

APPROVED DRAFT TSING YI OUTLINE ZONING PLAN NO. S/TY/30A

(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 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.

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- (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 "Site of Special Scientific Interest":
 - (a) provision, maintenance or repair of plant nursery, amenity planting, open space, rain shelter, refreshment kiosk, road, bus/public light bus stop or lay-by, cycle track, Mass Transit Railway station entrance, Mass Transit Railway structure below ground level, taxi rank, nullah, public utility pipeline, electricity mast, lamp pole, telephone booth, telecommunications radio base station, automatic teller machine and shrine;
 - (b) geotechnical works, local public works, road works, sewerage works, drainage works, environmental improvement works, marine related facilities, waterworks (excluding works on service reservoir) and such other public works co-ordinated or implemented by Government; and
 - (c) maintenance or repair of watercourse and grave.
- (8) In areas zoned "Site of Special Scientific Interest",
 - (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.

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(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) 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.
- (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.

"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).

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COMMERCIAL

Column 1 Uses always permitted

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

Ambulance Depot

Commercial Bathhouse/Massage Establishment

Eating Place

Educational Institution

Exhibition or Convention Hall

Government Use (not elsewhere specified)

Hotel

Information Technology and

Telecommunications Industries

Institutional Use (not elsewhere specified)

Library

Off-course Betting Centre

Office

Place of Entertainment

Place of Recreation, Sports or Culture

Private Club

Public Clinic

Public Convenience

Public Transport Terminus or Station

Public Utility Installation

Public Vehicle Park (excluding container

vehicle)

Recyclable Collection Centre

Religious Institution

School

Shop and Services

Social Welfare Facility

Training Centre

Utility Installation for Private Project

Wholesale Trade

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

Petrol Filling Station

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COMMERCIAL (Cont'd)

Planning Intention

This zone is intended primarily for commercial developments, which may include hotel, office, shop, services, place of entertainment and eating place, functioning mainly as an environmental buffer to screen off glare and noise from Container Terminal No. 9.

- (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 non-domestic plot ratio of 9.5 or the plot ratio of the existing building, whichever is the greater.
- (2) In determining the maximum plot ratio for the purposes of paragraph (1), 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.
- (3) Where the permitted plot ratio as defined in Building (Planning) Regulations is permitted to be exceeded in circumstances as set out in Regulation 22(1) or (2) of the said Regulations, the plot ratio for the building on land to which paragraph (1) applies may be increased by the additional plot ratio by which the permitted plot ratio is permitted to be exceeded under and in accordance with the said Regulation 22(1) or (2), notwithstanding that the relevant maximum plot ratio specified in paragraph (1) above may thereby be exceeded.
- (4) Based on the individual merits of a development or redevelopment proposal, minor relaxation of the plot ratio restriction stated in paragraph (1) above may be considered by the Town Planning Board on application under section 16 of the Town Planning Ordinance.

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RESIDENTIAL (GROUP A)

Column 1 Uses always permitted

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

Ambulance Depot

Flat

Government Use (not elsewhere specified)

House Library Market

Place of Recreation, Sports or Culture

Public Clinic

Public Transport Terminus or Station (excluding open-air terminus or station)

Public Vehicle Park

(excluding container vehicle)
(on land designated "R(A)5" only)

Residential Institution

School (in free-standing purpose-designed

building only)

Social Welfare Facility

Utility Installation for Private Project

Commercial Bathhouse/Massage Establishment

Eating Place

Educational Institution

Exhibition or Convention Hall

Government Refuse Collection Point

Hospital Hotel

Institutional Use (not elsewhere specified)

Mass Transit Railway Vent Shaft and/or Other

Structure above Ground Level other than

Entrances

Office Petrol Filling Station

Place of Entertainment

Private Club

Public Convenience

Public Transport Terminus or Station (not

elsewhere specified)
Public Utility Installation

Public Vehicle Park (excluding container

vehicle) (not elsewhere specified)

Religious Institution

School (not elsewhere specified)

Shop and Services (not elsewhere specified)

Training Centre

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

Eating Place

Educational Institution

Institutional Use (not elsewhere specified)

Off-course Betting Centre

Office

Place of Entertainment

Private Club

Public Convenience

Recyclable Collection Centre

School

Shop and Services

Training Centre

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RESIDENTIAL (GROUP A) (Cont'd)

Planning Intention

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

- (1) On land designated "Residential (Group A)" ("R(A)"), no new development for a domestic or non-domestic building shall exceed a maximum domestic plot ratio of 5.0 or a maximum non-domestic plot ratio of 9.5, as the case may be. For new development of a building that is partly domestic and partly non-domestic, the plot ratio for the domestic part of the building shall not exceed the product of the difference between the maximum non-domestic plot ratio of 9.5 and the actual non-domestic plot ratio proposed for the building and the maximum domestic plot ratio of 5.0 divided by the maximum non-domestic plot ratio of 9.5.
- On land designated "R(A)3" and "R(A)4", no new development for a domestic or non-domestic building shall exceed a maximum domestic plot ratio of 6.0 or a maximum non-domestic plot ratio of 9.5, as the case may be, and the maximum building heights in terms of metres above Principal Datum (mPD) as stipulated on the Plan, or the plot ratio and the height of the existing building, whichever is the greater. For new development of a building that is partly domestic and partly non-domestic, the plot ratio for the domestic part of the building shall not exceed the product of the difference between the maximum non-domestic plot ratio of 9.5 and the actual non-domestic plot ratio proposed for the building and the maximum domestic plot ratio of 6.0 divided by the maximum non-domestic plot ratio of 9.5.
- (3) For the purpose of paragraphs (1) and (2) above, on land designated "R(A)", "R(A)3" and "R(A)4", no 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 relevant maximum domestic and/or non-domestic plot ratio(s), or the domestic and/or non-domestic plot ratio(s) of the existing building, whichever is the greater, subject to, as applicable-
 - (i) the plot ratio(s) of the existing building shall apply only if any addition, alteration and/or modification to or redevelopment of an existing building is for the same type of building as the existing building, i.e. domestic, non-domestic, or partly domestic and partly non-domestic building; or
 - (ii) the maximum domestic and/or non-domestic plot ratio(s) stated in paragraph (1) or (2) shall apply if any addition, alteration and/or modification to or redevelopment of an existing building is not for the same type of building as the existing building, i.e. domestic, non-domestic, or partly domestic and partly non-domestic building.

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RESIDENTIAL (GROUP A) (Cont'd)

Remarks (Cont'd)

- (4) On land designated "R(A)5", no new development, or addition, alteration and/or modification to or redevelopment of an existing building shall result in a total development and/or redevelopment in excess of a maximum plot ratio of 6.7, and the maximum building height in terms of mPD as stipulated on the Plan, or the plot ratio and the height of the existing building, whichever is the greater.
- (45) On land designated "R(A)1" and "R(A)2", no new development, or addition, alteration and/or modification to or redevelopment of an existing building shall result in a total development and/or redevelopment in excess of the maximum gross floor area (GFA) and in breach of any other restrictions specified below:

Sub-zone Restriction

- R(A)1 Maximum domestic GFA of 245,700m² and a maximum non-domestic GFA of 47,625m² of which not less than 1,431m² shall be provided for kindergarten and day nursery uses.
- R(A)2 Maximum domestic GFA of 205,630m² and a maximum non-domestic GFA of 3,550m².
- (56) On land designated "R(A)3", a public transport terminus shall be provided.
- (67) In determining the relevant maximum plot ratio for the purposes of paragraphs (1), (2), and (3) and (4) above, area of any part of the site that is occupied or intended to be occupied by free-standing purpose-designed buildings (including both developed on ground and on podium level) solely for accommodating Government, institution or community facilities including school(s) as may be required by Government shall be deducted in calculating the relevant site area.
- (78) In determining the maximum plot ratio or GFA for the purposes of paragraphs (1), (2), (3), and (4) and (5) 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.
- (9) In determining the maximum plot ratio for the purpose of paragraph (4) above, any floor space that is constructed or intended for use solely as public transport interchange and Government, institution or community facilities, as required by the Government, may be disregarded.
- (810) In determining the maximum non-domestic GFA for the purposes of paragraph (45) above, any floor space that is constructed or intended for use solely as public transport and railway facilities, as required by the Government, may also be disregarded.

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RESIDENTIAL (GROUP A) (Cont'd)

Remarks (Cont'd)

- (911) Where the permitted plot ratio as defined in Building (Planning) Regulations is permitted to be exceeded in circumstances as set out in Regulation 22(1) or (2) of the said Regulations, the plot ratio or GFA for the building on land to which paragraphs (1), (2), (3), or (4) or (5) applies may be increased by the additional plot ratio by which the permitted plot ratio is permitted to be exceeded under and in accordance with the said Regulation 22(1) or (2), notwithstanding that the relevant maximum plot ratio or GFA specified in paragraphs (1), (2), (3), and (4) and (5) above may thereby be exceeded.
- (1012) Based on the individual merits of a development or redevelopment proposal, minor relaxation of the plot ratio/GFA/building height restrictions stated in paragraphs (1) to (45) above may be considered by the Town Planning Board on application under section 16 of the Town Planning Ordinance.

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RESIDENTIAL (GROUP B)

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

Government Use (Police Reporting Centre, Post Office Only)

House Library

Residential Institution

School (in free-standing purpose-designed

building only)

Utility Installation for Private Project

Ambulance Depot

Eating Place

Educational Institution

Government Refuse Collection Point

Government Use (not elsewhere specified)

Hospital Hotel

Institutional Use (not elsewhere specified)

Off-course Betting Centre

Office

Petrol Filling Station Place of Entertainment

Place of Recreation, Sports or Culture

Private Club Public Clinic

Public Convenience

Public Transport Terminus or Station

Public Utility Installation

Public Vehicle Park (excluding container

vehicle)

Recyclable Collection Centre

Religious Institution

School (not elsewhere specified)

Shop and Services Social Welfare Facility

Training Centre

Planning Intention

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

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RESIDENTIAL (GROUP B) (Cont'd)

- (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 total plot ratio of 2.1, or the plot ratio of the existing building, whichever is the greater.
- (2) In determining the maximum plot ratio for the purposes of paragraph (1) above, any floor space that is constructed or intended for use solely as car park, loading/unloading bay, plant room and caretaker's office, or caretaker's quarters and recreational facilities for the use and benefit of all the owners or occupiers of the domestic building or domestic part of the building, provided such uses and facilities are ancillary and directly related to the development or redevelopment, may be disregarded. Any floor space that is constructed or intended for use solely as public vehicle park and public transport facilities, as required by the Government, may also be disregarded.
- (3) Based on the individual merits of a development or redevelopment proposal, minor relaxation of the plot ratio restriction stated in paragraph (1) above may be considered by the Town Planning Board on application under section 16 of the Town Planning Ordinance.

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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) Religious Institution (Ancestral Hall only) Rural Committee/Village Office Eating Place

Government Refuse Collection Point

Government Use (not elsewhere specified) #

House (not elsewhere specified)

Institutional Use (not elsewhere specified) #

Petrol Filling Station

Place of Recreation, Sports or Culture

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

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VILLAGE TYPE DEVELOPMENT (Cont'd)

Planning Intention

The planning intention of this zone is primarily for the provision of land for the retention and expansion of existing villages as well as reservation of land for the reprovisioning of village houses affected by Government projects. 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.

- (1) No new development, or addition, alteration and/or modification to or redevelopment of an existing building (except development or redevelopment to those annotated with *) shall result in a total development and/or redevelopment in excess of a maximum building height of 3 storeys (8.23m) or the height of the existing building, whichever is the greater.
- (2) Based on the individual merits of a development or redevelopment proposal, minor relaxation of the building height restriction stated in paragraph (1) above may be considered by the Town Planning Board on application under section 16 of the Town Planning Ordinance.

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INDUSTRIAL

Column 1 Uses always permitted

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

Ambulance Depot

Bus Depot

Cargo Handling and Forwarding Facility (not elsewhere specified)

Eating Place (Canteen, Cooked Food Centre only)

Government Refuse Collection Point

Government Use (not elsewhere specified)

Industrial Use (not elsewhere specified)

Information Technology and

Telecommunications Industries

Office (Audio-visual Recording Studio, Design and Media Production, Office Related to Industrial Use only)

Public Convenience

Public Transport Terminus or Station

Public Utility Installation

Public Vehicle Park

Radar, Telecommunications Electronic Microwave Repeater, Television and/or

Radio Transmitter Installation

Recyclable Collection Centre

Research, Design and Development Centre

Shop and Services (Motor-vehicle Showroom on ground floor, Service Trades only)

Utility Installation for Private Project

Vehicle Repair Workshop

Warehouse (excluding Dangerous Goods Godown)

Asphalt Plant/Concrete Batching Plant

Broadcasting, Television and/or Film Studio

Cargo Handling and Forwarding Facility

(Container Freight Station, free-standing purpose-designed Logistics Centre only)

Container Vehicle Repair Yard

Dangerous Goods Godown

Eating Place (not elsewhere specified) (in wholesale conversion of an existing building only)

Educational Institution (in wholesale conversion of an existing building only)

Exhibition or Convention Hall

Industrial Use (Bleaching and Dyeing Factory,

Electroplating/Printed Circuit Board Manufacture Factory, Metal Casting and

Treatment Factory/Workshop only)

Institutional Use (not elsewhere specified) (in wholesale conversion of an existing building only)

Marine Fuelling Station

Mass Transit Railway Vent Shaft and/or Other Structure above Ground Level other than Entrances

Off-course Betting Centre

Offensive Trades

Office (not elsewhere specified)

Oil Depot, Oil Refinery and Petro-Chemical Plant

Open Storage

Petrol Filling Station

Pier

Place of Entertainment (in wholesale conversion of an existing building only)

Place of Recreation, Sports or Culture

Private Club

Public Clinic (in wholesale conversion of an existing building only)

Religious Institution (in wholesale conversion of an existing building only)

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<u>INDUSTRIAL</u> (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

Ship-building, Ship-breaking and
Ship-repairing Yard
Shop and Services (not elsewhere specified)
(ground floor only, except in wholesale
conversion of an existing building and
Ancillary Showroom # which may be
permitted on any floor)
Training Centre (in wholesale conversion of an
existing building only)
Vehicle Stripping/Breaking Yard

Wholesale Trade

In addition, the following uses are always permitted in the purpose-designed non-industrial portion on the lower floors (except basements and floors containing wholly or mainly car parking, loading/unloading bays and/or plant room) of an existing building, provided that the uses are separated from the industrial uses located above by a buffer floor or floors and no industrial uses are located within the non-industrial portion:

In addition, the following use may be permitted with or without conditions on application to the Town Planning Board in the purpose-designed non-industrial portion on the lower floors (except basements and floors containing wholly or mainly car parking, loading/unloading bays and/or plant room) of an existing building, provided that the use is separated from the industrial uses located above by a buffer floor or floors and no industrial uses are located within the non-industrial portion:

Eating Place
Educational Institution
Exhibition or Convention Hall
Institutional Use (not elsewhere specified)
Off-course Betting Centre
Office
Place of Entertainment
Place of Recreation, Sports or Culture
Private Club
Public Clinic
Religious Institution
Shop and Services

Training Centre

Social Welfare Facility (excluding those involving residential care)

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

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INDUSTRIAL (Cont'd)

Planning Intention

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

- (1) No new development, or addition, alteration and/or modification to or redevelopment of an existing building shall result in a total development and/or redevelopment in excess of a maximum plot ratio of 9.5, or the plot ratio of the existing building, whichever is the greater.
- (2) In determining the maximum plot ratio for the purposes of paragraph (1) 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.
- (3) Where the permitted plot ratio as defined in Building (Planning) Regulations is permitted to be exceeded in circumstances as set out in Regulation 22(1) or (2) of the said Regulations, the plot ratio for the building on land to which paragraph (1) applies may be increased by the additional plot ratio by which the permitted plot ratio is permitted to be exceeded under and in accordance with the said Regulation 22(1) or (2), notwithstanding that the relevant maximum plot ratio specified in paragraph (1) above may thereby be exceeded.
- (4) Based on the individual merits of a development or redevelopment proposal, minor relaxation of the plot ratio restriction stated in paragraph (1) above may be considered by the Town Planning Board on application under section 16 of the Town Planning Ordinance.

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GOVERNMENT, INSTITUTION OR COMMUNITY

Column 1 Uses always permitted

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

Schedule I: for "Government, Institution or Community" and "Government, Institution or Community (1)"

Ambulance Depot

Animal Quarantine Centre (in Government

building only)

Broadcasting, Television and/or Film Studio

Cable Car Route and Terminal Building

Eating Place (Canteen, Cooked Food Centre

only)

Educational Institution

Exhibition or Convention Hall

Field Study/Education/Visitor Centre Government Refuse Collection Point

Government Use (not elsewhere specified)

Hospital

Institutional Use (not elsewhere specified)

Library Market Pier

Place of Recreation, Sports or Culture

Public Clinic

Public Convenience

Public Transport Terminus or Station

Public Utility Installation

Public Vehicle Park (excluding container

vehicle)

Recyclable Collection Centre

Religious Institution

Research, Design and Development Centre

Rural Committee/Village Office

School

Service Reservoir Social Welfare Facility

Training Centre Wholesale Trade **Animal Boarding Establishment**

Animal Quarantine Centre (not elsewhere

specified) Columbarium

Correctional Institution

Crematorium Driving School

Eating Place (not elsewhere specified)

Firing Range

Flat

Funeral Facility

Helicopter Landing Pad Helicopter Fuelling Station

Holiday Camp

Hotel House

Marine Fuelling Station

Mass Transit Railway Vent Shaft and/or Other Structure above Ground Level other than

Entrances

Off-course Betting Centre

Office

Petrol Filling Station
Place of Entertainment

Private Club

Radar, Telecommunications Electronic Microwave Repeater, Television and/or

Radio Transmitter Installation

Refuse Disposal Installation (Refuse Transfer

Station only)

Residential Institution

Sewage Treatment/Screening Plant

Shop and Services (not elsewhere specified)

Utility Installation for Private Project

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GOVERNMENT, INSTITUTION OR COMMUNITY (Cont'd)

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

Schedule II: for "Government, Institution or Community (2)"

Ambulance Depot

Government Refuse Collection Point

Government Use (Customs and Excise Office,

Driving Test Centre, Police Reporting

Centre/Police Post only)

Pier

Public Convenience

Public Transport Terminus or Station

Public Utility Installation

Public Vehicle Park (excluding container

vehicle)

Recyclable Collection Centre

Animal Quarantine Centre

Government Use (not elsewhere specified)

Institutional Use (not elsewhere specified)

Office

Petrol Filling Station (excluding those

involving liquefied petroleum gas)

Place of Recreation, Sports or Culture Radar, Telecommunications Electronic

Microwave Repeater, Television and/or

Microwave Repeater, Television and/o

Radio Transmitter Installation

Research, Design and Development Centre

Sewage Treatment/Screening Plant

Shop and Services

Social Welfare Facility (excluding those

involving residential care)

Utility Installation for Private Project

Planning Intention

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

The sub-zone "Government, Institution or Community (1)" is part of the visual corridor for North-east Tsing Yi and high-rise building on site should be discouraged.

The sub-zone "Government, Institution or Community (2)" covers land beneath flyover. Due to the physical constraints and environmental conditions of such land, only selected Government, institution or community facilities are permitted in this sub-zone.

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GOVERNMENT, INSTITUTION OR COMMUNITY (Cont'd)

- (1) On land designated "Government, Institution or Community (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 building height of 32 metres above Principal Datum, or the height of the existing building, whichever is the greater.
- (2) Based on the individual merits of a development or redevelopment proposal, minor relaxation of the building height restriction stated in paragraph (1) above may be considered by the Town Planning Board on application under section 16 of the Town Planning Ordinance.

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OPEN SPACE

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	Column 2
Column 1	Uses that may be permitted with or
Uses always permitted	without conditions on application
	to the Town Planning Board
Aviary	Cable Car Route and Terminal Building
Barbecue Spot	Eating Place
Bathing Beach	Government Refuse Collection Point
Field Study/Education/Visitor Centre	Government Use (not elsewhere specified)
Park and Garden	Holiday Camp
Pavilion	Mass Transit Railway Vent Shaft and/or Other
Pedestrian Area	Structure above Ground Level other than
Picnic Area	Entrances
Playground/Playing Field	Pier
Promenade	Place of Entertainment
Public Convenience	Place of Recreation, Sports or Culture
Sitting Out Area	Private Club
Zoo	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.

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OTHER SPECIFIED USES

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

For "Boatyard and Marine-oriented Industrial Uses" only

Eating Place (Canteen, Cooked Food Centre only)
Government Refuse Collection Point
Government Use (Police Reporting Centre, Post Office only)
Industrial Use (Marine-oriented Industries only)
Marine Fuelling Station
Pier
Public Convenience
Public Utility Installation
Ship-building, Ship-breaking and Ship-repairing Yard
Utility Installation for Private Project

Asphalt Plant/Concrete Batching Plant
Cargo Handling and Forwarding Facility
Container Storage/Repair Yard
Eating Place (not elsewhere specified)
Government Use (not elsewhere specified)
Industrial Use (other than those listed in
Column 1)
Open Storage of Cement/Sand
Petrol Filling Station
Public Vehicle Park
Shop and Services
Warehouse (excluding Dangerous Goods
Godown)

Planning Intention

This zone is intended primarily for boatyard and marine-oriented industrial uses.

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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 "Container Terminal" only

Cargo Handling and Forwarding Facility

Container Storage/Repair Yard

Container Vehicle Park/Container Vehicle

Repair Yard

Eating Place (Canteen, Cooked Food Centre

only)

Government Refuse Collection Point

Government Use (not elsewhere specified)

Pier

Private Club

Public Convenience

Public Transport Terminus or Station

Public Utility Installation

Public Vehicle Park

Warehouse (excluding Dangerous Goods

Godown)

Ambulance Depot

Dangerous Goods Godown

Eating Place (not elsewhere specified)

Industrial Use

Marine Fuelling Station

Mass Transit Railway Vent Shaft and/or Other

Structure above Ground Level other than

Entrances

Petrol Filling Station

Public Clinic

Refuse Disposal Installation

Shop and Services

Utility Installation for Private Project

Vehicle Repair Workshop

Planning Intention

This zone is intended primarily to cater for the development of container terminals and the associated port back-up facilities.

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OTHER SPECIFIED USES (Cont'd)

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

For "Container Related Uses" only

Cargo Handling and Forwarding Facility

Container Storage/Repair Yard

Container Vehicle Park/Container Vehicle

Repair Yard

Eating Place (Canteen, Cooked Food Centre

only)

Government Refuse Collection Point

Government Use (not elsewhere specified)

Public Convenience

Public Transport Terminus or Station

Public Utility Installation

Public Vehicle Park

Warehouse (excluding Dangerous Goods

Godown)

Ambulance Depot

Dangerous Goods Godown

Eating Place (not elsewhere specified)

Industrial Use

Mass Transit Railway Vent Shaft and/or Other

Structure above Ground Level other than

Entrances

Office (for "Container Related Uses 1" only)

Oil Depot, Oil Refinery and Petro-chemical

Plant

Petrol Filling Station

Private Club (for "Container Related Uses 1"

only)

Public Clinic

Refuse Disposal Installation

Shop and Services

Utility Installation for Private Project

Vehicle Repair Workshop

Planning Intention

This zone is intended primarily to cater for the container related uses and port back-up facilities. Port related development such as container freight station, logistics centre, container vehicle park and container storage and repair yard are permitted within this zone.

- (1) On land designated "Other Specified Uses" annotated "Container Related Uses 1", no new development, or addition, alteration and/or modification to or redevelopment of an existing building shall result in a total development and/or redevelopment in excess of a maximum gross floor area of 35,000m².
- (2) Based on the individual merits of a development or redevelopment proposal, minor relaxation of the GFA restriction stated in paragraph (1) above may be considered by the Town Planning Board on application under section 16 of the Town Planning Ordinance.

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OTHER SPECIFIED USES (Cont'd)

Column 1 Uses always permitted

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

For "Business" only

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

Ambulance Depot

Commercial Bathhouse/Massage Establishment Cargo Handling and Forwarding Facility

Eating Place

Educational Institution

Exhibition or Convention Hall

Government Use (Police Reporting Centre,

Post Office only)

Information Technology and

Telecommunications Industries

Institutional Use (not elsewhere specified)

Library

Non-polluting Industrial Use (excluding industrial undertakings involving the use/storage of Dangerous Goods^Δ)

Off-course Betting Centre

Office

Place of Entertainment

Place of Recreation, Sports or Culture

Private Club

Public Clinic

Public Convenience

Public Transport Terminus or Station

Public Utility Installation

Public Vehicle Park (excluding container

vehicle)

Radar, Telecommunications Electronic

Microwave Repeater, Television and/or

Radio Transmitter Installation

Recyclable Collection Centre

Religious Institution

Research, Design and Development Centre

School (excluding free-standing purpose-

designed building and kindergarten)

Shop and Services

Training Centre

Utility Installation for Private Project

Broadcasting, Television and/or Film Studio Cargo Handling and Forwarding Facility Government Refuse Collection Point Government Use (not elsewhere specified)

Mass Transit Railway Vent Shaft and/or Other Structure above Ground Level other than

entrances

Non-polluting Industrial Use (not elsewhere

specified)

Petrol Filling Station

School (not elsewhere specified)

Social Welfare Facility (excluding those

involving residential care)

Warehouse (excluding Dangerous Goods

Godown)

Wholesale Trade

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OTHER SPECIFIED USES (Cont'd)

Column 1 Uses always permitted

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

For "Business" only (Cont'd)

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

Ambulance Depot

Art Studio (excluding those involving direct provision of services or goods)

Cargo Handling and Forwarding Facility (not elsewhere specified)

Eating Place (Canteen only)

Government Refuse Collection Point

Government Use (not elsewhere specified)

Information Technology and

Telecommunications Industries

Non-polluting Industrial Use (excluding industrial undertakings involving the use/storage of Dangerous Goods^{\(\Delta\)})

Office (excluding those involving direct provision of customer services or goods)

Public Convenience

Public Transport Terminus or Station

Public Utility Installation

Public Vehicle Park (excluding container vehicle)

Radar, Telecommunications Electronic

Microwave Repeater, Television and/or Radio

Transmitter Installation

Recyclable Collection Centre

Research, Design and Development Centre

Shop and Services (Motor-vehicle Showroom

on ground floor, Service Trades only)

Utility Installation for Private Project

Warehouse (excluding Dangerous Goods

Godown)

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

Office

Broadcasting, Television and/or Film Studio Cargo Handling and Forwarding Facility (Container Freight Station, free-standing purpose-designed Logistics Centre only) Industrial Use (not elsewhere specified) Mass Transit Railway Vent Shaft and/or Other Structure above Ground Level other than

Entrances

Off-course Betting Centre

Office (not elsewhere specified)

Petrol Filling Station

Place of Recreation, Sports or Culture (not elsewhere specified)

Private Club

Shop and Services (not elsewhere specified) (ground floor only except Ancillary Showroom # which may be permitted on any floor)

Vehicle Repair Workshop

Wholesale Trade

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OTHER SPECIFIED USES (Cont'd)

For "Business" only (Cont'd)

In addition, the following uses are always permitted in the purpose-designed nonindustrial portion on the lower floors (except basements and floors containing wholly or mainly car parking, loading/unloading bays and/or plant room) of an existing building, provided that the uses are separated from the industrial uses located above by a buffer floor or floors and no industrial uses are located within the non-industrial portion:

In addition, the following use may be permitted with or without conditions on application to the Town Planning Board in the purpose-designed non-industrial portion on the lower floors (except basements and floors containing wholly or mainly car parking, loading/unloading bays and/or plant room) of an existing building, provided that the use is separated from the industrial uses located above by a buffer floor or floors and no industrial uses are located within the non-industrial portion:

Commercial Bathhouse/Massage Establishment Social Welfare Facility (excluding those **Eating Place Educational Institution** Exhibition or Convention Hall Institutional Use (not elsewhere specified) Off-course Betting Centre Office Place of Entertainment Place of Recreation, Sports or Culture Private Club Public Clinic **Religious Institution** School (excluding kindergarten) Shop and Services

Training Centre

involving residential care)

- An industrial or industrial-office building means a building which is constructed for or intended to be used by industrial or industrial-office purpose respectively as approved by the Building Authority.
- Dangerous Goods refer to substances classified as Dangerous Goods and requiring a licence for their use/storage under the Dangerous Goods Ordinance (Cap. 295).
- Ancillary Showroom requiring planning permission refers to showroom use of greater than 20% of the total usable floor area of an industrial firm in the same premises or building.

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OTHER SPECIFIED USES (Cont'd)

For "Business" only (Cont'd)

Planning Intention

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

Remarks

- (1) No new development, or addition, alteration and/or modification to or redevelopment of an existing building shall result in a total development and/or redevelopment in excess of a maximum plot ratio of 9.5, or the plot ratio of the existing building, whichever is the greater.
- (2) In determining the maximum plot ratio for the purposes of paragraph (1) 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.
- Where the permitted plot ratio as defined in Building (Planning) Regulations is permitted to be exceeded in circumstances as set out in Regulation 22(1) or (2) of the said Regulations, the plot ratio for the building on land to which paragraph (1) applies may be increased by the additional plot ratio by which the permitted plot ratio is permitted to be exceeded under and in accordance with the said Regulation 22(1) or (2), notwithstanding that the relevant maximum plot ratio specified in paragraph (1) above may thereby be exceeded.
- (4) Based on the individual merits of a development or redevelopment proposal, minor relaxation of the plot ratio restriction stated in paragraph (1) above may be considered by the Town Planning Board on application under section 16 of the Town Planning Ordinance.

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OTHER SPECIFIED USES (Cont'd)

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

For "Recreation and Tourism Related Uses" only

Barbecue Spot

Broadcasting, Television and/or Film Studio

Eating Place

Field Study/Education/Visitor Centre

Flat

Golf Course

Government Use

Holiday Camp

Hotel

House

Picnic Area

Pier

Place of Entertainment

Place of Recreation, Sports or Culture

Public Transport Terminus or Station

Public Utility Installation

Religious Institution

Residential Institution

Shop and Services

Tent Camping Ground

Theme Park

Utility Installation for Private Project

Planning Intention

This zone is intended for low-density and low-rise recreation and tourism related development such as resort hotel, public recreational uses and other tourist attractions. 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.

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OTHER SPECIFIED USES (Cont'd)

For "Recreation and Tourism Related Uses" only (Cont'd)

Remarks

- (1) An applicant for permission for development on land designated "Other Specified Uses" annotated "Recreation and Tourism Related Uses" shall prepare a layout plan and other documents showing the following information for the consideration of the Town Planning Board:
 - (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 and facilities;
 - (iii) the details and extent of parking facilities, loading/unloading spaces and other facilities to be provided;
 - (iv) the alignment, widths and levels of any roads and pedestrian linkages proposed to be constructed;
 - (v) the landscape and urban design proposals within the area;
 - (vi) programmes of development in detail;
 - (vii) the details and programme of supply of utilities and infrastructure to meet the need of the proposed development;
 - (viii) an environmental assessment report, including but not limiting to a visual impact assessment to examine any possible environmental and visual problems that may be caused to or by the proposed development during and after construction and the proposed mitigation measures to tackle them;
 - (ix) a traffic (including marine traffic) impact assessment report to examine any possible traffic (including marine traffic) problems that may be caused by the proposed development and the proposed mitigation measures to tackle them;
 - (x) a drainage and sewerage impact assessment report to examine any possible drainage and sewerage problems that may be caused by the proposed development and the proposed mitigation measures to tackle them;

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OTHER SPECIFIED USES (Cont'd)

For "Recreation and Tourism Related Uses" only (Cont'd)

Remarks (Cont'd)

- (xi) a geotechnical assessment report including Natural Terrain Hazard Study to examine any possible geotechnical problems that may be caused by the proposed development and the proposed mitigation measures to tackle them; and
- (xii) such other information as may be required by the Town Planning Board.
- (2) The layout plan should be supported by an explanatory statement which contains an adequate explanation of the development proposal, including such information as land tenure, relevant lease conditions, existing conditions of the site, the character of the site in relation to the surrounding areas, principles of layout design, major development parameters, design population, types of Government, institution or community facilities, and recreational and open space facilities.
- (3) No new development, or addition, alteration and/or modification to or redevelopment of an existing building shall result in a total development and/or redevelopment in excess of a maximum plot ratio of 0.4 and a maximum building height of 40 metres above Principal Datum.
- (4) In determining the maximum plot ratio for the purposes of paragraph (3) 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.
- (5) Based on the individual merits of a development or redevelopment proposal, minor relaxation of the plot ratio or building height restrictions stated in paragraph (3) above may be considered by the Town Planning Board on application under section 16 of the Town Planning Ordinance.

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OTHER SPECIFIED USES (Cont'd)

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

For "Viewing Platform" only

Field Study/Education/Visitor Centre Government Use

Shop and Services

Utility Installation not Ancillary to the

Specified Use

Planning Intention

This zone is intended for the development of viewing platform.

Remarks

- (1) No new development, or addition, alteration and/or modification to or redevelopment of an existing building shall result in a total development and/or redevelopment in excess of a maximum gross floor area (GFA) of 457m² and a maximum building height of 5.6m, or the GFA and building height of the existing building, whichever is the greater.
- (2) Based on the individual merits of a development or redevelopment proposal, minor relaxation of the GFA and building height restrictions stated in paragraph (1) above may be considered by the Town Planning Board on application under section 16 of the Town Planning Ordinance.

For "Amenity Area" only

Amenity Planting

Government Use Utility Installation not Ancillary to the Specified Use

Planning Intention

This zone is intended primarily for the provision of land for the development of amenity areas.

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OTHER SPECIFIED USES (Cont'd)

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

For "Cargo Handling Area" only

Cargo Handling Area

Government Use Petrol Filling Station Utility Installation not Ancillary to the Specified Use

Planning Intention

This zone is intended primarily for the development of cargo handling facilities.

For "Petrol Filling Station" only

Petrol Filling Station

Government Use Utility Installation not Ancillary to the Specified Use

Planning Intention

This zone is intended primarily for the development of petrol filling station.

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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 "Cement Plant" only

Cement Plant

Government Use Utility Installation not Ancillary to the Specified Use

Planning Intention

This zone is intended primarily for the development of cement plant.

For "Traditional Burial Area For Tsing Yi Villager" only

Traditional Burial Area

Government Use Utility Installation not Ancillary to the Specified Use

Planning Intention

This zone is intended primarily to provide land for the development of traditional burial area for Tsing Yi villagers.

For "Sewage Treatment Plant" only

Sewage Treatment Plant

Government Use
Utility Installation not Ancillary to the
Specified Use

Planning Intention

This zone is intended for the development of sewage treatment plant.

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OTHER SPECIFIED USES (Cont'd)

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

For "Ventilation Building" only

Ventilation Building Government Use

Utility Installation not Ancillary to the

Specified Use

Planning Intention

This zone is intended for the development of Mass Transit Railway ventilation building.

For "Chemical Wastes Treatment Facility" only

Chemical Wastes Treatment Facility Government Use

Utility Installation not Ancillary to the

Specified Use

Planning Intention

This zone is intended for the development of chemical wastes treatment facility.

For "Marine-related Uses" only

Marine-related Uses Government Use

Utility Installation not Ancillary to the

Specified Use

Planning Intention

This zone is intended for the provision of land to serve the marine-oriented activities affected by the reclamation for the container terminal.

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GREEN BELT

Column 1 Uses always permitted

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

Agricultural Use Barbecue Spot Country Park * Government Use (Police Reporting Centre Nature Reserve Nature Trail **On-Farm Domestic Structure** Picnic Area Public Convenience **Tent Camping Ground** Wild Animals Protection Area

Animal Boarding Establishment

Broadcasting, Television and/or Film Studio Columbarium (within a Religious Institution

or extension of existing Columbarium only)

Crematorium (within a Religious Institution or extension of existing Crematorium only)

Field Study/Education/Visitor Centre

Flat

Government Refuse Collection Point Government Use (not elsewhere specified)

Grave

Holiday Camp

House

Marine Fuelling Station

Mass Transit Railway Vent Shaft and/or Other Structure above Ground Level other than Entrances

Petrol Filling Station

Pier

Place of Recreation, Sports or Culture **Public Transport Terminus or Station**

Public Utility Installation

Public Vehicle Park (excluding container vehicle)

Radar, Telecommunications Electronic Microwave Repeater, Television and/or

Radio Transmitter Installation

Religious Institution Residential Institution

Rural Committee/Village Office

School

Service Reservoir

Social Welfare Facility

Utility Installation for Private Project

Zoo

Planning Intention

The planning intention of this zone is primarily for the conservation of the existing natural environment amid the built-up areas/at the urban fringe, to safeguard it from encroachment by urban type development, and to provide additional outlets for passive recreational activities. There is a general presumption against development within this zone.

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.

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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
Country Park * 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

^{*} 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.

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 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, shall not be undertaken or continued on or after the date of the publication in the Gazette of the notice of the draft Tsing Yi Outline Zoning Plan No. S/TY/21 without the permission from the Town Planning Board under section 16 of the Town Planning Ordinance.

Attachment	IV	of
MPC Paper	No	. 5/21

APPROVED DRAFT TSING YI OUTLINE ZONING PLAN NO. S/TY/30A

EXPLANATORY STATEMENT

APPROVED DRAFT TSING YI OUTLINE ZONING PLAN NO. S/TY/30A

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APPROVED DRAFT TSING YI OUTLINE ZONING PLAN NO. S/TY/30A

(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. <u>INTRODUCTION</u>

This explanatory statement is intended to assist an understanding of the approved *draft* Tsing Yi Outline Zoning Plan (OZP) No. S/TY/30A. 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 1 September 1961, the first statutory plan of Tsuen Wan District (No. LTW/57) including Tsing Yi Island was exhibited under section 5 of the Town Planning Ordinance (the Ordinance). The plan was subsequently amended three times and approved by the then Governor in Council (G in C) on 8 October 1963 and 14 December 1965. On 30 June 1978, the draft Tsing Yi OZP No. LTY/24 covering mainly the Tsing Yi area was exhibited under section 5 of the Ordinance. The OZP was subsequently amended four times and exhibited for public inspection under section 7 of the Ordinance.
- 2.2 On 29 November 1988, the then G in C referred the draft Tsing Yi OZP No. S/TY/4 to the Board for further consideration and amendment under section 9(1)(c) of the Ordinance. The OZP was subsequently amended twice and exhibited for public inspection under section 5 or 7 of the Ordinance.
- 2.3 On 10 December 1991, the then G in C referred the draft Tsing Yi OZP No. S/TY/7 to the Board for further consideration and amendment under section 9(1)(c) of the Ordinance. The OZP was subsequently amended twice and exhibited for public inspection under section 5 of the Ordinance.
- 2.4 On 27 September 1994, the then G in C approved the draft Tsing Yi OZP under section 9(1)(a) of the Ordinance, which was subsequently renumbered as S/TY/10. On 23 May 1995, the then G in C, under section 12(1)(b)(ii) of the Ordinance, referred the approved OZP to the Board for amendment. The OZP was subsequently amended three times under section 5 or 7 of the Ordinance.
- 2.5 On 13 April 1999, the Chief Executive in Council (CE in C) approved the draft Tsing Yi OZP under section 9(1)(a) of the Ordinance, which was subsequently renumbered as S/TY/14. On 10 October 2000, the CE in C,

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- under section 12(1)(b)(ii) of the Ordinance, referred the approved OZP to the Board for amendment. The OZP was subsequently amended eight times and exhibited for public inspection under section 5 or 7 of the Ordinance.
- 2.6 On 21 April 2015, the CE in C, under section 9(1)(a) of the Ordinance, approved the draft Tsing Yi OZP, which was subsequently renumbered as S/TY/26. On 23 June 2015, the CE in C referred the approved OZP No. S/TY/26 to the Board for amendment under section 12(1)(b)(ii) of the Ordinance. On 7 August 2015, the draft Tsing Yi OZP No. S/TY/27 was exhibited for public inspection under section 5 of the Ordinance. On 10 June 2016, the CE, under section 8(2) of the Ordinance, agreed to extend the statutory time limit to submit the draft OZP to the CE in C for approval for a period of six months.
- 2.7 On 7 February 2017, the CE in C, under section 9(1)(a) of the Ordinance, approved the draft Tsing Yi OZP, which was subsequently renumbered as S/TY/28. On 13 March 2018, the CE in C referred the approved Tsing Yi OZP No. S/TY/28 to the Board for amendment under section 12(1)(b)(ii) of the Ordinance. The reference back of the approved OZP was notified in the Gazette on 23 March 2018 under section 12(2) of the Ordinance. The OZP was subsequently amended once and exhibited for public inspection under section 5 of the Ordinance.
- On 14 June 2019, the draft Tsing Yi OZP No. S/TY/29 incorporating amendments which mainly involve the rezoning of a site to the southeast of Tsing Sheung Road from "Other Specified Uses" ("OU") annotated "Marine-related Uses" to "OU" annotated "Container Related Uses", and incorporation of related land and sea areas into the planning scheme area and zoning the areas to "OU" annotated "Container Related Uses", was exhibited for public inspection under section 5 of the Ordinance. During the two-month exhibition period, a total of two representations were received. On 23 August 2019, the representations were published for public comment for three weeks. Upon expiry of the publication period on 13 September 2019, one comment was received. After giving consideration to the representations and comment on 6 December 2019, the Board noted the supportive representation, and decided not to uphold the remaining representation.
- 2.98 On 3 March 2020, the CE in C, under section 9(1)(a) of the Ordinance, approved the draft Tsing Yi OZP, which was subsequently renumbered as S/TY/30. On 13 March 2020, the approved Tsing Yi OZP No. S/TY/30 (the Plan) was exhibited for public inspection under section 9(5) of the Ordinance. On 2 February 2021, the CE in C referred the approved Tsing Yi OZP No. S/TY/30 to the Board for amendment under section 12(1)(b)(ii) of the Ordinance. The reference back of the approved OZP was notified in the Gazette on 11 February 2021 under section 12(2) of the Ordinance.
- 2.9 On XX XX 2021, the draft Tsing Yi OZP No. S/TY/31 (the Plan), which incorporates the rezoning of a public housing site to the west of Tsing Yi Road West from "Green Belt" ("GB") to "Residential (Group A) 5"

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("R(A)5"), 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 major road networks within which the development and redevelopment of land in Tsing Yi can be put under statutory planning control.
- 3.2 The Plan is intended to illustrate the broad principles of development and to provide guidance for more detailed planning within the planning scheme area (the Area). It is a small-scale plan and the road alignments and boundaries between the land use zones may be subject to minor adjustments as more 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 residential zones should be restricted to building lots carrying development right in order to maintain the character and amenity of the Tsing Yi 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. THE PLANNING SCHEME AREA

- 5.1 The Area covers the entire Tsing Yi Island which is situated to the north-west of the Victoria Harbour, separated from the Kowloon mainland by Rambler Channel to the east and north. It covers about 1,067 ha of land.
- 5.2 Tsing Yi is characterised by its very marked topography. The ground rises rapidly from sea level to about 300m in the south and to about 200m in the

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north.

- Tsing Yi is currently connected to Kwai Chung by the Tsing Yi Bridge, Kwai Tsing Bridge and Cheung Tsing Bridge, to Tsuen Wan by the Tsing Tsuen Bridge, and to Stonecutters Island by the Stonecutters Bridge across Rambler Channel on the eastern side. On the western side, it is linked up with Lantau Island via the Lantau Link which was opened in 1997. On the northern side, it is linked up with Ting Kau via the Ting Kau Bridge which was opened in 1998. With the operation of the Mass Transit Railway (MTR) Airport Express and Tung Chung Line in mid-1998, the accessibility of Tsing Yi has been greatly enhanced.
- 5.4 Prior to 1960, there was virtually no development in Tsing Yi. Development began to take place in the early 1960s when Government granted leases of seabed on the east and south for the development of oil depots, a power station and a few other forms of industrial undertakings; all of which are land extensive development dependent on marine access.
- 5.5 The opening of the Tsing Yi Bridge in 1974 gave impetus to further development and Tsing Yi has since become a focus of major land extensive and specialised industries, such as dockyards, chemical plant and marine engines workshop.
- 5.6 Major residential developments began in the mid 1970s and are mainly located in the north-east of Tsing Yi and around the former Tsing Yi Bay.
- 5.7 For convenience of reference, Tsing Yi has been subdivided into a number of smaller planning areas as shown on the Plan.
- 5.8 The Area covers land on the waterfront of the Victoria Harbour. For any development proposal affecting such land, due regard shall be given to the Vision Statement for Victoria Harbour published by the Board and the requirements under the Protection of the Harbour Ordinance (Cap. 531).

6. POPULATION

Based on the 2016 Population By-census, the population of the Area was estimated by the Planning Department to be about 184,150. It is estimated that the planned population of the Area would be about 200,300 211,000.

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

- 7.1 <u>Commercial ("C")</u> Total Area : 2.5 ha
 - 7.1.1 This zoning is intended primarily for commercial developments, which may include hotel, office, shop, services, place of entertainment and eating place. There is only one site in Area 22 to the north-west of the Container Terminal No. 9 (CT-9) which is

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designated for hotel and commercial development. The main purpose of the hotel and commercial development is to act as a buffer to screen off the possible noise and glare from the CT-9 and to reduce their effects on the nearby residential developments. It can also provide some commercial services to serve the adjoining developments and the residents of Tsing Yi.

- 7.1.2 In order not to overtax the existing and planned infrastructure, development or redevelopment within this zone is subject to a non-domestic plot ratio of 9.5. To provide flexibility for innovative design adapted to the characteristics of the site, minor relaxation of the plot ratio restriction may be considered by the Board through the planning permission system. Each proposal will be considered on its individual planning merits.
- 7.1.3 It is also necessary to restrict the building height to a limit that will achieve buffer function and not affect the general townscape of the area. However, in order to allow design flexibility, appropriate control would be incorporated in the lease of the site.

