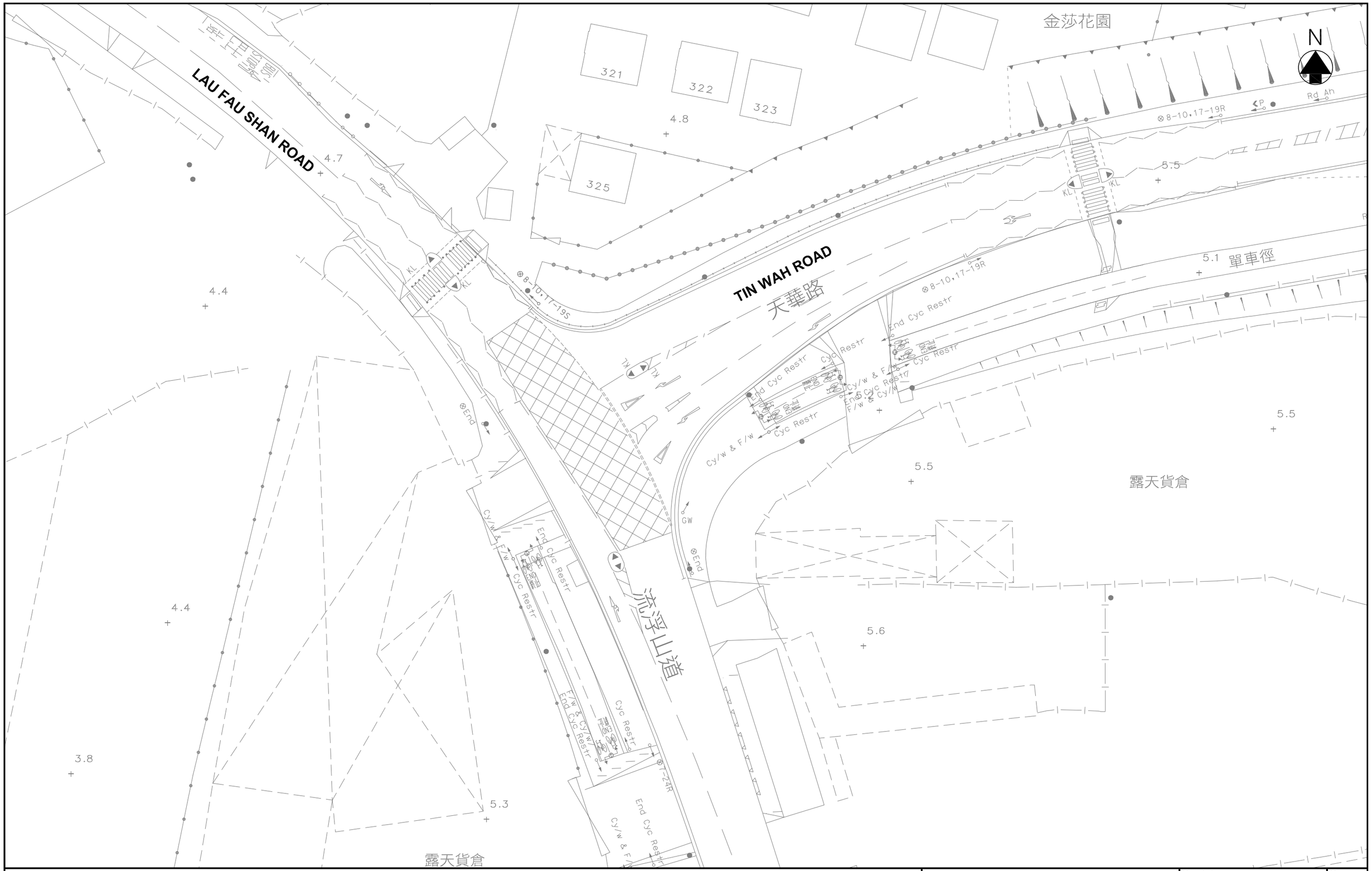
2017 OBSERVED TRAFFIC FLOWS

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

BLACK & VEATCH HONG KONG LIMITED 博威工程顧問有限公司 LLA 顧問有限公司 Consultancy Limited

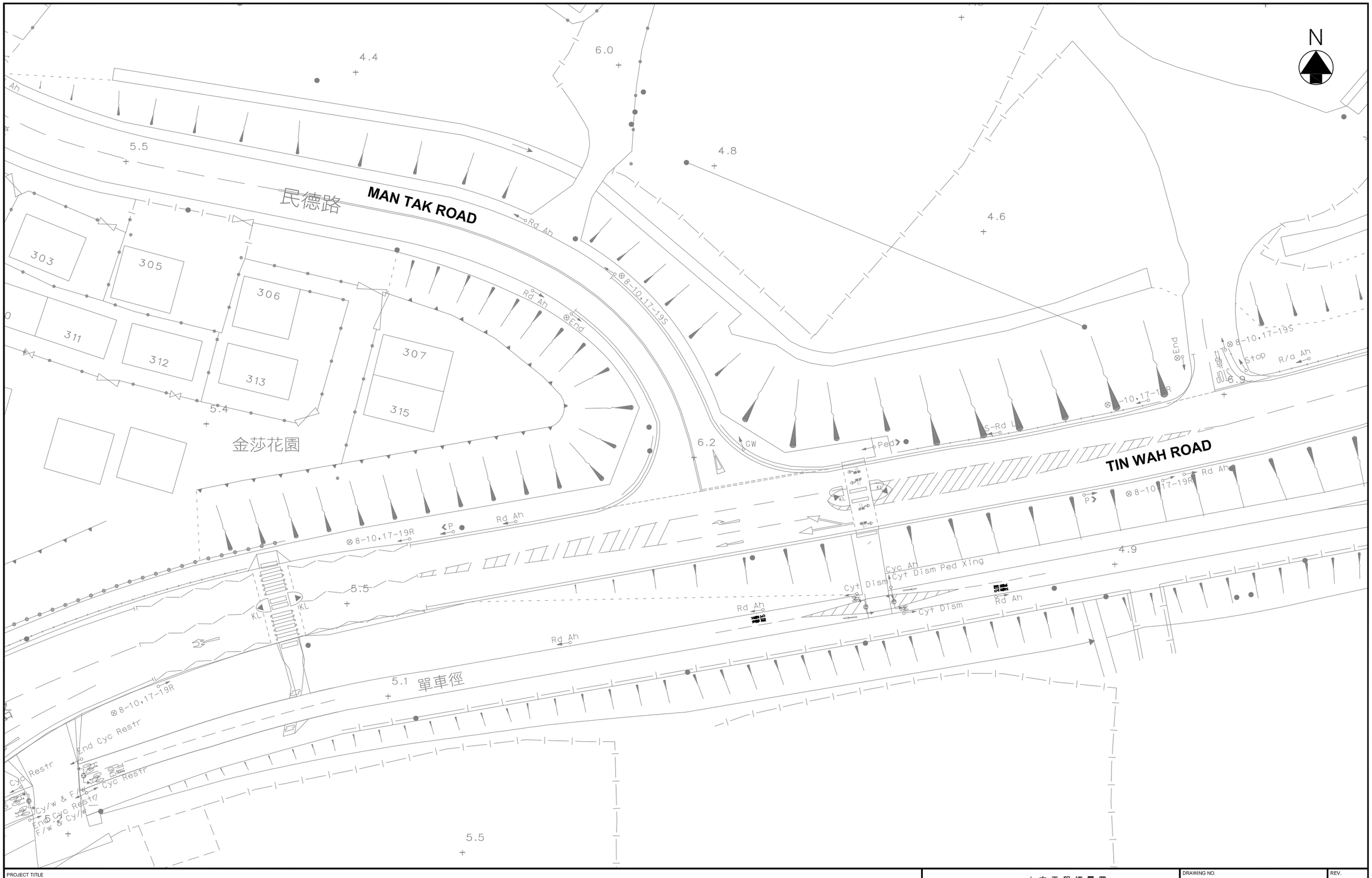
DRAWING NO.	REV.
196529/B&V/TTIA/FIG 2.2	-
DESIGNED: FN	CHECKED: LCH
DATE: 11/20	SCALE: N.T.S.

C:\Daily Work\20210331B\196529-B&V-TTIA-FIG 2.2.dwg, 4/6/2021 6:49:02 PM, Bluebeam PDF



PROJECT TITLE CE 41/2016 (CE) - SITE FORMATION AND INFRASTRUCTURAL WORKS FOR PROPOSED PUBLIC HOUSING DEVELOPMENTS IN YUEN LONG NORTH - FEASIBILITY STUDY	土木工程拓展署 CEDD Civil Engineering and Development Department	DRAWING NO. 196529/B&V/TTIA/FIG 2.3	REV. -
DRAWING TITLE **EXISTING JUNCTION LAYOUT OF J/O TIN WAH ROAD/LAU FAU SHAN ROAD (J1)**	BLACK & VEATCH HONG KONG LIMITED 博威工程顧問有限公司 LLA 顧問有限公司 Consultancy Limited	DESIGNED FN	CHECKED LCH
		DATE 11/20	SCALE 1:500

C:\Daily Work\20210331B\196529-B&V-TTIA-FIG 2.3.dwg, 4/6/2021 6:52:12 PM, Bluebeam PDF



PROJECT TITLE

CE 41/2016 (CE) - SITE FORMATION AND INFRASTRUCTURAL WORKS FOR PROPOSED PUBLIC HOUSING DEVELOPMENTS IN YUEN LONG NORTH - FEASIBILITY STUDY

DRAWING TITLE

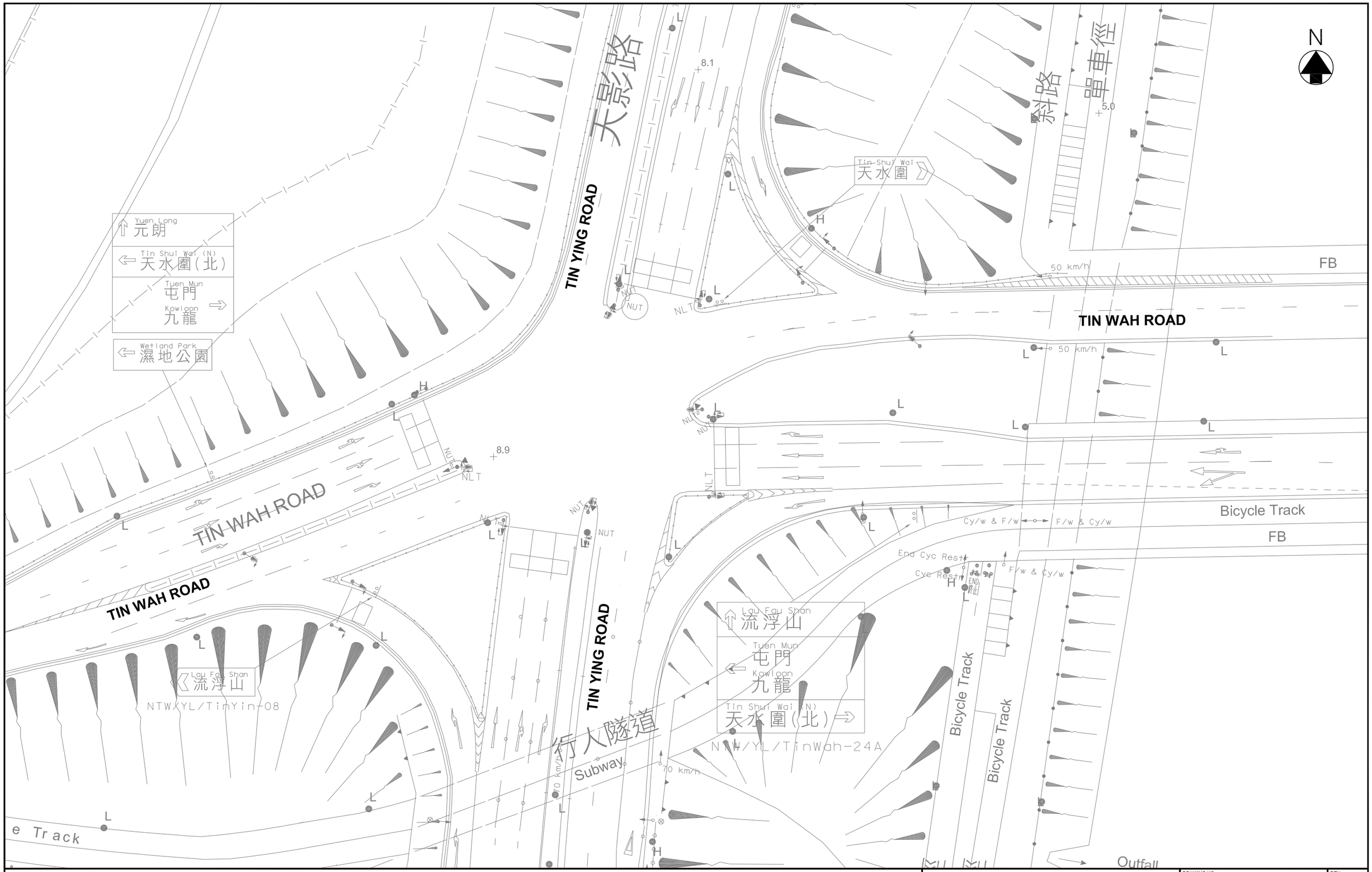
EXISTING JUNCTION LAYOUT OF J/O TIN WAH ROAD/MAN TAK ROAD (J2)

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

BLACK & VEATCH HONG KONG LIMITED 博威工程顧問有限公司 LLA 顧問有限公司 Consultancy Limited

DRAWING NO.	REV.
196529/B&V/TTIA/FIG 2.4	-
DESIGNED: FN	CHECKED: LCH
DATE: 11/20	SCALE: 1:500

C:\Daily Work\20210331B\196529-B&V-TTIA-FIG 2.4.dwg, 4/6/2021 6:54:56 PM, Bluebeam PDF



PROJECT TITLE

CE 41/2016 (CE) - SITE FORMATION AND INFRASTRUCTURAL WORKS FOR PROPOSED PUBLIC HOUSING DEVELOPMENTS IN YUEN LONG NORTH - FEASIBILITY STUDY

DRAWING TITLE

EXISTING JUNCTION LAYOUT OF J/O TIN WAH ROAD/ TIN YING ROAD (J3)

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

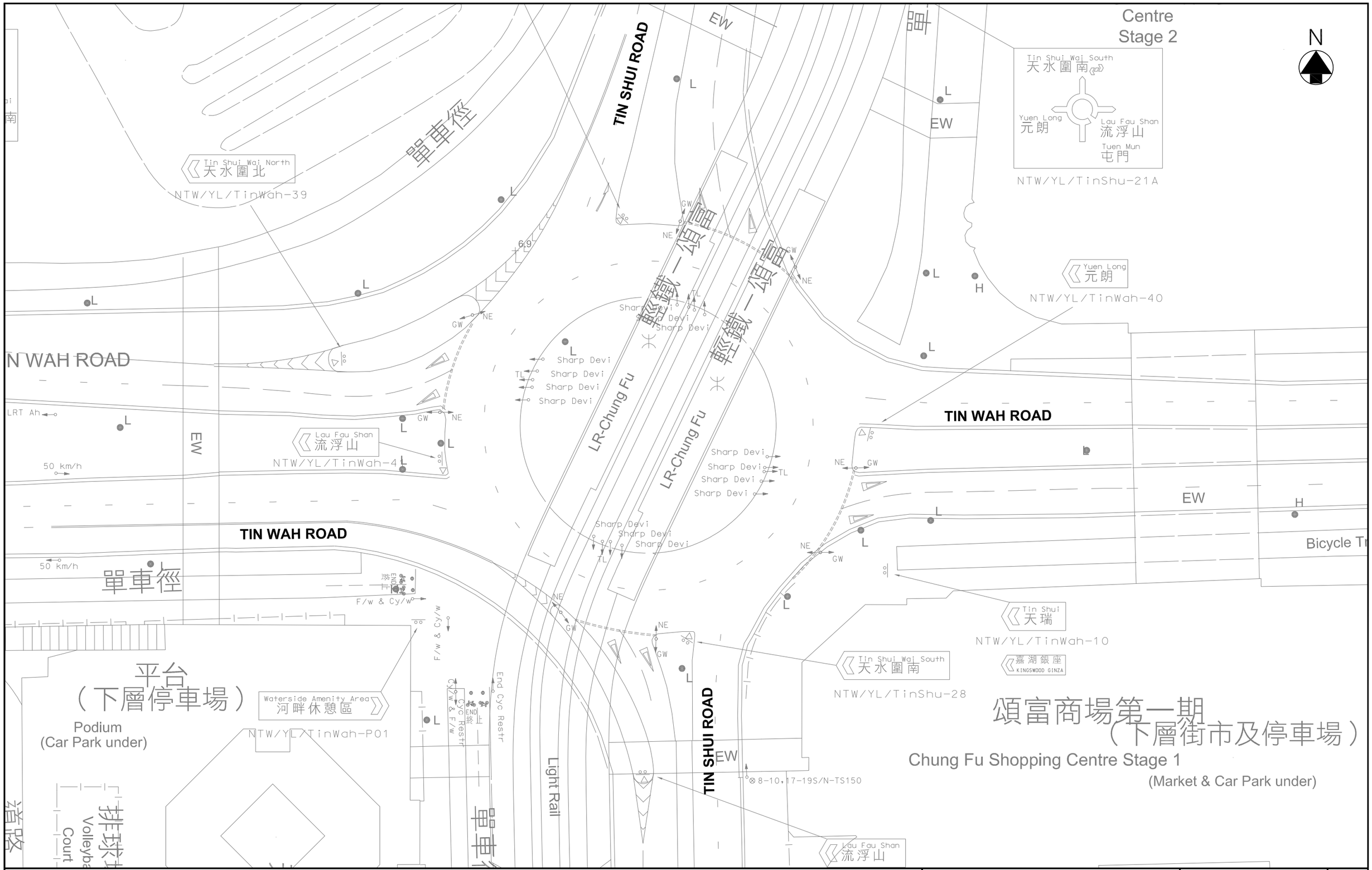
BLACK & VEATCH HONG KONG LIMITED 博威工程顧問有限公司 LLA 顧問有限公司 Consultancy Limited

DRAWING NO.	REV.
196529/B&V/TTIA/FIG 2.5	-

DESIGNED	CHECKED
FN	LCH

DATE	SCALE
11/20	1:500

C:\Daily Work\20210331B\196529-B&V-TTIA-FIG 2.5.dwg, 4/6/2021 6:59:07 PM, Bluebeam PDF



PROJECT TITLE

CE 41/2016 (CE) - SITE FORMATION AND INFRASTRUCTURAL WORKS FOR PROPOSED PUBLIC HOUSING DEVELOPMENTS IN YUEN LONG NORTH - FEASIBILITY STUDY

DRAWING TITLE

EXISTING JUNCTION LAYOUT OF J/O TIN WAH ROAD/ TIN SHUI ROAD (J4)

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

BLACK & VEATCH HONG KONG LIMITED 博威工程顧問有限公司 LLA 顧問有限公司 Consultancy Limited

DRAWING NO.	REV.
196529/B&V/TTIA/FIG 2.6	-
DESIGNED: FN	CHECKED: LCH
DATE: 11/20	SCALE: 1:500

C:\Daily Work\20210331B\196529-B&V-TTIA-FIG 2.6.dwg, 4/6/2021 7:01:47 PM, Bluebeam PDF

N

WETLAND PARK ROAD

PARK ROAD

TIN WAH ROAD

TIN WAH ROAD

天華路

TIN TSZ ROAD

單車徑

Bicycle Track

Tin Shui Wai (N)
天水圍(北)
Yuen Long
元朗
Tuen Mun
屯門
Kowloon
九龍

Fung Ka Wai
馮家圍

NTW/YL/TinWah-33

Tin Shui Wai (N)
天水圍(北)

NTW/YL/TinWah-38

Tin Shui Wai
天水圍

NTW/YL/TinWah-40

Yuen Long
元朗
Tuen Mun
屯門
Kowloon
九龍

NTW/YL/TinWah-39

Tin Shui Wai North
天水圍北

NTW/YL/TinWah-41

Cyt Dism Ped Xing
Cyc

Cyt Dism Ped Xing
F/W & Cy/W

70 km/h

5.6

7.1

PROJECT TITLE

CE 41/2016 (CE) - SITE FORMATION AND INFRASTRUCTURAL WORKS FOR PROPOSED PUBLIC HOUSING DEVELOPMENTS IN YUEN LONG NORTH - FEASIBILITY STUDY

DRAWING TITLE

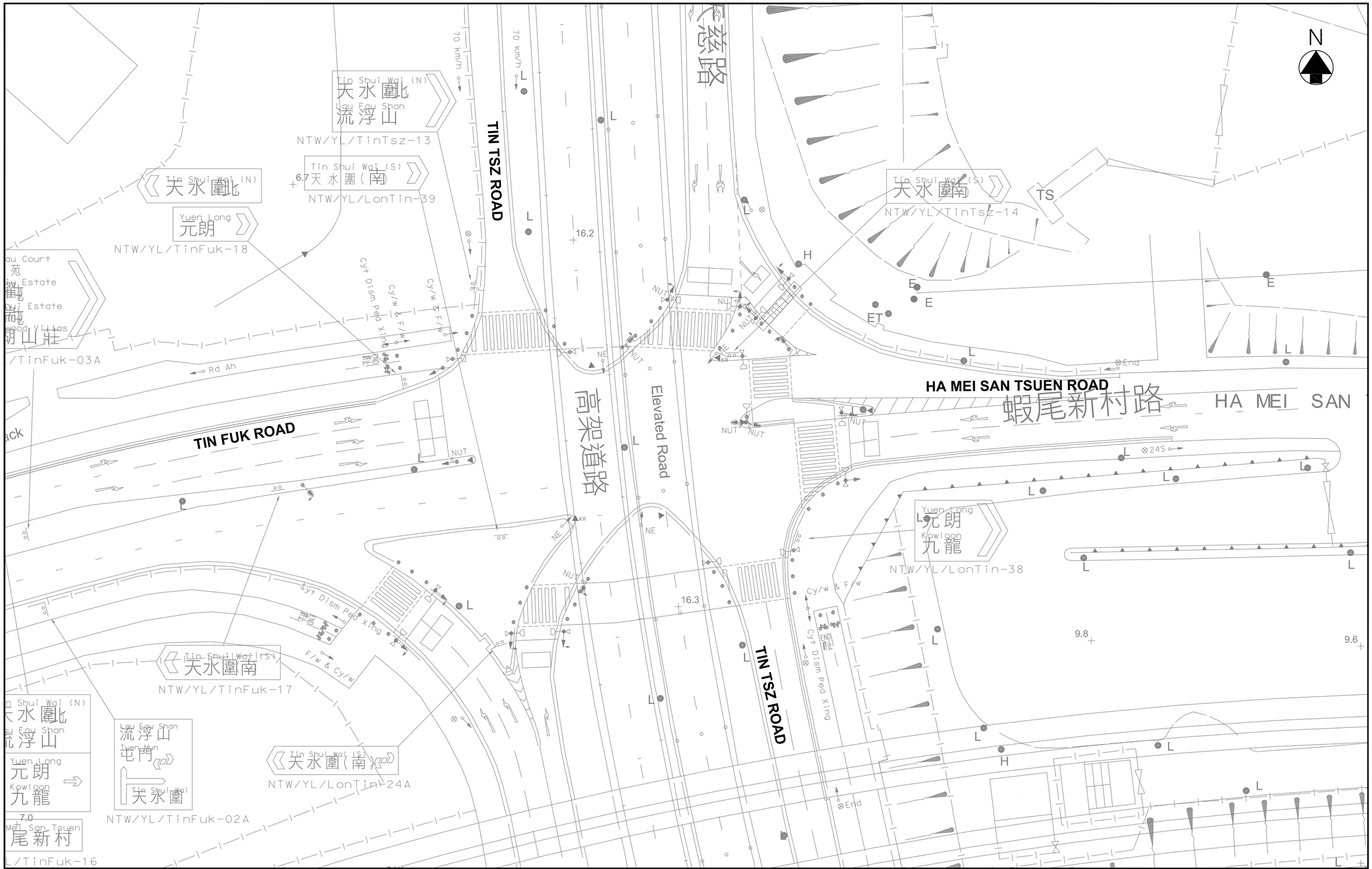
EXISTING JUNCTION LAYOUT OF J/O TIN WAH ROAD/ TIN TSZ ROAD (J5)

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

BLACK & VEATCH HONG KONG LIMITED 博威工程顧問有限公司
LLA 顧問有限公司 Consultancy Limited

DRAWING NO.	REV.
196529/B&V/TTIA/FIG 2.7	-
DESIGNED: FN	CHECKED: LCH
DATE: 11/20	SCALE: 1:500

C:\Daily Work\20210331B\196529-B&V-TTIA-FIG 2.7.dwg, 4/6/2021 7:04:05 PM, Bluebeam PDF



PROJECT TITLE

CE 41/2016 (CE) - SITE FORMATION AND INFRASTRUCTURAL WORKS FOR PROPOSED PUBLIC HOUSING DEVELOPMENTS IN YUEN LONG NORTH - FEASIBILITY STUDY

DRAWING TITLE

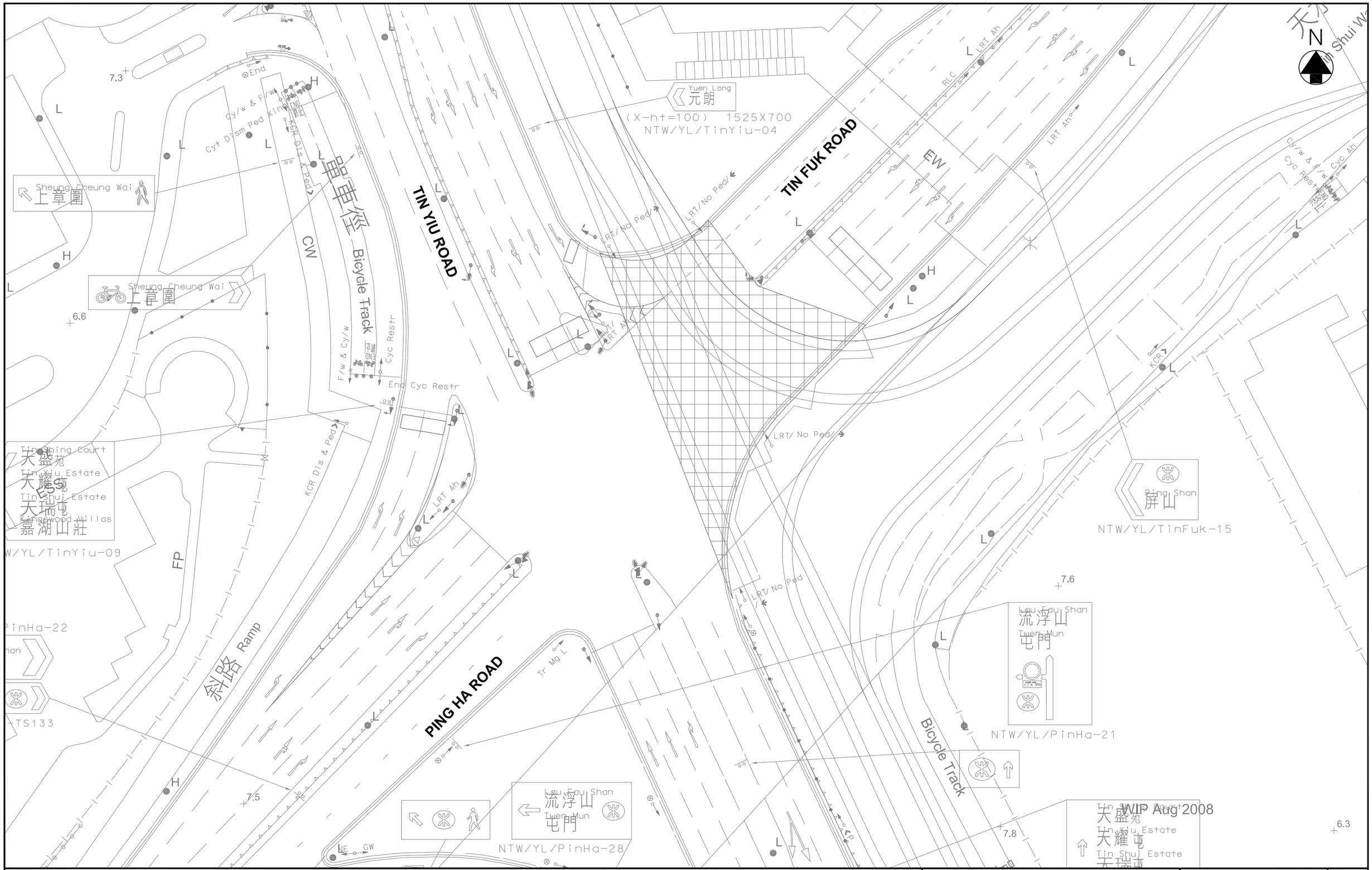
EXISTING JUNCTION LAYOUT OF J/O TIN TSZ ROAD/ TIN FUK ROAD (J6)

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

BLACK & VEATCH HONG KONG LIMITED 博威工程顧問有限公司 LLA 顧問有限公司 Consultancy Limited

DRAWING NO.	REV.
196529/B&V/TTIA/FIG 2.8	-
DESIGNED: FN	CHECKED: LCH
DATE: 11/20	SCALE: 1:500

C:\Daily Work\20210331B\196529-B&V-TTIA-FIG 2.8.dwg, 4/6/2021 7:06:41 PM, Bluebeam PDF



PROJECT TITLE

CE 41/2016 (CE) - SITE FORMATION AND INFRASTRUCTURAL WORKS FOR PROPOSED PUBLIC HOUSING DEVELOPMENTS IN YUEN LONG NORTH - FEASIBILITY STUDY

DRAWING TITLE

EXISTING JUNCTION LAYOUT OF J/O TIN FUK ROAD/PING HA ROAD/TIN YIU ROAD (J7)

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

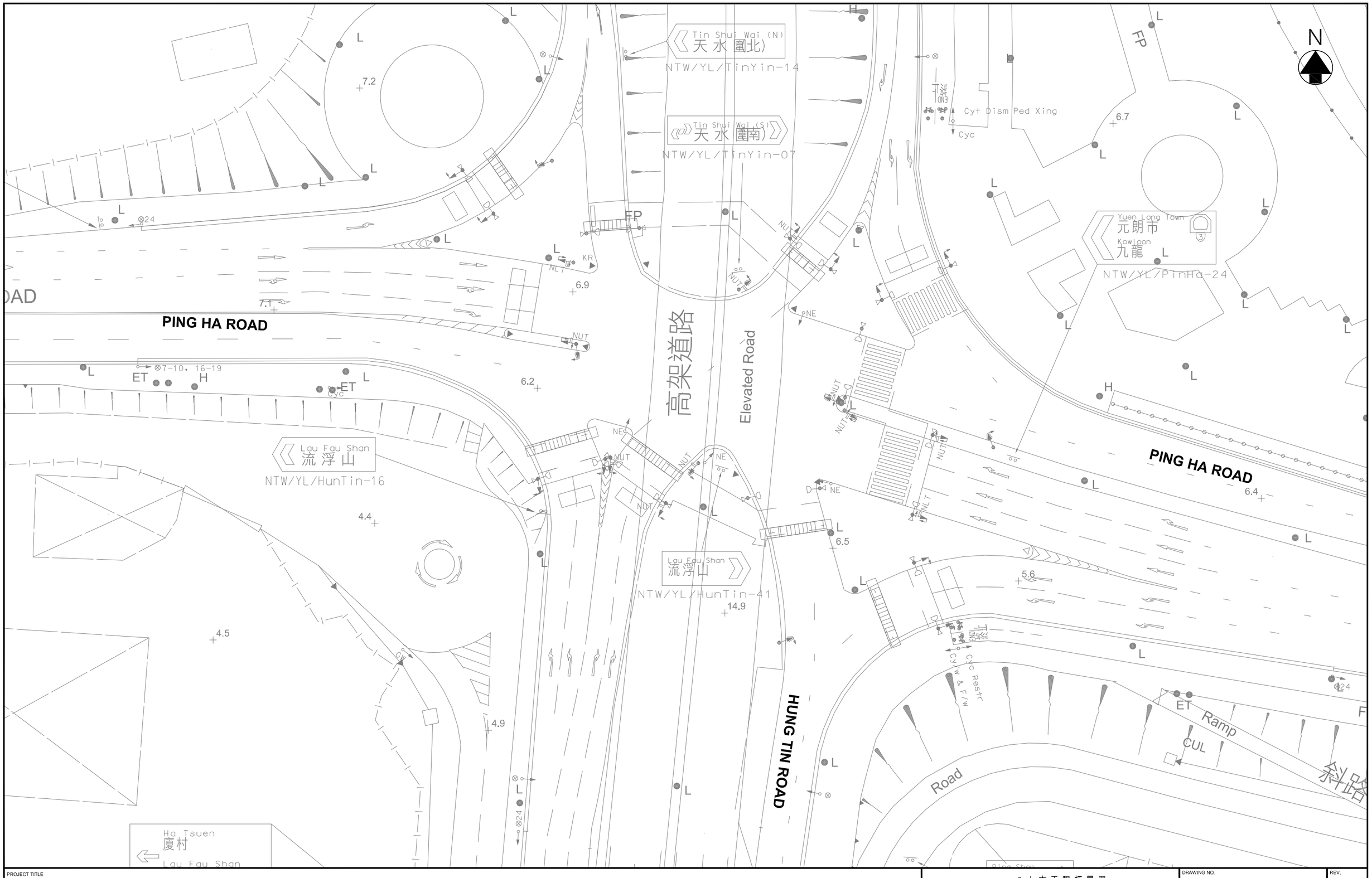
BLACK & VEATCH HONG KONG LIMITED 博威工程顧問有限公司
LLA 顧問有限公司 Consultancy Limited

DRAWING NO.	REV.
196529/B&V/TTIA/FIG 2.9	-

DESIGNED	CHECKED
FN	LCH

DATE	SCALE
11/20	1:500

C:\Daily Work\20210331B\196529-B&V-TTIA-FIG 2.9.dwg, 4/6/2021 7:11:27 PM, Bluebeam PDF



PROJECT TITLE

CE 41/2016 (CE) - SITE FORMATION AND INFRASTRUCTURAL WORKS FOR PROPOSED PUBLIC HOUSING DEVELOPMENTS IN YUEN LONG NORTH - FEASIBILITY STUDY

DRAWING TITLE

EXISTING JUNCTION LAYOUT OF J/O PING HA ROAD/TIN YING ROAD/HUNG TIN ROAD (J8)

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

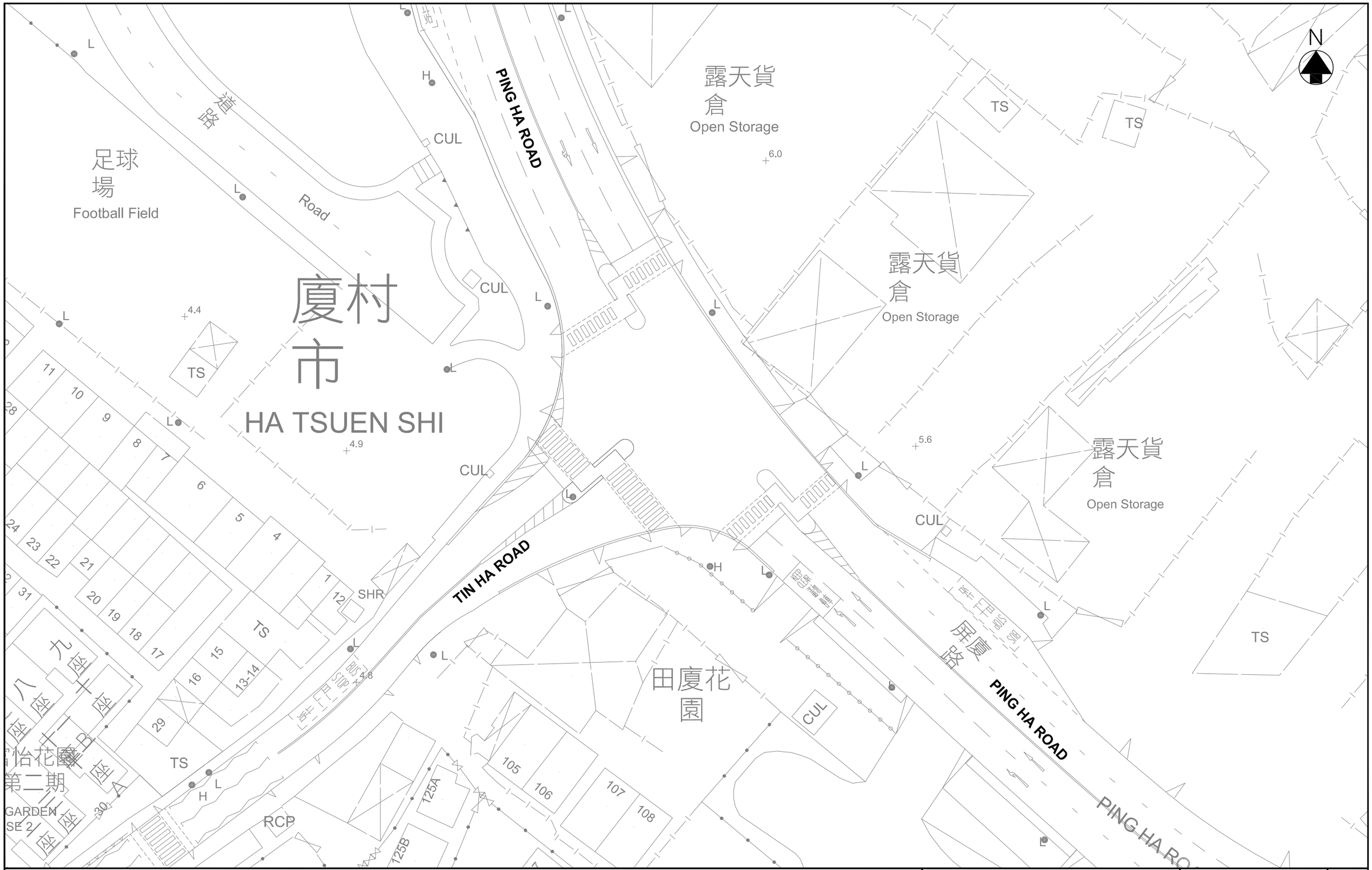
BLACK & VEATCH HONG KONG LIMITED 博威工程顧問有限公司
LLA 顧問有限公司 Consultancy Limited

DRAWING NO.	REV.
196529/B&V/TTIA/FIG 2.10	-

DESIGNED	CHECKED
FN	LCH

DATE	SCALE
11/20	1:500

C:\Daily Work\20210331B\196529-B&V-TTIA-FIG 2.10.dwg, 4/6/2021 7:15:12 PM, Bluebeam PDF



PROJECT TITLE CE 41/2016 (CE) - SITE FORMATION AND INFRASTRUCTURAL WORKS FOR PROPOSED PUBLIC HOUSING DEVELOPMENTS IN YUEN LONG NORTH - FEASIBILITY STUDY	土木工程拓展署 CEDD Civil Engineering and Development Department	DRAWING NO. 196529/B&V/TTIA/FIG 2.11	REV. -
DRAWING TITLE **EXISTING JUNCTION LAYOUT OF J/O PING HA ROAD/TIN HA ROAD (J9)**	BLACK & VEATCH HONG KONG LIMITED 博威工程顧問有限公司 LLA 顧問有限公司 Consultancy Limited	DESIGNED FN	CHECKED LCH
		DATE 11/20	SCALE 1:500

C:\Daily Work\20210331B\196529-B&V-TTIA-FIG 2.11.dwg, 4/6/2021 7:18:42 PM, Bluebeam PDF

THE SITE

PROPOSED SITE ACCESS

PROPOSED MINIMUM 4.0m WIDE FOOTPATH

PROPOSED ACCESS ROAD

PROPOSED SITE ACCESS

PROPOSED BUS/GMB LAYBY ON TIN WAH ROAD EASTBOUND

PROPOSED EXTENSION OF EXISTING CENTRAL DIVIDER

PROPOSED BUS/GMB LAYBY ON TIN WAH ROAD WESTBOUND

TIN WAH ROAD

MAN TAK ROAD

TIN YING ROAD

LEGEND:

PROPOSED SITE BOUNDARY

PROJECT TITLE

CE 41/2016 (CE) - SITE FORMATION AND INFRASTRUCTURAL WORKS FOR PROPOSED PUBLIC HOUSING DEVELOPMENTS IN YUEN LONG NORTH - FEASIBILITY STUDY