7.2 Residential (Group A) ("R(A)") - Total Area : 101.17 103.9 ha

- 7.2.1 This zoning is intended primarily for high-density residential developments. Commercial uses are always permitted on the lowest three floors of a building or in the purpose-designed non-residential portion of an existing building.
- 7.2.2 This zoning includes public rental housing, subsidized sales flats and private residential developments. Developments or redevelopments within the "R(A)" zone are subject to a maximum domestic plot ratio of 5.0 or a maximum non-domestic plot ratio of 9.5, or the plot ratio of the existing building, whichever is the greater. In calculating the gross floor area (GFA) for these developments/redevelopments, land for free-standing purpose-designed buildings that are solely for accommodating school or other government, institution or community (GIC) facilities, including those located on ground and on building podium, shall be deducted in calculating the relevant site area.
- 7.2.3 Existing public rental housing developments include Cheung Ching Estate, Cheung Hong Estate, Tsing Yi Estate, Cheung Fat Estate, Cheung On Estate, Cheung Hang Estate, Cheung Wang Estate, Easeful Court and Broadview Garden (part). Within these public rental housing estates, adequate community facilities, retail facilities and open spaces are provided in accordance with planning standards.
- 7.2.4 Existing subsidised sales flats include Ching Tai Court, Ching Nga Court, Ching Wah Court, Ching Wang Court, Ching Shing Court, Ching Chun Court, Serene Garden, Tivoli Garden, Greenview Villa and Broadview Garden (part). Adequate community facilities are provided within all housing estates in accordance with approved

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- planning briefs.
- 7.2.5 Private developments include Tierra Verde, Villa Esplanada, Tsing Yi Garden, Greenfield Garden, Grand Horizon and Mayfair Gardens.
- 7.2.6 The MTR Airport Express/Tung Chung Line Tsing Yi Station site (i.e. Tierra Verde and Maritime Square) is zoned "R(A)1". Any development/redevelopment at this site is restricted to a maximum domestic gross floor area (GFA) of 245,700m² and a maximum non-domestic GFA of 47,625m², of which not less than 1,431m² are for kindergarten and day nursery uses.
- 7.2.7 The Villa Esplanada at Nga Ying Chau is zoned "R(A)2". Any development/redevelopment at this site is restricted to a maximum domestic GFA of 205,630m² and a maximum non-domestic GFA of 3,550m². A public transport terminus, which is not accountable for GFA, is also provided within the site.
- 7.2.8 A proposed private residential site at the junction of Liu To Road and Hang Mei Street is zoned "R(A)3". Another proposed private residential site to the immediate west of Mayfair Gardens and a proposed public housing site at Tsing Hung Road are zoned "R(A)4". In order to prevent excessively tall or out-of-context buildings and to provide better control on the building heights of developments, building height restrictions are imposed taking into account the topography, foothill setting, site levels, local character, existing predominant land use, building height profile and the compatibility in terms of building height with the surrounding areas. "R(A)3" and "R(A)4" zones are subject to a maximum domestic plot ratio of 6.0 or a maximum non-domestic plot ratio of 9.5, or the plot ratio of the existing building, whichever is the greater. The "R(A)3" zone is subject to a maximum building height of 200 metres above Principal Datum (mPD) and the "R(A)4" zone is subject to a maximum building height of 140mPD. A public transport terminus shall be provided in the development within the "R(A)3" zone to re-provision the existing green minibus terminus at the site, which is accountable for plot ratio calculation.
- 7.2.9 A proposed public housing site at Tsing Yi Road West is zoned "R(A)5". Development within this sub-zone is restricted to a maximum plot ratio of 6.7 and a maximum building height of 220 mPD, or the plot ratio and height of the existing building, whichever is the greater. A kindergarten, a public transport interchange, social welfare facilities and retail facilities will be provided within the housing site. A pedestrian footbridge will also be provided for connection across Tsing Yi Road West. The provision or use of premises for GIC facilities would be subject to change to cope with the prevailing demand as requested by relevant Government departments. Besides, an Air Ventilation Assessment-Expert Evaluation (AVA-EE) has been carried out for the site. It is found

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that design measures, including building separation, setback and podium garden 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.

- 7.2.910 In the circumstances set out in Regulation 22 of the Building (Planning) Regulations, the above specified maximum plot ratio/GFA may be increased by what is permitted to be exceeded under Regulation 22. This is to maintain flexibility for unique circumstances such as dedication of part of a site for road widening or public uses.
- 7.2.4011 To provide flexibility for innovative design adapted to the characteristics of particular sites, minor relaxation of the plot ratio/GFA/building height restrictions may be considered by the Board through the planning permission system. Each proposal will be considered on its individual planning merits.

7.3 Residential (Group B) ("R(B)") - Total Area: 2.89 ha

- 7.3.1 This zoning is generally intended to provide for medium-density residential development. Within this zone, commercial uses are prohibited unless otherwise permitted by the Board through the planning permission system.
- 7.3.2 The Mount Haven at Liu To is under this zoning. Any development/redevelopment at this site is restricted to a maximum plot ratio of 2.1. To provide flexibility for innovative design adapted to the characteristics of the site, minor relaxation of the plot ratio restriction may be considered by the Board through the planning permission system. Each proposal will be considered on its individual planning merits.

7.4 Village Type Development ("V") - Total Area: 17.25 ha

This zoning is intended for the development and expansion of existing villages as well as for providing resites to village houses affected by Government projects. Except for St. Paul's and Fisherman Villages in Area 2 and the Lutheran Village in Area 4, all the villages in Tsing Yi are village resites. To provide flexibility for innovative design adapted to the characteristics of particular sites, minor relaxation of the building height restriction may be considered by the Board through the planning permission system. Each proposal will be considered on its individual planning merits.

7.5 Industrial ("I") - Total Area : 147.87 ha

7.5.1 The planning intention of the "I" zone is to reserve land primarily for general industrial uses to ensure an adequate supply of industrial floor

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space. Information technology and telecommunications industries are considered suitable to operate in industrial buildings. Office related to industrial use, being an integral part of industrial function, is also permitted as of right in the "I" zone. However, general commercial and office uses, other than those permitted on the purpose-designed non-industrial portion on the lower floors of an existing building separated by a buffer floor, will require planning permission from the Board.

- 7.5.2 The particular geographical conditions of Tsing Yi permit the provision of land for a wide spectrum of industrial uses. Industrial land along the southern and western coast has been developed for dockyards, boatyards and oil storage, that require direct marine access. In addition, there are chemical industries on the southern part of Tsing Yi.
- 7.5.3 In order not to overtax the existing and planned infrastructure, development or redevelopment within this zone is subject to a non-domestic plot ratio of 9.5. To provide flexibility for innovative design adapted to the characteristics of particular sites, minor relaxation of the plot ratio restriction may be considered by the Board through the planning permission system. Each proposal will be considered on its individual planning merits.

7.6 <u>Government, Institution or Community ("G/IC")</u> - Total Area : 43.59 ha

- 7.6.1 This zoning is intended to provide a wide range of GIC facilities to meet the needs of Tsing Yi residents. Existing facilities include Tsing Yi Sports Ground, Tsing Yi and Tsing Yi Southwest Swimming Pools, a district police station, a divisional police station, an ambulance depot, clinics, fire stations, schools, a technical institute, indoor recreation centres and waterworks installations.
- 7.6.2 A public transport terminus cum lorry park is located to the north of Tsing Tsuen Road and The Maritime Square 2 is zoned "G/IC(1)" which includes the provision of a public transport terminus cum public lorry park. As the site is part of the visual corridor for the North-east Tsing Yi, high-rise building on site should be discouraged. Any development or redevelopment at this site is restricted to a maximum building height of 32 metres above Principal Datum mPD. A landscaped deck should also be is also provided in the development to enhance the environment and visual quality for the neighbourhood. To provide flexibility for innovative design adapted to the characteristics of the site, minor relaxation of the height restriction may be considered by the Board through the planning permission system based on individual planning merits.
- 7.6.3 A site beneath Tsing Yi Bridge, Kwai Tsing Bridge and Cheung Tsing Bridge is zoned "G/IC(2)". In view of the physical constraints and environmental conditions, only selected GIC facilities are permitted

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within this sub-zone. The site is currently occupied by a number of government uses, namely Tsing Yi Salt Water Pumping Station and Cargo Examination Compound-Cum-Office Building of the Customs and Excise Department.

7.6.4 In detailed planning, local community facilities will also be provided within the housing areas.

7.7 <u>Open Space ("O")</u> - Total Area : 45.48 ha

- 7.7.1 This zoning 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. Adequate reservation for district open space has been made on the Plan. The area for passive recreational purposes mainly consists of well-wooded slopes and hills which should be preserved in the interest of general amenity.
- 7.7.2 The Tsing Yi Park (the town park) with an area of about 7 ha has been developed in Area 2. Another special feature is a waterfront promenade running along the coast of Area 3 in the east to Area 8 in the north. The portion of the promenade in Area 3 is linked up with the town park by several footbridges, which is an essential recreational focus for Tsing Yi residents.
- 7.7.3 The Tsing Yi Northeast Park located to the west of Ching Tai Court and Cheung On Estate has been developed as a district open space forming part of the waterfront promenade. Apart from providing additional recreational facilities, it can also serve as a noise buffer between the boatyards and the adjacent housing developments.
- 7.7.4 The open space in front of the existing residential development at Mayfair Gardens provides a variety of recreational facilities to the residents and the students of the adjacent technical institute.
- 7.7.5 The "O" zone located between Tsing Hung Road and Tsing Yi Road comprising an existing Tsing Hung Road Playground could form a consolidated open space to serve the existing and future population nearby.
- 7.7.6 Apart from the district open space, local open spaces are also provided in other zones to meet local demands.

7.8 Other Specified Uses ("OU") - Total Area: 180.24 ha

7.8.1 This zoning covers land allocated for specified uses.

Container Terminal

7.8.2 The largest area under this zone is designated for the CT-9

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development and back-up areas. The terminal has an area of about 68 ha and provides four container berths and two feeder berths. The feeder berths facilitate direct access to the terminal by river trade and coastal trans-shipment cargoes.

Container Related Uses

- 7.8.3 Land zoned "OU" annotated "Container Related Uses" is reserved for container related uses including container freight station, lorry parking, container storage and repair, and cargo handling and forwarding. To provide high value-added logistics services in Kwai Tsing area, three modern logistics developments have been developed along Tsing Yi Road and Tsing Yi Hong Wan Road.
- 7.8.4 Land zoned "OU" annotated "Container Related Uses 1" is reserved for container related uses including a noise barrier in the form of a screen building at a height of not less than 45 metres above Principal Datum mPD. The screen building was built at the northern part of the site with the intention to screen off the noise and glare from the CT-9 development. Development within the "OU" annotated "Container Related Uses 1" zone is restricted to a maximum GFA of 35,000m².

Marine-related Uses

7.8.5 An area to the southwest of the terminal is under this zoning and annotated for marine-related uses. It serves the existing marine-oriented activities of the Environmental Protection Department Chemical Waste Treatment Facility in Area 21 which was affected by the reclamation for the terminal.

Cement Plant

7.8.6 A cement plant in Area 9 has been developed to replace the former cement plant in Area 1. This site is located over 1 km away and at the downwind direction respective to the public housing developments in Area 8.

Boatyard and Marine-oriented Industrial Uses

7.8.7 The rest of the western half of Area 9 is reserved for boatyards and marine-oriented industrial uses to meet the long-term requirements.

Sewage Treatment Plant

7.8.8 A site to the north of the existing sewage treatment plant in Area 6 is reserved for the expansion of the plant. Upon completion, the plant will provide preliminary treatment of the domestic and industrial sewage from the whole Tsing Yi.

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Recreation and Tourism Related Uses

- 7.8.9 Two sites in North-west Tsing Yi abutting the Tsing Ma Bridge and Ting Kau Bridge are zoned "OU" annotated "Recreation and Tourism Related Uses". While situating at a strategic location and enjoying the best views of harbour and bridges, the sites are considered suitable for low-density and low-rise recreation and tourism related development such as resort hotel, public recreational uses and other tourist attractions.
- 7.8.10 As the sites are located at the prominent waterfront, it is the planning intention to restrict the development bulk, height and scale of the development on these sites to preserve the existing amenity. To this end, any development within this zone is restricted to a maximum building height of 40 metres above Principal Datum mPD and a maximum plot ratio of 0.4. In addition, any development within this zone would require planning permission so that the Board could consider the development proposals based on their individual planning merits.

Viewing Platform

- 7.8.11 A site at Wok Tai Wan is zoned "OU" annotated "Viewing Platform". It intends to develop a permanent viewing platform for Lantau Link to serve tourists and visitors.
- 7.8.12 Any development or redevelopment at this site is restricted to a maximum GFA of 457m² and a maximum building height of 5.6m.

Business

7.8.13 The Tsing Yi Industrial Area in Area 6 is zoned "OU" annotated "Business" which is intended primarily for general business uses. Under this zoning, a mix of information technology and telecommunications industries, non-polluting industrial, office and other commercial uses will be permitted as of right in new "business" buildings. As it is not possible to phase out existing polluting and hazardous industrial uses all at once, it is necessary to ensure compatibility of the uses within the same industrial building or industrial-office building and the Tsing Yi Industrial Area until the whole area is transformed to cater for the new non-polluting business uses. Development within this zone should make reference to the relevant Town Planning Board Guidelines.

Others

- 7.8.14 Other sites zoned "OU" include:
 - (a) petrol filling stations in Areas 10 and 22;

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- (b) traditional burial grounds for indigenous Tsing Yi villagers in Area 24;
- (c) ventilation building for the MTR Airport Express and Tung Chung Line in Area 28;
- (d) chemical wastes treatment facility in Area 21;
- (e) cargo handling area in Area 29; and
- (f) amenity areas in Areas 6, 22 and 29.
- 7.8.15 To provide flexibility for innovative design adapted to the characteristics of particular sites, minor relaxation of the plot ratio/ GFA/building height restrictions in the "OU" zones may be considered by the Board through the planning permission system. Each proposal will be considered on its individual planning merits.

7.9 Green Belt ("GB") - Total Area: 422.78 420.06 ha

- 7.9.1 This zoning is intended to establish the limits of urban expansion and comprises mainly steep hillsides not suitable for urban development. It serves the purpose of protecting the existing ridgeline which provides physical barriers separating the oil depots in the south and west of Tsing Yi from residential developments in the north-east. A network of natural pathways was completed in the hilltop of Area 28 to provide the public a landscaped picnic area with panoramic view. As to the other "GB" area, certain uses such as passive recreational uses may be permitted on selected sites.
- 7.9.2 There is a general presumption against development in "GB" zone. Development within this zone will be carefully controlled and development proposals will be assessed on individual merits taking into account relevant Town Planning Board Guidelines.

7.10 Site of Special Scientific Interest ("SSSI") - Total Area: 1.05 ha

7.10.1 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 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.

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7.10.2 The zone covers the South Tsing Yi SSSI located below the highest peak of Tsing Yi. It is a steep slope of woodland harbouring a population of Hong Kong Croton, which is endemic to Hong Kong.

8. <u>COMMUNICATIONS</u>

- Tsing Yi Island was first connected to the road network in Kwai Chung by the Tsing Yi Bridge (Tsing Yi South Bridge) completed in 1974. A second connection with the mainland is provided by the Tsing Tsuen Bridge which was completed at the end of 1987. The Lantau Link, North West Tsing Yi Interchange, Cheung Tsing Highway, Cheung Tsing Tunnel and Cheung Tsing Bridge were completed in 1997 to provide strategic road links connecting Tsing Yi with North Lantau, Tsuen Wan and Kwai Chung.
- 8.2 A duplicate Tsing Yi South Bridge, namely Kwai Tsing Bridge, was completed in 1999. The purpose of constructing the bridge is to increase the capacity of the transport links between Tsing Yi and Kowloon mainland to cater for the future developments in South-east Tsing Yi. The Kwai Tsing Bridge together with the existing south bridge have provided three lanes each for the eastbound and westbound traffic.
- 8.3 A ring road has been constructed within Tsing Yi to connect the coastal developments. From this ring road, there is a series of secondary roads and local distributors that provide access to the development areas in various parts of Tsing Yi.
- 8.4 A number of strategic road schemes connecting Tsing Yi with other parts of the territory have been constructed. Ting Kau Bridge and Tsing Sha Highway with Stonecutters Bridge have been completed. These road links improve the accessibility of Tsing Yi to the North-west New Territories and the West Kowloon area.
- 8.5 The 2.2 km long Tsing Yi North Coastal Road connecting the existing Tsing Tsuen Bridge (Tsing Yi North Bridge) to the east and the Lantau Link to the west was completed in February 2002. It stretches along the foothills of the north Tsing Yi coast and forms a part of the strategic route between Lantau and other parts of the territory.
- 8.6 Apart from the road links, the Area is served by the MTR which provides two links: Airport Express between Chek Lap Kok Airport and Hong Kong Island and Tung Chung Line between Tung Chung and Hong Kong Island.

9. <u>UTILITY SERVICES</u>

No difficulty is foreseen in the provision of utility services. Adequate land has been reserved for a telephone exchange, electricity substations, service reservoirs and a sewage treatment plant.

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10. IMPLEMENTATION

- 10.1 Although existing uses non-conforming to the statutory zonings are tolerated, any material change of use and any other development/redevelopment must be always permitted in terms of the Plan or, if permission is required, in accordance with the permission granted by the Board. The Board has published a set of guidelines for the interpretation of existing use in the urban and new town areas. Any person who intends to claim an "existing use right" should refer to the guidelines and will need to provide sufficient evidence to support his claim. The enforcement of the zonings mainly rests with the Buildings Department, the Lands Department and the various licensing authorities.
- 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 reservations within the Government. Disposal of sites is undertaken by the Lands Department. Public works projects are co-ordinated by the Civil Engineering and Development Department in conjunction with the client departments and the works departments such as the Highways Department and the Architectural Services Department. In the course of implementation of the Plan, the Kwai Tsing District Council would also be consulted as appropriate.
- Planning applications to the Board will be assessed on individual merits. In general, the Board, in considering the planning applications, will take into account all relevant planning considerations which may include the departmental outline development plan and the guidelines published by the Board. The outline development plan is available for public inspection at the Planning Department. Guidelines published by the Board are available from the Board's website, the Secretariat of the Board and the Technical Services Division of the Planning Department. Application forms and Guidance Notes for planning applications can be downloaded from the Board's website and are available from the Secretariat of the Board and the Technical Services Division and the relevant District Planning Office of the Planning Department. Applications should be supported by such materials as the Board thinks appropriate to enable it to consider the applications.

TOWN PLANNING BOARD MARCH 2020 XXX 2021



Agreement No. CE 51/2018 (CE)

Site Formation and Infrastructure Works for Public Housing Developments at Tsing Yi Road West, Tsing Yi – Feasibility Study

Final Interim Report for Rezoning - Issue 2.0





FINAL INTERIM REPORT FOR REZONING - ISSUE 2.0

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CE51/IR/601	Existing and Proposed Site Investigation Layout Plan
CE51/IR/602	Registered Features Plan
CE51/IR/603	Natural Terrain Catchment Classification
CE51/IR/701	Land Status Plan
CE51/IR/702	Access Provision
CE51/IR/801	Habitat Map and locations of flora and aquatic fauna species of conservation
	importance
CE51/IR/901	Air Ventilation
CE51/IR/1001	Conceptual Landscape Plan
CE51/IR/1002/1	Viewing Point VP1
CE51/IR/1002/2	Viewing Point VP2
CE51/IR/1002/3	Viewing Point VP3
CE51/IR/1002/4	Viewing Point VP4
CE51/IR/1002/5	Viewing Point VP5
CE51/IR/1002/6	Viewing Point VP6
CE51/IR/1002/7	Viewing Point VP7
CE51/IR/1002/8	Viewing Point VP8
CE51/IR/1002/9	Viewing Point VP9
CE51/IR/1002/10	Viewing Point VP10
CE51/IR/1002/11	Viewing Point VP11
CE51/IR/1003	Viewing Point Plan
CE51/IR/1004	Landscape and Visual Mitigation Plan
CE51/IR/1005	Tree Planting Plan with Transplant Location
CE51/IR/1006	Landscape Resource Plan 1
CE51/IR/1007	Landscape Resource Plan 2
CE51/IR/1008	Landscape Character Area Plan

LIST OF ABBREVIATIONS

AFCD Agriculture, Fisheries and Conservation Department

AHRP Airport Height Restriction Plan AVA Air Ventilation Assessment

B/Ds Government Bureau/Departments

DEVB Development Bureau

DIA Drainage Impact Assessment

DP Designated Project

DSD Drainage Service Department

EE Expert Evaluation

EIA Environmental Impact Assessment

EIAO Environmental Impact Assessment Ordinance

EPD Environmental Protection Department

FSD Fire Service Department GA Geotechnical Assessment

GB Green Belt

GIC Government / Institution / Community

HAD Home Affairs DepartmentHD Housing Department

HIA Heritage Impact Assessment

HyD Highways Department LandsD Lands Department

LCRS Land Contamination and Remediation Study
LCSD Leisure and Cultural Services Department

LPG Liquefied Petroleum Gas
NTHS Natural Terrain Hazard Study

OZP Outline Zoning Plan

PER Preliminary Environmental Review

PlanD Planning Department

POA Platform Option Assessment

PRH Public Rental Housing

PTI Public Transport Interchange

RS Public Housing Site

SA Sustainability Assessment SFA Site Formation Assessment

SSF Subsidised Sale Flats

SIA Sewerage Impact Assessment

TTIA Traffic and Transport Impact Assessment

TYRW Tsing Yi Road West
UIS Utilities Impact Study
WSD Water Supply Department

WSIA Water Supply Impact Assessment

1. INTRODUCTION

1.1 Background

- 1.1.1 The Chief Executive announced under the 2017 Policy Address that the Government would continue to rezone sites, increase development intensity and conduct holistic land use reviews to make optimal use of land. To meet this policy objective, a number of potential public housing sites have been identified by the Government and the Site at Tsing Yi Road West is one of these potential sites. CEDD is tasked to conduct an Engineering Feasibility Study (EFS) to examine the engineering feasibility of developing public housing, associated GIC facilities and Infrastructure Works as required at the Site under this Assignment. The general layout of the Site is shown in **Figure CE51/IR/101**.
- 1.1.2 The Site is located at Tsing Yi Road West and west of Cheung Hong Estate in Tsing Yi, and falls entirely within "Green Belt" ("GB") zone on the Approved Tsing Yi Outline Zoning Plan No. S/TY/30. To facilitate the Development, rezoning of the Site at Tsing Yi Road West to appropriate land use zonings for the proposed public housing development, GIC facilities and Infrastructure Works necessary for supporting the Development should be proposed in the Study. The completion of rezoning is among the critical tasks in the implementation programme for the proposed Development.
- On 16 May 2019, WSP (Asia) Ltd (WSP) had been appointed by CEDD of the Hong Kong Special Administrative Region to undertake the study, Agreement No. CE51/2018 (CE) "Site Formation and Infrastructure Works for Public Housing Development at Tsing Yi Road West, Tsing Yi Feasibility Study" (the Project).

1.2 Scope of the Project

- 1.2.1 The proposed scope of the Project consists of the following principal works elements:
 - a) Site clearance of existing structures and trees;
 - b) Site formation works;
 - Slope cutting and earth filling works as well as geotechnical works/structures (including natural terrain hazard mitigation measures and slope/retaining wall upgrading works if found necessary);
 - d) Roadworks;
 - e) Sewerage infrastructure works, including construction of sewerage pumping station if required;
 - f) Drainage infrastructure works;
 - g) Environmental mitigation measures;
 - h) Water supply works;

- i) Tree felling, transplanting and preservation, and compensatory tree planting, if found necessary; and
- j) Any other infrastructure and utility works recommended in various technical studies and assessments of this Assignment to support the Development.

1.3 Scope of the Report

- 1.3.1 The purpose of this report is to set out the essential information to identify the possible problems, introduce the assessment methodologies, illustrate the analyses, summarise the findings and propose mitigation measures/ recommended works, so as to demonstrate that there would be no insurmountable impact for the Development and the Infrastructure Works in undertaking the rezoning process. The following aspects are considered:
 - (a) Traffic impact
 - (b) Drainage impact
 - (c) Sewerage impact
 - (d) Water impact
 - (e) Natural terrain hazards
 - (f) Environmental impact
 - (g) Landscape and Visual impact
 - (h) Air ventilation impact

1.3.2 This report includes:

- (a) findings, proposals and recommendations of the Study including the scope of the recommended site formation and infrastructural works; and
- (b) the results of the technical assessments.

2. PRELIMINARY DEVELOPMENT LAYOUT PLAN AND PRELIMINARY **DEVELOPMENT PARAMETERS**

2.1 General

2.1.1 This chapter describes the preliminary development layout plan and preliminary development parameters for the proposed public housing development.

2.2 **Site Description**

2.2.1 The Site is located at Tsing Yi Road West and west of Cheung Hong Estate in Tsing Yi, and falls entirely within "GB" zone on the Approved Tsing Yi Outline Zoning Plan No. S/TY/30.

2.3 **Background of the Planning of "GB" Sites**

2.3.1 The proposed housing developments will involve rezoning of the existing "GB" zone. In fact, such a development within "GB" has been supported and initiated by the prevailing policies in order to increase the housing land supply and meet the keen housing demand in Hong Kong. The policies have also established the rationale to select the potential sites for housing developments. This section summarises the background of the planning of the developments within the "GB" site.

2013 Policy Address - s.73 Increasing Supply of Housing Land in Short to Medium Term

2.3.2 "The Government will take a number of strong measures to increase housing land supply in the short to medium term including Government, Institution or Community (G/IC) sites and other Government sites which would be used for housing development, and other sites in Green Belt areas which are devegetated, deserted or formed and considered suitable for rezoning for residential use. Town planning process will commence in phases with the purpose of releasing more sites for housing development."

2017 Policy Address - s.142 Land Supply

2.3.3 "Over the years, the Government has proposed many strategies for increasing land supply, including reclamation outside the Victoria Harbour, reviewing land uses, increasing the development intensity of sites, developing rock cavern space, speeding up urban renewal, developing the Lantau Island, etc. The departments and organisations concerned are also undertaking studies on the utilisation of land on the periphery of country parks and the use of brownfield sites in the New Territories. Many proposals on land supply have also been put forward in the community. Hence, it appears that what is lacking is not ideas on how to increase land supply but a broad consensus on the pros and cons, trade-offs and priorities of different options. However, if we continued to argue repeatedly and stayed indecisive, coupled with the long lead time for land production, the tight land supply in Hong Kong would only get worse, making it even more difficult for our people to realise their aspirations for home ownership."

2017 Policy Address - s. 144 Housing Policy

2.3.4 "Housing is not a simple commodity. Our community has a rightful expectation towards the Government to provide adequate housing. This is also fundamental to social harmony and stability. Therefore, while maintaining respect of a free market economy, the Government has an indispensable role to play in this area; The Government will focus on home-ownership to enable our people to live happily in Hong Kong and call it their home and will strive to build a housing ladder to rekindle the hopes of families in different income brackets to become home-owners; Focusing on supply and based on the Long Term Housing Strategy, the Government will step up our effort in increasing the supply of housing units; With insufficient land and when new supply is not yet available, the Government will strive to optimise the existing housing resources to meet the housing needs of families that have long been on the waiting list for public rental housing (PRH) and to help residents in poor living conditions."

Secretary for Development to Legislative Council on 24.1.2018

2.3.5 "As part of the multi-pronged land supply strategy, through on-going land use reviews in the last few years, the Government has identified over 210 sites with potential for housing development in the short to medium term, including 77 "Green Belt" (GB) sites identified from the two-stage GB review and other land use reviews. The first stage of GB review mainly covered GB areas which were formed, deserted or de-vegetated, but possessed potential for residential development. The second stage of GB review covered GB zones in the fringe of built-up areas close to existing urban areas and new towns, and those vegetated areas with relatively less buffering effect and lower conservation value. As with other sites rezoned for housing purposes, in proposing rezoning of GB sites, the Government will according to the established mechanism and criteria assess a host of factors, including transport and infrastructure capacity, provision of community facilities, development constraints, potential impacts on the local environment, visual and air ventilation impacts, etc. to ensure that there will not be insurmountable impact to the local community, while providing objective information to devise appropriate mitigation measures."

2019 Policy Address - s. 18 Land Supply

2.3.6 "To meet the keen housing demands of the public, we have to increase the supply of land for housing development in a persistent manner."

2.4 Optimized Development Layout Plan and Preliminary Development Parameters

- 2.4.1 The site for the proposed public housing development has been optimized in the feasibility study by considering the following key design rationales:
 - (a) Land
 - Maximisation of land availability for public housing development with due considerations on the site constraints including the topography and the presence of an existing stream running across the Site;
 - Minimisation of disturbance on Liu To Village; and
 - Avoidance of encroachment to the existing graves
 - (b) Traffic
 - Provision of standard access to and from the housing site.
 - (c) Environmental
 - Minimisation of nuisance to the environments; and
 - Minimisation of generation of construction waste.
 - (d) Cost and Programme
 - Cost effectiveness; and
 - Programme of target population intake.
- 2.4.2 The proposed site is located at an existing valley abutting Tsing Yi Road West. The existing ground level within the proposed site varies from about +20mPD to +66mPD. Site formation works, including construction of retaining walls, slope cutting and earth filling are required to raise the ground level and form level platforms for the proposed public housing development. The optimized site formation plan and sections are shown in **Figure CE51/IR/201** and **202**. The boundaries have been delineated taking into account the above rationales and the following features:
 - The eastern boundary has been partly limited by the elevated road N547 and partly setback to provide 3.5m at-grade footpath along at grade section of Tsing Yi Road West; and
 - The western and northern boundary has been delineated to optimize the stream diversion works with consideration of existing topography and avoid disturbance of existing graves.
- 2.4.3 Part of the existing stream and hiking trail are affected by the proposed public housing development. The stream and hiking trail will be diverted outside the rezoning boundary. The proposed stream and hiking trail are shown in **Figure CE51/IR/203**.

2.4.4 Based on the optimized site formation plan, a notional development layout and the preliminary development parameters for the proposed public housing development are developed and shown in Appendix A and Table 2.1 respectively. To cater for the potential demand, various retail, welfare, kindergarten and public transport interchange are proposed in the public housing development as appropriate. Details should be reviewed for the actual implementation of the proposed public housing development.

Table 2.1 Optimal Preliminary Development Parameter [1]

Gross Site Area (ha)	Current (Proposed) Zoning	Proposed Domestic Plot Ratio	Proposed Non- Domestic Plot Ratio [2]	Housing Type	Building Height Restriction	Approx. Flat Number ^[3]	Approx. Population ^[3] from Domestic Plot Ratio	Min Local Open Space (ha) ^[4]	Min. Greenery Area (ha) ^[4]
2.73	GB	6.5	0.2	PRH/SSF	+220mPD	3,820/3,220	10,320/8,700	1.03/0.87	0.54

Note:

- [1] Subject to review at detailed design stage.
- [2] The accountable non-domestic GFA would only include retail facilities, kindergarten, and Housing Authority's ancillary facilities including EMO. Welfare facilities, ancillary carpark and PTI are not included in the calculation of non-domestic plot ratio and total plot ratio.
- [3] 10% of design buffer has been considered in the technical assessments to allow design flexibility at later design stage.
- [4] In accordance with the HKPSG.

3. TRAFFIC AND TRANSPORTATION

3.1 General

3.1.1 This chapter provides a summary of the key findings in the Preliminary Traffic and Transportation Impact Assessment. The existing and planned road networks and traffic impacts due to the proposed development are presented.

3.2 **Existing Road Network**

- 3.2.1 The Site is located at the western side of Tsing Yi Road West between Liu To Road and Ching Hong Road (CHR) in Tsing Yi, which is easily accessible by the major primary distributors that connect to different destinations in the territory, e.g. Kowloon West, Hong Kong West, New Territories North East and New Territories North West.
- 3.2.2 Tsing Yi Road West is a District Distributor and of which the section of road that the Site abuts is an undivided 4-lane carriageway. Tsing Yi Road West is the road linking, from north to south, Fung Shue Wo Road, Liu To Road, Ching Hong Road, Tsing Chin Street, Cheung Tsing Highway, Sai Tso Wan Road and Tsing Yi Road. Motorists can further access to Tsuen Wan/ New Territories West via Fung Shue Wo Road and Tsing Tusen Road.
- 3.2.3 CHR is a Local Distributor with dual 2-lane carriageway between Tsing Yi Road and Chung Mei Road and with single 2-lane carriageway between Chung Mei Road and Tsing Yi Road West. CHR is the road linking Tsing Yi Road, Tsing Chin Street, Chung Mei Road and TYRW from east to west. Along the whole section of Ching Hong Road, there are several accesses for local estates and schools. Motorists can further access to Kwai Fong/Kowloon via Tsing Yi Road and Tsing Yi Bridge.

3.3 **Existing Traffic Conditions**

3.3.1 Manual traffic count survey was carried out on a normal weekday in May 2019 at the identified critical junctions to obtain the pattern of vehicular flows. The observed AM, Logistic and PM peak hours are 7:30 - 8:30, 11:00 - 12:00 and 17:00 – 18:00 respectively. The location of the critical junctions are presented in Figure CE51/IR/301. Assessment results of the existing performance are tabulated in **Table 3.1** and **3.2**.

 Table 3.1 Existing Junction Performance

Index	Junction	Junction	Year 2019 Existing RC/ DFC			
		Туре	AM	Logistic	PM	
J1	Tam Kon Shan Interchange	Roundabout	0.55	0.33	0.49	
J2	Tsing Yi Road West/ Fung Shue Wo Road	Signalised	>50%	>50%	>50%	
J3	Tsing Yi Road West/ Liu To Road	Signalised	>50%	>50%	45%	
J4	Tsing Yi Road West/ Ching Hong Road	Signalised	>50%	>50%	>50%	
J5	Cheung Tsing Highway/ Tsing Yi Road West	Signalised	>50%	>50%	>50%	
J6	Ching Hong Road/ Chung Mei Road	Signalised	>50%	>50%	>50%	

J7	Tsing Yi Road/ Ching Hong Road	Roundabout	0.33	0.23	0.30
Ј8	Tsing Yi Heung Sze Wui Road/ Fung Shue Wo Road/ Tsing King Road	Roundabout	0.47	0.31	0.43
Ј9	Tsing Yi Heung Sze Wui Road/ Chung Mei Road	Signalised	>50%	>50%	>50%
J10	Tsing Yi Interchange	Roundabout	0.54	0.43	0.52
J11	Tsing Yi Road/ Tsing Yi Hong Wan Road/ Tsing Sha Highway	Roundabout	0.35	0.46	0.38

Figure shown represent Reserve Capacity (RC) for the signalised junctions and Design Flow to Capacity (DFC) ratio for the roundabout or priority junctions. Negative RC below 0% and DFC over 1.00 indicates overload conditions.

Table 3.2 – Existing Road Link Performance

Index	Road Link	Direction	Yea	sting	
Inucx	Road Ellik	Direction	AM	V/C Logistic	PM
т 1	E CL W D 1	Northbound	0.45	0.30	0.50
L1	Fung Shue Wo Road	Southbound	0.21	0.14	0.22
1.0	T' V'D 1W 4	Northbound	0.36	0.24	0.42
L2	Tsing Yi Road West	Southbound	0.23	0.15	0.28
т 2	T' V'D 1W 4	Northbound	0.26	0.17	0.29
L3	Tsing Yi Road West	Southbound	0.21	0.13	0.21
τ.4	T-: V: D1 W4	Northbound	0.29	0.19	0.28
L4	Tsing Yi Road West	Southbound	0.25	0.17	0.20
1.5	Ching Hong Road	Eastbound	0.49	0.32	0.48
L5		Westbound	0.54	0.35	0.48
1.6	China Hana Daad	Eastbound	0.17	0.11	0.15
L6	Ching Hong Road	Westbound	0.17	0.12	0.15
L7	Toing Vi Dood	Northbound	0.36	0.22	0.27
L/	Tsing Yi Road	Southbound	0.26	0.17	0.25
то	Taina Vi Daad	Northbound	0.26	0.25	0.33
L8	Tsing Yi Road	Southbound	0.45	0.43	0.37
L9	Chung Mei Street	Eastbound	0.18	0.12	0.19
L9	Chung Wei Street	Westbound	0.21	0.14	0.19
L10	Fung Shua Wa Daad	Eastbound	0.22	0.15	0.20
LIU	Fung Shue Wo Road	Westbound	0.24	0.16	0.25
Т 1 1	Taina Vina Daad	Northbound	0.21	0.13	0.22
L11	Tsing King Road	Southbound	0.13	0.08	0.11
T 12	Toing Vi Houng Szo Wui Dood	Northbound	0.36	0.25	0.41
L12	Tsing Yi Heung Sze Wui Road	Southbound	0.57	0.37	0.45
L13	Tsing Yi Heung Sze Wui Road	Northbound	0.36	0.25	0.43
	Own represent Volume/Capacity Ratio (V/C Ratio) fo	Southbound	0.55	0.34	0.41

Figure shown represent Volume/Capacity Ratio (V/C Ratio) for the road links. V/C Ratio exceeding 1.0 but within 1.2 indicates manageable degree of congestion; while V/C ratio exceeding 1.2 indicates on-set of more serious congestion.

3.4 **Existing Transport Facilities**

The public transport services providing services in the vicinity of the Site and the 3.4.1 service coverage of franchised bus service including Causeway Bay, Tsuen Wan, Kowloon, New Territories North, Airport, etc. The coverage of green minibus service including Tsing Yi Station and Tsuen Wan district, which are short/medium-haul feeder services. The existing public transport servicing points in the vicinity of the Site are shown in Figure CE51/IR/302.

3.5 Proposed Access Arrangements

3.5.1 The vehicular access for the proposed housing development is proposed at Tsing Yi Road West.

3.6 Approach for Traffic Forecast

- 3.6.1 In order to carry out the traffic forecast, the base year and future year traffic models for weekday peaks are developed using NTW2 model of 2015 Base District Traffic Model, the 2016-based Territorial Population and Employment Data Matrices and latest planning assumptions for providing traffic forecast.
- 3.6.2 The tentative population intake of the proposed developments will occur in year 2034. Thus, the design year adopted is year 2037 (3 years after latest population intake's year), which is the worst case scenario.
- 3.6.3 The major planned/committed developments in the vicinity of the Site had been considered in the traffic forecasts.

3.7 Operational Traffic Impact Assessment and Proposed Works

- 3.7.1 Traffic forecasts have been developed for the design year 2037. The operational Traffic Impact Assessment identifies critical issues and recommends any associated traffic improvement schemes to alleviate the identified traffic problems as necessary.
- 3.7.2 Based on the forecasted peak hour traffic flows, the operational performance of the identified critical junctions have been assessed for scenarios with the proposed developments under the design year 2037. The results are summarized in **Table 3.3** and **3.4**.

Table 3.3 Junction Performance for Year 2037

Index	Junction	Junction Type		Year 2037 Reference RC/ DFC			Year 2037 Design RC/ DFC		
		Туре	AM	Logistic	PM	AM	Logistic	PM	
J1	Tam Kon Shan Interchange	Roundabout	0.74	0.40	0.61	0.84	0.46	0.67	
J2	Tsing Yi Road West/ Fung Shue Wo Road	Signalised	>50%	>50%	>50%	42%	>50%	40%	
Ј3	Tsing Yi Road West/ Liu To Road	Signalised	36%	>50%	32%	17%	35%	21%	
J4	Tsing Yi Road West/ Ching Hong Road	Signalised	45%	>50%	35%	39%	>50%	28%	
J5	Cheung Tsing Highway/ Tsing Yi Road West	Signalised	40%	37%	30%	35%	37%	28%	
Ј6	Ching Hong Road/ Chung Mei Road	Signalised	>50%	>50%	>50%	>50%	>50%	>50%	

Index	Junction	Junction Type	Year 2037 Reference RC/ DFC			Year 2037 Design RC/ DFC		
			AM	Logistic	PM	AM	Logistic	PM
Ј7	Tsing Yi Road/ Ching Hong Road	Roundabout	0.49	0.28	0.39	0.49	0.30	0.42
Ј8	Tsing Yi Heung Sze Wui Road/ Fung Shue Wo Road/ Tsing King Road	Roundabout	0.64	0.38	0.58	0.66	0.38	0.58
Ј9	Tsing Yi Heung Sze Wui Road/ Chung Mei Road	Signalised	25%	>50%	36%	22%	>50%	33%
J10	Tsing Yi Interchange	Roundabout	0.65	0.52	0.61	0.65	0.52	0.61
J11	Tsing Yi Road/ Tsing Yi Hong Wan Road/ Tsing Sha Highway	Roundabout	0.64	0.84	0.58	0.64	0.84	0.59

Figure shown represent Reserve Capacity (RC) for the signalised junctions and Design Flow to Capacity (DFC) ratio for the roundabout or priority junctions. Negative RC below 0% and DFC over 1.00 indicates overload conditions. This is based on the assumption that right-turn exit from the proposed development is not allowed, which is subject to further review in the later design stage.

Table 3.4 – Road Link Performance for Year 2037

Index	Road Link	Direction	Year 2037 Reference V/C			Year 2037 Design V/C		
			AM	Logistic	PM	AM	Logistic	PM
L1	Fung Shue Wo Road	Northbound	0.56	0.36	0.63	0.67	0.47	0.69
		Southbound	0.25	0.17	0.27	0.28	0.20	0.30
L2	Tsing Yi Road West	Northbound	0.47	0.29	0.49	0.61	0.43	0.57
		Southbound	0.29	0.21	0.34	0.34	0.26	0.39
L3	Tsing Yi Road West	Northbound	0.33	0.22	0.33	0.46	0.36	0.41
		Southbound	0.26	0.19	0.26	0.31	0.25	0.31
L4	Tsing Yi Road West	Northbound	0.39	0.25	0.39	0.40	0.26	0.40
		Southbound	0.38	0.29	0.29	0.38	0.29	0.29
L5	Ching Hong Road	Eastbound	0.60	0.40	0.69	0.60	0.40	0.69
		Westbound	0.72	0.53	0.64	0.79	0.61	0.73
L6	Ching Hong Road	Eastbound	0.22	0.14	0.18	0.22	0.14	0.18
		Westbound	0.21	0.16	0.20	0.24	0.19	0.24
L7	Tsing Yi Road	Northbound	0.51	0.33	0.37	0.51	0.33	0.37
		Southbound	0.35	0.26	0.35	0.38	0.29	0.38
L8	Tsing Yi Road	Northbound	0.46	0.45	0.53	0.46	0.45	0.53
		Southbound	0.74	0.73	0.61	0.75	0.74	0.62
L9	Chung Mei Street	Eastbound	0.21	0.14	0.31	0.21	0.14	0.31
		Westbound	0.29	0.20	0.24	0.29	0.20	0.24
L10	Fung Shue Wo Road	Eastbound	0.25	0.16	0.23	0.26	0.17	0.23
		Westbound	0.29	0.19	0.31	0.29	0.19	0.31
L11	Tsing King Road	Northbound	0.27	0.16	0.29	0.27	0.16	0.29
		Southbound	0.47	0.26	0.38	0.47	0.26	0.38
L12	Tsing Yi Heung Sze	Northbound	0.46	0.32	0.55	0.46	0.32	0.55
	Wui Road	Southbound	0.71	0.45	0.57	0.72	0.45	0.57
L13	Tsing Yi Heung Sze	Northbound	0.50	0.36	0.57	0.50	0.36	0.57
	Wui Road	Southbound	0.69	0.45	0.55	0.70	0.45	0.55

Figure shown represent Volume/Capacity Ratio (V/C Ratio) for the road links. V/C Ratio exceeding 1.0 but within 1.2 indicates manageable degree of congestion; while V/C ratio exceeding 1.2 indicates on-set of more serious congestion. This is based on the assumption that right-turn exit from the proposed development is not allowed, which is subject to further review in the later design stage.

- 3.7.3 As shown in **Table 3.3 and 3.4**, all the performance of critical junction and road links will be in satisfaction for both reference and design scenario in year 2037.
 - Proposed Footbridge across Tsing Yi Road West
- 3.7.4 To enhance the pedestrian connectivity nearby, a footbridge is proposed for residents and public to cross Tsing Yi Road West. The preliminary footbridge alignment is shown in **Figure CE51/IR/303**.
 - Proposed Footpath Along Tsing Yi Road West
- 3.7.5 To enhance the pedestrian walking environment, footpath path along Tsing Yi Road West outside the proposed development is proposed to widen to 3.5m.
 - Proposed Public Transport Interchange
- 3.7.6 PTI, which will accommodate facilities such as bus bays and taxi stand, is provided within the Site to cater for the proposed development and the wider district need, as per requested by TD. The detailed design of PTI and its public transport services to be included should be subject to later design stage.

3.8 Summary

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

4. DRAINAGE AND SEWERAGE

4.1 General

4.1.1 The purpose of this chapter is to assess potential drainage and sewerage impacts arising from the proposed public housing development and recommend necessary mitigation measures.

4.2 Drainage

Existing Drainage Conditions

4.2.1 Existing 1800mm dia. storm drain is identified at the junction between Tsing Yi Road West and Ching Hong Road. The surface runoff collected by the aforementioned 1800mm dia. storm drain is discharged to the existing natural stream passing from south to north through the center portion of the Site. It connects to another natural stream passing through the northern portion of the Site and subsequently discharges to the existing 3-cell 3.5m x 2.5m box culvert underneath Tsing Sum Street.

Drainage Impact of Proposed Public Housing Development

- 4.2.2 Preliminary drainage impact assessment is carried out to assess the impact to existing drainage system. The proposed development would generate additional runoff as a result of change of land use from unpaved to paved within the development area.
- 4.2.3 Water level and freeboard for the diverted stream and the downstream at existing drainage system have been studied. The freeboard of the existing and diverted stream after the development is sufficient.
- 4.2.4 As a result, it is concluded that the proposal of diverting the existing stream and the additional drainage discharge from the Site will not cause adverse drainage impact nor worsen the existing drainage condition.

<u>Recommendation</u>

- 4.2.5 The existing stream within the Site is proposed to be diverted as an engineering open channel to the west and north of the Site. A 3.5m wide maintenance path is located alongside the diverted channel for easy access.
- 4.2.6 In order to increase the habitat complexity of the diverted watercourse, gabions will be used to build the watercourse bank. The gabion banks and rip-rap channel bed can provide more microhabitats for aquatic-associated fauna than watercourse with traditional concrete bank and bed. To reduce landscape and visual impact, gabion baskets will be used to form vertical river embankments by placing the baskets in multiple layers of varying depths, subject to the depth of the stream channel. Reuse of excavated rock materials in the gabion would help in reducing the need for offsite disposal. Riparian planting is proposed within the gabion as part of habitat recreation for aquatic communities. Due to the steep gradient of the stream embankments, the riparian planting will be located at the planting area adjacent to

the top of the gabion wall. The irregular gabion surface and gaps between the gabions can retain sediment to provide suitable habitats for re-colonization of stream fauna.

- 4.2.7 The drainage system for proposed development is shown in Figure CE51/IR/401. The surface runoff due to the development is proposed to be conveyed to the diverted western stream. To properly convey the runoff to the downstream, two terminal manholes would be constructed at the western of the site within site boundary. Connecting pipes would be provided between proposed terminal manholes and diverted stream.
- 4.2.8 A detailed hydraulic analysis and design of the proposed drainage works should be carried out in the subsequent Investigation, Design & Construction stage to determine the final drainage scheme and ensure appropriate drainage mitigation measures would be implemented to cater for the latest site conditions and developments.

4.3 Sewerage

Existing Sewerage Conditions

- 4.3.1 The proposed public housing development falls within the sewerage catchment of Tsing Yi Preliminary Treatment Works (TYPTW).
- 4.3.2 There is no existing sewer along this section of Tsing Yi Road West. The nearest gravity sewer is along Ching Hong Road adjacent to Cheung Hong Estate Commercial Centre No. 2. The size of the aforementioned gravity sewer is only 225mm dia.. It would not have sufficient capacity to handle the additional sewage flow from the proposed development.

Sewerage Impact of Proposed Public Housing Development

- 4.3.3 The sewage generated from the proposed development is proposed to be conveyed to the TYPTW via proposed 500mm (OD) dia. gravity pipe along Tsing Yi Road West (TYRW) and Ching Hong Road. The proposed sewer will eventually connect to existing manhole FMH4019574 between Tsing Yi Road and TYPTW, with existing 600mm dia. gravity sewer downstream.
- 4.3.4 According to the results of preliminary sewerage impact assessment, both the downstream sewerage pipelines at Tsing Yi Road and TYPTW have sufficient capacities to cater for the peak sewerage flow after development.

Recommendation

4.3.5 The sewerage system for proposed development is shown in Figure CE351/IR/402-404. To properly convey the sewage to the downstream, a terminal manhole would be constructed at the eastern side of the Site. New 500mm (OD) dia. sewer would be constructed between proposed terminal manhole and existing sewerage system. The total length of proposed gravity sewer is approximately 1.9km along Ching Hong Road and Tsing Yi Road.

4.3.6 A comprehensive sewerage impact assessment should be carried out in subsequent Investigation, Design & Construction stage to incorporate the actual implementation programme, development parameters of the proposed housing developments and the adjacent planned developments and ensure appropriate sewerage mitigation measures would be implemented. Traffic impacts associated with the proposed sewer construction will be assessed and corresponding mitigation measure/TTM will be devised in design stage.

4.4 Summary

4.4.1 Following the implementation of the proposed drainage and sewerage works, no insurmountable issues are anticipated for the proposed developments from drainage and sewerage viewpoints.

5. WATER SUPPLIES AND UTILITIES

5.1 General

5.1.1 The purpose of this chapter is to assess potential water supply and utilities impacts arising from the proposed public housing development and recommend necessary mitigation measures.

5.2 **Water Supply Systems**

Existing Fresh Water Supply

- 5.2.1 The proposed public housing development falls within the supply zone of Tsing Yi North High Level Fresh Water Service Reservoir (Tsing Yi North HL FWSR). Tsing Yi North HL FWSR is fed by Tsing Yi North Low Level Fresh Water Service Reservoir (Tsing Yi North LL FWSR) via Tsing Yi North High Level Fresh Water Pumping Station.
- 5.2.2 Existing 700mm dia. and 400mm dia. fresh water mains are identified along Tsing Yi Road West adjacent to the Site.

Existing Salt Water Supply

- 5.2.3 Salt water supply to the proposed public housing development can be directly pumped from the Tsing Yi North High Level Fresh Water and Salt Water Pumping Station (Tsing Yi North HL FW & SW PS). Tsing Yi North High Level Salt Water Service Reservoir (Tsing Yi North HL SWSR) is acting as balance tank.
- 5.2.4 An existing 250mm dia. salt water main is identified along Tsing Yi Road West adjacent to the Site.

Impacts of the Proposed Developments on Fresh Water Service Reservoir

According to the hydraulic examination on the water supply network, both Tsing 5.2.5 Yi North HL FWSR and Tsing Yi North LL FWSR have sufficient capacities to cater for the additional fresh water demand arising from the proposed development and sufficient residual head could be provided by existing water supply system at the proposed fresh water supply connection to the Site.

Impacts of the Proposed Developments on Salt Water Pumping Station

5.2.6 According to the hydraulic examination on the water supply network, the Tsing Yi North HL FW & SW PS would not have sufficient capacities to cater for the salt water supply of the proposed developments.

Recommendations for Fresh Water Supply

- 5.2.7 According to the results of preliminary water supply assessment, both Tsing Yi North HL FWSR and Tsing Yi North LL FWSR have sufficient water capacities and residual heads to support the proposed development. Therefore, there is no need to upgrade the existing fresh water supply system.
- 5.2.8 A 250mm dia. fresh water main would be teed-off from the existing 400mm dia. fresh water main at TYRW to extend the water supply network for proposed development. In addition, a 200mm dia. fire service main would be teed-off from the proposed 250mm dia. fresh water main. The proposed fresh water connection is shown in Figure CE51/IR/501. The connection details and alignment of extension pipeline would be further investigated in later stage of the project when more site information is available.

Recommendations for Salt Water Supply

- 5.2.9 One of the schemes is to upgrade Tsing Yi North HL FW & SW PS to cope with future demand. The detailed scope of works would be further reviewed in the later stage.
- 5.2.10 A 150mm dia. salt water main would be teed-off from the existing 250mm dia. salt water main at TYRW to extend the water supply network for proposed development. The proposed salt water connection is shown in Figure CE51/IR/502. The connection details and alignment of extension pipeline would be further investigated in later stage of the project when more site information is available.
- 5.2.11 On the premise of striving for cost effectiveness without compromising technical efficiency, an alternative feasible scheme for the salt water supply without involving upgrading Tsing Yi North HL FW & SW PS has been explored. Under this scheme, salt water will be supplied to the proposed public housing development from the Tsing Yi Salt Water Pumping Station with Tsing Yi East Salt Water Service Reservoir acting as balance tank.
- 5.2.12 A 150mm dia. salt water main would be connected to the existing 200mm dia. salt water main at Ching Hong Road to extend the water supply network for proposed development as shown in Figure CE51/IR/503. The connection details and alignment of extension pipeline would be further investigated in later stage of the project when more site information is available.
- 5.2.13 Both options identified above would be further reviewed in the later stage to determine the most suitable scheme for salt water supply of the proposed development.

5.3 **Utilities**

Utilities Impacts of the Proposed Developments

5.3.1 There are existing utilities including 11kV power supply from CLP, gas main from Towngas & telecommunication cables. Connection points are available at the

- footpath of Tsing Yi Road West near the site access. Distribution network are proposed within the site area for serving the proposed development.
- 5.3.2 There is a section of HyD public lighting and its cable running along existing hiking trail/ access to Liu To Village. Part of the existing lighting and lighting cable shall be removed or diverted to the new hiking trail/ access to Liu To Village.

Recommendations for Utilities

- 5.3.3 The existing networks of power supply, gas mains, telecommunication service system and public lighting system have been reviewed under the Preliminary Utilities Impact Study (UIS) conducted under the Study. The results of this UIS have confirmed that there would be no critical conflicts between the proposed development with major utilities.
- 5.3.4 Street lighting are proposed at public road, including hiking trail. The lights shall be powered by low voltage cable from the CLP networks. Further liaison with CLP and HyD/Lighting is necessary at Investigation, Design & Construction stage for detailed arrangements.

5.4 Summary

5.4.1 From water supply and utilities viewpoints, no insurmountable issues are anticipated for the proposed development.

GEOTECHNICAL 6.

6.1 General

6.1.1 This chapter aims to summarize the geological and geotechnical information about the housing site, identify potential geotechnical impacts that may arise from the proposed development, and recommend the necessary improvements or upgrading works, if any.

6.2 **Ground Condition**

- 6.2.1 The ground condition with the Site has been determined from a review of desk study information as well as the existing ground investigation (GI) records and sitespecific GI results. The site-specific GI works comprising of 4 drillholes and 5 trail pits as shown in Figure CE51/IR/601 with associated in-situ testing carried out under GI Term Contract No. GE2018/06.51.
- 6.2.2 The existing ground level within the Site varies from about +20mPD to +66mPD. The Site is a valley site which slopes are steeply dipping from both sides towards the middle, which forms a watercourse running across the Site. To its southwest is an undeveloped uphill site Kam Chuk Kok, up to +214mPD. To its north is an uphill towards Liu To Road Garden up to +50mPD.
- 6.2.3 According to site-specific drillholes DH1, DH3 and DH4, the Site is covered by a thin layer of Colluvium of 0.5m - 5.0m thick. Thickness of completely decomposed to highly decomposed granite (C/HDG) ranged from 5.0m – 30.0m and bedrock lies about 20.0m - 30.0m below ground level. Different rock types (granite, volcanic rock and porphyry) are noted in existing and site-specific drillholes, suggesting a geological contact exists within the Site.
- 6.2.4 Hong Kong Geological Survey Map Sheet 10 shows that a concealed fault and an inferred fault is striking N-S and NW-SE respectively across the Site. The presences of these faults will affect the rock mass which may undulate in level due to preferential weathering of the rock. However, no thrust fault as indicated in the geological map was identified in the existing and site-specific GI information. Further ground investigation shall be conducted in detailed design stage.

6.3 **Existing Man-made Slopes and Retaining Walls**

There are 15 existing registered man-made features within or in vicinity of the Site. 6.3.1 Details are given in **Table 6.1** below. The locations of the slope features are shown in Figure CE51/IR/602.

Table 6.1 - Features Identified within or in the vicinity of the Site

1. 10NE-B/C 894	2. 10NE-B/C 193
3. 10NE-B/C 877	4. 10NE-B/F 67
5. 10NE-B/F 52	6. 10NE-B/C 175
7. 10NE-B/ND 8	8. 10NE-B/NS 3
9. 10NE-B/C 151*	10. 10NE-B/C 194 (1)
11. 10NE-B/C 150*	12. 10NE-B/C 194 (2)

13. 10NE-B/FR 65 *	14. 10NE-B/C 194 (3)			
15. 10NE-B/F 68*				

Note:

- 1. Features marked with asterisk (*) will be removed.
- 6.3.2 Some of the above-mentioned existing geotechnical features will be affected by the proposed site formation works. New geotechnical features will be formed. Detailed design of the proposed works associated with these geotechnical features will be proposed to GEO for approval. Registration of the geotechnical features (either existing, modified, or new) will be carried out under SIMAR Registration System in accordance with the established procedures/requirements.

6.4 **Natural Terrain Hazard Study (NTHS)**

- 6.4.1 A natural terrain hazard study has been conducted according to GEO Report No. 138, to identify and assess potential natural terrains that may affect the proposed site formation. There are three NTH Study Areas: namely NTSA-1, NTSA-2 and NTSA-3, which consist 6 Open Hillslope (OH) catchments, 3 Channelised (CD) catchments and 2 Topographic Depression (TD) Catchments. The demarcation of those hillside catchments considered is illustrated in Figure CE51/IR/603.
- 6.4.2 The natural terrain hazards are assessed based on the five generic landslide hazards defined in GEO Report No. 138, they are: Open Hillslope Landslide (OHL); Channelized Debris Flow (CDF)/ Failure within Topographic Depression (TDF)); Deep-seated landslide; Rockfall (RF); and boulder fall (BF). The hazard model for the NTSA is based on the findings from desk study, detailed API as well as the established engineering geological model.

6.5 **Findings and Recommendations**

- 6.5.1 The natural terrain hazard assessment indicates that there are potential OHL, CDF and TDF within the Study Areas, whereas rockfall, boulder fall and deep-seated landslides hazards are considered unlikely.
- 6.5.2 The debris mobility modelling for hillside catchments reveal that landslides from hillside catchments OH-5, CD-1, CD-2, CD-3 and TD-2 will not reach the proposed site, as a result, posing no hazard to the development, while landslide debris from hillside catchment OH-1, OH-2, OH-3, OH-4, OH6 and TD-1 will reach the site at the catchment toe.
- 6.5.3 Given that a diverted stream will be constructed at toe of the natural terrain hillside catchments, landslide debris from TDF and OHL will run into the diverted stream and it will be transported by the stream flow without reaching the platform of the development. The identified landslide hazards will then be mitigated owing to the existence of a diverted stream at the toe of the catchments and level difference of the elevated platform.
- 6.5.4 In view of further ground investigations and detailed field mapping will be carried out for the development in the investigation and design stage, the findings, natural

- terrain hazard types and proposed mitigation measures in the preliminary NTHS report, will be further reviewed in next stage.
- 6.5.5 A detailed NTHS will be prepared in detailed design stage in accordance with GEO Report No. 138.

6.6 **Summary**

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

7. LAND MATTERS

7.1 General

7.1.1 The purpose of this chapter is to summarize the key land requirement issues arising from the proposed public housing development.

7.2 **Land Resumption**

7.2.1 Based on the available land status record as shown in Figure CE51/IR/701, the Site is within government land. No private land resumption is involved.

7.3 **Land Acquisition and Alienation**

- 7.3.1 The site is largely within unallocated and unleased government land. The proposed development encroaches into existing government land lots as described below. Land acquisition and alienation will be required for the planned development.
 - (a) Permit for accommodation and agricultural under W5793
 - (b) Licence for watchmen shed and cultivation under 1273
 - (c) Licence for cultivation under KT37206
 - (d) Vesting Order VO66 of Lok Sin Tong Leung Chik Wai Memorial School and Po Leung Kuk Chan Yat Primary School

7.4 Clearance

- 7.4.1 Based on the site inspections, a number of temporary occupations are identified. There are existing temporary fences, areas of land with crops and temporary structure with possible domestic occupation within the site formation boundary. However, it should be subject to detailed site survey to be carried out at later stage.
- 7.4.2 After checking with available land status record, the existing temporary fences, areas of land with crops and the said temporary structure are within unallocated and unleased government land. Clearance, including potential rehousing will be required.
- 7.4.3 Pre-clearance survey will be conducted by LandsD to determine the structures, grave(s) and area(s) to be cleared before processing Land Clearance Application.

7.5 **Accesses Provision**

7.5.1 As shown in Figure CE51/IR/702, the proposed development will affect part of the pedestrian walkway to Liu To Village. Temporary access and re-provision of portion of access road to Liu To Village will be required.

- 7.5.2 The proposed development will affect a section of an existing hiking trail, which will be reprovisioned. A new hiking trail will be provided to the west outside the proposed development.
- 7.5.3 The new hiking trail will also be served as an access to the existing graves located outside the Site.

7.6 Existing Government/quasi-government facilities

7.6.1 A public toilet under government land allocation GLA-KT1176 to FEHD is located outside the proposed works boundary. The proposed development will not encroach the toilet, hence, no re-provisioning is required.

7.7 Existing and proposed developments affecting the proposed infrastructure works

7.7.1 The proposed pedestrian facilities including passenger lift and footbridge would encroach upon VO66 of Lok Sin Tong Leung Chik Wai Memorial School and Po Leung Kuk Chan Yat Primary School and slope features no. 10NE-B/F066, 10NE/B/C194(1) and 10NE/B/C194(3). Relevant parties should be consulted at detailed design stage. Adequate measures shall be taken during construction stage in order to minimize impacts of the works on them.

7.8 Graves, kam taps, urns or shrines

- 7.8.1 Subject to the detailed survey to be conducted by LandsD, there is no kam taps, urns or shrines that may require clearance within the Site.
- 7.8.2 There are three existing graves outside the Site, which located at north to west of the development. The proposed development will not affect the graves, hence, no clearance is required.
- 7.8.3 5m minimum site clearance between the proposed permanent structure and the existing graves is proposed to minimize impact.

7.9 Problematic areas or structures may cause delay

- 7.9.1 If domestic structures and ancient graves which over 60 years, are found, longer clearance time will be required for rehousing arrangement.
- 7.9.2 If clearance of ancient grave is necessary, which over 60 years from any information available, may need longer time to obtain ExCo approval. Nevertheless, clearance of grave is not required according to current development.

7.10 Others

7.10.1 The site falls within the Strategic Cavern Area (SCVA) No. 11 – Tsing Yi West. Pursuant to DEVB TC(W) No. 8/2017, Secretary of Sub-Committee on Cavern Development (SCCD) shall be consulted during detail design stage.

7.11 Summary

7.11.1 A preliminary land requirement study has been carried out to identify the land requirements of the proposed site formation and infrastructural works. It is anticipated that there would be no insurmountable issues from the land acquisition viewpoint.

8. **ENVIRONMENTAL**

8.1 General

8.1.1 A Preliminary Environmental Review (PER) has been conducted to identify the key environmental issues associated with the recommended scheme of the proposed development and associated site formation and infrastructure works during the construction and operation phases.

8.2 **Environmental Impact Assessment Ordinance (EIAO)**

8.2.1 The overall site area of the proposed development is less than 20ha and involving less than 100,000 total population. Furthermore, the proposed roadworks on Tsing Yi Road West is not major extension or improvement on the existing road. Thus, in accordance with the Environmental Impact Assessment Ordinance (EIAO), the proposed development and its relevant road works, shall not be classified as a Designated Project (DP).

8.3 **Air Quality**

Potential Air Quality Impact

- 8.3.1 The major construction activities would be occurred during site clearance, site formation and earth works. During the construction stage, fugitive dust would be generated from heavy construction works, e.g. piling, excavation, loading / unloading of spoils and material handling and wind erosion of exposed open area. Total Suspended Particulates (TSP), Respirable Suspended Particulates (RSP) and Fine Suspended Particulates (FSP) generated from the construction works would be the major pollutant sources.
- 8.3.2 During operation phase, vehicular emissions of Nitrogen Dioxide (NO₂), RSP and FSP from surrounding would be the major potential sources of air impact upon the Site.

Proposed Mitigation Measures – Construction Phase

- 8.3.3 In order to comply with Air Pollution Control Ordinance (APCO), requirements for dust control stipulated in the Air Pollution Control (Construction Dust) Regulation should be incorporated in the Contract Specification in order to minimise any potential dust nuisance arising from the construction activities of the Project. Any potential dust impact and watering mitigation would be subject to the actual site condition. On-site electricity supply should also be provided for powered mechanical equipment during construction phase.
- 8.3.4 The most direct and effective dust suppression measures are regular watering or haulage pavement of main roads within the site formation area. With regular

watering over all the exposed area, it should be sufficient to dampen the exposed surfaces.

- 8.3.5 Wheel washing facilities shall be installed and used by all vehicles leaving the site. No earth, mud and debris shall be deposited on public roads. Water in wheel cleaning facility shall be changed at frequent intervals and sediments shall be removed regularly. Such wheel washing facilities shall be usable prior to any earthworks excavating activity on the site. The Contractor shall also provide a hardsurfaced road between any washing facility and the public road.
- 8.3.6 In addition to implementing the recommended dust control measures mentioned above, it is also recommended that the relevant best practices for dust control as stipulated in the Air Pollution Control (Construction Dust) Regulation be adopted to further reduce the construction dust impacts of the Project, which include the following:

Good Site Management

8.3.7 Loading, unloading, handling and storage of raw materials, wastes or by-products should be carried out in a manner so as to minimize the release of visible dust emission. Any piles of dusty materials accumulated on or around the work areas should be cleaned up regularly. Cleaning, repair and maintenance of all plant facilities within the work areas should be carried out in a manner to minimize generation of fugitive dust emissions. The material should be handled properly to prevent fugitive dust emission before cleaning.

Paving of The Access

8.3.8 Temporary access should be paved/covered where applicable. Unpaved parts of the access should be sprayed with water or a dust suppression chemical so as to keep the entire access surface wet.

Loading, Unloading or Transfer of Dusty Materials

8.3.9 All dusty materials should be sprayed with water immediately prior to any loading or transfer operation so as to keep the dusty material wet. The loading, unloading and transfer area should be enclosed by enclosures.

Debris Handling

8.3.10 Any debris should be covered entirely by impervious sheeting or stored in a debris collection area sheltered on the top and the three sides. Before debris is dumped into a chute, water should be sprayed so that it remains wet when it is dumped.

Cover for Dusty Materials

8.3.11 Vehicle used for transporting dusty materials/spoils should be covered with tarpaulin or similar material. The cover should extend over the edges of the sides and tailboards.

Site Hoarding and Guarding

8.3.12 Where a site boundary adjoins a road, street, service lane or other area accessible to the public, hoarding or guarding of not less than 2.4m high from ground level should be provided along the entire length of that portion of the site boundary except for a site entrance or exit.

<u>Proposed Mitigation Measures – Operation Phase</u>

8.3.13 There is no industrial chimney identified within the study area. Sufficient buffer distance of 10m with reference to the Hong Kong Planning Standards and Guidelines (HKPSG) are provided between the road kerb of Tsing Yi Road West and the air sensitive uses of the proposed development. Proposed PTI of the development will be designed to ensure no insurmountable impact to the surrounding. Therefore, no further mitigation measure is required.

Residual Impact

- 8.3.14 As the detailed implementation plan for construction works is not available at the time of this PER, further assessment for the construction phase will be carried out at the detail design stage. With the implementation of appropriate mitigation measures as mentioned above, the air quality impact during construction would not be insurmountable.
- 8.3.15 For operation phase, with sufficient buffer distances reserved as stated above, the air quality impact is considered as limited.

8.4 Noise

Potential Construction Noise Impact

8.4.1 The potential source of noise impact for construction of the Project would be the use of Powered Mechanical Equipment (PME) for various activities, including site clearance, earth works, rock excavation, construction of retaining structure and road works within the project Sites.

Potential Traffic Noise Impact

8.4.2 Road traffic from nearby road network (i.e. Tsing Yi Road West) is the dominant noise impact on the proposed development.

Potential Fixed Noise Impact

8.4.3 The major fixed noise impact on the proposed development would be generated by the operation of cooling towers at Lok Sin Tong Leung Chik Wai Memorial School and Cheung Hong Estate Commercial Centre No. 2.

Proposed Mitigation Measures for Construction Noise Impact

- 8.4.4 The construction noise impact would not be insurmountable with proper implementation of noise control measures. Noise mitigation measures include:
 - good site practice to limit noise emission at source;

- scheduling of construction works outside school examination periods;
- use of silenced equipment;
- use of movable noise barrier; and
- use of noise enclosure/ acoustic shed.

Proposed Mitigation Measures for Road Traffic Noise Impact

8.4.5 Predicted noise levels at some assessment points at the domestic blocks and podium structure exceeded the relevant noise criteria. Noise mitigation measures including acoustic windows or 1.5m acoustic fins are recommended for domestic blocks and acoustic windows or fixed glazing for the podium structure. The podium structure should be allocated such that openable windows facing Tsing Yi Road West for ventilation would be minimised.

Proposed Mitigation Measures for Fixed Noise Impact

8.4.6 A PTI within the proposed development is proposed. However, it would be enclosed below the proposed podium with no line of sight to the residential blocks of the proposed development and nearby existing sensitive receivers. Therefore, the fixed noise impact resulted from this proposed PTI is anticipated to be minimal. No mitigation measure would be required as no exceedance of criterion is predicted.

Residual Impact

- 8.4.7 With proper implementation of the noise control measures, the construction noise impact would not be insurmountable.
- 8.4.8 With provision of acoustic windows or acoustic fins for domestic blocks and acoustic windows or fixed glazing and minimisation of openable windows in the podium structure facing Tsing Yi Road West for the proposed development, the traffic noise impact would not be insurmountable and could be complied with traffic noise standard as stipulated in the HKPSG.

8.5 Water Quality

Potential Water Quality Impact

- 8.5.1 The major water quality pollution sources during construction phase would be generated from construction site run-off, accidental spillage, general construction activities and sewage effluent from workforce. Without proper mitigation measures, increased loads of suspended solids, high levels of Biochemical Oxygen Demand (BOD), ammonia, E.coli counts and chemicals would have impact on the water quality of the local drainage and fresh water system.
- 8.5.2 Potential sources of water quality impact associated with operation of the Project include sewage generated from the development and runoff from road surfaces and paved areas.

Proposed Mitigation Measures for Water Quality Impact

- The good site practices outlined in ProPECC PN 1/94 "Construction Site Drainage" 8.5.3 should be followed as far as practicable in order to minimise surface runoff and erosion, and also to retain and reduce any suspended solids prior to discharge. Contractor must register as a chemical waste producer if chemical wastes would be produced from the construction activities. The Waste Disposal Ordinance (Cap. 354) and its subsidiary regulations in particular the Waste Disposal (Chemical Waste) (General) Regulation, should be observed and complied with for control of chemical wastes. The Contractor should provide temporary sanitary facilities, such as portable chemical toilets within the construction site to handle sewage from the workforce.
- 8.5.4 During the operation phase, all sewage generated from the Proposed Development should be collected and conveyed to the nearest public sewerage system via proper connections to minimise water quality impact from the operation of the proposed development. The stormwater runoff from paved surfaces within the Site will be directed to a managed stormwater drainage system. With implementation of stormwater best management practices including provision of trapped gullies and catch-pits, adverse impacts to the water quality is not anticipated.

Residual Impact

- 8.5.5 With the effective implementation of the recommended mitigation measures, e.g. construction of a suitable drainage system with silt traps, good site management practices, careful working practices and proper sewage collection and disposal system, no adverse water quality impact during construction phase is anticipated.
- During the operation phase, with full implementation of the mitigation measures, 8.5.6 no significant impact is anticipated.

8.6 **Ecology**

Ecological Baseline

8.6.1 There is no recognized site of conservation importance, such as Country Park, Special Area or Site of Special Scientific Interest (SSSI), within the Project Site. The only recognized site of conservation importance in Tsing Yi Island, the South Tsing Yi SSSI, is about 1.3km from the Project Site. This SSSI of area about 1.1ha was designated in 2005 and is located at a slope below the peak at South Tsing Yi. The woodland harbours a population of the endemic shrub Hong Kong Croton hancei, which is the only known surviving population in the world. No ecological importance resource was identified in the Project Site from the reviewed literature. Ecological survey was conducted between May and October 2019 covering 6 months in wet season to collect update information about the Site and nearby areas. The habitat map within the 100m Assessment Area is presented in Figure CE51/IR/801.

Construction Phase Impact

8.6.2 The proposed development involves site formation and stream diversion. It causes loss of habitats include developed area, plantation and village/orchard, woodland and watercourse. Of which the ecological value of woodland and watercourse was ranked as low to moderate and moderate respectively. The other habitats were ranked as low or very low ecological value. The potential impact to woodland and associated wildlife due to construction disturbance is considered as Minor to Moderate. The indirect impact due to noise and dust is anticipated to be minor and can be minimised by implementation of good site practice.

8.6.3 Elevated suspended solids levels caused by site runoff could increase the suspended solids load in the water bodies, and could decrease dissolved oxygen levels. The watercourse within the proposed development area are also mostly natural in nature, but with more human disturbance and, with low diversity and abundance of aquatic life. Without proper control of surface runoff, the potential impact due to runoff to watercourse is considered Minor to Moderate. Good site practice should be followed to minimize the impacts.

Operation Phase Impact

8.6.4 Potential impacts during operational phase will include increase of human activities from residential development, traffic and artificial lightings, and might affect the utilisation of habitats surrounding the proposed development area. However, the Site is adjacent to developed areas, including roads and residential areas. Fauna inhabiting these habitats are probably disturbance tolerant. Sensitive species might have already avoided these habitats. Hence, the potential impact due to increase of human activities, traffic and artificial lightings during operation phase is anticipated to be Minor.

Species of Conservation Importance

- 8.6.5 Four trees of *Aquilaria sinensis*, protected under Cap 586 of Hong Kong legislation, were recorded in woodland within the Site and will be directly impacted. The potential impacts to these Aquilaria sinensis individuals are ranked as Minor to Moderate. Transplantation of these individuals is recommended.
- 8.6.6 Two freshwater crabs Cryptopotamon anacoluthon and Nanhaipotamon hongkongense were recorded in the watercourse within the Site and will be directly impacted. The potential impacts these two species are ranked as Moderate, and hence translocation is recommended.
- 8.6.7 Japanese Pipistrelles were only foraging inside the boundary of Site. Alternative foraging habitats (e.g., woodland) are available outside the Site. The potential impact to this species is anticipated to be Insignificant.
- 8.6.8 The roosting site of Short-nosed Fruit Bat was outside the Site and will not be directly affected. Since the roosting site was away from the Site and will not be adversely affected by construction disturbance. The potential impact to this species is anticipated to be Insignificant.
- 8.6.9 Black Kites only soared above Developed Area outside the Site. This species occurs in many types of habitats in Hong Kong (Carey et al. 2001), including urban areas and is considered disturbance tolerant. The potential impact due to loss of

habitat and disturbance during construction and operation phases to this species is anticipated to be Insignificant. No mitigation measure is considered necessary.

- 8.6.10 Two dragonfly species of conservation importance were recorded in the watercourse within the Project Site. No nymph of these two dragonfly species was found. Adult dragonflies are very mobile and hence are not susceptible to site formation. The potential impact of loss of habitat to these two species is ranked as Minor as only one/two individuals of each species was recorded. The impact will be mitigated by creation of habitat of these two dragonfly species in the diverted sections.
- 8.6.11 Two other rare species of climbers and shrubs, *Gnetum luofuense* and *Diospyros vaccinioides*, were recorded outside the Site and will not be directly affected. Although they are categorized as near threatened in the IUCN Red List (IUCN 2019), both are common in Hong Kong and not known to be significantly exposed to any conservation threat to Hong Kong. The potential impact to these species is anticipated to be Insignificant.

Mitigation Measures

- 8.6.12 Mitigation measures such as compensation planting, transplantation of 4 trees of *Aquilaria sinensis*, set up 10m buffer zone after site formation between diverted watercourse and public housing development, habitat creation for the diverted watercourse, translocation of aquatic species of conservation importance and construction of green channel would be implemented to minimize the potential impact.
- 8.6.13 Diversion of the watercourse is inevitable for the proposed development. Ecological elements (e.g., rock pools, riffles, structures maintaining ecological connectivity) should be deployed in the diverted sections to increase the ecological function as habitats of aquatic fauna. Three ecological principles, ecological connectivity, provision of habitats for wildlife and naturalness should be followed as much as possible when designing the diverted section.
- 8.6.14 To increase the habitat complexity of the diverted watercourse, gabions will be used to build the watercourse bank. Reuse of excavated rock materials in the gabion would help in reducing the need for offsite disposal. Riparian planting is proposed within the gabion as part of habitat recreation for aquatic communities. The irregular gabion surface and gaps between the gabions can retain sediment to provide suitable habitats for re-colonization of stream fauna.
- 8.6.15 Loss of woodland should be mitigated by compensatory planting. It is recommended that the planting list should comprise (1) native species which occur in nearby woodland habitats; (2) both native tree and shrub species with variable maximum heights to shape forest complexity and structure, as well as the canopy and understorey; (3) native bird-attracting and butterfly-attracting shrub and tree species to increase the ecological function of the compensation woodlands; (4)

butterfly larval plant species to increase the ecological function of the compensation woodlands.

- A compensatory planting plan will be submitted to relevant authorities by the 8.6.16 contractor of building construction. The compensation planting plan shall include selection of planting locations, planting species, maintenance and planting schemes. The survival and conditions of the planted plants should be inspected during the maintenance period and replant where necessary.
- 8.6.17 Furthermore, exploration of opportunity for off-site planting will be carried out in the later subsequent stage.
- 8.6.18 With the implementation of the recommended mitigation measures, no significant residual impact is anticipated.

8.7 Waste Management

Construction Waste Management

- 8.7.1 A variety of wastes are anticipated to be generated during the construction phase that can be divided into different key categories based on their composition and ultimate method of disposal. The identified waste types include Construction and Demolition (C&D) materials (includes inert and non-inert C&D materials), chemical waste and general refuse. The estimated quantities of generation of surplus inert C&D materials and the amount to be re-use and dispose will be investigated in the investigation and design stage. Mitigation measures as follows have been proposed.
 - Good site practices with appropriate waste handling, store and disposal methods:
 - Waste reduction measures at planning and design stage as well as ensuring the implementation of good site practices;
 - The inert C&D materials (particularly excavated soil) should be reused onsite as fill material as far as practicable or reused as fill materials in local projects requiring public fill for reclamation. The surplus inert C&D materials will be disposed of at the Government's PFRFs for beneficial use by other projects in Hong Kong. The C&D materials generated from general site clearance should be sorted on site to segregate inert materials for reuse or disposal at PFRFs, whereas the non-recyclable non-inert materials will be disposed of at the designated landfill site.
 - The Contractor will be required to register with the EPD as a chemical waste producer and follow the guidelines stated in the "Code of Practice on the Packaging Labelling and Storage of Chemical Wastes". Good quality containers compatible with the chemical waste should be used, and incompatible chemicals should be stored separately.
 - General refuse should be stored in enclosed bins or compaction units separated from inert C&D materials. A reputable waste collector should be

employed by the Contractor to remove general refuse off-site separately from inert C&D materials.

Operation Phase Waste Management

- 8.7.2 During operation, general refuse should be collected on daily basis and delivered to the refuse collection point accordingly. A reputable waste collector should be employed to remove general refuse regularly to avoid odour nuisance or pest/vermin problems.
- 8.7.3 In the case of chemical waste being generated, the operator should register with EPD as a Chemical Waste Producer.
- 8.7.4 In accordance with Project Administration Handbook for Civil Engineering Works Chapter 4, for the project requires imported fill exceeding 50,000 m3, the Construction and Demolition Materials Management Plan (C&DMMP) should be submitted to Public Fill Committee (PFC) for in-principle approval prior to commencement of the detailed design. The C&DMMP should be vetted and endorsed by the departmental Vetting Committee before submitting it to PFC for approval.

Residual Impact

8.7.5 Construction waste is suggested to be on-site recycled as much as possible. Various waste management measures and good site practices also provided to reduce the volume of waste. Provided that the waste is managed by implementing all the recommended measures, no unacceptable adverse environmental impacts arising from the handling, storage, transportation or disposal of the waste generated by the Project would be envisaged during construction and operation phases.

8.8 Land Contamination

8.8.1 There is no potential land contaminative source and no visible sign of any contamination and spillage reported on the Site, the potential of land contamination on the Site is considered low.

8.9 Cultural Heritage Impact

8.9.1 There is no heritage sites within 50m from the Site. Thus, cultural heritage impact assessment is not necessary.

8.10 Hazard Assessment

- 8.10.1 The LPG/Oil Terminal is operated by Shell and located at West Tsing Yi TYTL 109 s.A.. It is classified as a Potentially Hazardous Installation (PHI) under the definition set in the HKPSG and has a Consultation Zone (CZ) of 1000m from the centre of LPG/Oil Terminal as outlined in PHI Register.
- 8.10.2 A hazard assessment has been conducted to identify hazardous scenarios associated with the LPG/Oil Terminal operated by Shell Hong Kong Ltd (Shell) with a view

to determining a set of relevant scenarios to be included in a Quantitative Risk Assessment (QRA).

8.10.3 The results of the study have shown that the individual risk criteria was in compliance with the Hong Kong Risk Guidelines (HKRG), while the societal risks of the LPG/Oil Terminal were within the As Low As Reasonably Practicable (ALARP) region of the HKRG for all cases. The proposed development has negligible contribution to the off-site risk of the LPG/Oil Terminal.

8.11 **Summary**

8.11.1 It is anticipated that no insurmountable issue from the environmental point of view for the proposed development.

9. AIR VENTILATION ASSESSMENT IN THE FORM OF EXPERT EVALUATION

9.1 General

9.1.1 Qualitative assessments of wind environments with the proposed public housing development have been carried out based on the conceptual layouts. The conceptual layouts of the proposed public housing development are shown in **Figures CE51/IR/901**.

9.2 Summary on Site Wind Availability and Air Ventilation Performance

Site Wind Availability

9.2.1 The annual prevailing winds mainly come from ENE, E and ESE directions, while the winds from E, SSE, S and SSW are the dominant wind directions during summers. Currently, there is no building structure within the Site. It is expected that the proposed high-rise development at the currently vacant site would induce some air ventilation impact to the surroundings under various prevailing winds.

Existing Wind Environment

- 9.2.2 Under prevailing ENE, E and ESE winds, the major road such as Ching Hong Road is generally oriented with a small angle between the prevailing winds directions, which could provide a good air path to ventilate south-east side of the Site. At the north-east side, there are green open space (e.g. Tsing Yi Road West Park) and low-rise building groups (e.g. Yim Tin Kok Restie Village, Lam Tim Resite village, etc.), where are useful for air paths to converge into the Site. In general, the incoming ENE, E and ESE winds can penetrate through the development site without much blocking and reach the downstream area at hillside and Mount Haven under the existing scenario. However, at the north-east part of the Site, these incoming winds may be slightly hindered by the elevated part of Tsing Yi Road West. Moreover, the high-rise developments (e.g. Cheung Hong Estate, Ching Wah Court, Cheung Ching Estate, etc.) on the east side of the Site would induce wind blockage effect to the immediate leeward region and relatively calm wind environment is expected at this portion and further downstream area.
- 9.2.3 Under prevailing SSE, S and SSW Winds, the major potential south-north wind corridors, in Tsing Yi Road West, Tsing Wah Playground and green open space at the south of the site under these winds could be observed. The incoming prevailing SSW wind flowing down the upstream hills' terrains and reach the development site directly, then flow through the vacant site, and reach the downstream area at Liu To Road Garden and Tsing Yi Road West. The prevailing S and SSE winds could flow along Tsing Yi Road West at the upstream and reach the Site without much blockage, then flow along the north-south valley topography within the vacant site and reach the downstream area at Mount Haven and Liu To Road. While, the elevated Tsing Yi Road West may be slightly blocking part of incoming winds and affect the ventilation environment at its downstream area under prevailing S and SSE winds. Moreover, the high-rise developments (e.g. Ching Wah Court, etc.)

would induce wind blockage effect and reduce the amount of S and SSE winds entering the south-east area of the Site.

9.2.4 In general, the Development Site, large areas of green open space and low-rise building area in the north to east side, together with major roads such as Tsing Yi Road West and Liu To Road form an air ventilation network. The annual and summer prevailing winds can penetrate through the currently vacant development site and reach the downstream areas without obstruction under the existing scenario.

Ventilation Performance of Proposed Development

- 9.2.5 The proposed high-rise buildings are arranged at podium of 73.5mPD and 80.5mPD atop a site formation platform (ranging from 46mPD to 54mPD) higher than the existing terrains at a range around 20mPD to 65mPD levels. Such development situated on the currently vacant Site would expect to have some adverse effects on the surrounding wind environment under various prevailing winds. Comparing with the existing condition under which the prevailing winds would flow through the site without obstruction, the proposed development would block a portion of these winds and weaken the winds, and these winds will have to flow at a higher level or flow along the sides of the development in order to pass through the Site. The proposed development would result in a relatively calm wind environment at the pedestrian level in downstream area, e.g. the area near the southern side of Mount Haven under ESE wind, and areas near Mount Haven, Liu To Road Garden and Liu To Road under southerly winds. Notwithstanding, it is worth noting that the downstream areas of the site under ENE and E winds are mainly inaccessible hilly terrain.
- 9.2.6 Under annual prevailing ENE, E and ESE wind condition, the adequately wide building gaps (not less than 15m) above podium level between building Blocks 1 to 3 could maximize the air permeability of the Site and minimize its impact on wind capturing potential of adjacent developments. Moreover, a building setback (~30m) from the northern site boundary to building Block 3 is provided to facilitate ENE, E and ESE winds penetration through the Site and reach its downstream area at areas near Mount Haven. In the proposed building layout option, the podium garden with a void about 4m high is considered below the building Blocks 1 to 3 to facilitate air penetration through the proposed development and reach its downstream areas. Thus, the blocking effect on air ventilation by the proposed development would be minimized.
- 9.2.7 Under summer prevailing E, SSE, S and SSW winds, the proposed building Blocks 2 and 3 have small angles (less than 30°) between the axis of building blocks and the prevailing E wind direction. It could minimize their blockage of wind under such prevailing wind direction. The disposition of building blocks away from the western Site boundary is provided to facilitate SSW and S winds penetration through the site and reach its downstream area at areas near Mount Haven. Moreover, to minimize the potential air ventilation impact induced, a 10m wide building setback from edge of Tsing Yi Road West has been provided for the proposed development to facilitate some portions of SSE, S and SSW winds to reach the downstream areas. Like in annual wind conditions, the podium garden with a void about 4m high below the building Blocks 1 to 3 could help to enhance

air permeability at lower portion of the proposed development under summer winds conditions.

9.3 Conclusions and Recommendations

- 9.3.1 Incoming winds may be blocked by the proposed high-rise building blocks, which would affect wind availability at the downstream areas under both the annual prevailing ENE, E and ESE winds, and summer prevailing E, SSE, S and SSW winds. In order to minimize the potential ventilation impacts, the conceptual layout of the proposed public housing development has been carefully designed after a qualitative assessment of wind performance of the Site with the consideration of the mitigation measures incorporated in the proposed development. The proposed mitigation measure would help alleviate the potential adverse impact on ventilation environment around the Site.
 - At least 15m wide building separation for building blocks in the proposed public housing development to facilitate winds penetration through the Site;
 - Buildings aligned in parallel to prevailing wind (i.e. with a small angle less than 30° between the longer frontage of building Blocks 2 and 3 and the prevailing E and ESE winds). The disposition of building blocks away from the western site boundary is provided to facilitate SSW and S winds penetration through the Site;
 - Building setback (i.e. a ~30m building setback from the northern Site boundary to building Block 3, and a 10m building setback from edge of the Tsing Yi Road West) to facilitate winds penetration through the Site and reach its downstream area; and
 - About 4m high void between podium and building blocks atop to provide permeability at the lower portion of the development.
- 9.3.2 Further recommended design principles for consideration at the Investigation, Design & Construction stage to facilitate wind penetration are listed below:
 - Maximize building permeability with reference to the good design features suggested in PNAP APP-152;
 - Building separation with reference to PNAP APP-152 for the avoidance of long continuous facades, minimization of podium bulk and ground coverage;
 - Building setback with reference to PNAP APP-152;
 - For public housing, developments greening coverage at least 20% and an overall target of 30% is aimed to be achieved for sites over two hectares. Reference could also be made to PNAP APP-152 "Site Coverage of Greenery"; and
 - Reference could also be made to recommendations of design measures in the Hong Kong Planning Standards and Guidelines.
- 9.3.3 As discussed above, these mitigation measures for the development design would help minimise the potential air ventilation impact on the surrounding areas. It is essential that the designers shall consider the recommended good design features such as building setback, building gap, etc. Nevertheless, these mitigation measures

- are only the preliminary findings and exact location and adoption of the proposed mitigation measures shall be further reviewed and examined in detailed design stage.
- 9.3.4 A quantitative AVA Initial Study is recommended to be conducted at detailed design stage to review and assess the effectiveness of the proposed mitigation measures as well as to optimise the scheme.

9.4 **Summary**

9.4.1 From the air ventilation point of view, the proposed high-rise development at the currently vacant site would induce some air ventilation impact to the surroundings under various prevailing winds. Various mitigation measures have been incorporated in the proposed development to minimise such impact.

10. LANDSCAPE AND VISUAL IMPACTS

Landscape Impact Assessment

10.1 General

10.1.1 Preliminary Tree Survey and Landscape Impact Assessments (LIA) were conducted for the Site such that the value of the landscape can be determined, the likely impacts can be assessed and feasible mitigation measures (if any) can be identified.

10.2 Preliminary Tree Survey Summary

- 10.2.1 Broad brush tree group surveys were conducted in September 2019 and October 2020 within 20m from the site formation boundary. The tree survey identified 48 tree groups and found approximately 1,720 nos. of trees within the tree assessment boundary. The majority of the existing trees surveyed are located on a valley to the west of Tsing Yi Road West. There are also two tree groups located under the bridge of the aforesaid road and two on the east to the road. Summary of surveyed trees are shown in **Table 10.2.1**. The tree survey plan is shown in **Appendix B**.
- 10.2.2 A total of 47 species, comprising 21 native and 26 exotic species to Hong Kong, were recorded excluding 4 dead trees. The most dominant tree species were Acacia confusa (台灣相思), Litchi chinensis (荔枝), Artocarpus heterophyllus (菠蘿蜜), Dimocarpus longan (龍眼) and Clausena lansium (黃皮). They are common exotic species found in Hong Kong's secondary forest and countryside villages. The general condition of the trees within the tree survey area were found to be average.
- Among surveyed trees, a total of sixteen (16 nos) were classified as Trees of Particular Interest, according to Guidelines for Tree Risk Assessment and Management Arrangement. They are species of *Aquilaria sinensis* (土沉香) and *Michelia* x *alba* (白蘭).
- For species Aquilaria sinensis (土沉香), four (4 nos.) trees of were found within the Site. A. sinensis has conservation status and is protected under Cap 586 of Hong Kong legislation. This tree species is categorized as "Near Threatened (NT)" under Rare and Precious Plants of Hong Kong (Status in China), as "Vulnerable (V)" under China Plant Red Data Book and listed as "Vulnerable (VU)" in IUCN Red List of Threatened Species. Individual tree survey was carried out.
- 10.2.5 For species *Michelia* x *alba*, twelve (12 nos.) of were found in this survey. *M*. x *alba* were listed under Cap. 96 Forest and Countryside Ordinance of Hong Kong legislation. This species is widely cultivated and exotic to Hong Kong. All the *M*. x *alba* found in this survey were of average condition and size and therefore, they are not considered species of conservation important.

Table 10.2.1 Summary of Surveyed Trees

Species	Chinese Name	Origin	Estimated No. of Trees	
Acacia auriculiformis	耳果相思	Exotic	1	
Acacia confusa	台灣相思	Exotic	377	
Acacia mangium	大葉相思	Exotic	31	
Acronychia pedunculata	山油柑	Native	1	
Aporosa dioica	銀柴	Native	3	
Aquilaria sinensis	土沉香	Native	4	
Archontophoenix alexandrae	假檳榔	Exotic	3	
Artocarpus heterophyllus	菠蘿蜜	Exotic	189	
Bauhinia purpurea	紅花羊蹄甲	Exotic	26	
Bischofia javanica	秋楓	Native	1	
Bridelia tomentosa	土蜜樹	Native	2	
Caryota ochlandra	魚尾葵	Exotic	1	
Caryota urens	董棕	Exotic	1	
Casuarina equisetifolia	木麻黄	Exotic	1	
Celtis sinensis	朴樹	Native	13	
Citrus maxima	柚	Exotic	5	
Clausena lansium	黄皮	Exotic	125	
Cratoxylum cochinchinense	黄牛木	Native	22	
Dead tree	死樹	-	7	
Delonix regia	鳳凰木	Exotic	1	
Dimocarpus longan	龍眼	Exotic	181	
Diospyros kaki	柿	Exotic	5	
Eucalyptus citriodora	檸檬桉	Exotic	6	
Eucalyptus torelliana	毛葉桉	Exotic	14	
Ficus hispida	對葉榕	Native	12	
Ficus variegata	青果榕	Native	2	
Ficus virens	大葉榕	Native	12	
Gordonia axillaris	大頭茶	Native	7	
Leucaena leucocephala	銀合歡	Exotic	100	
Ligustrum sinense	山指甲	Exotic	4	
Litchi chinensis	荔枝	Exotic	199	
Litsea cubeba	木薑子	Native	1	
Lophostemon confertus	紅膠木	Exotic	8	
Macaranga tanarius var. tomentosa	血桐	Native	61	
Machilus chekiangensis	浙江潤楠	Native	6	
Machilus velutina	絨毛潤楠	5		
Mallotus paniculatus	白楸	Native	25	

Mangifera indica	芒果	Exotic	5	
Melia azedarach	苦楝	Exotic	1	
Michelia x alba	白蘭	Exotic	12	
Microcos nervosa	布渣葉	Native	113	
Rhus succedanea	野漆樹	Native	6	
Schefflera heptaphylla	鴨腳木	Native	55	
Sterculia lanceolata	假蘋婆	Native	39	
Syzygium jambos	蒲桃	Exotic	8	
Tetradium glabrifolium	楝葉吳茱萸	Native	10	
Thevetia peruviana	黄花夾竹桃	Exotic	8	
Vernicia montana	木油樹	Exotic	1	
		Total	1720	

- 10.2.6 Among the surveyed trees, individual trees with Diameter at Breast Height (DBH) over 500mm, OVTs/potentially registrable OVTs and rare/endangered/protected plant species or plant species of conservation value that may be affected by the development, were recorded. Summary of these individual trees are shown in **Table 10.2.2**, while location and photo records are shown in **Appendix B**.
- 10.2.7 The survey result showed that none of the surveyed trees are Registered Old and Valuable Trees (OVTs), or potential OVTs according to the criteria specified in *DEVB TC(W) No. 5/2020*.
- Fourteen (14 nos.) mature trees with DBH >=500mm were found in this survey, all were located on hillside slopes. The general tree conditions were average and DBH ranged from around 500mm to 620mm. Amongst the 14 nos. trees, 6 nos. are exotic pioneer species *Acacia confusa* (台灣相思) and 3 nos. are exotic fruit tree species *Artocarpus heterophyllus* (菠蘿蜜). Only 1 no. native tree species *Microcos nervosa* was found with DBH of 614mm.
- 10.2.9 Four (4 nos.) *A. sinensis* has conservation status and is protected under Cap 586 of Hong Kong legislation. 3 of them are trees with DBH over 95mm while 1 of them is a younger tree with DBH of around 60mm. The 4 trees are around 6-7m tall and with 1-3 m crown spread. All 4 trees are located on slope with average health condition. Transplantation is recommended.