DRAWING TITLE

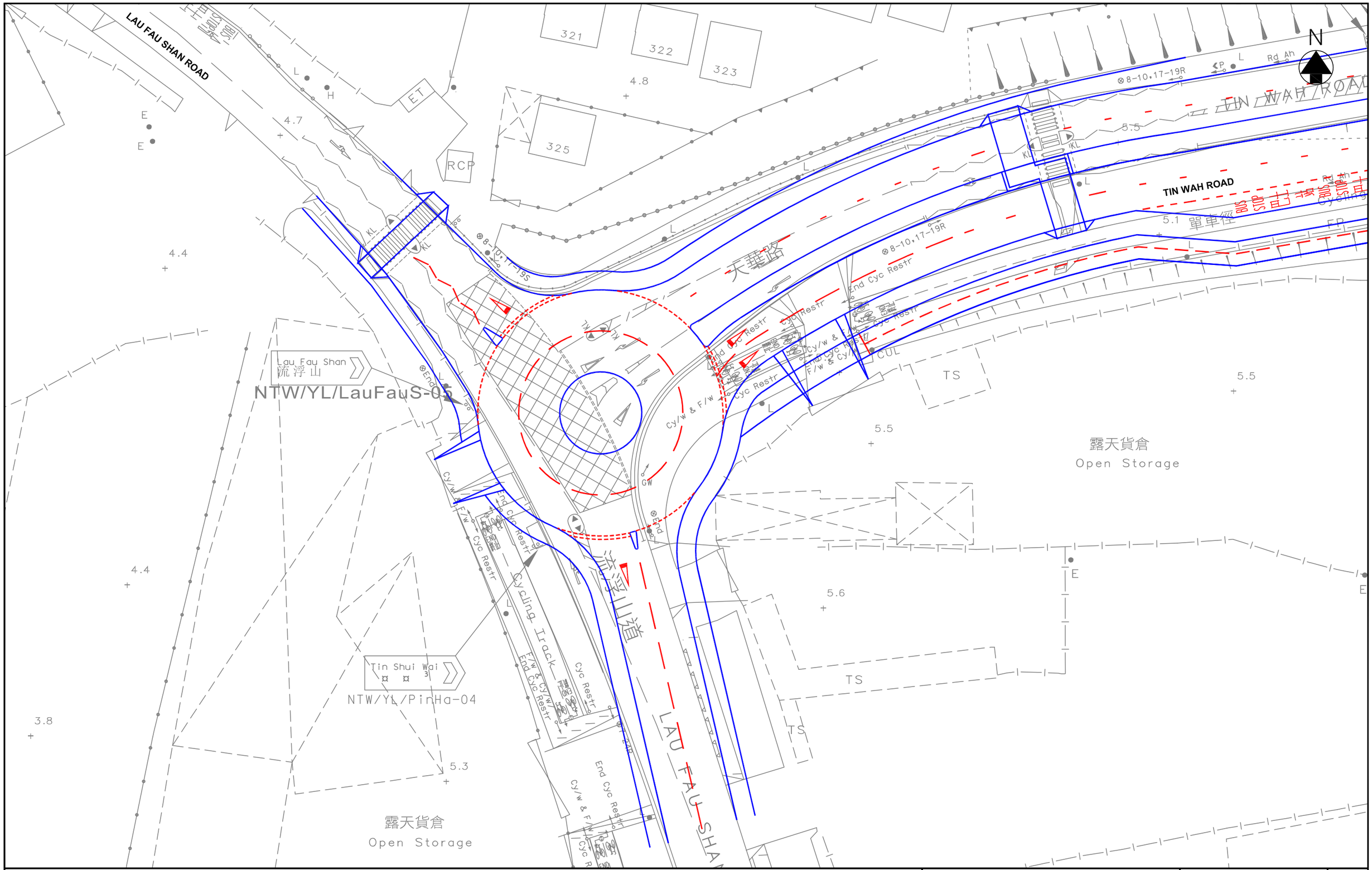
PROPOSED ACCESS ARRANGEMENT AND PT SERVICES FOR THE DEVELOPMENT

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

BLACK & VEATCH HONG KONG LIMITED 博威工程顧問有限公司
LLA 顧問有限公司 Consultancy Limited

DRAWING NO.	REV.
196529/B&V/TTIA/FIG 3.1	-
DESIGNED: FN	CHECKED: LCH
DATE: 11/20	SCALE: 1:1250

C:\Daily Work\20210331B\196529-B&V-TTIA-FIG 3.1.dwg, 4/6/2021 7:27:26 PM, Bluebeam PDF



PROJECT TITLE CE 41/2016 (CE) - SITE FORMATION AND INFRASTRUCTURAL WORKS FOR PROPOSED PUBLIC HOUSING DEVELOPMENTS IN YUEN LONG NORTH - FEASIBILITY STUDY	土木工程拓展署 CEDD Civil Engineering and Development Department	DRAWING NO. 196529/B&V/TTIA/FIG 4.1	REV. -
DRAWING TITLE **PROPOSED CONCEPTUAL JUNCTION LAYOUT OF TIN WAH ROAD/LAU FAU SHAN ROAD (J1)**	BLACK & VEATCH HONG KONG LIMITED 博威工程顧問有限公司 LLA 顧問有限公司 Consultancy Limited	DESIGNED FN	CHECKED LCH
		DATE 11/20	SCALE 1:500

C:\Daily Work\20210331B\196529-B&V-TTIA-FIG 4.1.dwg, 4/6/2021 7:29:55 PM, Bluebeam PDF

N

TIN YING ROAD

TIN WAH ROAD

EXISTING FOOTPATH WIDTH

PROPOSED FOOTPATH WIDTH

Tin Shui Wai 天水圍

Yuen Long 元朗

Tin Shui Wai (N) 天水圍(北)

Tuen Mun 屯門

Kowloon 九龍

Wetland Park 濕地公園

Lau Fau Shan 流浮山

Tin Wah Road 天華路

Tin Shui Wai North 天水圍北

NTW/YL/TinYin-08

NTW/YL/TinYin-09

NTW/YL/TinWah-24A

Bicycle Track 單車徑

Subway 行人隧道

Ramp 斜路

Outfall 排水口

CYCLE TIME: 90s

STAGE 1 | STAGE 2 | STAGE 3 | STAGE 4 | STAGE 5

FREE FLOW

PROJECT TITLE

CE 41/2016 (CE) - SITE FORMATION AND INFRASTRUCTURAL WORKS FOR PROPOSED PUBLIC HOUSING DEVELOPMENTS IN YUEN LONG NORTH - FEASIBILITY STUDY

DRAWING TITLE

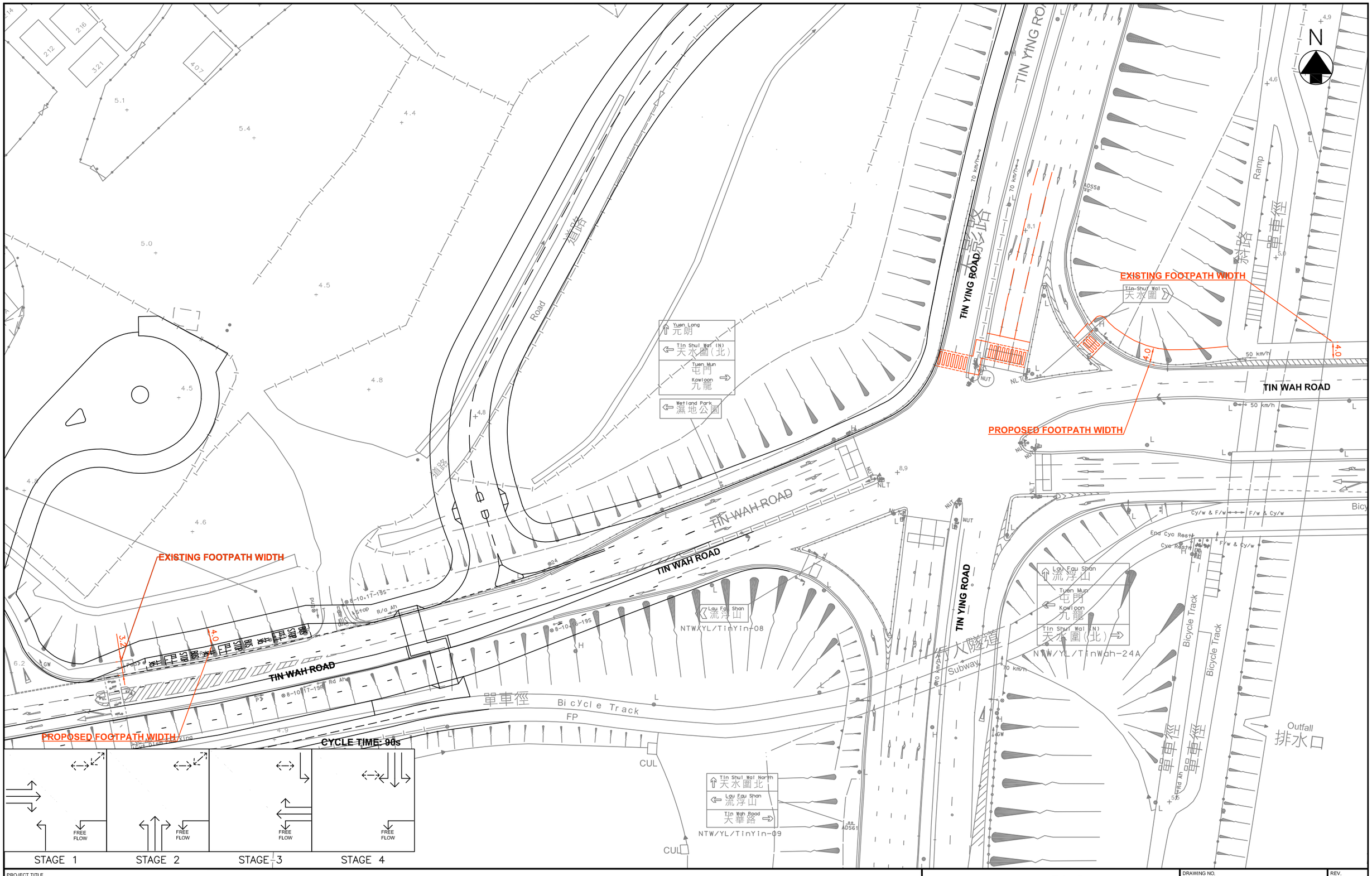
PROPOSED CONCEPTUAL JUNCTION LAYOUT OF TIN WAH ROAD / TIN YING ROAD (J3) – STRAIGHT CROSSING

土木工程拓展署 Civil Engineering and Development Department

BLACK & VEATCH HONG KONG LIMITED 博威工程顧問有限公司 LLA 顧問有限公司 Consultancy Limited

DRAWING NO.	REV.
196529/B&V/TTIA/FIG 3.2	-
DESIGNED: FN	CHECKED: LCH
DATE: 11/20	SCALE: 1:800

C:\Daily Work\20210331B\196529-B&V-TTIA-FIG 3.2.dwg, 4/6/2021 7:34:40 PM, Bluebeam PDF



PROJECT TITLE

CE 41/2016 (CE) - SITE FORMATION AND INFRASTRUCTURAL WORKS FOR PROPOSED PUBLIC HOUSING DEVELOPMENTS IN YUEN LONG NORTH - FEASIBILITY STUDY

DRAWING TITLE

PROPOSED CONCEPTUAL JUNCTION LAYOUT OF TIN WAH ROAD / TIN YING ROAD (J3) – STAGGERED CROSSING

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

BLACK & VEATCH HONG KONG LIMITED 博威工程顧問有限公司

LLA 顧問有限公司 Consultancy Limited

DRAWING NO.	REV.
196529/B&V/TTIA/FIG 3.3	-

DESIGNED	CHECKED
FN	LCH

DATE	SCALE
11/20	1:800

C:\Daily Work\20210331B\196529-B&V-TTIA-FIG 3.3.dwg, 4/6/2021 7:37:14 PM, Bluebeam PDF

500m

THE SITE

N

BUS STOP: K65

BUS STOP: K65

PING HA ROAD

GMB STOP: 34A

GMB STOP: 34A

BUS STOP: K65

BUS STOP: K65

GMB STOP: 34A

GMB STOP: 618

BUS STOP: K65

BUS STOP: K65

TIN YING ROAD

BUS STOP: 265B, 265M, 265S, 269M, 276A, 276B, 967X, 969C, E34A, K76

BUS STOP: 69C, 269B, 269M, 967, 967S, 967X, K73

GMB STOP: 618

TIN SHUI ROAD

TIN WAH ROAD

LRT TIN YAT STATION

GMB STOP: 618

LRT TIN FU STATION

BUS STOP: 265B, 265M, 265S, 269D, 269M, 276A, 276B, 967X, 969C, E34A, K76

LRT CHUNG FU STATION

BUS STOP: 69M, 265B, 265S, 269B, 269C, 269D, 269S, 276A, 969A, 969C, 969X, E34A, E34P, E34X

BUS STOP: 69M, 265B, 265S, 269B, 269C, 269D, 276A, 969A, 969P, E34A, E34P

LRT CHESTWOOD STATION

TIN SHUI WAI PUBLIC TRANSPORT INTERCHNAGE

LEGEND:

- THE SITE
- EXISTING BUS STOP
- EXISTING GMB STOP
- LRT STATION
- CYCLE TRACK

PROJECT TITLE

CE 41/2016 (CE) - SITE FORMATION AND INFRASTRUCTURAL WORKS FOR PROPOSED PUBLIC HOUSING DEVELOPMENTS IN YUEN LONG NORTH - FEASIBILITY STUDY

DRAWING TITLE

EXISTING PT, LRT STATION LOCATION AND CYCLE TRACK SYSTEM

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

BLACK & VEATCH HONG KONG LIMITED 博威工程顧問有限公司

LLA 顧問有限公司 Consultancy Limited

DRAWING NO. 196529/B&V/TTIA/FIG 3.4

REV. -

DESIGNED FN

CHECKED LCH

DATE 11/20

SCALE 1:5000

C:\Daily Work\20210331B\196529-B&V-TTIA-FIG 3.4.dwg, 4/6/2021 7:40:32 PM, Bluebeam PDF

© Copyright by Black & Veatch Hong Kong Limited

LEGEND:

- SITE BOUNDARY
- EXISTING STORM DRAINS
- EXISTING BOX CULVERT

Revision	Date	Description		Initial
	Designed	Checked	Drawn	Checked
Initial	FN	LCH	SZ	LGH
Date	08/17	08/17	08/17	08/17

Approved

Contract no.

CE 41/2016 (CE)

Contract title

SITE FORMATION AND INFRASTRUCTURAL WORKS FOR PROPOSED PUBLIC HOUSING DEVELOPMENTS IN YUEN LONG NORTH - FEASIBILITY STUDY

Drawing title

EXISTING DRAINAGE LAYOUT PLAN

Drawing No.

196529/B&V/DIA/001

Scale

1 : 1000 (A1)
1 : 2000 (A3)

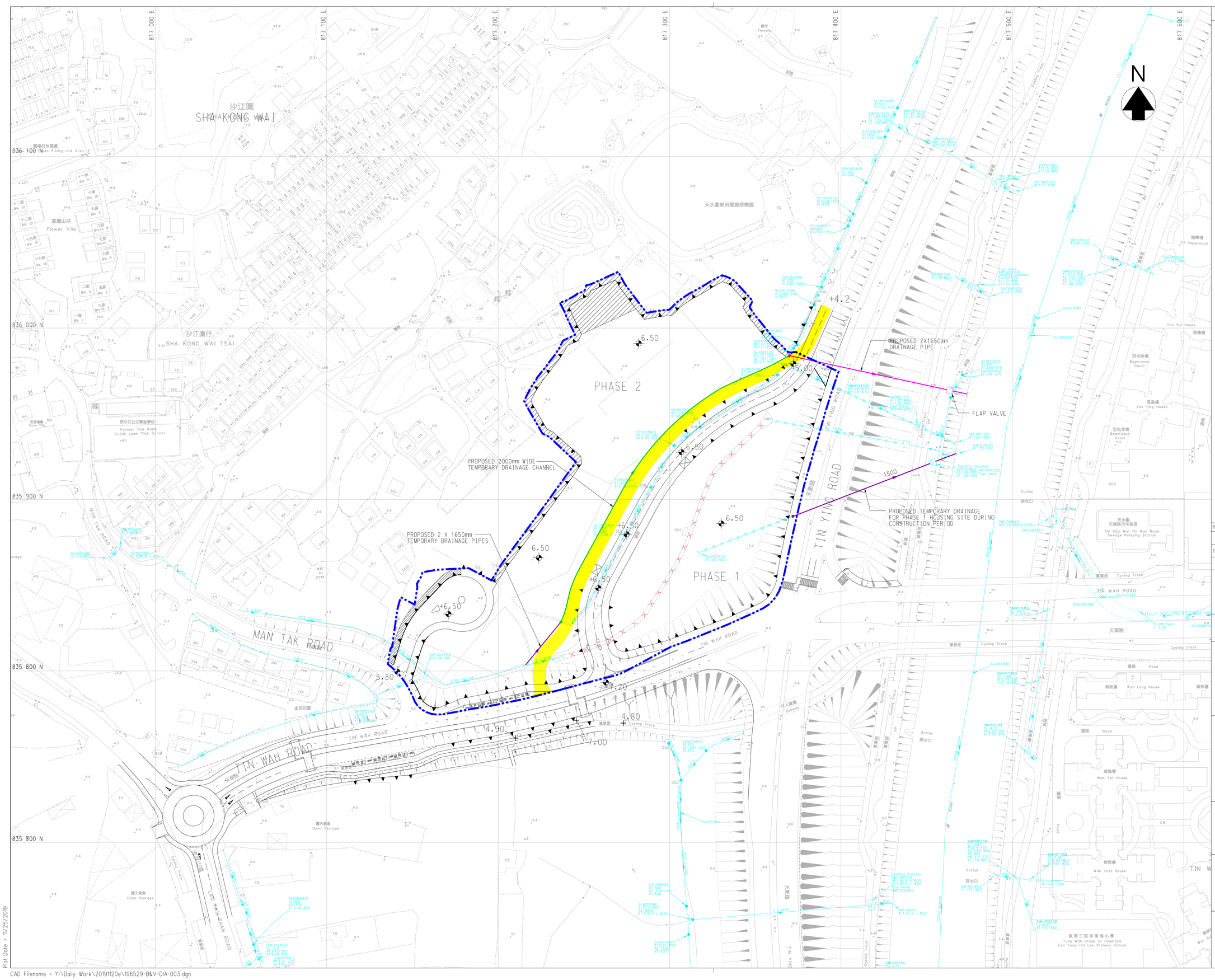
土木工程拓展署
CEDD Civil Engineering and Development Department

BLACK & VEATCH HONG KONG LIMITED
博威工程顧問有限公司

Plot Date = 11/25/2019

CAD Filename = Y:\Daily Work\20191120e\196529-B&V-DIA-001.dgn

© Copyright by Black & Veatch Hong Kong Limited



LEGEND:

- SITE BOUNDARY
- EXISTING DRAINAGE
- PROPOSED SLOPE
- +65 PROPOSED LEVEL
- PROPOSED PUBLIC ROAD
- PROPOSED RETAINING WALL
- PROPOSED PERMANENT DRAINAGE
- PROPOSED TEMPORARY DRAINAGE CHANNEL
- PROPOSED TEMPORARY DRAINAGE PIPE
- EXISTING DRAINAGE PIPE/CHANNEL TO BE ABANDONED
- EXISTING DRAINAGE CHANNEL TO BE DEMOLISHED
- PROPOSED TEMPORARY ACCESS DURING CONSTRUCTION PERIOD

Revision	Date	Description			Initial
	Designed	Checked	Drawn	Checked	
Initial	FN	LCH	SZ	LGH	
Date	08/17	08/17	08/17	08/17	

Approved

Contract no.

CE 41/2016 (CE)

Contract title

SITE FORMATION AND INFRASTRUCTURAL WORKS FOR PROPOSED PUBLIC HOUSING DEVELOPMENTS IN YUEN LONG NORTH - FEASIBILITY STUDY

Drawing title

PROPOSED DRAINAGE SYSTEM (INTERIM)

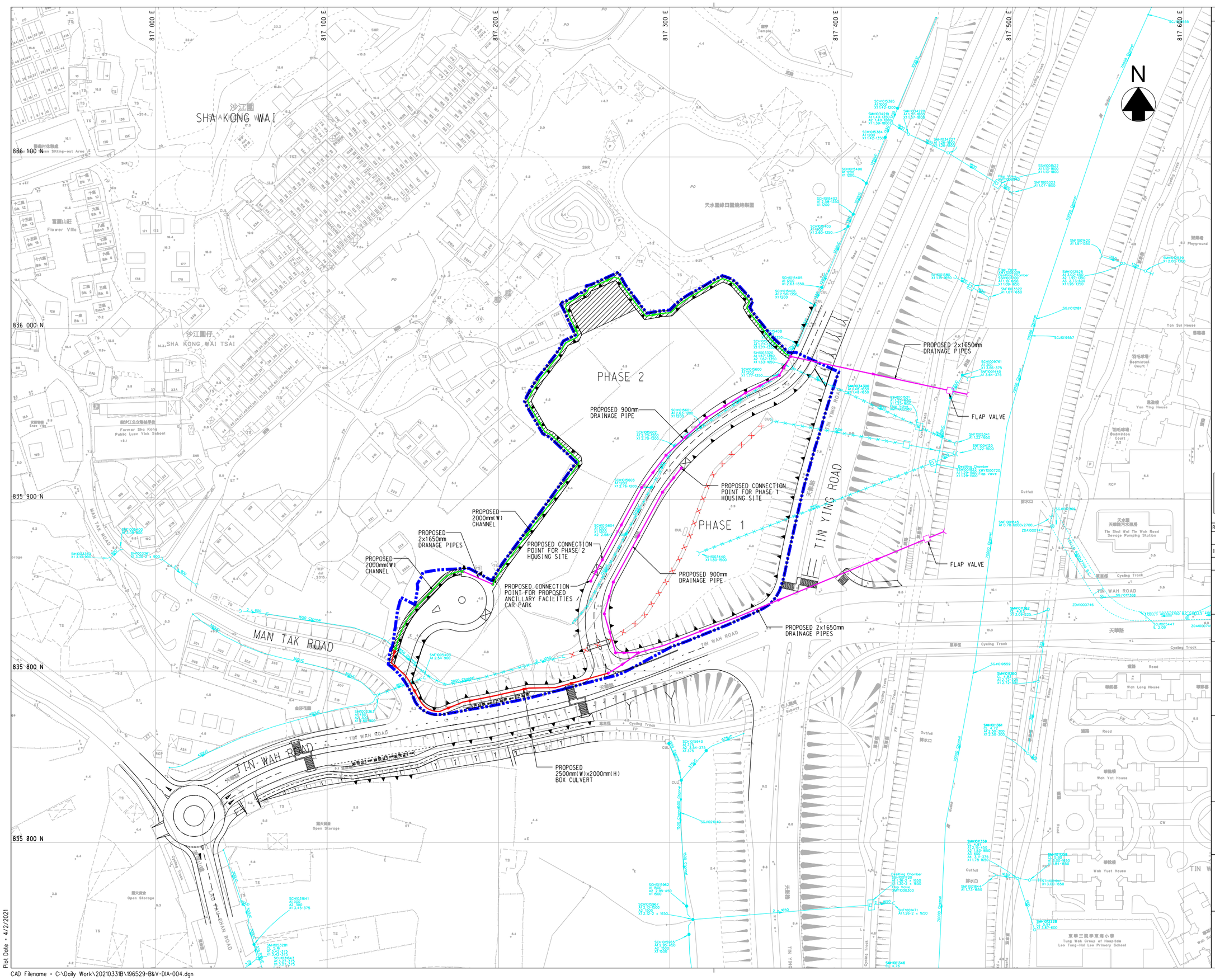
Drawing No.	Scale
196529/B&V/DIA/003	1 : 1000 (A1) 1 : 2000 (A3)

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

BLACK & VEATCH HONG KONG LIMITED
博威工程顧問有限公司

Plot Date = 11/25/2019

CAD Filename = Y:\Daily Work\20191120e\196529-B&V-DIA-003.dgn



© Copyright by Black & Veatch Hong Kong Limited

LEGEND:

- SITE BOUNDARY
- EXISTING DRAINAGE
- PROPOSED BOX CULVERT
- PROPOSED CHANNEL
- PROPOSED DRAINAGE PIPE
- EXISTING DRAINAGE PIPE/CHANNEL TO BE ABANDONED
- EXISTING DRAINAGE CHANNEL TO BE DEMOLISHED

SUBJECT TO DETAILED DESIGN AND FURTHER STUDY

Revision	Date	Description			Initial
	Designed	Checked	Drawn	Checked	
Initial	FN	LCH	SZ	LGH	
Date	05/19	05/19	05/19	05/19	

Approved

Contract no.
CE 41/2016 (CE)

Contract title
SITE FORMATION AND INFRASTRUCTURAL WORKS FOR PROPOSED PUBLIC HOUSING DEVELOPMENTS IN YUEN LONG NORTH - FEASIBILITY STUDY

Drawing title
PROPOSED DRAINAGE SCHEME (PROPOSED)

Drawing No.
196529/B&V/DIA/004

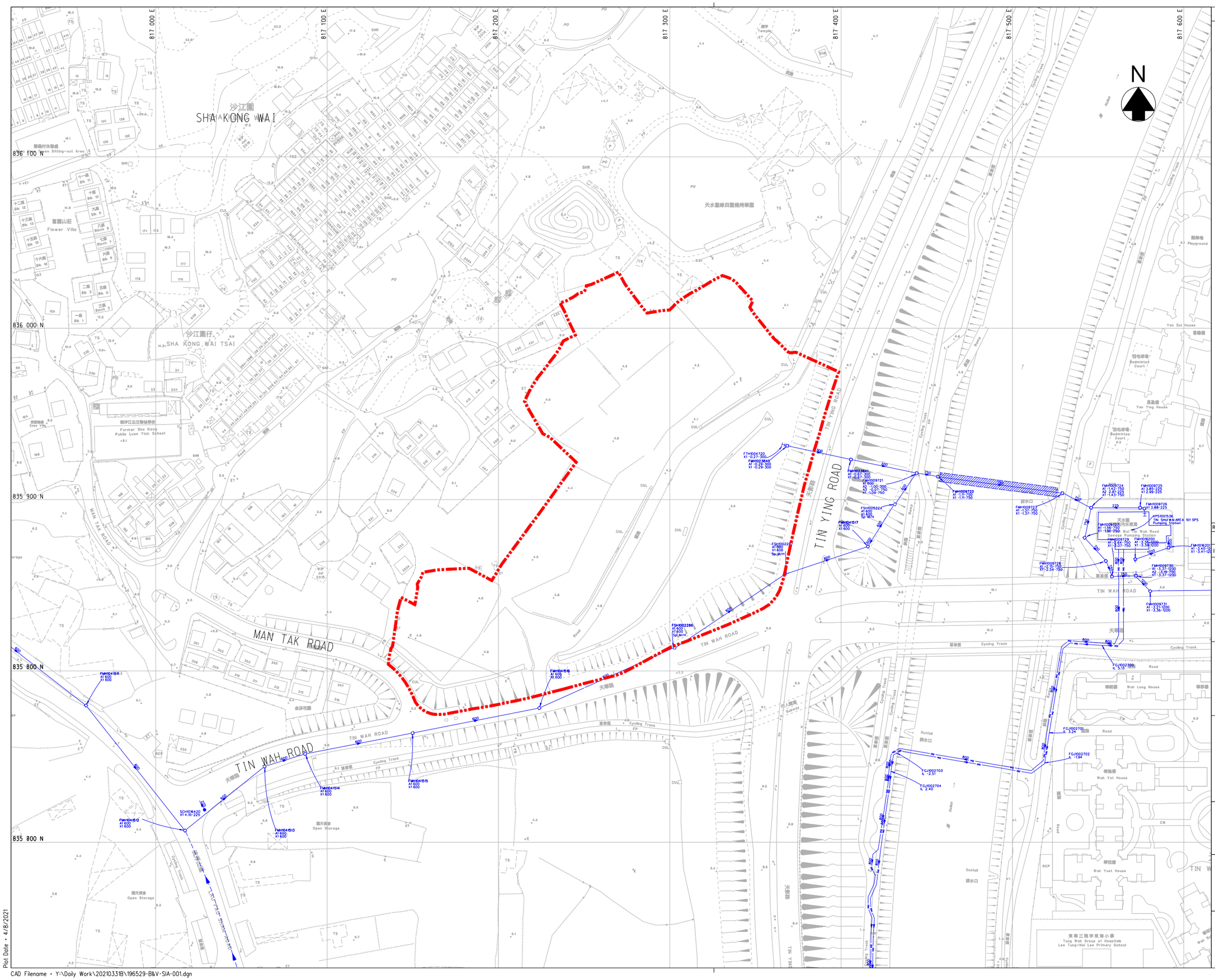
Scale
1 : 1000 (A1)
1 : 2000 (A3)

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

BLACK & VEATCH HONG KONG LIMITED
博威工程顧問有限公司

Plot Date = 4/2/2021

CAD Filename = C:\Daily Work\20210331B\196529-B&V-DIA-004.dgn



© Copyright by Black & Veatch Hong Kong Limited

LEGEND:

- SITE FORMATION BOUNDARY
- EXISTING SEWERAGE
- DRAINAGE RESERVE
- RM — EXISTING RISING MAINS
- PROPOSED SEWERS BY HSK NDA STAGE 1 WORKS

Revision	Date	Description			Initial
	Designed	Checked	Drawn	Checked	
Initial	FN	LCH	SZ	LGH	
Date	11/17	11/17	11/17	11/17	

Approved

Contract no.

CE 41/2016 (CE)

Contract title

SITE FORMATION AND INFRASTRUCTURAL WORKS FOR PROPOSED PUBLIC HOUSING DEVELOPMENTS IN YUEN LONG NORTH - FEASIBILITY STUDY

Drawing title

EXISTING SEWERAGE LAYOUT PLAN

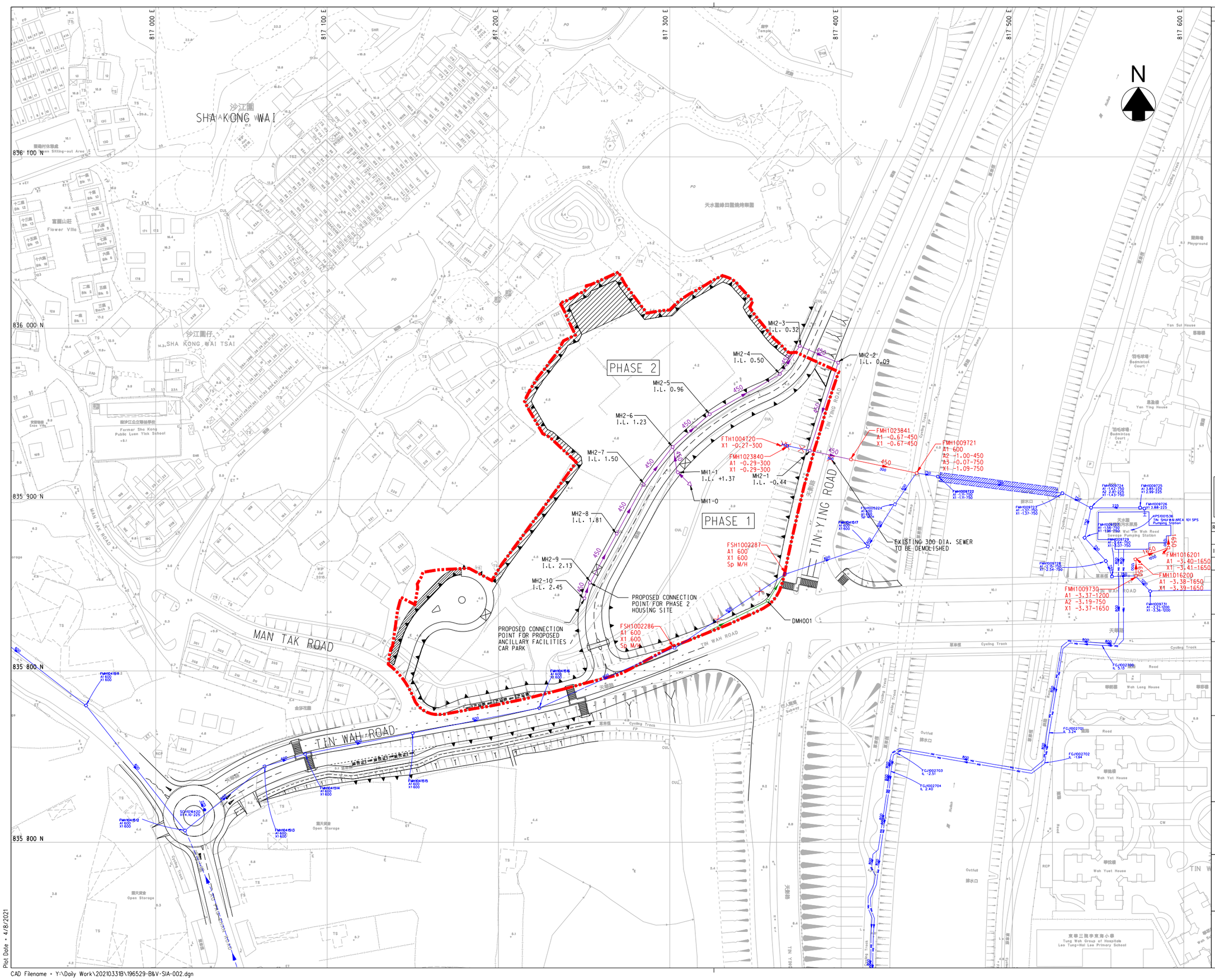
Drawing No.	Scale
196529/B&V/SIA/001	1 : 1000 (A1) 1 : 2000 (A3)

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

BLACK & VEATCH HONG KONG LIMITED
博威工程顧問有限公司

Plot Date = 4/8/2021

CAD Filename = Y:\Daily Work\20210331B\196529-B&V-SIA-001.dgn



© Copyright by Black & Veatch Hong Kong Limited

LEGEND:

- SITE FORMATION BOUNDARY
- +65 PROPOSED LEVEL
- PROPOSED PUBLIC ROAD
- ENTRANCE
- PROPOSED RETAINING WALL
- EXISTING SEWER
- PROPOSED SEWERAGE PIPELINE
- EXISTING SEWER TO BE UPGRADED
- DRAINAGE RESERVE
- MH1-1 I.L. 1.77 PROPOSED MANHOLE ID / INVERT LEVEL (mPD)
- PROPOSED SEWER DIVERSION
- EXISTING SEWER TO BE DEMOLISHED/ABANDONED
- RM EXISTING RISING MAINS
- PROPOSED SEWERS BY HSK NDA STAGE 1 WORKS
- PROPOSED TERMINAL MANHOLE AND PIPE

SUBJECT TO DETAILED DESIGN AND FURTHER STUDY

Revision	Date	Description			Initial
	Designed	Checked	Drawn	Checked	
Initial	FN	LCH	SZ	LGH	
Date	11/17	11/17	11/17	11/17	

Approved

Contract no.
CE 41/2016 (CE)

Contract title
SITE FORMATION AND INFRASTRUCTURAL WORKS FOR PROPOSED PUBLIC HOUSING DEVELOPMENTS IN YUEN LONG NORTH - FEASIBILITY STUDY

Drawing title
PROPOSED SEWERAGE SYSTEM

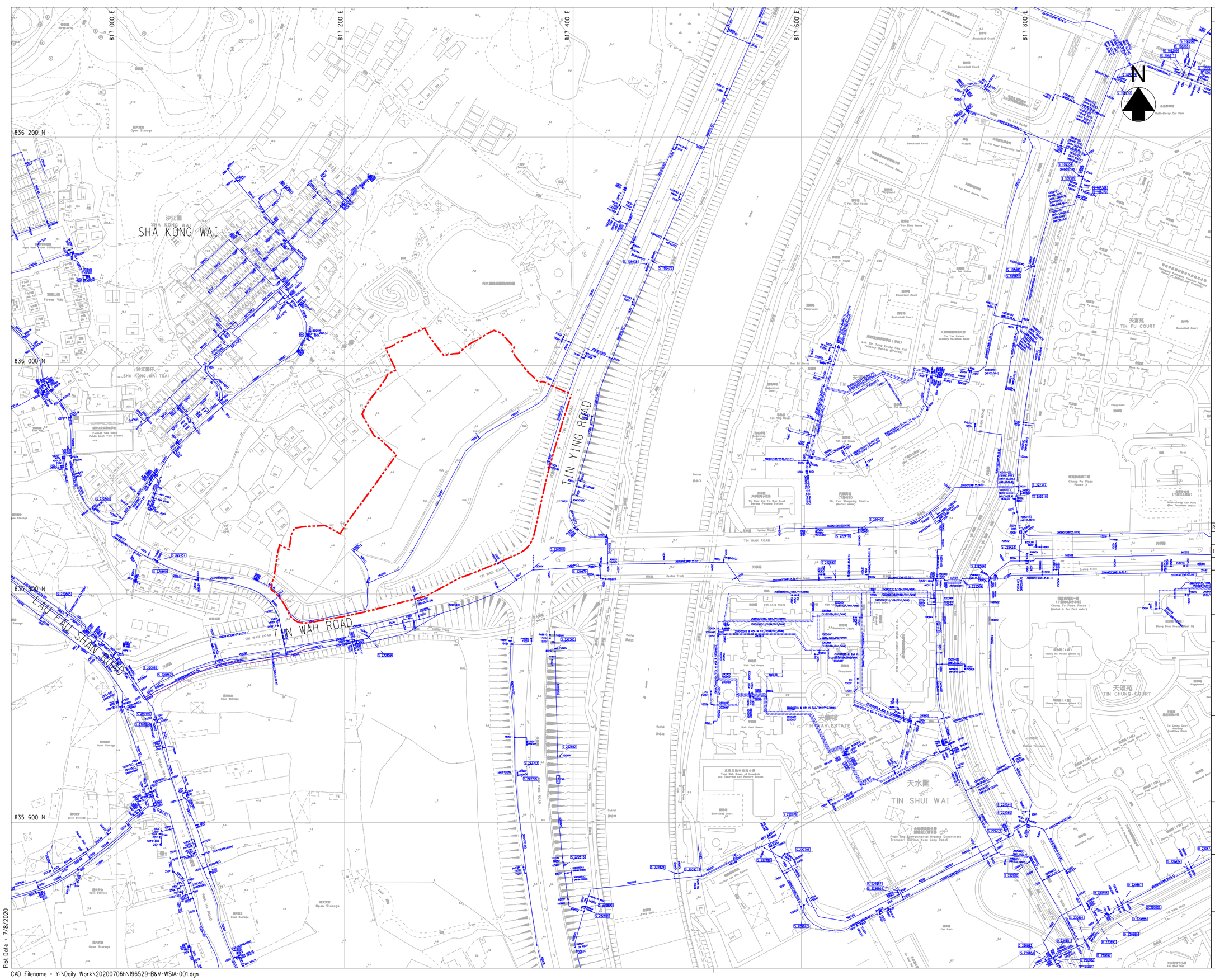
Drawing No.	Scale
196529/B&V/SIA/002	1 : 1000 (A1) 1 : 2000 (A3)

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

BLACK & VEATCH HONG KONG LIMITED
博威工程顧問有限公司

Plot Date = 4/8/2021

CAD Filename = Y:\Daily Work\20210331B\196529-B&V-SIA-002.dgn



© Copyright by Black & Veatch Hong Kong Limited

LEGEND:

DEVELOPEMENT BOUNDARY

EXISTING FRESH WATER MAINS

Revision	Date	Description			Initial
	Designed	Checked	Drawn	Checked	
Initial	FN	LCH	SZ	LGH	
Date	10/17	10/17	10/17	10/17	

Approved

Contract no.

CE 41/2016 (CE)

Contract title

SITE FORMATION AND INFRASTRUCTURAL WORKS FOR PROPOSED PUBLIC HOUSING DEVELOPMENTS IN YUEN LONG NORTH - FEASIBILITY STUDY

Drawing title

EXISTING FRESH WATER MAINS RECORD PLAN

Drawing No.	Scale
196529/B&V/WSIA/001	1 : 1500 (A1) 1 : 3000 (A3)

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

BLACK & VEATCH HONG KONG LIMITED
博威工程顧問有限公司

Plot Date = 7/8/2020

CAD Filename = Y:\Daily Work\20200706h\196529-B&V-WSIA-001.dgn

© Copyright by Black & Veatch Hong Kong Limited

LEGEND:

- DEVELOPEMENT BOUNDARY
- EXISTING SALT WATER MAINS

Revision	Date	Description			Initial
	Designed	Checked	Drawn	Checked	
Initial	FN	LCH	SZ	LGH	
Date	10/17	10/17	10/17	10/17	

Approved

Contract no.

CE 41/2016 (CE)

Contract title

SITE FORMATION AND INFRASTRUCTURAL WORKS FOR PROPOSED PUBLIC HOUSING DEVELOPMENTS IN YUEN LONG NORTH - FEASIBILITY STUDY

Drawing title

EXISTING SAIT WATER MAINS RECORD PLAN

Drawing No.	Scale
196529/B&V/WSIA/002	1 : 1000 (A1) 1 : 2000 (A3)

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

BLACK & VEATCH HONG KONG LIMITED
博威工程顧問有限公司

Plot Date = $DATE$

CAD Filename = $FILE$

© Copyright by Black & Veatch Hong Kong Limited

LEGEND:

- DEVELOPEMENT BOUNDARY
- EXISTING FRESH WATER MAINS TO BE DIVERTED
- EXISTING FRESH WATER MAINS
- PROPOSED SLOPE
- +65 PROPOSED LEVEL
- PROPOSED PUBLIC ROAD
- ENTRANCE
- PROPOSED RETAINING WALL
- 100 DIAMETER (mm) PROPOSED FRESH WATER MAINS
- 100 DIAMETER (mm) PROPOSED FRESH WATER MAIN DIVERSION

SUBJECT TO DETAILED DESIGN AND FURTHER STUDY

Revision	Date	Description			Initial
	Designed	Checked	Drawn	Checked	
Initial	FN	LCH	SZ	LGH	
Date	12/17	12/17	12/17	12/17	

Approved

Contract no.