Species Measurements Tree Group Scientific name Tree Chinese Height DBH at **Spread** No. No. name (m) 1.3m (m) (mm) 台灣相思 T2 13 520 33 Acacia confusa 6 T3 Acacia confusa 台灣相思 12 500 8 25 台灣相思 T4 Acacia confusa 14 500 6 22 T5 台灣相思 15 6 Acacia confusa 520 19 檸檬桉 T15 Eucalyptus citriodora 17 500 5 11 T20 Litchi chinensis 荔枝 15 505 8 9 T21 龍眼 15 540 8 1 Dimocarpus longan 杧果 T22 Manaifera indica 17 8 1 590 布渣葉 T24 Microcos nervosa 15 614 8 1 菠蘿蜜 T25 Artocarpus heterophyllus 12 500 6 23 菠蘿蜜 10 6 T26 Artocarpus heterophyllus 530 21 菠蘿蜜 T27 10 510 6 21 Artocarpus heterophyllus T29 台灣相思 Acacia confusa 13 520 6 30 T30 Acacia confusa 台灣相思 9 576 10 29 土沉香 7 3 T16 Aquilaria sinensis 110 4 T17 土沉香 6 1 19 Aquilaria sinensis 100 7 土沉香 2 T18 110 19 Aquilaria sinensis T19 Aquilaria sinensis 土沉香 6 60 1 11

Table 10.2.2 – Summary of Individual Trees

10.3 Preliminary Tree Treatment Proposal

- 10.3.1 In order to preserve and protect the valuable tree resources, due consideration should be given to ensure the existing trees identified within the Site would not be unnecessarily felled or pruned. Transplanting trees with high conservation and amenity value should be taken into consideration given retaining in-situ is not viable and the trees are of good health condition and have a high survival rate after transplanting. Tree felling should be regarded as a last resort whenever preservation by retaining in-situ or transplanting is impractical.
- 10.3.2 According to the preliminary estimation, among the 1720 nos. of trees identified in the tree survey assessment boundary, approximately 1264 nos. of trees will be affected by the site formation and associated infrastructure works due to unavoidable conflict with the proposed public housing development, structural platforms and footbridge. Among the 1264 trees, 4 nos. of *Aquilaria sinensis* are proposed to be transplanted. The remaining affected 1260 nos of trees are not recommended for transplanting for their low anticipated survival rate, low amenity value or the infeasibility of extracting a rootball suitable for transplanting. Out of the 14 nos. mature trees with DBH over 500mm, 4 nos. of them will not be affected and the remaining 10 nos. of trees are proposed to be removed due to unavoidable

conflict with the proposed works. A formal Tree Preservation and Removal Proposal application should be prepared and submitted for approval to relevant government departments at the next stage – Investigation, Design and Construction.

- 10.3.3 Preliminary Tree Preservation and Planting Proposal
- 10.3.3.1 A total of approximately 456 surveyed trees outside the site formation boundary will not be affected and are proposed to be preserved in-situ, including 4 nos. of mature trees with DBH over 500mm as mentioned above. All retained trees will be properly protected throughout the construction period of the Project. Tree protection measures shall be undertaken in accordance with Guidelines on Tree Preservation during Development by DEVB and Section 26 of General Specification for Civil Engineering Works (latest ed.)
- 10.3.3.2 4 individuals of *Aquilaria sinensis* are proposed to be transplanted to the "Green Belt' zone near the Site. The maintenance and management responsibility for those Aquilaria sinensis would be taken up by appropriate department in accordance with DEVB TC(W) No. 6/2015.
- 10.3.3.3 According to the latest Tree Planting Plan with Transplant Location (Figure CE51/IR/1005), areas have been designated for tree planting and transplanting at the west and north of the Site. Under the current proposal, there will be 87 nos of proposed tree planted near the proposed development. Light standard sized trees with 3m spacing are recommended for better establishment and adaptability. A compensatory planting plan will be submitted to relevant authorities by the contractor of building construction. The compensation planting plan shall include selection of planting locations, planting species, maintenance and planting schemes. The survival and conditions of the planted plants should be inspected during the maintenance period and replant where necessary. With a view to maximising the scope of tree planting, a couple of prospective parcels, which are still subject to further coordination with the responsible departments, are being reviewed under a continuous search for potential areas for off-site planting. This search to explore more opportunities for off-site planting is going to be extended into the subsequent stages to proceed together with individual tree survey as well as intensified coordination with relevant departments.
- Landscape and trees within the rezoning boundary shall be designed separately by 10.3.3.4 HD. A minimum of 215-255 nos. of trees based on the proposed flat number will be provided by HD. A detailed review of the landscape design would be carried out in the next stage
- 10.3.3.5 The quantity of trees will be subject to further review on planting arrangement during the next stage – Investigation, Design & Construction stage. However, this preliminary compensatory tree planting proposal could serve as a reference to the detailed tree preservation and removal proposal in that stage.

10.4 Summary on Landscape Assessment

10.4.1 According to Figure CE51/IR/1006-8, there are a total of 8 Landscape Resources (LR) and 3 Landscape Character Area (LCA) will be affected. The description of LRs and LCAs are listed in Table 10.4.1 as follows:

Table 10.4.1 – Description of LRs and LCAs

LRs	Description				
LR1	Woodland				
LR1.1 Woodland by Nam Wan and Kam Chuk Kok	This area is mainly zoned as Green Belt. It is a moderate dense vegetated wooded hillside with hiking trails. Most tre range from young to semi-mature and are located on slope.				
LR1.2 Woodland by Tsing Yi Road West	This area is mainly zoned as Open Space. It is a moderately dense vegetated woodland valley and slopes. Most trees range from semi-mature to mature and are located on slope.				
LR1.3 Plantation by Tsing Yi Road West & Cheung Tsing Highway	This LR is located on man-made slopes next to Tsing Yi Road West & Cheung Tsing Highway. As it is closed of the woodland hillside, species found are a mixed native and exotic, fast growing species.				
LR1.4 Plantation by Ching Hong Road, Chung Mei Road & Liu To Road	This LR is located on man-made slopes next to Ching Hong Road, Chung Mei Road & Liu To Road. Fast growing species can be found on these slopes.				
LR2	Agriculture				
LR2.1 Agriculture Land	This LR is scattered agricultural land that consists of mainly orchards located within lower slopes of Kam Chuk Kok.				
LR3	Open Space				
LR3.1 Liu To Road Garden	This LR is a small public park catering to local residents. The few trees within the park is planted along the pedestrian footpath of Liu To Road.				
LR3.2 Tsing Yi Road West Park	This LR is a large public park without facilities. Most of the landscape was retained from the original natural woodland and minimal facilities and walkways are provided to allow more planting space.				
LR3.3 Liu To Road Playground	This LR is a small playground containing a ball court, seating area and ornamental, buffer planting located along the periphery of the site.				
LR3.4 Tai Wong Ha Playground & Tsing Yu	This LR is a large public park catering to local residents. It contains several ball courts, exercise equipment, children's playground, seating areas and pavilions. Parts of the natural				

Street Garden & Tsing Yi Four Village Playground	woodland have been retained as part of buffer planting in the landscape design.
LR3.5 Tsing Wah Garden & Playground	This LR is a small public park catering to local residents. It contains ball courts, exercise equipment, seating areas and pavilions.
LR4	Water Resource
LR4.1 Natural Watercourse	This LR is a natural stream flowing west to east direction. The source is by Kam Chuk Kok and the water flows to manmade underground pipes at the end of Tsing Yi Road West Park by Resite Villages. The stream cuts deeply on both sides, creating a V-shaped riverbank with large rocks.
LR4.2 Channelized Watercourse	This LR comprises the man-made channelized watercourse sections with concrete riverbanks. Algae, moss and other vegetation can be found growing on and the bottom of the concrete banks. It is a discontinuous channel and mainly found near developed areas and village settlements.
LR4.3 Fresh Water Reservoir	This LR is mainly covered by maintained grass / lawn. No trees can be seen.
LR5	Residential and Village Developments
LR5.1 Liu To Village	Residential and Village Developments Liu To Village is a small village located at the near Mount Haven at the bottom of the valley. These are mainly low-rise homes and shacks with no cohesive framework or planning.
LR5.1	Liu To Village is a small village located at the near Mount Haven at the bottom of the valley. These are mainly low-rise
LR5.1 Liu To Village LR5.2	Liu To Village is a small village located at the near Mount Haven at the bottom of the valley. These are mainly low-rise homes and shacks with no cohesive framework or planning. Mount Haven is a private residential development with well-maintained landscaped gardens, lawns, outdoor swimming
LR5.1 Liu To Village LR5.2 Mount Haven LR5.3	Liu To Village is a small village located at the near Mount Haven at the bottom of the valley. These are mainly low-rise homes and shacks with no cohesive framework or planning. Mount Haven is a private residential development with well-maintained landscaped gardens, lawns, outdoor swimming pool and ball courts. Cheung Hang Estate is a public housing estate near the foothills of Liu To, located on slope. The landscape is terraced into different large podiums with landscape planting, water feature, seating areas, children's playgrounds, elderly

	are hard-paved and developed with scattered planters located within. Plants are mainly located in these planters or in pots.
LR5.6 Ching Wah Court	Ching Wah Court is a public housing estate located at hillside. The landscape can be found mainly on grade with landscape planting, seating areas, water feature, children's playgrounds, multi-use open space, pavilions, elderly fitness equipment and ball courts.
LR5.7 Cheung Hong Estate	Cheung Hong Estate is a public housing estate located at hillside. The landscape can be found on podiums at different levels, intertwined with outdoor commercial and retail facilities. Landscape planting, seating areas, water feature, children's playgrounds, multi-use open space, pavilions, elderly fitness equipment and ball courts can be found.
LR6	Government / Community / Institutions
LR6.1 School	This LR comprise of school buildings and school campus. Soft landscape can be found mainly surrounding the school's site boundary.
LR6.2 Tsing Yi Southwest Sports Centre	This LR comprise of a sports centre with changing rooms, multi-purpose arenas, sports court, children's playground, outdoor climbing. The landscaping is located on different levels with most of the trees located on ground level near the main entrance. There are lawn areas on different levels.
LR7	Tuongnout Douts
	Transport Route
LR7.1 Transportation Corridor	This LR refers to the well-maintained roadside planting and central median planting along major roads.
LR7.1	This LR refers to the well-maintained roadside planting and
LR7.1 Transportation Corridor	This LR refers to the well-maintained roadside planting and central median planting along major roads.
LR7.1 Transportation Corridor LR8 LR8.1 Hillside Scrubland &	This LR refers to the well-maintained roadside planting and central median planting along major roads. Scrubland and Grassland This area is mainly covered by shrubs located on the slopes
LR7.1 Transportation Corridor LR8 LR8.1 Hillside Scrubland & Grassland	This LR refers to the well-maintained roadside planting and central median planting along major roads. Scrubland and Grassland This area is mainly covered by shrubs located on the slopes and hill tops.

	fairly ordered landscape comprising of mainly hard landscapes and built environments softened by greenery
LCA3 Urban Peripheral Village Landscape	This LCA consists of villages located in valleys that have been retained or relocated amidst to their current location amidst the new development around them. Traditional and newer housing, temples, open space, parks, car parks, scattered fruit trees and agricultural fields can be found within this LCA. Vegetation mainly consists of scattered mature trees and peripheral woodland on hillside and ornamental species within parks and siting areas.
LCA4 Transportation Corridor Landscape	This LCA is characterized as a linear landscape character associated with Tsing Yi Road West and Cheung Tsing Highway. It consists of elevated structures, signage, lamp poles, powerlines and roadside and central median amenity planting areas.

- 10.4.2 The landscape impact to the affected LR and LCA, before and after mitigation, are summarized in **Table 10.4.2**. Other LRs / LCAs will not be affected by the proposed development.
- It is expected that with the implementation of mitigation measures, at the operation phase by Year 10, 6 of the residual landscape impacts to LR and LCA will be insubstantial or slight beneficial; 4 will be slight adverse; 1 will be moderately adverse. It is therefore considered that in accordance with the criteria and guidelines for evaluating and assessing impacts as stated in Annex 10 and 18 of the EIAO-TM, the overall landscape impacts are expected to be reduced by the implementation of mitigation measures including the provision of buffer plantation, buffer area surrounding the boundary of proposed development and the maximization of planting and green area so as to minimize the potential impacts to the landscape resources.

Table 10.4.2 – Description of LRs and LCAs

LR/LCA ID^	LR/LCA Name^	Sensitivity of LR/LCA (High / Medium / Low)	(Large / Inte	(Large / Intermediate / Potential Landscape Mitigation		Proposed Mitigation Measures	Mitigation Landscape Impact (after mitiga		mitigation) e, Slight,	
			Construction	Operation	Construction	Operation		Construction	Operation (Day 1)	Operation (Year 10)
LR1.1	Woodland by Nam Wan and Kam Chuk Kok	High	Intermediate	Intermediate	Substantial Adverse	Substantial Adverse	MM1,3,6,7,8	Substantial Adverse	Moderate Adverse	Moderate Adverse
LR1.3	Plantation by Tsing Yi Road West & Cheung Tsing Highway	Medium	Intermediate	Intermediate	Moderate Adverse	Moderate Adverse	MM6, 7	Moderate Adverse	Moderate Adverse	Slight Adverse
LR1.4	Plantation by Ching Hong Road, Chung Mei Road and Liu To Road	Medium	Small	Small	Slight Adverse	Slight Adverse	MM3,7	Slight Adverse	Slight Adverse	Insubstantial
LR2.1	Agriculture Land	Medium	Intermediate	Intermediate	Moderate Adverse	Moderate Adverse	MM1,3,6,7	Moderate Adverse	Slight Adverse	Slight Adverse
LR3.2	Tsing Yi Road West Park	High	Small	Small	Moderate Adverse	Moderate Adverse	MM1,3	Slight Adverse	Insubstantial	Insubstantial

LR4.1	Natural Watercourse	High	Intermediate	Intermediate	Moderate Adverse	Moderate Adverse	MM5	Moderate Adverse	Slight Adverse	Slight Adverse
LR4.2	Channelized Watercourse	Medium	Intermediate	Intermediate	Moderate Adverse	Moderate Adverse	MM5	Moderate Adverse	Slight Beneficial	Slight Beneficial
LR7.1	Transportation Corridor	Low	Small	Small	Slight Adverse	Slight adverse	MM7	Slight Adverse	Insubstantial	Insubstantial
LCA1	Upland and Hillside Landscape	High	Small	Small	Moderate Adverse	Moderate Adverse	MM1, 3, 5,	Moderate Adverse	Slight Adverse	Slight Adverse
LCA2	Residential Urban Landscape	Medium	Small	Small	Slight Adverse	Slight adverse	MM6	Slight Adverse	Insubstantial	Insubstantial
LCA4	Transportation Corridor Landscape	Low	Small	Small	Slight Adverse	Slight adverse	MM7	Slight Adverse	Insubstantial	Insubstantial

Notes: ^ All other LRs / LCAs will not be affected by the Development hence will not require assessment.

Visual Impact Assessment

10.5 General

- 10.5.1 A Visual Impact Assessment (VIA) has been undertaken in accordance with Town Planning Board Guidelines on Submission of Visual Impact Assessment for Planning Applications to the Town Planning Board (TPB PG-No.41) to assess the impacts arising from the proposed development at Tsing Yi Road West from visual perspectives.
- 10.5.2 The Visual Impact Assessment Area is defined by the visual envelope (Zone of Visual Influence (ZVI)) of the proposed visually intrusive works of the proposed development and associated infrastructure.

10.6 **Existing Visual Elements**

- Major visual resources of the region include the vegetated steep hillsides of Kam 10.6.1 Chuk Kok, Shek Wan, Sai Shan, public open spaces, coastline of Tsing Yi and waterscape of Rambler Channel. Visual detractors comprises of busy roads and highways, such as Tsing Yi Road West and Cheung Tsing Highway and Tsing Yi North Coastal Road, found within the ZVI.
- The development falls in the eastern fringe of a vegetated hillside and is located at 10.6.2 the fringe of a cluster of developed area in Tsing Yi surrounded with a number of public housing developments. The Site currently consists of densely vegetated plantation and woodland on slope.
- 10.6.3 The main visual corridor stretches from East to West direction which connects the green belt by Shek Wan to the Rambler Channel. Another visual corridor stretches from North to South direction and is located outside the site boundary, thus will not be affected by the development.
- 10.6.4 The visual quality of the region to most of the identified public viewers/viewing points is generally within the range between medium to good.

10.7 **Appraisal on Visual Changes**

Visual Composition

- 10.7.1 The proposed development and associated infrastructure, site formation and structural platform will be situated within a densely vegetated valley adjacent to Tsing Yi Road West. Currently the Site is not quite visible at ground level due to the existing ground level lower than the Tsing Yi Road West. Nonetheless, the vegetated site together with the hills to the southwest and northwest (approximately +214mPD) forms a green backdrop that serves as a visual amenity for the public viewers.
- 10.7.2 In terms of visual composition, the proposed development would reduce the visual amenity by replacing the existing natural vegetated slopes with three residential

blocks and podium gardens. The existing environment of the Site with a hill slope as backdrop is currently blended in with the Green Belt and rural-fringe village of Liu To, which are considered as transitional landscape to the highly urbanised Tsing Yi township in the east. There is a large open space, namely Tsing Yi Road West Park, forming part of the visual and landscape buffer between the Site and the Resite Villages of Yim Tin Kok, Lam Tin, Tai Wong Ha and San Uk. The proposed development would introduce a new building height into the area and change the visual character of the site, yet it in general shares a similar visual character with those nearby existing high-rise residential buildings, such as Cheung Hong Estate and Cheung Hang Estate.

10.7.3 In addition, the proposed works will contain structural platforms that will also be included in this appraisal. Under the preliminary design layout, the structural platform will form a retaining wall with a similar level to the surrounding village of Liu To and Tsing Yi Road West Park. To minimise the potential visual impact arising from the structural platforms and retaining walls, mitigation measures with landscape treatments on or adjacent to these structures should be considered.

Visual Obstruction

10.7.4 Views toward the hillside ridgeline of Shek Wan may potentially be obstructed as the proposed maximum building height is about +220mPD. The proposed development is anticipated to be highly visible to the public. The building height is considered to be one of the main sources of significant visual obstruction and visual incompatibility to the local visual context. Views towards visual amenities such as green backdrop and open sky, as well as visual permeability and openness experienced by the public viewers would generally be reduced.

Effects on Visual Resources

10.7.5 In terms of visual resources, the proposed development would affect approximately 3.3ha of densely vegetated areas, including plantations, agricultural land / orchards, natural woodland and watercourse. As the site are located within a downslope of a vegetated hillside, disturbance to existing vegetation would be unavoidable due to construction works for site formation and structural platforms. The proposed development with site formation will inevitably replace the vegetated areas and induce visual changes to the original suburban and natural setting. There would be some adverse effects on visual character, condition and quality, and the East-West visual corridor would also be affected.

Effects on Public Viewers

- 10.7.6 A total of 11 public viewing points (VPs) are selected to present the visual changes to the assessment area and sensitive public viewers taking into account visual sensitivity, local significance and accessibility. The locations are listed below:
 - VP1 Footbridge by Tsing Yi Road West Park
 - VP2 Footbridge by Tsing Wah Playground
 - VP3 Footbridge by Liu To Road
 - VP4 Footbridge by Greenview Villa

- VP5 Footbridge at Chung Mei Road
- VP6 Tsing Yi Nature Trails
- VP7 Liu To Road Garden
- VP8 Tai Wong Ha Playground
- VP9 Tsing Yi Road West Park
- VP10 Kwai Tsing Celebration of Reunification Education Trail
- VP11 Ching Hong Road
- 10.7.7 Photomontages based on the above VP are prepared based on the conceptual layout of the proposed public housing development and are shown in Figure CE51/IR/1002/1 to CE51/IR/1002/11. Locations of VP are shown in CE51/IR/1003.

10.8 **Design Consideration**

- 10.8.1 Conceptual Landscape Plan for the proposed public housing development is illustrated in Figure CE51/IR/1001. Minimum local space and green coverage was provided according to HKPSG, APP 152 – Sustainable Building Design Guidelines and DEVB TC(W) No.3/2012 Site Coverage of Greenery for Government Building Projects.
- 10.8.2 Based on the preliminary development parameters, the following principles were applied in the design of the site formation works, geotechnical works, road works, waterworks, sewerage and drainage works, infrastructure works and tree removal works for the Development which that can contribute to a reduction in landscape and visual impacts:
 - (a) Blue-Green Design The Development and associated infrastructure works should adopt a landscape design and layout that can connect urban hydrological functions, thereby using blue (water) and green (nature, plazas, parks and planting) to protect against flooding and other effects of climate change. The overall design should allow public to enjoy river channel facilities, experience and treasure the multiple values of water bodies, and also enhance biodiversity and create a better living environment. For this Site, blue-green design elements is recommended to be adopted.
 - (b) **Revitalize Stream Channel** The natural stream will be diverted towards the western and northern boundary to avoid the Development. The design of the diverted natural stream shall retain the integrity of the whole stream. Gabion walls are recommended instead of concrete banks to allow the diverted stream to naturalize over time and to create and increase availability of micro-habitats for wildlife. Translocation of aquatic species of conservation importance and habitat creation for the diverted stream are recommended to enhance the biodiversity. To further enhance the stream, plant species with high ecological value that are beneficial to existing local habitat and ecosystem will be planted alongside and atop the gabion walls. Detailed design of the stream diversion shall follow the ETWB TC(W) No. 5/2005 Protection of existing retained streams/rivers from adverse impacts

arising from construction works and appropriate construction methods, and interface treatment with terminated and newly diverted stream should be considered.

- (c) Improved Access to Water The diverted stream will serve as a visual resources and buffer between the green belt and the Development. The Development's landscape design should take into account visual access to the water on different levels. A hiking trail should be reprovisioned adjacent to the diverted stream to improve access of this water resource to the public. The proposed hiking trail could be linked with existing hiking trails and to Tsing Yi Road West Park as part of the park's extended nature walk. Educational panels can be erected in this proposed hiking trail to teach the public about local wildlife and promote water friendliness.
- (d) Aesthetic Design of Housing Development A compatible design, construction materials and facade for the proposed development will assist in achieving visual uniformity with the surrounding residential buildings of Cheung Hong Estate, Mount Haven and Cheung Hang Estate. consideration of finishing materials on the form, micro and macro texture, reflectivity / light absorbance and compatibility to the nearby environment is recommended. Visual penetration can be provided through adjustments to the building massing and layout. Colour blocking applied to the building façade can help to harmonize the building to the surrounding environment.
- (e) Minimization of Building Mass the proposed development is designed to follow Building Department's APP 152 - Sustainable Building Design Guidelines to avoid continuous building mass and wall development; and the visual corridor between each building block would be provided to allow visual permeability and to minimise visual obstruction as far as practicable. Corridors of minimum 15m in width between building block of the proposed development can serve as both visual and air ventilation passageways. (Remarks: The compliance with PNAP APP-152 SBDG is subject to detailed design)
- (f) Minimization of Landscape Fragmentation By keeping similar landscape character and visual context at close proximity, the landscape will appear less isolated and fragmented. By reducing these isolated patches of urbanization, the changes of habitat loss will also be reduced. The buildings of the proposed development should be kept close to Tsing Yi Road West, to avoid potential additional impact to the green belt. Green and blue corridors next to the diverted stream, green spaces and vertical greening for the proposed development should be designed to improve permeability and wildlife movement between existing green spaces, such as Tsing Yi Road West Park and the green belt at Shek Wan and Sai Shan. Vertical greening under proposed development's decking area should be considered where practicable. The proposed development's layout, building height, form and scale should be compatible to the transitional landscape between the urbanized land use and natural vegetation to reduce visual disturbance to practical minimum.
- (g) Minimize Topographical Changes Site formation with topographical changes is inevitable for this Site due to its existing steep slopes and valleys.

However, the site formation boundary and diverted stream is designed in order to avoid unnecessary slope works.

- (h) Alleviation of Visual Nuisance by Suitable Urban Design Air passageways within the building blocks of the proposed development can act as visual corridors to allow view passage and minimize visual obstruction by avoiding wall-like structures in front of the ridgeline.
- (i) Aesthetic Treatment of Slopes Slope appearance will be designed with consideration to the ecological, sustainable and aesthetic aspects. Slope works should be minimized in order to preserve existing trees and vegetation. If slope works are unavoidable, the design of the slope should incorporate planting and aesthetic treatment on exposed slope surfaces to reduce visual impact as much as possible and to blend the slope to the surrounding landscape topography. Slope works should reference GEO Publication No. 1/2011.
- (i) Selection of Plant Species All plant species will be selected through the "Right Tree; Right Place" principle, promulgated by DEVB, in mind. Factors such as design objectives, District's GMP, landscape character, biodiversity, environmental factors including soil condition, microclimate, visibility splays, traffic, spatial factors and characteristics of plants should be considered to determine the appropriate species for planting. Consideration should also be given to cost effectiveness, life cycle performance of the plant, and balance between design intention and maintenance concern. Native species generally have a higher ecological value and can enhance biodiversity, should be given priority in selection.
- (k) 4 nos. of Aquilaria sinensis will be transplanted 4 individuals of Aquilaria sinensis are proposed to be transplanted to suitable receptor site near the Site. The site condition of the transplanted trees are proposed should be similar to the original location. Location of transplanted trees shall be further studied in the detail design phase.

10.9 **Recommended Mitigation measures –**

For the construction and operation phase listed below are recommended to be 10.9.1 adopted. Proposed locations for mitigation measures are shown in Figure CE51/IR/1004.

ID No.	Landscape and Visual Mitigation Measure	Landscape Impact	Visual Impact
Const	ruction Phase		
MM1	<u>Preservation of Existing Vegetation</u> – Any existing trees not affected by the site formation works shall be carefully preserved and protected in accordance to <i>DEVB TC(W) No. 4/2020</i> and the latest <i>Guidelines on Tree Preservation</i> by GLTMS of DEVB during the construction phase for site formation works.	√	√
MM2	Control of Night-time Lighting Glare – All night-time lighting shall be avoided as far as possible during the construction phase	N/A	√

MM3	for site formation works. All lights should be directed light and no light glare shall illuminate directly outside the site formation boundary. Optimisation of Construction Areas and Providing Temporary Landscape Treatment on Temporary Construction Works — Construction areas' control, such as reducing extent of working areas, temporary working areas, storage area and shortening construction period, shall be enforced to minimise potential landscape and visual impact arising from construction activities for the site formation works. The Project should reduce topographical / landform changes to reduce disturbance with the natural terrain. Earthworks and engineered slopes should be designed to be visually interesting and compatible with the surrounding landscape, mimic contouring and terrain.	√	✓
MM4	Erection of Decorative Screen Hoarding - Site hoardings shall be painted in a colour, pattern and design that is compatible to the natural surroundings. Where possible, non-reflective, recessive colours should be used. Hoarding should be taken down at the end of the construction period of the site formation works.	N/A	✓
	Operation Phase	1	-
MM5	Revitalize Stream Channel - Additional planting along the top of the gabion embankment of the diverted stream can reinstate and enhance existing habitat. The planting selection and gabion design for the diverted stream should refer to DSD PN No. 1/2005 Guidelines on Environmental and Ecological Consideration for River Channel Design. and DEVB TCW No. 9/2020 Blue-Green Drainage Infrastructure. The comprehensive blue-green design approach will be taken into consideration.	√	√
MM6	Landscape Treatment within Development —Tree and amenity planting will be provided by HD within the completed housing development in accordance with HA's current greening policy and to improve compatibility with the surrounding environment. Greening on podiums should be applied to the proposed development to reduce exposure of paved areas and mitigate visual impact. The blue-green design approach shall be considered between the development and existing green spaces. Location and design of podium gardens should reference CIBSE HK Branch's Technical Guidelines for Green Roof System in Hong Kong (2011) and ArchSD/Urbis Study on Green Roof Application in Hong Kong (2007). The selection of planting species should make reference to Street Tree Selection Guide, of GLTMS, DEVB and the GMP for Kwai Tsing.	✓	✓

MM7	Buffer Planting – Buffer plants are proposed to be planted as a visual barrier to nearby unsightly views, such as busy streets and service passages, or to reduce wall effect of the proposed development on the surrounding neighbourhood. Locations of screen planting include areas by Tsing Yi Road West, Liu To Village, and along the maintenance access around the proposed development site. The selection of planting species should make reference to <i>Street Tree Selection Guide</i> , of GLTMS, DEVB and	√	√
MM8	the GMP for Kwai Tsing. Woodland Mix Tree and Shrub Planting – Tree compensation due to tree loss by site formation works to be compensated outside housing development site, in accordance with Development Bureau Technical Circular (Works) No. 4/2020. For trees to be planted on slope, tree planting will be conducted in accordance to GEO Publication 1/2011. The selection of planting species should make reference to Street Tree Selection Guide, of GLTMS, DEVB and the GMP for Kwai Tsing. Woodland mix of native shrub species will be planted as understorey plants as part of woodland reinstatement. The selection of shrub species should refer to GEO Publication 1/2011, GMP of Kwai Tsing and Street Tree Selection Guide, of	√	~
MM9	Planting on Footbridge – Plants to be located on both sides of the footbridge help soften the hard structures and visual enhancement. The selection of planting species should make reference to Street Tree Selection Guide, of GLTMS, DEVB and the GMP for Kwai Tsing. The mitigation measures are only the preliminary findings, exact location and adoption of the proposed mitigation measures shall be further reviewed and examined in detailed design stage.	N/A	✓

Notes: The mitigation measures are only the preliminary findings, exact location and adoption of the proposed mitigation measures shall be further reviewed and examined in detailed design stage. The maintenance and management responsibility for those mitigation measures shall be taken up by appropriate department in accordance with DEVB TC(W) No. 6/2015.

10.10 Summary on Visual Impact Assessment

- 10.10.1 The visual impact on the affected VPs, before and after mitigation, are summarized in **Table 10.10.1**.
- 10.10.2 Mitigation measures are proposed to reduce visual impact and their effect on visual resources to the extent as far as possible. These have been shown in **Figure CE51/IR/1002.1-1002.11**. Great efforts have been made to minimize adverse visual changes and mitigation measures have been proposed to alleviate visual impacts experienced by the VPs as far as possible, yet the proposed development will inevitably induce visual impacts on the VPs and the surroundings. The overall visual impact is considered to be within a range of "significantly adverse" to "slightly to moderately adverse".

Table 10.10.1 Summary of Visual Impacts

VP	VP Name	Sensitivity of VP	Potential Visual Impacts	Proposed Mitigation Measures		leasures	Potential Visual Impacts (after mitigation) (Enhanced / Partly enhanced & partly adverse / Negligible	
		(High / Medium / Low)	(before mitigation) (Enhanced / Partly					
			enhanced & partly adverse / Negligible / Slightly adverse / Moderately adverse / Significantly adverse)	During &After Construction	During Construction	After Construction	/ Slightly adverse / Moderately adverse / Significantly adverse)	
VP1	Footbridge by Tsing Yi Road West Park	Medium	Significantly adverse	MM1	MM2, 3, 4	MM6, 7	Significantly adverse	
VP2	Footbridge by Tsing Wah Playground	High	Significantly adverse	MM1	MM2, 3, 4	MM6, 7, 9	Significantly adverse	
VP3	Footbridge by Liu To Road	Medium	Moderately adverse	MM1	MM2, 3, 4	MM6, 7	Moderately adverse	
VP4	Footbridge by Greenview Villa	Medium	Moderately adverse	MM1	MM2, 3, 4	MM6, 7	Moderately adverse	
VP5	Footbridge by Chung Mei Road	Medium	Moderately to significantly adverse	MM1	MM2, 3, 4	MM6, 8	Moderately to significantly adverse	
VP6	Tsing Yi Nature Trails	Medium	Slightly to moderately adverse	MM1	MM2, 3, 4	MM6, 8	Slightly to moderately adverse	
VP7	Liu To Road Garden	High	Significantly adverse	MM1	MM2, 3, 4	MM6	Significantly adverse	
VP8	Tai Wong Ha Playground	Medium	Moderately adverse		MM2, 3, 4	MM6	Moderately adverse	

VP9	Tsing Yi Road West Park	Medium	Significantly adverse	MM1	MM2, 3, 4	MM6	Significantly adverse
VP10	Kwai Tsing Celebration of Reunification Education Trail	Medium	Significantly adverse		MM2, 3, 4	MM6	Significantly adverse
VP11	Ching Hong Road	Medium	Significantly adverse	MM1	MM2, 3, 4	MM6, 7	Significantly adverse

10.11 Overall Summary of Tree, Landscape, and Visual Aspects

- 10.11.1 None of the existing trees within the site are OVTs. Four trees are *Aquilaria sinensis*, which is a protected species with conservation status in Hong Kong, would be transplanted. Most of the trees on site will inevitably be affected by the proposed development due to the provision of building blocks and associated facilities. Site formation works will be minimized in order to affect less trees. The proposed development will integrate the existing greenery into the overall landscape design as far as practicable. Appropriate shrub and tree planting will be provided, including 87 no. of compensatory trees outside the rezoning boundary and 215-255 no. of new trees within the rezoning boundary. A detailed review of the landscape design of the proposed development would be carried out in the next stage.
- 10.11.2 On review of the likely residual impacts and the possibility to alleviate most of the landscape impact after mitigation, the overall landscape impacts would be minimized as far as practical with the proposed mitigation measures during construction and operation phase.
- 10.11.3 In terms of visual impact, the proposed development with maximum building height of 220mPD would affect parts of the mountain ridgeline in the backdrop for some VPs. It will introduce a new building height to this area and will add additional building massing to the nearby VPs. Despite the tall building blocks, their slim morphology allows greater flexibility in architectural and landscape design with wide building separation for air penetration and visual permeability.
- 10.11.4 Although the proposed development will change the visual character of the site from natural terrain to high-rise residential character, it can be perceived as an extension of the surrounding residential clusters.
- 10.11.5 The proposed development includes three residential blocks and associated facilities. Efforts to minimize site formation extent, the diverted stream, and slopes on site will impose restrictions on the potential space for tree planting. Although additional spaces for trees within Site is limited, landscape measures including preservation of existing vegetation, revitalizing stream channel, buffer planting, shrub planting, and amenity facilities have been proposed to create a living environment with high quality (see Figure CE51/IR/1001 Conceptual Landscape Plan & Figure CE51/IR/1004 Mitigation Plan). In addition, open space of 0.87ha/1.03ha in accordance with HKPSG requirements will be provided. Greenery area of 0.54 ha, equivalent to a minimum of 20% of the site area will be provided within the rezoning boundary. Every opportunity will be explored at later detailed design stage, including off-site planting, in order improve the overall landscape quality of the proposed development.

11. IMPLEMENTATION PROGRAMME

11.1 General

11.1.1 This chapter presents the key milestones of the implementation programme for proposed public housing developments.

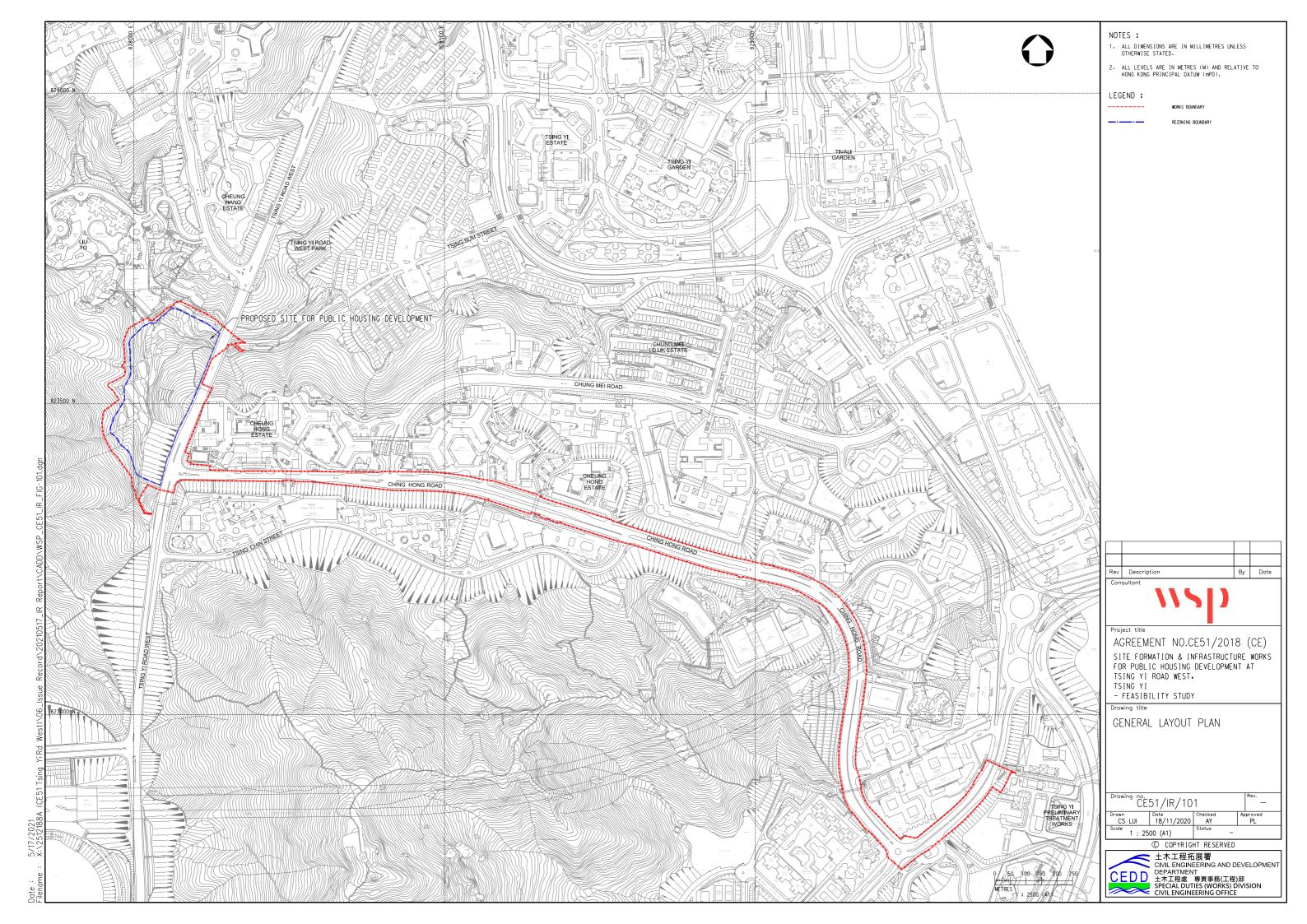
11.2 Proposed Preliminary Implementation Programme

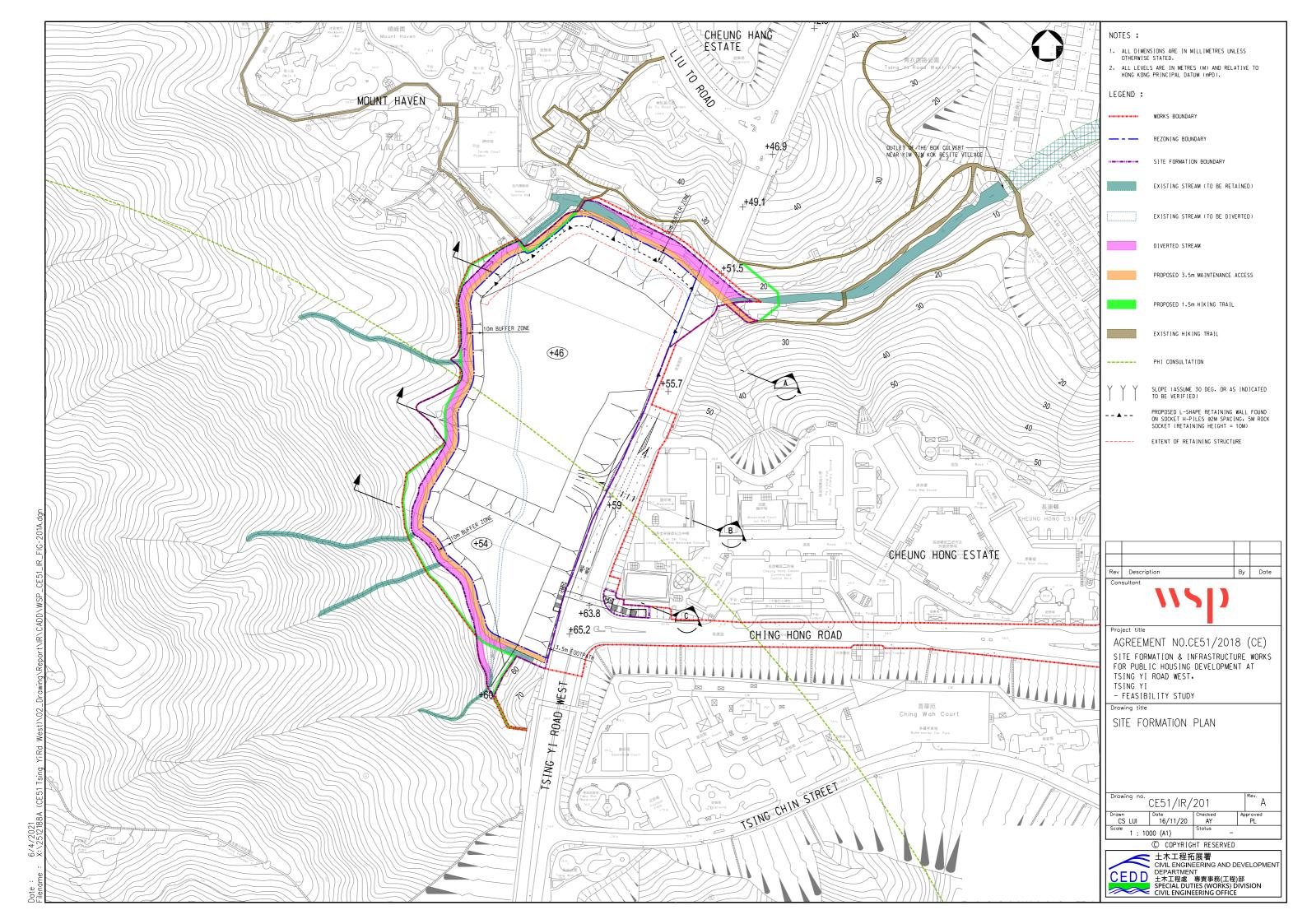
- 11.2.1 The key milestones of the preliminary implementation programme are as follows: -
 - Commencement of site formation and infrastructure works by Q1 2024;
 - Completion of site formation works by Q3 2028;
 - Commencement of foundation and building works by Q3 2028;
 - Completion of infrastructure works by Q1 2029;
 - Completion of foundation and building works for the Site by Q3 2034
- The implementation programme would be reviewed at IDC stage to reflect the latest changing circumstances as necessary.

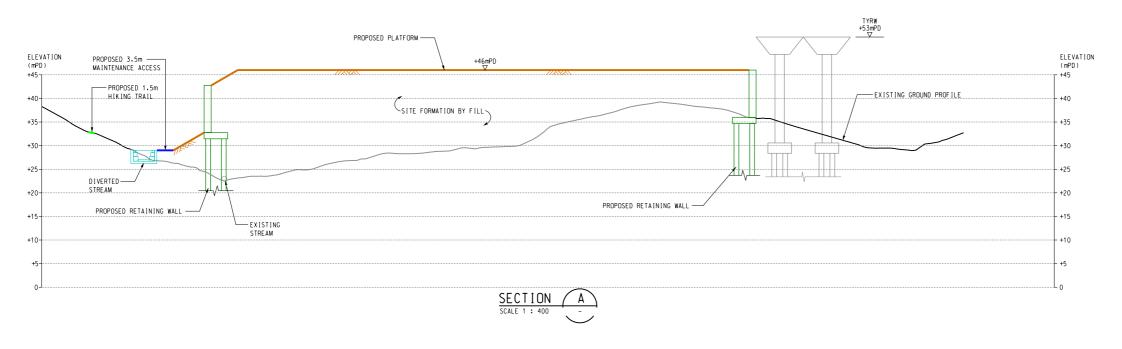
12. CONCLUSION

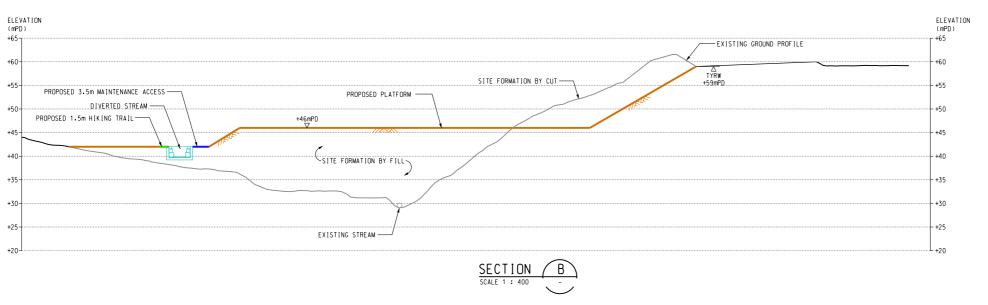
- 12.1.1 The proposed public housing development at Tsing Yi Road West has been studied under this EFS, and the study concluded that there is no insurmountable problem in terms of traffic, environmental, geotechnical, services and utilities, land acquisition, heritage, air ventilation, visual and landscape aspects.
- 12.1.2 In support of the rezoning process of the Site, site formation layout plans have been prepared and relevant technical assessments have been conducted. It is revealed that the proposed public housing development is technically feasible.

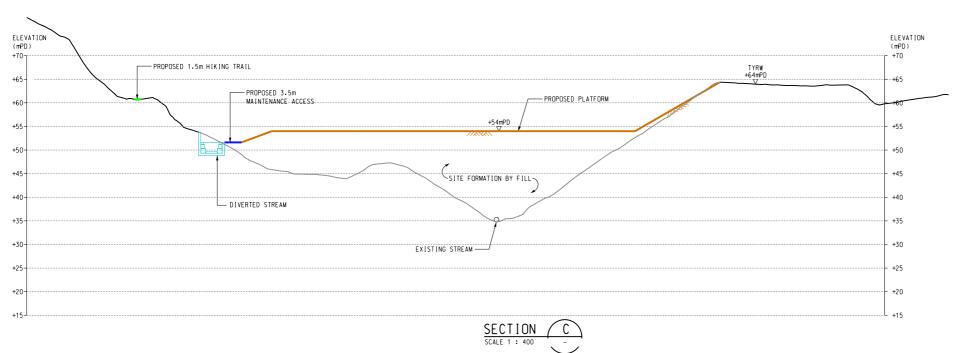
FIGURES

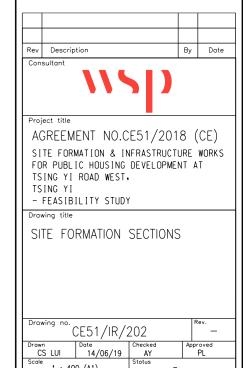








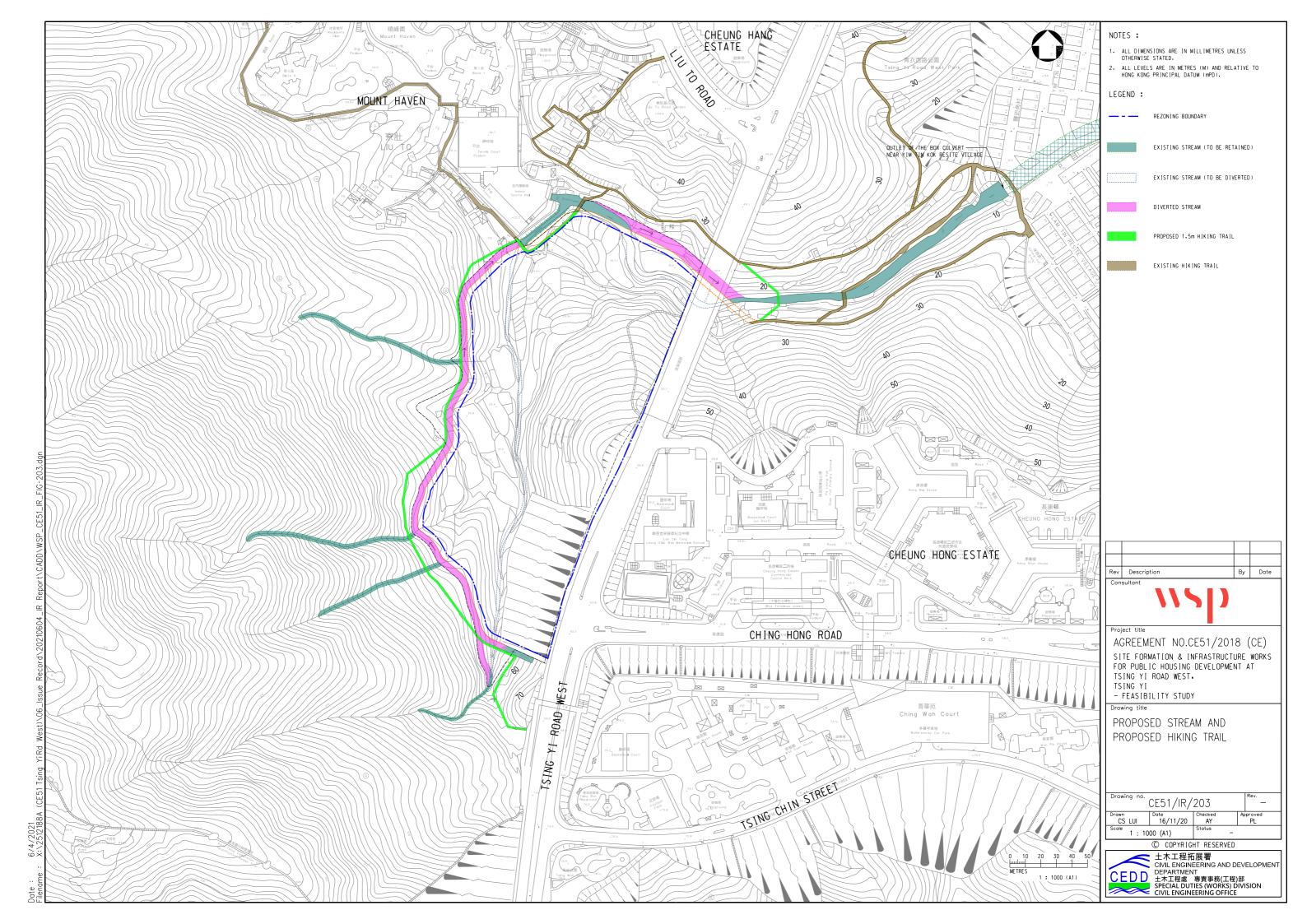


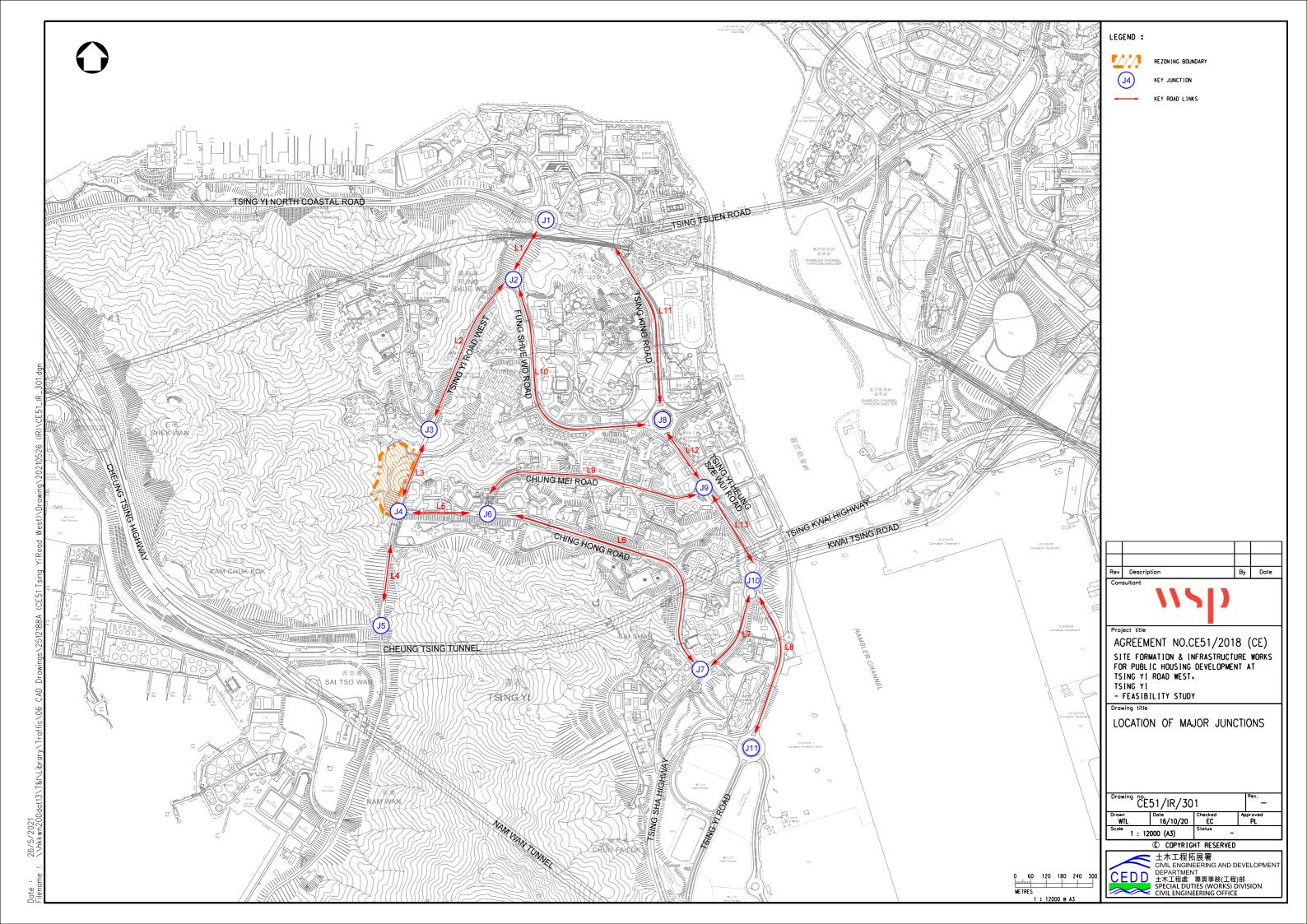


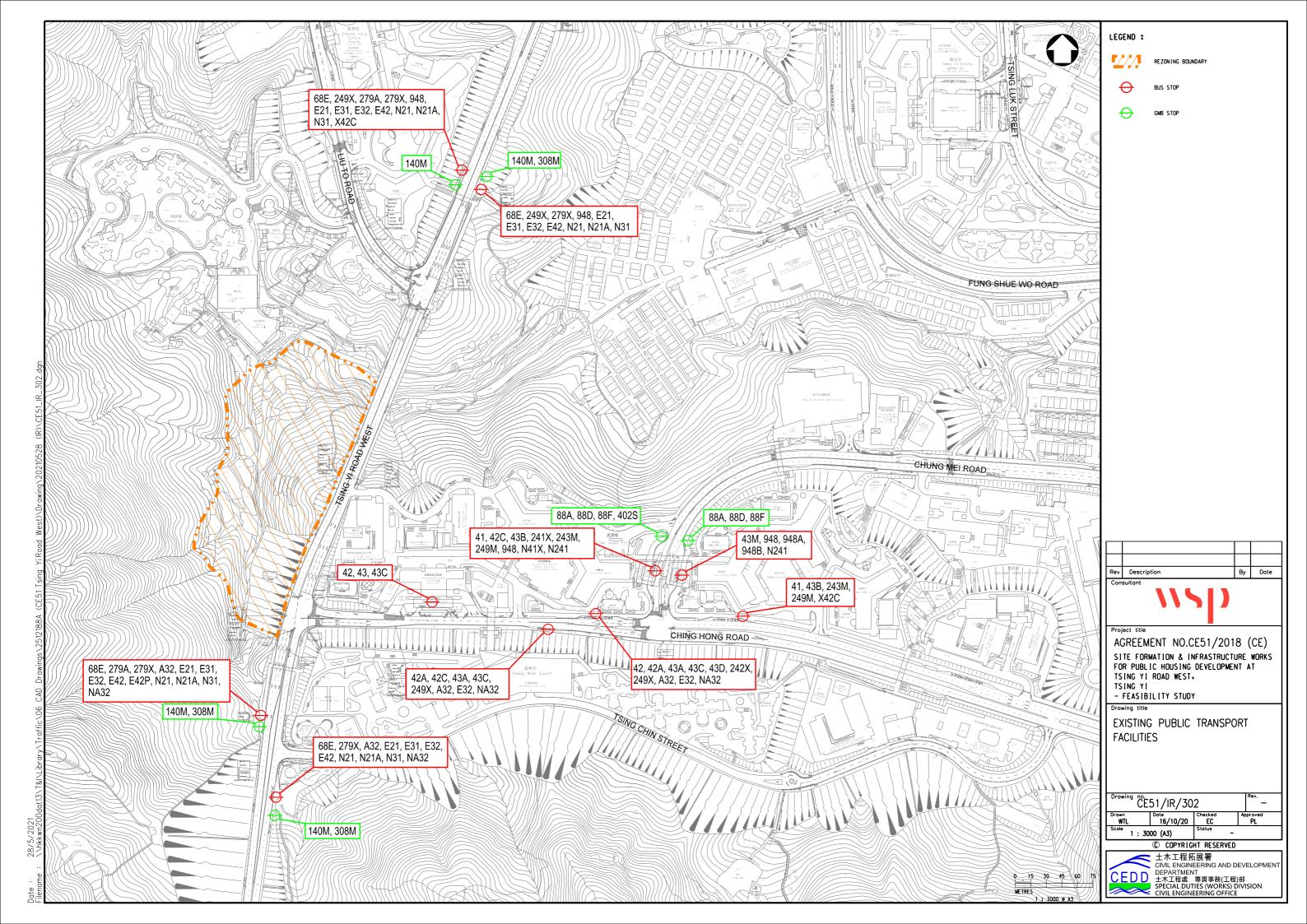
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CIVIL ENGINEERING AND DEVELOPMENT
DEPARTMENT
土木工程處 專賣事務(工程)部
SPECIAL DUTIES (WORKS) DIVISION
CIVIL ENGINEERING OFFICE

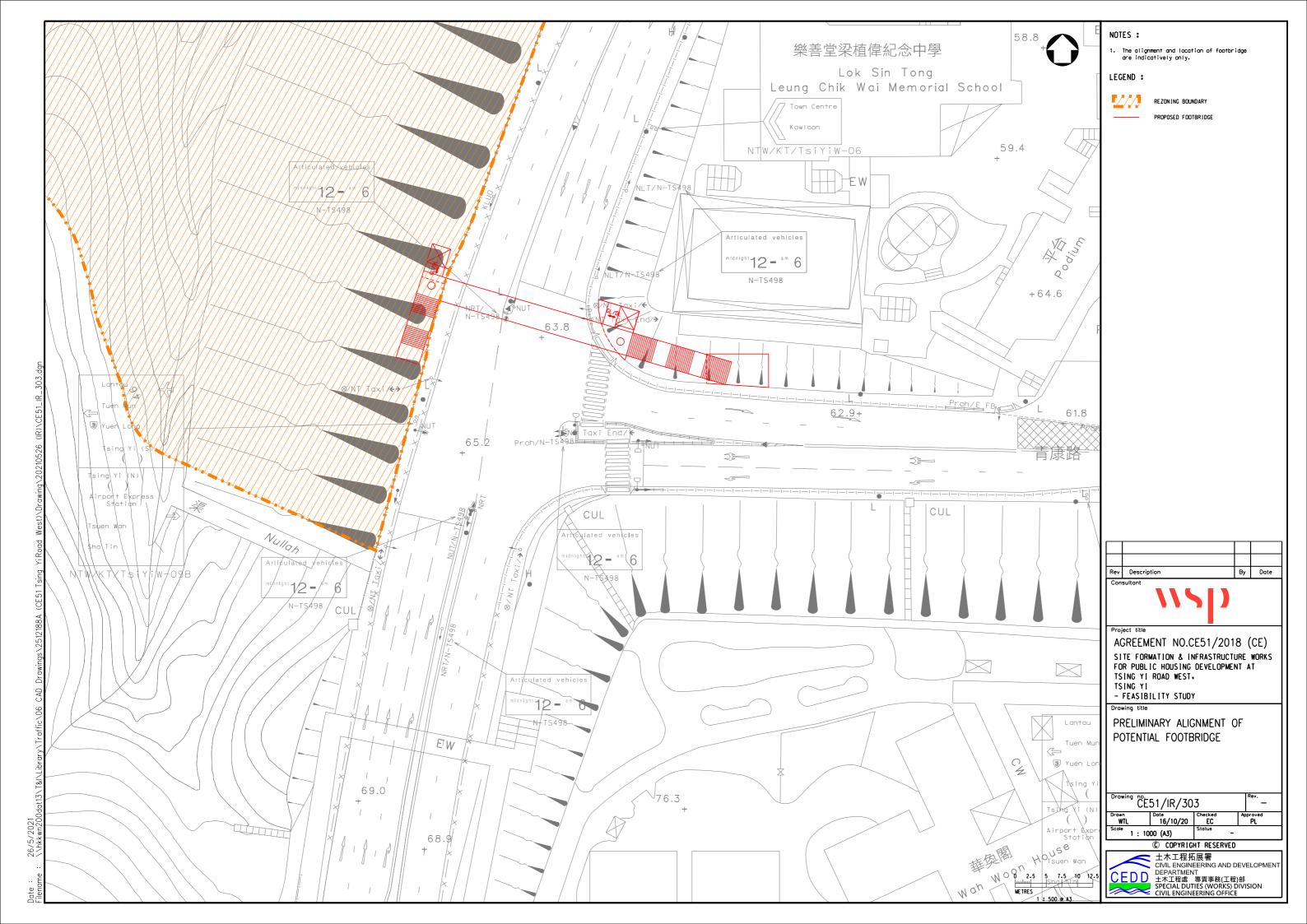
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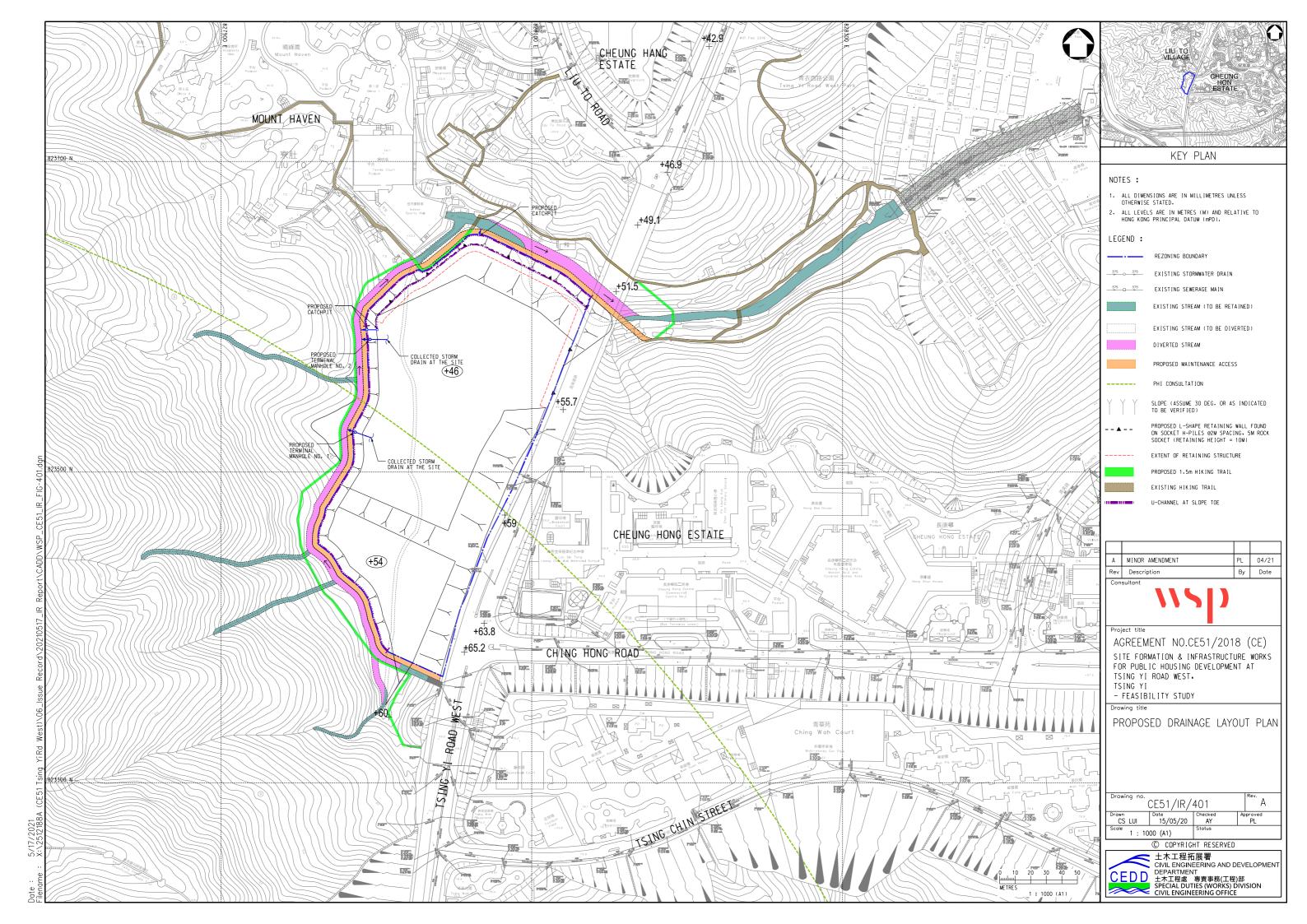
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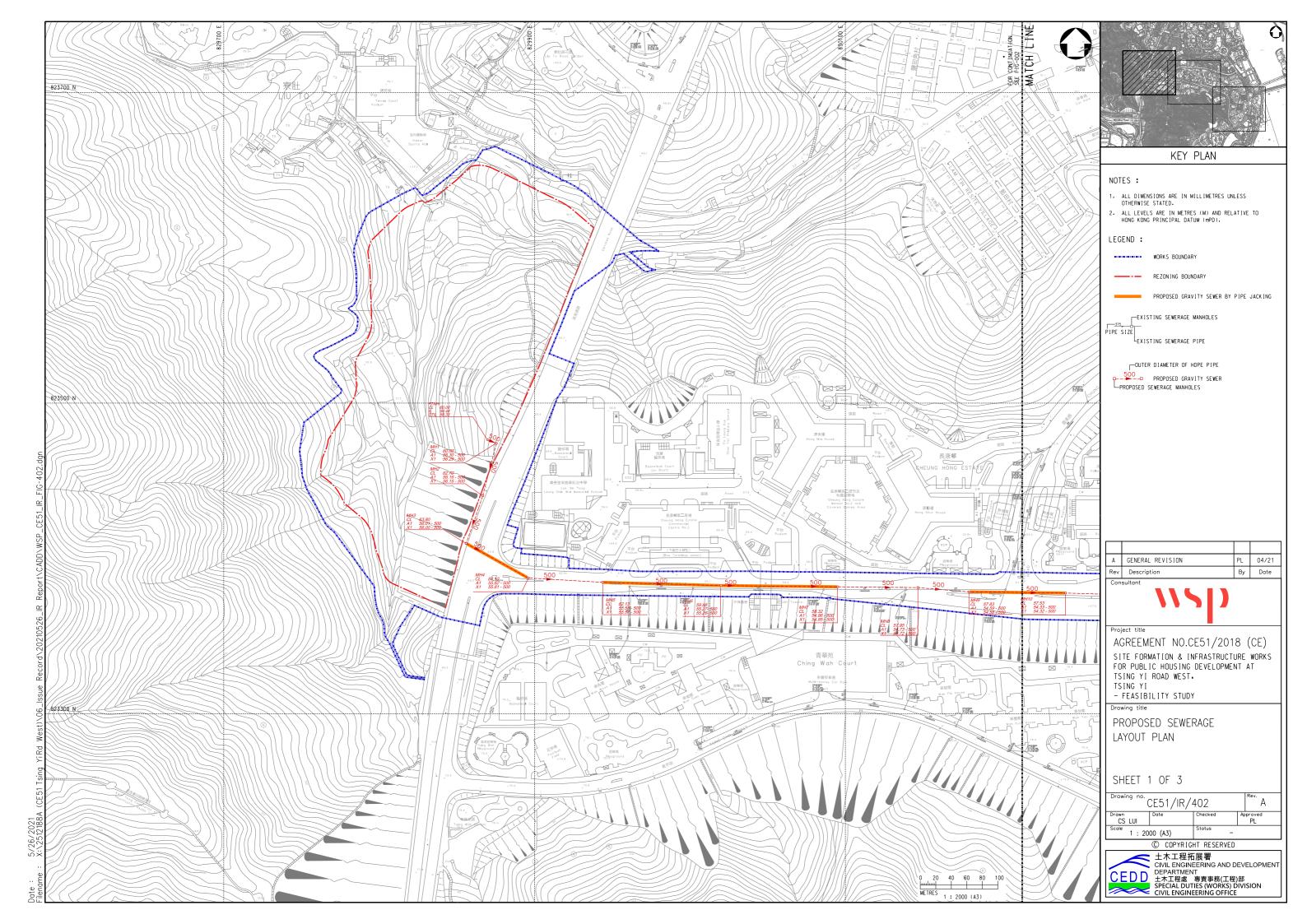