CE 41/2016 (CE)

Contract title

SITE FORMATION AND INFRASTRUCTURAL WORKS FOR PROPOSED PUBLIC HOUSING DEVELOPMENTS IN YUEN LONG NORTH - FEASIBILITY STUDY

Drawing title

PROPOSED FRESH WATER SYSTEM

Drawing No.	Scale
196529/B&V/WSIA/003	1 : 1250 (A1) 1 : 2500 (A3)

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

BLACK & VEATCH HONG KONG LIMITED
博威工程顧問有限公司

Plot Date : 4/2/2021

CAD Filename : C:\Daily Work\20210331B\196529-B&V-WSIA-003.dgn

© Copyright by Black & Veatch Hong Kong Limited

LEGEND:

- EXISTING FRESH WATER SERVICE RESERVOIR
- EXISTING PUMPING STATION
- EXISTING FRESH WATER MAINS
- EXISTING WSD NO BLASTING LIMIT / WWR
- PROPOSED FRESH WATER SERVICE RESERVOIR
- PROPOSED DN450 FRESH WATER MAIN - INLET
- PROPOSED DN450 FRESH WATER MAIN - OUTLET
- PROPOSED SLOPE

120m NO BLASTING LIMIT FOR WSD TUNNEL

EXISTING WSD TUNNEL

丹桂村北食水配水庫
Tan Kwai Tsuen North Fresh Water Service Reservoir

PROPOSED TEMPORARY TIN WAH ROAD FRESH WATER SERVICE RESERVOIR
CAPACITY:3521m³
TOP WATER LEVEL:65mPD
INVERT LEVEL:56mPD

BRIDGE

Revision	Date	Description		Initial
	Designed	Checked	Drawn	Checked
Initial	EM	LCH	SZ	LCH
Date	02/19	02/19	02/19	02/19

Approved

Contract no.
CE 41/2016 (CE)

Contract title
SITE FORMATION AND INFRASTRUCTURAL WORKS FOR PROPOSED PUBLIC HOUSING DEVELOPMENTS IN YUEN LONG NORTH - FEASIBILITY STUDY

Drawing title
PROPOSED INTERIM FRESH WATER SERVICE RESERVOIR

Drawing No.
196529/B&V/WSIA/004

Scale
1 : 1000 (A1)
1 : 2000 (A3)

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

BLACK & VEATCH HONG KONG LIMITED
博威工程顧問有限公司

Plot Date = $DATE$
CAD Filename = $FILE$

© Copyright by Black & Veatch Hong Kong Limited

LEGEND:

- DEVELOPEMENT BOUNDARY (FOR SITE FORMATION - PHASE 1 & 2)
- EXISTING SALT WATER MAINS
- 100 DIAMETER (mm) PROPOSED SALT WATER MAINS
- 150 DIAMETER (mm) PROPOSED FLUSHING WATER MAIN (INDICATVE)

SUBJECT TO DETAILED DESIGN AND FURTHER STUDY

Revision	Date	Description			Initial
	Designed	Checked	Drawn	Checked	
Initial	FN	LCH	SZ	LGH	
Date	01/19	01/19	01/19	01/19	

Approved

Contract no.
CE 41/2016 (CE)

Contract title
SITE FORMATION AND INFRASTRUCTURAL WORKS FOR PROPOSED PUBLIC HOUSING DEVELOPMENTS IN YUEN LONG NORTH - FEASIBILITY STUDY

Drawing title
PROPOSED FLUSHING WATER SYSTEM (SALT WATER)

Drawing No.
196529/B&V/WSIA/005

Scale
1 : 1000 (A1)
1 : 2000 (A3)

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

BLACK & VEATCH HONG KONG LIMITED
博威工程顧問有限公司

Plot Date = 4/2/2021

CAD Filename = C:\Daily Work\20210331B\196529-B&V-WSIA-005.dgn

© Copyright by Black & Veatch Hong Kong Limited

LEGEND:

- DEVELOPEMENT BOUNDARY (FOR SITE FORMATION - PHASE 1 & 2)
- EXISTING FRESH WATER MAINS
- 100 DIAMETER (mm)
- PROPOSED TEMPORARY MAINS FOR FLUSHING (TMF)

817 000 E | 817 100 E | 817 200 E | 817 300 E | 817 400 E | 817 500 E | 817 600 E

836 100 N | 836 000 N | 835 900 N | 835 800 N | 835 800 N

N

沙江圍
SHA KONG WAI

沙江圍仔
SHA KONG WAI TSAI

PHASE 2

PHASE 1

PROPOSED CONNECTION POINT TO PHASE 2 HOUSING SITE

PROPOSED CONNECTION POINT TO PROPOSED ANCILLARY FACILITIES / CAR PARK

PROPOSED CONNECTION POINT TO PHASE 1 HOUSING SITE

CONNECT TO PLANNED DN400 FRESH WATER MAINS

MAN TAK ROAD

TIN WAH ROAD

TIN YING ROAD

LU TAI SHAN ROAD

Revision	Date	Description		Initial
	Designed	Checked	Drawn	Checked
Initial	FN	LCH	SZ	LGH
Date	10/17	10/17	10/17	10/17

Approved

Contract no.
CE 41/2016 (CE)

Contract title
SITE FORMATION AND INFRASTRUCTURAL WORKS FOR PROPOSED PUBLIC HOUSING DEVELOPMENTS IN YUEN LONG NORTH - FEASIBILITY STUDY

Drawing title
POPOSED TEMPORARY MAINS FOR FLUSHING SYSTEM

Drawing No.
196529/B&V/WSIA/006

Scale
1 : 1000 (A1)
1 : 2000 (A3)

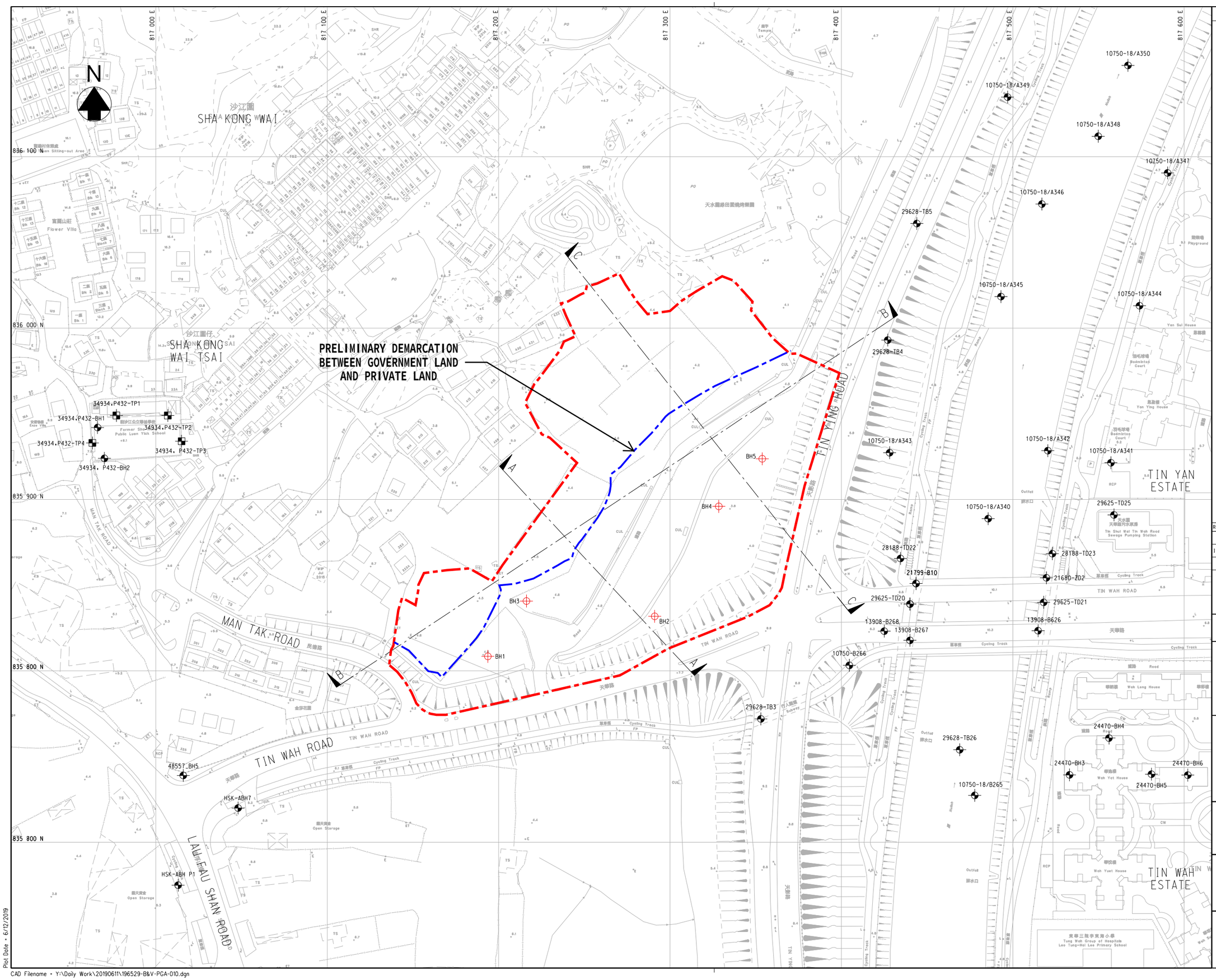
土木工程拓展署
CEDD Civil Engineering and Development Department

BLACK & VEATCH HONG KONG LIMITED
博威工程顧問有限公司

Plot Date = 8/12/2020

CAD Filename = Y:\Daily Work\20200810\196529-B&V-WSIA-006.dgn

© Copyright by Black & Veatch Hong Kong Limited



LEGEND:

- SITE BOUNDARY
- EXISTING BOREHOLE
- EXISTING TRIAL PIT
- BH1 BOREHOLE BH1 TO BH5

BOREHOLE	COORDINATES	
	EASTING	NORTHING
BH1	817193.70	835808.48
BH2	817291.06	835831.83
BH3	817216.22	835840.76
BH4	817328.45	835895.99
BH5	817353.79	835923.76

Revision	Date	Description		Initial
	Designed	Checked	Drawn	Checked
Initial	FN	LCH	SZ	LGH
Date	06/19	06/19	06/19	06/19

Approved

Contract no.
CE 41/2016 (CE)

Contract title
SITE FORMATION AND INFRASTRUCTURAL WORKS FOR PROPOSED PUBLIC HOUSING DEVELOPMENTS IN YUEN LONG NORTH - FEASIBILITY STUDY

Drawing title
EXISTING GROUND INVESTIGATION RECORDS

Drawing No.
196529/B&V/PGA/010

Scale
1 : 1000 (A1)
1 : 2000 (A3)

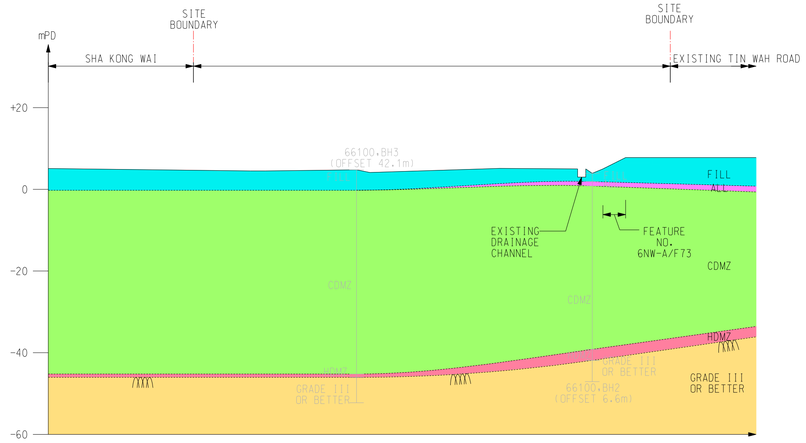
土木工程拓展署
CEDD Civil Engineering and Development Department

BLACK & VEATCH HONG KONG LIMITED
博威工程顧問有限公司

Plot Date = 6/12/2019

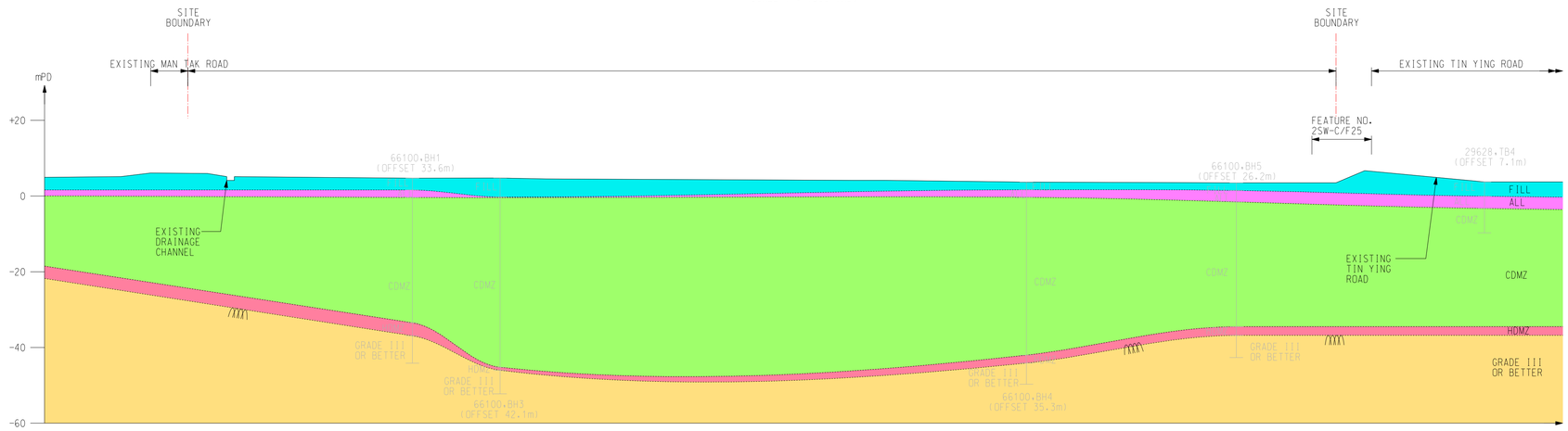
CAD Filename = Y:\Daily Work\20190611\196529-B&V-PGA-010.dgn

© Copyright by Black & Veatch Hong Kong Limited



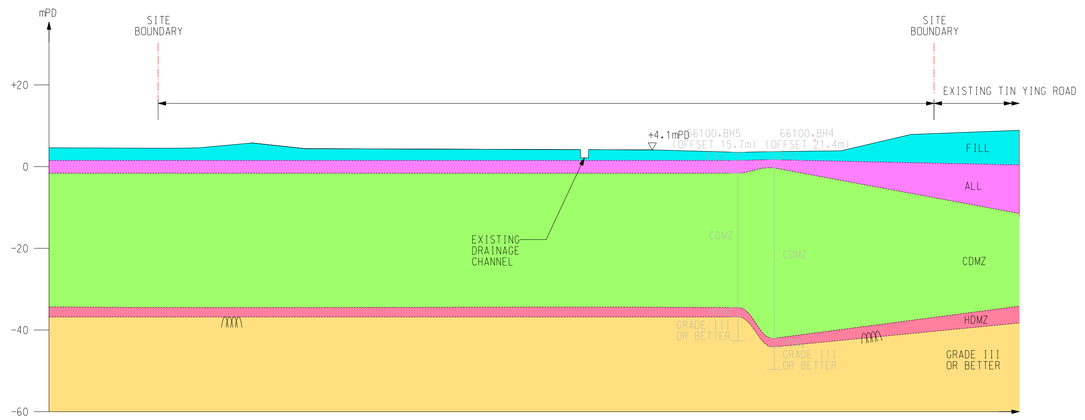
SECTION A - A

SCALE 1 : 1500 (A3)



SECTION B - B

SCALE 1 : 1500 (A3)



SECTION C - C

SCALE 1 : 1500 (A3)

LEGEND:

FILL	FILL
ALL	ALLUVIUM
CDMZ	COMPLETELY DECOMPOSED METASILTSTONE
-------	INFERRED GEOLOGICAL PROFILE
---/\/\/\---	INFERRED BEDROCK LEVEL (METASILTSTONE)

Revision	Date	Description		Initial
	Designed	Checked	Drawn	Checked
Initial	FN	LCH	SZ	LGH
Date	06/19	06/19	06/19	06/19

Approved

Contract no.

CE 41/2016 (CE)

Contract title

SITE FORMATION AND INFRASTRUCTURAL WORKS FOR PROPOSED PUBLIC HOUSING DEVELOPMENTS IN YUEN LONG NORTH - FEASIBILITY STUDY

Drawing title

SECTION A-A, SECTION B-B AND SECTION C-C

Drawing No.	Scale
196529/B&V/PGA/011	1 : 1500 (A3)

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

BLACK & VEATCH HONG KONG LIMITED
博威工程顧問有限公司

Plot Date = 11/25/2019

CAD Filename = Y:\Daily Work\20191120e\196529-B&V-PGA-011.dgn

© Copyright by Black & Veatch Hong Kong Limited

LEGEND:

- DEVELOPMENT BOUNDARY
- DEMARCATION BETWEEN GOVERNMENT LAND AND PRIVATE LAND
- PROPOSED SLOPE
- +65 EXISTING LEVEL
- 65 PROPOSED LEVEL
- PROPOSED PUBLIC ROAD
- PROPOSED HOUSING SITE PHASE 1
- PROPOSED HOUSING SITE PHASE 2
- ENTRANCE (INDICATIVE)
- PROPOSED RETAINING WALL
- PROPOSED DRAINAGE RESERVE

817 000 E | 817 100 E | 817 200 E | 817 300 E | 817 400 E | 817 500 E | 817 600 E

836 100 N | 836 000 N | 835 900 N | 835 800 N | 835 800 N

沙江圍 SHA KONG WAI

沙江圍仔 SHA KONG WAI TSAI

PHASE 2

PHASE 1

PRIVATE LAND | GOVERNMENT LAND

TIE IN WITH EXISTING F/P & C/W

PRELIMINARY DEMARCATION BETWEEN GOVERNMENT LAND AND PRIVATE LAND

PROPOSED ENTRANCE OF PHASE 1 HOUSING SITE

PROPOSED ENTRANCE OF PHASE 2 HOUSING SITE

PROPOSED FOOTPATH

PROPOSED CROSSING (SUBJECT TO REVIEW)

CONNECTING TO EXISTING CYCLING TRACK

PROPOSED 3 BUS LAY-BY

PROPOSED 3 BUS LAY-BY

TIN YING ROAD

TIN WAH ROAD

MAN TAK ROAD

LTD FAU SHAN ROAD

Revision	Date	Description		Initial
	Designed	Checked	Drawn	Checked
Initial	FN	LCH	SZ	LGH
Date	03/18	03/18	03/18	03/18

Approved

Contract no.

CE 41/2016 (CE)

Contract title

SITE FORMATION AND INFRASTRUCTURAL WORKS FOR PROPOSED PUBLIC HOUSING DEVELOPMENTS IN YUEN LONG NORTH - FEASIBILITY STUDY

Drawing title

PROPOSED PLATFORM LAYOUT OF THE DEVELOPMENT (OPTION 1)

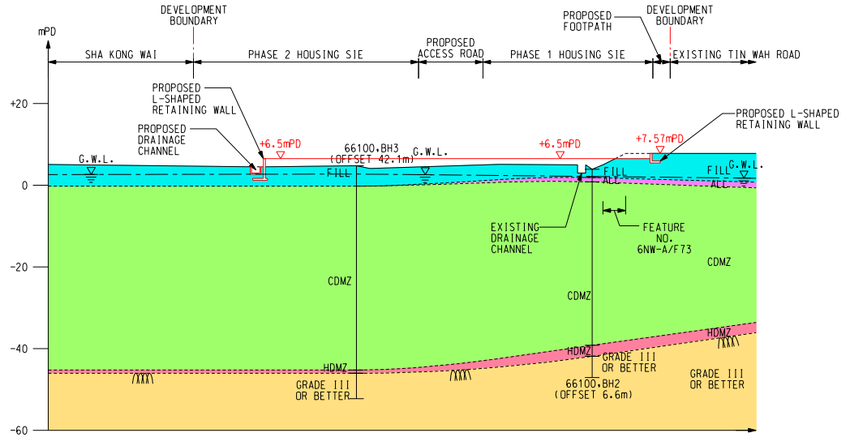
Drawing No.	Scale
196529/B&V/SFA/301	1 : 1000 (A1) 1 : 2000 (A3)

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

BLACK & VEATCH HONG KONG LIMITED
博威工程顧問有限公司

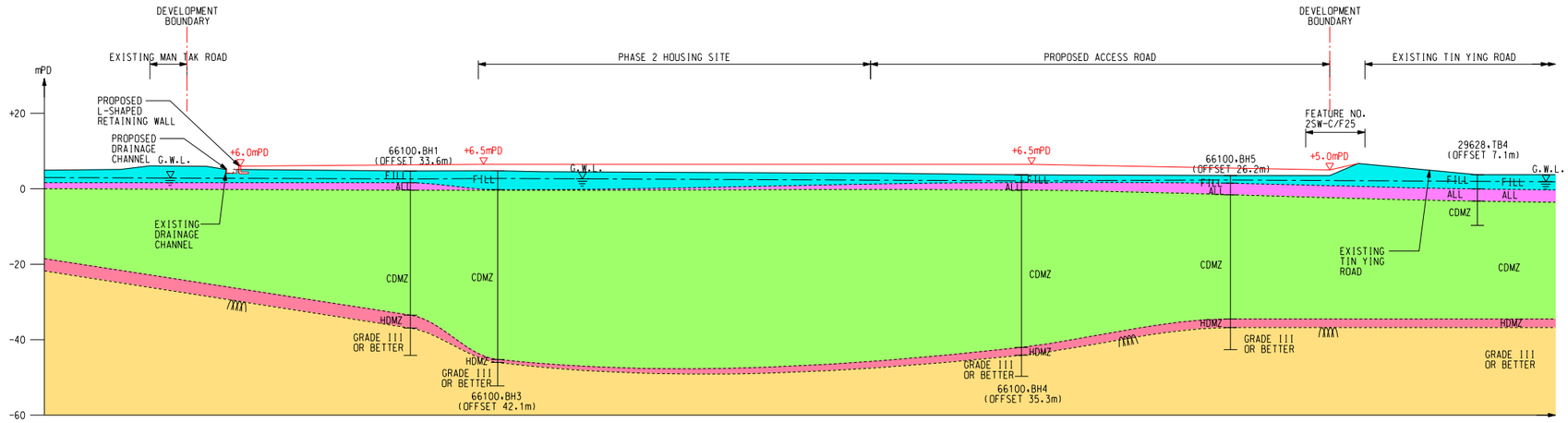
Plot Date = 9/11/2020

CAD Filename = Y:\Daily Work\20200911\196529-B&V-SFA-301.dgn



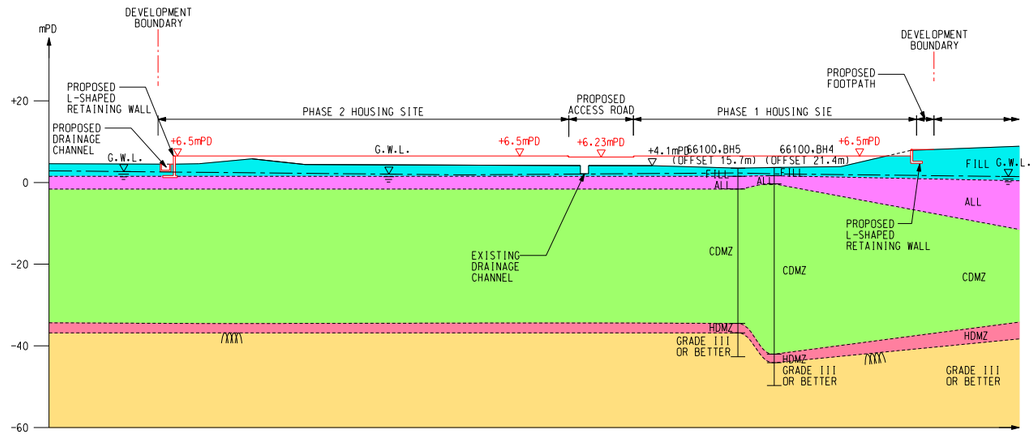
SECTION A - A

SCALE 1 : 1500 (A3)



SECTION B - B

SCALE 1 : 1500 (A3)



SECTION C - C

SCALE 1 : 1500 (A3)

© Copyright by Black & Veatch Hong Kong Limited

LEGEND:

FILL	FILL
ALL	ALLUVIUM
CDMZ	COMPLETELY DECOMPOSED METASILTSTONE
----	INFERRED GEOLOGICAL PROFILE
----	INFERRED BEDROCK LEVEL (METASILTSTONE)

NOTE:

1. THIS DRAWING SHALL BE READ IN CONJUNCTION WITH 196529/B&V/SFA/301.

Revision	Date	Description			Initial
		Designed	Checked	Drawn	Checked
Initial		FN	LCH	SZ	LGH
Date		06/19	06/19	06/19	06/19

Approved

Contract no.

CE 41/2016 (CE)

Contract title

SITE FORMATION AND INFRASTRUCTURAL WORKS FOR PROPOSED PUBLIC HOUSING DEVELOPMENTS IN YUEN LONG NORTH - FEASIBILITY STUDY

Drawing title

PREFERRED OPTION (OPTION 1)- SECTION A-A, SECTION B-B AND SECTION C-C

Drawing No.

196529/B&V/SFA/304

Scale

1 : 1500 (A3)

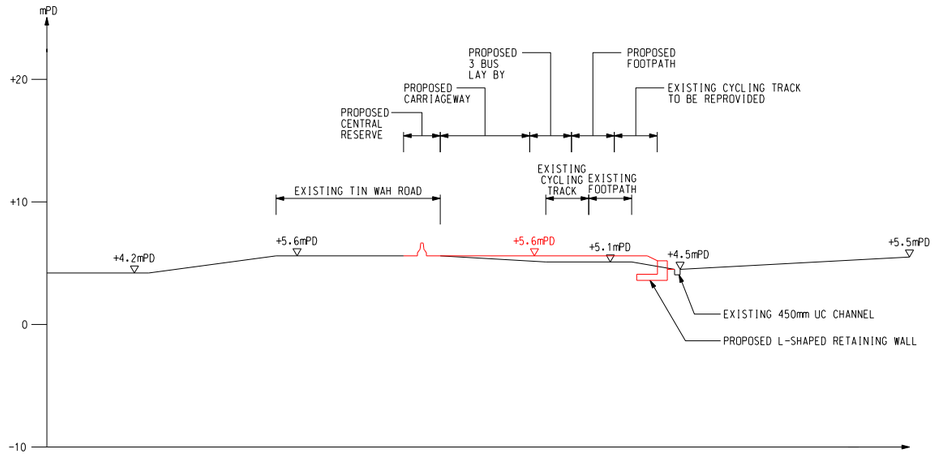
土木工程拓展署
CEDD Civil Engineering and Development Department

BLACK & VEATCH HONG KONG LIMITED
博威工程顧問有限公司

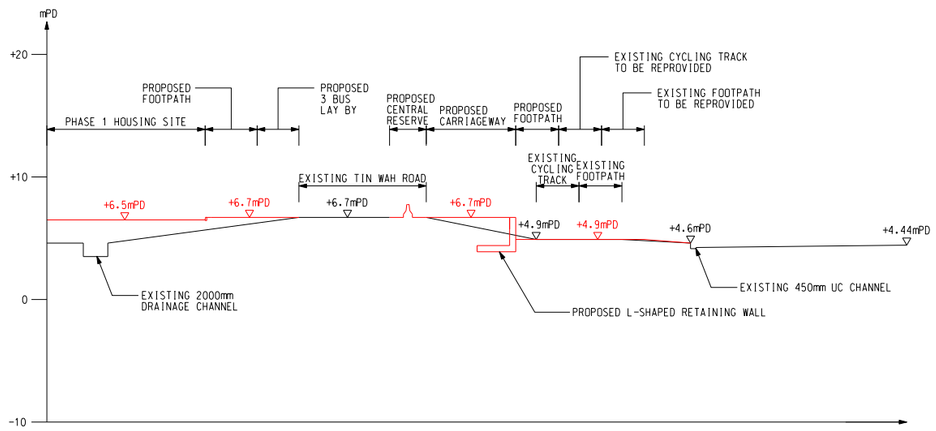
Plot Date : 1/14/2020

CAD Filename : Y:\Daily Work\20200113D\196529-B&V-SFA-304.dgn

© Copyright by Black & Veatch Hong Kong Limited



SECTION D - D
SCALE 1 : 500 (A3)



SECTION E - E
SCALE 1 : 500 (A3)

LEGEND:

——— EXISTING GROUND LEVEL

——— PROPOSED TIN WAH ROAD IMPROVEMENT WORKS AND GROUND LEVEL

NOTE:

1. THIS DRAWING SHALL BE READ IN CONJUNCTION WITH 196529/B&V/SFA/301.

Revision	Date	Description		Initial
	Designed	Checked	Drawn	Checked
Initial	FN	LCH	SZ	LGH
Date	06/19	06/19	06/19	06/19

Approved

Contract no.
CE 41/2016 (CE)

Contract title
SITE FORMATION AND INFRASTRUCTURAL WORKS FOR PROPOSED PUBLIC HOUSING DEVELOPMENTS IN YUEN LONG NORTH - FEASIBILITY STUDY

Drawing title
PREFERRED OPTION (OPTION 1) - SECTION D-D AND SECTION E-E

Drawing No.	Scale
196529/B&V/SFA/305	1 : 500 (A3)

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

BLACK & VEATCH HONG KONG LIMITED
博威工程顧問有限公司

Plot Date = 1/14/2020

CAD Filename = y:\daily work\20200113d\196529-B&V-SFA-305.dgn

© Copyright by Black & Veatch Hong Kong Limited

N

Sha KongWai

Flower Villa

MAN TAK ROAD

Open Storage

Sha Kong Wai Ts

Tin Wah Estate

Chung Plaza 2

Chung Plaza 1

C01
C02
C03
C04
C05
C06
C07
C08
C09
C10
C11

0m 20m 50m 100m

BLOCK PLAN

LEGEND

- PROJECT BOUNDARY
- ASSESSMENT AREA OF 500M
- REPRESENTATIVE ASRS

Revision	Date	Description			Initial
	Designed	Checked	Drawn		Checked
Initial	FN	LCH	SZ		LGH
Date	11/20	11/20	11/20		11/20

Approved

Contract no.
CE 41/2016 (CE)

Contract title
SITE FORMATION AND INFRASTRUCTURAL WORKS FOR PROPOSED PUBLIC HOUSING DEVELOPMENTS IN YUEN LONG NORTH - FEASIBILITY STUDY

Drawing title
LOCATION OF REPRESENTATIVE AIR SENSITIVE RECEIVERS DURING CONSTRUCTION PHASE

Drawing No.
196529/B&V/PER/FIG 3.1

Scale

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

BLACK & VEATCH HONG KONG LIMITED
博威工程顧問有限公司

RAMBOLL

Plot Date : 4/6/2021 10:34:59 AM

File Name : C:\Daily Work\20210331B\196529-B&V-PER-FIG 3.1

BLOCK PLAN

© Copyright by Black & Veatch Hong Kong Limited

NOTE

1. LAYOUT SUBJECT TO REVIEW IN SUBSEQUENT DETAILED DESIGN STATE.

LEGEND

- HOUSING SITE AND ROADWORKS BOUNDARY
- ASSESSMENT AREA OF 500M
- REPRESENTATIVE ASRS (WITHIN THE SITE)
- REPRESENTATIVE ASRS (OUTSIDE THE SITE)

Revision	Date	Description			Initial
	Designed	Checked	Drawn	Checked	
Initial	FN	LCH	SZ	LGH	
Date	03/21	03/21	03/21	03/21	

Approved

Contract no.
CE 41/2016 (CE)

Contract title
SITE FORMATION AND INFRASTRUCTURAL WORKS FOR PROPOSED PUBLIC HOUSING DEVELOPMENTS IN YUEN LONG NORTH – FEASIBILITY STUDY

Drawing title
LOCATION OF REPRESENTATIVE AIR SENSITIVE RECEIVERS DURING OPERATION PHASE AND RELEVANT PATH-GRIDS (WITHOUT HSK NDA)

Drawing No.
196529/B&V/PER/FIG 3.2

Scale

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

BLACK & VEATCH HONG KONG LIMITED
博威工程顧問有限公司

RAMBOLL

0m 25m 50m 100m

Plot Date : 4/6/2021 11:28:33 AM

File Name : C:\Daily Work\20210331B\196529-B&V-PER-FIG 3.2

BLOCK PLAN

© Copyright by Black & Veatch Hong Kong Limited

NOTE

1. LAYOUT SUBJECT TO REVIEW IN SUBSEQUENT DETAILED DESIGN STATE.

LEGEND

- HOUSING SITE AND ROADWORKS BOUNDARY
- ASSESSMENT AREA OF 500M
- REPRESENTATIVE ASRS (WITHIN THE SITE)
- REPRESENTATIVE ASRS (OUTSIDE THE SITE)

Revision	Date	Description			Initial
	Designed	Checked	Drawn	Checked	
Initial	FN	LCH	SZ	LGH	
Date	03/21	03/21	03/21	03/21	

Approved

Contract no.
CE 41/2016 (CE)

Contract title
SITE FORMATION AND INFRASTRUCTURAL WORKS FOR PROPOSED PUBLIC HOUSING DEVELOPMENTS IN YUEN LONG NORTH – FEASIBILITY STUDY

Drawing title
LOCATION OF REPRESENTATIVE AIR SENSITIVE RECEIVERS DURING OPERATION PHASE AND RELEVANT PATH–GRIDS (WITH HSK NDA)

Drawing No.
196529/B&V/PER/FIG 3.3

Scale

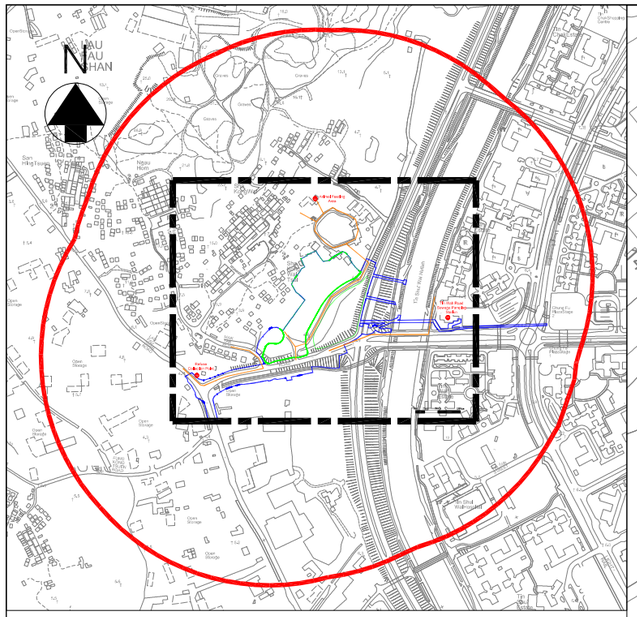
土木工程拓展署
CEDD Civil Engineering and Development Department

BLACK & VEATCH HONG KONG LIMITED
博威工程顧問有限公司

RAMBOLL

Plot Date : 4/6/2021 11:22:31 AM

File Name : C:\Daily Work\20210331B\196529-B&V-PER-FIG 3.3



BLOCK PLAN

© Copyright by Black & Veatch Hong Kong Limited

LEGEND

- PROJECT BOUNDARY
- HOUSING SITE BOUNDARY
- ASSESSMENT AREA OF 500M
- ODOUR PATROL ROUTE
- ODOUR SOURCE

Revision	Date	Description			Initial
	Designed	Checked	Drawn	Checked	
Initial	FN	LCH	SZ	LGH	
Date	11/20	11/20	11/20	11/20	

Approved

Contract no.
CE 41/2016 (CE)

Contract title
SITE FORMATION AND INFRASTRUCTURAL WORKS FOR PROPOSED PUBLIC HOUSING DEVELOPMENTS IN YUEN LONG NORTH - FEASIBILITY STUDY

Drawing title
LOCATION OF ODOUR SOURCES AND ODOUR PATROL ROUTE

Drawing No.
196529/B&V/PER/FIG 3.4

Scale

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

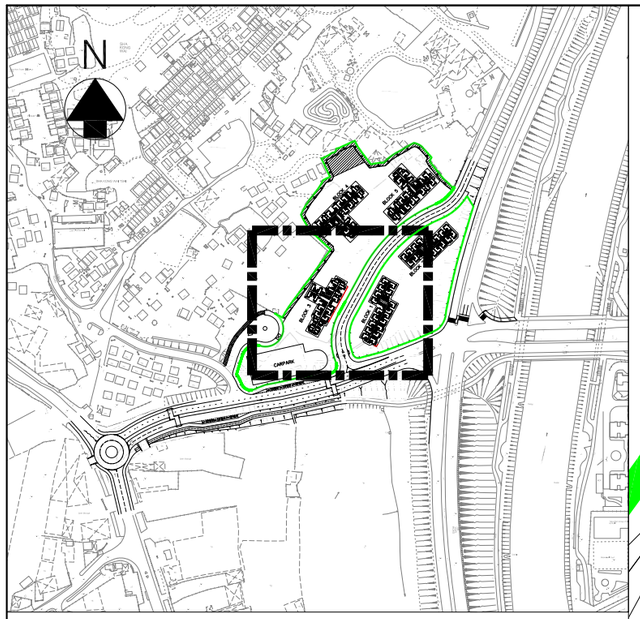
BLACK & VEATCH HONG KONG LIMITED
博威工程顧問有限公司

RAMBOLL

Plot Date : 4/6/2021 11:51:17 AM

File Name : C:\Daily Work\20210331B\196529-B&V-PER-FIG 3.4

© Copyright by Black & Veatch Hong Kong Limited



BLOCK PLAN

5.0

A

BLOCK 3

BLOCK 1

BLOCK

TS

CARPARK

0m 5m 10m 20m

NOTE

1. LAYOUT SUBJECT TO REVIEW IN SUBSEQUENT DETAILED DESIGN STATE.

LEGEND

HOUSING SITE BOUNDARY

AIR SENSITIVE USE OR FRESH AIR INTAKE PROHIBITED AT <5M ABOVE GROUND

Revision	Date	Description			Initial
	Designed	Checked	Drawn	Checked	
Initial	FN	LCH	SZ	LGH	
Date	03/21	03/21	03/21	03/21	

Approved

Contract no.

CE 41/2016 (CE)

Contract title

SITE FORMATION AND INFRASTRUCTURAL WORKS FOR PROPOSED PUBLIC HOUSING DEVELOPMENTS IN YUEN LONG NORTH – FEASIBILITY STUDY

Drawing title

AREA PROHIBITED FOR AIR SENSITIVE USE OR FRESH AIR INTAKE

Drawing No.

196529/B&V/PER/FIG 3.20

Scale

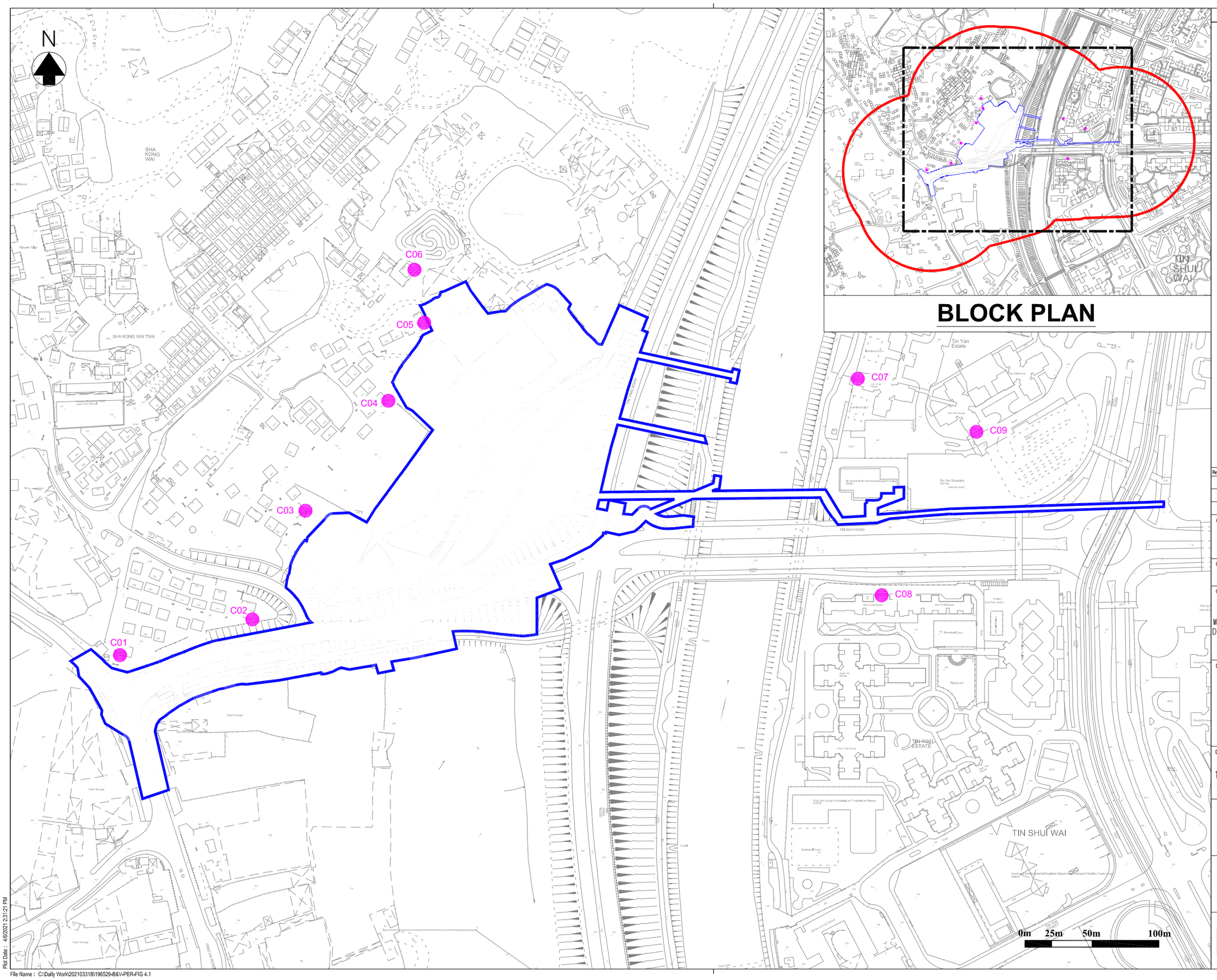
土木工程拓展署
CEDD Civil Engineering and Development Department

BLACK & VEATCH HONG KONG LIMITED
博威工程顧問有限公司

RAMBOLL

Plot Date : 4/6/2021 2:27:21 PM

File Name : C:\Daily Work\20210331B\196529-B&V-PER-FIG 3.20



BLOCK PLAN

© Copyright by Black & Veatch Hong Kong Limited

LEGEND

- PROJECT BOUNDARY
- ASSESSMENT AREA OF 300M
- REPRESENTATIVE NSRS

Revision	Date	Description		Initial
	Designed	Checked	Drawn	Checked
Initial	FN	LCH	SZ	LGH
Date	11/20	11/20	11/20	11/20

Approved

Contract no.