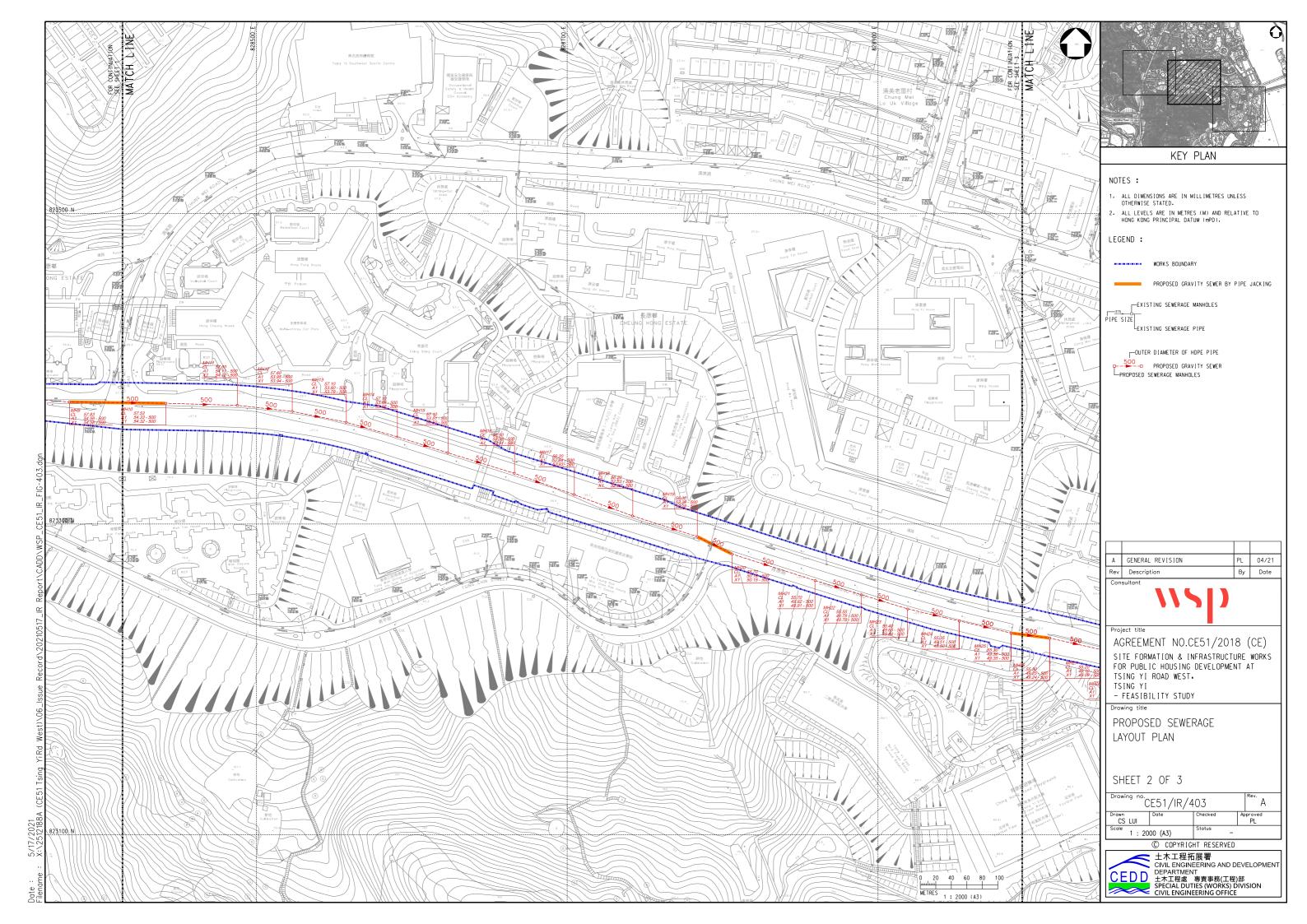


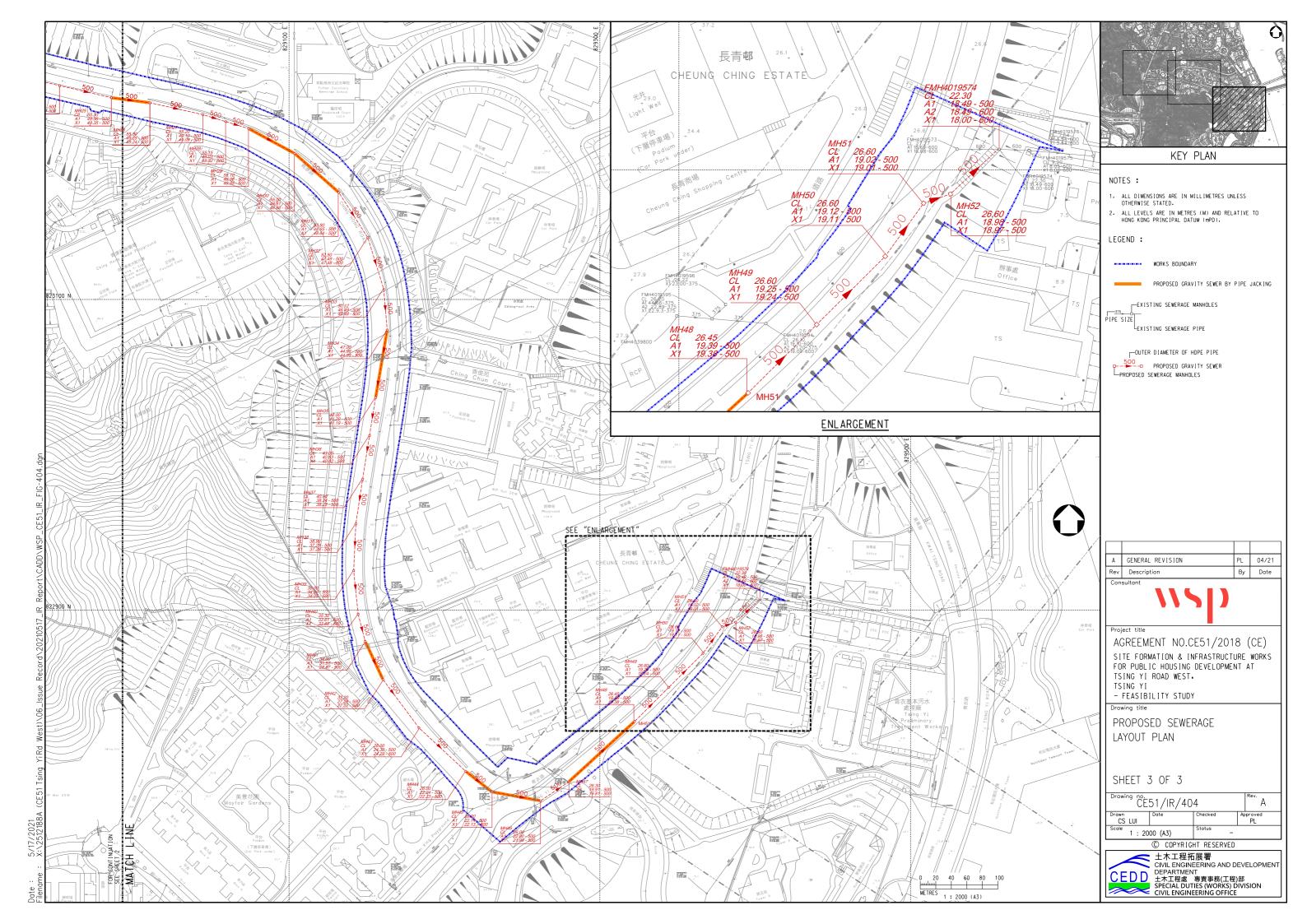


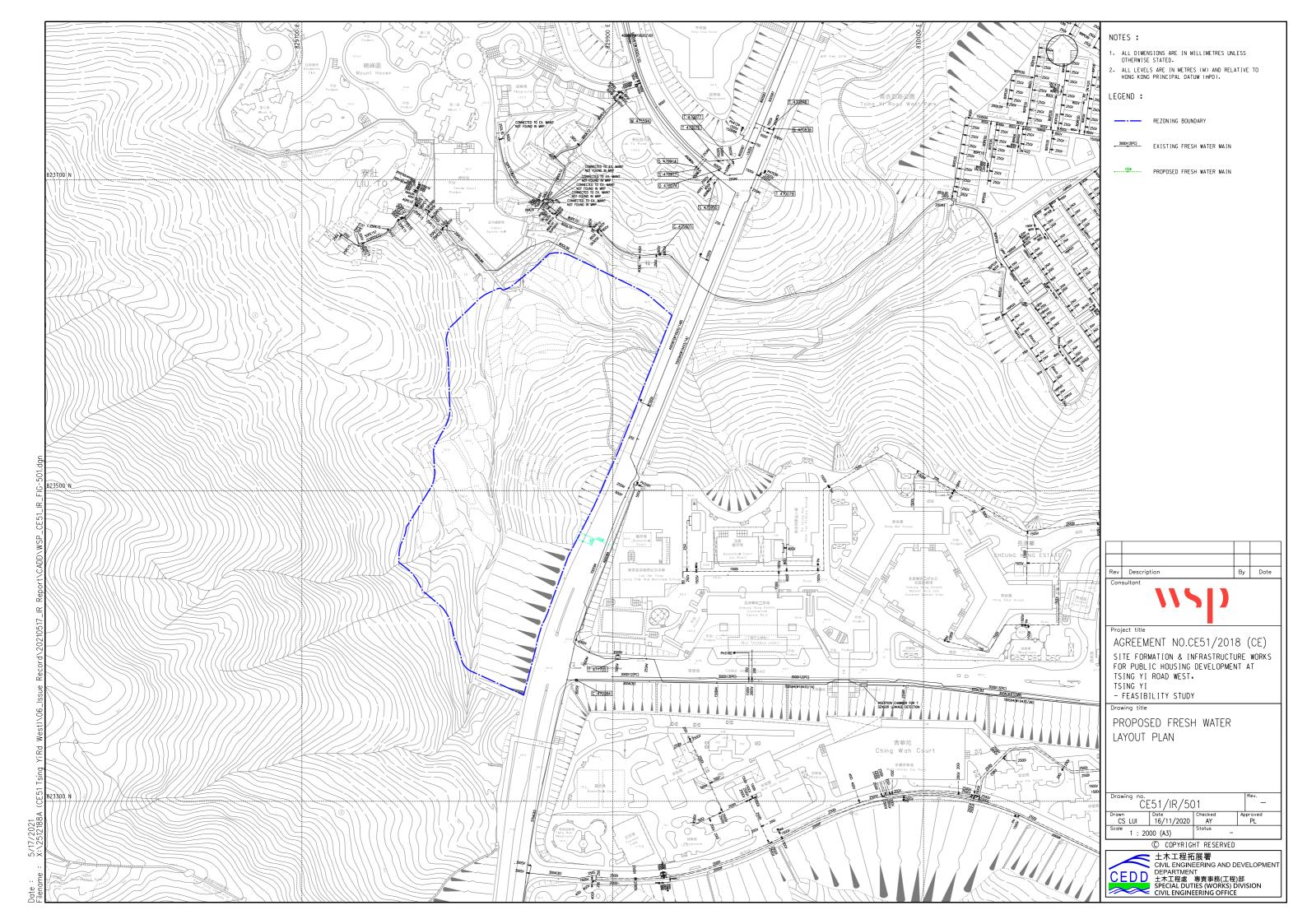


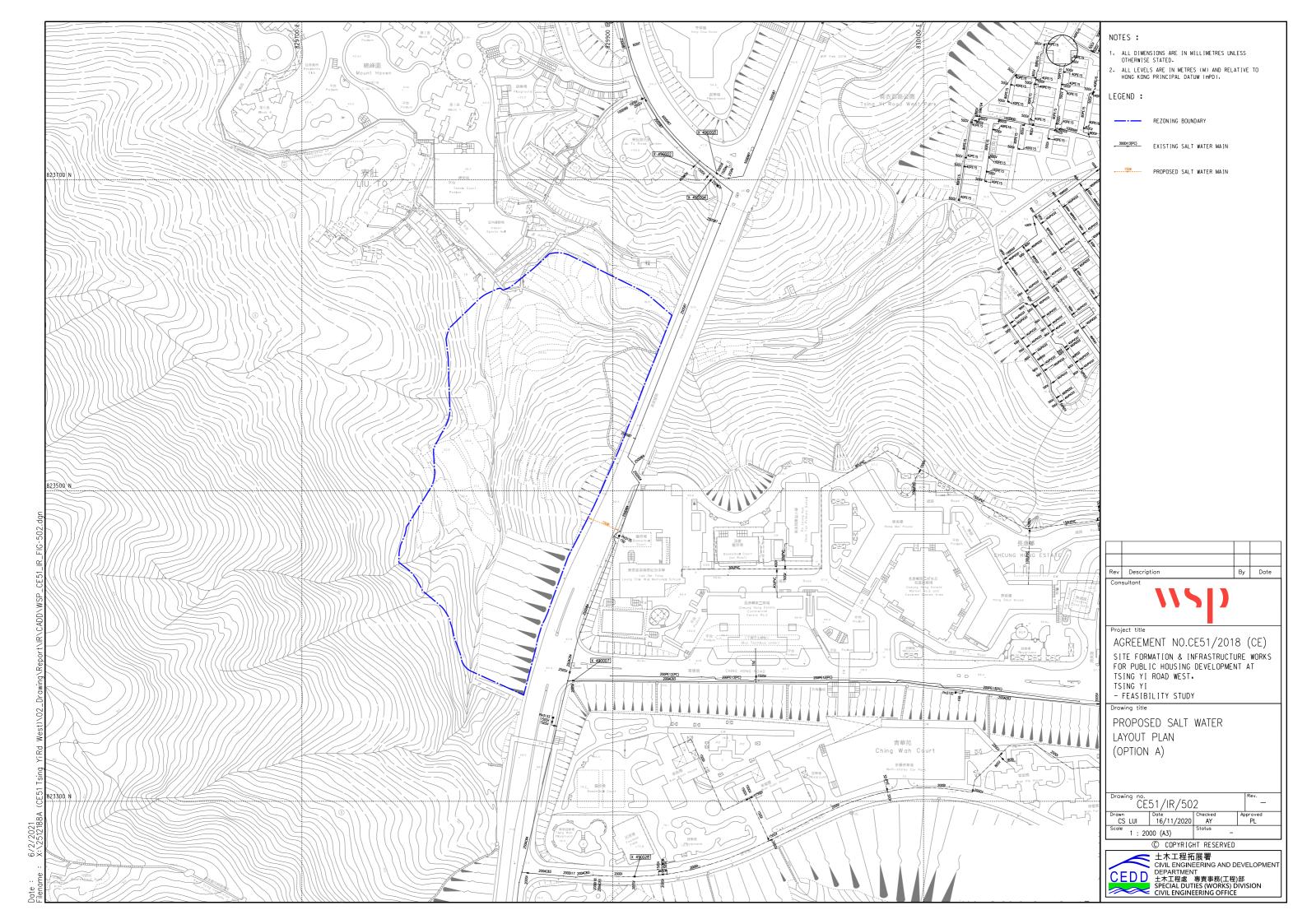


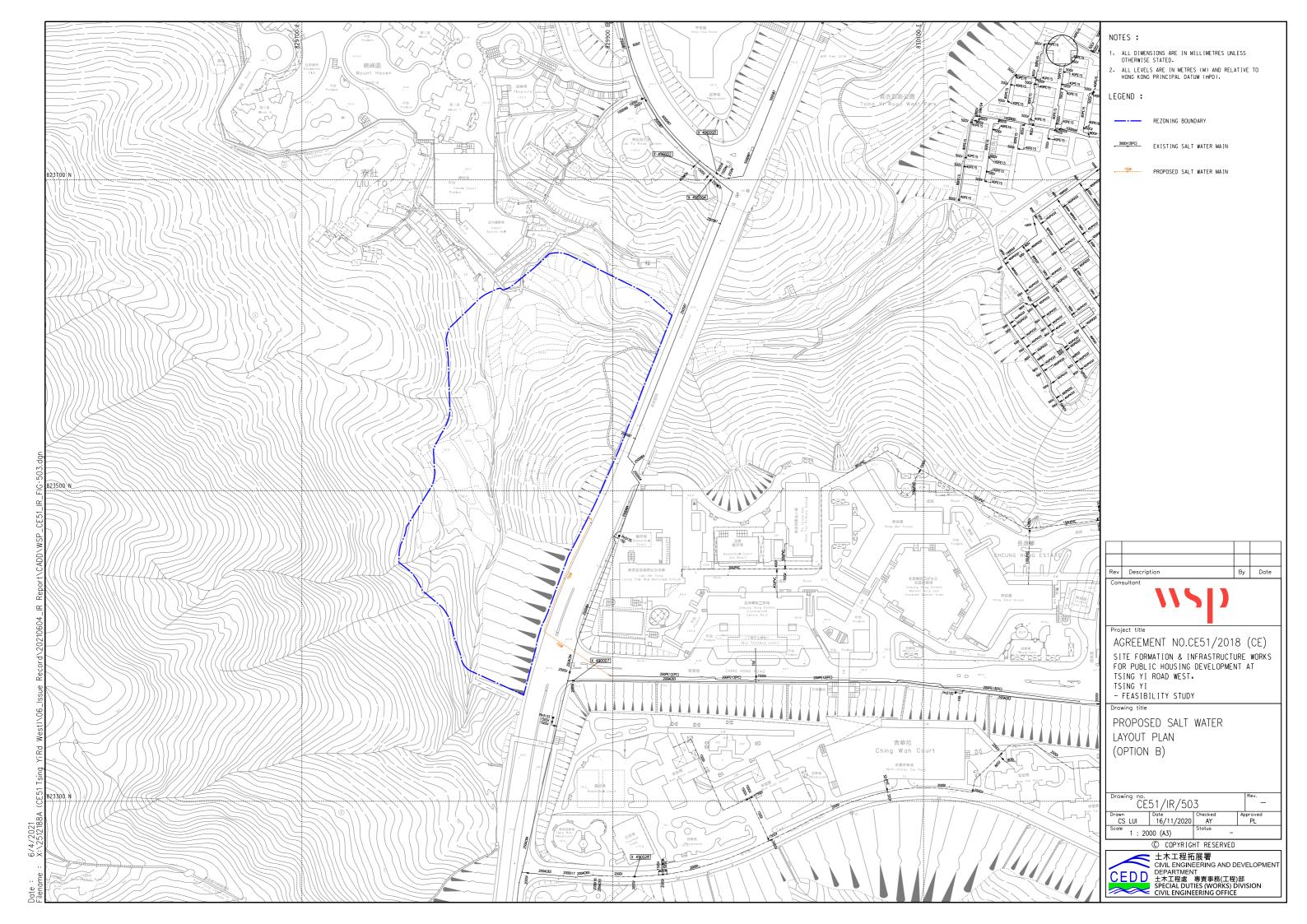


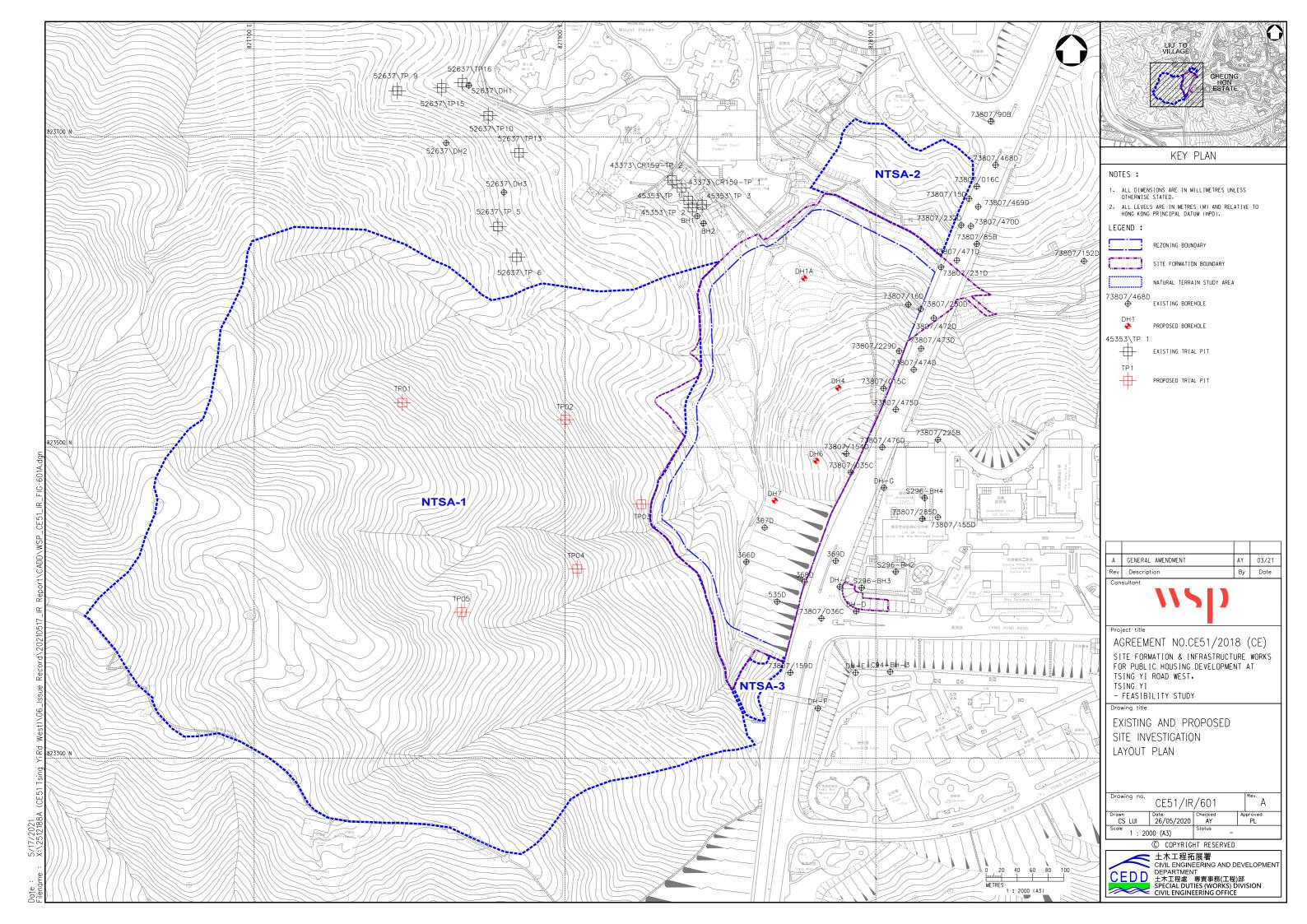


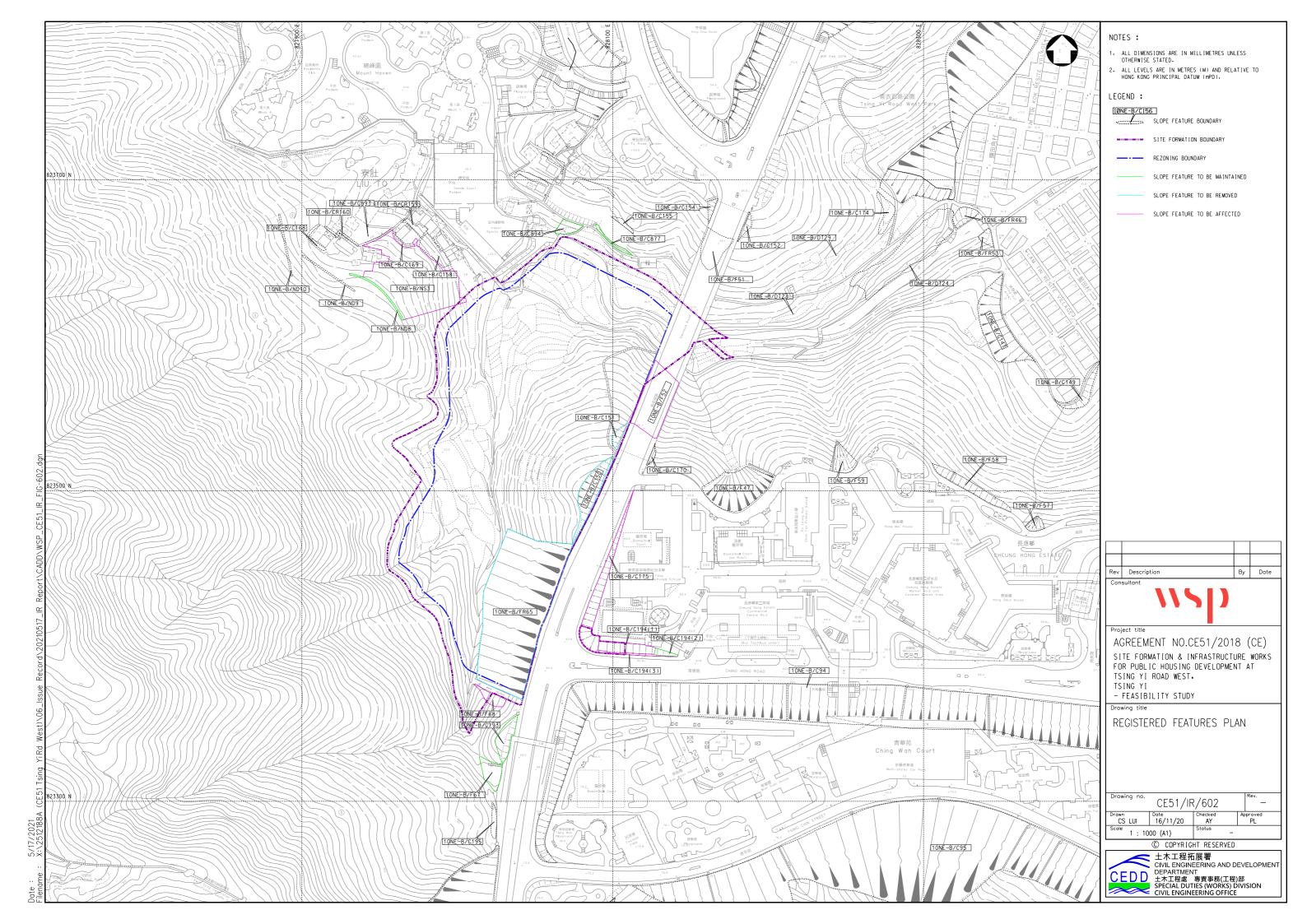


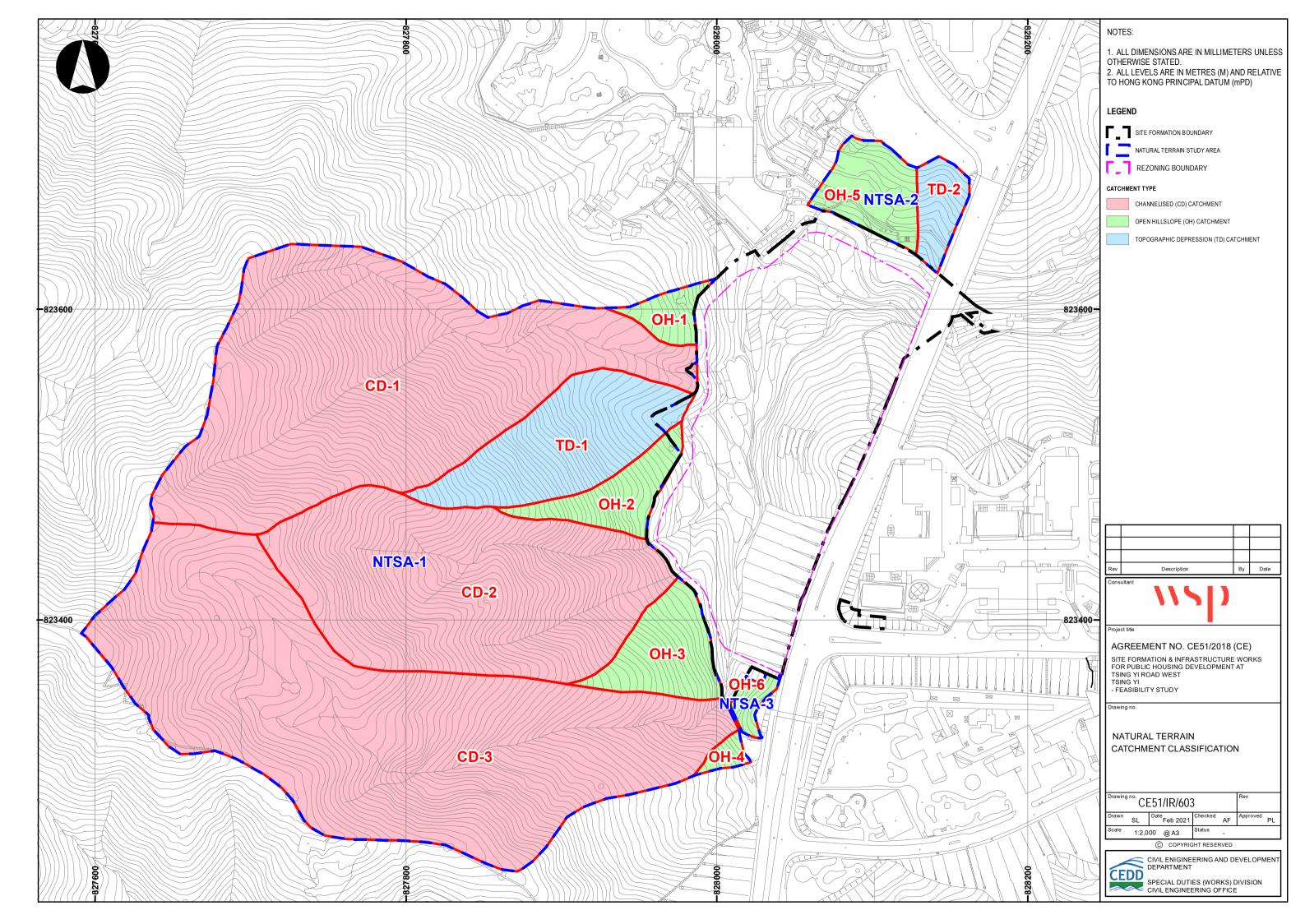


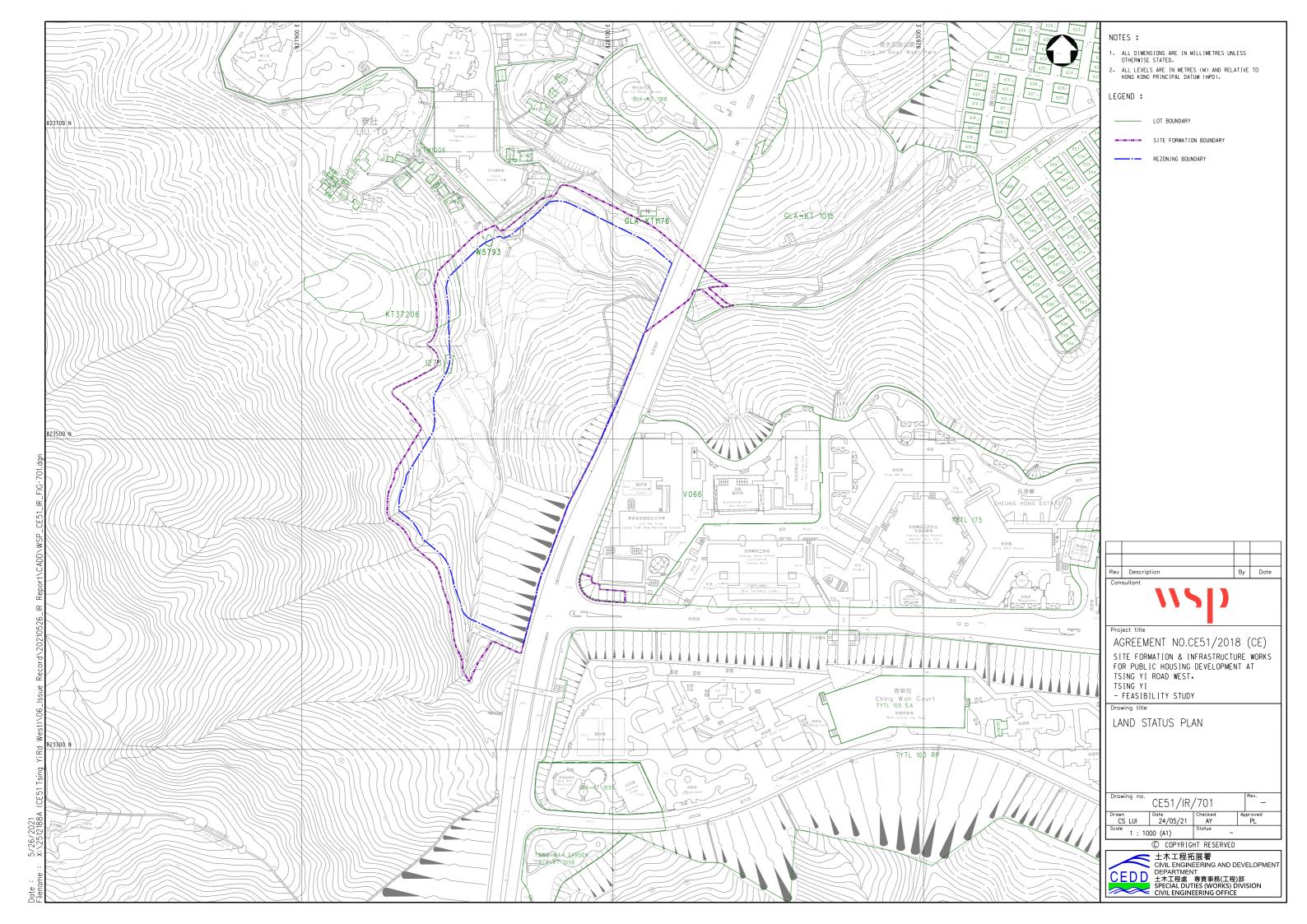


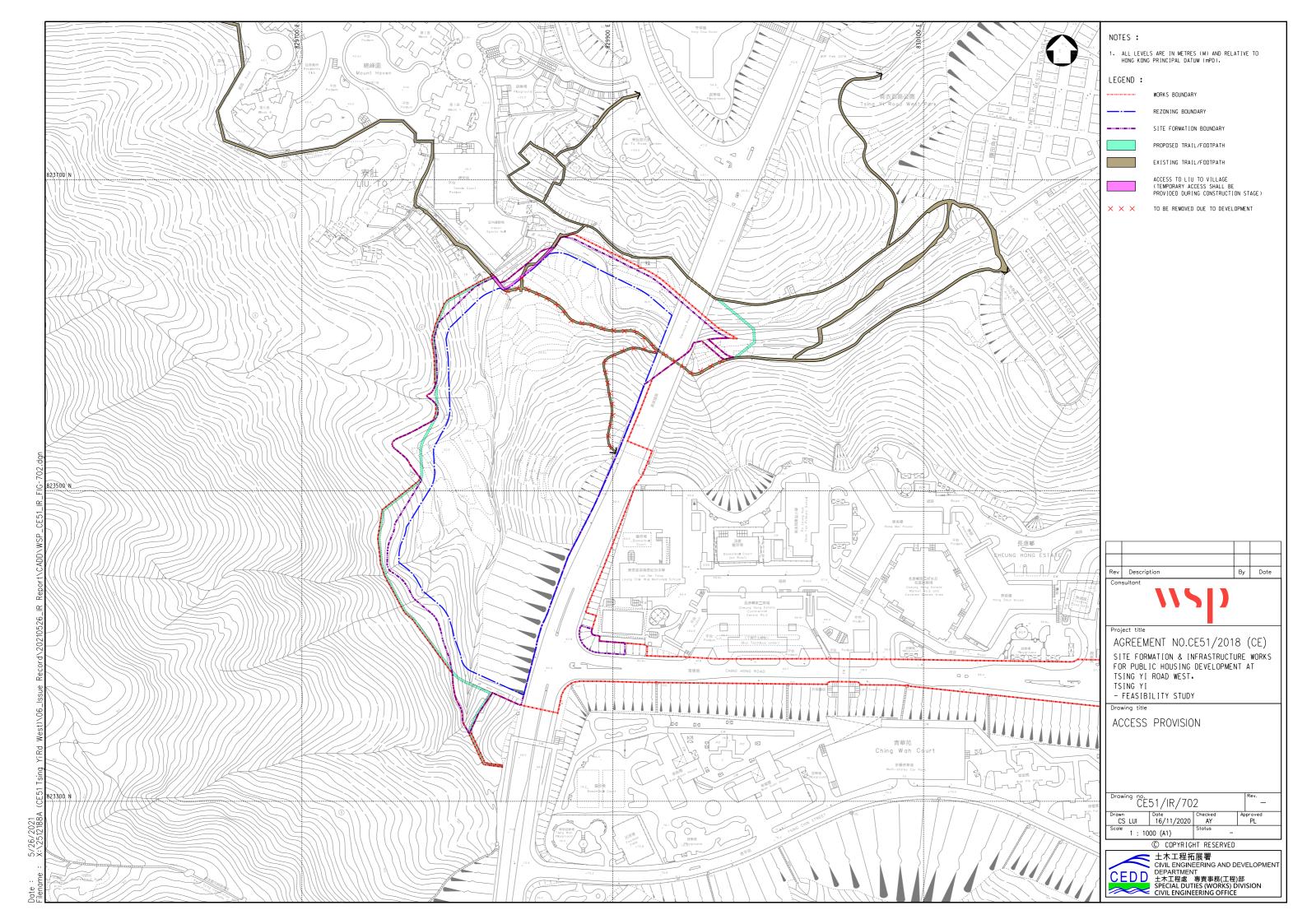


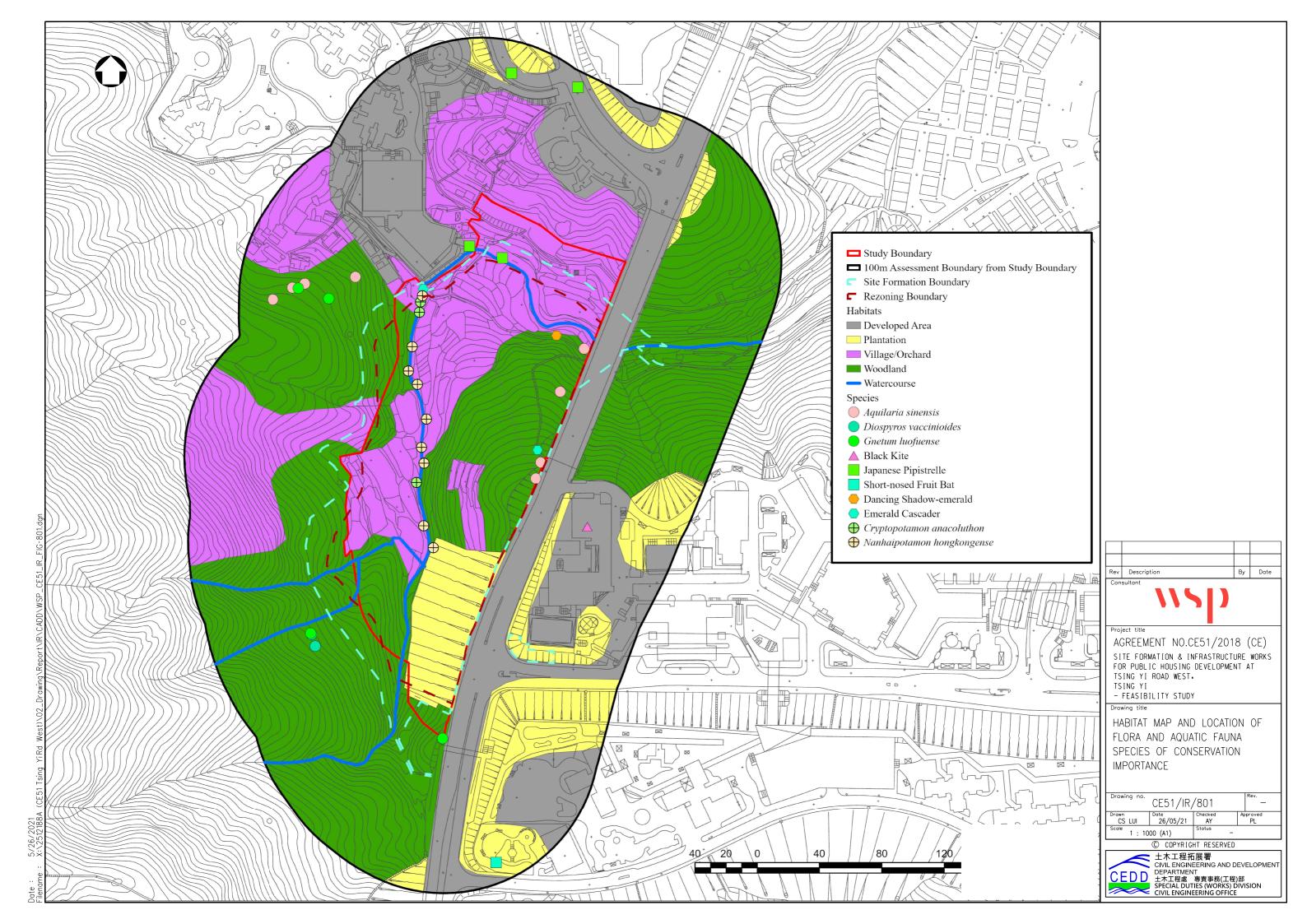


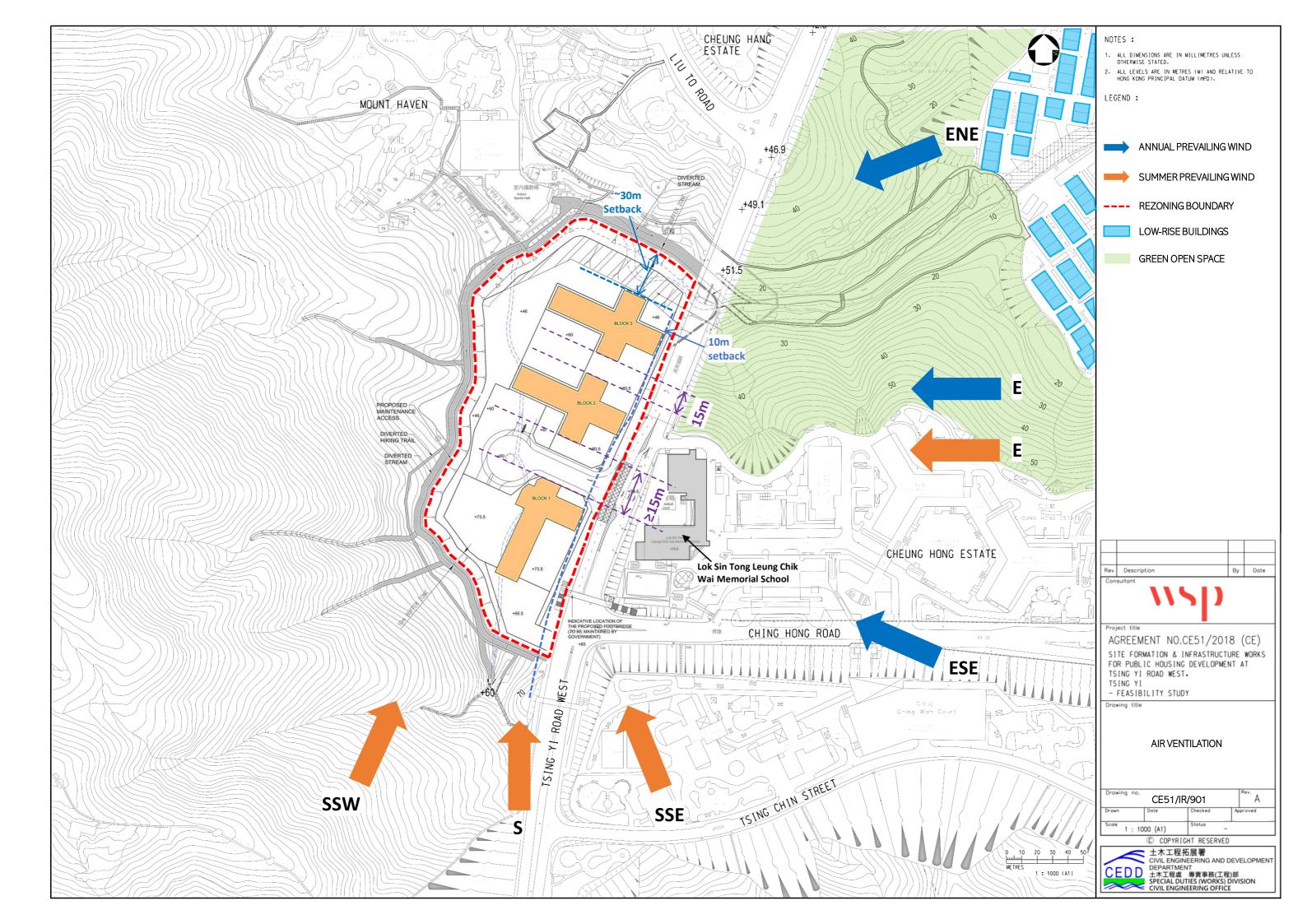


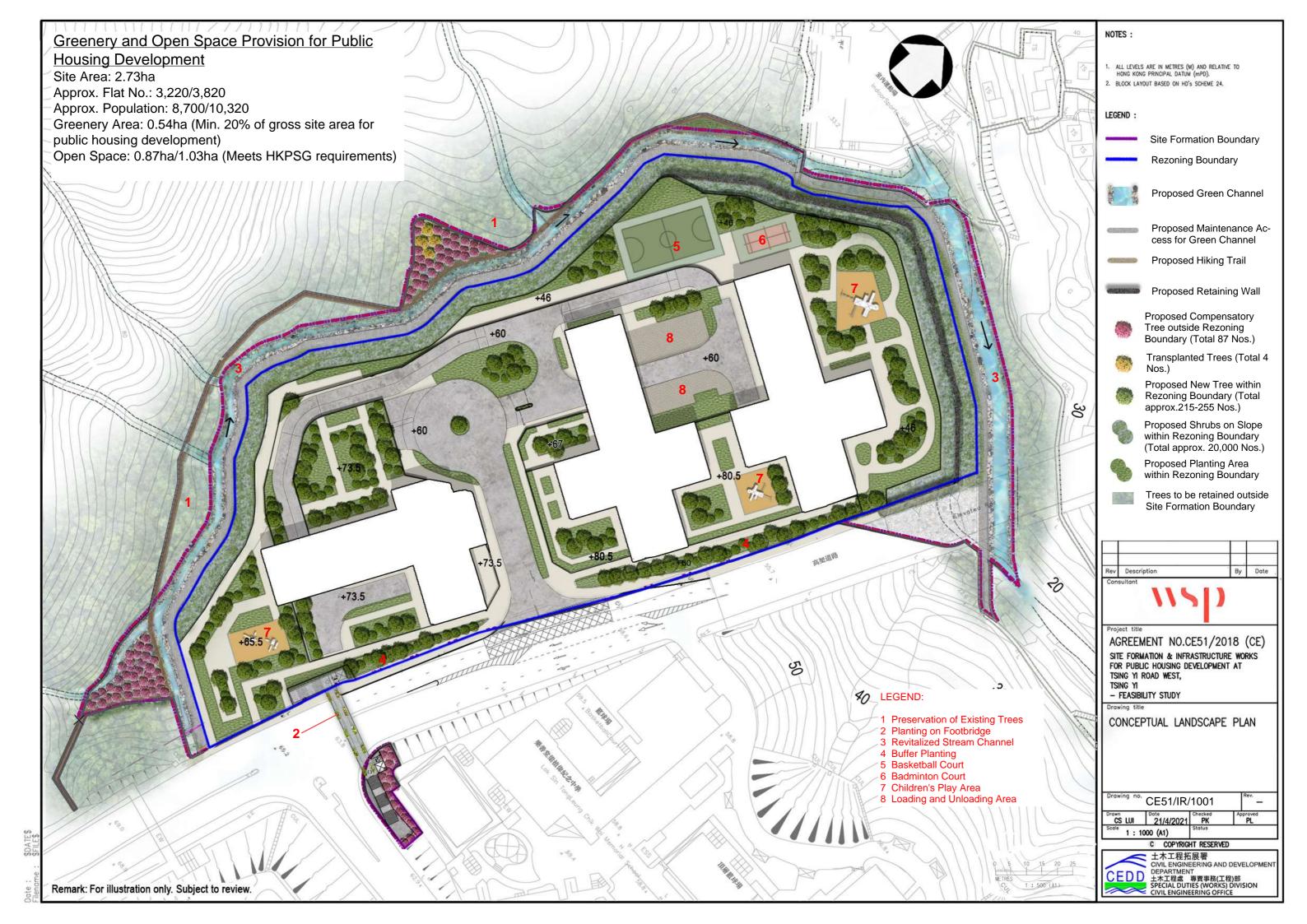










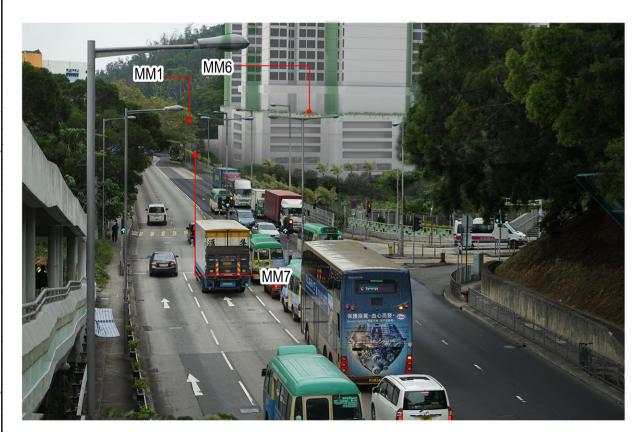




VP1 - Existing View taken at footbridge by Tsing Yi Road West Park



VP1 - Photomontage without Mitigation Measures



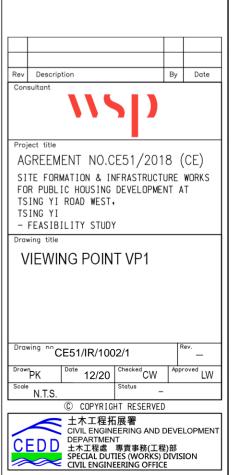
VP1 - Photomontage with Mitigation Measures

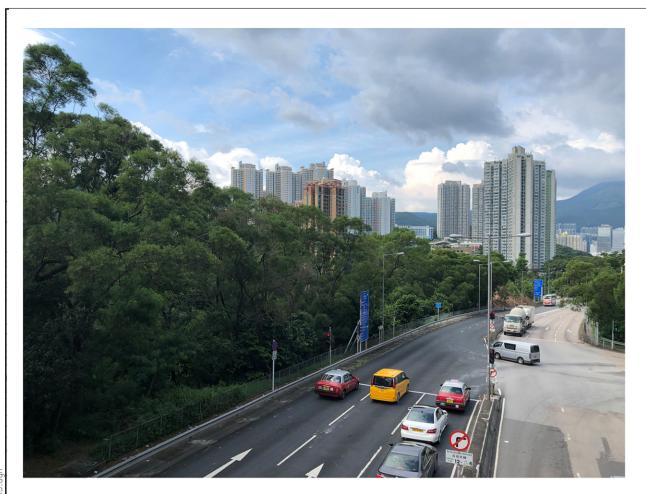
Mitigation Measure

MM1 Preservation of existing vegetation

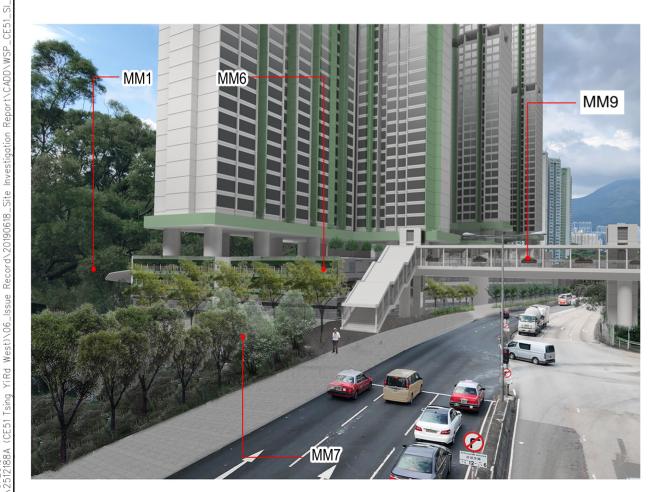
MM6 Landscape treatment within developement

MM7 Buffer planting





VP2 - Existing View taken at footbridge by Tsing Wah Playground



VP2 - Photomontage with Mitigation Measures



VP2 - Photomontage without Mitigation Measures

Mitigation Measure

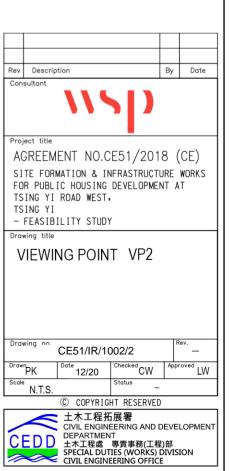
MM1 Preservation of existing vegetation

MM6 Landscape treatment within

developement

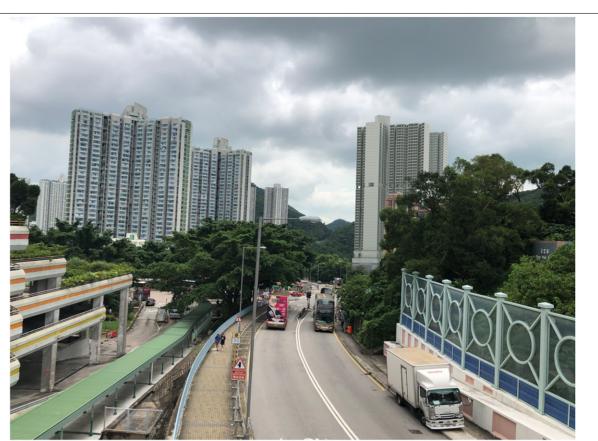
MM7 Buffer planting

MM9 Planting on footbridge





VP3 - Existing View taken at footbridge by Liu To Road



VP3 - Photomontage without Mitigation Measures



VP3 - Photomontage with Mitigation Measures

Mitigation Measure

MM1 Preservation of existing vegetation

Landscape treatment within

developement

MM7 Buffer planting



AGREEMENT NO.CE51/2018 (CE)

SITE FORMATION & INFRASTRUCTURE WORKS FOR PUBLIC HOUSING DEVELOPMENT AT TSING YI ROAD WEST, TSING YI - FEASIBILITY STUDY

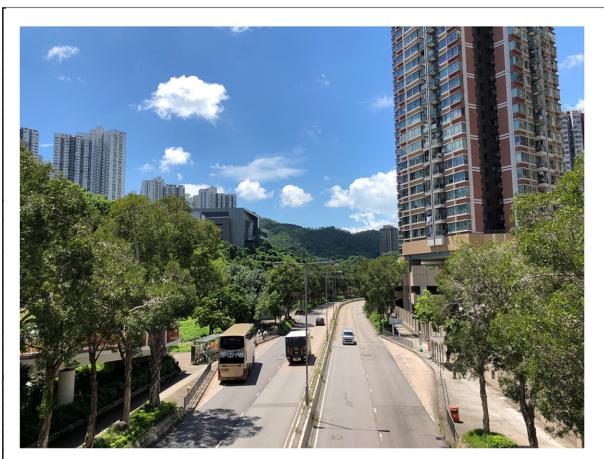
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VIEWING POINT VP3

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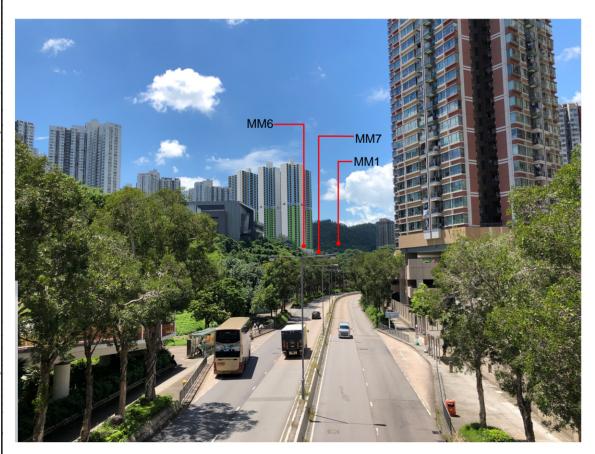




VP4- Existing View taken at footbridge at Greenview Villa



VP4 - Photomontage without Mitigation Measures



VP4 - Photomontage with Mitigation Measures

Miligation Measure

MM1 Preservatgion of existing vegetation

Landscape treatment within

developement

MM7 Buffer planting



AGREEMENT NO.CE51/2018 (CE)

SITE FORMATION & INFRASTRUCTURE WORKS FOR PUBLIC HOUSING DEVELOPMENT AT TSING YI ROAD WEST, TSING YI - FEASIBILITY STUDY

VIEWING POINT VP4

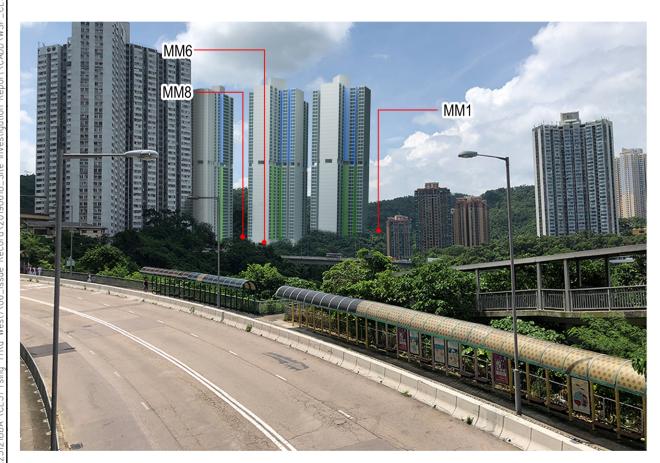
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VP5 - Existing View taken at footbridge Chung Mei Road



VP5 - Photomontage without Mitigation Measures



VP5 - Photomontage with Mitigation Measures

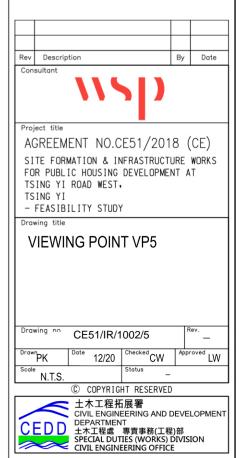
Mitigation Measure

MM1 Preservation of existing vegetation

MM6 Landscape treatment within developement

IM8 Woodland mix tree and shrub

planting





VP6 - Existing View taken at Tsing Yi Nature Trails

VP6 - Photomontage without Mitigation Measures



VP6 - Photomontage with Mitigation Measures

Mitigation Measure

MM1 Preservation of existing vegetation

MM6 Landscape treatment within

developement

MM8 Woodland mix tree and shrub

planting







VIEWING POINT VP6



VP7 - Existing View taken at Liu To Road Garden



VP7 - Photomontage with Mitigation Measures

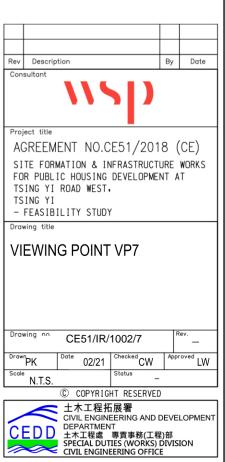


VP7 - Photomontage without Mitigation Measures

Mitigation Measure

MM1 Preservation of existing vegetation

M6 Landscape treatment within developement





VP8 - Existing View taken of Tai Wong Ha Playground

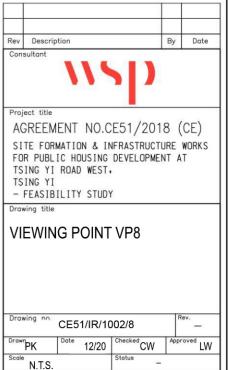


VP8 - Photomontage without Mitigation Measures



VP8 - Photomontage with Mitigation Measures

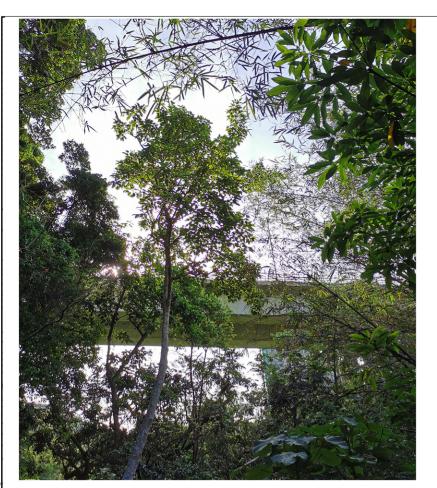
MM6 Landscape treatment within development



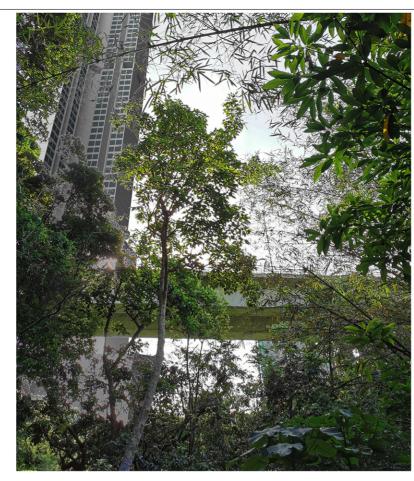
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CIVIL ENGINEERING OFFICE

rte: 18/6/2019



VP9 - Existing View taken at Tsing Yi Road West Park



VP9 - Photomontage without Mitigation Measures

MM1

MM6



VP9 - Photomontage with Mitigation Measures

Rev Description By Date

Note: For illustration only.

MM1 Preservation of existing vegetation

MM6 Landscape treatment within development

Subject to review.

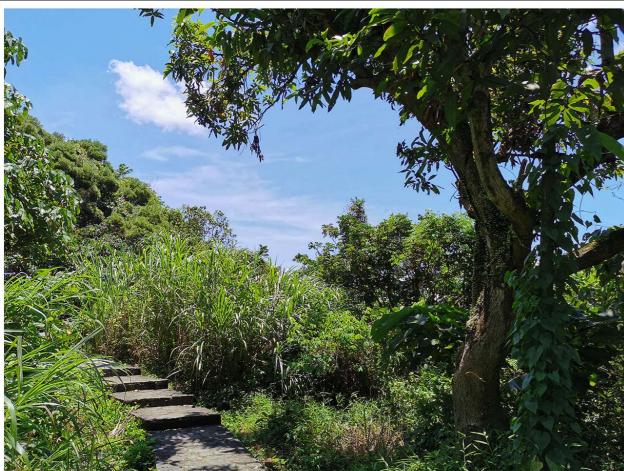
AGREEMENT NO.CE51/2018 (CE)

SITE FORMATION & INFRASTRUCTURE WORKS FOR PUBLIC HOUSING DEVELOPMENT AT TSING YI ROAD WEST, TSING YI - FEASIBILITY STUDY

VIEWING POINT VP9

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VP10- Existing View taken at Kwai Tsing Celebration of Reunification Education Trail



VP10 - Photomontage without Mitigation Measures

MM6



VP10 - Photomontage with Mitigation Measures



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SITE FORMATION & INFRASTRUCTURE WORKS FOR PUBLIC HOUSING DEVELOPMENT AT TSING YI ROAD WEST, TSING YI - FEASIBILITY STUDY

VIEWING POINT VP10

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VP11- Existing View taken at Ching Hong Road