CE 41/2016 (CE)

Contract title

SITE FORMATION AND INFRASTRUCTURAL WORKS FOR PROPOSED PUBLIC HOUSING DEVELOPMENTS IN YUEN LONG NORTH - FEASIBILITY STUDY

Drawing title

LOCATION OF REPRESENTATIVE NOISE SENSITIVE RECEIVERS DURING CONSTRUCTION PHASE

Drawing No.

196529/B&V/PER/FIG 4.1

Scale

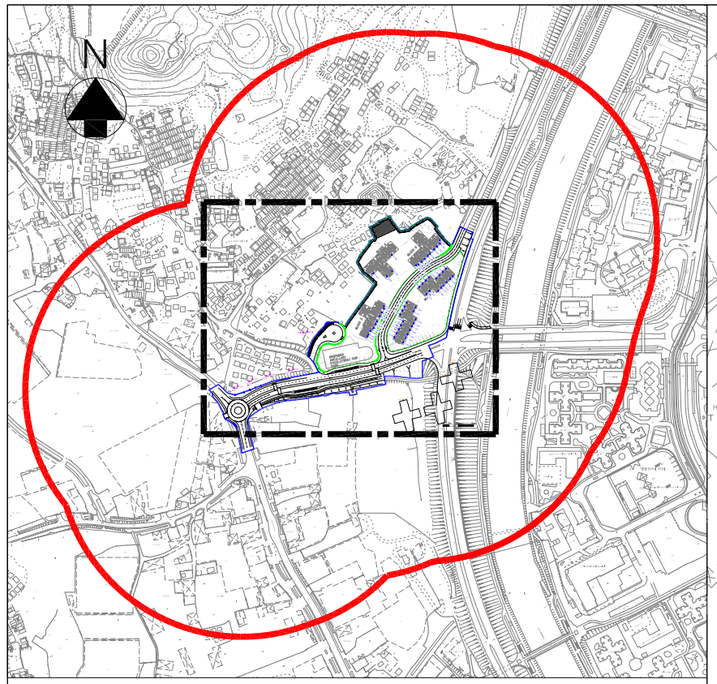
土木工程拓展署
CEDD Civil Engineering and Development Department

BLACK & VEATCH HONG KONG LIMITED
博威工程顧問有限公司

RAMBOLL

Plot Date : 4/6/2021 2:31:21 PM

File Name : C:\Daily Work\20210331B\196529-B&V-PER-FIG 4.1



BLOCK PLAN

© Copyright by Black & Veatch Hong Kong Limited

NOTE

1. LAYOUT SUBJECT TO REVIEW IN SUBSEQUENT DETAILED DESIGN STATE.

LEGEND

- HOUSING SITE AND ROADWORKS BOUNDARY
- HOUSING SITE BOUNDARY
- ASSESSMENT AREA OF 300M
- PLANNED NSRS (WITHIN SITE)
- PLANNED NSRS (OUTSIDE SITE)
- EXISTING NSRS

Revision	Date	Description			Initial
	Designed	Checked	Drawn	Checked	
Initial	FN	LCH	SZ	LGH	
Date	03/21	03/21	03/21	03/21	

Approved

Contract no.

CE 41/2016 (CE)

Contract title

SITE FORMATION AND INFRASTRUCTURAL WORKS FOR PROPOSED PUBLIC HOUSING DEVELOPMENTS IN YUEN LONG NORTH - FEASIBILITY STUDY

Drawing title

LOCATION OF REPRESENTATIVE NOISE SENSITIVE RECEIVERS FOR ROAD TRAFFIC NOIES IMPACT ASSESSMENT

Drawing No.

196529/B&V/PER/FIG 4.2

Scale

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

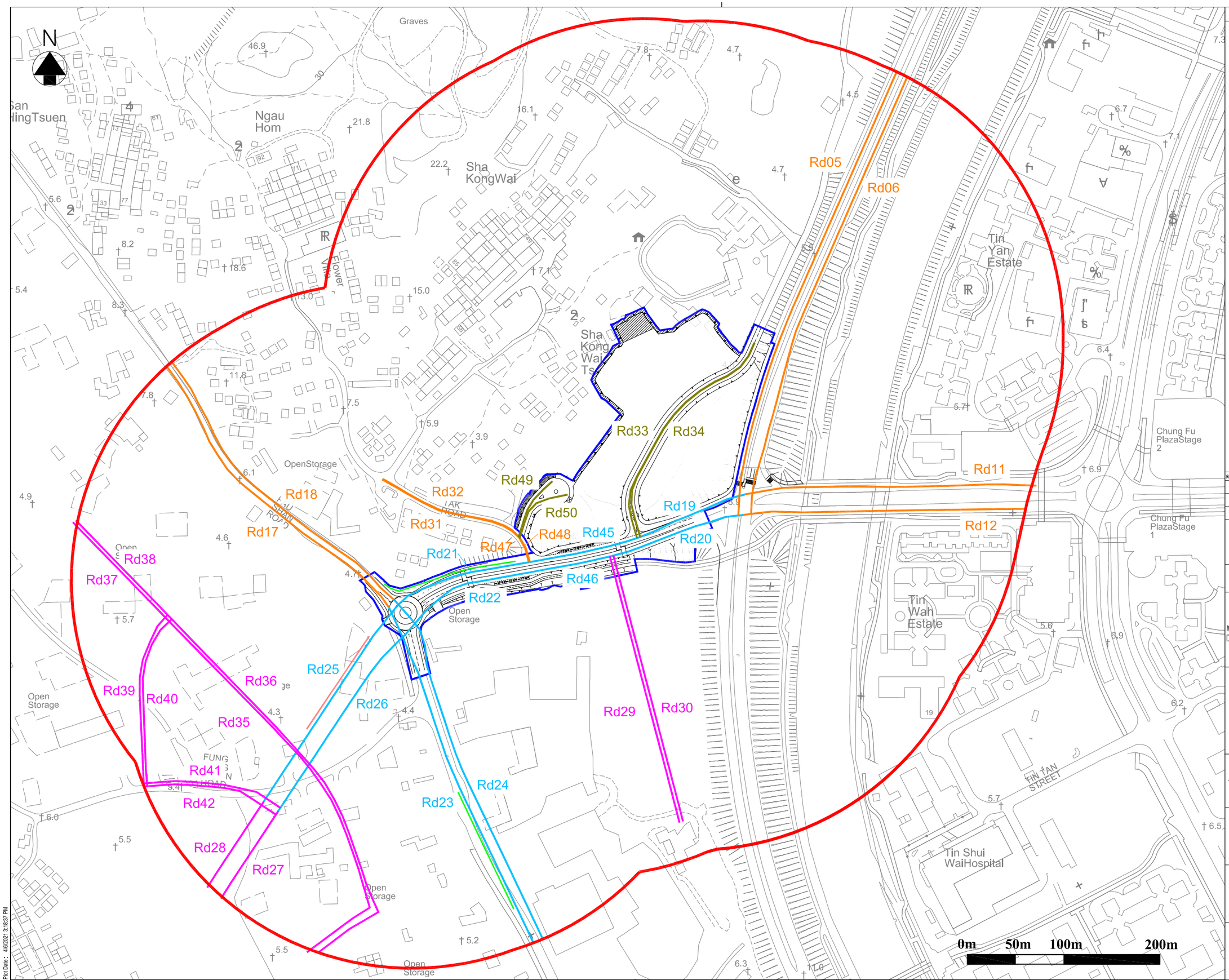
BLACK & VEATCH HONG KONG LIMITED
博威工程顧問有限公司

RAMBOLL

0m 10m 25m 50m

Plot Date : 4/6/2021 3:11:33 PM

File Name : C:\Daily Work\20210331B\196529-B&V-PER-FIG 4.2



© Copyright by Black & Veatch Hong Kong Limited

LEGEND

- HOUSING SITE AND ROADWORKS BOUNDARY
- ASSESSMENT AREA OF 300M
- EXISTING ROADS
- PROJECT ROADS UNDER THIS PROJECT
- PROJECT ROADS UNDER HSK NDA
- PROJECT ROADS WITH LOW NOISE ROAD SURFACING UNDER HSK NDA
- PLANNED 3M VERTICAL ROADSIDE BARRIER UNDER HSK NDA
- PLANNED 5M VERTICAL ROADSIDE BARRIER UNDER HSK NDA

Revision	Date	Description		Initial
	Designed	Checked	Drawn	Checked
Initial	FN	LCH	SZ	LGH
Date	11/20	11/20	11/20	11/20

Approved

Contract no.
CE 41/2016 (CE)

Contract title
SITE FORMATION AND INFRASTRUCTURAL WORKS FOR PROPOSED PUBLIC HOUSING DEVELOPMENTS IN YUEN LONG NORTH - FEASIBILITY STUDY

Drawing title
ROAD LINKS IDENTIFIED FOR ROAD TRAFFIC NOISE IMPACT ASSESSMENT

Drawing No.
196529/B&V/PER/FIG 4.4

Scale

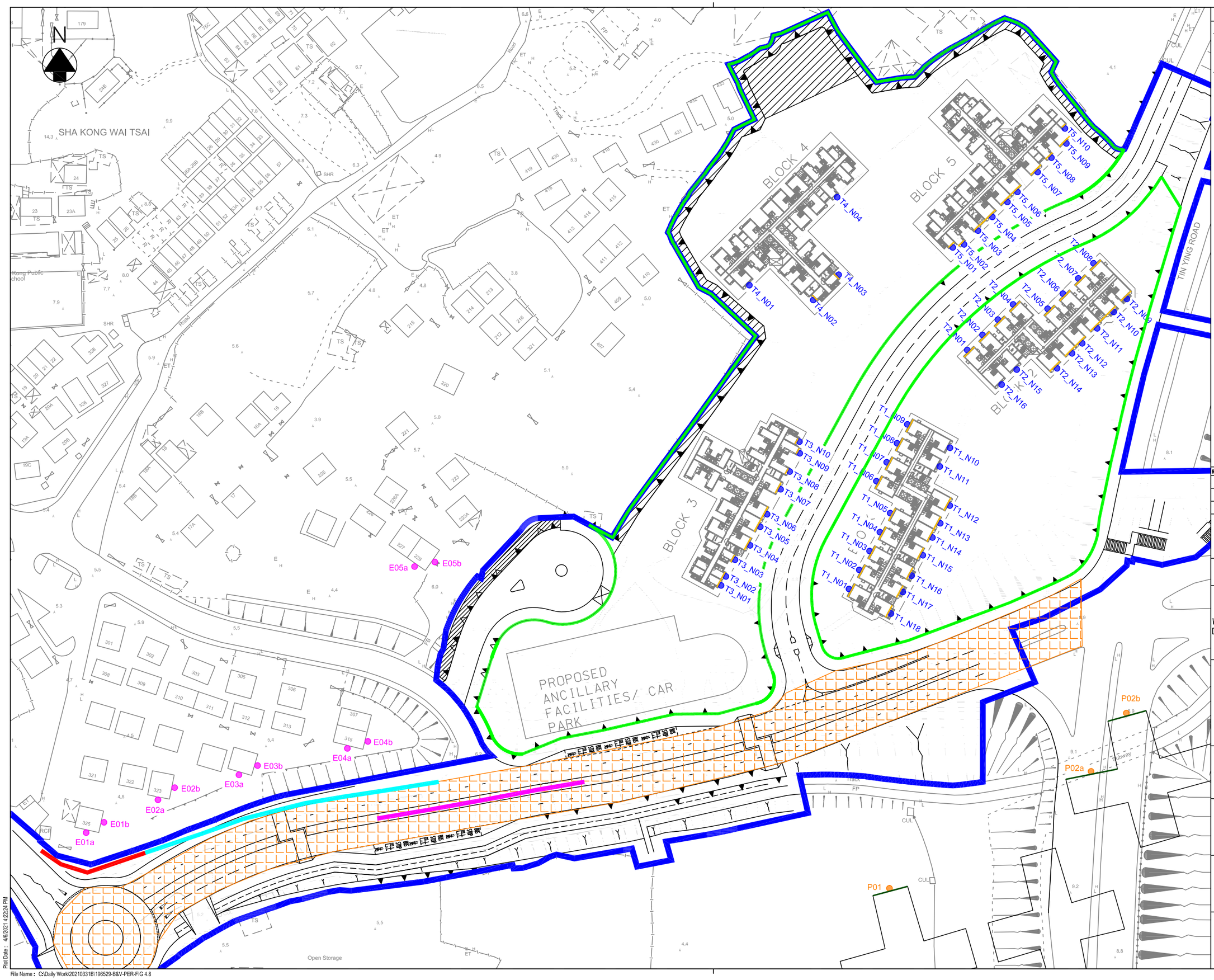
土木工程拓展署
CEDD Civil Engineering and Development Department

BLACK & VEATCH HONG KONG LIMITED
博威工程顧問有限公司

RAMBOLL

Plot Date: 4/6/2021 13:18:37 PM

File Name: C:\Daily Work\20210331B\196529-B&V-PER-FIG 4.4



© Copyright by Black & Veatch Hong Kong Limited

NOTE

1. LAYOUT SUBJECT TO REVIEW IN SUBSEQUENT DETAILED DESIGN STATE.

LEGEND

- HOUSING SITE AND ROADWORKS BOUNDARY
- HOUSING SITE BOUNDARY
- PLANNED NSRS (WITHIN SITE)
- PLANNED NSRS (OUTSIDE SITE)
- EXISTING NSRS

MITIGATION MEASURES PROPOSED UNDER THIS PROJECT

- ACOUSTIC WINDOW
- PROPOSED 2.5M VERTICAL BARRIER (ABSORPTIVE)
- PROPOSED 6M VERTICAL BARRIER

MITIGATION MEASURES PROPOSED UNDER HSK NDA

- ACOUSTIC WINDOW
- PLANNED 5M VERTICAL BARRIER
- PLANNED LOW NOISE ROAD SURFACING (INDICATIVE ONLY, EXACT EXTENT TO BE AGREED WITH HYD)

Revision	Date	Description			Initial
	Designed	Checked	Drawn	Checked	
Initial	FN	LCH	SZ	LGH	
Date	03/21	03/21	03/21	03/21	

Approved

Contract no.
CE 41/2016 (CE)

Contract title
SITE FORMATION AND INFRASTRUCTURAL WORKS FOR PROPOSED PUBLIC HOUSING DEVELOPMENTS IN YUEN LONG NORTH – FEASIBILITY STUDY

Drawing title
PROPOSED MITIGATION MEASURES FOR ROAD TRAFFIC NOISE IMPACT ASSESSMENT

Drawing No.
196529/B&V/PER/FIG 4.8

Scale

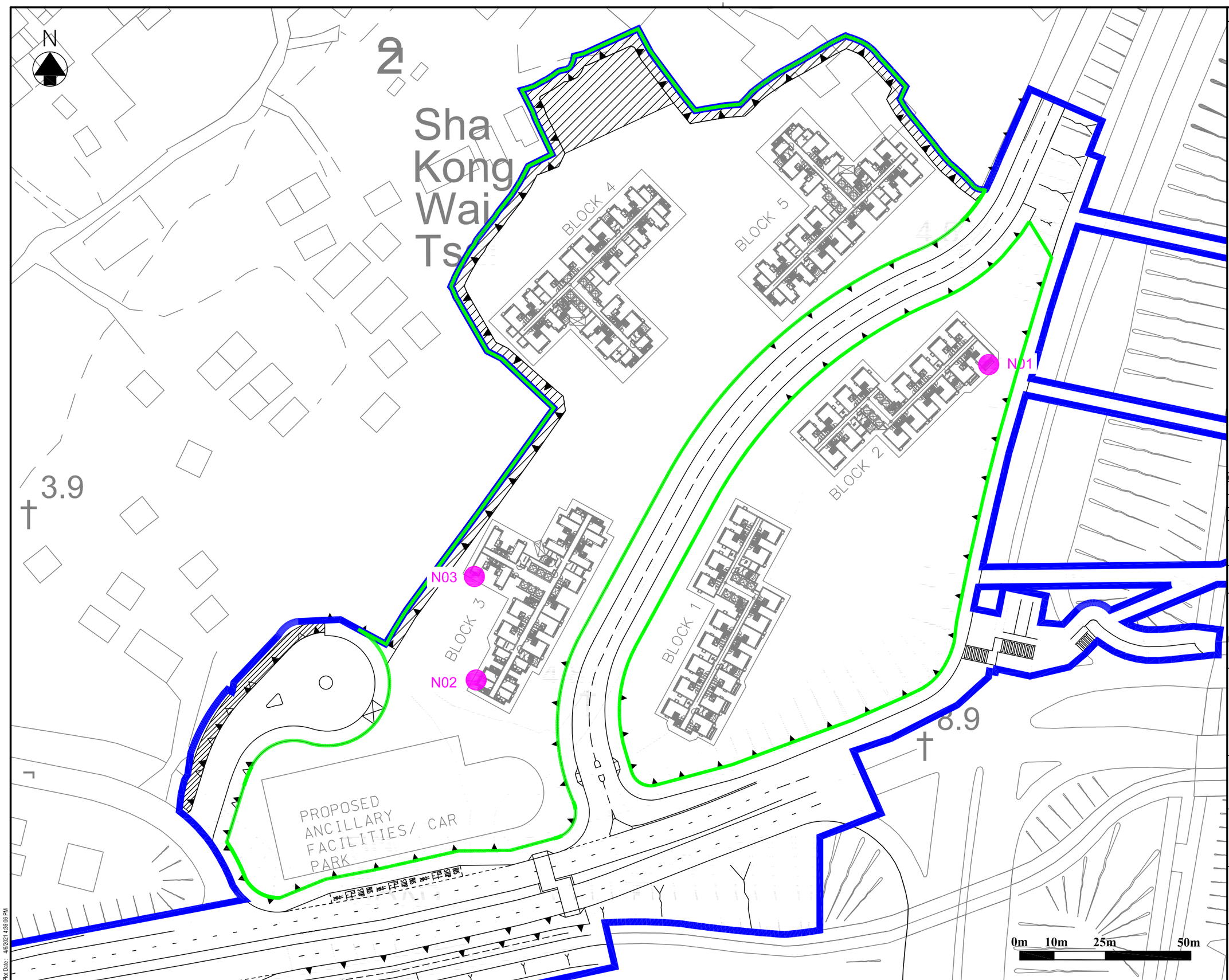
土木工程拓展署
CEDD Civil Engineering and Development Department

BLACK & VEATCH HONG KONG LIMITED
博威工程顧問有限公司

RAMBOLL

Plot Date : 4/6/2021 4:22:24 PM

File Name : C:\Daily Work\20210331B\196529-B&V-PER-FIG 4.8



© Copyright by Black & Veatch Hong Kong Limited

NOTE

1. LAYOUT SUBJECT TO REVIEW IN SUBSEQUENT DETAILED DESIGN STATE.

LEGEND

- PROJECT BOUNDARY
- HOUSING SITE BOUNDARY
- REPRESENTATIVE NSRS

Revision	Date	Description			Initial
	Designed	Checked	Drawn	Checked	
Initial	FN	LCH	SZ	LGH	
Date	11/20	11/20	11/20	11/20	

Approved

Contract no.
CE 41/2016 (CE)

Contract title
SITE FORMATION AND INFRASTRUCTURAL WORKS FOR PROPOSED PUBLIC HOUSING DEVELOPMENTS IN YUEN LONG NORTH - FEASIBILITY STUDY

Drawing title
LOCATION OF REPRESENTATIVE NOISE SENSITIVE RECEIVERS FOR FIXED NOISE SOURCE IMPACT ASSESSMENT

Drawing No.
196529/B&V/PER/FIG 4.3

Scale

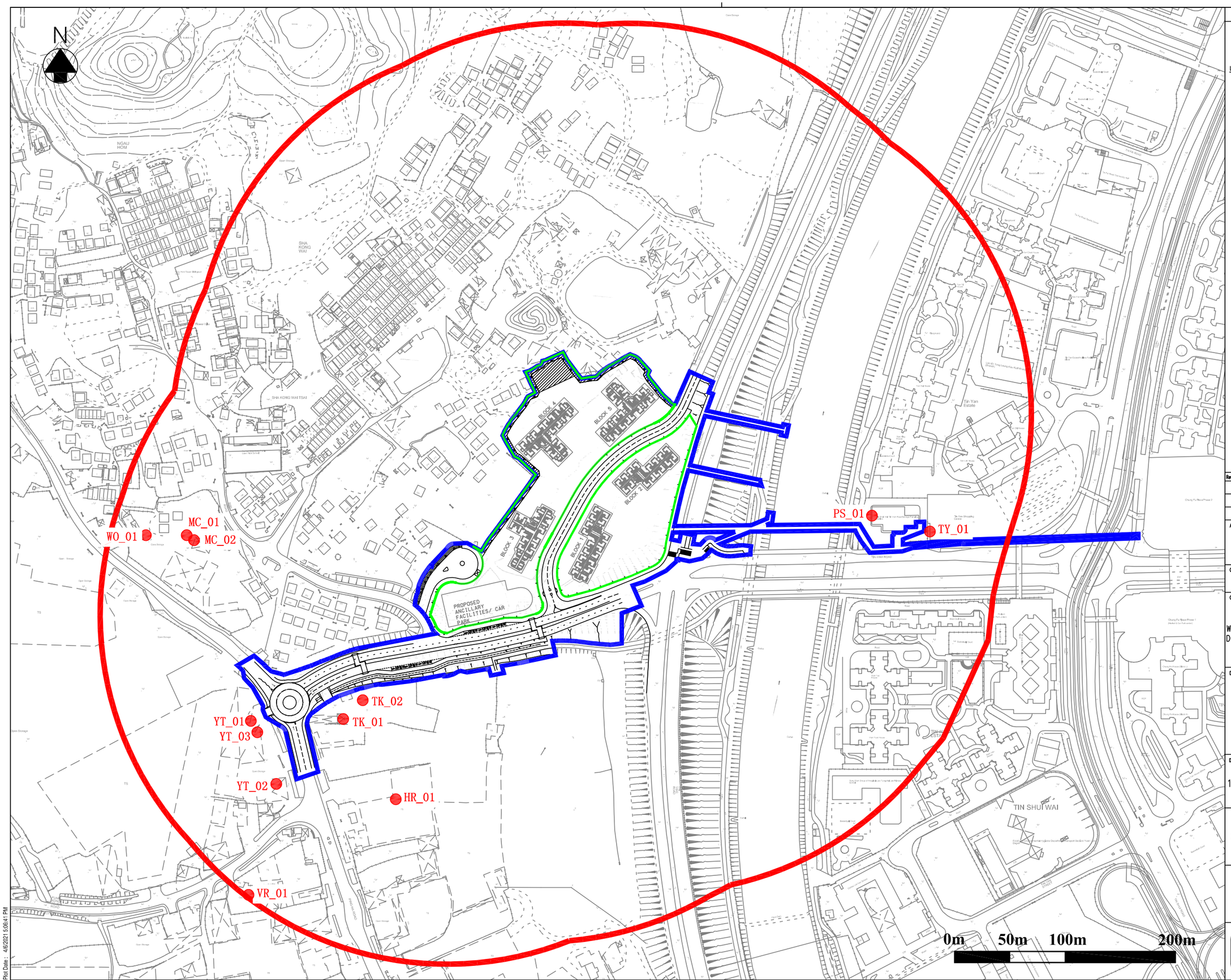
土木工程拓展署
CEDD Civil Engineering and Development Department

BLACK & VEATCH HONG KONG LIMITED
博威工程顧問有限公司

RAMBOLL

Plot Date: 4/6/2021 4:36:06 PM

File Name : C:\Daily Work\20210331B\196529-B&V-PER-FIG 4.3



© Copyright by Black & Veatch Hong Kong Limited

NOTE

1. LAYOUT SUBJECT TO REVIEW IN SUBSEQUENT DETAILED DESIGN STATE.

LEGEND

- PROJECT BOUNDARY
- HOUSING SITE BOUNDARY
- ASSESSMENT AREA OF 300M
- EXISTING FIXED NOISE SOURCE

Revision	Date	Description			Initial
	Designed	Checked	Drawn	Checked	
Initial	FN	LCH	SZ	LGH	
Date	03/21	03/21	03/21	03/21	

Approved

Contract no.
CE 41/2016 (CE)

Contract title
SITE FORMATION AND INFRASTRUCTURAL WORKS FOR PROPOSED PUBLIC HOUSING DEVELOPMENTS IN YUEN LONG NORTH – FEASIBILITY STUDY

Drawing title
LOCATION OF FIXED NOISE SOURCES (WITHOUT HSK NDA)

Drawing No.
196529/B&V/PER/FIG 4.5

Scale

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

BLACK & VEATCH HONG KONG LIMITED
博威工程顧問有限公司

RAMBOLL

Plot Date : 4/6/2021 5:06:41 PM

File Name : C:\Daily Work\20210331B\196529-B&V-PER-FIG 4.5

© Copyright by Black & Veatch Hong Kong Limited

NOTE

1. LAYOUT SUBJECT TO REVIEW IN SUBSEQUENT DETAILED DESIGN STATE.

LEGEND

- PROJECT BOUNDARY
- HOUSING SITE BOUNDARY
- ASSESSMENT AREA OF 300M
- EXISTING FIXED NOISE SOURCE
- PLANNED FIXED NOISE SOURCE

Revision	Date	Description			Initial
	Designed	Checked	Drawn	Checked	
Initial	FN	LCH	SZ	LGH	
Date	03/21	03/21	03/21	03/21	

Approved

Contract no.

CE 41/2016 (CE)

Contract title

SITE FORMATION AND INFRASTRUCTURAL WORKS FOR PROPOSED PUBLIC HOUSING DEVELOPMENTS IN YUEN LONG NORTH - FEASIBILITY STUDY

Drawing title

LOCATION OF FIXED NOISE SOURCES (WITH HSK NDA)

Drawing No.

196529/B&V/PER/FIG 4.6

Scale

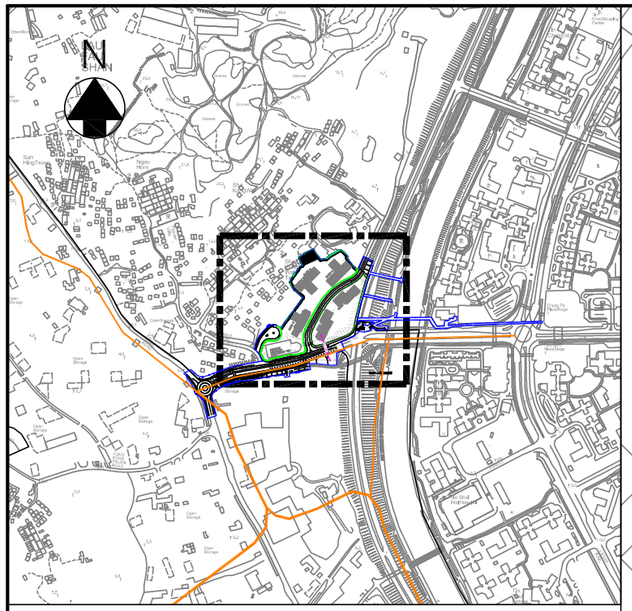
土木工程拓展署
CEDD Civil Engineering and Development Department

BLACK & VEATCH HONG KONG LIMITED
博威工程顧問有限公司

RAMBOLL

Plot Date : 4/6/2021 5:12:22 PM

File Name : C:\Daily Work\20210331B\196529-B&V-PER-FIG 4.6



BLOCK PLAN

© Copyright by Black & Veatch Hong Kong Limited

NOTE

1. LAYOUT SUBJECT TO REVIEW IN SUBSEQUENT DETAILED DESIGN STATE.

LEGEND

- PROJECT BOUNDARY
- HOUSING SITE BOUNDARY
- EFTS PROPOSED IN HSKNDA
- BUFFER DISTANCE

Revision	Date	Description			Initial
	Designed	Checked	Drawn	Checked	
Initial	FN	LCH	SZ	LGH	
Date	03/21	03/21	03/21	03/21	

Approved

Contract no.

CE 41/2016 (CE)

Contract title

SITE FORMATION AND INFRASTRUCTURAL WORKS FOR PROPOSED PUBLIC HOUSING DEVELOPMENTS IN YUEN LONG NORTH – FEASIBILITY STUDY

Drawing title

ALIGNMENT OF AND SEPARATION DISTANCE FROM EFTS PROPOSED IN HSK NDA

Drawing No.

196529/B&V/PER/FIG 4.7

Scale

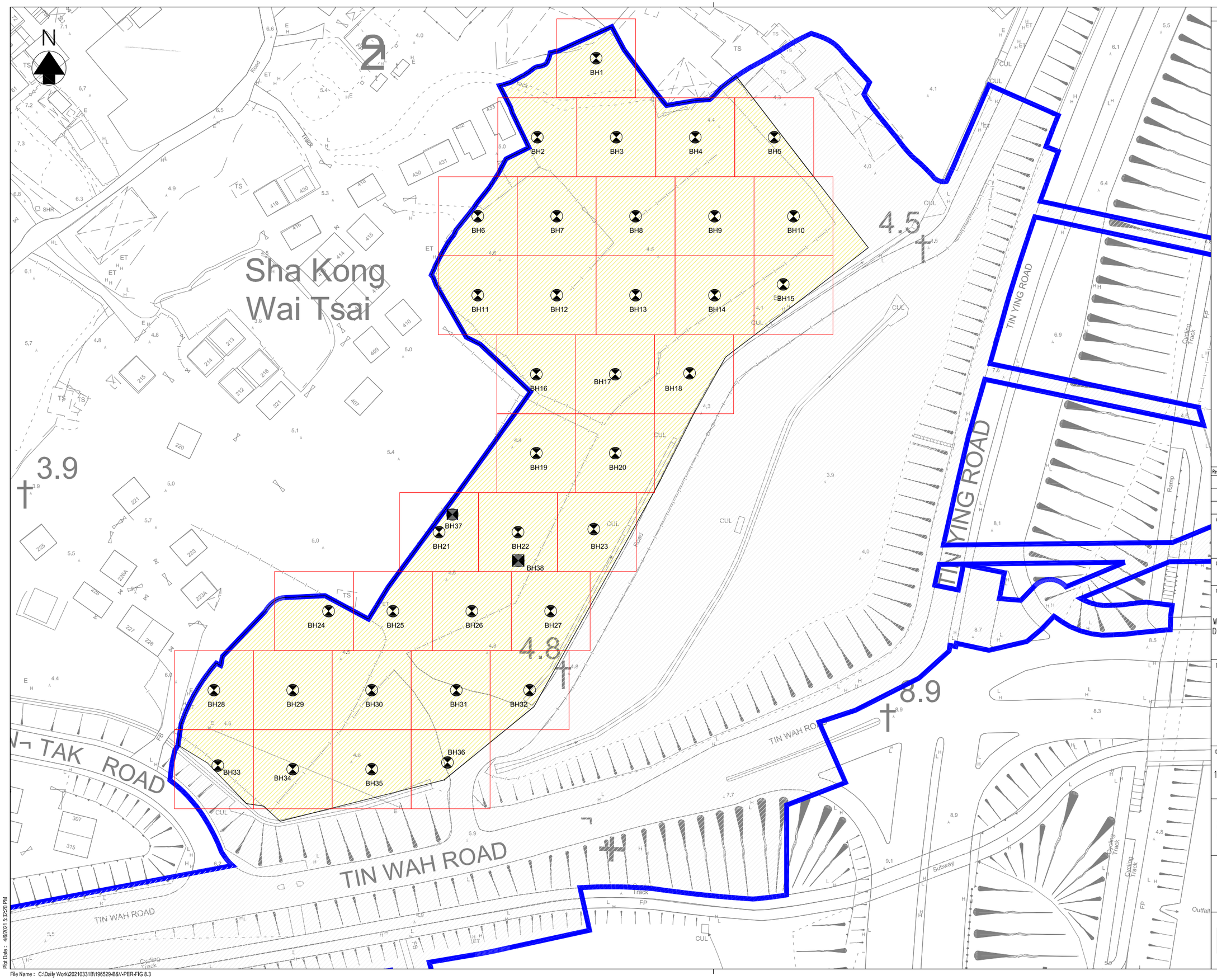
土木工程拓展署
CEDD Civil Engineering and Development Department

BLACK & VEATCH HONG KONG LIMITED
博威工程顧問有限公司

RAMBOLL

Plot Date: 4/6/2021 5:26:59 PM

File Name : C:\Daily Work\20210331B\196529-B&V-PER-FIG 4.7



© Copyright by Black & Veatch Hong Kong Limited

LEGEND

- PROJECT BOUNDARY (BOUNDARY OF ASSESSMENT AREA)
- PROPOSED SITE INVESTIGATION AREA
- 24M X 24M REGULAR SAMPLING GRID
- AREA EXCLUDED FROM THE PROPOSED SITE SITE INVESTIGATION AREA
- OIL STAINS OBSERVED DURING SITE INSPECTION
- BH1 — PRELIMINARY PROPOSED SAMPLING LOCATION FOR LAND CONTAMINATION STUDY
- BH37 — PRELIMINARY PROPOSED HOTSPOT SAMPLING LOCATION FOR LAND CONTAMINATION STUDY

Revision	Date	Description			Initial
	Designed	Checked	Drawn	Checked	
Initial	FN	LCH	SZ	LGH	
Date	11/20	11/20	11/20	11/20	

Approved

Contract no.
CE 41/2016 (CE)

Contract title
SITE FORMATION AND INFRASTRUCTURAL WORKS FOR PROPOSED PUBLIC HOUSING DEVELOPMENTS IN YUEN LONG NORTH - FEASIBILITY STUDY

Drawing title
PRELIMINARY PROPOSED SAMPLING LOCATIONS

Drawing No.
196529/B&V/PER/FIG 8.3

Scale

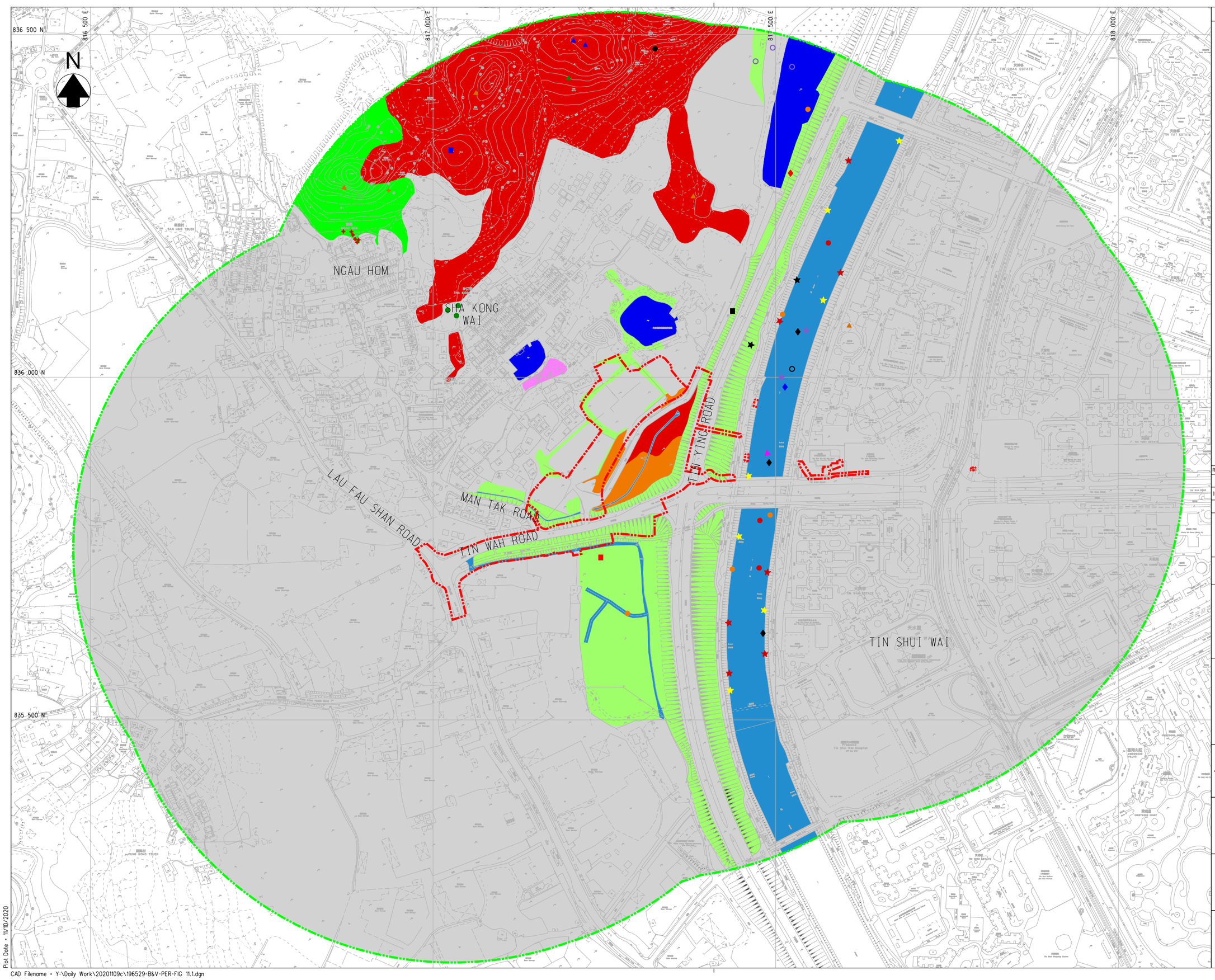
土木工程拓展署
CEDD Civil Engineering and Development Department

BLACK & VEATCH HONG KONG LIMITED
博威工程顧問有限公司

RAMBOLL

Plot Date : 4/6/2021 5:32:20 PM

File Name : C:\Daily Work\20210331B\196529-B&V-PER-FIG 8.3



© Copyright by Black & Veatch Hong Kong Limited

LEGEND:

- WORKS LIMIT
- ECOLOGICAL ASSESSMENT AREA
- MIXED WOODLAND
- PLANTATION
- GRASSLAND
- AGRICULTURAL LAND
- POND
- DRAINAGE CHANNEL
- VEGETATED WASTELAND
- DEVELOPED AREA
- AQUILARIA SINENSIS
- PAVETTA HONGKONGENSIS
- COMMON KESTREL
- COLLARED CROW
- SILKY STARLING
- BLACK KITE
- COMMON BUZZARD
- CHINESE GROSBEAK
- WHITE-SHOULDERED STARLING
- LITTLE EGRET
- BLACK-CROWNED NIGHT HERON
- CHINESE POND HERON
- WHITE-THROATED KINGFISHER
- HWAMEI
- GREAT CORMORANT
- GREAT EGRET
- GREY HERON
- ASIAN BARRED OWLET
- NORTHERN PINTAIL
- EURASIAN WIGEON
- NORTHERN SHOVELER
- INSECTIVOROUS BAT

Revision	Date	Description			Initial
	Designed	Checked	Drawn	Checked	
Initial	FN	LCH	SZ	LGH	
Date	11/20	11/20	11/20	11/20	

Approved

Contract no.
CE 41/2016 (CE)

Contract title
SITE FORMATION AND INFRASTRUCTURAL WORKS FOR PROPOSED PUBLIC HOUSING DEVELOPMENTS IN YUEN LONG NORTH - FEASIBILITY STUDY

Drawing title
HABITAT MAP AND SPECIES OF CONSERVATION INTEREST

Drawing No.	Scale
196529/B&V/PER/FIG 11.1	1 : 2500 (A1) 1 : 5000 (A3)

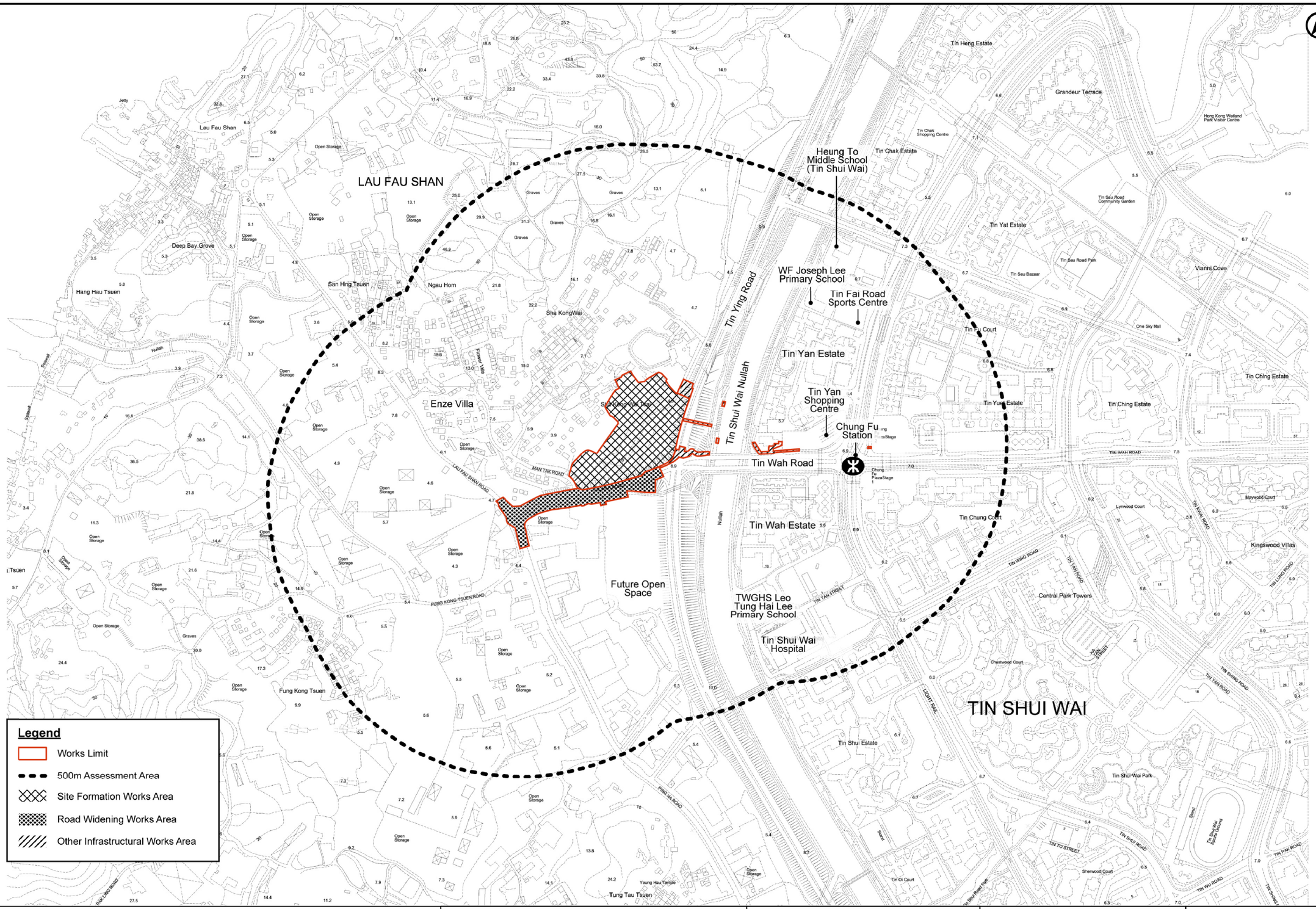
土木工程拓展署
CEDD Civil Engineering and Development Department

BLACK & VEATCH HONG KONG LIMITED
博威工程顧問有限公司

RAMBOLL

Plot Date = 11/10/2020

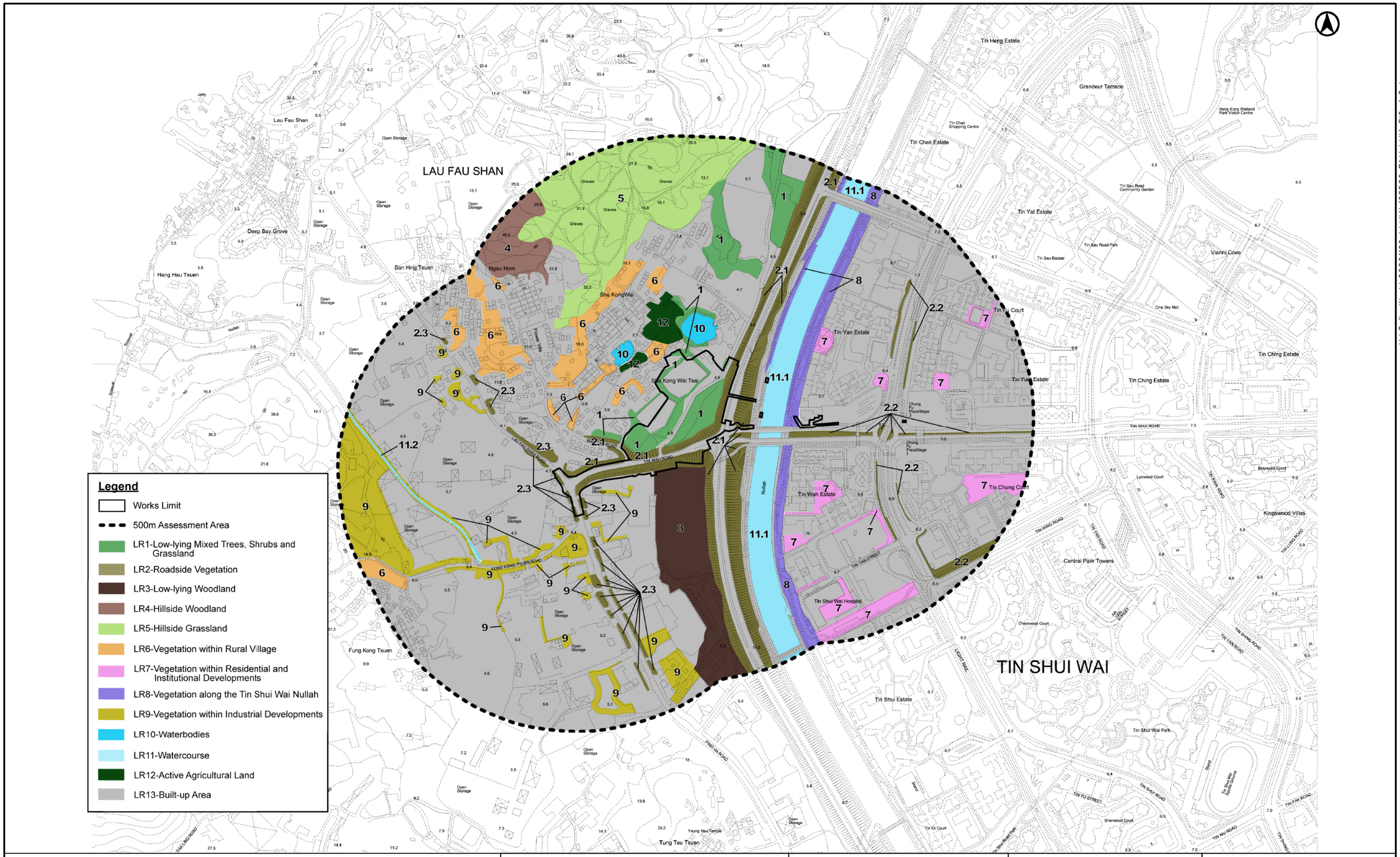
CAD Filename = Y:\Daily Work\20201109c\196529-B&V-PER-FIG 11.1.dgn



	Title: SITE LOCATION PLAN AND ASSESSMENT AREA FOR LIA	Contract title: SITE FORMATION AND INFRASTRUCTURAL WORKS FOR PROPOSED PUBLIC HOUSING DEVELOPMENTS IN YUEN LONG NORTH - FEASIBILITY STUDY	Contract no.: CE 41/2016 (CE)	Figure no.: 196529/B&V/LVIA/FIG 4.1
			土木工程拓展署 CEDD Civil Engineering and Development Department	Designed: FN / Checked: LCH
			BLACK & VEATCH HONG KONG LIMITED 博威工程顧問有限公司	Date: 11/20 / Scale: N.T.S.

Plot date : 11/10/2020 Time : 1:36:45 PM User : you62537

Y:\Daily Work\20201109c\LVIA\196529-B&V-LVIA-FIG 4.1.dgn



	Title: LANDSCAPE RESOURCES	Contract title: SITE FORMATION AND INFRASTRUCTURAL WORKS FOR PROPOSED PUBLIC HOUSING DEVELOPMENTS IN YUEN LONG NORTH - FEASIBILITY STUDY	Contract no.: CE 41/2016 (CE)	Figure no.: 196529/B&V/LVIA/FIG 4.3
			土木工程拓展署 CEDD Civil Engineering and Development Department	Designed: FN; Checked: LCH
			BLACK & VEATCH HONG KONG LIMITED 博威工程顧問有限公司	Date: 11/20; Scale: N.T.S.

Plot date : 11/10/2020 Time : 1:36:11 PM User : you62537

Y:\Daily Work\20201109c\LVIA\196529-B&V-LVIA-FIG 4.3.dgn

LR1-Low-lying Mixed Trees, Shrubs and Grassland

LR2-Roadside Vegetation

Tin Shui Road

Tin Shui Road / Tin Wah Road

LR2-Roadside Vegetation

Tin Wah Road

Ping Ha Road

Lau Fau Shan Road

LR3-Low-lying Woodland

LR4-Hillside Woodland

LR5-Hillside Grassland

Y:\Daily Work\20201109c\LVIA\196529-B&V-LVIA-FIG 4.4a.dgn

	Title: SELECTED PHOTOS OF LANDSCAPE RESOURCES WITHIN THE ASSESSMENT AREA	Contract title: SITE FORMATION AND INFRASTRUCTURAL WORKS FOR PROPOSED PUBLIC HOUSING DEVELOPMENTS IN YUEN LONG NORTH - FEASIBILITY STUDY	Contract no.: CE 41/2016 (CE)	Figure no.: 196529/B&V/LVIA/FIG 4.4a
			土木工程拓展署 CEDD Civil Engineering and Development Department	Designed: FN / Checked: LCH
			BLACK & VEATCH HONG KONG LIMITED 博威工程顧問有限公司	Date: 11/20 / Scale: N.T.S.

Plot date : 11/10/2020 Time : 1:35:42 PM User : you62537

LR6-Vegetation within Rural Village

LR7-Vegetation within Residential and Institutional Developments

LR8-Vegetation along the Tin Shui Wai Nullah

LR9-Vegetation within Industrial Developments

LR10-Waterbodies

LR11-Watercourse

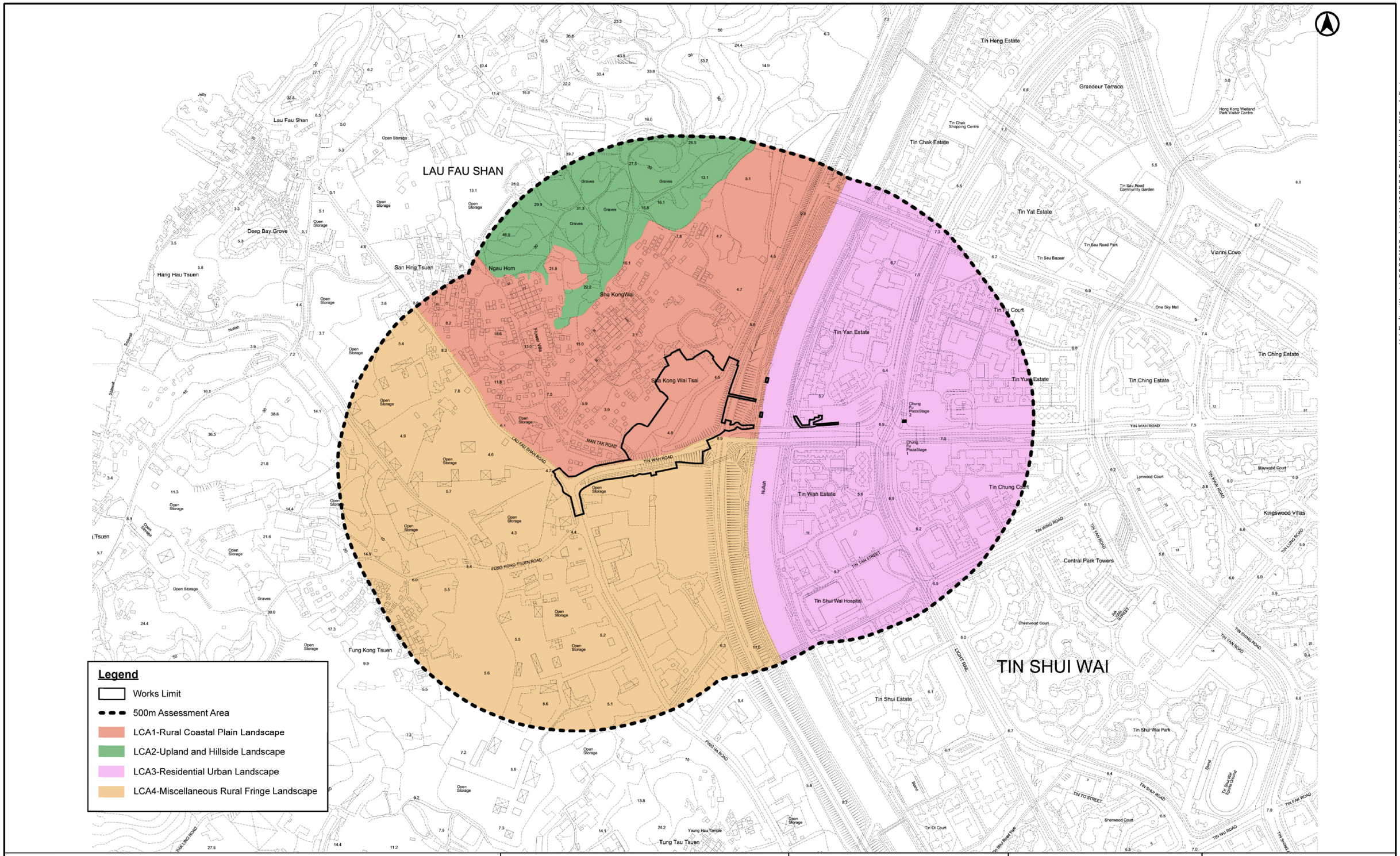
LR12-Active Agricultural Land

LR13-Built-up Area

	Title (CONT'D) SELECTED PHOTOS OF LANDSCAPE RESOURCES WITHIN THE ASSESSMENT AREA	Contract title SITE FORMATION AND INFRASTRUCTURAL WORKS FOR PROPOSED PUBLIC HOUSING DEVELOPMENTS IN YUEN LONG NORTH - FEASIBILITY STUDY	Contract no. CE 41/2016 (CE)	Figure no. 196529/B&V/LVIA/FIG 4.4b
			土木工程拓展署 CEDD Civil Engineering and Development Department	Designed: FN; Checked: LCH
			BLACK & VEATCH HONG KONG LIMITED 博威工程顧問有限公司	Date: 11/20; Scale: N.T.S.

Plot date : 11/10/2020 Time : 1:35:19 PM User : you62537

Y:\Daily Work\20201109c\LVIA\196529-B&V-LVIA-FIG 4.4b.dgn



	Title: LANDSCAPE CHARACTER AREAS	Contract title: SITE FORMATION AND INFRASTRUCTURAL WORKS FOR PROPOSED PUBLIC HOUSING DEVELOPMENTS IN YUEN LONG NORTH - FEASIBILITY STUDY	Contract no.: CE 41/2016 (CE)	Figure no.: 196529/B&V/LVIA/FIG 4.5
			土木工程拓展署 CEDD Civil Engineering and Development Department	Designed: FN; Checked: LCH
			BLACK & VEATCH HONG KONG LIMITED 博威工程顧問有限公司	Date: 11/20; Scale: N.T.S.

Plot date : 11/10/2020 Time : 1:33:49 PM User : you62537

Y:\Daily Work\20201109c\LVIA\196529-B&V-LVIA-FIG 4.5.dgn

LCA1-Rural Coastal Plain Landscape

LCA2-Upland and Hillside Landscape

LCA3-Residential Urban Landscape

LCA4-Miscellaneous Rural Fringe Landscape

Y:\Daily Work\20201109c\LVIA\196529-B&V-LVIA-FIG 4.6.dgn

	Title SELECTED PHOTOS OF LANDSCAPE CHARACTER AREAS WITHIN THE ASSESSMENT AREA	Contract title SITE FORMATION AND INFRASTRUCTURAL WORKS FOR PROPOSED PUBLIC HOUSING DEVELOPMENTS IN YUEN LONG NORTH - FEASIBILITY STUDY	Contract no. CE 41/2016 (CE)	Figure no. 196529/B&V/LVIA/FIG 4.6
			土木工程拓展署 CEDD Civil Engineering and Development Department	Designed: FN; Checked: LCH
			BLACK & VEATCH HONG KONG LIMITED 博威工程顧問有限公司	Date: 11/20; Scale: N.T.S.

Plot date : 11/10/2020 Time : 1:33:24 PM User : you62537

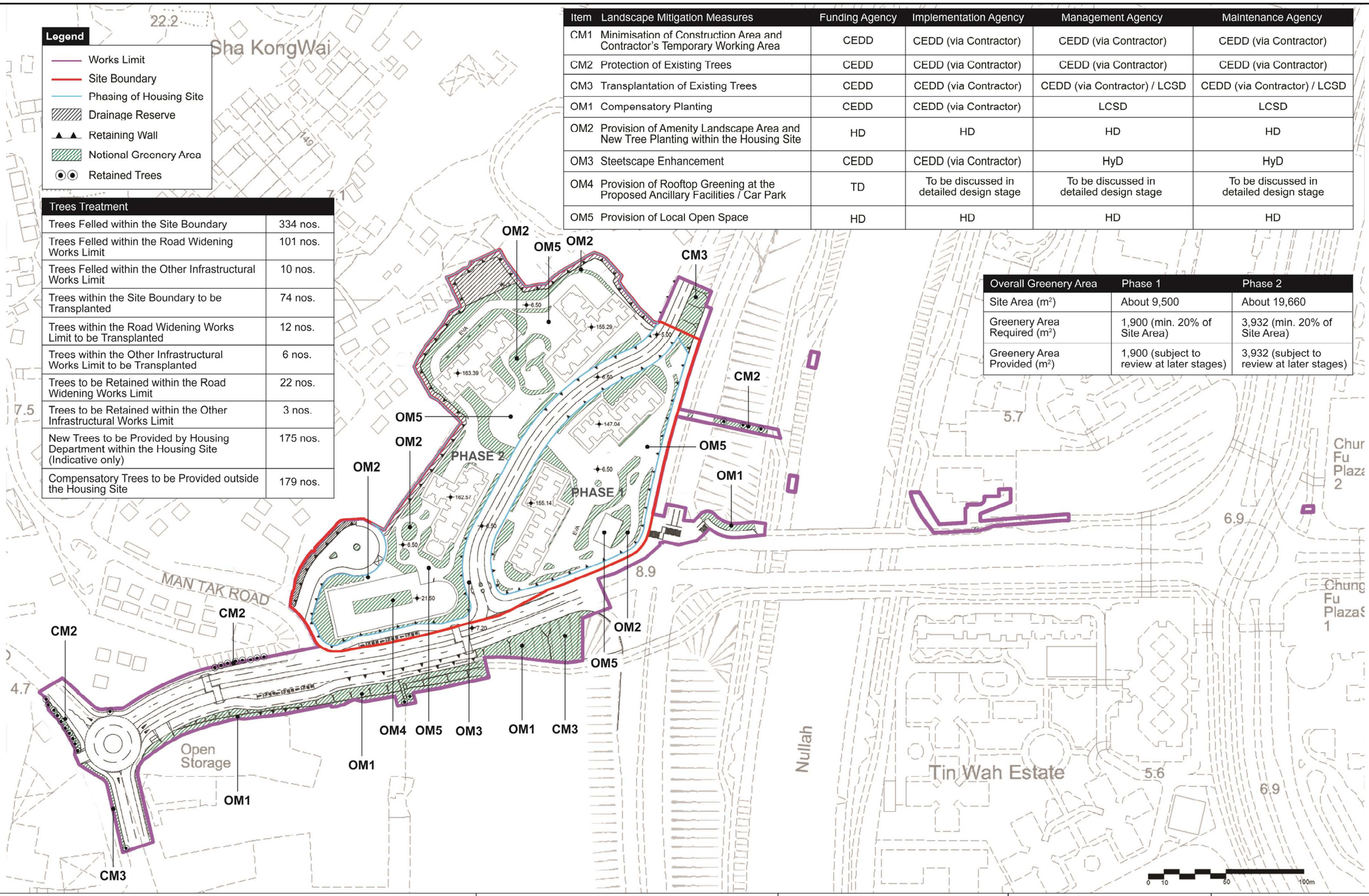
Item	Landscape Mitigation Measures	Funding Agency	Implementation Agency	Management Agency	Maintenance Agency
CM1	Minimisation of Construction Area and Contractor's Temporary Working Area	CEDD	CEDD (via Contractor)	CEDD (via Contractor)	CEDD (via Contractor)
CM2	Protection of Existing Trees	CEDD	CEDD (via Contractor)	CEDD (via Contractor)	CEDD (via Contractor)
CM3	Transplantation of Existing Trees	CEDD	CEDD (via Contractor)	CEDD (via Contractor) / LCSD	CEDD (via Contractor) / LCSD
OM1	Compensatory Planting	CEDD	CEDD (via Contractor)	LCSD	LCSD
OM2	Provision of Amenity Landscape Area and New Tree Planting within the Housing Site	HD	HD	HD	HD
OM3	Steetscape Enhancement	CEDD	CEDD (via Contractor)	HyD	HyD
OM4	Provision of Rooftop Greening at the Proposed Ancillary Facilities / Car Park	TD	To be discussed in detailed design stage	To be discussed in detailed design stage	To be discussed in detailed design stage
OM5	Provision of Local Open Space	HD	HD	HD	HD

Legend

- Works Limit
- Site Boundary
- Phasing of Housing Site
- Drainage Reserve
- Retaining Wall
- Notional Greenery Area
- Retained Trees

Trees Treatment	
Trees Felled within the Site Boundary	334 nos.
Trees Felled within the Road Widening Works Limit	101 nos.
Trees Felled within the Other Infrastructural Works Limit	10 nos.
Trees within the Site Boundary to be Transplanted	74 nos.
Trees within the Road Widening Works Limit to be Transplanted	12 nos.
Trees within the Other Infrastructural Works Limit to be Transplanted	6 nos.
Trees to be Retained within the Road Widening Works Limit	22 nos.
Trees to be Retained within the Other Infrastructural Works Limit	3 nos.
New Trees to be Provided by Housing Department within the Housing Site (Indicative only)	175 nos.
Compensatory Trees to be Provided outside the Housing Site	179 nos.

Overall Greenery Area	Phase 1	Phase 2
Site Area (m^2)	About 9,500	About 19,660
Greenery Area Required (m^2)	1,900 (min. 20% of Site Area)	3,932 (min. 20% of Site Area)
Greenery Area Provided (m^2)	1,900 (subject to review at later stages)	3,932 (subject to review at later stages)



NOTE:
1. LAYOUT SUBJECT TO REVIEW IN SUBSEQUENT DETAILED DESIGN STAGE.

Title: MITIGATION PLAN

Contract title: SITE FORMATION AND INFRASTRUCTURAL WORKS FOR PROPOSED PUBLIC HOUSING DEVELOPMENTS IN YUEN LONG NORTH - FEASIBILITY STUDY

Contract no.: CE 41/2016 (CE)

Figure no.: 196529/B&V/LVIA/FIG 4.7

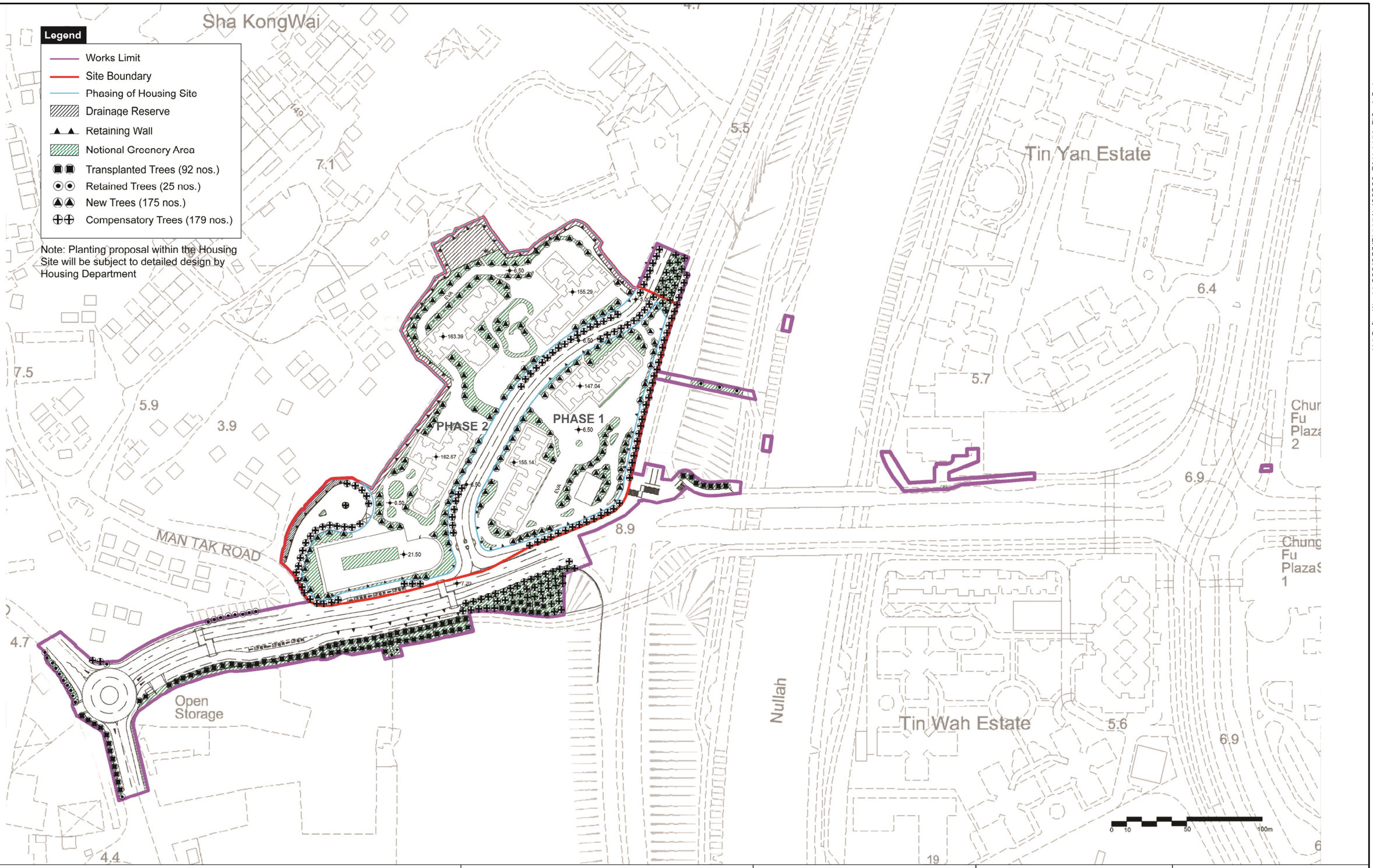
土木工程拓展署 CEDD Civil Engineering and Development Department

BLACK & VEATCH HONG KONG LIMITED 博威工程顧問有限公司

Designed: FN | Checked: LCH | Date: 11/20 | Scale: N.T.S.

Plot date : 4/6/2021 Time : 6:37:20 PM User : qin61312

Y:\Daily Work\20210331B\LVIA\196529-B&V-LVIA-FIG 4.7.dgn

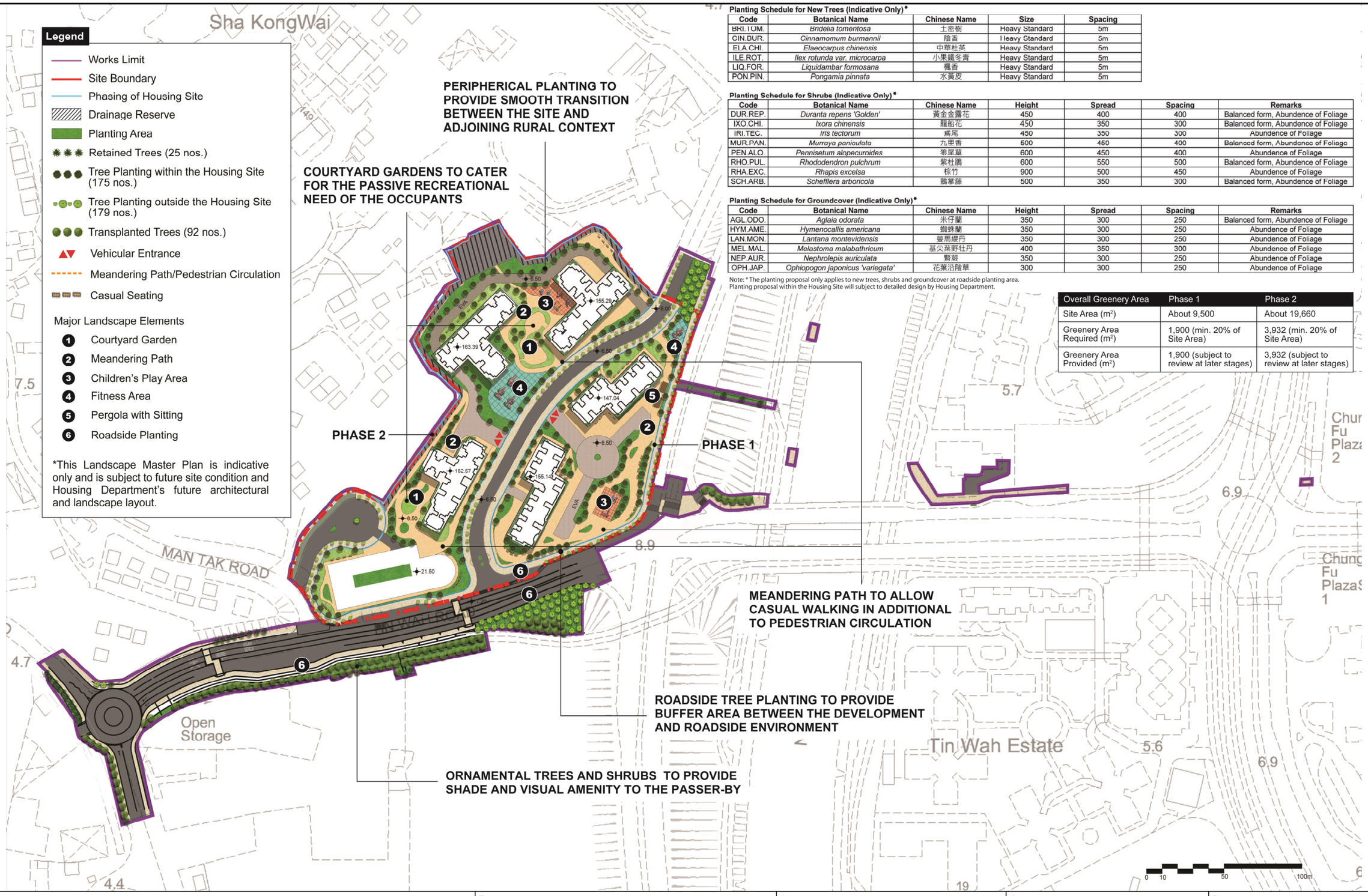


NOTE:
1. LAYOUT SUBJECT TO REVIEW IN SUBSEQUENT DETAILED DESIGN STAGE.

Title: COMPENSATORY AND NEW TREE PLANTING PLAN	Contract title: SITE FORMATION AND INFRASTRUCTURAL WORKS FOR PROPOSED PUBLIC HOUSING DEVELOPMENTS IN YUEN LONG NORTH - FEASIBILITY STUDY	Contract no.: CE 41/2016 (CE)	Figure no.: 196529/B&V/LVIA/FIG 4.8
		土木工程拓展署 CEDD Civil Engineering and Development Department	Designed: FN / Checked: LCH
		BLACK & VEATCH HONG KONG LIMITED 博威工程顧問有限公司	Date: 11/20 / Scale: N.T.S.

Plot date : 4/6/2021 Time : 6:32:14 PM User : qin61312

Y:\Daily Work\20210331B\LVIA\196529-B&V-LVIA-FIG 4.8.dgn



Planting Schedule for New Trees (Indicative Only)*

Code	Botanical Name	Chinese Name	Size	Spacing
BRI.TOM.	*Bridelia tomentosa*	土密樹	Heavy Standard	5m
CIN.DUR.	*Cinnamomum burmannii*	陰香	Heavy Standard	5m
ELA.CHI.	*Elaeocarpus chinensis*	中華杜英	Heavy Standard	5m
ILE.ROT.	*Ilex rotunda var. microcarpa*	小果鐵冬青	Heavy Standard	5m
LIQ.FOR.	*Liquidambar formosana*	楓香	Heavy Standard	5m
PON.PIN.	*Pongamia pinnata*	水黃皮	Heavy Standard	5m

Planting Schedule for Shrubs (Indicative Only)*

Code	Botanical Name	Chinese Name	Height	Spread	Spacing	Remarks
DUR.REP.	*Duranta repens 'Golden'*	黃金金露花	450	400	400	Balanced form, Abundence of Foliage
IXO.CHI.	*Ixora chinensis*	龍船花	450	350	300	Balanced form, Abundence of Foliage
IRI.TEC.	*Iris tectorum*	鳶尾	450	350	300	Abundence of Foliage
MUR.PAN.	*Murraya paniculata*	九里香	600	450	400	Balanced form, Abundence of Foliage
PEN.ALO.	*Pennisetum alopecuroides*	狼尾草	600	450	400	Abundence of Foliage
RHO.PUL.	*Rhododendron pulchrum*	紫杜鵑	600	550	500	Balanced form, Abundence of Foliage
RHA.EXC.	*Rhapis excelsa*	棕竹	900	500	450	Abundence of Foliage
SCH.ARB.	*Schefflera arboricola*	鵝掌藤	500	350	300	Balanced form, Abundence of Foliage

Planting Schedule for Groundcover (Indicative Only)*

Code	Botanical Name	Chinese Name	Height	Spread	Spacing	Remarks
AGL.ODO.	*Aglaia odorata*	米仔蘭	350	300	250	Balanced form, Abundence of Foliage
HYM.AME.	*Hymenocallis americana*	蜘蛛蘭	350	300	250	Abundence of Foliage
LAN.MON.	*Lantana montevidensis*	蔓馬纓丹	350	300	250	Abundence of Foliage
MEL.MAL.	*Melastoma malabathricum*	基尖葉野牡丹	400	350	300	Abundence of Foliage
NEP.AUR.	*Nephrolepis auriculata*	腎蕨	350	300	250	Abundence of Foliage
OPH.JAP.	*Ophiopogon japonicus 'variegata'*	花葉沿階草	300	300	250	Abundence of Foliage

Note: * The planting proposal only applies to new trees, shrubs and groundcover at roadside planting area.
Planting proposal within the Housing Site will subject to detailed design by Housing Department.

Overall Greenery Area	Phase 1	Phase 2
Site Area (m^2)	About 9,500	About 19,660
Greenery Area Required (m^2)	1,900 (min. 20% of Site Area)	3,932 (min. 20% of Site Area)
Greenery Area Provided (m^2)	1,900 (subject to review at later stages)	3,932 (subject to review at later stages)

NOTE:
1. LAYOUT SUBJECT TO REVIEW IN SUBSEQUENT DETAILED DESIGN STAGE.

Title

PRELIMINARY LANDSCAPE MASTER PLAN (WITH PLANTING PROPOSAL)

Contract title

SITE FORMATION AND INFRASTRUCTURAL WORKS FOR PROPOSED PUBLIC HOUSING DEVELOPMENTS IN YUEN LONG NORTH - FEASIBILITY STUDY

Contract no. CE 41/2016 (CE)

Figure no. 196529/B&V/LVIA/FIG 4.9

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

BLACK & VEATCH HONG KONG LIMITED 博威工程顧問有限公司

Designed FN | Checked LCH | Date 11/20 | Scale N.T.S.

Plot date : 4/6/2021 Time : 6:31:49 PM User : qin61312

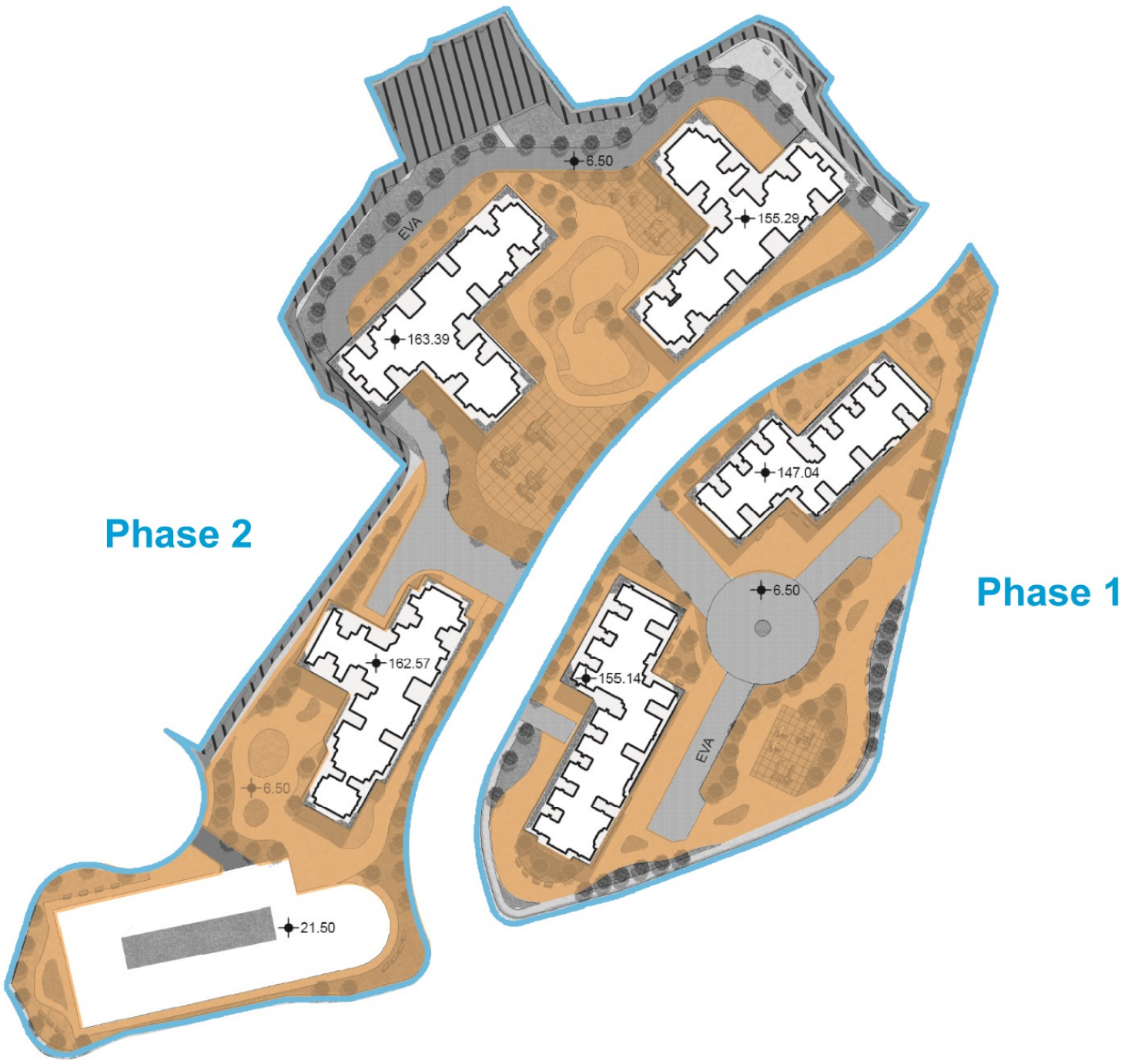
Y:\Daily Work\20210331BL\LVIA\196529-B&V-LVIA-FIG 4.9.dgn

Provision of Open Space	Phase 1	Phase 2
Population	About 3,640	About 7,532
Local Open Space Required (m^2)	3,640 (i.e.1m^2/person according to HKPSG)	7,532 (i.e.1m^2/person according to HKPSG)
Local Open Space Provided (m^2)	5,253	7,594

Legend

Local Open Space

Phasing of Housing Site



Title	Contract title	Contract no.	Figure no.	
DEMARCATION OF LOCAL OPEN SPACE	SITE FORMATION AND INFRASTRUCTURAL WORKS FOR PROPOSED PUBLIC HOUSING DEVELOPMENTS IN YUEN LONG NORTH - FEASIBILITY STUDY	CE 41/2016 (CE)	196529/B&V/LVIA/FIG 4.10	
NOTE: 1. LAYOUT SUBJECT TO REVIEW IN SUBSEQUENT DETAILED DESIGN STAGE.		土木工程拓展署 CEDD Civil Engineering and Development Department	Designed FN	Checked LCH
		BLACK & VEATCH HONG KONG LIMITED 博威工程顧問有限公司	Date 03/21	Scale N.T.S.

Plot date : 4/6/2021 Time : 6:31:21 PM User : qin61312

Y:\Daily Work\20210331B\LVIA\196529-B&V-LVIA-FIG 4.10.dgn

Legend

- Site Boundary
- Assessment Area Boundary

VP1 - View from the Overpass Connecting Tin Yan and Tin Wah Estates
VP2 - View from the Footbridge in front of Tin Shui Wai Hospital
VP3 - View from the Future Open Space Zone to the South of the Site
VP4 - View from the Bike Path at Ping Ha Road
VP5 - View from the Future Open Space Zone to the Southwest of the Site
VP6 - View from the Entrance Gate of Sha Kong Wai
VP7 - View from the Tin Shui Wai Hill Hiking Trail
VP8 - View from the Open Space Zone to the North of the Site
VP9 - View from along the Promenade in front of Tin Yan Estate

REC
Tin Shui Wai Hill
VP7
VP8
VP9
VP6
VP5
VP4
VP3
VP2
VP1
DRAINAGE CHANNEL
Tin Chak Estate
天澤邨
Heung To Middle School (Tin Shui Wai)
WF Joseph Lee Primary School
Tin Fai Road Sports Centre
Tin Ying Road
TIN SHUI ROAD
Tin Yan Estate
85.6 to100mPD
Tin Yan Shopping Centre
3 storeys
天恩邨
Tin Yan Estate
Chung Fu Station
Tin Wah Road
天華路
Tin Wah Estate
Tin Wah Estate
67mPD to 119mPD
TWGHS Leo Tung Hai Lee Primary School
Tin Shui Wai Hospital
Approx. 70mPD
Tin Shui Estate
Approx. 122mPD
天瑞邨
Tin Shui Estate
Future Open Space
Tin Shui Wai Nullah
排水道
DRAINAGE CHANNEL
Sha Kong Wai
沙江圍
Sha Kong Wai Tsai
沙江圍仔
LAU FAU SHAN ROAD
San Hing Tsuen
新慶村
Ngau Hom
蕉坳
Tung Kong Tsuen
東崗村
BLOCK 5
155.29mPD
BLOCK 4
163.39mPD
147.04mPD
BLOCK 2
BLOCK 3
162.57mPD
BLOCK 1
155.14mPD
PROPOSED ANCILLARY FACILITIES / CAR PARK
21.5mPD
污水抽水站
SEWAGE PUMPING STATION
R(E)
GB
R(A)
G/IC
OU
O(1)
R2
R2c
(SSF)c
(A)3

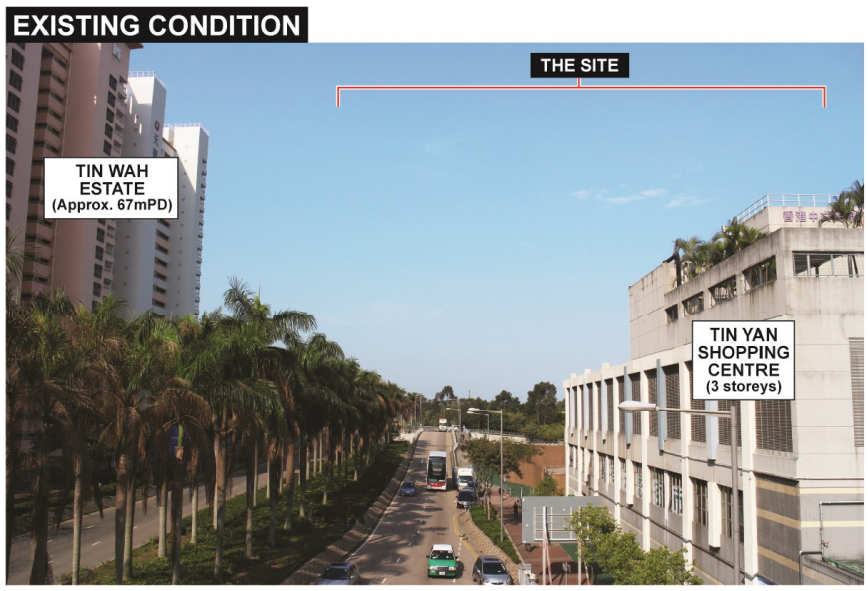
*Note: The planned developments (located to the southwest of the Site and the Assessment Area) in the Hung Shui Kiu/Ha Tsuen New Development Area Stage 3 and Stage 4 will be completed in 2031 onwards and they have been taken into account in the Visual Impact Assessment. The location, disposition and building footprints of the planned developments according to the Hung Shui Kiu New Development Area Planning and Engineering Study – Investigation (Agreement No. CE 2/2011 (CE)) have been incorporated in this Figure for indicative purpose.