VP11 - Photomontage with Mitigation Measures



VP11 - Photomontage without Mitigation Measures

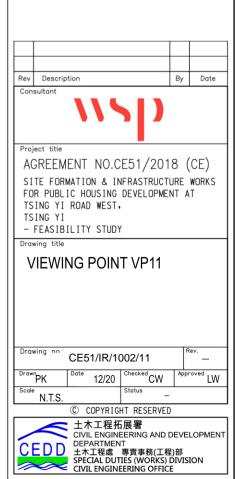
Mitigation Measure

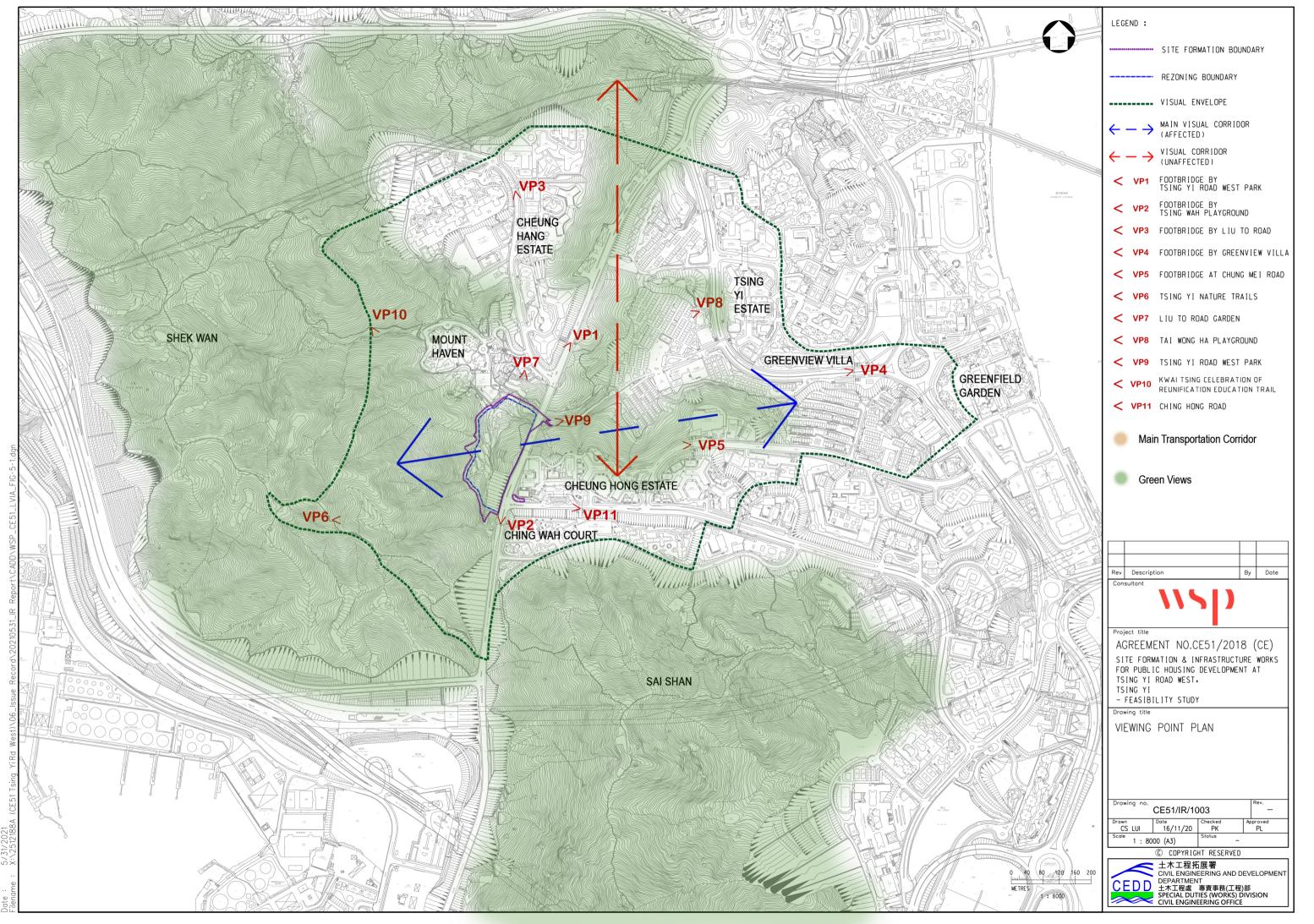
MM1 Preservation of existing vegetation

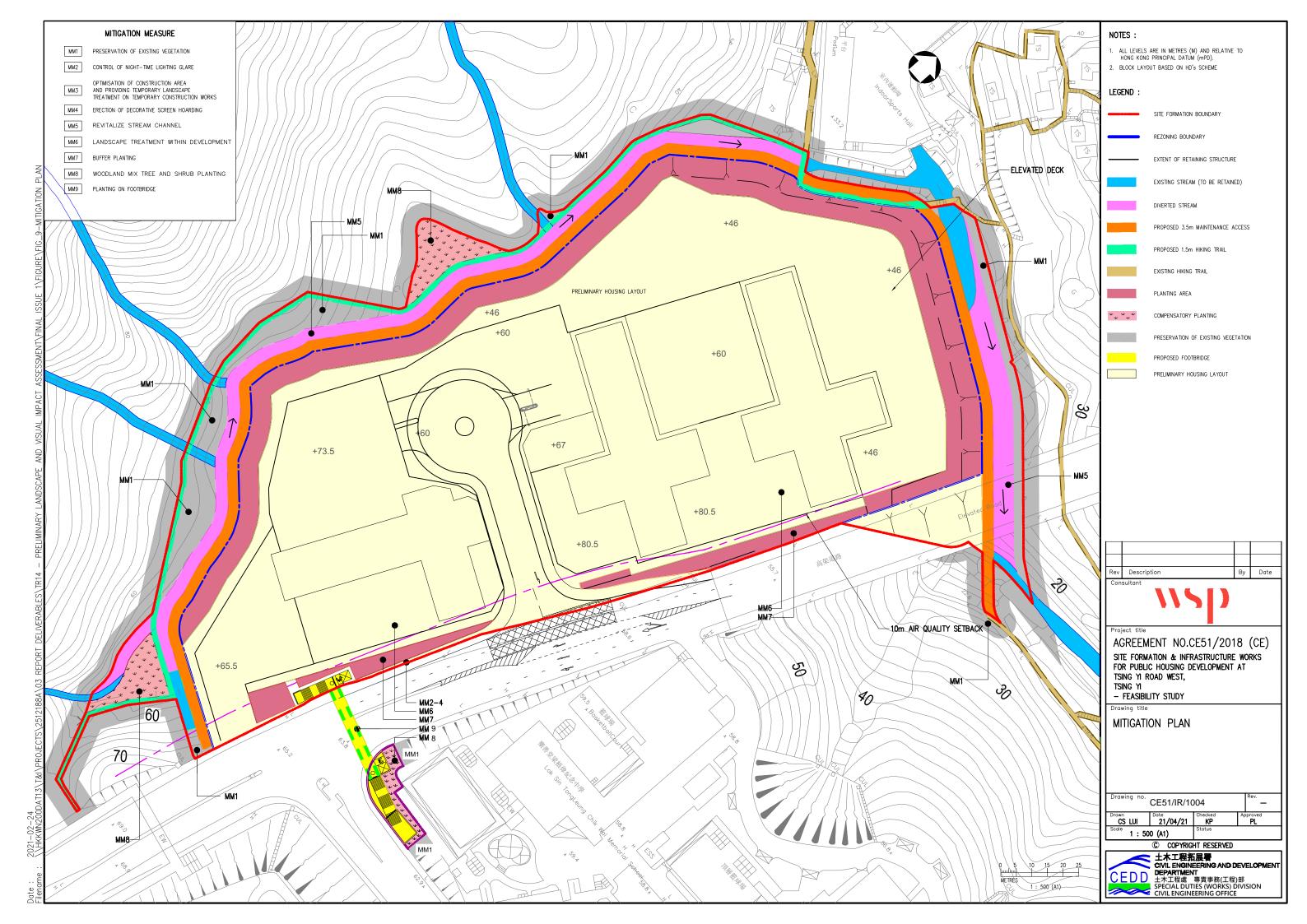
MM6 Landscape treatment within

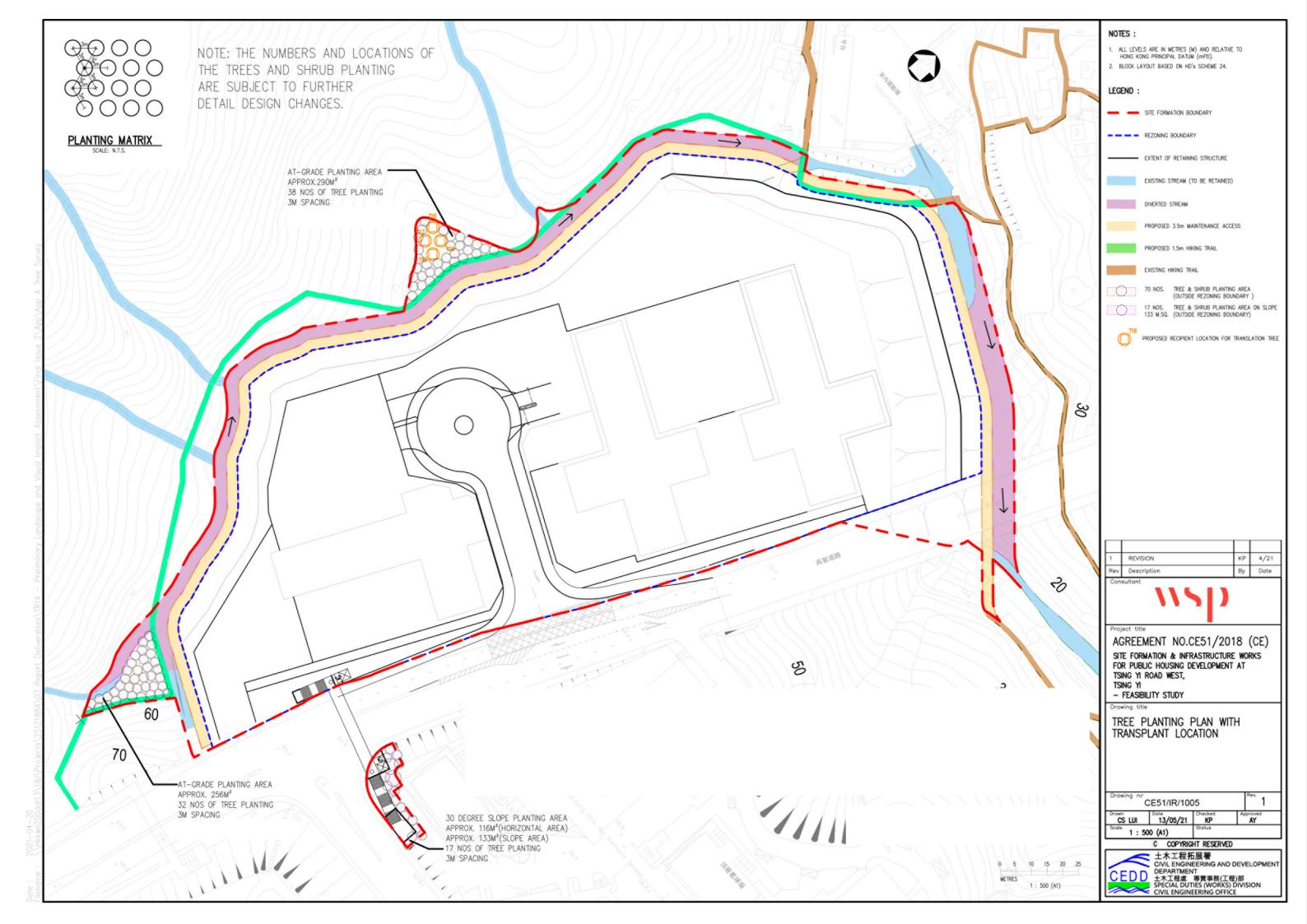
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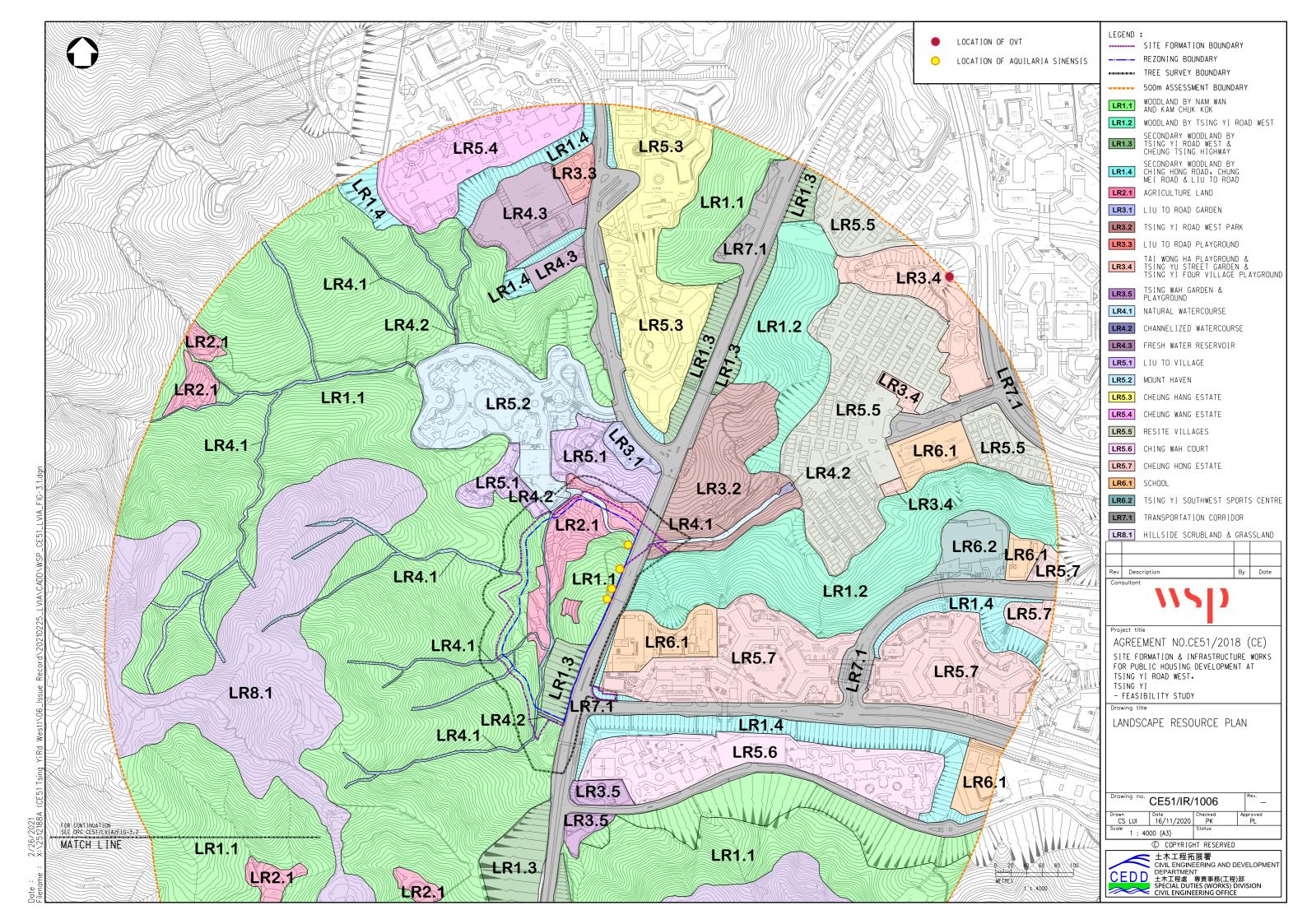
MM7 Buffer planting

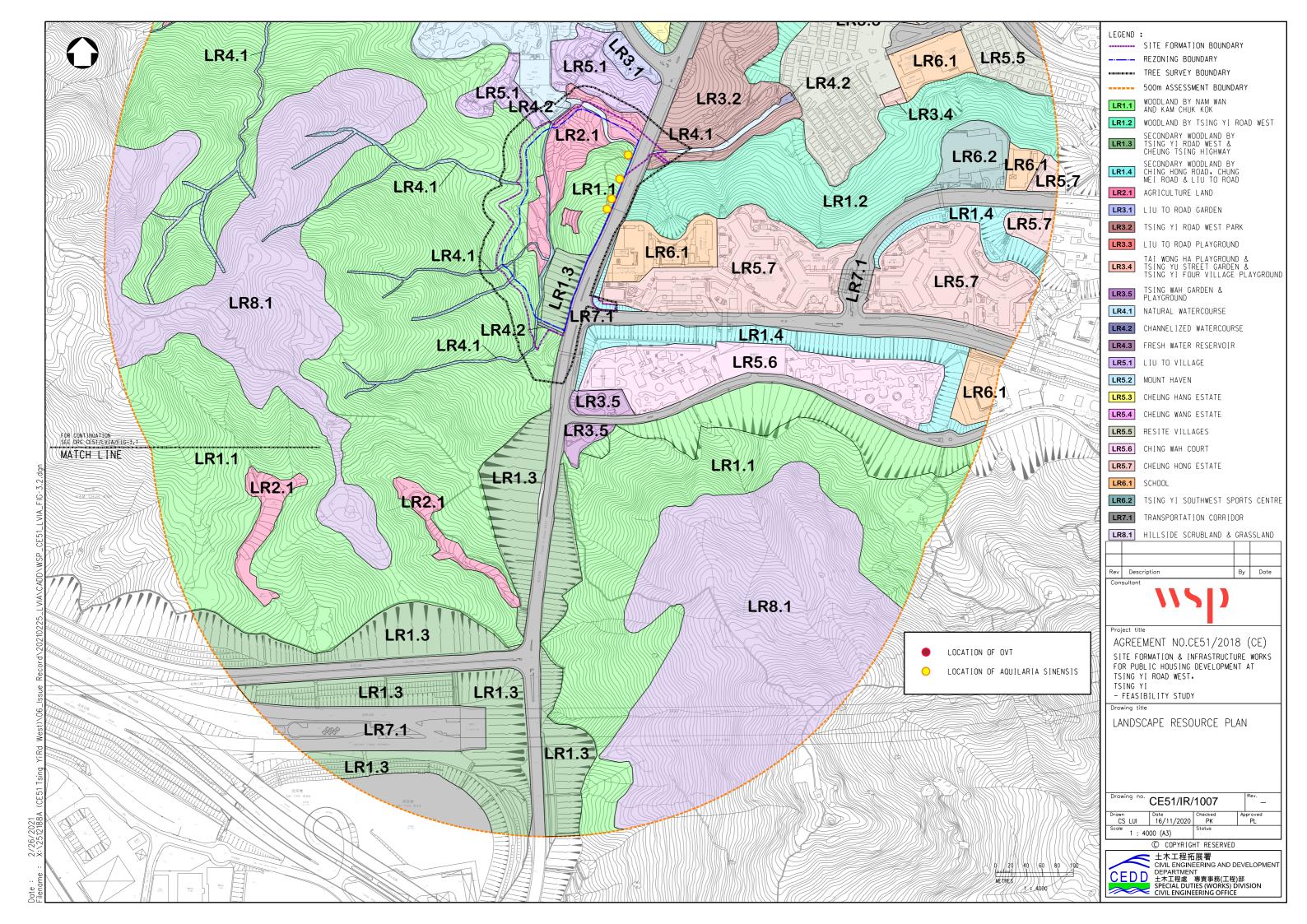


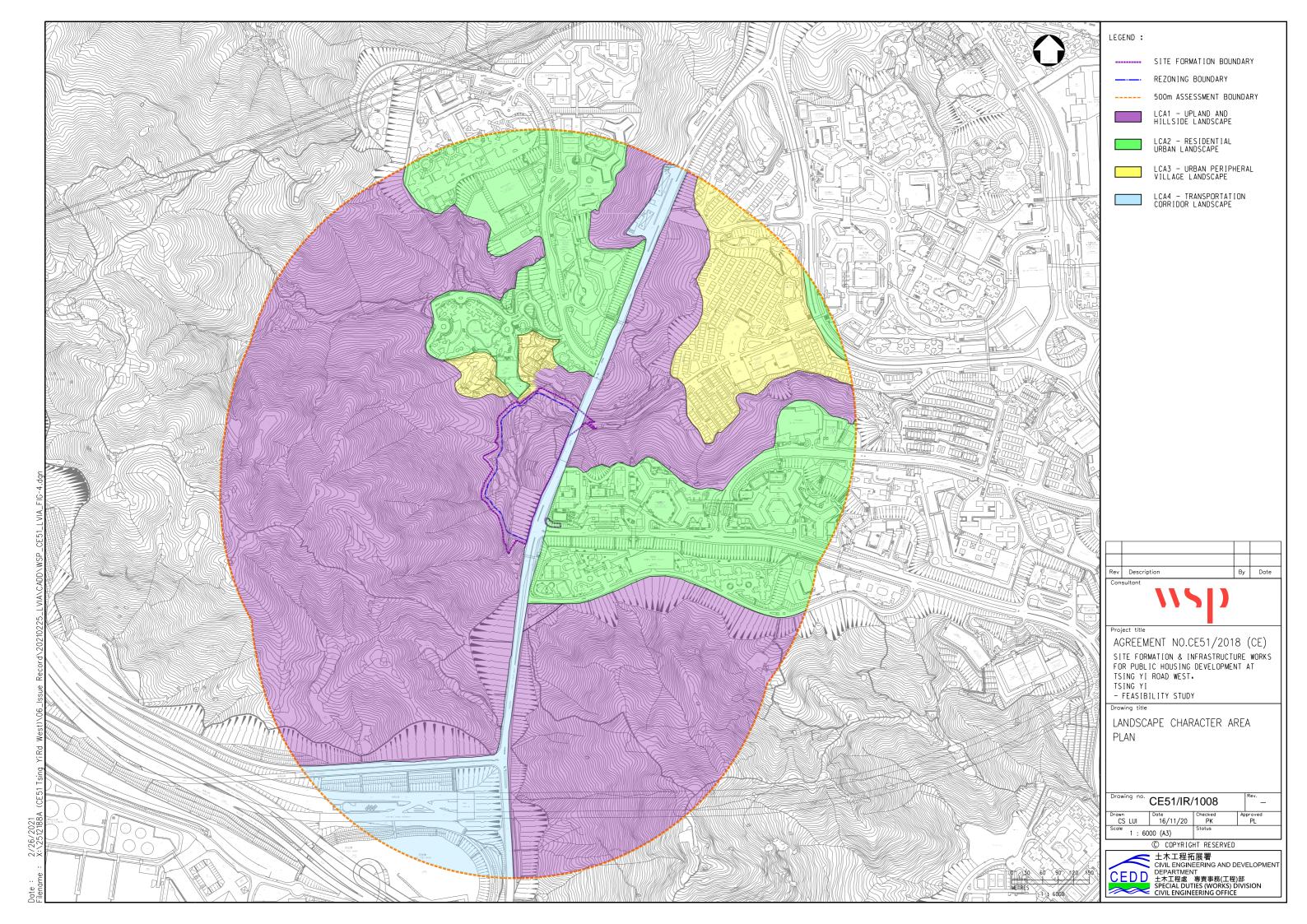






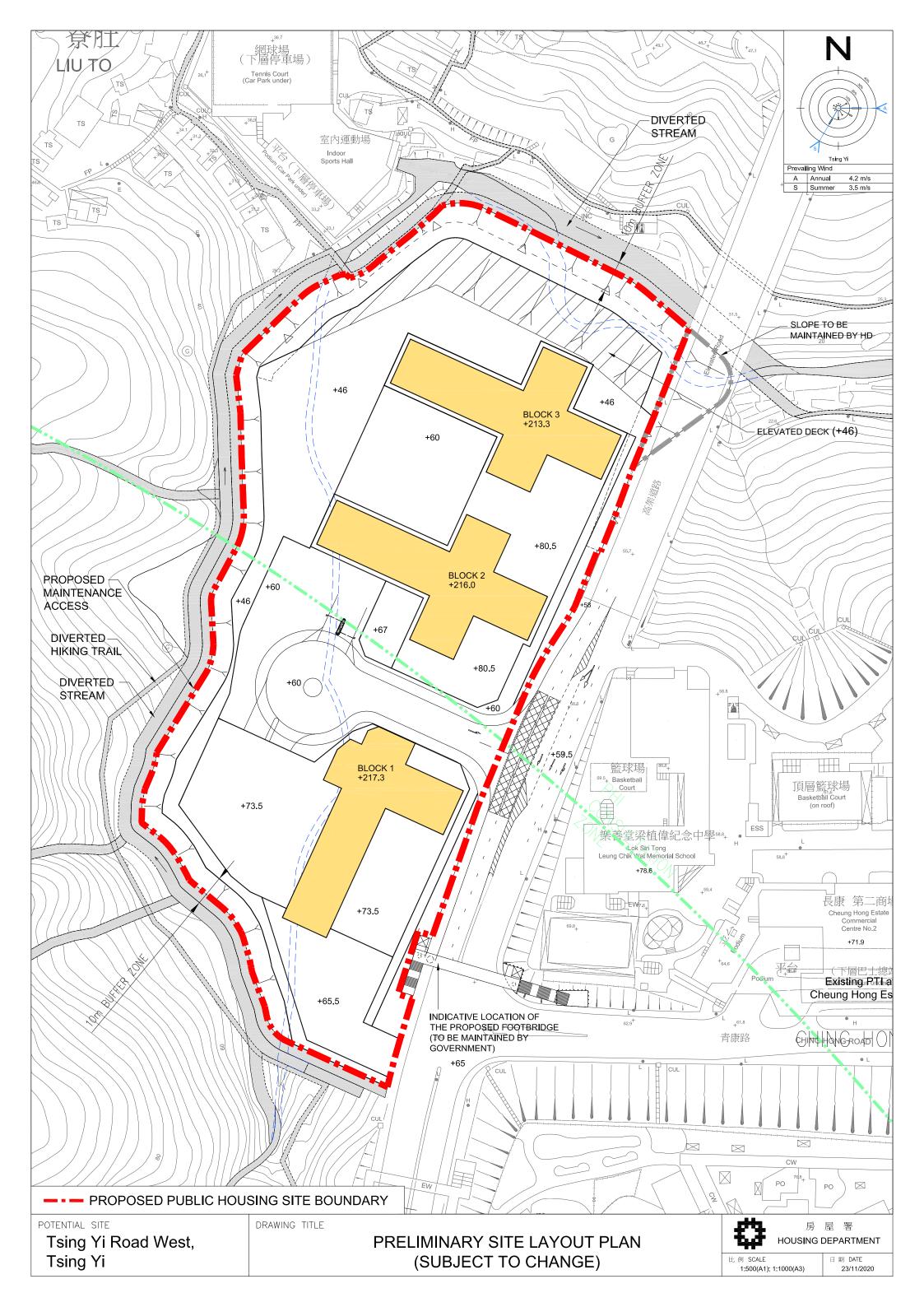






Appendix A

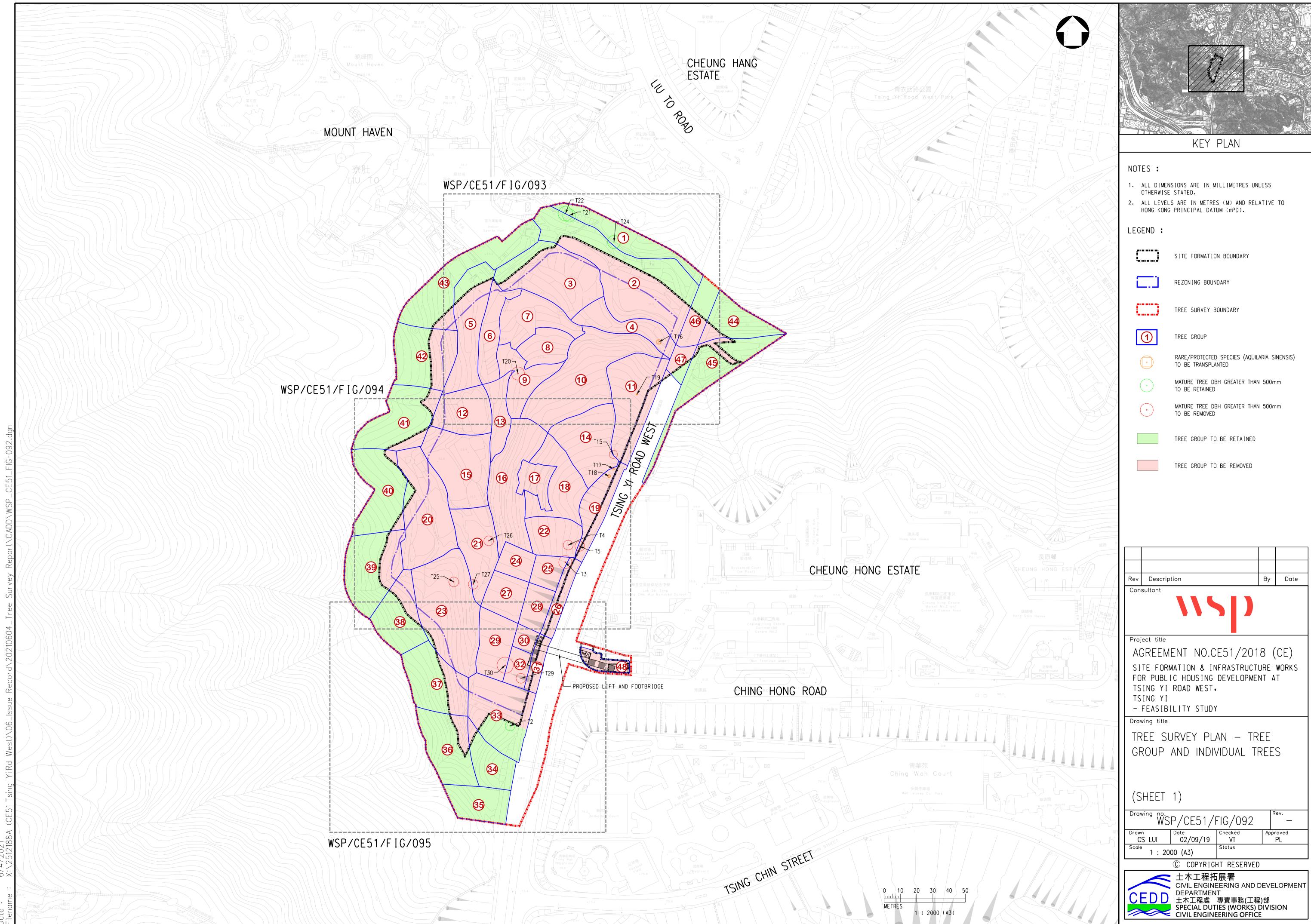
Notional Development Layout by HD



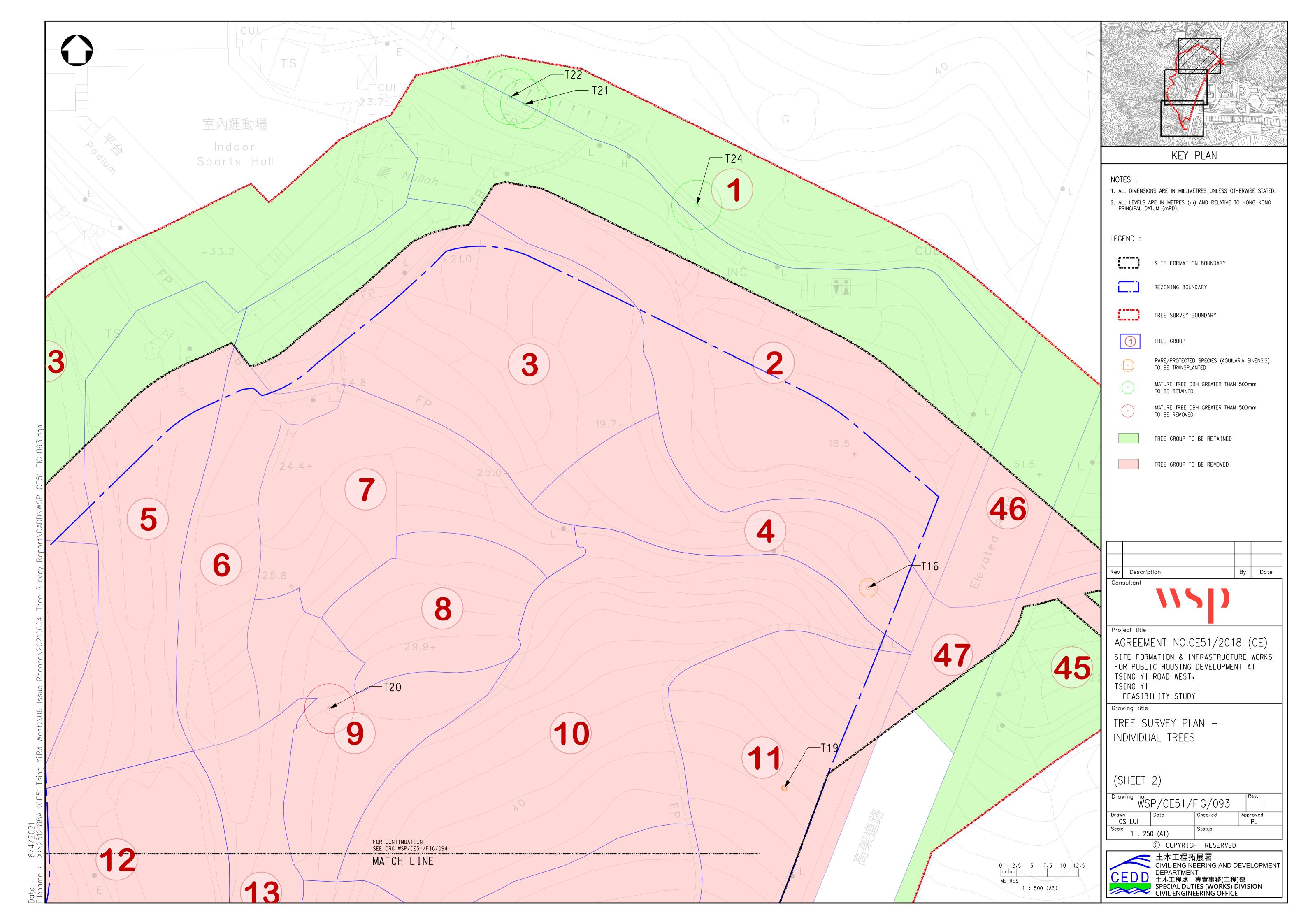
Final Interim Report for Rezoning Issue 2.0

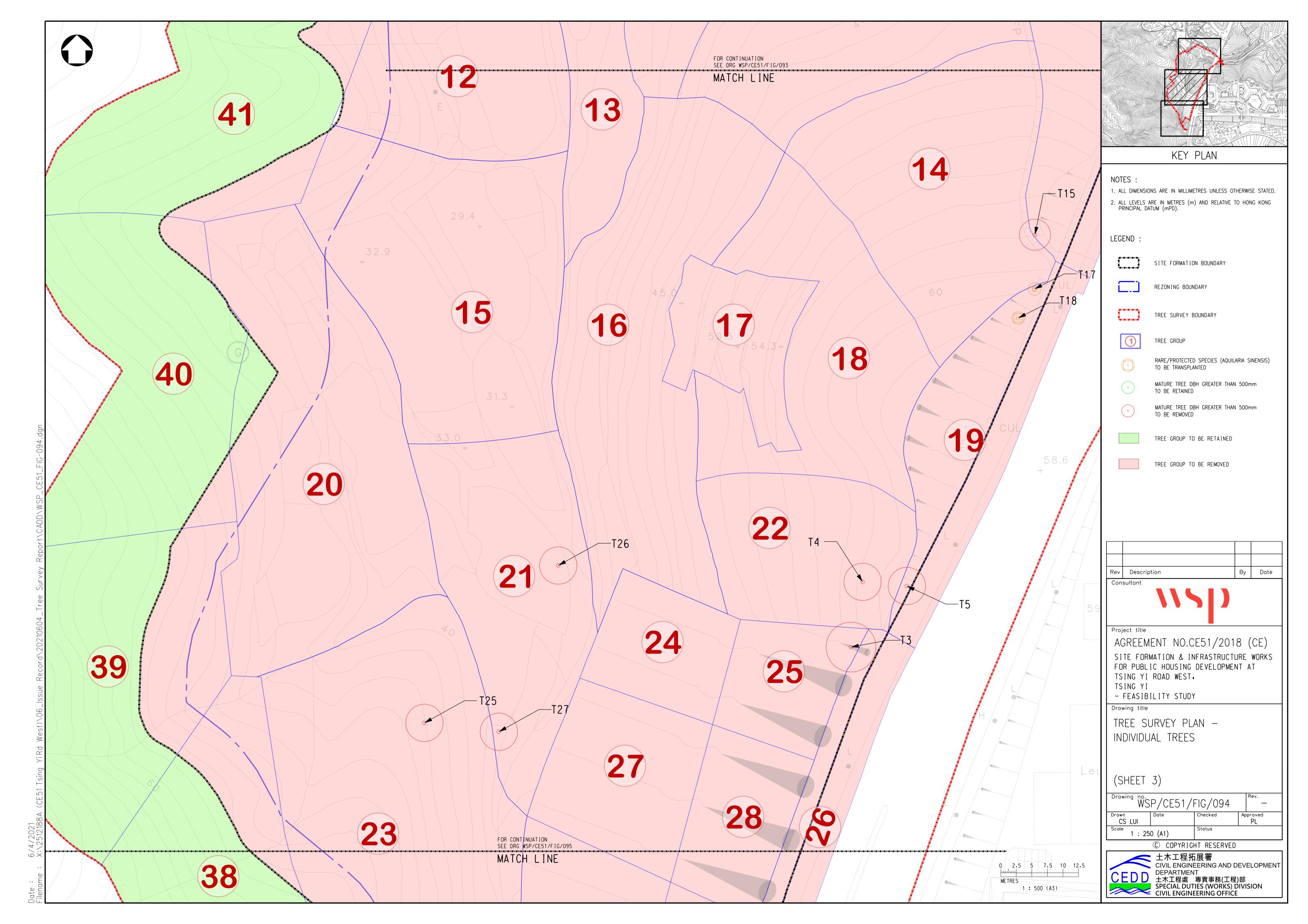
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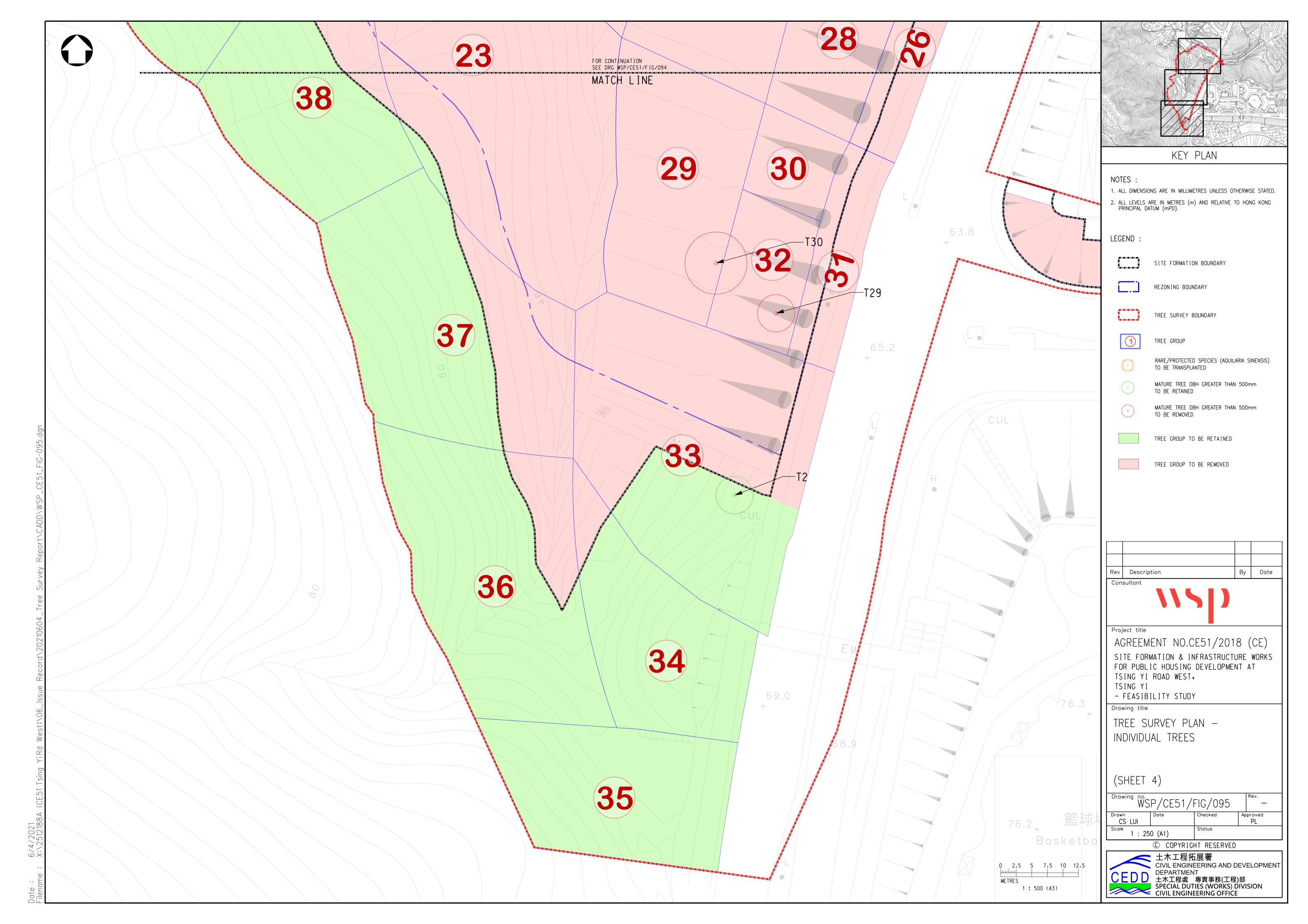
Tree Survey Plan and Photo Records

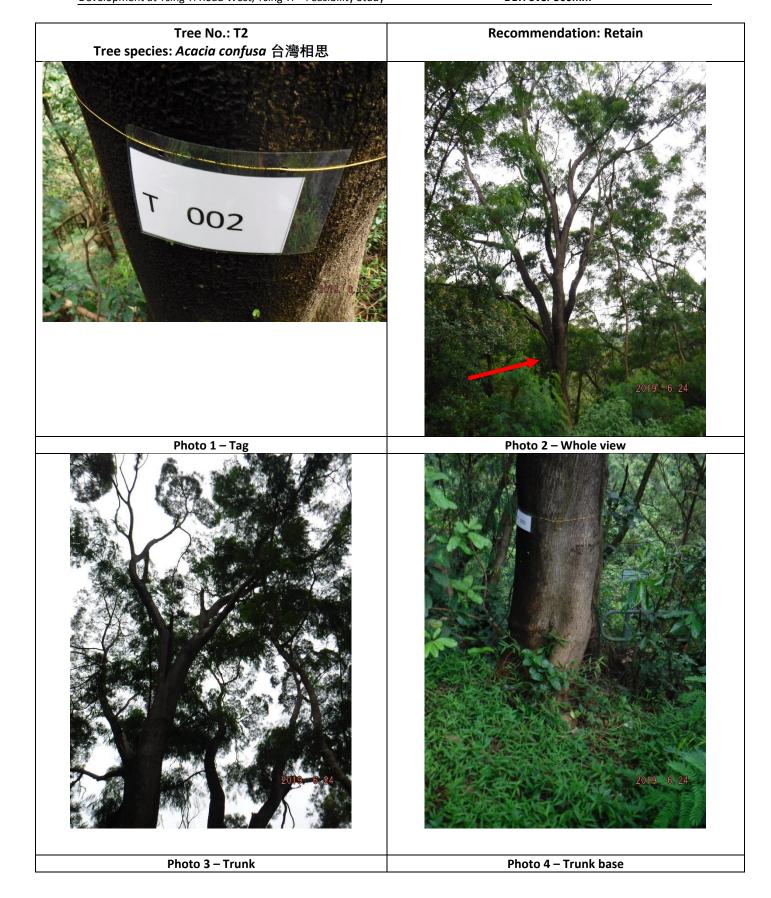


: 6/4/2021









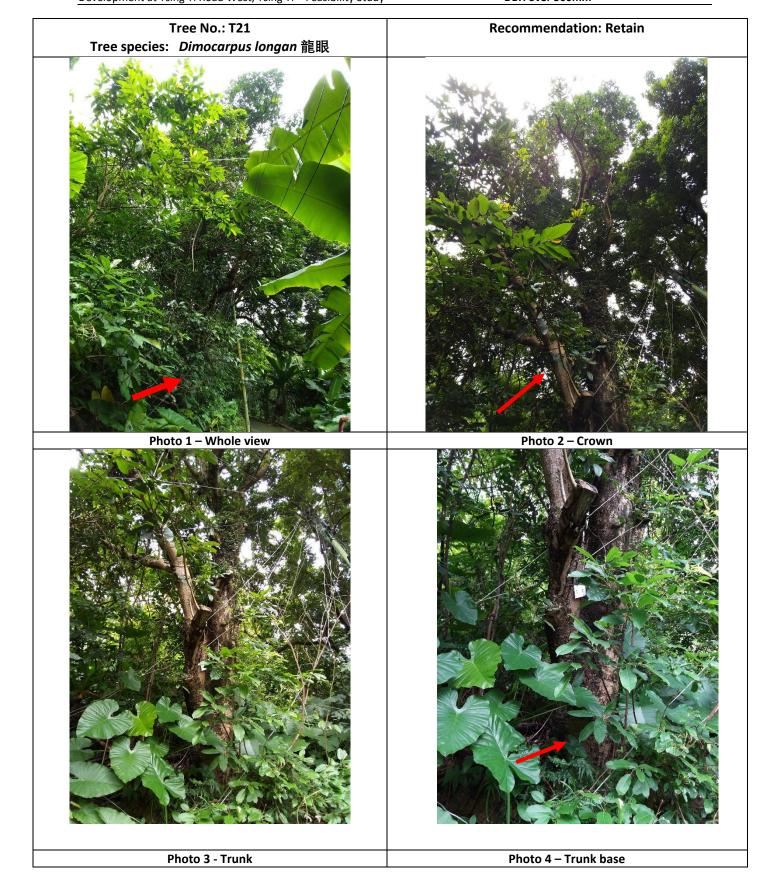






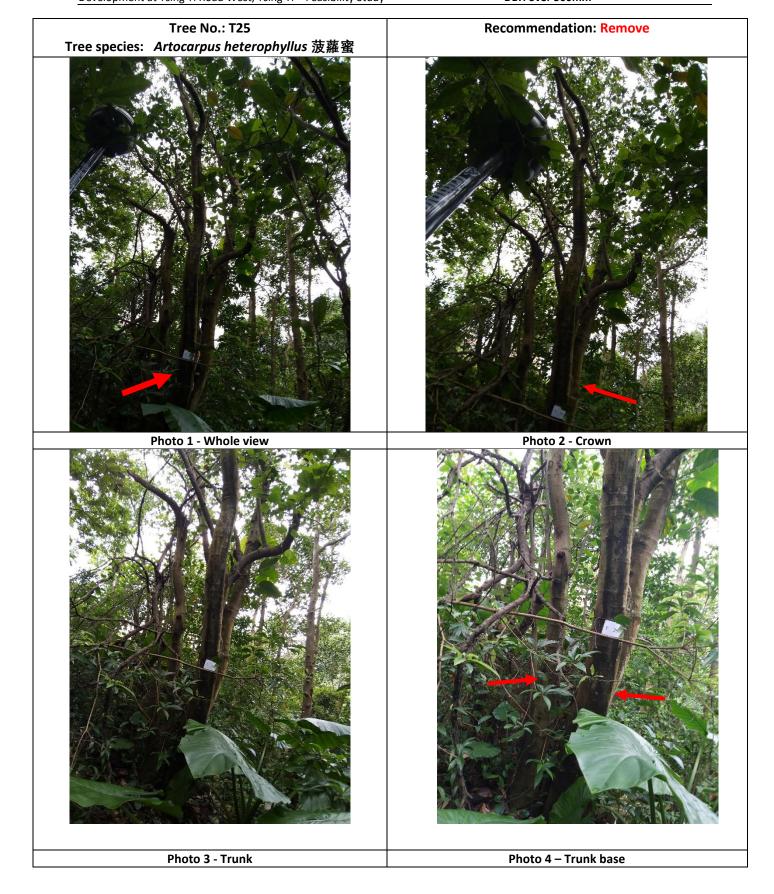
Tree No.: T15 **Recommendation: Remove** Tree species: Eucalyptus citriodora 檸檬桉 Photo 1 – Whole view Photo 2 – Crown Photo 4 – Trunk base Photo 3 – Trunk