Title: LOCATION OF VIEWPOINTS	Contract title: SITE FORMATION AND INFRASTRUCTURAL WORKS FOR PROPOSED PUBLIC HOUSING DEVELOPMENTS IN YUEN LONG NORTH - FEASIBILITY STUDY	Contract no.: CE 41/2016 (CE)	Figure no.: 196529/B&V/LVIA/FIG 5.1
		土木工程拓展署 CEDD Civil Engineering and Development Department	Designed: FN / Checked: LCH
NOTE: 1. LAYOUT SUBJECT TO REVIEW IN SUBSEQUENT DETAILED DESIGN STAGE.		BLACK & VEATCH HONG KONG LIMITED 博威工程顧問有限公司	Date: 11/20 / Scale: N.T.S.

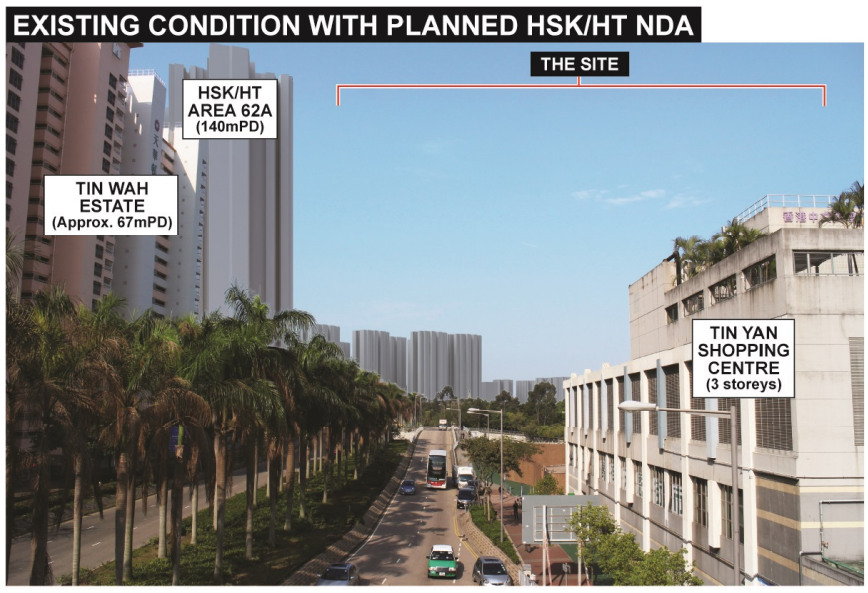
Plot date : 4/6/2021 Time : 6:51:34 PM User : qin61312

Y:\Daily Work\20210331B\LVIA\196529-B&V-LVIA-FIG 5.1.dgn

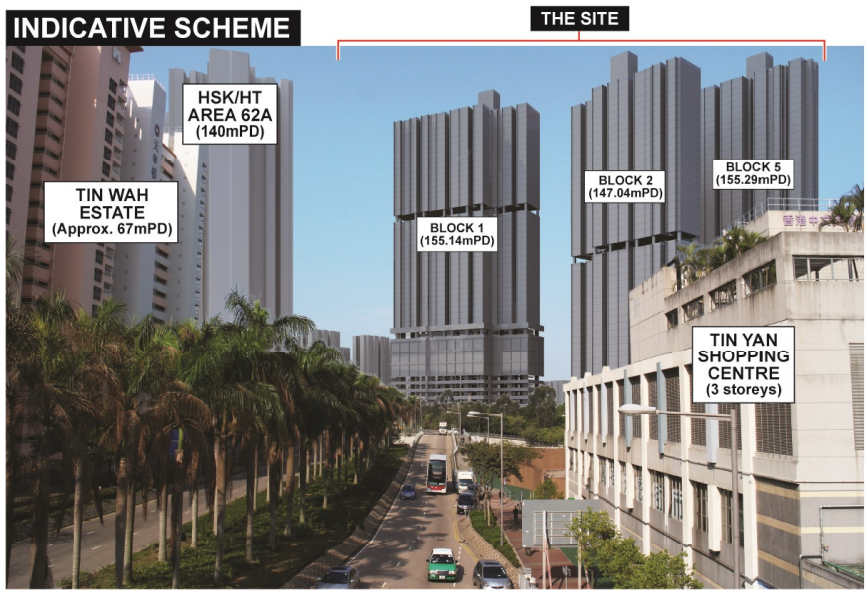
EXISTING CONDITION



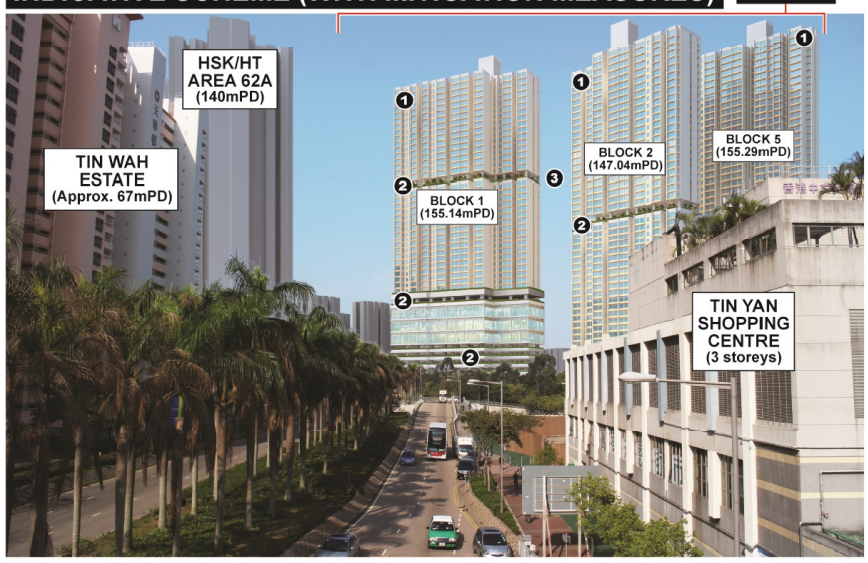
EXISTING CONDITION WITH PLANNED HSK/HT NDA



INDICATIVE SCHEME



INDICATIVE SCHEME (WITH MITIGATION MEASURES)



1. Façade treatment (light colour scheme) to help reducing the visual perception of the building mass
2. Greenery at the podium and refuge floor levels to help softening the building edges and provide some visual relief
3. Building gap between residential blocks to help enhancing visual permeability

Title

VIEWPOINT 1:
VIEW FROM THE OVERPASS CONNECTING TIN YAN AND TIN WAH ESTATES

NOTE:
1. LAYOUT SUBJECT TO REVIEW IN SUBSEQUENT DETAILED DESIGN STAGE.

Contract title

SITE FORMATION AND INFRASTRUCTURAL WORKS FOR PROPOSED PUBLIC HOUSING DEVELOPMENTS IN YUEN LONG NORTH - FEASIBILITY STUDY

Contract no.
CE 41/2016 (CE)

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

BLACK & VEATCH HONG KONG LIMITED
博威工程顧問有限公司

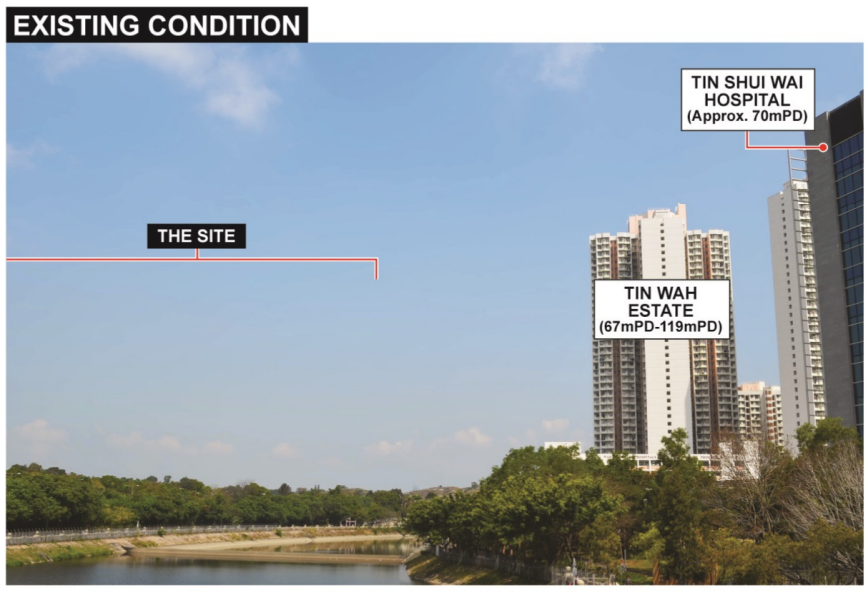
Figure no.
196529/B&V/LVIA/FIG 5.4

Designed	Checked
FN	LCH
Date	Scale
11/20	N.T.S.

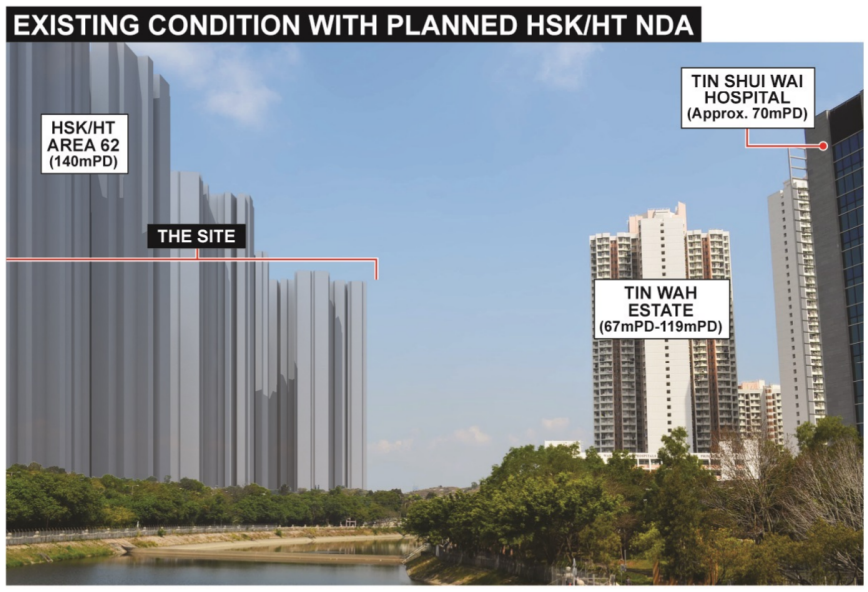
Plot date : 4/6/2021 Time : 6:30:18 PM User : qin61312

Y:\Daily Work\20210331B\LVIA\196529-B&V-LVIA-FIG 5.4.dgn

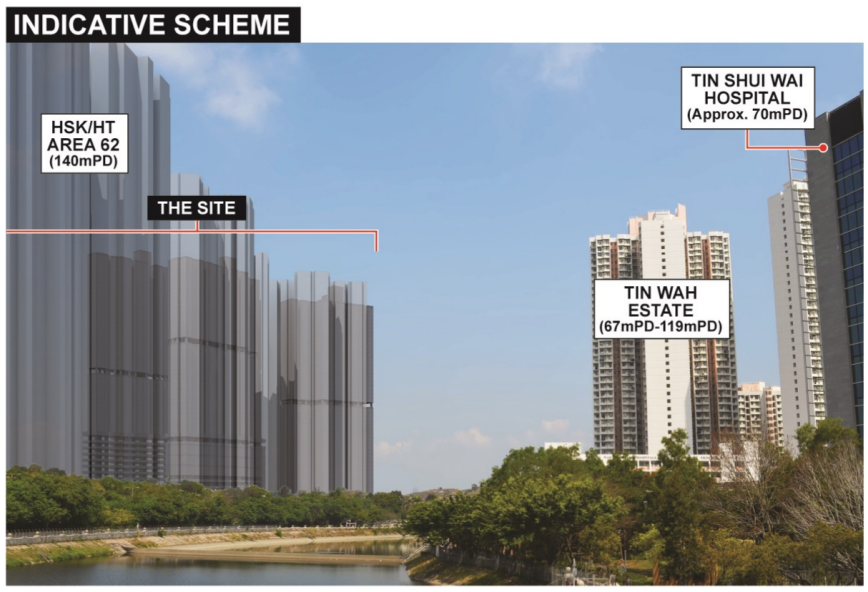
EXISTING CONDITION



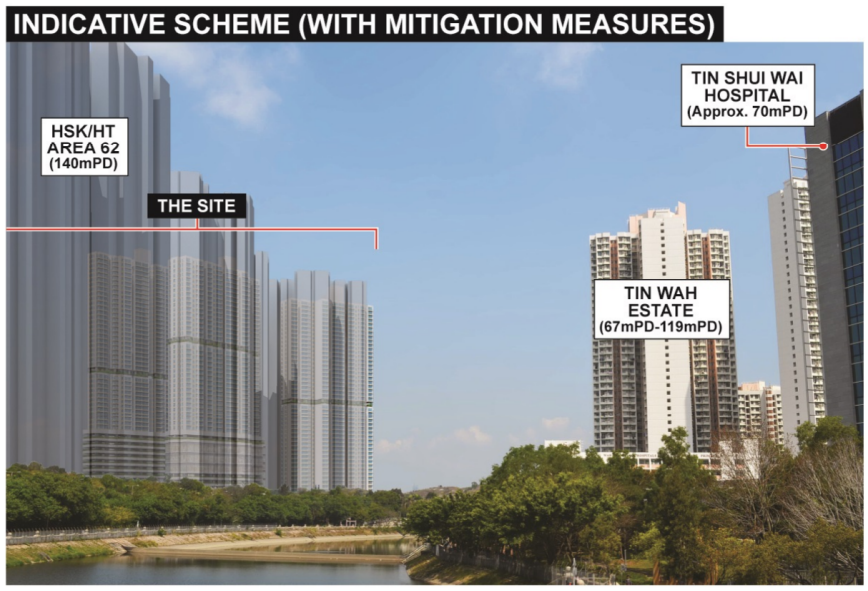
EXISTING CONDITION WITH PLANNED HSK/HT NDA



INDICATIVE SCHEME



INDICATIVE SCHEME (WITH MITIGATION MEASURES)



Title VIEWPOINT 2: VIEW FROM THE FOOTBRIDGE IN FRONT OF TIN SHUI WAI HOSPITAL	Contract title SITE FORMATION AND INFRASTRUCTURAL WORKS FOR PROPOSED PUBLIC HOUSING DEVELOPMENTS IN YUEN LONG NORTH - FEASIBILITY STUDY	Contract no. CE 41/2016 (CE)	Figure no. 196529/B&V/LVIA/FIG 5.5
NOTE: 1. LAYOUT SUBJECT TO REVIEW IN SUBSEQUENT DETAILED DESIGN STAGE.		土木工程拓展署 CEDD Civil Engineering and Development Department BLACK & VEATCH HONG KONG LIMITED 博威工程顧問有限公司	Designed: FN; Checked: LCH Date: 11/20; Scale: N.T.S.

Plot date : 4/9/2021 Time : 6:16:31 PM User : liu87249

Y:\Daily Work\20210331B\LVIA\196529-B&V-LVIA-FIG 5.5.dgn

EXISTING CONDITION

EXISTING CONDITION WITH PLANNED HSK/HT NDA

INDICATIVE SCHEME

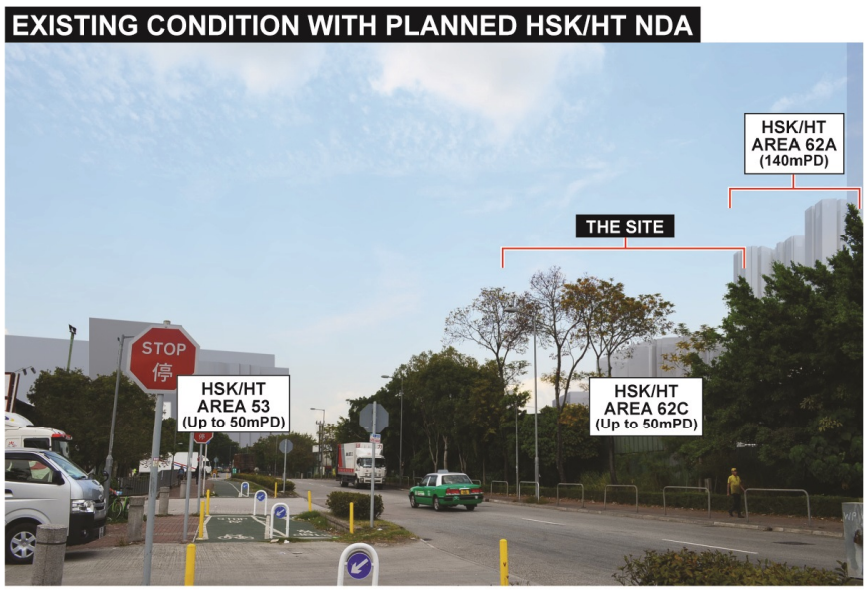
Title: VIEWPOINT 3: VIEW FROM THE FUTURE OPEN SPACE ZONE TO THE SOUTH OF THE SITE	Contract title: SITE FORMATION AND INFRASTRUCTURAL WORKS FOR PROPOSED PUBLIC HOUSING DEVELOPMENTS IN YUEN LONG NORTH - FEASIBILITY STUDY	Contract no.: CE 41/2016 (CE)	Figure no.: 196529/B&V/LVIA/FIG 5.2
NOTE: 1. LAYOUT SUBJECT TO REVIEW IN SUBSEQUENT DETAILED DESIGN STAGE.		土木工程拓展署 CEDD Civil Engineering and Development Department	Designed: FN; Checked: LCH
		BLACK & VEATCH HONG KONG LIMITED 博威工程顧問有限公司	Date: 11/20; Scale: N.T.S.

Plot date : 4/6/2021 Time : 6:29:18 PM User : qin61312

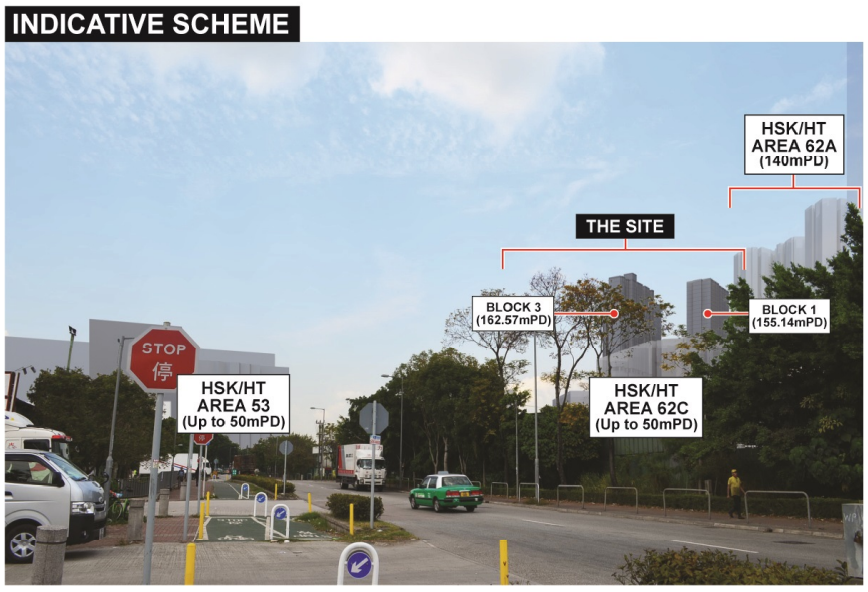
Y:\Daily Work\20210331B\LVIA\196529-B&V-LVIA-FIG 5.2.dgn

EXISTING CONDITION

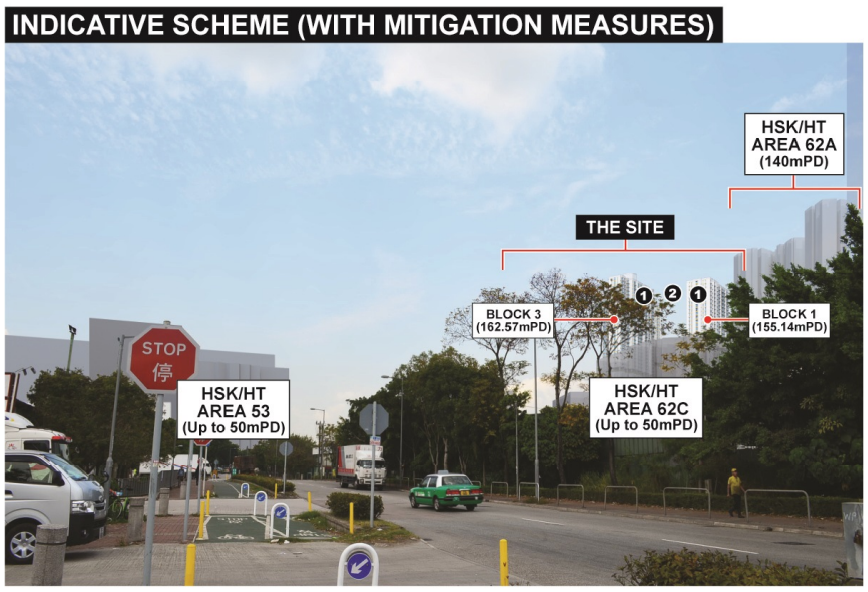
EXISTING CONDITION WITH PLANNED HSK/HT NDA



INDICATIVE SCHEME



INDICATIVE SCHEME (WITH MITIGATION MEASURES)



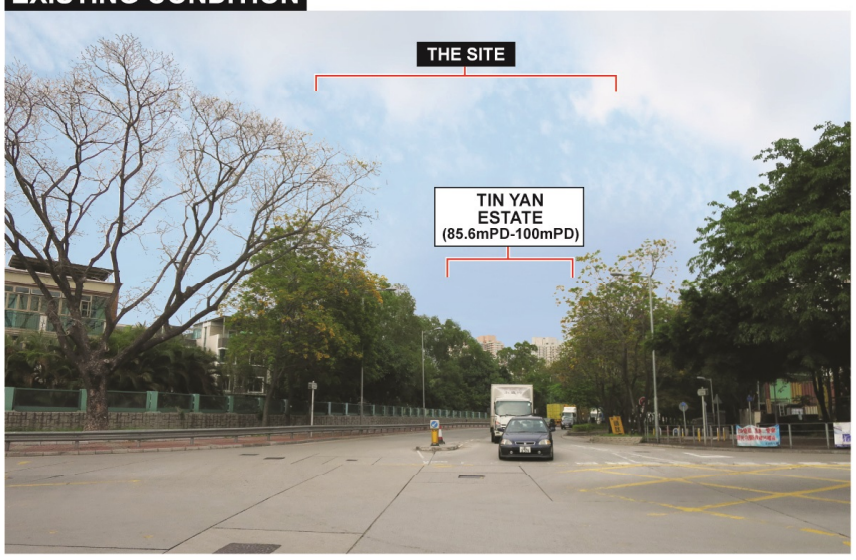
1. Façade treatment (light colour scheme) to help reducing the visual perception of the building mass
2. Building gap between residential blocks to help enhancing visual permeability

Title VIEWPOINT 4: VIEW FROM THE BIKE PATH AT PING HA ROAD	Contract title SITE FORMATION AND INFRASTRUCTURAL WORKS FOR PROPOSED PUBLIC HOUSING DEVELOPMENTS IN YUEN LONG NORTH - FEASIBILITY STUDY	Contract no. CE 41/2016 (CE)	Figure no. 196529/B&V/LVIA/FIG 5.6
NOTE: 1. LAYOUT SUBJECT TO REVIEW IN SUBSEQUENT DETAILED DESIGN STAGE.		土木工程拓展署 CEDD Civil Engineering and Development Department BLACK & VEATCH HONG KONG LIMITED 博威工程顧問有限公司	Designed: FN; Checked: LCH Date: 11/20; Scale: N.T.S.

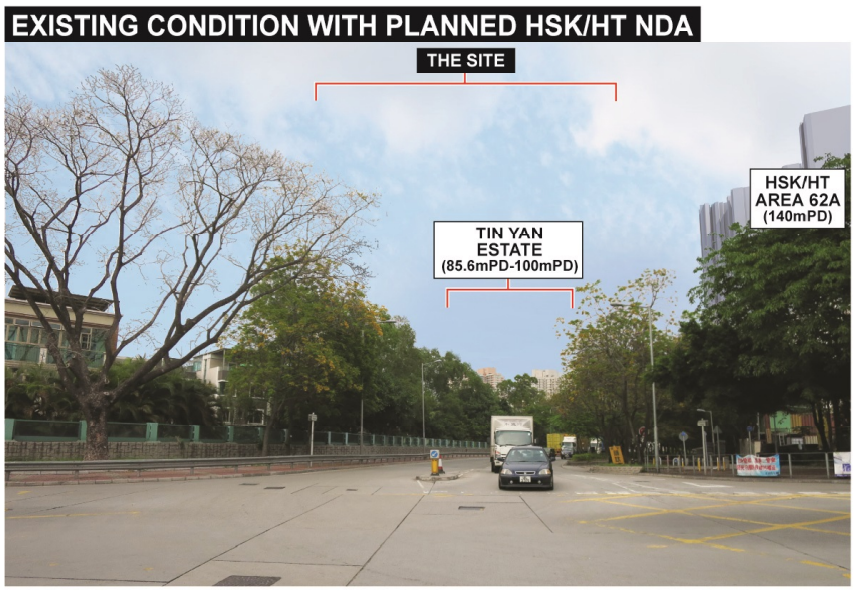
Plot date : 4/6/2021 Time : 6:28:13 PM User : qin61312

Y:\Daily Work\20210331B\LVIA\196529-B&V-LVIA-FIG 5.6.dgn

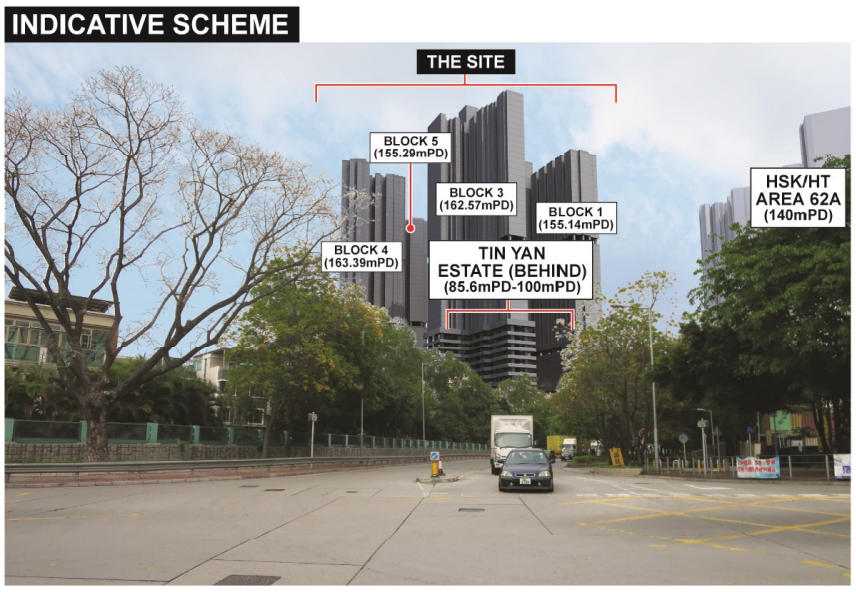
EXISTING CONDITION



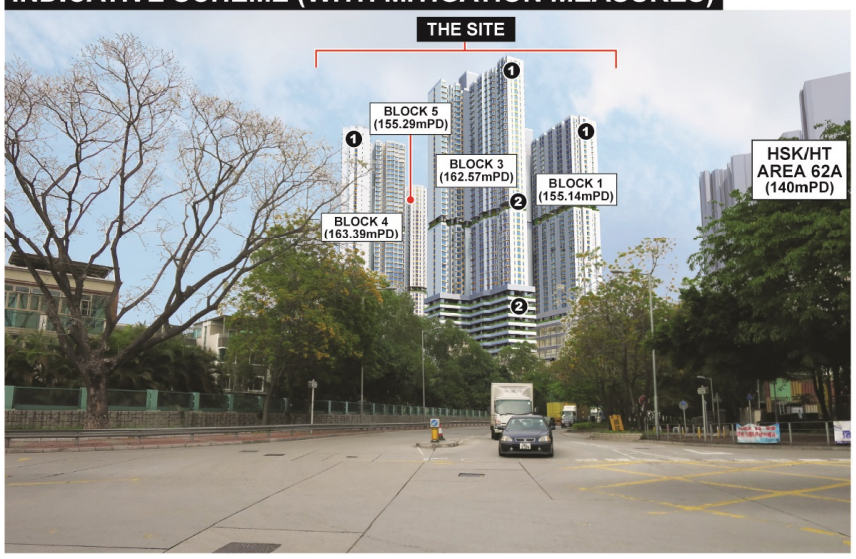
EXISTING CONDITION WITH PLANNED HSK/HT NDA



INDICATIVE SCHEME



INDICATIVE SCHEME (WITH MITIGATION MEASURES)



1. Façade treatment (light colour scheme) to help reducing the visual perception of the building mass
2. Greenery at the podium and refuge floor levels to help softening the building edges and provide some visual relief

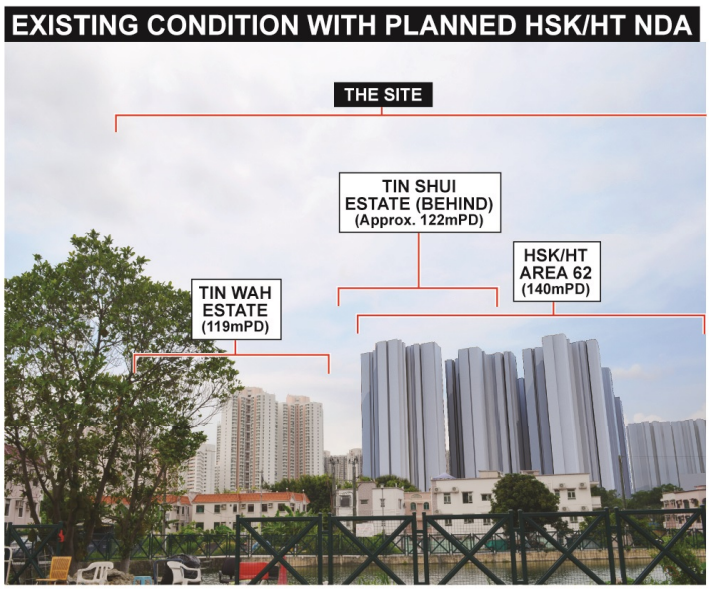
Title VIEWPOINT 5: VIEW FROM THE FUTURE OPEN SPACE ZONE TO THE SOUTHWEST OF THE SITE	Contract title SITE FORMATION AND INFRASTRUCTURAL WORKS FOR PROPOSED PUBLIC HOUSING DEVELOPMENTS IN YUEN LONG NORTH - FEASIBILITY STUDY	Contract no. CE 41/2016 (CE)	Figure no. 196529/B&V/LVIA/FIG 5.7
NOTE: 1. LAYOUT SUBJECT TO REVIEW IN SUBSEQUENT DETAILED DESIGN STAGE.		土木工程拓展署 CEDD Civil Engineering and Development Department BLACK & VEATCH HONG KONG LIMITED 博威工程顧問有限公司	Designed: FN; Checked: LCH Date: 11/20; Scale: N.T.S.

Plot date : 4/6/2021 Time : 6:27:38 PM User : qin61312

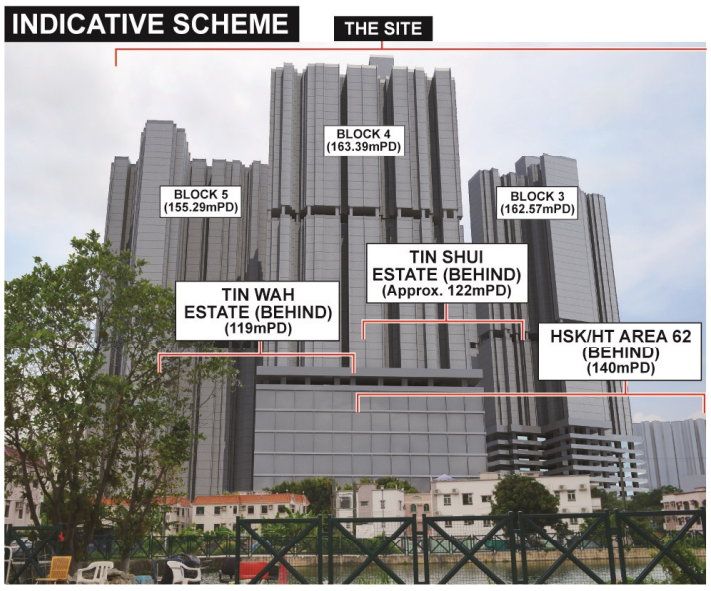
Y:\Daily Work\20210331B\LVIA\196529-B&V-LVIA-FIG 5.7.dgn

EXISTING CONDITION

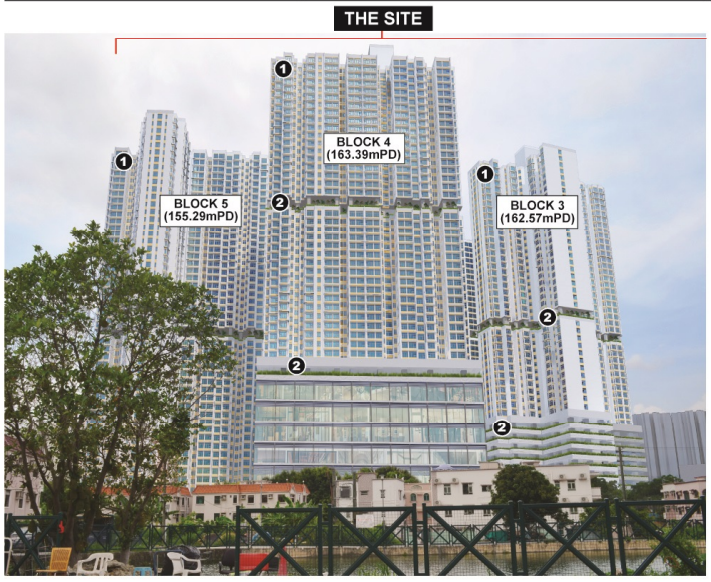
EXISTING CONDITION WITH PLANNED HSK/HT NDA



INDICATIVE SCHEME



INDICATIVE SCHEME (WITH MITIGATION MEASURES)



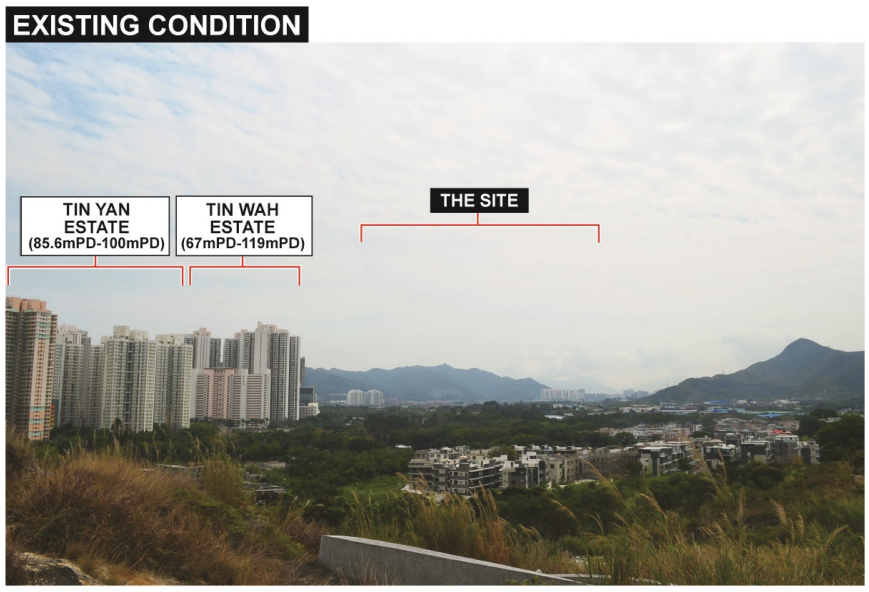
1. Façade treatment (light colour scheme) to help reducing the visual perception of the building mass
2. Greenery at the podium and refuge floor levels to help softening the building edges and provide some visual relief

Title: VIEWPOINT 6: VIEW FROM THE ENTRANCE GATE OF SHA KONG WAI	Contract title: SITE FORMATION AND INFRASTRUCTURAL WORKS FOR PROPOSED PUBLIC HOUSING DEVELOPMENTS IN YUEN LONG NORTH - FEASIBILITY STUDY	Contract no.: CE 41/2016 (CE)	Figure no.: 196529/B&V/LVIA/FIG 5.8
		土木工程拓展署 CEDD Civil Engineering and Development Department	Designed: FN / Checked: LCH
NOTE: 1. LAYOUT SUBJECT TO REVIEW IN SUBSEQUENT DETAILED DESIGN STAGE.		BLACK & VEATCH HONG KONG LIMITED 博威工程顧問有限公司	Date: 11/20 / Scale: N.T.S.

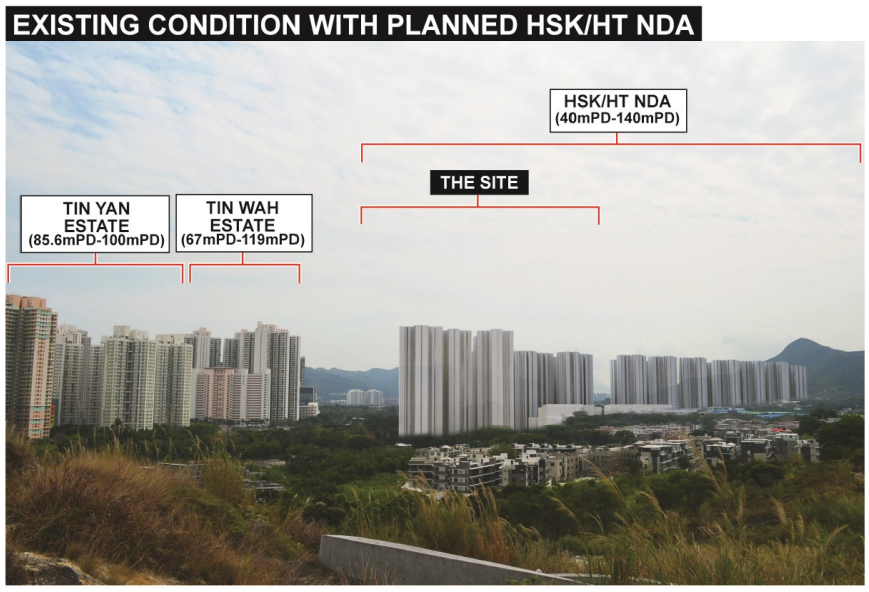
Plot date : 4/6/2021 Time : 6:27:11 PM User : qin61312

Y:\Daily Work\20210331B\LVIA\196529-B&V-LVIA-FIG 5.8.dgn

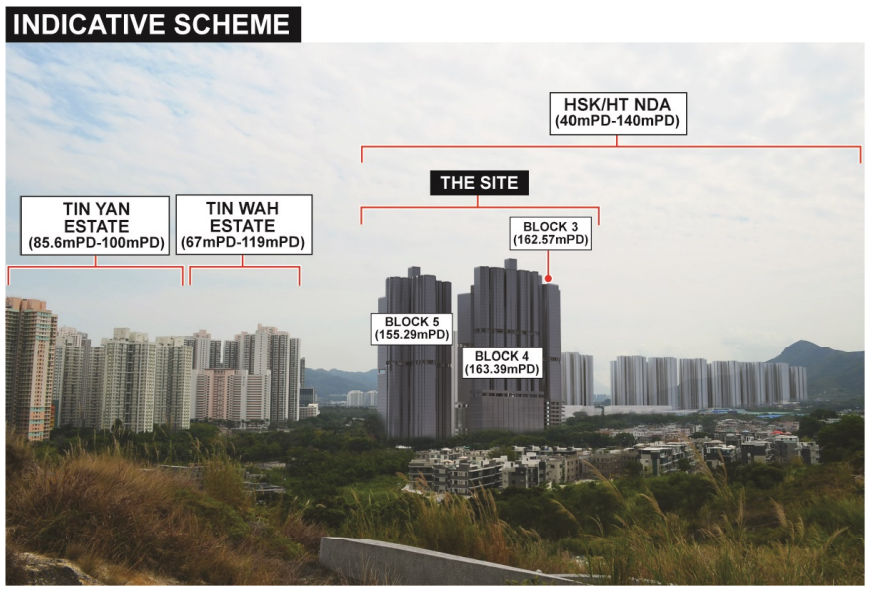
EXISTING CONDITION



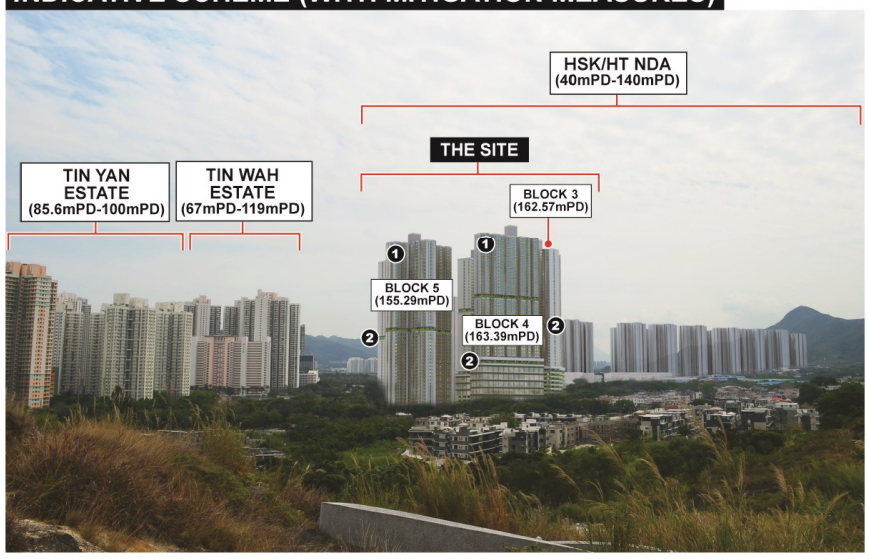
EXISTING CONDITION WITH PLANNED HSK/HT NDA



INDICATIVE SCHEME



INDICATIVE SCHEME (WITH MITIGATION MEASURES)



1. Façade treatment (light colour scheme) to help reducing the visual perception of the building mass
2. Greenery at the podium and refuge floor levels to help softening the building edges and provide some visual relief

Title: VIEWPOINT 7: VIEW FROM THE TIN SHUI WAI HILL HIKING TRAIL	Contract title: SITE FORMATION AND INFRASTRUCTURAL WORKS FOR PROPOSED PUBLIC HOUSING DEVELOPMENTS IN YUEN LONG NORTH - FEASIBILITY STUDY	Contract no.: CE 41/2016 (CE)	Figure no.: 196529/B&V/LVIA/FIG 5.9
		土木工程拓展署 CEDD Civil Engineering and Development Department	Designed: FN / Checked: LCH
NOTE: 1. LAYOUT SUBJECT TO REVIEW IN SUBSEQUENT DETAILED DESIGN STAGE.		BLACK & VEATCH HONG KONG LIMITED 博威工程顧問有限公司	Date: 11/20 / Scale: N.T.S.

Plot date : 4/6/2021 Time : 6:26:30 PM User : qin61312

Y:\Daily Work\20210331B\LVIA\196529-B&V-LVIA-FIG 5.9.dgn

NOTE:
1. LAYOUT SUBJECT TO REVIEW IN SUBSEQUENT DETAILED DESIGN STAGE.

Title

VIEWPOINT 8:
VIEW FROM THE OPEN SPACE ZONE TO THE NORTH OF THE SITE

Contract title

SITE FORMATION AND INFRASTRUCTURAL WORKS FOR PROPOSED PUBLIC HOUSING DEVELOPMENTS IN YUEN LONG NORTH - FEASIBILITY STUDY

Contract no.
CE 41/2016 (CE)

Figure no.
196529/B&V/LVIA/FIG 5.3

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

BLACK & VEATCH HONG KONG LIMITED
博威工程顧問有限公司

Designed
FN

Checked
LCH

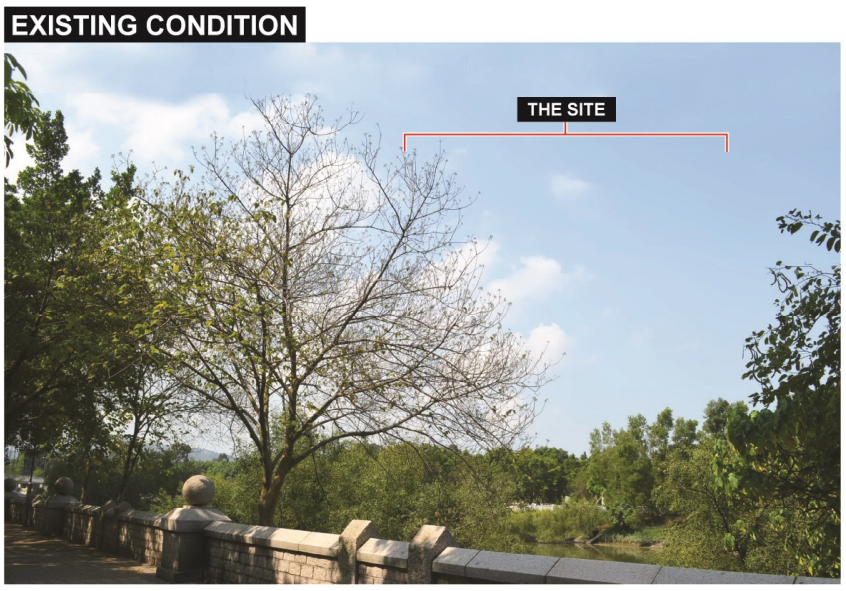
Date
11/20

Scale
N.T.S.

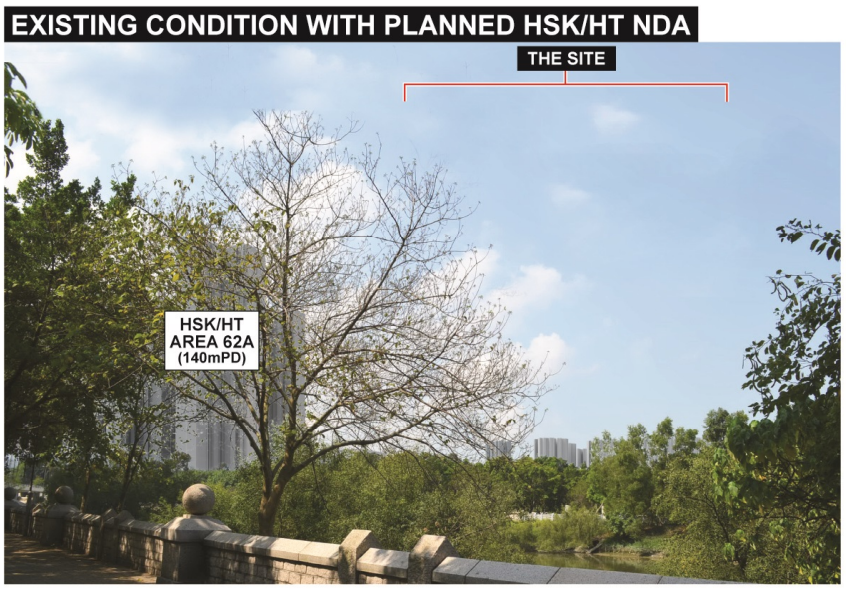
Plot date : 4/6/2021 Time : 6:26:02 PM User : qin61312

Y:\Daily Work\20210331B\LVIA\196529-B&V-LVIA-FIG 5.3.dgn

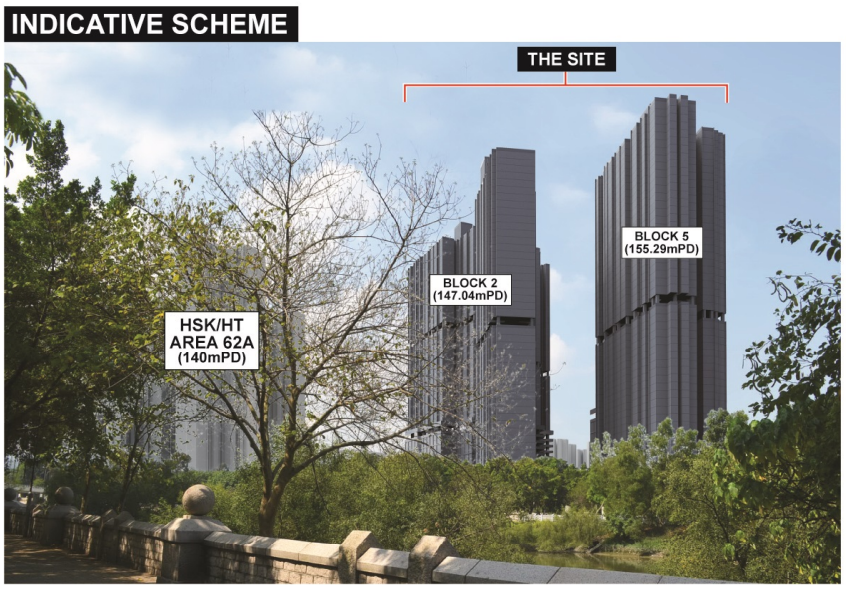
EXISTING CONDITION



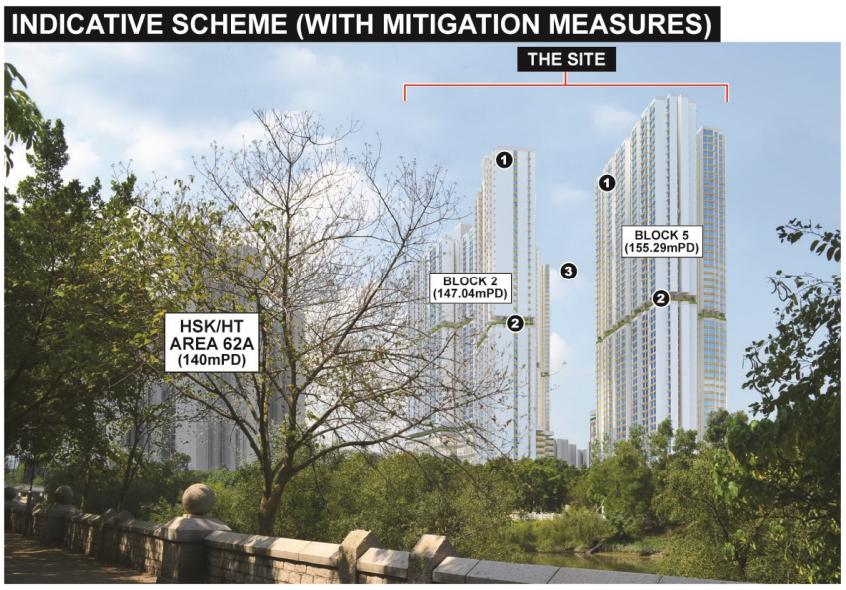
EXISTING CONDITION WITH PLANNED HSK/HT NDA



INDICATIVE SCHEME



INDICATIVE SCHEME (WITH MITIGATION MEASURES)



1. Façade treatment (light colour scheme) to help reducing the visual perception of the building mass
2. Greenery at the podium and refuge floor levels to help softening the building edges and provide some visual relief
3. Building gap between residential blocks to help enhancing visual permeability

Title VIEWPOINT 9: VIEW FROM ALONG THE PROMENADE IN FRONT OF TIN YAN ESTATE	Contract title SITE FORMATION AND INFRASTRUCTURAL WORKS FOR PROPOSED PUBLIC HOUSING DEVELOPMENTS IN YUEN LONG NORTH - FEASIBILITY STUDY	Contract no. CE 41/2016 (CE)	Figure no. 196529/B&V/LVIA/FIG 5.10
NOTE: 1. LAYOUT SUBJECT TO REVIEW IN SUBSEQUENT DETAILED DESIGN STAGE.		土木工程拓展署 CEDD Civil Engineering and Development Department	Designed: FN / Checked: LCH Date: 11/20 / Scale: N.T.S.
		BLACK & VEATCH HONG KONG LIMITED 博威工程顧問有限公司	

Plot date : 4/6/2021 Time : 6:24:54 PM User : qin61312

Y:\Daily Work\20210331B\LVIA\196529-B&V-LVIA-FIG 5.10.dgn

© Copyright by Black & Veatch Hong Kong Limited

LEGEND:

- PROPOSED WORKS LIMIT
- 10 METRES AREA OFFSET FROM PROPOSED WORKS LIMIT
- GROUP OF EXISTING TREES

Revision	Date	Description			Initial
	Designed	Checked	Drawn	Checked	
Initial	FN	LCH	SZ	LGH	
Date	08/17	08/17	08/17	08/17	

Approved

Contract no.

CE 41/2016 (CE)

Contract title

SITE FORMATION AND INFRASTRUCTURAL WORKS FOR PROPOSED PUBLIC HOUSING DEVELOPMENTS IN YUEN LONG NORTH - FEASIBILITY STUDY

Drawing title

TREE SURVEY PLAN

Drawing No.

196529/B&V/TS/001

Scale

1 : 1250 (A1)
1 : 2500 (A3)

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

BLACK & VEATCH HONG KONG LIMITED
博威工程顧問有限公司

Plot Date = 8/13/2020

CAD Filename = Y:\Daily Work\20200812C\196529-B&V-TS-001.dgn

© Copyright by Black & Veatch Hong Kong Limited

LEGEND:

- PROPOSED WORKS LIMIT
- 10 METRES AREA OFFSET FROM PROPOSED WORKS LIMIT
- TREE GROUP/PORTION OF TREE GROUP TO BE RETAINED UNDER PROJECT
- TREE GROUP/PORTION OF TREE GROUP AFFECTED BY PROJECT

THE AFFECTED PORTION COMPRISES 30 TREE GROUPS AND 537 TREES . OF WHICH:
- 92 TREES WOULD BE TRANSPLANTED; AND
- 445 TREES WOULD BE FELLED

Revision	Date	Description			Initial
	Designed	Checked	Drawn	Checked	
Initial	FN	LCH	SZ	LGH	
Date	08/17	08/17	08/17	08/17	

Approved

Contract no.
CE 41/2016 (CE)

Contract title
SITE FORMATION AND INFRASTRUCTURAL WORKS FOR PROPOSED PUBLIC HOUSING DEVELOPMENTS IN YUEN LONG NORTH - FEASIBILITY STUDY

Drawing title
PRELIMINARY TREE TREATMENT PLAN

Drawing No.
196529/B&V/TS/002

Scale
1 : 1250 (A1)
1 : 2500 (A3)

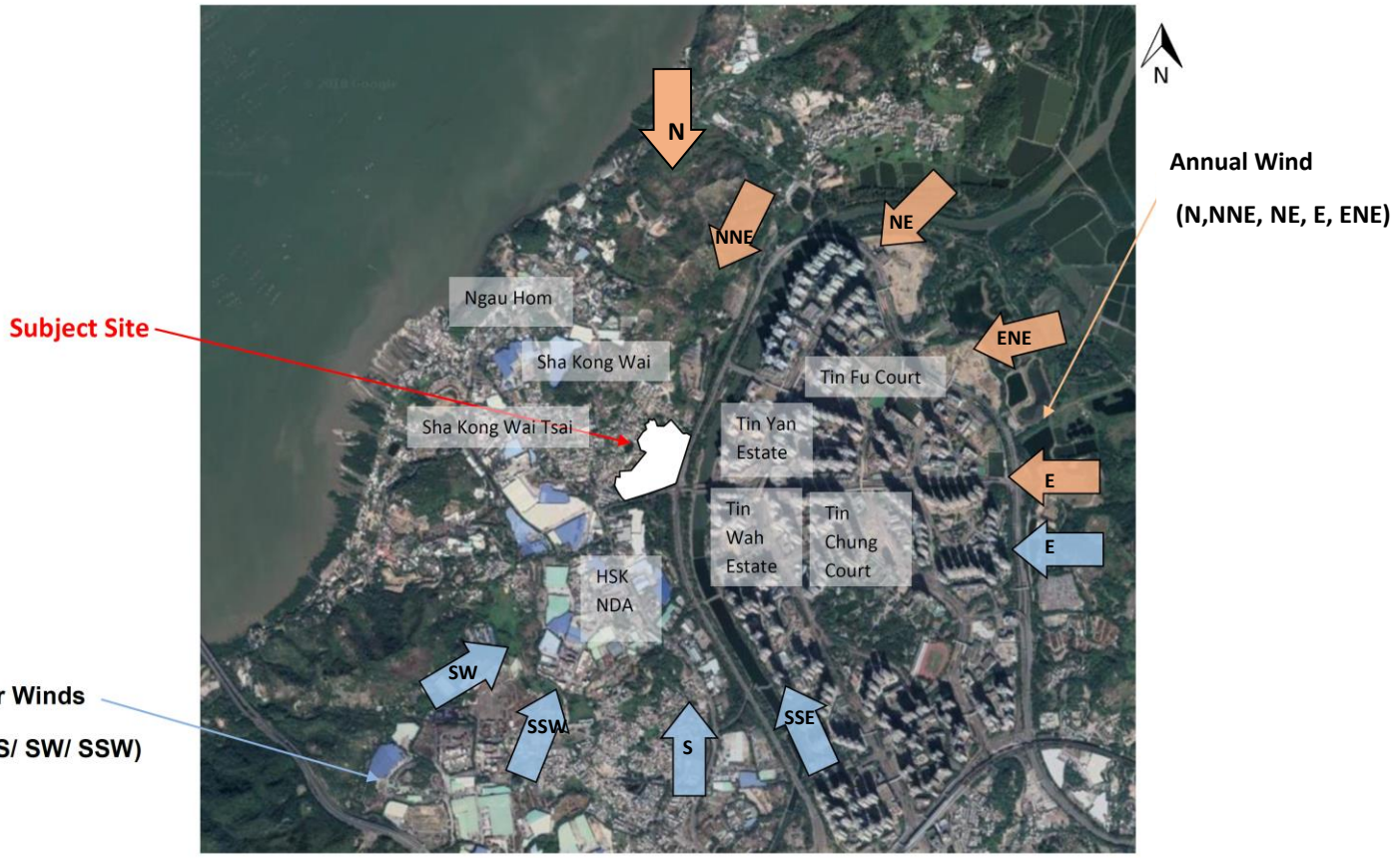
土木工程拓展署
CEDD Civil Engineering and Development Department

BLACK & VEATCH HONG KONG LIMITED
博威工程顧問有限公司

Plot Date = 8/13/2020

CAD Filename = Y:\Daily Work\20200812C\196529-B&V-TS-002.dgn

© Copyright by Black & Veatch Hong Kong Limited



Legend:

- Annual Prevailing wind
- Summer Prevailing wind

Revision	Date	Description			Initial
	Designed	Checked	Drawn		Checked
Initial					
Date					

Approved

Contract no.
CE 41/2016 (CE)

Contract title
SITE FORMATION AND INFRASTRUCTURAL WORKS FOR PROPOSED PUBLIC HOUSING DEVELOPMENTS IN YUEN LONG NORTH – FEASIBILITY STUDY

Drawing title
ANNUAL AND SUMMER PREVAILING WIND FOR SUBJECT SITE

Drawing No.
196529/B&V/AVA/2.2

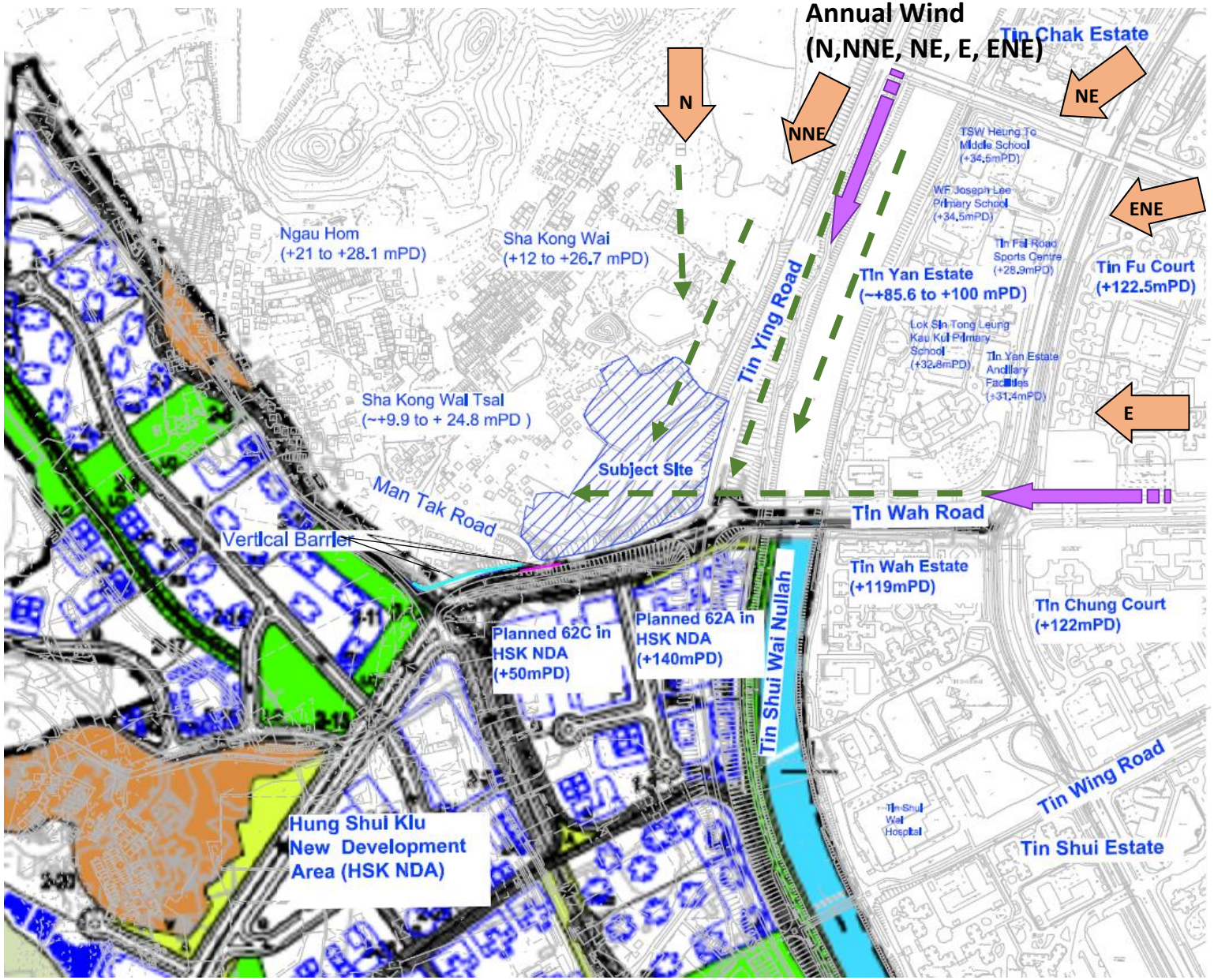
Scale
N.T.S

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

BLACK & VEATCH HONG KONG LIMITED
博威工程顧問有限公司

Plot Date = $DATE$

CAD Filename = $FILE$



© Copyright by Black & Veatch Hong Kong Limited

Legend:

- Expected wind flow
- Existing Breezeways
- Annual Prevailing wind
- Planned 5m Vertical barrier
- Proposed 2.5m Vertical Barrier

Revision	Date	Description			Initial
	Designed	Checked	Drawn	Checked	
Initial					
Date					
Approved					

Contract no.
CE 41/2016 (CE)

Contract title
SITE FORMATION AND INFRASTRUCTURAL WORKS FOR PROPOSED PUBLIC HOUSING DEVELOPMENTS IN YUEN LONG NORTH – FEASIBILITY STUDY

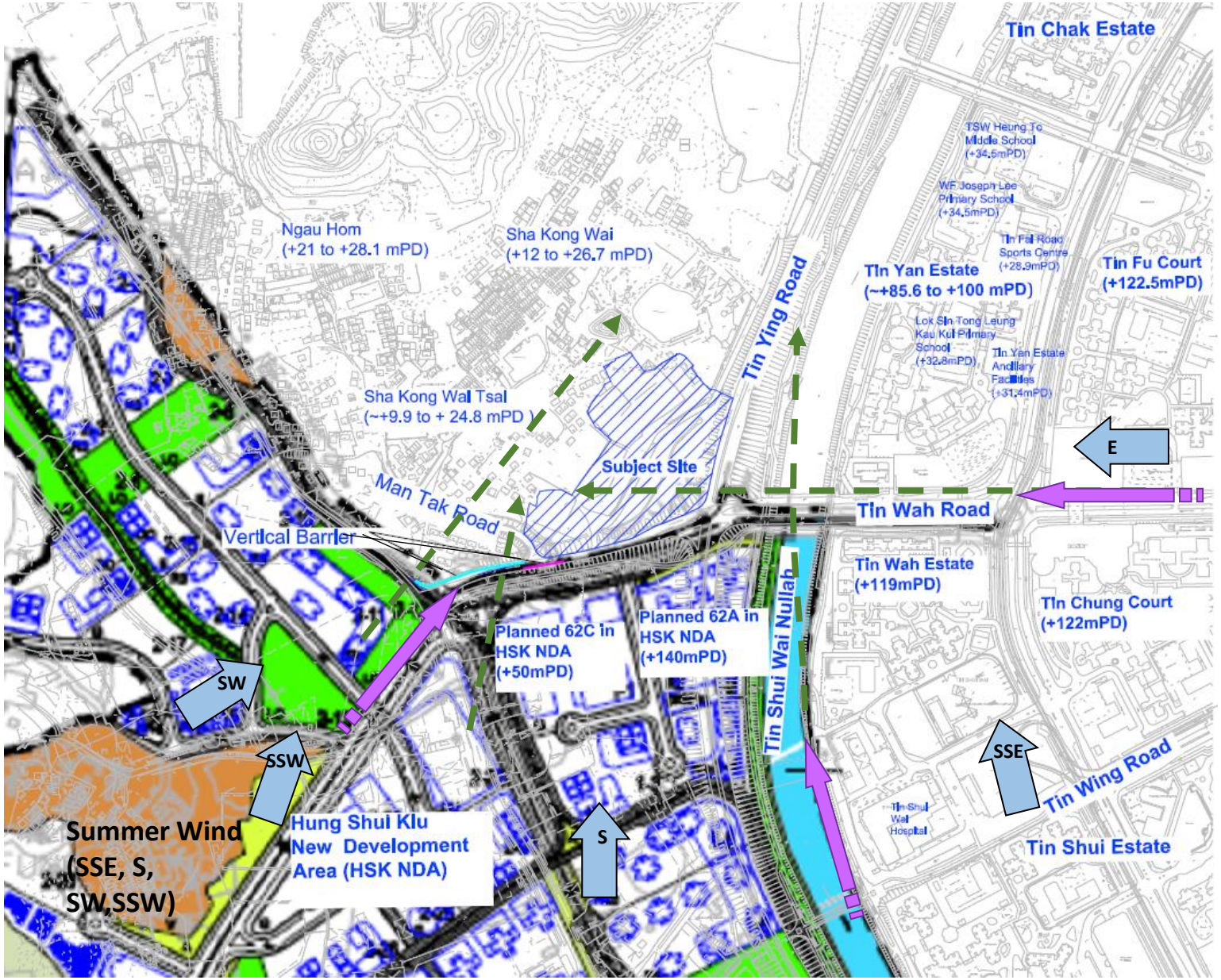
Drawing title
ILLUSTRATION OF EXISTING ANNUAL WIND FLOW

Drawing No.	Scale
196529/B&V/AVA/2.3	N.T.S

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

BLACK & VEATCH HONG KONG LIMITED
博威工程顧問有限公司

Plot Date = $DATE$
CAD Filename = $FILE$



© Copyright by Black & Veatch Hong Kong Limited

Legend:

- Expected wind flow
- Existing Breezeways
- Annual Prevailing wind
- Planned 5m Vertical barrier
- Proposed 2.5m Vertical Barrier

Revision	Date	Description			Initial
	Designed	Checked	Drawn	Checked	
Initial					
Date					
Approved					

Contract no.: CE 41/2016 (CE)

Contract title: SITE FORMATION AND INFRASTRUCTURAL WORKS FOR PROPOSED PUBLIC HOUSING DEVELOPMENTS IN YUEN LONG NORTH – FEASIBILITY STUDY

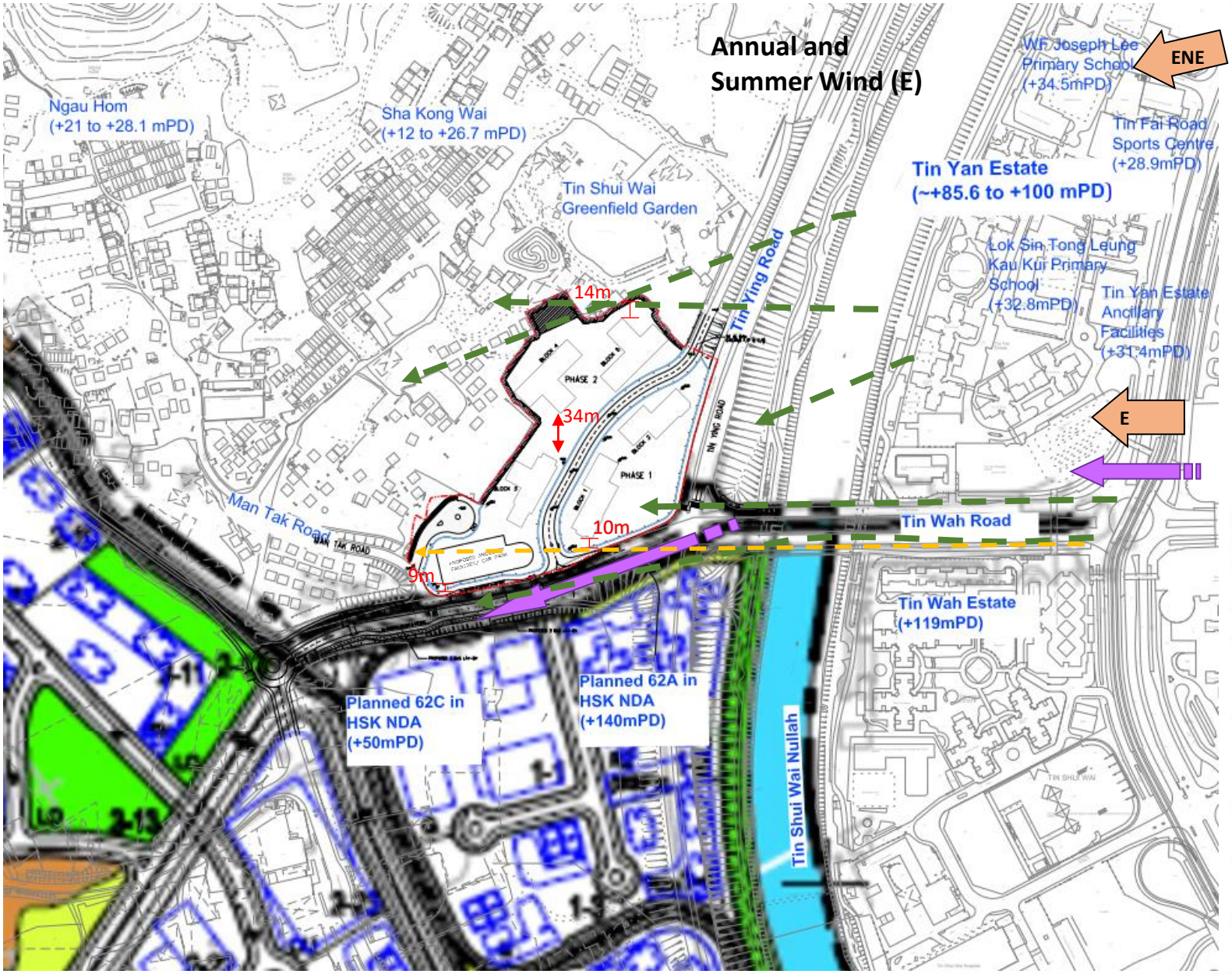
Drawing title: ILLUSTRATION OF EXISTING SUMMER WIND FLOW

Drawing No.	Scale
196529/B&V/AVA/2.4	N.T.S

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

BLACK & VEATCH HONG KONG LIMITED
博威工程顧問有限公司

Plot Date = $DATE$
CAD Filename = $FILE$



© Copyright by Black & Veatch Hong Kong Limited

NOTE:
LAYOUT SUBJECT TO REVIEW IN SUBSEQUENT DETAILED DESIGN STAGE

Revision	Date	Description			Initial
	Designed	Checked	Drawn	Checked	
Initial					
Date					

Approved

Contract no.
CE 41/2016 (CE)

Contract title
SITE FORMATION AND INFRASTRUCTURAL WORKS FOR PROPOSED PUBLIC HOUSING DEVELOPMENTS IN YUEN LONG NORTH – FEASIBILITY STUDY

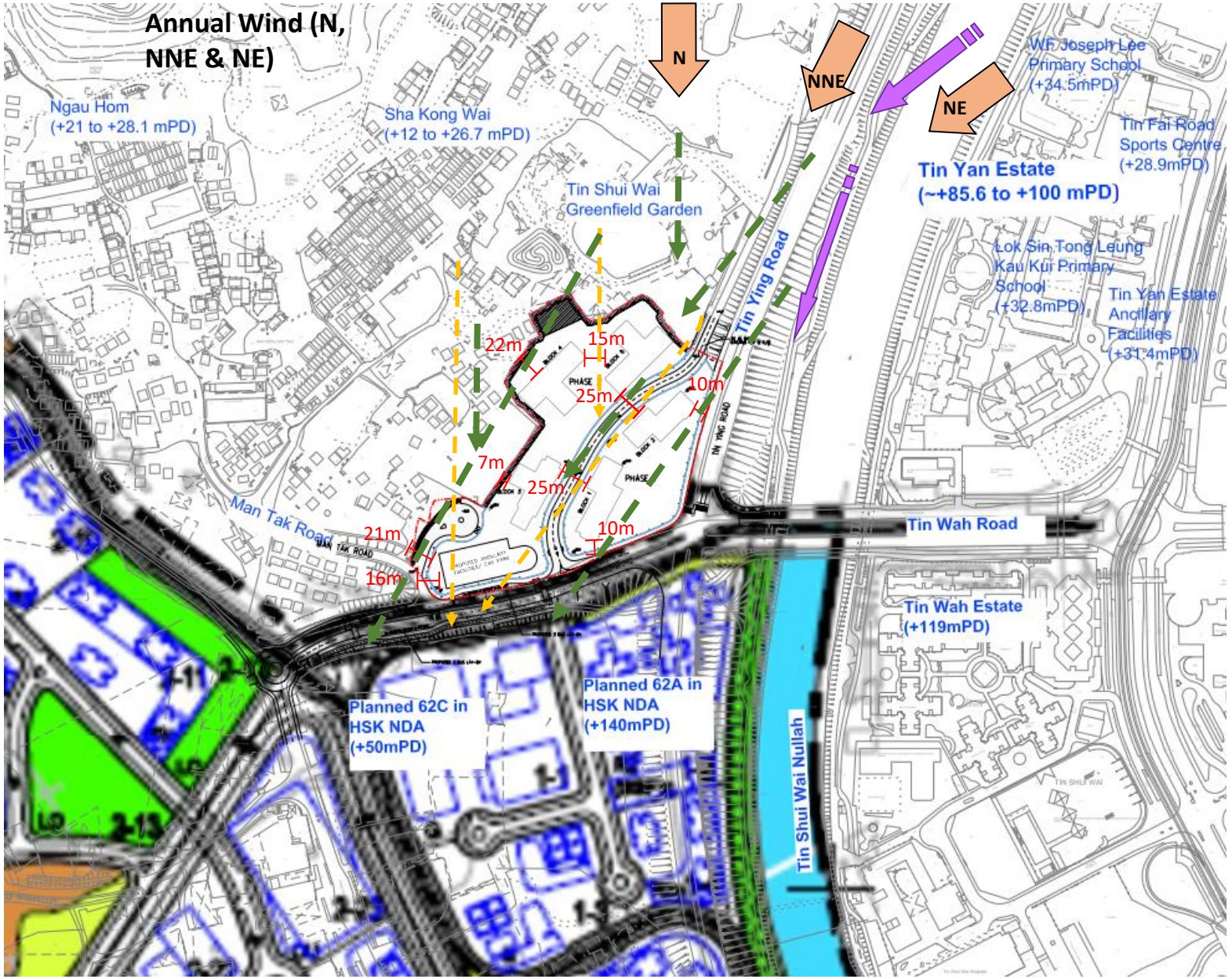
Drawing title
ILLUSTRATION OF WIND FLOW FROM E AND ENE DIRECTIONS

Drawing No.	Scale
196529/B&V/AVA/3.1	N.T.S

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

BLACK & VEATCH HONG KONG LIMITED
博威工程顧問有限公司

Plot Date = $DATE$
CAD Filename = $FILE$



© Copyright by Black & Veatch Hong Kong Limited

Legend:

- Expected wind flow
- Existing Breezeways
- Width of Building Separation/ Building setbacks
- Annual Prevailing wind
- High Level wind flow

NOTE:
LAYOUT SUBJECT TO REVIEW IN SUBSEQUENT DETAILED DESIGN STAGE

Revision	Date	Description			Initial
		Designed	Checked	Drawn	Checked
Initial					
Date					

Approved

Contract no.
CE 41/2016 (CE)

Contract title
SITE FORMATION AND INFRASTRUCTURAL WORKS FOR PROPOSED PUBLIC HOUSING DEVELOPMENTS IN YUEN LONG NORTH – FEASIBILITY STUDY

Drawing title
ILLUSTRATION OF WIND FLOW FROM N, NNE AND NE DIRECTIONS

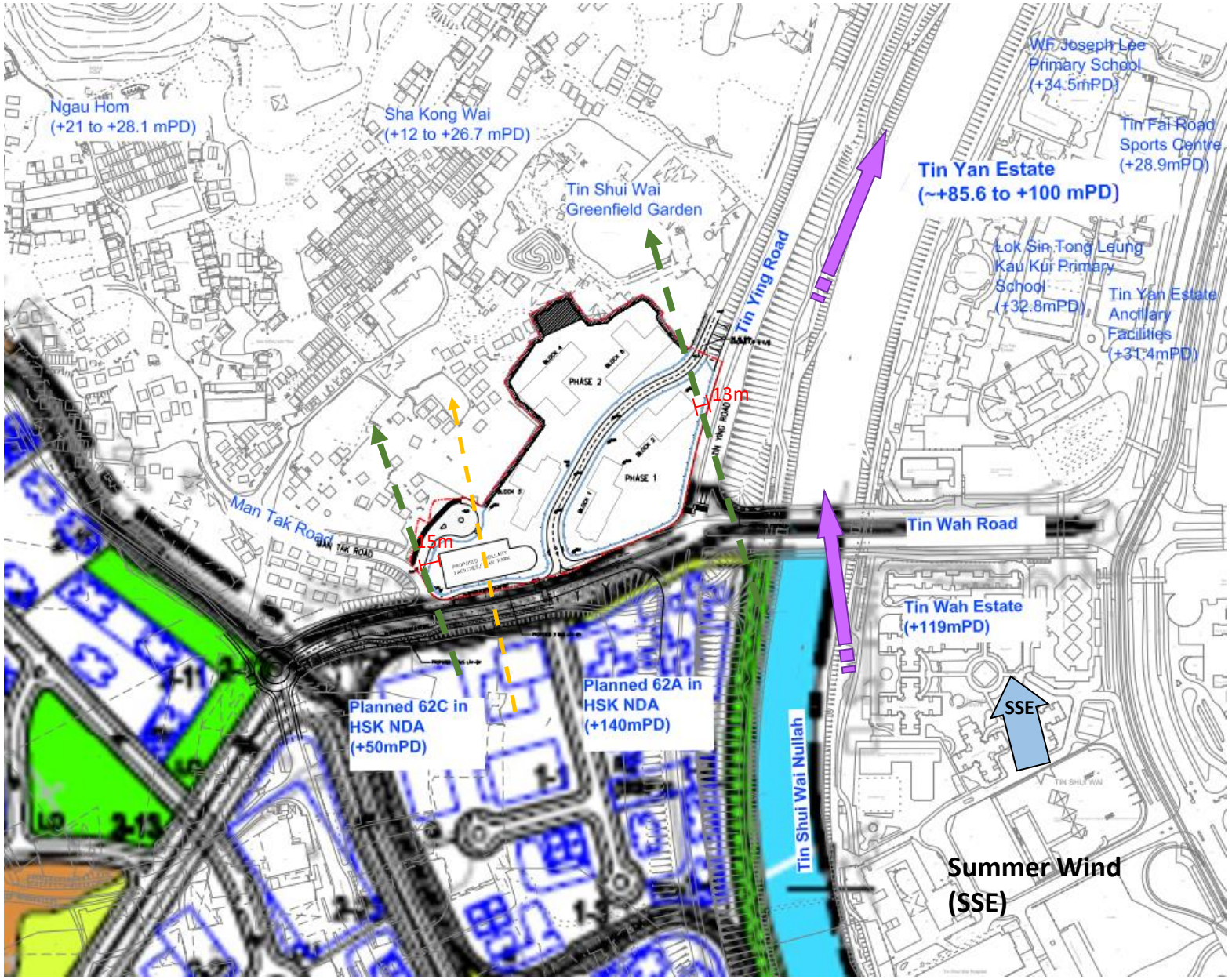
Drawing No.
196529/B&V/AVA/3.2

Scale
N.T.S

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

BLACK & VEATCH HONG KONG LIMITED 博威工程顧問有限公司

Plot Date = $DATE$
CAD Filename = $FILE$



© Copyright by Black & Veatch Hong Kong Limited

Legend:

- Expected wind flow
- Existing Breezeways
- Width of Building Separation/ Building setbacks
- Summer Prevailing wind
- High Level wind flow

NOTE:
LAYOUT SUBJECT TO REVIEW IN SUBSEQUENT DETAILED DESIGN STAGE

Revision	Date	Description			Initial
	Designed	Checked	Drawn	Checked	
Initial					
Date					

Approved

Contract no.
CE 41/2016 (CE)

Contract title
SITE FORMATION AND INFRASTRUCTURAL WORKS FOR PROPOSED PUBLIC HOUSING DEVELOPMENTS IN YUEN LONG NORTH – FEASIBILITY STUDY