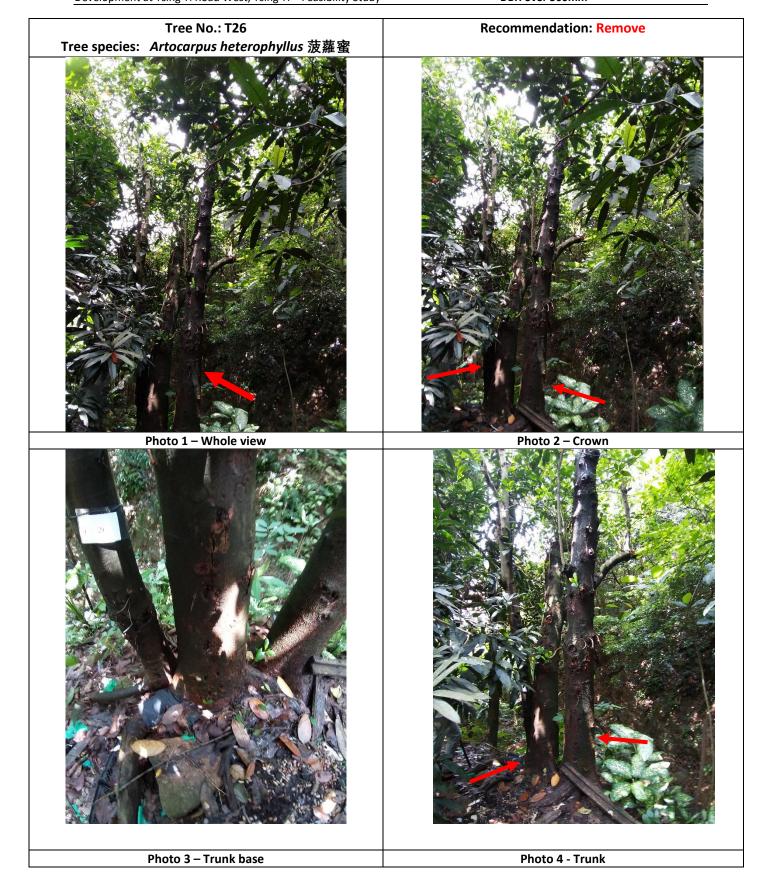




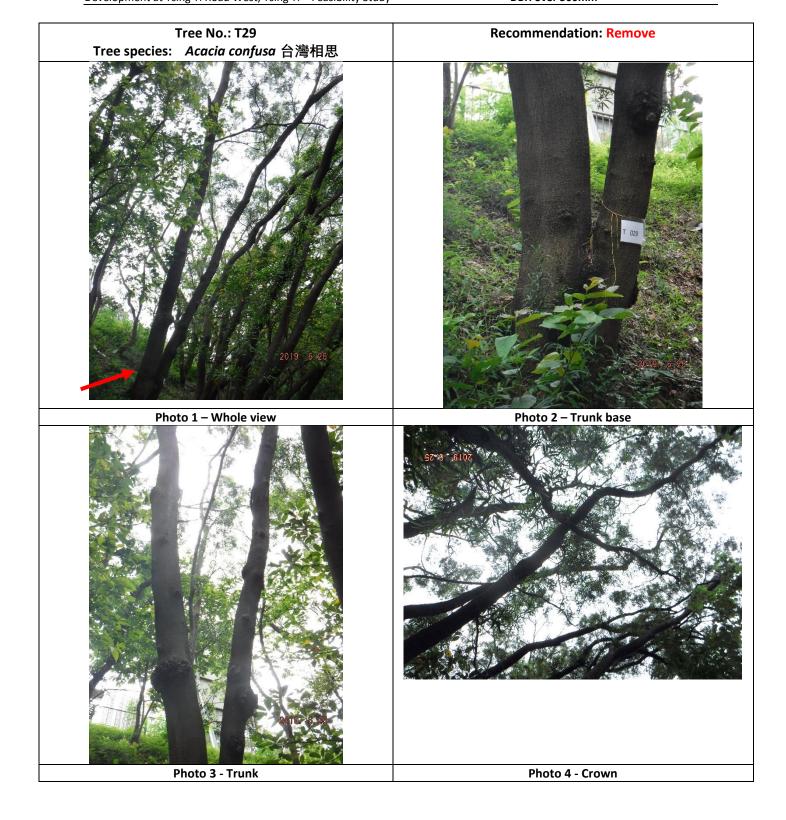






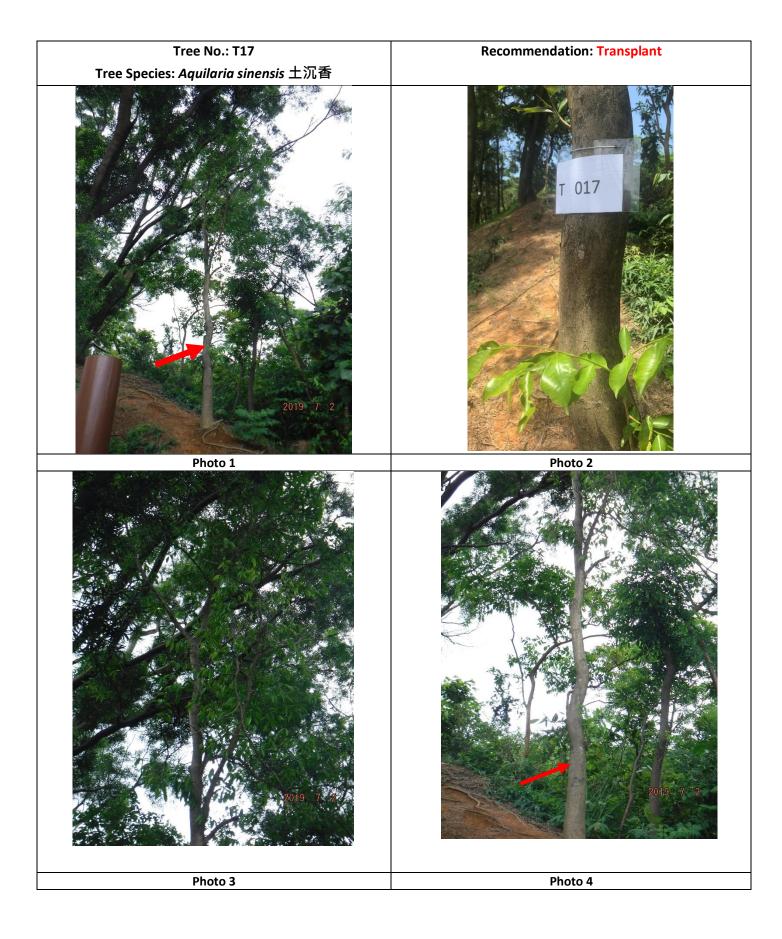


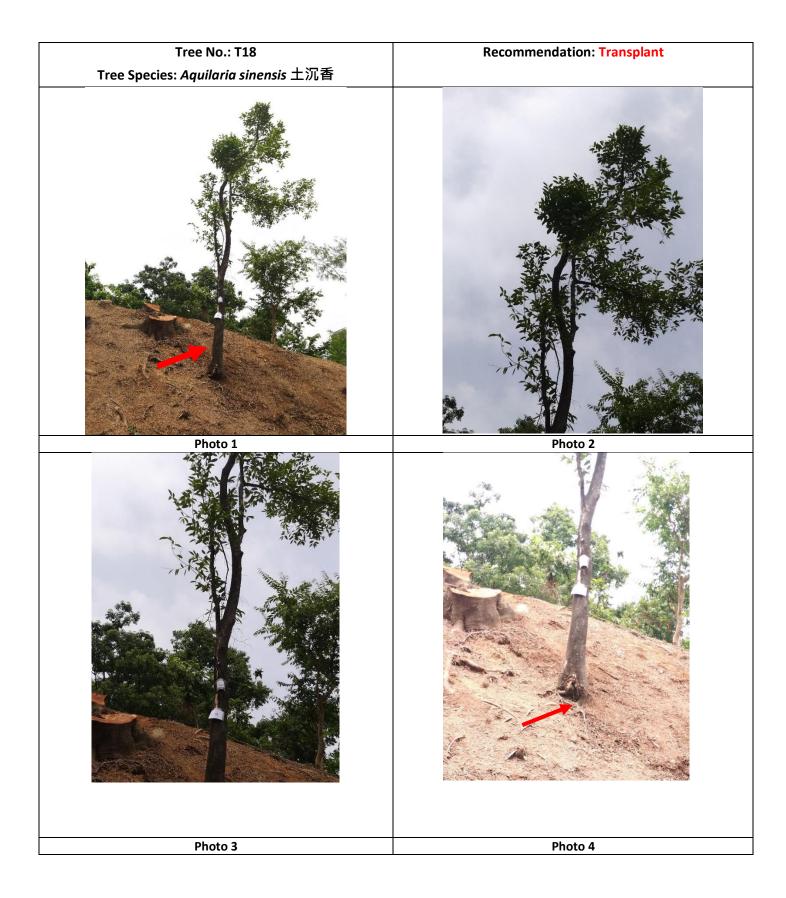




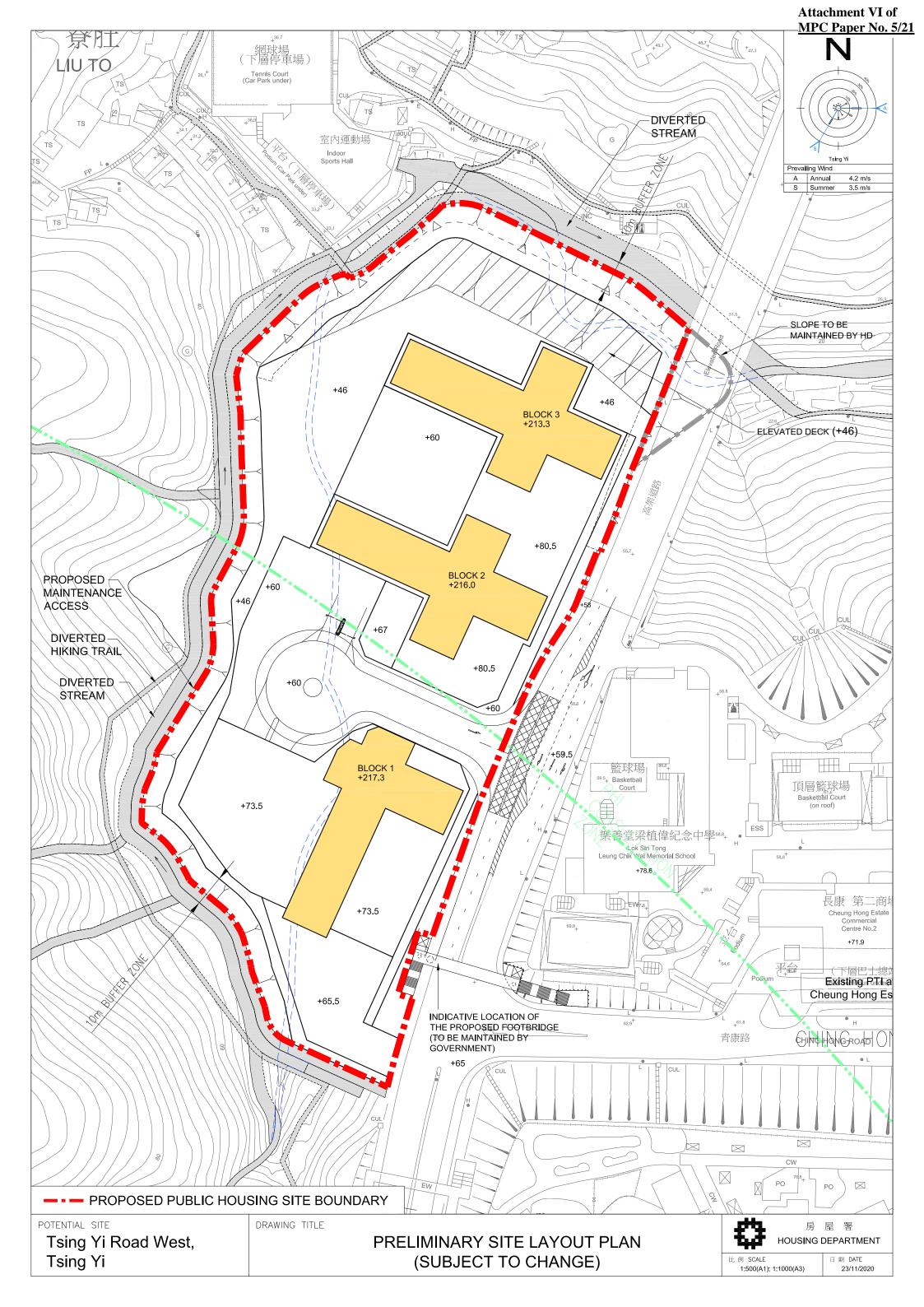


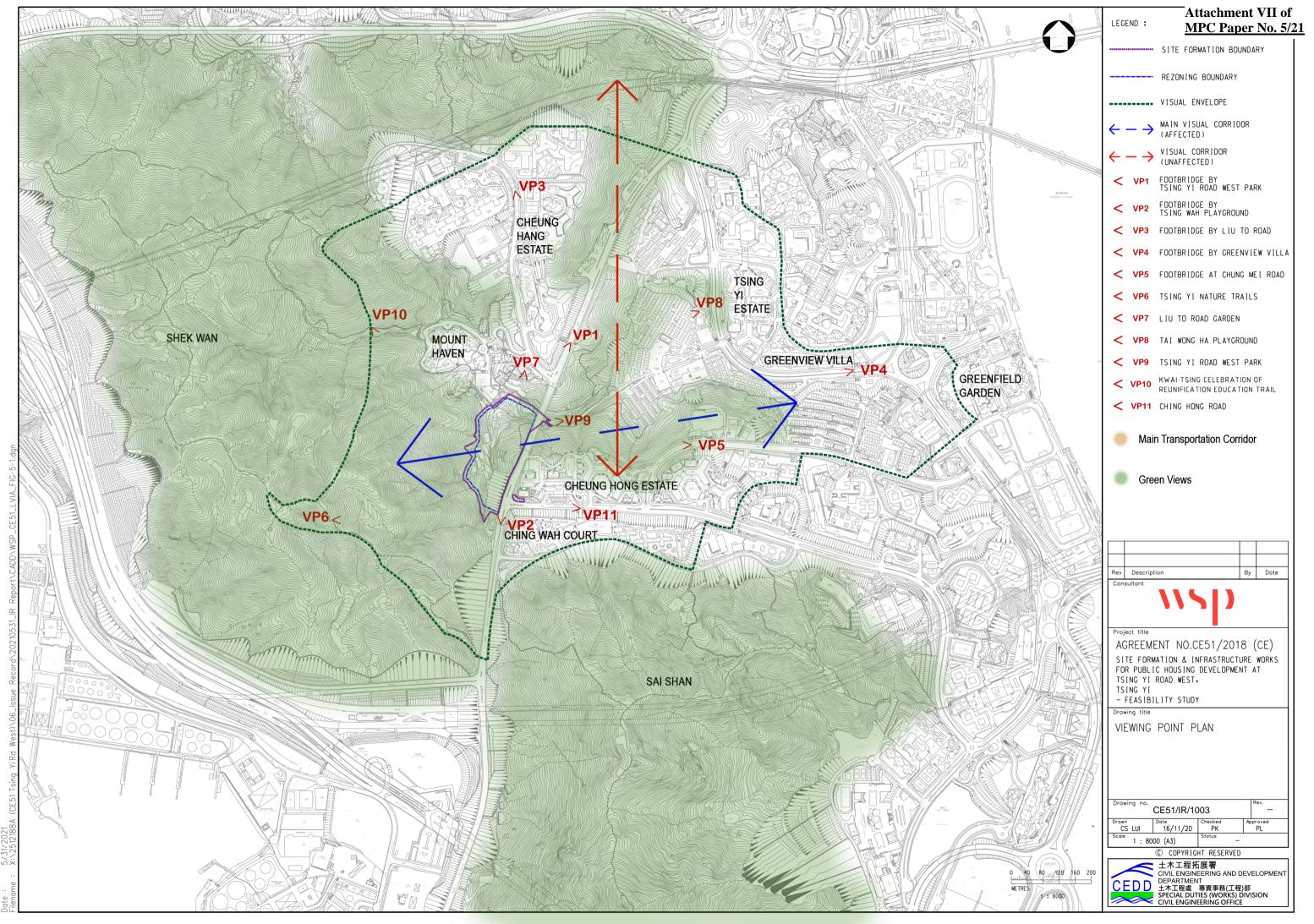










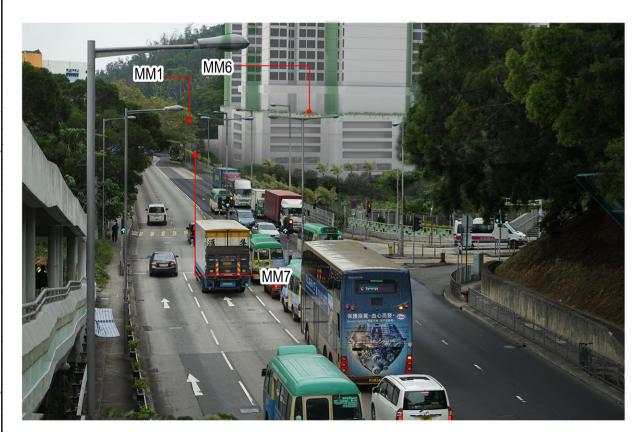




VP1 - Existing View taken at footbridge by Tsing Yi Road West Park



VP1 - Photomontage without Mitigation Measures



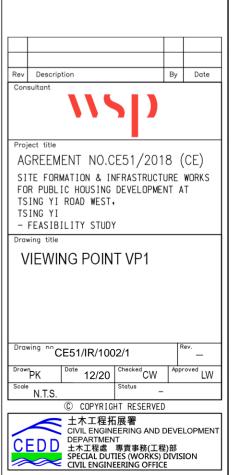
VP1 - Photomontage with Mitigation Measures

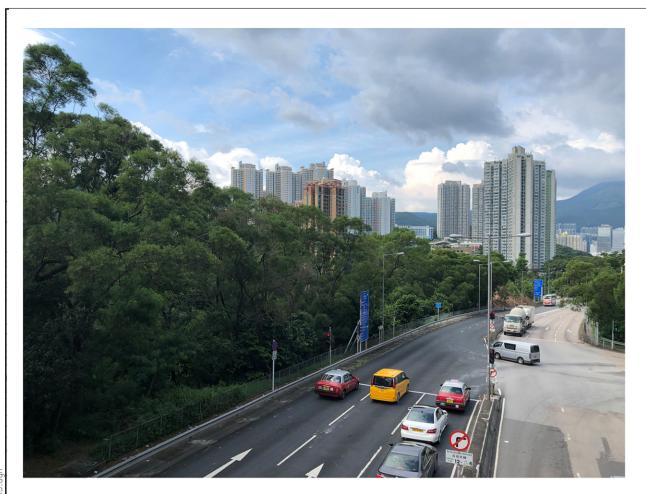
Mitigation Measure

MM1 Preservation of existing vegetation

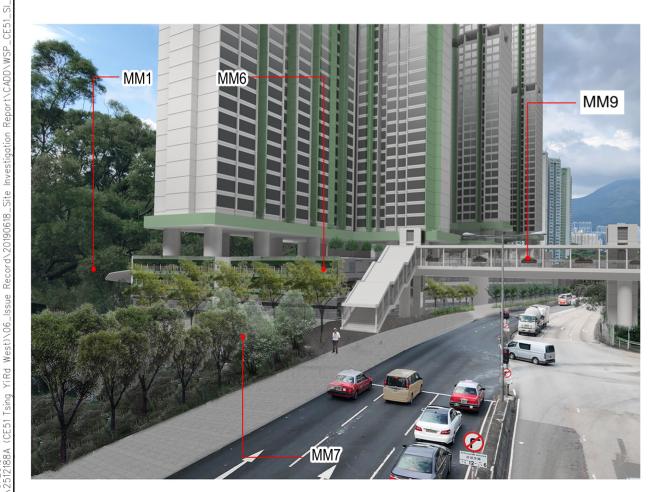
MM6 Landscape treatment within developement

MM7 Buffer planting





VP2 - Existing View taken at footbridge by Tsing Wah Playground



VP2 - Photomontage with Mitigation Measures



VP2 - Photomontage without Mitigation Measures

Mitigation Measure

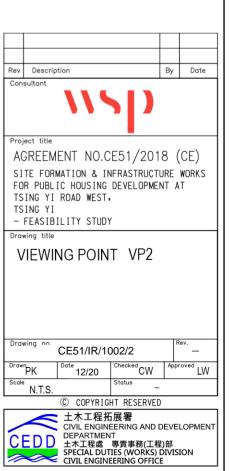
MM1 Preservation of existing vegetation

MM6 Landscape treatment within

developement

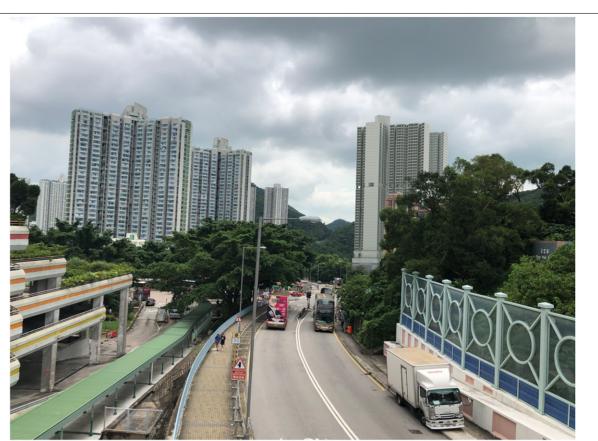
MM7 Buffer planting

MM9 Planting on footbridge





VP3 - Existing View taken at footbridge by Liu To Road



VP3 - Photomontage without Mitigation Measures



VP3 - Photomontage with Mitigation Measures

Mitigation Measure

MM1 Preservation of existing vegetation

Landscape treatment within

developement

MM7 Buffer planting



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SITE FORMATION & INFRASTRUCTURE WORKS FOR PUBLIC HOUSING DEVELOPMENT AT TSING YI ROAD WEST, TSING YI - FEASIBILITY STUDY

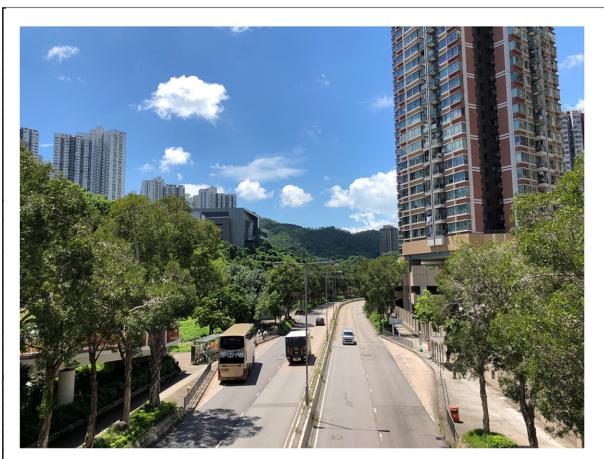
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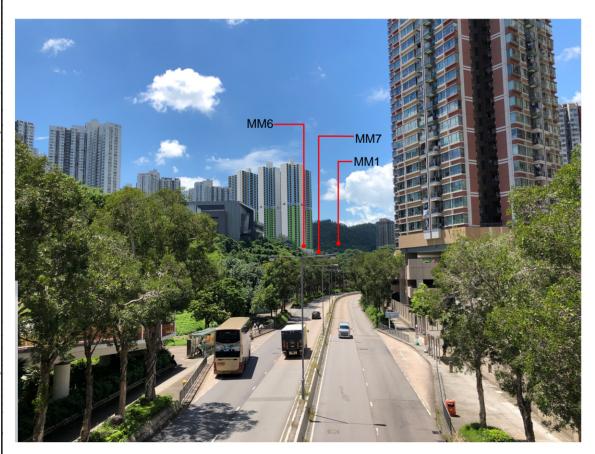




VP4- Existing View taken at footbridge at Greenview Villa



VP4 - Photomontage without Mitigation Measures



VP4 - Photomontage with Mitigation Measures

Miligation Measure

MM1 Preservatgion of existing vegetation

Landscape treatment within

developement

MM7 Buffer planting



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SITE FORMATION & INFRASTRUCTURE WORKS FOR PUBLIC HOUSING DEVELOPMENT AT TSING YI ROAD WEST, TSING YI - FEASIBILITY STUDY

VIEWING POINT VP4

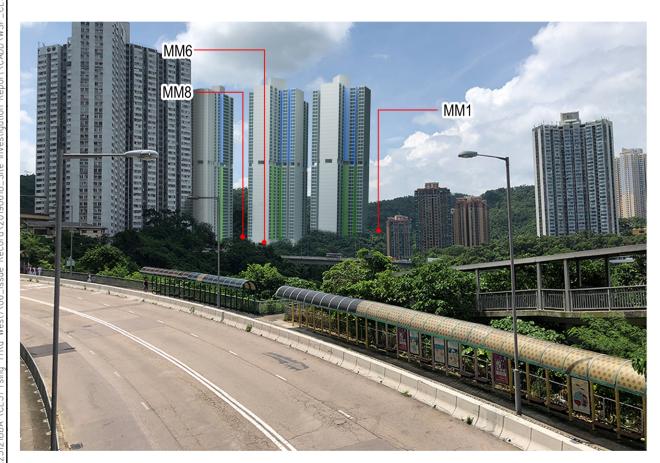
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VP5 - Existing View taken at footbridge Chung Mei Road



VP5 - Photomontage without Mitigation Measures



VP5 - Photomontage with Mitigation Measures

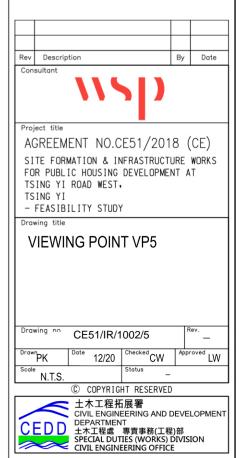
Mitigation Measure

MM1 Preservation of existing vegetation

MM6 Landscape treatment within developement

IM8 Woodland mix tree and shrub

planting





VP6 - Existing View taken at Tsing Yi Nature Trails

VP6 - Photomontage without Mitigation Measures



VP6 - Photomontage with Mitigation Measures

Mitigation Measure

MM1 Preservation of existing vegetation

MM6 Landscape treatment within

developement

MM8 Woodland mix tree and shrub

planting







VIEWING POINT VP6



VP7 - Existing View taken at Liu To Road Garden



VP7 - Photomontage with Mitigation Measures

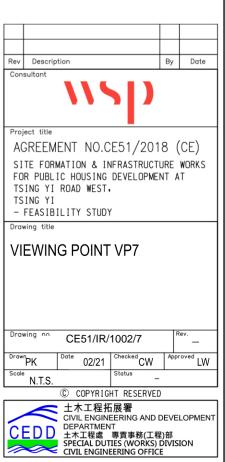


VP7 - Photomontage without Mitigation Measures

Mitigation Measure

MM1 Preservation of existing vegetation

M6 Landscape treatment within developement





VP8 - Existing View taken of Tai Wong Ha Playground

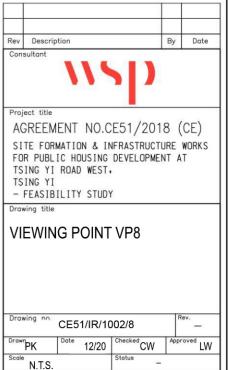


VP8 - Photomontage without Mitigation Measures



VP8 - Photomontage with Mitigation Measures

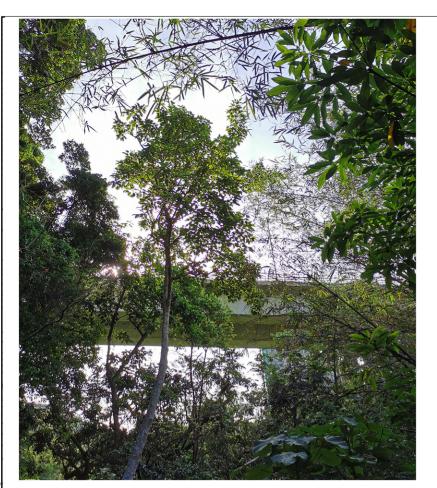
MM6 Landscape treatment within development



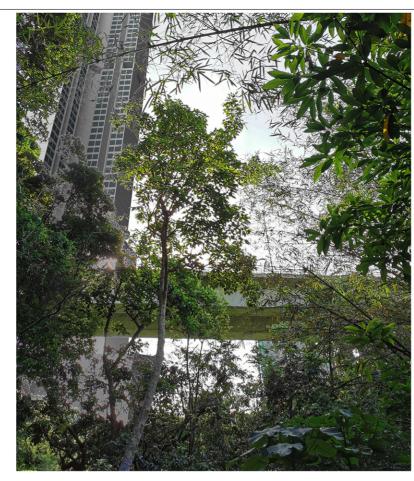
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rte: 18/6/2019



VP9 - Existing View taken at Tsing Yi Road West Park



VP9 - Photomontage without Mitigation Measures

MM1

MM6



VP9 - Photomontage with Mitigation Measures

Rev Description By Date

Note: For illustration only.

MM1 Preservation of existing vegetation

MM6 Landscape treatment within development

Subject to review.

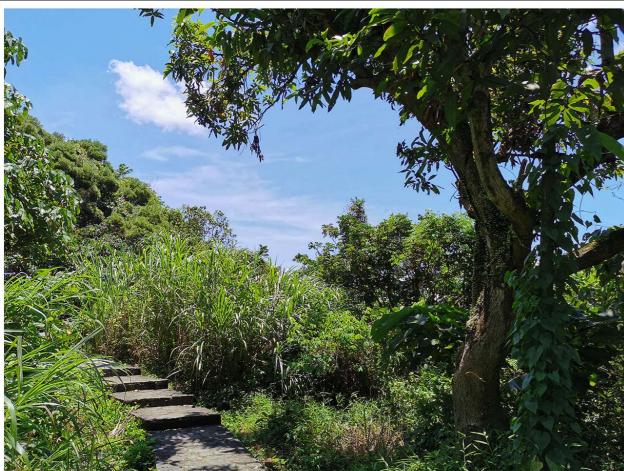
AGREEMENT NO.CE51/2018 (CE)

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VIEWING POINT VP9

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VP10- Existing View taken at Kwai Tsing Celebration of Reunification Education Trail



VP10 - Photomontage without Mitigation Measures

MM6



VP10 - Photomontage with Mitigation Measures



AGREEMENT NO.CE51/2018 (CE)

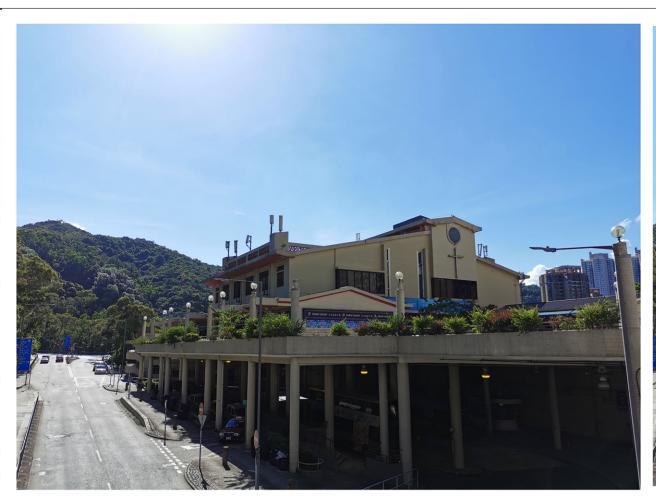
SITE FORMATION & INFRASTRUCTURE WORKS FOR PUBLIC HOUSING DEVELOPMENT AT TSING YI ROAD WEST, TSING YI - FEASIBILITY STUDY

VIEWING POINT VP10

Drawing no	Rev.				
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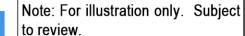
VP11- Existing View taken at Ching Hong Road



VP11 - Photomontage with Mitigation Measures



VP11 - Photomontage without Mitigation Measures



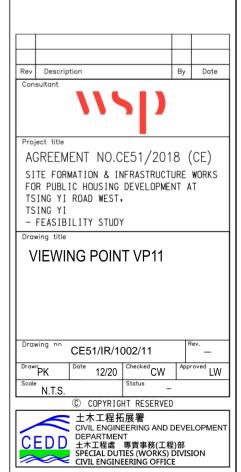
Mitigation Measure

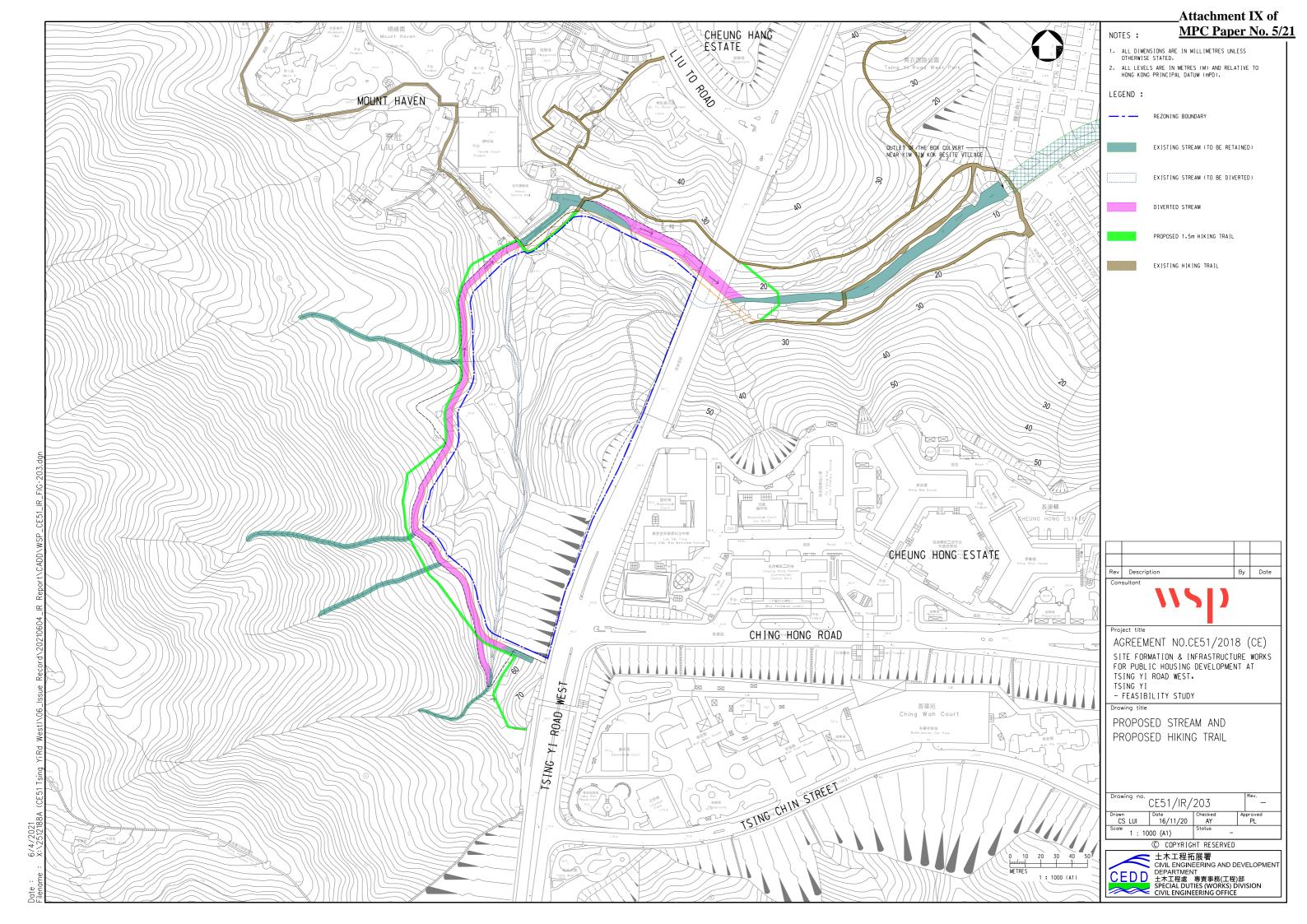
MM1 Preservation of existing vegetation

IM6 Landscape treatment within

developement

MM7 Buffer planting





Provision of Major Community Facilities and Open Space in Tsing Yi Outline Zoning Plan

	Hong Kong	HKPSG	Prov	Surplus/		
Type of Facilities	Planning Standards and Guidelines (HKPSG ¹)	Requirement (based on planned population)	Existing Planned Provision (including Existing Provision) ²		Shortfall (against planned provision)	
District Open Space	10 ha per 100,000 persons#	20.04 ha	20.79 ha	20.79 ha	+ 0.75 ha	
Local Open Space	10 ha per 100,000 persons#	20.04 ha	42.81 ha	49.11 ha	+ 29.07ha	
Secondary School	1 whole-day classroom for 40 persons aged 12-17#	244 classrooms	185 classrooms	245 classrooms	+ 1 classroom	
Primary School	1 whole-day classroom for 25.5 persons aged 6-11#	271 classrooms	326 classrooms	326 classrooms	+ 55 classrooms	
Kindergarten/ Nursery	34 classrooms for 1,000 persons aged 3 to under 6#	99 classrooms	143 classrooms	163 classrooms	+ 64 classrooms	
District Police Station	1 per 200,000 to 500,000 persons	0	1	1	+ 1	
Divisional Police Station	1 per 100,000 to 200,000 persons	1	1	1	0	
Hospital	5.5 beds per 1,000 persons	1,160 beds	0 beds	0 beds	$-1,160 \text{ beds}^3$	
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#	802 places	155 places	255 places	- 547 places ⁶	
Integrated Children and Youth Services Centre	1 for 12,000 persons aged 6-24#	3	4	4	+ 1	
Integrated Family Services Centre	1 for 100,000 to 150,000 persons#	1	2	2	+ 1	
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.	6	7	N.A.	

	Hong Kong	HKPSG	Prov	Surplus/	
Type of Facilities	Planning Standards and Guidelines (HKPSG¹)	Requirement (based on planned population)	Existing Provision	Planned Provision (including Existing Provision) ²	Shortfall (against planned provision)
Community Care	17.2 subsidised	1,090 places ⁴	500 places	959 places	- 131 places ⁶
Services (CCS)	places per 1,000				
Facilities	elderly persons aged 65 or above#				
Residential Care Homes	21.3 subsidised	1,349 places ⁵	401 places	491 places	- 858 places ⁶
for the Elderly	places per 1,000				
	elderly persons aged				
	65 or above#				
Library	1 district library for	1	1	1	0
	every 200,000				
	persons	_			
Sports Centre	1 per 50,000 to	3	4	4	+ 1
	65,000 persons#				
Sports Ground/	1 per 200,000 to	0	1	1	+ 1
Sport Complex	250,000 persons#				
Swimming Pool	1 complex per	0	2	2	+ 2
Complex – standard	287,000 persons#				

Note:

- 1. The Planned Resident Population including Usual Residents (UR) and Mobile Residents (MR) in Tsing Yi OZP is about 200,500. If including Transients, the overall planned population is about 211,000. All population figures have been adjusted to the nearest hundred.
- 2. Local open space, a kindergarten and other social welfare facilities are proposed under the public housing development near Tsing Yi Road West. As the proposed social welfare facilities within the said public housing development are being finalised, the planned provision as listed in the table above has only included the proposed local open space and kindergarten while the proposed social welfare facilities under the said public housing development has not been taken into account.
- 3. The provision of hospital beds is assessed by the Hospital Authority on a regional basis.
- 4. There is no rigid distribution between centre-based CCS and home-based CCS stated in the Elderly Services Programme Plan. Nonetheless, in general, 60% of CCS demand will be provided by home-based CCS and the remaining 40% will be provided by centre-based CCS. The planned provision as listed in the table above has included planned projects at very early planning stage which are subject to change.
- 5. Residential Care Services (RCS) for the elderly is planned by the Social Welfare Department (SWD) on a five-cluster basis (i.e Hong Kong, East Kowloon, West Kowloon, New Territories West and New Territories East) and the standard stipulated in the HKPSG should be applied flexibly having regard to a number of factors to be considered by SWD including the land supply in different districts in the cluster, service demand as a result of population growth and demographic changes as well as provision of different RCS of the clusters.
- 6. This is a long-term goal and the actual provision would be subject to the consideration of the SWD in the planning and development process as appropriate. It may not be appropriate to compare the standards with the provision of services and facilities which are assessed by SWD on a separate cluster/district basis. PlanD and SWD will work closely together to ensure that additional GIC facilities will be included in new and redevelopment proposals from both public and private sectors.
- # The requirements exclude planned population of transients.

動議

葵青區議會要求暫緩青衣西路公營房屋發展計劃,有關政府部門必須就規劃、環境、交通、綠化等項目上進行修改,並向本會提供顧問公司的詳細研究報告供參考,並以周詳計劃進行地區諮詢。否則應擱置此一計劃,或另覓選址開展工程。

動議人:郭升健、韓俊賢

和議人:蔡雅文



曉峰園業主委員會

Mount Haven Owners' Committee

通訊地址:新界青衣寮肚路3號曉峰園平台會所

Correspondence Address: Club House, Podium, Mount Haven, No.3 Liu To Road, Tsing Yi, N.T.

信函檔號: MH-T21-05-01(1)

敬啟者:

有關:計劃於青衣西路發展公營房屋事宜

委員會收到消息指政府計劃及研究於鄰近青衣西路位置發展公營房屋,屋苑管理公司早前亦曾致函查詢計劃詳情,但仍未收到 貴處回覆。由於預計上述計劃會對屋苑附近的交通及社區設施配套等構成壓力,並會對附近自然生態環境造成影響。因此,委員會特函於現階段向 貴處就上述計劃表達反對意見,並祈希 貴署盡快提供有關計劃詳情予本屋苑參閱。

如有任何查詢,請致電 2942-8888 聯絡服務處職員李先生。

此 致

規劃署

香港北角渣華道 333 號 北角政府合署 17 樓



二零二一年五月十日

政府總部 發展局 規劃地政科



Planning and Lands Branch **Development Bureau** Government Secretariat

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新界葵涌 興芳路 166-174 號 葵興政府合署 10 樓 葵青區議會 單仲偕主席

單主席:

青衣西路公營房屋發展計劃、 工地平整及基礎設施工程的可行性研究及 《青衣分區計劃大綱核准圖編號 S/TY/30》的擬議修訂項目

議員的提問/意見及動議

就葵青區議員於2021年5月11日葵青區議會會議上的提問/ 意見,以及在會上提出並獲得通過的一項動議,經徵詢相關部門後, 本局現回應如下:

政府一直以多管齊下的方式增加土地供應,包括透過各項土 地用途檢討工作,在全港物色可作房屋發展的用地,當中包括建議 把位於青衣西路以西的一幅「綠化地帶」用地改劃作公營房屋發展。

於 2021 年 5 月 11 日的葵青區議會會議上,規劃署、土木工

程拓展署(土拓署)及房屋署代表向議員介紹上述擬作公營房屋的用地,並聆聽議員的意見。一如以往,在提出有關發展建議前,政府會進行初步研究並仔細考慮發展會帶來的潛在影響,以評估及確立在上述用地發展公營房屋的可行性。土拓署進行的各項可行性研究已大致完成,現作最後整理。經考慮包括交通、基建、環境、景觀、視覺、空氣流通和風險等方面的潛在影響,預期在上述用地作公營房屋發展不會帶來無法克服的技術問題。

選址

上述擬議作公營房屋發展的用地屬青衣已建設地區的邊緣、臨近已發展區域及現有道路、有植被但緩衝作用和保育價值相對較低的「綠化地帶」。鑑於土拓署進行的初步研究沒有在上述用地內發現具重要保育價值的棲息地及具重要生態價值的河流,政府建議改劃有關用地以回應市民對公營房屋的殷切需要。

發展密度

為應付房屋及其他發展需要,政府本著「地盡其用」的宗旨,探討在不影響環境質素的情況下,適當地增加土地的密度和地積比率。就此,《2014年施政報告》已提出在除人口較稠密的港島北面和九龍半島以外,全港其他各個「發展密度分區」現時准許的最高住宅用地地積比率,可整體地適度提高約兩成。為進一步善用公營房屋用地,行政會議在2018年12月亦通過容許公營房屋用地的住用地積比率在技術可行的情況下再增加一成的建議。

經考慮上述政策、有關用地的情況以及可行性研究的結果後,政府建議改劃有關用地,並納入最高總地積比率 6.7倍(當中包括最高住用地積比率 6.5倍)及最高高度限制主水準基準上 220米。研究結果顯示,有關公營房屋計劃不會帶來無法克服的技術問題。

視覺上的影響

擬議公營房屋發展位處山谷, 需因應房屋發展要求平整地

盤。視覺評估報告顯示,根據擬議土地平整工程及樓宇的布局,發展計劃雖會在視覺方面帶來影響,相關部門在實施發展計劃時,將採取以下一系列的緩解措施,以盡量減低公營房屋發展對視覺和景觀造成的影響:

- 一) 於擬議發展項目與青衣西路及綠化帶之間設置緩衝區,作視 覺緩衝之用;
- 二) 於合適的位置,如上述緩衝區及擬建行人天橋,種植緩衝樹木及植物,以作為視覺屏障;
- 三) 擬建樓宇外牆顏色將採用配合周邊環境的色調以緩和視覺效果;
- 四) 盡量優化在擬議房屋發展範圍內的園景設計及綠化措施;及
- 五) 提供適當的樓宇間距。

交通影響

政府理解區議會及地區人士對交通負荷及配套方面的關注。土拓署進行的研究已就擬議發展進行初步交通及運輸影響評估,包括考慮將來青衣區內主要相關路段的行車情況。評估範圍包括青衣西路、楓樹窩路、青康路、青衣鄉事會路、涌美路、担杆山交匯處及青衣交匯處等主要道路及交匯處。影響評估亦已考慮區內其他已規劃的發展計劃。研究結果初步顯示,擬議發展計劃不會對區內交通網絡構成嚴重影響。土拓署將會在下一階段進行詳細交通評估,並會在有需要時進行道路/路口改善工程。

因應擬議發展計劃及地區所需,計劃範圍內將設有公共交通 交匯處。擬建公共交通交匯處預期將提供專營巴士服務,根據現行 做法,運輸署將於擬議房屋發展項目完成前兩年,將專營巴士路線 的具體計劃提交葵青區議會交通及運輸委員會,以徵詢意見。

此外,為方便日後區內居民橫過青衣西路往返擬議發展計劃 及附近一帶,包括青衣西路及青康路兩旁的公共交通設施,政府亦 建議興建一條橫跨青衣西路的行人天橋,並將設有升降機供有需要 的市民使用。 就泊車設施方面,房委會在規劃新公營房屋發展時,會諮詢運輸署的意見,提供合適的公營房屋泊車設施。

生態影響

上拓署已進行初步的生態影響評估,結果顯示,擬議公營房 屋發展計劃不會造成重大生態影響。

為配合擬議公營房屋發展計劃,一段長約 600 米的溪流將受影響而需要在工地西面改道重置。改道後的溪流將加入生態元素以提供不同的微生境。在擬議房屋發展範圍與改道的溪流之間,將預留約十米寬的緩衝區,以盡量減少發展計劃對生態之影響。對受影響溪流中具保育價值的水生物種,包括香港南海溪蟹和鰓刺溪蟹,評估報告亦建議可遷移至附近合適的棲息地以作保育。

樹木調查結果顯示,擬議發展計劃範圍內受影響並需要移除的樹木主要是一些果樹及普通品種樹木,並未有涉及古樹名冊內的樹木。當中具保育價值的四棵土沉香幼樹及半成年樹,評估報告亦建議可移植到附近合適的接收點。詳細樹木保育、移除及補償種植方案將根據發展局相關的技術通告及指引進行詳細研究及訂定,並在工程開展前提交相關部門審批,以減低對生態的影響。此外,根據相關的政府指引,擬議公營房屋發展計劃範圍內的綠化覆蓋率目標為百份之三十。視乎個別地盤的特色和限制,亦會按情況考慮調整綠化覆蓋率;然而,除特殊情況外,綠化覆蓋率必須至少達百份之二十。

區內政府、機構或社區設施的供應

根據《香港規劃標準與準則》,以《青衣分區計劃大綱圖》涵蓋範圍內的規劃人口計算,當上述公營房屋計劃完成後,區內現有及已規劃的各類政府、機構或社區設施已大致足夠,包括各類型社區設施如體育中心、游泳池場館、休憩用地、綜合家庭服務中心、綜合青少年服務中心、圖書館、診療所/健康中心、幼兒班及幼稚園課室、小學及中學課室等。長者社區照顧服務設施(包括長者日間護理中心)、安老院舍、幼兒中心及醫院床位的供應則會出現短

缺。

就長者社區照顧服務設施(包括長者日間護理中心)、安老院舍及幼兒中心的短缺,這項人口標準乃長遠目標,在規劃和發展的過程中,社會福利署會就實際提供的服務作出適當考慮。至於醫院床位的短缺,有關供應乃視乎聯網的情況而定,相關部門會繼續監察青衣區人口增長的情況,以應付區內需求。

擬議公營房屋計劃內亦會根據《香港規劃標準與準則》的要求預留足夠空間提供社會福利設施,以配合未來居民及社區的需要,其具體方案和實際安排有待在詳細設計階段與各持份者及相關政府部門進一步蹉商。除此之外,擬議發展計劃亦將設有零售設施、幼稚園及泊車設施,以照顧居民生活所需。

公營房屋類型

房委會會保留房屋類別的彈性,以配合公屋、「綠置居」計劃及其他資助出售單位之間的需求轉變,並適時調節不同類別之間的供應量,務求更適切地應對市況變動,配合社會整體的住屋需要。

下一步

要提供足夠土地達到十年建屋目標,是政府和社會共同面對的一項艱鉅挑戰。政府希望可獲得區議會、地區及居民的支持和體諒,以解決市民迫切的住屋需要。

為推展有關房屋發展,政府須根據《城市規劃條例》(《條例》) 改劃土地用途。規劃署將於 2021 年 6 月 11 日就有關擬議公營房屋 發展計劃的大綱圖修訂項目,連同區議會以及政府部門的意見,一 併提交城規會轄下小組委員會考慮。所有研究及評估報告亦會在提 交有關擬議修訂項目予小組委員會審議時,一併供公眾查閱。如小 組委員會同意有關擬議修訂項目,城規會將根據《條例》第 5 條展 示圖則及諮詢公眾,為期兩個月。屆時,各議員及公眾人士可對修 訂項目作出申述和提出意見。有關詳情可瀏覽網頁 https://www.info.gov.hk/tpb/tc/whats_new/whats_new.html。按現時 《條例》訂明,申述人和提意見人將獲邀出席城規會會議,直接向城規會委員作口頭陳述和表達意見。我們亦會繼續聆聽議員及居民的意見,務求在善用土地資源和增加房屋供應的同時,能釋除地區對交通、環境及生態保育等方面的疑慮。

感謝各議員對青衣區發展所提出的寶貴意見及關注。

發展局局長

(朱曉妍



代行)

2021年6月4日

副本送:

規劃署

土木工程拓展署

房屋署

運輸署

漁農自然護理署

葵青民政事務處

(經辦人:謝佩強先生)

(經辦人: 梁池歡先生)

(經辦人: 饒菊紅女士)

(經辦人: 關德儀女士)

(經辦人: 劉潤錕先生)

(經辦人: 嚴憶萱女士)