Drawing title
ILLUSTRATION OF WIND FLOW FROM SSE DIRECTION

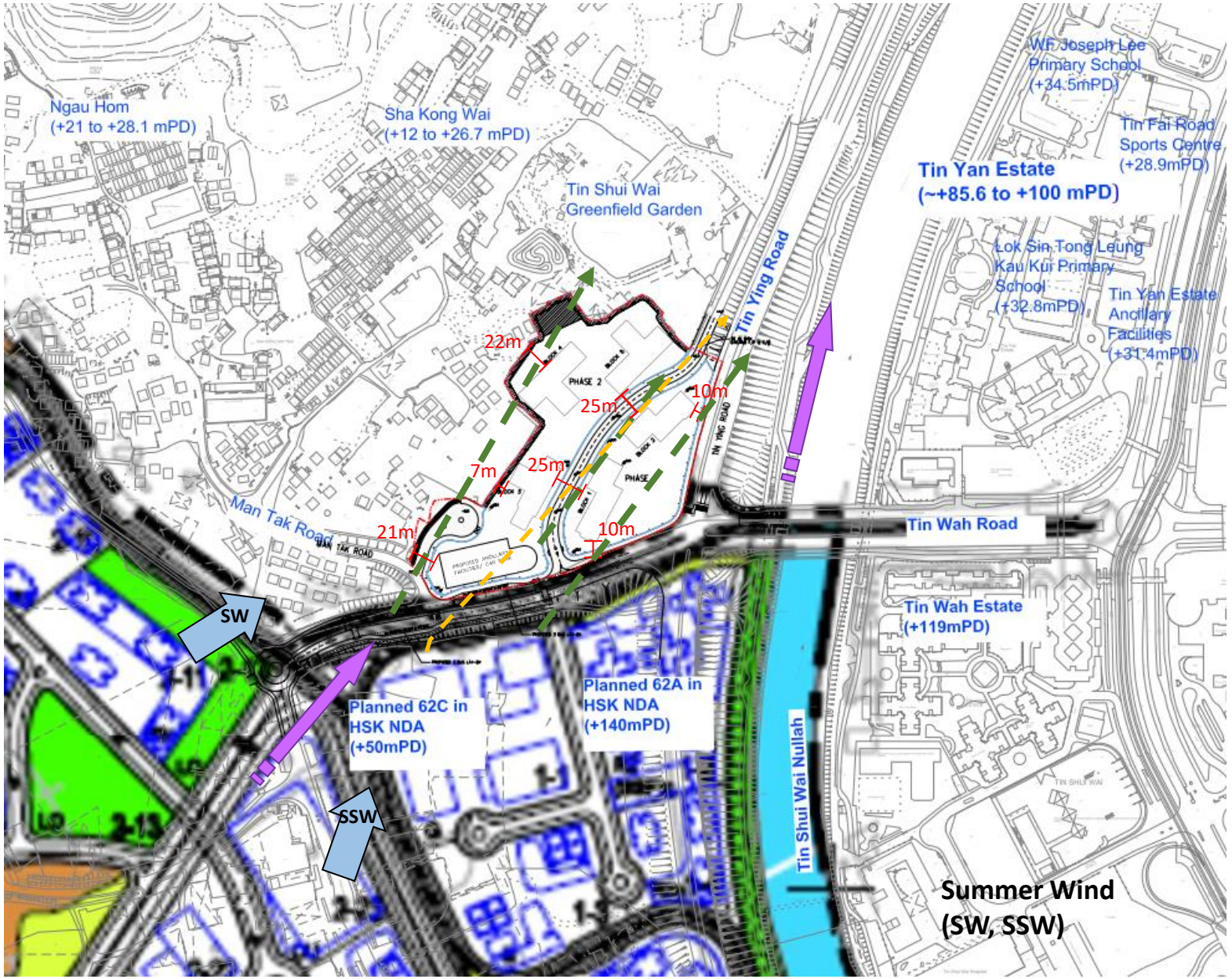
Drawing No.
196529/B&V/AVA/3.3

Scale
N.T.S

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

BLACK & VEATCH HONG KONG LIMITED
博威工程顧問有限公司

Plot Date = $DATE$
CAD Filename = $FILE$



© Copyright by Black & Veatch Hong Kong Limited

Legend:

- Expected wind flow
- Existing Breezeways
- Width of Building Separation/ Building setbacks
- Summer Prevailing wind
- High Level wind flow

NOTE:
LAYOUT SUBJECT TO REVIEW IN SUBSEQUENT DETAILED DESIGN STAGE

Revision	Date	Description			Initial
	Designed	Checked	Drawn	Checked	
Initial					
Date					
Approved					

Contract no.
CE 41/2016 (CE)

Contract title
SITE FORMATION AND INFRASTRUCTURAL WORKS FOR PROPOSED PUBLIC HOUSING DEVELOPMENTS IN YUEN LONG NORTH – FEASIBILITY STUDY

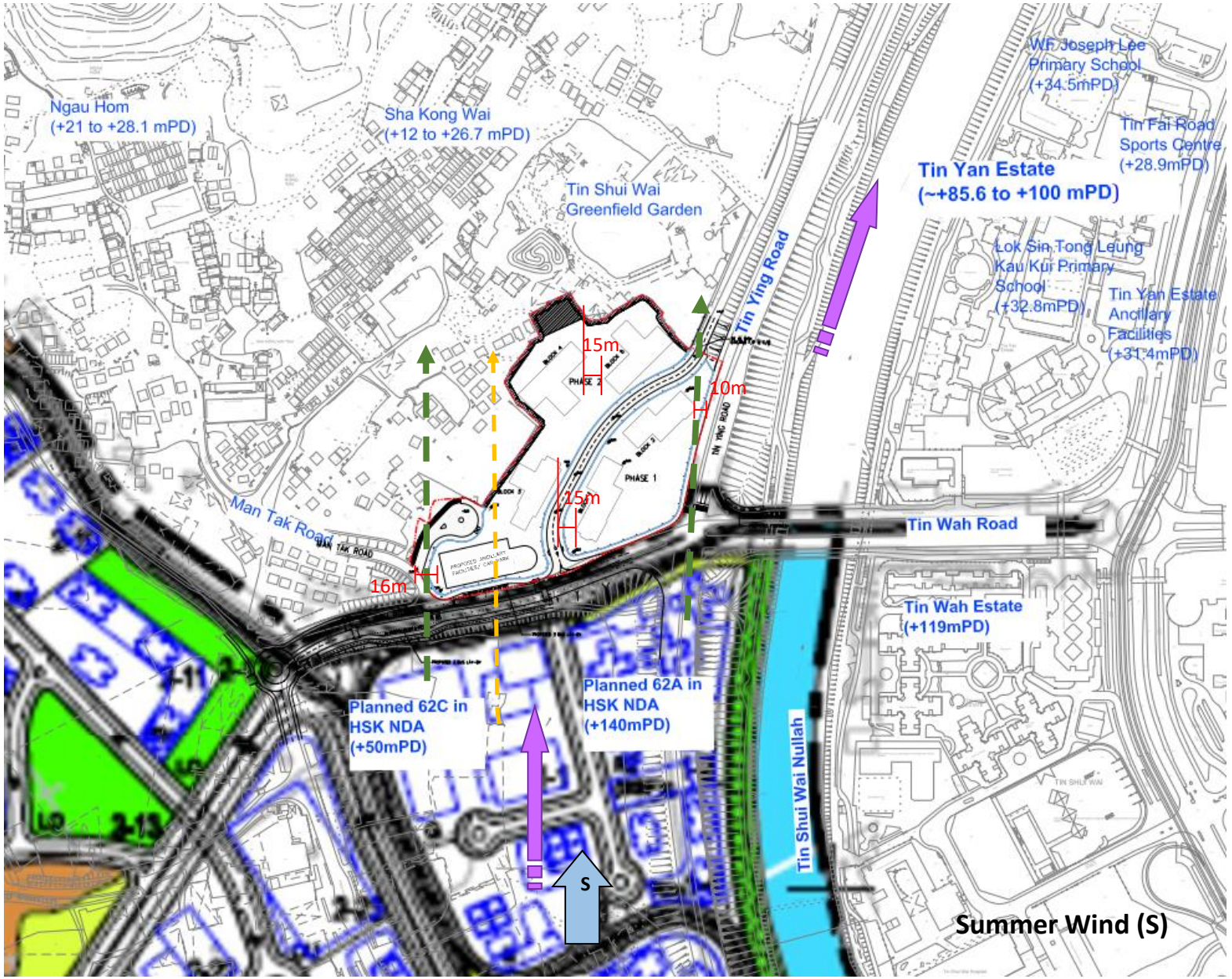
Drawing title
ILLUSTRATION OF WIND FLOW FROM SW AND SSW DIRECTIONS

Drawing No.	Scale
196529/B&V/AVA/3.4	N.T.S

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

BLACK & VEATCH HONG KONG LIMITED 博威工程顧問有限公司

Plot Date = $DATE$
CAD Filename = $FILE$



© Copyright by Black & Veatch Hong Kong Limited

Legend:

- Expected wind flow
- Existing Breezeways
- Width of Building Separation/ Building setbacks
- Summer Prevailing wind
- High Level wind flow

NOTE:
LAYOUT SUBJECT TO REVIEW IN SUBSEQUENT DETAILED DESIGN STAGE

Revision	Date	Description			Initial
	Designed	Checked	Drawn	Checked	
Initial					
Date					
Approved					

Contract no.
CE 41/2016 (CE)

Contract title
SITE FORMATION AND INFRASTRUCTURAL WORKS FOR PROPOSED PUBLIC HOUSING DEVELOPMENTS IN YUEN LONG NORTH – FEASIBILITY STUDY

Drawing title
ILLUSTRATION OF WIND FLOW FROM S DIRECTION

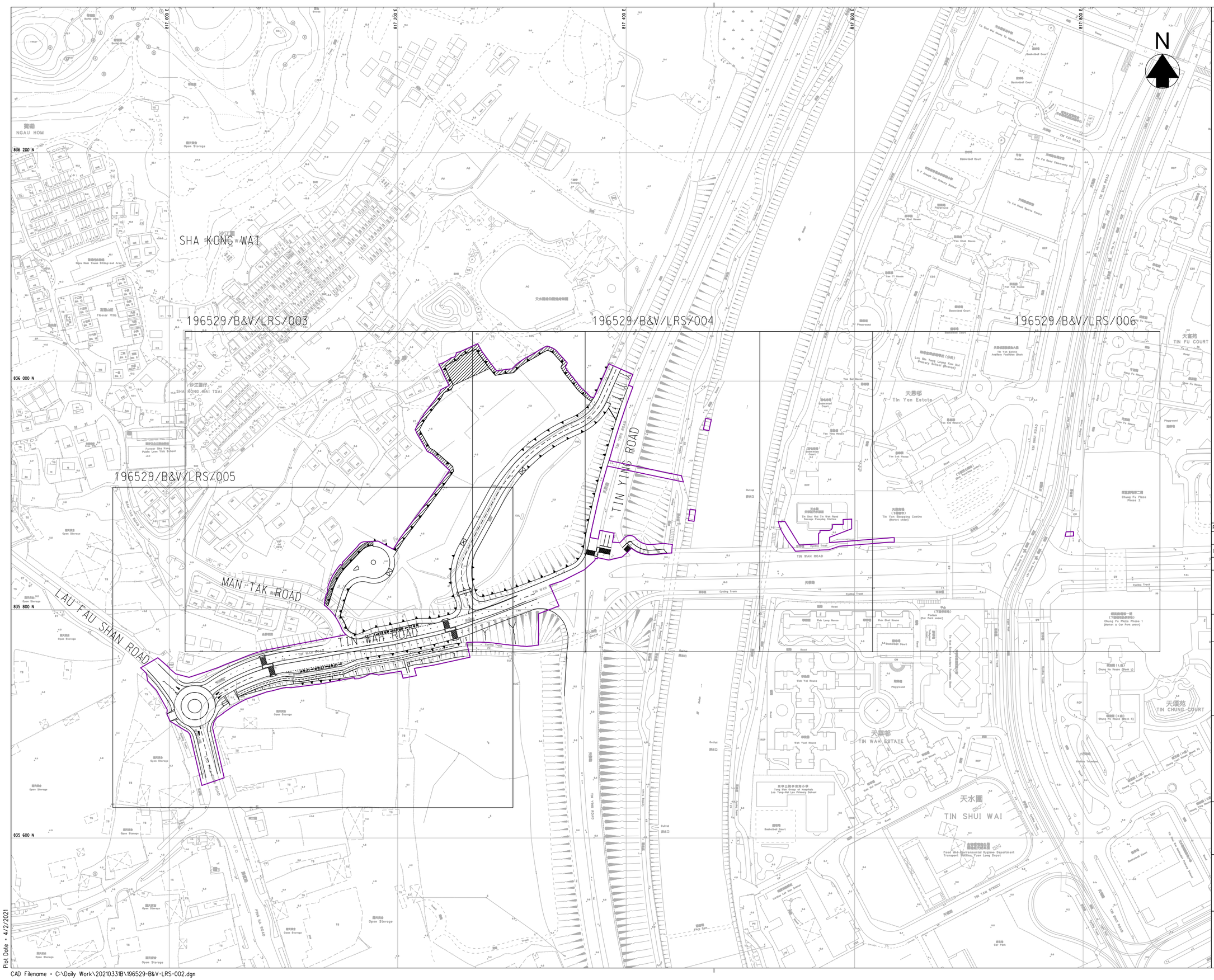
Drawing No.
196529/B&V/AVA/3.5

Scale
N.T.S

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

BLACK & VEATCH HONG KONG LIMITED 博威工程顧問有限公司

Plot Date = $DATE$
CAD Filename = $FILE$



© Copyright by Black & Veatch Hong Kong Limited

LEGEND:

WORKS LIMIT

Revision	Date	Description			Initial
	Designed	Checked	Drawn	Checked	
Initial	FN	LCH	SZ	LGH	
Date	08/17	08/17	08/17	08/17	

Approved

Contract no.

CE 41/2016 (CE)

Contract title

SITE FORMATION AND INFRASTRUCTURAL WORKS FOR PROPOSED PUBLIC HOUSING DEVELOPMENTS IN YUEN LONG NORTH - FEASIBILITY STUDY

Drawing title

LAND REQUIREMENT PLAN (KEY PLAN)

Drawing No.

196529/B&V/LRS/002

Scale

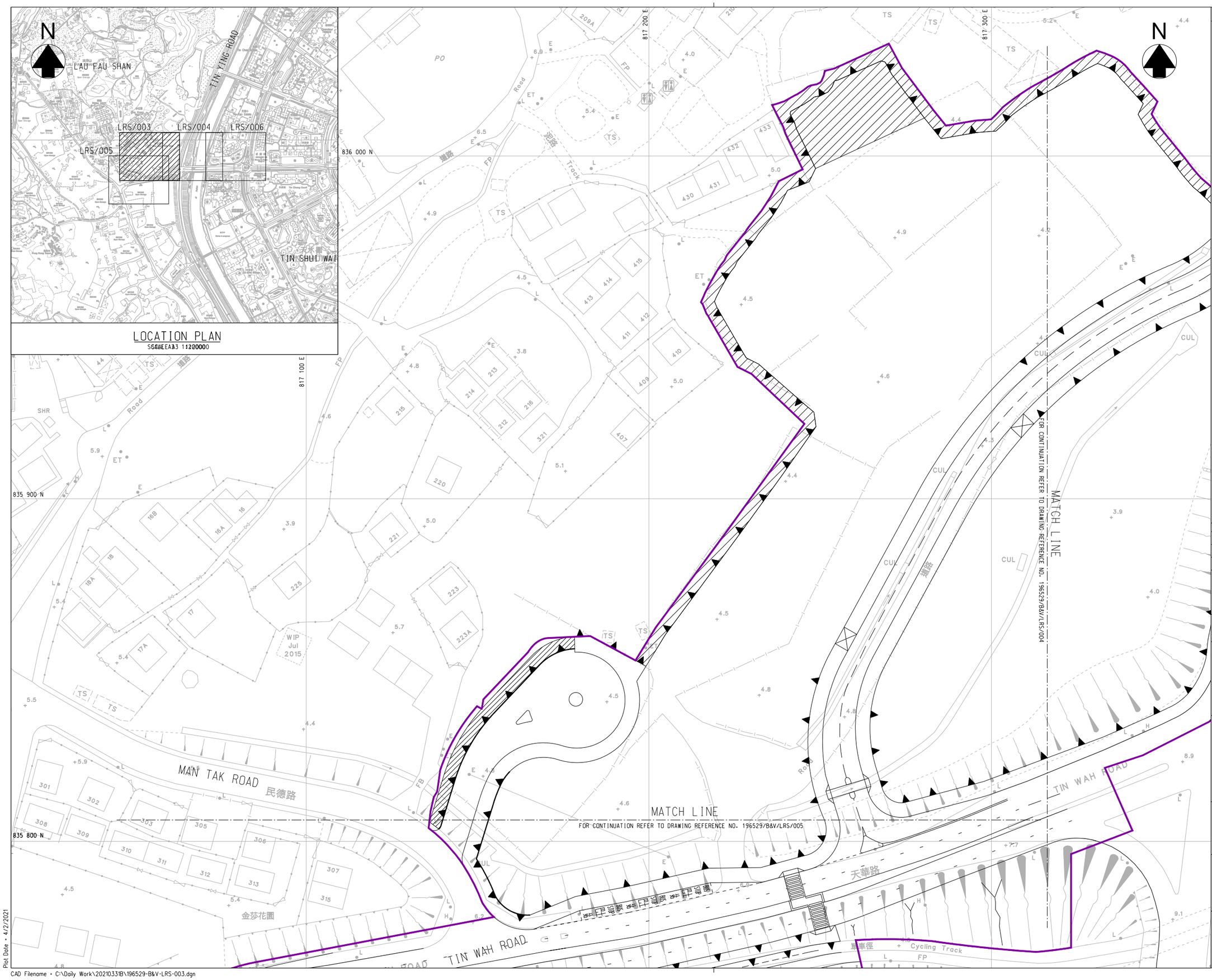
1 : 1500 (A1)
1 : 3000 (A3)

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

BLACK & VEATCH HONG KONG LIMITED
博威工程顧問有限公司

Plot Date = 4/2/2021

CAD Filename = C:\Daily Work\20210331B\196529-B&V-LRS-002.dgn



© Copyright by Black & Veatch Hong Kong Limited

LEGEND:

WORKS LIMIT

Revision	Date	Description			Initial
	Designed	Checked	Drawn	Checked	
Initial	FN	LCH	SZ	LGH	
Date	08/17	08/17	08/17	08/17	

Approved

Contract no.

CE 41/2016 (CE)

Contract title

SITE FORMATION AND INFRASTRUCTURAL WORKS FOR PROPOSED PUBLIC HOUSING DEVELOPMENTS IN YUEN LONG NORTH - FEASIBILITY STUDY

Drawing title

LAND REQUIREMENT PLAN (SHEET 1 OF 4)

Drawing No.

196529/B&V/LRS/003

Scale

1 : 500 (A1)
1 : 1000 (A3)

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

BLACK & VEATCH HONG KONG LIMITED
博威工程顧問有限公司

Plot Date : 4/2/2021

CAD Filename : C:\Daily Work\20210331B\196529-B&V-LRS-003.dgn

LOCATION PLAN
SCALE A3 1:20000

© Copyright by Black & Veatch Hong Kong Limited

LEGEND:

WORKS LIMIT

Revision	Date	Description		Initial
	Designed	Checked	Drawn	Checked
Initial	FN	LCH	SZ	LGH
Date	08/17	08/17	08/17	08/17

Approved

Contract no.
CE 41/2016 (CE)

Contract title
SITE FORMATION AND INFRASTRUCTURAL WORKS FOR PROPOSED PUBLIC HOUSING DEVELOPMENTS IN YUEN LONG NORTH - FEASIBILITY STUDY

Drawing title
LAND REQUIREMENT PLAN (SHEET 2 OF 4)

Drawing No.
196529/B&V/LRS/004

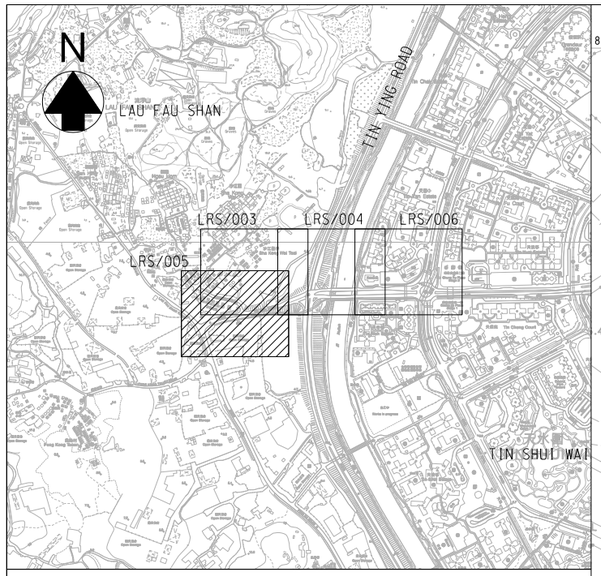
Scale
1 : 500 (A1)
1 : 1000 (A3)

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

BLACK & VEATCH HONG KONG LIMITED
博威工程顧問有限公司

Plot Date : 4/2/2021

CAD Filename : C:\Daily Work\20210331B\196529-B&V-LRS-004.dgn



LOCATION PLAN
SCALE A3 1:20000

© Copyright by Black & Veatch Hong Kong Limited

LEGEND:

WORKS LIMIT

MATCH LINE
FOR CONTINUATION REFER TO DRAWING REFERENCE NO. 196529/B&V/LRS/003

Revision	Date	Description		Initial
	Designed	Checked	Drawn	Checked
Initial	FN	LCH	SZ	LGH
Date	08/17	08/17	08/17	08/17

Approved

Contract no.
CE 41/2016 (CE)

Contract title
SITE FORMATION AND INFRASTRUCTURAL WORKS FOR PROPOSED PUBLIC HOUSING DEVELOPMENTS IN YUEN LONG NORTH - FEASIBILITY STUDY

Drawing title
LAND REQUIREMENT PLAN
(SHEET 3 OF 4)

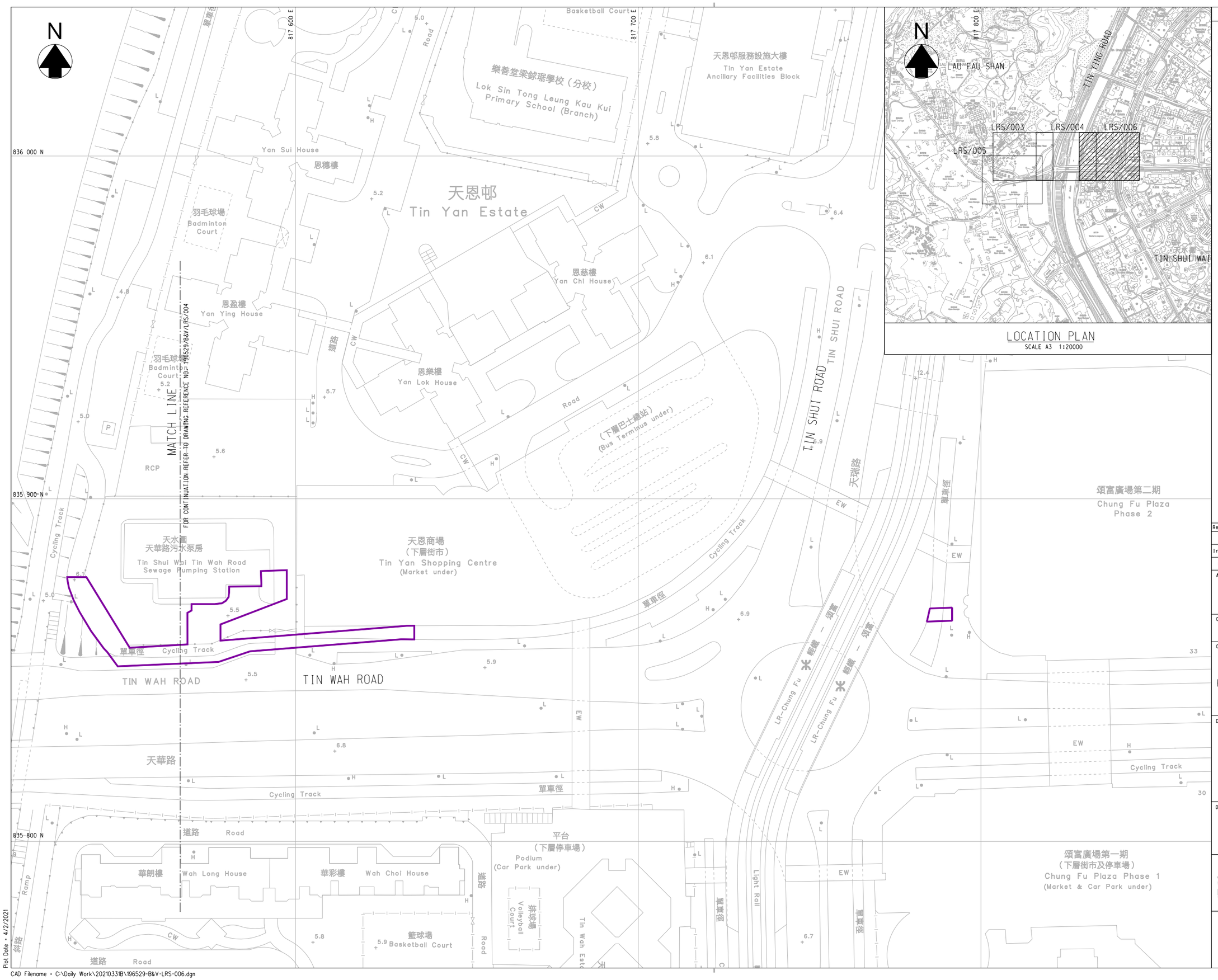
Drawing No.
196529/B&V/LRS/005

Scale
1 : 500 (A1)
1 : 1000 (A3)

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

BLACK & VEATCH HONG KONG LIMITED
博威工程顧問有限公司

Plot Date = 4/2/2021
CAD Filename = C:\Daily Work\20210331B\196529-B&V-LRS-005.dgn



LOCATION PLAN
SCALE A3 1:20000

© Copyright by Black & Veatch Hong Kong Limited

LEGEND:

WORKS LIMIT

Revision	Date	Description		Initial
	Designed	Checked	Drawn	Checked
Initial	FN	LCH	SZ	LGH
Date	08/20	08/20	08/20	08/20

Approved

Contract no.
CE 41/2016 (CE)

Contract title
SITE FORMATION AND INFRASTRUCTURAL WORKS FOR PROPOSED PUBLIC HOUSING DEVELOPMENTS IN YUEN LONG NORTH - FEASIBILITY STUDY

Drawing title
LAND REQUIREMENT PLAN
(SHEET 4 OF 4)

Drawing No.
196529/B&V/LRS/006

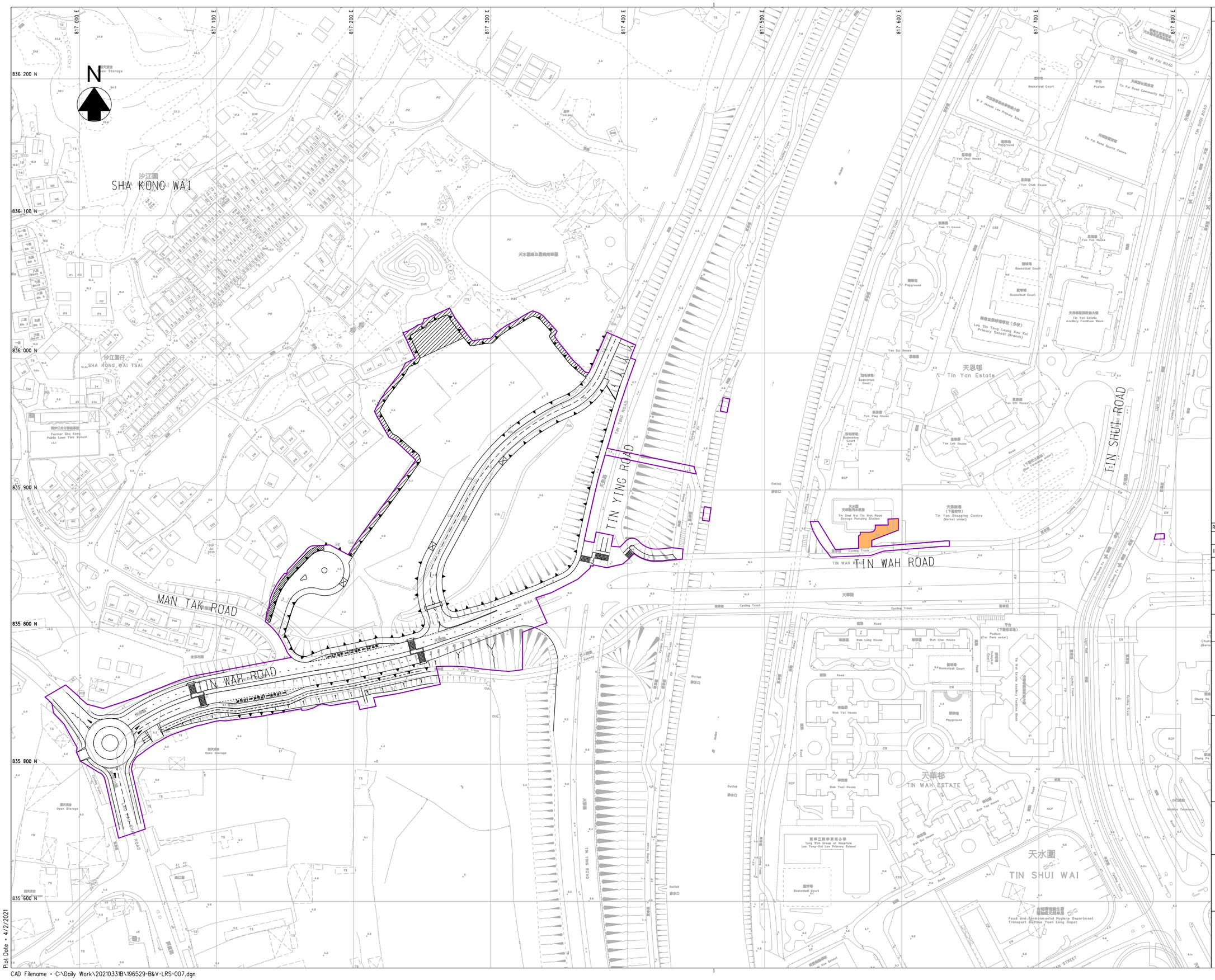
Scale
1 : 500 (A1)
1 : 1000 (A3)

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

BLACK & VEATCH HONG KONG LIMITED
博威工程顧問有限公司

Plot Date = 4/2/2021

CAD Filename = C:\Daily Work\20210331B\196529-B&V-LRS-006.dgn



© Copyright by Black & Veatch Hong Kong Limited

LEGEND:

- WORKS LIMIT
- AFFECTED GOVERNMENT LAND ALLOCATION

Revision	Date	Description		Initial
	Designed	Checked	Drawn	Checked
Initial	FN	LCH	SZ	LGH
Date	08/17	08/17	08/17	08/17

Approved

Contract no.
CE 41/2016 (CE)

Contract title
SITE FORMATION AND INFRASTRUCTURAL WORKS FOR PROPOSED PUBLIC HOUSING DEVELOPMENTS IN YUEN LONG NORTH - FEASIBILITY STUDY

Drawing title
LOCATION PLAN OF GOVERNMENT LAND ALLOCATION

Drawing No.
196529/B&V/LRS/007

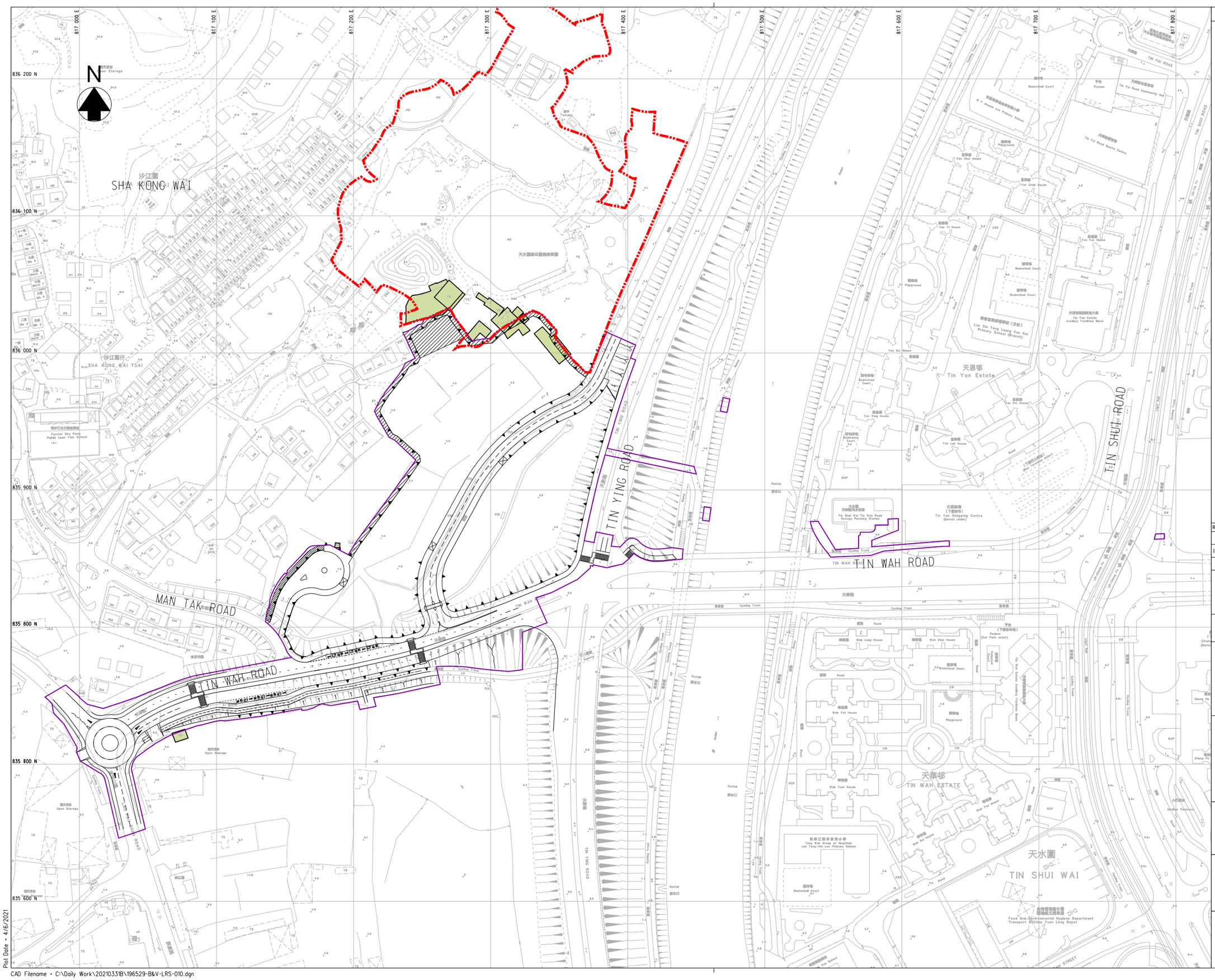
Scale
1 : 1250 (A1)
1 : 2500 (A3)

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

BLACK & VEATCH HONG KONG LIMITED
博威工程顧問有限公司

Plot Date = 4/2/2021

CAD Filename = C:\Daily Work\20210331B\196529-B&V-LRS-007.dgn



© Copyright by Black & Veatch Hong Kong Limited

NOTE:

1. SITUATION AS AT OCTOBER 2017 AND FOR IDENTIFICATION PURPOSES ONLY.

LEGEND:

- PLANNING APPLICATION NO. A/YL-LFS/39 (TIN SHUI WAI GREENFIELD)
- WORKS LIMIT
- TEMPORARY STRUCTURE TO BE AFFECTED

Revision	Date	Description		Initial
	Designed	Checked	Drawn	Checked
Initial	FN	LCH	SZ	LGH
Date	08/17	08/17	08/17	08/17

Approved

Contract no.

CE 41/2016 (CE)

Contract title

SITE FORMATION AND INFRASTRUCTURAL WORKS FOR PROPOSED PUBLIC HOUSING DEVELOPMENTS IN YUEN LONG NORTH - FEASIBILITY STUDY

Drawing title

LOCATION PLAN OF BUILDINGS/TEMPORARY STRUCTURES AFFECTED

Drawing No.	Scale
196529/B&V/LRS/010	1 : 1250 (A1) 1 : 2500 (A3)

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

BLACK & VEATCH HONG KONG LIMITED
博威工程顧問有限公司

Plot Date = 4/6/2021

CAD Filename = C:\Daily Work\20210331B\196529-B&V-LRS-010.dgn

Provision of Major GIC Facilities and Open Space in Tin Shui Wai OZP

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[#]	29.01 ha	22.79 ha	30.2 ha	+1.19 ha
Local Open Space	10 ha per 100,000 persons[#]	29.01 ha	66.99 ha	69.38 ha	+40.37 ha
Secondary School	1 whole-day classroom for 40 persons aged 12-17	378 classrooms	608 classrooms	608 classrooms	+230 classrooms
Primary School	1 whole-day classroom for 25.5 persons aged 6-11	488 classrooms	785 classrooms	785 classrooms	+297 classrooms
Kindergarten/ Nursery	34 classrooms for 1,000 children aged 3 to 6	158 classrooms	263 classrooms	269 classrooms	+111 classrooms
District Police Station	1 per 200,000 to 500,000 persons	0	0	0	0
Divisional Police Station	1 per 100,000 to 200,000 persons	1	1	2	+1
Hospital	5.5 beds per 1,000 persons[^]	1,643 beds	300 beds	1,100 beds	-543 beds
Clinic/Health Centre	1 per 100,000 persons	2	2	2	0
Magistracy (with 8 courtrooms)	1 per 660,000 persons	0	0	0	0
Child Care Centre	100 aided places per 25,000 persons[#@]	1,160 places	287 places	375 places	-785 places
Integrated Children and Youth Services Centre	1 for 12,000 persons aged 6-24[#]	3	8	8	+5

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 Family Services Centre	1 for 100,000 to 150,000 persons[#]	1	3	3	+2
District Elderly Community Centres	One in each new development area with a population of around 170,000 or above[#]	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[#]	N.A.	5	5	N.A.
Community Care Services (CCS) Facilities	17.2 subsidised places per 1,000 elderly persons aged 65 or above[#*@]	1,682 places	303 places	303 places	-1,379 places
Residential Care Homes for the Elderly	21.3 subsidised beds per 1,000 elderly persons aged 65 or above[#@]	2,083 beds	271 beds	271 beds	-1,812 beds
Library	1 district library for every 200,000 persons[π]	1	1	1	0
Sports Centre	1 per 50,000 to 65,000 persons[#]	4	3	4	0
Sports Ground/ Sport Complex	1 per 200,000 to 250,000 persons[#]	1	1	1	0
Swimming Pool Complex – standard	1 complex per 287,000 persons[#]	1	0	1	0

Note:
The planned resident population in Tin Shui Wai is about 290,130. If including transients, the overall planned population is about 298,600.
The requirements exclude planned population of transients.
^ The provision of hospital beds is to be assessed by the Hospital Authority on a regional basis.
* Consisting of 40% centre-based CCS and 60% home-based CCS.
@ This is a long-term goal and the actual provision would be subject to the consideration of the Social Welfare Department in the planning and development process as appropriate.
π Small libraries are counted towards meeting the HKPSG requirement.

APRIL 2021

Provision of Major GIC Facilities and Open Space in Lau Fau Shan & Tsim Bei Tsui OZP

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[#]	1.96 ha	0 ha	2 ha	+0.04 ha
Local Open Space	10 ha per 100,000 persons[#]	1.96 ha	0.56 ha	4.75 ha	+2.79 ha
Secondary School	1 whole-day classroom for 40 persons aged 12-17	21 classrooms	0 classroom	0 classroom	-21 classrooms
Primary School	1 whole-day classroom for 25.5 persons aged 6-11	30 classrooms	0 classroom	0 classroom	-30 classrooms
Kindergarten/ Nursery	34 classrooms for 1,000 children aged 3 to 6	17 classrooms	0 classroom	8 classrooms	-9 classrooms
District Police Station	1 per 200,000 to 500,000 persons	0	0	0	0
Divisional Police Station	1 per 100,000 to 200,000 persons	0	0	0	0
Hospital	5.5 beds per 1,000 persons[^]	110 beds	0 bed	0 bed	-110 beds
Clinic/Health Centre	1 per 100,000 persons	0	0	0	0
Magistracy (with 8 courtrooms)	1 per 660,000 persons	0	0	0	0
Child Care Centre	100 aided places per 25,000 persons[#@]	78 places	0 place	0 place	-78 places
Integrated Children and Youth Services Centre	1 for 12,000 persons aged 6-24[#]	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)	
Integrated Family Services Centre	1 for 100,000 to 150,000 persons[#]	0	0	0	0
District Elderly Community Centres	One in each new development area with a population of around 170,000 or above[#]	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[#]	N.A.	0	0	N.A.
Community Care Services (CCS) Facilities	17.2 subsidised places per 1,000 elderly persons aged 65 or above[#*@]	64 places	4 places	4 places	-60 places
Residential Care Homes for the Elderly	21.3 subsidised beds per 1,000 elderly persons aged 65 or above[#@]	80 beds	0 bed	0 bed	-80 beds
Library	1 district library for every 200,000 persons[π]	0	0	0	0
Sports Centre	1 per 50,000 to 65,000 persons[#]	0	0	0	0
Sports Ground/ Sport Complex	1 per 200,000 to 250,000 persons[#]	0	0	0	0
Swimming Pool Complex – standard	1 complex per 287,000 persons[#]	0	0	0	0

Note:
The planned resident population in Lau Fau Shan & Tsim Bei Tsui is about 19,620. If including transients, the overall planned population is about 19,970.
The requirements exclude planned population of transients.
^ The provision of hospital beds is to be assessed by the Hospital Authority on a regional basis.
* Consisting of 40% centre-based CCS and 60% home-based CCS.
@ This is a long-term goal and the actual provision would be subject to the consideration of the Social Welfare Department in the planning and development process as appropriate.
π Small libraries are counted towards meeting the HKPSG requirement.

APRIL 2021